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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Proceeding	91177156
Party	Plaintiff H-D Michigan, Inc.
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

H-D MICHIGAN, INC., Opposer v. BRYAN BROEHM, Applicant.	Opposition No.: 91177156 Mark: Serial No.: 78896325 Filed: May 30, 2006

OPPOSER'S NOTICE OF RELIANCE NO. 7 UNDER 37 CFR § 2.122(e)

H-D Michigan, Inc. ("Opposer") submits of record in connection with this opposition proceeding a representative sample of books that constitute printed publications available to the general public in libraries or of general circulation among members of the public under Trademark Rule 2.122(e).

This evidence is relevant to the issues of likelihood of confusion and dilution, and shows, among other things: prominent coverage of Harley-Davidson, its business, and its trademarks over several decades; the use of Harley-Davidson's trademarks and names HARLEY and HARLEY-DAVIDSON, and of the BAR & SHIELD Logo mark, including use as part of book titles and prominently on the front covers of the books; the unsolicited media attention given Opposer and its marks; the nature and extent of the public's exposure to the HARLEY and HARLEY-DAVIDSON names and marks, and the BAR & SHIELD Logo mark; the fame of Opposer's marks; and the strength and distinctiveness of Opposer's marks.

EX. NO.	YEAR	TITLE AND AUTHOR
1	1987	**Harley-Davidson** Motor Company, An Official Eighty-Year History by David K. Wright
2	1989	The **Harley-Davidson** Story by Harley-Davidson
3	1989	The Holy Ranger, **Harley-Davidson** Poems by Martin Jack Rosenblum
4	1990	**Harley-Davidson** by Tony Middlehurst
5	2002	100 Years of **Harley-Davidson** by Willie G. Davidson
6	2002	**Harley-Davidson** The Ultimate Machine by Tod Rafferty
7	2002	The Big Book of **Harley-Davidson** by Thomas C. Bolfert
8	2002	The Complete **Harley-Davidson**, a Model by Model History of the American Motorcycle by Tod Rafferty
9	2005	The Ultimate **Harley-Davidson** by Mac McDiarmid

Respectfully Submitted,

Date: June 26, 2008

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CERTIFICATE OF SERVICE

I certify that a true and accurate copy of the foregoing OPPOSER'S NOTICE OF RELIANCE NO. 7 UNDER 37 CFR § 2.122(e) was served by first class mail, postage prepaid, on this 26th day of June 2008, upon Bryan Broehm at the following address:

Bryan Broehm
331 Gazetta Way
West Palm Beach, FL 33413-1053

Alison L. Seager

U.S. Trademark Opposition No. 91177156
H-D Michigan, Inc. v. Bryan Broehm
Serial No. 78896325

Mark:

Exhibit 1

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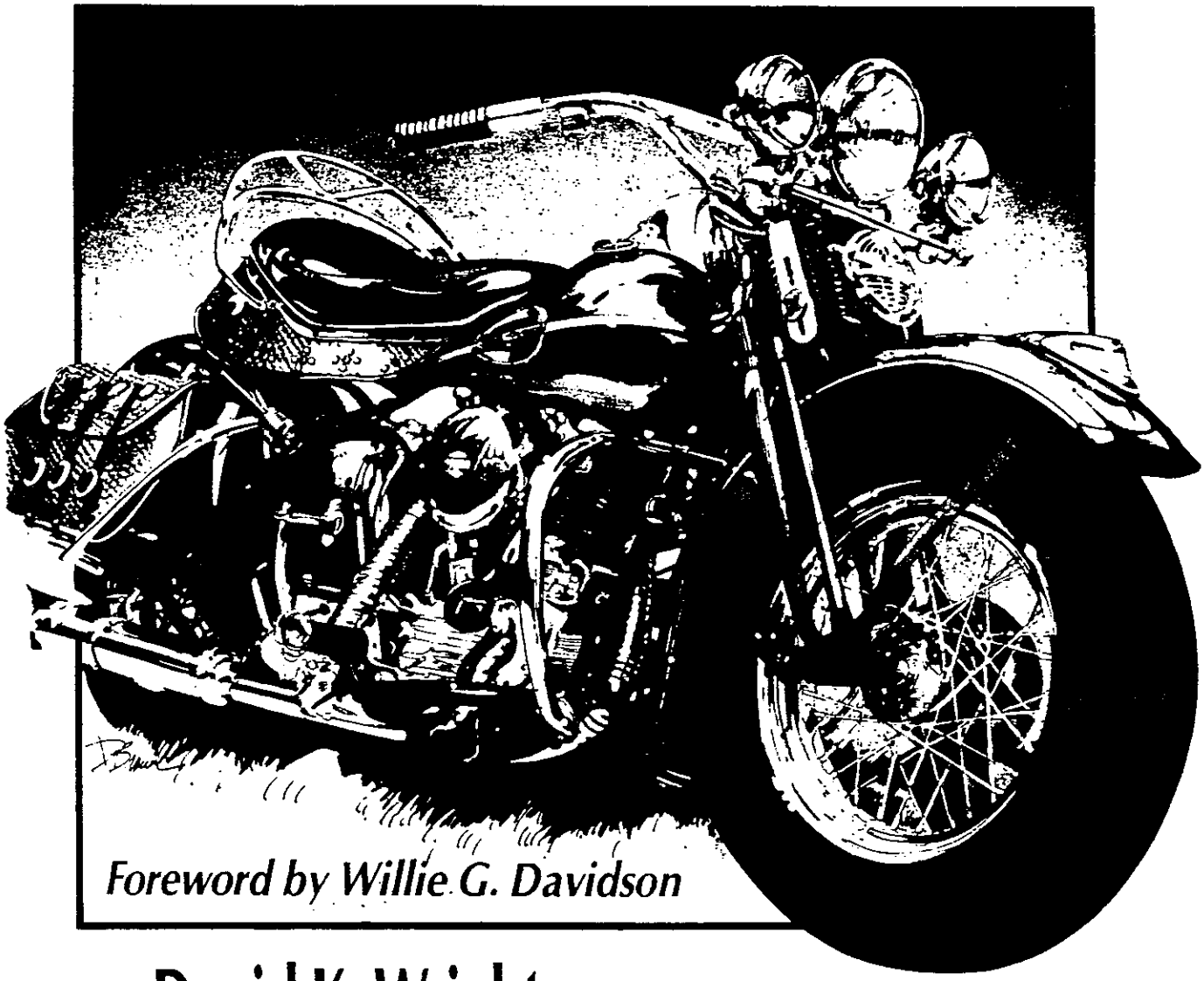
THE HARLEY-DAVIDSON MOTOR COMPANY

An Official Eighty-Year History



Foreword by Willie G. Davidson

David K. Wright

Second Edition

1028

THE HARLEY-DAVIDSON MOTOR COMPANY

An Official Eighty-Year History

DAVID WRIGHT

Motorbooks International
Publishers & Wholesalers Inc.
Osceola, Wisconsin 54020, USA

A NOTE ON THE OFFICIALLY AUTHORIZED HARLEY-DAVIDSON HISTORY.

In the development of this book, Harley-Davidson Motor Company, Inc., agreed to allow full access to company archives by the publishers and the author, David Wright. Harley-Davidson also arranged for interviews with Harley-Davidson officials past and present. Finally Harley-Davidson received review rights of the manuscript in order to clarify questions which arose in the preparation of this work. The result of this assistance is an overview of the company that otherwise would not have been possible.

Final editorial content, including statements of opinion on Harley-Davidson products and policies, and speculation on events relating to the company's history, their causes and effects, are based on the author's interpretation of the facts and do not necessarily reflect the stated position of Harley-Davidson Motor Company, Inc.

The words, Harley-Davidson, Harley, H-D, Buddy Seat, Power Blend, Comparts, More Than A Machine, Motorcycles, By The People, For The People, Electra Glide, Duo Glide, Super Glide, Sportster, Utilicar, Low Rider, Tour Pak, Pre-Luxe, Wide Glide, Tour Glide, Roadster, Far Bob, V-Fire Ignition, Comfort Flex, ENTHUSIAST and the Number One, Bar and Shield, Eagle and Wings logos are trademarks of Harley-Davidson Motor Company, Milwaukee, Wisconsin, U.S.A.

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To the people of Harley-Davidson

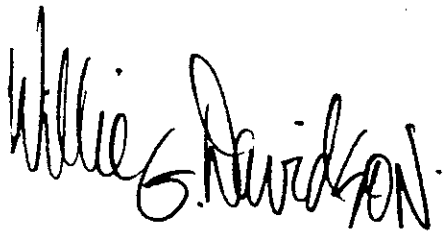
FOREWORD

As a boy, it didn't take me long to realize that I was related to a very special company. Born the son of H-D President William H. Davidson and the grandson of a Harley-Davidson Motor Company founder, I recall seeing my father attired in a conservative business suit as he pulled away from the door each morning on a motorcycle. Not just any motorcycle but—as it has turned out—the only American motorcycle that remains in production today. Why and how did Harley-Davidson survive when all the others failed? Were the Davidsons and the Harleys smarter or did they work harder than others? Has there always been a bit more demand, a bit more prestige connected with Harley-Davidson? If the company and the product are special, in what ways are they so special?

I don't have any single, definitive answer, but this book may provide a hint. In a century where the only constant is change, Harley-Davidson has succeeded by remembering its heritage, even as it offers riders a unique blend of usable technology. We're keenly aware of the degree of loyalty the motorcycle has developed over the years, and we keep an eye on that heritage as each new design comes off the drawing board.

This strong sense of where Harley-Davidson fits in the scheme of things was, I suspect, present at the creation in 1903. It's certainly important today. And I believe such awareness will create a continued demand for Harley-Davidson as we head toward our 100th anniversary. But that's another chapter in a story that continues to evolve.

Ride safe,



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It's impossible to list all the people who helped me piece this book together. But let me try. Once they were assured I had the blessing of Harley-Davidson, the following persons exerted themselves on my behalf:

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Oh yeah—thanks to Grace, Austin and Monica Wright, who put up with it.

INTRODUCTION

It was a warm evening in May 1966. College graduation and my draft notice were a month away. Though I didn't know it, Vietnam lay only ten months down the road. But the road on that particular evening led to a drive-in movie theater in Springfield, Ohio. A dozen of us took up three parking spaces with a Chevrolet, a Volkswagen and a Harley-Davidson. We spread blankets on car hoods and on the gravel, popped tab tops and watched Frankie Avalon fill Annette Funicello's cleavage with sand. After the movie, the guy with the H-D staggered under the weight of a twelve pack consumed. So we eased him into the back seat of the Chevy and I was elected to ride his bike home. Why me? I owned a small Italian bike, and all cycles were alike, right?

The first kick nearly tossed me into the next row of cars. Fiddling in the glare of an occasional headlight, I somehow got the Harley running. My girl climbed aboard and we eased off. Three feet later, I noticed a pronounced lurch that shook the handlebars; it went away as quickly as it appeared. We moved into traffic and somehow made it through the Midwest midnight to the bike owner's apartment. The next day, the guy who owned the Volkswagen called, upset. Somehow, in the darkness, the footpeg or the safety bar had caught his front fender, ripping it completely off the car. That accounted for the twitch in the handlebars, all right.

When the idea of writing about Harley-Davidson was suggested, fifteen years after my first ride, the fender assault came immediately to mind. No one thinks of stuff like that when you mention Harley, I believed. But that's wrong. Everyone conjures a definite mental image when H-D is brought up. Except for maybe tattoos or communism, nothing on earth fosters a stronger reaction, one way or the other. If the Universal Japanese Motorcycle is vanilla, Harley-Davidson is a rich, dark chocolate. If the UJM is elevator music, Harley-Davidson is the Grateful Dead. If a Suzuki or Honda or Yamaha or Kawasaki is the plump girl who sat next to you in homeroom for three years, a Harley-Davidson is the cheerleader with the great legs whose seat was too near the teacher's desk. Who wouldn't want to write about something as up front as the Harley-Davidson? You don't just show up on a Harley. You arrive.

I never did pay for that fender.

David Wright
Spring, 1983

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CHAPTER ONE

BEGINNINGS

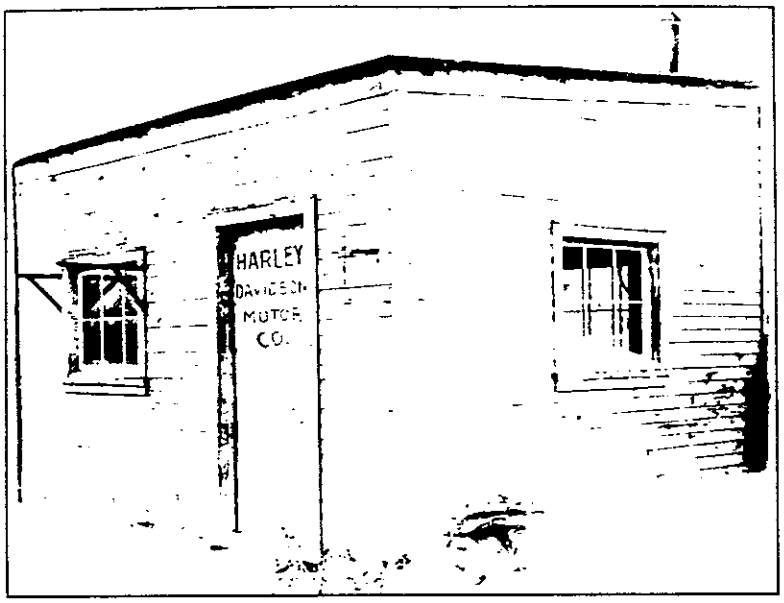
IT MAY NOT HAVE STARTED AS A BUSINESS. IN FACT, ARTHUR AND WALTER DAVIDSON AND Bill Harley were unaware of the appeal of the motorized bicycle designed by Bill, from patterns created by Art, and constructed by Walter, until a friend asked, "Will you make one for me?" Only then, in 1903, did the trio believe there might be a market for the spindly machine with the DeDion-type, single-cylinder engine. The three-horsepower motor would never carry the name of the German immigrant who worked with Arthur and Bill in Milwaukee's Barth Manufacturing Company and who recalled enough about the French design to pass on vital information concerning an engine that compressed and detonated air with gasoline to move a piston, a crankshaft and a chain or belt, culminating in power to a wheel.

The cycle was painted gloss black, as were the two identical machines the Davidsons and Harley managed to construct—and sell—the following year. Aunt Janet Davidson hand-applied red striping and created the original "Harley-Davidson Motor Company" logo seen on the fuel tanks. The initial bike not only looked good, but it had several things going for it that would separate it from the many other powered cycles then under construction in garages, barns and basements throughout the country.

Perhaps through luck, the trio had hit upon internal dimensions that proved reliable, if not very quick, the first time the engine was produced. However, Bill Harley realized that the spiderlike bicycle frame would soon be obsolete, so he designed a loop frame that eliminated the stresses to which diamond-shaped frames were subjected. The crucial factor, though, may have been economic—none of the three left his job immediately to embark on a career as a motorcycle manufacturer. Rather, they worked evenings and weekends on their creations. That accounts for the fact that the pair of bikes made in 1904 was followed by just eight machines in 1905. But by 1906, fifty Harley-Davidsons were made and quickly sold. One man (neither a Harley nor a Davidson) was employed full time in the ten-by-fifteen-foot shed bearing the Harley-Davidson Motor Company name. That structure was built for the boys by the Davidsons' father, a

cabinetmaker who must have been confident of their future. The hum of machinery echoed daily from the Davidson back yard at 38th and Highland Boulevard, on land now owned by the Miller Brewing Company. Among fellow residents of the area was Ole Evinrude, who was busy attempting to build a reliable marine engine and who imparted to Harley and the Davidsons vital carburetor knowledge.

Joined by the eldest Davidson brother, William A., the four filed incorporation papers after completing approximately 150 machines in 1907. Walter was transformed from machinist to president, Bill Harley from draftsman to chief engineer, Arthur from



The first Harley-Davidson was created in this shed in 1903. The site, at 38th and Highland Boulevard, is now owned by the Miller Brewing Company. (Harley-Davidson Motor Company)

A very early photo of founders and employees, proving among other things that some very young men started H-D. That's Bill Harley sitting with arms crossed. Behind him is Bill Davidson and behind them is Walter. Sherbie Becker, far left, and Bill Manz, left; Oscar Becker is astride bike, with Max Kobs behind him. The two fellows over Sherbie's shoulder are John Pfannerstill, left, and Charles Menzel. The two at right are not identified. (William H. Davidson collection)

patternmaker to secretary and general sales manager, and latecomer William ceased being a railroad tool room foreman for the superior title of works manager.

Harley decided at this time to pursue a degree in automotive engineering at the University of Wisconsin and left for Madison, 100 miles west. The three Davidsons, living modestly in flats in the vicinity of their work, put in long, grimy hours in the shed. Arthur and Walter, still bachelors, lived with their parents, keeping the proceeds from sales of cycles in a large jar in a medicine cabinet. Their mother, appalled at the dirt and grease they tracked in each night, hired a maid to clean up after them. Unfortunately, the maid also knew where the company treasury was stored. Somehow, her repeated trips to the jar did not cause the company to founder; quite the contrary.

Some 450 Harley-Davidsons were built to run the rutted U.S. roads in 1908. Eighteen persons were employed and a 2,380-square-foot brick building was erected for production purposes. It's hard for contemporary Americans, used to stagflation, to conceive of the speed with which the company grew. William H. Davidson, president of the company from 1942 to 1971 and son of William A., remembers his father "putting machinery in place and starting production as soon as the cement was dry" on a new floor of an H-D factory. Production grew every year but one through 1920, when 28,189 cycles were delivered to a network of domestic and foreign dealers recruited largely by Arthur Davidson.

Just thirteen years after incorporation, sales had increased 5,000 percent! What kind of men could parlay a shed, borrowed tools and some metal into the largest motorcycle company in existence at the time? They were conservative, as their 1908 letterhead indicated: The company hedged its bets by offering not only motorcycles but such items as "automatic float feed carburetors, marine motors and reversible propellors." ■

Ole Evinrude, who lived in the same part of Milwaukee as the founders, is said to have taught them how to make a carburetor work. (Outboard Marine Corporation)

The four founders with three unidentified employees in 1910. Walter is second from left, Arthur is in the middle, William A. is second from right and William Harley is at right. (William H. Davidson collection)

merely attaching labels such as conservative or industrious doesn't do these very human people justice. . . .

Arthur Davidson

Arthur Davidson, originally a patternmaker, was the most outgoing of the four founders. A small man, he served Harley-Davidson as secretary and general sales manager until his death in an automobile accident in 1950. His biggest contribution to the company, besides working with Bill Harley to construct the first motorcycle, was to recruit a nationwide dealer network. Beginning in the Northeast around 1910, Arthur persuaded a number of persons to become H-D dealers at a time when the company's sole claim to fame was Walter Davidson's 1908 victory in a nationally sanctioned New York endurance run. A good storyteller, Arthur took a strict executive approach to his job only when absolutely necessary. Both he and brother Walter were able riders; but his first love may have been the out-of-doors. In later years, he became a gentleman-farmer in Waukesha County, west of Milwaukee, raising prize Guernsey cattle. Ironically, some of his best stock came from the Hendee farm in Massachusetts, owned by a founder of the Indian Motocycle Company. He contributed time and money to the Boy Scouts, establishing a trust fund and donating land for a camp. He was also interested in and gave money to a local home for the blind.

Arthur was usually charitable to his dealers, too. "A Harley-Davidson dealer must make money," he stated repeatedly in meetings with dealers and factory personnel alike. Former H-D President William H. Davidson says Arthur firmly believed that the well being of dealers was crucial to the success of the company. Arthur also believed the American Motorcycle Association (AMA) was important to the company and so became a pillar of that organization. "We didn't do it [assume control of the AMA in the early days] because we wanted to," according to William H. "We did it because there was no one else around." Ever the salesman, Arthur was instrumental in signing dealers as far away as Australia and New Zealand while he recruited corporate members in the U.S. for the AMA. "Look—you make our castings, we want your support." That was Arthur's approach when all else failed.

Following World War II, he spent an increasing amount of time on his farm. A visitor recalls the satisfaction Arthur could not conceal as he ducked through a fence, walked up to the largest bull in his herd of cattle and, grabbing it by the nose ring, led it like a puppy around the barnyard. The zest he showed for life ended on the evening of December 30, 1950, when he and his wife were killed in a grinding, two-car crash in

Arthur Davidson, right, poses with another Harley-mounted cyclist, identified as P. Olson, about 1906 in Cambridge, Wisconsin, fifty miles west of Milwaukee. (Harley-Davidson Motor Company)

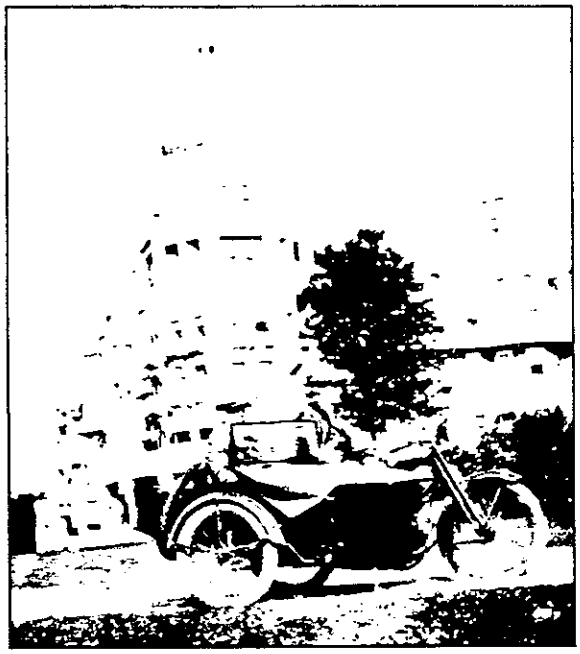
Milwaukee. Arthur was sixty-nine years old. Like his brothers and Bill Harley, he remained active in the company until his death. He could not know that his own son, James, and James' wife, would also die in an automobile accident in 1966.

William S. Harley

If there is one photo in the Harley-Davidson archives that tells about Bill Harley it is the picture showing him with William A. Davidson after a day spent fishing. Harley is at the helm of the cycle, with William A. in the sidecar. The two had just returned, on this summer day in 1922, from a successful fishing trip, as the pike draped over the sidecar indicate. In addition to being a highly skilled rider, Bill Harley was an outdoorsman of the first rank. A draftsman at the time he and Arthur Davidson produced the first bike, Harley served as the company's chief engineer and treasurer until his death from heart failure on September 18, 1943. Hunting, fishing and golf may have been even more enjoyable than motorcycling. The sole college graduate among the four founders, he was prevented from much recreation until well into the twenties, after company growth stabilized. And while he had many friends, he preferred the solitary sports that would take him into the birch- and pine-studded Wisconsin lake country.

Bill Harley earned his recreation, having started work at the age of fifteen in a Milwaukee bicycle factory. He ran some of the first Harley-Davidson motorcycles in endurance contests, finishing consistently and well. More important, his talent as an engineer resulted in many of the classic H-D models throughout his tenure. During both world wars, Harley was responsible for contact between the War Department and the factory. He had the foresight in 1939 to realize that war was inevitable; prototype H-D's were in the hands of the military at Fort Knox more than a year before Pearl Harbor. It is a tribute to him that the H-D 45 needed only a crankcase plate and extended forks to become virtually indestructible in the hands of GI's fighting from Japan to Germany.

Working long hours with the military, Harley nevertheless found time to retreat to the woodlands. He purchased a Leica 35mm camera, mounted it on a gun stock and stalked ducks and other birds, pulling the trigger and capturing them on film. After



William S. Harley on the cycle, William A. Davidson in the sidecar, on a trip through New England in the early twenties. They crashed the rig on a steep, freshly oiled hillside road. Harley gashed his head and Davidson suffered a broken kneecap. (William H. Davidson collection)

examining his prints, Harley would sketch the birds and other animals he had seen and photographed. His interpretations of wildlife etched on copper often were given to his friends. Harley continued to play a vigorous game of handball and participate in AMA activities until his death, which occurred before he could know that his efforts on behalf of the military contributed to the end of the Second World War.

Walter Davidson, Sr.

Harley-Davidson's first president probably wasn't aware of his future when he crawled from beneath a locomotive in Parsons, Kansas, to receive a letter from Arthur inviting him to ride a new motorcycle. Walter was headed for Milwaukee anyway, to attend elder brother William's wedding, so he looked forward to the bike ride. On arrival in the Brew city, he discovered that the cycle was in pieces and that brother Arthur and Bill Harley had hoped he'd precede his ride by putting the machine together. That delayed, probably shaky, ride changed his life, fascinating him in two ways: As a machinist, he appreciated the close tolerances of the small DeDion-type engine, and he quickly discovered that he was a natural rider. Walter went immediately to the Chicago, Milwaukee and St. Paul Railroad and secured a machinist's post so that he could assist Arthur and Bill Harley with the hobby.

"Harley-Davidson was his life," says William H. Without formal business training of any kind, Walter grew with his title. He was extremely generous, giving disproportionately to charity, but his honesty was almost excessive. At a business luncheon once, in a swank New York hotel, Walter looked at the tab, deducted his own meal and listed as a business expense only the meals consumed by his fellow diners. Hank Syvertson, who ran the H-D racing department in the thirties, once wanted to ride to an assignment in Los Angeles aboard the luxurious Super Chief train. Walter examined railroad rates and then informed Syvertson he was welcome aboard—if the extra $12 came out of Syvertson's own pocket.

Walter Davidson and an early single, no doubt similar to the model he used to win an important 1908 New York state endurance run. His performance in that event helped make H-D's early reputation. (William H. Davidson collection)

Toward the end of his life, Walter became recognized for his business ability. He was a trustee of Milwaukee's highly successful Northwestern Mutual Insurance Company and a director of First Wisconsin, the state's largest bank. He died at the helm of the company on February 7, 1942, at age sixty-five. While he will be remembered as the first president of H-D, his overwhelming 1908 win in that New York endurance run may have been his most important contribution. Many believe his perfect score on one of only three H-D's in the contest put the motorcycle on the map.

William A. Davidson

If Walter was the head of the company, William was the heart. A rider only briefly, he quit a responsible job as a Milwaukee Road railroad toolmaker and foreman to join his younger brothers and Bill Harley. A family man at the time, William became works manager in a motorcycle company during a decade when even the automobile industry was considered a question mark. He purchased the presses and other machines necessary to meet production needs that increased at a bewildering rate.

His employees called him "Old Bill," and he apparently relished his paternal role. One of his numerous pockets held a small black notebook filled with the names of employees who borrowed money from him "just till payday." He seldom collected any of the debts from the lengthy list of machinists, tool-and-die makers, welders and assemblers. A large man who enjoyed hunting and fishing, he liked to tell employees and visitors alike that "my office door is always open." However, anyone who took too much of his time was aimed toward a barrel of peanuts and told to "help yourself on the way out." The fatherly feeling William possessed ended on April 19, 1937, when Harley-Davidson and its employees signed the first union pact. William H. believes the fight to keep out the union, and the subsequent defeat suffered personally by his father, hastened his death—though William A. was afflicted with diabetes. Known among fellow founders and the Davidson and Harley families as an employee's friend, William A. Davidson died at the age of sixty-six, two days after signing the agreement admitting a union to his shop.

Incorporation papers, filed on September 17, 1907, indicate that Walter was the largest shareholder, with Arthur second; Bill Harley and Bill Davidson were third, perhaps because Davidson had a family to care for and Harley was spending most of his money for education. (A Davidson sister, Elizabeth, invested early and ended up with a sizeable share of the fledgling corporation.)

Bill Harley returned to Milwaukee during his studies long enough to design H-D's first twin, in 1909. His concept was light on theory and heavy on practicality: He grafted

William A. Davidson, left, and William S. Harley mope following the finish of the 1914 Dodge City, Kansas, 300-mile road race. The factory officially entered racing later than many of its early rivals, but was winning consistently by 1915. (William H. Davidson collection)

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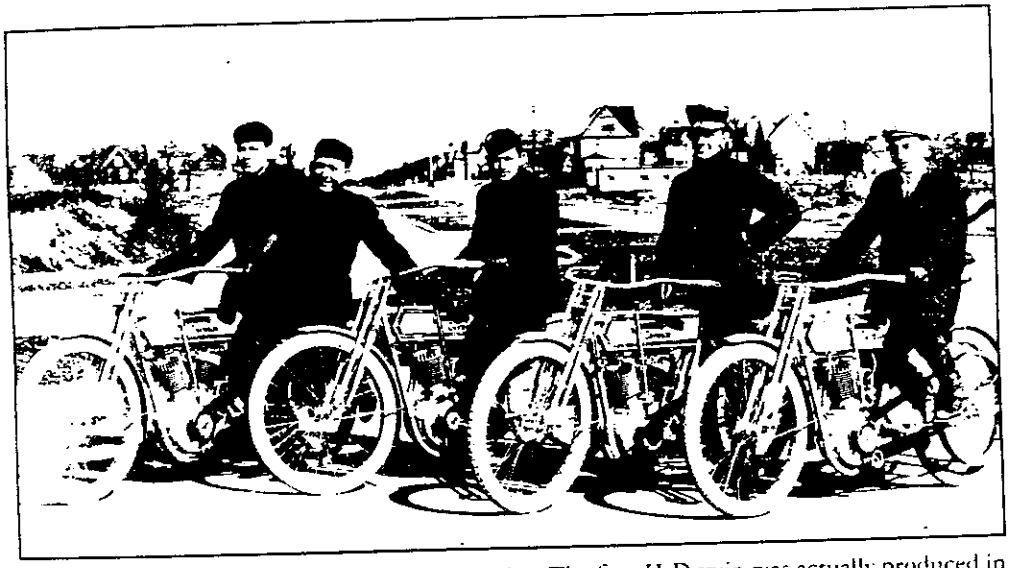
a second cylinder onto a single-cylinder engine, then modified the lower end to withstand the added power. In 1912, Harley created the first commercially successful motorcycle clutch, a rear-hub, free-wheel unit. In 1914, he introduced the "step-starter," allowing a machine to be kicked over by pushing either foot pedal, plus an internal expanding rear brake, a carburetor choke and a two-speed transmission. In 1915, the three-speed transmission was offered.

While Harley and fellow engineers were at work, the Davidsons were taking care of other facets of the business. Walter studied heat treating and taught it to employees, William mastered the oxygen-acetylene welding process and passed it on, and A[illegible]ar learned advertising techniques and recruited dealers.

The physical plant continued to grow, with 297,112 square feet devoted to manufacturing, manned by 1,574 employees—just ten years after the first H-D was assembled. So pressed to expand were the founders that they once built a 2,400-square-foot brick structure, only to raze it six months later to make room for a larger building.

During the early years, the company relied heavily on two Milwaukee financial institutions, the Marshall and Ilsley (M&I) and First Wisconsin National banks. The firm's first commercial loan originated at M&I, which maintained a close relationship with H-D until the AMF acquisition in 1969. When World War I orders for motorcycles came in, M&I provided crucial dollars that made Harley-Davidson the world's largest cycle company by 1918.

Everything the Milwaukee cyclemakers touched seemed to turn to gold. So they introduced sidecars and other motorcycle accessories, which sold very well, and bicycles, which did not. "Motorcycles and bicycles appeal to two different customers," says William H. Davidson, pointing out that the dealers were so busy selling motorcycles that they let the nine different bicycle models, introduced late in 1917 and produced for H-D by the Davis Sewing Machine Company, gather dust. To accommodate the ravenous public appetite for their motorized products in the late teens, the founders leased warehouse and production space wherever it was available. Prohibition dealt a nasty blow to



Two early twins, two early singles. The first H-D twin was actually produced in late 1907, but could not be made to run consistently with its suction valves. Mechanical valv[illegible] on the 1911 and ensuing models solved the problem. (William H. Davidson collection)

Milwaukee because it forced the major breweries to shut down; Harley-Davidson quickly leased idle facilities at the Pabst Brewing Company to house parts.

Victory followed victory, on dusty racetracks at places such as Dodge City, Kansas, and Marion, Indiana, and even in the halls of Washington, where H-D led a successful fight for approval of sidecars for use by rural letter carriers. Not even Yellowstone National Park was safe from Harley-Davidson: The Department of the Interior purchased H-D's to patrol its vast facility in northwest Wyoming. While the racetrack successes were to continue, the economic trophies would temporarily tarnish.

A brief but severe depression occurred worldwide beginning late in 1920. Walter Davidson, addressing a national dealer meeting in the fall of that year, correctly attributed the economic stagger to readjustment following the post World War I boom. The nation and the world recovered gradually in 1922, enjoying more prosperity than would be known for the next seven years. Unfortunately, the motorcycle industry did not fully share in this prosperity. Henry Ford had his Dearborn, Michigan, assembly line in high gear by 1920. Paying premium wages, he was able to produce a reliable automobile for as little as $245, a price that compared very favorably to the two-wheelers.

Harley-Davidson sales reflected the fact that many increasingly affluent Americans were turning their backs on cycles. The 1920 model year saw H-D produce 28,189 motorcycles. The following, depression year, just 10,202 came off the Juneau Avenue line. The economy soared, but cycle sales did not. H-D's best sales year during the twenties was 1926, when 23,354 bikes were sold. The company would not exceed 1920 sales figures until 1942. Meanwhile, few houses were being built without garages, because everyone was acquiring a car.

The Harley-Davidson endurance team; date and place unknown. At right is Lacy Crolius, the company's first ad director. Second from right is Walter Davidson. (William H. Davidson collection)

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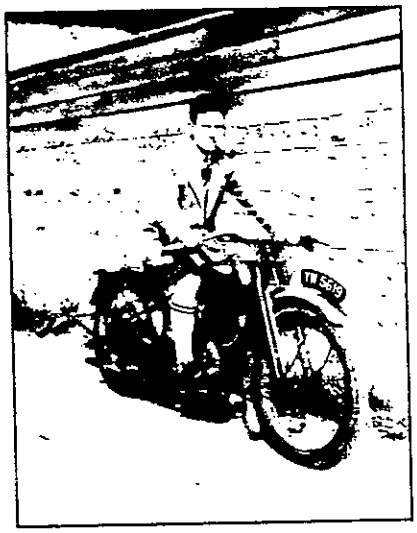
The decision to drop factory racing support after the 1921 season was only in part economic. Throughout its history, Harley-Davidson's attitude toward competition has swung from one extreme to the other. As early as 1913, Arthur Davidson was [illegible] racing results in sales literature, despite descriptions of cycle racing gore in the daily papers. During the period 1914–21, H-D assembled a group of supremely talented riders that swept most of the significant events. "The Wrecking Crew," as they were known, altered Harley-Davidson's reputation from reliable and slow to reliable and virtually invincible. To the credit of the factory, when it did something, it did it right. William H. Davidson remembers being put on a train at age fourteen with just-produced cams clattering in his suitcase. He was to deliver said cams to racer Jim Davis in time for the 1922 300-mile road race at Dodge City, Kansas. Cams in place, Davis provided H-D with its fifth consecutive Dodge City win. That same year, Otto Walker mounted his Harley and became the first rider ever to top 100 miles per hour in competition. Walker's achievement was a fitting finale to racing, for the time being.

A source of strength during the teens and twenties was the acceptance of Harley-Davidson models overseas. By 1921, there were H-D dealers in sixty-seven countries, a figure not equaled since. The following year, export folders were printed in seven languages: English, Danish, Italian, French, Dutch, Swedish and Spanish. As early as 1913, the company produced catalogs and owners manuals for "Los Entusiastas Latinos." By 1922, there was a cadre of South American dealers. *The Enthusiast* magazine, H-D's factory publication, began in 1916 and was even briefly offered in Spanish. Even earlier,

Douglas Watson, son of English distributor Sir Duncan Watson, sat on the H-D board until a brief but precipitous recession in the early twenties. H-D exported as much as one-third of its production prior to the Great Depression. (William H. Davidson collection)



The four founders, from left, Arthur Davidson, Walter Davidson, William S. Harley and William A. Davidson. This photo, believed to have been taken about 1915, appeared originally in *Motorcycle Illustrated* and, later, in *The Enthusiast*. Note that the founders were still quite young, though they had been making H-D's for more than a decade. (William H. Davidson collection)

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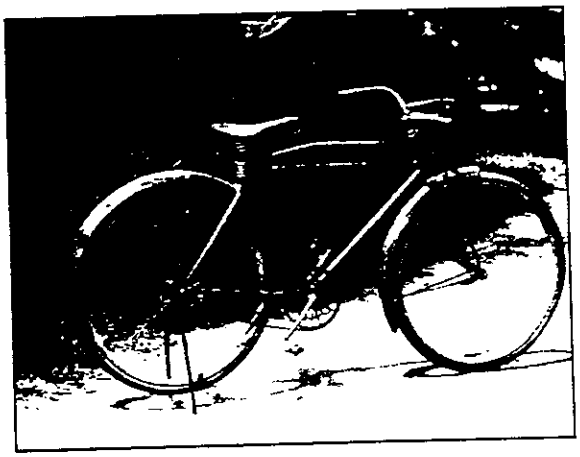
matching "Factory Facts" flyers were created for the U.S. and Canada, the only difference being in the price of the bikes. The 1913 Model 9-E, for example, was $285 fob Milwaukee and $350 fob Milwaukee if shipped to a Canadian buyer. Englishman Duncan Watson not only was selected as the British H-D distributor in 1919, but was made a company director. Despite the fact that cycles outnumbered cars in the United Kingdom at the time, Watson was forced by a new British import tariff of thirty-three percent to relinquish his distributorship just four years later, in 1923. To meet the European enthusiast's hunger for big V-twins, firms such as Anzani and JAP created H-D lookalikes. Throughout the twenties, accounts of races, brave deeds and tours of faraway places poured in to *The Enthusiast* offices and were reported to readers.

Never reported were the workings during this time of the research and development (R&D) department. Less active following the 1920–21 recession, R&D employees nevertheless constructed—and then destroyed, without so much as taking a photo—everything from a V-4 to variations on the V-twin theme. Four-cylinder Hendersons, popular at the time with police, interested H-D enough to explore a design; but not enough to tool up for such a machine. No sooner was one lightweight phased out than another was conceived, constructed by hand, tested, then assembled in quantity.

Other, less-exotic experiments involved sidecars. Produced by the factory and for Harley-Davidson by the Seaman Body Company (later a part of Nash Motors), sidecars were seen as the answer to all sorts of pickup and delivery problems. They were created with bodies in the shapes of cameras, shoes, platforms and more; not as jokes but to fit the needs of different kinds of businesses. Again, the inventiveness displayed by the H-D developers was thwarted by the rock-bottom price of automobiles. R&D people have always come in handy, however. During the thirties, when National Screw Company in Cleveland was hit by a strike, Harley-Davidson engineers quickly devised machines that would pump out the spokes for wheels formerly supplied by the struck company.

In the twenties—well into the thirties, for that matter—Harley-Davidson passed up annual cosmetic changes, preferring instead to refine the product. An illustration of this emphasis can be found in the electrical system. Prior to World War I, H-D installed Bosch electrical equipment, known for its reliability. But the German-designed units were replaced with U.S.-made Remy parts, for obvious reasons. Dissatisfied with Remy, Harley-Davidson engineers created ignition coils that were the envy not only of the motorcycle industry, but of automakers as well. The increasing reliability of the H-D's made up for the fact that the same olive drab color scheme, with striping variations, was used on machines produced from 1918 through 1932.

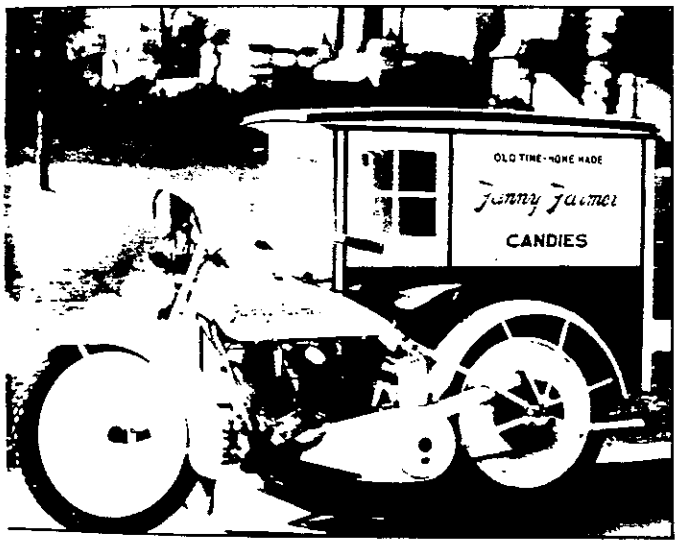


A Harley-Davidson bicycle, in original condition, owned by John Harley. These bikes were offered just six years (1918–24) and were made for H-D by the Davis Sewing Machine Company. (David Wright)

Meanwhile, consumers with experimental blood in their veins were using Harley-Davidson motors in other ways. A fellow by the name of Harvey Mummert constructed a light plywood airplane powered by an eighteen-horsepower H-D motor and bravely entered it in the first national air races over Dayton, Ohio, in 1924. He won the speed and efficiency contest in spite of one forced landing. None of his competitors finished the race, local news accounts reported: they either crashed or their motors quit. Less than a decade later, in 1932, Fawcett Publications' *Flying and Glider Manual* showed plans for building a propeller for a Harley-Davidson 74 cubic inch engine. Designed to power an ice boat, the motor was one of six (others included the Indian Chief, the Lawrence 28 and the Heath Henderson) deemed suitable for a hydroglider. But the most popular use of H-D on water or in the air proved to be the Harlequin.

Several hundred Harlequin-powered light planes took to the skies in the mid-thirties, sporting a horizontally opposed, two-cylinder engine that used H-D 74 cylinders. According to the 1933 edition of the Fawcett manual, the H-D parts were "noted for long life and are low priced and available. The valves are large and the valve chamber allows the best cooling possible to obtain in any design." The motor weighed ninety pounds and delivered thirty horsepower. Total cost to power a light plane was "way below $100." Before the introduction of light, four-cylinder motors by Cessna and others, home-built Harlequins could be found in hangars across the country.

Harley-Davidson produced a number of truly memorable machines during the twenties. The very first 74 cu. in. model, the JD, came out in 1921. The fore-and-aft, horizontally opposed, 37 cu. in. Sport Twin, introduced in 1919, hung on into the early twenties and was well received overseas. Especially desirable in the States were the two-cam 61 cu. in. and 74 cu. in. road bikes of 1928 and 1929, developed from successful board-track racing machines and capable of outrunning anything street legal on two wheels, or four. Also highly regarded was any H-D single produced at the time. Significant models included the 21 cu. in. side valve and overhead valve singles, offered from 1926 into the early thirties, and the "Peashooter," the racing version of the overhead valve motor. The latter became a force on English, Australian and New Zealand speedway tracks and even competed successfully in the U.S. in hillclimb events—against machines with more than twice the cubic inches.



A 1926 J model with a Package Truck. There is no reference in H-D parts and accessories books concerning the unusual solid wheels. The back brake was visible only from the right-hand side; front brakes were introduced in 1928. (Harley-Davidson Motor Company)

Due in large part to the appeal of the smaller displacement Sport Twin and the magneto- or coil-equipped singles, sales in foreign lands accounted for much of Harley-Davidson's revenue. Of 13,942 machines produced in 1924, for example, 6,194 were exported. Another important source of income was the sidecar: 3,257 were sold in 1924, or approximately one for every two of the V-twins created that year. An Indiana dealer at the time reported annual sales of forty-one V-twins; forty were sidecar-equipped. To make acquisition of a bike easier, the company formed a financing company in 1923 that evolved into Kilbourn Finance Corporation, an important H-D subsidiary that exists today as a dealer resource. Not even easy payments helped in 1924, however: H-D stockholders learned that year of the company's $119,143 loss, the only negative year prior to the Depression.

"The real beginning of our decline in this country," according to President Walter Davidson, addressing the board of directors in 1927, "began several years ago when we found it difficult to secure new dealers in territories where our old dealer either quit or for some reason had the agency taken away from him." To recruit new dealers, the company ran advertisements, not only in *The Enthusiast* but in such high-buck, national magazines as *The Saturday Evening Post*. Prior to the *Post* ads, national exposure was confined largely to mechanically oriented monthlies and to bicycle-motorcycle magazines. From the start, H-D provided its dealers with a variety of in-store signs and other trinkets and baubles. Because Milwaukee also is a center for quality printing, the banners, posters and so on, sent to dealers as early as the mid-teens, had a highly professional look.

In addition to recruiting dealers (for as little as $1,200 seed money to open a shop in Clarksburg, West Virginia, for example), H-D endorsed the American Motorcycle Association as a means of maintaining public interest. Walter Davidson joined Louis Bauer of Indian and Frank Schwinn of Excelsior in 1928 to retrieve the AMA from its deficit position. That backing, primarily by Harley-Davidson, led to a solid (and very rigid) race-sanctioning, lobbying and social organization. The AMA joined H-D dealers throughout the period in putting together annual Memorial Day weekend gypsy tours and other cycle-oriented events.

Dealers did not have much leeway in their relations with the factory, as a 1925 contract signed by Walter Davidson and Emil Schott of Lewiston, Maine, attests. While Schott, who ordered fifteen bikes and six sidecars for the 1926 model year, could not sell outside his assigned territory, the contract was "not to be construed as granting . . .

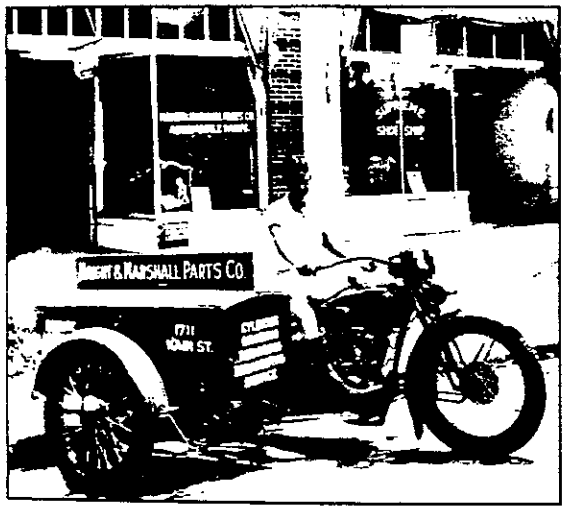
The four founders (from left to right) in the early twenties: William A. Davidson, Walter Davidson, Arthur Davidson, William S. Harley. (William H. Davidson collection)

exclusive sale of Harley-Davidson Motorcycles in the territory herein described." Also a part of the pact was this reminder: "The Dealer agrees not to sell imitation components parts . . . and will not use imitation component parts in repairing Harley-Davidson Motorcycles, sidecars and Parcelcars."

The twenties also saw the second generation of Harleys and Davidsons begin to join the company. William H. Davidson came aboard in 1928, after completing work for his degree at the University of Wisconsin. He learned the business by starting out in the factory and was followed in the next few years by Gordon Davidson in sales and by William J. Harley and Walter Davidson, both of whom were assigned initially to the shop. John Harley, brother of William J., began work in the office. The Davidsons, through marriage, birth and death, greatly outnumbered the Harleys on the stockholder rolls. There were seventeen persons with the Davidson surname, versus just three Harleys, on stock held at the eve of World War II.

Mechanical and styling advances continued throughout the twenties. Balloon tires, front brakes, streamlined gas tanks, Alemite lubrication, the beginning of parts standardization, greatly improved metallurgy—and related steps forward—made H-D riders forget about oil on pant legs from the total-loss system. Theodore A. Hodgdon Jr., whose father was one of the guiding lights of the Indian Motocycle Company, portrays this period quite accurately: "It is not generally remembered today, but of the hundreds U.S. cycles during the teens, twenties and thirties, only a handful were worth their weight in scrap. Unreliability and simply shoddy workmanship were the norms of the period. It was rare for most makes to exceed 5,000 miles in actual service before some catastrophic failure prematurely retired them. The buyer of an Indian or Harley-Davidson did not generally suffer these indignities, and could expect his mount to perform as advertised. In addition, extensive dealer networks enabled him to ride anywhere, anytime, with reasonable confidence that he might return on the same machine that he started out on." With these comments in mind, it's easy to see how the twenties rider might buy an off brand and become permanently disillusioned with motorcycling.

Neither disillusionment nor despair but rather indignation was the emotion felt by Harley-Davidson principals in February 1929, when a federal judge decided that H-D owed the Eclipse Machine Company of Elmira, New York, $1.1 million for three patent infringements. It seems that Eclipse, formerly a manufacturer of bicycles, had perfected and patented a very sound motorcycle transmission component design. The suit, filed in 1924, dragged on in various courts for five years. Harley-Davidson, after winning approval

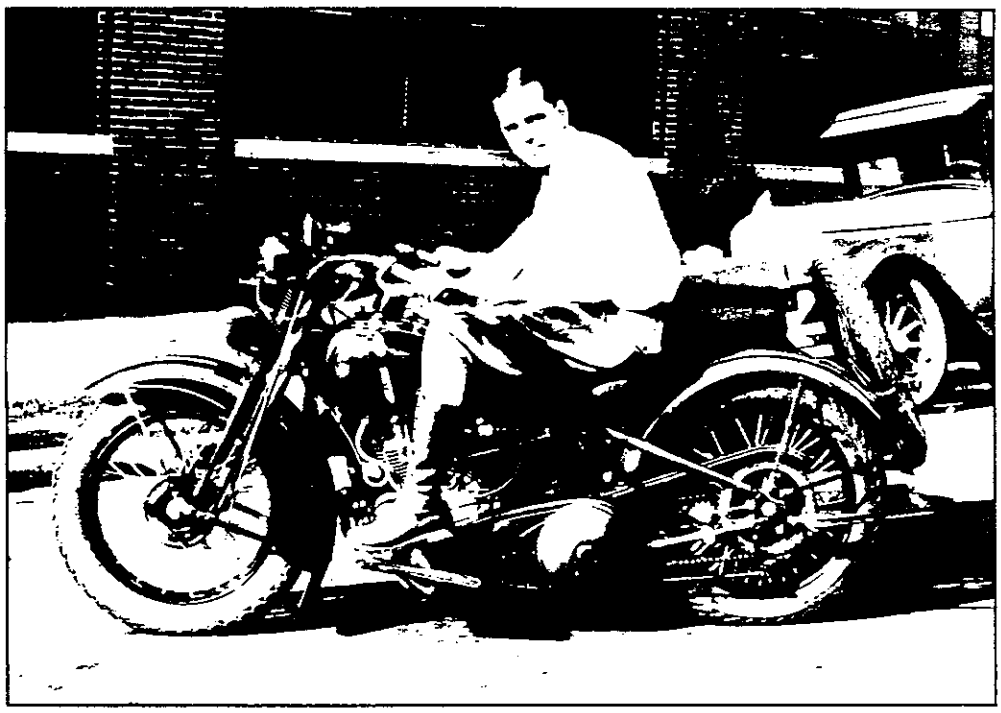


A 1929 Package Truck. Neither the rider nor the location is known. The dual headlights were featured just two years, in 1929 and 1930. (Harley-Davidson Motor Company)

in a lower court, continued installation of the clutch actuating device in question until the final judgment was received. Fortunately, 1929 model year sales of 22,946 motorcycles resulted in sufficient revenue to pay off the New York firm and still turn a profit. But the infringement can now be seen as a hint of things to come, not only for Harley-Davidson but for the whole, Depression-ridden world.

The 1930 models had been unveiled less than two months when the stock market plummeted in the fall of 1929. Oddly, sales did not suffer markedly that first year, slipping only to 17,662 units. Much of the decrease was due to the further decline in popularity of single-cylinder machines, which dropped from 3,882 units to 1,989. The big twins were only negligibly less popular, going at the rates of 12,842 for 1929 and 12,727 for 1930. A precipitous skid occurred the following year, as the economy continued its decline: 12,500 cycles rolled out of Juneau Avenue, and of those 3,831 went overseas. "We may be able to keep you on until spring," said William A. Davidson in the fall of 1930. As works manager, it was his unpleasant duty to lay off not only hourly employees but foremen as well. Those fortunate enough to stay on gladly accepted a ten-percent pay cut in November 1930. Gross revenues during the period 1930–32 slid from $6,562,000 to $4,173,000 to $2,389,000. Sales in 1932 totaled just 6,841 cycles, of which 1,974 were exported. In other words, only 4,867 new H-D's were purchased in the entire U.S. in 1932. Board meeting minutes indicate extended, serious talk of whether Harley-Davidson should stay in business.

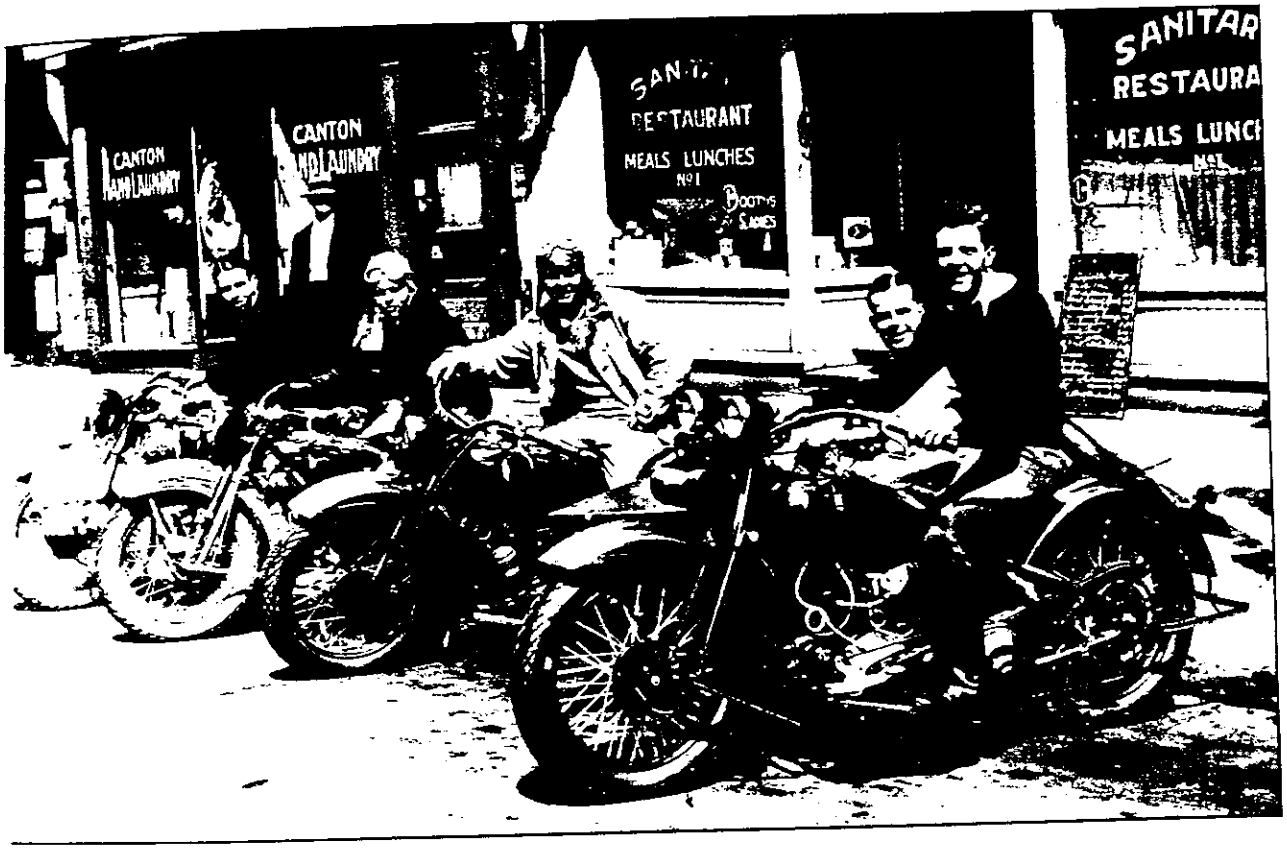
Not eager to throw in the towel, the Harleys and the Davidsons emphasized sales to police departments (more than 2,900 state and local departments were riding Harleys at the start of the Depression), personally won races (William H. Davidson, wearing a tie



William H. Davidson aboard the first 1930 big twin off the assembly line. This model, dubbed the VL, suffered from a series of mechanical woes that took a year to remedy. Davidson, to his credit, rode this example to Denver and back. (William H. Davidson collection)

and boots, captured Michigan's Jack Pine Enduro in 1930, and devised [illegible] to sell. The latter involved creation in 1931 of coupon books for H-D riders. The enthusiasts were to jot down prospects and give them to dealers. If the tip led to a sale, the coupon provider earned points. Two sales garnered the rider a bronze medal, four sales meant silver, eight sales meant gold. Anyone who snagged eight sales for his dealer also received $500 in cash from the factory and a commission on each sale. It was a sign of the times that just one person earned the gold.

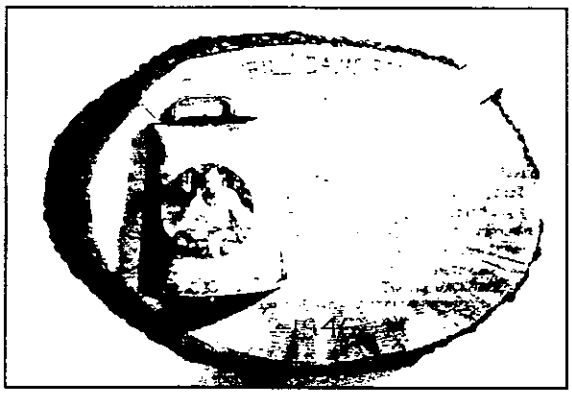
Sales in 1933 were 3,703 bikes, the lowest since 1910. It is a credit to H-D that it turned a slight profit that year. Through it all was one bright spot, a spot that moved hurriedly and consistently to the front. That was Joe Petrali. The slight-built Californian provided the factory with a morale booster by winning virtually every board-track, dirt-track and hillclimb event he entered for more than a decade. A quiet man who would not give an inch on the track, Petrali also was a technical conduit, telling William S. Harley and his engineers what worked and what did not. Petrali's input was one of the reasons that the H-D's from the Knucklehead on (1936–47) were state-of-the-art. The racer capped a brilliant career by running one of the new 1936 61 cu. in. V-twins to a sp[illegible] of 1[illegible].183 miles per hour on the sands of Daytona Beach. Fewer than 100,000 cycles were registered in the U.S. at one point in the thirties, but Petrali's victories played a part in making Harley-Davidson a two-to-one choice over Indian, the only other U.S. cycle



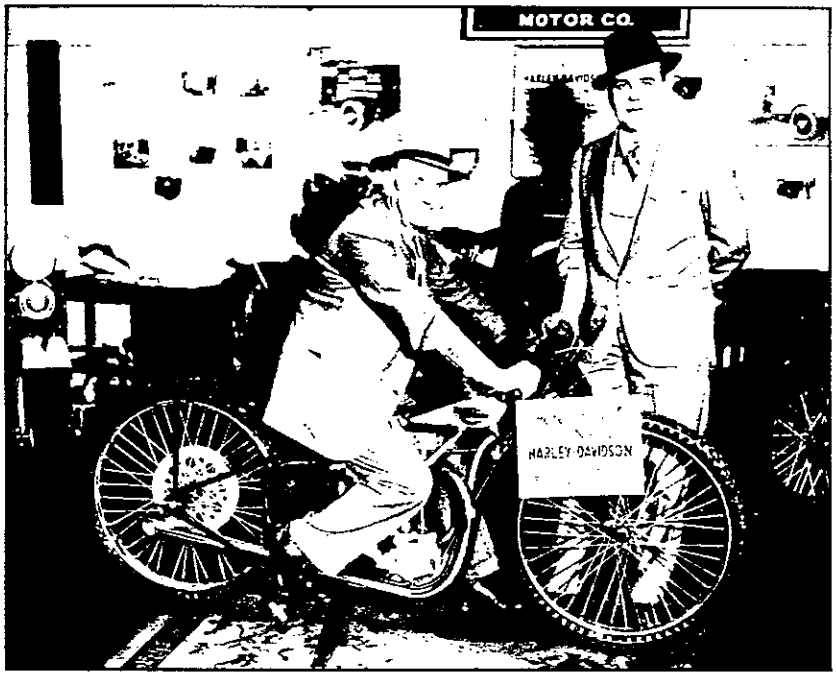
William J. Harley, foreground, and William H. Davidson, in the sidecar, meet (from left) Allan, Gordon and Walter Davidson following a 1929 trip by the latter three from Milwaukee to the Pacific Northwest and back in 1929. The trio rode 45 cu. in. bikes; Harley and William Davidson are in a 74 cu. in. VL. (William H. Davidson collection)

company still in business. By 1935, Indian was reduced to making 3,000 coaster wagons under subcontract for the Fisk Tire and Rubber Company.

Harley-Davidson looked for subcontract work, too, but without much success. One source of income from 1933 through 1937 was a licensing agreement brought by one of its overseas field representatives, Alfred Child. Child and a Japanese businessman signed a contract in late 1932 that turned over blueprints for current H-D models to a Japanese consortium. The factory received $3,000 for the prints in 1933, followed by sums of $5,000, $8,000 and $10,000 in 1934, 1935 and 1936, respectively. Precision machinery, idled by the lack of orders, also was sold to the Oriental concern, which created two- and three-wheelers under the Rikuo nameplate. President Walter Davidson grumbled over what he believed to be a real steal by the Japanese, but conceded that H-D



The 20th anniversary trophy presented to William H. Davidson in 1946 commemorating his 1930 win at the Jack Pine Enduro in Michigan. (William H. Davidson collection)



President Walter Davidson, with young William H., tries on the CAC cinder-track racer at a New York auto show in late 1933 or early 1934. Just 10–12 of these highly specialized bikes were sold. (William H. Davidson collection)

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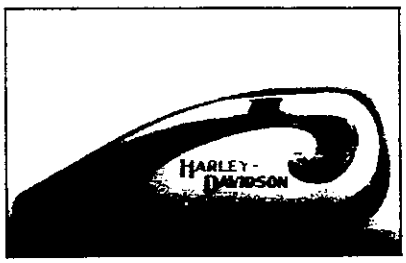
would have lost the market anyway due to an unfavorable exchange rate. In all, the factory received $32,320 for the tools, dies and machines sold to Child and his Oriental friend. The money was put to good use, no doubt, since in November 1933 Walter observed the "complete collapse of the [U.S.] banking system." Equally auspicious, the deal with the Japanese turned that nation on to motorcycles.

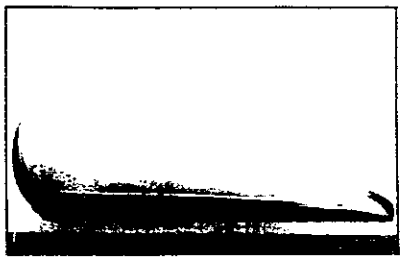
Fewer than 100 motorcycle clubs existed in the country in the early thirties. Declining popularity of motorcycles, caused primarily by a lack of money, made it difficult in some parts of the U.S. to find any kind of organized group of riders whatsoever. Those who were in clubs became more and more a subculture, wearing clothing available only from a motorcycle dealer. The mid-thirties rider, done up in cycling attire, would today look like he's wearing all of the worst features seen on equestrians, police and delivery boys. Harley-Davidson parts and accessories catalogs offered an extremely wide selection of clothing and accessories. It's only a slight exaggeration to state that clothing and various extras offered through H-D dealers helped many dealers survive the Depression. While the company realized $373,000 net profit in 1934, $300,354 in 1935 and $381,227 in 1936, prices were very low on a new bike. The profit margins for garb, add-ons and parts, however, have always contributed a higher percentage than have the cycles. Production during the 1934–36 period totaled 10,231, 10,368 and 9,812 bikes, respectively. Since low inventory was next to godliness with the conservative Davidsons, the factory produced no more cycles each year than it could sell. In time, lack of inventory would prove a problem.

The founders size up the first 61 cu. in. overhead valve E, which rolled off the assembly line for the 1936 model year. This bike later became known to H-D aficionados as the Knucklehead. H-D's major rival, Indian, made nothing that could compete with the OHV Harleys, which were produced with few changes through 1947. (William H. Davidson collection)

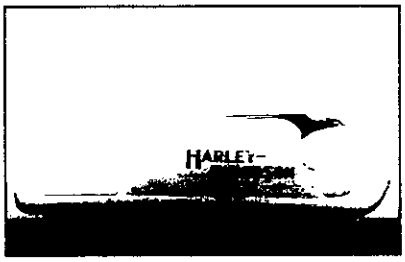
A larger problem surfaced on March 11, 1937, when nine employees asked to represent H-D wage earners under the banner of the United Auto Workers. Taking their cue from historic auto industry organizing, Harley-Davidson employees realized that the Depression was gradually lessening and that the company would survive. Though neither H-D nor most other major manufacturers in Milwaukee ever had a sweatshop reputation,



Compare the paint job on this '32 tank with the '31. Although the company had eased away from olive drab for 1931, not [illegible] offered that year approached the scrollwork seen a year later. (David Wright)

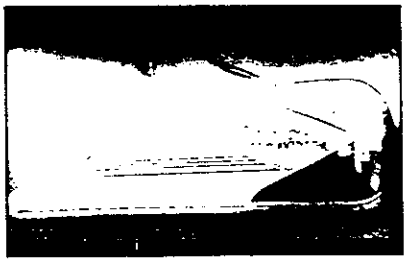


This shapely tank is from the 1931 model year, the first cycles affected by the Depression. As the economic hard times hung on, the paint and decals became more stylized because the company was trying harder than ever to appeal to the public. (David Wright)

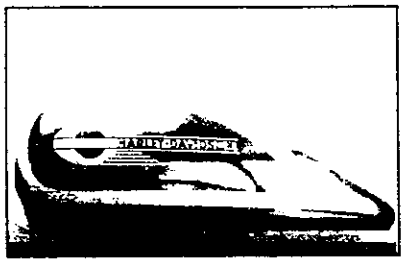


A 1933 model year gas tank. "There were no stylists per se at the factory at the time," says Willie G. Davidson. "But there were people who knew what looked good on a bike." Indeed, there were. (David Wright)

The early stages of Art Deco design, as seen on this 1934 model year tank. The quality of the paint and its careful application have been Harley-Davidson selling points through the years. (David Wright)



A 1935 tank. Beginning with the 1933 models, the "V" series H-D's and the 45's took on beautifully stylized tanks and color schemes. (David Wright)

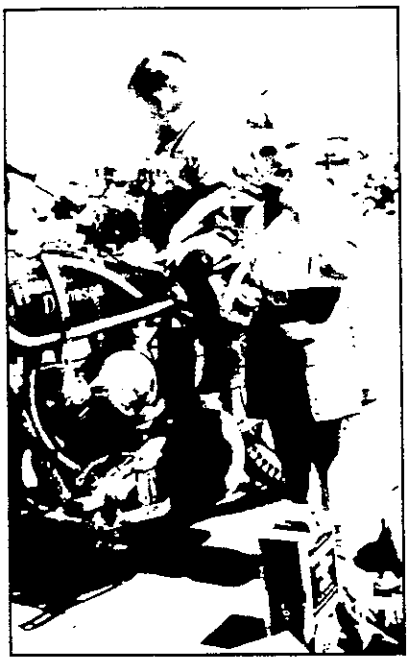


This tank is from the 1936 model year. The Art Deco decal is considered a classic, with variations on this theme used throughout the mid-thirties. (David Wright)

the hourly employees sought job security and more say in such matters as seniority, working conditions, vacations and compensation. Company officers were so unfamiliar with unionism initially that they failed to understand the employees' representation request. It became immediately evident in the form of a demand for a union election. Once organized, the wage earners sought and received forty-five cents per hour for women, sixty cents per hour for men and a week of paid vacation each year. Today, four labor unions represent various skills and jobs.

During this period, working with a minimum of capital, H-D managed to create several exciting new models. In 1936, the 61 cu. in. overhead valve model was introduced. It featured a circulating pressure oiling system that was seen the following year on the 74 and 80 cu. in. side-valve cycles, plus a new and improved four-speed gearbox. The big 1937's all featured full roller bearing motors, chrome-molybdenum tubular front forks, complete instrument panels and interchangeable wheels. The results were encouraging: '37 sales hit 11,674 units, the most since the Depression set in. Many longtime Harley-Davidson fans believe the mid-thirties bikes are the best looking machines ever to come out of Milwaukee. The streamlined, teardrop tanks with their Art Deco decals blend perfectly into the rear portion of the frame running to the back axle. The 45 cu. in. model received the full styling treatment, even though it was viewed by some as a utility machine. The 45, however, was about to become the star of the show.

Secure in the knowledge that the trusty 45 cu. in. solo motorcycle would fit Allied needs, William S. Harley and Walter Davidson departed for Camp Holabird, Maryland, on October 30, 1939. The military buildup was on and Harley-Davidson was in the running to create a shaft-drive, three-wheel vehicle for sandy and mucky terrain. Also under consideration for the project were Indian and Delco, the General Motors division. Delco's prototype used a BMW 750cc flathead engine in its three-wheeler, and while cost estimates were a soaring $4,600 apiece, the merits of the German powerplant impressed the military. The three-wheel project was dropped, but was followed by an order for



John Davidson sits on a racer while Willie G. tugs at a tooth during the 1938 Milwaukee AMA flat-track races. How many kids got so close so early to competition Harley-Davidsons? (William H. Davidson collection)

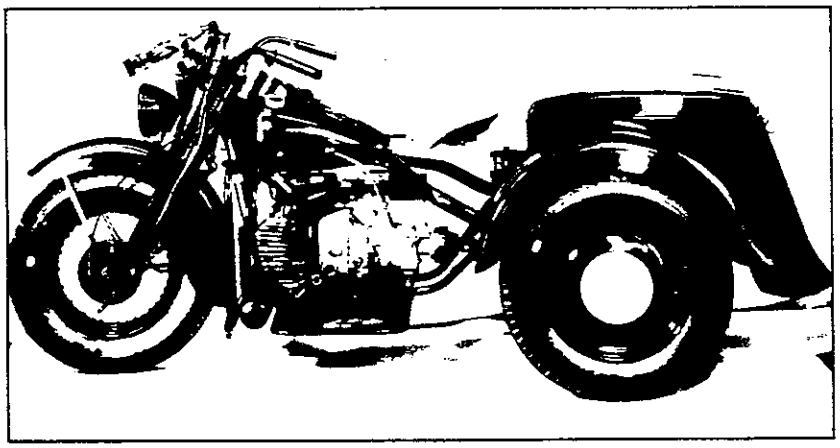
1,000 two-wheel shaft-drive cycles, to be built by H-D. To the credit of the factory, delivery of the last of these BMW copies was completed by July 1942, as promised.

The two Army-Navy "E" awards given to Harley-Davidson in 1943 and 1945 for supporting the war effort were due in large part to the performance of thousands of 45 cu. in. machines, to the feeling among employees that victory over the Axis hinged on the quality of their work and to the second generation of management. In addition to turning out 88,000 cycles on which soldiers could depend during the period 1942–45, they performed such one-shot projects as secretly taking apart, assessing and somehow reassembling a Russian motorcycle for Army intelligence.

Walter Davidson died in 1942 and William S. Harley followed just over a year later. William H. Davidson, son of works manager William A., was named president on February 23, 1942. Like the founders, there was more to him than the initial impression: a shrewd, conservative and low-key man of intellect. This second-generation Davidson went to work for the company as a laborer in 1925, during his summers off from the University of Wisconsin. He performed the most menial tasks and learned to ride well enough to capture the prized Duck Pine Enduro on a 45 cu. in. machine in 1930.

Bill Davidson's recall of that event shows just how well the Harleys and the Davidsons got along. "On the final day, I had a good chance of winning," he says. "But the stopwatch I wore around my neck on a lanyard had hit my tank and shattered. So Bill [William J.] Harley [also competing on a factory bike] gave me his watch. With a working timepiece, I was able to win." That's the kind of support the Davidsons and the Harleys provided one another down through the years, enabling William H. to remain at the helm of a viable company into the seventies.

Founder Walter Davidson's two sons, Walter C. and Gordon, served in the positions of vice president sales and vice president manufacturing, respectively. Walter was instrumental during World War II in procuring materials that other factories couldn't seem to get. Never one to let strong language stand in the way of a good story, he did battle with an increasingly rebellious dealer network during the late forties and fifties. An excellent rider and duck hunting fanatic, he retired early when AMF came aboard. Gordon, too, had a good sense of humor but was more temperate with his adjectives. He mixed easily with hourly laborers and supervisors alike and, according to at least two long-time employees, was incredibly tight with the company's money. He died of lung cancer in 1967. Founder William A. Davidson's son, Allan, worked briefly at Harley-

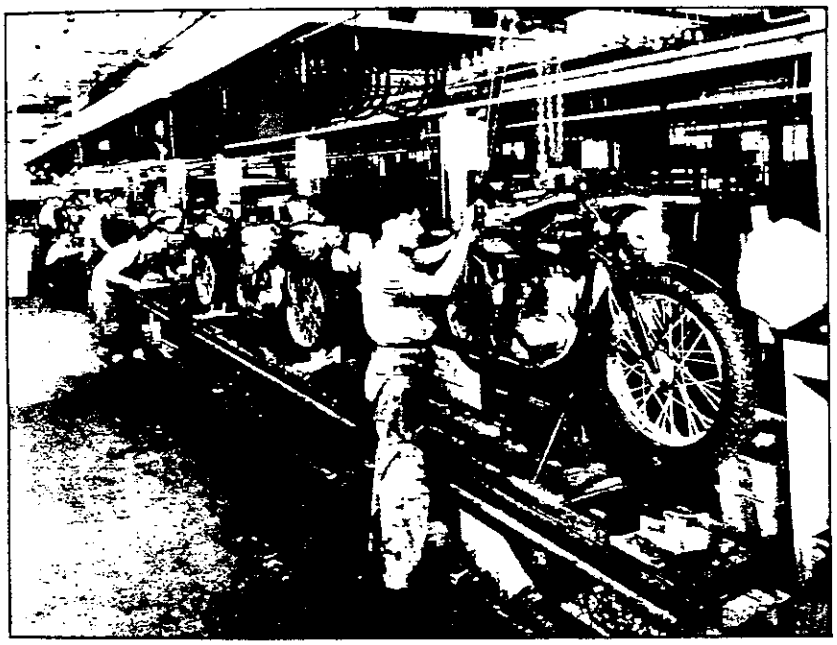


This 1944 photo shows a Servi-Car with the opposed-twin motor and shaft-drive transmission. The idea went no further than prototype stage, due to the declining popularity of the three-wheelers. (Harley-Davidson Motor Company)

Davidson and died prematurely. And Arthur's son, also named Arthur, carved a successful industrial career for himself outside the company.

The Harleys made important contributions, too. William J. Harley succeeded his father, William S., as vice president engineering. He worked his way through the ranks to the position, acquiring superior riding skill along the way. He also excelled in swimming as a young man and hunted ducks with the Davidsons throughout Wisconsin's greater Mississippi flyway. In later years, he became a connoisseur of wine and cheese, due in part to his frequent trips to Varese, Italy, in connection with Aermacchi motors. Assuming the title of chief engineer immediately following the death of his father, Harley was named a vice president in 1957, fourteen years before his death in 1971 from the complications of diabetes. His younger brother, John E., successfully ran the parts and accessories division for many years. Gentle, quiet and well liked, John's military school background propelled him into the U.S. Army during the Second World War, following graduation from Notre Dame. He rose to the rank of major, calling upon his years as an accomplished rider to help direct training of armored division motorcyclists at Fort Knox, Kentucky, and Fort Benning, Georgia. John was, like his brother and the Davidsons, a member of the H-D Board of Directors; ironically, he was never an officer in the company. A golfer, sailor and duck hunter throughout his life, John died of complications caused by cancer in December 1976.

Not even the then-monthly copies of *The Enthusiast* were produced in October 1945 as a forty-day strike descended upon the company. This job action resulted in delay of the 1946 model introduction until February 6, five months later than planned. Not that the '46 H-D's were anything new—the familiar 45, 61 and 74 cu. in. models were mechanically identical to their prewar brethren. Addressing the Board of Directors, President Davidson noted, "We will not be able to produce any radically new, postwar models



The post-WW II single-cylinder 125cc two-stroke on the assembly line in late 1947. This model was copied from the German DKW cycle, as was the English BSA Bantam. Note union membership button on collar of worker in foreground. (William H. Davidson collection)

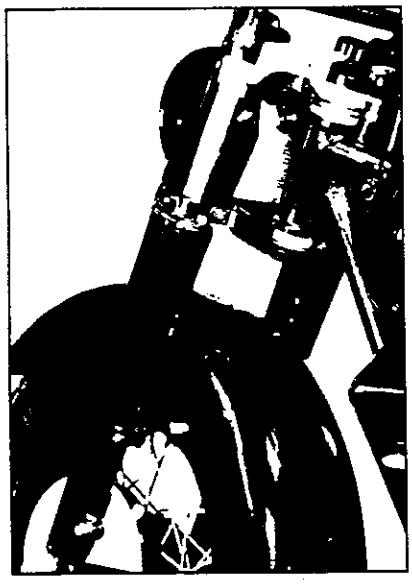
until the beginning of 1948." Despite material shortages that plagued Harley-Davidson until after the Korean conflict, 15,554 bikes were produced in 1946. Some 22,392 units were made in 1947, the last year of the 61 cu. in. and 74 cu. in. hemispheric combustion chamber Knuckleheads, as they later became known. Ambitious plans for new models were announced repeatedly throughout the forties to directors, though these models failed to pass the prototype stage. Among them:

—A Servi-Car with the horizontally opposed XA motor and driveshaft.

—Hydraulic front forks throughout the line by 1948.

—A vertical twin with shaft drive, hydraulic forks, rear suspension, rubber-mounted handlebars, foot shift, hand clutch and more.

The latter was a response to the introduction in some quantity of British twins, ridden with gusto by GI's fortunate enough to have been stationed in England. The sieve-like motors and marginal quality control of the British bikes were a tradeoff for handling that made Harley-Davidsons seem agricultural by comparison. Dealers, especially along the West Coast, who sought to take on a line of British cycles, increasingly popular scooters or motorbikes such as the U.S.-made Servi-Cycle were all but terrorized by old Arthur Davidson. "If they divide their time," he told directors in 1947, ". . . we'll eventually replace them with exclusive dealers." Any long-term thoughts on a vertical twin produced in Milwaukee were shelved in the wake of the experience of the Indian Motocycle Company, H-D's only remaining domestic competitor.



Experimental hydraulic forks on a 1946 model. No details are available. (Harley-Davidson Motor Company)

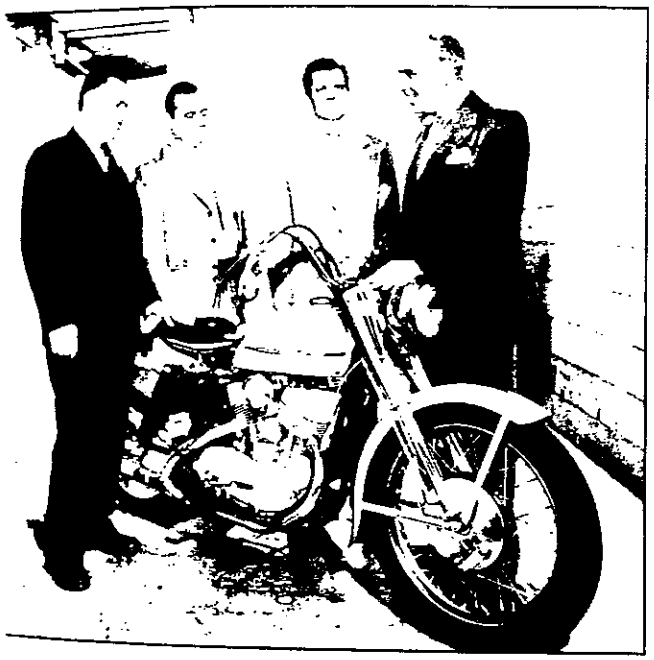
Arthur Davidson congratulates rider Joe Weatherly after the latter won the 100-mile national road race at Laconia, New Hampshire, in 1949. Arthur remained active with the company until his death in an auto accident in late 1950. (William H. Davidson collection)

Indian appears to have had the same hot-and-cold fascination with middleweight bikes. The fascination eventually proved fatal. According to Ted A. Hodgdon, Jr., son of a long-time Indian principal, "Since 1930, Indian had been examining lighter English design engineering. The experimental shops at Springfield [Massachusetts] contained examples of these machines, such as Norton, Matchless, Velocette and Triumph. These products . . . influenced the Prince single of the thirties. While a good enough little motorcycle, it did not sell well. It should have been a warning, but the lessons of the Prince went unheeded in Springfield." Following World War II, a line of middleweight vertical twins was emphasized, with the traditional heavyweight Indian V-twin carried only as an afterthought.

"Nearly all of the 'new' machines failed quickly and resulted in massive warranty claims," Hodgdon reports. "The small displacement and fragile Arrow and Scout rewarded rough treatment by promptly reducing themselves to junk. . . . Word quickly spread and diehard devotees switched their loyalties overnight. The traditional V-twins—carryovers from prewar design—were good motorcycles and enjoyed some success, but the damage had been done. . . . Production on the offending designs ceased and stopgap imports were sold under the Indian name for a few years. It was not enough, and the wigwam folded." The final irony occurred in 1970, when Taiwanese bikes with the Indian nameplate on their tanks were offered to Harley-Davidson. AMF did not seriously consider the offer.

By the end of 1948, the company was installed in the former A. O. Smith propeller plant on Capitol Drive in west suburban Wauwatosa, Wisconsin. The 269,000-square-foot, single-story facility was purchased two years earlier for $1.5 million to meet anticipated demand for postwar models, such as the 1948 big twin models with hydraulic lifters and the 1949 Hydra-Glide, the first Harley offered with hydraulic forks. For a couple of years in a row, officers badly misjudged public appetite for cycles; sales in 1949 totaled 23,740 units, versus an anticipated 43,250.

A year later, H-D pointed out to the U.S. Tariff Commission that foreign cycle sales amounted to nearly forty percent of new registrations. The company requested a



The handsome but sluggish 1952 K model is sized up by, from left, Gordon Davidson, vice president manufacturing; Walter C. Davidson, vice president sales; William J. Harley, vice president engineering; and William H. Davidson, president. (William H. Davidson collection)

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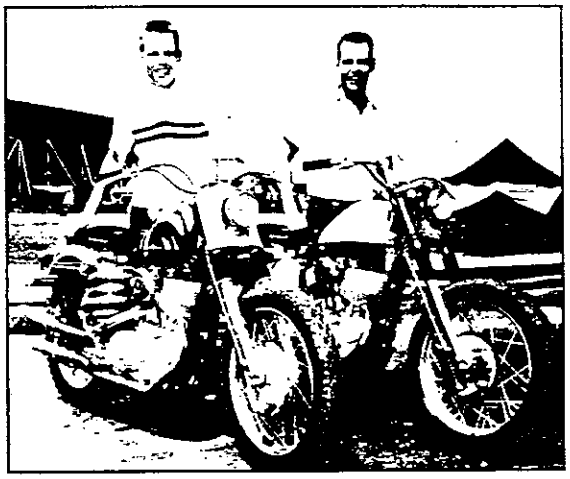
fifty percent hike in the tariff on foreign makes. Joined by United Auto Workers and Cushman scooter executives, H-D principals argued their case in Washington, but to no avail. The commission voted four-to-two to allow trade to go on as before, in part because the former Japanese distributor for H-D, Alfred Child, provided damaging testimony concerning Harley-Davidson's inability to accurately gauge the domestic market or placate its dealers. The importer of British BSA's at the time, Child apologized for the damage years later. "Sorry, Bill," he wrote William H. Davidson, "but my future depended on being able to carry on my business."

Business was on the mind of the Federal Trade Commission at about the same time. Harley-Davidson was found guilty of preventing its dealers from selling competitive lines of vehicles and accessories. From this decision, together with dealer protection laws designed initially for car dealers in every state, Harley-Davidson franchise holders today are an independent group. The company's current attitude, according to John Finstad, field sales manager, is simply to make sure that H-D's get their share of the dealers' time and talent.

Other phenomena were occurring beyond the company's control. In 1947, members of a Hollister, California, civic organization playfully dumped a questionable substance out a second-floor window onto a group of cyclists in town to attend a race. The riders overreacted, squaring off with the town toughs, then turning on virtually anybody who happened to be on the street. The wire services and *Life* magazine picked up the story, complete with vivid photos. That riot, immortalized in Stanley Kubrick's 1953 movie *The Wild One*, starring Marlon Brando, made cyclists paranoid and appeared, to non-riders, to split all riders into only two camps. One side seemed bent on improving cycling's image; its trademark was a tidy, full-dress touring bike. The other side struck the public as an outlaw element, riding bikes in various stages of modification, ready to perform violent or outrageous behavior. Motorcycling needed fresh air. It blew in unexpectedly from the Far East.

Japan's obliterated economy was very generously primed by the U.S. immediately after World War II. Following a period when Japanese trinkets were scorned as shoddy and in poor taste, a number of quality products were exported worldwide: cameras, stereo phonographs, tape decks, television sets—and motorcycles. The Japanese cycle invasion began innocently enough about 1960 with a 50cc Honda; at the opposite end of the spectrum from either the British sports bikes or the rock-solid Harleys. These Oriental machines found favor with housewives, students and others who might or might not graduate to larger, faster, two-wheel transportation. When riders who wanted more were ready, so were the Japanese, producing larger, faster and more expensive motorcycles every year.



Young Bill ("Willie G."), left, and John Davidson with their tricked-up K models in the summer of 1953. Both are the sons of William H. Davidson, retired H-D president. (William H. Davidson collection)

Earlier, following introduction of the K model in 1952, which competed sans success with the British vertical twins, Harley-Davidson was in dire straits. Consultants confirmed Gordon Davidson's contention that, "unless we lower the boom in very drastic fashion on every phase of our operations, we are headed for very serious trouble." Part of the problem appears to have been an unwillingness to sink back into the company a large share of the profits each year. Executive salaries were very low (only four company officers were paid more than $20,000 in 1950, for example), but shareholders were rewarded with dividends that frequently exceeded ten percent of the stock's value. A retired H-D employee guesses that this was a method of keeping all wages and salaries in line. "You couldn't very well ask for more money than the president of the company was making," he says. As a result, the possibilities of consolidating all operations in the Capitol Drive plant, then to moving everything back to Juneau Avenue, then to diversifying into such areas as snowblowers, lawn mowers, a motor scooter to be manufactured for Sears, even into air-conditioner compressors, were explored. Cycle production slid to 12,250 cycles in 1954 and 9,550 in 1955. H-D continued to turn a modest profit throughout the fifties before the new popularity of machines made the officers realize that there was a bike boom—worldwide and growing.

H-D's Post-War Models Committee, renamed the Development Committee, concluded on June 17, 1959, that the best way to introduce a middleweight motorcycle was to import. Of more consequence, the committee agreed to "give consideration to the 250cc model motorcycles produced by the motorcycle division of Aeronautica Macchi, SpA, of Varese, Italy." The committee decided against wedging Aermacchi motors into Sportster chassis, but to explore instead a joint venture with the firm.

William H. Davidson and his wife traveled to Varese in a circuitous route, visiting Europe's leading motorcycle manufacturers on the way. Following negotiations with Aeronautica Macchi (constructors, during World War II, of the respected Macchi fighter plane), H-D purchased half of the profitable Aermacchi cycle division for $247,209, a bargain even in those days. Financing was arranged through a Swiss bank and was expedited when a bank director confessed that he was a long-time H-D admirer. Net profits initially were estimated at $57,000 annually, based on the sale of 4,500 units in the 175–250cc class and 1,000 units in the 125–150cc class, plus spare parts.

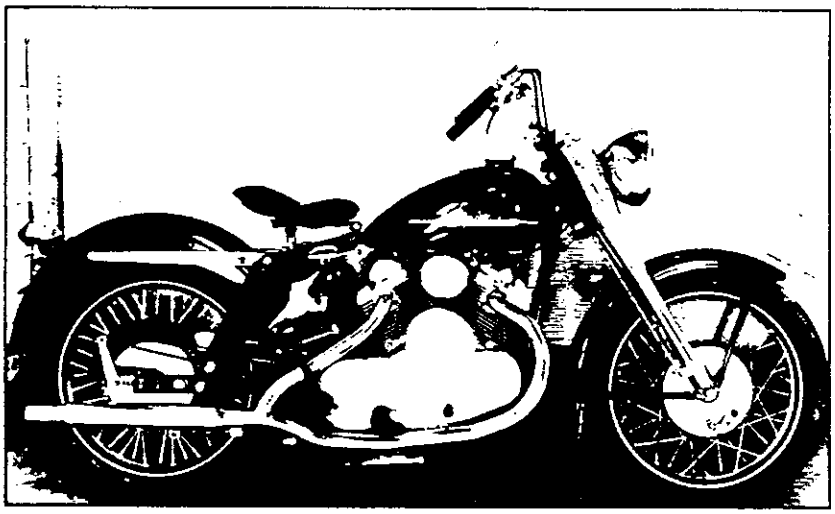
The first Topper scooter, surrounded by a Harley and three Davidsons. (William H. Davidson collection)

The long-sought, in-between Harleys were introduced in September 1960 for the 1961 season. Chief Designer Wilbur Petri, whose father had run the H-D tool room from 1914 to 1944, was sent to Italy as technical consultant and administrative advisor. Promised that he would spend just two years in the picturesque village separated from Switzerland by an Alpine mountain, Petri had to plead with management to bring him back to Milwaukee in 1967. During his seven-year tenure, he confronted electrical systems that never lived up to expectations and the complication of fitting U.S. handlebars, grips, levers and cables to the machines. Retired today after forty-three years with the company, the mechanical engineer defends the Aermacchi line. "They were well designed," he says.

Petri believes the failure of Aermacchi Harley-Davidson came about because AMF added a number of features without raising prices. "They thought they'd sell more units with more things on the bikes, but they were wrong. The machines became dated in comparison to the Japanese bikes." Also partially responsible for the demise of the Italian Harleys were the dealers themselves and the decision to switch the emphasis to two-stroke motors. Faced with the happy prospect of a superheated, Vietnam-era economy, H-D retailers consistently steered prospects toward the larger, U.S.-made machines. Asks Petri: "Would you rather sell a bike that nets $400 or $1,000?" John A. Davidson, son of William H. and president of the company at the time, announced on June 14, 1978, the closing of the lakeside plant near Varese.

The factory was purchased by Italian investors and in 1982 produced 40,000 machines, primarily off-road two-strokes. The Cagiva, as the motorcycle is called today, recently began to be imported into the U.S. So these Italian bikes now compete for the tougher-to-obtain discretionary dollar with H-D and all other makes.

But I'm getting ahead of the story. Let's examine more closely some aspects in the evolution of today's machines. . . .



The all-aluminum 45 cu. in. KL showed promise in the mid-fifties but development time for the machine ran out. The tremendously successful Sportster, introduced in 1957, took its place. (Harley-Davidson Motor Company)

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CHAPTER TWO
CONSTRUCTION

THE PUBLIC TOUR OF HARLEY-DAVIDSON'S YORK, PENNSYLVANIA, ASSEMBLY PLANT FOLlows time spent in the Rodney C. Gott Museum, and maybe that's unfortunate. Most visitors enter the plant with their heads full of obscure facts and a lingering mental picture of Cal Rayborn's KR or Joe Petrali's record breaker. But to truly appreciate the assembly facility, it's best to start with a clean slate.

The receiving warehouse is the marshaling area for H-D engines, transmissions and fiber glass, all transported from Milwaukee or the fiber glass plant in Tomahawk, Wisconsin. It's also the place where pieces produced from suppliers are stored—wheels, castings, forgings, batteries and more. Formerly the site of a ponderous inventory system connected by a 3½-mile monorail, the warehouse is infinitely less filled than one would suspect. That's because H-D switched in 1982 to the MAN (materials as needed) technique of assembly. This "major manufacturing innovation," wherein very low inventories are kept, puts H-D in the forefront among U.S. manufacturers. It hinges, simply, on all parts for a motorcycle arriving in York almost immediately prior to assembly. The major benefit has been a several-million-dollar savings in inventory.

A number of preassembly jobs are accomplished elsewhere throughout the plant. Among them:

—Chrome plating. Hardware is buffed and polished here, then loaded in racks. The process, from bare metal to completion, takes approximately ninety minutes, beginning with a coat of nickel and ending with glistening chrome. Tank probes sense temperature, pH content and contaminants as parts are lowered into and raised from the toxic solutions. Monitored on a console, this system of reverse osmosis units and scrubbers allows for ninety-nine-percent use of the heavy metals in the solution. Polishing is done with three automatic machines, polishing jacks and tumblers.

—Machining. A bewildering array of pieces is machined, often in widely separated areas, throughout the plant. Parts involved include primary chain housings, brake discs and starter components. Housings arrive in York as rough castings and are

machined, inspected and surface finished. Brake discs show up as blanked, circular pieces of metal and are turned to precise diameters, then hardened using magnetism and extremely high temperatures. After that, they are machined, ground and inspected for porosity and hardness. As many as sixteen distinct operations are performed on starter components by numerically controlled machines that preclude having to turn or remove the components.

—Screw machining. Steering-head bushings, axles, linkages and special screws are created from twenty-foot lengths of steel bar or hex stock, with automatic machinery.

—Grinding. Surface, cylindrical and centerless grinders precision machine h hardware as starter shafts, axles and crankpins.

—The presses. A battery of sixty-ton presses, many equipped with automatic feeders, stamps out components such as brackets, gussets, shims, battery clamps and tank and fender blanks. Even larger presses, rated as high as 1,000 tons, deep-draw such items as gas and oil tanks, fenders and air-cleaner housings. Blanking presses stamp out parts such as drive sprockets from stock as thick as [illegible] in.

—Wheel assembly. Wire wheels, consisting of hubs, rims and spokes, are laced and tightened by hand. They are then torqued in concentric holding fixtures and trued to specifications in indicator fixtures. Brake discs, drive sprockets, tubes and tires are installed prior to final balancing.

—Welding. Various subweldments are fabricated and the frame is assembled and welded in a single, continuous line. This change since 1982 has improved quality

Five-speed transmissions await shipment from the Capitol Drive plant to assembly in York. (David Wright)

80 cu. in. motors (left) and 61 cu. in. Sportster motors await shipment to York following assembly at Capitol Drive in suburban Milwaukee. (David Wright)

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without altering materials. Gas and oil tank stampings are welded together, hydrostatically tested, then buffed and polished. All welded parts are inspected prior to transfer to the paint facility. They join all first-piece, final assembly and new product parts at the main inspection station, peopled not by robots but by real employees using micrometers, gauges and their trained eyes.

—Electrostatic painting. Following phosphatizing, the tanks, fenders and frames are conveyed through a series of electrostatic paint booths in which charged paint is applied to grounded hardware. Each coat, whether primer, color or acrylic enamel, is oven-dried at 300°F for twenty minutes prior to the application of the succeeding coat.

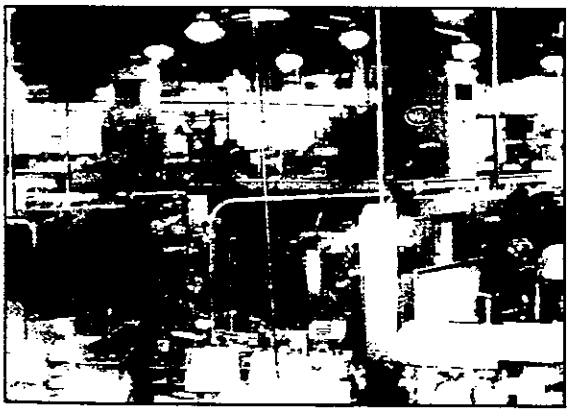
—Masking and pinstriping. Tank and fender masking and pinstriping are accomplished largely by hand, using templates and paint pencils, in a dust-free environment. Decals are applied entirely by hand, aligned only by experience. The tanks and fenders then are returned to the paint shop for another coating of acrylic and baking. Meanwhile, minute parts of frames that have resisted the electrostatic process are touched up by hand. "A lot of companies would like to get the kind of finish we put out," says George Kragel, York's recently retired public relations manager and former guide on the tour of the museum and the factory.

—Subassembling tanks and fenders. Front fender supports, license plate brackets and tail lamp assemblies are affixed to the fenders.

Now we're ready for a stroll down the assembly line. . . .

A bare frame begins its trip accompanied by a Vehicle Identification Number (VIN). Assembly will take place at seventy-two stations in less than two hours, resulting in as many as 160 motorcycles in each eight-hour shift. Assemblers trained in statistical process control are stationed at key points along the line, ensuring that each part is properly attached. Final inspection at the end of the line will determine whether the bike is interned in the "Harley Hospital" for minor repairs by trained mechanics, or if the machine is ready to be road tested and shipped. The road test is like nothing ever performed in the enthusiast books.

The finished, inspected H-D is wheeled into a concrete booth, hooked to a remote battery, to instruments and to ventilation equipment. The test rider climbs on, hits the starter button and the engine roars to life for the first time since it was tested in Milwaukee. This simulated road test, conducted on a roller stand that is powered by the rear wheel, lasts approximately five miles. Nearly thirty tests are conducted, including going through the gears to a "speed" of 60 miles per hour and testing such crucial functions as braking, suspension, lights, even the horn. The rider is backed up by an array of instruments that records sound level and such subtleties as the amount of vacuum in the transmission. Following this subjective and instrumental once-over, the bike is rolled forward a few feet for crating and shipping in the company's own fleet of trucks.

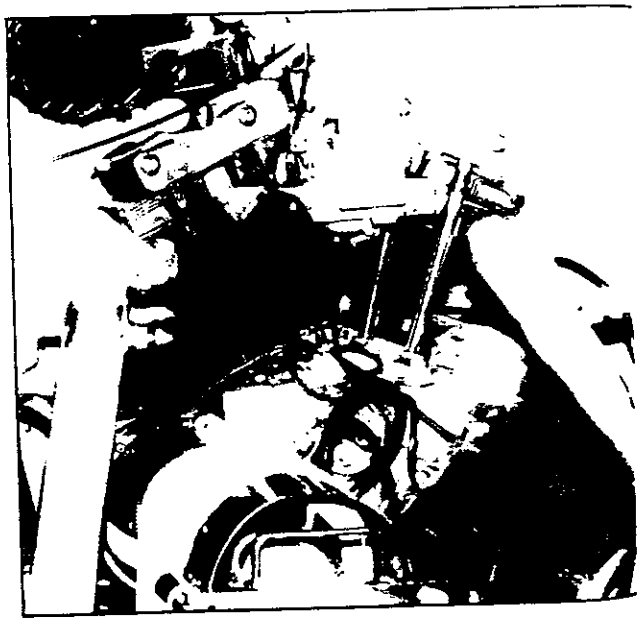


The most expensive piece of machinery ever purchased by AMF, worth $4.5 million, takes up hundreds of square feet in the Capitol Drive plant. The machinery makes five-speed transmissions. (David Wright)

Harley-Davidson converted the exciting but inefficient aerial inventory to the MAN system in mid-1982. The results have included dramatic savings at a time when the money saved can be put to better use elsewhere. Chairman Vaughn Beals told dealers of this new parts binning plan in 1982, citing it as one of several ways in which the company is attempting to save money. Special mention should be made of H-D suppliers, who cooperated in the low-inventory venture following a "summit conference" between the factory and many of its 700 or so suppliers in May of '82.

So much for the assembled machines; what about the assemblers? Ralph Swenson, who formerly headed the York plant, says, "This part of Pennsylvania produces people who are proud of their work ethic. Twenty years ago, this was a farming county. It created people who were good with their hands. We conduct training, but no one can teach an attitude, to be interested and concerned about your work. These people are." Swenson adds, almost as an afterthought, that many of the assemblers, welders and machinists are also riders.

Hand in hand with the MAN system has come statistical process control and statistical operator control. Seventy-five percent of production employees have been trained in one or both systems and they employ their knowledge in quality circles. Costs have decreased and quality has climbed, says Bob Conway, manager of the York quality audit program. Independent of the quality control processes, Conway and his people have gone from the need to audit all bikes in 1978 to subjecting only two or three percent to two-and-one-half hours of testing today. The difference is quality control. "We don't have a check list," says the Pennsylvania native. "It's open season—we can do anything we like to the bike." The initial going-over takes place on the bench, where anything except major disassembly is permitted. The air cleaner is unbolted, a finger probes for imprecise alignment of a gasket, the fit of the gas cap is checked. Failing to find any flaw of significance here means that the bike is ridden just to the east of the plant to the one-mile test track. From fifteen to thirty miles of acceleration, braking, handling and related functions are performed. The ribbon of asphalt is more than a mile long and winds amid rolling hills, pine trees and the tall sandbag bunkers used to test explosives by former occupants of the York plant. Speed and distance depend on the season, but the bikes are audited in rain and light snow. Following their tour through the countryside, cycle and



An XL motor is put through its paces on a Capitol Drive dynamometer. Recent installation of additional dyno's has helped make the 1,000 and 1,340cc motors more trouble-free than ever prior to shipment to York for installation. (David Wright)

rider meet again for a final inspection of cosmetics. Discovery of a flaw gives Conway the authority to halt shipment on as many bikes as are suspect.

"We've found a number of problems that, left unsolved, would have resulted in a major product recall," he says. "For example, we discovered a bearing problem in a transmission out there on the test track. Fewer than 400 bikes with that transmission had been sold, so we were able to make the repairs quickly through the dealers or in our factory inventory while the engineers made a minor design change."

"The dealers still may find a 'onesy-twosy' flaw, but they no longer have to touch the engines or the transmissions," says Conway. "Their warranty work was decreased markedly."

A similar effort is under way in Milwaukee at the engine transmission plant. Dynamometers, each worth $122,000, recently were installed to run a small batch of engines for approximately thirty minutes. Two engines each day will be run longer, for horsepower checks, then disassembled. "We'll test the engines in some chassis there, too, so that we can see how the engine, transmission and frame interrelate," according to Conway. "The tests in Milwaukee will tell us things that are awfully hard to detect, such as when a drill is getting dull. A small thing like that can affect the performance of a transmission."

Bob Conway and his assistants feel they paid their dues prior to taking over the quality audit program. Conway spent five years as a mechanic in the Philadelphia area before signing on in 1970 as a service representative. He left the company in 1974 to manage a dealership, returning to H-D in York in 1976 to develop the audit program. He recruited a number of skilled mechanics and riders, inside and outside the company, for the audit team. Steve Parker, a top tuner in National Motorcycle Racing Association drag meets, joined H-D York, as did Ronnie Alexander, a freelance road racing mechanic of

An 80 cu. in. (1340cc) motor is tested on a dynamometer prior to shipment to York for assembly. (David Wright)

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such stature that he worked exclusively on the late Cal Rayborn's pavement XR's in the early seventies. (Alexander, by the way, has his own computer and dynamometer. He leaves work most evenings to tinker at home with the V-twin.) Dick O'Brien, H-D retired race team manager, still remembers Conway traveling as far away as Laconia, New Hampshire, on his own time and money, to help the factory team prepare for a national race. Says O'Brien: "Conway is just doing one hell of a good job out there." That's quite an endorsement from a person who spent thirty-five years working exclusively on hand-built racers.

Harley-Davidson engines and transmissions, plus a few specialized parts such as clutch and power train components, are created and assembled at the Capitol Drive plant, in the Milwaukee suburb of Wauwatosa. These components are not shipped directly to York, but instead are delayed briefly at Juneau Avenue, where high-temperature paint is applied to the engines. (Except for hand assembly of the XR racers, the engine painting procedure is the only link that remains between Juneau Avenue facilities and any actual assembly.) The Capitol plant is run by Thomas A. Gelb, vice president operations, who somehow parlayed a bachelor's degree in forestry into a very successful career that began with the privately held Harley-Davidson company in 1963.

"When I joined the company, all of the assembly took place on the third floor of the Juneau Avenue plant," Gelb says, recalling that the semicompleted motorcycles were moved on elevators from floor to floor during production. Engine assembly was moved from Juneau to Capitol in 1972, even before the line was constructed in York. "We had the company's first powered assembly line," Gelb reports. He and Chairman Vaughn Beals said in separate interviews that the increasingly oil-tight, rattle- and trouble-free H-D's of today are the result of generous investment in contemporary tools and machines, at Capitol Drive and elsewhere, during the AMF years.

One rambling piece of equipment in the middle of the Capitol Drive building automatically machines the cases for five-speed transmissions. "That cost $4.5 million, the largest single piece of machinery ever purchased by AMF for any of its operations," according to Gelb.

All Harley-Davidson frames are welded not by robots but by skilled employees at the York assembly plant. (David Wright)

Harley-Davidson disc brakes are attached to wheels by hand prior to assembly. (David Wright)

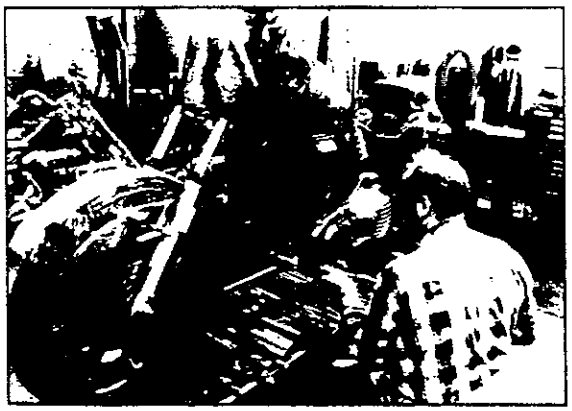
Approximately 1,000 persons are employed at Capitol Drive, with assembly taking place on a single shift and machining work on all three shifts. In addition to being the site for one of the largest heat-treating facilities in Wisconsin, the plant fronting U.S. Highway 41 has a just-completed engine quality program. A new kind of dynamometer checks the reliability of engines and transmissions, while technicians tear down and inspect the functions of those units. The results are an audit score that is passed on to quality auditors in York—and far fewer engine problems than in the past.

Though he has been with H-D more than twenty years, Gelb probably represents the kind of supervisory employee that will become more common in the now-independent H-D. A compulsive worker, he ceased riding or driving anything rapid after starring in an end-over-end accident during a sports car race in 1968 that still has old-time fans talking at the Mosport, Ontario, road racing course. "I have small children. I had to quit while I was in one piece." The two-time regional driving champion has turned cautious in the extreme—he no longer fishes much in Lake Michigan because the trophy-sized salmon similar to the taxidermy sample on his office wall contain questionable levels of hazardous chemicals. Such an attitude is, he hopes, reflected in the engines he ships to York. Appreciation for Gelb's outlook became evident at the culmination of the well-publicized buyback ride—from York to Milwaukee in 1981—when Vaughn Beals elevated the uneasy rider to his current vice presidential position.

"You wouldn't recognize the engine plant today," Gelb says. "The new quality control system eliminated virtually all of the inspectors. We've learned during this 'five-year' conversion that rewards are a very long time in coming. But they're larger than we anticipated."

The program has reached Harley-Davidson's fiber glass components plant in Tomahawk, Wisconsin, some 250 miles northwest of Milwaukee. When Harley-Davidson purchased the Tomahawk Boat Company in 1963, fiber glass was laid up by hand in a female mold. The following year, the use of compression molding equipment, which involved injection of fiber-glass-reinforced plastic into male and female molds and heat curing, was begun. The $250,000 in equipment paid for itself in six months, despite the fact that the products created in those early years wouldn't stand up to close scrutiny today.

Purchased primarily to create golf car bodies and for sidecars and Servi-Cars, the equipment was first used for saddlebags and fairings in 1969. Compression molding and the consequent heat curing caused the product to shrink by about six to eight percent. That shrinkage exposed the fibers in the material. The molded components were painted a matte finish, either black or white, that effectively concealed the minute fiber strands. So far, so good—until the late-seventies.



Minor repairs are performed in York's "Harley Hospital," an area just off the assembly line where troubleshooters sort out any imperfection. Note protective plastic on painted parts. (David Wright)

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Harley-Davidson at that time began to offer TourPaks, saddlebags and fairings to match bike colors. Dealers and customers alike complained with validity that the adornments were not as well finished as either the competition's accessories or the many aftermarket products available. "It wasn't orange peel, but it didn't look right," says a former employee. Then, in 1980, the Japanese entered the touring-bike market with rim-molded fairings and bags. The only way H-D could compete was to use lots of sandpaper and primer. Results were expensive and inefficient. The company then formulated its new stance toward quality with the introduction of low-profile fiber glass resin.

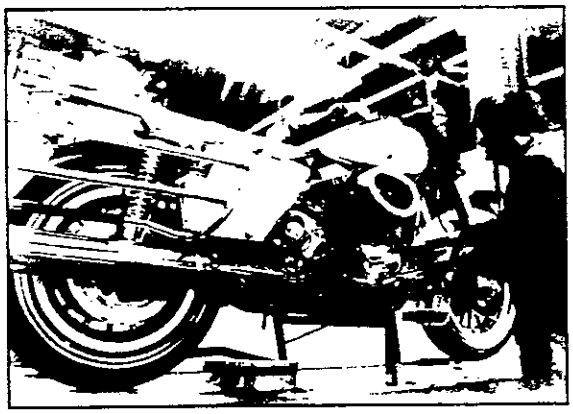
Shrinkage of the material is about two percent, effectively concealing the hairlike pieces of fiber glass. Efforts to make the accessories more closely match the bike were redoubled, with the result that criticism has come 180 degrees. "The finish is no longer a problem," says Robert S. Zawtocki, director of the Tomahawk plant. "We now apply urethane from either Cook, PPG or Sheboygan Paint Company to a greatly improved surface. These urethanes are also improved and they take clear coats well. Paint specifications are subjected to the statistical control program."

Not even the metallic colors cause problems, despite the fact that they formerly showed a lot of "flip." That means the paint appears to change color depending on the amount of light and the angle from which it is seen. Every color comes from a target paint sample created by the styling department. Each paint company then has to match the sample. The goal of styling, construction and assembly is to create a finished product that looks uniform, even if tiny formula adjustments have to be made in York or in Tomahawk.

All of the motorcycle products that emerge from the plant are styled by Willie G. Davidson and his H-D associates. The vice president has worked with mold makers to create distinctive parts and accessories for the bikes. Initially, Willie G. even created some new boat designs for the Tomahawk division. Weather willing, a local resident may spot one of Willie G.'s personal machines parked near the building on the east side of town.

Tomahawk isn't the end of the earth, but you can get a good view of it from there. A summer vacation destination, the year-round population shrinks like fiber glass under compression to just 3,400 hardy residents in the winter, when temperatures of forty below zero Fahrenheit are occasionally recorded. Like their Milwaukee counterparts, the ninety hourly employees are members of the Allied Industrial Workers union. There is no piecework and visitors frequently are surprised at the pace the workers maintain.

There's one more Harley-Davidson facility that should be noted. Since January 1981, the company has operated road testing facilities at the Talladega (Alabama) International Motor Speedway. Durability, Environmental Protection Agency emissions testing



A quality audit is performed on an Electra Glide Classic. The audit involves a two-and-one-half-hour test and inspection. (David Wright)

and high-speed handling are carried out. More important, prototype models are run over railroad ties and concrete rub strips to test new frame designs. Approximately forty employees on two shifts man the leased facility, where tests continue through rain, snow and the eleven-degree weather experienced in December 1981.

Two H-D employees prepare the mold for a new sidecar. (David Wright)

A model maker in the Tomahawk, Wisconsin, fiber glass plant, works on an original fairing mold. This fairing is featured on the FXRT. (David Wright)

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CHAPTER THREE

IRON

SINCE THE FIRST EDITION OF THIS BOOK WAS PUBLISHED IN JULY 1985, THE HARLEY-DAVIDSON Motor Company has made many major changes. None was more dramatic than the introduction for the 1986 model year of the 883cc Evolution Sportster. The Sportster, within less than thirty years, has evolved from a fast but cantankerous macho machine to (at least in its present form) a civilized introduction to the world of Harley-Davidson.

Other user-friendly items that have evolved in the 1980's on some or all bikes include efficient new crankcase, crankshaft and top-end components; computer-designed frames; spin-on oil filters; low-maintenance batteries; belt drives; electronic ignitions; performance suspension packages; and more. These features have resulted in a reduction of warranty claims by more than twenty-five percent—despite longer service intervals and a warranty that now covers twelve months of unlimited mileage. Today's Harley-Davidson, then, has become more sophisticated by decreasing complexity. That's quite an accomplishment, when you think about it.

In sizing up the mechanicals over the years, it's important to recall which innovations showed up when on the Milwaukee machinery. Here is a preface to reports on the individual bikes that includes such information.

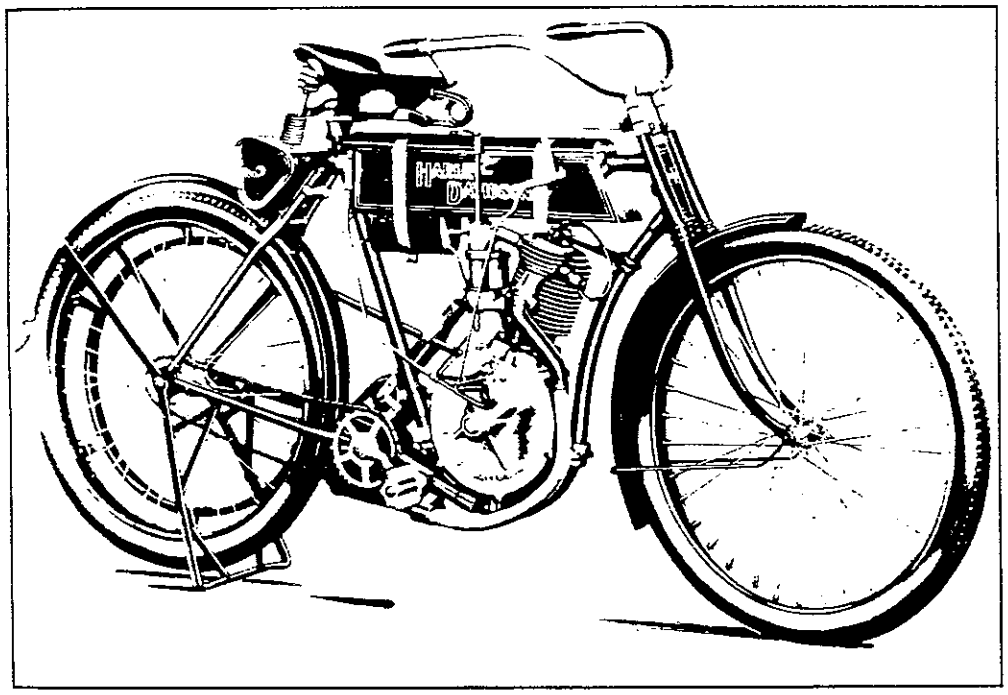
The very first motorcycle model was manufactured from 1903 through 1905. It featured a 25 cu. in., three-horsepower motor that drove the rear wheel directly via a single loop of leather. In 1906, cubic inches climbed to 35 and horsepower to 4 by way of a larger bore. The following year, 1907, marked the appearance of the first bottom-length springer front end. Crude as this suspension system seems today, it was hailed in the young industry as a breakthrough in combating the country's rutted roads and was grafted onto all kinds of racers. A battery ignition was seen as early as 1908, offered on the single as an alternative to the Bosch magneto.

There is proof positive the Harley-Davidson had a working V-twin as early as 1907. However, not until 1911 was the twin perfected. An exhaust valve on the side of the cylinder created an exit for spent fuel, giving rise to the term "ioe" or inlet-over-exhaust

configuration. Many have speculated on the 45-degree arrangement and 61 cu. in. size of the initial twin. The shape of the motor may well have been determined because it was the ideal depth to fit between the frame's front down tube and the seat tube. As for capacity, engineer William S. Harley probably picked 61 cu. in. because it could be constructed using two of the single cylinders and because that displacement worked out to 1,000 cubic centimeters. Sixty-one cubes were viewed by contemporaries as the ultimate reasonable size for motorcycle engines.

The company has shown a willingness to continuously improve its products down through the years; call that evolutionary if you will. H-D made its singles and V-twins more comfortable in 1912 by offering the first seat post, a patented "Ful-Floteing" device that cushioned the seat with a spring inside the seat tube. In rapid-fire succession, Harley-Davidson offered a clutch (1912), chain drive and a single-speed transmission (1913), internal expanding rear brake, gas lights, side cars and a two-speed transmission (1914), an electrical lighting system (1915) and a three-speed transmission the same year. World War I was but a pause in technological terms. The 1918 models displayed optional hand-operated rear brakes, while 1920 bikes featured Harley-Davidson's own electrical systems; the latter were created as an answer to the dampness-prone Remy units and set standards for quality electrics for a decade. Few of the features were found on the direct-drive racers of the day, indicating that looking after the street rider was a company priority. Harley-Davidson emerged from the teens as the world's largest motorcycle company simply because its products worked better than those of the competition.

Motorcycles, like all mechanical contrivances, reach plateaus, and such a leveling off seems to have occurred in 1922. That was the year before the demise of H-D's unique 37 cu. in., 180-degree opposed twin Sport model, created in 1918. The company produced a new series of 74 cu. in. motors, the JD, in 1921, then opted for refinement rather than revelation through 1925. Styling became a factor, initially evident in 1925 when the



The first Harley-Davidson. It is now believed that just one motorcycle was produced in 1903. (Harley-Davidson Motor Company)

then-new H-D's sported teardrop gas tanks. This new look worked especially well in 1926, when the company re-entered the lightweight field in a burst of new technology with 21 cu. in. models in either flathead or overhead valve configuration. The homework done on the flathead was to stand Harley-Davidson in good stead.

Meanwhile, the company produced a high-output motor, even though H-D no longer financed a factory team. The 61 cu. in. two-cam began showing up in hillclimb and flat-track winner's circles in 1925. Its success resulted in production in 1928 and 1929 of only 61 and 74 cu. in. two-cam models for very sporting street riders. The first production front brake appeared in '28, but there was even bigger news the following year. Announced with twin headlights, the 1929 models included the 45 cu. in. flathead V-twin and the 30.50 cu. in. single. Singles stuck around in various forms—speedway racer, utility machine—until 1934, but the offspring of that first 45 flathead are with us still.

The 1931 bikes reverted to a single headlight and so were featured on the VL series, introduced in 1930. The VL's most interesting technical innovation initially was wheel interchangeability. By 1933, the full line of bikes sported incredibly colorful Art Deco gas tanks as the factory tried desperately to sell bikes to an unemployed public. The Servi-Car, powered by the 45 cu. in. motor, came out in 1932 and was offered two years later with a reverse gear added to the three-speed transmission. This innovation was optional on all V-twins with sidecars from 1932 through 1974, when Servi-Car production ceased.

Since times were tough, the introduction of several new models in 1936 was a gamble. Foremost among them was the Knucklehead, the first overhead valve V-twin. The new, hemispherical-head motor showed a recirculating oil system and a greatly improved, welded fuel oil tank. Companion models that memorable year included an 80 cu. in. flathead, the ULH, and the last VL, available with H-D's first four-speed transmission. Encouraged, the factory offered 74 and 80 cu. in. UL flatheads the following year, together with the first WL in the 45 cu. in. series. Generator and oil indicator lights showed up in '38, followed in '39 by a streamlined dash panel and in 1940 by the first metal nameplate and 16 in. wheels. This prewar burst of technology culminated in 1941 with the introduction of the 74 cu. in. Knucklehead, a classic among classics. Accented with metal tank strips, the '41 Knuckler is the most sought-after Harley-Davidson ever.

Paramilitary organizations and the police were the sole recipients of new civilian cycles during the war years. The ULH series 80 cu. in. motors were last produced in 1945, with civilian production resuming in November of that year. The public had to be content through 1947 with very minor alterations (such as cast aluminum tail lights and a new nameplate), but 1948 was an exciting year indeed. Hydraulic lifters beneath 74 cu. in. Panhead cylinders created interest, as did the all-new, 125cc two-stroke machine with the three-speed, foot-shift transmission. Few took note of the demise of the 74 cu. in. UL series after '48. Another surprise was in store in 1949, as H-D swapped the venerable springer front end for hydraulic suspension, dubbing such models Hydraglides and introducing the soft ride on a 61 cu. in. version of the Panhead. A smaller version of the same principle appeared in 1951 on the 125cc bike and was dubbed the Teleglide.

The evolutionary process was at work in 1952, as foot shift was offered optionally on FL Panheads and on the EL, even though '52 was the last year for that 61 cu. in. series. More important, the K model blended the heritage of the 45 cu. in. motor with European styling and a four-speed foot-shift transmission in a dramatic departure in thinking for the utilitarian W series engine. The company's first off-the-shelf scrambler, the KRM, followed in 1953, the final year for the 45 cu. in. motor aboard a two-wheeler. The 1954 KH sported a 55 cu. in. (883cc) motor, making the sporting bike as fast as it was stylish. Meanwhile, H-D continued to produce several 125-165cc machines, but the stage was set for a pair of momentous mid-fifties motorcycles.

The 74 cu. in. FLH came out in 1955 and, even with its rigid frame, was the ultimate two-wheeled choice for touring enthusiasts. The FL series has evolved dramatically in its twenty-eight years of existence, yet its long-haul, luxury essence remains unchanged. Equally momentous was the introduction of the Sportster in 1957. If the FL's

were the kings of the highway, the XL's were the studs of the street and strip. Overhead valves were the secret to the Sportster's thunderous performance. The following year, H-D made both the F and X series even more desirable: The former received a swinging arm frame and automotive-type shocks to become the Duo-Glide, while the latter was joined by the magneto-equipped XLCH (CH stood for "Competition Hot"). Overlooked at the time were such amenities as the new hydraulic brake on the 74 cu. in. cycle.

Nineteen fifty-nine marked the final year of domestic small-engine production, with the exception of the Topper scooter, which made its debut in 1960, the golf cart, produced initially in 1963, and the snowmobile, 1971–1975. Henceforward, all of the smaller powerplants were to come from the Aermacchi H-D plant in Italy. The mainstay bikes continued to evolve, with the Sportster receiving a full-width front brake drum in 1964 and the FL series acquiring a 12-volt battery, electric starting, a five-gallon tank and a new name, Electra Glide, in 1965.

The Shovelhead motor was created for the Electra Glide in 1966, displaying a top end reminiscent of the Knucklehead. This evolutionary step disposed of several external oil lines, trading iron for aluminum in the process. To celebrate an increasingly oil-tight motor, H-D created the 74 cu. in. King of the Highway bike, a machine that redefined the term "full dress." By 1967, Tomahawk fiber glass technology allowed the company to produce the Servi-Car with a glass body. The first fiber-glass-bodied sidecar came along in 1968, followed by similar treatment in '69 for the golf cars. (Incidentally, the first non-leather H-D saddlebags were white plastic and were seen on the 1953 K model, just one of several special offerings in that Golden Anniversary year). The classic FLH bar-mounted fairing first appeared in 1969.

The Sportster did not sit idle during the years preceding the merger with AMF. In 1968, the XLH received electric start, a Fairbanks-Morse magneto helped launch the XLCH, both XL models sported 150 mph speedometers and the large oval air cleaner showed up, courtesy of the federal government. By the following year, the twelve-year-old motor was producing 58 horsepower at 6,800 revs a minute.

Mid-year 1970 models bore the AMF logo, even though the designs were executed before the conglomerate acquired Harley-Davidson. The first model to be recognized, in fact, as an AMF bike was the 1971 Super Glide. More important, Willie G. Davidson did at the factory what riders themselves had been doing—he mated the XL front end to the FL frame and motor, producing an electric- (FXE) or kick-start (FX) machine that is a benchmark among H-D fans. The Super Glide proved that Willie G.'s idea of a dream bike was on target and that such a machine could proliferate models even more distinctive than the initial (optional) red-white-and-blue-bedecked Super Glide. Yes, the model carried the FX designation, indicating its descent from both series of machines.

Disc brakes up front became standard on FL models the following year, while the Sportster peaked at its present 61 cu. in. (1,000cc) size. If Harley-Davidson clutches and transmissions had by then become trouble free, shifting required some thought: Governmental insistence placed all shifting mechanisms on the rider's left for '72. XL machines ran discs up front initially in 1973, whereas, FX and FL models sported disc brakes front and rear. "King of the Road" replaced "King of the Highway," including such items as windshield, spotlights, front and rear safety bars, "Pak King" fiber glass bags, bag guards and a windshield bag. The 738-pound weight made for rock-steady travel during the last full year of 70 mph interstate highway speeds.

Motorcycles generally and H-D's specifically were becoming so desirable that leaving a bike unattended was risky. So the factory in 1974 installed an alarm system on all domestically produced machines. The Sportster, said a magazine, was its own worst enemy; the bike was so reliable that owners were neglecting routine service. Juneau Avenue did not neglect the 1976 U.S. Bicentennial celebration; both the FX and FXE Super Glides were available with special commemorative paint, and the Electra Glide could be had in a Liberty Edition.

Several new models were unveiled in 1977. The FXS Low Rider was a styling sensation, as Willie G. indicated once again that he and his cohort were on the cutting

edge of custom machinery. In contrast, the Sportster was made available in a striking, black XLCR Cafe Racer model, complete with all the canyon-carving amenities. While the Japanese were calling on a cadre of stylists and engineers, one small department in one small factory was beating them to the punch by several years. Also on tap from then to now were XLT's, XLT Huggers, XLS Roadsters, XLX's and XR's: each "Sportster" catering to a particular kind of rider.

The 1978 FLH became the first modern H-D with the 80 cu. in. (1,340cc) motor, just in time to join an optional XLH as a seventy-fifth anniversary model. There followed the Classic in 1979 and the present successor to the touring crown, the FLT Tour Glide, in 1980. The FLT, with its five-speed transmission, vibration-isolated motor and frame-mounted fairing, which contrasted well with the Low Rider, which acquired the 80 cu. in. motor in 1979, with the FXEF Fat Bob running the 1,200cc motor during its inaugural year in 1979 and switching to 80 cubes the year after. The laid-back Wide Glide, also running 80 cu. in., came aboard in 1980, as did the dramatic belt-drive FXB Sturgis.

The FXR came along, winning respect from bike magazines and luring Brand X touring riders into H-D showrooms with its European-style fairing. Riders bade the Shovelhead motor adieu after the 1984 model year, welcoming the Evolution and the 1100cc Sportster motor for '85. Special model introductions included the 1985 FXRC Low Glide Custom as H-D continued to prove that beauty was more than metal deep by offering demo cruises wherever a rider could plunk down a valid operator's license. All this caused the media and the public to respond—here and abroad.

V-twin imitations were exported in earnest by the Japanese beginning with the 1981 model year. If the economy had not taken such a downturn, perhaps Harley-Davidson would feel that imitation is indeed the sincerest form of flattery. As it stands today, the American rider is offered an Oriental imitation or a domestically produced V-twin at the peak of its development, with seventy-five years of experience behind it. Let's examine that experience on a bike-by-bike basis. . . .

The First Singles
1903–1911

The first Harley-Davidson was made entirely by hand. There simply were no engine blocks, transmissions or carburetors, aftermarket or otherwise, available. That first bike was a copy of the French DeDion motor, a single-cylinder device with a capacity of approximately 25 cu. in. (400cc) that put out 2 horsepower—the equivalent of a fast walk on level ground. There was no gearbox; drive was direct to the rear wheel by means of a two-ply leather belt hooked to a pulley. The belt encircled the rear wheel rim. To get the vehicle moving, the rider pushed up to compression, then jumped on and pedaled frantically till the engine fired. Despite the exertion and the lack of hill-climbing ability, Arthur Davidson and Bill Harley sold all they could create.

The head could not be detached from the lower end and was characterized by an induction valve stop. The downward movement of the piston sucked open this valve, admitting fuel, before the valve was closed with a spring. The exhaust valve opened and closed via cam action.

The next step, in late 1906, was to enlarge the motor to about 35 cu. in. (475cc) and to double the size of the flywheel, which Davidson and Harley knew affected the powerplant's inclination to keep turning. This single design element added greatly to the longevity of the early H-D's, while Harley's single-loop frame looked more like a motorcycle and less like a bicycle.

By 1908, the company had conceived its own model identification system, based on years of operation. The '08 machines were considered fifth-year models, since true production did not commence until 1904. Earlier, in 1906, H-D came up with its very first option: color choice. The standard, piano finish black was supplemented with a Renault gray/carmine striping combination that created the famous "Silent Gray Fellow" impression. H-D realized quickly that quiet mufflers were appreciated by the rider and the public alike.

Here's the lowdown on a very early H-D single, taken from company archives. Because Harley-Davidson seldom fooled with success, the 35 cu. in. motor was unchanged except for valve design from its creation through 1918, when it became available only on special, commercial order.

Specifications

From a brochure believed to have been printed in 1925. List price was $222, f.o.b. Milwaukee.

Motor: One piece cylinder, large-diameter flywheel, starting by means of pedaling or by a crank, crankshaft covered by aluminum cap when not in use.

Frame: Wheelbase is 51 in., frame height is 21 ½ in., extension front forks, 2 ½ in. detachable tires, spring seat post, three-spring suspension motor cycle saddle.

Carburetor: Automatic float feed enables engines to run from 5 to 45 miles per hour without adjustment.

Grip control: Allows the cyclist to control engine speed without removing his hands from the handles.

Transmission: A 1 ½ in. endless flat belt is used to drive the machine and is furnished with a 22 in. rear drive pulley and either a 4 ½, 5 ½ or 6 in. leather-lined front pulley. Idler so constructed that the belt can be tightened by the rider while the machine is in motion.

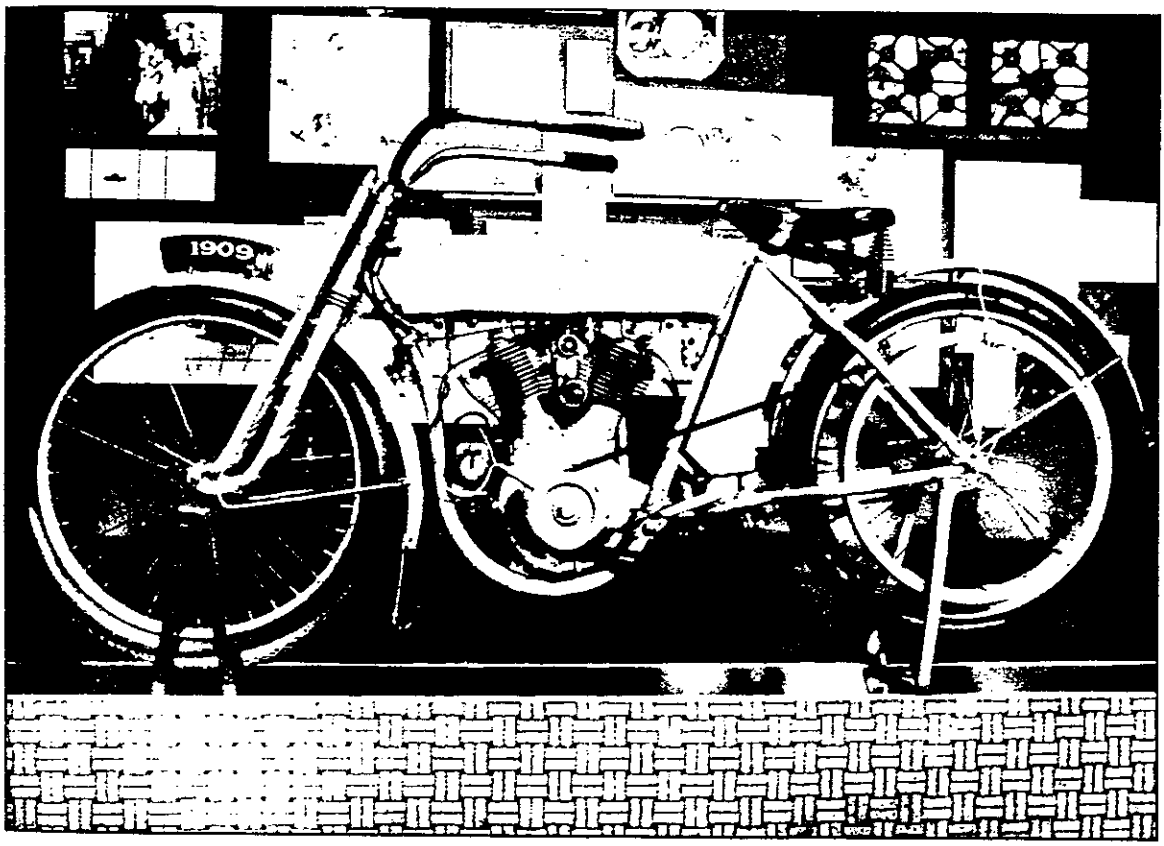
Tanks: Gasoline tank holds 1 ½ gallon, which is sufficient for 100 to 150 miles running. The lubricating oil tank holds two quarts and one filling is good for 750 miles. The oil is fed into the motor through a sight feed gravity oiler.

Muffler: Large enough to be noiseless with a minimum of back pressure.

Batteries: Three standard dry cells and a regular motor cycle coil 3 × 6 in. furnish the current.

Spark plug: ½ in. standard pipe thread; either mica or porcelain plug is furnished.

Tires and wheels: 2½ in. G&J detachable motor cycle tires are used, and the wheels are built up with steel rims and [illegible] heavy motor cycle spokes.



The first production V-twin, measuring just under 50 cu. in., was offered in 1909. This model featured the suction exhaust valve, an idea that worked only in theory before mechanical valves replaced them from 1911 onward. (F-22 Photography)

Hubs: The front is ¾ in. in diameter and the coaster brake is ½ in. in diameter.

Guards: Both braced by ¼ in. steel rods.

Finish: In black, grip control and all bright parts nickel plated. The aluminum casing is scraped and buffed to a high polish which does not tarnish or turn dull.

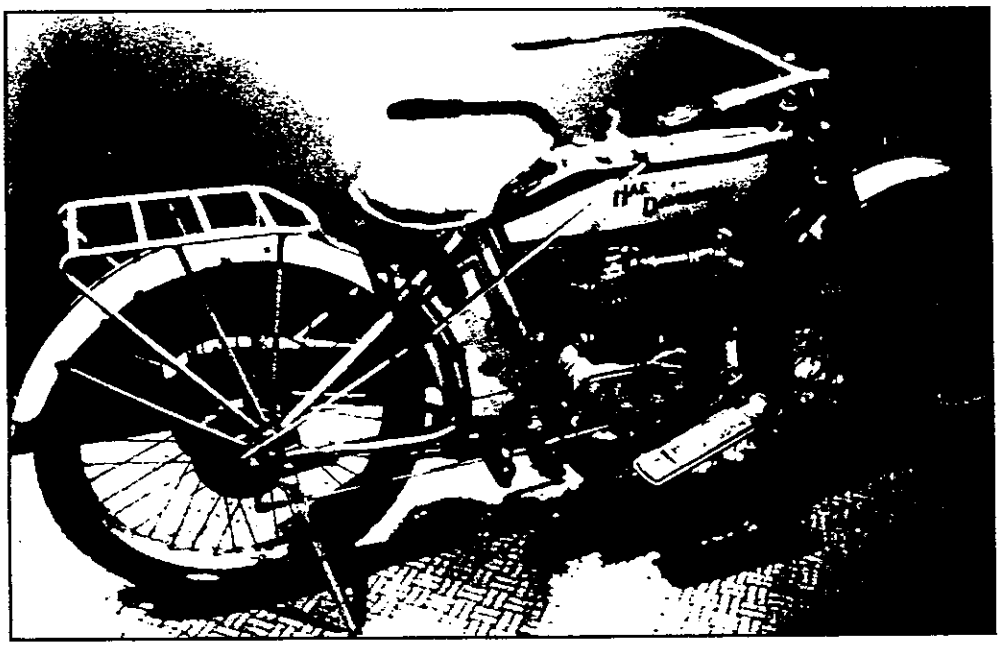
The V-Twin
1907–1921

The 45-degree V-twin, the very essence of Harley-Davidson down through the years, was first offered publicly in 1909. A response to the creation of multiple-cylinder models from Thor, Reading-Standard, Indian and other long-gone marques, the 7.2 horsepower behemoth was the forefather of every American V-twin now in production.

The most important engine difference between the very first V-twin, originally seen at a cycle show in late 1907 and produced through 1909, and the twins from 1911 onward, was the inlet valves. Suction valves were tried repeatedly and without success during the period 1907–1909, whereas mechanical valves were used for the later twin. There were no twins offered in 1910, a year devoted to solving the problem. Also, careful attention to the specs will show that the first V's didn't in fact measure up to the true 61 cu. in. capacity in the early years.

But the "6-D," as the model was initially dubbed, measured up in every other way. It sported a precision Bosch magneto (replacing a trio of dry-cell batteries, coil and points), a choice of 26 or 28 in. wheels (to accommodate riders of different heights) and the Renault gray finish, all standard. The founders were sufficiently confident of the new machine to provide the same guarantee against defective parts and workmanship enjoyed by singles owners. And while production was halted briefly in 1910, a "7-E" model, the very first all-out racer, was sold to a few select customers.

In 1911, H-D introduced its patented idler. A lever and gears replaced a rod and harness to uncouple the direct drive, providing clutch-like disengagement between the pulley and the new, larger 1¾-in. belt. No longer did the rider have to overcome direct



A 1914 61 cu. in. twin, as displayed in the York museum. (David Wright)

drive in order to stop; nor did he have to repeatedly restart a balky motor afterward. The 1911 motor also featured a new fuel/oil tank, superseding separate tanks and storing three quarts of oil for the total-loss lubrication system.

The oil traveled by gravity through a glass sight-tube to the crankcase, where it bathed the flywheel and the crank and was fed directly to the bearings. The force of the moving parts pushed oil to the piston and the lower cylinder wall. Oil not burned in combustion fell to the bottom of the case, where it was drained by hand. A hand-operated oil pump, standard for 1912, supplemented the gravity system, which could be adjusted but which most often ran at about one drop of oil every two-and-one-half seconds. Since the motor had been bored to 61 cu. in. for 1912, more lubrication was required.

Specifications
(From a 1911 brochure)

Motor: Twin-cylinder, 6½ horsepower, bore 3 in., stroke 3½ in. Piston displacement, 49.48 cu. in.

Cylinders: Close-grained gray iron, heat-treated prior to machining. Cylinder and cylinder heads each one piece, eliminating all chances of leakage through gaskets or joints.

Piston rings: Eccentric-turned and step-cut.

Connecting rod: Modified "I" beam section of chrome vanadium steel, bushed at both ends with phosphor bronze; lower bearing is adjustable.

Inlet valve: Made of nickel steel.

Exhaust valve: Two-piece type with cast iron head and nickel steel stem.

Mechanical inlet valves: Featured on the twin-cylinder models only at this time.

Crankcase: Aluminum.

Crank pin and shafts: Special tool steel, hardened and ground to exact size.

Crankshaft bearings: Made of phosphor bronze.

Ignition: Bosch magneto.

Lubrication: Semi-automatic, vacuum-feed oiling system. Overflow valve fitted to prevent flooding the crankcase; same valve maintains partial vacuum in the crankcase while motor is running to ensure lubrication in direct proportion to requirements.

Carburetor: Schebler.

Transmission: Flat belt with shield and idler. Belts are 1¾ in., two-ply, flat, waterproof.

Frame: Double bar loop, running continuously from steering head to seat mast. Steering head made of vanadium steel. All joints brazed.

Forks: All bearings provided with ball oilers. The main springs are 16½ in. long and 1 in. in diameter. The recoil springs are 4½ in. long and 1 in. in diameter.

Handlebars: Made of seamless steel tubing. Double grip control entirely enclosed within handlebars.

Oil and gasoline tanks: Individual units; top and lower frame bars are completely covered by the tanks. Gasoline tank capacity is 2½ gals., oil tank 1 gallon.

Tool box: Standard.

Mud guards: 3¾ in. wide with a raised center front. Front fitted with large splasher.

Muffler: Cutout provided.

Wheelbase: 56½ in.

Front hub: Equipped with knock-out type axle.

Rear hub: Coaster brake.

Equipment: Either Troxel, Mesinger or Persons saddle. G&J, Morgan & Wright, Goodyear or Goodrich tires. Studded or corrugated tread may be had at regular prices, but if any other special tread is wanted, extra charge will be made. Tires are 2½ in. Large, rubber-tread motorcycle pedals are regular equipment. A canvas tool roll containing a complete set of tools is supplied with each machine, together with an instruction book carefully written.

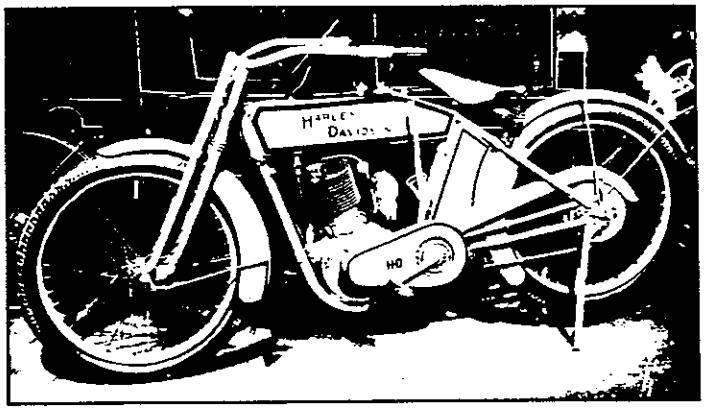
Single-Cylinder Models
1913–1918

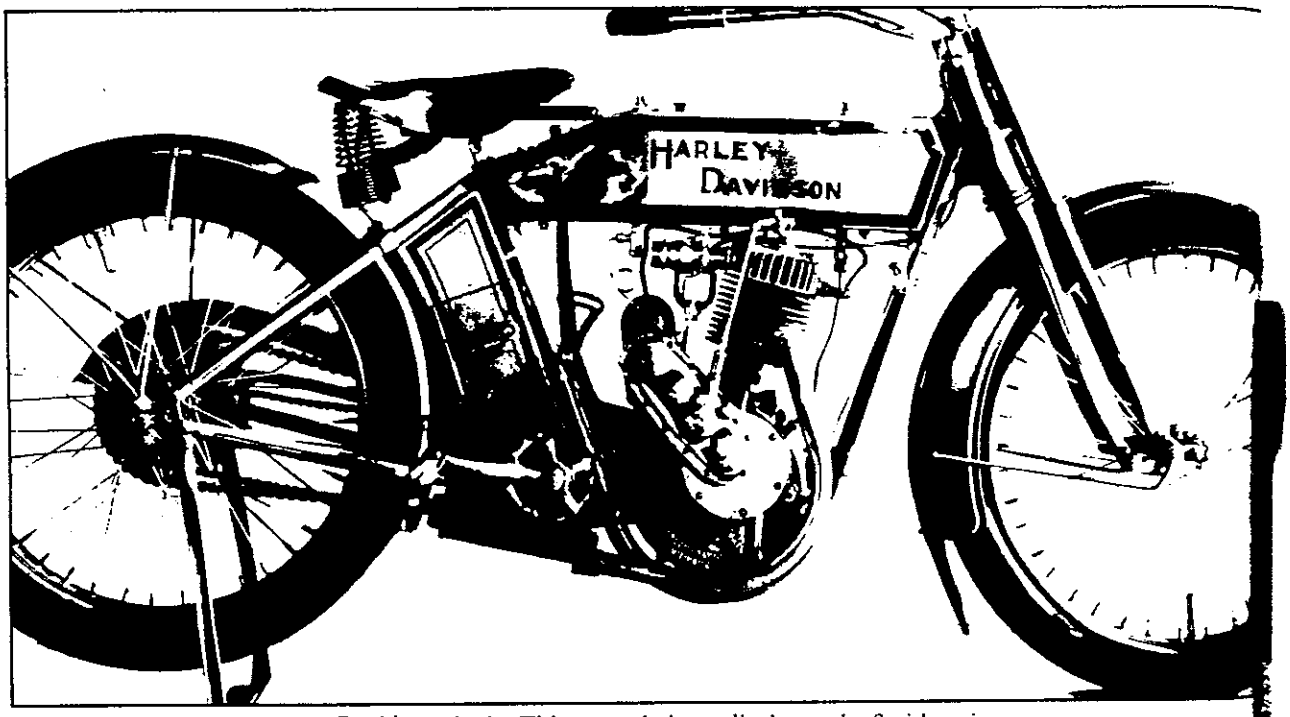
This series of single-cylinder, four-cycle machines was known collectively as the 5-35, which stood for 5 horsepower and 35 cubic inches (or 3500 rpm). Like virtually all H-D's past and present, the stroke (4 in.) was larger than the bore (3 5/16 in.). The cylinder and its integral head were of gray iron and featured a heat-treated steel piston with three rings and a hollow steel wrist pin. A chrome steel I-beam served as the connecting rod and there were separate camshafts for the inlet and exhaust valves. The crankcase was aluminum, with a tool steel crankshaft riding on phosphor-bronze bushings. Ignition was provided by a Bosch high-tension magneto (until World War I; as of 1915, the magneto was furnished by Remy).

A Schebler carburetor was standard equipment, with a priming petcock on the left side of the cylinder head. The tank between the "Ful-Floteing" seat and the steering head held both gasoline and oil, with separate, screw-type filler caps. Lubrication for the engine descended through a sight glass that told the rider how many seconds elapsed between drops of oil. One drop every five seconds is sufficient to lube the motor without throwing out a blue exhaust cloud, according to Bill McMahon, owner of a 1914 model.

01080

The shock of hitting a chuckhole was mitigated just a bit by the front suspension, which featured main and recoil springs, but with only about two inches of travel. The tires measured 2.5 × 28 in. and therefore did little to cushion bike or rider. Rear suspension was of course nonexistent, though the spring beneath the patented seat was of some consolation to the owner's posterior. Drive was by roller chain from a sprocket on the crankshaft to a sprocket on the rear hub. The clutch, also on that hub, was engaged by moving a lever on the left side of the machine. The same pedals used to start the motor (with the rear wheel on the stand) activated the internal expanding rear coaster brake by backward force. With the clutch disengaged, the machine could be pedaled forward when all else failed.





A 1913 Harley-Davidson single. This example is on display at the Smithsonian Institution in Washington, D.C. (Smithsonian Institution photos by Rolfe Baggett)

01081

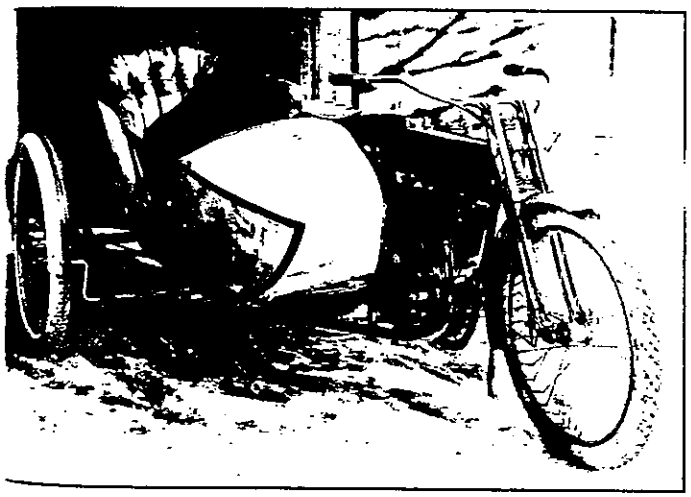
Top speed in low gear was approximately 35 miles per hour, with speeds exceeding 60 mph in high. The two-speed transmission made its appearance on one single and one V-twin in 1914. By 1915, singles and twins alike were hooked to the H-D three-speed. This sliding-gear unit allowed the step starter to be routed directly through the transmission instead of its former attachment to the frame. A single, backward kick could turn the motor over.

Except for commercial use, no singles were produced from 1918 until 1926. Some confusion has arisen over the serial numbers on the early bikes, since the 1915 models began with "12" and the 1916 models bore "16" designations. H-D merely brought its serial numbers in line with the current year from 1916 onward. For example, "C16S10115" indicates that the model in question had a two-speed transmission with chain drive, was made in 1916, was a single and was one of at least 10,115 motorcycles produced that year. This system continued through 1969.

The Sidecar
1914–1983

There were sidecars before there were Harley-Davidsons. The first consisted of a large wagon towed by the bike, but this school of sidecar thought ended when passengers complained of oil, gravel and mud showers. There followed a seat between two wheels up front, but this arrangement prevented the rider from seeing around his passenger. The English came up with the first true sidecar, a wicker-bodied unit, built in 1913.

An early H-D sidecar began life as a sheet of steel on which a pattern had been marked. Following trimming, the sheet was shaped into a pointed cowl. Reinforcement was provided by a ¼ in. rod that was enclosed around the perimeter of the cowl, which was joined to the scoop-shaped body via the rods and spot welding. Metal braces and supports were added, since the pieces were subjected to torsion. A triple-veneered hardwood floor was added and rough edges hand-sanded prior to receiving a coat of primer and baking in a 225-degree oven. The bodies then were spray painted by hand. The seat consisted of a wood base, springs and a leather cover. It was sewn on electric machines, a rarity for the time. The only screws on the cars—two dozen of them—were used to attach the seat to a body flange. The frame consisted of 1¼ in. steel tubing and was shaped on a series of jigs and fixtures. Since no early photos show finished sidecars within the factory, it can be assumed that the frame, body, axle, wheel and tire were shipped as a ready-to-assemble package to dealers. The price was $85.



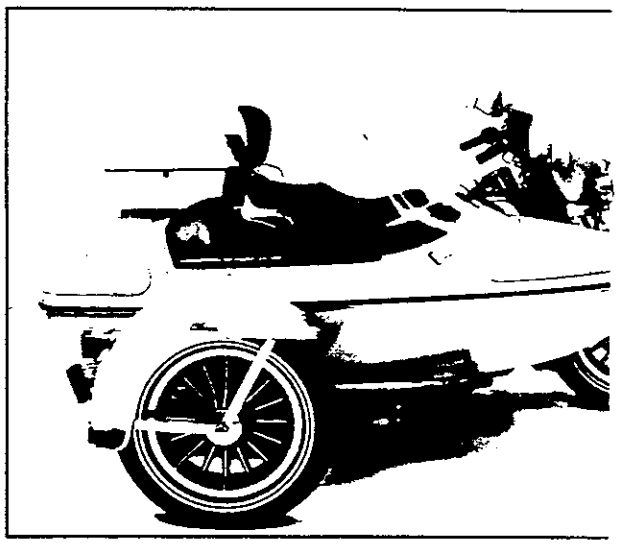
An early-twenties sidecar. Milwaukee's Seaman Company, later absorbed by Nash, built bodies for H-D from 1914 until World War II. (Harley-Davidson Motor Company)

01082

How times change. The modern sidecar consists of a one-piece body laid up in a mold. The frame carries the body lower, just inches above the car's fender. The passenger, with no plastic windscreen for protection, formerly sat as high as the rider; today, he or she is seated about eighteen inches below the bike's saddle for added stability. A long leaf spring carries the Big Twin body (sidecars with sprung wheels were made by Goulding prior to WWII but were available only for 45 cu. in. models). With sixty years of sidecar experience, H-D sets up bikes for sidecar use quite differently from its solo mounts. The forks have slightly less trail, the steering damper is snugged up a bit, ball joints long ago replaced nuts and bolts as means of affixing the car to the bike's special braces, the wiring connection for the sidecar tail light is made and the hydraulic brake system is filled and adjusted. Only at this point, and if the rider is experienced, does the factory advise motoring off into the sunset. The current sidecar manual, complete with directions for finding the VIN number, lists all of the quirks peculiar to riding a three-wheeler: reduced acceleration and lower gas mileage, pulling to the right under acceleration and to the left when decelerating, increased wear on tires and chains and the necessity of steering rather than leaning the machine. Finally, the bike will appear to be canted away from the car when viewed from the front or rear.

The golden age of the "chair" began in 1915. Cycles were authorized for Rural Free Delivery; the sidecar was a natural for carrying the mail. That same year, H-D produced the first van body on a sidecar chassis and by 1918 offered vans with capacities of as much as 600 pounds. By 1919, 16,400 sidecars were constructed—more than seven sidecars for every ten H-D's produced. Export literature first appeared in 1917, with left-hand bodies featured, for the English market. In the twenties, sidecars constituted the main thrust in advertising and were sufficiently popular to necessitate fliers written in German, Spanish and Japanese.

Goulding created its first sidehack in 1929 for the new 45 cu. in. models. Seaman, a Milwaukee firm later absorbed by Nash (American Motors), made the bodies during the twenties and earlier. Abresh Body Shop introduced a new-design unit in 1936, and steel body production continued through 1966 at Abresh in Milwaukee. The latter had for years created special-order sidecar and van bodies for the factory. Fiber glass bodies, laid up in the former boat-building facility in H-D's Tomahawk plant, were introduced in 1967.



A 1980 FLH Electra Glide Classic with sidecar. (Harley-Davidson Motor Company)

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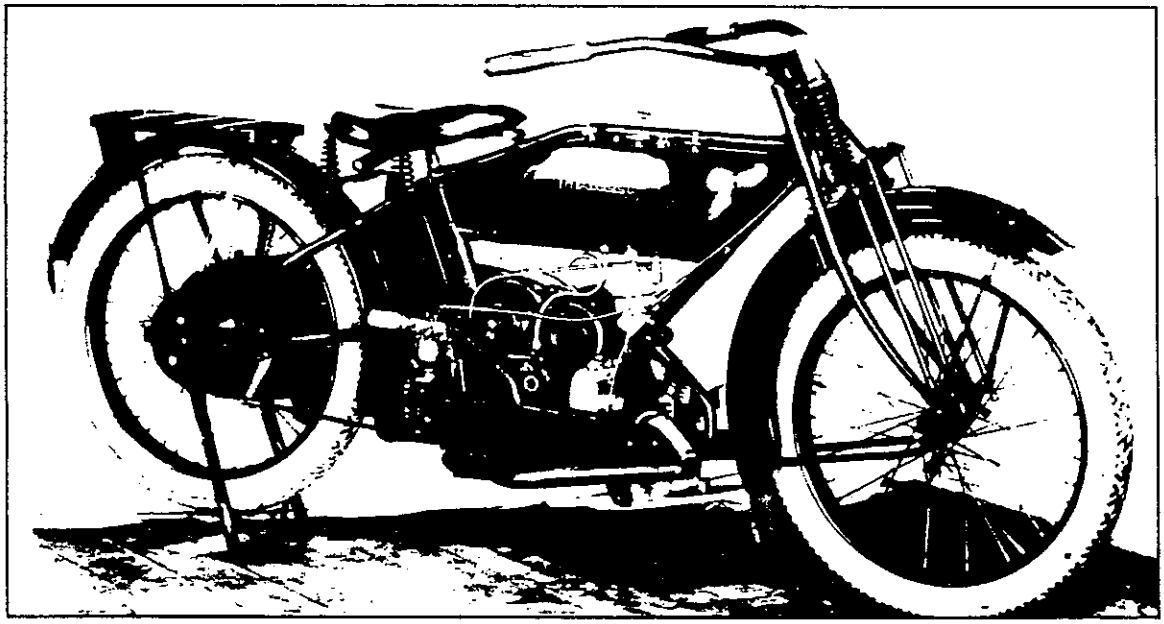
Virtually all H-D's headed for the front in World War I were three-wheelers, in contrast to the virtual absence of sidecars in World War II. A small exception is the batch of military "U" models ordered by the U.S. Navy. According to a notation found in the Harley-Davidson archives, only 136 such machines, attached to 74 cu. in. side valve bikes, were ordered, all in battleship gray.

37 Cu. In. Flat Twin Sport Model
1919–1922

"This new motor has the distinction of developing the highest motor speed of any gasoline engine motor ever built, so far as we know. We are not going to tell you what it is—you would not believe it."

The new motor, a front-to-rear opposed Sport Twin, *had* to turn over rapidly; otherwise, it pumped out so little power that the lightweight cycle was left in the dust by more powerful competition, namely, the Indian Scout. The lightweight, conceived during World World I and introduced late in 1918, carried its 37 cu. in. engine and three-speed transmission low in the frame. Equipped with 26 in. tires, only the handlebars and fork springs protruded above the level of the fenders. In addition to a fully enclosed drive chain that ran in a spray of oil emitted from a breather pipe, the Sport could be had with full electric lights and coil ignition, or magneto ignition and accessory gas lights. The machine was quiet, provided good fuel economy, displayed a distinct lack of vibration—and was slow. "What will it do on the road?" asked a copywriter. "Let's say 50 miles an hour and let it go at that—it will do better." Let's forgive the copywriter, who probably pushed a pencil better than he rode.

The Sport Twin was offered four years, from 1919 through 1922. In addition to being down on power, it represented very little that the Roaring Twenties rider wanted—the thump of the traditional V-twin, eye-watering acceleration and a top end of more than 45 or 50 mph. Nevertheless, the bike contributed important income from the export



A 1921 Sport model. This front-to-back opposed twin featured a 37 cu. in. motor. (Harley-Davidson Motor Company)

01084

market, where the opposed twin found favor with European riders prior to the creation of autobahns and such. The electrically equipped 22WJ sold for $340, while the magneto 22WF was offered for $310 during its final year of production.

Specifications
(From a 1922 brochure)

Motor: Six-horsepower, opposed (front to rear) twin, 2¾ in. (68.94mm) bore, 3 in. (76.22mm) stroke, displacement 35.64 cu. in. (584cc).

Carburetor: Schebler.

Three-speed transmission: Three-speed sliding gear transmission, multiple disc steel plate clutch running in oil.

Lubrication: Automatic oil pump.

Step starter: Rear stroke, mechanical, spring return.

Handlebars: One-piece welded, 1 in. tubular steel, double stem. Grip, double-acting wire control entirely enclosed within handlebars.

Frame: Keystone.

Driving chains: Duckworth roller, ½ in. wide, ½ in. pitch.

Brake: Internal expanding, double-acting band brake, 7 15/16-in. diameter, 1-in. face. Front external contracting brake available where required by law.

Saddle: Mesinger, Ful-Floteing seat post.

Tires: 26 in. × 3 in.

Wheelbase: 53½ in.

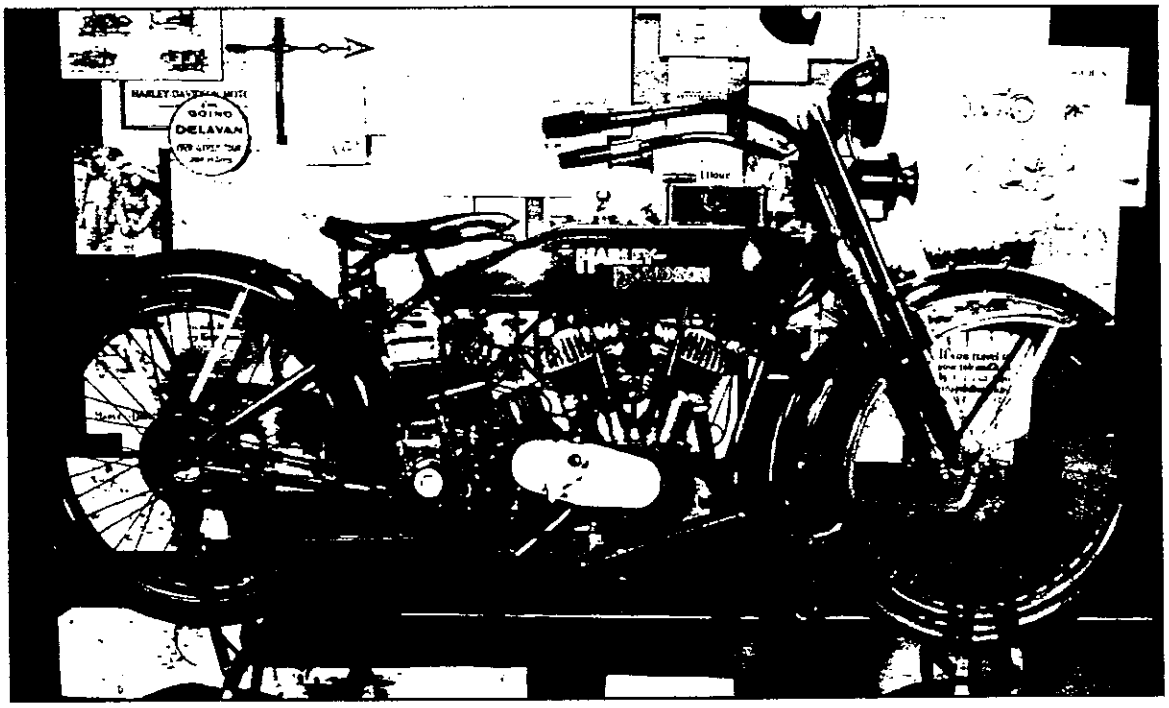
Tanks: Capacity 2¾ gallon capacity for gasoline, 2 quarts for oil.

Mudguards: Pressed steel.

Finish: Brewster green, striped in gold.

74 Cu. In. Twin
1922–1929

The first 74 cu. in. twin, introduced in 1922, remained essentially unchanged through 1929. Dubbed the Superpowered Twin, the new motor was first featured in the 22JD, which was electrically equipped, and in the 22FD, which ran a magneto. Prices (fob Milwaukee) were $390 and $360, respectively, only $25 higher than the 61 cu. in. J and F



The first 74 cu. in. machine was introduced in 1921. If the 1936 Knucklehead is the father of today's big twins, this motorcycle is the grandfather. (F-22 Photography)

01085

models offered the same year. Harley-Davidson claimed 18 horsepower from the new, bigger twin. The bore was 3 7/16 in. (86.97mm) and the stroke was an even 4 in. (101.60mm). The machine was advertised as ideal for sidecars, "especially for use with the two-passenger sidecar (Model 22QT) and where traveling conditions are the worst," a '22 brochure stated. The big twin was a response to four-cylinder Hendersons in particular, which had more, if less dependable, power than the trusty 61, which by then was a thirteen-year-old design.

The company noted that the new model was capable of 40-60 miles on a gallon of the low-octane gasoline almost universally available by 1920. The lighting and ignition system consisted of a 6-volt generator-ignition unit, a storage battery, headlight, tail light and motor-driven oil warning signal. The ignition system consisted of a circuit breaker, a distributor and a high-tension spark coil. The system was mounted directly behind the motor, probably to reduce the chance of contact with water.

Two important, non-cosmetic changes on the 74 were introduced in 1924 and were the kinds of amenities riders had on Harleys and wanted on other bikes. Alemite lubrication on all bearing surfaces except within the motor greatly extended the life of the running gear. The cap of the Alemite gun was hooked over the fitting and the handle turned, forcing grease onto the surface with 500 pounds of pressure. An Alemite gun and a large can of grease were furnished gratis with each new twin.

The second improvement was the use of aluminum for the 74's pistons. This lightweight metal with superior heat-dissipating properties meant more power and less chance of seizing. More evident additions included the handsome teardrop tank and balloon tires in 1926 and throttle-regulated oil pressure and a front brake, standard on 1928 models.

Performance, by all accounts, was excellent. In fact, J models intended for sidecar use sported a spacer plate between the cylinders and the lower end. This 1⅛-in. plate prolonged engine life by slightly lowering compression.

Specifications
(From a 1922 brochure)

Motor: Air-cooled, high-speed, high-efficiency, two cylinder, four cycle "L" head, pocket valve, "V" type motor. For sidecar use, motors are fitted with ⅛-in. compression shims. Letter "S" in model number designates sidecar motor.

Carburetor: Schebler.

Battery: Exide.

Three-speed transmission: Sliding gear type, gears of chrome nickel steel, transmission box of aluminum. Transmission main shaft mounted on large, heavy duty roller bearing on the left or drive side and a ball bearing on the right side. Main drive gear runs on a high-duty phosphor-bronze bearing. Uses same type lubrication oil as the motor.

Lubrication: Automatic oil pump. Average 800-1,000 miles per gallon of oil.

Step starter: Rear stroke mechanical starter, spring return.

Clutch: Multiple dry disc.

Handlebars: One piece, welded, 1 in. tubular steel, double stem.

Controls: Grip, double acting wire control entirely enclosed within the handlebars.

Frame: Extra heavy duty gauge high carbon steel seamless tubular loop, rigidly reinforced.

Driving chains: Duckworth roller, ⅜-in. width, ⅝-in. pitch.

Brake: Controlled by lever on right footboard. Internal expanding, double acting band brake, operating on a steel drum 7 5/16 in. diameter with 1 in. face. Where the law calls for two brakes, an external contracting brake can be furnished in addition.

Saddle: Mesinger saddle, Ful-Floteing seat.

Suspension: Double spring front fork.

Tires: 28 in. × 3 in.

Wheelbase: 59½ in.

Tanks: Gasoline capacity 3¼ gallons, lubricating oil 1 gallon.

Mudguards: Pressed steel, extra wide and substantial. Flat military front mudguard available.

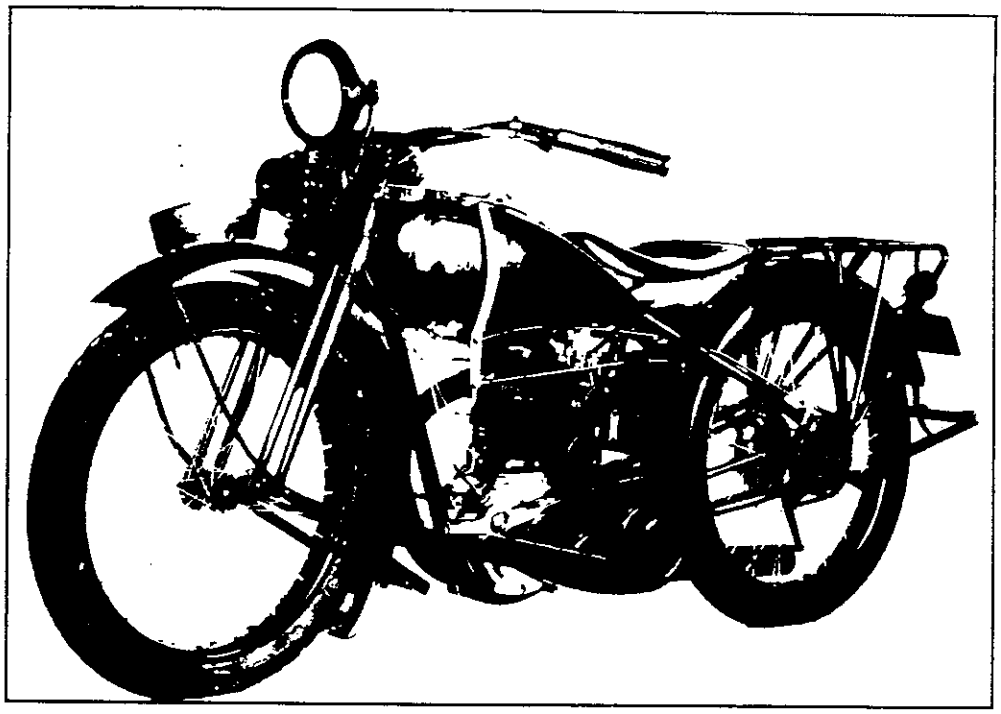
Finish: Brewster green, tastily double striped in gold.

21 Cu. In. Single
1926–1935

The 21 cu. in. single was produced for ten years, though the average U.S. Harley-Davidson rider was hardly aware of its prolonged existence. The dependable little machine, available in side valve or overhead valve configurations, was infinitely more popular with Europeans, Australians and New Zealanders than in its native land. Again, the ribbons of long, straight North American highways beckoned the rider astride large, slow-turning motors.

Created simultaneously with similar Indian models, the single helped lure racer Joe Petrali from Excelsior to run the Peashooter—the nickname for H-D's overhead valve model—in competition. And run it he did. Petrali swept every national dirt-track event in the country in 1935, thirteen races in all. His success on the little machine prompted the AMA to create a new competition class made up of larger, nearly stock motorcycles.

The single was offered initially in four versions, a side valve magneto model, a side valve generator model, an overhead valve magneto model and an overhead valve generator model. The side valves featured iron alloy pistons, while the overheads sported lightweight, racing-type aluminum. The latter were created with patented, aircraft-type Ricardo heads that squeezed the air-fuel mixture toward the plug for better combustion. All models were fully equipped and appeared to be scaled-down, single versions of the big bikes. While the overhead valve had plenty of punch, the side valve was slow. Top end on the overhead, produced as a 21-incher through 1929, was a reported 65 miles per hour in stock form; the side valve struggled to exceed 50. Prices ranged from $210 to $275 in 1926.



A 1926 21 cu. in. overhead valve BA, the street version of the Peashooter racer. (Harley-Davidson Motor Company)

Specifications
(From a 1926 brochure)

Motor: Four-stroke cycle, single cylinder, air cooled, 21.398 cu. in. (350 cc) displacement. 2⅞ in. bore, 3¼ in. stroke. Side by side valves in models A and B. Overhead valves in models AA and BA.

Carburetor: Schebler DeLuxe.

Transmission: Three-speed progressive sliding gear.

Lubrication: Motor lubricated by mechanical pump, supplemented by hand pump. Transmission lubricated by separate oil splash. Nine-place Alemite fitted.

Ignition: Harley-Davidson generator-battery on electrically equipped models. Robert Bosch magneto on magneto models.

Electrical equipment: (On electric models only) Harley-Davidson generator, coil, timer-distributor, four-plate storage battery, vibrator horn, two-bulb headlight, standard tail lamp, ignition and light switch panel located back of steering head. Relay cutout that automatically opens and closes battery-generator circuit.

Starter: H-D rear stroke on right side.

01087

Clutch: Single-plate dry disc, foot operated.

Handlebars: One piece, 1 in. tubular double stem with closed end grips.

Frame: High carbon, seamless, tubular steel with wide trussed loop. Drop forged head.

Controls: Grip, double-acting wire controls entirely enclosed within handlebars. Toe operated compression relief.

Brake: External contracting, foot operated. Drum 5¼ in. diameter, 3 5/16 in. × 1 in. lining.

Driving chains: Roller 5⅛ in. pitch and 1¼ in. wide.

Seat: Mesinger top. Full spring seat post.

Tires: Full balloon, 26 in. × 3.30 in.

Wheelbase: 55 in.

Tanks: Gasoline capacity, three gallons. Lubricating oil, three quarts. Reserve gasoline tank.

Mudguards: Pressed steel.

Footboards: Standard Harley-Davidson.

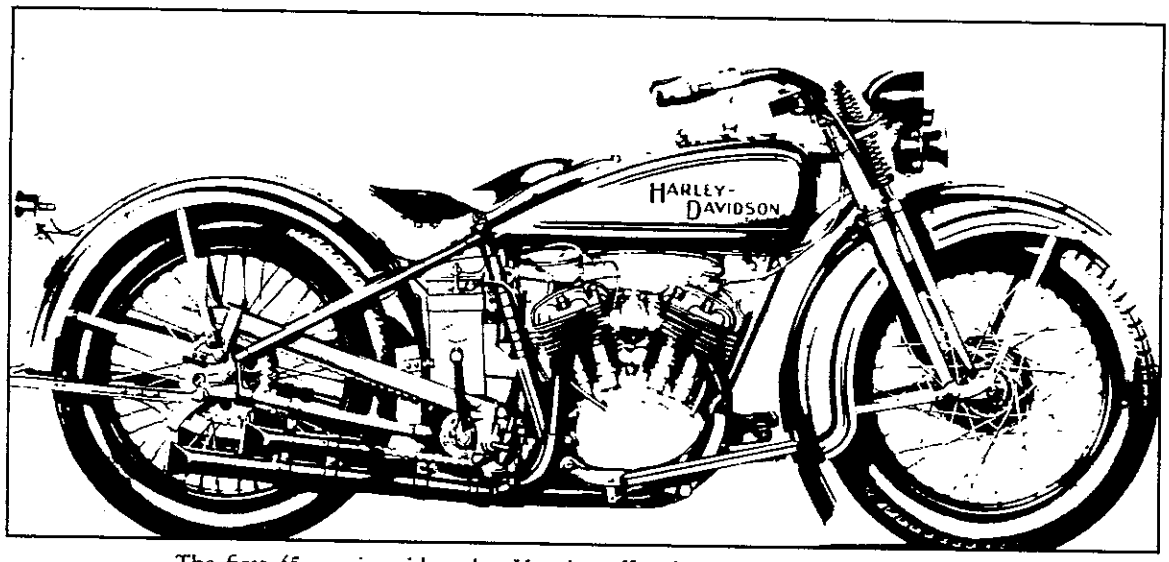
Tool equipment: Tool and tire repair kit.

Finish: Harley-Davidson olive green. Tanks, wide maroon striping with center gold stripe.

45 Cu. In. V-Twin
1929–1951

Nineteen twenty-nine may have been a bad year for the stock market, but it was a vintage year for Harley-Davidson. The 30.50 cu. in. single was introduced, the powerful two-cam was in its second year of road bike production and—most meaningful of all—the 45 cu. in. motor made its debut.

Three 45 models for 1929 indicated that the factory was serious about this bike. There was a low-compression D model for sidecar work, a standard DL and a high-compression DLD. Alloy pistons were provided for all 45's from 1930, though the high-compression version of the bikes was phased out for 1932. These "R" designated machines remained mechanically the same through 1936. They then received a new letter



The first 45 cu. in. side valve V-twin, offered in 1929. The motor was last offered in the Servi-Car in 1974. (Harley-Davidson Motor Company)

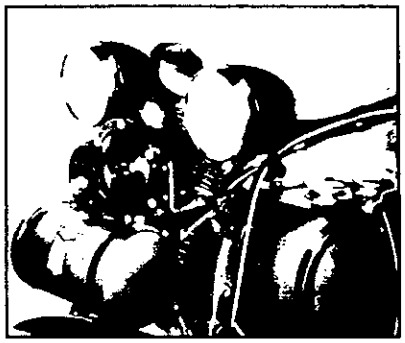
01088

designation, "W," and displayed the recirculating oil system proven on the 1936 Knucklehead. Special alloy heads, for the WR and WLDR, were the only other thirties mechanical innovations. The W series dominated U.S. racing until two-wheel 45 production ceased in 1951.

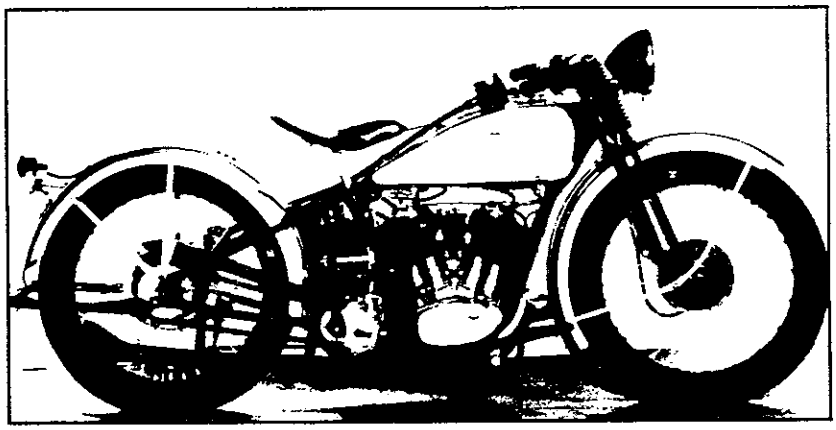
The motor evolved into a real winner. Throughout its forty-five years of production (the last twenty-two in the Servi-Car only), the 750cc side-valve twin was characterized by massively oversized cooling fins on the heads, which allowed a machine to idle all day without seizure from overheating. Charles Darling, Sodus, New York, rode 45's from 1930 through 1951. Here are his impressions of those models through the years:

"The model years 1930–1935 had quite acceptable handling characteristics. . . . Even the deeply rutted dirt roads, which were fairly common in those days, did not present much of a problem when negotiated at reasonable speeds. However, beginning with the 1936 model year and continuing through the last 1951 WL models, the steering head angle was decreased by a few degrees, making the forks assume a more nearly vertical position. This decreased the 'caster' angle and had a decidedly negative effect on stability. It was even worse when the machines were equipped with 5.00 × 16 in. tires.

"Another handicap of the 45 R and W series were the three-speed transmissions. They had a wide ratio gap between second and third, making it necessary to really wind out the motor in second so it wouldn't bog down when the clutch was engaged in third



Two headlights were used on 1929 and 1930 models. The canister held tools and was said to have kept the rider awake at night by clanking loudly on rough roads. (Harley-Davidson Motor Company)



The Woolery "Bullet," a prototype, was a 1931 45 cu. in. motor in a 1933 B (single-cylinder) frame. The weight was 387 pounds with two gallons of gasoline and two quarts of oil. Top speed was a reported 88 miles per hour. Guy Webb, Inc., the Minneapolis H-D dealer at the time, ordered the bike for Mr. Woolery, a customer. The tank speedometer, incidentally, is a genuine Harley-Davidson accessory. (Harley-Davidson Motor Company)

gear. . . . The transmission itself on these models was notoriously weak, too. Despite this, the Harley 45 was a nice little machine to ride and provided economical transportation for thousands of people."

Police aboard Servi-Cars and soldiers aboard WLA 45's in World War II would agree with Darling's last statement. U.S. riders, accustomed to the power of the 61 and 74 cu. in. bikes, frequently abused the 45 to make it run with the big twins. The motor refused to react in any negative way except to leak a bit of oil from around the head gaskets, though this may have been aggravated by the owner or dealer who inadvertently scratched the gasket after cleaning carbon from the heads or grinding the valves. A low-compression motor (6.5:1), the 45 ran faultlessly on regular or Ethyl gasoline; it continued to do so in the thirties, when several compression choices were offered for those desiring more speed or pulling power for sidecar work. And because the factory produced as many as twenty sets of spares for each WLA (Army) model, 45 cu. in. parts remain easy to find.

Harley-Davidson certainly has made faster and flashier bikes. It has yet to produce a machine that endeared itself to more people.

Specifications
(From a 1929 dealer brochure)

Motor: V type twin cylinder air-cooled four stroke cycle—bore 2¾ in., stroke 3-13/16 in., displacement 45.32 cu. in. Side by side valves, independent cam action on each valve. Dow metal pistons. New, plunger-type crankcase oil drain.

Carburetor: Schebler DeLuxe with self-cleaning air cleaner.

Muffler: Four tubes.

Transmission: Three-speed progressive sliding gear.

Lubrication: Throttle-controlled motor oiler that provides proper lubrication at all speeds. Transmission lubricated separately. 13 Alemite fittings.

Ignition: Harley-Davidson generator-battery with output controller.

Electrical equipment: Harley-Davidson generator with instantaneous output controller; weather and waterproof coil and timer; five plate, 22-ampere/hr. storage battery; high frequency horn; two bullet headlights; standard tail lamp; ignition and light switch panel with built-in ammeter and hooded parking light located back of steering head. Relay cutout automatically opens and closes generator-battery circuit.

Starter: Harley-Davidson rear stroke, right side.

Clutch: Single-plate dry disc, foot operated.

Handlebars: One piece, 1 in. tubular, double stem with closed end twist grips.

Controls: Grip, double-acting wire controls, enclosed in handlebars and cables.

Brakes: Foot-controlled contracting rear brake and built-in hand-controlled expanding front wheel brake.

Frame: High carbon seamless tubular steel, strongly reinforced with wide trussed loop. Drop forged head and gearbox bracket.

Driving chains: Duplex engine chain ⅜-in. pitch, ¼-in. wide, each sprocket 3/16-in. wide. Rear chain roller, ⅝-in. pitch, ⅜-in. wide. Large cushion motor sprocket.

Saddle: Mesinger form-fitting top. Adjustable spring seat post.

Tires: Standard make, 25 × 3.85 in., full balloon.

Wheelbase: 56½ in.

Tanks: Saddle type. Gasoline capacity, 3¾ gallons; oil capacity, 7½ pints. Reserve gasoline tank.

Mudguards: Extra wide valanced, rear guard hinged for easy access to wheel.

Finish: Harley-Davidson Olive Green with maroon striping with center gold stripe. Rims and handlebars black.

30.50 Cu. In. Single
1929–1936

Harley-Davidson did in 1929 what racers had been doing for more than a decade: It created a single from half of a 61 cu. in. V-twin. Unlike the go-fast guys, who yanked the head and covered the gaping hole with a steel plate, H-D engineers grafted a head of very similar dimensions onto the lower end first produced in 1926 for the side-valve and overhead valve singles. A dissimilar 500cc H-D single, the CAC, was raced in the early thirties but, except for export, was not a popular street bike. It appears that riders at that time would accept nothing smaller than a 750cc motor. They may have preferred a twin if their memories were long, since the first bikes on U.S. roads were singles that spewed oil and often needed leg power on steep grades.

The Model C, as it was known, initially shared the 21 cu. in. frame, but beginning with the 1932 model was offered in the 45 cu. in. frame.

Specifications
(From a 1929 dealer brochure)

Motor: Four-stroke, single-cylinder side valve. Bore 3½ in., stroke 4 in.; piston displacement 30.50 cu. in.

Muffler: Four-tube "Pipes of pan."

Carburetor: Schebler DeLuxe with self-cleaning air cleaner.

Transmission: Three-speed progressive sliding gear.

Lubrication: Throttle-controlled motor oiler. Transmission lubricated separately. 14 Alemite fittings.

Ignition: Harley-Davidson generator-battery with output controller.

Electrical equipment: H-D generator with instantaneous output controller; waterproof coil and timer; five plate storage battery; high-frequency horn; two bullet headlights; standard tail lamp; ignition and light switch panel with built-in ammeter and hooded parking light located back of steering head. Relay cutout automatically opens and closes battery-generator circuit.

Starter: Rear stroke, right side.

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Clutch: Single-plate dry disc, foot operated.

Handlebars: One piece, 1 in. tubular, double stem with closed end twist grips. Controls in grip, double-acting wire controls enclosed in handlebars and cables. Toe-operated compression relief.

Brakes: Foot-controlled contracting rear brake and built-in hand controlled expanding front brake.

Frame: High-carbon, seamless, tubular steel, strongly reinforced and with wide trussed loop. Drop-forged head and gearbox bracket.

Driving chains: Duplex engine chain ½ in. pitch, ⅜ in. wide, each sprocket ⅜ in. wide. Rear chain, roller, ½ in. pitch, ⅜ in. wide. Large cushion motor sprocket.

Saddle: Mesinger form-fitting top. Adjustable spring seat post.

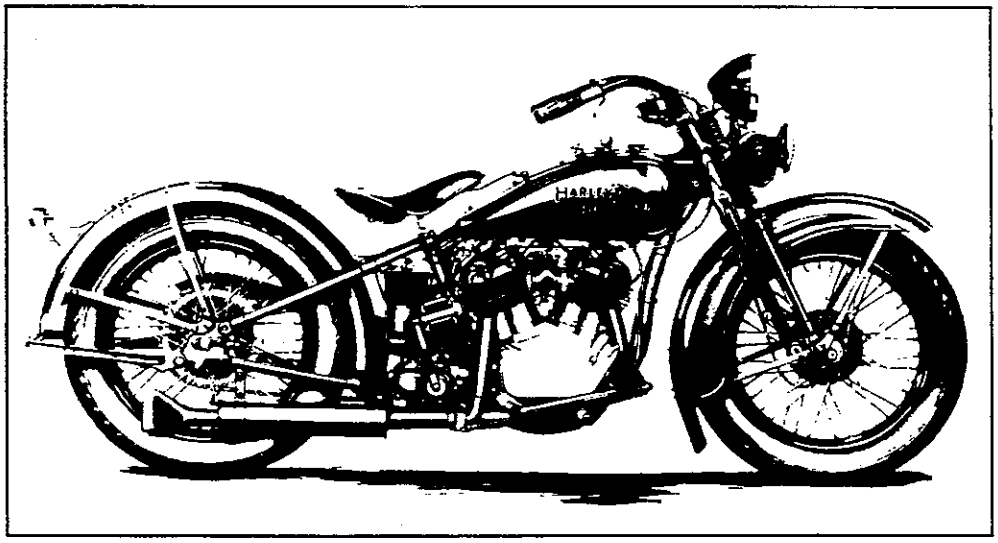
Tires: 25 × 3.85 in.

Wheelbase: 56½ in.

Finish: Harley-Davidson Olive Green with maroon striping with center gold stripe. Rims and handlebars black.

74 Cu. In. VL
1930–1940

Harley-Davidson billed the 1930 74 cubic inch big twin as "the greatest achievement in motorcycle history." Actually, the new design may have been one of the most poorly developed H-D's ever to roll down Juneau Avenue. "Originally, it had a bad engine, a bad clutch, the flywheels were too small, the frames broke, the mufflers became so clogged with carbon that the engines lost power," says William H. Davidson, who recalls a frantic trip he made to New York state in late 1929, only days after the Buffalo police took delivery of a fleet of new 74's. "We replaced mufflers, valves springs, pistons, everything we'd carried from Milwaukee. The shop mechanic took one out and it ran 90 miles an hour. Then I took one of their police officers out in a sidecar and wound it up to 75. He yelled to me that 75 was fast enough, which was fortunate, because it wouldn't go



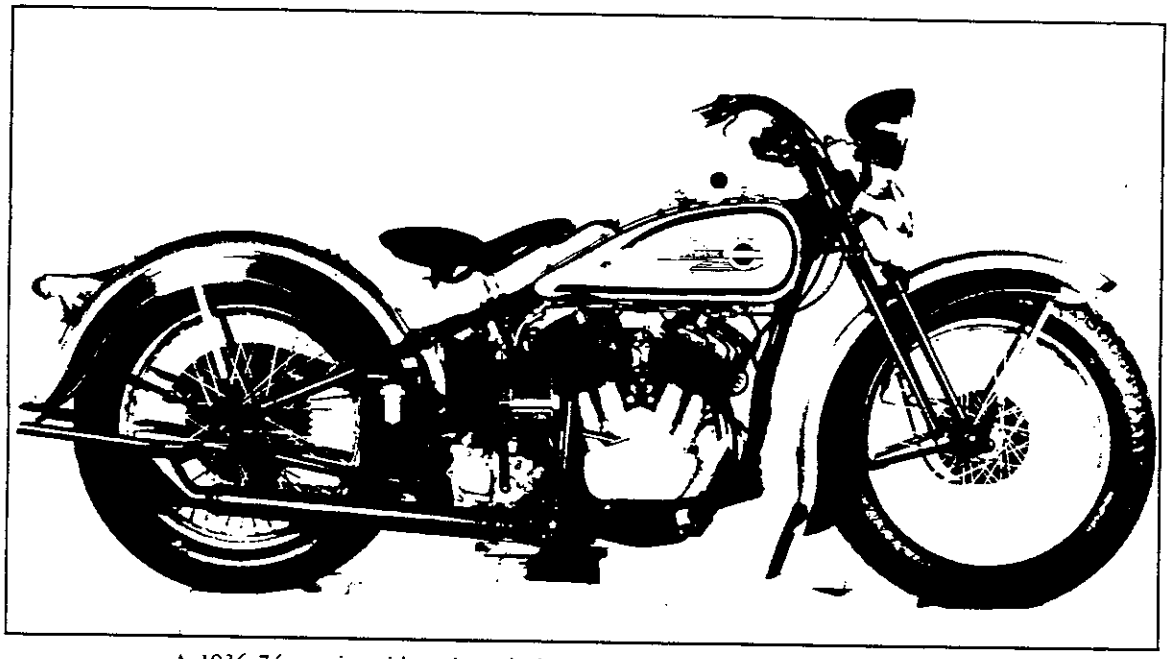
The 1931 VL. (Harley-Davidson Motor Company)

any faster." Davidson points out that the initial poor performance could not have come at a worse time. The stock market's nosedive took place just two months after the new model introduction in July 1929. Dealers were asked to sell a high-priced bike with big problems to riders facing even bigger problems. To Harley-Davidson's credit, early problems were quickly corrected.

There was no single specification on the new 74 that would arouse suspicion. The bore was 3 7/16 inches and the stroke was 4 inches. The Ricardo heads had been proven in earlier models. Combined with side-by-side valves and a 1 1/4 inch Schebler downdraft carburetor, the motor developed at least 15 percent more horsepower than previous 74's. It also featured a new, plunger-type crankcase oil drain and a cam gear case vacuum that was touted as keeping the motor cleaner (spewing less oil on bike and rider). The few affluent buyers soon wished they could trade their new machines for 61 cu. in. J models, even if it meant well-lubricated boots and trousers.

By no means were all of the new ideas on the 74 bad. The primary chain was extra-heavy duplex. By loosening a single nut on either axle, a wheel could be quickly removed for service. Wheels were interchangeable, not only for the VL, but for the sidecar and Package Truck options as well. Full balloon 27 × 4.00 tires were featured on the new model. The new frame, while heavier than the J model, allowed for a lower riding position. As early as 1930, then, Harley-Davidson was touting a low and distinctive way to travel. Other amenities included a high-frequency horn, an improved 22-amp battery and a sealed coil that enhanced the H-D reputation for having waterproof electrical systems. The saddle-type tanks held four gallons of gasoline and a gallon of oil.

The finish remained olive green but was highlighted by a vermilion stripe. By 1932, the olive drab caterpillar would become a multicolored, Art Deco butterfly. List price was $340 for each of four models: the standard V, the higher-compression VL, the sidecar-geared VS and the VC, which featured nickel iron rather than Dow metal pistons and which was designed for use with the Package Truck.



A 1936 74 cu. in. side valve, designated the VLD. The V series bikes were introduced disastrously in 1930 but evolved into dependable machines. (Harley-Davidson Motor Company)

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It's been said that the best bikes also have the most complete tool kits. The VL is the exception that proves the rule. Here's the tool kit contents, typical of H-D models throughout this period. Unfortunately, early VL owners got to know their tools on a regular basis:

1. Registration card.
2. Rider's handbook.
3. Wrench for valve spring covers, valve tappets and various small nuts.
4. Socket wrench for cylinder head clamp screws.
5. Wrench for axle nuts and rear brake hub nut.
6. Spark plug wrench.
7. Tire patches.
8. Chain tool.
9. Screwdriver.
10. Wrench for transmission clamp nuts and transmission oil filler plug.
11. Wrench for valve tappets; also fits various small nuts.
12. Wrench for rear axle adjusting screw and lock nuts, cylinder base nuts, gas pipe nuts and clutch pull rod lock nut.
13. Wrench for footboard support rod nuts, front fork rocker plate stud nuts, oil pipe nuts and various other nuts.
14. Pliers.
15. Monkey wrench.
16. Steering head lock keys.
17. Ignition and lighting switch keys.
18. Tool box key.
19. Wrench for switch box terminal nuts, also feeler gauge for adjusting circuit breaker point gap.
20. Rear chain repair links.
21. Front chain repair links.
22. Pump fastening clips.
23. Alemite grease gun.
24. Tire pump.

1930 VL Specifications

Number of cylinders: Two.
Bore: 3 7/16 in. (87.31 mm).
Stroke: 4 in. (101.6 mm).
Displacement: 73.73 in. (1,208.19 cc).
Horsepower (N.A.C.C. rating): 9.45.
Wheelbase: 60 in.
Gear ratios
Motor sprocket: 23.
Clutch sprocket: 51.
Countershaft sprocket: 28.
Rear wheel sprocket: 51.
High gear ratio: 4.04 to 1.
Tire data
Size: 4.00 in.
Inflation (solo rider): 16 lb. front, 18 lb. rear.
Motor or serial number: Stamped on left crankcase.

Servi-Car
1932–1974

The Servi-Car, introduced in 1932, made a lot of sense. It enabled someone relatively unfamiliar with two-wheelers to take advantage of the fuel economy offered by the standard DS 45 cubic inch motor and the compact size of a motorcycle. Previewed to dealers in their November 9, 1931, news bulletin, the three-wheeler was "Intended primarily for use by garages and services stations in the pickup and delivery of customer's cars." Unlike other tricycle-type vehicles of the time, there seems to have been quite a bit of engineering in the Servi-Car. The frame was a complete unit; there had been no ill-planned attempt to graft a motorcycle onto a pair of wheels. Primary drive was provided by a double roller, enclosed chain leading to the three-speed transmission. A single chain transmitted power to a sprocket on the rear axle. Final drive was by means of a modified automobile differential, completely enclosed.

In addition to a hand-controlled, internal expanding brake up front, a foot pedal activated a drum brake on a larger internal expanding brake attached to the rear axle. Origin of the rear brake was no puzzle: Shoes and linings were interchangeable with the rear unit on 74 cubic inch H-D's. An important consideration was the distance between

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the rear wheels, 42 inches. This allowed riders, many of whom were inexperienced, to follow the paths forged by car tires in mud and snow. The wheelbase measured 61 inches. The body of the machines, immediately behind the rider, looked like a large soft-drink cooler. It was 29 inches wide, 23 inches long, a foot high, first metal and then fiber glass and was supported on a subframe. The subframe was hinged to a tie bar fastened on the Servi-Car frame and supported in the rear by a pair of coil springs. Rear mudguards and a rear apron were attached to the body, which was hinged at the top by two latches (one of which could be locked). The flat rear end was "perfectly adapted to advertising signs and lettering," an early bulletin pointed out. The standard color initially was turquoise blue for the tanks, rear fenders and body, with the frame, chain guards, front forks, tow bar, battery box and running gear in black. Price in 1932, with tow bar, was $450 fob Milwaukee.

Options offered initially included a passenger seat and a carrier for an automobile tire (should a service station specialize in fixing flats). Never advertised as a machine designed for the highway, the three-wheeler instead offered a way for one man to drive to a parked car, hook up the Servi-Car with a standard tow bar and drive the car to a service station or garage, the tricycle in tow. As sound as this seems to be, the Servi-Car was most commonly used through 1974 by traffic police.

Changes throughout its production included making the tow bar an option in 1963 (no service station in its right mind would come to you by then), installing electric starting the following year and using fiber glass for bodies in 1966. Despite its ability to slog along at city speeds all day, the machine had a few quirks. A 1969 owner's handbook admonishes to "put shift lever in neutral before stopping engine while parking. If left in gear when engine is stopped, rock Servi-Car to shift out of gear to neutral." Neutral-only starting was a minor annoyance, but that wasn't what killed the Servi-Car. Instead, it was done in by various Cushmans and stripped-down Jeeps, which offered meter maids, postal employees and such weather protection and, usually, a heater. In its final year,

Sure, it's a whimsical photo, but where do you think they got the idea for the Servi-Car? This arrangement, conceived on the West Coast and dubbed the Cycle Tow, allowed a bit of lateral movement. The wheels swung up and forward when not in tow. Retired President William H. Davidson recalls that this creation was quite unstable, but inspired H-D to create the sturdy Servi-Car. (Harley-Davidson Motor Company)

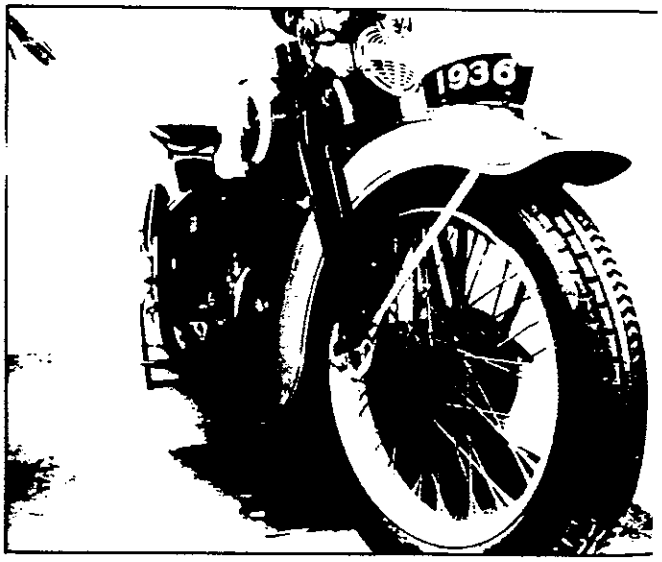
only seventy Servi-Cars were sold, primarily to municipalities. A new, 74 cu. in. Servi-Car never got past the prototype stage.

Specifications

Model G (1963 and earlier): with tow bar.
Model GA (1963 and earlier): less tow bar.
Model GE (1964 and later): electric start (less tow bar).
Wheelbase: 61 in.
Overall length: 100 in.
Overall width: 48 in.
Fuel tank: 3.4 U.S. gallons.
Oil tank: 3½ quarts.
Transmission: ¾ pint.
Engine: see specifications for DS 45 engine.
Battery: 12-volt, 60 amp-hr. capacity.
Circuit breaker points: .022 in.
Spark plugs, type: Harley-Davidson No. 3.
Size: 14 mm.
Gap: .025 to .030 in.
Spark timing: Retard 0 degrees (front piston top center), automatic advance 30 degrees (⅝-in. before piston top center).
Transmission type: Constant mesh.
Speeds: Three forward, one reverse.
First gear: 14.4 to 1.
Second gear: 9.7 to 1.
Third gear: 5.85 to 1.
Reverse: 12.45 to 1.
Tire size (1968 and earlier): 5.00 × 16, 1969 and later: 5.10 × 16.

80 Cu. In. Side Valve Twin
1936–1945

The 80 cu. in. side valve twin, designated UL or ULH and produced from 1936 through 1941, featured the Y-type intake manifold found on the more popular 45 and 74 cu. in. models, plus deeply finned heads and a new combustion chamber design shared with the smaller models. The factory especially recommended the 80, initially designated the ULH, for sidecar work. In 1937, the giant twin shared the circulating oil pump and dry sump lubrication with the 45 and 74. This was an entirely satisfactory bike in virtually every respect; the original four-speed transmission caused minor problems only the first year of production. The decision not to continue the side valve 80-incher following World War II probably was due to material shortages, and to the immense popularity of the Knucklehead.



An 80 cu. in. side valve machine, produced in 1936. These bikes greatly resemble the 45's of the same year; however, the heads are larger and more deeply finned, while the frame is of double downtube construction. This V-series Harley-Davidson is currently stored in York. (David Wright)

Specifications

From a 1936 dealer brochure:

Motor: Air-cooled four-stroke cycle, side by side valves, Ricardo cylinder heads. Lynite, cam-ground pistons. Cylinders straight honed, mirror finish. Linkert carburetor. Bore, 3.422 in.; stroke, 4 ¼ in.

Muffler: Burgess straight-through with gas-deflecting end.

Transmission: Three speed standard. Reverse gear available. Fourth speed available.

Lubrication: Throttle-controlled oil pump for motor with automatic front chain oiling. Transmission lubricated separately. All other bearings Alemite fitted.

Ignition: Harley-Davidson generator-battery.

Electric equipment: Large, 7-in. headlight with prefocused double filament bulb. Dual beam control from handlebar. High output generator with automatic increase when headlight is in use. Twenty-two ampere-hour battery. Disc-type horn.

Handlebars: One piece, with double-acting twist-grip controls fully enclosed.

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Frame: Extra low, strongly reinforced, seamless steel tubing, with drop forged fittings. Entire frame heat-treated. Theftproof lock.

Clutch: Multiple dry disc, foot-operated.

Front forks: Combination rigid and spring fork construction. Rigid fork drop-forged. Spring fork seamless steel tubing and drop-forging fitted with two sets helical cushion bumper and recoil springs.

Drive: Duplex extra heavy roller chain for front. Rear chain, extra heavy single roller.

Tires: Full balloon, 19 × 4.00 standard, 18 × 4.00 optional.

Wheels: Front and rear quickly demountable and interchangeable. Both wheels wire with drop-center rims.

Wheelbase: 60 in.

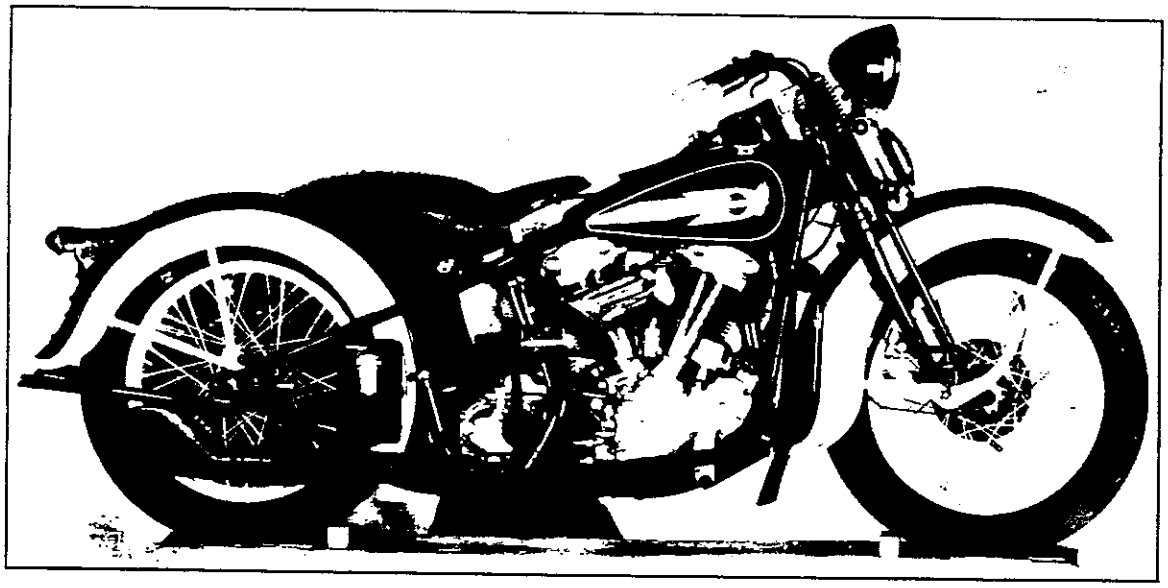
Overall length: 94 in.

Saddle height: 29½ in.

Tank: Saddle type, large capacity. Main gas tank, 21¼ pints (approximately three gallons); reserve tank, 8½ pints (approximately one gallon). Oil tank, 8¼ pints.

61, 74 Cu. In. Overhead Valve Models
1936–1947

As nice a guy as President Walter Davidson was, he'd run out of patience. The National Recovery Administration, a product of the Depression, prevented his engineers in 1934 from working overtime. The government body encouraged hiring more people rather than overworking people already on the payroll, and that's one of the reasons why the 61 cu. in. overhead valve model failed to make its debut until 1936 (and why just six variations, on two models, were offered in 1935). Despite the delay, the Knucklehead, as

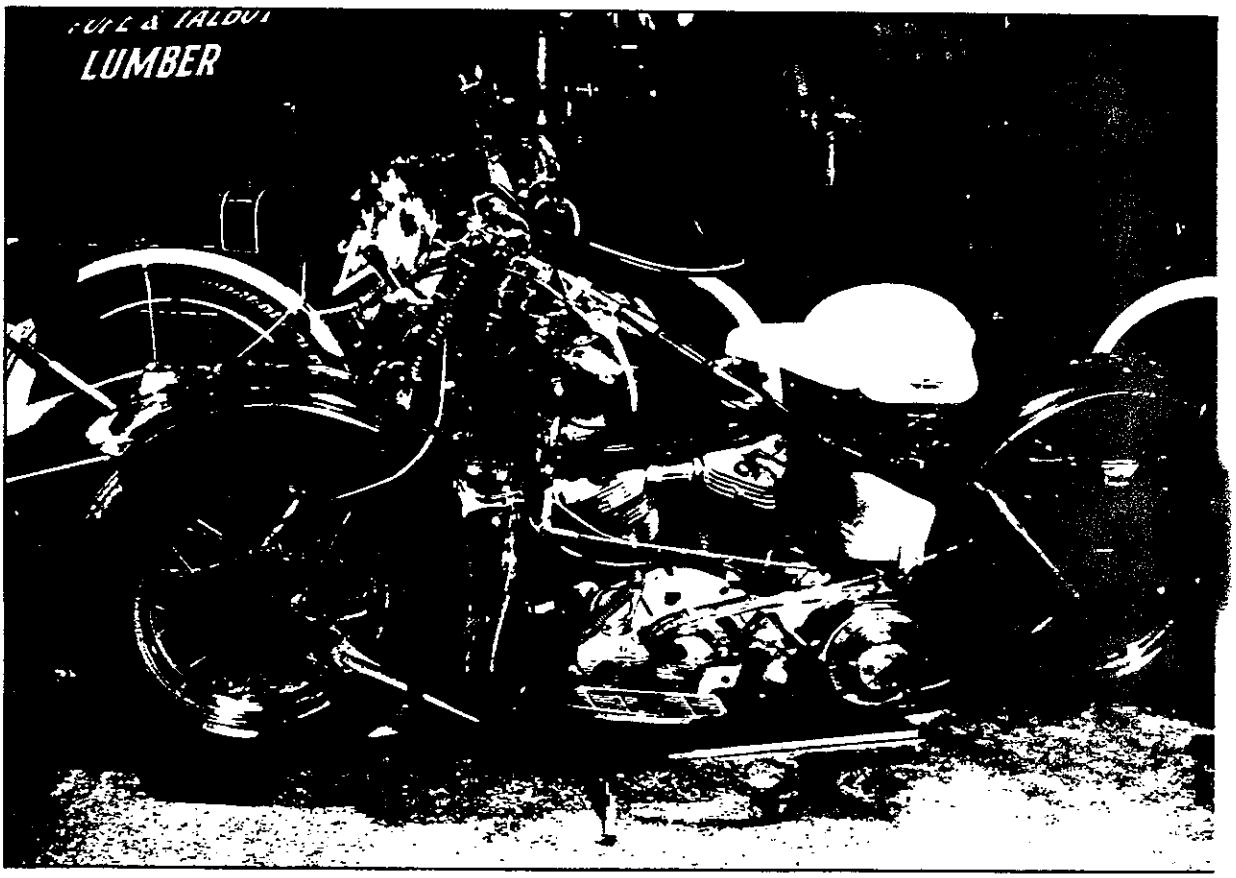


The 61 cu. in. 1936 overhead valve V-twin, designated the E model, was produced through 1947 and became popularly known as Knucklehead, due to the knuckle-like protrusions atop the head. (Harley-Davidson Motor Company)

it came to be known, had a few initial problems. There seemed to be no way to regulate oil flow to the valves. Other parts received either too much or too little lubrication, so a crash lube improvement program began almost immediately and the new and usually reliable recirculating oil system of 1937 was the result.

The 74 cu. in. overhead valve model introduced for the 1941 model year was identical to the highly popular 61 cu. in. overhead valve model. According to the factory, the 74 was created by "a demand from a small number of riders for a model of this type of larger cubic inch capacity—a model that would handle a sidecar with ease and speed, and a solo motorcycle with performance far beyond ordinary requirements." Nice as that sounds, the 74 was instead an insurance policy to prevent speed-oriented H-D enthusiasts from being passed by an Indian. The biggest mechanical news within was a centrifugally controlled oil pump that at last solved the 61's problem of too much oil in some parts of the engine and not enough in others. A bypass valve, regulated by rpm, closed at high speed for maximum lubrication of the motor. At low speed, the valve opened to bypass the gear case and return to the supply tank. Vane-type pumps were installed in 1941 on the 45, 74 and 80 cu. in. side valve motors, with gear-driven pumps on the 61 and 74 OHV's.

The other major improvement on all models involved the clutch. Three steel discs, three friction (fiber) discs and a spring disc meant seven frictional surfaces on all big twins, instead of the five used in 1940. A total surface increase of 65 percent over the



A 74 cu. in. 1942 Harley-Davidson overhead valve V-twin, as displayed by the Smithsonian Institution. (Smithsonian Institution photo by Rolfe Baggett)

previous models made for smoother shifting, as did the new and larger clutch hub. Other niceties found on the new OHV and shared with other models included a larger and more effective air cleaner; forty-four percent larger rear brake; better feel to the front brake lever, which was made of die-cast aluminum; a quieter muffler; a "new, airplane-style speedometer dial" featuring silver numerals on a black face with a white needle; and sturdier gearshift and foot clutch lever mechanisms. Unfortunately, all models also shared stainless steel styling strips on the gas tanks. These hunks of metal, viewed today, just don't come off as well as the decals on the mid-thirties Harley-Davidsons.

The 74 OHV was produced in extremely limited quantities during World War II and in only slightly larger batches in 1946 and 1947. Henry Koster, a long-time mechanic employed at Harley-Davidson of Bergen County in Rochelle Park, New Jersey, says the 1941 and '42 74's were the most efficient motors ever to come out of Milwaukee. His view is shared by James Lang, a former New England dealer who's familiar with every model H-D since 1924. And Mike Lange, a top restorer, says his '41 74 runs with and stays cooler than the hydraulic-lifter 74 cu. in. models that superseded the overhead valve machines in 1948.

Specifications ·61 cu. in. model:
(From a 1936 brochure)

Motor: V-twin, overhead valve configuration, bore 3 5/16 in., stroke 3½ in., displacement 60.32 in., horsepower rating (NACC) 8.77.

Compression: EL (high compression, created by high piston), 7:1 without cylinder shims, 6.5:1 with cylinder shims. EL (low compression, created by low piston), 6:1 without cylinder shims, 5.6:1 with cylinder shims.

Horsepower: 40 at 4,800 rpm.

Gear ratios, motor sprocket: 23.
Clutch sprocket: 37.
Countershaft sprocket: 22.
Rear sprocket: 51.
Third-gear ratio: 4.57.
Fourth-gear ratio: 3.73.
Battery: Six volts.
Dry weight: 565 lbs.

Model S-125
1947–1952

The first new model after World War II was only new to these shores. The design was the work of prewar German DKW engineers, who had two strikes against them. First, losing the war meant losing all patent rights. Second, the DKW factory found itself behind the Iron Curtain. So BSA in Great Britain and H-D in America produced the two-stroke, single-cylinder machine. Returning soldiers were cycle hungry, but wanted more than this. William H. Davidson told directors that 10,000 were made and sold in the first seven months of 1947. However, the little bike never completely fulfilled the lightweight craving of H-D dealers, who have yet to spread the welcome mat for a two-cycle engine.

Specifications
(From a 1947 collateral piece)

Serial number: The engine (serial) number is stamped on the front end of the engine crankcase, on the left-hand side.
Wheelbase: 50 in.
Model designation: S.
Type of engine: Two cycle.
Number of cylinders: One.
Bore: 2 1/16 in. (52.39 mm).
Stroke: 2 9/32 in. (57.94 mm).
Displacement: 7.6 cu. in. (124.87 cc).
Compression ratio: 6.6 to 1.

Horsepower (N.A.C.C. rating): 1.7.
Brake horsepower (approximate): 3.
Tire size: 3.25 × 19 in.
Gasoline tank, total: 1¾ gals.
Main supply: 1½ gals.
Reserve: 1 quart.
Transmission case: 1¼ pints.
Low gear: 29.3 to 1.
Second gear: 15.4 to 1.
High gear: 8.45 to 1.

Model K, 45 and 55 Cu. In. V-Twin
1952–1956

The Harley-Davidson Model K, introduced in 1952, looked more like a contemporary cycle than anything produced by the company prior to that year. It featured rear suspension consisting of a swing arm and a sturdy pair of shocks, a revamped 45-cubic-inch side valve motor and a combination foot shift and hand clutch. Unfortunately, problems plagued the sleek machine from its inception. Most worrisome from the corporation's point of view were some serious mechanical and performance problems, among them the breaking of gear teeth in the 1954 and '55 KH models. Art Kauper in the H-D experimental department noticed that there was a pattern to teeth breakage, but he could not initially tell why. On a visit to a steel supplier, however, he watched an ingot being rolled into flat stock and saw the corner outlines of the ingot in the finished steel. Those corners correlated with the teeth that were breaking. By going immediately to a forged gear, the problem was solved. But performance remained dismal, both in leaving a stoplight and attempting to reach a speed much in excess of 80. Boosting the motor to 55 cubes in 1954 helped some, but not enough.

Nevertheless, there was such a thing as a desirable K bike. Tom Lyman, now a Utah chiropractor, remembers getting a ride on a new K and trading his 1951 Hydra-Glide immediately for a KK model, in 1953. The KK featured hotter cams, less chrome and flatter bars and gave Lyman perfect service. Says he: "Where the KK was really great was out on the road, or blasting through a canyon. It cruised very nicely at 70 or 75 mph and had a top speed of 90 to 95 with the shorter gearing I had put on. All I can say is, it was smooth, leaned well into the twisties and was easy to take care of." Searching hard for a flaw, Lyman concedes that the ride might have been "mushy" by today's standards. But the bike was no lemon.

The K was a stopgap model, according to William H. Davidson, who reports that development time ran out on a radical, sixty-degree V-twin called the KL. Unlike other H-D's, the KL featured connecting rods offset in side-by-side fashion (in other models, the big end of one connecting rod fit within the big end of the other.) The aluminum high-cam motor sported dual carburetors and probably was the performance equal of the 1954 Golden Anniversary KH, with its 55 cu. in. motor and engine-transmission unit construction, a first for H-D.

A 1952 Model K. This sports bike employed the 45 cu. in. side valve motor. (David Wright)

Specifications
(From a brochure, printed in 1951)

45 cu. in. side valve motor—Air-cooled, four stroke, V-type twin cylinder. Removable aluminum alloy cylinder heads. Enclosed valve gear. Low-expansion, aluminum alloy, cam-ground, double slot pistons. Cylinder bores honed and parkerized. Deep cylinder fins extend around intake and exhaust ports for proper cooling. All main bearings retained roller type: double tapered Timken bearings on the sprocket side. Linkert carburetor. Motor develops approximately 32 horsepower. Bore, 2¾ inches. Stroke, 3 [illegible] inches.

Transmission—Harley-Davidson four speed. Incorporated as an integral part of crankcase casting. Sliding dog clutches. Large, rugged gears for durability. Constant-mesh design. Foot shift, hand clutch.

Lubrication—Circulating lubrication system with gear-type pressure pump and gear-type scavenger pump with pressure feed direct to cylinder walls. Transmission and front chain lubricated by oil supply separate from engine. All other bearings Alemite-Zerk fitted.

Ignition—Two-brush shunt, voltage controlled generator, storage battery, spark coil, circuit breaker. Easy starting and waterproof.

Electric equipment—Large, sealed ray headlight with prefocused 32-32 candlepower, double filament bulb. Generator and oil pressure warning lights incorporated in the headlights. Electric, trumpet-type blast horn.

Clutch—Harley-Davidson multiple dry disc with bonded-on clutch facings. Left hand operated.

Drive—Motor to transmission by ⅜-inch pitch triple chain running in oil bath and adjusted by Stellite-faced sliding shoe. ⅝-inch pitch single-row roller chain to rear wheel. Engine has compensating sprocket.

Frame—Double loop, silver brazed tubular steel. Heat-treated steel head, seat post cluster, rear support arms and axle clips.

Rear suspension—Swing arm type sprung by means of two helical coil springs and controlled by means of two hydraulic, automotive type shock absorbers, all encased in royalite covers. Pivot point of swinging arm is supported by pre-loaded Timken bearings.

Front fork—Easy riding hydraulic fork. Load is transmitted by long helical springs supported and contained in main tubes, hydraulically dampened by oil of high viscosity index. Hydraulic stops are provided in both recoil and cushion positions.

Muffler—Designed to reduce back pressure and has resonating chamber to produce low note. Inner tube and end bells of heavy gauge steel. Chrome-plated finish.

Handlebars—Seamless steel tubing. Rubber mounted Buckhorn type. Neoprene twist-grip controls for throttle and spark, fully enclosed.

Wheels—Drop center rims. Cadmium plated spokes. Knock-out type axles. Ball bearing mounted.

Tires—Goodyear or Firestone, 3.25 by 19, four ply.

Brakes—Fully enclosed, front and rear brakes with molded anti-score lining. Cast iron rear brake drum. Front drum of steel. Front and rear brakes eight inches in diameter and one inch wide.

Tanks—Extra large, welded heavy gauge steel gas tank with center filling cap. Capacity: 4½ gallons, with reserve in addition. Reserve controlled by two-way gas valve with fuel strainer. Welded heavy gauge steel oil tank. Capacity: 3 quarts, with provision for filter. Oil tank has screw-down provision in cap.

Instrument panel—120-mph speedometer, ignition and light switch incorporated in the top part of the front fork cowling. Each switch incorporates a tumbler type lock.

Saddle—Suspended on two seat posts. Each part incorporating a helical coil spring. Form fitting, bucket type with foam-rubber padding, covered with soft, genuine leather.

Finish—All surfaces to be painted are treated to resist rust and corrosion. Available in Persian Red, Rio Blue and Briliant Black. Available at extra cost, Metallic Bronco Bronze. Chrome and stainless steel trim. Frame in black enamel.

XL Models
1957-1987

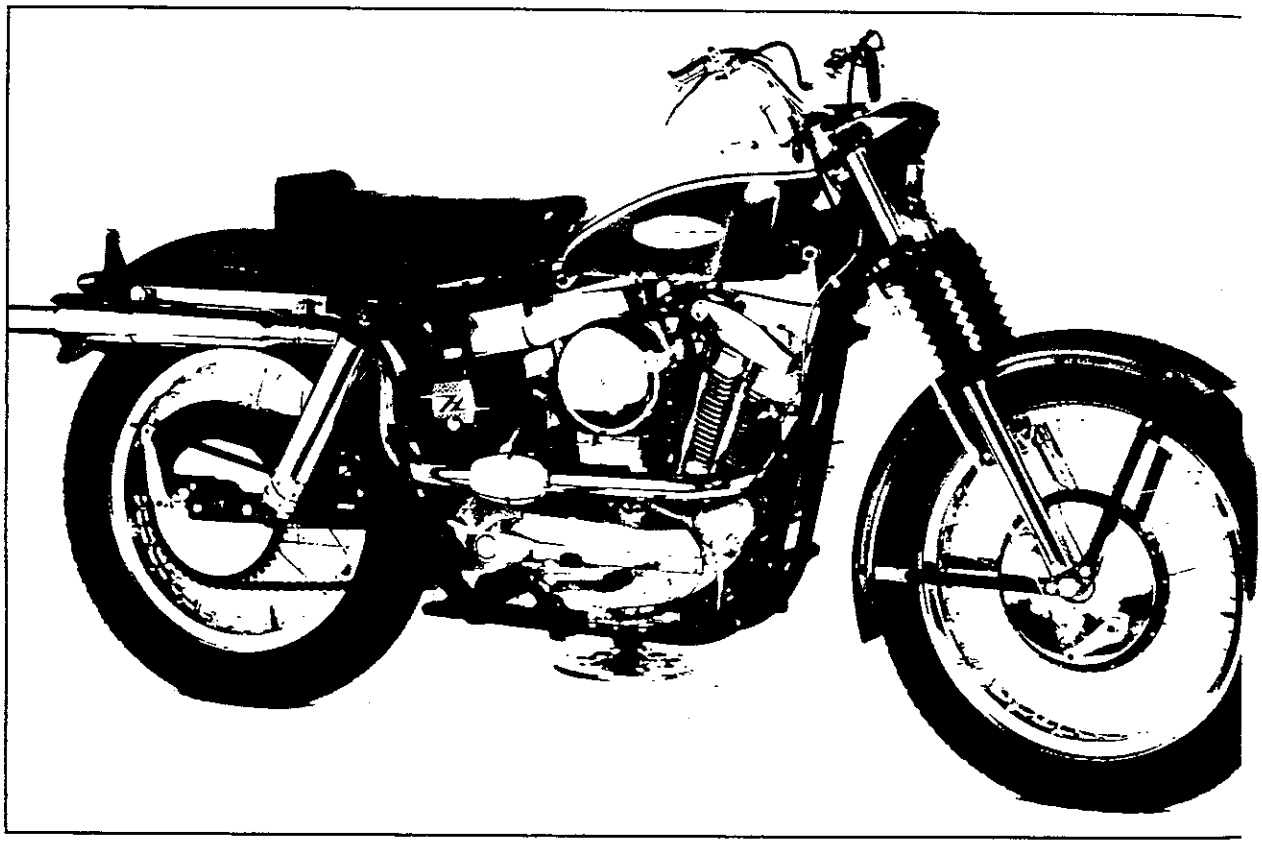
If the Model K was underwhelming, the Sportster, introduced in 1957, was successful beyond the wildest dreams of even the most optimistic engineer or designer. Larger by 10 cu. in. than the original K, the 55 cu. in. machine boasted overhead valves that produced twelve percent more horsepower, a claim no unsuspecting Triumph owner would contest. Now in their twenty-sixth year of production, the X models have proliferated into 61 cu. in. (1,000cc) corner straighteners that retain wads of torque and the deep thuds that bring joy to the ears of V-twin owners to this day.

The motor initially measured 53.9 cu. in. (883cc), producing 40 horsepower at 5,500 rpm. Introduced with a 7.5 to 1 compression ratio, the musclebike shared all of the assets and none of the liabilities associated with its predecessor: The engine and transmission were one unit, with transmission service accomplished via an easily removed cover. Automotive-style shocks (one of five shock types used from then to now) nestled beneath the seat, providing sufficient buffer for the bike to be touted originally as either an on- or off-road model. In only its second year of production, the fast got faster, thanks to higher compression through domed pistons, cleaner ports, larger valves and aluminum tappets. The stage was set for the awesome XLCH.

High pipes, a magneto-generator ignition, peanut gas tank and semi-knobby tires warned the timid away from the lightweight XLCH. Here was a case where Harley-Davidson slightly misjudged the market—and reaped the rewards. Riders everywhere passed up enduros for the highway with the XLCH (CH stood for "Competition Hot"). They quickly ran off or removed the knobbies to become the favorites in any asphalt game being played. Both XL's in 1959 received a horsepower hike via a high-lift intake cam and redesigned exhaust cams. Owners found ways of expending that power. . . .

John Heidt, formerly a top drag racer and now an H-D dealer in Fond du Lac, Wisconsin, believes the 1962 Sportster was the fastest of them all. "There were more fast '62's than any other year, though any '59–'65 Sportster with a stock Linkert carburetor would reach 115 mph in the quarter mile," he says. "I ran a 13.4-second quarter with a '59 Sportster without the muffler, which actually made the bike slower, due to insufficient back pressure. I ran 105–107 mph quarters Sunday after Sunday with a '62. The denser the air, the better it ran." Looking at reliability, Heidt says he frequently drag-raced two hours steady at the Union Grove, Wisconsin, strip without shutting the motor down. Not until a decade later was there a stock motorcycle that could stay with the Sportster.

Style became as important as speed. The staggered, shorty dual exhausts, first seen in 1962, have become classic Sportster equipment. A year earlier, H-D announced that all of the new Hi-Fi colors were available for either model, plus any color combination the

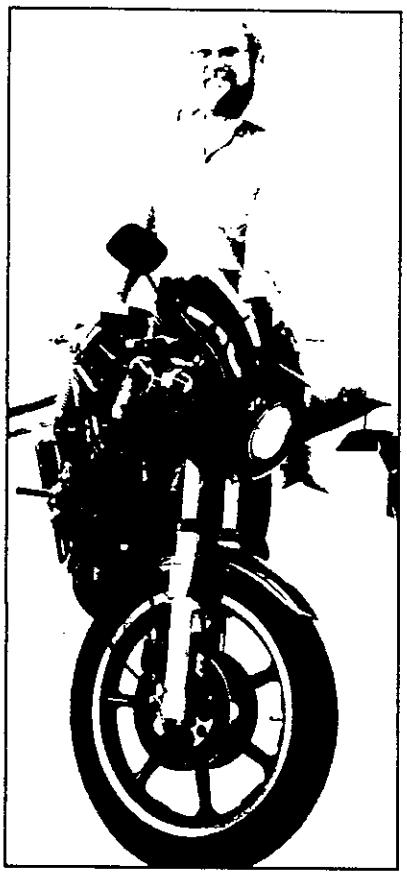


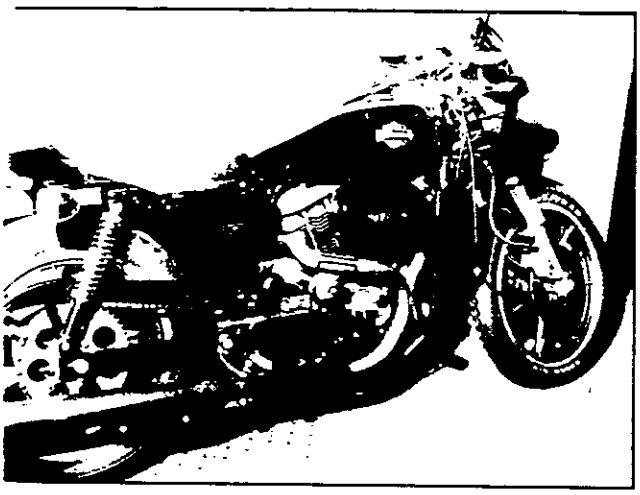
A 1962 Super CH Sportster. "CH" is said to have stood for "competition hot," while the "H" model was intended for the highway. (Harley-Davidson Motor Company)

prospective owner could conceive. That option lasted through 1971, when Sportster production reached such numbers under AMF that standardized hues were made mandatory. Nacelled headlights in various configurations appeared beginning in 1959 and lasted for more than a decade.

As the look changed, so too did the iron. The 1959 models started with a single-switch ignition, while in 1962 the speed-conscious engineers on Juneau Avenue converted such crucial items as fork brackets and motor mounts to aluminum. Full-width aluminum front wheel hubs, light but tough, were standard from 1964, as riders of all ages and sizes were stuffing H-D stroker kits into the machines for even better drag strip hole shots. The following year, the electricals were upgraded to a full 12-volt system, in anticipation of the 1967 electric starter. The XLH lost its kick starter in 1968, the year before the magneto ignition finale for the XLCH. Starting a magneto-equipped Sportster, by the way, taught a whole generation of riders how to use manual spark advance—and profanity. The battery system still in use employs a centrifugal advance with automatic

Willie G. Davidson with his cafe racer, the first XLCR produced. The vice president of styling has personalized his machine by adding pinstriping, trading the original Goodyear tires for Continentals and porcelainizing the exhausts. (David Wright)





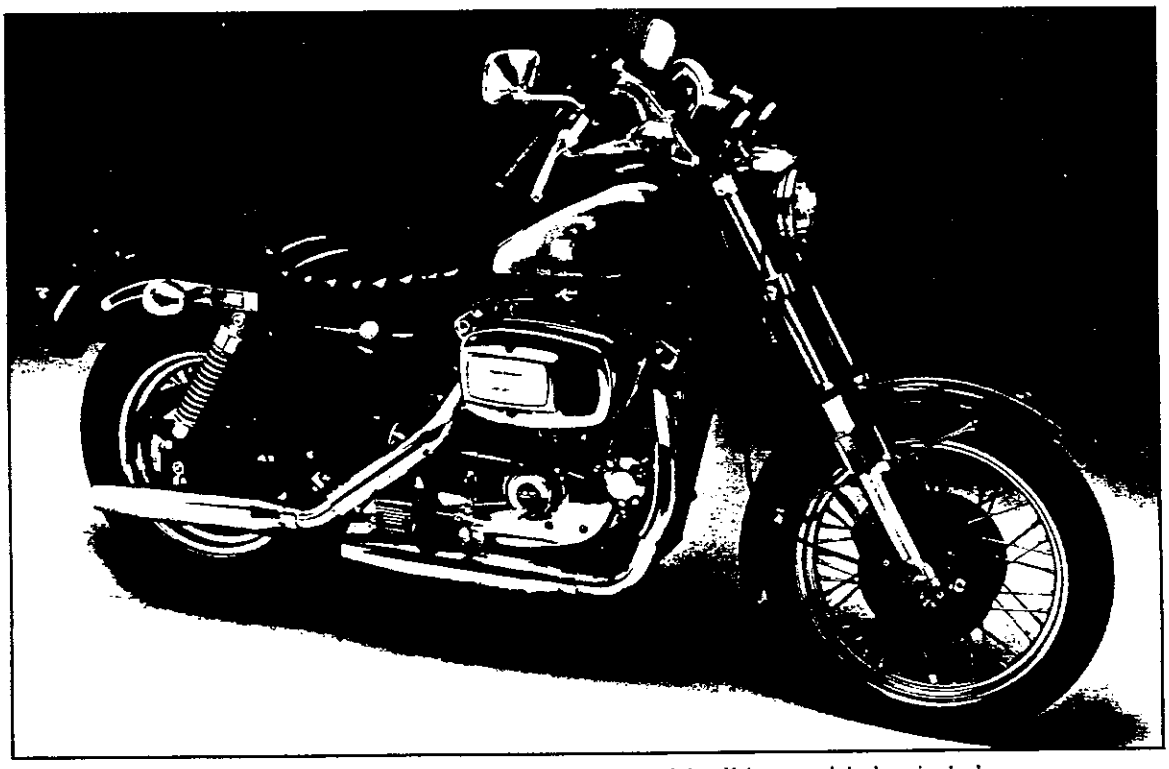
An XLCR, as displayed at the Rodney C. Gott Museum in York. Fewer than 3,400 of these cafe racer-type bikes were produced. (David Wright)

retard. Riders who kick (no pun intended) about the lack of a manual starter never attempted to turn over a magneto-equipped XLCH.

The chassis continued to evolve, with a new front fork in 1968. The motor, a wonder in 1957, got better each year. Not even a "California" muffler, to control emissions, could prevent the V-twin in '68 from producing 58 horses at 6,800 rpm. Small wonder Michael Parks chose such a machine for *Then Came Bronson* the following year. For 1971, the timer was integrated into the cam cover, providing easier timing adjustment. A more important alteration was the switch that year from a dry to a wet clutch. The engineers were preparing the bike for the full 1,000cc treatment in 1972.

The megamotor combined with the reintroduction of the classic peanut tank and a low-profile seat to take advantage of the increasing interest in cruising bikes. Throughout the seventies, in fact, the Sportster became increasingly stylized as the feds descended upon H-D with a number of regulations. The pleasant "bread box" air cleaner of the late-sixties evolved into the infernal "ham can" in 1979. Side reflectors became mandatory in 1971, though stylists were able to work these shiny bits into elements already present on the bikes. About the only federal edict that made sense was the switch to a spring return and an external throttle cable in 1975.

Aware that a sound engine can look good with a number of chassis, the company in 1977 began to broaden the appeal of the XL's. Out came the XLCR Cafe Racer, a black-on-black, single-seat machine that proved Willie G.'s styling versatility and became an instant classic despite its two-year lifespan. The bikini-fairinged bike displayed siamesed exhausts and dual discs up front, the latter showing up on the XLH and XLCH from



The 1982 25th Anniversary Sportster, a special edition model that includes paperwork proving its ancestry, signed by Chairman Vaughn Beals, President Charlie Thompson and Styling Vice President Willie G. Davidson. (Harley-Davidson Motor Company)

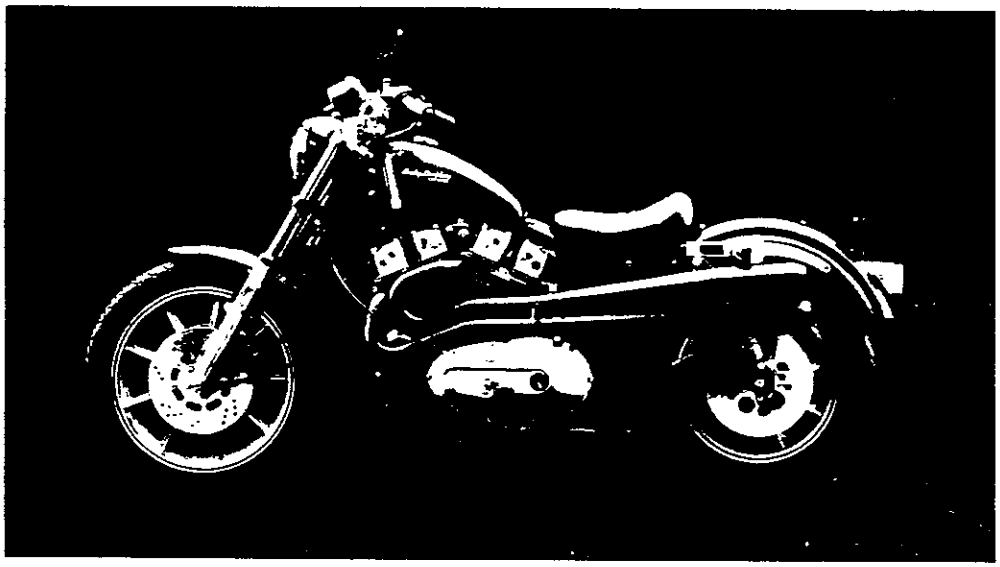
1978. This bike is so highly regarded by those who know, that Willie G. and his two sons each own an XLCR. Finally, with an eye on the calendar, the Sportster has appeared in seventy-fifth company anniversary and twenty-fifth Sportster anniversary models, limited-production versions of everybody's favorite sports bike.

Other variations on the Sportster theme in 1979 were the Hugger, with its short shocks and low seating position, and the XLS Roadster with Low Rider styling and 16-in. rear tire. Two additions for 1983 are the no-frills XLX and the limited-production XR1000. The former is a basic black answer to high prices, while the latter is a contender for AMA Battle of the Twins road racing honors, yet is said to be very manageable in town. Its heritage is evident in the dual Dell'Orto carbs and XR750-style pipes and aluminum heads and pistons from the racing bike. Horsepower, something H-D has recently downplayed, is 70.

All of these configurations now operate on the cutting edge of almost any rider's ability, thanks to 1982 introduction, at last, of a frame combining stamped and welded tubular construction. If you're unaware of the reception given fresh-framed Sportsters by the press, then you've really been out of touch—which is something no one will ever accuse the Sportster itself of being.

As late as the 1985 model year, the company was offering three variations on the Sportster theme—the XR-1000, the bargain-basement XLX and the Sportster itself—with the same 1000cc motor. All that changed in 1986, when the 883cc Evolution XLH replaced the XLX, and the Sportster 1100 XLH superseded its 1000cc brethren (sadly, the XR-1000 was dropped from the model line). Both of these motors showed the Evolution top end, complete with hydraulic lifters; new camshaft gear drive train; high-strength heads with new, oval combustion chambers; computer-designed camshafts; new rocker covers for easier servicing; three-piece flywheels; and revised intake and exhaust systems. Both machines run cooler than their elders, due mostly to superior oil flow.

In short, motors in two sizes that work well and were overwhelmingly well received by public and press alike. The '87 883cc model showed a tidier combustion chamber, muffler and ignition that resulted in a reported five more horses. The bigger bike got a similar power boost from similar work. Yes, most riders would like a five-speed Sportster. And yes, the 883 bike is, well, sort of slow. But what are next year's for, anyhow?



The left side of the bike is dominated by the XR750-derived exhaust system, which is street legal. (Harley-Davidson Motor Company)

Because the Sportster has evolved so completely, here are specs on the very first and very latest bikes.

Sportster H Specifications
(From a 1957 brochure)

Engine—55 cubic inch air-cooled four stroke, V-twin cylinder overhead valve engine. The size of the bore is 3 inches. The length of the stroke is 3 13/16 inches. Enclosed valve gear. Low expansion aluminum alloy, cam-ground pistons. Cylinder bores honed and parkerized. Deep cylinder fins extend around exhaust ports for proper cooling. All main bearings retained roller type; double tapered Timken bearings on the sprocket side; straight retained roller bearings on the gear side. Linkert carburetor. Includes cylinder heads with enlarged intake port openings, increased-size intake valves, light weight racing-type tappets, special 9-to-1 high dome pistons.

Transmission—Harley-Davidson four speed. Incorporated as an integral part of crankcase casting. Sliding dog clutches. Large, rugged gears for durability. Constant-mesh design. Foot shift, hand clutch.

Lubrication—Circulating lubrication system with gear-type pressure pump and gear-type scavenger pump. Transmission and front chain lubricated by oil supply separate from engine. All other bearings Alemite-Zerk fitted or prepacked.

Ignition—Two-brush shunt, voltage controlled generator, storage battery, spark coil, circuit breaker. Easy starting and water proof.

Clutch—Harley-Davidson multiple disc. One-piece clutch discs. Left hand operated.

Drive—Motor to transmission by 3/8-inch pitch triple chain running in oil bath and sliding shoe tension control 5/8-inch pitch single-row roller chain to rear wheel.

Rear suspension—Swing-arm type sprung by means of two helical coil springs and controlled by means of two hydraulic, automotive type shock absorbers, all enclosed in chrome covers. Pivot point of swinging arm is supported by pre-loaded Timken bearings.

Front fork—Easy riding hydraulic fork. Load is transmitted by long helical springs supported and contained in main tubes, hydraulically damped by oil of high viscosity index. Hydraulic stops are provided in both recoil and cushion position.

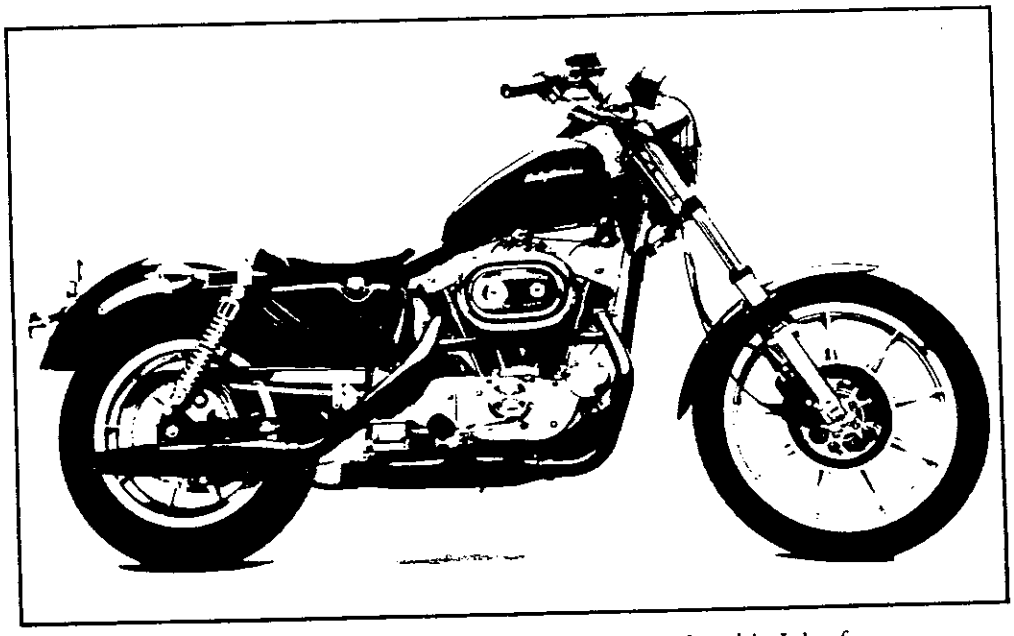
Tires—Goodyear or Firestone, 3.50 by 18 inches.

Brakes—Fully enclosed, front and rear brakes with molded anti-score lining. Front and rear brakes 8 inches in diameter and 1 inch wide.

Tanks—Extra large welded heavy gauge steel tank with center filling cap. Capacity: 4.4 gallons including reserve in addition. Reserve controlled by two-way gas valve with fuel strainer. Welded heavy gauge steel oil tank. Capacity: 3 quarts, with provision for filter. Oil tank has secure, screw-down provision.

Special equipment—This model available with the Deluxe Group.

Finish—Harmonizing two-tone color styling: Black, Calypso Red, Skyline Blue, or Sabre-Grey Metallic with Birch White tank panel. (Other colors and combinations were available on special order through dealers.) Chrome and stainless steel trim.



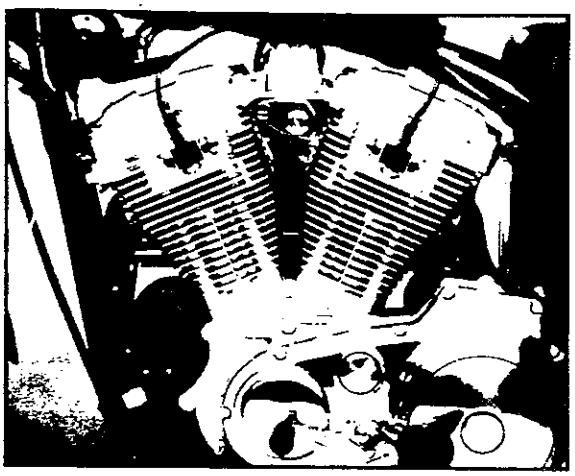
The no-nonsense XLX was priced at $3,995 when it was introduced in July of 1982. The bike, available only in black, is the least expensive H-D currently in production. (Harley-Davidson Motor Company)

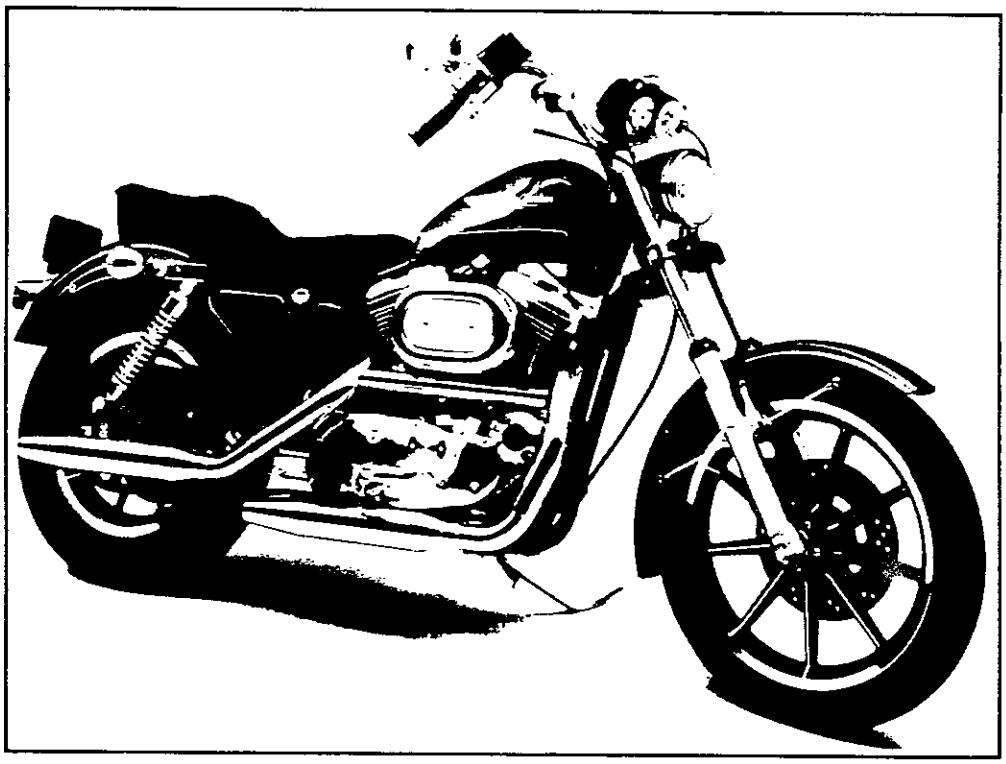
1987 XLH Sportster 1100 Specifications
From a brochure)
Length: 87.5 in.
Seat height: 29 in.
Ground clearance: 6.7 in
Rake/trail: 29.7°/4.5 in

Wheelbase: 60 in.
Dry weight: 457 lbs.
Load capacity: 443 lbs.
Engine: OHV V2 Evolution.
Bore and stroke: 3.350 x 3.812 in.
Displacement: 67.2 cu. in., 1100cc

01105

The V2 Evolution 883cc XLH Sportster engine was new in 1986 and featured hydraulic lifters plus improved piston, cylinder, cylinder head and crankshaft components. This smaller-displacement Evolution machine was priced at $3,995. (Harley-Davidson Motor Company)





The Evolution also was offered in an 1100cc Sportster configuration for 1986: the XLH in a variety of colors. Both Sportsters retained the traditional four-speed transmission. (Harley-Davidson Motor Company)

Compression: 9.0:1.
Ignition: V-Fire III electronic breakerless with solid-state, dual-stage advance.
Oil capacity: 3 qts.
Fuel capacity: 2.25 gals.
Exhaust system: Staggered shorty duals.
Clutch: Multi-plate with diaphragm spring in oil bath.
Primary drive: Triple-row chain.
Final drive: Single-row chain.
Transmission: 4-speed, constant mesh.
Gear ratios: 1st, 9.48; 2nd, 6.61; 3rd, 4.98; 4th, 3.98.
Torque: 63.5 ft. lbs. at 4,000 rpm.

01106

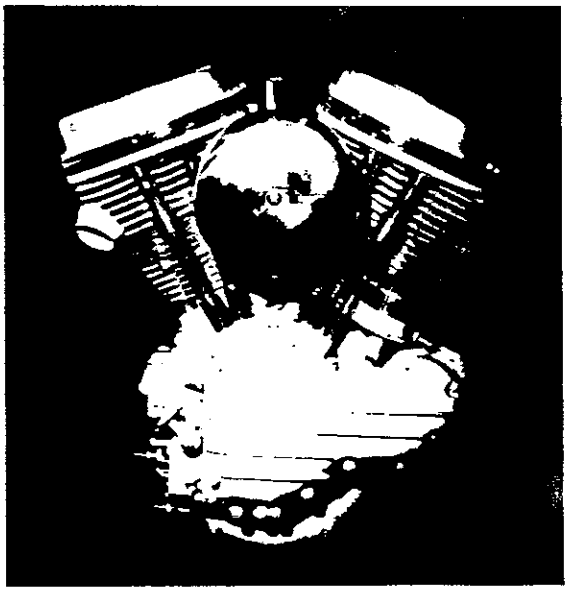
Brakes, front and rear: 11.5 x 20 11.5 x 23
Braking: 145 ft. at 60 mph.
Tire size, front and rear: MJ90 x 19 MT90 x 16
Wheels: 7-spoke cast.
Starting: Electric.
Mileage: 57 hwy., 48 city.
Lean angle, right, left: 37 degrees 36 degrees
Instruments: Speedometer with odometer and resettable tripmeter; tachometer.
Color options: vivid black; candy brandywine; candy bronze; brandywine and crimson; metallic blue and silver

61 and 74 Cu. In. Models
1948–1965

The Panhead motor began life in a hardtail frame, became the Hydraglide a year later, showed up as the Duo-Glide in 1958 and ended up in 1965 as the Electra Glide. Its eighteen years of dependable existence allowed the company to perfect non-motor aspects of its bikes.

The new overhead valve 61 and 74 cu. in. motors previewed in 1948 featured aluminum cylinder heads and used push-rod-type hydraulic lifters in the valve train. The rocker arms and cylinder heads were redesigned, with the latter the source for the eventual Panhead nickname. The new heads dissipated heat more rapidly than did the Knucklehead's, while the new lifters eliminated tappet noise. To accommodate the change in the length of the rocker arm fingers, a new camshaft was designed. Also new were the exhaust ports and pipes; the intake manifold was new and was fabricated from brazed tubing. Extensive work was done with oil flow and pressure. A new and larger pump delivered a reported twenty-five percent more oil to the overhead mechanism at 15 lbs. of pressure per square inch. From a cosmetic standpoint, the motor had no external oil pipes.

The cylinder heads were made of aluminum alloy, having aluminum-bronze valve seat inserts and steel valve guides. The lower portion of the rocker arm support was cast

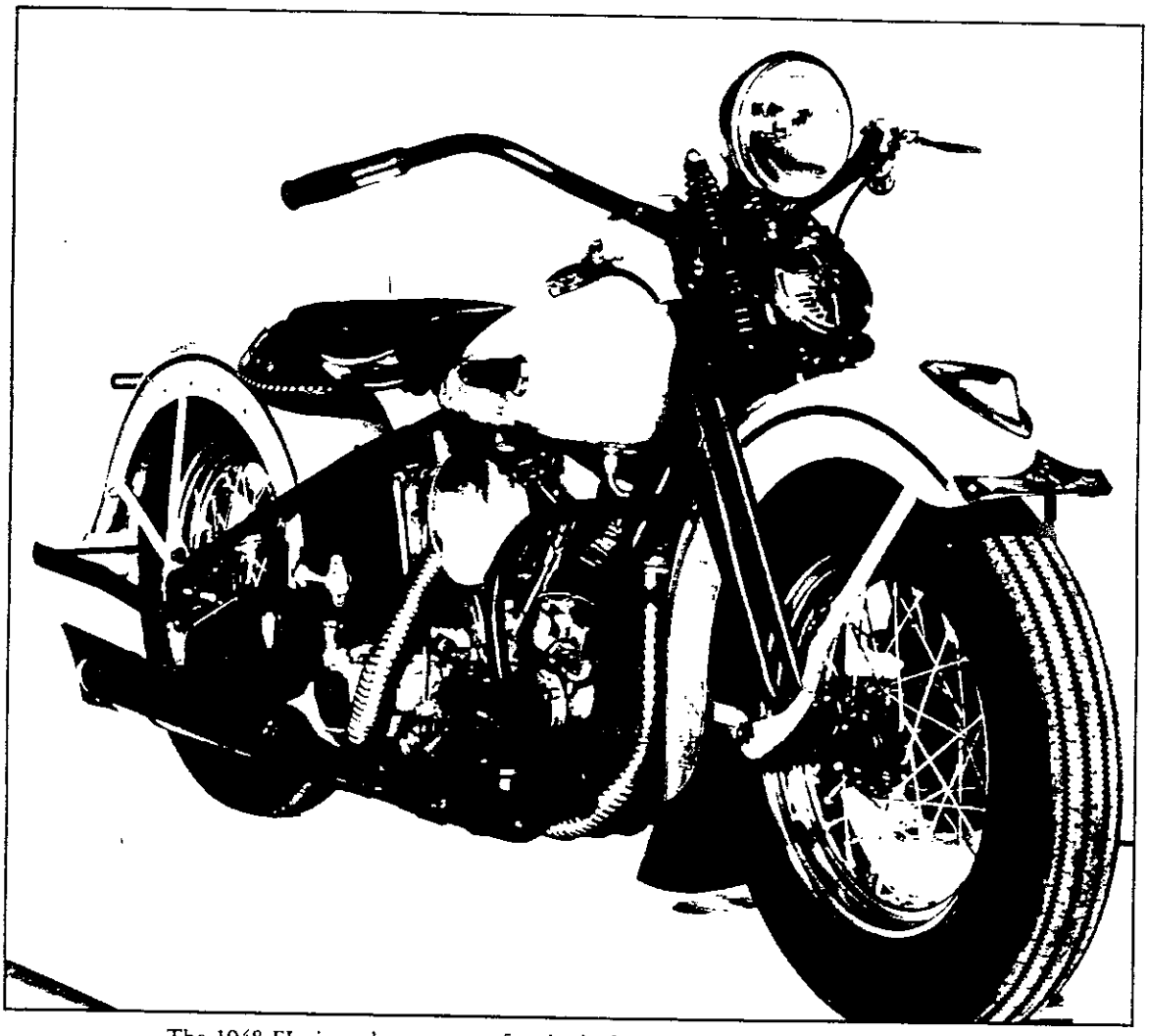


The Panhead motor, first produced for the 1948 model year. It superseded the Knucklehead and offered the advantages of better oil passage and lighter weight (the Knucklehead was all iron, whereas the Panhead, produced through 1965, and numerous aluminum upper end parts). (David Wright)

iron and the upper portion, or cap, of the rocker arm support was bronze. The cylinder heads were provided with steel inserts for the cylinder bolts and the spark plugs. The plugs themselves had a broader heat range, providing better performance at low speeds. The 74 cu. in. Panhead engine weighed eight pounds less than its Knucklehead counterpart, though horsepower was about the same.

Improvements outside the motor in 1948 included a steering head lock, a safety guard mounting plate on the frame and a more comfortable latex-filled saddle. Two forms of corrosion protection were applied to all body parts, including tanks. Forty-eight also was the first year for what may have been H-D's most startling color ever—Azure Blue.

In 1949, the year following the Panhead's premier, the company installed hydraulic front forks. These were an immense improvement over the rigid-spring forks known previously. Riders reported crossing railroads—even railroad ties—with ease. The forks were the single biggest improvement to date in terms of ride and handling and contributed to the touring reputation the 74 has passed on to the FLH and FLT. Today's touring



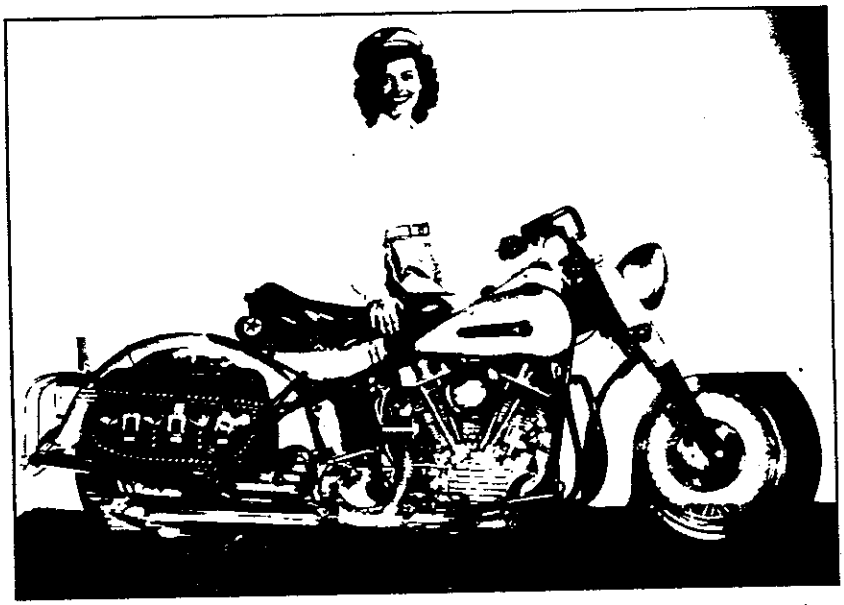
The 1948 FL, introductory year for the hydraulic lifter motor that came to be known as the Panhead. (Harley-Davidson Motor Company)

rider might be put off by the 1949's low-speed handling: the uncanny balance of the big bikes was still several years down the road. Also found on the '49 was a front brake with a thirty-four-percent-larger drum. The Panhead transmission would be quite familiar to today's rider, since the harder it was shifted, the better it changed gears. The hand shift and foot clutch, by the way, showed a pattern change earlier, in 1947. From the rider's view, first gear was closest to him and fourth closest to the steering head. Prior to '47, riders pulled rather than pushed when they shifted up.

Porting work produced ten more horses for 1950, while '51 models boasted 55 horsepower and combined the serrated exhaust headers (seen on the 74 through 1973) with a chromed lower exhaust system. With an eye on traditional riders, Harley-Davidson continued to offer hand shift after 1952, the year of the first foot-shift Panhead. Competing for sales with such long-gone makes as Delfino, James, Panther and Sunbeam, 1952 was the swan song for the 61 cu. in. motor. The '52's sported wide tanks and wider tires, 5.00 × 16 in., whereas 1953 models are most easily identified by the speedometer, which read 1, 2, 3, rather than 10, 20, 30.

There was no mistaking the '53 models, since all H-D's that year displayed a 2½-in. gold medallion on the front fender. A "trumpet blast" Jubilee air horn was standard, and plastic saddlebags were optional. A chrome medallion with "V" replaced gold the following year, together with a streamlined front chain guard and rubber-mounted, horizontal tail lamps. Not until '56 did the trusty Panhead motor need attention; high-lift cams and a freer air cleaner produced a reported twelve percent power hike. A lower seating position combined with the ever-plush saddle to provide an adequate ride, even with the solid rear. But that was about to change.

Ever hear of a fit too perfect on a motorcycle? That was the only initial problem with the Duo-Glide, offered from 1958 through 1964 and still seen in large numbers on the highway. A series of prototypes was built of the machine, some nearly a decade before production. All of the prototypes were afflicted with a fork damping problem, according to Art Kauper, who worked at the time with engineers assigned to the project. "We went into production at the absolute eleventh hour," he reports. The problem was



The 1949 Hydra-Glide, so named for the new telescopic front forks. (Harley-Davidson Motor Company)

solved when it was discovered, during the first few months, that the rubber seals on the fork legs actually rubbed the legs to a mirror finish, creating a perfect fit. This left no room for oil, which was forced past the seals as the forks worked up and down. The solution proved to be a new seal with slightly looser tolerance and a slightly rougher finish on the fork legs.

The only other malady surfaced following delivery of a sizeable Duo-Glide order to the California Highway Patrol. Officers experienced instability at or above the legal limit. John Nowak, service school dean and a troubleshooter for years with the company, was dispatched to the West Coast to attempt to solve the problem. "The police took a ride and wanted the solid rear ends back," says Nowak, who tried a number of fancy stunts before discovering that the head bearing was too tight. "Service Bulletin No. 510 tells dealers how to set the bearing. All the other stuff suggested is baloney." Proof that H-D could solve suspension problems was made evident a year or so later, when airplane manufacturers consulted the factory before developing their landing gears.

The FL's and FLH's in 1958 also showed a gold, silver and black tank insignia and enjoyed larger cylinder head fins for improved cooling. The insignia took on an arrow shape the following year, and there was now a neutral indicator light. The Duo-Glide by 1960 featured the same style headlight nacelle seen on the Sportster. Other early-sixties modifications included a larger rear chain, a new chain oiler and external oil lines to the overhead valve gear in '63; and full-width, finned, aluminum front brake drums in 1964. The stage was set for a new idea that fostered a new name for the FL and FLH.

The Electra Glide was one of three new Harley-Davidson models for 1965, yet its 12-volt electrics, push-button start, sealed and enclosed primary chain and five-gallon "turnpike" tank made riders forget the Sprint Scrambler and the M-50. H-D had for years preached that the 74 cu. in. bike was the ultimate highway cycle, and the Electra Glide certainly backed that claim. Instant starting proved to be the final tribute to the Panhead motor, a V-twin that began life as a postwar improvement on the Knuckler and ended with a reliability record roughly equivalent to the path of the sun. "H" stood for highway and was an indication that the model carried extras for touring; but any of the 74's would roll all day down any road to anywhere.

Specifications
(From a 1949 magazine road test)

Motor: V-type two-cylinder four-stroke engine, 3 7/16 in. bore, 3 31/32 in. stroke, 74 cu. in. displacement (also offered with 61 cu. in. motor). Dry sump lubrication, battery ignition. Schebler 1 5/16 in. carburetor, 50 horsepower (estimated) at 4,800 rpm.

Transmission: Four speeds, hand gear change, foot clutch, oil capacity one quart, primary chain drive, secondary chain drive.

Frame, running gear: Double loop seamless steel frame, Hydra-Glide forks, rigid rear suspension, 59½ in. wheelbase. Oil tank capacity, 4 quarters, gasoline tank capacity 3¾ gallons. Brakes, 8 in. front, 8 in. rear. Tire size, front and rear, 5.00 × 16 in. Dry weight, 560 lbs.

Model B, Hummer
1959–1960

Just a glance at the specs will reveal that the Hummer evolved from the 125cc DKW copy. Bore, stroke and dimensions were either the same or too close to call. The motorbike-like conveyance lasted only two years, due to the importation of the small Aermacchi/Harley-Davidsons.

Specifications

Serial number: The engine (serial) number is stamped on the front end of the engine crankcase, on the left-hand side.
Wheelbase: 51½ in.
Model designation: Hummer.
Type of engine: Two cycle.
Number of cylinders: One.
Bore: 2 1/16 in. (52.39 mm).
Stroke: 2 9/32 in. (57.94 mm).
Displacement: 7.6 cu. in. (124.87 cc).
Compression ratio: 6.6 to 1.
Horsepower (NACC rating): 1.7.
Brake horsepower (approximate): 3.

Size: 3.50 × 18 in.
Gasoline tank, total: 1⅞ gals.
Main supply: 1½ gals.
Reserve: 1½ quarts.

Transmission case: 1¼ pints.
Low gear: 26.5 to 1.
Second gear: 15.4 to 1.
High gear: 8.45 to 1.

Topper Scooter
1960–1965

How many Harley-Davidsons can you name that had a parking brake? Or a starting system that involved neither kicking nor any kind of electrics? Or a buddy seat wherein there was room for a six-pack? Or belt drive? Sound like your kind of bike? Sorry to report that it was no one's kind of bike, but rather was the 165cc Topper scooter. Sold from 1960 through 1965, the Topper was H-D's answer to the brief popularity of the Italian Vespa and Lambretta scooters seen on college campuses and other strange places during the Eisenhower years. Among its features was a front brake lever on the left handlebar that could, via locking a cam, also serve to brake the bike when parked. The cam slid into the gap created when the front brake was squeezed; it wedged itself between the brake lever and the bracket that held the lever to the bar. Nothing tricky, but it worked; why a scooter needed a parking brake at all was a question best left unasked. Anyone who ever started a mower or a snowblower will be familiar with the Topper's hand recoil method. It worked, too. And while the factory recommended carrying surplus two-stroke oil beneath the buddy seat for mixing at fuel stops, the space frequently was devoted to school books or contraband.

The scooter fad peaked right about the time the Topper was introduced, which was unfortunate, because the Topper seems to have used its original engine design to good advantage. The only complaint voiced by more than an occasional owner concerned the transmission. The unit automatically changed the driving ratio by varying the diameter of front and rear driving flanges on which the belt drive ran. Engine speeds caused balls operating on cams to move together, altering the diameter of the flanges. Negligent owners or those who ran the machines in muck quickly learned that the belt slipped on—and off—the flanges. Final drive was by a conventional chain. Both the 5- and 9-horsepower models sold for $445 in 1962 (the smaller horsepower model could be driven in some states without an operator's license).

Specifications

Serial number: The engine (serial) number is stamped on the engine crankcase.
Wheelbase: 51.5 in.
Model designation letter: A and AU.
Type of engine: Two cycle.
Number of cylinders: One, horizontal.
Bore: 2.375 in. (60.325 mm).
Stroke: 2.281 in. (57.937 mm).
Piston displacement: 10 cu. in. (165 cc).
Compression ratio: 6.6 to 1.
Horsepower (N.A.C.C. rating): 2.26.
Spark plug type: Harley-Davidson No. 4.
Size: 14 mm.
Gap: .025 to .030 in.
Circuit breaker point gap: .018 in.
Ignition timing: 3/64 in. (.078 mm) to 7.64 in. (.110 mm) before piston top center.
Fuel tank: 1.7 U.S. gallons, with .5 U.S. pint reserve.
Number of sprocket teeth: Transmission drive 14; rear wheel 63.
Overall ratio: Maximum 18.0; minimum 5.9.
Tire size: 4.00 × 12.

Bobcat, Ranger, Pacer, Scat, 175cc
1962–1966

These U.S.-designed and constructed bikes were aimed at riders not yet ready for the 250cc Sprint or Sprint H Aermacchi/Harley-Davidsons being imported at the time. They sold well, in one form or another, for five years. The 175cc two-stroke "would go just fast enough to get you hurt," according to one veteran dealer, who said he preferred selling kids the larger though less peaky four-strokes. Others contend these bikes were

quite easy to ride, though with three-speed transmissions it took some skill to keep the machines in their power bands.

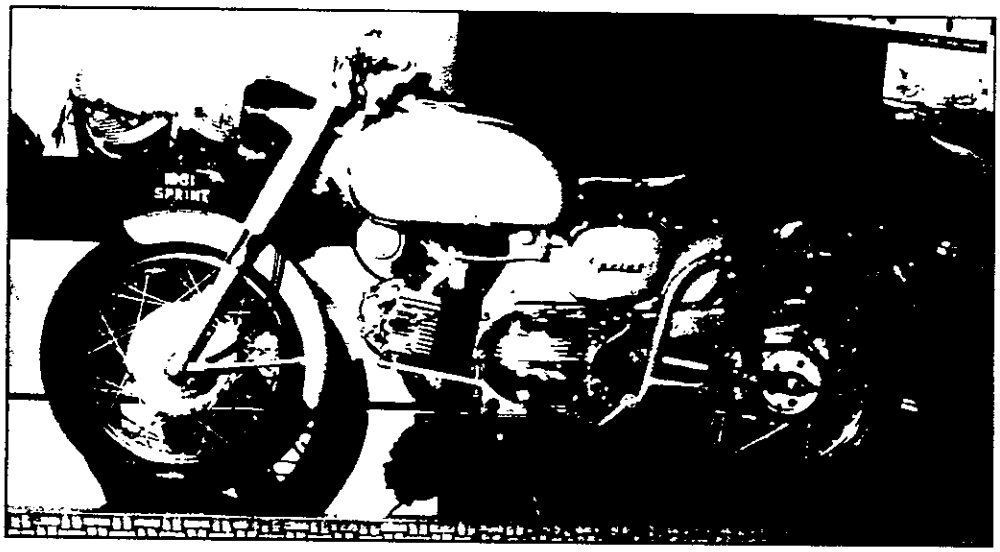
The only sort of problem involved the electrical system. Off-road riders frequently experienced shorts of various kinds, while road runners found flickering headlights the norm as often as the exception. Full-size H-D riders also could not get used to some of the most unyielding upholstery known to man. No wonder the off-road guys stayed up on the pegs.

The machines were introduced with solid rear ends. The Ranger, a trail bike without lights, was sold only in 1962, while the surviving (street) Pacer and (on- or off-road) Scat received swing arms and shocks in '63. The Bobcat, offered either as a road or trail model, displayed an attractive, one-piece body in 1966, its only year of production.

Specifications
(From a 1966 Bobcat owners manual)
Wheelbase: 52 in.
Overall length: 79 in.
Overall width: 30.5 in.
Fuel tank: 1.87 U.S. gallons.
Transmission: 1.25 pints.
Model designation: BTH.
Type: Two cycle, single cylinder.
Bore: 2.375 in.
Stroke: 2.406 in.
Displacement: 10.7 cu. in. (175cc).
Compression ratio: 7.5:1.
Ignition timing: 1/8 in. before piston top center.
Circuit break point gap: .018 in.
Spark plug type: H-D No. 4.
Size: 14mm.
Gap: .040 to .045 in.
Transmission type: Constant mesh.
Speeds: Three forward.
Engine sprocket teeth: 15 standard, 15 trail model.
Clutch sprocket teeth: 31 standard, 31 trail model.
Countershaft sprocket teeth: 15 standard, 12 trail model.
Rear wheel sprocket teeth: 49 standard, 84 trail model.
Tire size: 3.50 × 18 in.

250cc, 350cc Sprint Four-Stroke Singles
1961–1974

The first Aermacchi/Harley-Davidson effort were single-cylinder machines that sold like, well, like Hondas during the first few years of importation into the U.S. However,



The first joint effort between H-D and Aeronautica Macchi was this 250cc (15 cu. in.), single-cylinder, Sprint road bike. Introduced in 1961, it was well finished and sold briskly. Full-size Harley riders expressed amazement at the time concerning the size of the fuel tank, which was larger than the single-cylinder head. (David Wright)

the superior Italian-American styling could not overcome an interior wiring system and a price tag that seemed to climb as the Japanese competition, such as the 305cc Honda Super Hawk and Scrambler, stayed cheap and got fast.

A Sprint H could compete on a regional racing level with most other machines; accomplished scrambles riders such as Alabama's Phil Scarborough made their presence known. But then along came the two-strokes and that blew the four-strokes, Italian and Japanese, out of the water. Part of the Aermacchi problem was that it made hardly anything except the engine, which was reliable. H-D supervisors on the scene fought constant quality battles with suppliers. Often, they lost. Still, the Sprint would, with dry points, give reliable service.

The motor was hung from a single-strut frame, plenty substantial for the H model, introduced in 1962. More popular than its street counterpart, the H scrambler ran bobbed fenders, high exhausts and semi-knobby tires, yet had a street-legal lighting system. By '63, both bikes more closely resembled their big brethren cosmetically, while the H glistened with a new and large chrome air cleaner together with the largest air-hose-cartridge system ever on a non-racing H-D. Dubbed the Scrambler the following year, power was boosted via a 27mm Dell'Orto carburetor, 9.5-1 compression ratio and a megaphone to 25 horses at 8,700 rpm.

The capacity stayed the same but the iron cylinder and aluminum head took on a shorter stroke and a larger bore for 1966. Little else changed until the '69 model year, when the street model, now called the SS, showed up with a 350cc motor and dual exhausts. The Scrambler received the new motor and a new designation, the SX, in 1972.

Sprint Specifications
(From a 1961 owner's manual)

Serial numbers: The engine (serial) number is stamped on a pad on the engine crankcase, below the cylinder. The frame serial number is located on the right side of the steering head.

Wheelbase: 52.0 in. (Sprint); 53.3 in. (Sprint H).

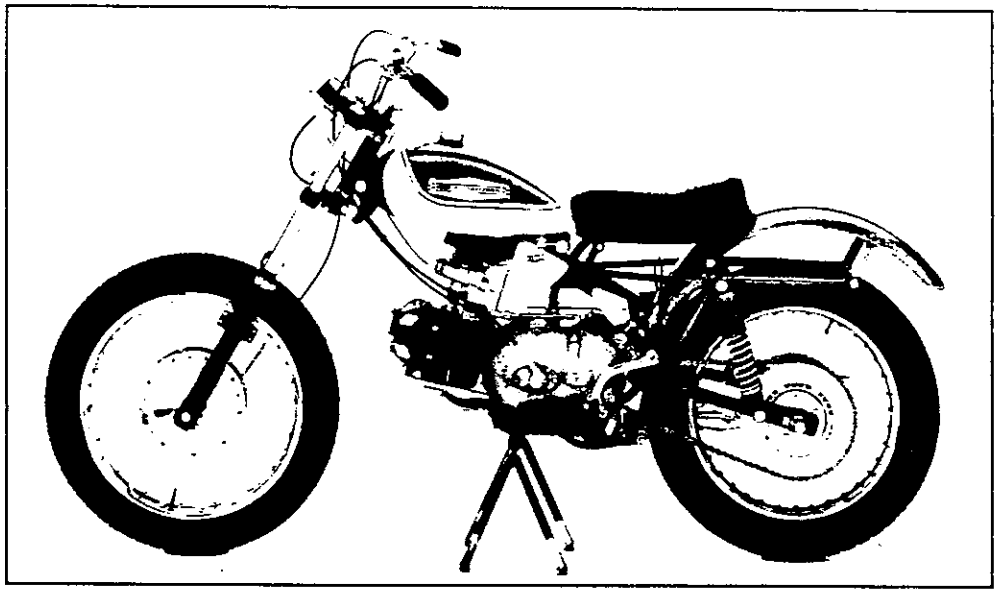
Overall length: 78.5 in. (Sprint); 81 in. (Sprint H).

Overall width: 28.5 in. (Sprint); 28.8 in. (Sprint H).

Fuel tank (total capacity): 4 U.S. gallons (Sprint); 2.64 U.S. gallons (Sprint H).

Reserve: Two quarts (Sprint); 0.62 quarts (Sprint H).

Crankcase oil: Two quarts.



The handsome Sprint H, offered from 1961 through 1968, was a popular short-track mount. (Harley-Davidson Motor Company)

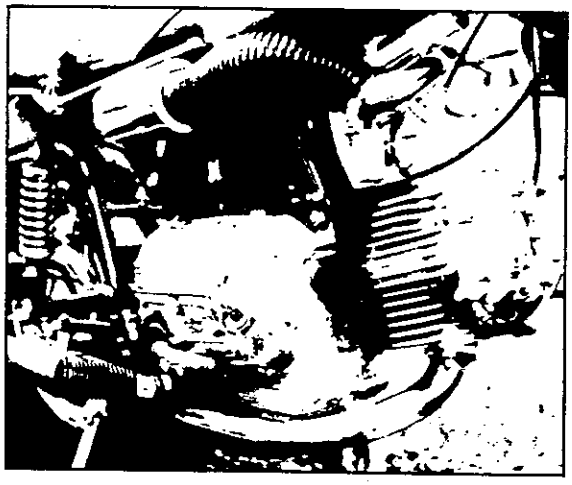
Model designation letter: C (Sprint); H (Sprint H).
Number of cylinders: One.
Type: Four cycle.
Bore: 2.598 in. (66 mm).
Stroke: 2.835 in. (72 mm).
Piston displacement: 15 cu. in. (246.2 cc).
Compression ratio: 8.5 to 1 (Sprint); 9.2 to 1 (Sprint H).
Horsepower: 18 at 7,500 rpm (Sprint); 19.5 at 6,700 rpm (Sprint H).
Horsepower (N.A.C.C. rating): 2.7.
Valve tappet clearance (cold): .004 in. (Sprint); intake, .003 in., exhaust, .005 in. (Sprint H).
Ignition timing: Retard 21 degrees (5/64-in.) BTC, automatic advance 41 degrees (3/32-in.) BTC (Sprint); retard 1 degree BTC, automatic advance 41 degrees (3/32-in.) BTC (Sprint H).
Circuit breaker points, gap: .018 in.
Spark plug type: Harley-Davidson No. 7.
Size: 14 mm.
Gap: .020 in.
Transmission type: Constant mesh.
Speeds: Four forward.
Drive pinion gear teeth: 26.
Clutch ring gear teeth: 65.
Transmission internal ratios: 1st, 2.91; 2nd, 1.76; 3rd, 1.27; 4th, 1.00.
Transmission sprocket: 16 (Sprint); 15 (Sprint H).
Rear wheel sprocket: 38.
First gear: 17.28 to 1 (Sprint); 18.44 to 1 (Sprint H).
Second gear: 10.45 to 1 (Sprint); 11.15 to 1 (Sprint H).
Third gear: 7.54 to 1 (Sprint); 8.09 to 1 (Sprint H).
Fourth gear: 6.33 to 1 (Sprint); 5.94 to 1 (Sprint H).
Tire, front: 3.00 × 17 (Sprint); 3.00 × 18 (Sprint H).
Tire, rear: 3.00 × 17 (Sprint); 3.50 × 18 (Sprint H).

M-50, M-50 Sport, M-65, M-65 Sport, Shortster
1965–1968

"A menace."

That's how a retired Harley-Davidson engineer describes the M-50 and M-50 Sport motor-driven cycles, constructed in Italy by Aermacchi/Harley-Davidson and offered in the U.S. in 1965 and 1966. The 50cc, two-stroke bikes were handsomely finished in Holiday Red with White panels. The M-50, displayed in ads with females aboard, followed traditional motorbike lines and was available both years; the Sport model featured a racing-style gas tank and a flat, competition-look seat to entice riders of both genders. It was offered only in 1966. All of this was of little consolation to the rider who found himself short of acceleration as a Freightliner bore down on Route 66.

Essentially the same machines, enlarged to 65cc capacity, were offered beginning in 1967. "Sudden disinterest" in 1966 resulted in 4,000 M-50's in inventory. They were sold well below the $225 suggested retail price. (The Sport model was offered in 1966 for $275). The M-65 and M-65 Sport went for $230 and $265, respectively. Strangely enough, such tiny transportation is still around. Honda, for example, currently sells the



A 1961 250cc Sprint motor. Not really comparable to the full-size Harley-Davidsons, the Aermacchi/H-D's nevertheless brought cycling to a large number of beginning riders. (David Wright)

MB5, a 49cc bike with cafe racer styling. In contrast to the M-50's 1966 sticker price, the Honda retails for $798. That's about $266 per cubic inch.

Specifications

Wheelbase: 44.1 in.
Overall length: 71.4 in. (M), 67.8 in. (MS)
Overall width: 25.6 in. (M), 24.0 in. (MS)
Ground clearance: 4.3 in.
Fuel tank: 1.6 U.S. gallons (M), 2.5 U.S. gallons (MS)
Transmission: 1 pint
Model designation letter: M, MS
Type: 2 cycle, single cylinder
Bore: 1.527 in. (38.8 mm)
Stroke: 1.654 in. (42.0 mm)
Piston displacement: 3.03 cu. in. (49.66 cc)
Taxable horsepower: .93
Compression ratio: 10 to 1
Circuit breaker point gap: .018 in.
Spark plug type: Harley-Davidson No. 7
Size: 14 mm
Gap: .025 to .030 in.
Ignition timing: 27 degrees (0.115) BTC
Transmission type: Constant mesh
Speeds: 3 forward
Drive pinion gear teeth: 13
Clutch ring gear teeth: 59
Transmission internal ratios: 1st—3.18, 2nd—1.78, 3rd—1.17
Transmission sprocket: 13
Rear wheel sprocket: 27
Low (first) gear: 29.85 to 1
Second gear: 16.76 to 1
Third gear: 11.06 to 1
Tire size: 2.00 × 17 front, 2.00 × 17 rear

Rapido Model
1968–1977

The Rapido and its successors, the TX (1973), the SX (1974) and the SXT (1975) were offered to the public during Aermacchi/Harley-Davidson's final decade. Though price competitive with the Japanese, they suffered in dealerships not used to catering to off-road riders, even young ones. All of the assets and liabilities associated with the Italian line were present here, though a four-speed transmission made the engine more flexible than previous play racers.

Specifications

(From a 1970 Rapido owners manual)

Overall length: 76.6 in.
Overall width: 32.7 in.
Wheelbase: 48.9 in.
Ground clearance: 6.7 in.
Fuel tank: 2.4 U.S. gallons (1 quart reserve).
Transmission: 1 pint.
Model designation: MLS.
Type: Two cycle, single cylinder.
Bore: 2.21 in.
Stroke: 1.97 in.
Displacement: 7.53 in. (123.5 cc).
Taxable horsepower: 1.95.
Compression ratio: 7.65:1.
Circuit breaker point gap: .016 in.
Spark plug type: H-D No. 6 or 5-6.
Size: 14 mm.
Gap: .025 to .030 in.
Ignition timing: 20 degrees (0.073) BTC.
Transmission type: Constant mesh.
Speeds: Four forward.
Drive pinion gear teeth: 19.
Clutch ring gear teeth: 61.
Transmission internal ratios: 1st—2.50, 2nd—1.40, 3rd—.92, 4th—.72.
Transmission sprocket: 14.
Rear wheel sprocket (standard): 50.
Rear wheel sprocket (trail): 62.
First gear: 28.7:1 standard, 35.5:1 trail.
Second gear: 16.1:1 standard, 19.9:1 trail.
Third gear: 10.6:1 standard, 13.1:1 trail.
Fourth gear: 8.3:1 standard, 10.3:1 trail.
Tire size: 3.00 × 18 in. front, 3.50 × 18 in. rear.

Baja, SR 100
1970–1974

Bike magazines lavished high praise on the Baja after a class win in the Greenhorn Enduro. But over its five-year lifespan under two names, it failed to improve while the

Japanese off-road bikes made major technological advances. Not even a lighting option in 1972 or automatic gas-oil mix, available on the SR 100 in 1973, could keep it in the fore of race-minded youngsters.

Specifications
(From a 1972 owners manual)
Wheelbase: 52 in.
Overall length: 78.5 in.
Overall width: 34 in.
Ground clearance: 12.8 in.
Fuel tank: 2.5 U.S. gallons (1 quart reserve).
Transmission: 1.3 pints.
Model designation: MSR.
Type: 2 cycle, single cylinder.
Bore: 1.97 in.
Stroke: 1.97 in.
Displacement: 5.98 cu. in. (98.1cc).
Taxable horsepower: 1.55.
Compression ratio: 9.5:1.
Circuit breaker point gap: .016 in.
Spark plug type: H-D No. 7.
Size: 14 mm.
Gap: .025 to .030 in.
Ignition timing: 20 degrees (0.073) BTC.
Transmission type: Constant mesh.
Speeds: Five forward.
Drive pinion gear teeth: 19.
Clutch ring gear teeth: 61.
Transmission internal ratios: 1st—2.06, 2nd—1.33, 3rd—.92, 4th—.75, 5th—.58.
Transmission sprocket teeth: 12, 13, 14, 15.
Rear wheel sprocket: 72.
Tire size: 3.00 × 21 in. front, 3.50 × 18 in. rear.

The Snowmobile
1971–1975

Repeatedly throughout its history, Harley-Davidson attempted to diversify. Except for golf cars, such attempts have largely been thwarted. One of the most recent examples was the H-D snowmobile, produced from 1971 through 1975. Snowmobiles, pioneered by Bombardier Ltd. in Quebec, appeared in the mid-sixties to be a real blessing for snow belt motorcycle dealers. Here was a machine that could be sold to riders who were putting their bikes away for the winter. Instead of hibernating, dealer and rider alike could remain active year-round.

That sort of thinking proved valid until the first glitch in the seventies' economy. Riders realized that snowmobiles were much less functional than bikes, frequently requiring trailering to a desirable trail, plus mounds of clothing, provisions, etc. Dozens of makes sprang up in Minnesota, Wisconsin and Michigan garages, only to disappear. Like pleasure boats, snowmobiles were a novelty most people could do without. Today, only four makes survive, and most of them are either partially or exclusively of Japanese manufacture.

A Harley-Davidson 440cc, two-cycle snowmobile, as seen in the Rodney C. Gott Museum storage facility in York. (David Wright)

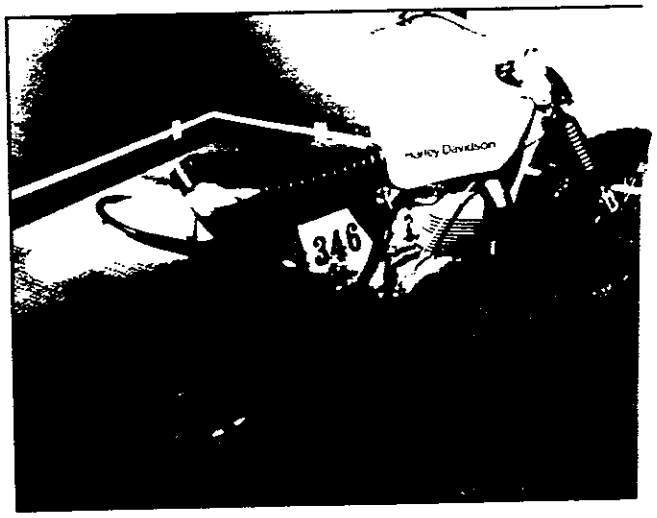
The H-D snowmobiles differed only insignificantly from most other kinds, though the engines were manufactured by the company. With a pair of skis up front and a tread in the rear, they offered a choice of two-cylinder, two-cycle engines (24.29 cu. in. and 26.42 cu. in.), manual or electric start, chain drive and automatic transmission. The sleds actually competed briefly with AMF's Skidaddler before the H-D engine was placed in the AMF frame and the parent company's snowmobile disappeared.

SS/SX-175, SS/SX-250 Two-Cycle Singles
1974–1978

The off-road SX-175 was introduced in 1974, the streetgoing SS- and off-road SX-250 in 1975 and the street SS-175 in 1976. Timing could not have been worse, since the Environmental Protection Agency and the Department of Transportation were looking askance at two-cycle engines and since public acceptance of the ringading sound continued to decline.

These motors were copies of the Yamaha DT-1, the force in motocross in the seventies. Although the two-strokes were as trouble-free as their four-cycle Aermacchi counterparts, they contributed to the demise of the Italian lightweights. Folks just didn't like the sound. The 250 enjoyed some off-road competition success, notably in the hands of Californian Don Ogilvie.

Specifications
(From a 1976 dealer brochure)
Wheelbase: 56 in.
Overall length: 86 in.
Overall width: 31 in. (SS), 35 in. (SX).
Ground clearance: 7 in.
Fuel tank: 2.8 gals.
Reserve: 1.2 quarts.
Transmission: 2.5 pints.
Oil tank: 3.3 pints.
Type: Two cycle, single cylinder.
Model designation: SS/SX-175, SS/SX-250
Bore: 175, 2.40 in. (61 mm); 250, 2.84 in. (72 mm).
Stroke: 2.35 in. (59.6 mm).
Displacement: 175, 10.63 in. (174.1 cc); 250, 14.80 in. (242.6 cc).
Taxable horsepower: 175, 2.3; 250, 3.22.
Compression ratio: 175, 10.6 to 1; 250, 10.3 to 1.
Spark plug type: 175, Harley-Davidson No. 7-8; 250, Harley-Davidson No. 7.
Size: 14 mm.
Gap: .025 in.
Ignition timing: 21 degrees (.100 in.) BTC.
Ignition timing pickup tap: .012 to .016 in.
Transmission type: Constant mesh.
Speeds: Five forward.
Drive pinion gear teeth: 20.



The MX-250, produced only for the 1977 and 1978 model years, may be among the most competitive single-cylinder motocross bikes ever constructed. (David Wright)

Clutch ring gear teeth: 56.

Transmission internal ratios: 1st, 2.53; 2nd, 1.79; 3rd, 1.30; 4th, 1.0; 5th, .80.

Transmission sprocket teeth: SX-175, 13; SS-175, 14; SS SX-250, 15.

Rear wheel sprocket teeth: SX-175, 49; SS-175, 50; SX-250, 50; SS-250, 49.

Gear ratios, SX-175: First gear, 26.8; second gear, 18.6; third gear, 13.6; fourth gear, 10.6; fifth gear, 8.5.

Gear ratios, SS-175: First gear, 25.4; second gear, 17.6; third gear, 12.8; fourth gear, 10.0; fifth gear, 8.0.

Gear ratios, SX-250: First gear, 23.7; second gear, 16.5; third gear, 12.0; fourth gear, 9.3; fifth gear, 7.5.

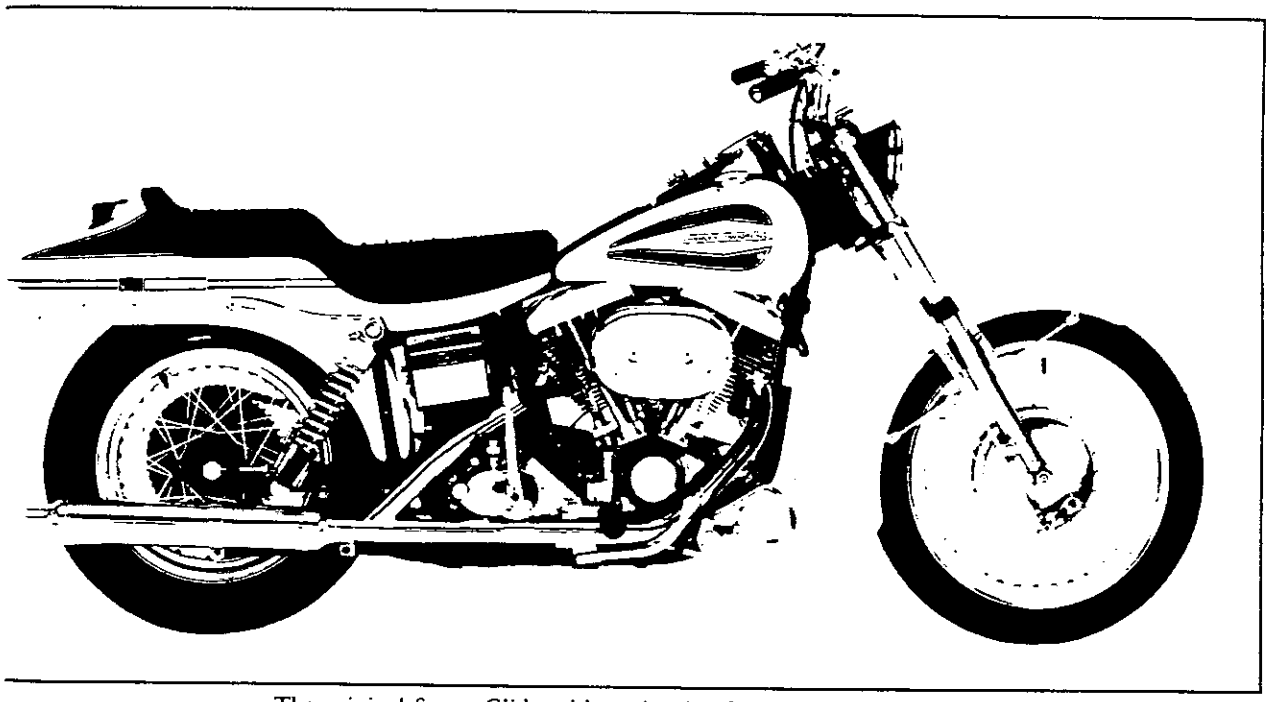
Gear ratios, SS-250: First gear, 23.2; second gear, 16.1; third gear, 11.7; fourth gear, 9.1; fifth gear, 7.4.

Tire size: SS-175, 3.25 × 19 in. front, 4.00 × 18 in. rear; SX-175, 3.00 × 19 in. front, 4.00 × 18 in. rear; SS-250, 3.25 × 19 in. front, 4.00 × 18 in. rear; SX-250, 3.00 × 21 in. front, 4.00 × 18 in. rear.

74, 80 Cu. In. V-Twin
1966–

The name has disappeared from the front fenders for 1983, but the effect the Electra Glide had on contemporary Harley-Davidson motorcycles lingers on.

Electric starting was introduced in 1965, with the motor now known as the Shovelhead making its debut in 1966. A Tillotson diaphragm carburetor combined with a new "power pac" head design to produce 60 horses, 5 more than the Panhead offered. That extra power came in handy as a higher percentage of riders were going the "Dresser" route—thanks to Harley-Davidson's numerous quality touring accessories. The motor itself evidenced less vibration than did its predecessor, emitting only a slight rhumba beat under deceleration. The FLH, with higher compression, produced 60 horses, versus 54 for the FL. Soft, oversize handgrips, by this time an H-D trademark, neutralized any other commotion.



The original Super Glide with optional red, white and blue decor. This bike wed the F-series motor and chassis to a modified X-series front end. The success enjoyed by this Willie G. Davidson design spawned everything from the Low Rider to the Fat Bob to the Super Glide II. (Harley-Davidson Motor Company)

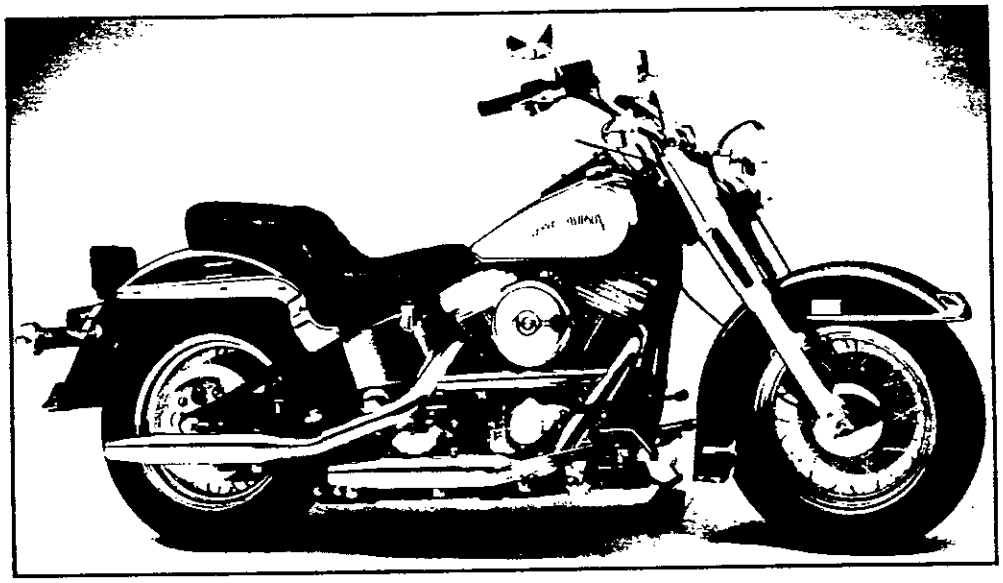
Contemporary road tests indicated that the FL's and FLH's remained the touring machines by which other bikes were judged. The H-D's were faulted only for inadequate brakes and the external presence of oil. The latter may have been a cheap shot, since those unfamiliar with the big V-twin frequently mistook the drip of the rear chain oiler for a lack of close tolerances.

Immediately following its introduction, evolutionary improvements began. In 1967, the bikes received a push-pull choke that allowed for infinite adjustment. Also added to the line was a pleated seat that made the already comfy H-D bench even more so. A new oil pump and warning lights for oil, generator and ignition were added in '68, followed by the unveiling in 1969 of the classic, bar-mounted FLH fairing. This piece, produced by H-D in the Tomahawk fiber glass plant, was offered initially only in white, as were matching fiber glass saddle bags. The most noticeable change for 1970 was the disappearance of serrated headers. The Shovelhead spat out its exhaust via chrome headers that looked infinitely better and worked as well as the parts they replaced.

Meanwhile, customizers were casting admiring glances at the Shovelhead motor in the FL frame, in part because 150,000 riders in 1970 were left with money in hand but no bikes—demand created in part by the war-time economy was that strong. Formerly content with modifying Sportsters, the would-be cruisers were cutting off the formidable Electra Glide forks and installing wild aftermarket front ends. These bits and pieces varied from dainty to dangerous, as West Coast extension forks kept pushing the front wheel farther from the motor. Fortunately, Willie G. was able to head the trend off with a design that has become a true watershed in U.S. riding: the Super Glide.

"Is the American motorcyclist ready to ride around on someone else's expression of personal, radical tastes?" *Cycle* magazine asked before testing the new '71 Super Glide. The publication put the bike through its paces and concluded that the machine "will succeed in this country like no machine Harley-Davidson has ever made or dreamed of making."

Davidson is characteristically modest about his first major design under the auspices of AMF: "AMF never knew quite what to make of this department [styling], so they just let us alone." Willie G. grafted the Sportster's handsome—and stable—



The 1986-½ FLST Heritage Softail is described in its press kit as the "re-creation of a classic style of motorcycle . . . built on a foundation of solid 1980's engineering." The model mimicks 1949 Hydra Glide styling. (Harley-Davidson Motor Company)

aluminum front forks onto the massive frame, compensating for their stock appearance by making the Super Glide graphically exciting. The boat-tail Sportster seat worked surprisingly well on the initial batch of Super Glides, which still carried the FLH designation on the timing cover.

The FX, as the Super Glide was designated, was significant for the following reasons:

—It was the first factory custom. Prior to 1971, no company had ever listened so closely to owners of its products. Until then, riders bought what was offered and set about individualizing as best they could.

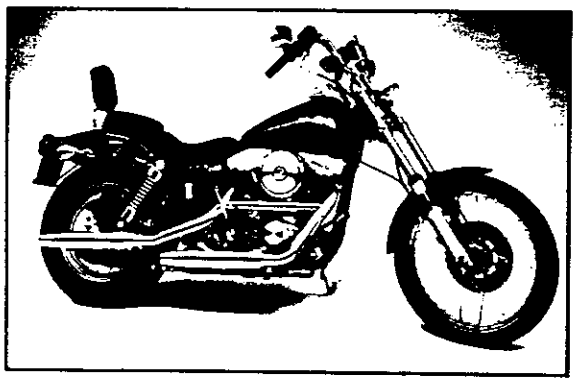
—It combined traditional parts of one motorcycle with traditional parts of another to come away with an entirely new look. This alone endeared it to the Electra Glide and Sportster faithful, who could identify with the FX even if they did not intend to buy it.

—It was the first cruiser, the first bike to make so personal a statement about a whole new kind of rider who had never before had an acceptable, showroom-stock bike offered him. Harley-Davidson dealers were talking to a new kind of customer about a new kind of machine.

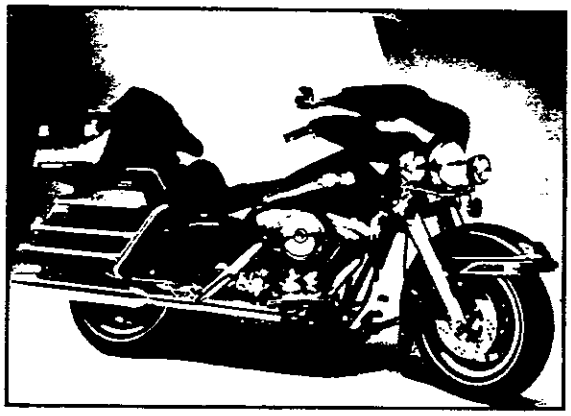
—It was a seed that sprouted everything from the Fat Bob to the Wide Glide to the Super Glide II. Thanks to this machine, no Harley owner has any excuse for owning a bike exactly like anyone else's.

And it was a good bike. It kick-started easily, the transmission was traditionally bulletproof, the clutch action was "the best in motorcycling," said a magazine, and in practice it handled much better than anyone could imagine. Slimmer by 70 pounds than an FL, the FX rocketed away from stoplights, yet would chug willingly through town all day. Drum brakes front and rear prevented the Super Glide from state-of-the-art stops, but that would be remedied quite soon. With an optional red, white and blue color scheme, the Super Glide was the perfect bike at the perfect time. Somehow, Willie G. had created something that was as outrageous as a Yippee and as conservative as an Orange County cop in one master stroke.

At this time, the feds began their descent upon manufacturers of transportation; their well-intentioned regulations were designed to make cars, trucks, buses and cycles safer. Harley-Davidson, thanks to AMF and healthy sales, had more development dollars



The Wide Glide FXWG was offered with kick start, a rigid engine and a four-speed transmission, a combination that may be gone after 1986. (Harley-Davidson Motor Company)



The FLHT Electra Glide also was offered for 1986 in a Liberty promotional edition. The bike has the Evolution engine and five speeds. (Harley-Davidson Motor Company)

than ever. Because of the federal edicts, however, most of those bucks went into safety rather than higher performance or new product design.

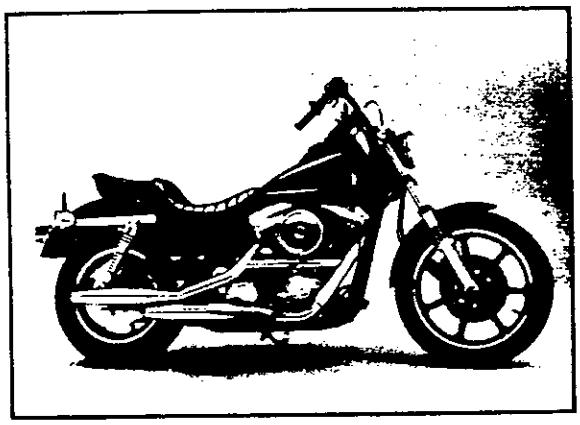
For example, left-hand foot shift became mandatory in 1972 and turn signals were the rule in 1973. Besides jacking up consumer prices, the regs meant that H-D had to divert time, money and manpower to find new suppliers, conduct safety testing and so on. Except for development of the "King of the Road" tour package in 1973, no significant modifications were made to the FL's through 1975. Lamented one employee: "We wanted magazines to conduct road tests on our bikes at a time when we had nothing new to show them."

Nevertheless, H-D soldiered on. Disc brakes showed up in 1973, silencing the major complaint voiced about the company's products in postwar years. The Super Glide received optional electric starting to become the FXE in 1974. And in 1976, the company created a stylized eagle and five "Liberty Edition" versions of the V-twin.

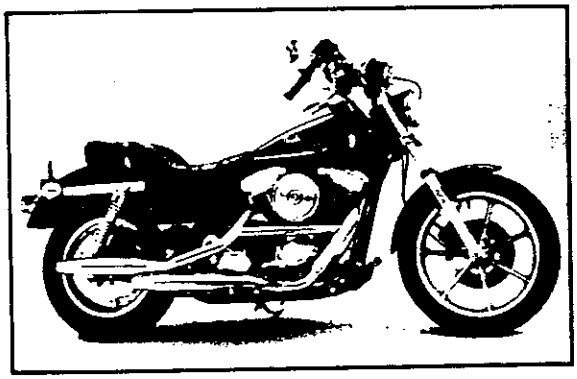
In cruised the FXS Low Rider in 1977, a contrast to another new model, the Sportster-inspired XLCR Cafe Racer. The FXS deposited the low rider just 27 in. above the ground, featured highway pegs as standard equipment and displayed a Fat Bob (split) gas tank. It also bore, in its second year of production, the "ham can" air box, a unit shared with all other V-twins in hopes of appeasing Uncle Sam's noise and emissions savants.

The 1978 Electra Glide received the optional, enlarged 80 cu. in. motor, just in time for the company's diamond (seventy-fifth) anniversary. The less ornate FL was dropped in 1979 as the FLH was offered with more standard equipment than any motorcycle ever: fairing/windshield, saddle bags with safety guards, luggage rack, passing lights, safety bars and running boards. At this time, owners of virtually all heavyweight cycles began to notice that their bikes did not run worth a damn on the lower-octane gasoline that, in leaded or unleaded form, was crowding premium fuel off the pumps. The 1930's vintage flywheel medallion on the handsome FLH tank reminded riders that the old bikes stuttered less because there were fewer federal impediments. Dealers leaned out the carburetion under the direction of a factory service bulletin, sold lots of octane additive and hoped for the best.

Harley-Davidson countered in 1980 with four entirely new models, the most significant being the FLT Tour Glide. Most evident was the dual-headlight, frame-mounted fairing, a slick answer to the aftermarket wind slicers. Less noticeable but of



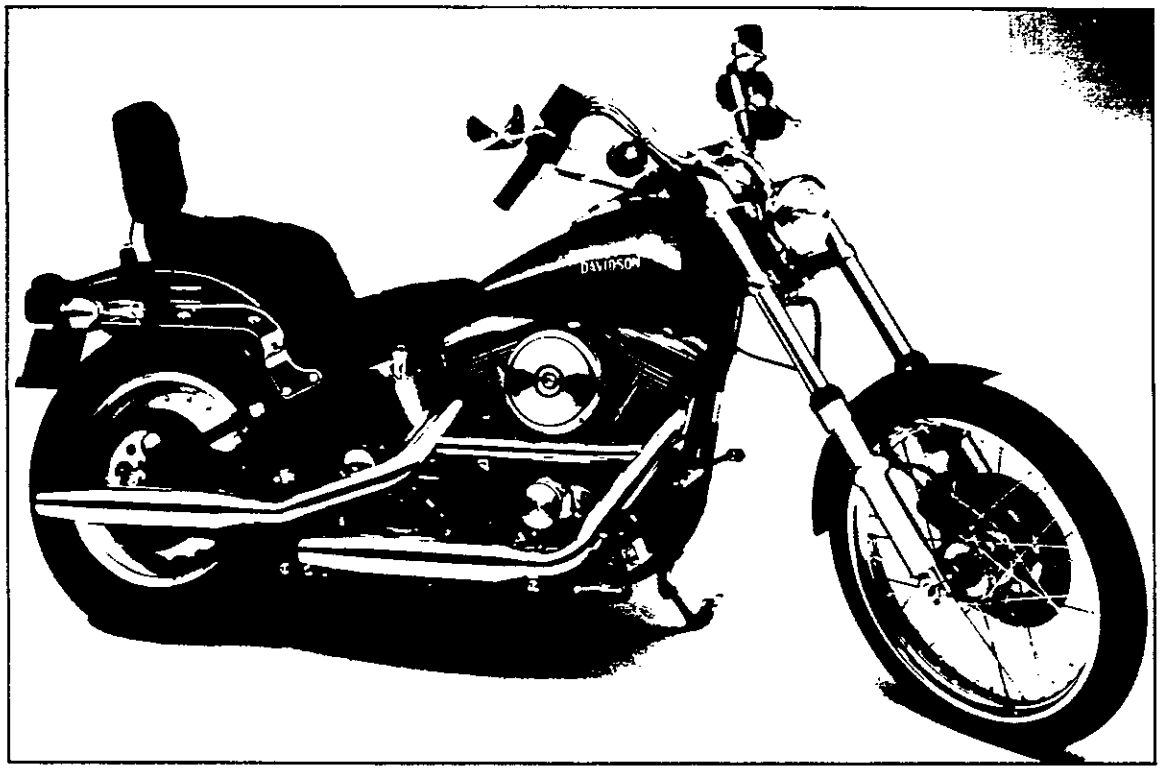
The FXR (left) featured new seven-spoke cast-aluminum wheels for '87. The FXRS Low Rider (right) was offered in a Sport version for '87. (Harley-Davidson Motor Company)



more significance was Harley-Davidson's first five-speed gearbox. The unit made two-up riding with the standard TourPak especially effortless, while a new frame and the patented positioning of the steering head in front of the fork crowns created excellent low-speed stability.

The FLT's vibration-isolated motor, which used elastomer mounts to intercept vibes transmitted to the drive train swing arm or frame, received high marks from heavyweight riders. So did the V-Fire (1980) and V-Fire II (1981) ignitions, which created a hotter spark without points. An enclosed secondary chain, five-gallon fuel tank, triple disc brakes, styled wheels and every conceivable touring amenity standard made the Tour Glide complete.

If the FLT was the ultimate tourer, the new Sturgis was the ultimate cruiser. One of three new-for-1980 offspring of the Super Glide, the FXB (for belt) was a study in black trimmed lightly in orange. Technically, the bike broke new ground with its 1⅛ in. primary and 1½ in. secondary drives accomplished with Aramid fibers from the Gates Rubber Company. But the machine was so stylish that few owners cared if the driveline was quieter, lasted twice as long as a chain and required neither lubrication nor adjustment. They had to notice, however, that a compensating sprocket on the primary drive all but eliminated the lash characteristic of all chain-driven bikes. Drag bars with risers, a Fat Bob tank, a seat only 27 in. off the ground, the Bar and Shield adorning the tank—the Willie G.-designed machine may be the most handsome Harley-Davidson in the company's eighty years.

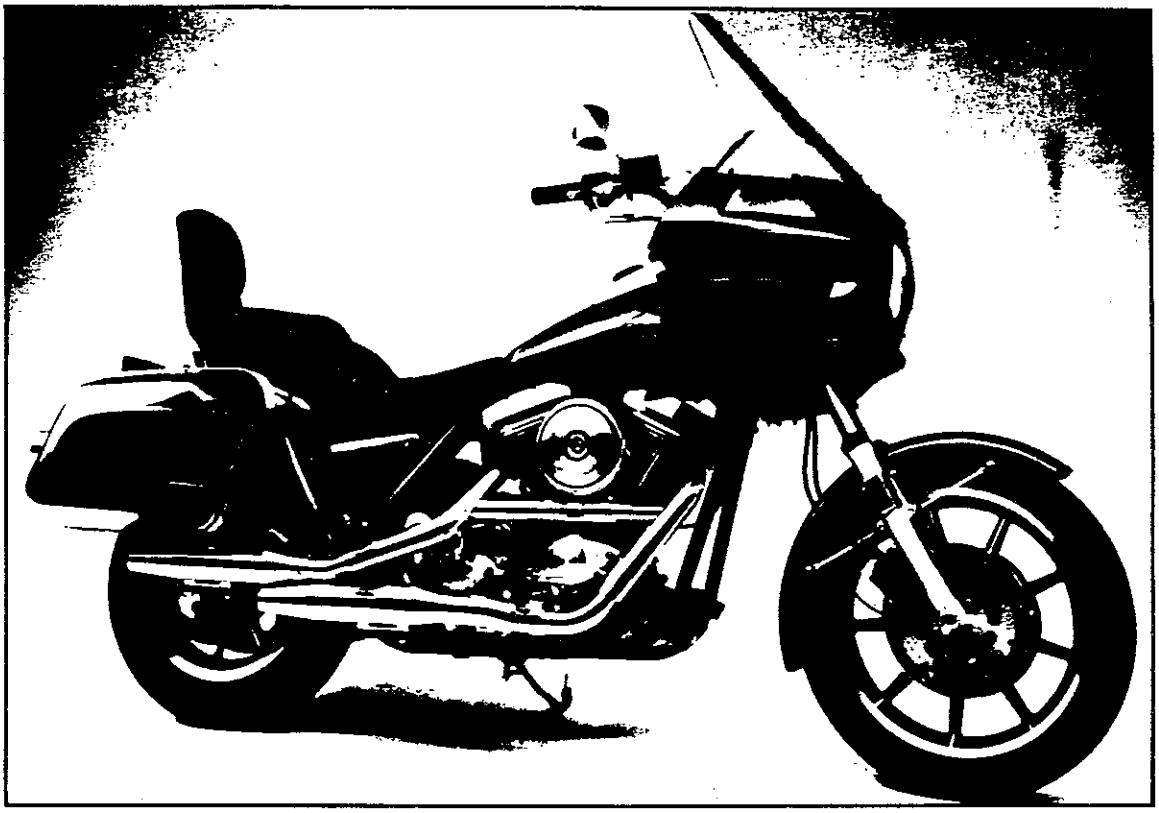


One of the most visible differences between the FXST and FXSTC Custom was the latter's solid rear wheel. The Softail Custom FXSTC has unique scroll graphics, a central rear monoshock and the Evolution engine with five-speed transmission. (Harley-Davidson Motor Company)

Joining the Sturgis were the FXWG Wide Glide and the FXEF Fat Bob (the latter and one 1980 FLH being the final evidence of the 74 cu. in. motor). The Wide Glide sported a 21 in. tire up front, a low seating position (26¼ in.), the pullback bars that had become common on H-D's and spoke wheels. The Fat Bob was so named because of its bobbed rear fender and five-gallon fuel tank. (Speaking of gasoline, the 1982 bikes ran just fine, thanks, on regular. That's due to lowered compression.)

The pinnacle of Harley-Davidson achievement may be the FXR/FXRS, for 1982 and 1983 both termed Super Glide II. Recipients in 1982 of the five-speed transmission and a new frame that used FLT-type mounts to isolate the motor, these models were termed "Harley-Davidson's Great Leap Forward" by *Cycle World*. Besides cosmetic differences, the FXR runs traditional spoke wheels while the FXRS possesses mag-style wheels. And there's a less expensive Super Glide, the FXE, sans the five-speed or the elastomer-mount frame. Because every other maker copies H-D styling and H-D can find nothing out there worth copying, stylists inverted the '83 equation: the XLS Roadster is an ersatz FXRS, clear down to the indigo blue/pewter or black with gold pinstriping.

Wait a minute. . . . Did I say H-D can't find anything to copy? Take a look at the FXRT Super Glide II, the company's answer to all those furrin sports/touring bikes with their slick fairings. The FXRT's fiber glass is among the slickest; the company says it was developed with the aid of a wind tunnel. Other niceties are in the air suspension rear



The Sport Glide FXRT offered in 1986 continued to bridge the sport-touring gap. Highway mileage was 55 mpg, which the factory attributes in part to the wind-tunnel-tested fairing. (Harley-Davidson Motor Company)

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shock system, antidive air forks up front activated by a solenoid hooked to the brake light, and saddle bags. These treats are designed to lure upscale riders who, until now, could only find such a machine in brand X showrooms.

Three pure touring bikes are offered, an FLH, an FLT and an FLHT. The latter is an answer to would-be Tour Glide buyers who longed for the smaller, bar-mounted fairing found previously only on the FLH. The FLHT shares the Tour Glide five-speed transmission and other FLH attributes, while the FLH runs (along with the Low Rider) the proven belt drive. Both the FLHT and FLH are called Electra Glide, a name, a look, a feeling that has set the tone for touring for nearly two decades.

The last Electra-Glide rolled off the production line in York on June 4, 1984. It was replaced for the '85 model year by the FLHT, with the Evolution rubber-isolated V2 engine, five-speed gearbox and twin-disc front brake.

Harley-Davidson introduced the Evolution motors throughout the line for the 1985 model year (only the Softail had the new motor in 1984). The long-awaited mill is basically a much more efficient, quieter, simpler and cooler-running top end. Specs for that motor follow the traditional Shovelhead number.

FL, FLH Specifications
(From a 1965 owners manual)

Wheelbase: 60 in.
Overall length: 92 in.
Overall width: 35 in.
Fuel tank total: 5 or 3¾ gals.
Reserve: 1 or 1¼ gals.
Oil tank: 4 quarts.
Transmission: 1½ pints.
Model designation: FL, FLH.
Number of cylinders: Two.
Type: 45-degree V type.
Horsepower: FLH, 60 horsepower at 5,400 rpm; FL, 55 horsepower at 5,400 rpm.
Taxable horsepower: 9.44.
Bore: 3⁷⁄₁₆ in. (87.3 mm).
Stroke: 3³¹⁄₃₂ in. (100.8 mm).
Displacement: 73.66 cu. in. (1,207 cc).
Torque: FLH, 65 lb.-ft. at 3,200 rpm; FL, 62 lb.-ft. at 3,200 rpm.
Compression ratio: FLH, 8 to 1; FL, 7.25 to 1.
The engine (serial) number of your Harley-Davidson is stamped on the left side of the engine crankcase.
Circuit breaker point gap: .022 in.
Spark plugs, size: 14 mm.
Gap: .025 to .030 in.
Heat range for average use: No. 3-4.
Spark timing: Retard 5 degrees BTC.
Automatic advance: 35 degrees BTC.
Transmission type: Constant mesh.
Speeds: Four forward (foot shift or hand shift). Three forward and one reverse optional.
Clutch sprocket teeth: 37.
Transmission sprocket teeth: 22.
Rear wheel sprocket teeth: 51.
Engine sprocket (four-speed transmission): FL, 23; FLH, 24.
Engine sprocket (three-speed transmission): FL, 23; FLH, 24.
High gear ratio (four-speed transmission): FL, 3.73; FLH, 3.57.
High gear ratio (three-speed transmission): FL, 3.73; FLH, 3.57.
Tire sizes: 4.00 × 18 in., 4.50 × 18 in., 5.00 × 16 in.

1987 FXLR Low Rider Custom Specifications

Length: 91.63 in.
Seat height: 26.38 in.
Ground clearance: 5.25 in.
Rake/trail: 29/4.22.
Wheelbase, 63.13 in.
Dry weight: 575 lbs.
Load capacity: 510 lbs.
Engine: OHV V2 Evolution, isolation mounted
Bore and stroke: 3.498 x 4.250 in.
Displacement: 80 cu. in., 1340cc.
Compression: 8.5:1.
Carburetion: Butterfly throttle with accelerator pump—38mm.
Ignition: V-Fire III electronic breakerless with solid-state, dual-stage advance.
Oil capacity: 3 qts.
Fuel capacity: 4.2 gals.
Exhaust system: Staggered shorty duals.
Clutch: Multi-plate with diaphragm spring in oil bath.
Primary drive: Double-row chain.
Final drive: Gates Kevlar Poly Chain belt.
Transmission: 5-speed, constant mesh.
Gear ratios: 1st: 10.93; 2nd: 7.45; 3rd, 5.40; 4th, 4.16; 5th: 3.37.
Torque: 82.5 ft./lbs. at 3,600 rpm.
Brakes: 11.5 x .20 front, 11.5 x .23 rear.
Braking: 153 ft. at 60 mph.
Tire size: MH 90 x 21 front/MT90 x 16 rear.
Wheels: Front classic laced, rear disc.
Starting: Electric.
Miles per gallon: 55 hwy./43 city.
Lean angle: 31 degrees right and left.
Instruments: Speedometer with odometer and resettable tripmeter.
Color options: Vivid black, candy brandywine, candy bronze, brandywine and crimson.

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CHAPTER FOUR
UNIFORMS

NO ONE ON A HARLEY-DAVIDSON EVER CAUGHT UP WITH PANCHO VILLA. BUT NEITHER did any of the National Guardsmen on horses, in cars or on foot during the "punitive expedition" in northern Mexico in the spring of 1916. From the military point of view, the foray south of the border to nab Villa and felow banditos was a bust. For H-D fans, however, the raid stands out as the first use of the product in a combat situation.

The Harleys taken south were owned by the Army's First Aero Squadron. They were equipped with sidecar-mounted machine guns and were sufficiently impressive to warrant two additional orders for machines, on March 16 and March 27. Credit for mating machine gun and motorcycle was given jointly to the New Mexico Military Institute, the Springfield (Massachusetts) Armory and H-D engineers, according to a 1916 copy of *The Enthusiast*. "When machine guns were carried on mules in the old way, from two to four minutes were required to set up and begin firing. The motorcycle machine gun permits of [sic] instant firing from the sidecar and when it is desired to set up separately, firing can be started within 50 seconds from the command to halt when the rate of fire is 480 shots per minute," *The Enthusiast* enthused. At least twenty-two such machines saw service.

Other folks in uniform were experimenting with cycles and sidecars. In Spain at about the same time, the militia staged raids on the homes of alleged revolutionaries, confiscating "a lot of seditious papers" and hauling them off in an H-D sidecar outfit. The same issue reported the McKeesport, Pennsylvania, Police Department's conversion to Harleys from another make, indicating that motorcycles were becoming accepted transportation for the law. Even earlier, in 1909, Pittsburgh's first motorized police vehicle turned out to be a Harley-Davidson. From the mid-teens through the sixties, *The Enthusiast* dutifully reported every city, county and state police department astride H-D's. And while there were few service problems associated with use of the cycles by police, that futile pursuit of the bandits in Mexico pointed out the need for in-field service and maintenance. Yes, Harley riders have Pancho Villa to thank for inception of the service school.

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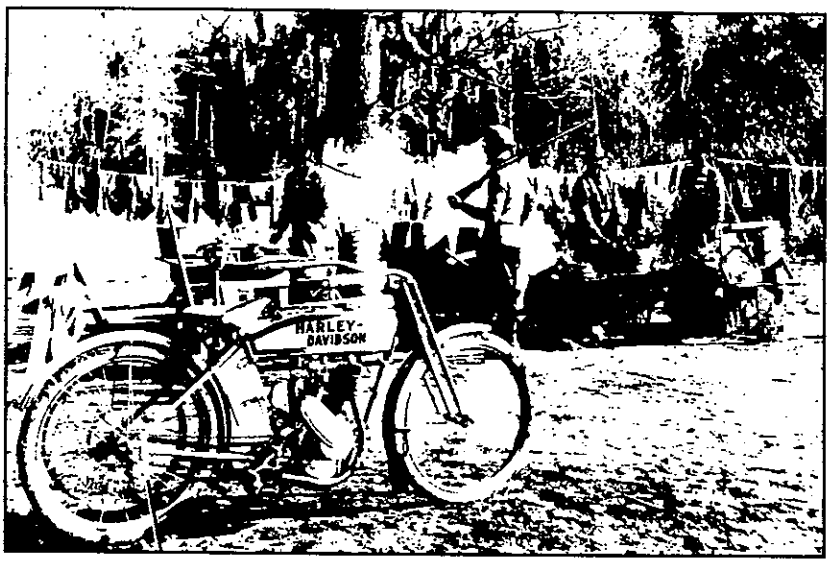
But, beginning in July 1917, H-D dealer personnel were no longer admitted to the school. Instead, groups of thirty enlisted men spent three weeks in Milwaukee, learning how to maintain the thousands of Harleys seeing service in France and to greater extent at Army camps throughout the U.S. More than 300 enlisted repairmen were put through the service school in the sixteen months before the World War I armistice was signed in November 1918. Most of the instant mechanics never made it to France, primarily because the United States was not fully mobilized when peace came.

The first glimpse of Harley-Davidsons by World War I soldiers may have been the line of bikes that gave rides to the wounded at various hospitals in England prior to U.S. entry into the war. This country was strongly supportive of the English and French months before American involvement. Once war was declared, the cycles were shipped with all other vehicles, though they were used primarily for messenger service rather than in actual combat. It is reasonable to assume that as many as 7,000 Harley-Davidsons found their way to France. War Department records show that 26,486 H-D's were ordered through November 1, 1918, and that a total of 20,007 Indians and Harley-Davidsons were shipped overseas. The most noteworthy was a sidecar rig ridden boldly—and inadvertently—into Germany.

"The first Yank to enter Germany" actually shows a doughboy riding a Harley-Davidson with sidecar and heading west, *out* of Germany, as the Kaiser's forces retreat. The picture, reproduced worldwide, was shot by a resident of a town near the Rhine River. It was taken on November 11, 1918, the very day the Germans surrendered. But who was the Allied soldier? What were the circumstances? More than twenty-five years would elapse before the rider's identity became known.

In 1944, an electrical contractor named Roy Holtz, from Chippewa Falls, Wisconsin, showed up at Juneau Avenue to obtain a copy of his picture. Puzzled, the editors of *The Enthusiast* learned that Holtz was the unidentified soldier in the famous World War I photo. "I didn't even remember when the picture was taken," Holtz said. "It appeared first in American newspapers and magazines . . . But there's nothing exciting about the incident."

Under questioning, Holtz provided this account: On the night of November 8, 1918, Holtz left a forward position in northern Belgium with his captain in the sidecar. A



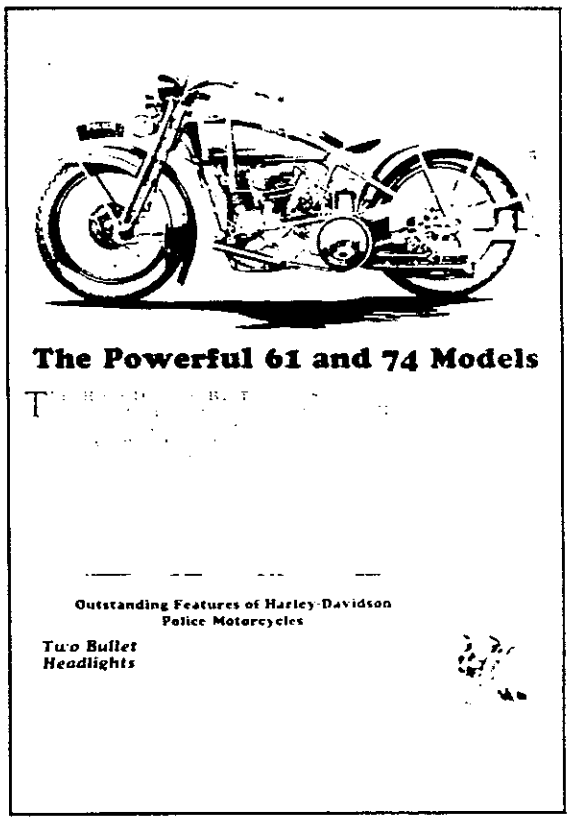
An early H-D single and a shotgun-carrying prison guard somewhere in the South prior to World War I. (Harley-Davidson Motor Company)

heavy rain disoriented the officer, who insisted that Holtz steer his H-D east, into Germany. When the two stopped at a farmhouse to ask directions, they were taken prisoner by German officers from a Bavarian division. Holtz, a corporal who could speak fluent German, was treated to shots of potent potato whiskey while his inept superior sat soaking in his uniform. The two were imprisoned until the morning of the armistice, November 11, then freed to return to Allied lines.

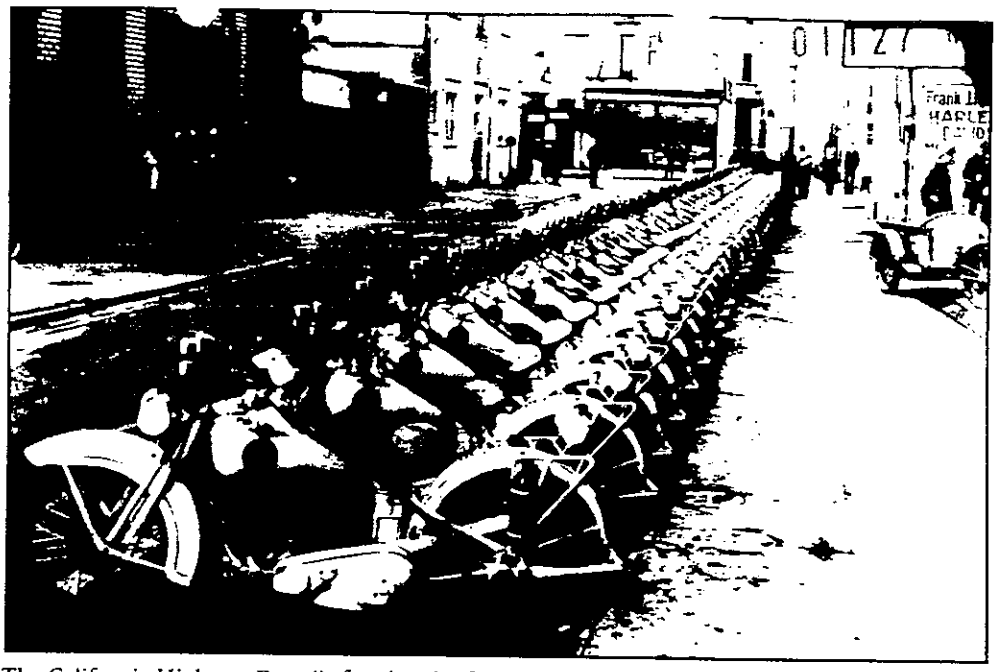
Because both were in unfamiliar territory, they drove farther into Germany, then became separated. At one time as much as sixty miles east of his own unit, Holtz rode westward, through retreating Germans, to meet the Allied advance. Not only was he the first Yank into Germany, but he was there nearly seventy-two hours ahead of his comrades.

At war's end, Harley-Davidson did not need to convert to peacetime production—the cycles it had furnished the military were no different from the H-D's available in approximately 1,000 dealerships throughout the United States. The most visible indication that H-D had been to war was the olive paint job, which lasted with minor variations into the thirties.

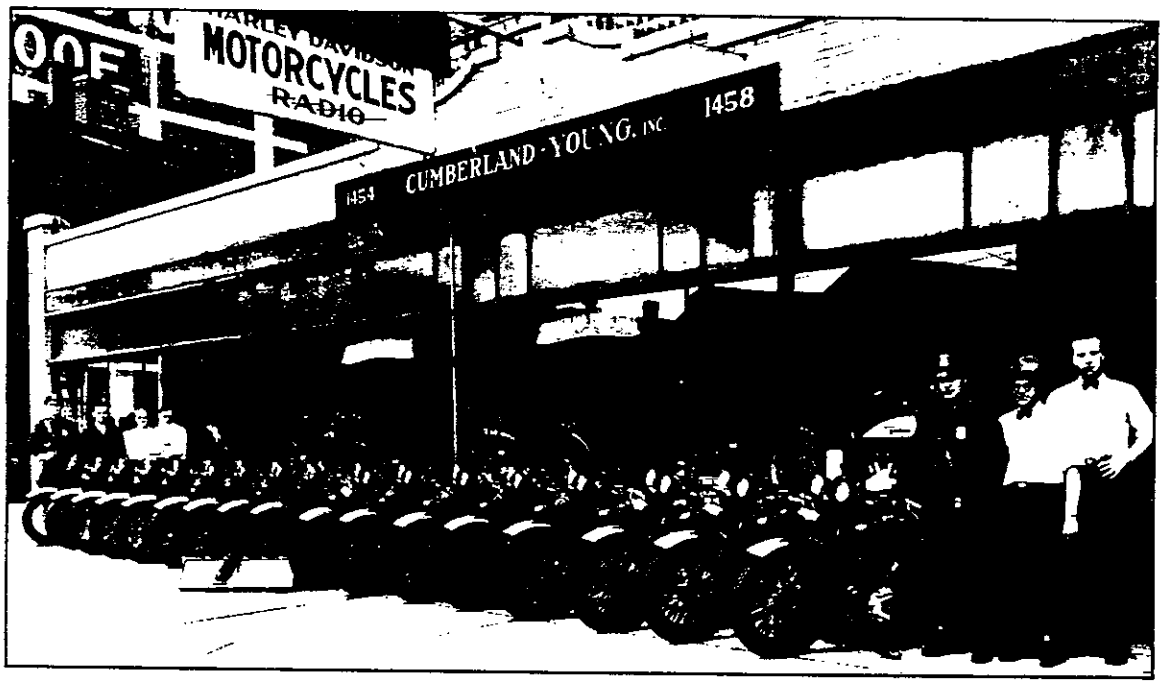
Since, by 1919, Henry Ford's assembly line was only beginning to make a low-priced car a reality, municipalities bought motorcycles in sizable numbers. Many of the bikes found their way into the hands of the police, who could use the machines in metropolitan areas to ease their way through traffic. Briefly, before the Great War, Harley-Davidson even offered a sidecar unit with fire extinguishers and first-aid equipment. They and at least a small number of public officials reasoned that two firefighters on a cycle could reach a blaze and haul out victims while a cumbersome truck was stuck



This 1929 advertisement touted the use of H-D's by the police. It appeared in *The Enthusiast,* which devoted an entire issue each year in the late-twenties and the thirties to law enforcement. (Harley-Davidson Motor Company)



The California Highway Patrol's first batch of Harley-Davidsons, 1929 JD models, delivered at Frank Murray's Sacramento dealership. (Armando Magri collection)

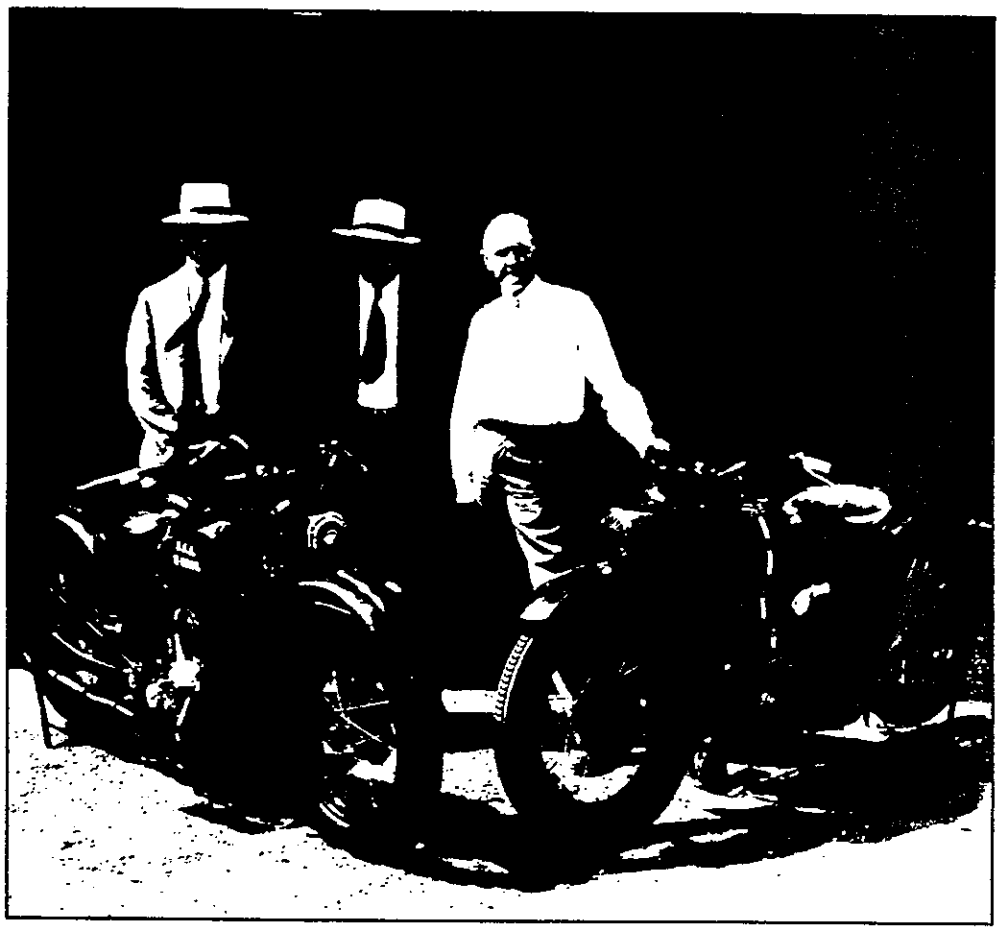


Seventeen new 1930 VL's delivered to Buffalo, New York, police. Young William H. Davidson, second from left in the far group, was sent to Buffalo to remedy matters when the police reported disappointment with speed. The first one serviced by Davidson reached a speed of 90 miles an hour, he states. (William H. Davidson collection)

in what was becoming a familiar phenomenon—rush hour.

By 1925, more than 2,500 city and county police units used Harley-Davidsons. As American salaries rose and the prices of cars created by mass production fell, more and more four-wheelers were on the roads. The twenties may have been roaring in part because there were few speed limits outside towns and those rural limits were hardly ever enforced. Consequently, highway fatalities rose at an alarming rate and states responded with troopers, highway patrols and police. "Harley-Davidson will curb this tragic traffic slaughter," trumpeted a 1926 company publication, and a special office for fleet sales to law enforcement agencies was established. With each large order, *The Enthusiast* would report that another state was covering its major highways with H-D's. By the mid-thirties, the cartoon showing a motorcycle cop hiding behind a billboard had become a cliche.

In other countries, law enforcement, frequently indistinguishable from the military, was employing the Harley-Davidson. Movietone newsreels, *Life* magazine and daily papers commonly showed at least half a dozen Guatemalans forming a human pyramid atop a police-style H-D that is somehow still in motion. Such stunts made Americans forget that Latin lawmen were probably using the bikes to keep their fellow



William S. Harley, left, and President Walter Davidson, right, pose with a U.S. Army inspector about to take delivery of a modest number of 1931 VL's. (Harley-Davidson Motor Company)

citizens subservient. In fact, police in the U.S. had their own drill teams. Such cities as Detroit and Washington, D.C., turned out dozens of precision police riders. They did much to maintain interest in law enforcement by performing close-order drill on wheels in parades and in competition. The Miami Beach Police Department, today among the most besieged in the country, won a national drill team competition, staged by the American Legion, in 1955. Police drill teams exist even today. Perhaps the most accomplished is the twelve-man Louisville H-D force.

By 1930, police models differed from street Harleys in several ways. The most evident to the populace was the one-way radio, with volume on high, that was the motorcycle cop's only link with headquarters. Not until 1948 were two-way radios introduced by H-D. The first two-way, delivered on a Servi-Car to Oshkosh, Wisconsin, dealer Joe Robl's shop, was a Motorola FM unit. It featured a 152,000-k. cycle frequency that eliminated most of the "dead spots" found on earlier rolling radios. Installed just to the rear of the driver's left hip, the unit was cushion-mounted and proved to be successful virtually from the start. State police, using even higher frequencies, reported a range of seventy-five miles with their Motorolas.

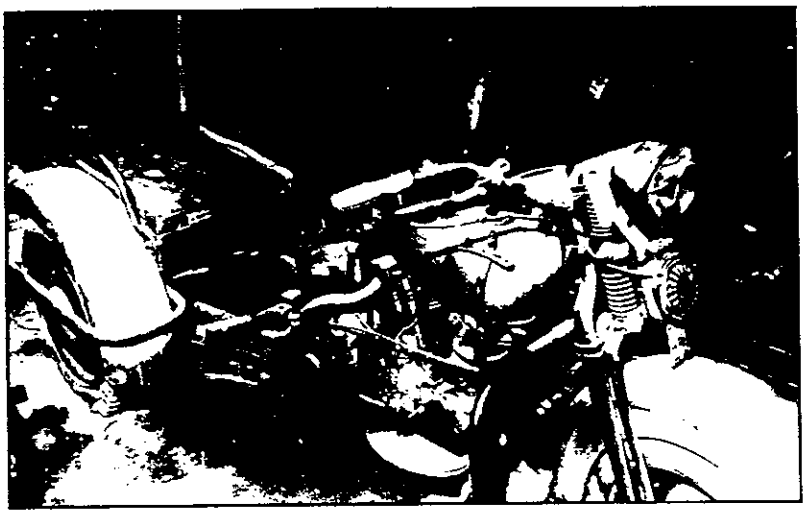
What was being a motorized police officer like in the thirties? William J. Lally, a retired trooper with the New York State Police, reports that the H-D's were ridden each year from about May 1 through October 15, enforcing speed limits that changed several times during his years in the saddle. In 1937, New York law stated, "A speed of over 50 miles an hour for a distance of over a quarter of a mile is considered operating a vehicle in a manner not careful and prudent." (The heavily populated Northeast has always had slower speed limits than other parts of the U.S.—Nevada, for example, posted speed limits only within city limits until 1974.) Happily for the officers, the Harleys were more than a match for passenger cars of that era. "In the years I rode [1937–41 and 1946–48], I

Trooper W. J. Lally on his 1936 H-D 74 cu. in. police bike. "The red light and the mirror were mine," says Lally, now retired. "The saddlebags I borrowed from my horse—no foolin'." (W. J. Lally collection)

Sgt. Carmen R. Sicilia works on a New York State Police cycle in the mid-thirties. Frequently, municipalities turn to the selling dealer to service their motorcycles. (W. J. Lally collection)

never had anyone with any make of automobile get away from me," says Lally.

Working out of the Oneida barracks, Officer Lally and fellow troopers in the early and mid-thirties were provided with bikes devoid of the paraphernalia usually associated with law enforcement. "They were taken out of the crates 'bare' and assigned to the troopers," he remembers. "Any red lights, sirens, mirrors or windshields had to be purchased by the troopers. Not until 1938 or 1939 were sirens and radios installed [by the State Police]. . . . If you didn't have some sort of makeshift arrangements, you carried all your reports and papers in your pockets. And as far as rain protection was concerned, you simply strapped a plain, everyday black raincoat over the back fender. If you got caught in a bad storm you would drive in some farmer's barn and call the station. They would send a car out to pick you up—or tell you to ride back to the station." Still a rider today at age sixty-eight, Lally says a New York cycle trooper not only enforced speed limits but performed all tasks normally associated with police work—homicide investiga-



An extremely rare bike—a shaft-drive Knucklehead Servi-Car. This prototype is believed to have been constructed for scrutiny by the Army prior to World War II. It is owned by Hammond, Indiana, H-D dealer Harry Molenaar. (David Wright)

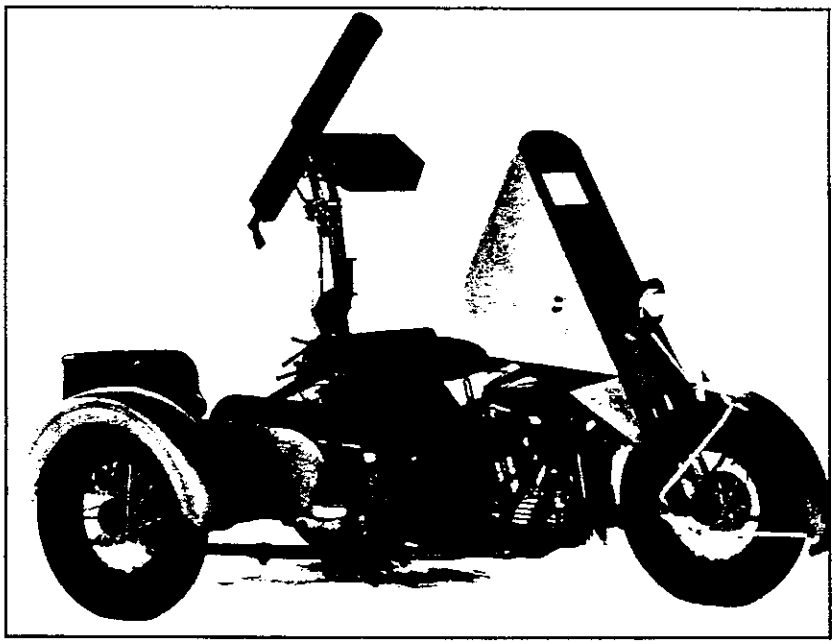
A closeup of the same three-wheeler shows a universal joint just below and to the right of the hinge visible in the upper left portion of the photo. (David Wright)

tion, aid at the scene of an accident, directing dragging operations in connection with a drowning, etc. In contrast, states such as Wisconsin limited state officers to traffic control or to involvement in an investigation only if the crime actually took place on a state highway.

While mounted officers patrolled Depression-era highways, war clouds were gathering again in Europe. Nazis and Communists used Spain during the period 1936–39 as a location for testing the weapons they were to fire in Poland, over Great Britain, in North Africa and elsewhere. It was from the conflict in Spain that one of the classic stories about Harley-Davidson turns up. . . . Some 500 soldiers and civilians took refuge during fighting in Toledo inside the Alcazar—the fortress-like Spanish military academy. As the foe lay siege to the structure, food supplies dwindled. At night, the defenders stole out to nearby fields and gathered whatever grain they could find. Returning, they hooked one of two Harley-Davidsons via a belt to a small hammer mill. The mill ground the grain into a coarse flour, used in bread that fed the inhabitants of the old stone fortress. The H-D, despite being run in a stationary position for two months, did not falter. And the Alcazar did not fall.

Other garrisons, towns, even countries were falling beginning in August 1939, more than two years before Pearl Harbor. United States industry, including Harley-Davidson, was put on a war footing. "That war was planned," John Nowak, former dean of the service school, believes. "The Army came in in 1937 to look over the civilian service school and equipment, making sure everything was ready." John was ready, too, traveling to every Army encampment east of the Mississippi to ensure that the fifty service school mechanics turned out in Milwaukee every four weeks were doing things by the books. In four years, he logged an incredible 200,000 miles on a 61 cu. in. EL with sidecar.

A total of 88,000 motorcycles (plus spare parts for an additional 30,000) was produced by H-D during World War II, following some unique tests conducted at Fort

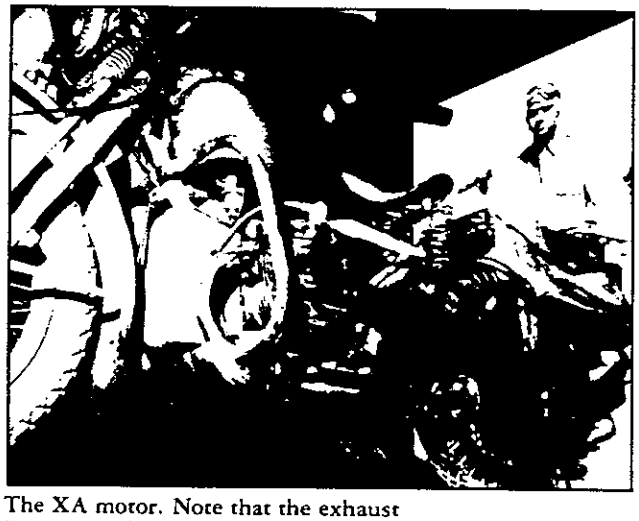


A Colt machine gun and an attempt at armor plate adorned this 1940 experimental model. (Harley-Davidson Motor Company)

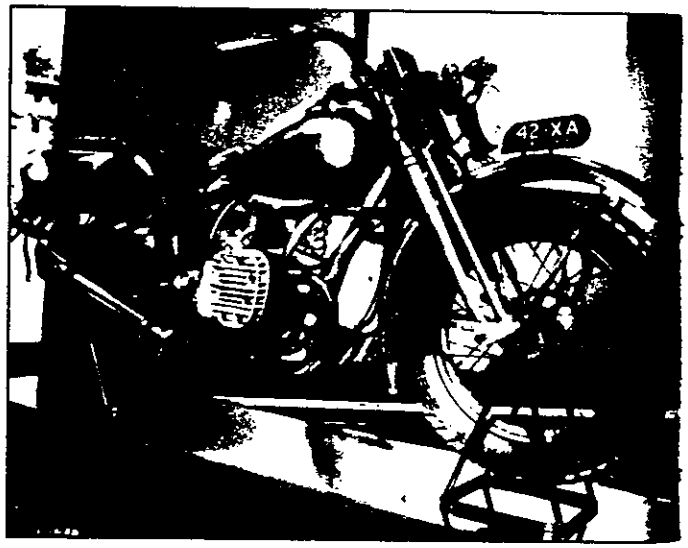
Knox and in Louisiana by Nowak, under the direction of founder Bill Harley. "We were told our cycles had to ford a stream sixteen inches deep," Nowak recalls. "So we stuck the oil breather tube up toward the gas tank. If we hadn't done that, the circulating oil systems would have sucked water into the crankcases through the breather. The spark plugs were above water, but any speed over three miles an hour would splash them and drown out the bike."

The Model 42XA-Solo motorcycle built by Harley-Davidson for the U.S. Army from late 1941 into 1943 looked more familiar to German prisoners of war than it did to GI's. The twin-cylinder, L-head bike with a carburetor for each cylinder and shaft drive was copied from the BMW used by the Axis early in the war. H-D engineers converted the various measurements from centimeters to inches and began to tool up for production. Just 1,000 of the XA's were built, due to the fact that the Germans had, by 1942, been chased successfully across the Sahara.

"Somebody in the Army—who should have been shot—got the idea for a shaft drive. Why have two completely different sets of parts (the WLA and the XA)? That



The XA motor. Note that the exhaust is upswept for easier operation in water. (David Wright)



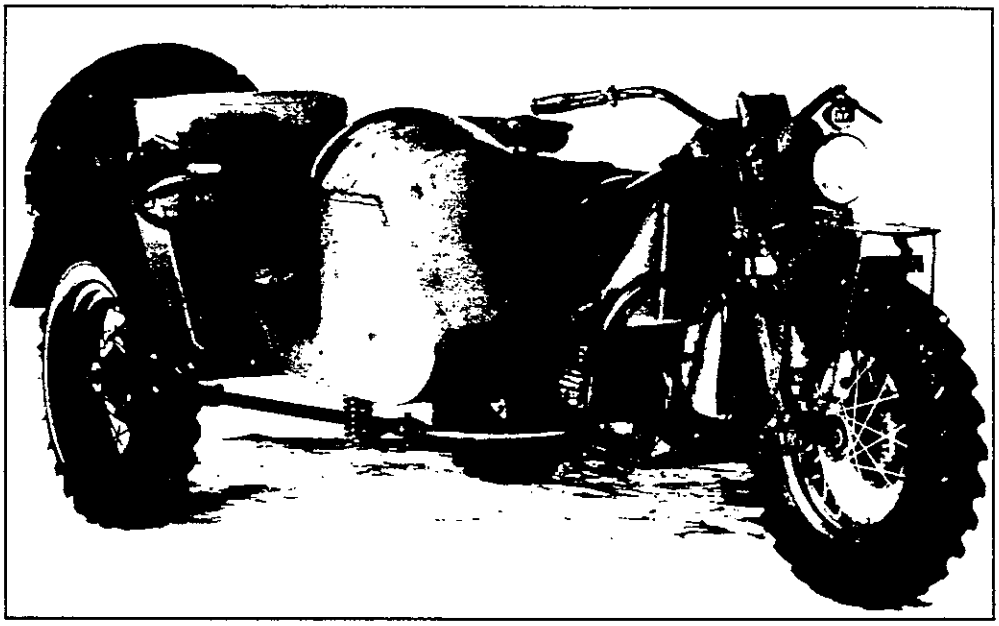
The XA featured a BMW-type horizontally opposed two-cylinder engine and shaft drive. Just 1,000 were constructed early in the war. (David Wright)

should have been the question from the beginning." So states Wilbur Petri, a retired mechanical engineer whose assignments included everything from plant layout to post-war liaison with the Aermacchi factory. He confirms William H. Davidson's belief that the XA's cost the Army slightly less than $1 million, or $1,000 per machine. Those figures include design, tooling, development, etc. "We practically gave it to them," Davidson says.

The consumer got no closer to the XA (which featured a four-speed transmission, hand clutch and both hand and foot shift) than isolated photos of cyclists in training at Fort Knox. *The Enthusiast* pointed out as early as mid-1942 that this bike was experimental and that H-D riders would be told when—and if—it was offered to the public. Plans to produce the XA in civilian form were explored to the point that a prototype with an overhead valve engine and hydraulic forks was created and ridden extensively in 1946. Petri rode the XA and says it was smoother than the V-twin, since the vibrations in opposed-engine cylinders tend to be self-canceling. The usual shaft drive quirks, including the feeling of levitation when the throttle was cracked open, were present, too.

XA Specifications
(Issued February 1, 1942)
Type of engine: Twin cylinder, opposed, L-head.
Bore: 3 1/16 in.
Stroke: 3 1/16 in.
Displacement: 45.038 cu. in.
Compression ratio: 5.7 to 1.
Horsepower: 7.5.
Wheelbase: 59 1/2 in.
High gear ratio: 4.70 to 1.
Tire size: 4.00 × 18.
Crankcase capacity: 2 quarts.
Transmission capacity: 2 quarts.
Rear drive housing: 4½ ounces.
Left gasoline tank: (slightly more than) 2 gallons.
Right gasoline tank: (slightly more than) 2 gallons. Includes ½ gallon reserve supply.

If the Army should indeed have shot the officials who gave the nod for the XA, then they should have staged a parade for the honchos on the WLA project. Instead of



An XA with sidecar, designated the XS, 1942. (Harley-Davidson Motor Company)

drawing up specs on a clean sheet of paper, the bureaucrats wisely took a look at the proven H-D WL, added some military adornments and went off to war. Although the WLA varied minutely from one defense contract to another, it generally differed from the civilian machine in only these ways:

—A more substantial luggage rack was installed.

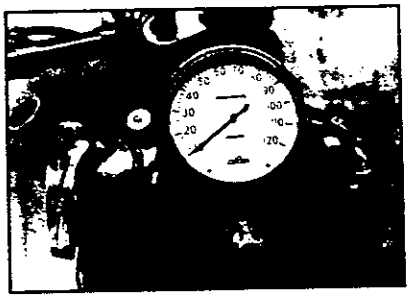
—A scabbard for a Thompson machine gun or a rifle ran parallel to the right front fork.

—Blackout lights front and rear were standard.

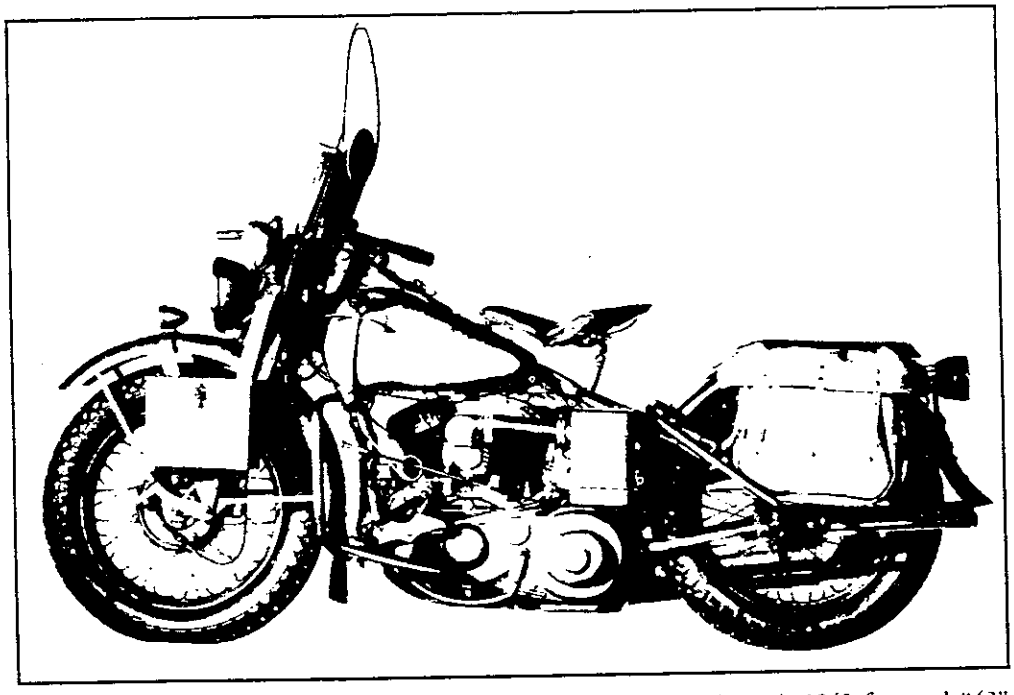
—Oil, spark plug and speed recommendations were listed on a metal plate attached to the gasoline tank, between the instruments and the seat.

—A skid plate was attached to the crankcase.

Anyone who ever rode or serviced a WLA reports staggering abuse without any sort of non-repairable breakdown. Standard procedure for riders included throwing the bikes down whenever the enemy was nearby. The WLA's slid without complaint on their



The Harley-Davidson WLA model on display in York has just nine miles on the odometer. Note the shift pattern, which was turned around after WW II. The twin almond shapes just below the speedometer housed warning lights on the civilian bikes but were virtually invisible on military models. (David Wright)



A 1944 WLA. All WLA's produced from 1942 through 1945 featured "42" prefix serial numbers. (Harley-Davidson Motor Company)

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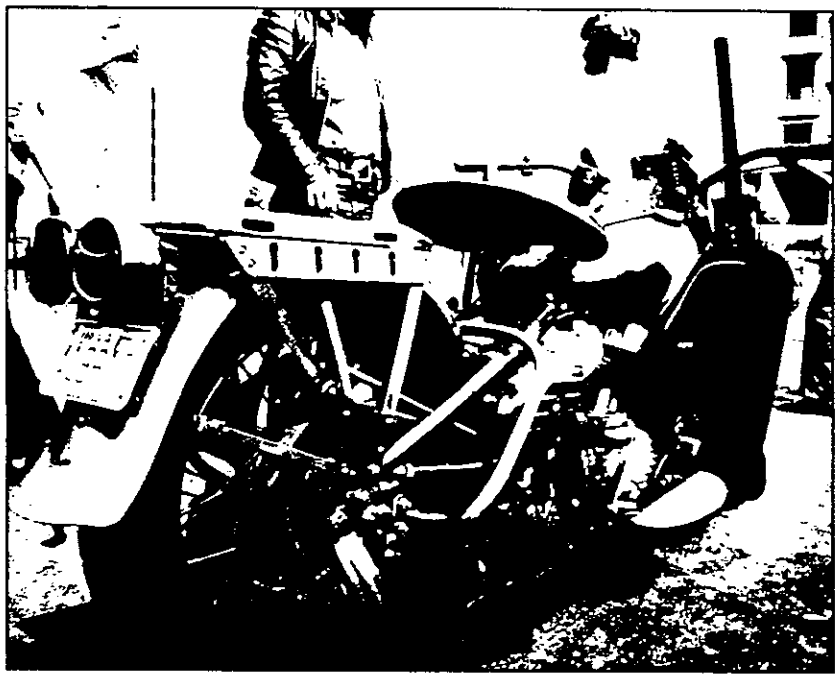
tanks in several continents, since every armored division listed 540 cycles in its complement of vehicles. Nor were U.S. armored divisions the only units lucky enough to have the trusty 45's. Approximately 20,000 WLC's, the Canadian version of the 45 and almost one-quarter of wartime production, were shipped northward. The Canadian bikes featured the clutch on the right, brake on the left, right foot shift and the horn atop the headlight rather than beneath it. The metal luggage rack, mounted on the rear fender of the WLA only, was designed to carry a forty-pound radio the Army never quite managed to affix to the bike in quantity. The Canadians did have an "auxiliary box" atop the front fender, and were less concerned about being followed: The WLC was shipped without a rearview mirror.

W. T. Basore, who now lives in Tulsa, recalls his introduction to the WLA, on a remote island off Burma, in the Bay of Bengal. Stationed there as a private first class in late 1944, Basore used the machine to take him to his swing-shift assignment on the other side of the island. "I generally made the return trip each night about midnight, traveling 20 to 30 mph with the lights off." Unlike the ballyhooed riders trained at Fort Knox and elsewhere, Basore had never ridden a cycle. "Due to a severe shortage of fuel [all air-lifted in], two or three Harleys had been brought in to make best possible use of the fuel we had," he reports. Basore learned the rudiments of riding, failing to encounter anything more hostile than an occasional jackal or a cow on his midnight rides. "I found that blipping the ignition switch would cause a racket not unlike a high-powered rifle," he says, adding that the 45 never let him down.



A World War II WLA, as displayed at Daytona Beach in 1982. (David Wright)

WLA Specifications
(Training manual no. TM 9-879, no issue date listed)

Type of engine: Two-cylinder, V-type L-head, air cooled.
Cylinder bore: 2¾ in.
Stroke: 3[illegible] in.
Engine (serial) number left side engine base, below front cylinder.
Wheelbase: 59½ in.
Length, overall: 88 in.
Width, overall (handle bars): 41 in.
Wheel size: 18 in.
Tire size: 4.00 × 18 in.
Tire type: drop center.
Weight, without rider or armament: 540 lb.

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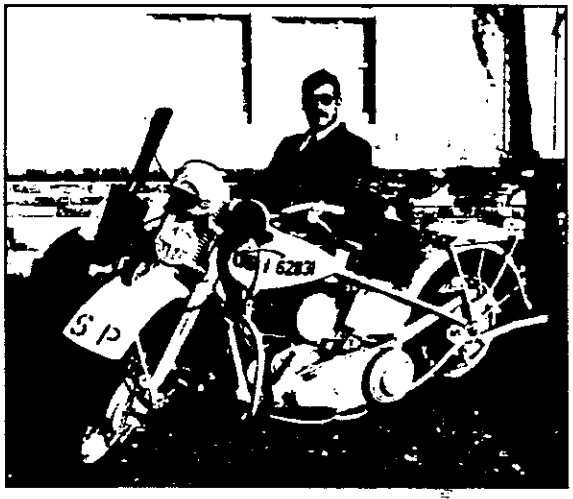
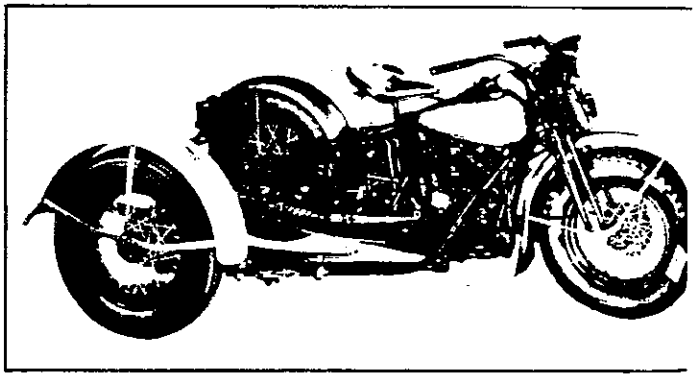
Ground clearance (skid plate): 4 in.
Fuel: 72 octane or higher gasoline.
High gear ratio: 4.59:1
Engine sprocket: 31-tooth.
Countershaft sprocket: 17-tooth.
Rear wheel sprocket: 41-tooth.
Maximum allowable speed: 65 mph.
Miles per gallon (hard surface): 35.
Cruising range: 150 miles.
Fording depth (carburetor): 18 in.
Fuel capacity (left tank): 3½ gals.
Oil capacity (right tank): 1½ gals. Transmission capacity: ¾ pint.

While the WLA exceeded and the XA met government expectations, the H-D factory chased several wild geese in an effort to win the war. Somehow, in 1941, sidecar-equipped Indians wound up in Louisiana for a series of tests in swampy, tropical conditions. The inability of these machines to function hastened development of another all-terrain vehicle, the Jeep. Shortly after the Jeep was in production, Harley-Davidson provided Willys with XA-type, opposed-twin motors intended for airborne mini-Jeeps. But the Toledo, Ohio, firm was so busy cranking out full-size models that the junior version never got past the Willys experimental experts. Some 5,000 motor generators, based on the XA engine, were ordered; but the war ended before these units could be produced. And H-D's most closely held wartime secret—mating two V-twin engines for installation in a Canadian mini-tank—also failed to materialize. By war's end, H-D was creating such things as telescope equipment under subcontract to Bell & Howell and Argus.



Francis Blake, sidecar restoration specialist, poses in his U model with sidecar. "SP" stands for Shore Patrol, the Navy's military police.



A 44-U (U indicating a medium-compression 74 cu. in flathead motor) with sidecar chassis. A reported 136 such machines were delivered, painted gray. (Harley-Davidson Motor Company)

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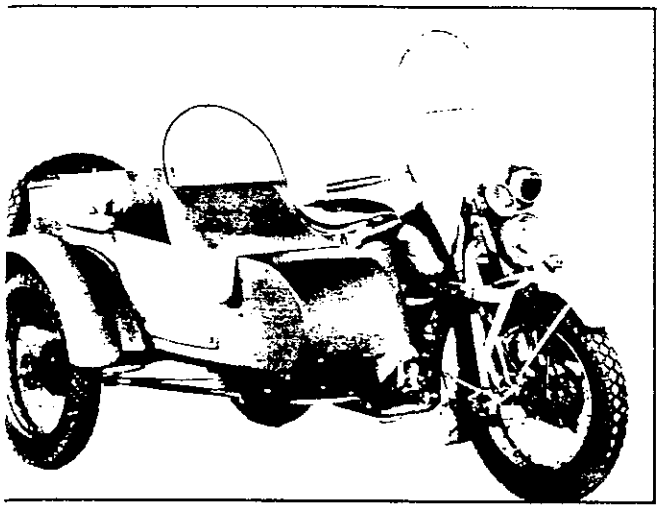
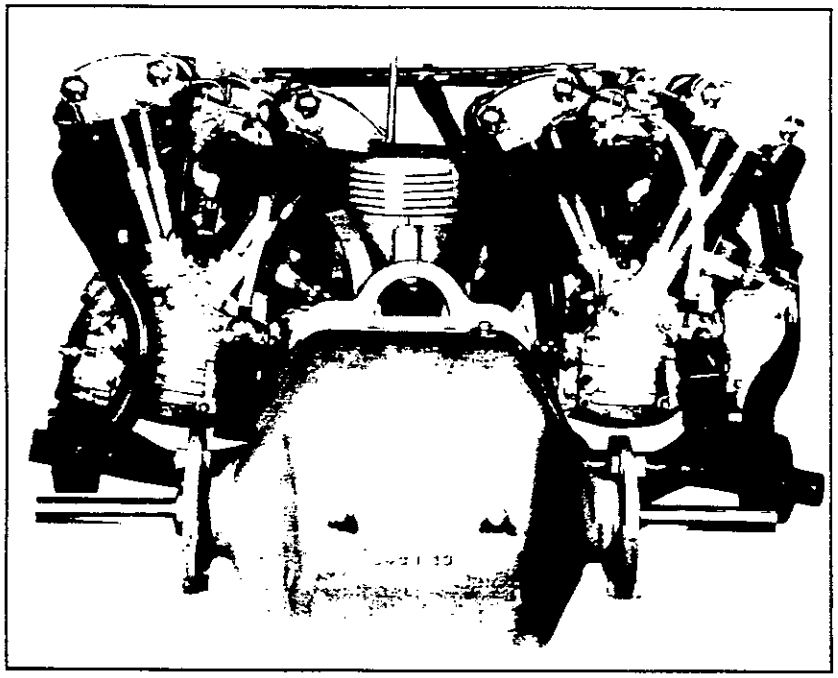
The fortunate few who received new Harley-Davidsons during the war years included civilian police, of course, and those who could demonstrate a legitimate need. Mounted, armed guards patrolled the sprawling munitions plant operated by the Olin Company outside Baraboo, Wisconsin, keeping it safe from saboteurs. Other strategic installations also featured routine civilian and military cycle patrols. Of less importance were such quasi-police units as the Dayton (Ohio) Funeral Escort Service, which led processions through the city on H-D's bearing the only civilian paint job available—gray.



This prototype, labeled the WSR, apparently was designed to be used on the Russian front. Created in 1944, after thousands of WLA's were sent to the Soviets, this machine never left Milwaukee. William H. Davidson believes the WSR to have been a very minor project, because "the Army never told us where shipments were going." (Harley-Davidson Motor Company)



This experimental engine, consisting of two 61 cu. in. overhead valve motors, was designed in 1944 to power a Canadian mini-tank. (Harley-Davidson Motor Company)

Cyclists who, for one reason or another, were not drafted kept their thirties machines together as best they could, riding on rationed rubber and gasoline.

John Nowak pinpoints the rationing rationale: "We had plenty of gasoline throughout the war. But we didn't have much rubber. I guess the government figured that the best way to preserve tires was to keep people off the roads. They did that by restricting the sale of fuel."

Since World War II, Harley-Davidson's fortunes with the military and the constabulary have diminished. Neither the Korean conflict nor the Vietnam war saw any significant use of motorcycles (though there were some very limited attempts to use trail bikes in Vietnam). Some 418 Sportsters were sold during the late fifties for military police and shore patrol units. Today, there are Army experiments being carried out with 250cc machines hooked to parachutes. This is going on only during domestic maneuvers and represents no large-scale use by the armed forces. On the civilian front, just over 400 state, provincial, county and municipal police departments ride Harley-Davidsons here and in Canada.

Oshkosh, Wisconsin, dealer Joe Robl, seated, and William H. Davidson check out the new two-way radio installation on the first Servi-Car so equipped. (William H. Davidson collection)

At H-D's Milwaukee headquarters, Chicago police take delivery of 16 Servi-Cars—either during or immediately after World War II. (William H. Davidson collection)

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Police sales represent only a small percentage of production today. That percentage is meaningful, however, because dealers can profit from service contracts, and H-D receives reams of exposure from mounted officers. An aggressive dealer can counter the lower initial price of a Kawasaki police bike, for example, by showing city fathers that Harley-Davidsons have "a resale value two to three times what any competitive brand is worth," according to a recent factory bulletin. The report notes that the California Highway Patrol recently received $4,200 for an H-D purchased in 1984, while 1977-79 units auctioned by Milwaukee police brought in $2,150 to $2,350, "whether running or not."

Prior to 1984, the company offered three distinct models: the FLH chain, the FLH belt and the FLHT enclosed chain. These units superseded the standard and deluxe models, seen during the AMF years. Gone too are low-compression or handshift models, the former the victim of today's cooler-running motors, the latter in response to a new generation of lawmen who are foot shifters. Today's two mainstays, the FLHT-P Electra Glide and the FXRP Pursuit Glide, are very different machines, as the following specifications indicate. Between them, they're standard equipment for such major cities as Boston, Chicago, Cleveland, Houston, Indianapolis, New York and Pittsburgh, and state patrols to include California, Connecticut and Wisconsin. The units are made even more attractive because the company carries a twelve-month, unlimited-mileage warranty on each police bike it sells.

FLHT-P Electra Glide specifications

Engine: 80 cu. in. air-cooled, four stroke, V-twin cylinder. Overhead valves. Aluminum cylinders with cast-iron liners. Diamond-turned pistons of 12 percent silicon aluminum. Compression ratio, 8.5:1.

Carburetor: Float-bowl type. 38mm venturi opening. Reusable foam air-cleaner element.

Transmission: 5-speed constant-mesh gearbox with short throw shifter linkage. Gear ratios, overall: 1st, 10.93; 2nd, 7.45; 3rd, 5.40; 4th, 4.13; 5th, 3.37.

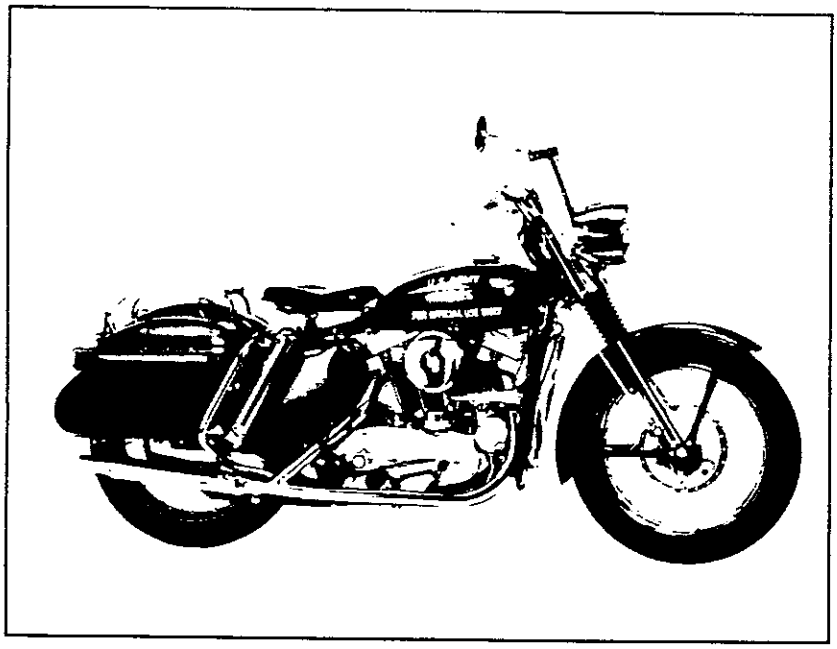
Electrical system: 22 amp hr. 12-volt storage battery. Solid-state regulated alternator for high output at low speeds. Suitable for radio operation and for emergency flashing lights. System meets or exceeds all state and federal regulations. Quartz halogen headlamp with 50-watt low beam, 60-watt high beam.

V-Fire ignition system: Coil, electronic V-Fire ignition, microprocessor-controlled dual advance and retard curves. No distributor. Electric start.

Ignition switch: Permits operation with or without key. Contains integral fork lock.

Clutch: Multiple heavy-duty clutch plates, wet clutch with diaphragm spring, hand operated.

Drive: Engine to transmission by auto-lubricated ½-in.



1963 Sportsters, designated XLA, were procured by the U.S. Army. (Harley-Davidson Motor Company)

pitch, double-roller chain. Transfer to rear wheel by Kevlar reinforced belt.

Exhaust: Crossover dual exhaust.

Tri-mount chassis: (Isolated engine) Utilizes automotive-type elastomer engine mounts. The mounts isolate the rear swing arm, drive train and engine from the rest of the vehicle.

Frame: Double loop, fully gusseted. Heavy wall construction, powder coated with black enamel.

Suspension: Front, twin-disc system with dual 11.5-in. drilled rotors and metallic linings. Dual calipers are hydraulically operated by right handlebar lever. Rear, 12-in. disc and twin-piston caliper. Hydraulically operated by right foot pedal.

Fuel capacities: 5-gal. tank (includes 1 gal. reserve). Miles per gallon, 50 highway; 39 city. Four-quart oil system.

Weight: 712 lbs. dry, without accessories.

Dimensions: Height, 61 in.; length, 94.25 in.; wheelbase, 62.94 in.; ground clearance, 5.12 in.

Tires: MT90 x 16T blackwalls. Tubeless.

Wheels: Cast alloy with bead-retention rims. Tapered bearings.

Solo seat: Traditional solo saddle, air suspension, adjustable dampening and springing.

Standard equipment: Adjustable footboards (three positions); air-adjustable anti-dive front suspension; air-adjustable rear shocks, balanced wheels; brakes—dual caliper front, single caliper rear; cast wheels with blackwall tires; color—birch white, special paint design or colors available at no charge on police orders; directional lamps; chrome engine guard; front and rear fender tip running lights; 4-way hazard warning flashers; fuel gauge; 5-gal. gas tank with locking cover; heel/toe shift lever; "humanized" hand controls, including brake lever, clutch lever, switch housing, master cylinder and integral siren switch; indicator lights for high beam, turn signals, neutral and oil; isolated engine and transmission mounting; two mirrors; dual chrome mufflers; pull-pull throttle; pursuit light, front, one red, one blue, quartz halogen headlamp; radio carrier; hinged saddlebags with carrier; Kevlar-reinforced secondary belt drive; black solo saddle with air suspension; police speedometer; tachometer; 5-speed, foot shift transmission; 12-month, unlimited-mileage warranty; heavy-duty wiring harness; V2 Evolution engine.

Optional equipment: Cycle signal mounting kits—left front mount, right front mount, rear mount; cycle signals, red or blue; electronic siren, including amplifier, mounting and switches; microphone kit; two police transfers, front fender; chrome saddlebag kit guard; Whelen strobe package; whitewall tires; adjustable windshield only, windshield with fairing.

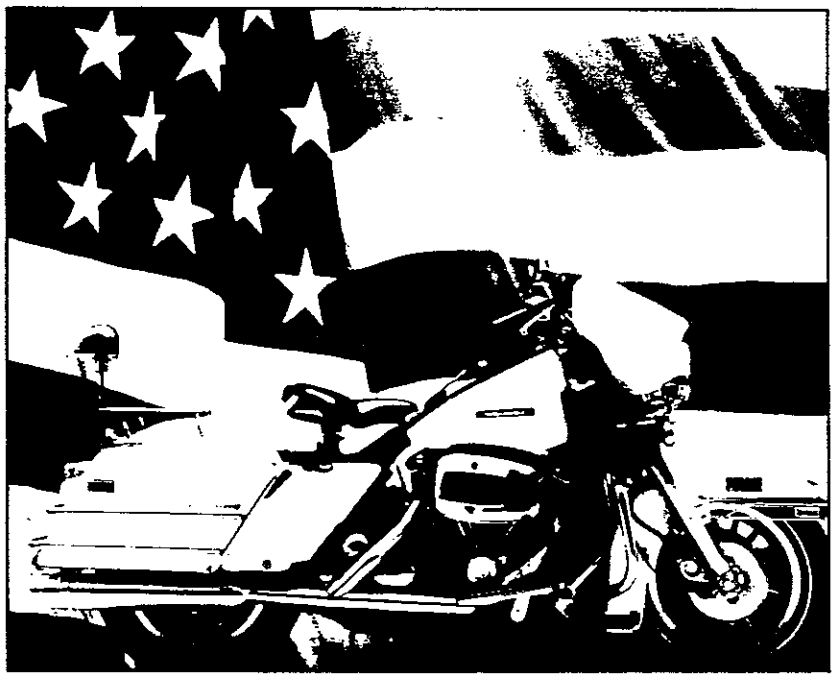
FXRP Pursuit Glide specifications

Engine: 80 cu. in. air-cooled, 4-stroke, V-twin cylinder. Overhead valves. Aluminum cylinders with cast-iron liners. Diamond-turned pistons of 12-percent silicon aluminum. Compression ratio, 8.5:1.

Carburetor: Float-bowl type. 38mm venturi opening. Reusable foam air-cleaner element.

Transmission: 5-speed constant-mesh gearbox with short throw shifter linkage. Gear ratios, overall: 1st, 10.93; 2nd, 7.45; 3rd, 5.40; 4th, 4.13; 5th, 3.37.

Electrical system: 22 amp hr. 12-volt storage battery. Solid-state regulated alternator for high output at low speeds. Suitable for radio operation and for emergency flashing lights. System meets or exceeds all state and federal regulations. Fairing version has 7-in. headlight with 60-watt high beam and 50-watt low beam. Windshield version



The 1983 FLHT Police bike.

has 5¾ in. headlight with 50-watt high beam and 35-watt low beam. Both are quartz halogen headlamps.

V-Fire ignition system: Coil, electronic V-Fire ignition, microprocessor-controlled dual advance and retard curves. No distributor. Electric start.

Clutch: Multiple heavy-duty clutch plates, wet clutch with diaphragm spring, hand operated.

Drive: Engine to transmission by lubricated ⅝ in. pitch, double-roller chain. Transfer to rear wheel by Kevlar reinforced belt.

Exhaust: Staggered shorty duals or optional, high-performance crossover dual exhaust. Standard exhaust generates 80.4 ft. lbs. torque at 3,500 rpm. With high-performance exhaust, 84.1 ft. lbs.

Tri-mount chassis: (Isolated engine) Utilizes automotive-type elastomer engine mounts. The mounts isolate the rear swing arm, drive train and engine from the rest of the vehicle.

Frame: Double loop, fully gusseted. Heavy wall construction, powder coated with black enamel.

Suspension: 5-position adjustable spring preload with dual dampening on rear. Lean angle, 36 degrees right, 36 left.

Brakes: Twin-disc front, hydraulically operated by right handlebar lever. Single-disc rear with self-adjusting pads, operated by right foot pedal.

Fuel capacities: 5-gal. tank (includes 1 gal. reserve). Miles per gallon, 50 highway/39 city. 4-quart oil system.

Weight: 712 lbs. dry, without accessories.

Dimensions: Height, 61 in.; length, 94.25 in.; wheelbase, 62.94 in.; ground clearance, 5.12 in.

Tires: MM90 x 19T tubeless blackwall front MT90 x 16 tubeless blackwall rear.

Wheels: Cast alloy with bead-retention rims. Tapered bearings.

Solo seat: Traditional solo saddle, air suspension, adjustable dampening and springing.

Standard equipment: Adjustable rear shocks; balanced wheels; brakes—dual caliper front; cast wheels with blackwall tires; color—birch white, special paint design or colors available at no charge on police orders; directional lamps, chrome engine guard; footboards; 4-way flashers; hazard warning flashers; fuel gauge; 4.2-gal. gas tank; heel toe shift lever; "humanized" hand controls, including brake lever, clutch lever, switch housing, master cylinder and integral siren switch; indicator lights for high beam, turn signals, neutral and oil, plus pursuit on fairing version; isolated engine and transmission mounting; two mirrors; dual chrome mufflers; nonadjustable fork; pull-pull throttle; pursuit light, front, one red, one blue; quartz halogen headlamp; radio carrier; radio speaker mount; hinged saddlebags with carrier; Kevlar-reinforced secondary belt drive; black solo saddle; police speedometer; tachometer; 5-speed, foot shift transmission; 12-month, unlimited-mileage warranty; heavy-duty wiring harness; V2 Evolution engine.

Optional equipment: Cycle signal mounting kit; cycle signals, red or blue; high-performance crossover dual exhaust; electronic siren, including amplifier, mounting and switches; Whelen strobe package; microphone kit; adjustable windshield only; windshield with fairing.

The California Highway Patrol ordered 131 of these FXRP police H-D's for 1984, following with a 161-bike order in 1985. Though Kawasaki won the 1986 CHP order, H-D's are in use by such prominent law-enforcement bodies as Milwaukee, Indianapolis, Boston, Pittsburgh, Montreal, Toronto and Vancouver. (Harley-Davidson Motor Company)

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CHAPTER FIVE
DEALING

ARTHUR DAVIDSON WAS QUICK TO REALIZE THE POTENTIAL OF THE MOTORCYCLE. SO, immediately following 1907 incorporation, he set off on a dealer recruiting odyssey that began in New England and spread south and westward. Ten years later, on the eve of America's entry into World War I, Arthur had almost singlehandedly signed up Harley-Davidson dealers in every one of the forty-eight states—more than 800 total. Records are scarce on who these cycling pioneers were, but it's safe to guess that they were already involved in transportation (car and bicycle dealers) or a manual trade (blacksmiths, mechanics), or were riders who saw a way to mix business and pleasure. Wisely, Arthur shied away from offering his cycles to competing dealers.

The very first Harley-Davidson dealer sought out the tiny shed on Milwaukee's west side to see if the Davidsons and William Harley were serious about producing motorcycles. C. H. Lang of Chicago sold all the H-D's produced in 1904—three machines. He quickly set up an office on the fifth floor of a Windy City office building and by 1912 was selling 800 machines a year, without a showroom or even a demonstrator model. A highly successful businessman, Lang by 1916 was the nation's leading motorcycle dealer. He told a cycle magazine at the time that his brisk trade was due to constant distribution of "direct literature" via a 3,000-name mailing list and to a time payment plan of his own making.

Lang moved his business into showroom quarters after World War I, where 300–400 cycles were sold each year until the Depression. The pioneering dealer attributed the leveling off of sales in the twenties to the failure of city fathers to maintain roads and to the harebrained drivers of automobiles. Lang himself had earlier been "run down by a flivver driver and crippled in one leg ever since."

Meanwhile, fellow H-D dealers were prospering elsewhere. In 1907, a fourteen-year-old Californian named Dudley Perkins straddled a Reading Standard cycle and became not only an enthusiast but a racer as well. A mechanic by trade, he worked for Excelsior, Merkel and Indian dealers in the Bay Area before joining Al Maggini to open a

Jefferson and DeLuxe dealership in 1913. Perkins realized that racing was a solid way of promoting his dealership and parlayed his flat-track success into floor traffic and sales. Arthur Davidson was recruiting dealers on the West Coast at the time and quickly convinced Perkins of the superiority of the H-D twins and singles. In January 1914, Maggini and Perkins opened their Harley-Davidson dealership at 626 Market St. in San Francisco.

A booming business and a new bride who considered racing dangerous ended Perkins' racing career in 1915—more or less. The soft-spoken fellow turned to hillclimbs, winning hundreds of "slant meets" up and down the coast through 1936. His reputation established, Perkins bought out Maggini and moved into larger quarters. Throughout the twenties, he sold not only hundreds of road bikes, but commercial vehicles as well. By 1928, Perkins' knowledge of municipal and private business needs had made him the largest Package Truck dealer in the country.

Like other pioneering dealers—Bruce Walters in Peoria, Illinois, and Bill Cleary in Savannah, Georgia—the economic woes of the thirties did very little good for Perkins' bank account. Cycle enthusiasts were penniless until around 1940, when the U.S. military buildup was under way. Since most riders were young and able-bodied, they were drafted before they could so much as renew acquaintance with their local dealer. Those who remained behind during World War II had a ravenous appetite for new bikes that only an extremely enterprising dealer like Dudley Perkins could feed. By 1944, Perkins realized that the Allies would emerge victorious and that many of the 80,000-plus machines produced by Harley-Davidson for the military were still in crates. So the San Francisco dealer located the bikes, purchased them from the government, repainted them

Dudley Perkins Company, the world's oldest Harley-Davidson dealership, is in San Francisco. Begun in 1914 as Maggini and Perkins, the dealership is now operated by Dudley Perkins, Jr., son of the founder. (David Wright)

and peddled hundreds of new 45 cu. in. WLA's to civilians. It's no coincidence that parts for 45's are still plentiful in northern California.

Dealers without such resources frequently found World War II to be more of a hardship than the Depression. Overnight, they went from down-at-the-heels idleness to manic activity. Harry Molenaar, a dealer in Hammond, Indiana, since 1933, says he kept alive during World War II by selling nothing and servicing everything. Molenaar held service contracts for a dozen police departments and was on call to keep running a number of Harley-Davidson two- and three-wheelers in use in the Gary-Hammond-East Chicago steel mills. Rathbun Chambless of Montgomery, Alabama, recalled his wartime activities to *American Motorcyclist* magazine in 1949:

"When the war came along, the picture was not too bright. No new motorcycles, no parts, practically no help. . . . We [Chambless and two mechanics] worked on motorcycles during the day, making what parts we couldn't buy. From five in the afternoon till midnight or later, we ran three lathes, making axle spindles for [Army] tanks—a subcontract. About the middle of the war, my next-to-last mechanic was drafted. We [two] made it through the war by working eighteen hours a day."

A dealer who was an enthusiast and a good businessman, too, could count on recognition. Dudley Perkins was named to the American Motorcycle Association competition committee in 1932 and served the AMA until his retirement. A fixture at dirt-track national races on the West Coast until his death in 1978, Perkins also sponsored a number of great riders, including 1969 AMA champ Mert Lawwill. The Perkins organization, now run by Dudley, Jr., and his two sons, is still in San Francisco and is billed as the world's oldest Harley-Davidson dealership.

More than 200 dealerships were thriving by 1912, allowing Arthur Davidson to pay attention to the related chores of advertising and sales promotion. He retained a Mil-

Dudley Perkins, Sr. (James Perkins collection)

Dudley Perkins, Sr., tilts his hill-climber skyward for a publicity shot. (James Perkins collection)

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waukee advertising agency and created a barrage of printed assistance to combat Indian, Thor, Excelsior plus other brands either established earlier than H-D or with strong followings in a particular state or region. By 1919, just sixteen years after the first Harley-Davidson was constructed, the world's largest motorcycle manufacturer was providing dealers with:

—Service bulletins, issued whenever a problem surfaced. Those who wonder how things got done before product recalls have only to look at such fliers.

—Motorcycle manuals, now called owners manuals, issued with each machine. Dealers were advised to keep additional copies on hand, since they were "particularly complete and comprehensive."

—Motor repair manuals, covering the most practical methods of fixing the bikes. Harley-Davidson also provided schools and libraries with this sort of repair information.

—Engine and transmission blueprints, "suitable for framing" but intended primarily for reference.

—"Standards of Practice" manuals, designed to be used by the dealer when he held seminars for his buyers on operation and maintenance. This piece contained 410 questions and answers and was developed initially for training World War I soldiers.

Other publications included electrical repair manuals, lubrication charts, a hint-filled flier on service topics, actual cutaway motors and tables of standard bearing sizes and clearances. These in-shop guides were supplemented by *The Enthusiast*, which in

March to Success in 1936
with Harley-Davidson
1936

HARLEY-DAVIDSON MOTOR CO., MILWAUKEE, WIS., U. S. A.

HARLEY-DAVIDSON Motorcycles

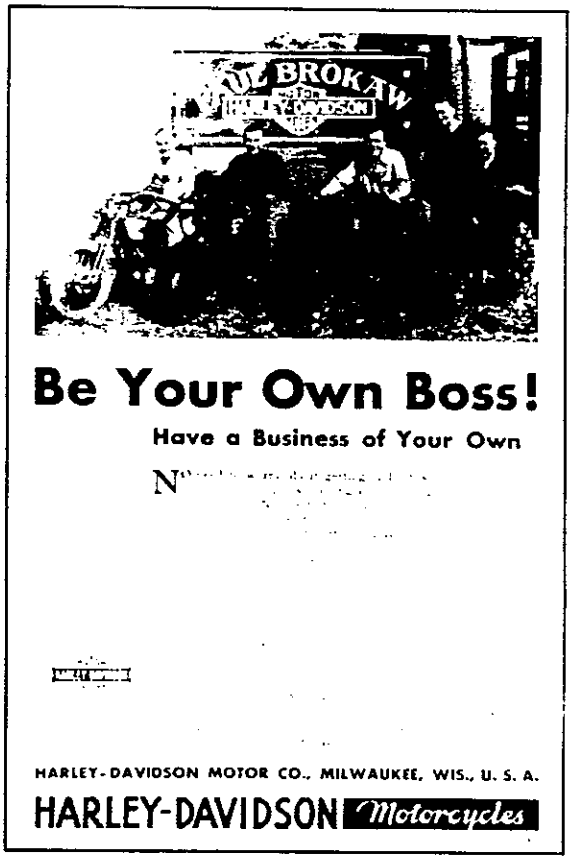
A dealer recruitment ad, from the back cover of *The Enthusiast*. (Harley-Davidson Motor Company)

1919 was about to be published monthly; posters that boasted of H-D accomplishments on the racetrack; even form letters that taught mechanics how to bill a customer.

All of the above contributed to uniformity, making H-D dealerships in Oregon resemble H-D dealerships in New Jersey. At the time, there were too many Mom 'n' Pop storefronts or even sheds where the motorcycle was peddled. Today, except for size and location, dealerships greatly resemble one another. But there are a few exceptions, frequently made to accommodate the local market. In Littleton, Colorado, for example, a rider will find an authorized shop with its own tattoo facility and a distinct skull-and-crossbones look. Vinnie, the proprietor, says he gets no heat from the factory because he's one of the nation's top ten dealers and "I pay my bills on time." Maybe Vinnie really knows his market. And maybe a little individuality is a good thing. The company's continuing challenge is to turn enthusiasts—individualists and conformists—into good businessmen.

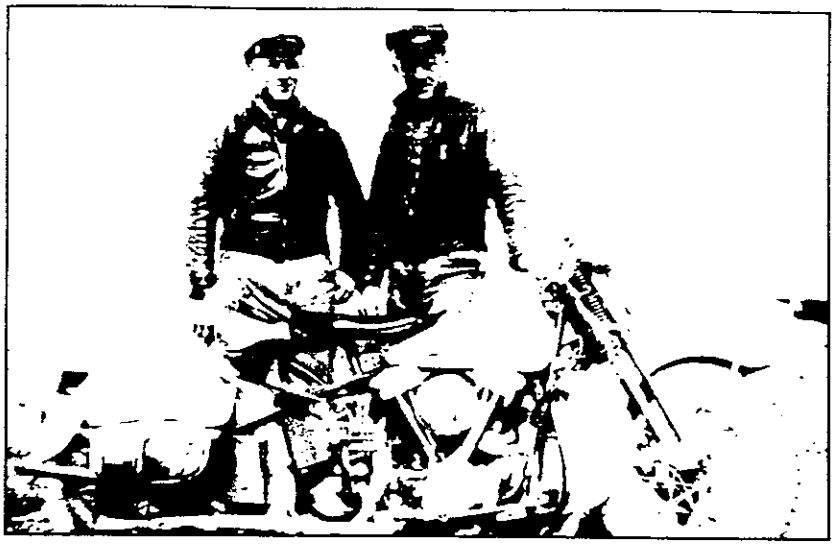
"Harley-Davidson is successful because of its dealers. And remember, that's the opinion of someone who was a factory engineer." So says Wilbur Petri, jointly responsible for some of H-D's better designs over the years and the man who helped the H-D lightweight factory in Italy turn a profit during the period 1969–76.

In the beginning, Harley-Davidson demanded—and received—total brand loyalty. In return, a dealer could count on a finely tuned marketing force that could lead the inexperienced or greatly assist the established. The company today is attempting to expand its 725-dealer network at a time when it's tough to deal in any kind of vehicle. A large inventory, for example, means a dealer is more likely to have the model a customer

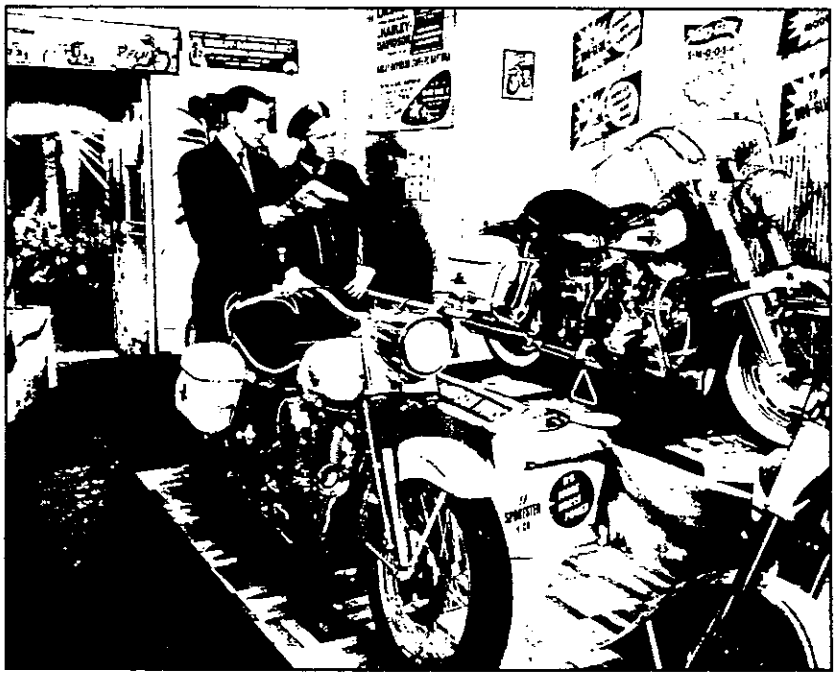


"They even made money during the darkest days of the depression," claims this late-thirties dealer-recruitment ad. The dealer featured is Paul Brokaw, Waterloo, Iowa. (Harley-Davidson Motor Company)

wants; but excessive inventory means that dealer is paying 1.5 percent interest monthly on every unsold bike. Several months of interest eat at the profit of each unsold machine. And since twenty-five percent of all H-D outlets sell other makes, Milwaukee machines frequently compete for floor space. Meanwhile, Harley-Davidson parts and accessories



North Dakotans Louis (left) and Arnold Hoffman with their 1939 61 cu. in. overhead valve demonstrator. The Hoffmans ran their dealership out of their farmstead and were typical of rural dealers at the time. (Arnold Hoffman collection)



Harley-Davidsons were represented in London, England, by the Warr dealership, shown here in late 1958. (Harley-Davidson Motor Company)

Sacramento, California, dealer Frank Murray escorts his wife in an early sidecar. (Armando Magri collection)

Frank Murray, pioneer dealer in Sacramento, California, stands in front of his store with four mounted policemen. (Armando Magri collection)

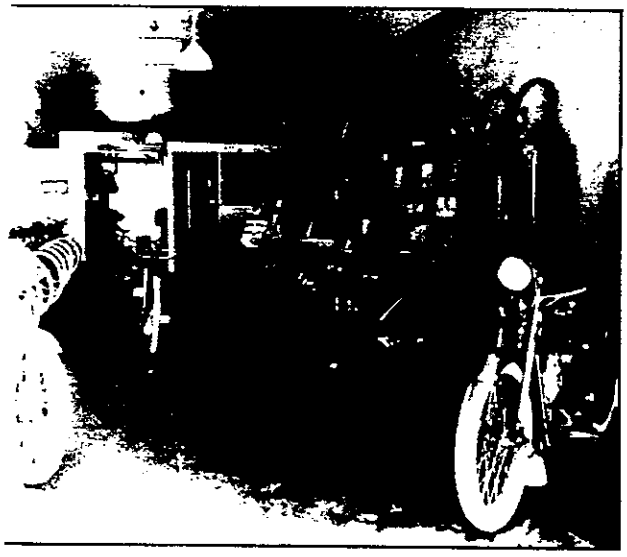
are up against aftermarket products such as Drag Specialties, Jammer, Gary Baig and so on. So long as the factory believes the big twins are receiving their share of the dealer's time and floor space, little can be said.

Perhaps the two dealers described below are atypical, since their loyalty is unshakable. The first, a long-time dealer on the West Coast, has had opportunities to take on virtually every British and Japanese cycle made. He has declined, simply because "Harley-Davidson has always treated me fairly." The second is convinced that there is no other motorcycle. Let's take a look at each. . . .

The skinny, soft-spoken kid from Chico, California, bought his second Harley-Davidson in 1930. He paid $25 for this 1925 model, then sold it for $30 and five gallons of wine, payable whenever the buyer could swipe a gallon from his old man. Armando Magri didn't know it at the time, but he was learning the rudiments that would one day make him the patriarch of Harley-Davidson dealers.

Magri, like everyone else, was short on cash during the Depression: he sacrificed what little money he had to buy and race bikes, hanging around Frank Murray's Sacramento H-D franchise. Murray offered Magri a job as a go'fer on July 5, 1937, which enabled the racer to participate on a regular basis in Class C competition. More important, he was signing on with an incredibly stable organization. (As of 1982, this Sacramento dealership has had just two owners and three locations in sixty-three years.) Magri spent spare moments in the back shop, working on his equipment. He also learned, almost by osmosis, what success required in terms of sales and service. And he raced.

Murray's shop. Lack of doors indicates this may have been on the second floor. (Armando Magri collection)



Murray's original showroom in his Sacramento storefront. (Armando Magri collection)

Magri competed throughout California beginning in 1935 against many of the greats—Sam Arena, Ed Kretz, Billy Matthews and others. In his zeal, he once ran a race in San Pedro, hauled his bike back to Murray's, made a few repairs and rode it toward Marion, Indiana, for another race. He burned up the clutch and got hopelessly lost in Wyoming, then fried the points 100 miles short of the Indiana destination. Unable to shut the bike off because it could not be restarted following repairs to the electrical system, Magri rode in the race and then headed west to California. That story, and his uniformly awful luck during a couple of races at Daytona Beach, point up a couple of things. He is obviously a rider, a fixer, a racer and, underneath, a stubborn individual. Those are the qualities that enabled Magri to take over Murray's dealership in 1949 and make it grow. But there are other attributes that have made him as fine an example of a long-time dealer as can be found.

"In fifty-two years, I've never been discriminated against because I rode a motorcycle," he says. If that is true, it's because Magri may be among the most sweet-tempered men ever to straddle a cycle. He has counted among his customers, since 1954 or so, members of the Hell's Angels; yet he and his wife, Lew, have been on a first-name, social basis with most of the Harleys and the Davidsons. The ability to mix easily with all levels of society indicates that Magri makes his own luck. And speaking of luck, there are stories circulating in the Sacramento area about how the local Harley-Davidson dealer's skill once caused a Nevada gambling casino to go broke (this tale has some validity, since Magri taught one of the Davidsons how to shoot craps one year at Bonneville, Utah). Now seventy-two years old and freshly retired, Magri's career as a dealer ended just as U.S. cycle sales appear to have peaked. Still known as Armando Magri, Inc., the business was purchased by Mike Shattuck, a former H-D district manager.

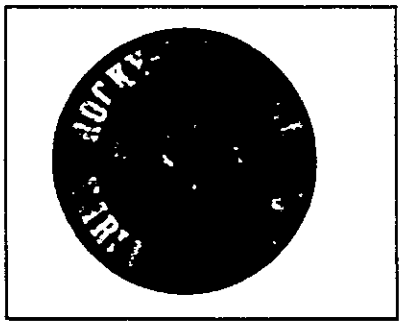
Armando Magri. (David Wright)

Armando Magri, Inc., as it's currently known, occupies this new building on the north edge of the city. (Armando Magri collection)

The dealership currently serves a metropolitan population of approximately 750,000 in Sacramento proper. Gross income in one recent year broke down as follows: parts, forty-four percent; new motorcycles, forty-three percent; service, nine percent; and used motorcycles, four percent. The typical buyer is about thirty years of age, a blue-collar worker who almost always opts for a completely stock machine. "Inasmuch as the factory builds several semicustom models, we do hardly any customizing today," Magri says.

Mike Sanko, who operates Oak Lawn Cycle Sales in a southern suburb of Chicago, is a completely different kind of dealer, yet he is equally successful. Sanko's relationship with Harley-Davidson began in 1979, though he had sold Hondas out of the small storefront for more than a decade prior to that. "I had to wait eight months for the franchise," he says. "But I just had a gut feeling that we could sell a lot of bikes." Unlike the Sacramento dealer with the touch at the crap table, Sanko is a conservative man. It shows in his choice of mounts—he prefers the FLT and FLH machines—and in his convictions. He believes unswervingly that everyone wants to ride a Harley-Davidson. "The people who put them down just can't afford them," he says. Not even the economic slump of 1982, when the H-D factory closed the entire month of May, dismayed Sanko. "The traffic is slow because we had such a hard winter and a late spring," he believes. Says

Here's one way a dealer can make the connection between the track and his dealership. H-D has a kit for personal appearances by riders at dealerships in the vicinity of an AMA national race. This "slick" is designed for newspaper advertising. (Harley-Davidson Motor Company)



Some dealers prefer their own logos, as this Littleton, Colorado, example proves. (Vinnie)

John Crowell, whose job as a district manager it is to keep dealers pumped up: "I call on Mike and he improves my attitude."

Sanko's market is a bit unusual, because most Chicago-area riders do eventually want to work their way up to a Harley-Davidson. When such a rider arrives at his dealership with a foreign bike to trade, Sanko will reach an agreement with the prospect, then sell the trade-in to a dealer who markets whatever kind of bike the used machine happens to be. Sanko simply does not like to have anything but Harley-Davidsons on his property. Not that Honda—or any other Japanese manufacturer—did him wrong; it's just that he is unashamedly an H-D booster. The only chink in his armor is a Drag Specialties aftermarket catalog displayed in his showroom, though Sanko is quick to point out that H-D accessories outsell Drag three to one. He carries non-Harley bolt-ons because his customers want them in some quantity. Clearly, Oak Lawn Cycle Sales is the kind of operation the company wants more of. If a dealer is peddling lots of bikes—as Sanko is—H-D can withstand the competition in the parts and accessories business.

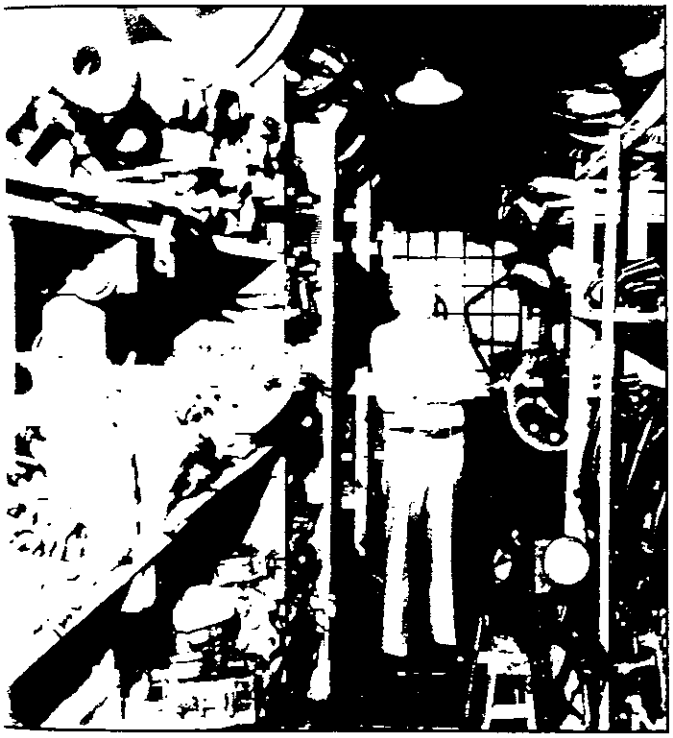
So what does it take to be a dealer these days? For starters, an individual in a medium-size market needs about $65,000 and an equal amount in credit. That will at least get him noticed at Harley-Davidson, though it's no guarantee he'll be approved. The dealer application form asks detailed financial questions and alerts the applicant that checks may be made concerning "character, general reputation, personal characteristics and mode of living." The company is willing to sign up enthusiasts with the cash and the character—if they're also good businessmen. The would-be Harley retailer can come up with a location for his business two ways; he can suggest a place where he believes the bikes would sell, or he can choose from among the dealerships currently on the market (since the company approves new dealers, it also frequently helps the selling dealer find a successor).

Mike Sanko, Oak Lawn, Illinois, Harley-Davidson dealer. (David Wright)

Thanks to a thorough canvassing of all U.S. cycle registrations, the company can provide an applicant a very educated guess on how many bikes he will sell in a given territory. H-D will then be able to tell whether the new dealer can make money in his or another chosen location.

Dealers are divided into four groups, based on population. Obviously, a dealership in a small town costs less to buy or start up than does a metropolitan outlet. The average age of a Harley-Davidson dealership is less than ten years, since a major expansion of the network occurred during the cycle boom in the late-sixties and early-seventies. Recently, fifty to sixty dealerships a year have turned over. A company spokesman attributes this to interest rates, energy costs and the stabilizing of the market. It's also likely that many of the men who returned from World War II with a little cash and the urge to sell Harleys are of retirement age. The company will help those veteran dealers find successors by running newspaper advertisements and urging competent applicants in one geographic area to move to a lucrative franchise elsewhere.

Some guys will do anything to qualify. A fellow by the name of Barry Matteson, up Anchorage, Alaska, way, was determined to sell H-D's. In 1971, he went into business for himself as Barry's Custom Cycles—in his one-car garage. He created "lots of choppers and go-fast Harleys" before moving up the economic ladder in 1973 to a larger shop. The property was bought out from under him in '76, so Barry found a gutted house, converted it into his "showroom" and took on the H-D lightweight line, followed soon by the V-twins. Able to show just five bikes in his new quarters, he added a twelve-by-twenty-four-foot modular building nearby, shrugging off Alaska's weather while running between showroom and shop. In 1981, due to the large number of North Slope construction workers with "wads of money," Barry peddled more than 100 bikes. That year enabled him to cut a deal on a larger dealership, under one roof, where he can now

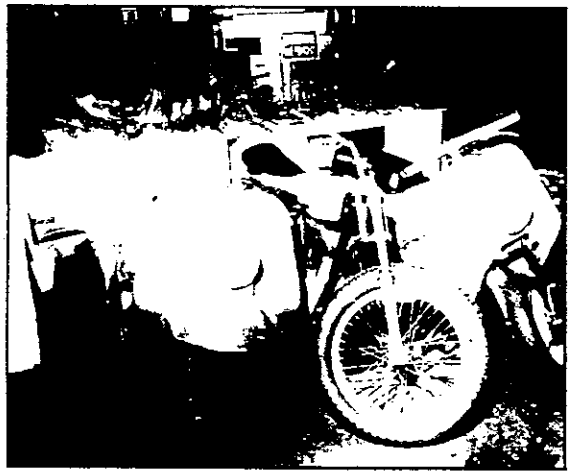


Long-time dealer Harry Molenaar surveys a few of the many parts he has on hand. (David Wright)

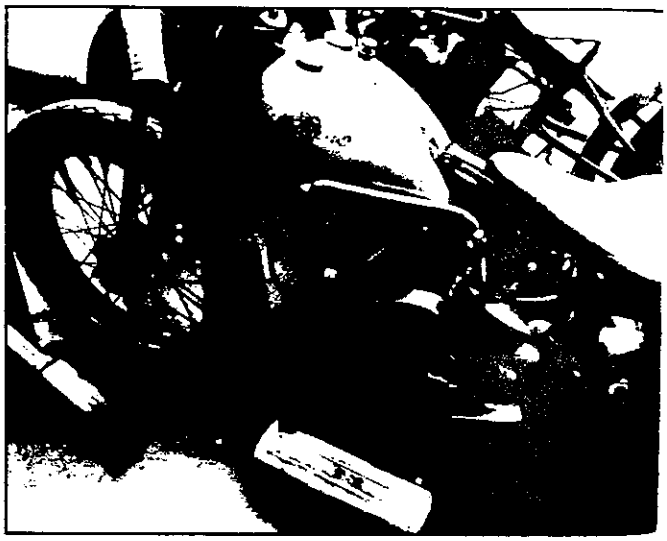
show thirty bikes on a major road between downtown Anchorage and the city's airport. A knack for bike work has evolved into a sophisticated operation, with attractive "House of Harley" stationery and all of the trappings of the biggest and best outlets.

Patience is required, though today's very low interest rates make for an attractive buying atmosphere, both for prospective dealers and riders. In the wake of double-digit inflation of a few years ago, H-D proprietors deserve low rates. Things were bad at the time but even worse in the thirties. Back then, many dealers purchased a demonstrator, then found they had so little money left that they had to sell the demonstrator before ordering any other bike. In 1932, an average of 100 Harley-Davidsons was sold in each state. In 1981, by contrast, the average H-D dealer in the U.S. was able to move nearly seventy bikes. With unemployment in 1982 the highest since the thirties, sales declined. The results were lower production and a month-long shutdown of the York and Capitol Drive plants in the spring. The decision to temporarily close the engine and assembly plants was influenced by the company's retail sale and warranty registration (RSWR) system, in place since 1978. This monthly report shows what each dealer has sold and what he has in inventory. It reports sales by district, region and nation, enabling H-D either to build the right models at the right time or adjust its inventory by any of several means, including a brief layoff to work off unsold units.

The key person between the dealer and the company is the district manager. He helps the dealer get the bikes he wants when he wants them, provides the factory with a slew of reports on the dealers' well-being in his geographic area and ensures that neither his dealers nor the company is excessively tardy in mailing money to each other. The DM's, as the twenty-three H-D field people are known, "have to walk the fence,"



An iron-head XR750 shares floor space with two Topper scooters at Harry Molenaar's Hammond, Indiana, dealership. As of 1983, Molenaar had been an H-D dealer for fifty years. (David Wright)



The far-forward footboard is a tipoff: This overhead valve-motored bike was used to climb hills. It now is on display at Molenaar Harley-Davidson, Hammond, Indiana. Note the remnant of an H-D crest on the tank, a very rare insignia. (David Wright)

according to ot ealer, pleasing both the company and its contacts with the public. Usual grousing aside, Harley-Davidson and those who analyze the industry believe H-D dealers get the fairest shake of all. An informal survey conducted in connection with this book contacted every U.S. Harley dealer by letter. Of the 350 replies received (amazing in itself), just one dealer voiced total disagreement with company policies.

Assuming an applicant meets the financial and other criteria and finds a dealership he'd like to call his own, he's thoroughly indoctrinated at the plant on Juneau Avenue. Nothing appears to be held back. He's shown the supersecret styling studio and research and development, then given a cram course in management. Down through the years, Harley-Davidson has said, "We do not serve the public, we serve our dealers." The new dealer comes away from his visit to headquarters with that belief sinking in. But that's not the last time he'll call on Milwaukee. Each year, dealers gather there or at some more exotic location to preview the new models. There's the predictable hoopla, to include earnest speeches on the future from the brass. More meaningful meetings take place at other times of the year and include workshops on such things as office practices and procedures and, equally important, sending employees to the Harley-Davidson Service School.

Bastions of Harley-Davidson strength are found in California, Texas and throughout the snowbelt states, from Massachusetts through Minnesota, according to registration information provided by the company. Marketing analyst Frank Cimermancic points out that strong dealerships in a state can make a big difference; Minnesota recently moved into the top ten in registrations, due largely to three strong dealers in the greater Twin Cities area. With their large populations and extended riding seasons, California and Texas are the top two states in registrations. And while the list changes each year, other strong states include Michigan, Ohio, Pennsylvania and, of course, Wisconsin.

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CHAPTER SIX
RESTORATION

DOWN FLORIDA WAY, THERE'S THIS SAND DUNE, SEE. A LOCAL RESIDENT, NOT GIVEN TO exaggeration, says he's sure there are hundreds of Harley-Davidson XA's buried in the dune. An overeager Army captain celebrated the end of World War II by off-loading the bikes from a train so that he could fill the cars with citrus and make a pile of cash. There are several holes in this story, not the least being that the last XA was created in 1942, three years before hostilities ceased. But maybe they're WLA's, instead. And maybe, with a metal detector and a couple of weeks vacation. . . .

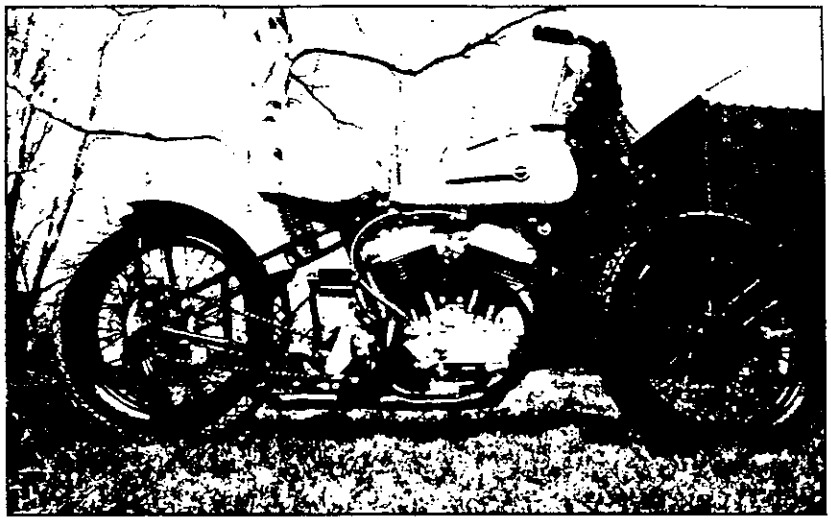
If that's too far-fetched, try this: In an extremely rural area of Missouri is an old fellow with several quonset huts filled with H-D's. Depending on his mood, he's apt to sell you a bike just so you'll quit pestering him. This story is from an Oregon Harley dealer who's actually seen all of the allegedly well-preserved iron. . . .

Finally, perhaps you're aware of motorcycle mountain. Another quonset hut, this one filled not only with Harleys but with Vincents, BSA's, etc., was in the way of a Colorado construction project. The old man who owned the place, a former H-D dealer, was too apathetic to move bikes and building; so the construction guys either piled earth on everything or it was hit by a land or mud slide (take your pick). In any event, this place really exists and a guy named Vinnie in Littleton is allowed on the property once in awhile to rescue the mud-encrusted machines.

Let's return to earth, shall we? If you want a restored or restorable Harley-Davidson, the best thing to do is buy it or trade for it with a known restorer. That's the advice of Connie Schlemmer and his friend, Louis Bartley, both of whom have a reputation for not only restoring bikes but for offering solid advice to the restorer-to-be. Here's more sobering news: Frequently, the restorer will not set a price on a vintage bike, but will insist that the buyer trade him one or more motorcycles or motorcycle pieces that he can use in future restoration work. Yes, there are times when not even money works! What, then, can someone who wants to restore or own a restored Harley-Davidson do?

Let's pin down a trio of restorers, who worked on three vastly different bikes to learn how they did it.

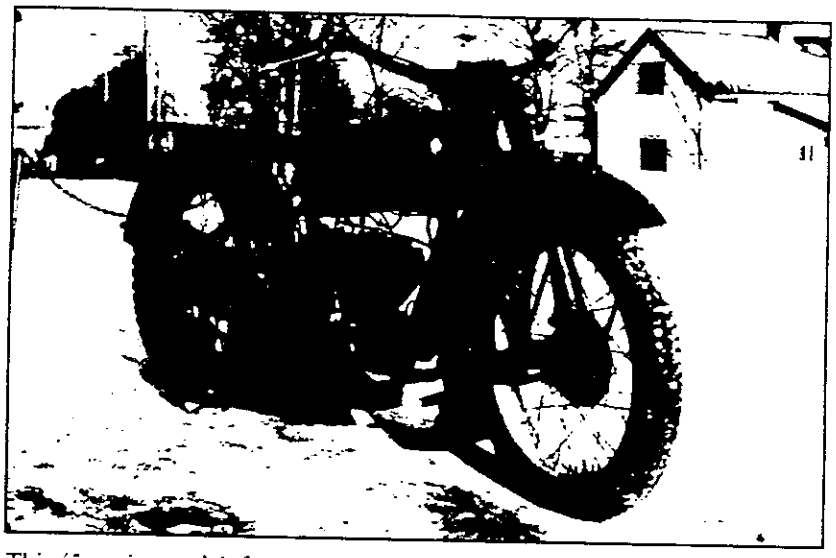
Mike Lange, who lives west of Milwaukee, attributes the finding of his 1924 two-cam racer to the guy who stole his car. Lange was driving down an alley, on the way to test-drive a car to replace the one taken from in front of his home. "I saw those Castle springs sticking out from under a blanket in a garage, so I stopped," he relates. Lange offered the owner $2,000 cash on the spot for what turned out to be a 1924 JD, but the owner decided to make things a little more difficult. He insisted that he would trade the grotty, old bike only for a new 350cc, four-cylinder Honda. Lange ordered the Honda—and the JD owner reneged. Finally, the deal was consummated for $1,500.



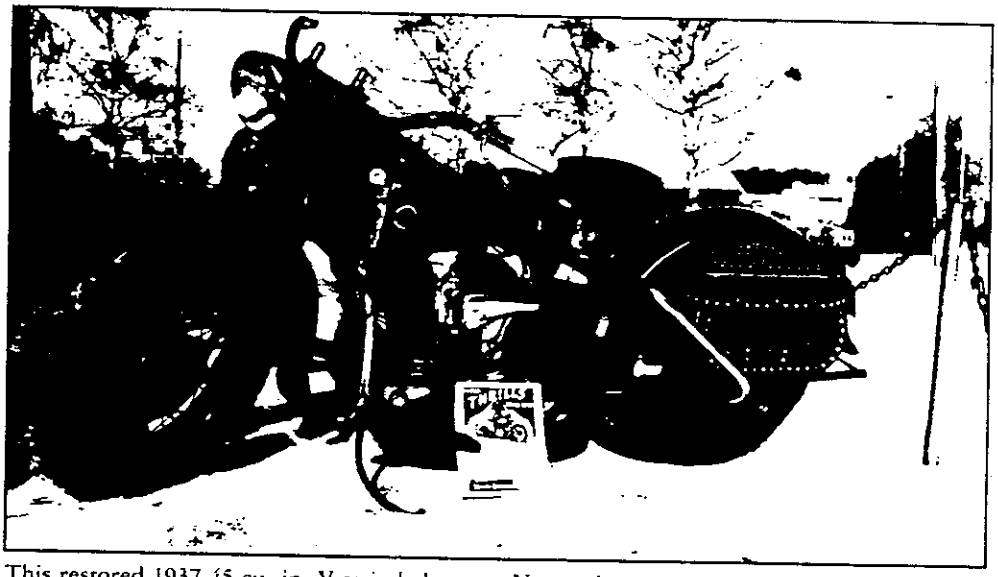
Michael Lange's 1950 WR. This yellow color was offered in 1950, but not for the WR. So Lange is repainting the machine an authentic WR color, ruby red. (David Wright)

Lange's 1941 Knucklehead. (David Wright)

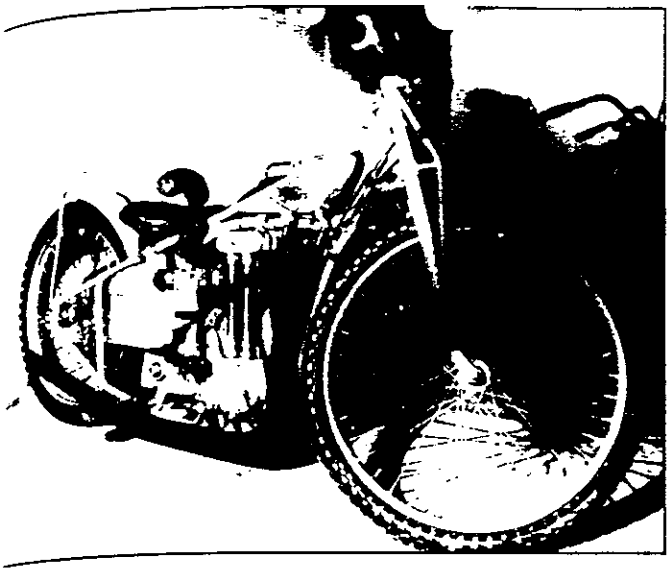
"I bought the two-cam because I needed valve springs for the JD," he says. Said valve springs were located in Louisiana, along with a two-cam motor the owner offered for sale but refused to ship. So Lange drove to Louisiana, picking up the valve springs, the two-cam motor, the front end and a keystone frame, all for $750. Restoration on the racer was begun immediately. Lange is a machinist in the prototype department of a large job shop and so has skill and access to lathes, and so on. He began to retore both bikes simultaneously. The results speak for themselves, though he has since dismantled the JD to fix a couple of things that annoy him. Except for a crack in the lower rear portion of



This 45 cu. in. model, from 1929, is being restored by Norwegian Ola Jonassen.



This restored 1937 45 cu. in. V-twin belongs to Norwegian restorer Ola Jonassen. Parts for the 45 motor continue to be available in the U.S. and throughout Europe.



This 21 cu. in. cinde. ack or speedway machine from early 1934 belongs to restorer Dan Pugens of Milwaukee. Not more than a dozen of the overhead valve machines, which featured direct drive and weighed 265 pounds, were made. Most such bikes were sold on the East Coast or in California. This example may have been run by East Coast star Goldy Restall. (David Wright)

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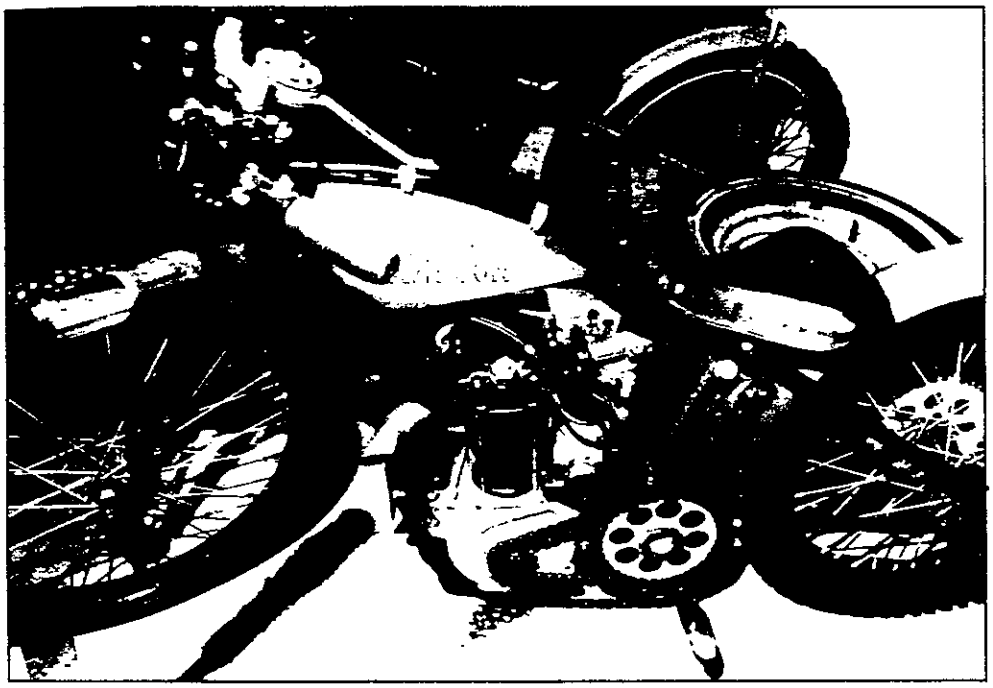


Dan Pugens of Milwaukee also has restored this 1931 500cc (28.4 cu. in.) speedway racer, a twin-port single with lower end modified to accept a Bosch magneto. Stock 1926–31 H-D singles frames were modified at the factory for these bikes, which were assembled by hand. Handmade items on this machine include push rods, cylinders, J.A.P.-style forks, handlebars and steering damper. Bore was 3 in., stroke was 4 in. (David Wright)

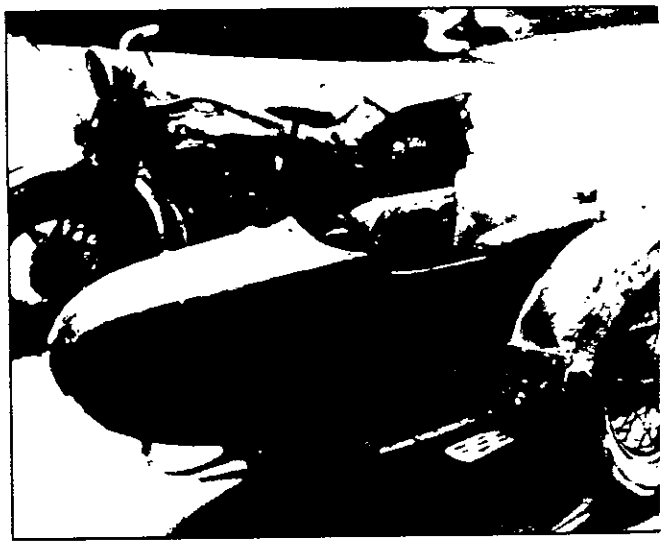
the frame (which Lange will fix in the job shop), the two-cam is as tidy as it was nearly sixty years ago, when the serial number 24FHAC577 was banged into the engine case.

"I made a chopper before I came to my senses," says Lange, who also has restored a 1941 74 cu. in. Knucklehead and sidecar, plus a WLDR racer. Unlike many restorers, he has driven the two-cam at speeds. One such junket almost cost him damage to the bike and himself. "There's no transmission and it's geared for a mile track," he reports. "It doesn't even start to breathe till 70–90 miles an hour, and I'm guessing the top speed is 140." On a seldom-traveled portion of road, Lange recently opened 'er up, running at least 80 miles an hour. The rear Universal tire, never intended for anything much past idle, flew off the rim, wrapping itself around the axle. Somehow, the brakeless machine and rider managed to stop without incident.

Glenn Harding's 1941 restored 61 cu. in. EL had been reduced to just one part—the rear cylinder head—when he got ahold of it in 1962. The former Harley-Davidson dealer, who now teaches at Patrick Henry Community College in Martinsville, Virginia, spent the following nineteen years acquiring parts here and there for what may be the nicest Knucklehead in existence. The son of an engineer-machinist, Harding began working in a cycle sh[illegible] the age of twelve and from 1939 to 1962 ran a combination H-D lawn mower small engine dealership. Only after he sold the business did he begin to long intensely for an EL. The cylinder head was snagged from a fenced-in area apparently filled with junk parts at his former dealership.

"As luck would have it, I began to pick up old parts and was given others—first the engine, then a transmission, then a frame," he says. The frame itself was created from parts of three choppers; Harding paid heed to old books and manuals for proper dimensions. "Every part I managed to find was worn out or discarded. If someone has a valuable part these days, money won't work—you have to trade him something he wants more than that part." The motor on the bike carries serial number 41EL2394 and is entirely stock except for minor internal refinements. Harding modified the valve gear for quiet, more endurable running. The paint, he admits, is a compromise. The black is authentic DuPont enamel, whereas the red is DuPont lacquer. "Originally, it was all enamel, but the more you rub lacquer, the better it looks."

The saddlebags aren't stock, but they can be considered authentic, since Harding sold similar units out of his shop. "I went to Daytona right after the war and saw these great looking square leather saddlebags. So I came home and designed them to sell in my

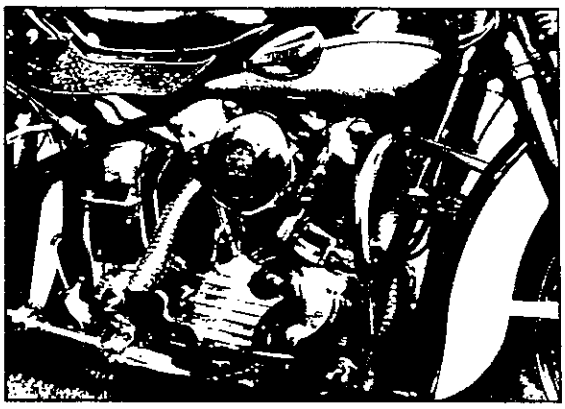


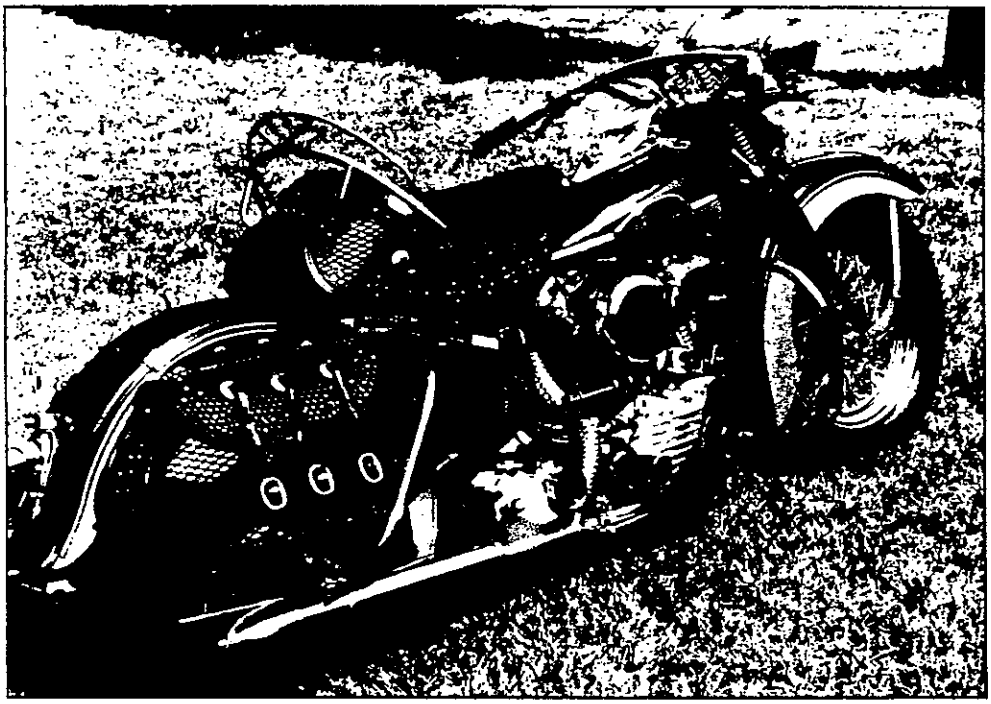
Restorer Francis Blake recently was given this pre-World War II 45 with sidecar—if he would renovate a similar model. Both were recovered by an American visiting Egypt. (Francis Blake)

shop." The bags were made by hand carving wood to the proper shape, then applying a thin layer of foam rubber and stretching the leather over the wooden mold. The hand-tooled bags and seat skirt were sold in quantity at the dealership and Harding was able to recall how he created them. The original bags, incidentally, continued to sell well until 1957, when swinging arms and plastic conspired to make rigid bags more practical and capable of matching the color of the bike.

"I was forced to use a non-authentic seat rail," he admits, pointing out that the small rim of bright metal did not come out until the fifties. And since no one he knew performed cadmium plating, Harding found a shop in another part of the state that

Harding says he has eliminated much of the motor's inherent vibration by balancing the original parts. (Luther Oehlbeck)





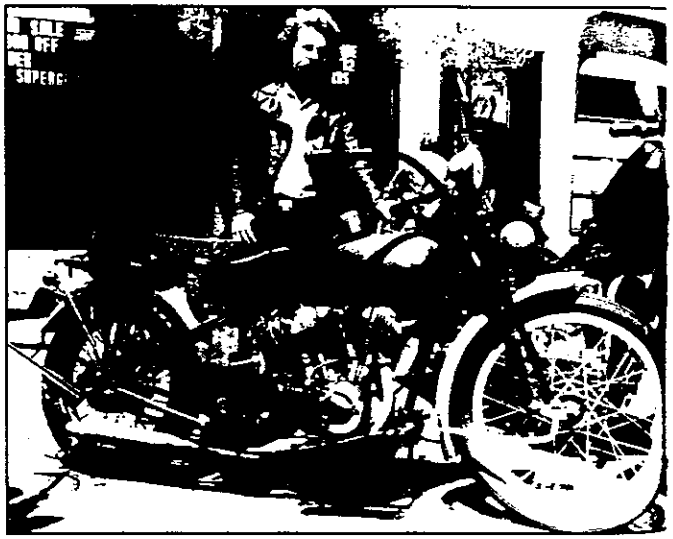
Glenn Harding's 1941 61 cu. in. overhead valve model. His restoration project began with only a rear cylinder. The saddlebags and skirt are similar to ones offered by Harding when he was an H-D dealer. The seat rail is similar to that found on postwar models. (Luther Oehlbeck)

imparts a cadmium look in their plating process. It is, he says, a different appearance than chrome.

No attempt was made to run the bike until it was entirely together. On June 15, 1981, the EL started on the first kick. Only a toolbox and Eagle fender tips have been added since these photos were taken. The machine, says its proud owner, is a joy to operate. "It's very easy to handle, since it has a low center of gravity. It honestly feels like a 150- or 200-pound minibike. The ride is harsh by today's standards, but vibration is negligible. If you had significant vibrations, you had a problem with these bikes, though it was my experience that Harley-Davidson was never as critical as they should have been with engine balancing. The bike just doesn't have any brakes compared to the new ones. And the front spring has just 1½ in. of travel. This model had ride control, which consisted of two plates and a friction disc. The disc, mounted on the rigid fork, tightened steering."

Harding doesn't ride the bike excessively or at high speeds, and it isn't set up for parades, which requires more cooling than the motor gets at long periods near idle. It's more to be admired than anything else, as is the owner's next project. He's restoring a 1934 Seafoam Blue VLD, which he says has "bushels of power." Check with him in nineteen years or so.

Here's a rider's-eye view of LaFerrera's machine. The speedometer was an option in 1928. (David Wright)

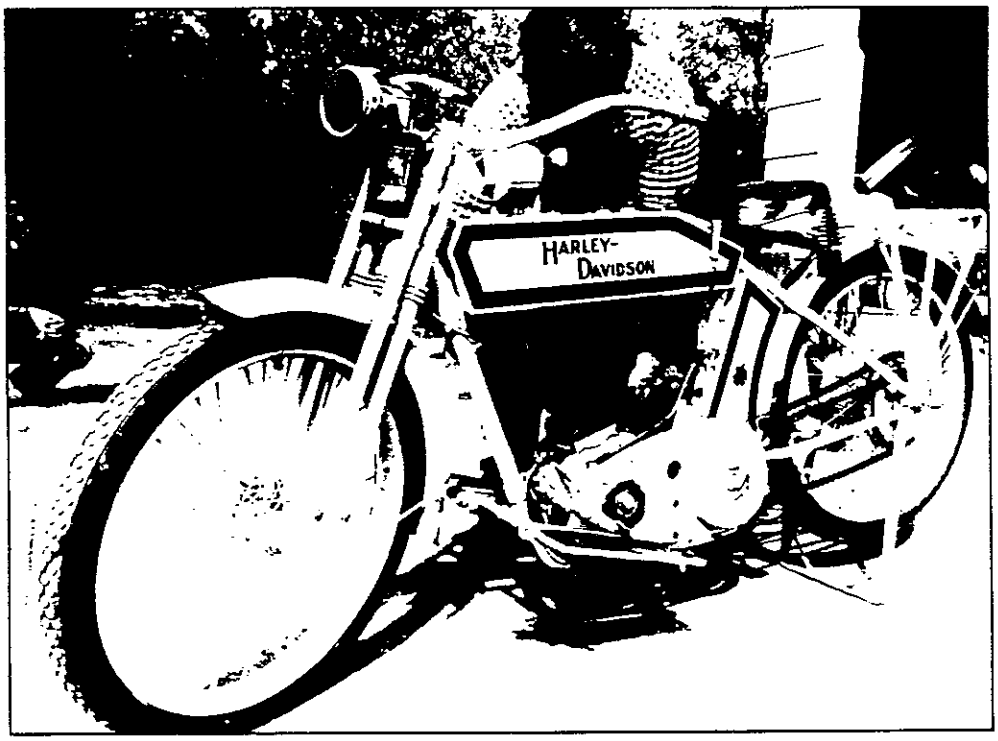


Salvatore LaFerrera of San Francisco rides this 1928 V-twin daily. He says the bike's performance is entirely adequate—except for the brakes. Front brakes were introduced on H-D's in '28. (David Wright)

The paint is wrong, the shift arm is missing, the head was borrowed from an Excelsior and many small items are elsewhere. So what is Bill McMahon's 1914 magneto single doing in a chapter on restorations? First, his bike is in running order, something many antique H-D owners may never accomplish due to missing parts. Second, the Wisconsin Rapids, Wisconsin, owner rides the darned thing at regular intervals. An antique Ford buff, McMahon noticed in a newspaper in 1972 that a "1915 motorcycle fram [sic]" was among contents of an old farmstead coming up for auction. "My partner in old car parts and I bought the contents of five sheds at that auction," he says. "I bought the frame for $15."

Attached to the frame were a front wheel, dangling from broken front forks, plus rusted tanks, both fenders and bent handlebars. In one of the sheds McMahon uncovered a motor, extra handlebars, fenders, running boards, linkage, another gas tank and miscellaneous parts that appeared to be from the magneto, fuel lines, etc. He then purchased those pieces from his partner for $35 and had "what I thought was a fairly complete pile of parts. Little did I know. . . ." Once in his basement, McMahon discovered that he'd purchased a 1914 Model 10C, serial number D7807. The bike appeared rust colored but underneath showed faint flecks of gray paint. He spent the next seven years following parts leads, shopping swap meets and contacting the factory. Failing to receive any company information, McMahon snooped around the factory in Milwaukee, met a man on a loading dock who identified himself only as "a Harley friend" and eventually provided him with photos and a copy of a 1914 owners manual.

Purchasing the only new parts available—tires, tubes, decals and rubber mats—McMahon brought the motor to life for the first time in 1979. "As soon as I got it running, everybody wanted to buy it," he says, despite the fact that running condition

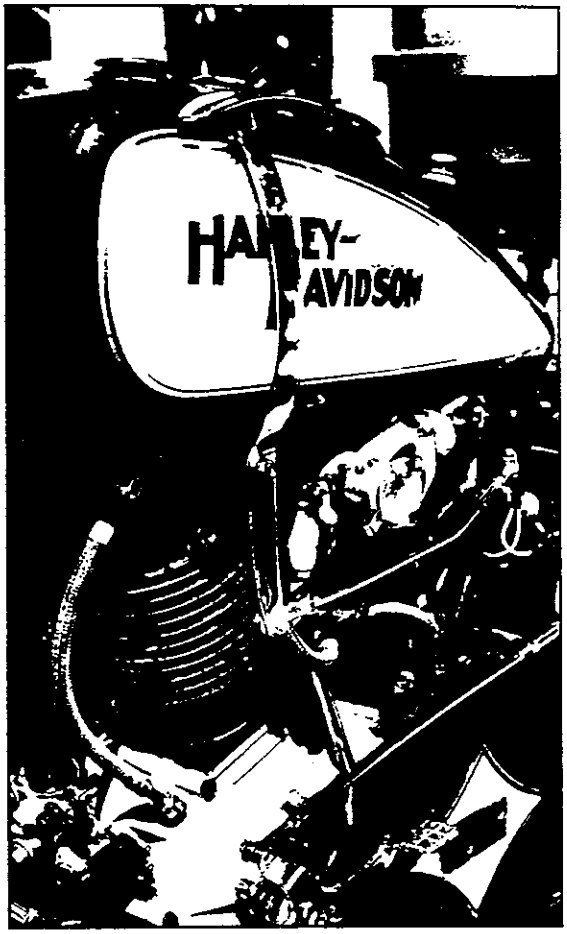


Bill McMahon adjusts the gravity oil feed to his restored 1914 single. (David Wright)

was more important to him than 100-percent faithful restoration, or checks of $3,000 or more. In addition to the parts already mentioned, the bike is missing a shift crank, which prevents the rider from using top gear in the two-speed, hub-mounted transmission. Also missing are the primary chain guard, the muffler cutout and the original nickel plating. A manual H-D klaxon horn is affixed, while the carbide lamp and kerosene tail lamp were borrowed from a long-forgotten motorcycle or bicycle.

"It isn't restored perfect. That's why I let a lot of people ride it and why I ride it a lot," says McMahon. The 1914 cycles were the first year of the step starter; starting, says the owner, is easy. "You start the oil to drip to the motor at about thirty drops a minute, then fill the carb with gasoline using the tickle valve," he reports. "Bring it up to compression and step down hard with either pedal. One or two kicks is all it needs. It idles like a new Harley. You know—thumpa, thumpa."

McMahon allows the bike to warm up for about two minutes before jumping aboard, easing out the clutch and riding off. "I locked it in low gear and that's fast enough," he says. "I can go between 35 and 40 miles an hour. If I could shift it, it should go 60 to 70 miles an hour. That's too fast for 2½ in. tires and a sixty-eight-year-old machine." Nevertheless, you'll see McMahon—and other folks he trusts—aboard the milky gray machine in local parades, at a big antique car show in Iola, Wisconsin, each



This immaculate 1926 Twin showed up at Sturgis in 1982 with California restorer John Cameron aboard. Much of the bike appears to be original, though the cloth oil-line braiding is an old aftermarket item. (Richard Creed)

summer and at an occasional antique meet. "It has chipped paint, but it's a runner! It's to drive my antique vehicles, not look at them."

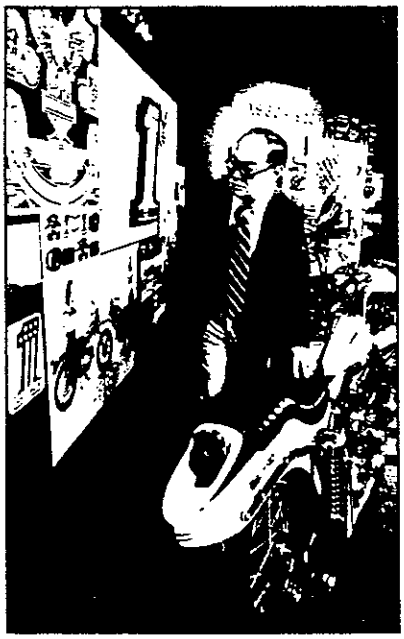
Now that your appetite is whetted, where can you see old-time Harley-Davidsons? The following list of museums indicates that at least one historic H-D is on public display within a long day's ride of virtually every biker in North America. Rather than pop an oil line trying to find out if that's really true, just remember the location of the vintage Harley nearest you and stop to see it the next time you're on tour.

American Police Museum and Hall of Fame
14602 S. Tamiami Trail
North Port, Florida 33595
305 891-1700

For those riders who have no qualms about entering an edifice dedicated to the law, there's a 1962 Duo-Glide police solo standing tall. The museum pays tribute to officers slain in the line of duty and displays gruesome murder weapons, too. Donation requested.

Deeley Classic and Antique Museum
12260 Vulcan Way
Richmond, British Columbia V6V 1J8
604 273-5421

On the second floor of the Fred Deeley Imports Building in a suburb of Vancouver, this is one of the finest private collections of cycles anywhere in North America. In addition to a 1927 JD, a 1930 hillclimber and a 1942 WLC, there are bikes owned by Steve McQueen and such varieties as a 1923 opposed twin Sport. Trevor Deeley rounded up old bikes in the fifties, before the restoration craze began in earnest. Harley-Davidson specialist Fred Pazaski did most of the restoration work. No charge, open daily noon to 4 p.m.



George Kragel, now retired, formerly conducted tours of the Rodney C. Gott Museum at the York, Pennsylvania, H-D assembly plant. (Harley-Davidson Motor Company)

Henry Ford Museum
Greenfield Village
Dearborn, Michigan 48121
1-800-835-2246 ext. 218

Willie G. himself noted the absence of any worthwhile motorcycles in 1956 while working for Ford's Lincoln division. A year later, he and Walter C. Davidson remedied the situation by presenting the museum with an authentically restored 1907 single, complete with belt drive. The machine was found in mediocre shape somewhere in Milwaukee and restored to original condition at the H-D factory. There's now a 1941 Fleet Red, 74 cu. in. Knucklehead with sidecar, too, restored by Don Montgomery. Open 9 am to 5 pm, admission charged.

Rodney C. Gott Museum
Harley-Davidson York
1425 Eden Road
York, Pennsylvania 17403
717-848-1177

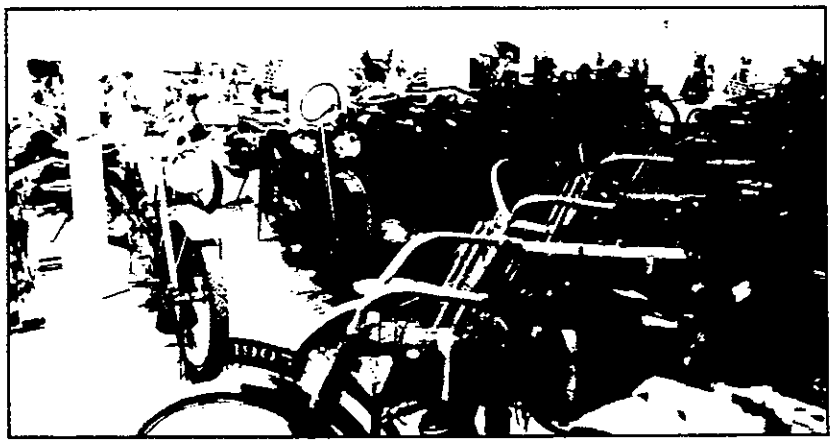
If you don't see the particular Harley-Davidson model you want at the H-D museum, come back in a few months. There are approximately 100 bikes stored in a barn on factory property that are periodically exchanged with bikes on display. Obviously, this is the most complete collection of Harley-Davidsons anywhere. Following a tour of the old bikes, visitors receive an up-close view of the assembly line in action. Both tours are free, neither given on holidays.

Harrah's Automobile Collection
Box 10
Reno, Nevada 89504
702-786-3232

This is probably the world's best private collection of automobiles, but don't let that distract you. Harrah's displays a 1913 Model 9E, a 1918 Model 18F and a Model W Sport Series machine, according to its letter. Odds are, spending a day at the museum is more healthy for your wallet than gambling, though there is an admission charge.

Indianapolis Motor Speedway Hall of Fame Museum
4790 W. 16th St.
Speedway, Indiana 46224
317-241-2501

There are more than twenty-five Indy-winning cars on display, but that's not why we're here. A fairly authentic reproduction of a 1935 Joe Petrali "Peashooter," restored with the help of Harry Molenaar and presented by Harley-Davidson, was admitted to the speedway several years ago. Admission charged.



More than 100 bikes are stabled in a barn to the east of the York assembly facility, awaiting their turn to be shown in the museum. Museum displays are rotated on a regular basis. (David Wright)

01167

Armando Magri, Inc.
1000 Arden Way
Sacramento, California 95815
916 929-4680

You met Mr. Magri a bit earlier. His collection of bikes is the result of more than forty-five years on and around H-D's. Like many dealers, he quietly sets aside a model he finds particularly impressive. No charge, of course.

Molenaar Harley-Davidson
5617 Calumet Ave.
Hammond, Indiana 46320
219 932-8340

If you find out what Harry has, will you let him know? Seriously, there are several exceptionally nice old bikes at this fifty-year-old dealership. They include a 1928 two-cam hillclimber, a 1930 45 cu. in. hillclimber, a 1934 CAC cinder-track racer, a 1926 "Peashooter," a 1930 30.50 cu. in. short-track bike and, for all we know, more. No charge, natch.

Museum of Science and Industry
57th Street and Lake Shore Drive
Chicago, Illinois 60637
312 684-1414

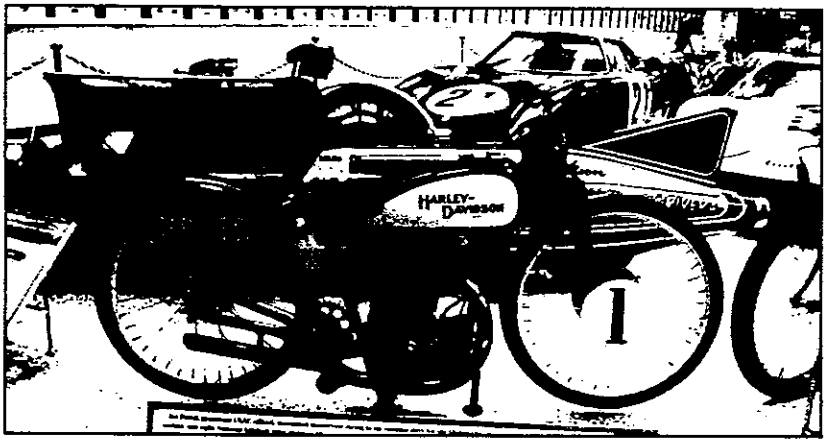
This place is huge, but it's so interesting you may not mind searching in coal mines and caves. Gay Nineties streets and space-shuttle settings for the lone H-D on exhibit. The bike is a 1922 horizontally opposed 37 cu. in. Sport Twin. The label on the bike says the company "was a leading manufacturer of early motorcycles," but makes up for that slur by pointing out that a similar machine once set the cross-country speed record.

The National Museum of American History
Smithsonian Institution
14th St. and Constitution Ave. N.W.
Washington, D.C. 20560
202 357-2700

A pair of Harley-Davidsons graces the Smithsonian. On display are a 1913 Model 9-B single and a 1942 74 cu. in. overhead valve model. Both are in super shape and are worth visiting if only because a visit here puts Harley-Davidson into excellent perspective in two-wheel history. 10 am to 5:30 pm daily, no admission.

San Diego Hall of Champions
1439 El Prado, Balboa Park
San Diego, California 92101
714 234-2544

It's nice that a city honors its sports heroes. It's even nicer when it recognizes a cycle racer as a sports hero. A visit here will turn up Brad Andres' 750cc side valve KR. The museum folks are aware that Andres was a Daytona winner and 1955 Grand National champion. Donation requested.



Joe Petrali's dirt-track bike is in the foreground; in the back is the Cal Rayborn Bonneville record-breaker. The former was donated to the Indianapolis Speedway museum by H-D and was restored with the aid of Hammond, Indiana, dealer Harry Molenaar. (Indianapolis Motor Speedway)

Sundays Only Cycle Museum
P.O. Box 1135
Hawthorne, Florida 32640
904 481-3758

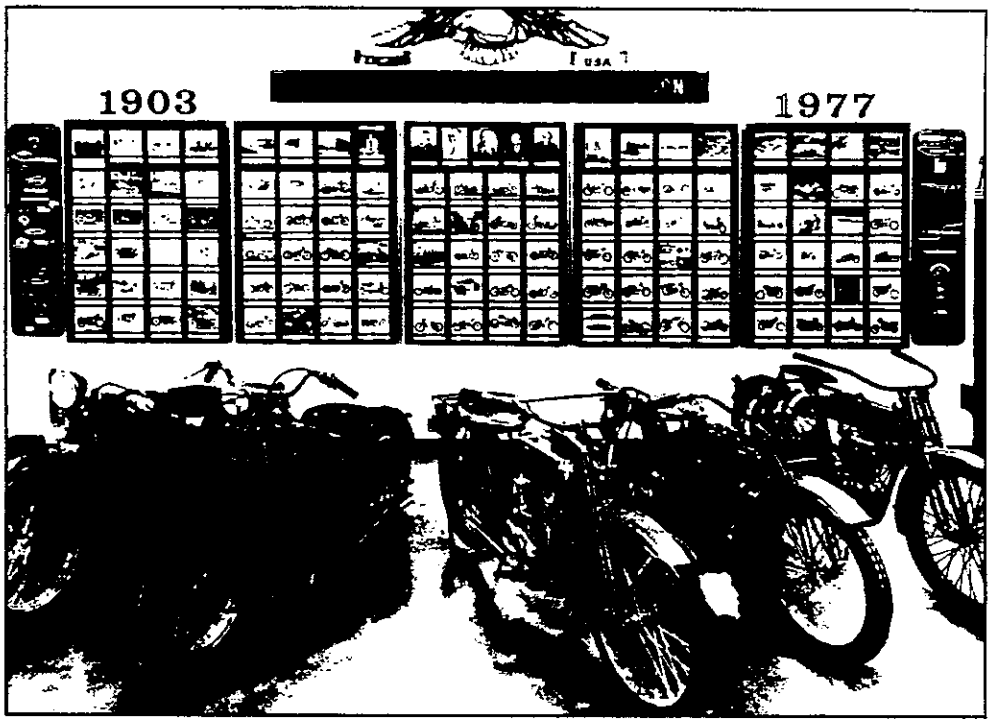
What do you do when your hobby outgrows your back yard? If you're Herb Dickey, you open a museum. Dickey shows visitors around his rural Gainesville grounds from noon to 5 p.m. on the Sabbath. He has a total of seventy-five H-D's and is always on the lookout for a purchase or trade to round out his collection.

One note of caution: Small museums frequently keep unpredictable hours, while large museums often rotate their displays in and out of storage. A telephone call could save aggravation.

"Beware of profiteers!" That's the word from Chris Haynes, proprietor of the Harley-Davidson dealership in Albany, Oregon, and a man who has restored approximately twenty-five vintage H-D's. With his warning ringing in your ears, here is an admittedly incomplete list of sources for old parts. The list is wanting because those who deal in antique parts are heavy on knowledge but light on correspondence. In other words, they're too busy salvaging parts themselves to write to some guy in Wisconsin who claims to be the author of a book. Please accept these descriptions, names and addresses for what they are: groundwork you may not have to cover to bring that VL or ULH back to showroom shape. Happy hunting!

Antique Cycle Supply
Cedar Springs, Michigan 49319
616 696-8200

This outfit has a 120-page catalog that leans heavily toward the nuts and bolts so necessary to re-equip a vintage bike. The strength of the catalog lies in the number of large, easy-to-understand exploded drawings of carburetors, generators, cases, covers, motors and more. It's important to note that not all of the parts shown in the exploded views are available. Owner Chris Kusto says his parts are obtained from three sources: military surplus, old dealer inventories and remanufac-



Sacramento dealer Armando Magri displays restored bikes on his showroom floor. (Armando Magri collection)

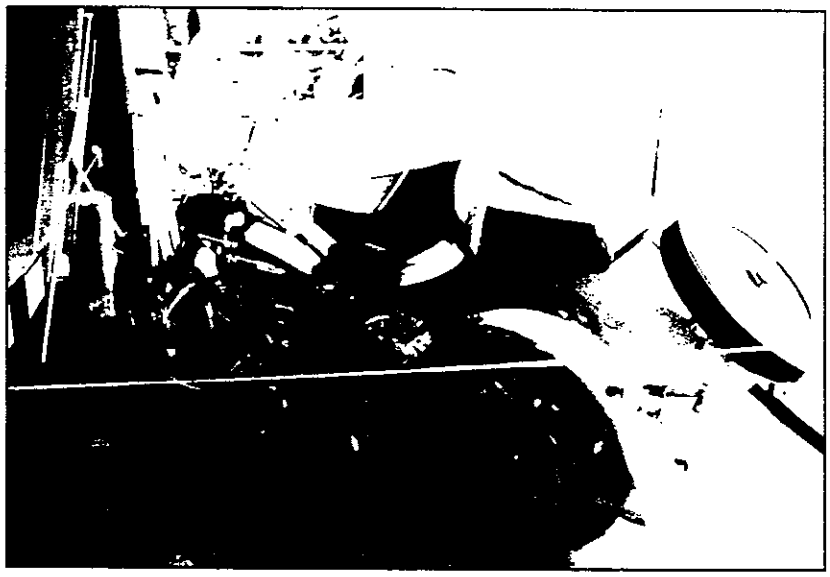
turers. More than half of the total inventory is genuine Harley-Davidson, purchased as government surplus and from older dealership inventories, with the balance remanufactured. The catalog is $5, cashier's check or money order only.

Bill's Custom Cycles
7145 Berwick Highway
Bloomsburg, Pennsylvania 17815
717-759-9613

Bill's shop is about two hours north of York, just off Interstate Highway 80. Over the years, he's bought out nine Harley-Davidson dealers and has 1,622 square feet devoted exclusively to old parts. His fifty-foot showcase displays vintage H-D motors and many of the parts you may have thought unobtainable. The decor is nice, too: There are many old Harley racing posters and sixty H-D kidney belts from days of yore. The shop is a treat, whether you're into restorations or not. Catalog, write or call for parts.

Coker Tire
P.O. Box 72554, 1317 Chestnut St.
Chattanooga, Tennessee 37407
800-251-6336 (615-625-6368 in Tennessee)

A toll-free phone number beats money from home, and that's what the Coker people offer. They also offer a large number of vintage bike tires which carry their own brand name. They seem especially friendly and willing to work with restorers (they sell antique automobile tires, too). The founder, Harold Coker, began his B. F. Goodrich dealership in Athens, Tennessee. He moved to Chattanooga, passing the growing antique portion of his business to son Corky in 1974. The current ten-page flyer lists seventeen different antique bike tire sizes. The Coker tires are actually superior to the originals, since the reproductions are created using nylon cord.



This Panhead sidecar outfit graces Magri's showroom window. (David Wright)

M. F. Egan's Vintage Motorcycle
P.O. Box 738
Los Alamitos, California 90720
213/596-6241

01170

Egan and an unspecified number of employees do "selective, high quality restorations on Harley-Davidsons, as well as other marques." The sixteen-page catalog is helpful in that all parts are marked as original used equipment or reproductions. Also listed are a number of old bikes that range from a 1929 two-cam on which restoration has begun to an original 1953 Vincent Black Shadow. The catalog reports that "we have tons of unlisted parts—send us your needs."

Motorcycles Only
127 W. 154th St.
Gardena, California 90247
213/323-6264

This outfit, in greater Los Angeles, specializes in ground up restoration of early Harley-Davidsons J, JD, VL, UL, H, Knucklehead, Panhead and, of course, 45. At present, when not de-raking a frame, the company offers some N.O.S. parts and used parts for mail order and/or over-the-counter sale. To find out what is available, send an addressed, stamped envelope.

Seven of the dozens of original motorcycles owned by Hammond, Indiana, dealer Harry Molenaar. The bike in the foreground is a 250cc Aermacchi/Harley-Davidson road racer equipped with a front disc brake. (David Wright)

Conrad F. Schlemmer
1218 Wedgewood Drive
Council Bluffs, Iowa 51501

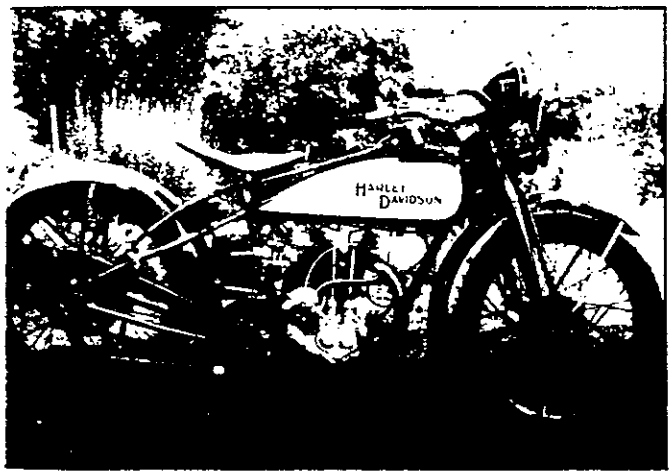
Here's your singles source, old-time Harley fans. Connie Schlemmer, former hillclimber and Red Oak, Iowa, H-D dealer, specializes in the 1926 through 1935 singles, selling stuff that was produced in pre-Knucklehead times. "I've accumulated a good number of parts over the years," he reports, indicating that his engine pieces, etc., are original. Frequently a judge at Antique Motorcycle Club of America events, Schlemmer says, "If a fellow is sincere and needs some help, I'll be happy to assist him." Perhaps if you attend an AMCA event, you'll see Connie's handiwork, which is his best advertisement.

Universal Tire Company
2652 Columbia Ave.
Lancaster, Pennsylvania 17603
717 397-5184

Lancaster is just down the road a piece from York, where we're told that motorcycles are assembled. Universal carries an incredible array of motorcycle tires, specializing in the sizes common from 1900 to 1930. "We also carry an extensive line of tubes," says Harvey E. Nauss, Jr., the sales manager, "which means we can accommodate the short 1¾ in. motorcycle brass stem, which was also original and authentic for many restorations of early motorcycles." Nice to know that you're dealing with someone who understands the bits and pieces. Like Coker, Universal probably has more call for classic automobile tires, and they seem friendly and well-versed in the manly art of authentic cycle restoration.

Walneck's Motorcycle "Classic'fieds"
7923 Janes Ave.
Woodridge, Illinois 60515
312 985-2715

Neither a restorer nor a supplier, Walneck's instead is a monthly tabloid newspaper chock full of juicy antique bikes for sale. Mr. Walneck himself admits that a disproportionate number of the bikes in his forty-or-so pages are British. The careful reader, however, will come across a number of partially and fully restored H-D's in this colorfully written, entertaining paper. The creator also is a buyer and seller of antique bikes.



This 1928 Single, an overhead valve 350 cubic centimeter BA model, proves that overseas restorers are active. The owner is Olle Ridelius, a Swede. Scandinavian sales of H-D's prior to the Depression were high.

CHAPTER SEVEN

ADORNMENTS

ITS LATEST PARTS AND ACCESSORIES CATALOG REVEALS WHAT MAKES HARLEY-DAVIDSON the largest purveyor in the cycle aftermarket: There's something for every kind of rider inside. You want tradition? Slip on a motorcycle cap; while the price may have escalated since the thirties, the design, happily, has not changed. You want fashion? Walk into a genuine leather vest or a pair of jeans bearing the H-D bar and shield on a back pocket. You want safety? Dealers now offer Bell and other helmets—full face, open face, compact, even vinyl covered. Wearables and trinkets take up the front half of the spring book, perhaps because they're higher-volume and frequently lower-priced items (decals, for example, sell for less than one dollar). Seats, Tour Paks, sissy bars and more separate the cosmetics up front from the bolt-on engine accessories and such hard-core motorhead stuff as 1340cc conversion kits and high-output alternators. None of the items is inexpensive, but you might be disappointed if it were.

Rick Miller, parts and accessories product development manager for the company, points out an important difference between the spring and fall catalogs. The spring offering has a little bit of everything, whereas the fall book is heavily oriented toward clothing and designed for Christmas shopping. The books, one million of each, are mailed to lists specially tailored by Detroit's R. L. Polk Company, aimed at owners of 700cc and larger bikes. The result is that as much as forty percent of the items is purchased by owners of motorcycles other than H-D's. Virtually all dealers participate in some sort of direct mail program, Miller says.

With the decline in the snowmobile market up north and the ongoing onslaught of things Japanese, parts and accessories are a way for an H-D dealer to keep his head above water during the off season. A New Jersey dealer, among the first to display catalog items in a boutique setting next to his showroom, reports grossing $30,000, primarily on clothing sales, in December. H-D argues that buying from a dealer ensures that the consumer is purchasing a quality item which the company stands behind. Except for

"BROWN LEADER" IS FINEST JACKET

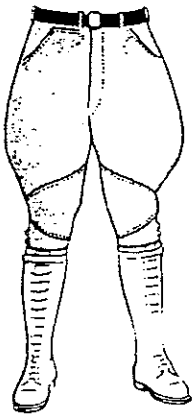
The "Brown Leader" jacket is made up to our own specifications, and is everything that we think a motorcycle jacket should be. It is designed to take care of all sorts of conditions under which you would wear it, and when you get one you will agree that it is the ideal jacket.

This extra fine jacket is made from rich, brown horsehide leather, that will not scuff or scar in the hardest kind of service. It is lined throughout with a good brown moleskin cloth that has excellent wearing qualities. The collar is leather, and so are the cuffs and waist band. Cuffs can be buttoned tight to keep the wind out, and two take-up straps at the waist band assure a good fit. The two pocket flaps button down. Has a genuine Talon zipper.

This jacket, being full grain horsehide, is shower proof and absolutely windproof. It is soft and flexible and can be doubled up and stowed away in a saddle bag without damage. Fully guaranteed. Sizes 34 to 46 are standard.

Code
11067-34—Brown Leader Jacket ..... $11.85 [illegible]

FINE LOOKING RIDING BREECHES



Cavalry Style Breeches

This 1934 line of riding breeches is an even better assortment to choose from than we have shown in previous years. Careful purchasing in large quantities has enabled us to maintain prices at very low figures. Every number has been carefully selected as the best available at anywhere near the price.

Good riding breeches are a very good investment, as they are comfortable, very good looking, and wear for a long time. They are particularly well adapted to motorcycle riding.

The sizes available from our stock are as follows:

11093-34 In standard lengths only—28, 30, 32, 34, 36, 38 waist measures.

Other numbers—
- Sizes 28, 30, 32, 34, 36, 38, 40 in standard lengths
- Sizes 30, 32, 34, 36, 38 in extra longs
- Sizes 28, 30, 32 in extra shorts

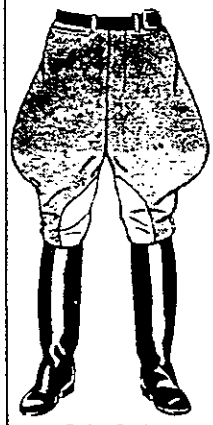
These sizes should fit nearly everyone. Where special sizes are needed, they can be supplied at an extra charge.

English Military Style Breeches

Cavalry Style Tan Breeches

Full peg top as shown, with double knees and seat. A very good looking tan mixture, of great wearing quality. Five roomy, turned and stitched pockets. No special sizes.

Code
11093-34—Tan whipcord breeches .....$2.95 [illegible]



Polo Style Breeches

Polo Style Dark Oxford Breeches

Extra wide peg top, with safety pockets, double knees and seat. Very dressy. Extra good grade of Oxford Whipcord. A really excellent breech for any service—many worn by Police.

Code
11097-34—Oxford Whipcord Breeches .....$3.95 [illegible]

Polo Style Tan Whipcord Breeches

These are the same style as described above, with button top safety pockets, leather knee facings, double seat, and full peg. The material in these breeches is made from a double twisted yarn that insures extra long wear. Color is a light brown or tan mixture that will not soil easily. Very smart appearing.

Code
11098-X ..... $4.75 [illegible]

English Military Style Breeches

These are very high grade, part wool breeches, that anyone would be proud to wear. The English Military Style is very attractive, as you can see from the picture. Full grain leather facings are used on the knees. Button top safety pockets are fitted. These breeches will please the most particular.

Code
11099-X .....$7.75 [illegible]

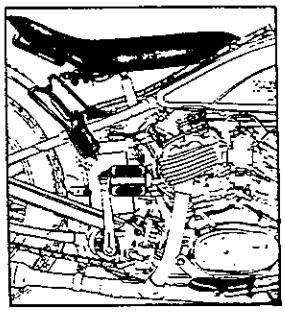
"Styles may have changed, but motorcycle clothing either keeps you warm or it doesn't," says William H. Davidson, retired H-D president. This is a page from the 1934 accessories catalog.

leathers (Who wants to wear a swiney pair someone returned?), virtually all of the merchandise can be exchanged. Look for more mirrors, fitting rooms and flashy clothing displays at your favorite dealer.

If apparel is hot property, the bolt-on stuff is less so. That's due primarily to the fact that H-D produces many bikes with the custom look, right off the assembly line. Nevertheless, Screamin' Eagle performance parts and G-Tech diecast aluminum accessories recently were introduced by the company. So while bike prices are high, the average owner has to do a lot less to his machine to make it look like a truly individual effort. And individuality is what may have gotten the custom craze started in the first place. If the factory custom is affecting the nuts and bolts division of parts and accessories, it's nothing short of a lunge at the jugular of those who market noncompany Harley-Davidson look-good and go-fast stuff. With a few exceptions, factory personnel have little more regard for these competitors than they do for the Japanese. If the Orientals lack style, H-D believes many aftermarketeers lack a sense of fair play (they use the traditional Harley-Davidson bar-and-shield trademark on their wares and produce parts that frequently are foreign-made and do not fit properly or last long. In 1982, the company successfully curbed in court the use of the trademark by an aftermarket firm known as Joe's MCN.

Ersatz parts were a problem very early, and Arthur Davidson warned dealers that the company would not tolerate affixing aftermarket parts on H-D bikes. He knew he was addressing many people who had attended only the Baling Wire School of Motorcycle Maintenance, and that insisting on genuine parts and accessories would maintain the company's reputation. The very first parts and accessories to carry the H-D trademark were aimed at the rider rather than the bike. The initial issue of *The Enthusiast* in 1916 shows several wool-lined leather gloves and mittens, designed for operating the bikes in cold weather (it should be remembered that cycles were competing for sales with automobiles at that time, and that bikes were virtually as warm as cars in the winter). Those trusty mittens, which retailed for up to $2.50, are fondly recalled by former H-D President William H. Davidson. "The styles may change, but cold-weather gear either keeps you warm or it doesn't."

A separate parts and accessories department was actually formed in 1912, indicating



Details of the New Buddy Seat

Here's how Harley-Davidson riders took a friend along before twin seating became standard equipment. This illustration is from H-D's 1934 accessories catalog. The first such edition was produced about 1915.

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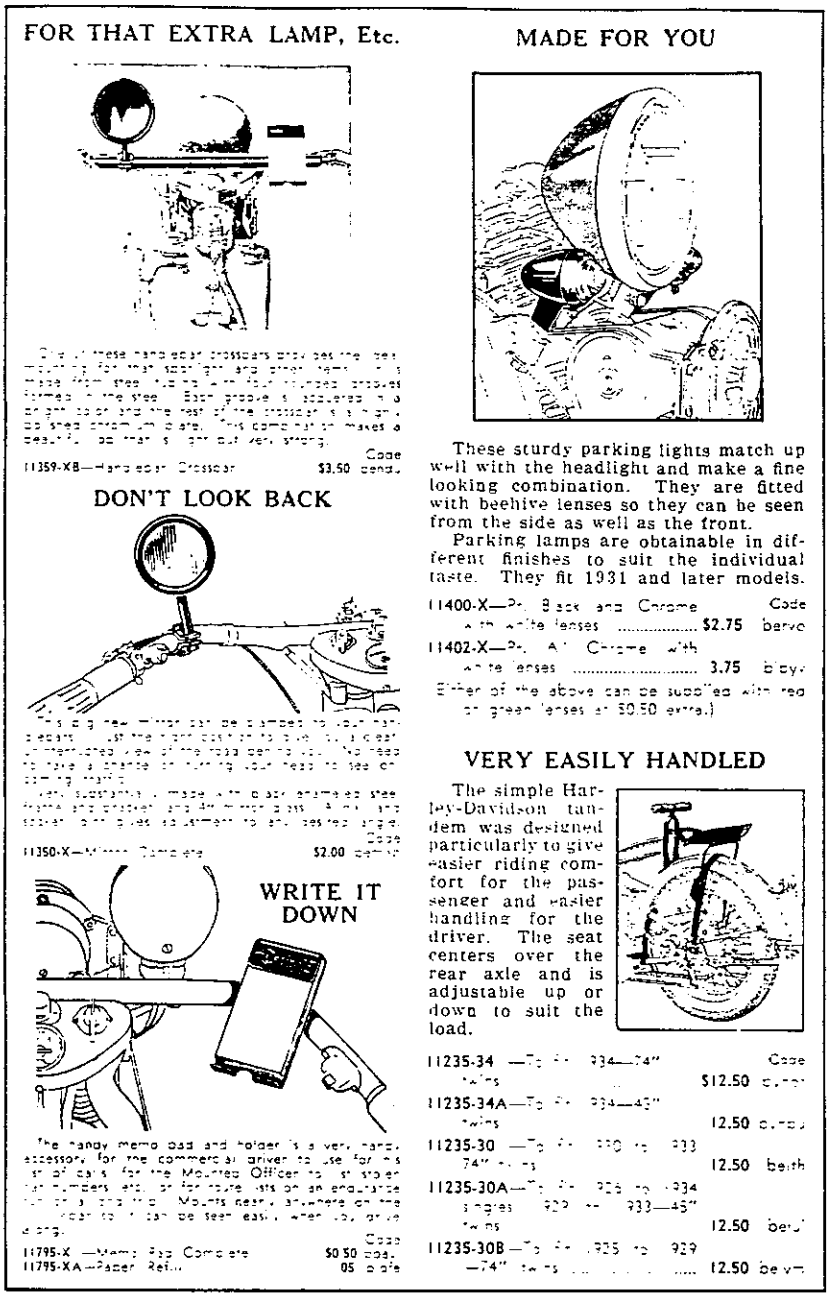
just how early Harley and the Davidsons realized the importance of these items. Down through the years, the company has tried to accommodate an incredible variety of interests, from the highly successful molded plastic saddlebags introduced for the 1954 model K to the hunting-fishing (trail-riding) kit for the 1963 Aermacchi-H-D Scat. And while the vast majority of accessories ideas came from within (the first safety bars were an



FOR THAT EXTRA LAMP, Etc.

DON'T LOOK BACK

WRITE IT DOWN

MADE FOR YOU

These sturdy parking lights match up well with the headlight and make a fine looking combination. They are fitted with beehive lenses so they can be seen from the side as well as the front.

Parking lamps are obtainable in different finishes to suit the individual taste. They fit 1931 and later models.

VERY EASILY HANDLED

The simple Harley-Davidson tandem was designed particularly to give easier riding comfort for the passenger and easier handling for the driver. The seat centers over the rear axle and is adjustable up or down to suit the load.

Mirrors were an option in 1934, as this page from that year's catalogue shows. The notepad indicates that numerous Harley-Davidsons continued to be used for deliveries.

option with the 1935 models), occasional aftermarket firms preceded H-D thinking (such as the B&H foot-shift conversion kit, offered in 1947).

It can be argued that custom bikes originated the moment the first rider pried off a fender or replaced the first factory part with an aftermarket trinket. But consistent custom evidence surfaced initially in California in the thirties. Destitute riders, aching for new bikes but unable to afford them, took to bobbing fenders and repainting their machines to make the Harleys and lesser makes look new and different. It is a credit to H-D that owners were largely content to leave the engines and transmissions alone prior to World War II. After that global conflict, riders found themselves in exactly the opposite situation: They oozed money but were able to buy only designs that had been formulated in the late thirties. So they began to toy with performance.

Numerous Harley-Davidson dealers have been sources of performance parts, since they fielded Class C American Motorcycle Association racers as early as the mid-thirties. The most successful ever was Tom Sifton, owner of the H-D franchise in San Jose, California. Prior to WW II, Sifton's reputation was earned for the porting work he performed on his own racing machines. As GI's returned to civilian life, Sifton offered them cams and related hardware that propelled Milwaukee iron to unheard-of speeds on the California dry lakes, at Bonneville, on drag strips and on flat tracks. Both the factory

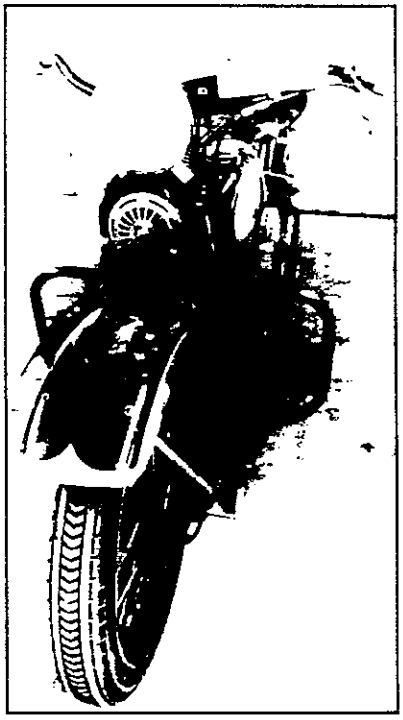
This candy-apple custom is the work of Hall's Harley-Davidson in Chico, California. Besides being an important source of income, custom work allows dealers who so choose to show their design talents.

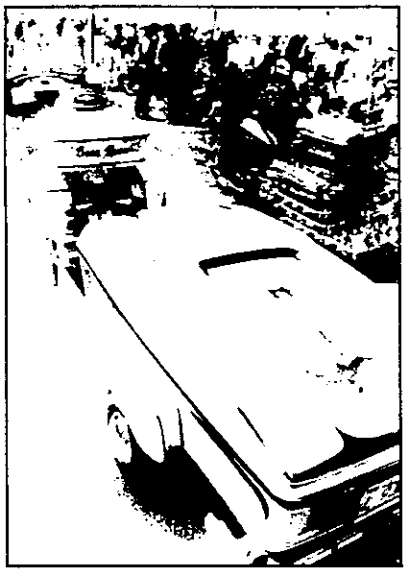
and independent speed shops responded. Today, there are more speed parts for Harley-Davidson motorcycles than for any other two-wheeled vehicle.

The introduction of the overhead valve Sportster in 1957 appeased most performance buffs, so riders took a page from the thirties and, again, began modifying the looks of their bikes. The factory declined to see who could produce the most outrageously extended forks, but bikes designed by such Californians as Ed "Big Daddy" Roth, Von Dutch and others became less and less transportation and more and more artistic statements. In the last few years, the customizers have retreated from the radical chopper look, in part because "Choppers won't pass state vehicle inspections, at least not in the East," says long-time New Jersey dealer Eddy Mills. Today, modified bikes fill the used cycle ads as the company produces designs that satisfy the customizer, the speed freak, the cruiser and the tourist.

Harley-Davidson is more than the last American motorcycle. It's the last, in fact, the *only* production custom motorcycle. With the parts, accessories and paint options available, today's H-D owner has no excuse for possessing a machine that looks like anyone else's. Earl Widman, who sells H-D's and Suzukis in St. Louis, defines the difference between his two kinds of buyers and the feelings they have toward their machines. "A Harley owner will customize his bike, whereas a Suzuki owner won't even

Safety guards, currently a controversial accessory, were popular in the thirties, as this 1935 45 cu. in. model indicates. The bike is part of the H-D collection in York. (David Wright)

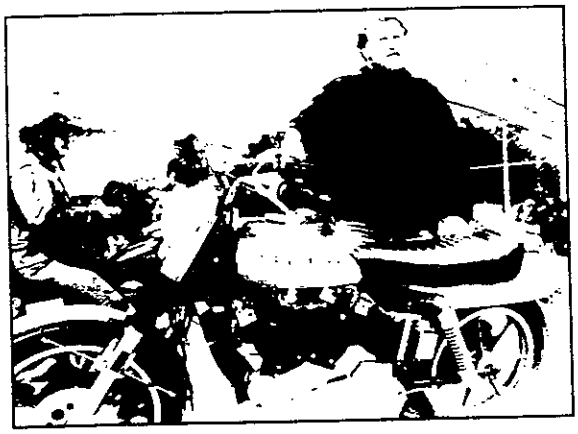




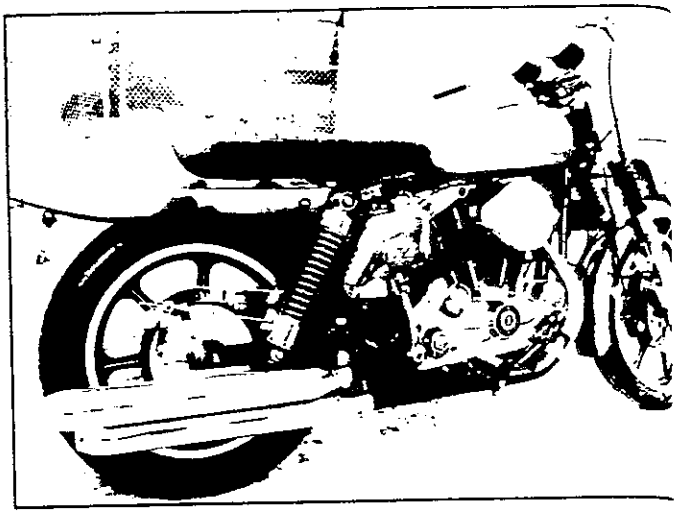
This sumptuous fiber glass trailer shows what "Boss Hawg" uses when his Dresser becomes overloaded. The bike and trailer were seen at Daytona in 1982. (David Wright)

replace a damaged tank or fender. They're content to buy the bike and just ride." With this confirmed individuality in mind, let's examine a quartet of custom Harley-Davidsons that ranges from the subtle to the—well—less than subtle. . . .

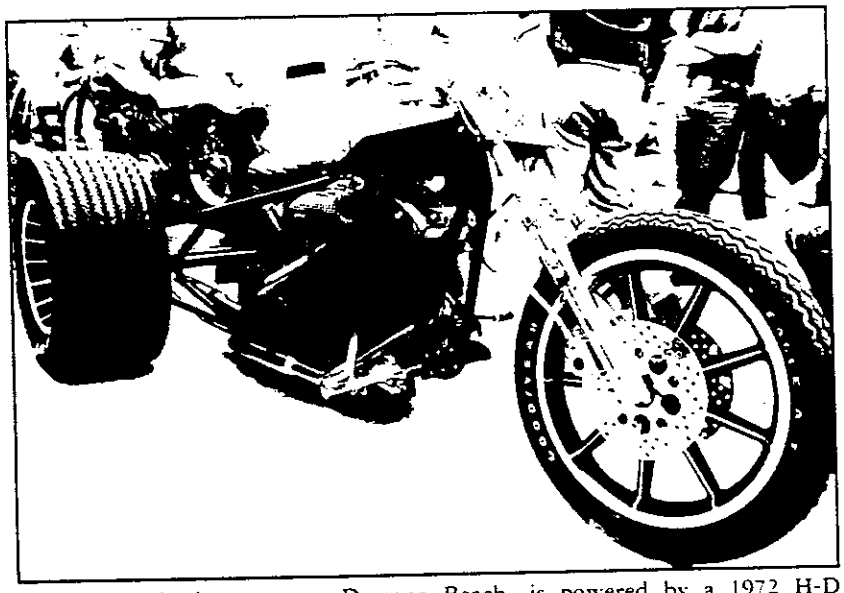
Typical of a personalized bike is the 1969 Sportster XLH belonging to Andy Huffer of Hagerstown, Maryland. The machine has been modified extensively, yet it looks neither like a chopper nor a street racer. Rather, to the untrained eye, it appears to have exited from the York plant this morning. "It's almost all Harley-Davidson except the Morris wheels," Huffer points out. "But those were the same wheels offered on the Cafe



Maryland's Andy Huffer with his modified Sportster. (David Wright)



Another view of Huffer's immaculate, Imron-red Sportster. (David Wright)



This three-wheeler, seen at Daytona Beach, is powered by a 1972 H-D Shovelhead motor in a tubular frame. Stylish as such bikes are, they are almost impossible to insure. (David Wright)

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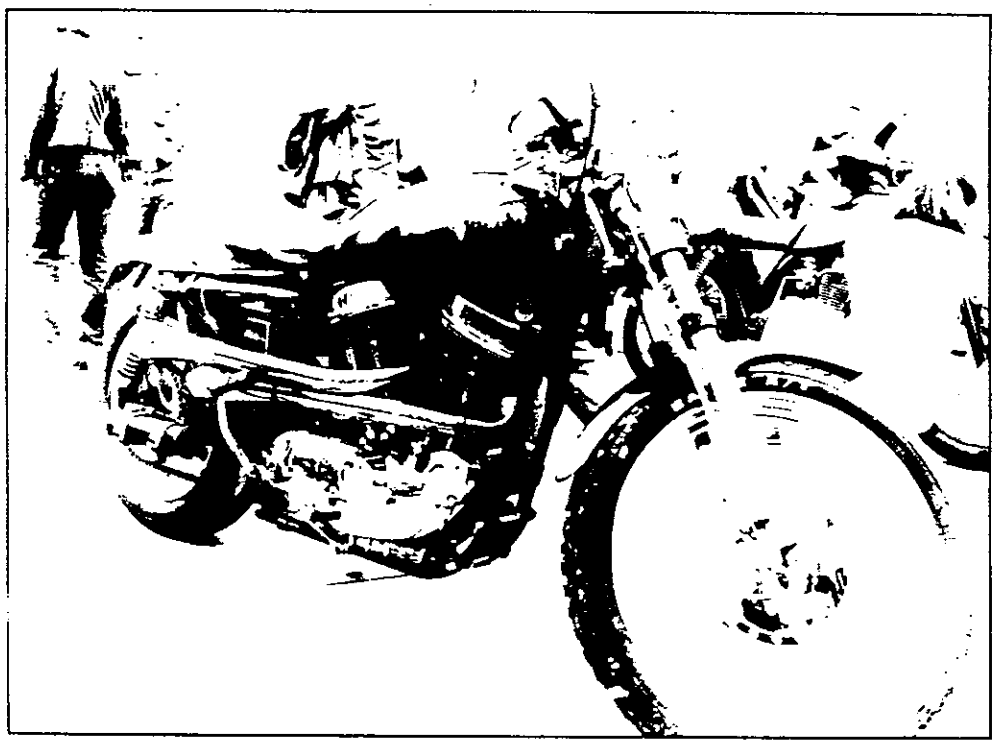
Racer [XLCR]." Other non-H-D parts include Sifton "C" cams and Branch heads. Everything else looks factory because it is factory.

The headlight shell was adapted, after a lengthy search, from a 1969 XLH. The tank is from a 1977 XLT and carries factory red paint, as does the front fender. The stock seat was painted by a friend of Huffer's to match the Imron finish up top and out front. The machine features both kick and electric start and now has a Harley-Davidson electronic ignition. The engine measures 79 cu. in., with the bore at 3 7/16 in. and the stroke at 4 1/4 in. The cam covers are late-model H-D.

"The bottom end has about 50,000 miles on it," according to the Mack Truck assembly plant employee. "I get fifty-five miles to a gallon of gas and 1,400 miles to a quart of oil. That's better in both respects than the original. It's been trouble-free and it doesn't stutter or overheat in traffic." Obviously, this bike is meant to be ridden on the street.

Huffer says the style of this particular year encouraged him to create what he calls a "blend" bike. "I like this configuration, even though I have $5,000 in it and it's been in and out of my hands three times." Huffer is aware of the bike's worth because, now that this Sportster is just the way he likes it, he plans to sell it. His next project is to personalize a Low Rider. "Don't tell anybody," he says, "but I have my eye on the first Low Rider to come off the assembly line. It's rough, but I know where it is and I think I can buy it." Huffer is one of those riders who can't let well enough alone. The result speaks tastefully for itself.

You're much less likely to see Richard Muller's bike on the street—the resident of Garfield Heights, Ohio, has just 108 miles on his 1965 H-D since sinking $10,000 into it.

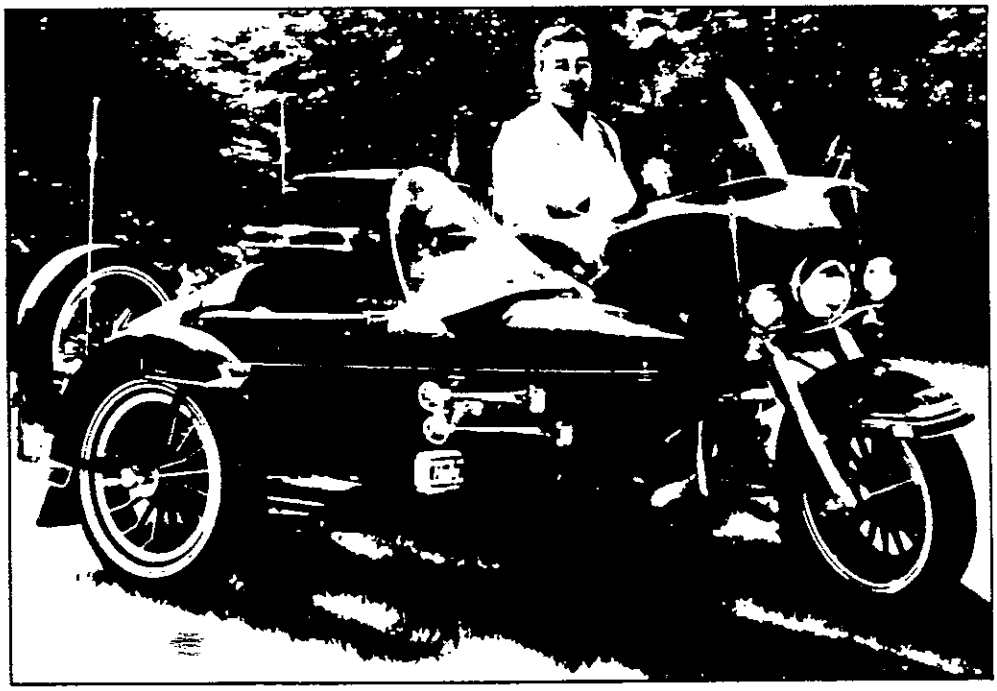


Here's a popular modification—Panhead cylinders and heads atop a Sportster bottom end. This example, dubbed a PanSter, was seen at Daytona in 1982. (David Wright)

Rather, the high-styled street racer can usually be found only in the Midwest's top custom shows. Muller calls his bike the "Solo Rider." It features a Pan-Shovel engine bored to 84 cu. in., with electric start, S&S flywheel, Sifton cams, Manley valves and Leineweber valve springs. The transmission casing conceals Andrews gears and the bike has a Barnett clutch. The engine, transmission and paint work were done completely by the owner; only the stripes on the machine, which is painted '77 Chrysler metallic gray, are the work of anyone else.

"Want to see the tricks?" Muller asked recently during an outdoor show. With a flick of the key, the truck driver owner activated a digital clock above the instrument panel. Like a heart, the blue numbers pulsated predictably. Muller has a distinct advantage over many would-be customizers: He formerly worked for a Harley-Davidson dealer. During his time there, he saw firsthand what looked good and what worked. The result is his showbike, which also carries such distinctive touches as Muller-fabricated generator case, brake pedal and regulator bracket, plus Knucklehead-type oil lines. The naked velocity stack protruding from the carburetor points out the lone drawback of such a work of art: Muller can't bring himself to ride it much on the street. Incidentally, his project bike took up five years of nights and weekends, "off and on."

The bike belonging to Levittown, New York, resident Andrew Oberle appears even wilder than Muller's, yet it is as street-ready as Huffer's individualized Sportster. That's because much of the thinking behind the low-slung, red machine was formulated a continent away by Arlen Ness, acknowledged king of aftermarket motorcycle designers. Oberle's machine started out as a 1973 Sportster. The motor, now an 86 in. stroker with Trok barrels and an S&S carburetor, was wedged into a Ness chrome moly frame; other examples of the Californian's handiwork abound and include everything from the pegs to



Here's a well-turned-out FLH Classic. The owner is Ken Smance of Manchester, New Hampshire, a member of the International Northeast Harley-Davidson Dresser Association. The sidecar features a convertible top and a television set.

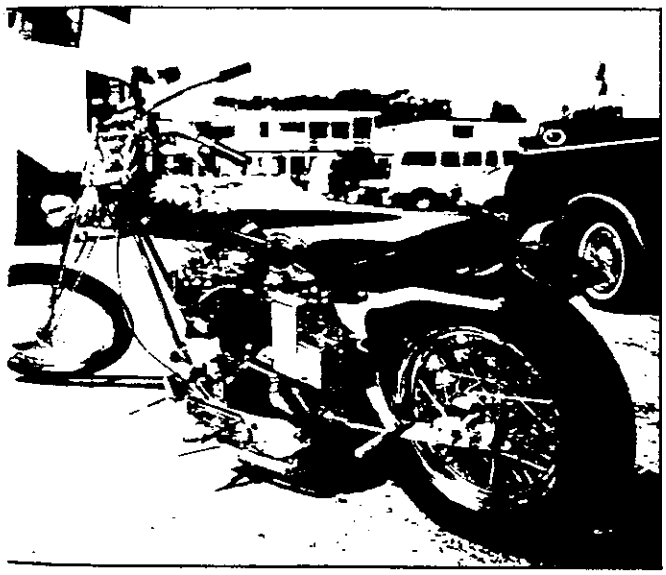
the rear fender. The bike features a Fury front end. Because Ness refuses to build anything that won't work on the street, Oberle's machine is low-slung but legal.

"I never had a bike as a kid," confesses Ness, a well-dressed Californian with a neatly trimmed mustache and goatee. Highly respected by H-D personnel, he is one of hundreds of financial successes associated with the motorcycle and the aftermarket products made for it. "I married young, and neither my dad, my mother nor my wife wanted me to have a motorcycle."

Surprisingly, the man who spent his first twelve years in Minnesota didn't own his own machine until the ripe old age of twenty-seven. To get the money, he had to save winnings he realized as a professional bowler. His "half-trick," used Knucklehead pleased him, but not so much that he was content to leave it alone. The stunts he pulled on that used bike soon turned up on bikes belonging to friends—they'd seen his machine and wanted him to work the molding and customizing magic that suddenly made their H-D's look less exotic than Arlen's old Knucklehead. A truck driver at the time, Ness switched to carpentry; the four-and-one-half-day workweek for San Leandro carpenters gave him a bit more time to work out of his home. "My house became a place to hang out," he says.

Arlen rented a store, set it up for painting, then began to design the dramatic parts that have become his signature. He created ram horn bars, welded frames and more. Along the way, he began to farm out the work to those he could trust: racing car builders who knew materials and how to form those materials into a finished product from a Ness drawing. "Long straight ends looked unsafe to me, so I lowered the bike all around, like a drag bike. The look worked well. After that, I designed a series of sleek tanks, then clamps, brackets, etc. The last three years, I haven't been able to make stuff fast enough." At present, more than 400 dealers, Harley-Davidson and otherwise, carry Ness aftermar-

Arlen Ness, acknowledged by many at Harley-Davidson to be a seminal figure in custom motorcycles. (David Wright)



A Ness-equipped 1973 Sportster owned by Andrew Oberle of New York. (David Wright)

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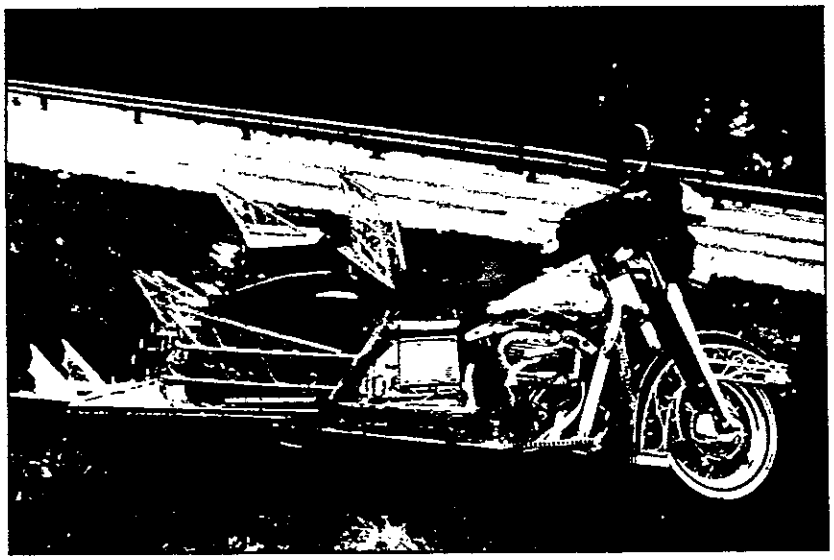
ket products. Like H-D, he is plagued with imitators. And unlike many aftermarket wheeler-dealers, Ness scrupulously avoids using the H-D trademark. His products sell without it.

To meet the demand a few years ago, he opened two additional stores and a machine shop. But they complicated his life excessively and he reverted to a single store and to a catalog that generates nearly half of his present business. With three employees, plus his wife and himself, and that catalog, Ness can find time to turn out new designs and to take on freelance design assignments. He also has the time now to conduct an Associated Press writer and photographer through his business, or to answer questions for a network television interviewer. And he's hot on the rebuying trail for some of his most memorable creations, since there's talk of a syndicated Arlen Ness Custom Show and of a museum. Modestly, he says: "I'm lucky. I can look at somet ng and it will fall into place. Somehow, I can foresee good lines on a bike."

Those who customize XL's and those who customize FLT's really should communicate more. While their tastes differ, the amount of labor and degree of devotion to the machines are the same. A case in point is the well-dressed Dresser of Joseph and Alice Espada of Mount Vernon, New York. The Espadas, members of the International Northeastern Harley-Davidson Dresser and Touring Association, Inc., took their Electra Glide to Modern Cycle Works in their home town; the results speak ornately for themselves. Here, courtesy of the builder, is a list of the adornments on what may be the ultimate attention getter:

1. Scrolled and chained front bumper, front fender, rear crash bars, bag guards, transmission cover, battery cover, oil tank cover, front crash bars, gas tank and hooded "peace" light.
2. Front fender with built-in running light.
3. Chained axle stars.
4. Custom turn signals built into fairing.
5. Air-scoop-mounted "six gun."
6. Air-cleaner-mounted "six gun."
7. Chrome engine, chrome Mikuni carburetors.
8. Chained floorboards with fore and aft air vents.
9. Passenger pegs replaced with illuminated, stained glass, scroll-paneled running boards.
10. Stock seat rail replaced with highback scrolled and chain "Bird of Paradise" rail.



This six-gun encrusted Dresser was created for a Texan (who else?) by The Modern Cycle Works in Mount Vernon, New York. Several owners of such creations belong to the International Northeast H-D Dresser Association. (Joseph Espada)

11. Padded dashboard features built-in television set, quartz LED clock, cylinder head temperature gauge, battery-generator gauge, map light, cigarette lighter, accessory switches, indicator lights.

12. Tour Pak is lined with white mink fur.

13. Within the padded and chrome-plated Tour Pak is an electric clock, FM quad stereo with concealed antenna and eight-track cassette.

14. Padded saddlebags feature scroll and rhinestone trim and carry stereo quad speakers.

15. Custom light mount carries nine chrome hooded lights.

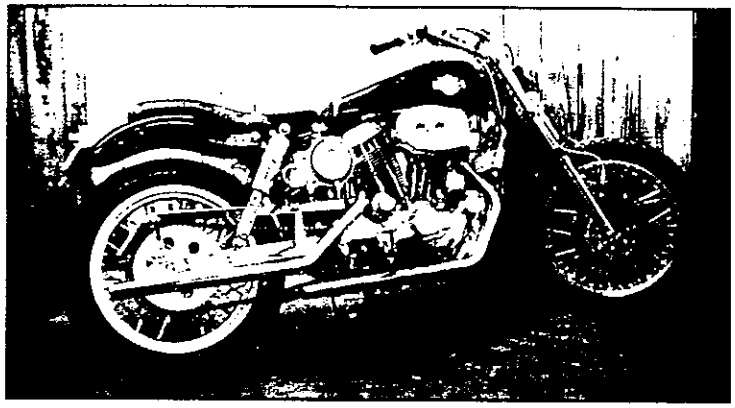
16. The custom rear pan is topped with a staggered-step rear bumper.

17. "Star-tipped" Hollywood mufflers.

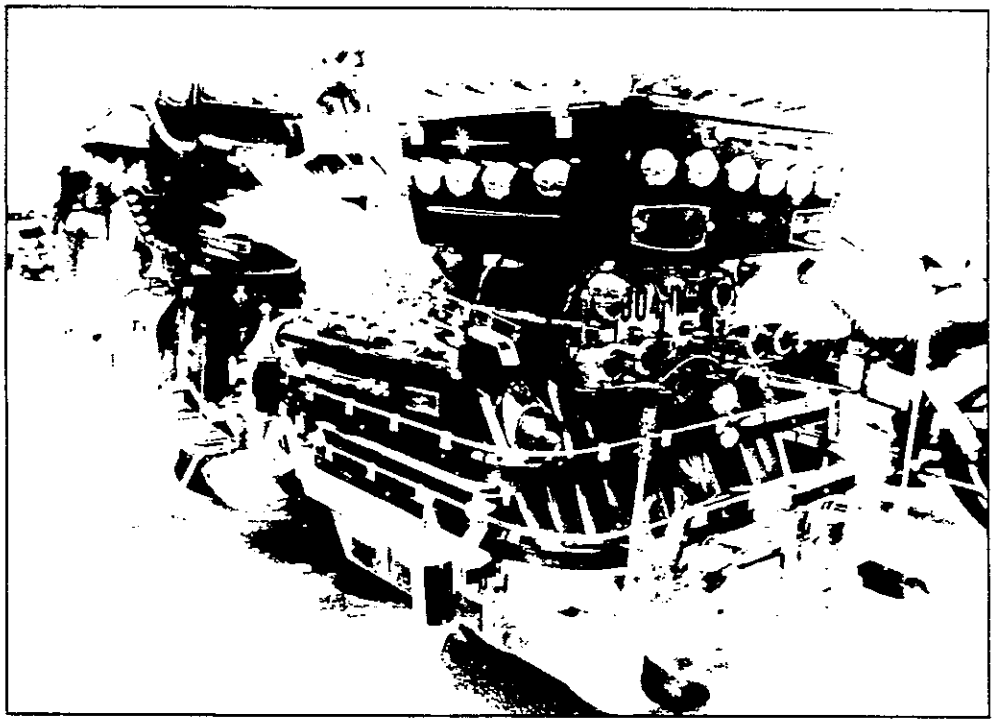
18. Fairing, front and rear fenders painted royal blue metal flake with twenty-four coats of clear lacquer.

19. All else except tires and upholstery is chrome plated.

One look at the Espadas' cycle indicates that anything added to this chapter would be anticlimactic.



A custom bike prepared by Hall's Harley-Davidson, Chico, California, for former drag racer and Bonneville runner Les Waterman. This machine began as a 19[illegible] XLH Sportster. In addition to a completely big, performance motor, the creation has a handling package and is capable of turning in the high ten-seconds in the quarter miles. It's valued at $14,000! Fabrication and paint are by Ron Hall, one of the West Coast's top H-D customizers.



Ornately yours, from Daytona Beach. (David Wright)

CHAPTER EIGHT

RACING

RETIRED HARLEY-DAVIDSON PRESIDENT CHARLIE THOMPSON SAW HIS FIRST MOTORCYCLE RACE in 1966 at the Springfield, Illinois, mile. "Two kids got killed there and I thought, 'Jesus, if that happens at every race, this . . the last one I'm going to attend.' Since then, I've been to hundreds of races and only seen one other death." Former football coach Thompson can understand the analogy between racing and the Woody Hayes belief that, when you throw a forward pass, three things can happen and two are bad. In racing, that's also true. A rider can race and be maimed or killed, he can race and end up broke, or he can race and finish without a completely empty wallet or chronic aches, pains—or worse.

Since the early teens, when H-D began fielding racing bikes, not much has changed. The riders still flirt with dismemberment, they live from one meager payoff to the next, the majority never make it as expert riders—and they will be racing as long as there are wheeled vehicles. Among those vehicles will be Harley-Davidsons, so long as numerous dealers and key employees believe racing is of benefit to the company.

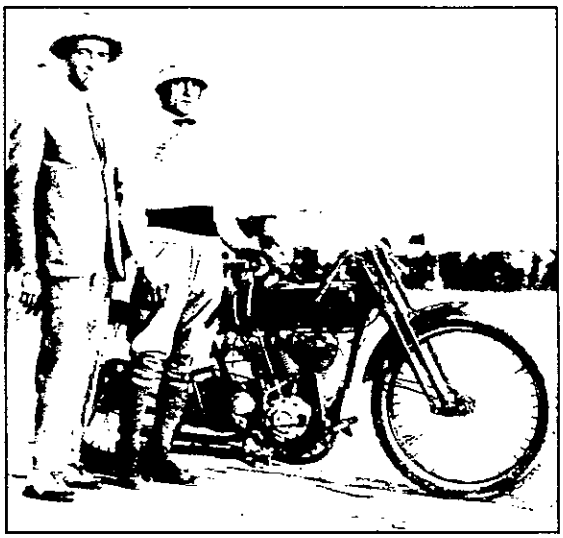
There are at least five kinds of motorcycle racing and, over the years, Harley-Davidson has played a prominent part in each of them. They include:

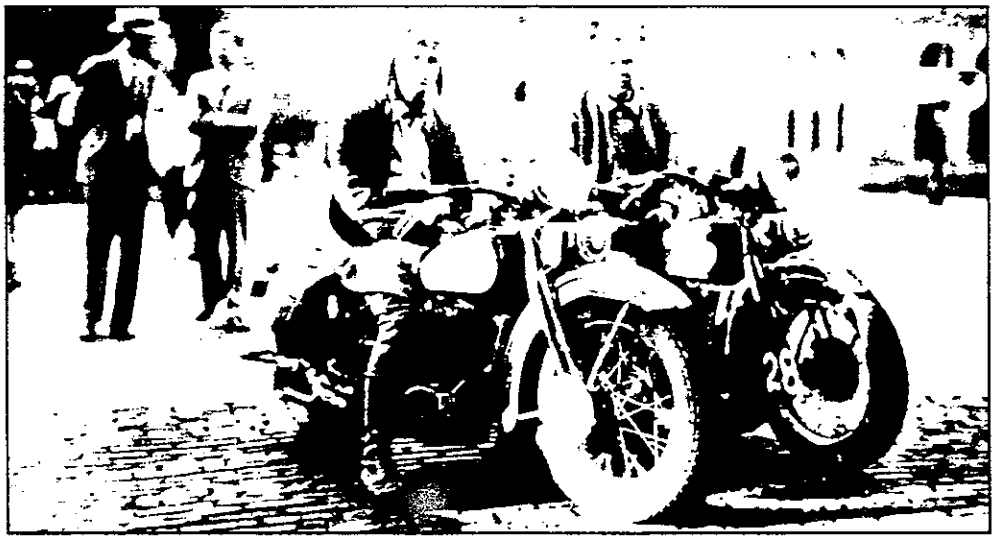
—Flat track. This is the familiar half-mile or mile horse track, where riders stay on the gas, off the brakes (if there are any) and pitch the bikes sideways to scrub off enough speed to make it around the two 180-degree bends. There has yet to be a national dirt-track event without a Harley-Davidson in the field, which gives an indication of the part the machines have played over the years in U.S. racing. Most of the twenty-eight events on the current AMA/Camel Pro Series national circuit are flat tracks, so it's a foregone conclusion that the rider who carries off the No. 1 plate must be able to win on the dirt. This kind of competition evolved from dirt roads in the teens and banked tracks constructed of two-by-fours laid on their sides in the teens and twenties. Variations include the TT courses, which are ovals punctuated by one or more jumps and a couple of right turns; short track, usually quarter-mile tracks for smaller-displacement bikes; and an occasional banked track, such as Knoxville, site of a current AMA national.

—Off-road racing. This can be anything from a neighborhood scrambles track to the run down the Baja Peninsula to the Jack Pine Enduro. Before bikes became excessively specialized, H-D's capable of legal operation on the highway proved their durability by slogging through swamps and being pounded across deserts. These forms of racing have spawned many of the top flat-track riders, such as current factory team man Randy Goss.

—Road racing. This includes left turns, right turns, elevation changes, blind corners—in short, all the situations except oncoming traffic that a rider is likely to encounter on a twisting, two-lane blacktop. The amazing thing about road racing is the number of incredibly good riders this country has produced, considering that road racing has been less popular in America than either flat-track or off-road competition. Harley-

H-D's were ridden in races everywhere, as this 1925 post card from Italy indicates. Exact date and location are unknown, but the gentlemen are named Orlandi and Gantarini.





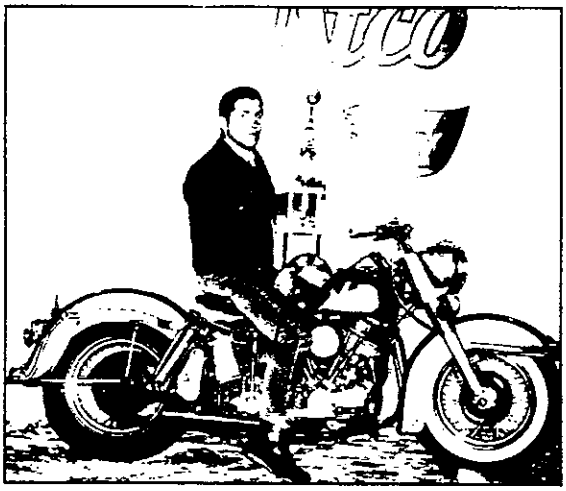
Gordon (left) and William Davidson following two days on the Jack Pine trail in 1931. H-D-ridden machines captured ten consecutive Jack Pine contests. (William H. Davidson collection)

Davidson provided the power for much of that glory through 1973, when the company ceased to be competitive against the multicylinder two-stroke bikes from Japan.

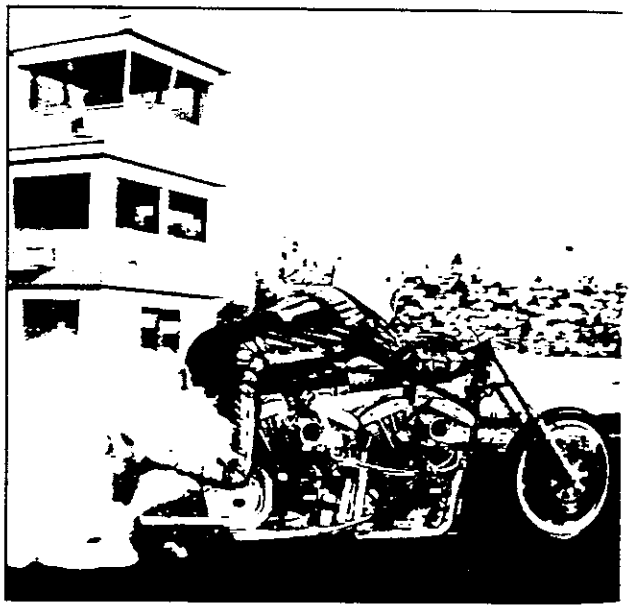
—Drag racing. Road riders were cracking the throttle open long before the California drag bikers took to the dry lakes shortly after World War II. Like most things motorcycling, Harley-Davidsons were popular mounts in the beginning and continue to star in quarter-mile showdowns. This is the last bastion of those who believe you should run what you bring: for every double-engine fueler, there are hundreds of box-stock H-D's at drag strips each weekend.

—Hillclimbs. Due to the popularity of other kinds of off-road events and alleged damage to the environment, this fascinating form of entertainment has decreased in popularity. U.S. hillclimbs are run off-road, whereas Europeans climb hills on paved roads. Both feature individual riders against the clock.

With an eye on the various uses of a racing motorcycle, let's look at some of the mechanical stars of the shows through the years. If details are lacking, it's because H-D has not always been as willing as it is today to divulge specifications of what propelled its machines into the winner's circle. If your personal favorite is missing, see Chapter III. Many racing machines were little more than street models with the lights pried off.

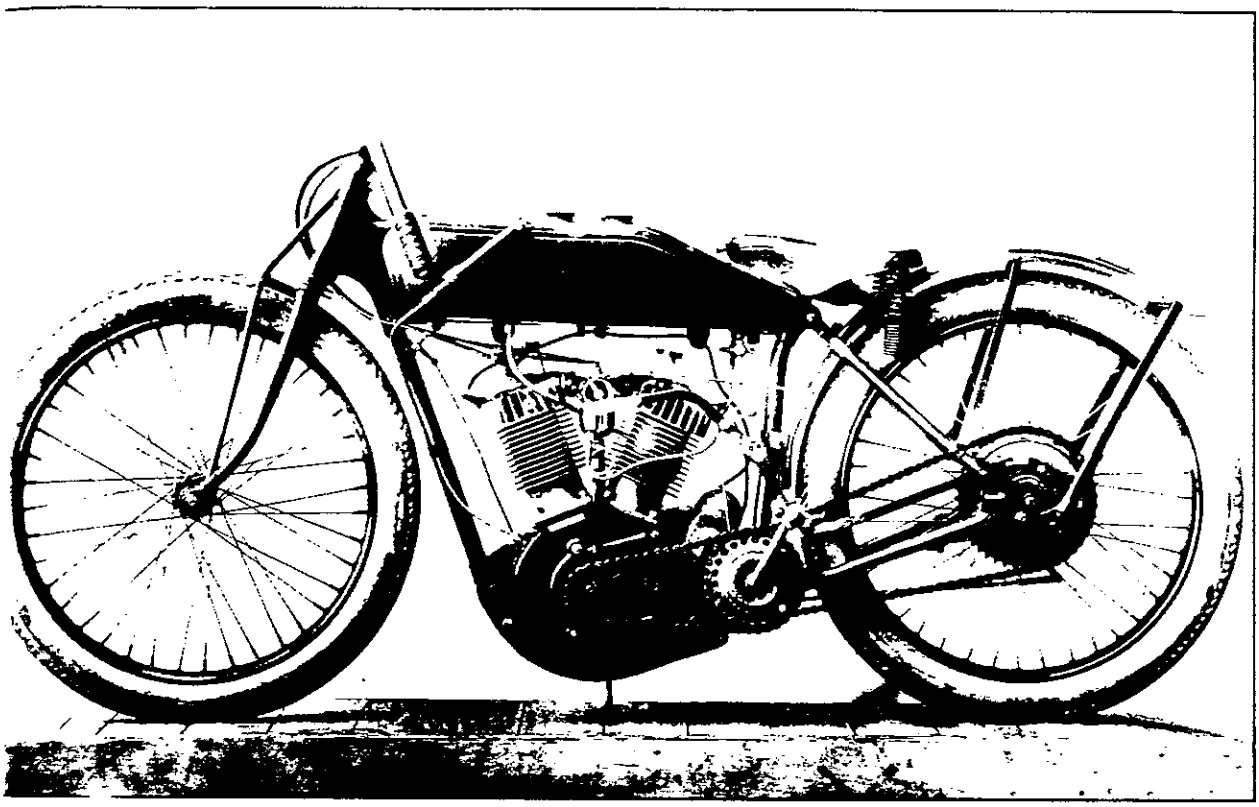


Who says you can't drag-race a Duo-Glide? Jeff Mowry, Patterson, New Jersey, took top stock eliminator honors at Atco Dragway in 1968 on this A/Stock Harley-Davidson. His elapsed time was 14.96 seconds, with a speed of 82.56 miles per hour. (National Hot Rod Association)



Joe Smith on his double-engine Harley-Davidson smokes off the line during a 1976 meet. Smith broke the nine-second quarter-mile barrier on this machine. (National Hot Rod Association)

Harley-Davidson's first model built exclusively for competition was the 61 cu. in. (999cc) eight-valve V-twin, created just prior to World War I for the group of racers that came to be known as the Wrecking Crew—Hepburn, Parkhurst, Davis, Weishaar and others. The first of the three-speed bikes was constructed in 1916 in three versions: one lubricated by hand, one with an oil pump and one that featured both a mechanical pump and a plunger. To prevent dilettantes from dabbling with their eight-valves, Harley-Davidson priced the machines at $1,500 apiece (compared to $350 for a new Indian racer). Unfortunately, verifiable specifications on these neat bikes no longer exist. That's true, too, of the two-cam racing models, which at 65 cu. in. had a top speed approaching 120 miles an hour. Both machines had wheelbases of about 50 in., 28 × 2½ in. tires, forty-spoke, soldered wheels, a magneto cutout switch on the handlebars that served as the only means of braking for a turn and direct drive. With their very high compression, the bikes frequently needed to be pushed by two or three men or pulled by an automobile in order to start.



A 1920 61 cu. in. racing bike. The plunger in the middle of the separate gas and oil tanks was used periodically during high speeds to supplement the gravity-feed lubrication system. Early racers were direct drive; that is, there was no transmission. They were tough to push-start, they had no brakes and they could easily exceed 100 miles an hour. Note the German Bosch magneto, used immediately after hostilities ceased in World War I. (Harley-Davidson Motor Company)

JH, JDH "Two-Cam"
1928–1929

The two-cam was billed as "The Fastest Model Ever Offered by Harley-Davidson," and it was indeed that. Independent cam action was provided for each valve by two big, broad-faced cams on the gears. The results were better timing, higher compressions and more rpm. The appearance was striking, too, since the tall engine protruded into the lower edge of the gas tank to accommodate the valve stems, valve springs and pushrods. The JDH 74 in. model, "particularly recommended by our engineers for greatest speed and maximum performance," was $370, fob Milwaukee. The JH 61 in. cost $360, certainly a strong temptation to spend $10 more.

Harley-Davidson enthusiasts at the time were quite familiar with the two-cam, since it had been winning races for several years prior to its public offering. On July 4, 1925, Joe Petrali became the first two-cam rider to exceed 100 miles per hour in a board-track race when he averaged 100.36 in winning at the Altoona, Pennsylvania, speedway. The machine, with its increased horsepower, retained a broad power band; hillclimbers, particularly in the East and Mideast, hauled home lots of silver, courtesy of the two-cam.

Why, then, were these classic bikes offered for just two years? As attractive as the prices appear today, they were considered excessive in the late twenties. Americans were buying automobiles by the hundreds of thousands, but were unwilling to purchase more than 19,911 H-D's in the prosperous year of 1927. These were superbikes in the contemporary sense of the word; the racing-type adornments (special tank and handlebars, solo seat) were standard rather than optional. The 1930 VL models could at least be called new and inexpensive, even if they offered less power.

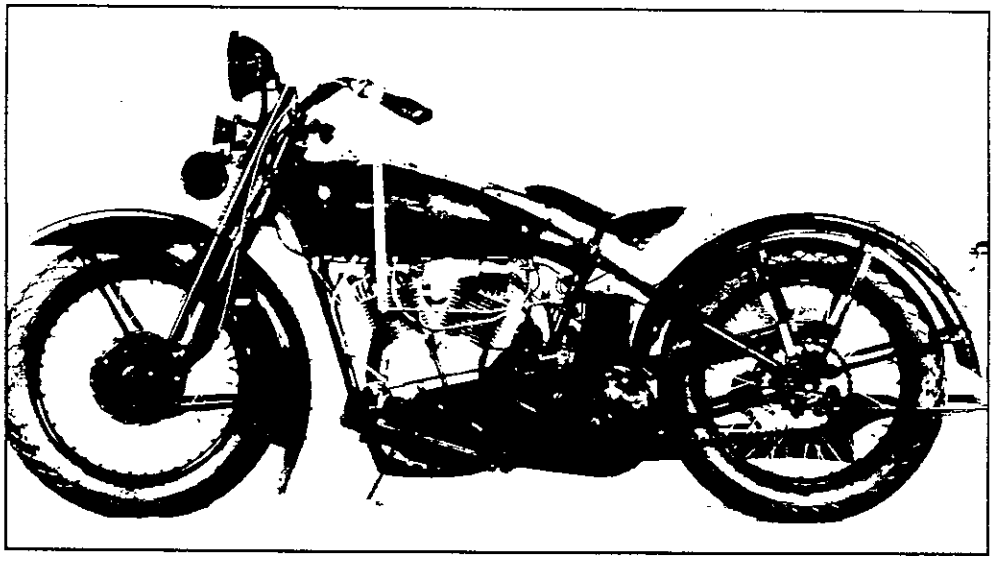
Specifications

(From a 1928 brochure. The following figures are for the road bikes, since specs on the racing bikes are much less complete.)

Motor—Two cam, twin-cylinder, V-type, air-cooled, four-stroke cycle. Fitted with Dow metal pistons. 74 cu. in. model—bore 3 7/16 inches, stroke 4 inches, piston displacement 74 cubic inches. 61 cu. in. model—bore 3 5/16 inches, stroke 3 1/2 inches, piston displacement 60.34 cubic inches.

Carburetor—Schebler DeLuxe with air cleaner.

Transmission—Harley-Davidson three-speed progressive sliding gear with positive gear shifter locking device.



A 1928 JDH "two-cam." (Harley-Davidson Motor Company)

Lubrication—Harley-Davidson throttle controlled motor oiler provides proper lubrication at all motor speeds. Transmission lubricated separately. Twenty Alemite fittings.

Ignition—Harley-Davidson generator-battery.

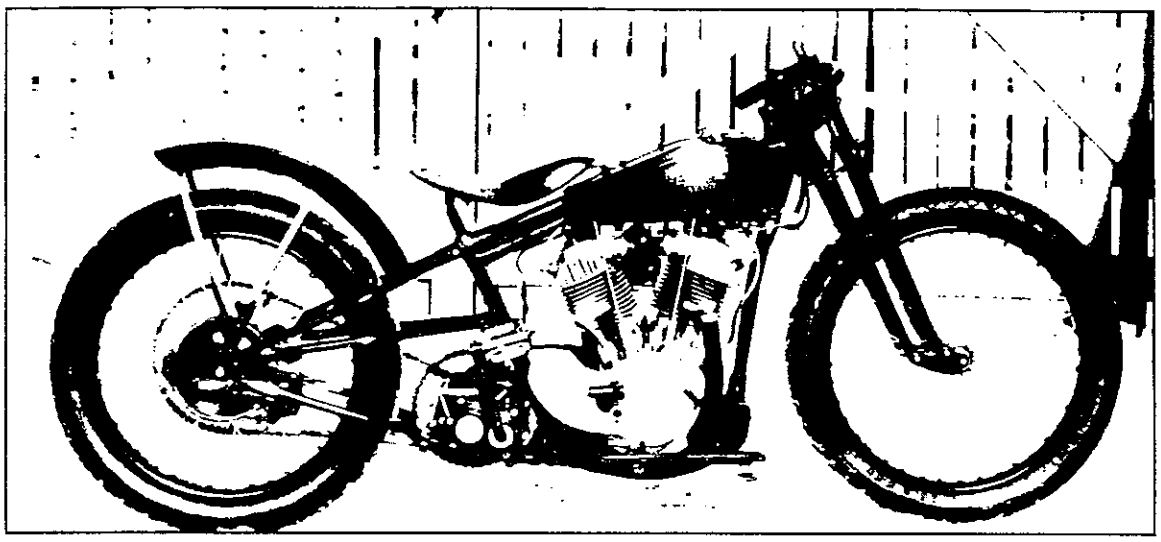
Electric equipment—Harley-Davidson generator, weather and waterproof coil, timer, 22 ampere hour storage battery, motor driven horn, two-bulb headlight, standard tail light, switch panel. Relay cutout in generator-battery circuit.

Starter—Harley-Davidson rear stroke on right side.

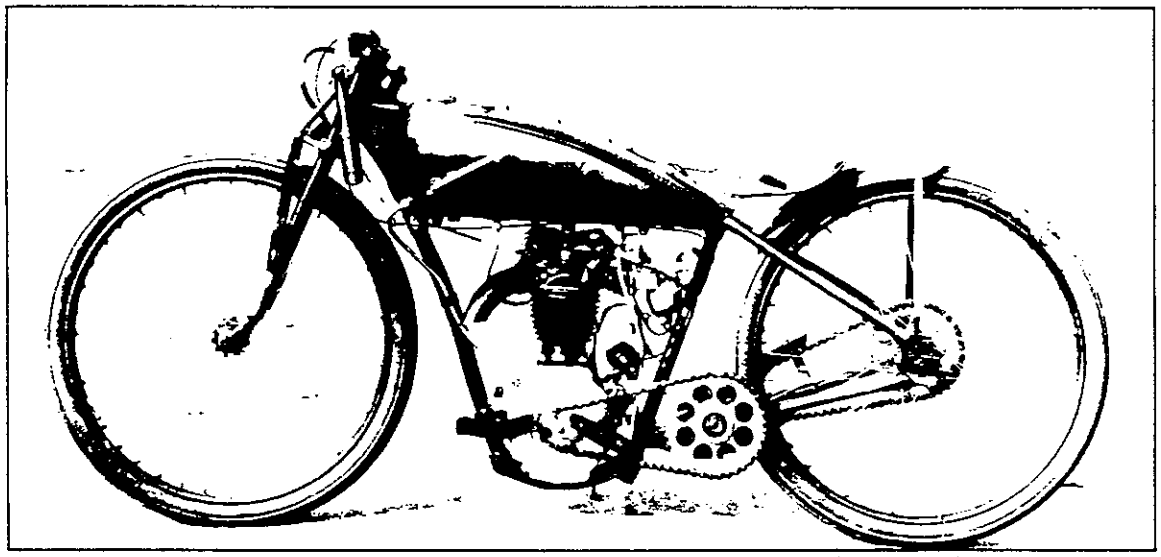
Clutch—Harley-Davidson multiple dry disc, foot operated.

Handlebars—Roadster type, one piece, one inch tubular, double stem with closed end grips. Regular style handlebars optional.

Frame—Strongly reinforced heavy gauge high carbon, seamless tubular steel with wide trussed loop. Drop forged steel head.



A twin-cam hillclimber from about 1925. The motor featured an overhead inlet valve and a side exhaust valve on each cylinder. (Harley-Davidson Motor Company)



The 1928 21 cu. in. overhead valve Peashooter, ridden successfully in professional races by Joe Petrali and others. (Harley-Davidson Motor Company)

Controls—Grip, double-acting wire controls enclosed in handlebars and cables. Toe operated compression relief.

Brakes—Harley-Davidson foot controlled contracting rear brake and built-in hand controlled expanding front wheel brake.

Driving chains—Roller, ⅝ in. pitch and ⅜ in. width.

Saddle—Large, roomy form-fitting Mesinger. Harley-Davidson adjustable spring seat post.

Tires—Full balloon, 25 × 3.85 inches. Standard 27 × 3.85 inch size optional.

Wheelbase—62 inches.

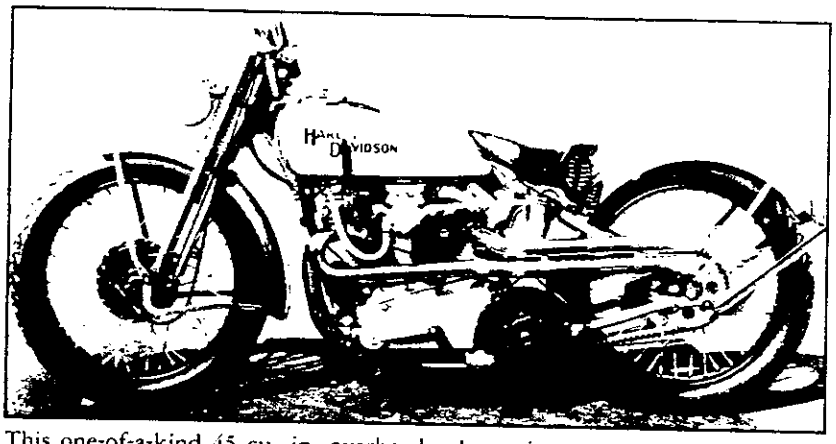
01190

Tanks—Narrow saddle type. Gasoline capacity 2½ gallons. Reserve gasoline tank, 1½ gallons. Lubricating oil tank, 1 gallon. Wide, standard capacity tank optional.

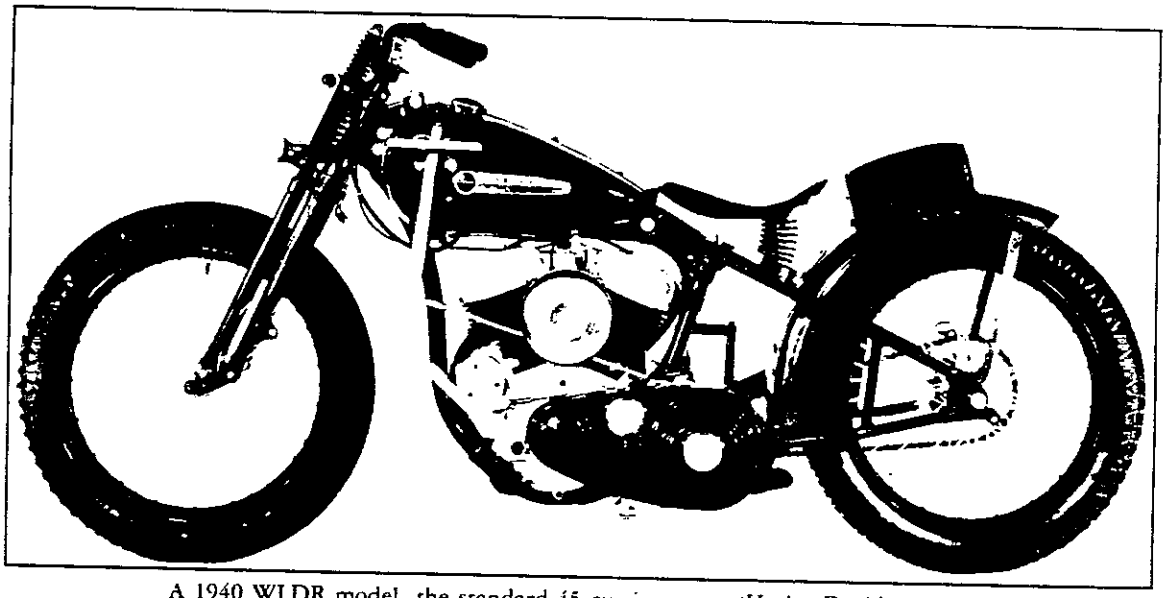
Footboards—Harley-Davidson folding.

Tool equipment—Complete tool and tire repair kit.

Finish—Harley-Davidson Olive Green with maroon stripe with gold center and edged in black.



This one-of-a-kind 45 cu. in. overhead valve twin was exported in 1930 for racing in Europe. It featured two exhaust pipes per cylinder (note exhaust on opposite side of machine, positioned to allow kick starting), front and rear drum brakes and a three-speed transmission. Such an extravagance was probably cut short by the Depression. (Harley-Davidson Motor Company)



A 1940 WLDR model, the standard 45 cu. in. racer. (Harley-Davidson Motor Company)

WR, WRTT
1940–1951

01191

As ungainly as they look today, the rigid-tail WR's gave a good account of themselves in the controversial years when the AMA allowed 750cc capacity for side valve machines, but just 500cc for overhead valve (i.e., foreign) bikes. The WR was characterized by a low compression ratio, another criterion used by the Harley-Davidson-dominated sanctioning body to keep the English vertical twins out of the winner's circle. The WR put out about forty horsepower; modest by modern standards but, when combined with the sheer numbers of Harleys on the track, quite enough. Hot shoes such as Paul Goldsmith and Jimmy Chann gave the WR a good ride while youngsters such as Joe Leonard and Everett Brashear cut their racing teeth on bikes like these. The WR's also were the overwhelming favorite of TT riders, who found that the frames were as reliable as the motors.

Specifications

(From a 1951 brochure)

Engine: 45 cu. in. side valve; bore, 2¾ in.; stroke, 3 13/16 in.; Dow metal or aluminum pistons. Wico vertical magneto, mounted on side of engine; or Wico horizontal magneto, mounted in front.

Frame: Special light frame, chrome molybdenum tubing (WR); Standard WL (WR-TT).

Tanks: Narrow, rubber mounted. Capacity, 1¾ gallons of gasoline and 1¾ gallons of oil (WR); large, rubber mounted tanks for long distance racing. Each side holds 2½ gallons of gasoline, can only be used with aluminum oil tank, part No. A 3501-41. Narrow rubber mounted tanks; hold 1¾ gallons of gasoline and 1¾ gallons of oil (tank choice on WR-TT).

Handlebar: Speedster bars, solid or rubber mounted.

Wheels: Special ball bearing hubs, no brake, 18 in. or 19 in. rim optional, Firestone tires, 4.00 × 18 or 3.25 × 19 (WR). Standard WL with brakes; 18 in. or 19 in. rims optional, Firestone tires, 4.00 × 18 or 3.25 × 19.

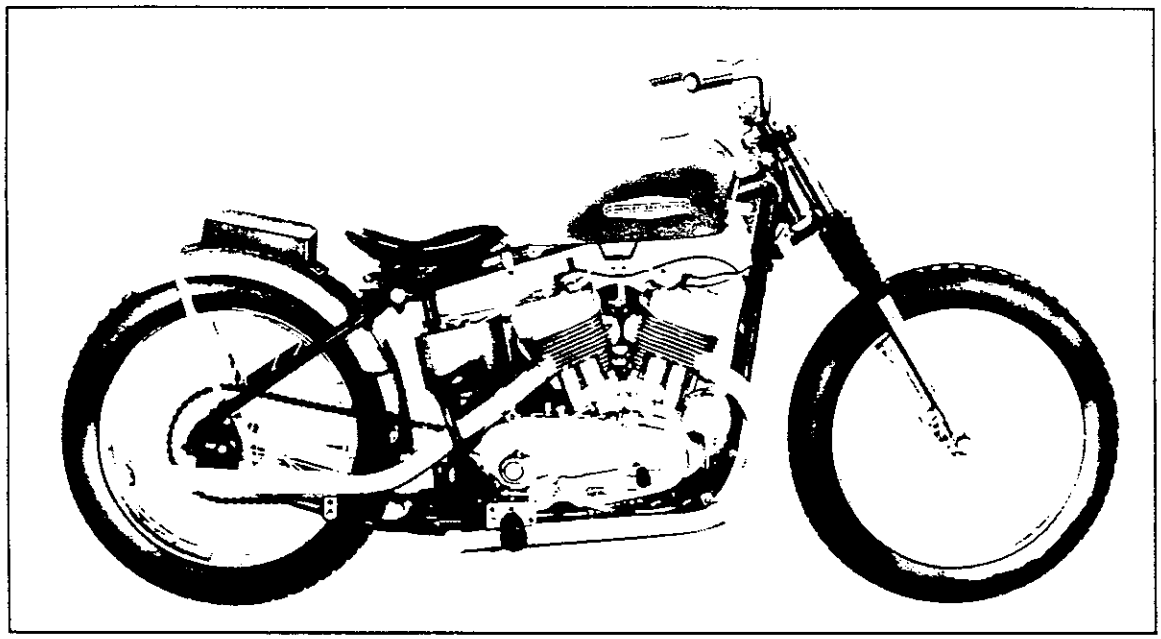
Transmission: ⅝-in. pitch clutch sprocket, standard or close ratio gears (WR); ⅝-in. or ¾-in. pitch clutch sprocket, standard or close ratio gears; ¾-in. pitch recommended for long distance racing only (WR-TT).

Front mudguard: Not supplied on track models (WR). Special front mudguard (WR-TT).

Rear mudguard: Special WR, special WR-TT.

Footpegs: Footpegs and Servi-Car-type clutch (WR). Footboards and side bars, standard WL (WR-TT).

Saddle: Special, no seat bar or seat post (WR). Special WR with standard WL seat bar and post (WR-TT).



A KR model, also 45 cu. in. (Harley-Davidson Motor Company)

Front chain guard: 1940 type outer, standard WL inner.

Tank pad: Furnished with large tanks only (WR-TT).

Gear ratio: ⅜-in. pitch front chain: 22, engine: 59, clutch: 17, countershaft: 39, rear wheel equals 6.15 to 1 (WR); ⅜-in. pitch front chain: 30, engine: 59, clutch: 17, countershaft: 41, rear wheel, equals 4.74 to 1 (WR-TT). 36, 37 and 38 tooth rear wheel sprockets furnished with WR. Other sprockets available as follows: 17 to 33 tooth ⅜-in. pitch engine sprockets and 15 and 16 tooth countershaft sprockets (WR); ½-in. pitch front chain: 45, engine: 45, clutch: 17, countershaft: 41, rear wheel, equals 4.52 to 1 (WR-TT). Other sprockets for WR-TT available as follows: 17 to 33 tooth ⅜-in. pitch engine sprockets: 14 to 25 tooth ½-in. pitch engine sprockets: 15 and 16 tooth countershaft sprockets: 42 tooth rear wheel sprocket and brake shell assembly.

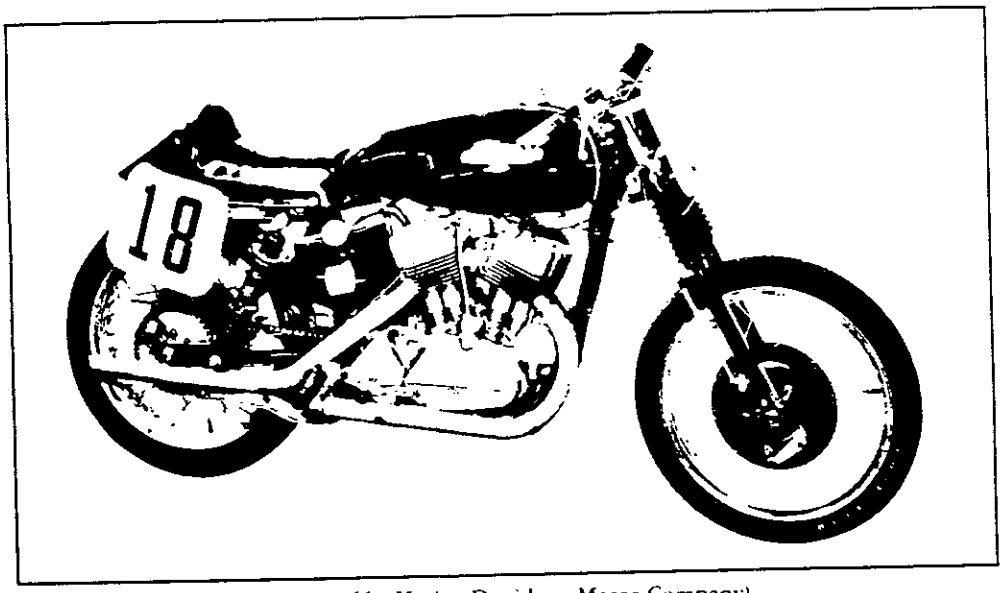
Colors: Brilliant black, ruby red and riviera blue at no extra cost. Available at extra cost: metallic green, flight red, azure blue, white.

KR, KR-TT
1952-1969

The KR is the bike all the experts tried, year after year, to bury. And year after year, riders such as Carroll Resweber, Bart Markel, Mert Lawwill and others continued to win on the supposedly outmoded side valve machine. The specs indicate that the KR's were 750cc machines. That wasn't the case. As delivered to the customer ($1,320 for the dirt-tracker, $1,425 for the road-racer, in 1966), the motor measured 744cc. Following 200 miles of break-in, however, the cylinder barrels distorted and had to be rebored. The AMA permitted racers to be 0.045 in. oversize, so the eventual size of the engine was 767cc.

The AMA also was responsible for the demise of the bike, since it ruled in 1969 that European bikes no longer had either a compression or a displacement limitation. Prior to 1970, the KR 750 side valve competed against the 500cc overhead valve Triumph, BSA, Matchless and Norton, as had its predecessor, the WR. In addition to producing almost twice as many horses per cube, the English bikes handled infinitely better, particularly on TT and road courses.

The differences between Harley-Davidson's TT-designated road racer and the flat-track bike were few but significant: The road racer ran inert gas shocks as opposed to a



The KR in road racing trim, 1966. (Harley-Davidson Motor Company)

solid rear end, it showed up with a six-gallon gas tank and its pavement wheels and tires were daintier than the broadsliding KR. Top speed of the bike at its peak exceeded 150 miles an hour, as clocked on the high banks of Daytona International Speedway. That held up until about 1967, when the British bikes ran with and then away from the H-D team on the straights. The English riders had an even greater advantage on the several tight road courses—Laconia, Marlboro (Maryland), Nelson Ledges (Ohio)—where Nationals were held. No one ever merely flicked a KR-TT from side to side in an S-turn. The large, heavy machine was a chore to ride. After breaking-in on KR's, Cal Rayborn was able to handle the new XR with ease. Still, this bike won national championships for the factory for twelve of its seventeen years. Not bad for an "obsolete" machine.

Specifications

Motor: 744cc side-valve V-twin, bore 2.747 in., stroke 3.8125 in., compression ratio 9:1, horsepower 48 at 7,000 rpm. Torque, 50 lbs. ft. at 5,000 rpm. Linkert carburetor with 1.312 in. bore.

Frame: Chrome moly seamless steel tubing, 1 in. outside diameter, .262 in. wall. Duplex cradle.

Wheelbase: 56 in.

Suspension: Telescopic front forks; inert gas shock absorbers (KR-TT only).

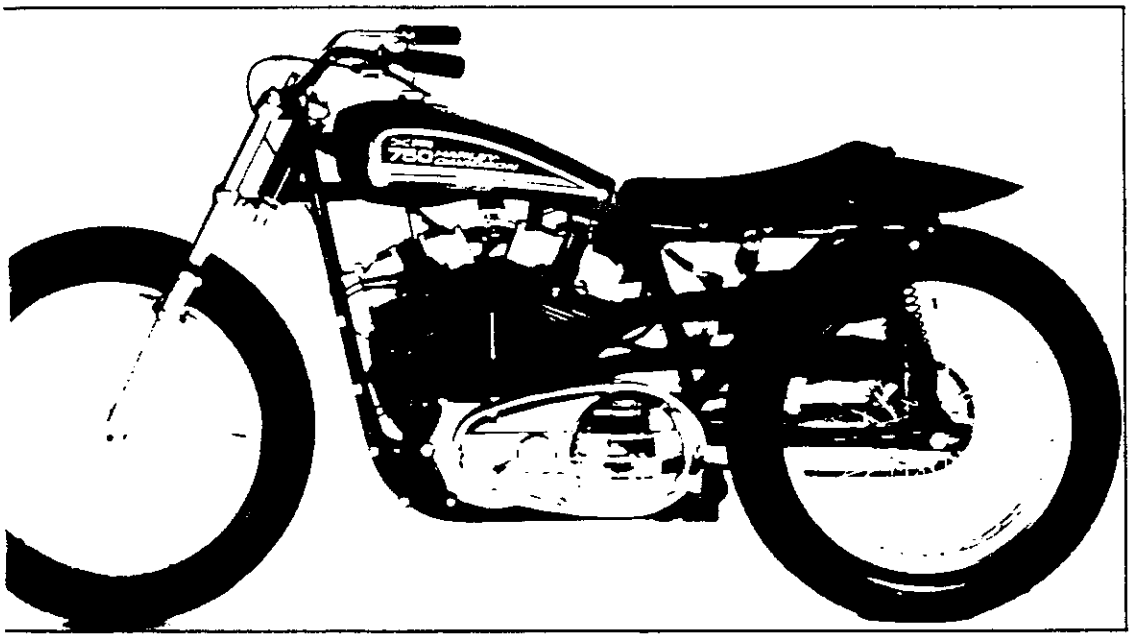
Ignition: Fairbanks-Morse magneto.

Brakes: 8 in. × 1½ in., front and rear, 50.3 sq. in. braking surface (no brakes on KR).

Weight: 385 lbs. (KR-TT); 377 lbs. (KR)

XR750
1970–

A leading cycle magazine has called the XR750 the most successful dirt-track racer of the decade. As time passes, that becomes an understatement. Nineteen eighty-seven marks the eighteenth year that riders, independent as well as factory-sponsored, have chosen the very narrow bike with the destroked 880cc Sportster engine for battle on the Grand National tracks.



The XR750, dominant on dirt for more than a decade. (Harley-Davidson Motor Company)

Introduced in 1970 with iron barrels, the XR suffered through that season and the next before aluminum cylinders and cylinder heads were perfected and installed. Since then, except for a brief period when Yamaha proved that there could be a bike created that was too dangerous to race, the XR750 has been the overdog on everything but pavement. In the hands of Cal Rayborn, the machine even chalked up significant road racing victories, notably at Daytona and London, before being edged out by the peaky, Oriental, water-cooled two-strokes. The similarities and differences between the iron-barreled and aluminum-barreled machines deserve closer scrutiny.

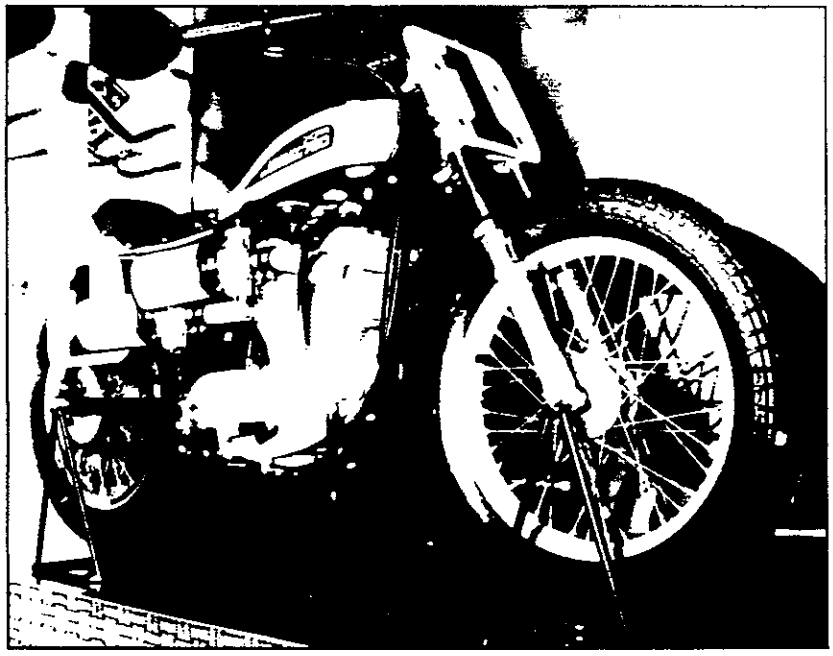
The most obvious difference, from a distance, concerns the exhausts. The earlier model featured a pair of straight pipes painted silver that exited right. The new model sports flat-black megaphones carried high on the left side of the machine to avoid contact with the dirt on mile, half-mile and TT tracks.

Both bikes are equipped with Ceriani forks and Girling racing shocks, proof that this selection was correct from the start. The suspension is hooked to identical frames of welded, tubular 4130 steel. (The first 100 XR frames, incidentally, were furnished by an outside supplier from St. Louis.) Both display aluminum rims and spoked wheels. The earlier model was delivered with a Pirelli tread on the front wheel and a Goodyear on the back. Recent thinking favored Goodyear on both ends.

Internally, valves, pistons and cams are polished and valve stems are chrome plated on both machines. The later version carries an enlarged flywheel, probably because the motor turns out approximately 90 horsepower, versus 70 for the iron-heads.

Pieter Zylstra, product designer for the racing department, notes that another major difference is the compression ratios. "We had to run very low compression—about 8 to 1—for the [iron-head] engine to stay together. The motor had a shorter stroke and larger valves than the aluminum motor. It was fast but not reliable." Compression for the aluminum engine is 10.5 to 1.

What's riding an XR750 like? The first clue after straddling the machine is provided by the bike's size—or rather its lack of size. The XR750 is by far the smallest Harley-



The mighty XR750, as displayed at York. (David Wright)

Davidson currently in production. The second hint is the utter lack of any sort of starting mechanism. Run-and-bump starting is the order of the day. As soon as the engine thumps to life, the rider realizes his right hand is much more lethal than usual. That's because the throttle goes from nothing to everything with only one-quarter turn. There's a rear disc brake, but engine compression is more frequently used to scrub off speed on the way toward a corner. The power band is as wide as any bike in existence: the XR pulls strongly from 2000 rpm on up. Since it produces 90 horsepower, you'll have to ask a racer what it's like flat out.

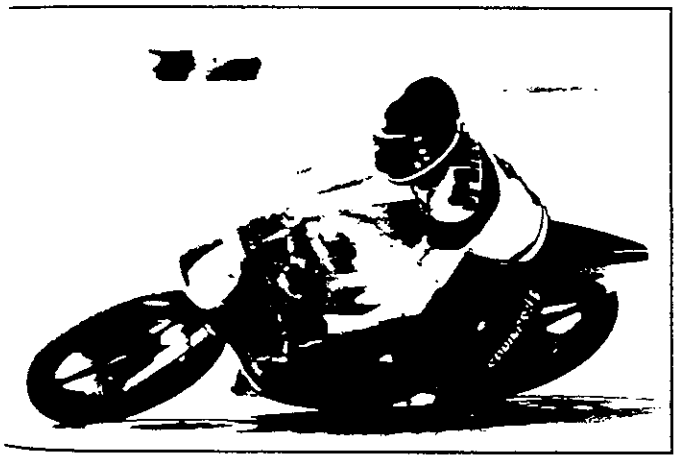
Specifications

Engine type: OHV V-twin.
Carburetion: Dual 36mm Mikuni carburetors.
Exhaust system: Tuned dual exhausts with reverse-cone megaphones.
Bore and stroke, inches: 3.125 × 2.983.
Displacement: 45 cu. in (752cc).
Clutch type: Multi-plate, dry.
Primary drive: 25-tooth motor sprocket, 59-tooth clutch, triple row roller chain.
Rear drive: 16-tooth transmission sprocket, 40-tooth rear wheel sprocket.
Drive ratio, overall: 5.92:1.
Transmission: Constant mesh, four-speed.
Transmission ratio: 1st, 2.291:1; 2nd, 1.51; 3rd, 1.14; 4th, 1.00.
Weight: 290 lbs.
Tire size, front and rear: 4.00 × 19.
Gas capacity, gallons: 2½.
Oil capacity, quarts: 3.
Electrical equipment: Fairbanks-Morse magneto.
Color: Jet Fire Orange.

Aermacchi/Harley-Davidson RR-250, RR-350
1971–1976

The Aermacchi/Harley-Davidson RR-250 and RR-350, in the hands of Walter Villa, proved to be world beaters. Like most front-running Italian bikes, they featured bits and pieces from all over—Dunlop tires and Girling forks from England, Mikuni carburetors from Japan and Ceriani forks, Borrani rims and Dansi ignition from around the block. The bikes' only drawback, in air- or water-cooled configuration, proved to be the brakes. Initially, the drums were very good, but drums nevertheless, at a time when discs were seen on most competing 250's. Like many things associated with Italian machinery, there was a reason for the drums: The maker paid A·H-D to use them.

Villa overcame early braking points to win three 250 world championships, in 1974, 1975 and 1976, on board the machine. The following year, he snagged the 350 world title. All that is quite a feat for a company that built its first-ever two-cycle engine in 1967. The bike enjoyed some success stateside, tóo, ridden by Cal Rayborn, Gary Scott and others.



Jay Springsteen is a capable road racer. He finished sixth on this outgunned Aermacchi/H-D in the 1978 250cc Daytona 100-miler. (Harley-Davidson Motor Company)

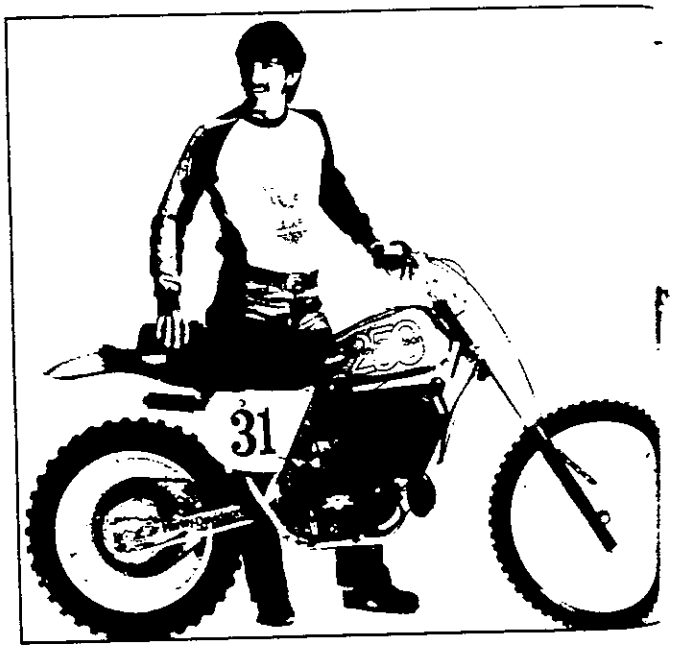
But U.S. racers and fans showed a preference for bigger-bore equipment, despite 58 horsepower at 12,000 rpm for the 250 and 70 horses at 11,400 for the 350. Since these bikes were all constructed by hand, specs differed from one machine to the next. The switch to disc brakes up front took place prior to the 1976 season.

Specifications: 250cc dated 1972

Engine type: Two-cycle, liquid cooled twin.
Bore: 2.213 in.
Stroke: 1.968 in.
Displacement: 15 cu. in. (248.06 cc).
Compression ratio: 11.33:1.
Clutch type: Multi plate, dry.
Primary drive: Helical gear, 2.438:1.
Final drive: Chain.
Transmission gear: 16 teeth.
Rear wheel gear: 46 teeth.
Drive ratio: 6.427:1.
Transmission: Six-speed, constant mesh.
Transmission ratio: 1st, 2.00:1; 2nd, 1.527; 3rd, 1.286; 4th, 1.087; 5th, 0.958; 6th, 0.917.
Front suspension: Ceriani forks.
Rear suspension: Girling 3-position shock absorbers.
Front brake: Twin double leading shoe.
Rear brake: Double leading shoe.
Carburetor: Twin 34 mm Mikuni.
Tire size, front: 3.00 18 in. Dunlop.
Tire size, rear: 3.00 3.25 18 in. Dunlop.
Dry weight: 230 lbs.
Fuel capacity: Six gallons (pre-mix).
Oil capacity: Two quarts.
Ignition: Dansi or CDI.
Color: Jet fire orange and black w/ white number plaques.

Aermacchi/Harley-Davidson MX-250
1977–1978

The Aermacchi/Harley-Davidson, manufactured in 1977 and 1978, remains a potent motocross or dirt-track machine in the hands of a good rider. Jay Springsteen showed how good he and a bike with an MX-based motor were in 1982 when he won the short-track event to kick off the season's AMA/Winston Pro Series in the Houston Astrodome. It should be remembered that, for every MX bike raced, there were dozens of

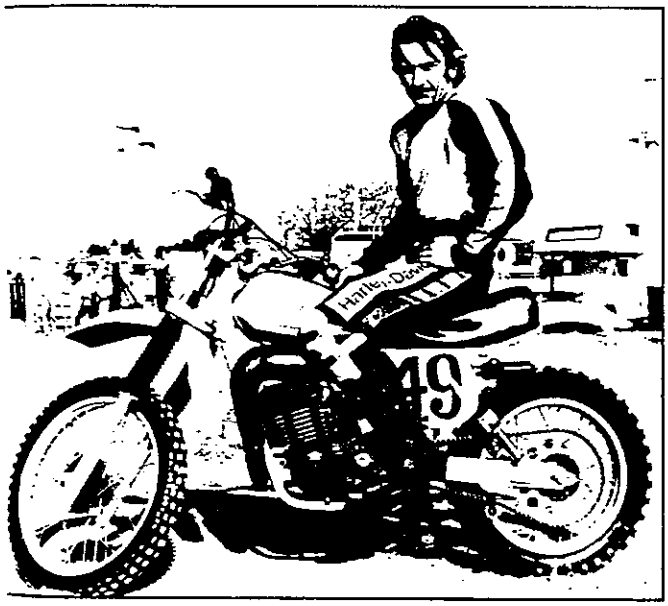


Aermacchi/H-D produced a potent motocrosser, the MX-250. Rex Staten rode for the factory team in 1977. (Harley-Davidson Motor Company)

the four-stroke Sprints on short tracks and in scrambles, proving once again how prone street-stock H-D's—even foreign models—were to racing.

Specifications MX-250, MX-250 Dirt Tracker

Overall length: 83.6 in. (212.5 cm).
Handlebar width: 34.2 in. (87 cm).
Ground clearance: 12 in. (30.5 cm).
Wheelbase: 57.3 in. (145.5 cm).
Dry weight: 233 lbs. (105 Kg).
Steering angle: 45 degrees.
Rake: 30 degrees.
Trail: 5.5 in. (140 mm).
Front suspension: Telescopic oil dampened, 8.9 in. (225 mm) travel.
Rear suspension: Swinging arm, coil spring, oil dampened.
Front wheel tire: 3.00 × 21 in.
Rear wheel tire: 4.50 × 18 in.
Front brake: Internal expanding, single leading shoe type, inside diameter 140 mm.
Rear brake: Internal expanding, single leading shoe type, inside diameter 140 mm.
Rims: Akront, shoulderless light alloy.
Spokes: 36 per wheel, 4 mm diameter.
Transmission: 2½ pints (1,200cc). Fuel tank: 2.2 gals. (8.5 liters).
Front forks: 7 oz. (wet) each side (210cc).
Model designation: MX.
Type: Two cycle, single cylinder.
Bore: 2.835 in. (72 mm).
Stroke: 2.346 in. (59.6 mm).
Displacement: 14.81 in. (242.6cc).
Compression ratio: 11.8 to 1.
Lubrication system: Fuel and oil mixture, 20:1.
Starter system: Primary kick starter.
Type: Capacitor discharge Dansi or CDI Motoplat.
Ignition timing: .280 in. (18 degrees, 2 mm) before TDC.
Trigger air gap: (Dansi: .212-.216 in.) .30-.40 mm.
Spark plug: Champion N59G.
Plug gap: .020 in. (.5 mm).
Dell'Orto carburetor (not included) type: PHB E 38.
Venturi diameter: 1.496 in. (38 mm).
Main jet: 170.
Low speed jet: 70.
Mikuni carburetor (not included) type: Vm-38.
Venturi diameter: 1.496 in. (38 mm).
Main jet: 320.
Needle (middle position): 6CF1.
Needle jet: Q0.
Slide: 2.0.
Needle valve: 3.3.
Air jet: 1.2.
Pilot jet: No. 45.
Clutch: Wet, multi plate.
Primary drive pinion gear: 22 teeth.
Primary drive clutch gear: 60 teeth.
Primary ratio: 2.73.
Gear ratios: 1st, 14/27; 2nd, 18/28; 3rd, 21/26; 4th, 21/21; 5th, 23/19.
Gearshift pattern: One down, four up.
Transmission sprocket: 13-, 14-, 15-, 16-tooth supplied.
Chain type: ⅝ × ⅜ in.
Fuel-oil recommendation: SAE 30 viscosity racing oil, mixed one part oil to twenty parts high-octane, leaded gasoline.



Team H-D motocross rider Don Kudalski. (Harley-Davidson Motor Company)

XR1000
1983-1984

Whenever enthusiasts believe they've seen all the tricks in the Juneau Avenue bag, along comes a machine such as the XR1000. This XR750-inspired, XL-based street bike and AMA Battle of the Twins road racer was developed in just sixty days in the fall of 1982, allowing H-D to meet AMA rules by producing 200 such bikes in time for the 1983 racing season.

The $6,800 bike boasts 70.6 horsepower at 5,600 rpm (versus 56 on a stock XL). Peak torque is 71.4 ft.-lb. (versus 58 for the XL). And with high-performance kit parts from the factory, 90 horses becomes a reality. Power emanates from XR aluminum heads and rocker boxes, high-compression (9:1) aluminum XR pistons, Branch Flowmetrics heads, a redesigned combustion chamber and port area, plus dual Dell'Orto slide carburetors and XR-style megaphone exhausts.

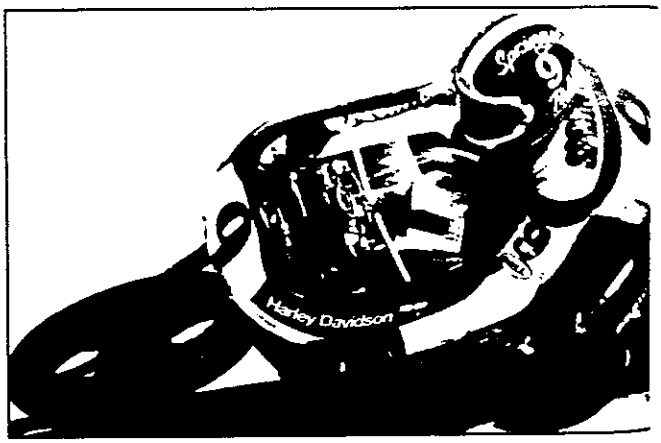
The frame is 100 percent XL, though a number of performance adornments have been added. Dunlop K291 Sport Elite tires, dual front 11½ in. disc brakes up front, an 11½ in. rear disc, flat-track bars and 2.5-gallon fuel tank add up to a dry weight of just 480 pounds. Performance options include higher compression ratio pistons, special cams and special exhausts.

Dick O'Brien, former racing director, oversaw the quick, quality work. The bike in the hands of Jay Springsteen handily won the Battle of the Twins contest at Daytona in March 1983.

Specifications

Wheelbase: 60.0 in.
Seat height: 29.0 in.
Tire size, front: MM90V-19* (100/90V-1)
Rake: 29.7 degrees
Overall length: 87.7 in.
Ground clearance: 6.8 in.
Tire size, rear: MT90V-16* (130/90V-1)
Trail: 4.5 in.
Engine type: OHV V-Twin
Bore & Stroke: 3.189 × 3.812 in.
Oil capacity: 2.5 qt.
Carburetion: Dual 36mm slide Dell'Orto
Ignition: V-Fire III electronic breakerless
Clutch: Multiplate oil bath
Primary drive: Triple chain
Gear ratios, overall: 1st, 10.22; 2nd, 7.25; 3rd, 5.49; 4th 3.97
Brake, front diameter × width (x2): 11.5 × .20 in.
Front brake swept area: 99.5 in.
Braking distance @ 60 mph: 145 ft.
Suspension travel, front: 6.9 in.; rear: 3.25 in.
Dry weight: 480 lbs.
Wheels: 9-spoke cast aluminum
Headlamp: Quartz Halogen, 50-watt high beam
Color options: Slate gray/silver striping
Electrical system: 12-volt battery, 19-amp-hour, generator-13 amp, coil, regulator, headlight, taillight, turn signals, stoplight, horn; entire system meets or exceeds all state and federal regulations for lighting, electric start.

*Dunlop K291 Sport Elite.



Jay Springsteen ate up the competition, winning the 1983 Daytona Battle of the Twins race with top speeds of 167 mph. (Harley-Davidson Motor Company)

Displacement: 1000cc 61 CID
Compression ratio: 9.0:1
Fuel capacity: 2.25 gals., reserve: .25 gals.
Exhaust system: Left-side, high megaphone dual
Cam: Q cam
Transmission: 4-speed, constant mesh
Final drive: Single chain
Primary drive ratio: 1.74
Final drive ratio: 2.29

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Torque: 71.4 ft. lbs @ 5600 rpm
Brake, rear diameter × width: 11.5 × .23 in.
Total brake swept area: 198.5 sq. in.
Lean angles (SAE J1168):
Right: 37 degrees
Left: 36 degrees
Optional equipment: 18 inches mag rear wheel, 3.3-gal. gas tank
GVWR: 900 lbs.

What kinds of people race motorcycles? Few have ever gone racing for the money: it simply isn't there. Fewer still have any conscious desire for fame or glory, though fame and glory are the assets and can be the liabilities of winning. Not one racer in anyone's memory ever thought he would end up in the ambulance, so death wishes can be ruled out. What's left is the rush riders receive from competition, from playing a game made fast far beyond human power by means of an internal combustion motor. The first group of riders to race Harley-Davidsons with major success was The Wrecking Crew. That included, at various times, factory riders Eddie Brinck, Jim Davis, Walter Higley, Ralph Hepburn, Irving Jahnke, Maldwyn Jones, Fred Ludlow, "Red" Parkhurst, Otto Walker and Ray Weishaar. Created following a poor showing by Harley-Davidson in the 1914 Dodge City, Kansas, road race, The Wrecking Crew all but owned the dusty road courses until 1921, when H-D opted out of racing for economic reasons.

Far from being motorcycle bums, these riders frequently possessed an advanced degree of mechanical knowledge and held full-time jobs off the track. Typical was Eddie Brinck, the Dayton, Ohio, native who raced for fifteen years while a foreman with the U.S. government motor testing department at McCook Aviation Field. Brinck applied what he learned on the job (internal combustion engines were still relatively new) to his cycles. In addition to scoring significant victories here, he took the single-cylinder H-D Peashooter to Australia in 1926 and recorded several wins. A family man, he died August 13, 1927, when a tire blew in the first lap of a Springfield, Massachusetts, event.

The original Harley-Davidson Wrecking Crew, a group of racers who overwhelmed the competition in the late teens. (Harley-Davidson Motor Company)

Brinck was one of numerous brilliant riders discovered by Bill Ottoway, an engineer recruited from the Thor motorcycle company by Harley-Davidson in 1913. Ottoway was a capable engineer, a shrewd assessor of talent and, according to contemporaries, as trusting as he was honest. On one occasion, when Gene Walker's Indian ran suspiciously fast to sweep a series of events, Ottoway was asked by race officials if he wanted the competing motor torn down. "If Indian says the motor is OK, it's OK," he replied. One indication of H-D's stability is that just three men—Ottoway, Hank Syvertson and Dick O'Brien—have run the racing department in the company's seventy years of competition.

Ottoway watched a number of his riders come and go, including Otto Walker and Ralph Hepburn. Both Wrecking Crew members, the pair ran board and horse tracks as factory riders and as independents. Walker capped a stunning career in 1921 by winning a fifty-mile race at the San Joaquin, California, speedway in 29 minutes, 34.6 seconds (101.43 miles per hour) and posting one lap in excess of 109. All this was accomplished on a 61 cu. in. machine. In contrast to Walker, who retired to the safety of a charter fishing boat, Hepburn competed until 1948 when, at the age of fifty-one, he died at the wheel of the infamous Novi racer at the Indianapolis Motor Speedway.

Sadly, death was common in the early years, as riders donned cloth caps at worst and gauze-and-airplane dope helmets at best for 100-plus-mile-an-hour competition. Besides Brinck, racing has claimed H-D riders Walter Stoddard, Tommy Hayes, Billy Huber, Dick Ince, Cal Rayborn, Renzo Pasolini and most recently, Willie Crabbe, among many others. Automobiles, through the years, have also taken a toll, off the track (Fred Nix) and on (Hepburn and David "Swede" Savage). Joe Leonard, first of the modern national champs, was disabled after a successful career on four wheels. Still, racing seems almost natural.

H-D recorded victories all over the world in the twenties, in the hands of U.S. and foreign riders alike. In England, D. H. Davidson (not related to the company) exceeded 100 miles an hour as early as 1920 in a speed run, and Fred Dixon won numerous solo and sidecar races. Grass tracks were popular in Australia and New Zealand, and Harley-

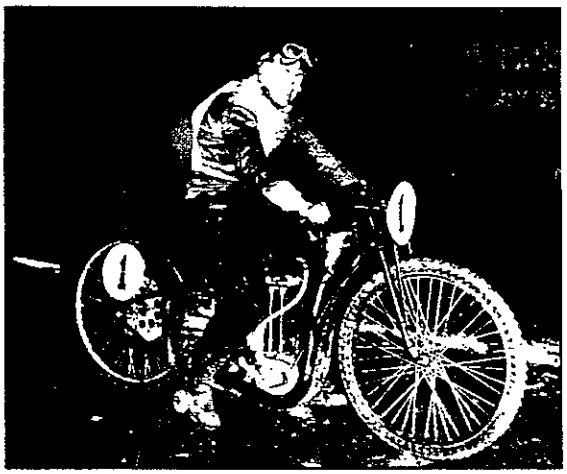
Oscar Lenz, seen here at a New Jersey endurance run, won the Jack Pine event six times and tied a seventh between 1923 and 1936. (Harley-Davidson Motor Company)

Davidson scored well there. Yet another surface, ice, was favored in Scandinavia by little-known but highly talented Erik Westerberg. He averaged an incredible 87.561 miles an hour in winning a 1923 ice race aboard his eight-valve machine. And in 1930, Olle Virgin captured a dirt-track series run in Sweden and Denmark by posting average speeds as high as 111.78 miles an hour on an overhead valve 45 cu. in. machine. Clearly, the world's largest manufacturer was well-represented on the world's starting lines.

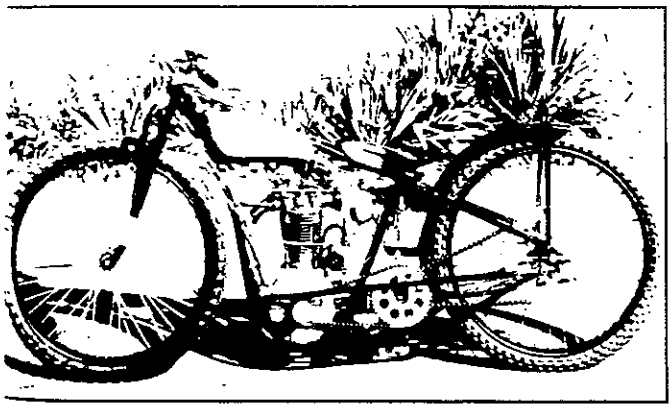
While Harley-Davidsons were winning speed contests, they were faring equally well in various endurance runs. Less than a decade after Walter Davidson's Long Island endurance win, Alan Bedell ran 1,000 miles nonstop at Ascot Park. He averaged 48.3 mph for nearly twenty-one hours, a creditable speed for 1917. History failed to record the kind of H-D beneath Bedell, but notes that he also set a twenty-four-hour mark (48.1 mph), a 500-mile world record (50.1 mph) and a record for 12 hours (49.5 mph). Almost simultaneously, C. F. Bruschi and Walter House set a 1,000-mile record for sidecars, pushing their H-D to an average speed of 48.42 mph in less than twenty-one hours.

As U.S. roads improved, riders began to challenge each other from one point to another. Walter Hadfield repeatedly lowered the elapsed time from Vancouver to Tiajuana in what became known as the Three Flags Run. Hap Sherer, aboard a Sport Twin, rode from Denver to Chicago in 1920 in about 48 hours (averaging 26.4 mph). And while racer Otto Walker was posting flying-mile world records at 112-plus mph, Canadian H-D distributor Fred Deeley and friends were setting a world economy record; they rode from Vancouver to Tiajuana in 1926 averaging 104.67 miles per gallon of fuel and 1,234.7 per gallon of oil. But the king and queen of the endurance riders were Earl and Dot Robinson.

The Michigan Harley-Davidson dealer twice lowered the time and upped the speed needed to run between Los Angeles and New York. Earl toured the 3,000 or so miles solo in 77 hrs., 53 min. in 1935, then teamed with Dot to cover the same wide-open space in a sidecar in 86 hrs. 55 min.



East Coast speedway star Goldy Restall on the cinder-track CAC model. Just ten of these machines were made, in late 1933 and early 1934, for combat with highly specialized English bikes, according to company records. (Harley-Davidson Motor Company)



Another view of the 1934 CAC model. (Harley-Davidson Motor Company)

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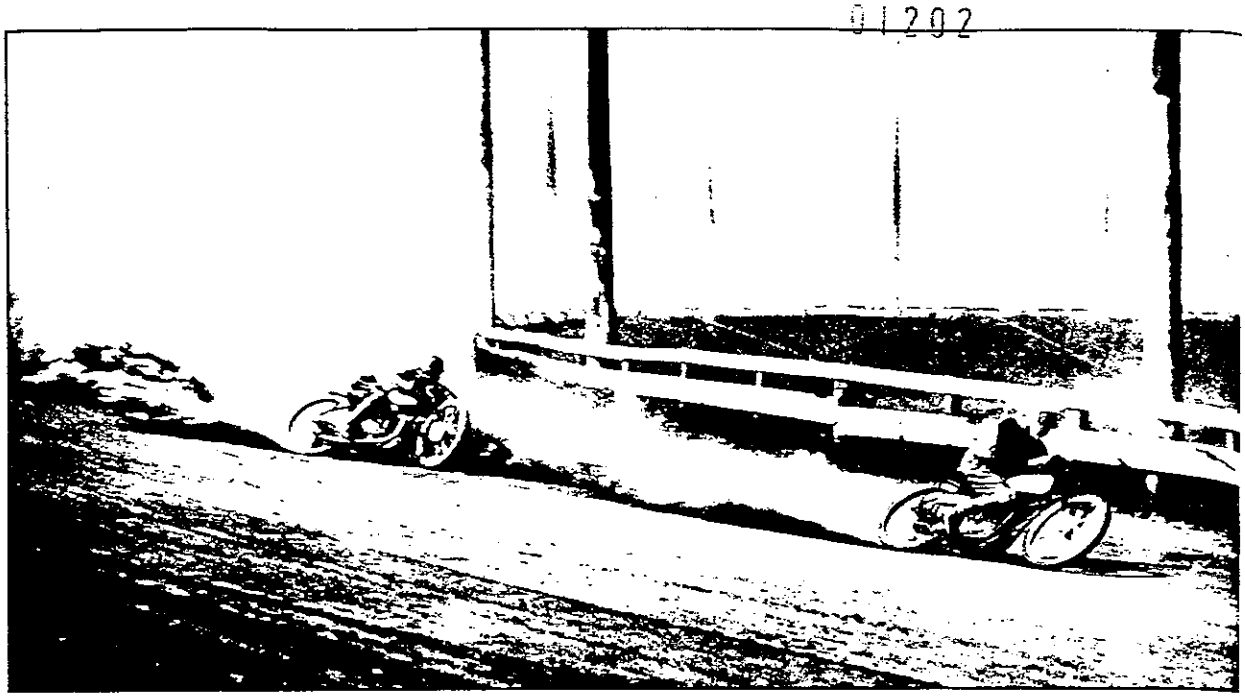
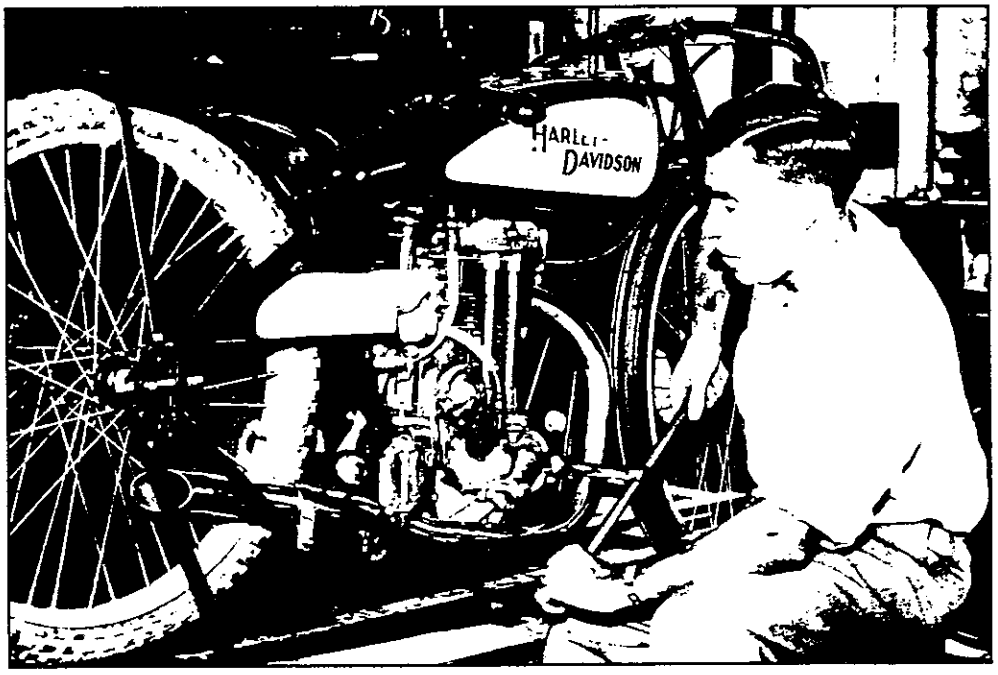


Petrali leads Indian-mounted Lou Balinski during the 1935 three-mile national at Reading, Pennsylvania. This was one of Petrali's 13 consecutive victories. (Harley-Davidson Motor Company)



Joe Petrali readies his motor at the factory for the Milwaukee races in 1936. Taped iron bar protruding from in front of seat served as a thigh brace for riders on the rough dirt tracks. (Harley-Davidson Motor Company)

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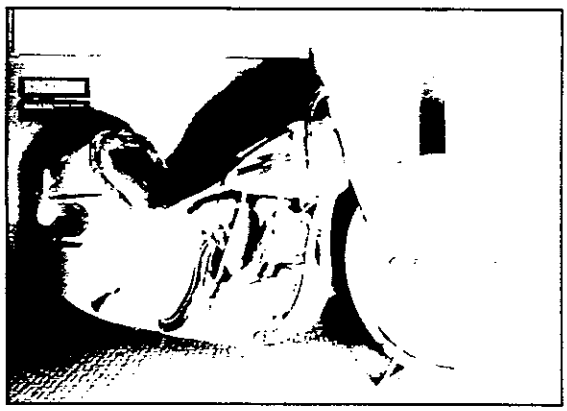
Following World War II, time trials and drag racing became popular, with Bonneville producing records year after year. Privateers who did well in Utah included Jack Dale, who in 1951 ran 123.52 mph on a 45 cu. in. side-valve H-D; and Jack Heller, who took a 55 cu. in. Sportster to a speed of 134.881 mph on the salt in 1958. And by 1971, several drag racers on single-engine H-D's had broken the nine-second barrier for the quarter mile.

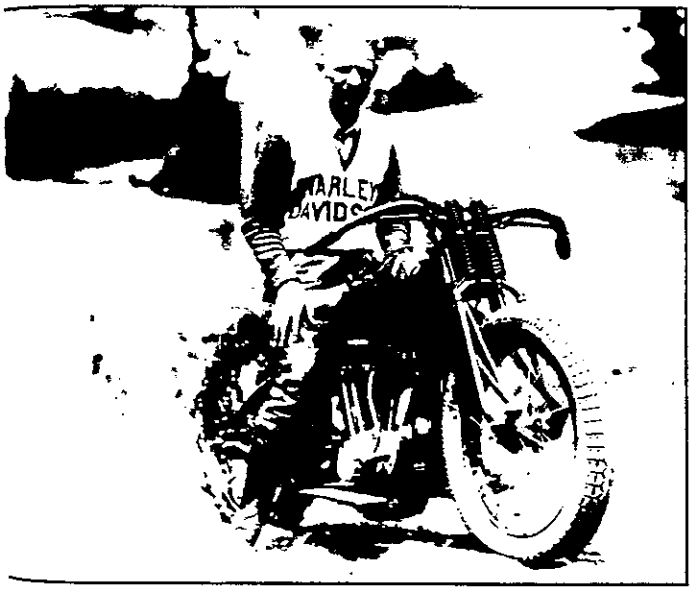
No one aboard a Harley-Davidson attracted more attention during the period 1925–50 than Windy Lindstrom. The Californian won more than 300 hillclimbs at a time when climbs attracted large crowds at the foot of virtually any hill worthy of the name. While less successful "slant artists" played games with elongated frames, Lindstrom stuck with standard 45 or 74 cu. in. H-D hillclimbers with special gearing, a rear-wheel chain and a kill button. He attributed his success to using the same throttle opening all the way up the hill, tapping the kill button for a split second whenever the front end of his machine threatened to head where it came from.

Movietone newsreels showed Lindstrom and others astride their bucking bikes, a strip of leather running from the right wrist to the spark plug contact points in the electrical circuit. Lindstrom rarely departed his bike anywhere but at the end of his run; but when he did, the leather strip was yanked from between the points, grounding out the motor. Such a precaution prevented a riderless bike from veering into the crowd that lined the hill.

There were good riders aplenty in the thirties, though the economy and lack of national news coverage might have indicated otherwise. East Coast honors were upheld

Joe Petrali's 1936 Knucklehead record breaker, as displayed in the Rodney C. Gott Museum, [illegible]k. The "fairing" was constructed from a gasoline tank. The machine is painted an unusual color—light blue. (David Wright)



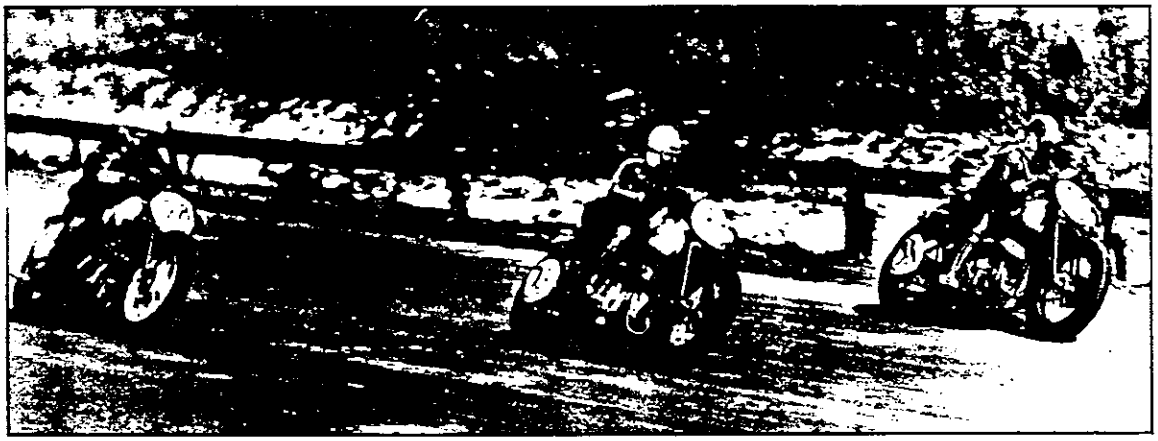


"Windy" Lindstrom, a top thirties hillclimber. (Harley-Davidson Motor Company)

by Arthur "Babe" Tancrede and Ben Campanele, who were superb on road courses such as Laconia and Daytona Beach, and Goldie Restall, who did battle on cinder-track speedways. Out West, Lindstrom, Sam Arena, "Sprouts" Elder, Jack Cottrell, Joe Herb and Milton Iverson starred in hillclimbs, TT's and flat tracks, with Arena winning from 1934 until after 1950 in one of the most versatile careers of all time. Midwesterners Herb Reiber and Paul Goldsmith were joined after World War II by Roger Soderstrom and Leo Anthony, while down south such names as June McCall, Herman Dahlke and Buck Brigance were to be reckoned with. These and others seldom made the sports section but were seen regularly in faithful racing coverage by *The Enthusiast*.

Not even H-D's owner magazine covered the so-called outlaw races in the thirties, though H-D frequently was the most common machine on the track. Bob Holder, now retired and living in Lincoln, California, reports that "you could ride whatever you

Petrali goes up . . . and over the Hornell, New York, hill during a 1938 climb. He's on a 45 cu. in. twin. (William H. Davidson collection)

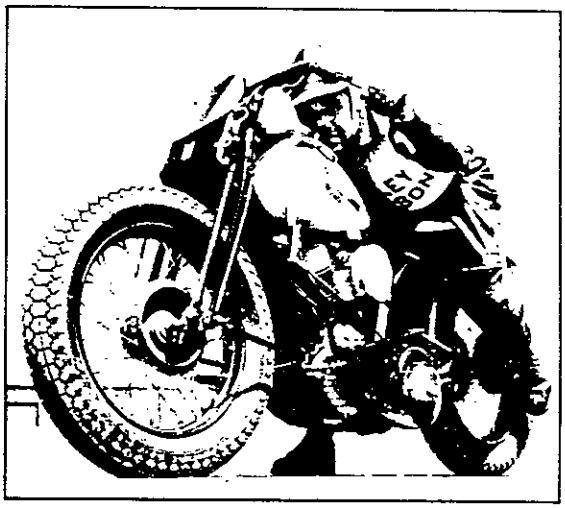


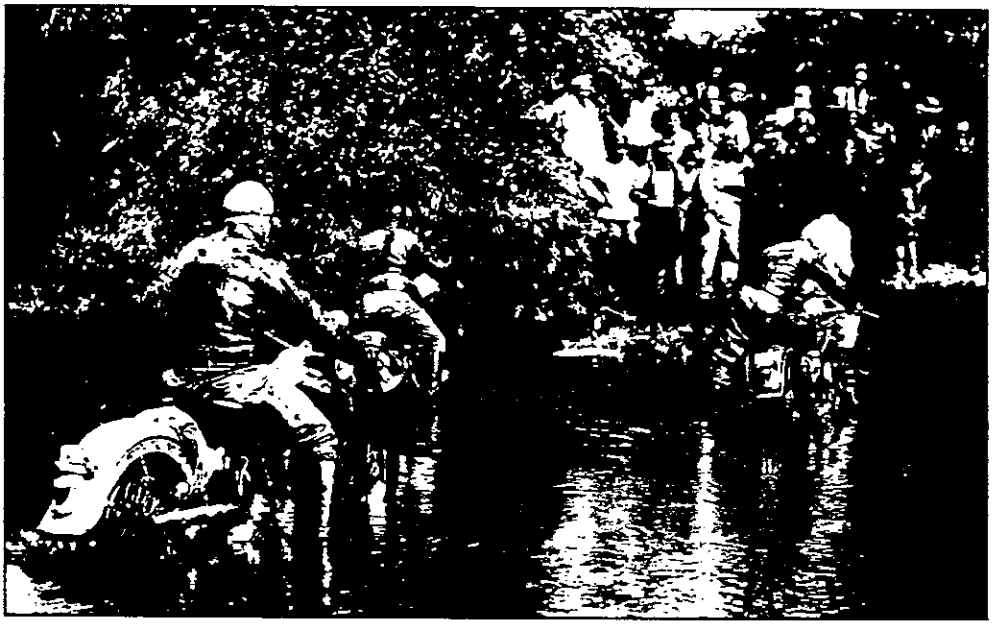
Herb Reiber, center, considered by many to have been underrated, powers around the Langhorne, Pennsylvania, track in a 1939 Class C race. Reiber also was a skilled hillclimber and TT rider. (Harley-Davidson Motor Company)

wanted at outlaw tracks, so long as the size of the engine was legal—45 cu. in. for side valves and 30.5 cu. in. for overhead valves. . . . We used to take a 1929 Harley 61 cu. in. bike and remove one cylinder and rebalance the rest. We had a 30.5 cu. in. bike with one overhead valve. I was riding one of these at Santa Ana one Sunday and just before I crossed the finish line the crankpin broke, causing parts of the engine to fly up between my legs. When I got the checkered flag, I didn't have an engine in the frame."

Things were more organized, and not much more expensive, under AMA sanction. Ed Rusk, who competed throughout the South in the forties and fifties, was a good rider and a meticulous record keeper. In 1947, for example, he ran twenty-seven TT and flat-track races from Jacksonville to as far north as Peoria. He picked up six trophies and

Arthur "Babe" Tancrede, a successful Class C competitor, poses prior to a 1940 race in Richmond, Virginia. (Harley-Davidson Motor Company)





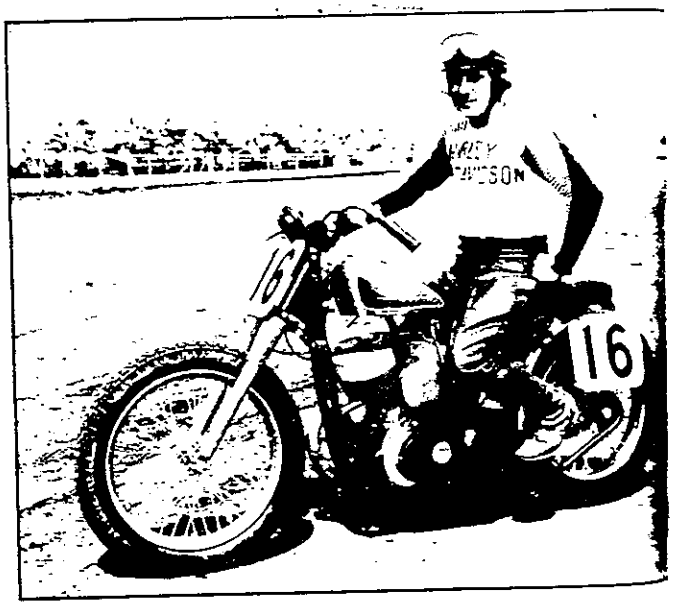
Jack Piners ford a stream in 1946. (Harley-Davidson Motor Company)

more than $2,100 in prize money, paying out $335 for expenses and just $260 for repairs to his 45 and 80 cu. in. motors. After doling out $120(!) to a Columbus, Georgia, hospital following a spill, he still had enough cash for a new motor ($600) at season's end. Purses have been stagnant since then, but expenses have taken a quantum leap, with $120 tires and $1.50-a-gallon gasoline the rule rather than the exception. Small wonder that flat-track riders live from paycheck to paycheck to (meager) payoff.

The invasion of the U.S. by English machines following World War II meant more registrations. As registrations increased, so did the number of top-flight racers, many of whom were able to give H-D some competition at last. And although Indian was on its last legs, ageless Ed Kretz and Bobby Hill won just often enough to make things interesting. Throughout the fifties and sixties, Triumphs and BSA's tormented Milwaukee bikes on dirt and pavement, all but going broke in the process. Meanwhile, hundreds of talented riders who would never see a No. 1 plate were competing regionally and nationally on Harley-Davidsons. They included Paul Albrecht, Rex Beauchamp, Ernie Beckman, Everett Brashear, Scott Brelsford, Duane Buchanan, Charles Carey, Babe DeMay, Darrel Dovel, Chet Dykgraaf, Harry Fearey, Walt Fulton, John Gibson, Dick Hammer, Bill Huber, Corky Keener, Troy Lee, Bill Miller, Tony Murguia, Ronnie Rall, Roger Reiman, George Roeder, Greg Sassaman, Larry Schafer, Dave Sehl, Bob Tindall, Joe Weatherly, Ralph White and many, many other riders.

Drag racing and motocross gained popularity as hillclimbs and the inclination to try for a land speed record at Bonneville declined. The Utah site saw H-D's run with great

Joe Leonard is greeted by his wife after a dirt-track win. (Harley-Davidson Motor Company)



National champ Jimmy Chann, seen here at Springfield in 1952. (Harley-Davidson Motor Company)

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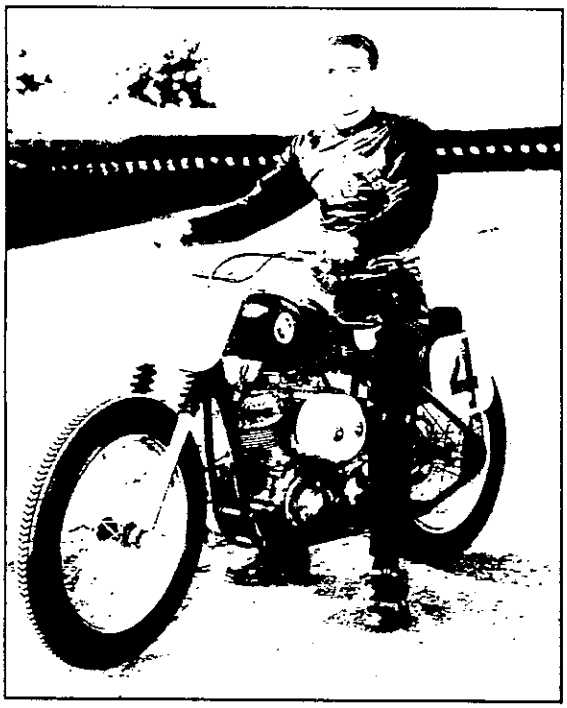
frequency, from Jack Dale's Class C record of 123.52 miles an hour on a 45 cu. in. side valve in 1951 through Les Waterman's 164.89-mile-per-hour effort with a pair of 82 cu. in. motors in 1962 to factory-backed efforts. George Roeder, a superb racer, drove a missile-shaped bike with a Sprint engine to a speed of 177.255 miles per hour in 1965, while Cal Rayborn posted a speed of 265.492 inside an 89 cu. in. engined, fuel-burning Sportster streamliner five years later. Motocross was forced on H-D by its acquisition of Aermacchi and by the herd of Japanese two-strokes that first gained popularity on the West Coast.

Despite factory support in the late seventies, the Aermacchi riders found themselves the victims of an old Harley stunt—they were beaten simply because they were greatly outnumbered. The money saved when Aermacchi was sold went into drag racing, belatedly. Marion Owens and a few others campaigned against megabuck Japanese multicylinder machines, with varying degrees of success in 1979 and 1980. Harley-Davidson is still represented in road racing in The Battle of the Twins, an AMA-sanctioned event limited to two-cylinder cycles. Gene Church has come to dominate this series on a H.O.G.-sponsored bike. More about both later.

Dealers such as Robison, plus Earl Widman, Leonard Andres, Dudley Perkins, Hank Reiman, Wayne Wiebler, Lawrence Smith and Flint, Michigan's renowned Bert Cummings have contributed disproportionately over the years to H-D's racing success. Willing to experiment with racing motors, they are part of the reason the factory Harley rider can count on running with Springsteen, Goss and Parker if he has the talent. Another source of speed is the independent tuner, best exemplified today by "Tex" Peel, also from Michigan. An employee of GM's Buick assembly plant by day, Peel works nights and weekends making the XR as fast as, or faster than, the factory machines. Peel's diligence, combined with Ricky Graham's skill and Dick O'Brien's sharing of speed secrets, propelled Graham to the Winston Pro Series national championship in 1982.



San Diego's Brad Andres, national champion in 1955. (Harley-Davidson Motor Company)

Scott Parker. (Harley-Davidson Motor Company)

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There just isn't room to list all of today's great racers. But there are plenty out there, mostly young, scratching for cash but running up front on any track you'd care to name. Here's a quick glance at three of today's top riders, all with factory connections but none with full H-D sponsorship. Upon the retirement in 1983 of Dick O'Brien, and with factory money in short supply, the company asked why it should continue to compete against loyal privateers on one hand and Honda's money and technology on the other. So technical expertise continues to flow from Juneau Avenue, but it comes from engineering. There is, sadly, no racing department as such at Harley-Davidson today. But guys like this trio keep the bar and shield far forward by hiring their own tuners, chasing sponsors and more.

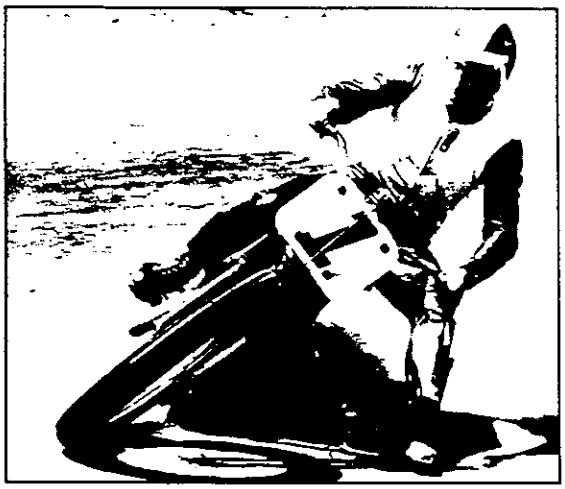
Scott Parker: Scott's now in his mid-twenties, but he still looks like the youngest person ever to earn an AMA expert license, which he was. He has led every dirt-track event in the series and has won seven, most recently at a record 102.047 mph at Sacramento in 1985. A member of the so-called Michigan Mafia, Scotty has enjoyed several years of full factory support, including being a teammate to Jay Springsteen on the official Harley-Davidson Racing Team in 1986.

Chris Carr: A Californian and one of the new-generation stars, Carr was just eighteen in 1985 when he won AMA rookie of the year honors. He's a member of the H-D factory team on mile and half-mile tracks on his Mert Lawwill-prepared XR750. Jay Springsteen, who knows a thing or two about riding, says he sees his younger self in the Stockton resident who ran the circuit as he finished his senior year of high school.

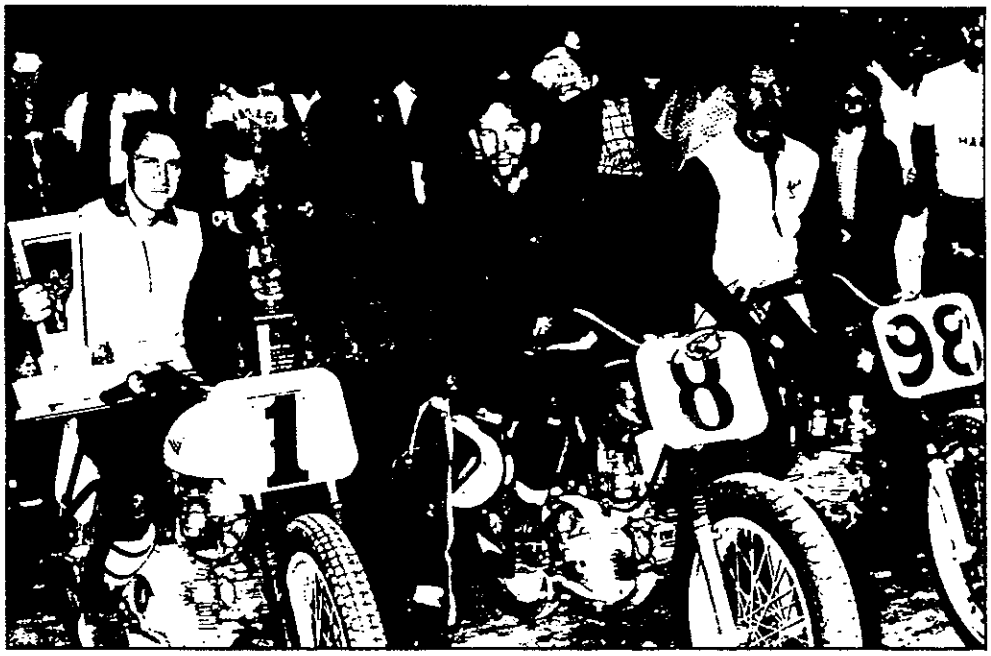
Start of the annual Daytona 200-mile race on the beach. The date is believed to be 1958. (Harley-Davidson Motor Company)

Gene Church: A former dirt-track rider, Church has dominated Battle of the Twins racing, winning the title in 1984, 1985 and 1986 on *Lucifer's Hammer*, the Harley Owners Group-sponsored road racing bike that began life under Mark Brelsford in 1975! For 1987, Gene will be aboard a new machine in the GP class, running an XR-1000 engine in a Buell chassis. Church, from North Carolina, is a mechanic in sponsor Don Tilley's H-D dealership. He's won in every BOTT class and has a dozen GP wins through 1986. Gene's bike can be identified not only by its sound but by its mellow brown, gold and white H.O.G. paint job.

Gene Church. (Harley-Davidson Motor Company)

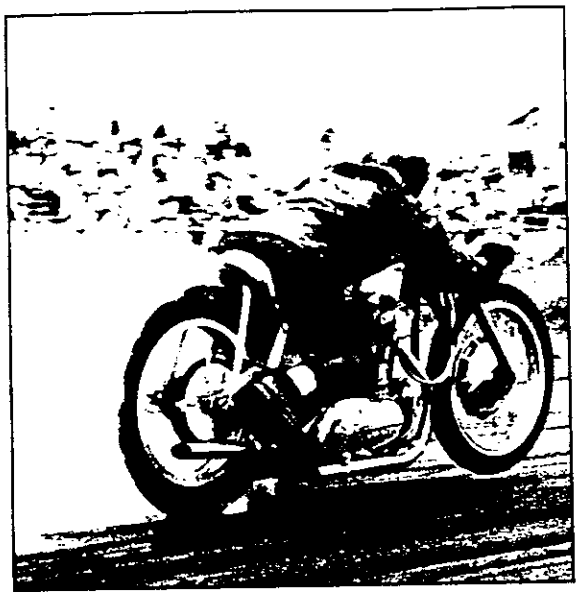


Bart Markel. (Harley-Davidson Motor Company)



Carroll Resweber holds trophies at the Santa Fe (Illinois) short-track meet in 1961. In the middle is Bart Markel, on the right is Joe Leonard. The trio won a total of ten national championships. (Harley-Davidson Motor Company)

There are others out there beyond the glow of the Camel Pro Series or the Stroh's Miles, running bull-ring regionals where 120 riders may vie for a total purse of $1,200. Some will slide almost unnoticed into the Expert ranks, picking off today's stars. Many will be aboard Harley-Davidsons, since, despite Honda's recent brilliance, H-D is the only



Leo Payne ran a 9.71-second quarter mile, turning 152.38 miles an hour in 1967 at Connecticut Dragway. (Brian King)

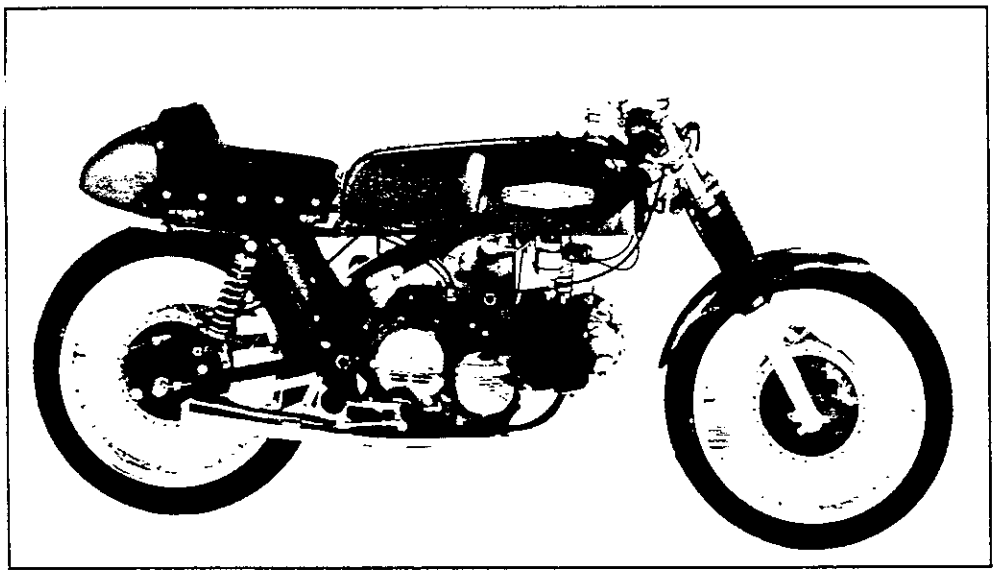
Drag racer Ron Fringer poses with wife, children, trophy girl, trophy and Top Gas Eliminator H-D. Fringer, seen at Beech Bend (Kentucky) International Raceway, had just posted a 10.09-second time and a 133.72-mile-an-hour speed during a 1971 meet. The Woodstock, Illinois, racer was one of numerous Midwesterners who did especially well in the sixties and early seventies using Sportster motors. (National Hot Rod Association)

make that shows sustained interest in AMA competition. Since we all age at the same speed, the names will change. But the faces in the infield will be familiar, because once you've run and won, it's hard to stay away.

One other guy should be mentioned. His eyes rest behind two thick slabs of glass, perhaps the result of too many blindingly sun-filled afternoons in a swirling infield. A hearing aid is graphic evidence of excess time near the rough bark of an unmuffled V-twin. Neither the glasses nor the hearing device is an indication of age or infirmity, at least not on Dick O'Brien. The former head of Harley-Davidson's racing department is as likeably foul-mouthed and honest as he was in 1936, when he began working on H-D motors at Puckett's shop in Orlando, Florida. In those days, O'Brien raced sprint cars and stockers with some success, finishing tenth in a stock car race on the old Daytona beach course. When war broke out, the angular Floridian climbed aboard his bike and rode nonstop, without eye protection, to Tennessee to sign up for pilot training. The marathon ride left his vision temporarily blurred, so O'Brien spent the war on the ground as a civilian machinist for the Navy and as a senior aircraft mechanic with the Army Air Corps. Among his duties was dissecting captured enemy aircraft. "You think racing teams are secretive? The Army wouldn't even allow cameras on the base," he says.

O'Brien returned to the H-D shop service manager's position he left in 1941. For more than a decade he and friends raced, built and rebuilt Harleys, producing speed parts that were tested at Daytona Beach and on tracks throughout the Southeast. On June 3, 1957, he joined the factory as assistant to racing director Hank Syvertson. Three months later, Syvertson retired and O'Brien stepped in as only the third racing director in the company's eighty-year history. In his twenty-six years on tour with the factory team, the man with the shock of white hair has done battle with Norton, Indian, Triumph, BSA, Matchless, Yamaha, Suzuki, Honda, Kawasaki and many brands that have come and gone. One mark of his maturity is the credit he is willing to give riders who consistently took on—and occasionally beat—the factory H-D's and the swarm of independents who favored the V-twin. Among the opposition he's willing to praise are Dick Mann, Kenny Roberts and Mike Hailwood.

Of Mann, O'Brien expresses admiration, both for his sure riding style and his David-and-Goliath effort as tuner and racer to take two No. 1 plates. He still wonders how Roberts stayed aboard the treacherous, blindingly fast XR-750 dirt tracker that day



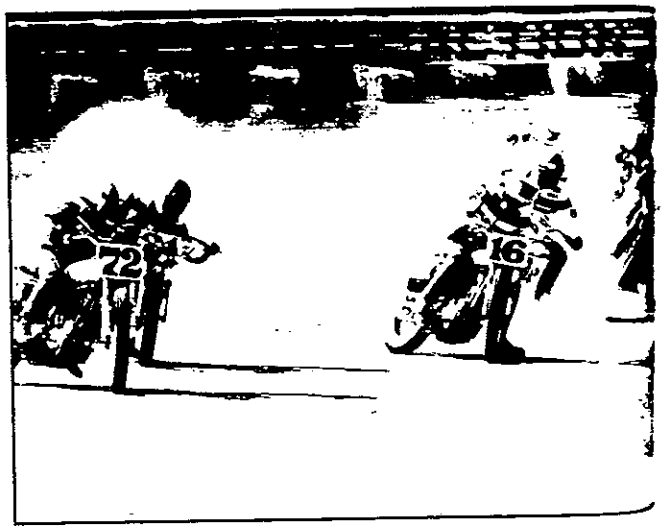
The Sprint in road racing trim, 1966. (Harley-Davidson Motor Company)

in 1975, when Kenny won the Indianapolis mile. And he believes Mike Hailwood was as good a road racer as anyone is likely to see. But his special insights are reserved for the H-D factory riders, whom he got to know as he and his men readied their machines for combat.

O'Brien also will talk, though a bit reluctantly, about the dark side of racing—the injuries, the disfigurement, the deaths. Mark Brelsford, who today is ranching in Alaska, broke some bones in a fiery Daytona crash while trying to defend his national championship. On the comeback trail, Brelsford ran the 1973 Charity Newsies flat-track event in Columbus, falling in the wrong turn at the wrong time. "He almost died twice that night in the hospital," says O'Brien, explaining that the youthful Californian had bone marrow in his blood stream. Carroll Resweber, who today works in the factory race shop, is a constant reminder of the dangers of the track. The four-time national champion went down in a multibike pileup during a 1962 flat-track event in Illinois. Resweber still favors his left arm and left leg, which is a bit shorter than the right. But he is luckier than Jack Gholson, who died in the mishap, and virtually as lucky as Dick Klamfoth, who initially was believed to have broken his back.

But the good times outnumber the tragedies; that is proven by O'Brien's attendance record. Even though the factory no longer participates in AMA national road races, Dick marked his fortieth appearance at Daytona in 1982. And while all of the competitors he began with are also retired, the former H-D director of racing still enjoys sizing up the current crop of talent. "Several guys could win the national championship," he says, adding that wins by nonfactory riders are good for the sport. He points out, too, that the riders who most recently ran for him, Jay Springsteen, Randy Goss and Scott Parker, are as competitive as anyone could wish. "Jay can shrug off bad luck, he can handle it. But Randy really takes it hard. They're two different kinds of people."

Dick O'Brien, former H-D racing director. (Harley-Davidson Motor Company)



An early-seventies flat-track event. From left are Mike Kidd (72); Rex Beauchamp (31); Dave Sehl (16); Greg Sassaman (80); and young Jay Springsteen (65). (Harley-Davidson Motor Company)

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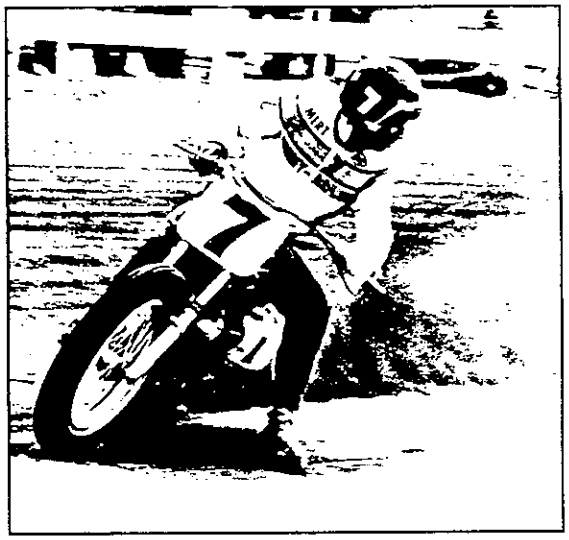
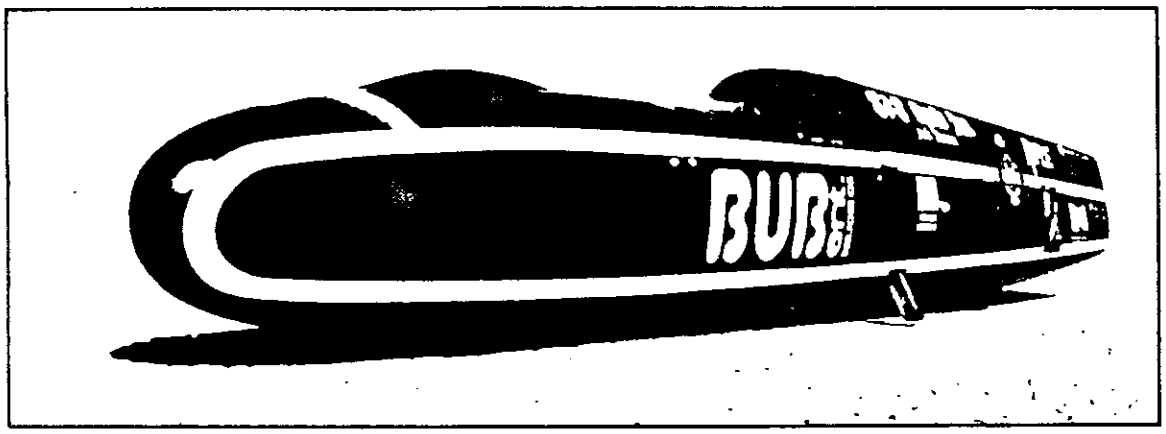
Harley-Davidson came close to fielding no factory team in 1982, primarily due to the cost of the program. It has been estimated that the racing program is a $300,000-a-year proposition, fairly small by auto racing standards but awesome to a company with a history of relatively low profits. However, a number of long-time H-D dealers appealed successfully and the two-bike team became three (Scott Parker came on board, thanks in part to sponsorship from Pabst Brewing Company). O'Brien believes that racing, especially to the older dealers and employees at the factory, is vital to morale. "It gives them something to be proud of," he says. Whether the factory will continue to support riders—in the face of Honda's success and with thousands of shareholders to pacify—remains to be seen. If Dick O'Brien has his way, the orange, black and white racers will await the drop of the flag till hell freezes over.

Despite his racing commitment, O'Brien maintains other interests. Recently remarried, he enjoys Indy-type auto racing and is a long-time friend of Bobby Unser. When time permits, O'Brien climbs on his own bike, a Low Rider. He's converted his new mate to riding the bike, but only after she attended a riding course at a local technical college.

Not only was Mert Lawwill a national champ, he was the subject of a successful movie, *On Any Sunday*. (Harley-Davidson Motor Company)



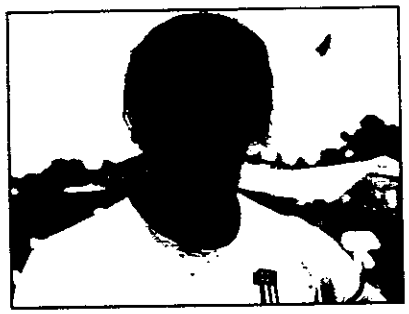


This Harley-powered streamliner, dubbed "Tenacious" and serviced by S & S Cycle, Viola, WI, is the fastest H-D on earth and the fastest single-engine motorcycle. In the fall of 1985, rider Dan Kinsey hit 276.510 mph on the Denis Manning bike. (Harley-Davidson Motor Company)

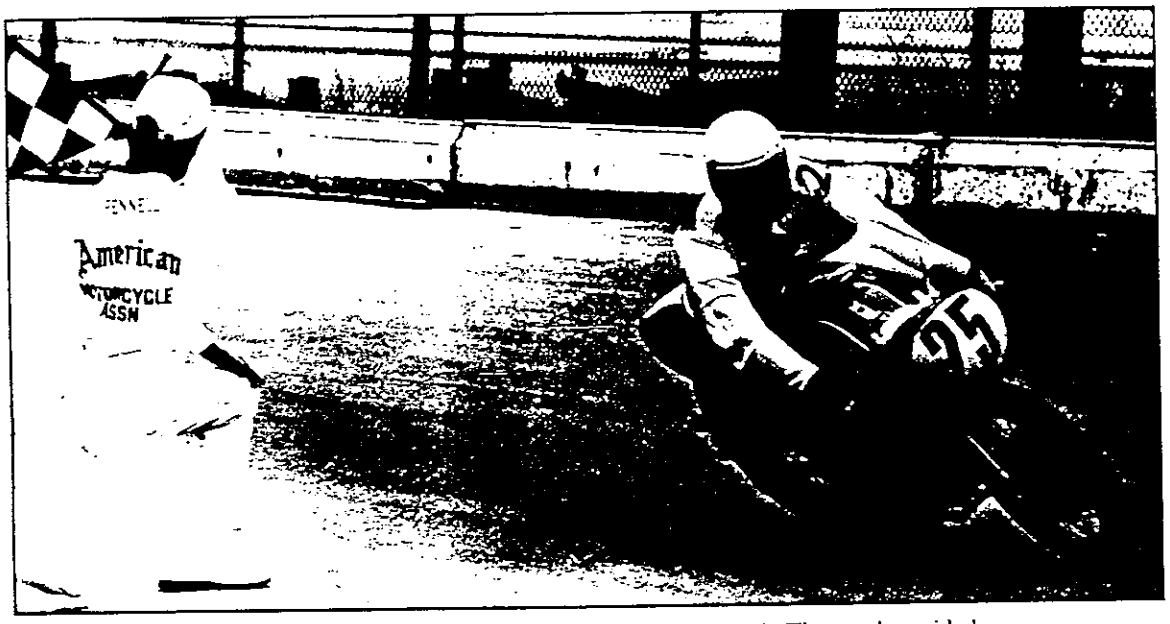
O'Brien has seen it all—the high banks of Daytona; the long-defunct, washboard Pennsylvania bull rings; the sweet, swift Springfield cushion. He's watched a pushy parent ruin a young factory rider's chance of being rehired. He's observed riders lose their touch to the ravages of age by either charging harder to make up for reflex loss, or slowing imperceptibly with each season. And he's seen Harley-Davidson racing bikes evolve from solid-tail snorters to machines lightened with space-age metal and tuned to the individual rider.

When O'Brien retired after '83, the H-D racing program existed briefly on its own before being moved into engineering. An era ended, but the great machines, in the hands of the riders described below, will live on in fans' memories.

What's more unbelievable, winning every national event during an entire cycling season, capturing five nationals in one day, or being Howard Hughes' engineer aboard the only flight of the Hughes Spruce Goose? Joe Petrali, among the most successful racers ever to straddle a Harley-Davidson, performed those feats and some others, living a swashbuckling sort of life that had to be seen to be believed. Born in 1904, two years prior to the earthquake in San Francisco, Petrali grew up in Sacramento. By the age of



Cal Rayborn in 1973. (Cycle News, Inc.)

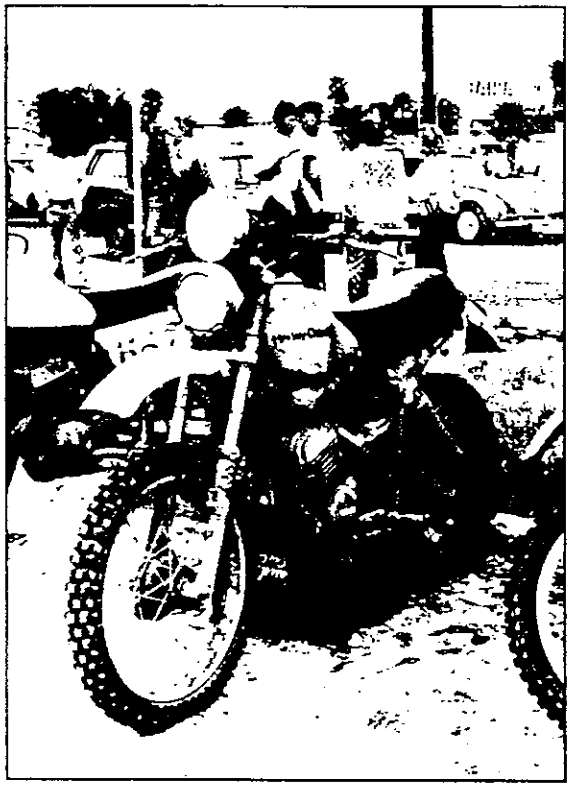


Cal Rayborn takes the checker at a road-racing national. Those who said the KR's and XR's weren't road-racing bikes never saw Cal Rayborn on one. (Harley-Davidson Motor Company)

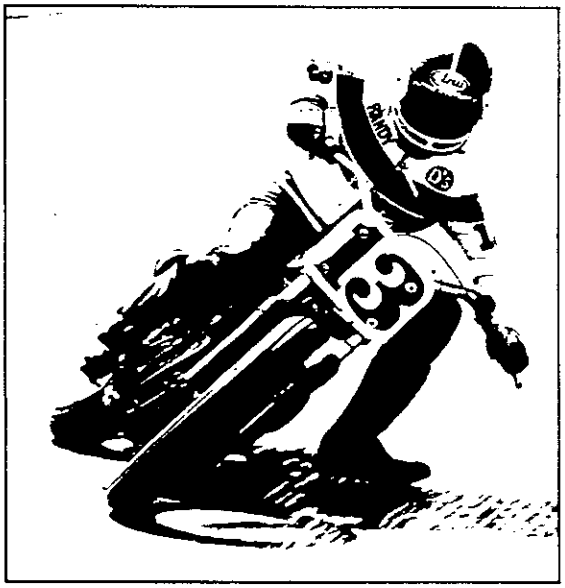
thirteen he owned a beater bike, and by the age of sixteen he was winning races on treacherous board tracks. As good a mechanic as he was a rider, Petrali earned a job in Kansas City and a place on the then-prestigious Indian factory team. He raced and wrenched for several years.

Alliances were rather loose in those days, so when Joe showed up at the Altoona, Pennsylvania, board track in 1925 without a ride, Ralph Hepburn noticed. Hepburn had broken his hand in a practice spill and offered the youngster his Harley-Davidson factory mount. Joe orbited the track a few times, experimented with a new additive known as tetraethyl, then left the field in a cloud of dust. The 100-mile race ended just 59 minutes, 47.2 seconds later; that's right, Petrali had averaged more than 100 miles an hour on the 61 cu. in. H-D. The factory bowed out of competition briefly during the period 1926–30, so Petrali successfully entered the new 350cc class on an Excelsior. He returned to Harley-Davidson to ride the Milwaukee version of the 350 class, an overhead valve single dubbed the Peashooter. From then until his voluntary retirement in 1938, Petrali mowed down every other professional racer on every other kind of bike. In 1935, he won all thirteen events on the national calendar, including five nationals in a single day on the Syracuse, New York, track. And in 1937, he set a speed record of 136.183 miles an hour on a new 61 cu. in. overhead valve Knucklehead at Daytona Beach.

Some will say the demise of Class A (350cc) professional racing after 1937 was due to the economy. Others may well blame Petrali, who dominated the series as no rider has ever dominated any series before or since. When the rules changed for the '38 season to 750cc Class C road bikes, Petrali opted to run only a few hillclimbs, another area in which he excelled. For all of his experience, Joe hardly ever crashed. He once cracked ribs when his mount fell on him at a hillclimb, and he crashed heavily on the dirt track



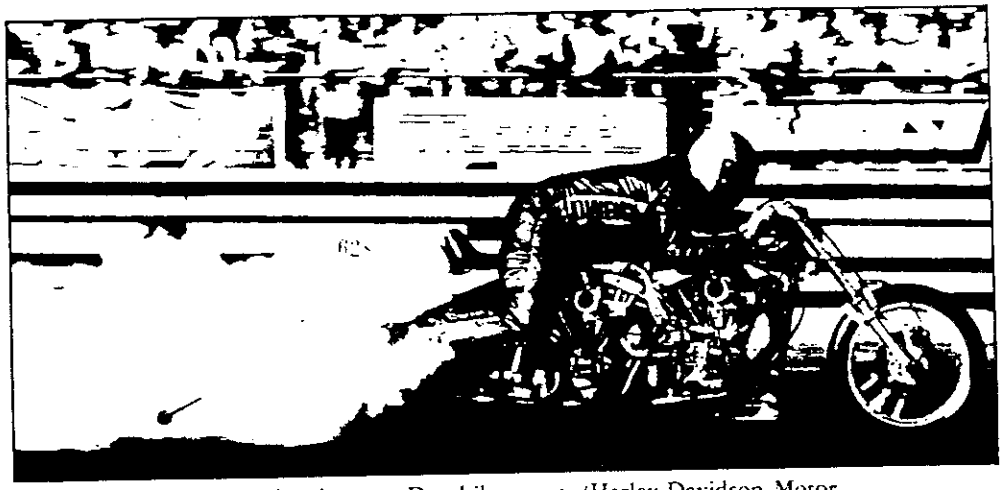
The MX-250 with the extra headlight successfully ran the Baja in 1975. (Harley-Davidson Motor Company)



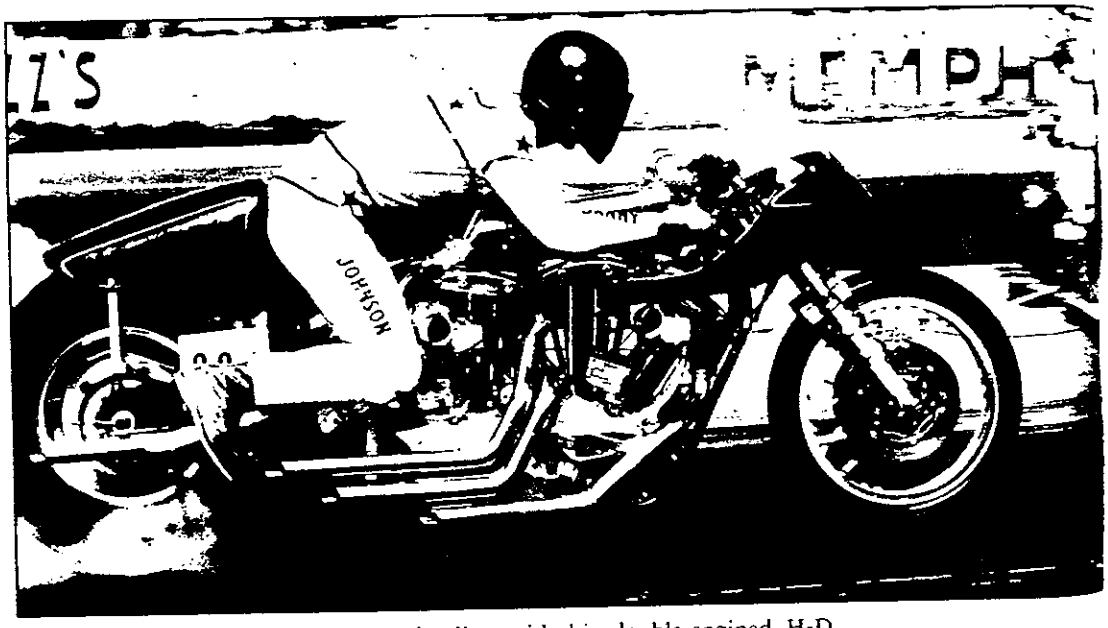
Randy Goss, No. 1 as a team rider in 1980, is another in a seemingly never-ending procession of Michigan dirt-track riders. (Harley-Davidson Motor Company)

when another competitor's bike lay in his path. "He was tough," says retired H-D President William H. Davidson. "He was a nice guy, but he wouldn't give an inch on the track." Contemporary riders who come upon the spindly racing bikes of the twenties wonder how any man could muster the courage to climb on the gearless, brakeless machines. Petrali got on and stayed on for twenty years.

Happily, Joe did well after his racing retirement. He worked for Hughes, worked for a brake lining company and served as an official for the United States Auto Club. Petrali appeared regularly at the Bonneville (Utah) Salt Flats, sanctioning the speeds turned in by many riders and drivers, including those on Harley-Davidsons. The man with forty-eight national wins to his credit died of natural causes in 1972.



Marion Owens smokes the tire at a Dragbike meet. (Harley-Davidson Motor Company)

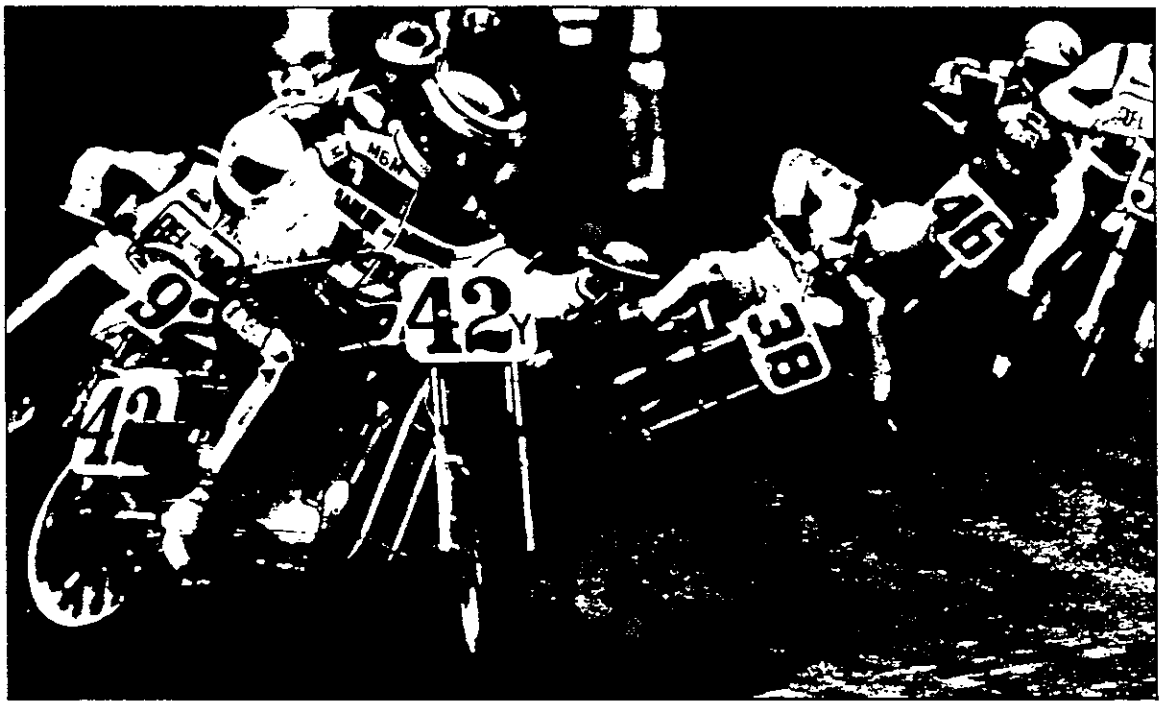


Drag racer Danny Johnson leaves the line with his double-engined H-D. (Harley-Davidson Motor Company)

Two soldiers, one from Indiana and one from Wisconsin, were sharing a bunker one night in 1967 at the Ninth Infantry Division base camp in Vietnam. The Hoosier, who had attended the Charity Newsies event in Columbus, Ohio, a couple of times, said he thought Dick Mann was the best rider he'd ever seen. "That's because," said the Wisconsin native, a few years older, "you never saw Carroll Resweber."

Resweber caused that kind of comment from the time he first climbed on his old Knucklehead in Port Arthur, Texas, challenging his friends to race on and off the Gulf Coast area roads. Everett Brashear, an expert rider from nearby Beaumont, was sufficiently impressed with Resweber to take the novice rider north on the dirt-track trail. Carroll had been promised a ride on a Paul Goldsmith machine, arriving in Illinois only to find that Goldsmith had bent the bike in a crash. So Resweber rode what he could find in three Wisconsin junior events, winning all three and making an impression on independent tuner Ralph Berndt. Berndt worked for H-D but put together his own bikes, since there were no true factory riders in those days. By 1956 Resweber was an expert; by 1957 he finished ahead of Brashear in the point standings; and by 1958 he displayed the No. 1 plate.

Resweber won sixteen nationals in his four-consecutive-year reign as the national racing champion. And he did it while working a forty-hour week for Mercury Marine in Cedarburg, Wisconsin, the only village ever to fete a cycle champ by holding a "Carroll Resweber Day." The slim Texas native would no doubt have earned a fifth consecutive title in 1962, but for a tragic evening spent in Lincoln, Illinois. . . . You may hear tales of that half-mile track, about how the dust was so thick that Resweber ran into fallen Jack Gholson and Dick Klamfoth because his eyes were closed. The champ suffered a broken neck in the spill, an incident of which he has no recall. "I remember looking over to Ralph [Berndt], who was timing other riders, and I remember leaving the pits. That's



Scott Pearson (42) ahead of a falling rider at the Astrodome in 1977. (Harley-Davidson Motor Company)

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all," he said recently. "I'm told that I wasn't breathing when they picked me off the track in a sheet—they'd run out of stretchers. But an ambulance attendant gave me mouth-to-mouth."

Ironically, 1962 was to have been Carroll's last year on two wheels; he had an offer to race stock cars. He lay unconscious nine days, then spent two years being told by medical experts that his left arm was useless. Today, he has eighty-percent use of the arm, enough to climb on his stylized street bike whenever he chooses.

Now a machinist and fabricator in Dick O'Brien's H-D race shop, the bearded, graying rider is modest almost to a fault about his career. "I loved to win," he says. "On equal equipment, I believed I could beat the other guys. That's the way I felt inside." Known for running in exactly the same smooth groove on every lap, Resweber was said to have psyched Bart Markel, the high-road, low-road anywhere-in-between competitor. "If Bart would have slowed down, he would have beaten me." Resweber's records on 50-horsepower bikes withstood the onslaught of today's 90-plus horsepower until two or three years ago—that's how fast he was. At the Springfield national early in '62, for example, Resweber lapped the entire field in the fifty-mile main event before running out of gas. Of today's competitors, he believes that "Jay [Springsteen] is a natural." And

Springsteen with Lyn Griffis, Miss Winston, celebrates a victory. (Harley-Davidson Motor Company)

Jay Springsteen. (Harley-Davidson Motor Company)

Springsteen arrives at the Peoria TT. (Harley-Davidson Motor Company)

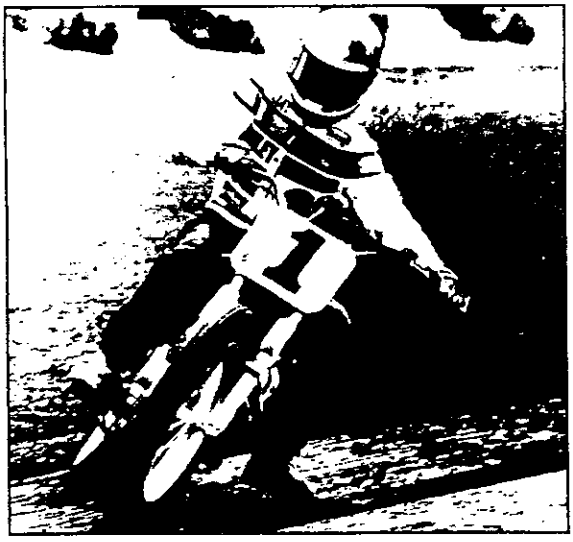
while there were female admirers hanging on the fence back in the late fifties and early sixties, "I didn't pay any attention to them," Carroll says. "I was married at the time, and besides, I was a racer." Indeed, he was.

The old guys, the ones who've been around racetracks for years, smile slyly when Bart Markel is brought up. His name causes them to flash on something they saw at a race Bart ran during his very long professional career, which stretched from 1957 through 1979. In those twenty-two grueling years, the stubby AC Delco tool-and-die machinist from Flint, Michigan, bounced off hay bales, guardrails and other competitors in winning twenty-eight dirt-track nationals and three No. 1 plates, in 1962, 1965 and 1966.

A high-cushion rider, Markel was best on the half-mile tracks, where the bikes and the action were the thickest. As one of his admirers once said, he'd win every race through a room filled with coat hangers. He was once suspended, accused by the AMA of rough riding and thereby earning his nickname, "Black Bart." Few who know him believe he's ever intentionally run anyone into the fence (except maybe Sammy Tanner, who did it to Bart several weeks before Bart did it to him). Rather, Markel is probably the most extreme example of a rider who violated all of the laws of gravity and still won. He raced as if he were allergic to the groove, in contrast to his old nemesis, Resweber.

Dick O'Brien doesn't wonder why Bart was a less-than-successful road racer. "He refused to slow down for the turns," O'Brien recalls. While other asphalt competitors rode with clip-on bars and fairings, Markel's machine sported wide, dirt-track bars; he sat bolt upright, waiting impatiently for the opportunity to pitch the bike into a slide, an opportunity that usually came along in the worst possible way. Photos in the Harley-Davidson archives show him in every turn, foot in the outrigger position, waiting for the

Bill Werner, tuner for Springsteen. (Harley-Davidson Motor Company)



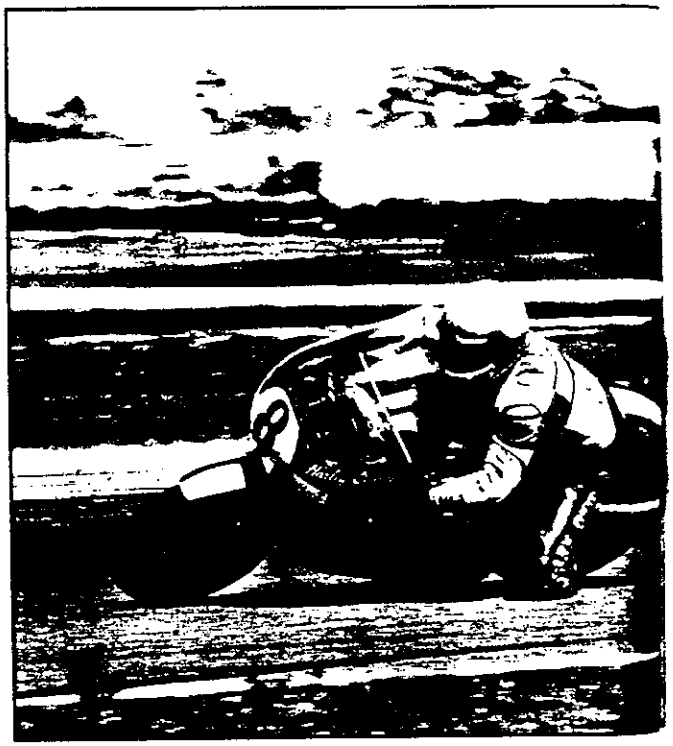
Springer on a roll. Note the tearaway plastic, layered and alternatively tabbed so that the rider can rip it off during the race, thereby improving his view. (Harley-Davidson Motor Company)

cushion to propel him ahead of half-a-dozen riders. Ironically, Markel seldom suffered any lasting injury, though he might show up for a national with his left leg supported by a bungee cord tied around his waist. The fact that he kept himself in superb physical condition, even as age caught up with him, probably helped Bart overcome aches and pains that would have sidelined lesser riders. Today, he can be seen at an occasional half-mile or mile race, a quiet, unassuming man with glasses. Markel's legacy is still on the track in the form of virtually every Michigan rider competing for national points. The fact that Michigan seems to produce more flat-trackers than automobiles is a tribute to the rider they called "Black Bart." But they didn't call him that to his face.

"Cal Rayborn never played out his string," says one veteran dealer, who turns his shop over to H-D factory bikes and independents alike each year when the big national show comes to town. Indeed, Rayborn's star seemed to be ascending when he reluctantly left H-D at the end of the '73 season. The XR750 had at last been eclipsed by the two-strokes on pavement, and the lanky resident of Spring Valley, near San Diego, signed up with Suzuki. Rayborn had acquired a Chevy-engined racing car, deciding to take the machine to Australia to sell it—at a handsome price. "I told him before he left not to ride any junk," says Dick O'Brien. But the temptation to climb on an Aussie dealer's bike—with a reputation for seizing—was too much. The machine locked up, throwing Rayborn violently into a trackside steel barrier. He died shortly afterward.

Cal's career began with a severe injury, a broken back suffered in a road race on the then-new Riverside, California, course in 1958. The eighteen-year-old recovered, began to ride scrambles, then was taken under dealer Leonard Andres' wing. Andres' son, Brad, had won one national title and was a superior road racer himself. So Andres senior knew what to look for. Fighting perennially weak brakes, Rayborn almost overnight emerged

An auspicious moment, Daytona 1984: Dave McClure (left) wins Battle of the Twins heavyweight modified class; Gene Church (center) wins grand prix class; and Will Roeder wins stock class, all on XR-1000's in various states of tune. (Harley-Davidson Motor Company)

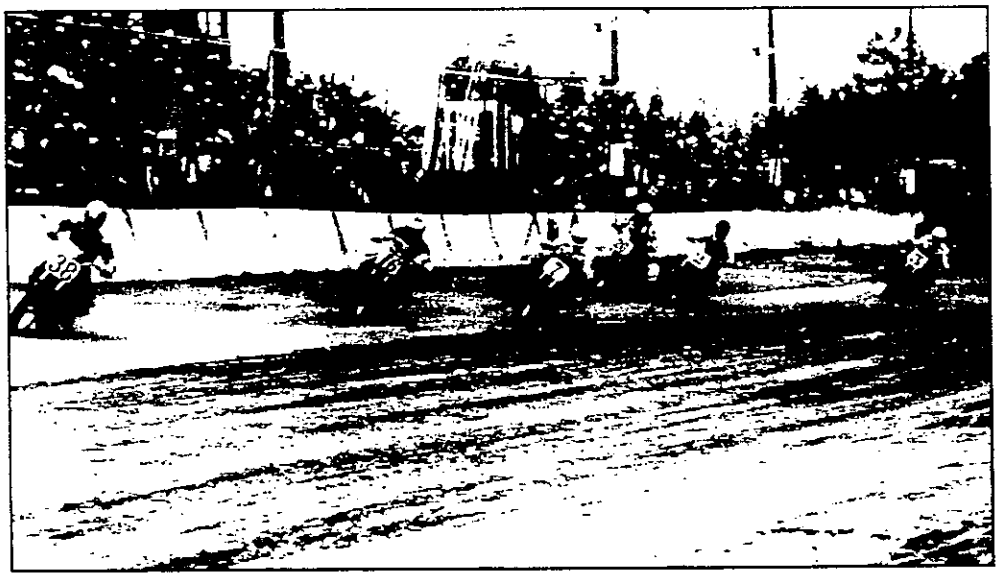


Three-time Battle of the Twins GP champ Gene Church at Daytona, 1986. (Harley-Davidson Motor Company)

in front of a pack of very, very talented road racers: Dick Mann, Gary Nixon, Dick Hammer—and Brad Andres. He won Daytona with ease, he once ran a streak of six straight pavement wins and he passed Roger Reiman in an Indianapolis Raceway Park turn by sliding his bike sideways for nearly 100 feet. Yet Rayborn never mastered the dirt, which prevented him from affixing the No. 1 to the fairing of his XR. A loner and, in O'Brien's words, "a constant bitcher," Rayborn scuffed the cases, the pegs, the fairing and more—no matter how far up and in the factory mechanics moved whatever protruded. He then complained about the quality of help he was receiving. "Anybody can take the fast turns," according to O'Brien, "but Calvin and Mike Hailwood were the only two I ever saw who mastered the slow ones. Calvin and Mike—now that would have been a race."

Jay Springsteen is a different kind of loner: He is the lone rider in the history of the AMA national title chase to have accumulated forty wins. He's done it on every kind of dirt—short track, TT, half mile and mile. Springer also is an able road racer, having finished sixth in the 1978 250cc 100-miler at Daytona on a vastly underpowered machine. The wiry kid who loves to race but hates the publicity hoopla attached to racing is an avid hunter and fisherman. He lives in the small town of Lapeer, Michigan, where he has to do little more than walk out his back door to be in ideal out-of-doors surroundings. Only a stomach problem that continues to defy a permanent cure will keep Springer from racking up more and more national victories.

The ailment surfaced repeatedly in 1981. Jay would show up with the factory team, watch tuner Bill Werner set up his bike, turn qualifying laps and then, before or during the heats he would be in agony. Dieting helped. He stayed away from the deplorable food most racers thrive on. Medication helped. He was diagnosed as having a rare form of diabetes and was dosed accordingly. But the shy, quiet man with the No. 1 plate had to sit frequently and watch others run for his title. "I think it all may be in my head," he said recently, though tests he has undergone indicate his stomach produces two-and-one-half times the normal amount of digestive acids. He may be right, since Werner usually is given back a bike after a race that is totally wrung out by a seemingly emotionless Jay Springsteen. One gauge of his skill, as if a gauge were needed, is that he has taken thirteen of his forty victories on mile tracks, the most demanding of all AMA venues.



Flat-track action at Barberville, first Florida stop for the Harley-Davidson-sponsored early spring series in the Southeast. (David Wright)

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CHAPTER NINE

SCENES

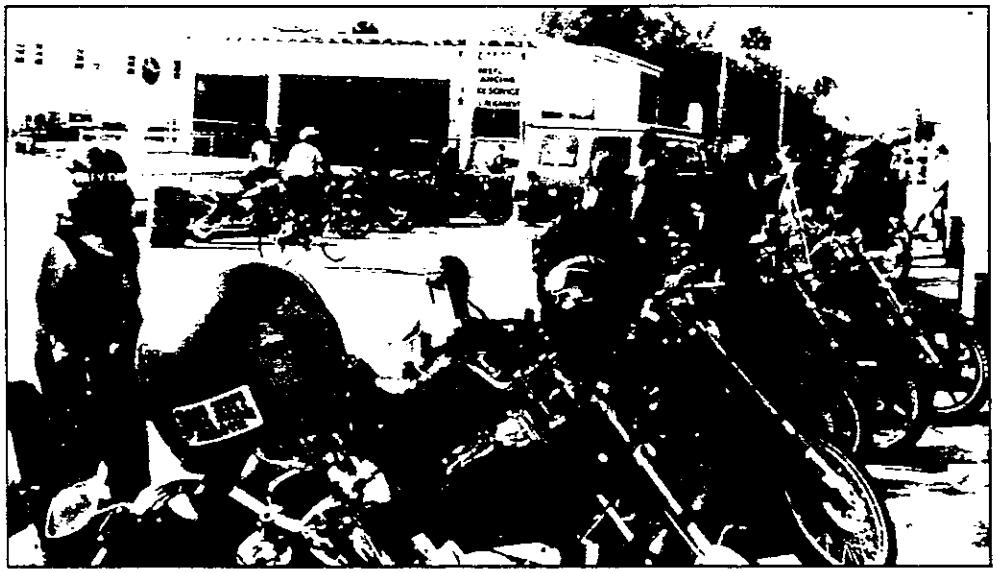
TODDLING OUT OF THE DAYTONA BEACH HILTON LOBBY IS A SMALL, BLUE-HAIRED LADY in her seventies, perhaps from Schenectady. Ambling into the lobby is a large, Medusa-haired man, maybe from Detroit, wearing a "Give Me Head Till I'm Dead" T-shirt. She rustles by him in her double-knit pants suit; he shuffles by her, aglow with tattoos, a skull earring bearing blue-gem eyes, a dangling chain connecting wallet and belt loop. No doubt about it, both are well turned out for their intended purposes. She's in Daytona to meet old friends, talk about her departed husband and take some sea air. He's in Daytona for Cycle Week in general and for the Harley-Davidson show in the Hilton ballroom in particular. Neither acknowledges the other's presence, nor are they there to antagonize each other. Each has her or his own definition of a good time. Which is what Daytona in March is all about.

"I'm not sure how Cycle Week became synonymous with Harley-Davidson," confesses Kathleen (Kal) Lawler, H-D's advertising manager and one of a phalanx of Juneau Avenue employees who migrates to Florida to entertain badass bikers, ultraconservative Tour Glide owners and anyone in between who rides, fixes or gets off on Harley-Davidsons. The traditional (by now) Hilton show was initiated during H-D's AMF years and has continued, with growing success and added events, each year since the mid-seventies. Importance of the Daytona International Speedway races, on the 3.87-mile road course some eight miles west, has diminished considerably in Milwaukee since H-D withdrew the road racing XR750 from competition in 1973. It may be one of motorcycling's all-time public relations coups that many U.S. bikers still think of Harley-Davidson when they think of Daytona. Harley-Davidson is not about to let that change, despite the Daytona Armory show patronized by competing manufacturers, whose cubic dollars definitely outnumber those in the H-D purse.

Cycle riders begin drifting into northeast Florida as early as the previous Sunday, drawn in part by the Harley-sponsored half-mile event on the rutted clay Volusia County

Speedway bowl outside nearby Barberville. Though the H-D series of seven races run in late winter in Georgia and Florida is worth no national points, such stars as Terry Poovey, Steve Morehead and Billy Labrie like the competition—and the $51,000 in prize money. The dirt-track stars stick around, since Memorial Stadium in Daytona Beach stages the Harley-Davidson series Wednesday through Saturday evenings of Cycle Week. Fans from the eastern half of the U.S. are joined by leathery old Harley dealers, former

H-D's Cuban dealer, Del Campo (center, with camera), brought several family members and race fans to Daytona in the late forties. That's William H. Davidson in the light shirt, beneath the banner. (William H. Davidson collection)



The street alongside Robison Harley-Davidson becomes so packed during race week that Daytona city fathers turn it into a one-way thoroughfare. (David Wright)

Promptly at noon, the fans are admitted to the show, paying a dollar that is donated to the Bikers' Fight Against Muscular Dystrophy. They observe reassuring engine cutaways that convey how an eighty-incher works, see a Harley dangle in midair at the end of an Aramid fiber from the new belt drive and check out the iron currently owned by Willie G. and other folks in the H-D hierarchy. Meanwhile, across the street in the Hilton's spare parking lot, there's a ride-in show in progress. Wednesday it's Sportsters and full Dressers. Thursday it's antiques and Super Glides, including all sport model Flatheads, Knuckleheads, Panheads and Shovelheads. This display is free, with $5 assessed each owner who shows a bike; that sum, too, ends up with the Muscular Dystrophy Association. Weather willing, the crowd shucks everything but colors, T-shirts and epidermal insignia to glide back and forth between the Hilton and the parking lot.

Simultaneously, at the south end of the lot, H-D employees are offering rides on the '82 model of choice, so long as the would-be test rider has a valid cycle license. Perhaps because the FXR, FXRS, Sturgis and Sportster have received so much good press, numerous Japanese bike owners want to check out the merchandise. A demo bike is no sooner shut off than another prospective customer climbs aboard for a short run down South Atlantic Avenue.

The scene shifts northward each evening, centering around the intersection of Atlantic and Main Street. Half of all Japanese bikes and all of the Harley-Davidsons in the Western Hemisphere appear to cruise by the Rat's Hole T-shirt Shop in a never-ending, cacophonous parade. The police are as feisty here as anywhere else when it comes to speeding, drugs or drinking in public, but they seem to turn a nonworking decibel meter toward the roar of V-twins—and engines of every other configuration—each evening in Daytona's Peninsula District. The fun is fairly harmless, as bikers who could win a Sonny Barger lookalike contest tend to muster at the Boot Hill Saloon, while those a bit less awesome favor Mac's on South Atlantic or some other watering hole. The natives know what it's like and usually avoid the traffic. The few college kids who've shown up in Daytona early for Easter break look in vain for Lacoste sweaters among a tidal wave of cycle apparel.

About the races. . . . The flat, sandy barrens on the southeast edge of the Speedway turn into Harley Heaven Friday through Sunday, initially as home base for a Muscular Dystrophy Association benefit poker run and ultimately as a corral for H-D owners to

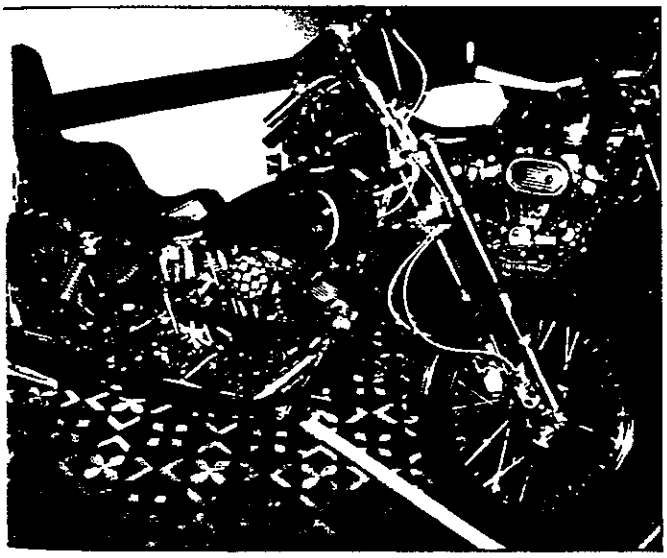
H-D Chairman Vaughn Beals addresses a press conference at the Harley-Davidson show in the Daytona Beach Hilton. (David Wright)

view the events. This is the place where the "Just for Kicks" contest shows how often an H-D can be started in a minute, where Vaughn Beals gives away a commemorative Sportster, where Pat Simmons of the Doobie Brothers manages to join Friday's band for a jam and where such phenomena as slow races, potato scrambles and bite-the-wiener while riding behind your man all take place. The nearby bleachers, offering a view of the racetrack chicane, are curiously empty, even for such normally good draws as the 100-mile Superbike race. That's because H-D owners simply cannot identify with the Star Wars appearance or the mega-mosquito sound of today's road racing bikes. During even the most well-hyped Speedway event, you're more apt to find Harley owners near the beach. Especially come Saturday morning.

Each year on Saturday, T-shirt peddler Karl "Big Daddy Rat" Smith stages a custom chopper bike show on the boardwalk, not far from two of his seven retail outlets. Actually, calling the show a chopperfest is somewhat unjust—there are all kinds of bikes entered, and the choppers, street racers and antiques on display are several echelons above anything you're likely to see on the street. Smith panders to the traditional chopper crowd, printing and distributing a sexist newspaper that outlines how to stay out of jail during Cycle Week and tells the reader on virtually all twenty pages how to score Big Daddy's version of the official T-shirt. Adorning Smith's arms, especially during carefully staged photo opportunities, are bikini-clad women displaying a "Miss FTW" or a "Miss Rat's Hole" sash. See what most of the bike magazine guys miss 'cause they're out at the track?

Fortunately for the former carnival vendor, he rides a three-wheel bike; otherwise, he might fall victim to a feminist car bomb. His redeeming quality, of course, is that he may not take the affair that seriously, and he manages to lure many, many very nice machines to the boardwalk for free viewing.

Dayton, Ohio's Bill Kirmec hand stripes more than 40 bikes behind Robison Harley-Davidson each year, more than paying for his trip to Florida. (David Wright)



Carroll Resweber, four-time national champion and currently a member of H-D's racing department, owns this FXRS. The motor has been brought up to XR specs. It was one of numerous employee-owned machines shown in 1982 at Daytona. (David Wright)

There are a few other occurrences during Cycle Week, none of which is sanctioned by the Harley-Davidson Motor Company. A Tennessee group of bikers stages sand drag races 'way to the south of the Hilton, and there's a swap meet at the Volusia County Fairgrounds, twenty miles west in Deland. The best thing to do at the "run what you brung" drags is hunker with everyone else on the sand as a scene reminiscent of Muroc in the late forties takes place. The best thing to do at the swap meet is to find out in how many pieces a Sportster can be disassembled after being stolen in Daytona the previous evening. One of numerous prostitutes who migrates from Atlanta to Daytona for the Cycle Week clients each year sums up the swap meet nicely: "I figured I could handle about any biker till one took me to that swap meet. Them people are *crazy*!"

Much larger than any other annual H-D gathering, Daytona is all things to Harley-Davidson riders of all persuasions. Fortunately, it's not likely to change anytime soon.

Sturgis, frequently used as an example by those who don't understand motorcycles, has mellowed. The last upheaval was in 1982; city fathers now work with bikers to preserve the tradition. . . .

The Black Hills rally and races began in 1938 under AMA sanction. The Jackpine Gypsies Motorcycle Club got things started by posting a purse of $300 and the event grew, despite incomplete Depression recovery and the thunder in the distance that became World War II. Riders who showed up at Sturgis each year demanded even more riding, in the form of tours that featured the small farming town as a jumping-off point.

Main Street, Sturgis, South Dakota. Close examination will show which make of machine is favored by those in attendance. (Richard Creed)

There are now five full days of tours during the week in mid-August set aside for the event.

J. C. "Pappy" Hoel, now seventy-nine and disabled but with an excellent understanding of the activities, formed the Jackpine Gypsies in 1936. The perseverance of Pappy and fellow club members put Sturgis on motorcycling's map, despite gaining and then losing national sanction of their racing event (it's still an AMA regional). "We have never had ar[illegible]rious problems with the 'outlaw' group," says the sole surviving founder of the Jackpine Gypsies. "We have their cooperation as long as we do not hassle them. We have a few motorcycles stolen, but that is normal when you consider that we have an estimated 15,000 motorcycles in a town of 5,000 people. There is nothing quite like it anywhere in the world and reservations, even months early, are hard to get."

The first day is devoted largely to signing in, being seen and checking out the iron and occupants arriving in streams from the East and West (Interstate Highway 90) and the North and South (U.S. Highway 85). Because Sturgis is more or less in the middle of the continent (900 miles west of Chicago, 1,500 miles east of San Francisco), and because the weather in August in South Dakota is as warm as it ever gets, the rally-races are a meeting of the Heartland Harleys and the West Coast wonderbikes.

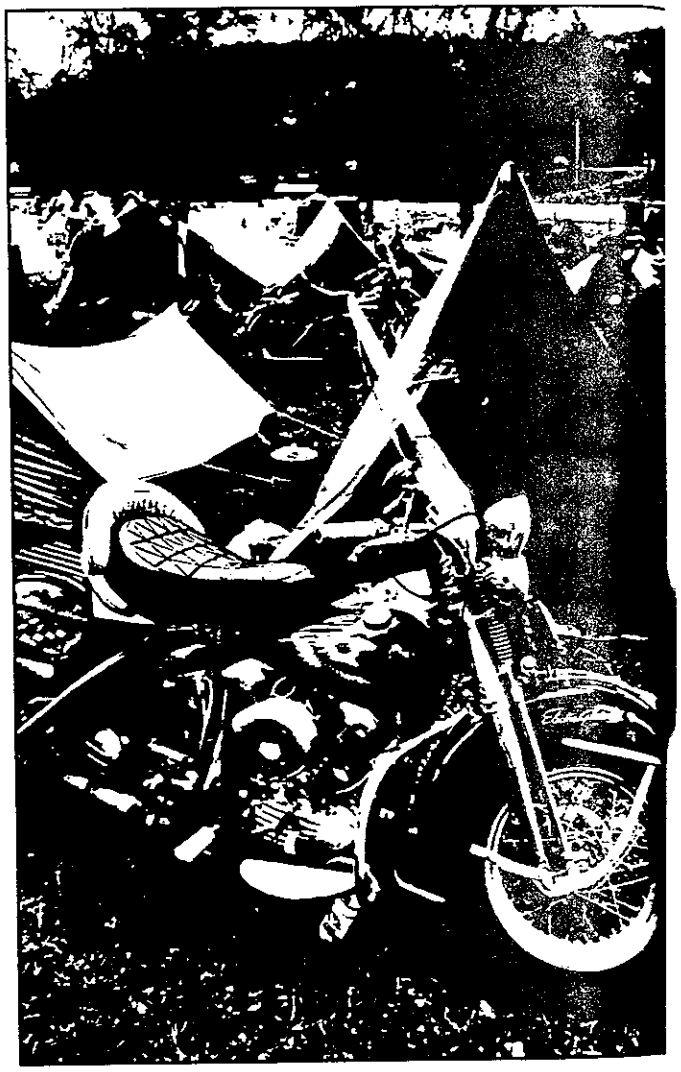
Campgrounds outside fill up early with the mirthful. Here is where you're likely to get your first look at a female chest unencumbered by bra or T-shirt, where you'll inhale the first of many whiffs of marijuana, where beards are so common it looks like a tree farm. It's not really difficult to tell the good guys from the bad guys; most of the latter tend

This is the machine Willie G. Davidson rode to Sturgis in 1982. It's a prototype belt-drive Wide Glide. (David Wright)

Sturgis-area roads are scenic; the shoulders unforgiving. (Harley-Davidson Motor Company)

to go off by themselves. Unfortunately, in recent years, the nearby town of Deadwood has assumed that everyone who looks nasty, is; such unreasonable regulations as banning biker's wallets and prohibiting cycles on many city streets show among other things that Deadwood isn't the wide-open gambling and whoring town it likes to promote (such lusty institutions as Pam's Purple Door are, sad to say, shut down). The road tours themselves are enough to make a Dresser devotee cringe. Clapped-out, reworked and underdone Harleys from years long gone take to the road, not with a Tour Pak but with a six pack, showing one and all that the rider, if no one else, has confidence in his machine. No one is left stranded. And those who tire of touring can attend an aftermarket show in the armory or go to four nights and an afternoon of flat-track competition. Leather goods, ersatz accessories, T-shirts and more are peddled by the dozens of the visitors.

The locals, at least the ones who have overcome their fear of rolling thunder, also make a lot of money off the bikers. The United Presbyterian women turn out great hot cakes each morning, while the gals at Grace Lutheran Church offer lunch all day long.



A Knucklehead and a tent are all you need to fit in at the Sturgis campground. (Richard Creed)

The Bear Butte Cafe (honest!) sells enough Grain Belt beer to irrigate the U.S. wheat crop, while Mr. Al's Main Street concession stand just keeps the hot dogs coming. Those who take a pass on one of the tours test their bravery on the infamous Rainbow Curve, out on the highway toward Deadwood. There are three days of swap meet and two nights of sanctioned Dragbike racing.

Speaking of racing, Pappy Hoel has created an illuminated Lucite memorial to White Plate Flat Trackers, that select group of riders who ran the AMA professional expert class at one time or another. He's put together a monument to motorcycling, complete with names of many of the greats. In the unlikely event that you have money to spare in Sturgis, this is a chance to contribute. It's not tax deductible or anything, but Pappy will furnish contributors a T-shirt and the feeling that you have a piece of his rock. Richard Creed, who came here several years ago representing *Cycle News*, met a girl and settled in with the local paper, voices fears that touring and cafe-type riders will stay away in the future, due to disproportionate coverage by the chopper mags. But he has enough long-term faith in the town and the event to have affixed his name to the note for the Black Hills Classic's new concrete grandstand.

Meanwhile, the brotherhood all week is thick as new paint. And malice—except for shenanigans associated with excessive consumption of booze and thousands of traffic violations—is as scarce as a conventional handshake. It's a much more homogenous crowd than Daytona, making up for long hours in the saddle on the interstate highways. If Willie G. attends with regularity, is it all bad?

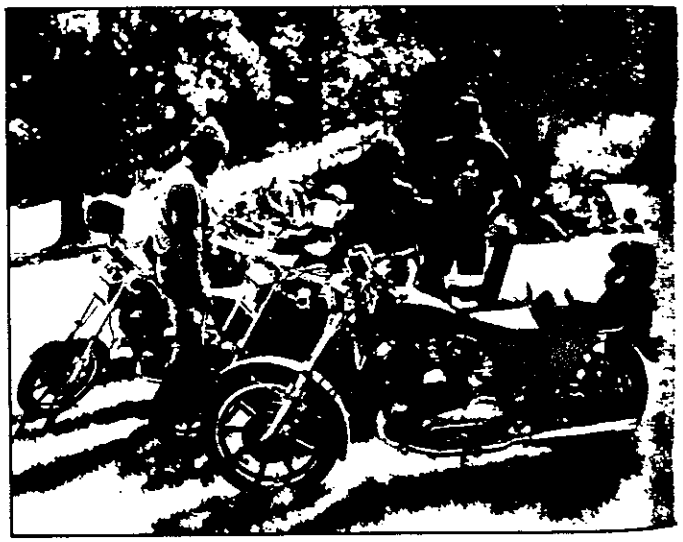
This V-twin's authenticity is betrayed by the disc brake up front. Other giveaways include the headlight, turn signals, tires and mirror. The motor is from the J series. This machine, seen at Sturgis, is one of hundreds of "blend" bikes ridden to South Dakota each year for the festivities. (Richard Creed)

Those who go looking for the Aspencade Motorcyclist Convention in New Mexico will be half a continent away from the action. That's because this tour-bike ritual has been renamed Americade and moved from the little town of Ruidoso to the little town of Lake George, New York. For those who long to run though the Rockies, however, a new event is making itself known. Riders now show up each summer in Durango, Colorado, where touring types are building the kind of event associated for years with New Mexico. Closer to home, no matter where home may be, individual Harley-Davidson dealers frequently put on annual tours that draw hundreds of riders.

Among the most successful is the ride started by Chris Draayer, former racer and retired H-D dealer in Salt Lake City. The 180-mile trip to State Line, Nevada, has been known for the last thirty-five years as the Wendover Run. Recently, 2,000 riders on all kinds of bikes joined in what has become the best-attended event by a single dealer west of the Mississippi. The $3,000 raised went to the Muscular Dystrophy Association, the prime beneficiary of many locally organized trips.

Not one Harley-Davidson rider in ten has ever set wheel in Daytona, Sturgis, Ruidoso, Lake George, Durango or Wendover. As H-D oriented as these events may be, they aren't representative of the majority of those who own the V-twins. What *is* representative? If the company's marketing research is accurate, the most common scene on a contemporary Harley is *cruising*. The term means different things to different riders, but H-D ad copy sees it as enjoyable jaunts in the open, away from wife, kids, jobs, cares, conformity, unemployment and inflation. Exemplified by the FXR, the cruise bike has an ample (3.8-gallon) tank, rubber-isolated engine, premium Dunlop tires, a supersoft seat and the 80-in. motor that turns just 2400 rpm at 55 miles an hour. This machine and its stablemate, the Super Glide, are engineered to separate the rider from the conscious exertion of a sports bike while reminding him that he's aboard a leaner, hungrier machine than an FLH or FLT. The bike also will idle around town most of the day without complaint on regular gasoline. Designed for the nontouring, habitual rider, the cruiser represents mainstream motorcycling to Harley-Davidson.

Cruising riders may think a got-up touring bike resembles a tipped-over juke box. Touring riders could not care less. They're a large minority in the H-D scheme of things, buying the big-buck, big-size, fat-wheeled machines that have transported generations of riders from one coast to the other and, more importantly, back. Despite such recent Japanese attempts to out-Harley Harley-Davidson with the Honda Aspencade and



This photo proves, if nothing else, that a few bikes showed up for Aspencade events without TourPaks. (Harley-Davidson Motor Company)

others, nothing quite approaches touring on an FLT or an FLH. The current Tour Glide Classic, for example, can carry the frame-mounted fairing, the saddlebags and an amazing 455 pounds on the frame-mounted seat and in all those compartments. Small wonder veteran H-D riders can't get used to the gusty instability of a lesser touring machine. Like the cruiser, the touring rider tends to travel with one or more of his own kind, frequently two up. That can't be said of all Harley-Davidson riders, however.

Sportsters can be used to cruise, all right, but the recent quantum leap in frame design and, therefore, handling makes the bike ideal for straightening corners. They're being marketed as back-road screamers, making up in traditional low-end pulling power what they lack in five-figure rpm. From the advent of the Japanese flashbikes in the early seventies, the company has preferred to talk of the safe performance of torque versus "turn it on and you're gone" and the corner bending so prevalent among the foreign competition. But now that the Japanese are making pseudo-cruisers, H-D hopes to reach those who appreciate handling with a pair of bikes that dive toward the apex as well as any. Unlike their cruising or touring fellow owners, Sportster buyers may appear all alone on a curvaceous road as frequently as they motor down Main Street. It's a new market for H-D, a scene it entered in earnest in 1982 to lure a new kind of rider to a new kind of Harley-Davidson.

If you're not into creating your own scene, here are several clubs that are national or international, either have a strong H-D orientation or welcome Harley-Davidson owners. They gather at more or less regular intervals at Daytona, Sturgis or at functions of their own.

American Motorcyclist Association
P.O. Box 141
Westerville, Ohio 43081
614-891-2425

This is the largest and oldest organized group of cyclists in the country. The association has evolved from being a shill for manufacturers in the twenties to an extremely diverse group of tourers, competitors, dealers and more. In addition to sanctioning racing activity, AMA personnel man an effective lobby in Washington, publish a national monthly magazine of high quality and stage a variety of racing and nonracing events each year. Annual membership is $20, which gives the member voting rights on club issues. A new H-D owner's first exposure to the AMA may well be the moment when he takes delivery. Inside the packet that contains his owners manual is an AMA application blank. Though other manufacturers support the association, only Harley-Davidson makes this pitch.

Ruidoso was Mecca for touring riders of all ages. (Harley-Davidson Motor Company)

Dick Winger
Antique Motorcycle Club of America
2008 Fitchburg Rd.
Stockbridge, Massachusetts 49285

It has ups and downs, but the Antique Motorcycle Club of America serves "owners of motorcycles at least thirty years of age and those interested in old motorcycles." This opens up all sorts of interesting possibilities. For example, your K model Harley-Davidson recently became eligible, while that '61 Sportster in your neighbor's driveway will qualify in just a few years. In short, with each passing year more bikes enable owners to join. Evidently, you need not even own an antique in order to sign on. Information provided by Dr. Earl Chalfant, the president, indicates that anyone devoted to seeking out, preserving, restoring, exhibiting, exchanging information and/or good fellowship related to old bikes is OK. Membership includes a pleasant quarterly magazine containing stories, photos and ads, plus advance warning on the eight or so nation meets held each year across the country. Dues are $20 per year, sufficiently reasonable for more than 1,500 members from virtually every state and such far-flung places as Arabia, Australia and South Africa. To apply for membership, write Mr Cox.

Canadian Vintage Motorcycle Group
c/o Rick Harrett
312 Houghton Ave. South
Hamilton, Ontario L8K 2N3

Founded in 1967, this group has chapters in the Hamilton-Toronto area, Ottawa, Kitchener, London and Vancouver. There are at present approximately 500 members, "which translates into about 1,200 people, since it's a family sort of organization," says a spokesman for CVMG. Its largest annual meet features as many as 300 bikes and takes place in Barry, near Toronto, on the third weekend of June. Dues each year are $12 Canadian, which includes a monthly newsletter. A generous number of vintage H-D's are represented in the club, including such exotica as the third KRTT made.

Harley Owners Group (H.O.G.)
c/o Harley-Davidson Motor Company
P.O. Box 653
Milwaukee, Wisconsin 53201

At long last, in response to thousands of suggestions over the years from dealers and owners, there is an official Harley-Davidson club. An owner, his spouse and family can sign up at the dealership for life membership ($300), full membership ($30 per year) or associate membership ($10 per year) in a worldwide club that will "make our Harley-Davidson owners feel as special as we think they are," says the factory.

H.O.G. is divided into five chapters, each designed to appeal to a particular group of owners: Big Twin, Touring, Antique, Sportster and International. The focus of the club, of course, is to provide activities for H-D riders. Among those activities and services are:

Members of a Corpus Christi, Texas, motorcycle club; photo believed to have been shot in the mid-forties. (Harley-Davidson Motor Company)

—A fly-and-ride program that allows a vacationing rider to rent an H-D for about the cost of a mid-sized car in such nice spots as California, Florida, Hawaii and Germany. This innovation is part of a package offered through the H.O.G. travel center.

—A touring directory, complete with maps, special tour tips, a list of dealers and related information. The directory is 128 pages, with color throughout.

—H.O.G. rallies and receptions at Daytona, Sturgis, the Aspencade rally, The Great American Motorcycle Shows and at all Camel (formerly Winston) Pro Series races.

—A $1,000 standing theft recovery award, with decal for the bike, similar to the AAA or AMA programs.

—Emergency towing service, offered through participating dealers.

—A bimonthly newspaper that focuses on club events and services, new products and technical tips.

—A toll-free, nationwide telephone number aimed at answering owner questions and solving their problems.

A would-be rider can access himself to all the above without charge by paying dues if he already owns the right bike, or by buying a new H-D. That will automatically enroll him for the first year in a new club with more than 700 "chapters."

Idaho Vintage Motorcycle Club
12346 Foxbrush Court
Boise, Idaho 83729

Like the AMCA, this club caters to all makes, but we can't all own Harleys, can we? Yes, vintage H-D's are as welcome as anything else, and this organization of approximately ninety members admits bikes of more recent manufacture than does the larger vintage group. It also admits folks from outside the state of Idaho, so there's no telling where membership will go. President Lynn Snider was, at last report, "up to my ears" in club activities and therefore not able to impart much info. He did, however, provide a cleverly written newsletter which indicates the club enjoys showing its bikes and drinking beer, in that approximate order. For details, contact the group at the above address.

Harley Owners Group (H.O.G.) logo. (Harley-Davidson Motor Company)

Riding to an AMA national, somewhere in Pennsylvania in the mid-fifties. (Harley-Davidson Motor Company)

International Northeastern Harley-Davidson Dresser and Touring Association, Inc.
Del Austin
RD 1, Box 36, Randolph Rd.
Great Bend, Pennsylvania 18821
717 879-2709

This club is a good indication of what can be done when a few riders get fed up with the Marlon Brando image. Four H-D Dresser owners banded together in 1977 to form an association limited to those who ride FLH and FLT models. They stage tours and rallies "Dedicated to improving the image of motorcycling." It must work: during a recent INHDDTA tour, 125 Dressers crossed the U.S.-Canadian border without so much as stopping for customs, thanks to trustworthiness and prior arrangement. (Try *that* on a chopper!) There are more than 1,500 members here and in Canada, Europe, Japan and Australia, administered by trustees who are benevolent but short on patience if a member misbehaves. Annual membership for the association, which also provides H-D with intelligent criticism, is $15. Oh yes, the "Northeastern" in the title was kept for sentimental reasons.

Motor Maids, Inc.
Claire Sutter, Secretary
324 South Ave.
Aurora, Illinois 60505

Founded in 1940, this female-only club is made up of women who (according to the bylaws) own and operate their own, their husband's or their father's motorcycles. The organization has a long-time relationship with Harley-Davidson, since the first president was Dot Robinson, wife of cross-country record setter and retired H-D dealer Earl Robinson. In addition to an annual national convention, each state club convenes one weekend a year, frequently at an AMA dirt-track national. Donning white gloves and uniforms, the ladies in formation are a popular addition to a promoter's schedule. Except for the WAC's, this may be the closest most women get to military discipline. A member is expelled, for example, if she's caught trailering her cycle to a Motor Maid event. Dues are $10 a year, plus a $5 initiation fee.

Motor Maids in convention, 1967, Pennsylvania.

United Sidecar Association
c/o Terry Strassenberg
18461 Martin Ave.
Homewood, IL 60430

This is the largest and apparently best-organized sidecar group in the U.S., with approximately 1,200 members, a bi-monthly news journal (*The Sidecarist*) and an annual, national rally. USA serves as a clearing house for individual sidecar clubs, helping to promote local and regional events. Dues are $10 per year. Sidecar enthusiasts are different—not better or worse, just different—from the average H-D rider, so expect the unexpected. All makes of cycles are admitted.

This list does not include organizations that aren't much into mainstream membership or have initiation or membership requirements they would rather not discuss. Such a bunch is the Hell's Angels, the subject of much fawning by the news media in the sixties and a group that is, unfortunately, associated with Harley-Davidson.

A California priest offers a prayer prior to a club ride in the fifties. Note the saddlebag purse carried by the lady closest to camera. (James Perkins collection)

More than 100 riders depart the Capitol Drive plant in May 1982, headed for Madison to protest use of Kawasakis by Wisconsin State Police. The ride was organized by union members, many of whom were laid off at the time. (David Wright)

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The Angels were just one of dozens of California bike gangs until immortalized on film and in print in *Life* magazine photos and in a Hunter Thompson book that, from a cycling enthusiast's point of view, was heavy on sociology but weak on mechanicals. Somewhere along the line, the Angels began to believe their clippings and performed some genuinely outrageous, antisocial acts. It all seemed bearable—runs into the California outback to suck wine and smoke dope, volunteering to take their bikes to Vietnam to clean up the Vietcong, showing what they thought of peace and civil rights in Berkeley—until they became entwined in the drug trade. Local, state and federal authorities began to take them seriously, once guns and drugs were being moved in earnest by the Oakland, California-based, group. While other gangs nationwide were dealing in (relatively) harmless stolen motorcycle parts, the Angels were snuffing and being snuffed on a regular basis. Even their leader at the time, Sonny Barger, had to park his Harley to serve time in prison.

The Oakland Police Department reported recently that the gang is still active, though there have been no problems in three or four years. The most recent police-Angel run-in occurred in front of the gang's national headquarters on Foothill Boulevard in 1978. Following a number of arrests just outside, the confrontation spilled into the Angel building. When the dust settled, it was discovered that four Oakland policemen had conspired to trash the building. "The four were dismissed and one was later reinstated through civil service," says Sgt. Dan Krause, who keeps an eye on bike gangs from the office of the Oakland chief of police. That's been it, save for sporadic, individual arrests and occasional raids on suspected Hell's Angels' drug laboratories, according to Krause, who says there's no indication that the Angels, or any other California gang, is either growing or dying out. "They [the Angels] still ride Harley-Davidsons and you can still see forty or fifty Harleys parked in front of their clubhouse every Friday or Saturday

Members of a club organized at the Hagerstown, Maryland, Mack Truck assembly plant, during a recent visit to the H-D museum at York. Note that 28 of the 32 bikes are Harleys. (Harley-Davidson Motor Company)

night." But . .t's true, too, of a lot of legitimate club. .nd associations, not only in California but throughout North America.

Incidentally, there's absolutely no evidence to indicate that the Harley-Davidson Motor Company ever had any dealing with or condoned the actions of local or national motorcycle gangs. In fact, an incident in 1973 shows that at least one gang treats H-D as shabbily as it treats everyone else. The first hint of the factory's problem came from an authorized—and very reputable—dealer in California. The dealer had been approached by a Milwaukee-area biker, who offered to sell him 10,000 Harley-Davidson spark plugs at fifty percent of the cost of manufacture. Shrugging off the easy money, the dealer notified the company. Employees discovered a total of 29,000 spark plugs missing, then notified the FBI.

Agents obtained a court order and placed a tap on the home telephone of John Buschman, who had been an H-D employee for less than three months, in late 1965 and early 1966, before being dismissed for excessive absenteeism. Buschman lived in Mequon, an exclusive suburb north of Milwaukee, without readily evident means of support. The monitored phone conversations, the Bureau reported, indicated that "Buschman was a captain in a local chapter of a nationwide motorcycle gang called the 'Outlaws.'" His long-distance calls amounted to orders for parts. In cahoots with another former employee, a then-current employee and one or more truck drivers, Buschman managed to help steal hundreds of thousands of dollars in parts, selling them to dealers and bike shops as far away as the West Coast and Florida. One United Parcel shipment from Buschman's home to California was valued at $24,609.

"Their primary income is their old ladies and stolen Harleys," reported a cycle mechanic in Florida who had been approached by an Outlaw peddling new factory parts. He, too, was suspicious, primarily because he was used to buying only *used* stolen parts from the gang. More court paperwork was obtained by the FBI and a raid was staged on Buschman's residence early in 1974. The agents found hundreds of Harley parts and "an arsenal of weapons" at the Buschman home and in a barn Buschman rented. Trial testimony indicated that parts were moving out of the plant in quantity in trucks and vans, and piecemeal via a few dishonest employees. Buschman was sent to prison, but his caper has left its mark on even the most casual plant visitor. Whether tattooed or tuxedoed, persons leaving the premises must to this day open packages, briefcases and lunch pails for inspection by guards.

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CHAPTER TEN
IMAGE

"THE AVERAGE H-D BUYER IS AGE 18–70 AND RANGES FROM BANKERS TO LOW-CLASS motorcycle clubs."—Kentucky dealer.

"Customers represent all walks of life; young, old, rich, poor (not *too* poor)."—Connecticut dealer.

"Average Harley-Davidson riders are between twenty and thirty, blue collar workers of macho status."—California dealer.

"Our customers are fifty percent white collar, fifty percent blue collar."—Pennsylvania dealer.

"A lot of our buyers turn their bikes into customs."—Missouri dealer.

"Custom bikes have been dead for several years."—New York dealer.

"Average buyer? Harley-Davidson buyers are *not* average."—Washington dealer.

"Many of our customers are getting or have just gotten a divorce."—Illinois dealer.

Clearly, Harley-Davidson riders were (and are) a diverse audience and the trick was to reach the many kinds of riders.

The first ad to appear in any sort of non-company publication may have been a simple piece extolling the virtues of the 1914 models. That half-page example appeared in *Western Bicyclist & Motorcyclist*, a monthly magazine aimed at dealers as much as at riders. A third audience, business-government, attracted the majority of Harley-Davidson lineage well into the twenties. In fact, the company expended a large sum of ad money in 1915 to obtain approval for the use of motorcycles in the then-new U.S. Post Office Rural Free Delivery (RFD) system. Once cycles were given the federal OK, Harley-Davidson not only used them in print ads but based an entire campaign on the high number of miles and low cents-per-mile rates recorded by the rural postal service workers. One ad, produced shortly after World War I, "proved" that a Harley-Davidson was cheaper than shoe leather!

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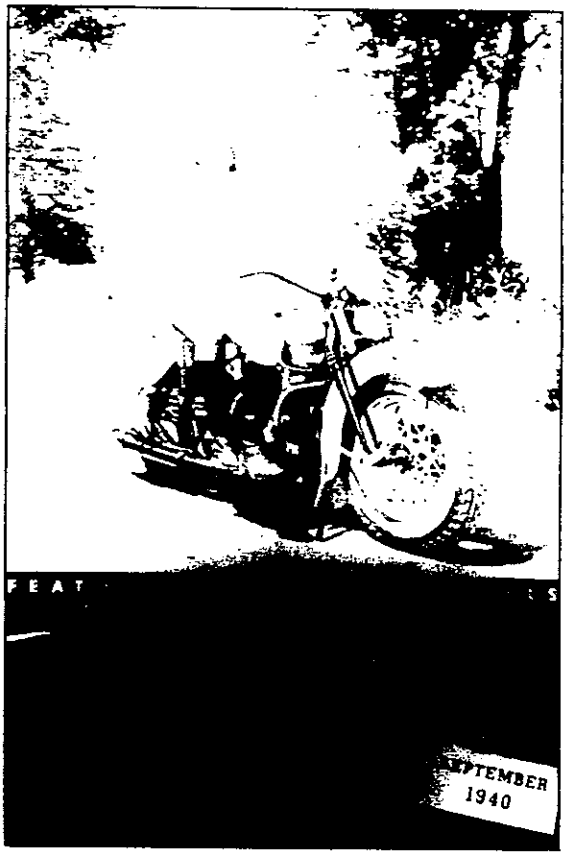
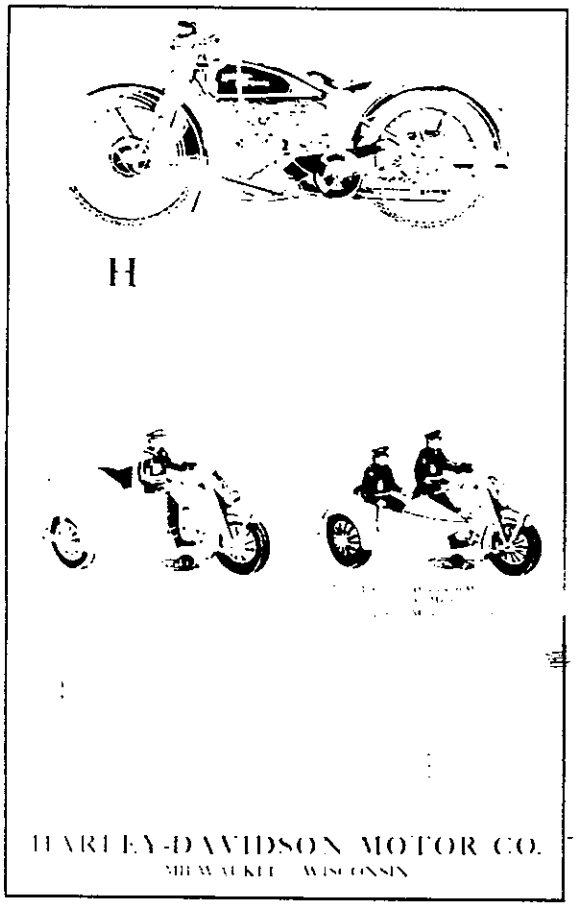
Meanwhile, consumers were reached primarily through dealers, with a dealer and direct mail campaign outlining innumerable advantages for the young factory worker who could depart the gloomy city and head for the countryside, with or without a female acquaintance in a sidecar. Since most H-D's were sold with sidehacks well into the twenties, hauling a friend was a snap. Harley-Davidson's incredible racing results during this period were not used to attract first-time buyers, but were instead posted regularly in *The Enthusiast* and in a few trade magazines. Marketing experts then and marketing experts now see no link between success on the track and luring the new rider. And while the thirties were hub-deep in wonderful H-D models, sales were so weak that the company had to strain to produce *The Enthusiast* each month.

Each September issue of *The Enthusiast* during the thirties and forties was devoted to new models. Here is the 1940 customer's first look at the newest Knucklehead. (David Wright)





Harley-Davidson toys have been around a long time, as this 1929 ad in *The Enthusiast* attests. Either a parcel car or a sidecar was available; both made "a noise like the exhaust when pulled along." The metal models featured authentic paint, rubber tires and removable drivers. (David Wright)

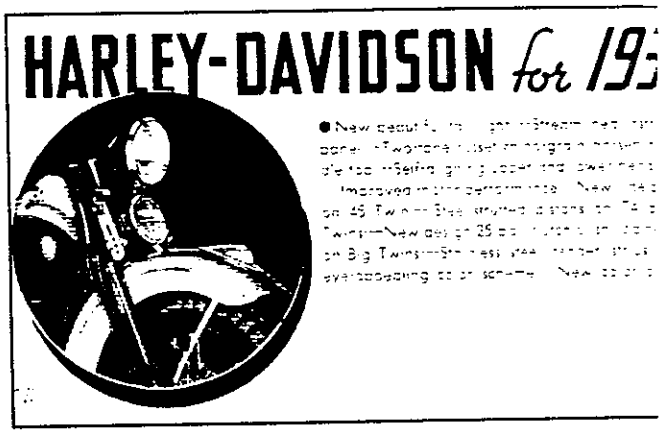
Following World War II, the company continued with Milwaukee's Klau-Van Pietersom-Dunlap, the only ad agency used until the sixties. Print ads were inserted in such national magazines as *Mechanix Illustrated* and *Popular Science;* magazines such as *Boy's Life* were used to advance the Topper scooter and other small machines. Throughout the fifties, the company continued to devote more than half its national print budget to motorcycling magazines. Those ads alternated between street model previews and racing results. Naturally, when something as stupendous as H-D's 1960 sweep of the first fourteen places in the Daytona race occurred, extra ad funds were expended.

The cycling boom that began around 1965 pretty much terminated racing ads, as the company sought the thousands of would-be riders who identified most closely with street and trail machines.

Successful ads link the product to the reader. Lately, Harley-Davidson has conveyed the feeling a rider gets on a Harley, a feeling the ads say can't be had on any other kind of machine. Like the bikes, the ads frequently are plagiarized by agencies selling foreign bikes. The company hopes and believes the consumer can tell the difference.

There are approximately 725 Harley-Davidson dealers, and no two serve precisely the same kind of rider. With that in mind, the advertising department is expected to entice

Direct mail. 1939. Post cards such as these were provided to dealers to announce new models. H-D currently conducts cycling's most effective mail advertising campaign, using the names of owners of 700cc-and-up bikes registered with each state.



This 1952 advertisement for the Hydra-Glide was run in magazines such as *Popular Science.* Were the saddle bags meant to conceal the lack of rear suspension, common on the K model and on English bikes? (Harley-Davidson Motor Company)

every kind of customer. That's a big-league problem, according to Bill Dutcher, former AMF motorcycle products group public relations director.

"A 1977 study commissioned by Harley-Davidson indicated that there are three types of motorcycle riders: custom/performance, touring and sport," Dutcher relates. "H-D has a sizeable share of the custom market, is strong in the touring market and is absolutely nowhere with the sport rider. So there are two kinds of Harley riders—the bikers and the tourers. If I can, let me call them the left and right wing, but not in any political sense. It's just that they're on opposite sides of virtually every issue. So if you run an ad that appeals to one, you're automatically turning off the other. Ruidoso doesn't

Another Hydra-Glide national ad. Compare this to the current four-color offerings in cycle publications. (Harley-Davidson Motor Company)

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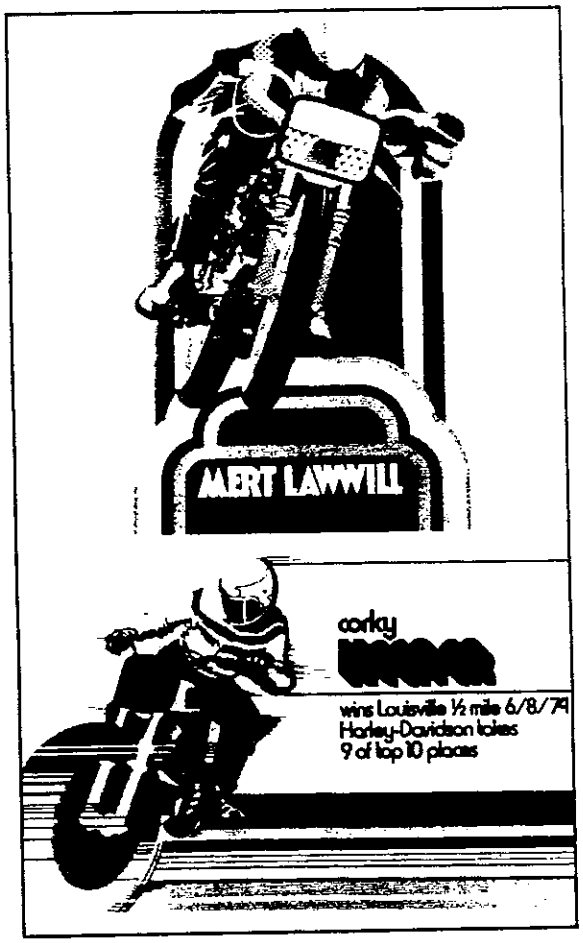
mean anything to a guy on a chopper, and seeing guys with bandanas in H-D ads won't win you touring riders. And without any models that can stay with the current crop of Japanese superbikes, H-D isn't likely to corner the sport market."

Harley-Davidson evidently viewed the market in a similar way until 1982. In addition to offering the usual custom (FXRS, Sturgis, Low Rider, Wide Glide) and touring (Electra Glides, Tour Glide, FXR) bikes, the company produced a pair of sport bikes (Sportster, Roadster) that met with critical acclaim from cycle magazines and from riders who get off on being able to flick a cycle through a series of sharp turns, then come to a safe, sure stop. Harley-Davidson still makes performance motorcycles. The challenge was to spread the word.

The three kinds of bikes were segregated by types into different brochures. A dealer, the thinking properly went, can tell what kind of potential customer he has after a brief conversation. Said dealer then lays on the customer a brochure tailored to the kind of riding the customer intends to pursue. No bandanas with Electra Glides, no choppers mixed in with the fiber glass, no sport bikes with riders who look like they're members of the Booze Fighters M.C. This sounds simpler than it really was, since the enthusiast publications weren't about to give an H-D high marks in a road test, just to benefit a marketing plan. Were the bikes in fact better, or have such quality magazines as *Cycle World* succumbed to Harley propaganda? "The product is greatly improved," says a member of the H-D national advertising program. That makes advertising much easier.



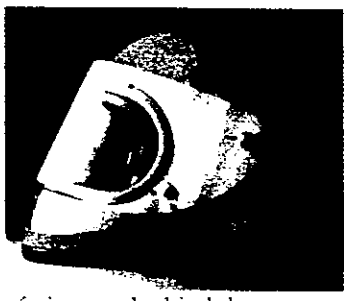
Harley-Davidson has always made the most of racing wins, as these dealer posters indicate. (Harley-Davidson Motor Company)

Advertisi nas never really been easy for H-D, pa ularly since the company labored throughout the teens, twenties and early thirties under a delusion. "We tried for a long time to convince people that motorcycles had some utility value," says William H. Davidson, the former president. "Motorcycles have never been anything but pleasure." His assessment coincides with a styling change made for 1933, wherein the bikes dropped the utility look—and olive drab paint—in favor of a rainbow of colors and ads peopled with models who looked more like cycle club members and less like delivery boys. Today, the last thing you'll find in a Harley ad is a bike carrying a stack of pizzas or a bundle of dry cleaning.

The role of those involved with advertising also has changed. The first person concerned with spreading the word was Lacy Crolius, whose photo is easiest to find in the Harley-Davidson racing archives. Crolius, and Walter Davidson, for that matter, took time off from their duties as ad manager and president, respectively, to enter endurance runs in the very early years. Later came W. E. Kleimenhagen, a more polished man but one who would argue the merits of the Crocker motorcycle with a dealer as readily as any rider. During Kleimenhagen's thirty-year tenure, there is an almost exact correlation between how attractive the ads were and how well the cycles were received by

OT EVERYTHING THE GOVERNMENT SUGGESTS TO LOOK LIKE THE GOVERNMENT SUGGESTED IT.

[A Less Than Tolerant Viewpoint from Harley-Davidson]



Just because helmets nandatory, doesn't mean have to look that way.

So, with a little moxie, the knowledge that comes protecting the thinking of race car drivers Al Bobby Unser, we've n to protecting your head out subjecting you to the rrassment of looking like imid.

We beat the government ards for impact.

We beat the government ards for resisting ation.

We did it with different so that you'd have some n the matter, and we d a bonus. We color and n-coordinated many of elmets to our cycles so d fit right in with the c Harley-Davidson look.

We also offer a series of visors—the kind that snap, the kind that slide—in colors to fit any series of light conditions you might encounter.

If you get down to your Harley-Davidson dealer, you can see the results for yourself, along with a complete line of Harley-Davidson rider accessories—everything from boots, to leathers, to gloves.

Check out a Harley-Davidson helmet. They look so good maybe the government will consider banning them.

Nothing has to be a compromise.

Harley-Davidson

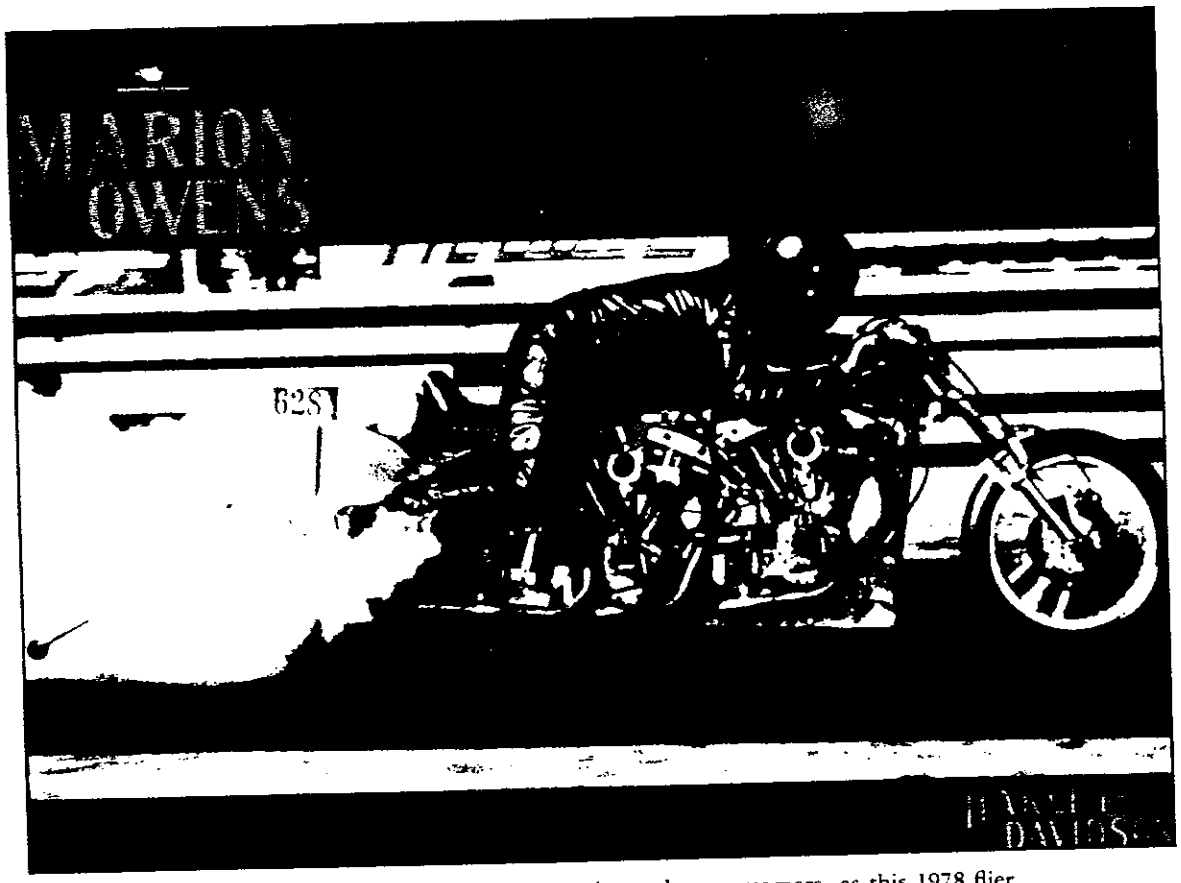
This late seventies ad is significant. It allows H-D to take a shot at government, it mentions celebrities (race car drivers Al and Bobby Unser) and it peddles an important accessory. Ironically, the company realizes that a smaller percentage of H-D riders than average wear helmets. (Harley-Davidson Motor Company)

the public. The early-thirties and early-fifties print material has a somewhat listless appearance, while the later-thirties and fifties ads, brochures and posters carry a snap that makes the reader believe the company knew what it was doing. In fact, H-D had a better understanding of its role than did its acquirer, AMF.

AMF in 1976 hired Benton & Bowles, a prestigious Chicago ad agency, for all of the conglomerate's recreational lines. Harley-Davidson received a rigid set of guidelines as to format and appearance of all advertising and collateral (dealer) material. AMF believed, with some validity, that the polished firm would bring needed marketing expertise to its large subsidiary. Thus began a battle that did not end until just prior to the buyback. "Benton & Bowles tried to apply package goods techniques to motorcycle marketing," says Clyde Fessler, director of marketing services. "They were nonenthusiasts trying to appeal to enthusiasts."

Other suspicions also upset H-D personnel. Since Benton & Bowles had been retained by AMF, there was the feeling that B&B was most interested in satisfying the Connecticut parent rather than the folks in Milwaukee. And since AMF believed itself to be highly visible and therefore vulnerable to attack from all sides, an individual ad had to pass through five levels of corporate approval.

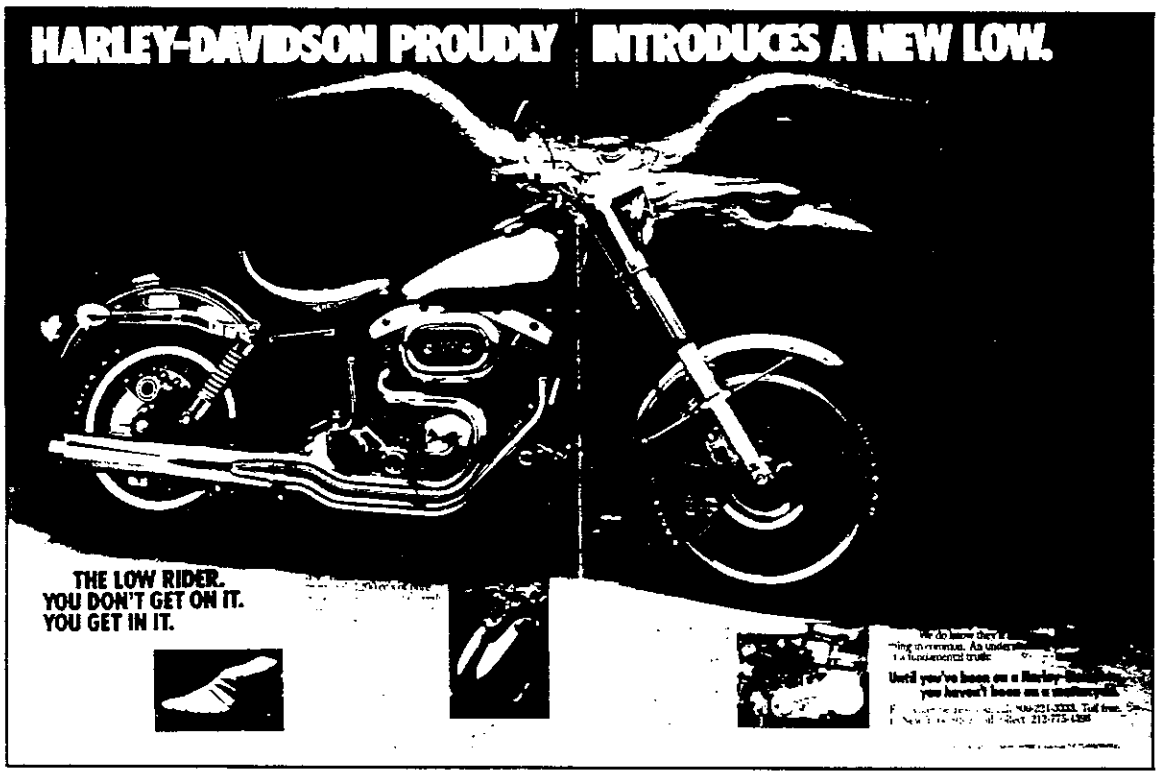
Harley-Davidson remained in charge of its own sales promotion, and so hired another agency to create brochures, literature, point-of-purchase displays and related collateral. And since B&B was responsible only for national (primarily print) advertising,



Harley-Davidson still uses racing results to draw customers, as this 1978 flier featuring Marion Owens attests.

H-D marketers hired a third agency to create radio and television spots; H-D paid for production and the dealers then had an opportunity to run the radio and TV spots locally, splitting the cost with Harley on a cooperative basis. As time went on, H-D spent more on those segments of advertising under their control and less on national print. The tail was wagging the hog, so to speak, even though H-D was obeying AMF advertising edicts.

Harley-Davidson continued to run this devious pattern until the spring of 1978. Responding to numerous dealer requests, H-D saw to it that a full-page ad was placed in *Easyriders*, the largest-circulation outlaw-type sex/bike monthly. AMF was mortified that one of its subsidiaries was a part of the "Swastika" set and ordered H-D not to run future ads in such a prurient publication. Lou (Spider) Kimzey, the force behind *Easyriders*, filled the page meant for the H-D ad with a Surgeon General's-type warning that the motorcycle manufacturer had determined *Easyriders* was injurious to its image. The black page with the small, rectangular block of type was a stroke of genius: Letters displaying various degrees of literacy and outrage poured in to the magazine, the motor company and the conglomerate. Both H-D's Clyde Fessler and AMF's Bill Dutcher acted to pacify everyone. Dutcher put on his shabbiest clothes and went west to meet Kimzey personally. Kimzey got himself up in a three-piece suit for the occasion. They nearly missed meeting at a restaurant as a result. Fessler worked a deal wherein the AMF logo was exorcised from the ads, to be replaced by a line crediting the ad to the H-D dealer network. An individual dealer placed and paid for the ad, then was reimbursed by Harley-Davidson. Somehow, everyone was pacified, since the money for the ads was taken from the dealer coop program. But that led to other corporate shenanigans.



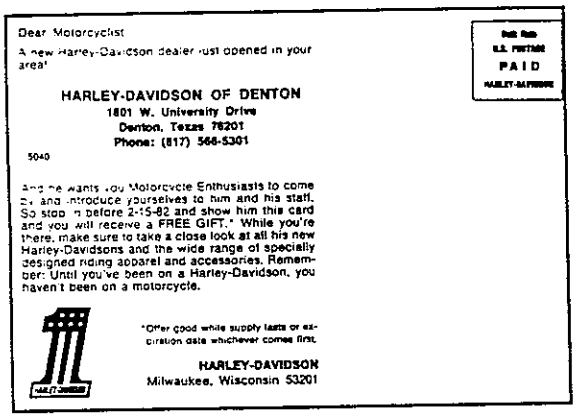
Appealing to a specific kind of biker, H-D in 1979 introduced the Low Rider in the kind of bold advertising the Japanese are now copying. (Harley-Davidson Motor Company)

The dealer coop program grew from $200,000 in 1976 to $2 million in 1978. There followed numerous heated meetings between AMFers and H-D personnel, since the conglomerate had a deal with B&B wherein the agency was paid a flat annual fee and all ad commissions were rebated to AMF. The large and independent sum being spent by Harley-Davidson was preventing AMF from getting any sort of rebate on H-D advertising. Like a parent who runs out of patience, AMF ordered Harley-Davidson in the spring of 1980 to run its cooperative ad program through Benton & Bowles. At about that time the economy began to sour, so H-D abandoned more expensive advertising for the direct mail approach. Again, this resulted in no revenue being rebated to AMF, since a Minneapolis agency prepared the creative work and a Chicago agency was retained for other dealer coop programs. The parent firm capitulated in January 1981, stating that all recreational subsidiaries could select their own agencies effective June 10. The point was moot, since both sides were aware that soon the motorcycle company would be independent once again.

Today, two distinct things are happening in motorcycle advertising, according to Mike Keefe, H-D ad manager. The Japanese, after years of trying to broaden the market by advertising in the mass media, are cutting back their motorcycle programs and, consequently, their advertising. That's a reaction to a flat or declining cycle market. But H-D continues to do what it's been doing: "We don't use the mass media," Keefe states. "Instead, we try to reach those already on bikes through an aggressive direct-mail program and by advertising in the buff books." The last major push to broaden the market was Honda's $5 million television and print campaign to get first-time riders on their 250cc Rebel.

Nevertheless, Keefe continues, there are some interesting things going on in the market. "Do scooter buyers become motorcyclists? No one knows. But the entry-level vehicle theory here has been revised with the introduction in 1986 of the 883. Before, a used bike was the most common introduction to H-D. We're finding some other interesting things—like the unusually high number of people who already own a Harley who are buying the 883. Or the success of the 1100, which is a dressed-up, punched-out 883.

"Another pleasant surprise has been the success of the demo program. This was the best way to show riders how nice the new Evolution machines really were. Based on



Dear Motorcyclist

A new Harley-Davidson dealer just opened in your area!

HARLEY-DAVIDSON OF DENTON
1801 W. University Drive
Denton, Texas 76201
Phone: (817) 566-5301

5040

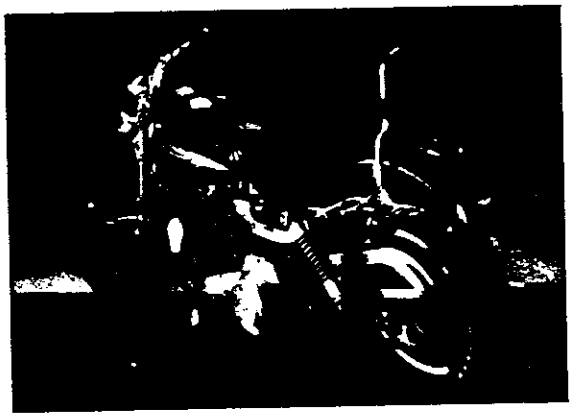
PAID

And he wants you Motorcycle Enthusiasts to come in and introduce yourselves to him and his staff. So stop in before 2-15-82 and show him this card and you will receive a FREE GIFT.* While you're there, make sure to take a close look at all his new Harley-Davidsons and the wide range of specially designed riding apparel and accessories. Remember: Until you've been on a Harley-Davidson, you haven't been on a motorcycle.

*Offer good while supply lasts or expiration date whichever comes first.

HARLEY-DAVIDSON
Milwaukee, Wisconsin 53201

The front . . .



. . . and back of a direct-mail piece, aimed at Texas riders of motorcycles over 750cc in the Denton area. H-D uses direct mail frequently and effectively.

successful demos in Daytona, we have a demo fleet semi truck that goes to rallies and has given 5-6,000 rides per year, in addition to Daytona.

Keefe also believes that the belated creation of giant V-twins by Suzuki and others merely serves to focus on what has become a born-again configuration for bike engines.

Does the company have an overall ad strategy? Here's Keefe again: "We're starting to sell the entire Harley-Davidson experience. With the establishment of local H.O.G. chapters, everything you need to enjoy the sport is at your H-D dealer. We offer the whole environment, something no other bikemaker can match." Keefe admits there's no cafe racer in the Harley lineup at the moment, but points out that current manufacturing techniques lend themselves to short-run, specialty models. If the market demands it, the company may well produce it.

Savvy marketing is good, but having a mystique about its products is even better. Larger companies than H-D have spent millions trying to create a similar devotion, only to fail. How did Harley do it? They're not sure themselves. (Why do you think it's called a mystique?) Eyeing the aura that surrounds the bikes, Clyde Fessler sizes it up this way: "It's like a fire. You can pull and use a color from the fire, but if you just try to grab the whole thing, you're going to get burned." That analogy cuts several ways. On a personal basis, at least one H-D president during the AMF years got so caught up in the mystique that he is said to have committed a stunt with a biker's old lady in full view of Daytona Beach Hilton guests. On a marketing basis, it appears that Japanese manufacturers are attempting to grab the fire rather than the colors.

Mystique also means continuing to successfully walk the tightrope between bikers and touring riders, who have little patience with each other. The current H-D crusade against aftermarket firms who produce counterfeit parts is terribly risky, in that it could alienate one entire, important and loyal segment of the market. Fortunately, some bikers may dislike the company, but they love the motorcycles.

Another crusade is tied to the mystique: That is the "I make the eagle fly" quality program. Devised by President Charlie Thompson in 1981, the "Eagle" plan was aimed at instilling more pride in workers, with the results showing up in greatly lowered defects. "We couldn't justify a premium price for our bikes if the quality wasn't as good as or

A pointed message currently provided municipalities as part of the sales effort for police bikes. (Harley-Davidson Motor Company)

better than the competition," Thompson said. Results have been gratifying: there are fewer warranty claims, engines appear oil-tight and—most important—new owners are delighted.

Who, then, is today's Harley-Davidson buyer? According to a major maketing study, the owner of a Milwaukee motorcycle is:

—Overhwhelmingly male: 98 of every 100 H-D owners is a man.

—34.1 years old.

—Married (54 percent). Single riders make up 29 percent and widowed or divorced 17 percent.

—A blue-collar employee (58 percent). Some 36 percent are white-collar workers and 6 percent are either unemployed, retired or of independent means.

—In command of a median individual income of $28,000, with a median household income of $35,300. (Ah, the joys of working wives!)

—A high school graduate (91 percent). Half have one or more years of college.

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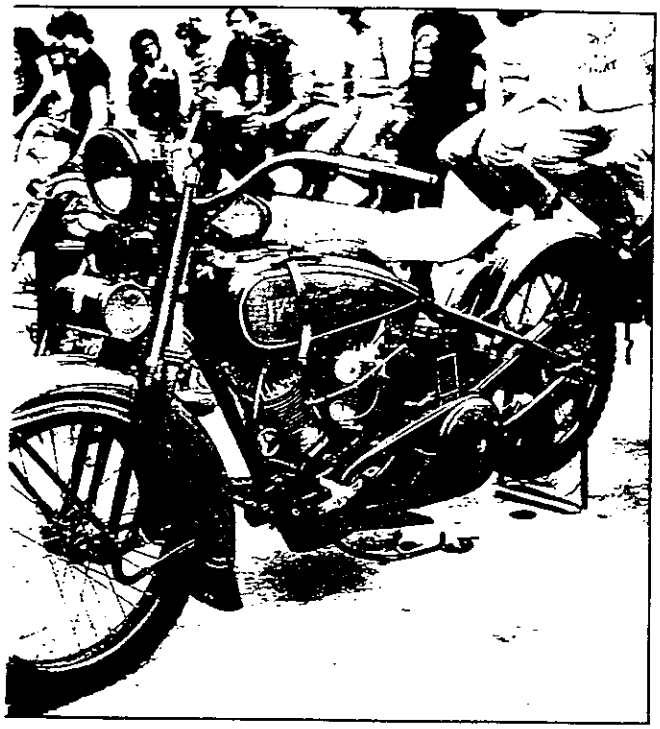
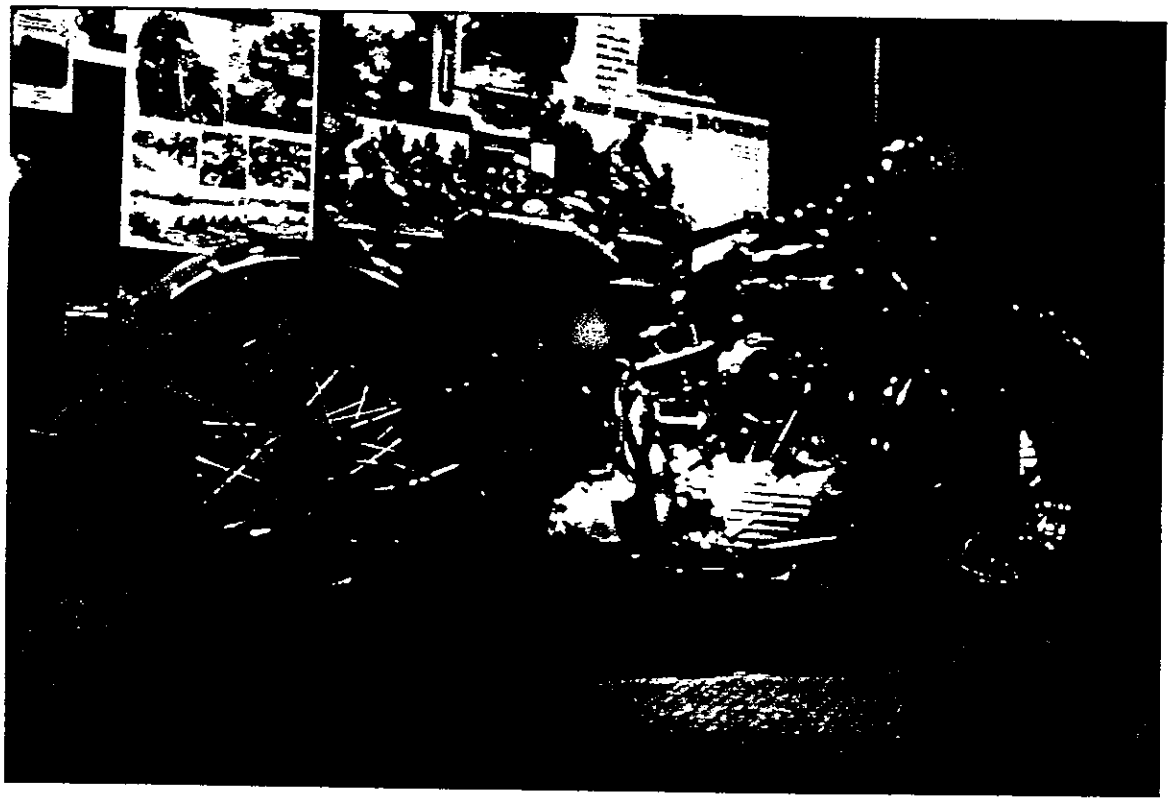
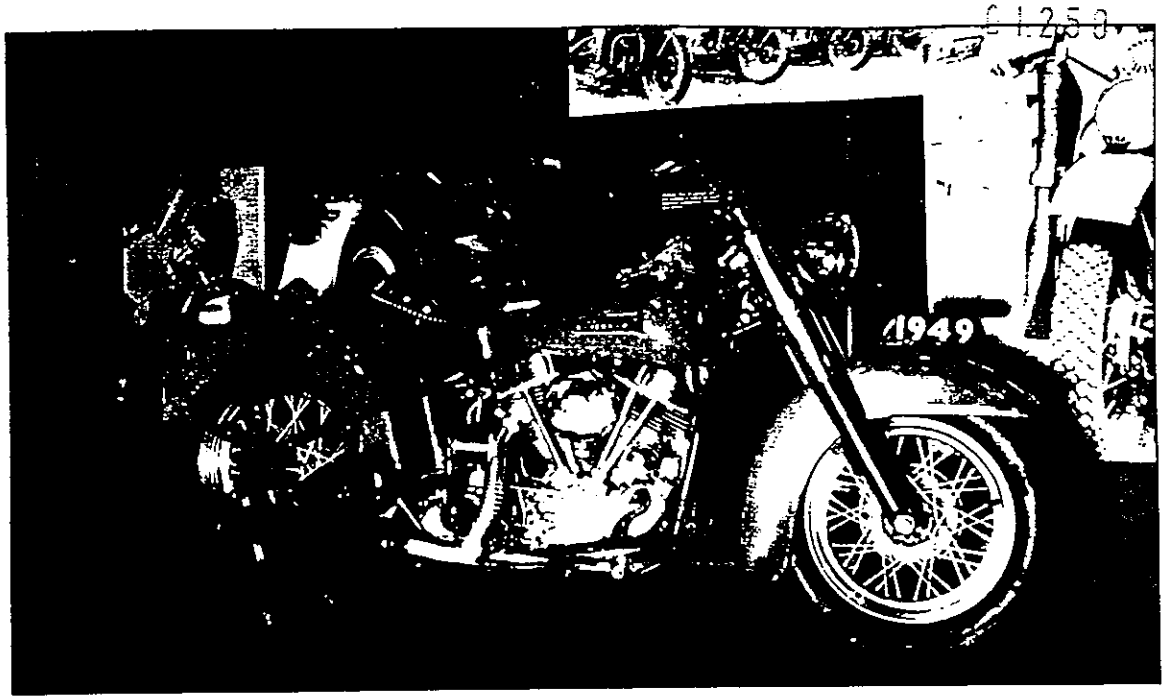


This 192" JD was restored by Andy Batsleer of New Smyrna Beach, Florida. Numerous unobtainable parts were hand-crafted by Batsleer. The bike looks authentic. (David Wright)

A 1948 Panhead, the first year for this engine with hydraulic valves, as shown in Harley-Davidson's Rodney C. Gott Museum in York, Pennsylvania. (David Wright)





The first Hydra-Glide, produced in 1949, also on museum display. (David Wright)

The 1952 Model K, as displayed at H-D's Gott Museum. (David Wright)

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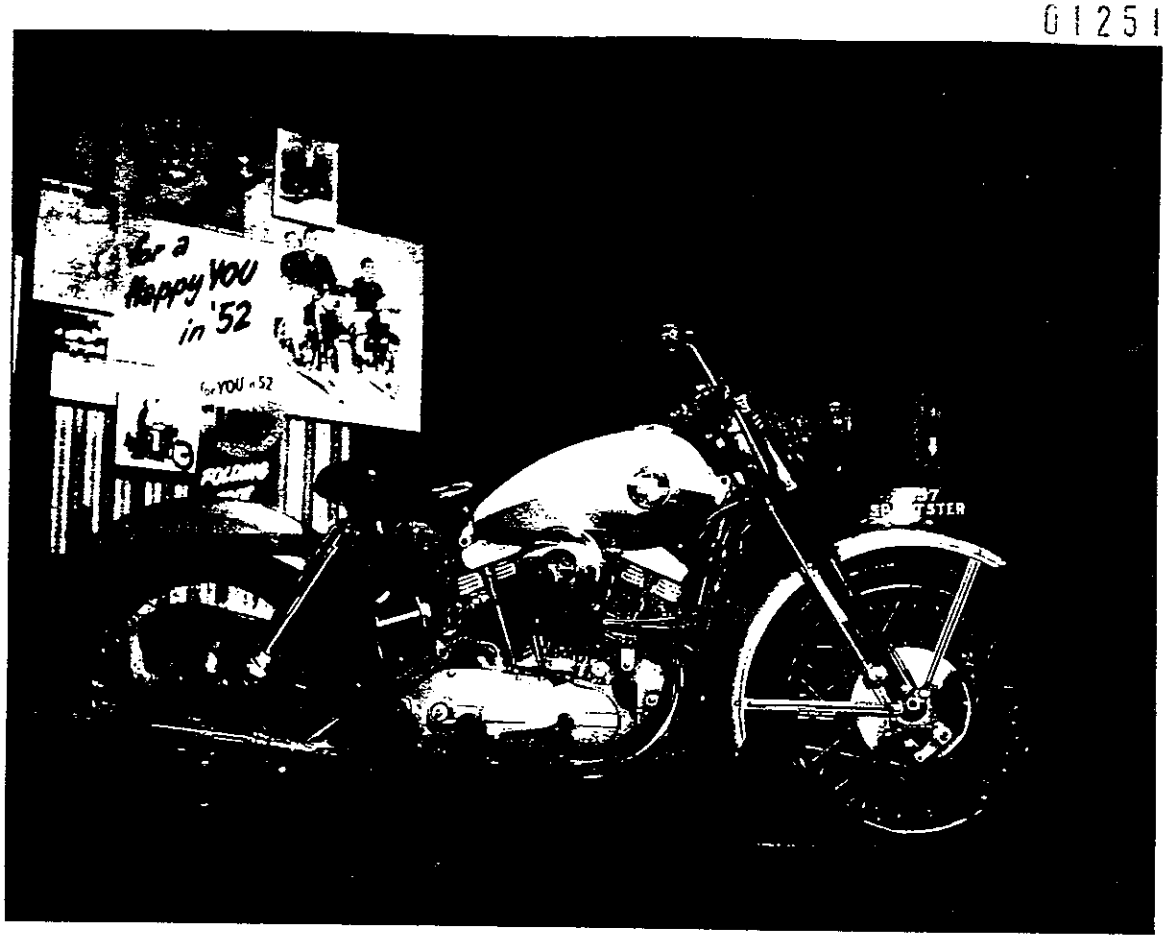
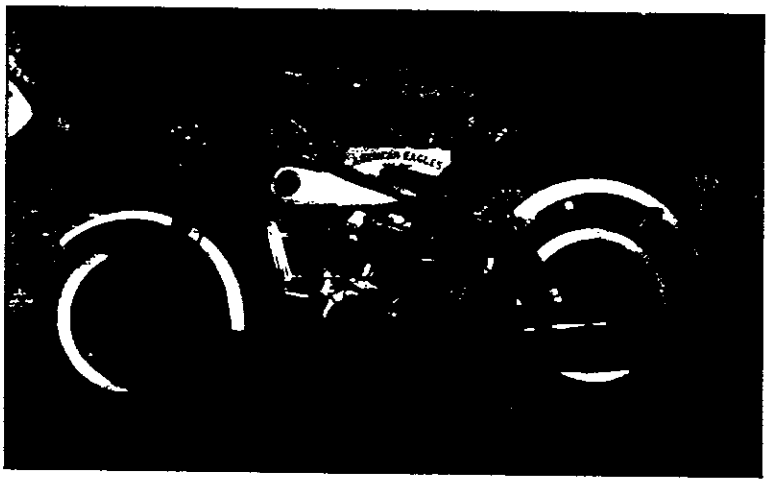


The first Sportster, produced in 1957, is displayed in H-D's Gott Museum. (David Wright)

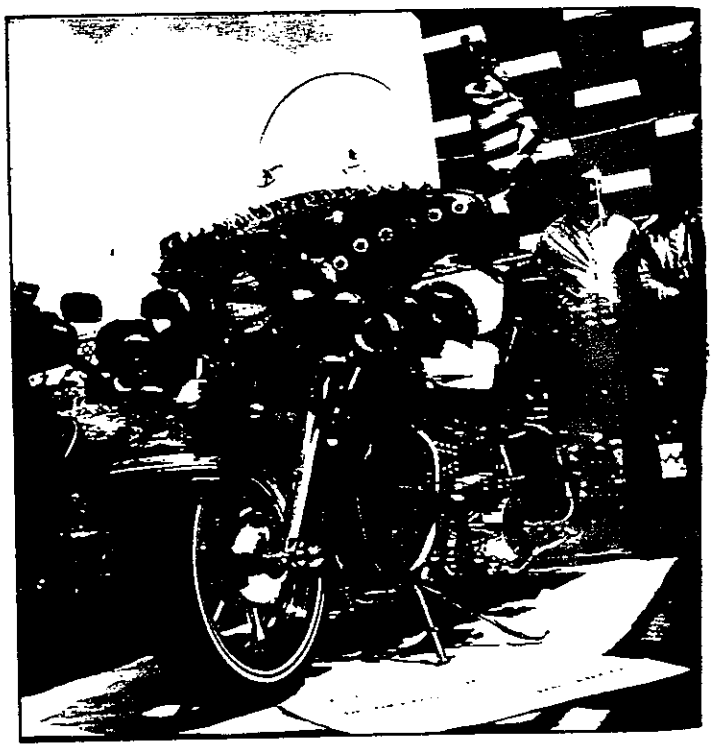


The Duo-Glide, offered in 1958, provided an alternative to a solid rear end for riders of the big Harley-Davidsons. (David Wright)

01252

Bill McMahon, Wisconsin Rapids, Wisconsin, adjusts, fires up, then rides his 1914 Harley-Davidson. Although his restoration isn't exact, he probably puts more miles on his antique H-D than most. (David Wright)

A 1971 Electra Glide, ready for touring or display, is shown in the Daytona Beach Hilton lot. (David Wright)



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The immaculately restored two-cam racer of Michael Lange, Oconomowoc, Wisconsin. The motor was first created in 1916 and was made through 1929. Lange's bike is a 1924 model. The motor in this bike was bored and stroked to 80 cu. in., probably for hillclimbing purposes. Lange points out that displacement for the track racers such as his were 61 cu. in. (David Wright)

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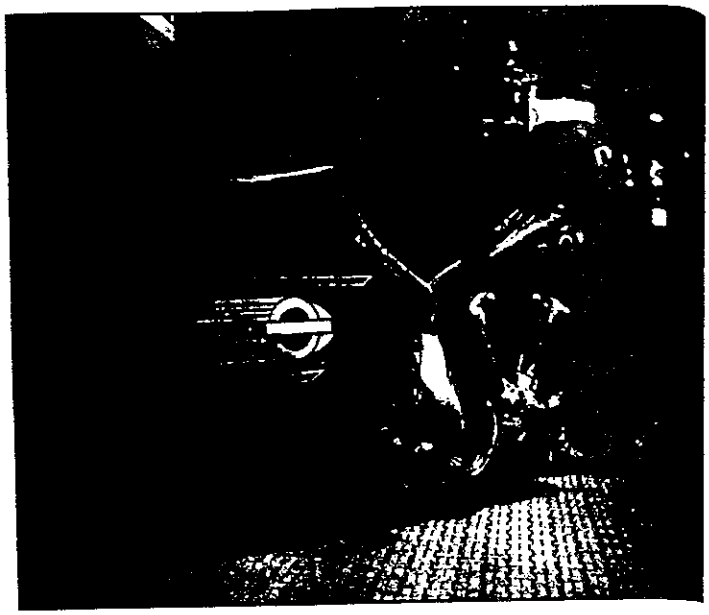
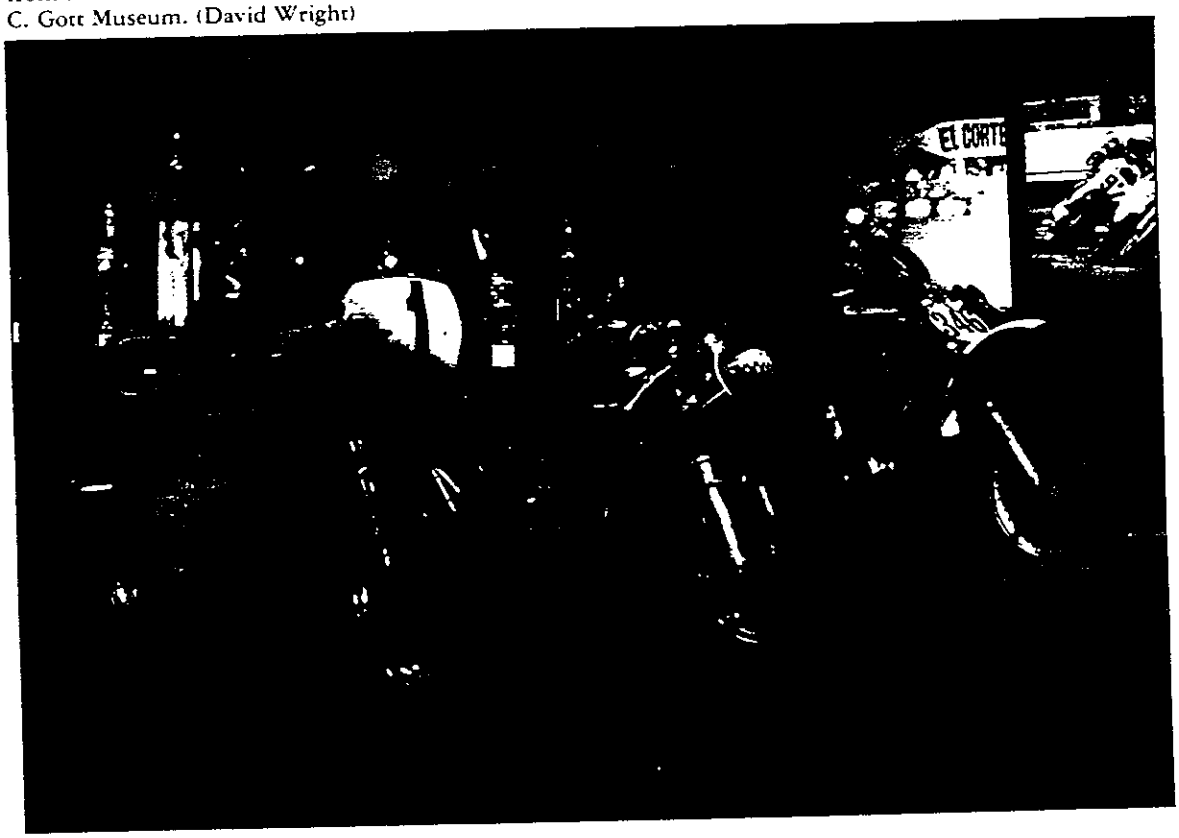


Joe Petrali's 1936 Knucklehead record breaker exceeded 136mph on the sands of Daytona Beach. Here it's displayed in the H-D museum. (David Wright)

From left, Cal Rayborn's XR, Walter Villa's 250cc Aermacchi and a replica of the Baja-winning motocross 250. All are on display from time to time in the Rodney C. Gott Museum. (David Wright)



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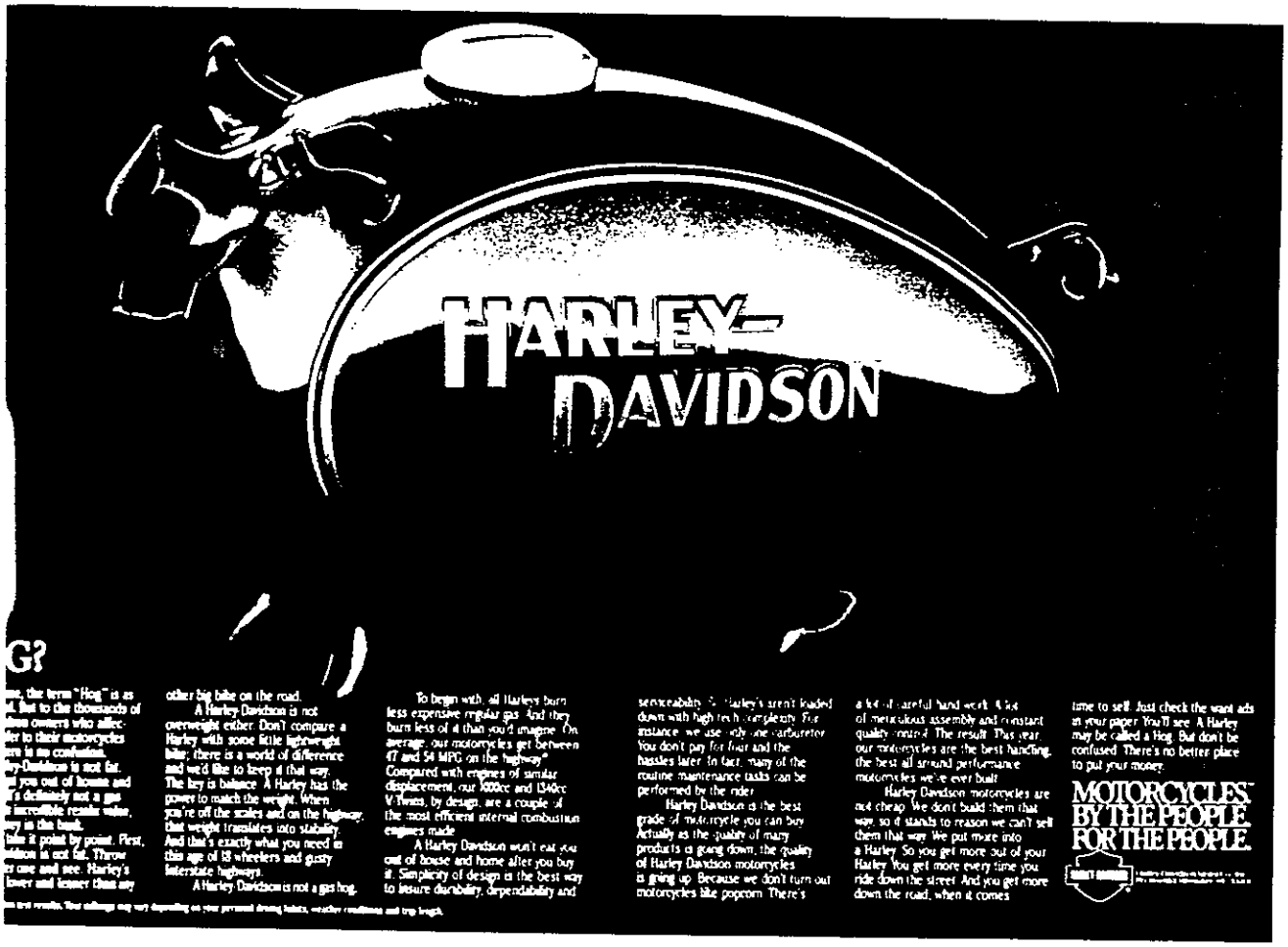
Beautiful artwork and printing were featured on H-D brochures in the teens. (David Wright)

A contemporary example of H-D national print advertising. The hog is now offered as a piggy bank through dealers. (Harley-Davidson Motor Company)



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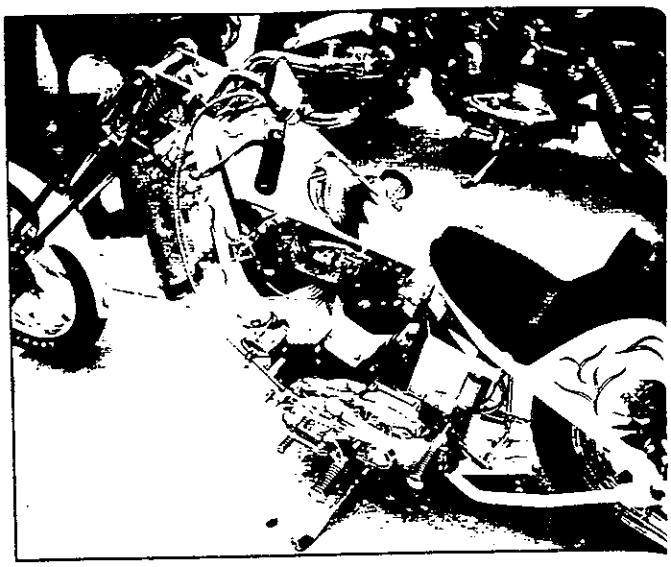
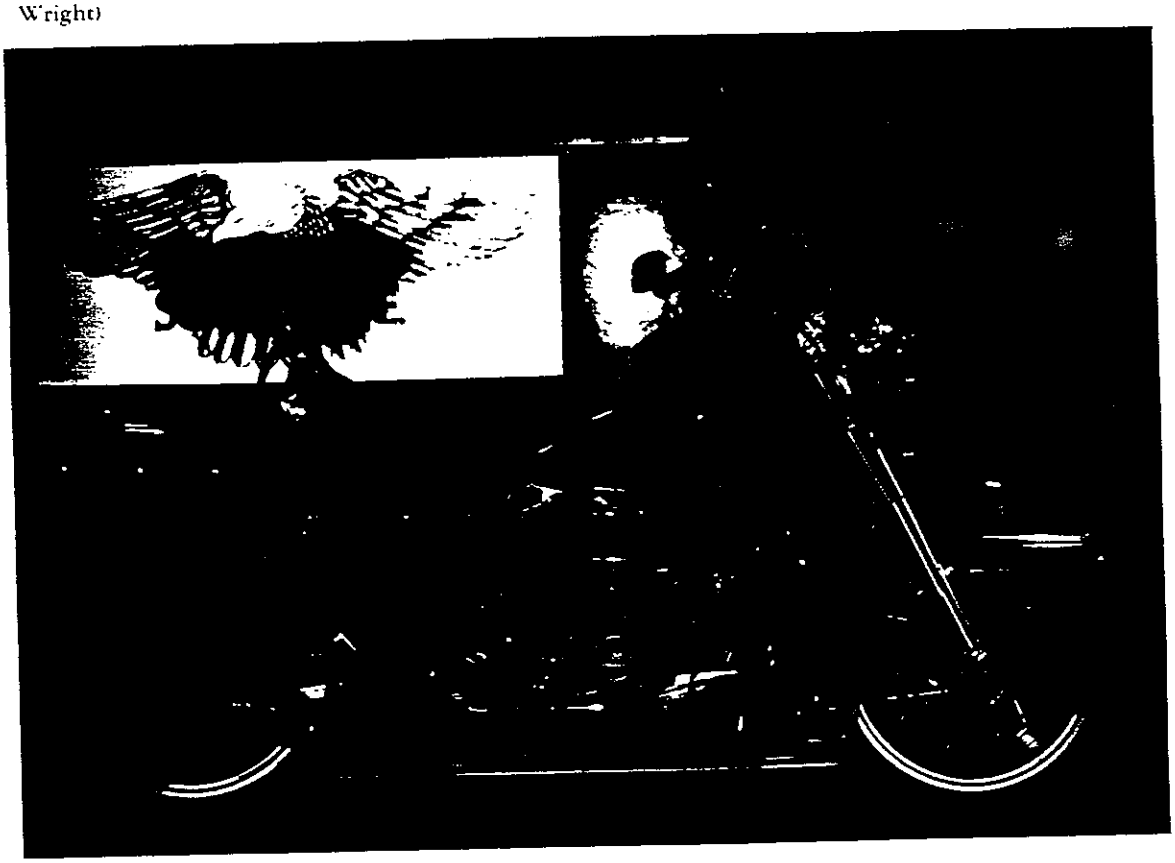


Customs line the boardwalk each Saturday morning during Daytona Beach Speed Week. This stunning white creation is from South Carolina. (David Wright)

A 1981 FLH Heritage model on display in the Rodney C. Gott Museum, York, Pennsylvania. This is said to be the first bike off the assembly line following the buyback from AMF. (David Wright)



01257

CHAPTER ELEVEN

CELEBRITIES

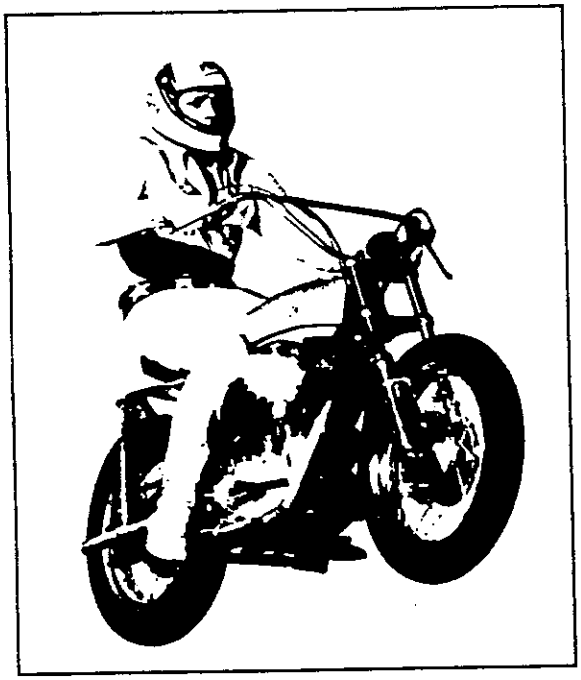
HARRY TAINTOR KNEW HOW TO ATTRACT ATTENTION, ALL RIGHT. THE SEATTLE HARLEY-Davidson dealer found out one day in 1918 that something called Trixie Friganza, The Vaudeville Queen, was in town. He called the theater, asked Trixie if he could show her the sights of the city in his H-D V-twin sidecar and she consented. Harry eased his three-wheeler to the curb under the marquee and was greeted by Miss Friganza, all 250-or-so pounds of her. Never one to miss a publicity opportunity, Harry alerted the local newspaper and then took the plump young actress up the steep hills of his home town. Since he couldn't convince the photographer that this was a cheesecake assignment, he managed to relate that the trip around town indicated how powerful the H-D with sidecar really was. If it could haul Trixie, it could haul anything.

Since then, Harley-Davidson has been associated with an incredible number of celebrities, who either proved they'd made it by buying one or more Harleys, or were conned into posing for some kind of publicity shot with an H-D occupying center stage. Sylvester Stallone, an H-D owner, may have said it all in *Rocky II*. Heavyweight boxing hopeful Rocky Balboa is asked by the press why he wants a return match after the beating administered by the champ. Rocky's only audible reason is that the money won in the fight will enable him to buy a motorcycle. Muhammad Ali warned Joe Frazier several years ago that "Motorcycles is for crazy people." Today, Ali owns a Harley-Davidson.

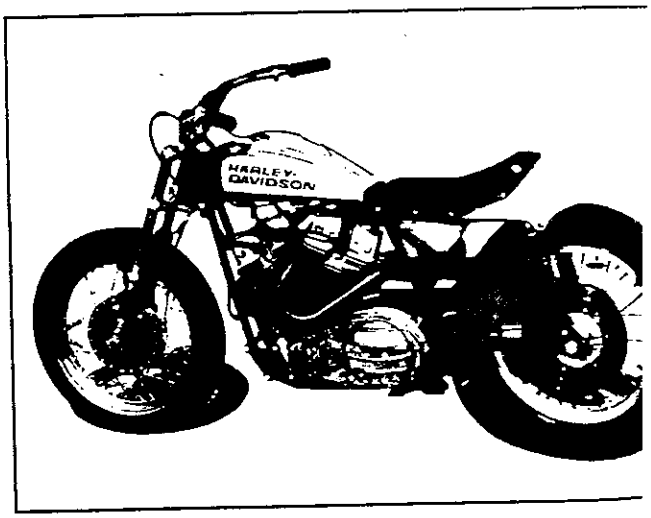
Perhaps H-D ownership among the stars provides the same kind of rush it gives everyone who has ever owned or ridden a Harley. It's also one of the only ways the most famous actors, singers and athletes can assume a little welcome anonymity. Pulling on a full-face helmet, they can ride among their adoring public without fear of being recognized. A few years ago, however, a fellow from Montana inverted the equation. He used a motorcycle to escape anonymity, becoming the most famous cycling celebrity of all time. His name—Evel Knievel.

Robert Knievel grew up like a lot of us—he played a good game of high school football and hockey, tried his hand at rodeo, held an AMA amateur competition license, chased a lot of women and caught a few, sold insurance, even worked as a private detective. But success seemed beyond his grasp until he hit on the idea of jumping objects—cars, trucks, fountains, canyons, you name it—on a motorcycle. Evel, as he came to be known, worked the West Coast in the beginning, accruing cash in direct proportion to the size or number of the objects a track promoter or county fair director wanted him to leap. By 1968, he'd cleared most possible obstacles and, despite multitudinous broken bones, may have thought himself indestructible. So he announced that he would leap the Grand Canyon. An Indian tribe and the federal government prevented Evel from performing this 1½-mile jump (or plunge), so he continued to thrill crowds while he waited for another ultimate trick to come along.

Millions of dollars were paid by the public to watch Evel clear twenty-one cars at the Ontario (California) Speedway, sail over another large number of vehicles before crashing into a wall in the Astrodome and fly above the Caesar's Palace fountain. The Las Vegas stunt, next to the assassination of John F. Kennedy, may be the most commonly run strip of film in history. It shows Evel taking off, landing wrong, tumbling off cars and going end-over-end, seemingly forever, across the hotel parking lot. Bones snap and poke his leathers and skin singes on the asphalt as speed rips at man and riderless machine. Following numerous stays in the hospital, Evel would emerge, believing more strongly in his invincibility and in the righteousness of his cause (whatever that was).



Robert (Evel) Knievel.



One of Knievel's XR's. The bike, along with a car and Evel paraphernalia, is on display in a suburban Chicago auto museum.

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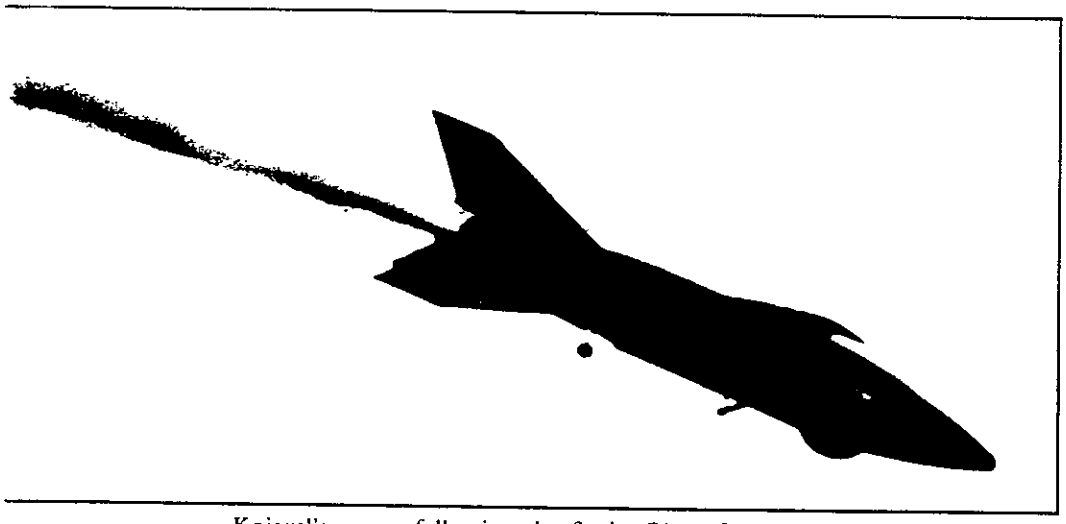
Harley-Davidson entered the picture in 1970, providing Evel with a modest fee, technical expertise and, what he wanted most, an All-American machine. It's more than coincidence that Evel and the entire line of H-D's took on the stars-and-stripes motif simultaneously and in earnest. The deal garnered reams of publicity for the company, since Evel's likeness and his bike were being reproduced by everybody from T-shirt peddlers to toymakers. The company even made sure that the AMF logo was on board Knievel's jet-powered machine as it sailed off for a test run in 1973 and fizzled during the real Snake River Canyon jump attempt in 1974. Diplomatically, Harley-Davidson and Evel parted company after he was convicted of beating a former business associate with a baseball bat. Sheldon Saltman had cowritten a book on Evel that poked holes in the Knievel legend. Saltman suffered a broken left arm and right wrist, small change for a daredevil but of sufficient concern to Saltman that he successfully sued Evel.

Today, Knievel lives modestly, dividing his time between painting—he's a decent artist—and launching his son's stunt-riding career. Former H-D President Charlie Thompson points out that, despite his reputation, Evel abided by every agreement between himself and the company.

Evel Knievel isn't the only fellow out there who has ridden motorcycles to fame, if not fortune. Back in the twenties and thirties, a brief and nutty fad involved running one's bike into and—the rider hoped—through a wall of wood. The participants performed at county fairs and were looked on much like the barnstormers in their rickety airplanes at about the same time. The first documented board bash on a Harley-Davidson was performed in Texas in 1932 by a Texas Tech student named Daisy May Hendrich. He proved life's not easy for a boy named Daisy May by slamming his H-D repeatedly through inch-thick boards constructed in a six-by-six-foot wall. Adam Beyer of Fond du Lac, Wisconsin, also H-D mounted, was entertaining folks farther north in a similar vein. But J. R. Bruce of Wooster, Ohio, outdid both Hendrich and Beyer by setting the wooden wall aflame before he rammed successfully through it. And while Putt Mossman was running up and down a ladder mounted to his H-D as it traveled at forty miles an hour, a resident of Valparaiso, Chile, *really* upped the ante. Juan Maliu climbed aboard his Milwaukee-made machine and pleased a crowd by roaring (intentionally) through a wall of plate glass. Prudently, most U.S. stunt riders settled for flaming wood.

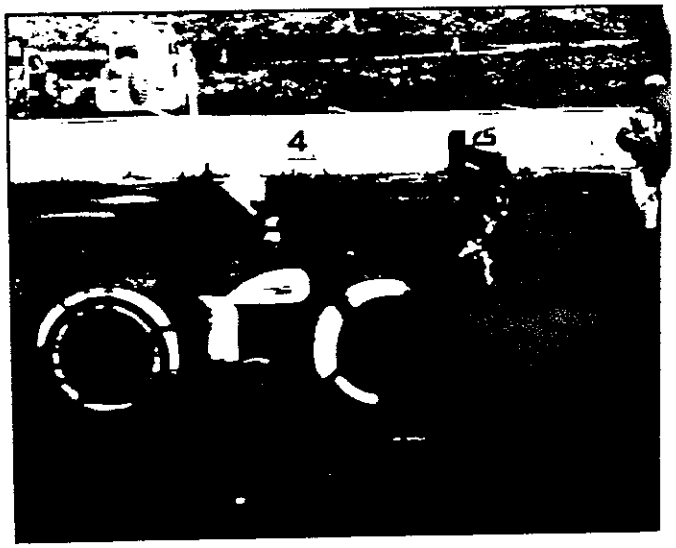


Knievel's career following the Snake River Canyon stunt approximated the trajectory of his missile. (Harley-Davidson Motor Company)

Among them was Harry Molenaar, now retired after fifty years as a Harley-Davidson dealer in Hammond, Indiana, outside Chicago. Molenaar and a friend performed flaming wall crashes in the thirties as part of a thrill show featured throughout northern Indiana. On one particular evening, following a day of rain, the grandstand was packed as Harry and his cohort lined up to do their promised side-by-side simultaneous crash through a pair of flaming walls. The friend noticed that *two-by-fours* were being used and that the boards were so rain-soaked they weren't turning into ashes, which had been the key to their success so far. He told Harry that he felt ill and that the show must go on without him. Molenaar promised the throng that he would eliminate both burning walls, kicked over his bike and aimed for wall No. 1. "I hit it and it knocked me cold. But I stayed on the bike and woke up half way round the track," he recalls. He got the bike lined up once again and roared down the muddy straightaway toward wall No. 2. That collision gave him a concussion but, he says, the crowd loved it.

Not all tricks with a motorcycle are so dangerous. Those who have seen a cadre of Shriners perform on their Hogs realize that speed isn't necessary for a good show. "The Masons do the work and the Shriners have the fun," explains Freddy Ephrem of Jacksonville, Florida, a Shriner who has been involved for years with Harleys. Ephrem says the

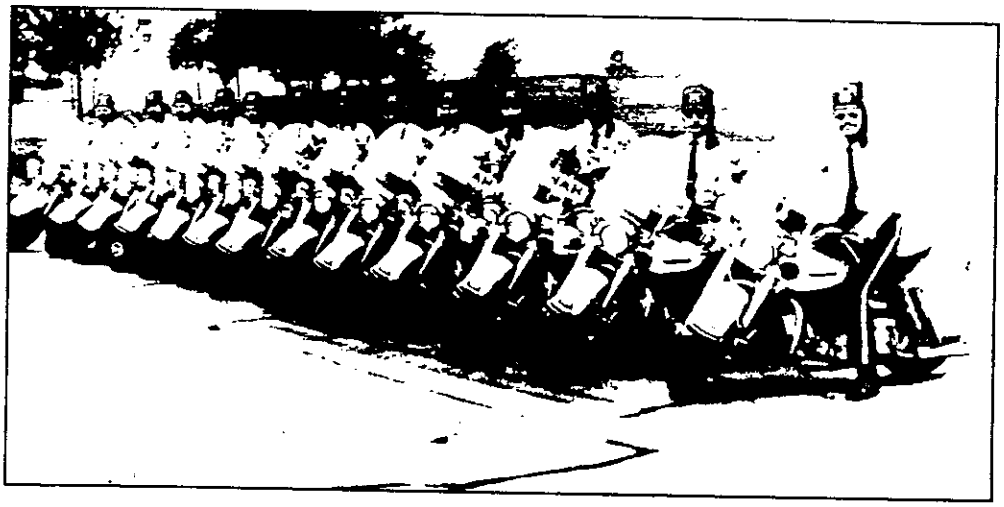
George Hamilton portrayed Evel Knievel in a successful telling of the stunt man's life. (Harley-Davidson Motor Company)



Seven-year-old Jimmie Hinds may not have been the first to smash through a flaming wood wall, but he was among the youngest, as this 1940 photo indicates. (Harley-Davidson Motor Company)

southeastern U.S. is the most active area in the country for motorized Shrine drill teams, adding that the most impressive unit may come out of Nashville. That city's Al Menah Shrine has sixteen members aboard special H-D Shrine bikes (similar in appearance to police bikes, minus sirens, red lights and radios). Two years following its creation in 1960, the Al Menah Motor Corps began winning awards and hasn't stopped since. Temple member Jim Hester relates that Al Menah has won one or more first, second or third place trophies in every southeastern or international competition each year. The "finals" for such competition include rigid inspection for cleanliness and uniformity by no less than the Marines. Routines are worked out in long, arduous hours on a drill field. Any organization that can pass military muster must find the numerous parades and other civic festivities easy by comparison.

If thousands have seen the Shriners, millions have watched Harley-Davidsons as they were put through their paces in the movies. It's no coincidence that the biker image was spread by overly dramatic films and television, all too ready to show a fringe element of motorcycling that may never have existed in the numbers or the ways Hollywood believed. H-D's first recorded appearance on the silver screen was in 1926, when Christy



Chicago's Medinah Temple Shrine features this 13-man team.

Not all drill teams are Shriners, as this photo proves. The Schuykill County Pennsylvania MC Drill Team favors dissimilar H-D's and similar white shirts with black vests.

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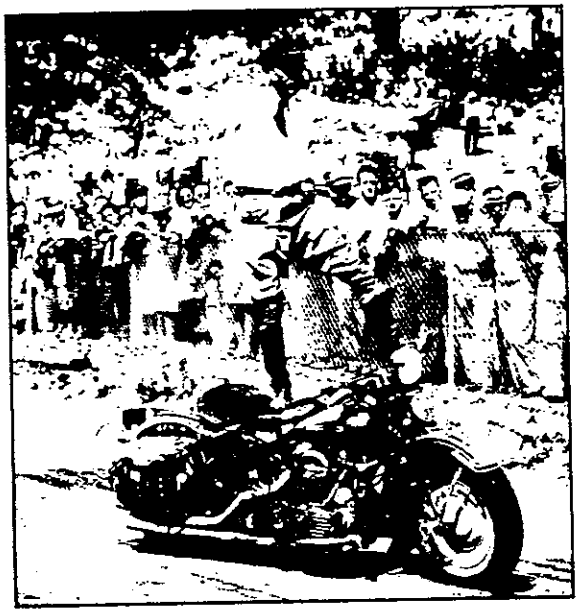
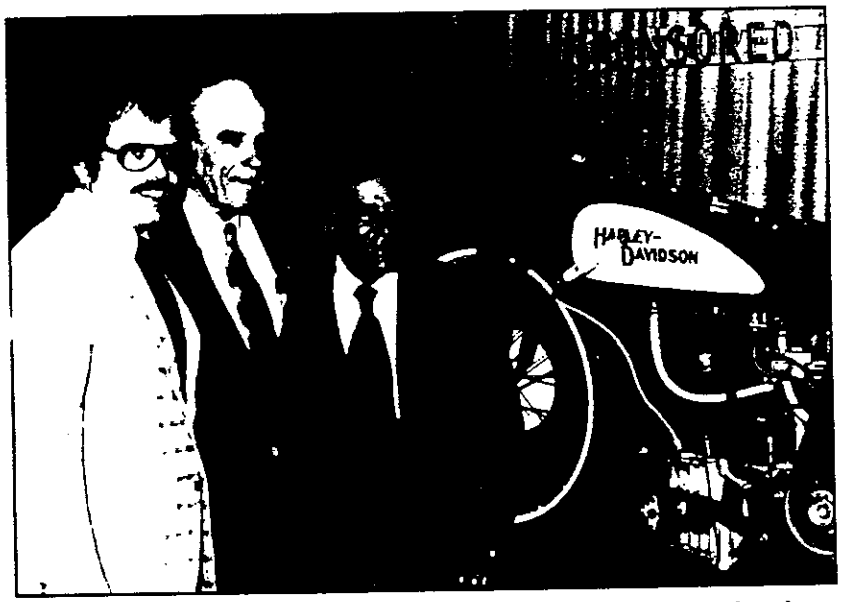
Comedy star Bill Dooley cantered along on a JD in a silent, slapstick film with a long-forgotten title. California's Highway Patrol acquired motorcycles in 1930, and Columbia Pictures responded in 1933 with a movie entitled *State Trooper*. A less-than-memorable production starring Bob Artman, the picture nevertheless was viewed by thousands, since films were the primary entertainment of the Depression. A bit later, Movietone



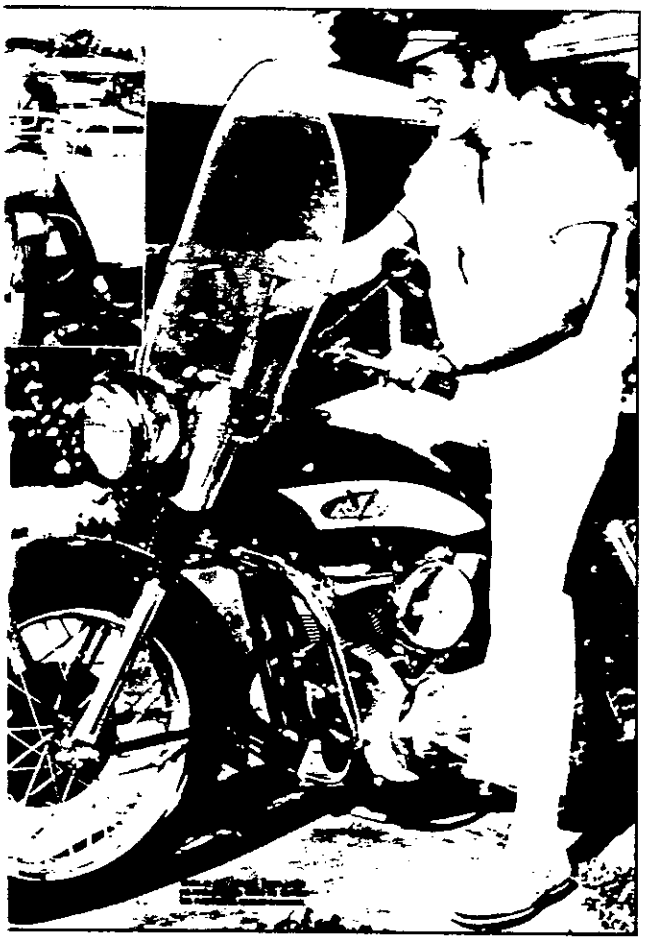
A Mexican stunt man entertains the crowd at the 1948 Peoria Tourist Trophy races. (Harley-Davidson Motor Company)



Tony Hulman (right), millionaire owner of the Indianapolis Motor Speedway, accepts the restored Peashooter racer for his museum from Willie G. and William H. Davidson in 1964. Hulman rode an H-D while a student at Yale. (Indianapolis Motor Speedway)

newsreels began to deliver brief, well-filmed news capsules, among the "selected short subjects" that accompanied a feature. The Movietoners knew that a strip of film was worth 1,000 words; all of them seem to contain, between views of Franklin Delano Roosevelt or Hitler or Churchill, sports action scenes. These seemed to be either some poor soul jumping barrels on ice skates, jumping from an airplane or jumping off a hill-climbing Harley-Davidson as the front wheel kicked upward.

Movie actor Victor McLaglen formed a precision drill team in 1937. The group has performed off and on ever since, on the screen and in person. At about the same time, an enterprising *Photoplay* magazine photographer named Hyman Fink began furnishing *The Enthusiast* with snapshots of movie stars and starlets on one or more H-D's. Jimmy Durante, Ward Bond, Robert Taylor, Robert Young, Clark Gable, Tyrone Power, Preston Foster, Gene Tierney, Van Johnson, Keenan Wynn, Marlene Dietrich, Andy Devine—riders and nonriders alike were snared by Fink's lens. Captions showing the actresses made no bones about the fact that the accompanying photos were publicity ploys. But the actors were said to be doing things like saving World War II-rationed gasoline or memorizing lines for a movie as they rode. Many actors, such as Keenan Wynn, actually were avid cyclists. A Hollywood group, the Three Point Motorcycle Club, founded the Big Bear enduro, in 1941.



Elvis himself owned and rode H-D's. This KH model was said to have cost Presley $3,000. (Harley-Davidson Motor Company)

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Use of H-D's in films following World War II began slowly but built up momentum. Unfortunately, numerous Harley-Davidsons could be seen in Stanley Kubrick's *The Wild One*, starring Marlon Brando. Though the company was silent about this fairly accurate portrayal of the sacking of Hollister, California, in 1947 by a motorcycle gang, dealers to this day blame the movie for cycling's lingering poor image. Ironically, Brando rode a Triumph in the film. But to the average American, a bike was a bike—something nice people stayed off. An MGM movie at about the same time, *Code Two*, with Keenan Wynn, Ralph Meeker and Robert Horton, failed to make a counterbalancing positive impression. The three portrayed cycle cops with less verve, apparently, than the superstar Brando in his role as the leader of a pack. Rank-and-file cyclists tried to counter the negative image in several ways. The Lexington (Kentucky) Eagles Motorcycle Club put on a ride in 1957 for the March of Dimes and several clubs staged "a blessing of the motorcycles" before taking off on a tour. But the damage had been done before millions of moviegoers.

Many of the Harley-Davidsons seen in the movies (such as the early twin ridden by James Stewart in the Lindberg story, *The Spirit of St. Louis*) came from Bud Ekins. The former desert rider and a friend of the late Steve McQueen has provided bikes for films and for such television series as *Nichols*, which starred James Garner astride an H-D single. But most of the cycles seen in sixties films were straight from the factory. They included everything from Edd (Kooky) Byrnes' 1960 Topper scooter to Robert (*Baretta*) Blake's Electra Glide as late as 1973. The latter may be the only bike ever to have a movie named after it, since the story of the Arizona state patrolman was titled *Electra Glide in Blue*. Meanwhile, the success of *Easy Rider*, the 1969 Peter Fonda/Dennis Hopper low-budget film that became a blockbuster, spawned a succession of cheap imitations. American-International pumped out a slew of forgettable flicks with titles such as *The Wild Angels* and *Run, Angel, Run*. Drive-in screens across the country were filled with the thunder of choppers and the biker lifestyle.

H-D's have escorted politicians for years. This is the Shah of Iran, riding in a Rolls-Royce and accompanied by Electra Glides. The year is not known, but the place is Iran. (Harley-Davidson Motor Company)

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Fortunately, a pair of Hollywood productions counterbalanced the American-International films. *On Any Sunday*, a documentary covering most aspects of motorcycle competition, featured a modest, swarthily handsome young man new to the screen, one Mert Lawwill. H-D's top factory rider at the time (1970), Lawwill was highlighted throughout an entire AMA season, riding at Daytona, riding at San Jose, riding in his van from one track to the next. Though the production was a success because motorcyclists saw it numerous times, the image it projected had nothing whatsoever to do with outlaws. An effort with even more positive impact was *Then Came Bronson*, starring Michael Parks. Once a week in 1969 and 1970, the televised roar of a Sportster echoed in living rooms across the land. A sweet-tempered drifter coped with life on the road and the series was successful enough to survive the ratings war for seventy-eight episodes. Cyclists were quick to point out that the lead character more closely resembled the average rider than did any previous effort from Tinseltown.

Even Evel Knievel got in the act, initially with George Hamilton playing the role of the infamous stunt man, then in Evel's own production. Evel modestly titled his film, *Viva Knievel*. While the acting isn't memorable, the picture—and Lauren Hutton—are visual treats to this day on late-night TV.

All of the films on earth have had less impact than television, which increasingly shapes the points of view of many Americans. Television, for a while, anyway, somehow

Country singer Tanya Tucker is one of numerous current celebrity owners. (Ian Vaughan)

Doobie Brothers Pat Simmons (seated) and (from left) Keith Knudson, Chet McCracken and Bobby LaKind. (Harley-Davidson Motor Company)

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saw a link between riding a motorcycle and behavior that might shame Charles Manson. The portrayals were aired, riders complained to the network and little else occurred. Fortunately, most Americans today know that there is no absolute correlation between riding a bike and hunger for preteen children or road-killed game. With that in mind, here's the best list available of famous folks who, at one time or another, owned a Harley-Davidson.

Kareem Abdul-Jabbar, professional basketball player.
Paul Anderson, world champion weight lifter.
Muhammad Ali, world heavyweight boxing champion.
Ann-Margret, singer-actress.
William T. Archey, deputy commissioner, U.S. Customs.
Dan Aykroyd, actor-comedian.
Terry Bradshaw, professional football player.
Earl Campbell, professional football player.
Sir Malcolm Campbell, world land speed record holder.
Clarence Chamberlain, aviator.
Cher, singer.
Roy Clark, singer.
Wayne Cochran, singer.
David Allen Coe, singer.
Dave Cowans, professional basketball player.
William "Wild Bill" Cummings, auto racer.
Glenn Curtis, aviator.
Jack Dempsey, world heavyweight champion boxer.
Andy Devine, actor.
Neil Diamond, singer-composer.
James Drury, actor.
Bob Dylan, singer-songwriter.
Clint Eastwood, actor-politician.
Peter Fonda, actor.
Malcolm Forbes, president, editor-in-chief, *Forbes*.
Preston Foster, actor.
Russ Francis, professional football player.
Daniel Frohman, theatrical magnate.
Clark Gable, actor.
John Gardner, novelist.
Bobby Goldsboro, singer.
Barry Goldwater, Jr., U.S. representative.
Rodney Gott, president, AMF.
George Hamilton, actor.
Isaac Hayes, singer-composer.
Howard Hessman, actor-comedian.
Hulk Hogan, professional wrestler.
Larry Holmes, world heavyweight boxing champion.
Tony Hulman, owner, Indianapolis Motor Speedway.
James Hylton, auto racer.
Reggie Jackson, professional baseball player.
Lew Jenkins, world lightweight boxing champion.

Dan Aykroyd, John Belushi and others gather beneath a Milwaukee freeway overpass during filming of *The Blues Brothers*. Aykroyd later led Belushi's funeral procession on an H-D. (Harley-Davidson Motor Company)

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Bruce Jenner, Olympic decathlon winner, actor.
Billy Joel, singer-songwriter.
Alan Jones, singer.
Jack Kelly, actor.
Lorenzo Lamas, actor.
Jay Leno, comedian.
Charles Lindbergh, aviator
Al McGuire, basketball coach and television sportscaster.
Bill Mitchell, vice president styling, General Motors.
Victor McLaglen, actor
Willie Nelson, singer.
Olivia Newton-John, singer-actress.
Ken Norton, professional boxer
Olaf, crown prince of Norway.
Roy Orbison, singer.
Michael Parks, actor.
Dan Pastorini, professional football player.
John Payne, actor.
David Pearson, auto racer.
Tyrone Power, actor.
Elvis Presley, singer-actor.
Wade Preston, actor.
Burt Reynolds, actor.
Peter Reckell, actor.
Lou Reed, singer.
Roy Rogers, actor.
Kurt Russell, actor.
Arnold Schwartzenegger, bodybuilder-actor.
Wilbur Shaw, auto racer.
Pat Simmons, singer.
Roger Smith, actor.
Tommy Smothers, entertainer.
Ken Stabler, professional football player.
Robert Stafford, U.S. senator.
Sylvester Stallone, actor-producer.
Gil Stratton, Jr., actor.
Robert Taylor, actor.
Tanya Tucker, singer.
Hershel Walker, professional football player.
Mike Weaver, professional boxer.
Hank Williams, Jr., singer.
Paul Winchell, ventriloquist.
Keenan Wynn, actor.
Robert Young, actor.

Michael Parks aboard his Sportster during filming of the 1969–70 TV series, *Then Came Bronson.*

CHAPTER TWELVE

BUYBACK AND BEYOND

THE SLIM, IMMACULATELY ATTIRED, ELDERLY GENTLEMAN MIGHT PASS UNNOTICED THESE days near his suburban Milwaukee home. Now eighty years old and a widower, William H. Davidson maintains an energy level envied by men half his age. He administers a trust fund, contributes time and wise counsel to numerous benevolent organizations and can speak knowledgeably on virtually any topic you care to name. To the public, he is just another retired industrialist. But to cyclists, he is the mortar that cemented Harley-Davidson Motor Company past and present.

Davidson signed on with the company just prior to the Depression, in 1928. In part because literally everyone at Harley-Davidson started at the bottom, he paid his dues on loading docks, in warehouses and on assembly lines. It became evident that he was not only a skilled rider but an excellent administrator, as well. Not one employee wondered at the directors' decision in 1931 to elect him to the board, less than five years after graduation from the University of Wisconsin. William H. began to matter increasingly as H-D fortunes followed American industry downward in the early thirties. Named a vice president in 1937, he was the driving force behind the company's crucial government contracts; the engineers and assemblers got the glory and William H. saw to it that corporate promises were kept to Uncle Sam. When President Walter Davidson died in 1942, the board knew William A.'s son was most capable of guiding company fortunes. He was elected without a dissenting vote.

The milestones in Davidson's career include continuing to meet Defense Department needs; returning Harley-Davidson to a prosperous, stable, peacetime footing; doing battle with the imports while making the right decisions on evolution of the product line each year; deciding to sell H-D stock publicly; and, then, steering shareholders in the public company away from the jaws of predators and into the waiting arms of AMF.

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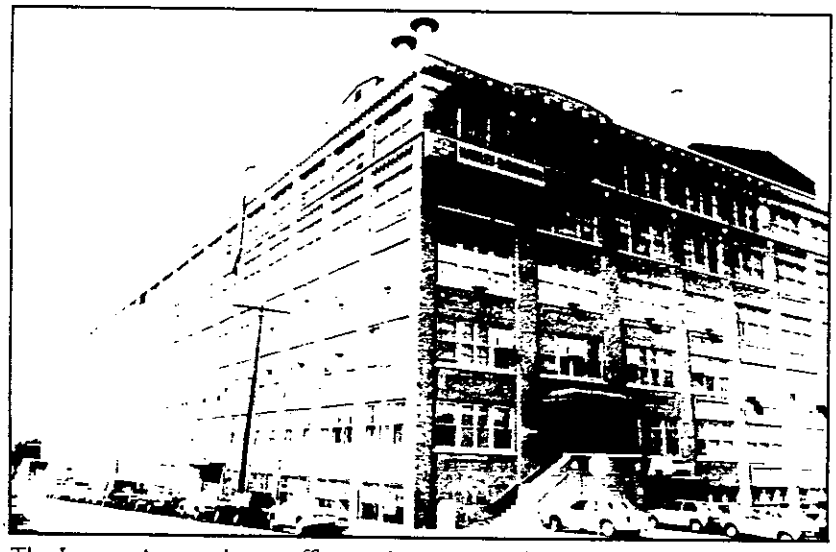
Looking back, William H. sees no mystery about why Harley-Davidson opted to sell stock to anyone with the money in 1965. "There were a number of shareholders in the privately owned company who wanted to pursue other interests." Rather than attempting to keep track of private stock in 326 hands, and to create capital for the coming cycle boom, the directors made their first public offering in 1965.

Several chances to buy H-D stock took place during the period 1965–69, with more than 1.3 million shares ultimately made available. The company seemed to be a good investment, despite the fact that Harley-Davidson had just twelve to sixteen percent of the total motorcycle market: Accessories were blossoming, riders were queued up with money in hand at the dealerships and H-D had a reputation for being soundly managed. In addition to attracting individual investors, the company was noticed by such firms as AMF, Bangor Punta, Chrysler, International Harvester and White Motor. These and other corporations made at least informal inquiries about purchasing the company—lock, stock and barrel. All were politely turned down.

Meanwhile, Harley-Davidson could do very little about the sales of foreign bikes, but it was able for several years to prevent British machines from becoming too uppity on America's flat tracks and road racing courses. Until 1969, H-D personnel and allies on the American Motorcycle Association's competition committee preserved the 750cc flathead side valve by permitting overhead valve engines with a maximum displacement of just 500cc. Earlier, the committee had further thwarted efforts of Triumph and BSA by limiting compression ratios; the trusty flathead would run at relatively low compression, say 7.5:1, while the British vertical twins could not pull the higher rpm they needed to pass the Harleys without a ratio of 9.5:1 or higher.

The late Floyd Clymer, a pioneer racer, Indian dealer, cycling entrepreneur and publisher, reported in 1956 on an AMA competition committee meeting that was orchestrated by H-D's favorite AMA official, E. C. Smith. Sensing that the compression ratio rule was in trouble, AMA officials waited until a proponent of British bikes angrily left the room to take the compression vote. It failed by a single ballot.

An increasing number of racers, however, were voting for foreign machines. Riders such as Dick Mann, Gary Nixon and, a bit later, Kenny Roberts, won national championships aboard Matchless, BSA, Triumph, Honda, Yamaha—anything but the Milwaukee bikes. Immediately after the rules were opened up in '69, the Triumphs and



The Juneau Avenue home office, as it appears today. (David Wright)

BSA's temporarily blew the iron-head XR's into the hay bales, spending themselves toward financial oblivion when they should have been casting a nervous eye at the thousands of little Hondas that were spawning wickedly quick Suzuki X-6 Hustlers that in turn gestated vile-handling but fast Kawasakis and the milestone Honda 750cc four-cylinder.

Coincidentally, Harley-Davidson worked with the transverse-four configuration several years prior to the introduction of the bigger Honda. Very little is known about the machine, though photos of a non-running model still exist. The machine sports an engine that carries double overhead cams and is labeled the X1000. Many H-D employees with access to the archives are aware of the photos, but few seem to know why the mock-up was created. According to William H., it was only a styling exercise and never got into the metal stage.

Production on less esoteric models continued, supplemented by the many small machines that arrived from Italy with the H-D name. Merger mania was sweeping the country in the late sixties, as smaller companies by the hundreds were devoured by such conglomerates as Litton, TRW, LTV and others. There were, it seemed, just two kinds of corporations in Vietnam-era America: those doing the digesting and those about to be chewed. One of the corporations eager to grab a merger meal ticket was Bangor Punta, an East Coast firm with roots in the railroad business. A neighbor of H-D, the respected Waukesha Engine Company, was merged into B-P, which then cast a covetous eye at Harley-Davidson. Anxiety among H-D directors grew in direct proportion to the amount of Harley-Davidson stock the conglomerate was acquiring. Prompted in part by rumors that B-P had a reputation for exploiting its acquisitions, President William H. Davidson in 1968 reopened talks with AMF.

A bidding war for outstanding shares ensued, with H-D principals urging shareholders to peddle their stake to AMF. There were, William Davidson told shareholders, "substantial benefits to the stockholders of both companies. . . . The merger will be a tax-

The York, Pennsylvania, assembly facility formerly housed munitions-making equipment for the U.S. Navy, which still pays H-D to store the armament machinery. (Harley-Davidson Motor Company)

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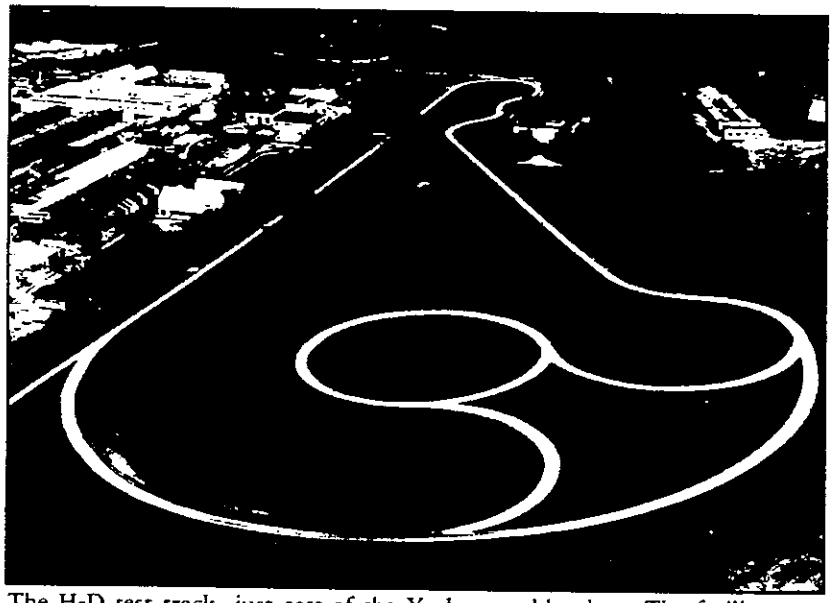
free reorganization and will give the stockholders of H-D participation in a large and more diversified enterprise with greater financial resources for further development and growth." Unfortunately, at least one H-D board member almost queered the deal by passing on to Bangor Punta some of Harley-Davidson's most private antimerger thoughts. Despite a lawsuit, Bangor Punta lost the bidding war for America's only motorcycle to American Machine & Foundry. Shareholders in H-D expressed their confidence in William H. by voting overwhelmingly to merge with AMF on December 18, 1968. For the record, 713,554 shares in H-D became 1,020,331 shares in AMF. Had it been a cash deal, the conglomerate would have paid something over $30 million for Harley-Davidson.

The more shareholders thought about it, the better they liked the AMF offer to purchase the company. One employee, who bought 100 shares of H-D stock at $7 per share in 1965, as it first went public, was confronted with the happy prospect of receiving 1.5 shares of AMF stock for each share in Harley-Davidson. At that time, AMF shares were selling for $28 per share. They moved rapidly to $35, allowing the shareholder, in less than five years, to realize $5,200 from his $700 investment. It did not take long for many Harley and Davidson relatives, who wanted more liquidity, to liquidate—much to their financial benefit.

Among the first to depart from within H-D was Walter Davidson, vice president of sales. He quickly became disenchanted with his position in the new scheme of things. William H. Davidson was named chairman in 1971, though he no longer had a board to chair. "They pulled my teeth," he complained to one of his employees. In a company characterized previously by stability, a succession of leaders came and went. William H. Davidson, John H. O'Brien, John A. Davidson, Vaughn L. Beals, E. Gus Davis and Charles K. Thompson all took their turns in the president's chair—in a single decade. O'Brien departed after displeasing AMF personnel with some sort of tentative deal he had in mind in Europe. Davis left in less than eighteen months, a victim of his own bombast, according to those who were associated with him. And William H. and son John had the



The H-D test track, just east of the York assembly plant. The facility, on a gentle slope, also houses pillboxes formerly used to test weaponry. The track is now used primarily for the quality audit program. (Harley-Davidson Motor Company)

outrageous (to AMF) idea that the president of Harley-Davidson should make some of the decisions affecting the company.

Dealers nationwide still hear it: "Harley-Davidson didn't build any good motorcycles while they were owned by AMF." Not only is this statement not true, it is a cheap shot at a conglomerate that poured millions of developmental dollars into H-D, allowing it to produce such significant bikes of yesterday as the Super Glide and such monumental bikes of today as the FXLR Low Rider Custom. Harley-Davidson motorcycles would not be half as good as they are (and they are *very* good bikes) without AMF willingness to spend money.

AMF shareholders approved the merger on January 7, 1969. At the time, H-D was selling 15,475 domestically produced cycles. A dozen years later, on the eve of the buyback by company personnel, H-D would be selling more than 50,000 machines—all U.S.-made heavyweights. In addition to dollars, AMF descended upon Juneau Avenue with diverse engineering skills, modern management techniques and with marketing, advertising and promotional ideas that heightened recognition almost overnight. The red-white-and-blue No. 1 insignia, Michael Parks astride a Sportster in TV's *Then Came Bronson*, movie star Robert Blake enforcing the law in *Electra Glide in Blue*, Evel Knievel's death-defying leaps—all were correctly calculated to make the public more aware of H-D during a period of incredible increases in U.S. cycling registrations.

Not all of the AMF decisions proved to be of long-range benefit. The company's massive York, Pennsylvania, defense and bowling equipment plant lay all but idle in 1972, just when H-D badly needed more assembly space and when Milwaukee's unionized assemblers were more militant than ever. The decision was made to refurbish the York facility, converting it to final assembly and relying on Capitol Drive only for production of engines and transmissions. Confirmed reports of sabotage of a few 1972 models at the Capitol Drive assembly line hastened the move, allowing the first bike produced in York to bob down the overhead conveyor line in February of 1973. Quality control problems afflicted some '73's, but that affliction was minute compared to a world news event the following year.

The Middle East War in October 1974 caused American drivers and riders to become aware of the price of gasoline and just how far a gallon of that precious fuel would allow them to travel. H-D and fellow bikemakers rejoiced—here at last was a prudent reason to buy a motorcycle. But the oil crisis was also a blow to AMF/H-D, because it greatly increased the cost of hauling engines and transmissions from Milwaukee to York, a distance of 700 miles, for final assembly. At a time when the price difference between a Harley-Davidson and a Japanese bike was already noticeable, this added expense was frightening. There was soon as least one indication that the parent company was concerned.

Q. *Do you see more growth in the leisure area than in the industrial side of your business?*

A. *At this point, we intend to develop relatively more strength on the industrial side, which now accounts for about 36 percent of AMF's business. We would like to see closer to 50 percent of AMF's business come from industrial products and services.*

The above question, answered by AMF President Rodney C. Gott in the company's 1975 annual report, is the first clue the public had that Gott and friends were less than enthralled with bicycles, sailboats, tennis rackets, skis, golf clubs, rubber balls—and motorcycles. Gott and company had good reason to be disillusioned with H-D, since a strike in 1974 i. .d the Capitol Drive and York assembly lines. The 101-day strike, over cost of living allowance, cost the company fourteen weeks of production before AMF acceeded to worker demands. Actually, the strike helped H-D work off an inventory created by a drop of twenty-five percent in U.S. cycle registrations, combined with intensified Japanese production of cycles with engines larger than 750cc. Readers of the company's financial statements noticed throughout AMF's tenure that motorcycle products were strong on sales but weak on profits. In 1978, for example, motorcycles and other travel vehicles accounted for seventeen percent of revenue but just one percent of

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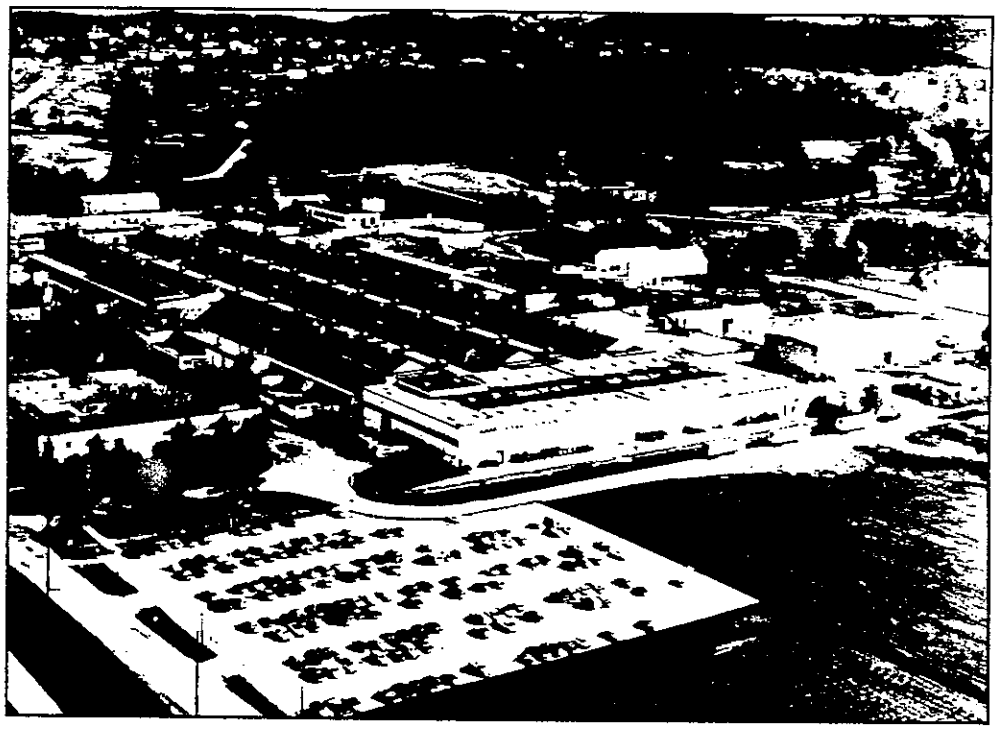
profit, though that tiny figure is due to the large write off related to the sale of Aermacchi rather than lack of demand for the heavyweights. Incentive to sell H-D was increased by the exceptional long-range potential of AMF products used in oil fields. Therefore, the question became not whether AMF would peddle H-D, but when.

Asked to assess the AMF years, William H. Davidson believes the conglomerate made only one major miscalculation. "They thought Harley-Davidson could become another Honda. That's ridiculous," he says, pulling from a stack of papers the latest Honda Motor Company annual report. "This states that Honda produced 3,518,000 units in the year ending February 28, 1982. No one can imagine Harley-Davidson ever producing one-tenth that many machines. We were never meant to be a high-production company."

AMF investment (such as $4.5 million for just one machine for Capitol Drive that makes the FLT's five-speed transmission) placed H-D in a difficult spot. The product was neither quite a hand-built, premium-priced, limited production item nor was it a "nifty, thrifty Honda 50," stamped out like cookies. While its unique position in the market accounted for the majority of sales then and now, this position caused concern—and a futile trip to Washington.

The charge of "dumping" initiated by AMF in April 1978 resulted in good news and bad news for Harley-Davidson. The good news was that the U.S. Treasury Department in August 1978 found three of the four major Japanese manufacturers guilty of selling their bikes at prices even lower than on the home (Japanese) market, as AMF had contended. The bad news came three months later, when the nonpartisan International Trade Commission ruled that the dumping had not damaged sales of Harley-Davidson motorcycles.



Another view of the York plant. The Rodney C. Gott Museum, named for the former AMF chairman, is at the extreme left center of the photo. (Harley-Davidson Motor Company)

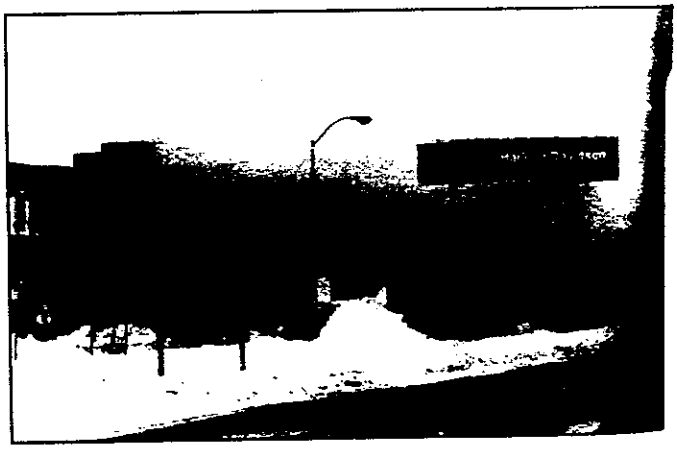
"The law says dumping is selling products at less than fair market value," explains John A. Davidson, then H-D's president. AMF picked him to lead the fight in Washington against the Japanese. "In the early seventies, when the motorcycle business was doing well worldwide, the Japanese established production schedules that were much higher than the mid-seventies demand for their products. We contended that they chose the U.S. to unload their excess production."

The charges were not based on manufacturers' costs, though consultants were hired by AMF to check the costs of Japanese cyclemaking. Rather, Davidson reports, those numbers were used as guidelines to compare U.S. selling prices with prices in Japan and were adjusted for such factors as shipping costs and value of the Japanese yen relative to the dollar. AMF decided to pursue matters with the Treasury after totaling all of the figures and coming up with what it believed to be less than fair market value. This conclusion led AMF to believe that federal antidumping statutes had been violated.

Davidson remembers that the case was unusually complicated because no Japanese manufacturer is allowed to sell motorcycles larger than 750cc in Japan. Investigators thus had to look to other free-market economies such as France and Canada for model comparisons with big bikes offered in the U.S. The Japanese attempted to muddy the waters with minor model differences and designations, which made comparison difficult. Nevertheless, the weighted average dumping margins found for each of three Japanese manufacturers were: Honda, 2.9 percent; Kawasaki, 7.26 percent; and Yamaha, 1.98 percent. The fourth major Japanese bikemaker, Suzuki, was guilty of so tiny a margin that the Treasury dropped charges against it, Davidson says.

AMF and Harley-Davidson evidently looked at the percentages, realized they didn't appear that dramatic, and began to produce press releases commenting on the Treasury decision. Davidson is quoted as saying that "the dumping margins were much very much higher on certain models. Some ranged as high as 54 percent." There is no indication which models are referred to. In any event, a finding equally favorable to H-D by the independent International Trade Commission would have meant that the Japanese had the unenviable choice of either boosting U.S. prices or paying duty on the bikes they shipped to this country.

Late in 1978, the commission delivered the bad news: Although the Japanese had indeed dumped products on these shores, the practice had not injured Harley-Davidson. AMF and H-D employees not directly involved with the proceedings probably were stunned by the decision. But those who spent countless hours preparing the material sensed trouble when the commissioners requested and received permission to query Harley dealers about the problem. "We told our dealers to be frank with the commission, and that's where the case was lost," Davidson says. H-D dealers, plagued with real and imagined problems with the Aermacchis, told the commission that the smaller H-D's



The Capitol Drive plant in Wauwatosa, a suburb immediately west of Milwaukee. The plywood on the sign covers the AMF insignia following the buyback. The sign later was replaced with a new Harley-Davidson Motor Company logo. (David Wright)

were obsolete and could not compete with the state-of-the-art Japanese bikes. "So they ruled that we injured ourselves by failing to keep our product up to date," says Davidson.

Despite the months of work without reward, Davidson believes the whole process was worthwhile. "It stabilized prices and made everyone—us and the Japanese—take a close look at production." The big loser in the proceedings may well have been Yamaha. That company petitioned to have its case dropped, due to the small difference between its U.S. and Japanese prices. The Treasury Department agreed to drop the Yamaha matter—if Yamaha would permit it to monitor the company's pricing. "This drove Yamaha nuts," Davidson says. The other big loser was the troubled Aermacchi operation in Italy. If anyone at AMF or Harley-Davidson had any doubts about what dealers thought of the H-D lightweights, they knew after the commission recessed.

An AMF corporate employee who prefers anonymity believes pursuit of the Japanese was not only a waste of time, but was hideously expensive in terms of the number of well-paid executives who commuted between Milwaukee and Washington, D.C., on and off, for weeks at a time. "AMF's bankroll was of great value to Harley-Davidson," he contends. "But the dumping thing proves that not all of the money was wisely spent."

All this is significant, as we'll see later on. . . .

Those who ran the country were affecting H-D in other, equally troublesome ways. California took action in the late-sixties to curb its awesome pollution problem, and the feds appropriated many of the emissions, noise—and safety—decrees created originally in Los Angeles County, which has more motorized vehicles than virtually any of the forty-nine other states. H-D recruited engineers from all fields in an eleventh-hour rush to meet increasingly stringent federal vehicle standards. Those standards were most evident in the enlarged air cleaners, constricted breathing and low-octane, unleaded fuel being foisted upon the 1978–80 models.

Harley-Davidson joined the growing chorus from the media and from auto manufacturers for relief from—or at least a holding action on—the regulations. The election of Ronald Reagan in 1980 meant that Joan Claybrook of the National Highway Transportation Safety Administration was out of office and that tougher requirements would be shelved. Eyeing the trusty V-twin and the federal edicts, Racing Director Dick O'Brien summed it up succinctly: "If it can't breathe and it can't fart, how do they expect it to live?"

O'Brien's XR750 bikes were not only living but dominating AMA dirt-track racing well into the 1980's. That domination began to unravel in 1984 as former H-D riders such as Ricky Graham and Bubba Shobert defected to Team Honda's V-twins. Despite lingering stomach problems, Jay Springsteen copped his fortieth national victory in 1986, a total no one else is near.

Racing wins may be appreciated only by the dealers and by H-D employees. With that in mind, the company has for the last several years instantaneously created collateral material for dealers to display in their shops. The posters, telegrams, etc., also adorn the Milwaukee and York facilities, where a new breed of manager is as interested in racing as in anything else that pertains to the company.

This new manager, reared in, or at least accustomed to, the AMF way of doing things, appreciates and believes in what the company tries to do; in the motorcycles themselves, with exciting new Low Rider, Wide Glide and Roadster models; in quality control, where employees are now convinced that premium quality is imperative if a premium price is on the tag; in a sense of history, whether understanding how real motorcycles evolve or staging a nationwide ride to raise money for the Statue of Liberty; and in an entrepreneurial urge that culminated in a dozen of the managers buying the company from AMF. How can just twelve men raise an estimated $75 million to purchase a company that has been in business eighty years? By pooling their resources, finding bankers who share the dream and streamlining their new company as it's never been streamlined before. Before detailing the buyback, here's a glance at the men who now run the Harley-Davidson Motor Company. . . .

Vaughn L. Beals—"Vaughn Beals didn't climb on a motorcycle till he was forty-five years old," says Bill Dutcher, who served AMF's motorcycle products group as public relations manager until the buyback. "Yet he's a natural rider, if I ever saw one." Dutcher, a former racer, is a good judge of talent—as sales manager for Bultaco until 1975, he signed up such rising stars as Mike Kidd and Freddy Spencer. If Dutcher was surprised at Beals' ability on a bike, the new head of Harley-Davidson had a few surprises in store for him when he moved to Milwaukee.

"I was talking to a mechanic attending service school when I noticed a series of numbers tattooed on his arm. I asked him what they were and he rolled up his sleeve to display a Harley-Davidson logo, with the numbers beneath it. This guy was wearing the serial number of every Harley-Davidson he'd owned. There were at least six or seven. Who else tattoos the name of a product on his arm but a Harley-Davidson fan?"

One of the subtle adornments Vaughn Beals carries about is a ring with a beaver on it, symbolizing the fact that he holds bachelor's and master's degrees from Massachusetts Institute of Technology, among the most prestigious technical colleges in the U.S. Beals, the son of a Nova Scotian, studied aeronautical engineering, then spent more than fifteen years in aerospace industry research and technology. In 1965, he made the transition from technology to management when he joined Cummins, a maker of diesel engines. Beals managed worldwide diesel sales five years before striking out on his own, founding a company that manufactured logging and related equipment in Seattle. When tapped by AMF's Ray Tritten as vice president and group executive for the motorcycle products group, he was a consultant to several Pacific Northwest companies.

What is a person with credentials on the frontier of technology doing at the head of a company frequently accused of throwing away calendars after 1936? Beals was recruited more for his style of management than for his knowledge of ballistic missiles. A tall, balding, soft-spoken man, Beals comes off as exuding the type of authority in the board room that he displays in the saddle of his own Electra Glide or the company's FLT Tour Glide. Despite his reserve, he says he enjoys meeting and mingling with Harley-Davidson owners. In fact, the only drawback to the York-to-Milwaukee buyback ride in June of 1981 was the insistence by every H-D dealer en route that Mr. Beals consume a near-lethal first cutting of commemorative cake.

Beals believes the buyback group will succeed because, "at Harley-Davidson, we're different. No one yet has successfully competed against us, though the Japanese are trying like hell. They're great engineers and great manufacturers, and we're feeling their V-twin push, but they don't understand the 'soft' areas. They do, however, learn fast."

Vaughn L. Beals. (David Wright)

Unlike Tritten, who managed H-D very capably but at a distance, Beals is involved in—and can talk knowledgeably about—any phase of the company. A detractor feels "he has his nose in everything;" a former AMF employee says Beals' presence and grasp of the entire company was reassuring. Says he: "If I were a part of the buyback team, I'd want Vaughn Beals running things. If anyone can make it happen, he can."

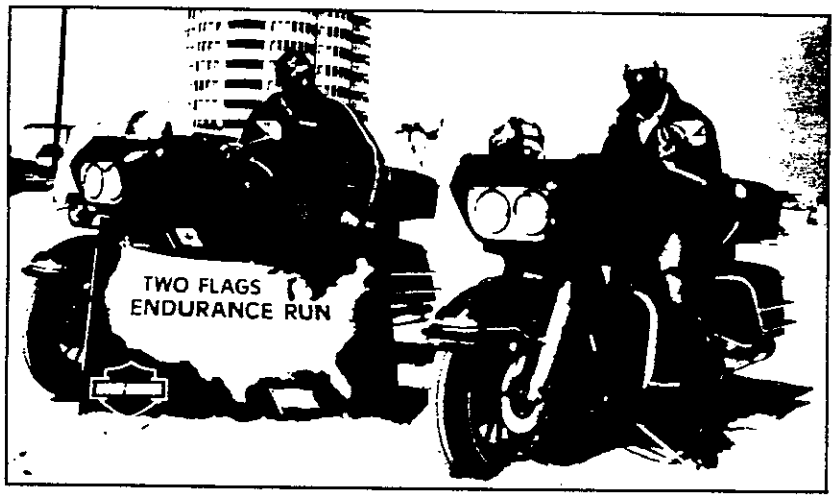
Charles K. Thompson—A key buyback member, Thompson was president and chief operating officer until mid-1982, when his health failed. He has since survived a heart transplant and is retired. There currently is no one with his title in the company.

William G. Davidson—"I'll bring my crayons and be right down."

That was William ("Willie G.") Davidson's reaction when, on February 18, 1963, he was invited by his father, then President William H. Davidson, to sign on as H-D styling director. Unlike the proverbial much-maligned boss's son, Willie G. was experienced prior to being offered the styling position. Besides spending more than five years working for Brooks Stevens (designer-builder of the Excalibur sports car), Davidson had styled for Ford Motor Company's Continental Division. According to the senior Davidson, Willie G. owes it all to *The Saturday Evening Post*.

"It was Christmas and Bill was home from the University of Wisconsin," William recalls. "He was in his junior year majoring in art and complained that he wasn't looking forward to a career teaching unwilling schoolkids how to draw in rural Wisconsin. He read about a kid who was doing well at The Art Center College of Design in Los Angeles and showed me the *Post* article. I checked with an ad agency artist, who gave the place high marks. Two weeks later, Bill was enrolled and on his way to California."

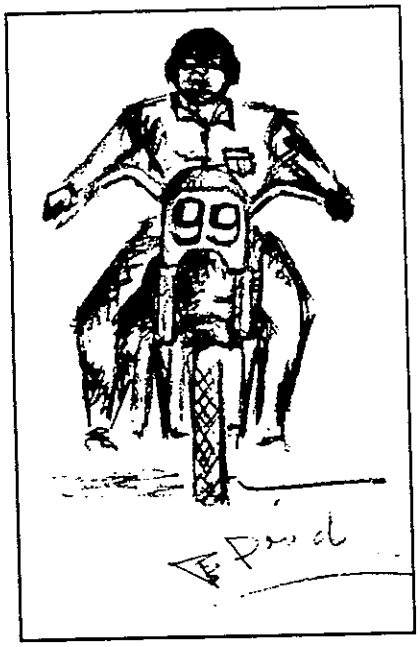
It's easy to conclude that many of the lush designs created by Willie G. are influenced by his Los Angeles stay. But there is little comparison between the customs in California in the middle fifties and the FXRS, for example. A lifetime of being in and around every department at the Juneau Avenue plant, plus the Art Center College of Design training, are much more likely to have left their marks on the recent president's elder son. "I realized early I was a part of something unique. My dad rode a bike every day. It wasn't tough to tell that he was coming home on something none of the neighbors had," Willie states. "I hung around the experimental shop, I went to the races. I had the bug at an early age."



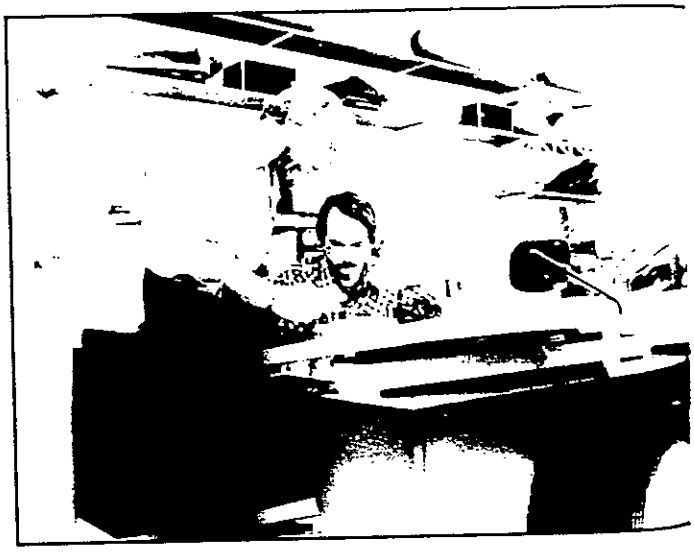
Ex-President Charles Thompson (left) and Chairman Vaughn Beals aboard the 1982 Tour Glides ridden from the Canadian Pacific to Florida to test the new oil control package. (David Wright)

If California plays only a small part in his designs, it has well influenced his lifestyle. In contrast to fellow officers of Harley-Davidson, who favor traditional business attire, Davidson wears leather vests, jeans and the kinds of opulent personal accessories popular with many H-D owners. Since he rides to work year-round (his bike is equipped with a sidecar in the winter), the biker gear serves its purpose. He opted out of three-piece suits several years ago, leading one to believe that there are two sides to the man who currently carries the title of vice president, styling. The serious side of Willie G. dutifully performed all Art Center assignments at the year-round school. The less serious side can be seen strolling Daytona's boardwalks each March.

Today, Willie G. also can be seen on his bike frequently leading a contingent of riders to Daytona and other events in order to raise money for the Muscular Dystrophy Association. He enjoys such outings. "I really like being around Harley-Davidson people. It's my hobby as well as theirs. They're a fun-loving group of people. And our motorcycle attracts a devotion, a dedication, that's total." Willie G.'s dedication occasionally shows through his clothing and the long hours he enjoys in the saddle. Returning from the annual Sturgis, South Dakota, rally a couple of years ago, he stopped in a Minnesota wayside with an idea. Rummaging in a trash receptacle, he found a fairly clean paper bag. Willie began to work frantically with a pencil, recalling what he'd seen and liked at Sturgis and what seemed possible for H-D stylists and engineers. That brief stop to sketch while sitting on a picnic bench resulted in the belt-drive Sturgis. Not bad for a guy who showed up a few years ago with a bunch of crayons.



A very early rendering by Willie G., on the back of his father's company letterhead. (William H. Davidson collection)



Willie G. Davidson (standing), vice president of styling, discusses a design detail with Louis Netz. Stylist Netz was in large part responsible for the look of the lean, low-priced 1983 XLX. (David Wright)

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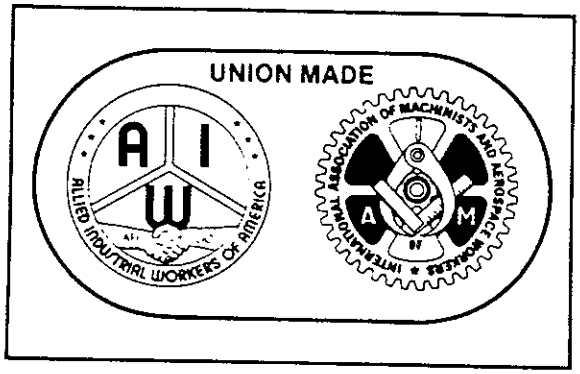
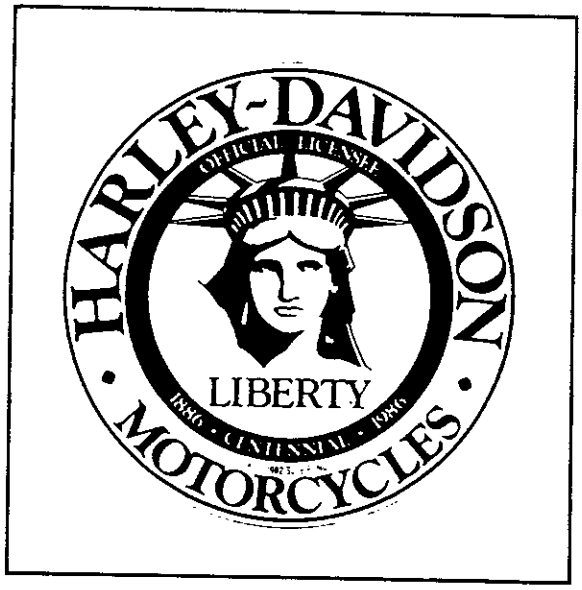
Jeffrey L. Bleustein—Jeff Bleustein had numerous occasions to become acquainted with Milwaukee before being named vice president of enginering in 1975. As a member of AMF's corporate research and engineering division, he made frequent trips to Harley-Davidson to iron-out technical problems associated with his mechanical engineering specialties. "One of my 'clients' was Harley-Davidson," he says. "A lot of neat things were going on out here." So it may have been easy for him to decide on joining the buyback team; he had a special interest in the company.

A native of greater New York City, Bleustein holds a PhD in mechanical engineering from Columbia University. Following completion of a NATO research grant that took him to England, he served as an instructor at Yale University's department of engineering and applied science. The theory of elasticity, dynamics, electro-mechanical interaction—Bleustein taught these and other courses before being recruited by AMF researchers in 1971. One of six specialists, he recalls his early years for the company fondly: "We floated around the world with our attaché cases. Everyone assumed we were experts because we were called in from far away. And we worked on everything—skis, tobacco machinery, oil industry products, motorcycles. It was a good existence."

Bleustein was surprised at the Juneau Avenue staff. "There weren't many engineers," he recalls. "A lot of people in engineering were there because they loved Harley-Davidsons. So we began to bring in some engineers from several different industries—RV's, agriculture, diesels, trucks—people with good credentials who may not have



1985 and later H-D's bear the A.I.W./I.A.M. union label. Application of the label was agreed to between the company and the unions before contract talks opened. The label is on the right-hand downtube, near the steering head. (Harley-Davidson Motor Company)



The 1986 Ride for Liberty invited owners of all bikes to join Vaughn Beals and Willie G. Davidson in a ride that raised $250,000 for restoration of the Statue of Liberty. The promotion introduced the Liberty edition H-D series. (Harley-Davidson Motor Company)

known anything about motorcycles. We doubled the staff in two or three years and the new people are all assimilated." Bleustein says AMF had two goals in mind in the early seventies: first, to bring production up to meet demand, then to put more effort into product development. Veteran employees point to the FXRS as evidence of the infusion of AMF corporate dollars at that time.

Bleustein also became an expert in turbulence during this period—that is, he and fellow H-D employees watched a succession of executives come and go at the head of the subsidiary. But the engineers were more concerned with a host of federal Environmental Protection Agency regulations that affected noise and emission levels on the bikes. "Some people here acted as if, by disregarding the regulations, they would go away. We made our products conform, but we came very, very close to the deadline." With those problems apparently behind him, Bleustein watched with pleasure as the buyback team took shape. "After all of the turnover and the EPA, this served as a unifying force," he says.

Today, he misses the seemingly bottomless purse of AMF, but says the managers have a solid plan for the future. "I like to think I was always careful with the company's money, but now I'm even more careful," he says.

Bleustein recently departed engineering to head up the parts and accessories division. His successor is Mark Tuttle, a racing school grad and, say those in his department, a genuine talent. Gone are such esoteric projects as a V-4 or a smaller-displacement engine. Instead, the engineers are now in charge of the racing department. They provide

Exact date and location not known, but the company-produced caption says John Davidson (left) is discussing "plans for the new company and the 1982 model year" with (from Davidson's left) Dr. Jeff Bleustein, vice president engineering; Charles K. Thompson, president; and Vaughn L. Beals, chairman. Just weeks later, John opted out. (Harley-Davidson Motor Company)

parts and knowledge to tuners for Gene Church, Scott Parker and other H-D racers. Tuttle, by the way, is a vice president but neither an officer in the corporation nor a shareholder.

Timothy K. Hoelter—Timothy K. Hoelter, vice president general counsel, has an unusual ambition for an attorney: He wants to avoid representing his client in court whenever possible. The only man on the buyback team who was neither associated with AMF nor Harley-Davidson, Hoelter served H-D for eight years as a member of the Milwaukee law firm of Whyte & Hirschboeck S.C. He specialized in corporate law "by accident," being assigned to a hearing before the Wisconsin Department of Motor Vehicles that involved H-D just four months after graduation from Harvard Law School. A Milwaukee native who did his undergraduate work at the University of Wisconsin, Hoelter today is concerned with an incredible array of subjects where the company and the legal system meet: trade regulations (how Harley-Davidson treats dealers), warranties, antitrust matters, truth in advertising and promotion, the environment and more. He adheres to few rigid lines, but one to which he voices commitment is preserving the company trademark.

"The law doesn't distinguish between 'good infringement' [the logo on an attractive T-shirt or quality decal, for example] and 'bad infringement.' They tell you to protect your trademark against those who use it or give it up and let everyone use it. That doesn't give us much choice in prosecuting." Holding a file, he displays an example of what the company believes is "bad infringement." A catalog from Texas displays a Bat Wing Power Hitter, apparently a device to aid the marijuana smoker. Emblazoned thereon is the Harley-Davidson trademark. He can lay his hands on items the company finds equally offensive: cocaine spoons, swastikas and skull decals, various pins, bits of clothing, all bearing the bar and shield. "Are you going to control your promotional effort, or do you intend to leave it in the hands of third parties? That's the question. Unfortunately, we sometimes have to give our answer in court, though a surprisingly large number of offenders cease and desist when we explain our position," Hoelter says. A California firm, Joe's MCN, that refused to cease the use of the H-D trademark recently was ordered to do so in court.

Fortunately, not all of the attorney's confrontations are hostile. As an officer in the company, one of his responsibilities is to improve relations with vendors. He's personally responsible for half-a-dozen vendors, making them feel that they're a part of the new effort, offering them a special program wherein they can receive a discount on the purchase of a machine, even inviting some of them to the annual unveiling of new models. He also keeps an eye on the way in which H-D treats its dealers. "A dealer today has a minimal obligation to the company. The current feeling here is that we don't want to force any of our dealers into a particular program. But if they choose to participate, then we want them to abide by the rules we've set forth." In view of some dealer complaints in the dim, distant past, that's a very enlightened attitude.

Chris Sartalis—Sartalis keeps fellow officers posted on the fiscal wellbeing of the company from his position as vice president and controller in York.

Sartalis joined AMF's lawn and garden division late in 1966 and has been with either AMF or Harley-Davidson ever since. His AMF duties included assistant group controller for the recreational vehicles group (which included H-D at the time), assistant group controller for the motorcycle products group, assistant controller for H-D, then vice president and controller of Harley-Davidson for five years prior to the buyout.

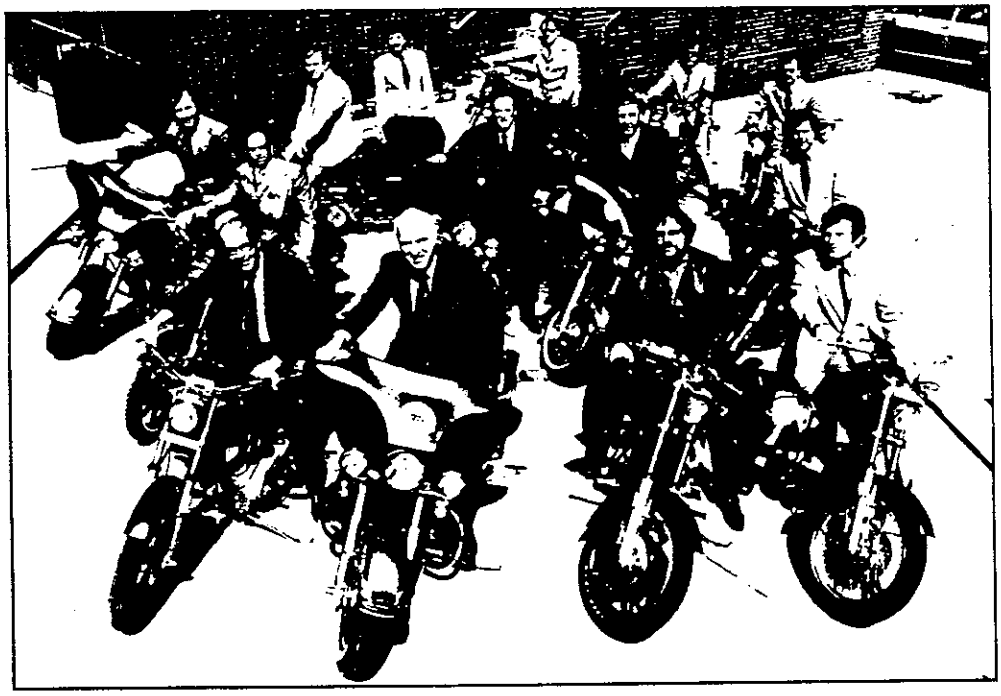
"When the buyout opportunity came, my job changed, even though my title did not," Sartalis reports. "For the first time I had to be concerned with such things as banking relations and taxes. Those weren't my responsibilities when the company was a subsidiary." The weekend golfer characterizes himself as "a conservative controller," pointing out that one of the strengths of the buyback team is the fact that its members come from all over the vocational, social, political and cultural spectrum. With the

credentials of his fellow officers in mind, he believes "there's no question that we can pull this off."

Modest in conversation, Sartalis nevertheless admits that his job is made more difficult because motorcycles are complicated products. Costing, he says, is a challenge, given the number of components, dealers, regulations and so on. Nevertheless, he decided to join the team because "Motorcycles are a very exciting product. I like the business and I really liked the opportunity."

Peter L. Profumo—Peter L. Profumo is in a three-way tie for the youngest member of the buyback team. The vice president of program management was barely thirty-five years old when he joined fellow H-D executives on the ride from York to Milwaukee. "I don't like riding in big groups," he admits, adding that the wide open spaces of Wisconsin played a part in his decision to participate in the innovative way in which the company is managed today.

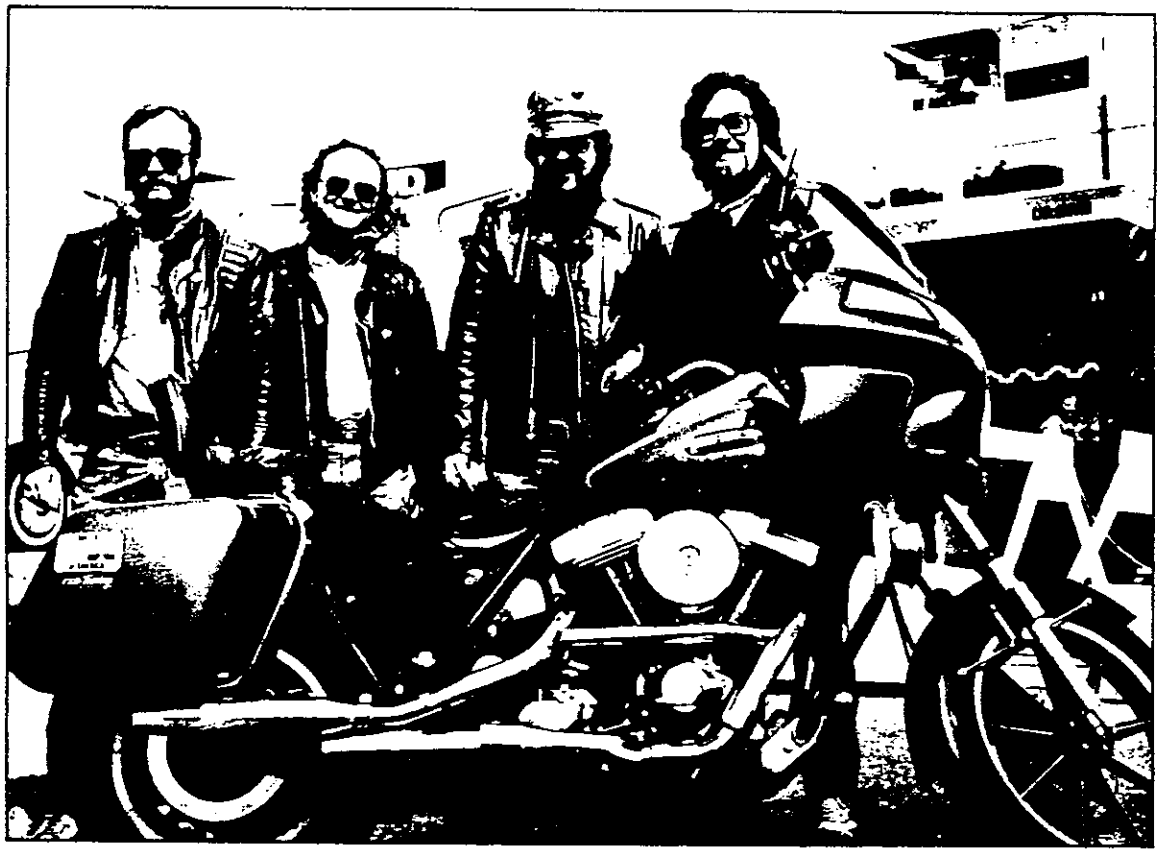
Profumo left his native New Jersey to attend Fordham University in New York City, graduating as an accounting major. He served a hitch in the Army before joining AMF in 1968 as an internal auditor. His duties included all the sorts of things a public accountant would do; in fact, he worked with the firm that annually goes over AMF corporate numbers. "That keeps costs low," he says, adding that he visited virtually every AMF operation except Harley-Davidson, due to flukes in his travel schedule.



Pre-buyout executives prepare to depart Juneau Avenue in 1978 to celebrate H-D's 75th anniversary with a cross-country ride. Members of the buyback team in the photo include Chairman Vaughn Beals (front row, second from left); Styling Vice President Willie G. Davidson (front row, second from right); President Charles Thompson (behind Davidson); Engineering Vice President Jeff Bleustein (on Thompson's right); and Vice President Peter Profumo (behind and to the right of Beals). John A. Davidson, Willie G.'s younger brother and the former H-D president, is on the left in the front row. (Harley-Davidson Motor Company)

"I'm still amazed by the loyalty our customers show for the products," says the buyback team member most likely to ride solo on two wheels, carving through the lake country west of Milwaukee. He quickly ascended to the position of vice president, management information systems, hiring fellow buybacker Jim Paterson in the process. Eyeing the owner loyalty that is so impressive, he says, "I joined the team because I believe in the long-term viability of the company. It isn't a process that will make me rich in the short term; but it's a good long-term proposition." Profumo's argument is convincing, since he has seen and understands all of the numbers associated with the return to private ownership. "The parting was great. AMF and H-D objectives were contrary. AMF did not see a lot of potential profit in this company, so they pulled the plug on new products. Harley-Davidson would have become a specialty company. I don't know if it could have survived."

Currently, Profumo is responsible for coordinating and bringing to the market the company's new products. "This company has a history of not delivering programs to the market on time," he says. "The FLT had bugs initially because it hit the market too early. This position provides a mechanism for marketing, engineering, any department, to speak up early if there are problems." Also in charge of pilot (prototype) bikes, Profumo must figure out the timing for marketing people who want to spread the word about a new model to the media. His first major tracking and reporting venture involved the



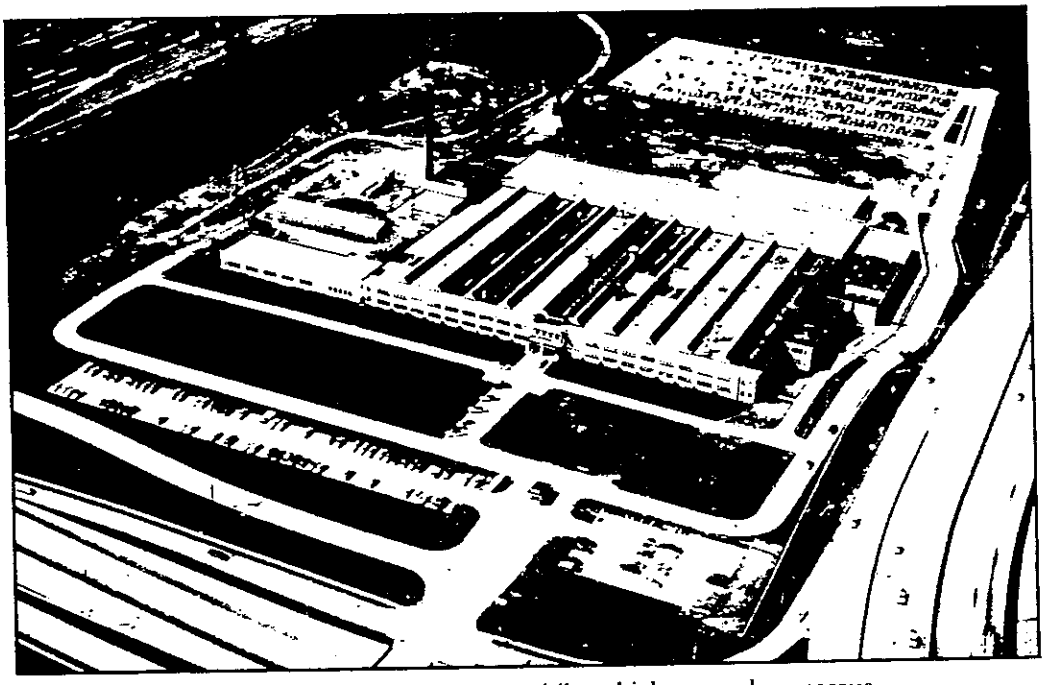
These four H-D employees rode this 1984 FXRT Sport Glide 8,704 miles in seven days as part of the Cannonball One Lap of America contest. The lone motorcycle in the "high-performance rally" averaged 53 mph and got 55 mpg. (Harley-Davidson Motor Company)

FXR. He notes with satisfaction that both the FXR and the Sportster had been the subject of generous reviews from enthusiast publications.

James Paterson—If you're too busy to learn how to ride, you're just too busy. That's been the problem so far with Jim Paterson. "Every time I'm about to learn, there's a crisis," says the corporation's vice president of marketing. Being one of the youngest members of the buyback team, however, Paterson has many years of riding ahead of him. From Connecticut, he joined AMF following college and a stint with Kraft Foods in Chicago. As a sailing enthusiast, hooking up with AMF in January 1971 seemed to be the ideal job, first with the corporate staff and then with the conglomerate's motorcycle products group. Paterson and Vaughn Beals were caught up in structuring the financing for the leveraged buyout. Today, he is responsible for gauging the demand for every product in the company's mix—plus such staff functions as advertising and public and investor relations.

"AMF got rid of Harley-Davidson because of the extreme capital requirements and because it needed to use that capital in some of its other divisions," he believes. "Harley-Davidson contradicted the corporate strategy, which was to deemphasize leisure products in favor of industrial and energy pursuits. One of the problems during the AMF years was the fact that the company went for a long while without a corporate strategy. I think Harley-Davidson is improving in that respect, it's becoming much more professional. However, H-D would not exist today, as we know it, without AMF. It probably would be in one location—perhaps Capitol Drive—making only 15,000 or so motorcycles a year."

Paterson intends to learn to ride. "Growing up, a lot of my friends had Harley-Davidsons. I've been to Daytona and I can understand the fascination. Watching the Bikers Fight MD parade at Daytona this year, I saw the Harleys go by and heard the thunder. Then, some Japanese bikes went by and they sounded tinny. The sound was anticlimactic."



The Capitol Drive plant, located between a multilane highway and numerous railroad tracks, now produces engines and transmissions. The plant is in the Milwaukee suburb of Wauwatosa. (Harley-Davidson Motor Company)

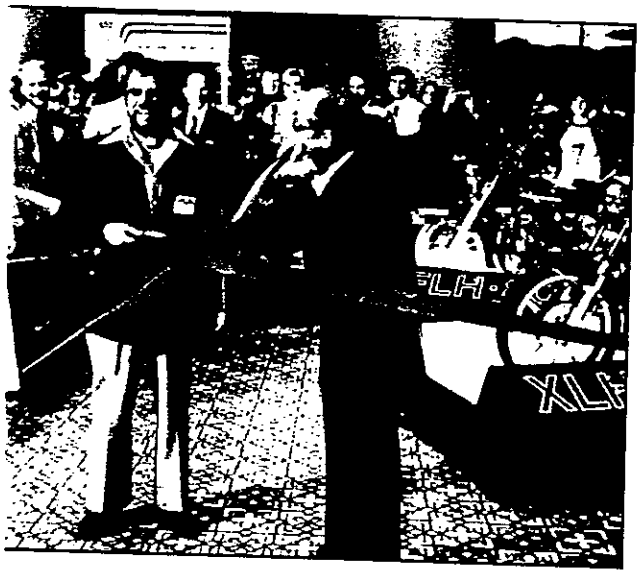
An accounting major at the University of Connecticut, Paterson believes not only that the company will survive, but that there are "excellent chances for long-term profit" among those who bought the company from AMF.

Ralph Swenson—Ralph Swenson, president of Harley-Davidson York until early in 1982, is an AMF man, with all the good connotations that implies. He, Beals and Thompson comprise the Harley-Davidson board of directors. Born in Brooklyn in 1920, Swenson is the oldest member of the buyback team. He attended technical high school, put in a four-year machinist and tool-and-die apprenticeship, then completed work for an engineering degree at night while working as a tool-and-die shop foreman. World War II found him signing on with the Merchant Marine. Following a brief tenure with a defense contractor, Swenson joined AMF in 1947.

A manufacturing and methods engineer initially, Swenson married, started a family and went to work back in Brooklyn. AMF had made the postwar transition in its only plant at the time from defense work to the manufacturing of cigar-, cigarette- and baked-goods-making machines. American Machine and Foundry, in 1947, was much smaller than Harley-Davidson is today: Annual sales were less than $20 million. As the company grew, primarily via the manufacturing and marketing worldwide of bowling equipment, Swenson remained in Brooklyn. When that ancient facility was closed in 1968, he spent a brief period in Des Moines with the company's lawn and garden division before moving to York.

"When I got here, the plant was full of bowling and government contract work. The government contracts concluded in September 1972, when AMF decided to move the Harley assembly line here," he recalls. "We were charged with installing chassis and assembly line production for H-D. It involved restructuring from a major job shop."

Swenson and three York employees (Art Donofrio, industrial engineer; Art Jenkins, planning; Curt Tucker, expediting) joined H-D service schools dean John Nowak, who knew how a motorcycle ought to go together, and the Logan Company, conveyor manufacturers. Within six months, all of the job shop material had been moved or mothballed and the first motorcycle, a 1973 Sportster, rolled off the assembly line. Prior to the end of '73, all chassis fabrication and assembly was being performed in York. "We did a lot of it [creation of the assembly line] ourselves. We had to—there was nothing to go by." The would-be motorcycle assemblers built sixty-five trusses, each fifty-five feet



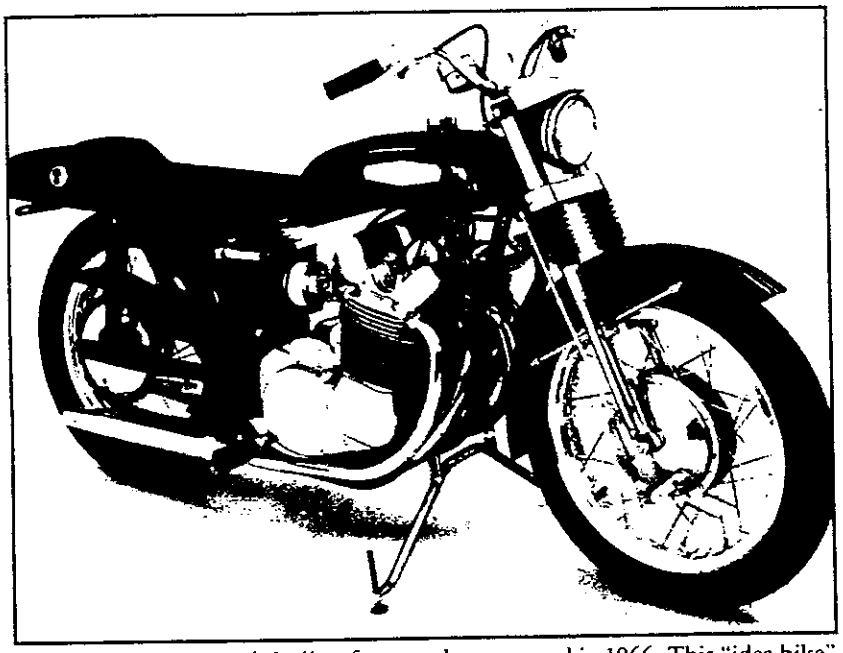
Cutups Willie G. and John Davidson open the 1978 H-D exhibit at the Daytona Beach Hilton. (Harley-Davidson Motor Company)

long and weighing 8,000 pounds, to support the monorail assembly line. The trusses were in place by New Year's Day, 1973.

"From 1964 to 1968, AMF looked for proprietary work and had a tough time finding it," Swenson explains. "However, there was heavy production here for the international market, particularly in pinspotters. Success in the quality of AMF bowling equipment indicated that this was a reliable workforce. These 226 acres and almost a million square feet of single-floor space also influenced AMF to move Harley production here." With an eye on Swenson's experience, Beals freed him from the duties in York so that he could pursue the kind of non-motorcycle private contract work performed through 1972 in the York facility. Since the buyout, Swenson has landed several lucrative defense contracts for the York operation.

David R. Lickerman—David Lickerman, president of Harley-Davidson International, calls himself a member of the Retread Club. He's one of a growing number of executives, inside and outside the company, who came to motorcycling after the age of forty and made up for it by riding mornings, noons, nights and weekends. His personal bike is an FLH Classic and he can be seen on Connecticut's freeways and byways at least six months of the year. H-D International is in Stamford, where the division leases office space from AMF's research and development quarters. When the buyback occurred, the international division opted not to move to Milwaukee, in part because the Connecticut location enables it to better service European and African markets.

Lickerman joined AMF in 1962 in Mexico, where he was working for his father's engineering firm. The Chicago native rose to the position of president for AMF-Mexico before assuming the presidency in 1975 of the international bowling operations. With experience in foreign trade, it was only logical that he join the men who were buying Harley-Davidson from its parent. Despite the varying strength of the dollar (a weak



A transversely mounted, in-line-four mockup, created in 1966. This "idea bike" was on the minds of H-D three years before the first Honda four was introduced. This model progressed sufficiently to receive a designation, the X1000, but no engine or transmission work took place. (Harley-Davidson Motor Company)

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dollar relative to foreign currency means H-D may have a slight price advantage). Lickerman sees international sales growing to a significant percentage of the new company's total. "Exports didn't matter until AMF took over," he says. "Until mid-1981, the weakness of the dollar allowed us to account for as much as eighteen percent of total sales. Since then, a strong dollar has affected our prices. Still, we feel that the international division could eventually account for twenty-five percent or more of total production."

Every country differs in the duties and taxes it applies to incoming Harley-Davidsons. The European Common Market, for example, posts moderate sums, whereas the Scandinavian countries and most developing or Third World nations heap large taxes and duties on any product entering their ports. In addition to Europe, Lickerman points out that motorcycle sales are significant in Australia and in Japan, where H-D is the top-selling heavyweight.

Richard F. Teerlink—There are several heroes walking around Juneau Avenue, but none more important to the survival of the new company than this man. As chief financial officer and treasurer, Teerlink successfully returned the company to public ownership by offering two million shares of common stock and $70 million in high-yield notes in July 1986. The sale was necessitated by the fact that Citicorp, lead bank among the four lending the buyback team money, wanted out of the deal. Had Teerlink not devised a solid method of rounding up cash, the firm's future would have been a lot shakier than it is.

"We just got some breathing room," he says, pointing out that the $70 million in high-yield or "junk" bonds means that H-D should be prepared for a big payout in 1996. But "we decided that living the life of leveraged buyout was not how we wanted to exist." The common stock, listed on the American exchange as HDI, supports the company's borrowing base. "Now," says the Chicago native, "a lender can't change our plans."

Richard F. Teerlink. (Harley-Davidson Motor Company)

Notably absent among the buyback members was John A. Davidson, former H-D president and a third-generation member of the founding family.

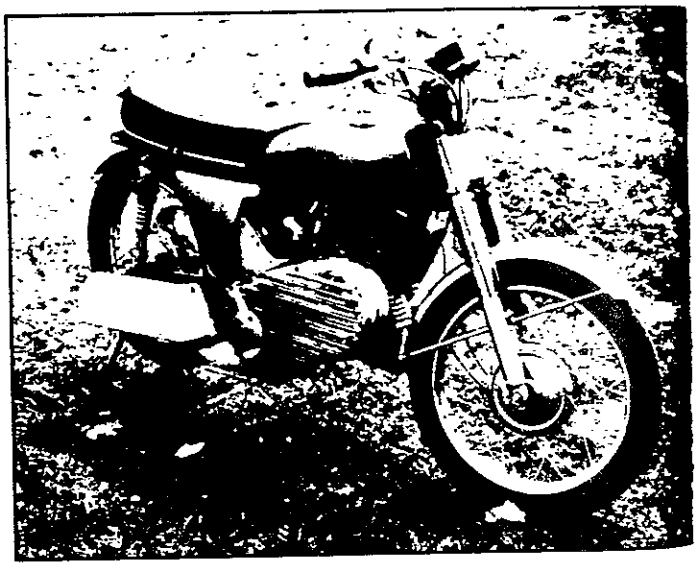
The AMF news releases weren't terribly informative where John A. was concerned. The February 27, 1981, announcement of the planned buyback listed the H-D board chairman and golf car division president as one of the prospective investors. Three months later, a brief news item reported that Willie G.'s younger brother had decided not to join Beals and associates in the newly independent company.

What did Davidson's decision do to those who were pondering being a part of the buyback? More than one came to him after learning that John would be leaving, he says. They wondered if he saw something in the plans they had not. "I didn't attempt to discourage any of them," he says. "I just told them not to do anything emotional."

All buyback principals will admit that their venture is a risk; it was a risk John Davidson did not want to take. Because of John's decision, he and his brother now travel different roads.

In a procession that followed signing over the company on June 23, 1981, buyback members, their wives and the press made a symbolic ride from York to Milwaukee. Along the way, the riders were greeted by dealers and H-D enthusiasts with the kind of buoyancy last seen when the Allies liberated Paris. That attitude prevailed in Milwaukee into 1982, as the company did a lot of things right. It franchised the bar-and-shield symbol for added income, prosecuted those who used the H-D name illegally, aggressively searched for new dealers and exuded a "We're all in this together" sort of brotherhood. But a recession that threatened at the time of the buyback became reality. Coupled with stratospheric interest rates, things did not look good.

In August of 1982, Harley-Davidson went once again to Washington. As the sole remaining domestic motorcycle manufacturer, the company was seeking relief under the Trade Act of 1974. In papers filed with the same International Trade Commission that stifled them in 1978, H-D stated its belief that Japanese manufacturers were deliberately building abnormally high inventories of unsold motorcycles in the United States and that there was "a direct onslaught on Harley's markets by virtually copying our motorcycles' styling and components, as well as our marketing research." Unlike Chrysler Corpora-



Among the ideas presented to H-D has been a gas turbine cycle. Details on this prototype are lacking, but it appears heavy and, unlike a Harley-Davidson, has a very wide engine.

tion. H-D is not seeking government funds. Rather, the company wants the Japanese to compete "in the real world," a world with less discretionary income.

Harley-Davidson had a strong case. The 1974 act under which it sought relief was created for U.S. industries seriously injured by imports. If 1982 sales of 12,000 Honda Aspencades didn't represent serious injury, what did? "We are running at only fifty-one percent of capacity, despite costly rebate and promotion campaigns," Beals said in testimony before the commission on November 30, 1982. "The company has suffered unprecedented financial losses, and our future is in the hands of our lenders."

The White House weighed the evidence, then surprised financial analysts and shocked Oriental bikemakers on April 1, 1983, by imposing sizeable tariffs on all Japanese cycles 700cc or larger. A tariff of forty-five percent was added to the regular tariff on heavyweights above 6,000 total (from all four major Japanese producers) brought into the country this year. The duty decreases to thirty-five percent after the first 7,000 cycles in 1984, twenty percent after the first 8,000 in 1985, fifteen percent after the first 9,000 in 1986 and ten percent after the first 10,000 in 1987. The tariff increase does not apply to bikes already in the U.S. but took effect quickly, on April 15.

The most exciting period in the history of the company has been the four short years since the 1983 tariff decision. Among the things that have happened:

—Evolution motors, introduced in 1984, have spread throughout the line and appear to be all the things riders want: oil tight, trouble free and, above all, in the 45-degree V configuration.

—The five-speed gearbox is reality in all bikes running the 1340cc engine. It works well.

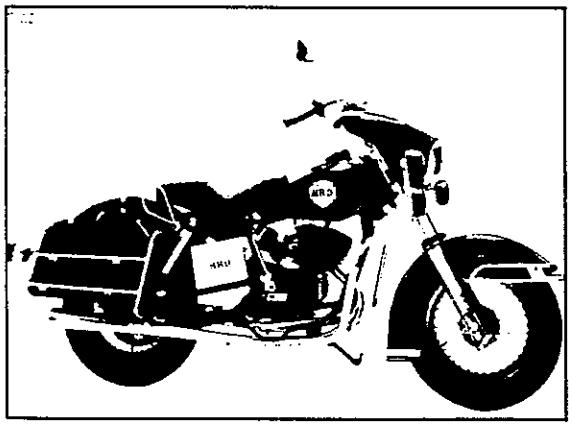
—Harley Owners Group (H.O.G.) has more than 60,000 members. There are as many as fifty major club events each year (rides, rallies, shows), and some 150 local chapters meet and maintain interest on a regular basis.

—The $3,995 Evolution Sportster with the 883cc motor is luring new riders. In fact, six of every ten buyers stepped off Japanese iron in order to own this machine.

—While the U.S. goes quality-control crazy, H-D wins a major award for engineering defects out of its products. Among the results: significantly reduced warranty claims and the ability to hold the line on price increases.

—This commitment to reducing defects has helped H-D secure lucrative defense business, constructing bombs at York.

—The bullet was bitten and the Racing Department as traditionally conceived was disbanded. Nowadays, H.O.G. and the dealers support racing and the company's engineers dial out necessary go-fast parts for all H-D racers.



H-D may be getting into the toy business, but someone beat them to it. This HRD "Florida" is constructed in Italy with a two-stroke, 50cc motor and is imported to the U.S. in small numbers.

HARLEY-DAVIDSON MODELS 1908–1983

From Harley-Davidson factory archives. Please note that no similar printed information exists concerning the 1903–1907 models.

1908

Model 4: single cylinder, single-belt drive, 28 in. wheels, battery ignition, 3.9 horsepower, 3 1/16 in. bore, motor numbers under 2500.

1909

Model 5: single-cylinder, single-belt drive, 28 in. wheels, battery ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers 2500–4200.

Model 5A: single-cylinder, single-belt drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers 2500–4200.

Model 5C: single-cylinder, single-belt drive, 26 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers 2500–4200.

Model 5D: twin-cylinder, single-belt drive, 28 in. wheels, magneto ignition, 6½ horsepower, 3 in. bore, 3½ in. stroke, 49.48 cu. in., motor numbers 2500–4200.

1910

Model 6: single-cylinder, single-belt drive, 28 in. wheels, battery ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers 4200–7600.

Model 6A: single-cylinder, single-belt drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers 4200–7600.

Model 6B: single-cylinder, single-belt drive, 26 in. wheels, battery ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers 4200–7600.

Model 6C: single-cylinder, single-belt drive, 26 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers 4200–7600.

Model 6D: twin-cylinder, single-belt drive, 28 in. wheels, magneto ignition, 6½ horsepower, 3 in. bore, 3½ in. stroke, 49.48 cu. in., motor numbers 4200–7600.

1911

Model 7: single-cylinder, single-belt drive, 28 in. wheels, battery ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers 7600–10000, followed by letter A.

Model 7A: single-cylinder, single-belt drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers 7600–10000, followed by letter A.

Model 7B: single-cylinder, single-belt drive, 26 in. wheels, battery ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers 7600–10000, followed by letter A.

Model 7C: single-cylinder, single-belt drive, 26 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers 7600–10000, followed by letter A.

Model 7D: twin-cylinder, single-belt drive, 28 in. wheels, magneto ignition, 6½ horsepower, 3 in. bore, 3½ in. stroke, 49.48 cu. in., motor numbers 7600–10000, followed by letter A.

1912

Model 8: single-cylinder, single-belt drive, 28 in. wheels, battery ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers followed by letters AB, BA or B.

Model X8: single-cylinder, single-belt drive, 28 in. wheels, battery ignition, free-wheel control (clutch), 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers followed by letters AB, BA or B.

Model 8A: single-cylinder, single-belt drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, motor numbers followed by letters AB, BA or B.

Model X8A: single-cylinder, single-belt drive, 28 in. wheels, magneto ignition, free-wheel control (clutch), 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers followed by letters AB, BA or B.

Model 8D: twin-cylinder, single-belt drive, 28 in. wheels, magneto ignition, 6½ horsepower, 3 in. bore, 3½ in. stroke, 49.48 cu. in., motor numbers followed by letter D.

Model X8D: twin-cylinder, single-belt drive, 28 in. wheels, magneto ignition, free-wheel control (clutch), 6½ horsepower, 3 in. bore, 3½ in. stroke, 49.48 cu. in., motor number followed by letter D.

Model X8E: twin-cylinder, single-belt drive, 7 to 8 horsepower, 3 5/16 in. bore, 3½ in. stroke, 60.34 cu. in., motor number followed by letter E.

1913

Model 9A: single-cylinder, single-belt drive, 28 in. wheels, magneto ignition, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers followed by letter C.

Model 9B: single-cylinder, single-chain drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor numbers followed by letter D.

1914

Model 10A: single-cylinder, single-belt drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor number followed by letters CF.

Model 10B: single-cylinder, single-chain drive, 28 in. wheels, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor number followed by letters DG or D, single speed.

Model 10C: single-cylinder, single-chain drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor number followed by letters DG or D, two-speed.

1915

Model 11B: single-cylinder, single-chain drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor number followed by letter J, single-speed.

Model 11C: single-cylinder, single-chain drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3½ in. stroke, 30.17 cu. in., motor number followed by letter L, two-speed.

1916

Model 16B: single-cylinder, single-chain drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 30.17 cu. in., motor number followed by letter L, single-speed.

Model 16C: single-cylinder, single-chain drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 30.17 cu. in., motor number followed by letter L, three-speed.

1917

Model 17B: single-cylinder, single-chain drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 30.17 cu. in., motor number preceded by 17S, single-speed.

Model 17C: single-cylinder, single-chain drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 30.17 cu. in., motor number preceded by 17S, three-speed.

1918

Model 18B: single-cylinder, single-chain drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 30.17 cu. in., number preceded by 18S, single-speed.

Model 18C: single-cylinder, single-chain drive, 28 in. wheels, magneto ignition, 4.34 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 30.17 cu. in., number preceded by 18S, three-speed.

Model 18E: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 18T, single-speed.

Model 18F: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 18T, three-speed.

Model 18J: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by L18T, three-speed.

1919

Model 19F: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 19T or 19A, three-speed.

Model 19J: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by L19T or L19A, three-speed.

1920

Model 20F: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 20T, three-speed.

Model 20J: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, [illegible] in. stroke, 60.34 cu. in., numbe[illegible] preceded by L20T, three-speed.

1921

Model 21F: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 21F, three-speed.

Model 21FD: twin-cylinder, twin-chain drive, magneto ignition, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 21FD, three-speed.

Model 21J: twin-cylinder, twin-chain drive, generator, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 21J, three-speed.

Model 21JD: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 21JD, three-speed.

1922

Model 22F: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 22F, three-speed.

Model 22FD: twin-cylinder, twin-chain drive, magneto ignition, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 22FD, three-speed.

Model 22J: twin-cylinder, twin-chain drive, generator, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 22J, three-speed.

Model 22JD: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 22JD, three-speed.

1923

Model 23F: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 23F, three-speed.

Model 23FD: twin-cylinder, twin-chain drive, magneto ignition, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 23FD, three-speed.

Model 23J: twin-cylinder, twin-chain drive, generator, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 23J, three-speed.

Model 23JD: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 23JD, three-speed.

1924

Model 24FE: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 24FE three-speed, aluminum pistons.

Model 24FD: twin-cylinder, twin-chain drive, magneto ignition, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 24FD, three-speed, cast iron pistons.

Model 24FDCA: twin-cylinder, twin-chain drive, magneto ignition, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 24FDCA, three-speed, aluminum pistons.

Model 24FDCB: twin-cylinder, twin-chain drive, magneto ignition, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 24FDCB, three-speed, iron alloy pistons.

Model 24JE: twin-cylinder, twin-chain drive, generator, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 24JE, three-speed, aluminum pistons.

Model 24JD: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 24JD, three-speed, cast-iron pistons.

Model 24JDCA: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 24JDCA, three-speed, aluminum pistons.

Model 24JDCB: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 24JDCB, three-speed, iron alloy pistons.

1925

Model 25FE: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 25FE, three-speed, iron alloy pistons.

Model 25FDCB: twin-cylinder, twin-chain drive, magneto ignition, 9.5 horsepower, 3 7/16 in. bore, 3½ in. stroke, 74 cu. in., number preceded by 25FDCB, three-speed, iron alloy pistons.

Model 25JE: twin-cylinder, twin-chain drive, generator, 8.68 horsepower, 3 5/16 in. bore, 3½ in. stroke, 60.34 cu. in., number preceded by 25JE, three-speed, iron alloy pistons.

Model 25JDCB: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3½ in. stroke, 74 cu. in., number preceded by 25JDCB, three-speed, iron alloy pistons.

1926

Model 26F: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3½ in. stroke, 60.34 cu. in., number preceded by 26F, three-speed, iron alloy pistons.

Model 26FD: twin-cylinder, twin-chain drive, magneto ignition, 9.5 horsepower, 3 7/16 in. bore, 3½ in. stroke, 74 cu. in., number preceded by 26FD, three-speed, iron alloy pistons.

Model 26J: twin-cylinder, twin-chain drive, generator, 8.68 horsepower, 3 5/16 in. bore, 3½ in. stroke, 60.34 cu. in., number preceded by 26J, three-speed, iron alloy pistons.

Model 26JD: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3½ in. stroke, 74 cu. in., number preceded by 26JD, three-speed, iron alloy pistons.

1926–1927

Model A: single-cylinder, single-chain drive, magneto ignition, 3.31 horsepower, 2⅞ in. bore, 3¼ in. stroke, 21.098 cu. in., number preceded by A, side by side valves, iron alloy pistons.

Model AA: single-cylinder, single-chain drive, magneto ignition, 3.31 horsepower, 2⅞ in. bore, 3¼ in. stroke, 21.098 cu. in., number preceded by AA, overhead valves, aluminum pistons.

Model B: single-cylinder, single-chain drive, generator, 3.31 horsepower, 2⅞ in. bore, 3¼ in. stroke, 21.098 cu. in., number preceded by B, side by side valves, iron alloy pistons.

Model BA: single-cylinder, single-chain drive, generator, 3.31 horsepower, 2⅞ in. bore, 3¼ in. stroke, 21.098 cu. in., number preceded by BA, overhead valves, aluminum pistons.

1927

Model 27F: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3½ in. stroke, 60.34 cu. in., number preceded by 27F, three-speed, iron alloy pistons.

Model 27FD: twin-cylinder, twin-chain drive, magneto ignition, 9.5 horsepower, 3 7/16 in. bore, 3½ in. stroke, 74 cu. in., number preceded by 27FD, three-speed, iron alloy pistons.

Model 27J: twin-cylinder, twin-chain drive, generator, 8.68 horsepower, 3 5/16 in. bore, 3½ in. stroke, 60.34 cu. in., number preceded by 27J, three-speed, iron alloy pistons.

Model 27JD: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3½ in. stroke, 74 cu. in., number preceded by 27JD, three-speed, iron alloy pistons.

1928

Model 28A: single-cylinder, single-chain drive, magneto ignition, 3.31 horsepower, 2⅞ in. bore, 3¼ in. stroke, 21.098 cu. in., number preceded by 28A, side by side valves, Dow metal pistons.

Model 28AA: single-cylinder, single-chain drive, magneto ignition, 3.31 horsepower, 2⅞ in. bore, 3¼ in. stroke, 21.098 cu. in., number preceded by 28AA, overhead valves, Dow metal pistons.

Model 28B: single-cylinder, single-chain drive, generator, 3.31 horsepower, 2⅞ in. bore, 3¼ in. stroke, 21.098 cu. in., number preceded by 28B, side by side valves, Dow metal pistons.

Model 28BA: single-cylinder, single-chain drive, generator, 3.31 horsepower, 2⅞ in. bore, 3¼ in. stroke, 21.098 cu. in., number preceded by 28BA, overhead valves, Dow metal pistons.

Model 28F: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3½ in. stroke, 60.34 cu. in., number preceded by 28F, three-speed, iron alloy pistons.

Model 28FD: twin-cylinder, twin-chain drive, magneto ignition, 9.5 horsepower, 3 7/17 in. bore, 3½ in. stroke, 74 cu. in., number preceded by 28FD, three-speed, iron alloy pistons.

Model 28J: twin-cylinder, twin-chain drive, generator, 8.68 horsepower, 3 5/16 in. bore, 3½ in. stroke, 60.34 cu. in., number preceded by 28J, three-speed, iron alloy pistons.

Model 28JD: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3½ in. stroke, 74 cu. in., number preceded by 28JD, three-speed, iron-alloy pistons.

Model 28JXL: twin-cylinder, twin-chain drive, generator, 8.68 horsepower, 3 5/16 in. bore, 3½ in. stroke, 60.34 cu. in., number preceded by 28JXL, three-speed, Dow metal pistons.

Model 28JDXL: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3½ in. stroke, 74 cu. in., number preceded by 28JDXL, three-speed, Dow metal pistons.

Model 28JH: twin-cylinder, twin-chain drive, two cams, generator, 8.68 horsepower, 3 5/16 in. bore, 3½ in. stroke, 60.34 cu. in., number preceded by 28JH, three-speed, Dow metal pistons.

Model 28JDH: twin-cylinder, twin-chain drive, two cams, generator, 9.5 horsepower, 3 7/17 in. bore, 3½ in. stroke, 74 cu. in., number preceded by 28JDH, three-speeds, Dow metal pistons. (Note: all 61 and 64 cu. in. models were offered with 25 × 3.85 tire sizes; the JD models were offered with these sizes standard and with 27 × 3.85 tires optional. Tire size for the singles was 26 × 3.30.)

1929

Model 29A: single-cylinder, single-chain drive, magneto ignition, 3.31 horsepower, 2⅞ in. bore, 3¼ in. stroke, 21.098 cu. in., number preceded by 29A, side by side valves, Dow metal pistons.

Model 29AA: single-cylinder, single-chain drive, magneto ignition, 3.31 horsepower, 2⅞ in. bore, 3¼ in. stroke, 21.098 cu. in., number preceded by 29AA, overhead valves, Dow metal pistons.

Model 29B: single-cylinder, single-chain drive, generator, 3.31 horsepower, 2⅞ in. bore, 3¼ in. stroke, 21.098 cu. in., number preceded by 29B, side by side valves, Dow metal pistons.

Model 29BA: single-cylinder, single-chain drive, generator, 3.31 horsepower, 2⅞ in. bore, 3¼ in. stroke, 21.098 cu. in., number preceded by 29BA, overhead valves, Dow metal pistons.

Model 29D: twin-cylinder, twin-chain drive, generator, no horsepower given, 2¾ in. bore, 3 13/16 in. stroke, 45.32 cu. in., number preceded by 29D, three-speed, Dow metal pistons.

Model 29F: twin-cylinder, twin-chain drive, magneto ignition, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 29F, three-speed, iron alloy pistons.
Model 29FD: twin-cylinder, twin-chain drive, magneto ignition, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 29FD, three-speed, iron alloy pistons.
Model 29J: twin-cylinder, twin-chain drive, generator, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 29J, three-speed, iron-alloy pistons.
Model 29JD: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 29JD, three-speed, iron alloy pistons.
Model 29JXL: twin-cylinder, twin-chain drive, generator, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 29JXL, three-speed, Dow metal pistons.
Model 29JDXL: twin-cylinder, twin-chain drive, generator, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 29JDXL, three-speed, Dow metal pistons.
Model 29JH: twin-cylinder, twin-chain drive, two cams, generator, 8.68 horsepower, 3 5/16 in. bore, 3 1/2 in. stroke, 60.34 cu. in., number preceded by 29JH, three-speed, Dow metal pistons.
Model 29JDH: twin-cylinder, twin-chain drive, two cams, generator, 9.5 horsepower, 3 7/16 in. bore, 3 1/2 in. stroke, 74 cu. in., number preceded by 29JDH, three-speed, Dow metal pistons. (Note: 45 cu. in. model offered with 25 × 3.85 tires, standard; 61 and 74 cu. in. models offered with 27 × 3.85 tires, standard. No optional sizes listed.)

1930

Model 30-V: 74 cu. in. Big Twin.
Model 30-VL: 74 cu. in. Big Twin, high compression.
Model 30-D: 45 cu. in. side-valve V-twin.
Model 30-DL: 45 cu. in. side-valve V-twin, high compression.
Model 30-DLD: 45 cu. in. side-valve Special Sport solo.
Model 30-C: 30.50 cu. in. single.

1931

Model 31-V: 74 cu. in. Big Twin.
Model 31-VL: 74 cu. in. Big Twin, high compression.
Model 31-D: 45 cu. in. side-valve V-twin.
Model 31-DL: 45 cu. in. side-valve V-twin, high compression.
Model 31-DLD: 45 cu. in. side-valve Special Sport solo.
Model 31-C: 30.50 cu. in. single.

1932

Model 32-V: 74 cu. in. Big Twin.
Model 32-VL: 74 cu. in. Big Twin, high compression.
Model 32-D: 45 cu. in. side-valve V-twin.
Model 32-DL: 45 cu. in. side-valve V-twin, high compression.
Model 32-DLD: 45 cu. in. side-valve Special Sport solo.
Model 32-C: 30.50 cu. in. single.

1933

Model 33-V: 74 cu. in. Big Twin.
Model 33-VL: 74 cu. in. Big Twin, high compression.
Model 33-D: 45 cu. in. side-valve V-twin.
Model 33-DL: 45 cu. in. side-valve V-twin, high compression.
Model 33-DLD: 45 cu. in. side-valve V-twin, Special Sport solo.
Model 33-C: 30.50 cu. in. single.

1934

Model 34-B: 21 cu. in. side-valve single.
Model 34-C: 30.50 cu. in. side-valve single.
Model 34-CB: B model with the 30.50 cu. in. motor.
Model 34-RL: 45 cu. in. V-twin, high compression.
Model 34-R: 45 cu. in. V-twin, low compression.
Model 34-RLD: 45 cu. in. V-twin, Special Sport solo.
Model 34-VLD: 74 cu. in. side-valve twin, Special Sport solo, TNT motor.
Model 34-VD: 74 cu. in. side-valve twin, solo, low compression.
Model 34-VDS: 74 cu. in. side-valve twin, low compression, sidecar gears, TNT motor.
Model 34-VFDS: 74 cu. in. side-valve twin, heavy-duty commercial TNT motor.

1935

Model 35-RL: 45 cu. in. V-twin, high compression.
Model 35-R: 45 cu. in. V-twin, low compression.
Model 35-RS: 45 cu. in. V-twin, low compression, sidecar gears.
Model 35-RLD: 45 cu. in. V-twin, Special Sport solo.
Model 35-VLD: 74 cu. in. side-valve twin, Special Sport solo.

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Model 35-VD: 74 cu. in. side-valve twin, solo, low compression.

1936

Model 36-RL: 45 cu. in. V-twin, sport solo, high compression, solo bars.
Model 36-RLD: 45 cu. in. V-twin, sport solo, extra high compression, solo bars.
Model 36-RLDR: 45 cu. in. V-twin, competition special.
Model 36-R: 45 cu. in. V-twin, low compression, solo bars.
Model 36-RS: 45 cu. in. V-twin, low compression, sidecar gears.
Model 36-VLD: 74 cu. in. side-valve twin, Special Sport solo.
Model 36-VD: 74 cu. in. side-valve twin, low compression.
Model 36-VDS: 74 cu. in. side-valve twin, low compression, sidecar gears.
Model 36-VLH: 80 cu. in. side-valve twin, Sport solo.
Model 36-VHS: 80 cu. in. side-valve twin, low compression, sidecar gears.
Model 36-EL: 61 cu. in. overhead valve twin, Special Sport solo.
Model 36-E: 61 cu. in. overhead valve twin, medium compression.
Model 36-ES: 61 cu. in. overhead valve twin, medium compression, sidecar gears.

1937

Model 37-WL: 45 cu. in. twin, Sport solo.
Model 37-WLD: 45 cu. in. Sport solo, extra high compression.
Model 37-WLDR: 45 cu. in. twin, competition model.
Model 37-W: 45 cu. in. twin, low compression.
Model 37-WS: 45 cu. in. twin, sidecar gearing.
Model 37-UL: 74 cu. in. twin, Special Sport solo.
Model 37-U: 74 cu. in. twin, solo, medium compression.
Model 37-UHS: 74 cu. in. twin, medium compression, sidecar gears
Model 37-EL: 61 cu. in. twin, overhead valve twin, Special Sport solo.
Model 37-E: 61 cu. in. twin, overhead valve twin, medium compression.
Model 37-ES: 61 cu. in. twin, overhead valve twin, medium compression, sidecar gears.

1938

Model 38-WLD: 45 cu. in. twin, Sport Solo, extra high compression.
Model 38-WL: 45 cu. in. twin, Sport Solo, high compression.
Model 38-WLDR: 45 cu. in. twin, competition model.

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Model 38-UL: 74 cu. in. twin, Special Sport solo.
Model 38-U: 74 cu. in. twin, solo, medium compression.
Model 38-US: 74 cu. in. twin, medium compression, sidecar gears.
Model 38-ULH: 80 cu. in. twin, Special Sport solo.
Model 38-UH: 80 cu. in. twin, solo, medium compression.
Model 38-UHS: 80 cu. in. twin, medium compression, sidecar gears.
Model 38-EL: 61 cu. in. overhead valve twin, Special Sport solo.
Model 38-ES: 61 cu. in. overhead valve twin, sidecar gears.

1939

Model 39-WLD: 45 cu. in. twin, Sport Solo, extra high compression.
Model 39-WL: 45 cu. in. twin, Sport Solo, high compression.
Model 39-WLDR: 45 cu. in. twin, competition model.
Model 39-UL: 74 cu. in. twin, Special Sport solo.
Model 39-U: 74 cu. in. twin, medium compression.
Model 39-US: 74 cu. in. twin, medium compression, sidecar gears.
Model 39-ULH: 80 cu. in. twin, Special Sport solo.
Model 39-UH: 80 cu. in. twin, solo, medium compression.
Model 39-UHS: 80 cu. in. twin, medium compression, sidecar gears.
Model 39-EL: 61 cu. in. overhead valve twin, Special Sport solo.
Model 39-ES: 61 cu. in. overhead valve twin, sidecar gears.

1940

Model 40-WLD: 45 cu. in. twin, Special Sport solo.
Model 40-WL: 45 cu. in. twin, high compression.
Model 40-WLDR: 45 cu. in. twin, competition model.
Model 40-UL: 74 cu. in. twin, Special Sport solo.
Model 40-U: 74 cu. in. twin, medium compression.
Model 40-US: 74 cu. in. twin, medium compression, sidecar gears.
(Aluminum head optional on all 74 cu. in. twins.)
Model 40-ULH: 80 cu. in. twin, Special Sport solo.
Model 40-UH: 80 cu. in. twin, solo, medium compression.
Model 40-UHS: 80 cu. in. twin, medium compression, sidecar gears.
(Aluminum heads standard on 80 cu. in. twins.)
Model 40-EL: 61 cu. in. overhead valve twin, Special Sport solo.
Model 40-ES: 61 cu. in. overhead valve twin, sidecar gears.
(Four-speed transmission standard on 61, 74, 80 cu. in. twins.)

1941

Model 41-WL: 45 cu. in. twin, high compression.
Model 41-WLD: 45 cu. in. twin, Sport solo.
Model 41-WLDR: 45 cu. in. twin, Special Sport solo.
Model 41-UL: 74 cu. in. twin, Special Sport solo.
Model 41-U: 74 cu. in. twin, medium compression.
Model 41-ULH: 80 cu. in. twin, Special Sport solo.
Model 41-UH: 80 cu. in. twin, medium compression.
Model 41-EL: 61 cu. in. overhead valve twin, Special Sport solo.
Model 41-E: 61 cu. in. overhead valve twin, medium compression.
Model 41-FL: 74 cu. in. overhead valve twin, Special Sport solo.
Model 41-F: 74 cu. in. overhead valve twin, medium compression.

1942

Model 42-WLD: 45 cu. in. twin, Special Sport solo.
Model 42-WL: 45 cu. in. twin, high compression.
Model 42-UL: 74 cu. in. twin, Special Sport solo.
Model 42-U: 74 cu. in. twin, medium compression.
Model 42-EL: 61 cu. in. overhead valve twin, Special Sport solo.
Model 42-E: 61 cu. in. overhead valve twin, medium compression.
Model 42-FL: 74 cu. in. overhead valve twin, Special Sport solo.

1943

Model 43-UL: 74 cu. in. twin, high compression solo.
Model 43-U: 74 cu. in. twin, medium compression.
Model 43-EL: 61 cu. in. overhead valve twin, Special Sport solo.
Model 43-E: 61 cu. in. overhead valve twin, medium compression.
Model 43-FL: 74 cu. in. overhead valve twin, Special Sport solo.
Model 43-F: 74 cu. in. overhead valve twin, medium compression.

1944

Model 44-UL: 74 cu. in. twin, high compression solo.
Model 44-U: 74 cu. in. twin, medium compression.
Model 44-EL: 61 cu. in. overhead valve twin, Special Sport solo.
Model 44-E: 61 cu. in. overhead valve twin, medium compression.
Model 44-FL: 74 cu. in. overhead valve twin, Special Sport solo.
Model 44-F: 74 cu. in. overhead valve twin, medium compression.

1945

Model 45-WL: 45 cu. in. twin.
Model 45-UL: 74 cu. in. twin, high compression solo.
Model 45-U: 74 cu. in. twin, medium compression.
Model 45-US: 74 cu. in. twin, medium compression, sidecar gears.
(Aluminum heads a $7 option on all above models.)
Model 45-EL: 61 cu. in. overhead valve twin, Special Sport solo.
Model 45-E: 61 cu. in. overhead valve twin, medium compression.
Model 45-ES: 61 cu. in. overhead valve twin, medium compression, sidecar gears.
Model 45-FL: 74 cu. in. overhead valve twin, Special Sport solo.
Model 45-F: 74 cu. in. overhead valve twin, medium compression.
Model 45-FS: 74 cu. in. overhead valve twin, medium compression, sidecar gears.

1946

Model 46-WL: 45 cu. in. twin.
Model 46-UL: 74 cu. in. twin, high compression solo.
Model 46-U: 74 cu. in. twin, medium compression.
Model 46-US: 74 cu. in. twin, medium compression, sidecar gears.
(Aluminum heads a $7 option on all above models.)
Model 46-EL: 61 cu. in. overhead valve twin, Special Sport solo.
Model 46-E: 61 cu. in. overhead valve twin, medium compression.
Model 46-ES: 61 cu. in. overhead valve twin, medium compression, sidecar gears.
Model 46-FL: 74 cu. in. overhead valve twin, Special Sport solo.
Model 46-F: 74 cu. in. overhead valve twin, medium compression.
Model 46-FS: 74 cu. in. overhead valve twin, medium compression, sidecar gears.

1947

Model 47-WL: 45 cu. in. twin.
Model 47-UL: 74 cu. in. twin, high compression solo.
Model 47-U: 74 cu. in. twin, medium compression.
Model 47-US: 74 cu. in. twin, medium compression, sidecar gears.
(Aluminum heads a $7 option on all above models.)
Model 47-EL: 61 cu. in. overhead valve twin, Special Sport solo.

Model 47-E: 61 cu. in. overhead valve twin, medium compression.
Model 47-ES: 61 cu. in. overhead valve twin, medium compression, sidecar gears.
Model 47-FL: 74 cu. in. overhead valve twin, Special Sport solo.
Model 47-F: 74 cu. in. overhead valve twin, medium compression.
Model 47-FS: 74 cu. in. overhead valve twin, medium compression, sidecar gears.

1948

Model 48-WL: 45 cu. in. twin.
Model 48-UL: 74 cu. in. twin, high compression solo.
Model 48-U: 74 cu. in. twin, medium compression.
Model 48-US: 74 cu. in. twin, medium compression, sidecar gears.
(Aluminum heads an $8.35 option on all above models.)
Model 48-EL: 61 cu. in. overhead valve twin, Special Sport solo.
Model 48-E: 61 cu. in. overhead valve twin, medium compression.
Model 48-ES: 61 cu. in. overhead valve twin, medium compression, sidecar gears.
Model 48-FL: 74 cu. in. overhead valve twin, Special Sport solo.
Model 48-F: 74 cu. in. overhead valve twin, medium compression.
Model 48-FS: 74 cu. in. overhead valve twin, medium compression, sidecar gears.

1949

Model 49-S: 125cc two-stroke single (chrome rims $7.50 option).
Model 49-WL: 45 cu. in. twin (aluminum heads, $7.50 extra).
Model 49-EL: 61 cu. in. overhead valve twin, sport solo.
Model 49-ES: 61 cu. in. overhead valve twin, sidecar gears.
Model 49-FL: 74 cu. in. overhead valve twin, sport solo.
Model 49-F: 74 cu. in. overhead valve twin, medium compression.
Model 49-FS: 74 cu. in. overhead valve twin, medium compression, sidecar gears.
(All E- and F-series models equipped with Hydra-Glide forks beginning in 1949 model year.)

1950

Model 50-S: 125cc two-stroke single (chrome rims $7.50 option).
Model 50-WL: 45 cu. in. twin (aluminum heads, $7.50 extra).
Model 50-EL: 61 cu. in. overhead valve twin, sport solo.
Model 50-ES: 61 cu. in. overhead valve twin, sidecar gears.
Model 50-FL: 74 cu. in. overhead valve twin, sport solo.
Model 50-F: 74 cu. in. overhead valve twin, medium compression.
Model 50-FS: 74 cu. in. overhead valve twin, medium compression, sidecar gears.

1951

Model 51-S: 125cc two-stroke single (chrome rims $8.50 option, chrome handlebars $3.75 option).
Model 51-WL: 45 cu. in. twin (aluminum heads $10 option).
Model 51-EL: 61 cu. in. overhead valve twin, sport solo.
Model 51-ELS: 61 cu. in. overhead valve twin, sidecar gears.
Model 51-FL: 74 cu. in. overhead valve twin, sport solo.
Model 51-FLS: 74 cu. in. overhead valve twin, sidecar gears.

1952

Model 52-S: 125cc two-stroke single.
Model 52-ELF: 61 cu. in. overhead valve twin, sport solo, foot shift.
Model 52-EL: 61 cu. in. overhead valve twin, sport solo, hand shift.
Model 52-ELS: 61 cu. in. overhead valve twin, sidecar gears, hand shift.
Model 52-FLF: 74 cu. in. overhead valve twin, sport solo, foot shift.
Model 52-FL: 74 cu. in. overhead valve twin, sport solo, hand shift.
Model 52-FLS: 74 cu. in. overhead valve twin, sidecar gears, hand shift.
Model 52-K: 45 cu. in. twin, sports model.

1953

Model 53-ST: 165cc two-stroke single.
Model 53-K: 45 cu. in. twin, sports model.
Model 53-FLF: 74 cu. in. overhead valve twin, sport solo, foot shift.
Model 53-FL: 74 cu. in. overhead valve twin, sport solo, hand shift.
Model 53-FLEF: 74 cu. in. overhead valve twin, foot shift with traffic combination.
Model 53-FLE: 74 cu. in. overhead valve twin, hand shift with traffic combination.

1954

Model 54-ST: 165cc single-cylinder, two-stroke.
Model 54-STU: 165cc single-cylinder, two-stroke, modified carburetor.
Model 54-KH: 55 cu. in. twin, sport model.
Model 54-FLF: 74 cu. in. overhead valve twin, foot shift.
Model 54-FL: 74 cu. in. overhead valve twin, hand shift.
Model 54-FLEF: 74 cu. in. overhead valve twin, foot shift, traffic combination.

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Model 54-FLE: 74 cu. in. overhead valve twin, hand shift, traffic combination.

1955

Model 55-Hummer: 125cc single-cylinder, two-stroke.
Model 55-ST: 165cc single-cylinder, two-stroke.
Model 55-STU: 165cc single-cylinder, two-stroke, modified carburetor.
Model 55-KH: 55 cu. in. twin, sport model.
Model 55-KHK: 55 cu. in. twin, sport model KH with special speed kit.
Model 55-FLF: 74 cu. in. overhead valve twin, sport solo, foot shift.
Model 55-FL: 74 cu. in. overhead valve twin, sport solo, hand shift.
Model 55-FLEF: 74 cu. in. overhead valve twin, foot shift, traffic combination.
Model 55-FLE: 74 cu. in. overhead valve twin, hand shift, traffic combination.
Model 55-FLHF: 74 cu. in. overhead valve twin, super sport solo, foot shift.
Model 55-FLH: 74 cu. in. overhead valve twin, super sport solo, hand shift.

1956

Model 56-Hummer: 125cc single-cylinder, two-stroke.
Model 56-ST: 165cc single-cylinder, two-stroke.
Model 56-STU: 165cc single-cylinder, two-stroke, modified carburetor.
Model 56-KR: 45 cu. in. side-valve twin, four-speed transmission, magneto ignition, flat-track racing motorcycle.
Model 56-KRTT: 45 cu. in. side-valve twin, four-speed transmission, magneto ignition.
Model 56-KHRTT: 45 cu. in. twin-cylinder TT racing motorcycle.
Model 56-KH: 55 cu. in. side-valve twin, sport model.
Model 56-KHK: 55 cu. in. side-valve twin, KH sport model with special speed kit.
Model 56-FLHF: 74 cu. in. overhead valve twin, super sport solo, foot shift.
Model 56-FLH: 74 cu. in. overhead valve twin, super sport solo, hand shift.
Model 56-FLF: 74 cu. in. overhead valve twin, sport solo, foot shift.
Model 56-FL: 74 cu. in. overhead valve twin, sport solo, hand shift.
Model 56-FLEF: 74 cu. in. overhead valve twin, foot shift, traffic combination.

Model 56-FLE: 74 cu. in. overhead valve twin, hand shift, traffic combination.

1957

Model 57-Hummer: 125cc single-cylinder, two-stroke.
Model 57-ST: 165cc single-cylinder, two-stroke.
Model 57-STU: 165cc single-cylinder, two-stroke, modified carburetor.
Model 57-KR: 45 cu. in. twin-cylinder, flat-track racing motorcycle.
Model 57-KRTT: 45 cu. in. twin-cylinder, TT racing motorcycle.
Model 57-KHRTT: 45 cu. in. twin-cylinder, TT racing motorcyle.
Model 57-XL: 55 cu. in. overhead valve twin, designated the Sportster.
Model 57-FLHF: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 57-FLH: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 57-FLF: 74 cu. in. overhead valve twin, sport solo, foot shift.
Model 57-FL: 74 cu. in. overhead valve twin, sport solo, hand shift.

1958

Model 58-XL: Sportster: 55 cu. in. overhead valve twin, medium compression.
Model 58-XLH: Sportster: 55 cu. in. overhead valve twin, 9:1 compression.
Model 58-XLC: Sportster: 55 cu. in. overhead valve twin, 9:1 compression.
Model 58-XLCH: Sportster: 55 cu. in. overhead valve twin, 9:1 compression, magneto ignition.
Model 58-FLHF: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 58-FLH: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 58-FLF: 74 cu. in. overhead valve twin, sport solo, foot shift.
Model 58-FL: 74 cu. in. overhead valve twin, sport solo, hand shift.
(F series motorcycles designated Duo-Glide, equipped with swinging arm and twin rear shocks.)
Model 58-Hummer: 125cc single-cylinder, two-stroke.
Model 58-ST: 165cc single-cylinder, two-stroke.
Model 58-STU: 165cc single-cylinder, two-stroke, modified carburetor.

1959

Model 59-XL, Sportster: 55 cu. in. overhead valve twin, medium compression.
Model 59-XLH, Sportster: 55 cu. in. overhead valve twin, high compression.
Model 59-XLCH, Sportster: 55 cu. in. overhead valve twin, high compression.
Model 59-FLHF: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 59-FLH: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 59-FLF: 74 cu. in. overhead valve twin, sport solo, foot shift.
Model 59-FL: 74 cu. in. overhead valve twin, sport solo, hand shift.
Model 59-Hummer: 125cc single-cylinder, two-stroke.
Model 59-ST: 165cc single-cylinder, two-stroke.
Model 59-STU: 165cc single-cylinder, two-stroke, modified carburetor.

1960

Model 60-XLH, Super H Sportster: 55 cu. in. overhead valve twin.
Model 60-XLCH, Super CH Sportster: 55 cu. in. overhead valve twin.
Model 60-FLHF: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 60-FLH: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 60-FLF: 74 cu. in. overhead valve twin, sport solo, foot shift.
Model 60-FL: 74 cu. in. overhead valve twin, sport solo, hand shift.
Model 60-BT, Super 10: 165cc single-cylinder, two-stroke, 9 horsepower.
Model 60-BTU, Super 10: 165cc single-cylinder, two-stroke, 5 horsepower, with carburetor restrictor.
Model 60-A, Topper scooter: 165cc single-cylinder, two-stroke, belt drive, automatic transmission, 9 horsepower.
Model 60-AU, Topper scooter: 165cc single-cylinder, two-stroke, belt drive, automatic transmission, 5 horsepower, with carburetor restrictor.

1961

Model 61-XLH, Super H Sportster: 55 cu. in. overhead valve twin.
Model 61-XLCH: Super CH Sportster: 55 cu. in. overhead valve twin.
Model 61-FLHF: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 61-FLH: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 61-FLF: 74 cu. in. overhead valve twin, sport solo, foot shift.
Model 61-FL: 74 cu. in. overhead valve twin, sport solo, hand shift.
Model 61-BT: Super 10: single-cylinder, two-stroke, 9 horsepower.
Model 61-BTU: Super 10: single-cylinder, two stroke, 5 horsepower, with carburetor restrictor.
Model 61-AH, Topper scooter: 165cc single-cylinder, two-stroke, belt drive, automatic transmission, 9 horsepower.
Model 61-AU, Topper scooter: 165cc single-cylinder, two-stroke, belt drive, automatic transmission, 5 horsepower, with carburetor restrictor.
Model 61-C, Sprint: 250cc single-cylinder, four-stroke.
Model 61-KR-KRTT: 45 cu. in. side-valve racing motorcycle.
Model 61-XLRTT: 45 cu. in. side-valve TT racing motorcycle.
Model 61-CRTT: 250cc single-cylinder, overhead valve, four-stroke motor, 9.5:1 compression ratio, four-speed transmission, battery ignition, off-road racing motorcycle.

1962

Model 62-KR-KRTT: 45 cu. in. side-valve racing motorcycle.
Model 62-XLRTT: 45 cu. in. side-valve TT racing motorcycle.
Model 62-XLH, Super H, Sportster: 55 cu. in. overhead valve twin.
Model 62-XLCH, Super CH, Sportster: 55 cu. in. overhead valve twin.
Model 62-FLHF: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 62-FLH: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 62-FLF: 74 cu. in. overhead valve twin, sport solo, foot shift.
Model 62-FL: 74 cu. in. overhead valve twin, sport solo, hand shift.
Model 62-BT, Pacer: 175cc single-cylinder, two-stroke.
Model 62-BTH, Scat: 175cc single-cylinder, two-stroke.
Model 62-BTF, Ranger: 165cc single-cylinder, two-stroke.
Model 62, BTU, Pacer: 165cc single-cylinder, two-stroke, 5 horsepower, with carburetor restrictor.
Model 62-H Sprint H: 250cc single-cylinder, four-stroke.
Model 62-C Sprint: 250cc single-cylinder, four-stroke.
Model 62-CRTT: 250cc single-cylinder, four-stroke road racer.
Model 62-AH, Topper scooter: 165cc single-cylinder, two-stroke, belt drive, automatic transmission, 9 horsepower.
Model 62-AU, Topper scooter: 165cc single-cylinder, two-stroke, belt drive, automatic transmission, 5 horsepower, with carburetor restrictor.

1963

Model 63-XLH, Super H Sportster: 55 cu. in. overhead valve twin.

Model 63-XLCH, Super CH Sportster: 55 cu. in. overhead valve twin.

Model 63-KR: 45 cu. in. side-valve twin, four-speed transmission, magneto ignition, designed for flat-track racing.

Model 63-KRTT: 45 cu. in. side-valve twin, four-speed transmission, magneto ignition, designed for TT racing.

Model 63-XLRTT: 55 cu. in. overhead valve twin, four-speed transmission, magneto ignition, 9:1 compression ratio.

Model 63-FLHF: 74 cu. in. overhead valve twin, super sport, foot shift.

Model 63-FLH: 74 cu. in. overhead valve twin, super sport, hand shift.

Model 63-FLF: 74 cu. in. overhead valve twin, sport solo, foot shift.

Model 63-FL: 74 cu. in. overhead valve twin, sport solo, hand shift.

Model 63-AH: Topper scooter: 165cc single-cylinder, two-stroke, belt drive, automatic transmission, 9 horsepower.

Model 63-AU: Topper scooter: 165cc single-cylinder, two-stroke, belt drive, automatic transmission, 5 horsepower, with carburetor restrictor.

Model 63-BT, Pacer: 175cc single-cylinder, two-stroke, three-speed transmission, street model.

Model 63-BTH, Scat: 175cc single-cylinder, two-stroke, three-speed transmission, trail model.

Model 63-BTU, Pacer: 175cc single-cylinder, two-stroke, three-speed transmission, 5 horsepower, with carburetor restrictor.

Model 63-C, Sprint: 250cc single-cylinder, four-cycle.

Model 63-H, Sprint: 250cc single-cylinder, four-cycle, trail model.

Model 63-CRTT: single-cylinder, four-stroke road racer.

1964

Model 64-KR: 45 cu. in. side-valve twin, four-speed transmission, magneto ignition.

Model 64-XLRTT: 55 cu. in. overhead valve twin, four-speed transmission, magneto ignition, 9:1 compression ratio.

Model 64-CRTT: single-cylinder, four-stroke road racer.

Model 64-XLH, Super H, Sportster: 55 cu. in. overhead valve twin.

Model 64-XLCH, Super CH, Sportster: 55 cu. in. overhead valve twin.

Model 64-FLHF: 74 cu. in. overhead valve twin, super sport, foot shift.

Model 64-FLH: 74 cu. in. overhead valve twin, super sport, hand shift.

Model 64-FLF: 74 cu. in. overhead valve twin, sport solo, foot shift.

Model 64-FL: 74 cu. in. overhead valve twin, sport solo, hand shift.

Model 64-BT, Pacer: 175cc single-cylinder, two-stroke, three-speed transmission, street model.

Model 64-BTH, Scat: 175cc single-cylinder, two-stroke, three-speed transmission, trail model.

Model 64-BTU, Pacer: single-cylinder, two-stroke, three-speed transmission, 5 horsepower, with carburetor restrictor.

Model 64-C, Sprint: 250cc single-cylinder, four-stroke.

Model 64-H, Sprint: 250cc single-cylinder, four-stroke, trail model.

Model 64-AH, Topper scooter: 165cc single-cylinder, two-stroke, belt drive, automatic transmission, 9 horsepower.

Model 64-AU, Topper scooter: 165cc single-cylinder, two-stroke, belt drive, automatic transmission, 5 horsepower, with carburetor restrictor.

1965

Model 65-XLH, Super H, Sportster: 55 cu. in. overhead valve twin.

Model 65-XLCH, Super CH, Sportster: 55 cu. in. overhead valve twin.

Model 65-FLHFB: 74 cu. in. overhead valve twin, super sport, foot shift.

Model 65-FLHB: 74 cu. in. overhead valve twin, super sport, hand shift.

Model 65-FLFB: 74 cu. in. overhead valve twin, super solo, foot shift.

Model 65-FLB: 74 cu. in. overhead valve twin, super solo, hand shift.

(All F models were equipped with electric starting and designated Electra Glides. Last year for the Panhead motor.)

Model 65-BT, Pacer: 175cc single-cylinder, two stroke, three-speed transmission, street model.

Model 65-BTH, Scat: 175cc single-cylinder, two-stroke, three-speed transmission, trail model.

Model 65-C, Sprint: 250cc single-cylinder, four-stroke.

Model 65-H, Sprint: 250cc, single-cylinder, four-stroke trail model.

Model 65 M-50, single-cylinder, two-cycle, three-speed transmission.

Model 65-AH, Topper scooter: 165cc single-cylinder, two-cycle, belt drive, automatic transmission, 9 horsepower. Designated high compression.

1966

Model 66-FLHFB: 74 cu. in. overhead valve twin, super sport, foot shift.

Model 66-FLHB: 74 cu. in. overhead valve twin, super sport, hand shift.

Model 66-FLFB: 74 cu. in. overhead valve twin, super solo, foot shift.

Model 66-FLB: 74 cu. in. overhead valve twin, super solo, hand shift.

Model 66-XLH, Super H, Sportster: 55 cu. in. overhead valve twin.

Model 66-XLCH, Super CH, Sportster: 55 cu. in. overhead valve twin.

Model 66-C, Sprint: 250cc single-cylinder, four-stroke.

Model 66-H, Sprint: 250cc single-cylinder, four-stroke trail model.

Model 66-BTH, Bobcat: 175cc single-cylinder, two-stroke, three-speed transmission, offered in standard (street) and trail models without separate model designation.

Model 66-M-50: 50cc single-cylinder, two cycle, three-speed transmission, magneto ignition.

Model 66-M-50 Sport: 50cc single-cylinder, two-cycle, three-speed transmission, magneto ignition.

1967

Model 67-XLH, Sportster: 55 cu. in. overhead valve twin, electric start.

Model 67-XLCH, Sportster: 55 cu. in. overhead valve twin, electric start.

Model 67-FLHFB: 74 cu. in. overhead valve twin, super sport, foot shift.

Model 67-FLHB: 74 cu. in. overhead valve twin, super sport, hand shift.

Model 67-FLFB: 74 cu. in. overhead valve twin, super sport, foot shift.

Model 67-FLB: 74 cu. in. overhead valve twin, super sport, hand shift.

Model 67-H, Sprint: 250cc single-cylinder, four-stroke, trail model.

Model 67-SS, Sprint: 250cc single-cylinder, four stroke.

Model 67-M-65, 65cc single-cylinder, two-cycle, three-speed transmission.

Model 67-M-65, Sport: 65cc single-cylinder, two-cycle, three-speed transmission.

Model 67M-50: 50cc single-cylinder, two-cycle, three-speed transmission.

1968

Model 68-XLH, Sportster: 55 cu. in. overhead valve twin.

Model 68-XLCH, Sportster: 55 cu. in. overhead valve twin.

Model 68-FLHFB: 74 cu. in. overhead valve twin, super sport, foot shift.

Model 68-FLHB: 74 cu. in. overhead valve twin, super sport, hand shift.

Model 68-FLFB: 74 cu. in. overhead valve twin, super sport, foot shift.

Model 68-FLB: 74 cu. in. overhead valve twin, super sport, hand shift.

Model 68-H, Sprint: 250cc, single-cylinder, four-stroke, trail model.
Model 68-SS, Sprint: 250cc single-cylinder, four-stroke.
Model 68-M-125, Rapido: 125cc single-cylinder two-stroke, four-speed transmission.
Model 68-M-65: 65cc single-cylinder, two-cycle, three-speed transmission.
Model 68-M-65, Sport: 65cc single-cylinder, two-cycle, three-speed transmission.
Model 68-M-50, Sport: 50cc single-cylinder, two-cycle, three-speed transmission.

1969

Model 69-XLH, Super H, Sportster: 55 cu. in. overhead valve twin.
Model 69-XLCH, Super CH, Sportster: 55 cu. in. overhead valve twin.
Model 69-FLHFB: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 69-FLHB: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 69-FLFB: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 69-FLB: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 69-SS, Sprint: 350cc four-cycle, overhead valve single.
Model 69-ERS, Sprint Scrambler: 350cc overhead valve, four-cycle, four-speed transmission, magneto ignition.
Model 69-ML-125, Rapido: 125cc single-cylinder, two-stroke. (1,000 street models built; Rapido then continued as a trail model.)
Model 69-M-65: 65cc single-cylinder, two-stroke.
Model 69-M-65 Sport: 65cc single-cylinder, two-stroke.
Model 69-XLRTT: 55 cu. in. overhead valve twin, 9:1 compression ratio, four-speed transmission, magneto ignition.

1970

Model 70-FLHF: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 70-FLH: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 70-FLPF: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 70-FLP: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 70-XLH, Super H, Sportster: 55 cu. in. overhead valve twin.
Model 70-XLCH, Super CH, Sportster: 55 cu. in. overhead valve twin.
Model 70-SS, Sprint: 350cc single-cylinder, four-cycle.
Model 70-MLS, Rapido: 125cc single-cylinder, two-stroke.
Model 70M-65 Sport, Leggero: single-cylinder, two-cycle.
Model 70-ERS, Sprint Scrambler: 350cc overhead valve, four-cycle.
Model 70-MSR, Baja: 100cc single-cylinder, two-cycle, four-speed transmission.

1971

Model 71-FLHF: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 71-FLH: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 71-FLPF: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 71-FLP: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 71-FX, Super Glide: 74 cu. in. overhead valve twin, foot shift.
Model 71-XLH, Super H, Sportster: 55 cu. in. overhead valve twin.
Model 71-XLCH, Super CH, Sportster: 55 cu. in. overhead valve twin.
Model 71-SX, Sprint: 350cc single-cylinder, four-cycle, off-road model.
Model 71-SS, Sprint: 350cc single-cylinder, four-cycle.
Model 71-MLS, Rapido: 125cc single-cylinder off-road bike.
Model 71-M-65 Sport, Leggero: 65cc single-cylinder, two-cycle.
Model 71-ERS, Sprint Scrambler: 350cc overhead valve, four-cycle.
Model 71-MSR, Baja: 100cc single-cylinder, two-cycle.

1972

Model 72-FLHF: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 72-FLH: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 72-FLPF: 74 cu. in. overhead valve twin, super sport, foot shift.
Model 72-FLP: 74 cu. in. overhead valve twin, super sport, hand shift.
Model 72-FX, Super Glide: 74 cu. in. overhead valve twin, foot shift.
Model 72-XLH, Super H, Sportster: 1000cc V-twin.
Model 72-XLCH, Super CH, Sportster: 1000cc V-twin.
Model 72-MLS, Rapido: 125cc single-cylinder, two-cycle.
Model 72M-65 Sport, Leggero: 65cc single-cylinder, two-cycle.
Model 72-ERS, Sprint Scrambler: 350cc overhead valve, four-cycle.
Model 72-MSR, Baja 100L (lights): single-cylinder, two-cycle.
Model 72-MSR, Baja 100 (no lights): single-cylinder, two-cycle.
Model 72-MC-65, Shortster minicycle: 65cc single-cylinder, two-stroke.

1973

Model 73-FL: 74 cu. in. overhead valve twin.
Model 73-FLH: 74 cu. in. overhead valve twin.
Model 73-XLH, Super H, Sportster: 1000cc V-twin.
Model 73-XLCH, Super CH, Sportster: 1000cc V-twin.
Model 73-FX, Super Glide: 74 cu. in. overhead valve twin.
Model 73-SS, Sprint: 350cc single-cylinder, four-stroke, electric start.
Model 73-SX, Sprint: 350cc single-cylinder, four-stroke, electric start.
Model 73-TX: 125cc.
Model 73-Z-90: 90cc single-cylinder, two-stroke, automatic gas-oil mix.
Model 73-X-90: 90cc single-cylinder, two-stroke, automatic gas-oil mix.
Model 73-SR-100: 100cc single-cylinder, two-stroke, automatic gas-oil mix.
Model 73-XRTT: 45 cu. in. aluminum engine, racing motorcycle.

1974

Model 74-FLH-1200: 74 cu. in. overhead valve twin.
Model 74-FLHF: 74 cu. in. overhead valve twin.
Model 74-FL, Police: 74 cu. in. overhead valve twin.
Model 74-FX, Super Glide: 74 cu. in. overhead valve twin.
Model 74-FXE, Super Glide: electric start, overhead valve twin.
Model 74-XLH, Super H, Sportster: 1000cc V-twin.
Model 74-XLCH, Super CH, Sportster: 1000cc V-twin.
Model 74-SS 350: 350cc single-cylinder, four-cycle.
Model 74-SX 350: 350cc single-cylinder, four-cycle.
Model 74-SX 175: 175cc single-cylinder, two-cycle.
Model 74-SX 125: 125cc single-cylinder, two-cycle.
Model 74-Z-90: 90cc single-cylinder, two-cycle.
Model 74-X-90: 90cc single-cylinder, two-cycle.
Model 74-SR-100: 100cc single-cylinder, two-cycle off-road bike.
Model 74-XR: 45 cu. in. racing motorcycle.

1975

Model 75-FLH-1200: 74 cu. in. overhead valve twin.
Model 75-FLHF: 74 cu. in. overhead valve twin.
Model 75-FL Police: 74 cu. in. overhead valve twin.
Model 75-FX, Super Glide: 74 cu. in. overhead valve twin.
Model 75-FXE, Super Glide: electric start, 74 cu. in. overhead valve twin.

Model 75-XLH, Super H, Sportster: 1000cc V-twin.
Model 75-XLCH, Super CH, Sportster: 1000cc V-twin.
Model 75-SX-175: 175cc single-cylinder, two-cycle.
Model 75-SX-125: 125cc single-cylinder, two-cycle.
Model 75-Z-90: 90cc single-cylinder, two-cycle.
Model 75-X-90: 90cc single-cylinder, two-cycle.
Model 75-XR: 45 cu. in. racing motorcycle.
Model 75-SX-250: 250cc single-cylinder, two-cycle, five-speed transmission.
Model 75-RC-125: 125cc single-cylinder, two-cycle.
Model 75-SS-250: 250cc single-cylinder, two-cycle, five-speed transmission.

1976

Model 76-FLH-1200: 74 cu. in. overhead valve twin.
Model 76-FX, Super Glide: 74 cu. in. overhead valve twin.
Model 76-FXE, Super Glide: electric start, 74 cu. in. overhead valve twin.
Model 76-XLH, Super H, Sportster: 1000cc V-twin.
Model 76-XLCH, Super CH, Sportster: 1000cc V-twin.
Model 76-SS-250: 250cc single-cylinder, two-cycle.
Model 76-SX-250: 250cc single-cylinder, two-cycle, off-road.
Model 76-SXT-125: 125cc single-cylinder, two-cycle.
Model 76-SS-175: 175cc single-cylinder, two-cycle.
Model 76-SS-125: 125cc single-cylinder, two-cycle.
Model 76-MX-250: 250cc single-cylinder, off-road racing cycle.
Model 76-RR-250: 250cc two-cylinder, liquid-cooled racing cycle.

1977

Model 77-FLH-1200: 74 cu. in. overhead valve twin.
Model 77-FLHS: 74 cu. in. overhead valve twin.
Model 77-FX, Super Glide: 74 cu. in. overhead valve twin.
Model 77-FXE, Super Glide: electric start, 74 cu. in. overhead valve twin.
Model 77-FXS, Low Rider: 74 cu. in. overhead valve twin.
Model 77-XLT, Sportster: electric start, 1000cc V-twin.
Model 77-XLCR, Cafe racer: 1000cc V-twin.
Model 77-XLH, Super H, Sportster: 1000cc V-twin.
Model 77-XLCH, Super CH, Sportster: 1000cc, V-twin.
Model 77-SS-250: 250cc single-cylinder, two-cycle.
Model 77-SX 250: 250cc single-cylinder, two-cycle.
Model 77-SXT 125: 125cc single-cylinder, two-cycle.
Model 77-SS 175: 175cc single-cylinder, two-cycle.
Model 77-SS 125: 125cc single-cylinder, two-cycle.
Model 77-RR 250: 250cc two-cylinder, liquid-cooled racing cycle.

1978

Model 78-FLH-1200: 74 cu. in. overhead valve twin.
Model 78-FLH Anniversary: 74 cu. in. overhead valve twin.
Model 78-FLH 80, Electra Glide: 80 cu. in. overhead valve twin.
Model 78-FX, Super Glide: 74 cu. in. overhead valve twin.
Model 78-FXE, Super Glide: electric start, 74 cu. in. overhead valve twin.
Model 78-FXS, Low Rider: 74 cu. in. overhead valve twin.
Model 78-XLH, Super H, Sportster: 1000cc V-twin.
Model 78-XLH Anniversary, Sportster: 1000cc V-twin.
Model 78-XLCH, Super CH, Sportster: 1000cc -twin.
Model 78-SX 250: 250cc single-cylinder, two-cycle.
Model 78-XLT, Sportster: electric start, 1000cc V-twin.
Model 78-XLCR, Cafe Racer: 1000cc V-twin.
Model 78-XLS, Roadster: 1000cc V-twin.
Model 78-XR 750: 45 cu. in. V-twin flat-track racer.

1979

Model 79-FLT, Tour Glide: 80 cu. in. V-twin, solid-state ignition.
Model 79-FLHC, Electra Glide Classic: 80 cu. in. V-twin, solid-state ignition, sixteen-spoke wheels, MT90 by 16 in. rear tire; TourPak standard.
Model 79-FLHC with sidecar, Electra Glide Classic, sidecar standard.
Model 79-FLH 80, Electra Glide: 80 cu. in. V-twin: fairing windshield, saddle bags with safety guards, luggage rack, passing lights, safety bars, running boards, all standard.
Model 79-FLH 1200, Electra Glide 74: 1200 cc V-twin: fairing windshield, saddle bags with safety guards, luggage rack, passing lights, safety bars, running boards, all standard.

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Model 79-FLH 80, Police: 80 cu. in. police motorcycle.
Model 79-FLH 1200, Police: 74 cu. in. police motorcycle.
Model 79-FXS 1200, Low Rider: 1200cc V-twin, solid-state ignition, two-into-one exhaust; stash pouch, sissy bar standard.
Model 79-FXS 80, Low Rider: 80 cu. in. V-twin, solid-state ignition, two-into-one exhaust; stash pouch, sissy bar standard.
Model 79-FXEF 1200, Fat Bob Super Glide: 1200cc V-twin, solid-state ignition, buckhorn handlebars.
Model 79-FXEF 80, Fat Bob Super Glide: 80 cu. in. V-twin, solid-state ignition, 3.5-gal. twin gas tanks with instrument pod in middle, two-into-one exhaust.
Model 79-FXE 1200, Super Glide: 1200cc V-twin, solid-state ignition, two-into-one exhaust.
Model 79-XLH, Sportster: 1000cc V-twin, XR750-derived frame, 16 in. rear tire, nine-spoke aluminum wheels, buckhorn bars.
Model 79-XLCH, Sportster: 1000cc V-twin, XR750-derived frame, 16 in. rear tire, nine-spoke aluminum wheels, buckhorn bars.
Model 79-XLCR, Cafe Racer: 1000cc V-twin.
Model 79-XLS, Roadster: 1000cc V-twin, solid-state ignition, siamese exhaust system, cast aluminum wheels, 16-in. drag-style rear tire, tooled leather stash pouch, highway pegs; termed by factory "a Sportster version of the FXS Low Rider."

1980

Model 80-FLT, Tour Glide: 80 cu. in. V-twin, solid-state ignition.
Model 80-FLHC, Electra Glide Classic: 80 cu. in. V-twin, solid-state ignition.
Model 80-FLHC with sidecar, Electra Glide Classic.
Model 80-FLH 80, Electra Glide: 80 cu. in. V-twin, solid-state ignition.
Model 80-FLH 1200, Electra Glide: 1200cc V-twin, solid-state ignition.
Model 80-FLHS, Electra Glide: 80 cu. in. V-twin, solid-state ignition.
Model 80-FLH 80, Police: 80 cu. in. police motorcycle.
Model 80-FLH 1200, Police: 74 cu. in. police motorcycle.
Model 80-FXB, Sturgis: 80 cu. in. V-twin, solid-state ignition, primary and secondary belt drive.
Model 80-FXWG, Wide Glide: 80 cu. in. V-twin, solid-state ignition.
Model 80-FXS 1200, Low Rider: 1200cc V-twin, solid-state ignition.

Model 80-FXS 80, Low Rider: [illegible] in. V-twin, solid-state ignition.

Model 80-FXEF 80 Fat Bob Wide Glide: 80 cu. in. V-twin, solid-state ignition.

Model 80-FXE 1200, Super Glide: 1200cc V-twin, solid-state ignition.

Model 80-XLS, Roadster: 1000cc V-twin, solid-state ignition, spoke wheels standard, cast wheels extra.

Model 80-XLH, Sportster: 1000cc V-twin, solid-state ignition, spoke wheels standard, cast wheels extra.

1981

Model 81-FLTC, Tour Glide Classic: 80 cu. in. V-twin, solid-state ignition, crossover exhaust system.

Model 81-FLT Tour Glide: 80 cu. in. V-twin, solid-state ignition, crossover exhaust system.

Model 81-FLHC, Electra Glide Classic: 80 cu. in. V-twin, belt drive, four-speed transmission, 7 in. quartz halogen headlight; TourPak and back rest standard.

Model 81-FLHC with sidecar, Electra Glide Classic: 80 cu. in. overhead valve V-twin, belt drive, four-speed transmission, 7 in. quartz halogen headlight; TourPak and back rest standard.

Model 81-FLH 80, Electra Glide: 80 cu. in. V-twin, solid-state ignition.

Model 81-FLHS, Electra Glide: 80 cu. in. V-twin, solid-state ignition.

Model 81-Heritage, Electra Glide: 80 cu. in. V-twin, solid-state ignition.

Model 81-FLH 80, Police: 80 cu. in. police motorcycle.

Model 81-FXB, Sturgis: 80 cu. in. engine, primary and secondary belt drive.

Model 81-FXWG, Wide Glide: 80 cu. in. V-twin.

Model 81-FXS 80, Low Rider: 80 cu. in. V-twin.

Model 81-FXEF 80, Fat Bob: 80 cu. in. V-twin.

Model 81-FXE 80, Super Glide: electric start, 80 cu. in. V-twin.

Model 81-XLS, Roadster: 1000cc V-twin.

Model 81-XLH, Sportster: 1000cc V-twin.

1982

Model 82-FLT, Tour Glide: 80 cu. in. V-twin.

Model 82-FLT Classic, Tour Glide: 80 cu. in. V-twin.

Model 82-FLH, Electra Glide: 80 cu. in. V-twin.

Model 82-XLS, Roadster: 61 cu. in. V-twin.

Model 82-FXS, Low Rider: 80 cu. in. V-twin.

Model 82-FXWG, Wide Glide: 80 cu. in. V-twin.

Model 82-XLH, Sportster: 61 cu. in. V-twin.

Model 82-FXE, Super Glide: 80 cu. in. V-twin.

Model 82-FXB, Sturgis: 80 cu. in. V-twin, primary and secondary belt drive.

Model 82-FXR, Super Glide II: 80 cu. in. V-twin, five-speed transmission.

Model 82-FXRS, Super Glide II: 80 cu. in. V-twin, five-speed transmission, computer-designed frame.

Model 82-FLH 80: 80 cu. in. police motorcycle.

1983

Model 83-FLHT, Electra Glide: 80 cu. in. motor, fork-mounted fairing, halogen headlamp and dual spot lamps, tubeless tires, five-speed transmission.

Model 83-FLHT Classic, Electra Glide: 80 cu. in. motor, fork-mounted fairing, halogen headlamp and dual spot lamps, tubeless tires, five-speed transmission, TourPak standard.

Model 83-FLT, Tour Glide: 80 cu. in. motor, adjustable footboards, tubeless tires, rear fender engine vents, 22-amp alternator, spin-on oil filter.

Model 83-FLT Classic, Tour Glide: 80 cu. in. motor, adjustable footboards, tubeless tires, rear fender engine vents, 22-amp alternator, spin-on oil filter.

Model 83-FLH, Electra Glide: 80 cu. in. motor, secondary belt drive, automotive type spin-on oil filter.

Model 83-XLH, Sportster: 61 cu. in. motor, two-stage ignition, 8.8-1 compression ratio, oval air box, FXE-style 3.3-gallon gas tank, ribbed primary chain cover.

Model 83-XLS, Roadster: 61 cu. in. motor, two-stage ignition, 8.8-1 compression ratio, oval air box, 3.8-gallon Fat Bob-style gas tank, nine-spoke cast wheels.

Model 83-XLX-61: 61 cu. in. motor, two-stage ignition, 8.8-1 compression ratio, oval air box, peanut gas tank, nine-spoke cast wheels.

Model 83-FXSB, Low Rider: 80 cu. in. motor, four-speed transmission.

Model 83-FXWG, Wide Glide: 80 cu. in. motor, four-speed transmission.

Model 83-FXE, Super Glide: 80 cu. in. motor, four-speed transmission.

Model 83-FXR, Super Glide: 80 cu. in. motor, five-speed gearbox, low-maintenance calcium alloy grid battery, spin-on oil filter.

Model 83-FXRS, Super Glide II: 80 cu. in. motor, five-speed gearbox, low-maintenance calcium alloy grid battery, spin-on oil filter.

Model 83-FLH 80: 80 cu. in. police motorcycle.

HARLEY-DAVIDSON PRODUCTION 1903–1981

The following was gleaned from several sources, all within the Harley-Davidson Motor Company. More complete figures are not available.

1903
1

1904
2

1905
8

1906
50

1907
150

1908
450

1909
1,149

1910
3,168

1911
5,625

1912
9,571

1913
12,904

1914
16,284

1915
16,645

1916
17,439

1917
19,763

1918
19,359

1919
24,292

1920
28,189

1921
10,202

1922
12,759

1923
18,430

1924
13,996

1925
16,929

1926
23,354

1927
19,911

1928
22,350

1929
21,142

1930
17,422

1931
10,500

1932
6,841

1933
3,703

1934
10,231

1935
10,368

1936
9,812

1937
11,674

1938
9,934

1939
8,355

1940
10,855

1941
18,428

1942
29,603

1943
29,243

1944
17,006

1945
11,978

1946
15,554

1947
20,392

1948
31,163

1949
23,740

1950
18,355

1951
14,580

1952
17,250

1953
14,050

1954
12,250

1955
9,750

1956
FL: 836
FLE: 671
FLH: 224
FLF: 1,578
FLEF: 162
FLHF: 2,315
(Total F series, 5,786)
G: 467
GA: 736
KHK: 714
KH: 539
KR: 29
KRTT: 18
XL: 1
KHRTT: 13
ST: 2,219
B: 1,384
TOTAL: 11,90[illegible]

1957
FL: 1,579
FLH: 164
FLF: 1,259
FLHF: 2,614
(Total F series, 5,616)
G: 518
GA: 674
KH: 90
XL: 1,983
XLA: 418
(Total XL series, 2,401)
KR: 16
KRTT: 9
KHRTT: 4
ST: 2,401
B: 1,350
TOTAL: 13,079

1958
FL: 1,591
FLH: 195
FLF: 1,299
FLHF: 2,953
(Total F series, 6,038)
G: 283
GA: 643
XL: 579
XLH: 711
XLCH: 239
(Total XL series, 1,529)
KRTT: 26
KR: 9
XLRTT: 26
ST: 2,445
B: 1,677
TOTAL: 12,676

1959
FL: 1,201
FLH: 121
FLF: 1,222
FLHF: 3,223
(Total F series, 5,767)
G: 288
GA: 524
XL: 42
XLH: 942
XLCH: 1,059
XLR: 5
XLRTT: 13
(Total XL series, 2,061)
KR: 10
KRTT: 23
ST: 2,311
B: 1,285
A: 73
TOTAL: 12,342

1960
A: 3,801
74: 5,967
Servi-Car: 707
XLH: 2,765
B, BT: 2,488
TOTAL: 15,728

1961
A: 1,341
74: 4,927
Servi-Car: 628
XLH: 2,014
BT: 1,587
TOTAL: 10,497

1962
74: 5,184
45: 1,276
XLSS: 1,998
G, GE: 703
B: 1,983
TOTAL: 11,144

1963
BT: 824
BTU: 39
BTH: 877
AH: 972
AU: 6
XLH: 432
XLCH: 1,001
(Total XL series, 1,433)
KR: 80
FL: 1,096
FLF: 950
FLH: 100
FLHF: 2,100
Sprint C: 150
Sprint H: 1,416
TOTAL: 10,043
(Factory reported 10,407 bikes produced; no reason given for discrepancy.)

1964
FL: 2,775
FLH: 2,725
(Total FL series, 5,500)
BT: 600
BTH: 800
BTU: 50
AH: 800
AU: 25
XLCH: 1,950
XLH: 810
XLA: 100
(Total XL series, 2,860)
GE: 725
XLRTT: 30
KRTT: 30
KR: 20
CR: 50
Sprint C: 230
Sprint H: 1,550
TOTAL: 13,270

1965
FL: 2,130
FLH: 4,800
(Total F series, 6,930)
BT: 500
BTH: 750
AH: 500
XLCH: 2,815
XLH: 955
Total XL series, 3,770)
GE: 625
XLRTT: 25
KRTT: 10
KR: 8
CR: 35
CRS: 175
Sprint H: 2,500
Sprint C: 500
M50: 9,000
TOTAL: 25,328

1966
FL: 2,175
FLH: 5,625
(Total F series, 7,800)
BTH: 1,150
XLCH: 3,900
XLH: 900
(Total XL series, 4,800)
GE: 625
KR: 10
KRTT: 10
XLRTT: 25
CR: 50
CRS: 350
Sprint H: 4,700
Sprint C: 600
M50: 5,700
M50S: 10,500
TOTAL: 36,310

1967
FL: 2,150
FLH: 5,600
(Total F series, 7,750)
XLCH: 2,500
XLH: 2,000
(Total XL series, 4,500)
GE: 600
Sprint H: 2,000
Sprint SS: 7,000
CRTT: 35
CRS: 50
M65: 2,000
M65 Spt: 3,267
TOTAL: 27,202

1968
FL: 1,718
FLH: 5,354
XLH: 1,995
XLCH: 4,889
GE: 617
M-65: 1,200
M-65 Sport: 1,700
SS-350: 4,150
ML: 5,000
ERS: 125
TOTAL: 26,748

1969
FL: 1,800
FLH: 5,500
XLH: 2,700
XLCH: 5,100
GE: 475
M-65: 950
M-65 Sport: 1,750
SS-350: 4,575
ML: 1,000
MLS: 3,275
ERS: 250
TOTAL: 27,375

1970
FL: 1,706
FLH: 5,909
XLH: 3,033
XLCH: 5,527
GE: 494
M-65 Sport: 2,080
SS-350: 4,513
MLS: 4,059
ERS: 102
MSR-100: 1,427
TOTAL: 28,850

1971
FL: 1,200
FLH: 5,475
XLH: 3,950
XLCH: 6,825
GE: 500
M-65 Sport: 3,100
SS-350: 1,500
MLS: 5,200
ERS: 50
MSR-100: 1,200
FX: 4,700
SX-350: 3,920
TOTAL: 37,620

1972
FL: 1,600
FLH: 8,100
XLH: 7,500
XLCH: 10,650
GE: 400
M-65 Sport: 3,708
SS-350: 3,775
MLS: 6,000
ERS: 50
MSR-100: 900
FX: 6,500
SX-350: 2,525
XR: 200
MC: 8,000
TOTAL: 59,908

1973
FL: 1,025
FLH: 7,750
XLH: 9,875
XLCH: 10,825
GE: 425
SS-350: 4,137
FX: 7,625
SX-350: 2,431
MC: 95
TX-125: 9,225
Z-90: 8,244
X-90: 8,250
SR-100: 986
XRTT: 10
TOTAL: 70,903

1974
FLH-1200: 5,166
FX: 3,034
FXE: 6,199
XLH: 13,295
XLCH: 10,535
SS-350: 2,500
SX-350: 2,085
SX-175: 3,612
SX-125: 4,000
Z-90: 7,168
X-90: 7,019
SR-100: 1,396
XR: 100
FLHF: 1,310
FL-Police: 791
TOTAL: 68,210

1975
FLH-1200: 7,400
FX: 3,060
FXE: 9,350
XLH: 13,515
XLCH: 5,895
SX-175: 8,500
SX-125: 2,500
Z-90: 2,562
X-90: 1,586
XR: 100
FLHF: 1,535
FL-Police: 900
SX-250: 11,000

RC-125: 4,500
SS-250: 3,000
TOTAL: 75,403

1976
FLH-1200: 11,891
FX: 3,857
FXE: 13,838
XLH: 12,844
XLCH: 5,238
SX-250: 3,125
SS-250: 1,416
SXT-125: 6,056
SS-175: 1,461
SS-125: 1,560
MX-250: 87
RR-250: 2
TOTAL: 61,375

1977
FLH-1200: 8,691
FX: 2,049
FXE: 9,400
XLH: 12,742
XLCH: 4,074
SX-250: 558
SS-250: 144
SXT-125: 48
SS-175: 110
SS-125: 488
RR-250: 5
FLHS: 535
FXS: 3,742
XLT: 1,099
XLCR: 1,923
TOTAL: 45,608

1978
FLH-1200: 4,761
FX: 1,774
FXE: 8,314
XLH: 11,271
XLCH: 2,758
XLH Anniversary: 2,323
SX-250: 479
FXS: 9,787
XLT: 6
XLCR: 1,201
FLH-80: 2,525
XLS: 2
XR750: 80
FLH-1200 Anniversary: 2,120
TOTAL: 47,401*

1979
FLT: 19
FLHC: 4,368
FLHC and sidecar: 353
FLH-80: 3,429
FLH-1200: 2,612
FLH-80 Police: 84
FLH-1200 Police: 596
FXS-1200: 3,827
FXS-80: 9,433
FXEF-1200: 4,678
FXEF-80: 5,264
FXE-1200: 3,117
XLCH: 141
XLCR: 9
XLS: 5,123
XLH: 6,525
TOTAL: 49,578*

1980
FLT: 4,480
FLHC: 2,480
FLHC and sidecar: 463
FLH-80: 1,625
FLH-1200: 1,111
FLHS: 914
FLH-80 Police: 391
FLH-1200 Police: 528
FXB: 1,470
FXWG: 6,085
FXS-1200: 3
FXS-80: 5,922
FXEF-80: 4,773
FXE-1200: 3,169
XLS: 2,926
XLH: 11,841
TOTAL: 48,181*

1981
FLTC: 1,157
FLT: 1,636
FLHC: 1,472
FLHC and sidecar: 152
FLH-80: 2,131
FLHS: 1,062
Heritage: 784
FLH-80 Police: 402
FXB: 3,543
FXWG: 5,166
FXS-80: 7,223
FXEF-80: 3,691
FXE-80: 3,085
XLS: 1,660
XLH: 8,442
TOTAL: 41,606*
(Factory total, 41,586; no reason given for discrepancy.)

*Does not include production for Harley-Davidson International.

GRAND NATIONAL CHAMPIONS

In 1954, the American Motorcyclist Association established the Grand National Championship, a series of point-paying races on paved road courses and on dirt tracks. Prior to that (1946–53), the winner of the annual dirt-track race at Springfield, Illinois, was named the national champion. Prior to World War II, it appears the national champion was named by general consensus.

1946

Chet Dykgraff, Norton.

1947

Jimmy Chann, Harley-Davidson.

1948

Jimmy Chann, Harley-Davidson.

1949

Jimmy Chann, Harley-Davidson.

1950

Larry Headrick, Harley-Davidson.

1951

Bobby Hill, Indian.

1952

Bobby Hill, Indian/Norton.

1953

Bill Tuman, Indian/Norton.

1954

1. Joe Leonard, Harley-Davidson, 78 pts.
2. Paul Goldsmith, Harley-Davidson, 39.
3. Charles West, Harley-Davidson, 31.

1955

1. Brad Andres, Harley-Davidson, 80 pts.
2. Everett Brashear, Harley-Davidson, 54.
3. Joe Leonard, Harley-Davidson, 53.

1956

1. Joe Leonard, Harley-Davidson, 32 pts.
2. Brad Andres, Harley-Davidson, 21.
3. Al Gunter, BSA, 14.

1957

1. Joe Leonard, Harley-Davidson, 41 pts.
2. Al Gunter, BSA, 35.
3. Dick Klamfoth, BSA, 20.

1958

1. Carroll Resweber, Harley-Davidson, 36 pts.
2. Joe Leonard, Harley-Davidson, 35.
3. Dick Klamfoth, BSA, 28.
3. Everett Brashear, Harley-Davidson, 28.

1959

1. Carroll Resweber, Harley-Davidson, 52 pts.
2. Dick Mann, BSA, 37.
3. Brad Andres, Harley-Davidson, 29.

1960

1. Carroll Resweber, Harley-Davidson, 49 pts.
2. Joe Leonard, Harley-Davidson, 45.
3. Bart Markel, Harley-Davidson, 35.

1961

1. Carroll Resweber, Harley-Davidson, 62 pts.
2. Joe Leonard, Harley-Davidson, 39.
3. Dick Mann, BSA, 38.

1962

1. Bart Markel, Harley-Davidson, 58 pts.
2. Carroll Resweber, Harley-Davidson, 44.
3. Dick Mann, Matchless, 31.

1963

1. Dick Mann, Matchless, 114 pts.
2. George Roeder, Harley-Davidson, 113.
3. Ralph White, Harley-Davidson, 104.

1964

1. Roger Reiman, Harley-Davidson, 503 pts.
2. Dick Mann, Matchless, 467.
3. Ronnie Rall, Harley-Davidson, 454.

1965

1. Bart Markel, Harley-Davidson, 620 pts.
2. Dick Mann, Matchless/Yamaha, 597.
3. Gary Nixon, Triumph, 562.

1966

1. Bart Markel, Harley-Davidson, 434 pts.
2. Gary Nixon, Triumph, 361.
3. Sammy Tanner, BSA, 241.

1967

1. Gary Nixon, Triumph, 508 pts.
2. George Roeder, Harley-Davidson, 451.
3. Fred Nix, Harley-Davidson, 436.

1968

1. Gary Nixon, Triumph, 622 pts.
2. Fred Nix, Harley-Davidson, 613.
3. Cal Rayborn, Harley-Davidson, 556.

1969

1. Mert Lawwill, Harley-Davidson, 672 pts.
2. Gene Romero, Triumph, 579.
3. Cal Rayborn, Harley-Davidson, 517.

1970

1. Gene Romero, Triumph, 667 pts.
2. Jim Rice, BSA, 574.
3. Dave Aldana, BSA, 459.

1971

1. Dick Mann, BSA, 1,054 pts.
2. Gene Romero, Triumph, 921.
3. Jim Rice, BSA, 893.

1972

1. Mark Brelsford, Harley-Davidson, 1,483 pts.
2. Gary Scott, Triumph, 1,105.
3. Gene Romero, Triumph, 877.

1973

1. Kenny Roberts, Yamaha, 2,014 pts.
2. Gary Scott, Triumph, 1,241.
3. Gary Nixon, Kawasaki, 887.

1974

1. Kenny Roberts, Yamaha, 2,286 pts.
2. Gary Scott, Harley-Davidson, 1,467.
3. Gene Romero, Yamaha, 1,132.

1975

1. Gary Scott, Harley-Davidson, 1,358 pts.
2. Kenny Roberts, Yamaha, 1,260.
3. Jay Springsteen, Harley-Davidson, 1,027.

1976

1. Jay Springsteen, Harley-Davidson, 301 pts.
2. Gary Scott, Harley-Davidson, 280.
3. Kenny Roberts, Yamaha, 265.

1977

1. Jay Springsteen, Harley-Davidson, 260 pts.
2. Ted Boody, Harley-Davidson, 218.
3. Gary Scott, Harley-Davidson/Triumph, 215.

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1978

1. Jay Springsteen, Harley-Davidson, 296 pts.
2. Steve Eklund, Yamaha Harley-Davidson, 291.
3. Hank Scott, Harley-Davidson, 229.

1979

1. Steve Eklund, Yamaha Harley-Davidson, 270 pts.
2. Jay Springsteen, Harley-Davidson, 229.
3. Randy Goss, Harley-Davidson, 226.

1980

1. Randy Goss, Harley-Davidson, 207 pts.
2. Hank Scott, Harley-Davidson, 206.
3. Ricky Graham, Harley-Davidson, 175.

1981

1. Mike Kidd, Harley-Davidson, 200 pts.
2. Gary Scott, Harley-Davidson, 195.
3. Randy Goss, Harley-Davidson, 186.

1982

1. Ricky Graham, Harley-Davidson, 221 pts.
2. Jay Springsteen, Harley-Davidson, 219.
3. Randy Goss, Harley-Davidson, 188.

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Serial No. 78896325

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Exhibit 2

THE HARLEY-DAVIDSON STORY

THE HARLEY-DAVIDSON® STORY

Foreword

It is impossible in a work of this size to comprehensively cover each and every detail on the history of Harley-Davidson and the many models the company has produced since its inception—back at the turn of the century. Rather, the pages that follow provide an overview of the company that I am lucky enough to be a part of.

Harley-Davidson is a uniquely American institution and its products are an outgrowth of American thinking. Our bikes are a reflection of consumer wants and desires, and as a result, are in a class all their own.

As Harley-Davidson moves into the future, we may come up with new and different ideas, but we will never forget our background and heritage. And we will always stay unique. So I invite you, as you read through these pages, to think about where we've come from, and have fun thinking about where we might go.

Enjoy,

Willie G. Davidson

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Introduction

We humans spent a long time afoot before we climbed aboard a horse. It was a while after that yet when we started riding around in carriages and on bicycle saddles. Then one day a few of our more creative, mechanically inclined ancestors set about mounting motors on their favorite wheeled vehicles. Naturally, these early experiments were accompanied by great outbursts of laughter and hooting from neighbors and townspeople. Fortunately, the experiments didn't stop.

The first motorcycles were actually steam powered curiosities tested as early as 1868. Credit goes to the E. R. Thomas Motor Company for the first commercially produced motorcycle in the United States in 1901. Yale, Pope, Merkel, Henderson, Thor, Excelsior, Indian and Harley-Davidson came close behind.

Within a few decades, more than 150 American motorcycle manufacturers would appear over the horizon then fade into the not so rosy sunset. Only two lived to see the close of World War II. When proud old Indian fell by the way in 1953, only one company was left. Harley-Davidson.

That Harley-Davidson survives while all the others died is the result of a complex set of factors which are difficult to define. An intensely loyal consumer following; a strong dealer network; sheer determination; product quality and durability; all are certainly contributing reasons. Maybe something that works and looks as good as those big V-twins just can't die. Whatever the reasons, Harley-Davidson survives larger and healthier than ever in today's highly competitive motorcycle scene.

Let's take a look across time at the history of the only original motorcycle still produced in the United States: Harley-Davidson, America's motorcycle.

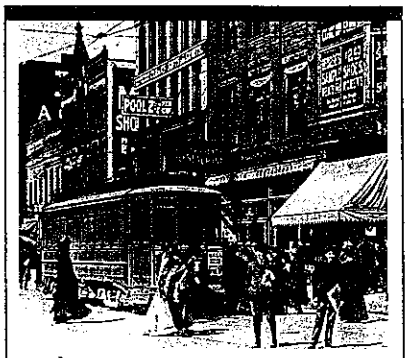
Putting the Idea on Wheels: Pre-1903

The Harley-Davidson story begins in 1901 with an idea: Take the effort out of bicycling. Of course, by 1901 the idea had been around for a while, with the E. R. Thomas Company already producing its own version of motor-powered two-wheelers. As with any such endeavor, though, there was plenty of room for improvement.

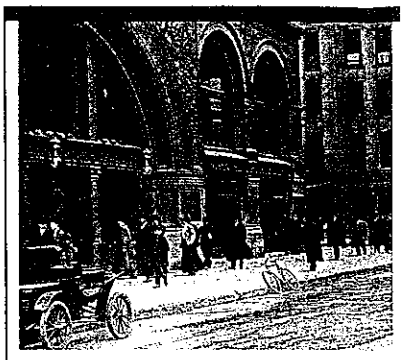
Enter 21 year old William S. Harley and his friend since boyhood, 20 year old Arthur Davidson. The two young men worked at the same Milwaukee manufacturing company, Harley as a draftsman, Davidson as a pattern maker. Like many of their contemporaries—the great automotive pioneers—they were hobby designers, ever tinkering to put their designs to practical use, while the people around them just shrugged their shoulders. A German draftsman who knew something of early European motorcycles and the DeDion gasoline engine also worked at the same firm.

With the German draftsman's special knowledge, Harley's earlier experience in the building of bicycles and Davidson's patterns for a small, air-cooled, gasoline engine, they spent their evenings experimenting in a basement workshop. Finances were modest; the tools they worked with unsophisticated. And yet, the project progressed. Progressed, that is, as far as it could without the help of a skilled mechanic.

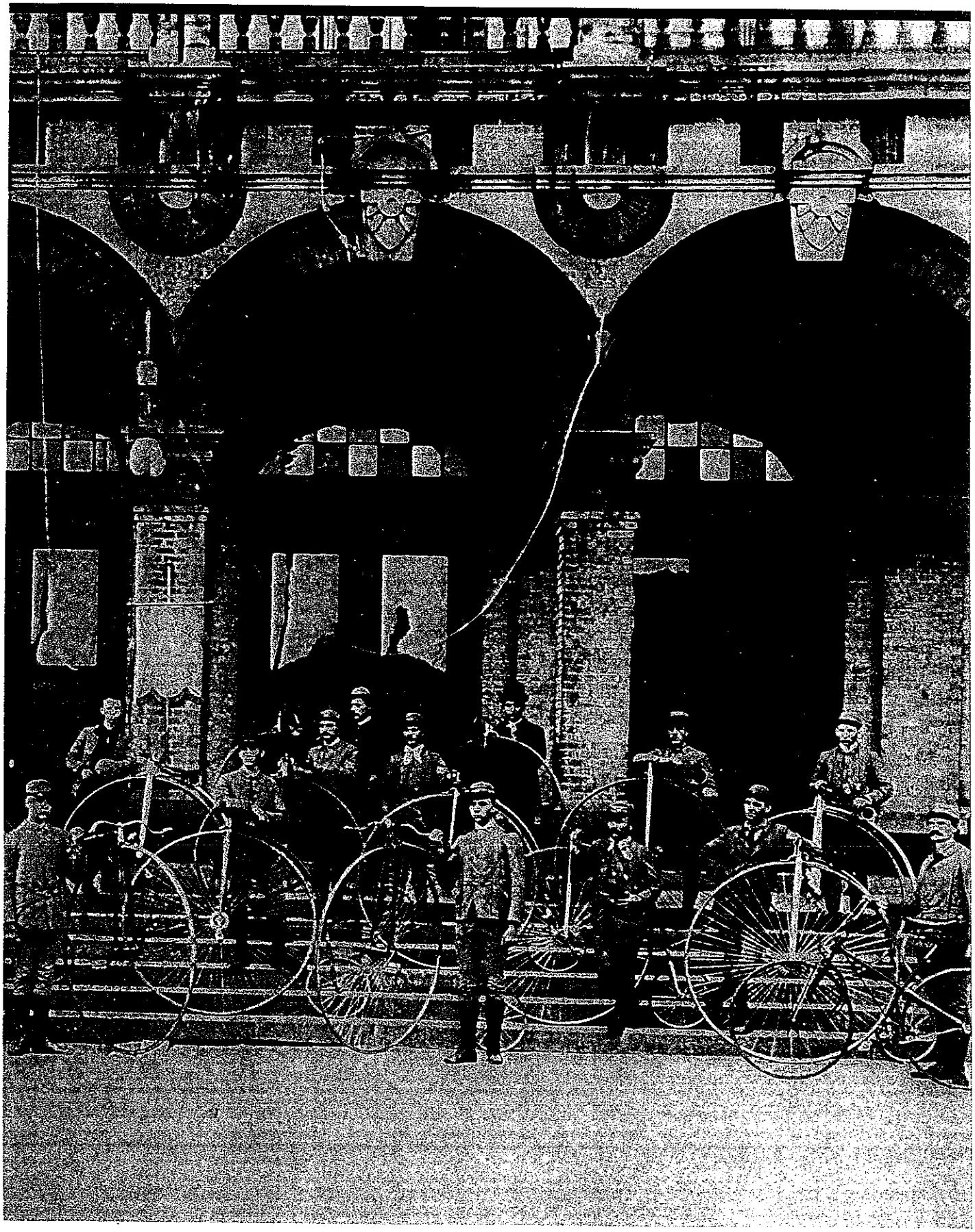
Arthur Davidson's brother, Walter, was just such a skilled mechanic and Walter was soon due in Milwaukee, travelling from his job as a railroad machinist in Parsons, Kansas, for the wedding of a third Davidson brother, William. So, Bill Harley and Arthur Davidson wrote Walter, offering him a ride on their new motorcycle when he arrived. What Walter didn't realize was that before he could get a ride on the motorcycle, he would have to help build it. Sharing the others' enthusiasm, Walter stayed in Milwaukee.



Turn of the Century Milwaukee bustled with an increasing variety of transportation...from electric streetcars to bicycles to horse and horseless carriages and shoe leather. The time was right for experimentation.



The Milwaukee Wheelmen bicycle club, circa 1887. Harley's and the Davidsons' goal to take the work out of bicycling was admirable indeed.



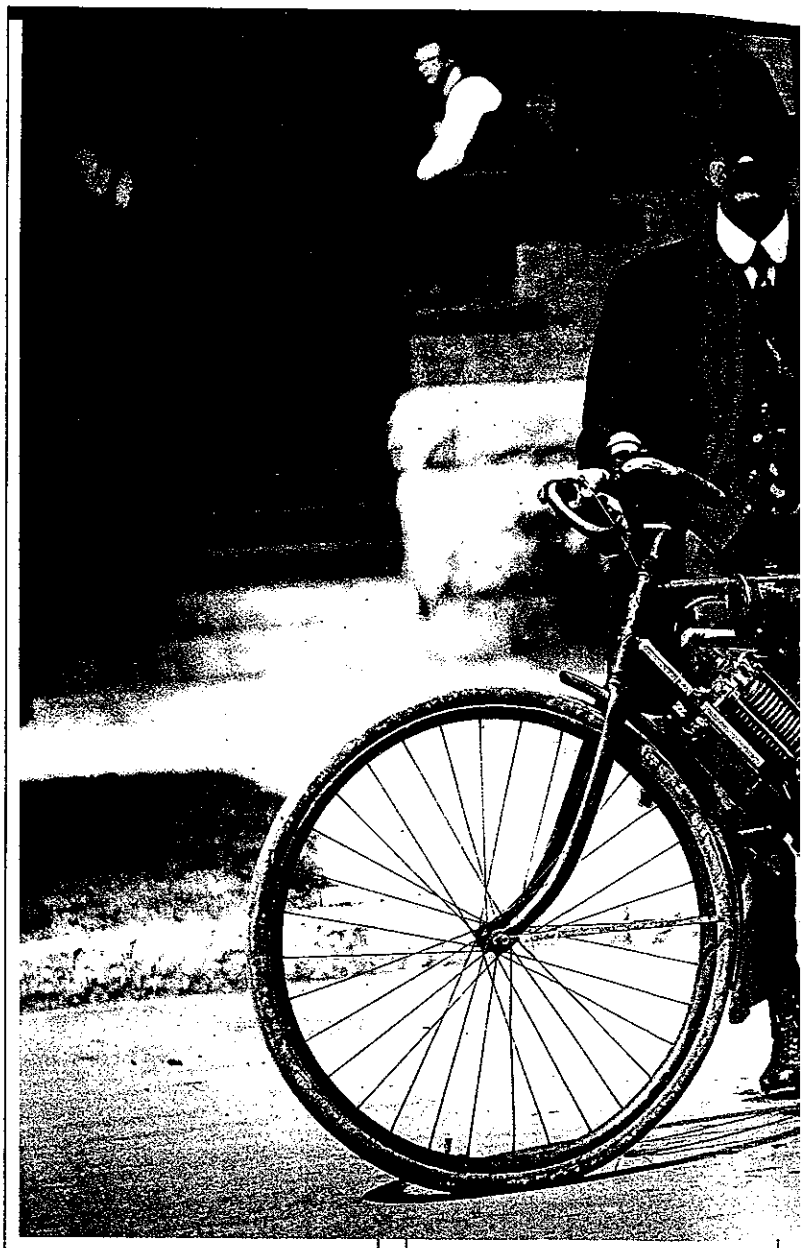
It wasn't long before William Davidson joined in the project, lending to it his skill as an experienced toolmaker. Every spare minute Bill Harley and the Davidson brothers could find was devoted to putting the idea in motion. Assistance in overcoming various mechanical problems came from the German draftsman.

Another friend lent the use of his small shop, lathe and drill press for completing the machine, in return for a complete set of the engine castings they were building. Evenings and weekends ran together as parts were machined by hand, and the first Harley-Davidson motorcycle began to take shape.

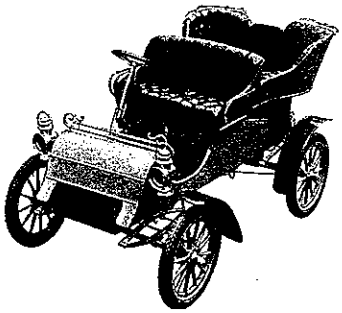
To appreciate the kinds of problems the young men from Milwaukee encountered, we have to put ourselves in a turn of the century state of mind. Problems that seem simple to solve now were major road blocks during the early years of the 20th century. There were few books or engineering manuals on the subject and no ready-made parts. Parts had to be fabricated from limited existing materials and plenty of good old American ingenuity. And you didn't go to the local filling station for five gallons of gas. You bought it a pint at a time at the corner drugstore.

The first Harley-Davidson carburetor was allegedly made from a tomato can. "The first spark plug," Bill Harley remarked some time later, "was as big as a door knob."

The first engine, when completed, was a leather belt direct drive affair of $2^1/_8 \times 2^7/_8$ inch bore and stroke, for 25 cu. in. capable of three horsepower. Early test rides proved the machine to be somewhat underpowered. Climbing hills still required leg power to



The Panama Canal construction in the early 20th Century would cut weeks of time off one method of transportation.

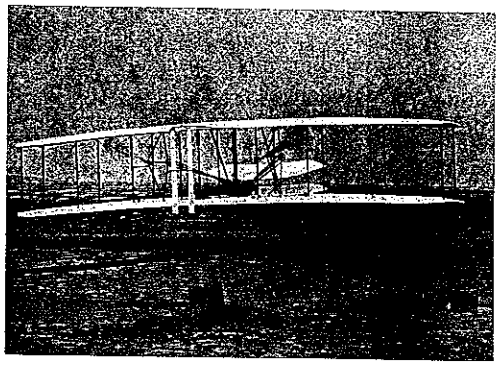


Henry Ford's Model T. Another 1903 milestone.

Experiments in two-wheel motor powered vehicles took many forms in the late 19th and early 20th centuries.

back up the engine power. They also found that a standard bicycle frame was too flimsy for motorized travel. What this meant to a team whose whole purpose was to remove the physical effort from bicycling was that it was time to go back to the shop and drawing boards.

Bore and stroke on the next engine was increased to 3 × 3½ inches. The flywheel more than doubled in size, growing from five to 11½ inches. Several months were spent finding a satisfactory carburetor design, with Ole Evinrude, later to make his mark in the outboard motor field, helping work out the problems. A loop frame was designed to replace the bicycle diamond frame for added strength. Bill Harley and the Davidson brothers were ready to put their idea into production. The year was 1903.



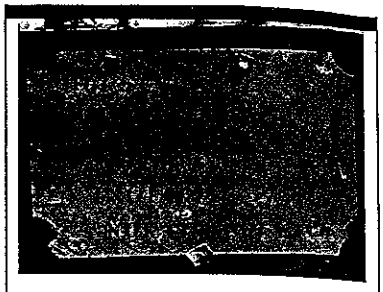
The Wright Brothers' flight of 1903 culminated man's attempt at powered flight. The year was indeed momentous in transportation history.

The Motorcycle in the Grey Metal Suit: 1903-1908

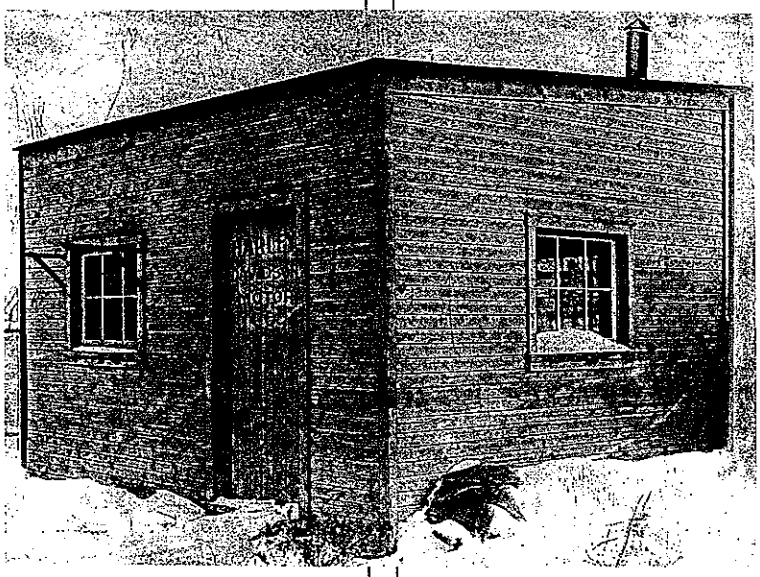
Through a coincidence of factors, 1903 stands out as a hallmark year in transportation history. American enterprise and creativity in adapting the internal combustion engine to a variety of uses was gaining momentum. A couple of hundred miles east of where the Davidsons and Harley were putting their motorized bicycle into production, in Dearborn, Michigan, an automotive pioneer named Henry Ford came out with his first "Model T." Meanwhile, at Kitty Hawk, North Carolina, another motorized marvel of transportation was born, when the Wright brothers succeeded at man's first powered flight.

Together, these wonders of the times, combined with hundreds and thousands of others in that era, would completely change peoples' perspectives on the world.

In Milwaukee, motorcycle production meant the need for more space. A friend's shop would no longer be suitable. With the help of the Davidsons' cabinet maker father, William C., a 10 × 15 foot "factory" was erected in the Davidson back yard. They painted the name "Harley-Davidson Motor Co." on the door, and a legend was born.

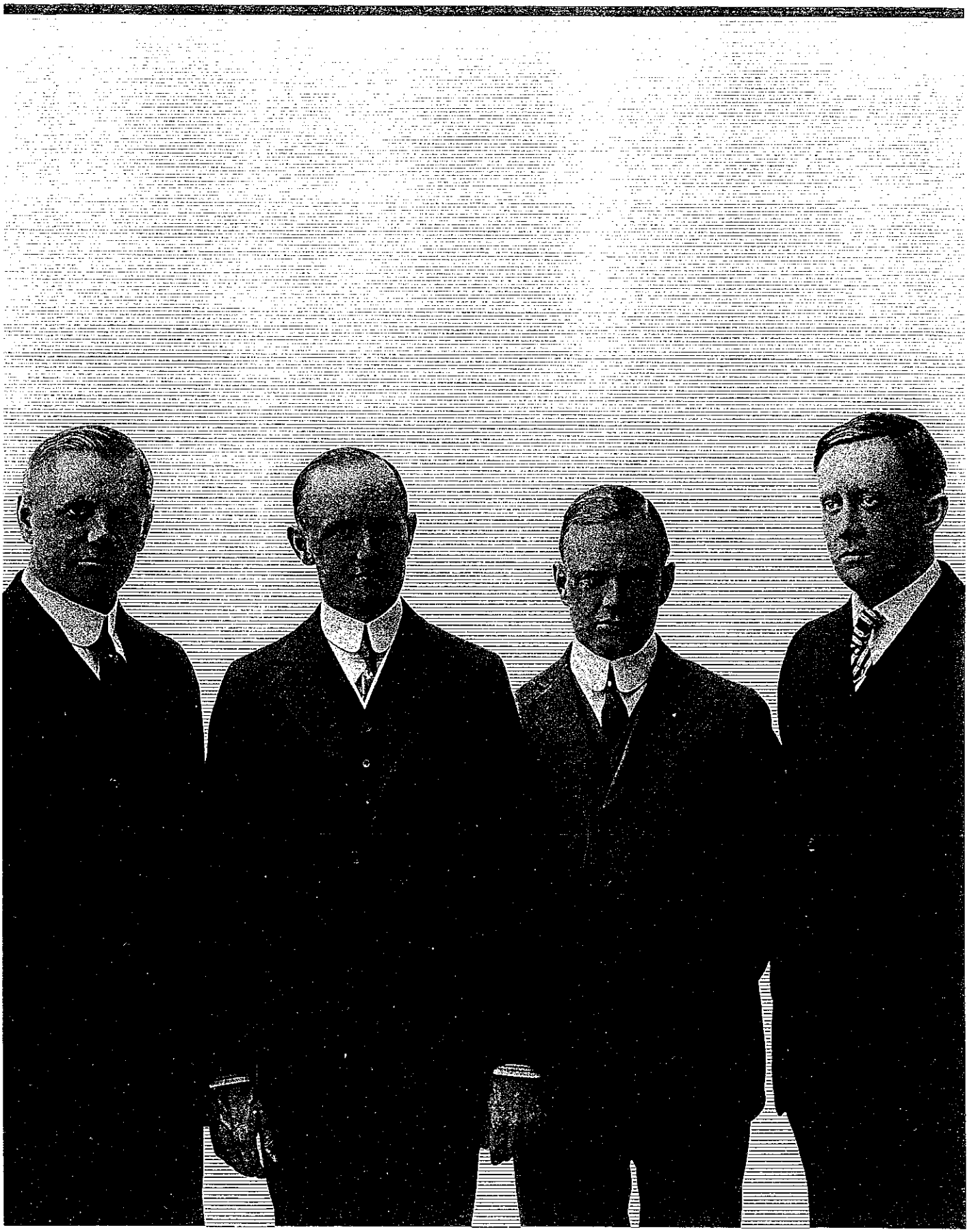


A sign of changing times.



The first "factory" — 1903.

The founders: (from left) William A. Davidson, Walter Davidson, Sr., Arthur Davidson and William S. Harley.

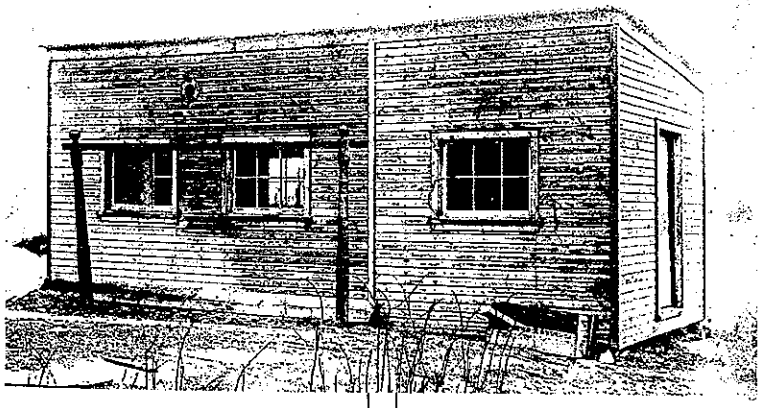


During 1903, Harley-Davidson Motor Company turned out a grand total of three motorcycles. All three were bought and paid for before they were completed. A fellow named Meyer took delivery of the first production cycle. He rode it 6,000 miles before selling it to George Lyon, who put 15,000 more miles on it. After that it was owned by a Dr. Webster, Louis Fluke and Stephen Sparrow, in that order. Those three consecutive owners accumulated another 62,000 miles of dependable travel. In 1913, Harley-Davidson advertised that their first motorcycle had covered over 100,000 miles, was still operating and retained its original bearings. Durability was the word, right from the start.

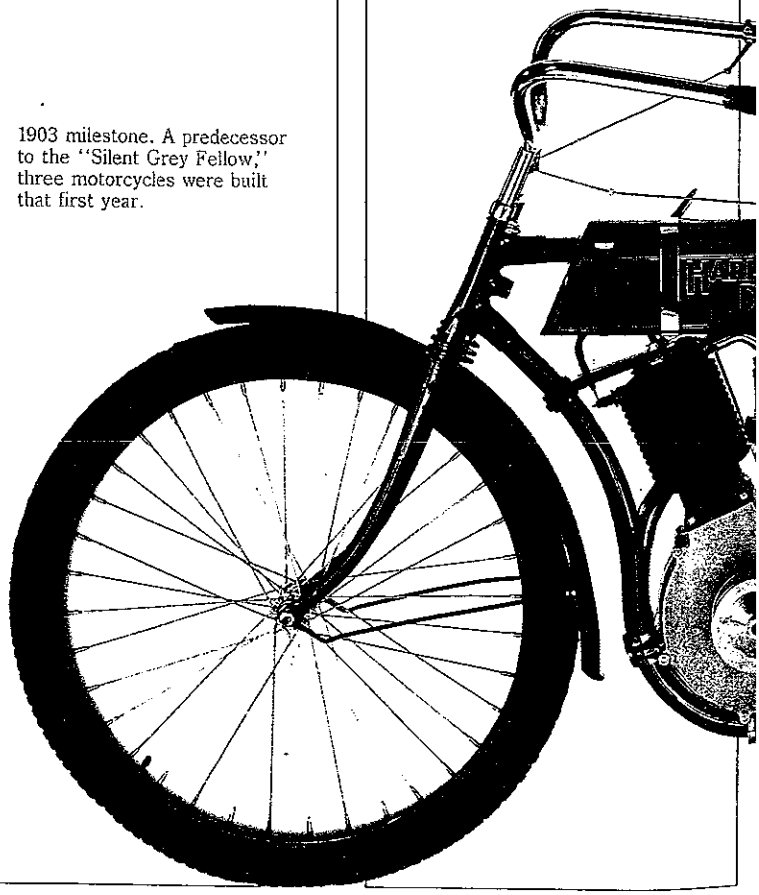
The early Harley-Davidson quickly took on the nickname "Silent Grey Fellow." During those early years, the company adopted grey as the standard color. The company's campaign to keep motorcycling a quiet activity, by condemning the practice of open muffler cutouts to increase exhaust noise, earned the "silent." Harley-Davidson's efforts to promote the product as a companion on the lonesome road gave it human traits. Thus, the "fellow."

In 1904, the size of the original Harley-Davidson factory doubled. Eight machines went out the door. The next year, the size of the building doubled again. Also, in 1905, the company hired its first employee, outside of the small group of founders.

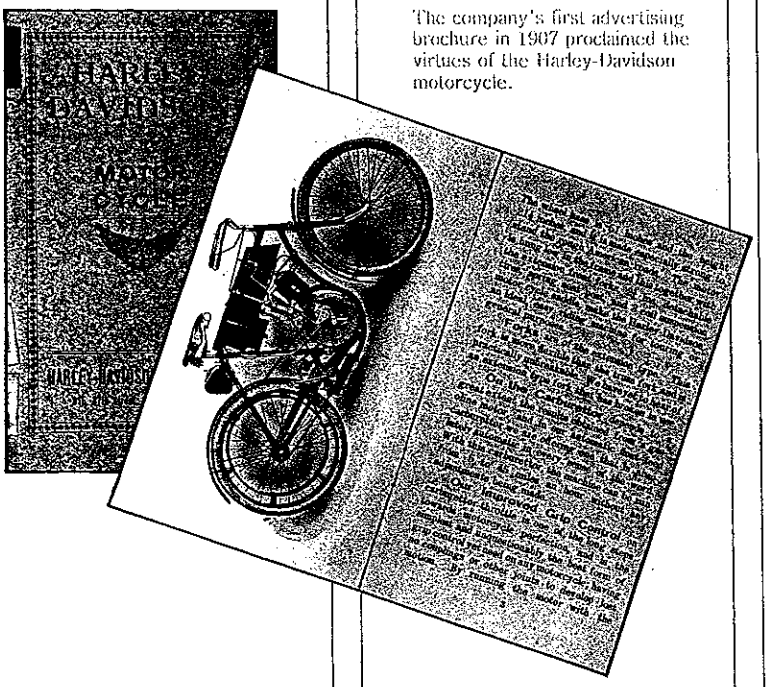
Harley-Davidson Motor Company was definitely heading in the right direction on the road to success. When the calendar turned to 1906, the first building was erected on the current Juneau Avenue site of the main Milwaukee offices. It was a "whopping" 28 × 80 feet. Financing for



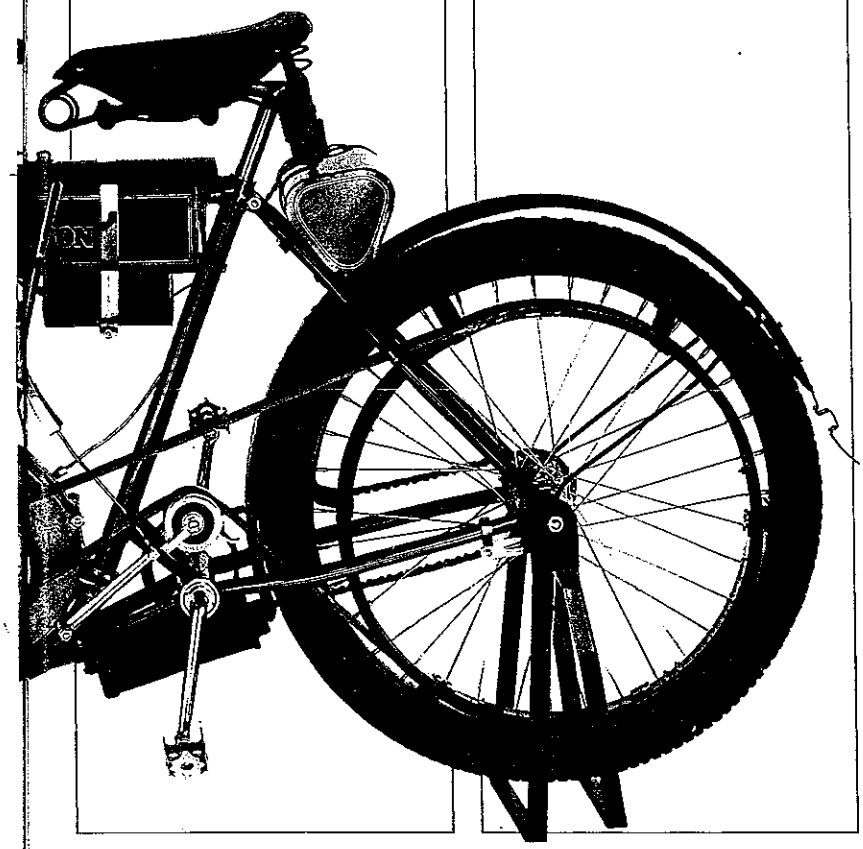
Factory expansion. The shed doubles in size, 1904, to handle increased production.



1903 milestone. A predecessor to the "Silent Grey Fellow," three motorcycles were built that first year.



The company's first advertising brochure in 1907 proclaimed the virtues of the Harley-Davidson motorcycle.



the building came in the form of a loan, from an uncle in Madison, Wisconsin. The uncle, James McLay, was a beekeeper, so this first loan was always spoken of as coming from the "honey uncle."

"After we had the framework up," as Walter Davidson later recalled on the new construction, "the railroad surveyors notified us that we were encroaching on the right of way of the (adjacent) railroad, so we got about eight or ten fellows, picked up the entire shop and moved it back about a foot and a half, so that we were safe."

Production for 1906 leaped to 50 motorcycles and five extra workers were hired to meet the demand. The bikes got their first springer front end, as constant improvement became a design philosophy from the start. Bill Harley, Arthur, Walter and William Davidson had by now given up their regular jobs to devote their full time and energies to the new, rapidly growing company.

It was of those early days that Walter Davidson recalled, "we worked every day, Sunday included, until at least 10 o'clock at night. I remember it was an event when we quit work on Christmas night at 8 o'clock to attend a family reunion."

By this time it was obvious that Harley and the Davidsons had a going—and growing—business venture. They could foresee nothing that might hinder the production of their machines. . .except their own limitations as technicians. So while the Davidsons stayed in Milwaukee to tend the store, Bill Harley packed his bags and headed for the University of Wisconsin at Madison. There he majored in engineering, specializing in internal combustion engines. He worked his way through school by waiting tables at a fraternity house.

The company was incorporated in 1907. Walter Davidson became the first president; William Harley was chief engineer and treasurer; Arthur Davidson became secretary and general sales manager; and William Davidson, works manager. But titles were of little importance. What had to be done got done by whoever had the know-how and the time. William Davidson's desk was said to be a laboratory covered with semi-finished hubs, shafts, bearings and pistons. When rapid expansion demanded new manufacturing methods, Walter Davidson learned the heat treating process and then taught employees. William and Walter Davidson went to Chicago to learn oxygen-acetylene welding, and instructed others when they returned to Milwaukee.

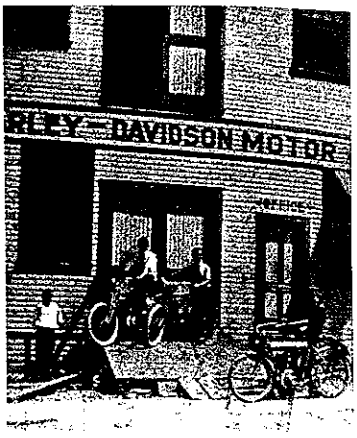
With Harley and the Davidson brothers devoting their total efforts to the company, production tripled in 1907 to 150 machines. This year too, the first Harley-Davidsons were sold specifically for police duty.

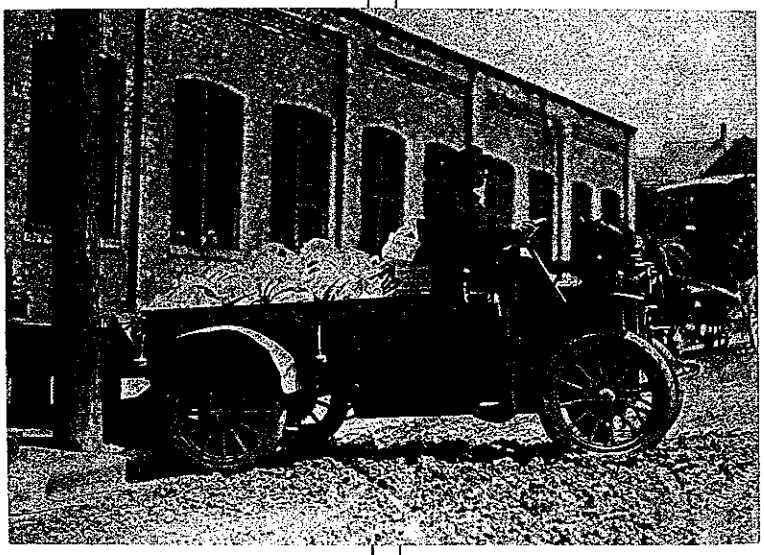
The year also saw the company's first advertising catalog, produced on credit. Up to that point, word of mouth had been sufficient to sell the motorcycles, but with expanding production and markets, and an ever-growing list of competitors, advertising became a necessity.

In 1908, Bill Harley graduated and returned to Milwaukee. He immediately went to work on the design of a more powerful engine. Demand was high and Harley-Davidson wasn't about to ignore it. The only limits were the number of hours in a day and factory space.

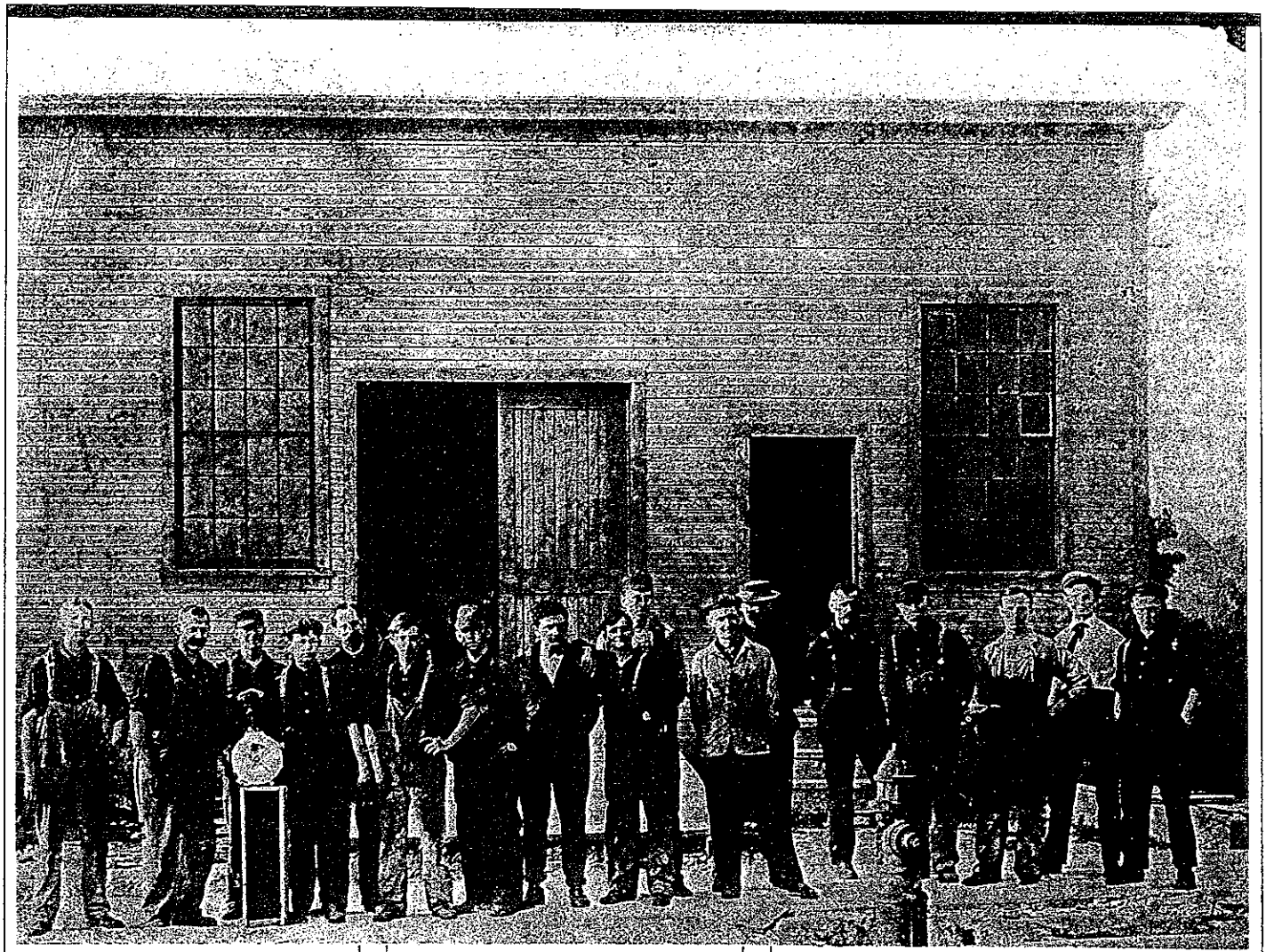
By 1907, an expanded work force was needed to build that year's 150 vehicle production run.

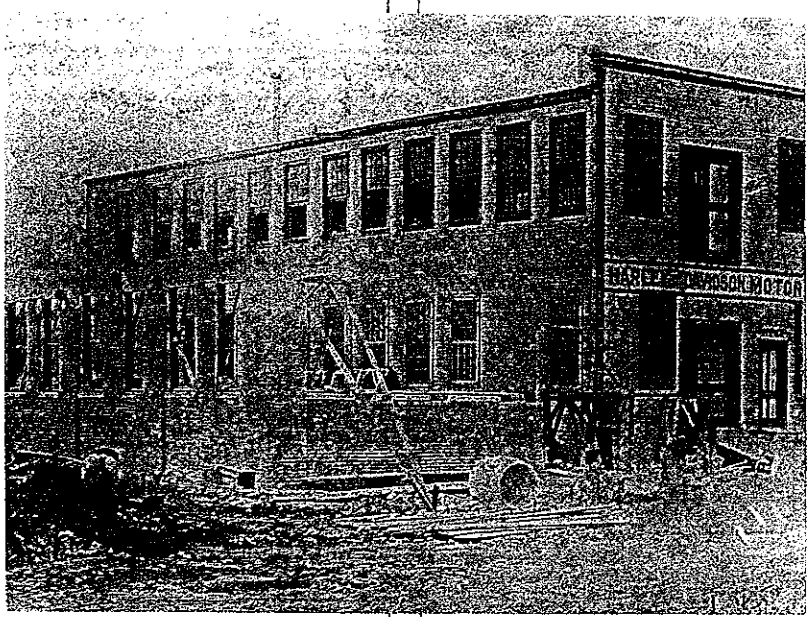
1908 models came out the factory doors in increasing numbers.



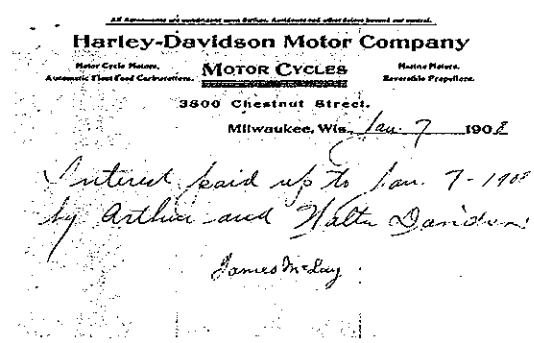


By 1909, the Company was abandoning the horse and going to the latest in modern trucking for its shipping and transportation needs.





Early growth required continual expansion, like this brick addition, about 1908.



Harley-Davidson Motor Company

Motor Cycle Motors. Automatic Float Feed Carburetors. MOTOR CYCLES Marine Motors. Reversible Propellers.

3800 Chestnut Street.

Milwaukee, Wis. Jan 7 1908

Interest paid up to Jan. 7-1908 by Arthur and Walter Davidson

James McLay

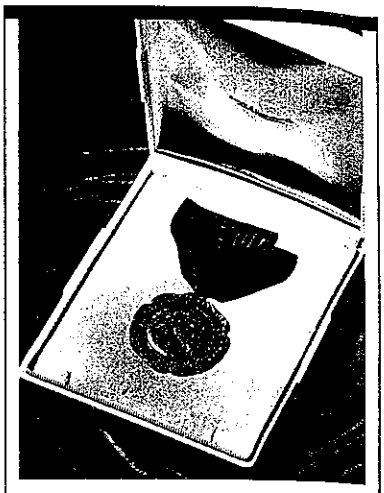
A receipt from the "Honey Uncle."

Improving the Breed: 1908-1917

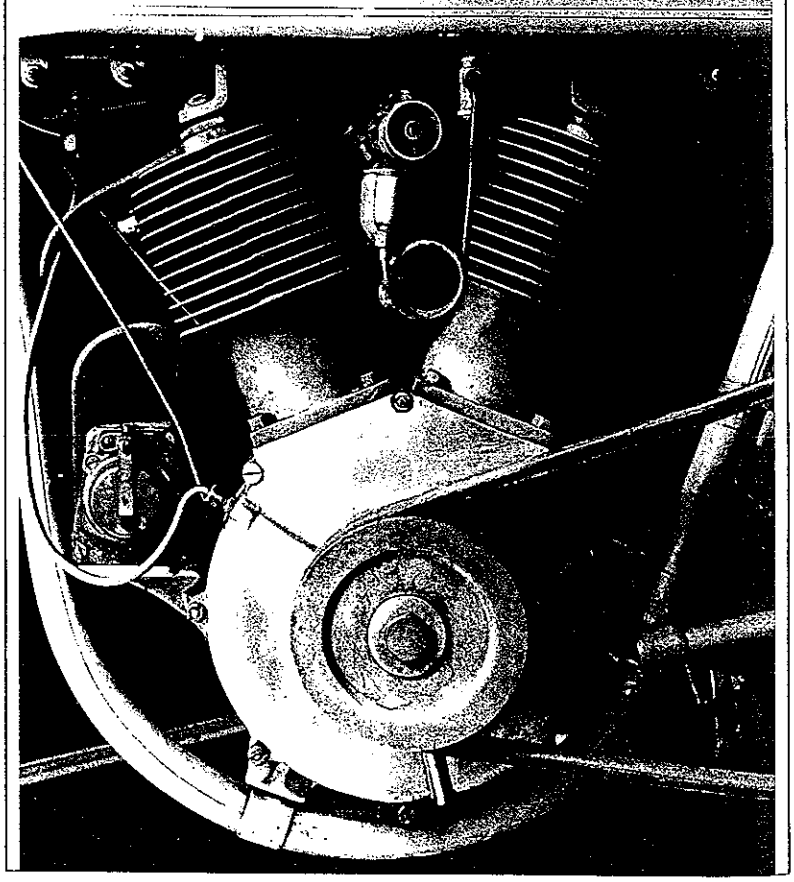
The single cylinder Harley-Davidson engine was a proven quantity in 1908. It was dependable and popular with riders. It had grown 10 cubic inches since its introduction, to 35 cubic inches, delivering four horsepower. Top speed was around 45 miles per hour.

Rather than tamper with the successful design of the Silent Grey Fellow's single, Bill Harley decided to look for a power boost through the use of twin cylinders. The result of his experiments was a design that became a Harley-Davidson trademark: the 45 degree V-twin. The new engine, introduced in 1909, displaced 61 cubic inches and produced seven horsepower. Top speed was nearly 60 miles per hour. Twenty-seven twins were produced that year.

Harley-Davidson also chose that time frame to start participating in competitive events. When the Federation of American Motorcyclists (FAM) dropped the starting flag for its June 29, 1908 Endurance Run in New York's Catskill Mountains, Walter Davidson was at the starting line with 61 other entrants. He was the only Harley-Davidson rider and definitely wasn't considered one of the favorites. During the first day of the run, rough mountain terrain eliminated 15 riders. Walter passed through the check points without a hitch and was still going strong. Forty-six riders, with Walter high in the standings, started the 180 mile circle around Long Island to Brooklyn the second day. Walter's performance was as flawless as it had been the day before. After checking his performance with competitors and officials, the judges awarded him a unique winning score, a perfect 1,000, plus 5 for outstanding consistency of both rider and machine.



The first president, Walter Davidson, Sr., after he won the Federation of American Motorcyclists' endurance run in 1908, and the FAM medal he won.



1909 V-Twin detail.

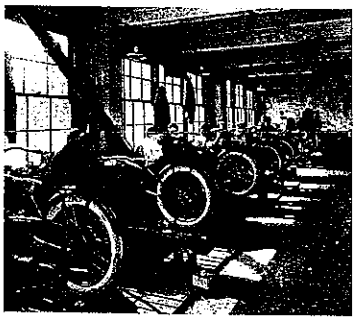
HARLEY
D

A week later, Walter was back at it again, this time setting the FAM economy record. his fuel consumption over 50 miles of hilly Long Island territory amounted to one quart, one ounce—or 188.234 miles per gallon.

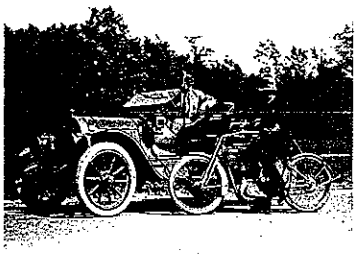
In 1909 the factory doubled in size to 4,760 square feet of work space. There were now 35 employees. Production was 1,000 units. But that was nothing unusual. During the years 1907-1913, manufacturing space at least doubled every year. By the end of 1913, there were 187,750 square feet and space added the following year brought the total to 297,110 square feet. As the *Milwaukee Journal* said in a 1914 article on the company, "the past decade has done no less than work a modern miracle."

In 1911, the twin came with a new frame and the buyer's choice of coil or magneto ignition. But 1912 was really the year for innovation. One model, the 61 cu. in. X8E, featured the first commercially successful motorcycle clutch, a "free wheeling" rear wheel mechanism designed by Bill Harley. This made possible the use of a roller chain to power the motorcycle. The company had to that point used a left-hand-controlled belt tensioner, making it possible to disengage power to the rear wheel when stopping, but the chain held prospects at that time of being more efficient. Unlike today's ribbed belts, the

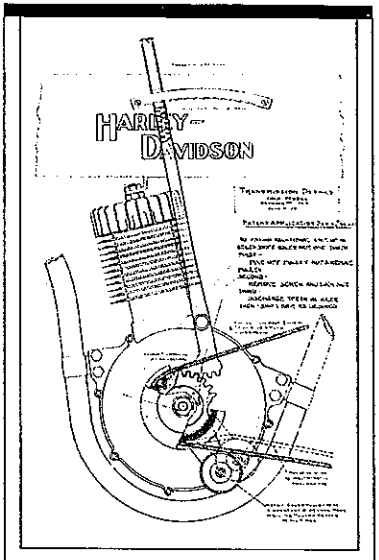
The founders stood "shoulder-to-shoulder" in 1910, to demonstrate there were no gaps between the shop and the front office.



Highly skilled labor and hand craftsmanship were a tradition, even in 1910.



A little friendly advice from an early-era mounted patrolman. 1912.



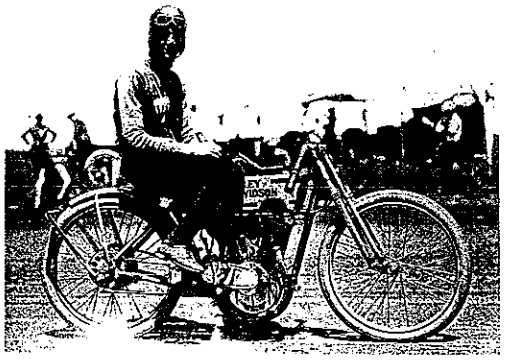
Patent application for a belt tightener, 1909.

Polishers in the plating department at the Juneau Avenue plant, 1910.

leather belts of 1912 were prone to slip when wet. "Separate and independent chain adjustments are provided for all three chains," read the product literature. Remember—the motorcycle still had pedals connected to the rear wheel by a chain, for starting. This same year saw the introduction of the center post saddle suspension and the overhead intake/side exhaust valve combination.

All this time, Harley-Davidson machines were entering and winning races with independent owners in the saddle. The company's policy was to build no special racing machines. There were no "factory riders." One Harley-Davidson ad appeared in *Motorcycle Illustrated,* September 21, 1911, reading: "No, we don't believe in racing and we don't make a practice of it, but when Harley-Davidson owners win races with their own stock machines hundreds of miles from the factory, we can't help crowing about it."

In 1912, stone stock eight horsepower twins ridden by private owners won the Bakersfield and San Jose Road Races. At San Jose, the winning rider finished 17 miles ahead of the number two machine. During 1913, Harley-Davidsons took the first three places in a 225 mile race from Harrisburg to Philadelphia, and back.



Red Parkhurst, a giant among the race course crowd during the teens.

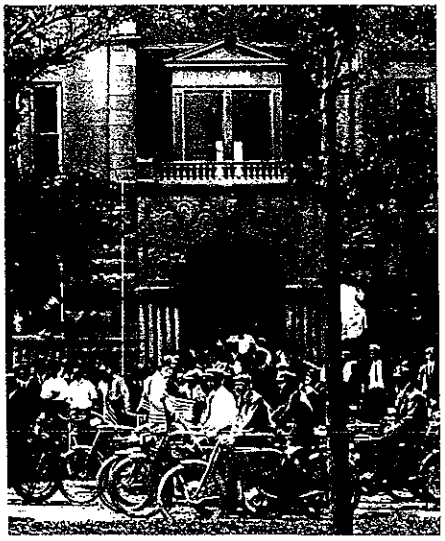
All eyes turn left, as Harley Davidson mechanics, oblivious to the action down the track, continue to prep the machine.

As the head of engineering, Bill Harley had special reasons to smile about big race wins.

Harley-Davidson proved its early supremacy at dirt track racing.

Later that year, in what was intended to be a challenge race between Indian and Excelsior, a dealer entered a Harley-Davidson with Curley Fredericks riding.

Floyd Clymer, who later became a dealer/rider for Harley-Davidson, was riding the Excelsior. He recalled the exciting race in his *Motor Scrapbook:* "I got away first and Boyd on his Indian gradually drew near me. We were about nip and tuck at the end of the first mile. Then I heard a quiet hum. Not even making much noise, Fredericks went by so fast that we could not even get in his draft. He was carrying a very high gear ratio and at the finish he must have been a quarter mile head of both of us."

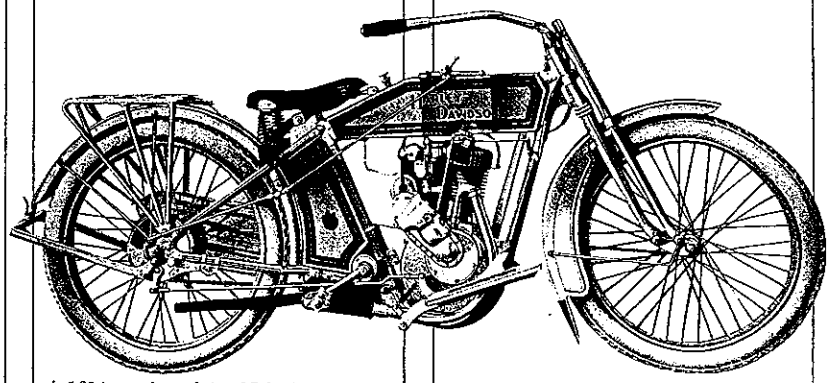


Part of the Chicago Motorcycle Club contingent on its annual Milwaukee run, circa 1912.

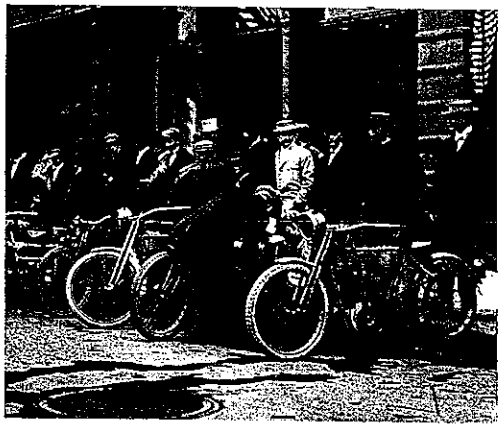
A new single cylinder model was added to the Harley-Davidson line for 1913. Designated as the 5-35 model, the numbers came from the engine specifications of five horsepower and 35 cubic inches. Choice of chain or belt drive to accompany the new single was up to the customer.

Harley-Davidson introduced a step starter in 1914, eliminating the need to put the machine on its rear stand for starting. Up to this point the motorcycle was started either by pedaling in bicycle fashion or running along side until the engine got going. The internal expanding rear brake, carburetor choke and two-speed transmission were offered as well, followed the next year with the revolutionary three-speed sliding gear transmission and engine clutch.

No longer able to ignore the racing success of independent Harley-Davidson riders, Bill Harley established the company's official Racing Department in 1914. Before the year was out, Harley-Davidson had captured the win at the One Hour National Championships under FAM Sanction at Birmingham, Alabama. The following year, Harley-Davidson motorcycles raced to a total of 26 major firsts.

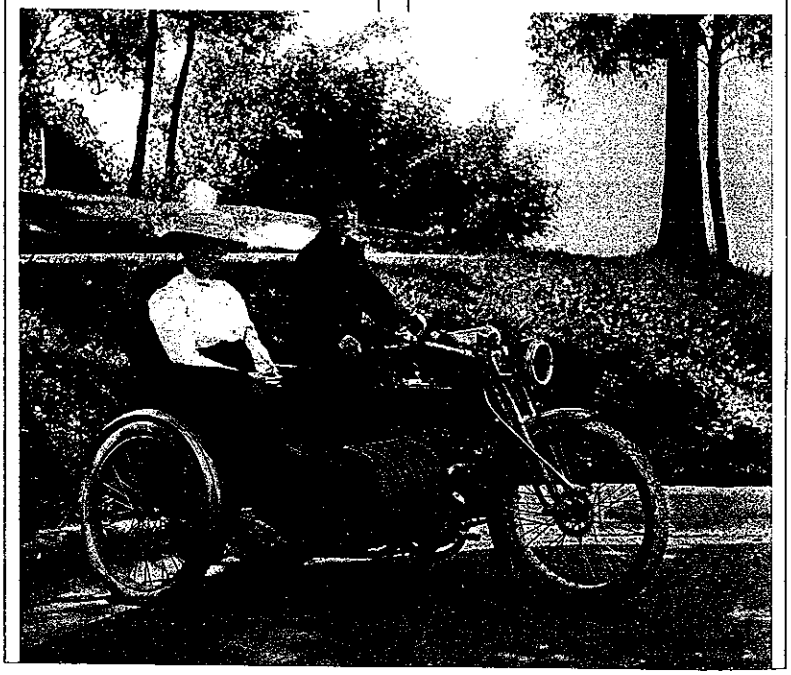


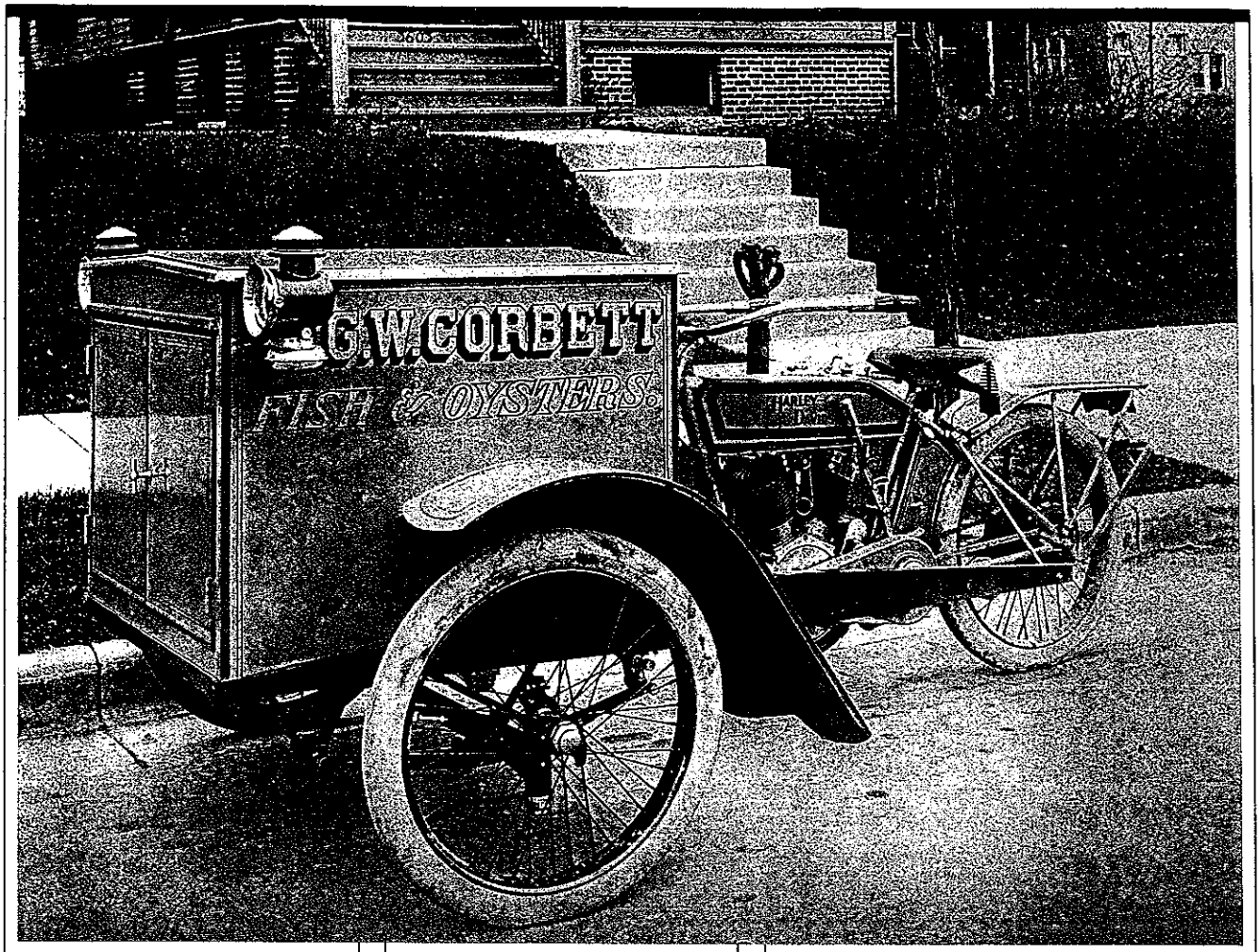
A 1914 version of the 35-inch single.

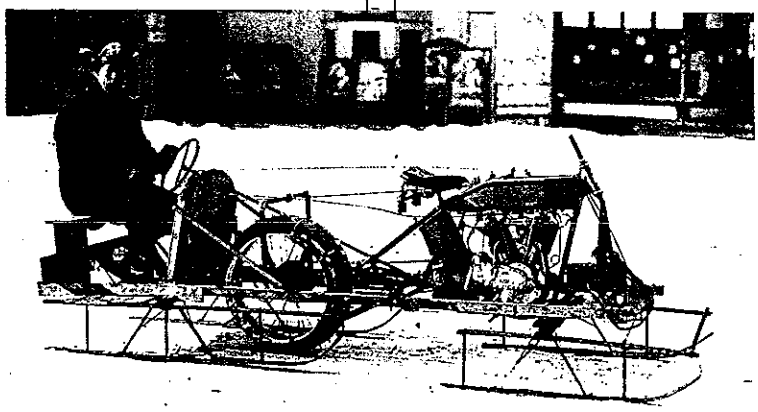


"Showing off your iron" has long been a popular pastime.

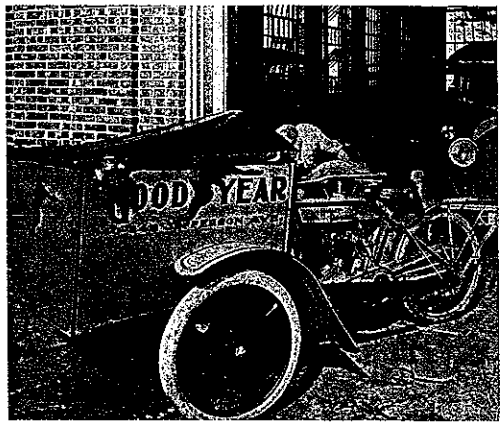
The wicker sidecar was a rarity but an eyecatcher, nonetheless.







Harley-Davidson enthusiasts have always tinkered. An early "snowmobile," ca. 1917, had a character not found in its modern descendant.



The motorcycle truck, first marketed in 1915, saw use by a wide variety of businesses.

Nineteen-sixteen saw more of the same. There were 15 victories in all—on board tracks, flat tracks and in the FAM Nationals—and more than a couple of them were complete sweeps.

While racing symbolized the ultimate in exciting motorcycle challenge, international events were forcing attention on a more serious side. Much as it might protest, the United States was being brought into the international conflicts that raged around the globe.

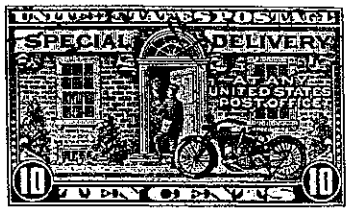
In 1916, Harley-Davidson motorcycles saw their first military duty in border skirmishes with Pancho Villa. The Mexican revolutionary was angered at President Wilson's support of his opponents and retaliated by raiding U.S. territory along the border. "Black Jack" Pershing was sent with his troops to quiet things down.

In the meantime, the black clouds of war stormed over Europe. The "war to end all wars" had started in 1914 and when the United States was forced into the conflict, Harley-Davidson would be ready to do its part.

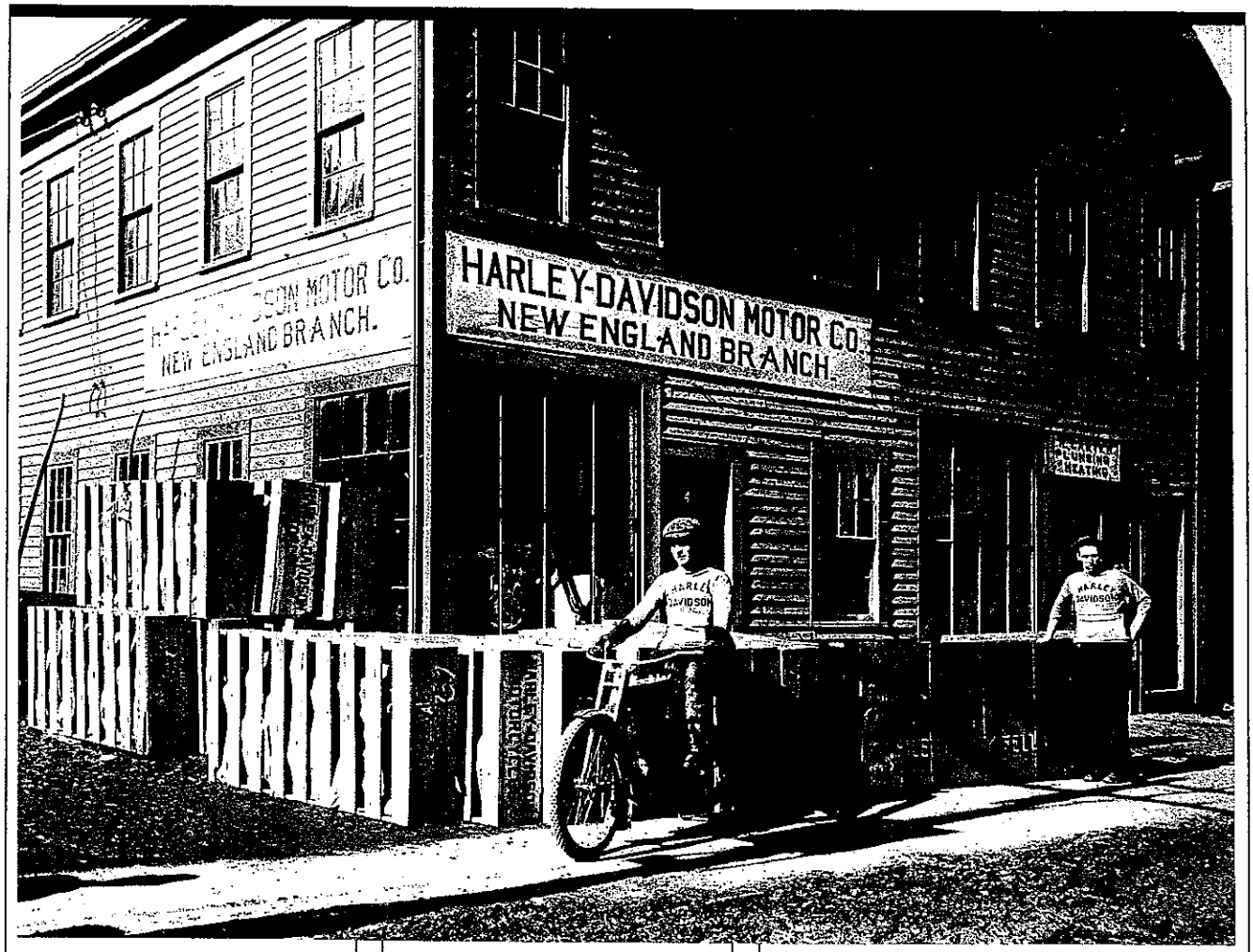
Harley-Davidson started training mechanics as part of the war effort in 1917.

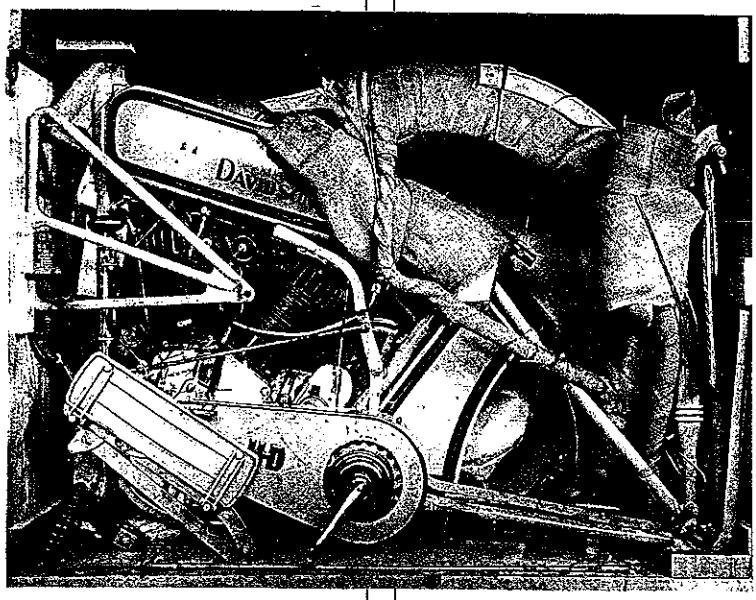
More efficient than the horse, Harley-Davidson proved an ideal way to deliver the mail in rural areas.

A symbol of Harley-Davidson's standing as an R.F.D. vehicle.



The Post Office even issued a stamp featuring Harley-Davidson.





Crating methods have changed dramatically since 1916.

The company early-on saw the importance of a strong dealer network. A load of new bikes had just arrived at "New England Branch," while among the dealer legends, Dudley Perkins first opened his doors in 1914.

Wartime Wheels: 1917-1918

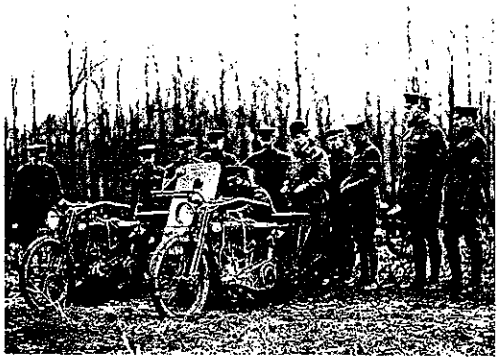
In April, 1917, the United States entered the conflict. The motorcycle industry immediately swung its efforts over to military production. All manufacturers halted racing until victory in Europe was won.

During the period just prior to the United States entering the war, suspension of British civilian cycle production had forced the world's non-military riders to look stateside for new mounts. Harley-Davidson drew a good share of this business and its reputation overseas grew.

Copies of Harley-Davidson service bulletins prior to the war emphasized the value of civilian preparation and organization for military preparedness. When the war came, those who knew the ins and outs of motorcycles would be ready to perform a valuable service for their country.

Some 20,000 cycles would see dispatch and scout duty before war's end. Most of those would come from Milwaukee.

Harley-Davidson's "now and then" (meaning it was published every now and then) publication *The Enthusiast* was launched in 1916. It, too, stood firmly behind the war effort, keeping riders on both sides of the pond informed on military motorcycle matters. *The Enthusiast* is still published, making it America's longest continuously published motorcycle magazine.



William S. Harley (in derby) checks out the performance of motorcycles built for World War I.

When it came to war, Harley-Davidson was at the forefront.

The War was responsible for another Harley-Davidson tradition that continues yet today. In 1917, the first Harley-Davidson Service School was established to help train military personnel to repair and maintain all of those hard working cycles abroad. The school was continued after the war, to provide qualified mechanics for civilian motorcycles.

One of the most famous motorcycle stories to come out of World War I concerns a Harley-Davidson. It all started on November 8, 1917 amid rumors of an armistice. The German army was being driven back toward its own weakening border. Corporal Roy Holtz, a dispatch rider, was ordered to take his captain on a mission. The pair became lost during heavy action and heavy weather, forcing them to ride into the night. When they came upon a lighted farmhouse, Corporal Holtz went in to determine their location. As chance would have it, their location turned out to be a German field headquarters. The two men were taken prisoners, but when the Armistice came on November 11, they were released and returned to their own line. Holtz was just in time to rejoin his unit on the move toward Germany. On November 12, 1918, Corporal Roy Holtz became the first Yank to enter Germany ...aboard his Harley-Davidson.

Happy days were here again.

Corp. Roy Holtz and the famous "first Yank" photo.

A Time Out of War: 1919-1941

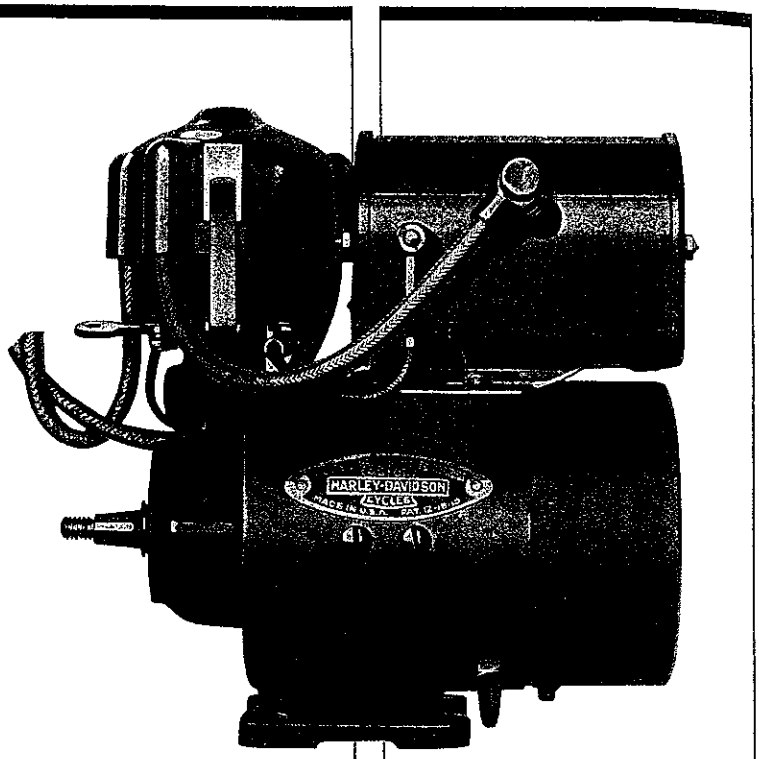
The conversion back to civilian production was relatively smooth and simple for Harley-Davidson. The only reminder was the army green that continued as the standard color for some years after the war, replacing the popular pre-war gray.

Because British motorcycle manufacturers were out of the civilian cycle business for practically all of the period from 1914 to 1918, Harley-Davidson's position in the world market steadily improved. Ever since that time, an important portion of Harley-Davidson's business has been in exports.

With the Army, wanting V-twins during the war, the single cylinder motorcycles had been dropped in 1918, except for a commercial version. The twin was available as an F model (magneto) or J model (electric).

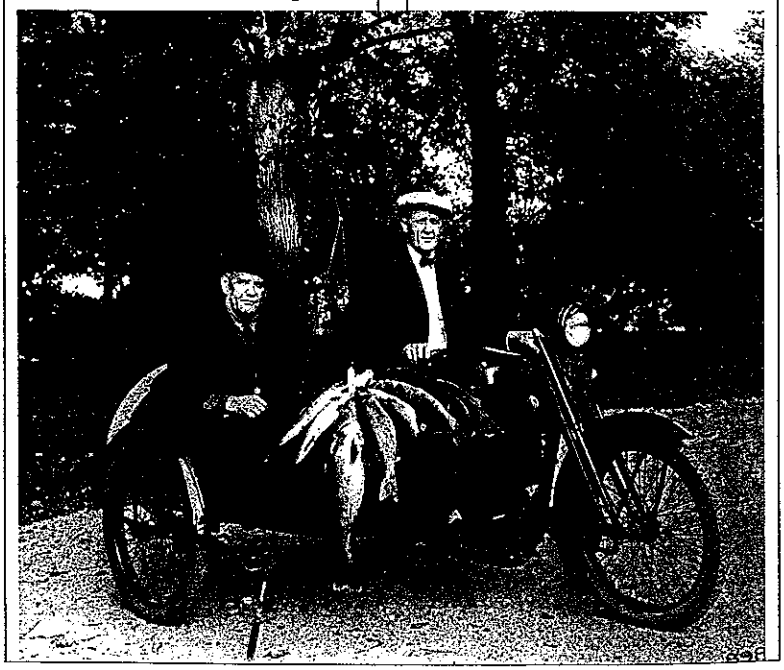
In 1919, Harley-Davidson introduced its Sport Model. While this 37 cu. in. opposed fore-and-aft twin initially met a popular reception, Americans had by now come to view the massive V-Twin as the norm. Additionally, the layout and design of the Sport Model's engine left little prospect for future development and refinement. As a result, the Sport Model was dropped in 1923, as apparently sales did not justify continued production. In its day, though, it was a great competitor. Among the many records it set was a 64 hour, 58 minute run from Canada to Mexico with Hap Scherer aboard.

Nineteen-nineteen also marked the introduction of the 20J V-Twin, a 1920 model. What made it special was that it carried its very own, Harley-Davidson produced electrical system.

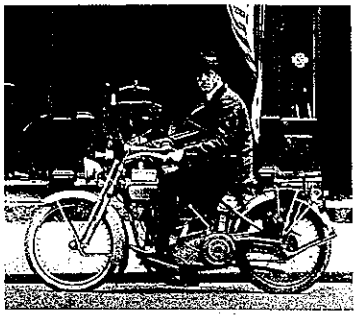


The Harley-Davidson generator first appeared in 1920.

William A. Davidson and William S. Harley found their company's product to be the perfect way to get out for an afternoon's fishing.



The motorcycle fit for a king! —or at least for Prince Axel of Denmark.



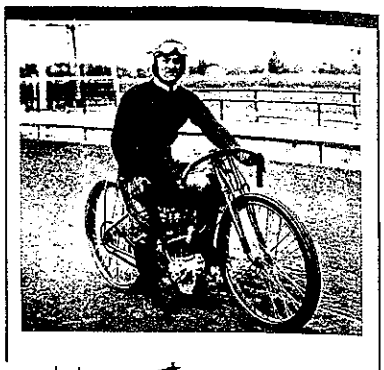
The 1920 electric Sport Model was powered by a longitudinally opposed twin cylinder engine. Note the enclosed chain, which would come back into use some 60 years later, for efficient power transmission.

In racing, Harley-Davidson was back in the winner's circle. Road races and endurance runs were both dominated by stock pocket-valve and special eight-valve cycles. A stock pocket-valve did 102.87 miles per hour and a racing eight-valve, 111.98 to set new records on the sand at Daytona Beach.

On February 22, 1921, the Milwaukee racing team was responsible for making a Harley-Davidson the first machine ever to win a motorcycle race with an average speed over 100 miles per hour, on a Fresno, California board track.

Harley-Davidson again made the entire cycling world turn about and take notice when it introduced the first 74 cu. in. V-Twin in 1922. This giant machine was recommended for pulling the two passenger sidecar, while the "61" was still suggested for the one passenger sidecar and solo riders.

Refinements to the Harley-Davidson motorcycle continued throughout the Twenties. An alemite lubrication system, with 12 fittings on the motorcycle appeared in 1924 and grease guns became the rule. Drop forged, steel frame fittings came in 1925. The Teardrop gas tank, so much a part of the unmistakable Harley-Davidson look, made its inaugural appearance in 1926 on a new 21 cu. in. single designated the BA model. Two years later, a device the motorcyclist of today generally thinks of as a "must"—the front brake—came into use. At the time of its appearance, it met with some degree of rider skepticism. A carburetor air cleaner was added the same year.

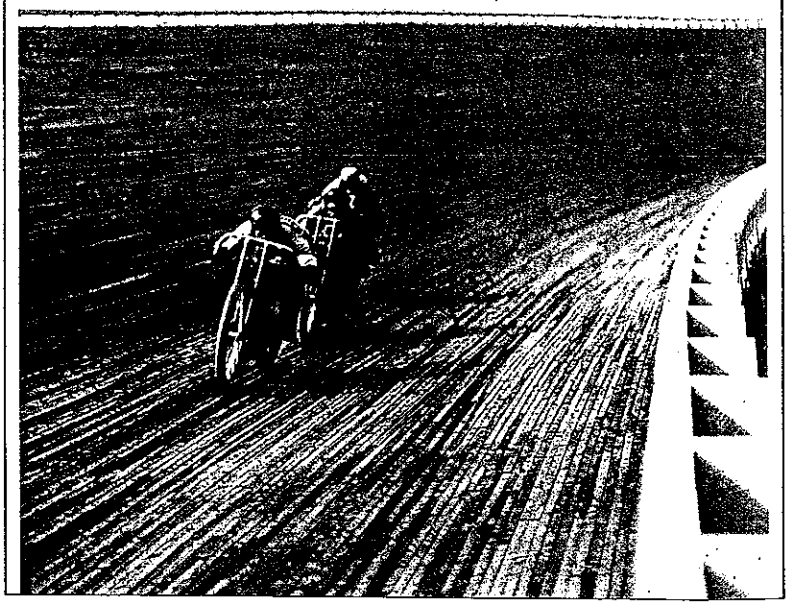


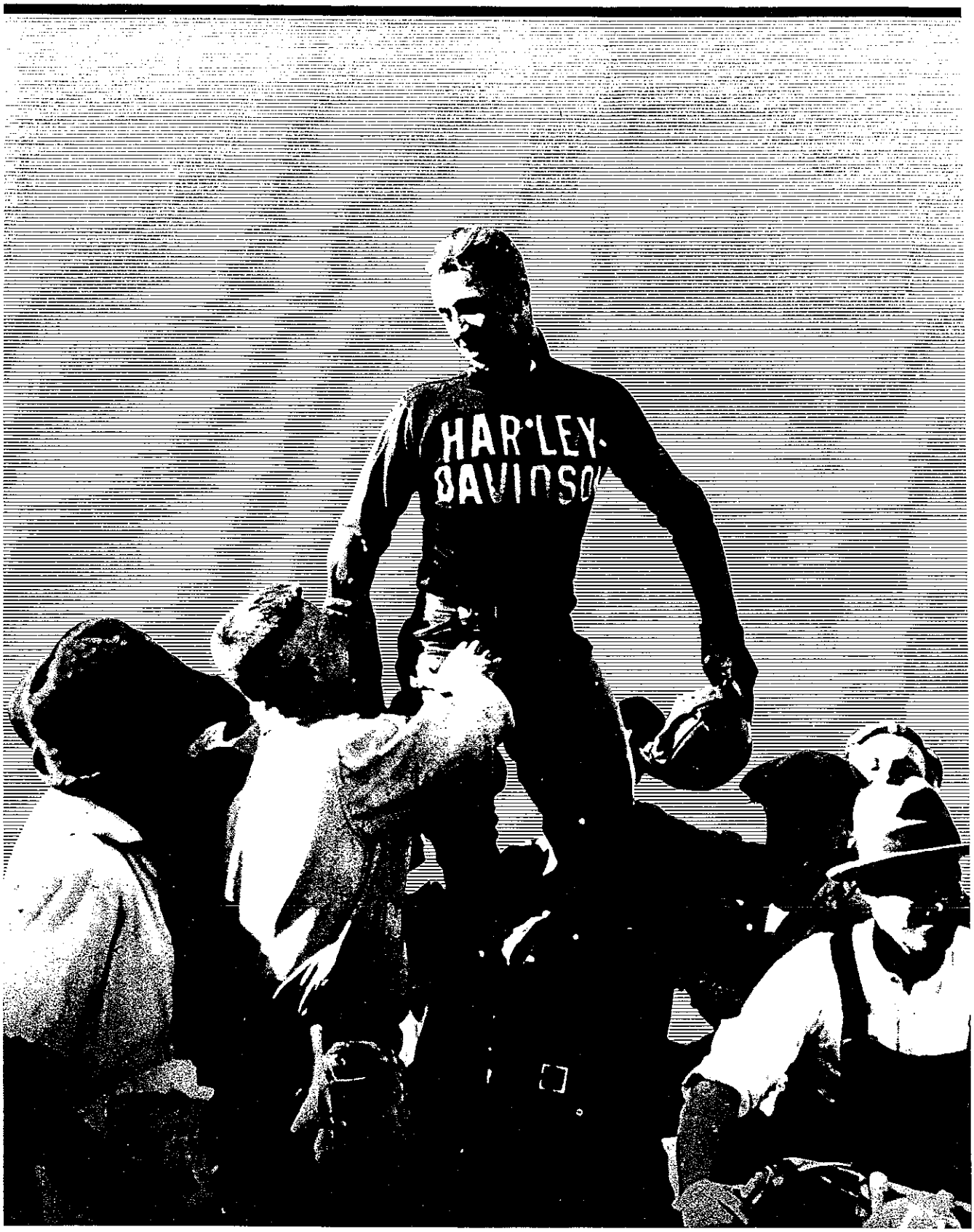
Eddie Brinck aboard the "Peashooter," 1928.

One of the early Harley-Davidson "wrecking crews" at Dodge City, 1920. (from left): Maldwyn Jones, Fred Ludlow, Ralph Hepburn, Jim Davids, Ray Weishaar, Otto Walker and Walter Higley.

An exuberant crowd and a victorious Ralph Hepburn, Dodge City, 1921.

The era of high speed board track racing reached a peak in the 1920's.




HAR·LEY·
DAVIDSO

The WL 45-inch side valve twin came along in 1929 and became an immediate hit. Here was combined the power characteristics of the big twin and agile handling of the single.

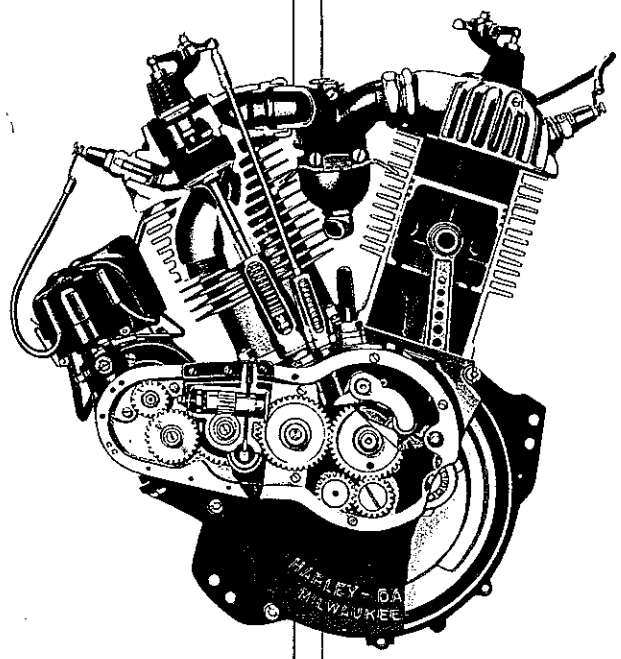
Of course, 1929 also brought the start of the Great Depression, and along with it, some heavy blows for the motorcycle industry. Dozens of manufacturers dropped out of sight. A shortage of dollars for individual transportation, combined with low pricing and growth in the automobile industry,were at least partly at fault. Then too, motorcycling had evolved into largely a recreational activity, and people tended not to spend dollars on "leisure" pursuits. Harley-Davidson suffered along with everyone else, as sales fell sharply. Industry-wide production dropped from almost 32,000 cycles yearly during prosperous times to a low of just over 6,000 by 1933.

According to H-D old-timers, the factory kept as many workers employed as possible, by reducing the length of the work week for each. Maybe employees worked only two days per week, but they worked.

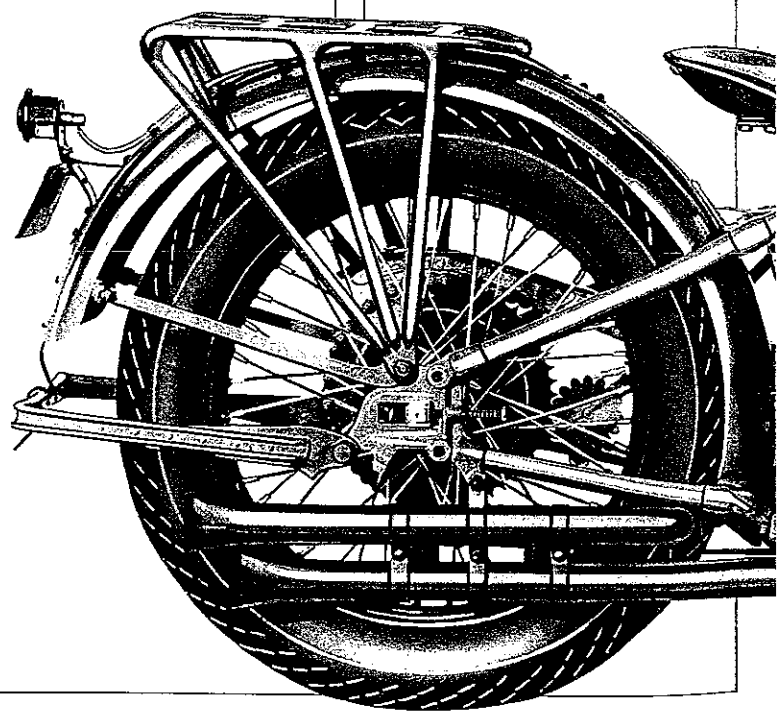
The company prevailed where others couldn't and the reasons are somewhat difficult to pinpoint. Certainly a strong dealer network, police and military use, conservative business management and a strong export business were all contributing factors.

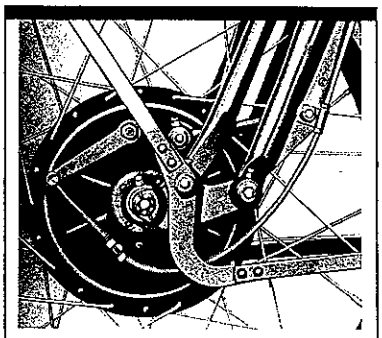
Two new engines were unveiled in 1930. First was the 74 cu. in. side-valve VL model. Second was a 30 cu. in. single to keep the "21" company.

The three-wheeled Servi-Car was first marketed in 1932, powered by the 45 cu. in. twin. It was intended for and became very popular as both a delivery vehicle and

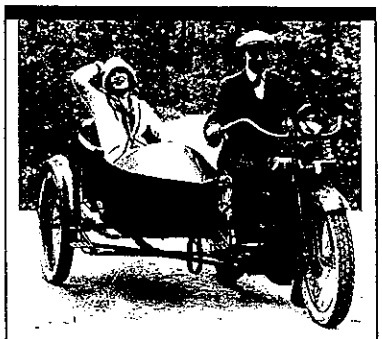


A look inside the 74 cu. in. V-Twin of 1924.

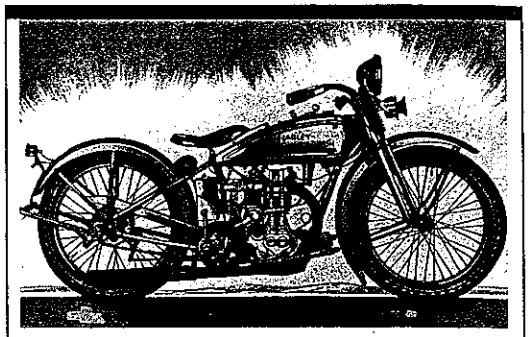




Stopping power, circa 1928.

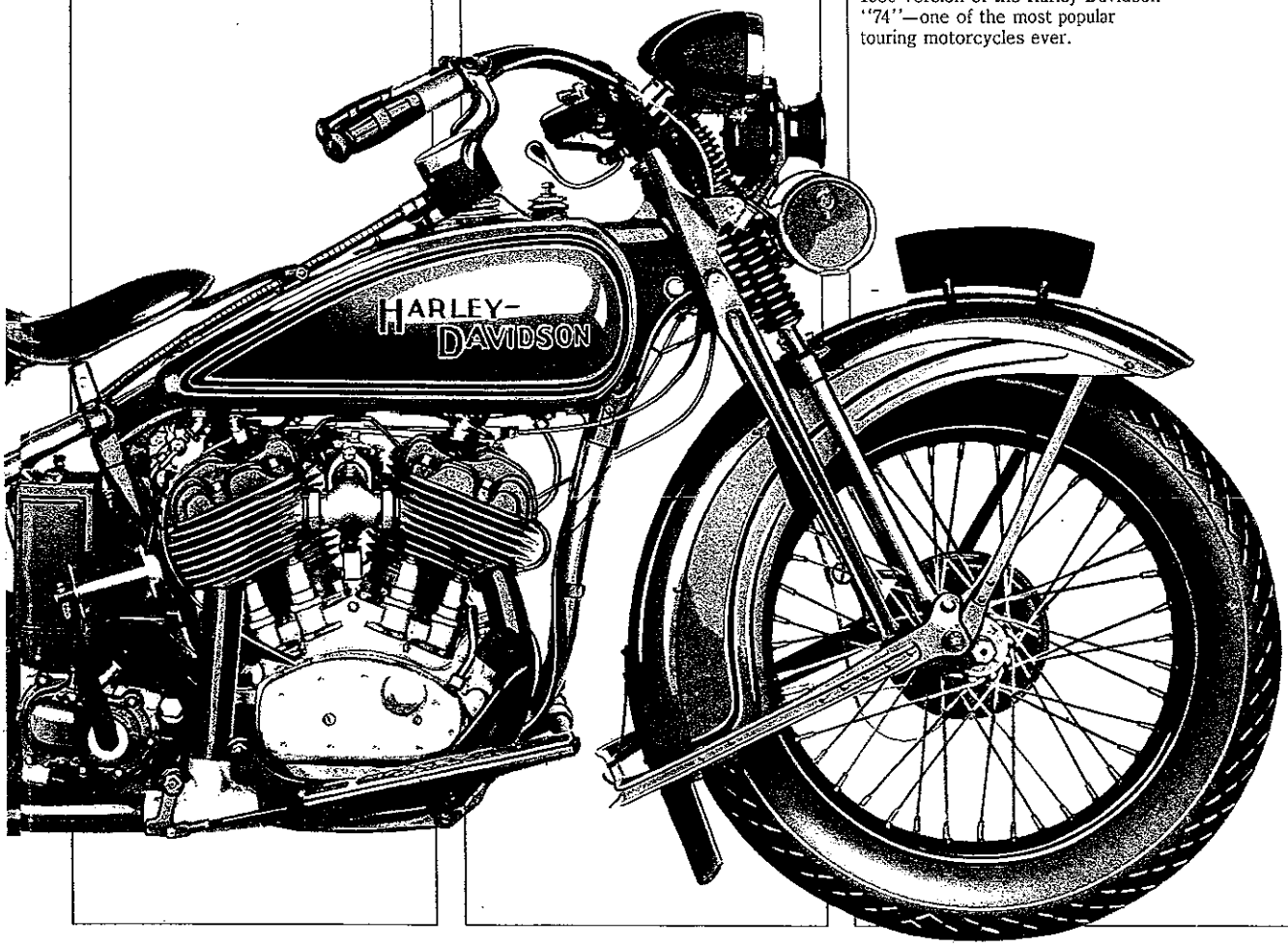


A pretty girl, a Harley-Davidson and a quiet country road. What more could a young man ask?



The popular 21" single was introduced in 1926.

1930 version of the Harley-Davidson "74"—one of the most popular touring motorcycles ever.

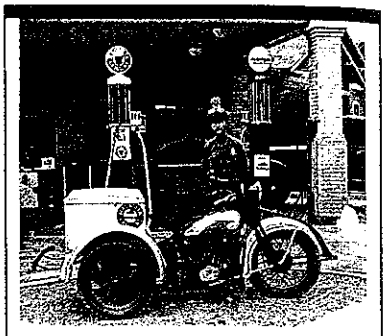


for police use. The police market had been growing since its inception in 1907 and by this time, accounted for sizeable Harley-Davidson sales. Harley-Davidsons are still popular with police forces as many a speeder knows.

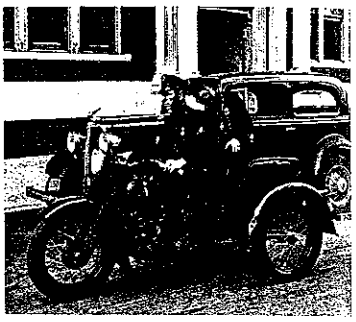
At the Depression's depth in 1933, the company took a new tactic to try to help the sales picture. It came out with special paint and styling treatments to make the motorcycles more visually appealing still and catch the eyes of more potential consumers. Gone was the army green. Art Deco tank decals, two-and-three tone paint and other special touches were the order of the day, as the Harley-Davidson special styling expertise was born.

Harley-Davidson innovations for the Thirties included interchangeable wheels, four-cam valve operation, high compression aluminum pistons, a form wound generator capable of handling greater currents, a steering head anti-theft lock, Buddy saddle, hand adjustable fork spring damper, a radio for police work, generator and oil pressure signal lights... the list goes on.

In 1936, American riders' demands for more power were met with an 80 cu. in. side-valve twin. Shortly afterwards, the brand new 61 cu. in. overhead valve twin was introduced and became an overnight success. The "Knucklehead," it came to be called. It delivered twice the horsepower of the old "61." It also carried a double loop frame, heavier forks and wheels, four speed transmission and the first oil circulation system. The days of total loss oiling were coming to a close.

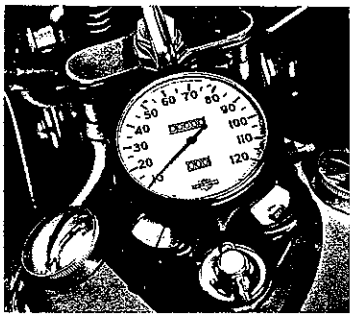


In the 1920s, the Harley-Davidson delivery vehicle took on many forms.

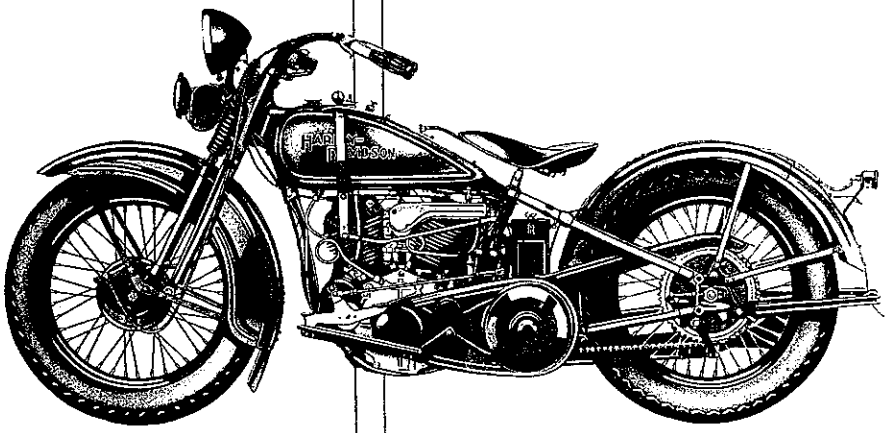


Marked tires and parking tickets have been with us a long time.

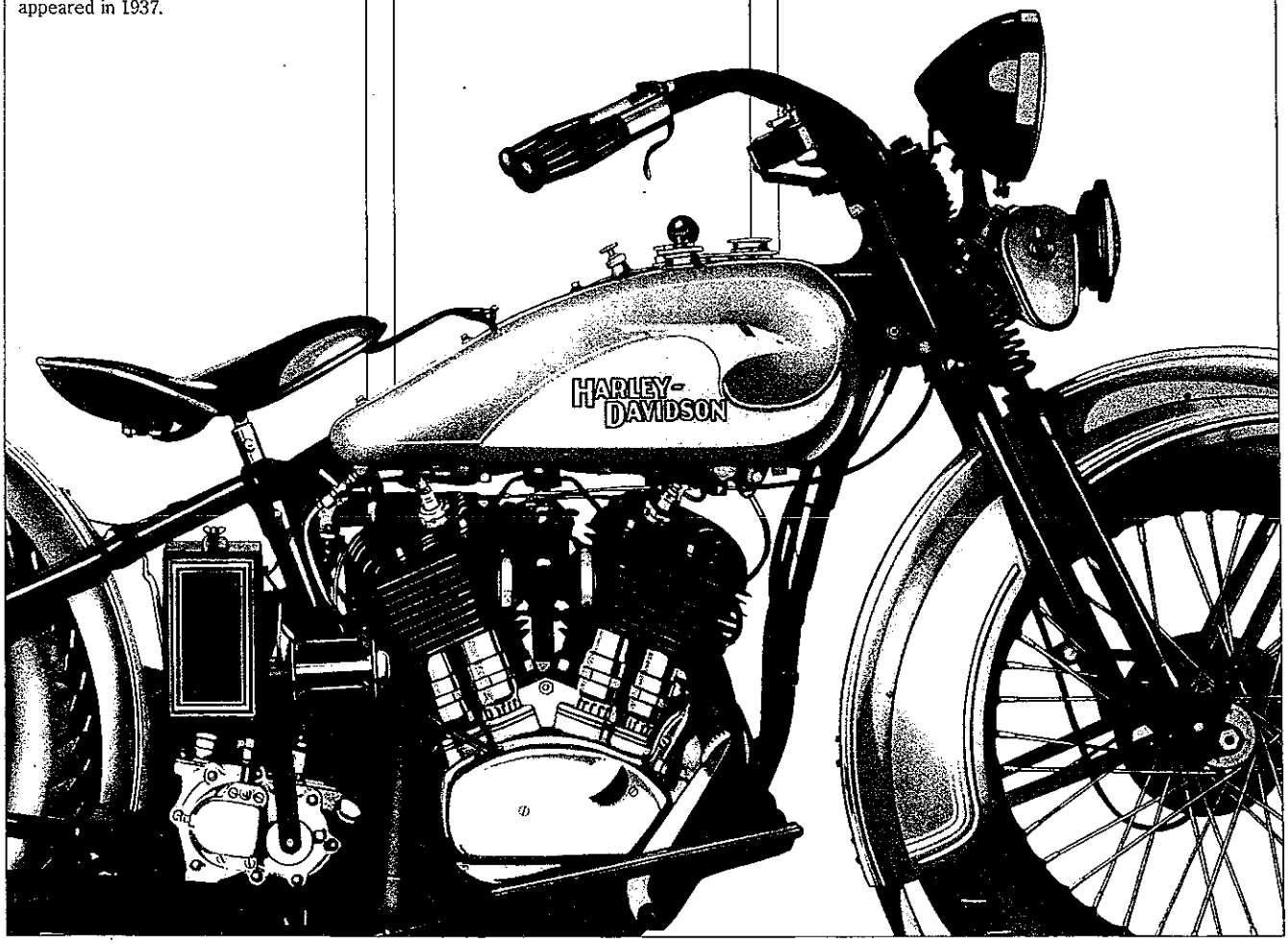
A love of cycling has always typified company management. As young men, Gordon, Walter and Allan Davidson stopped to visit Dud Perkins during an 8,000 mile cross country trip in 1929.



The built-in instrument panel appeared in 1937.



Styling underwent a big transition from 1932 (above) to 1933 (below) as tank graphics and flashy color combinations tried to capture more sales at the depth of the Depression.

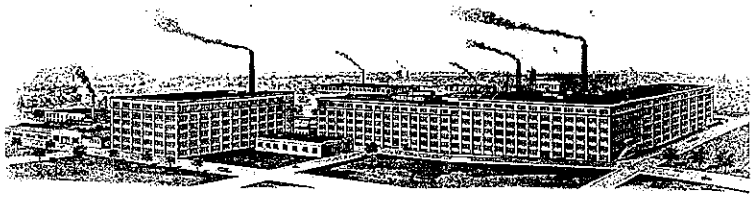


Success on the race course continued through the decade, although racing in general was a much curtailed activity. At the Jack Pine Championship Endurance Run, the national Miniature TT races, the 200 Mile Road Race, National AMA Dirt Track Championships, 100 Mile TT, Southwest TT, and the Syracuse Nationals, H-D dominated. In 1937, a 61 cu. in. V-twin set a new speed record at Daytona Beach of 136.183 miles per hour, with the legendary Joe Petralli riding. That oceansand record still stands.

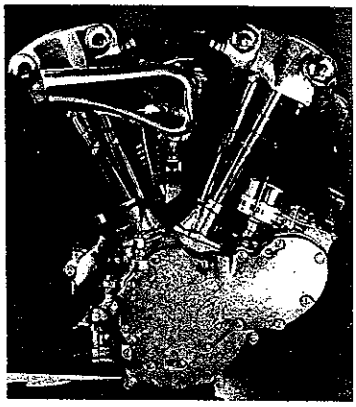
In 1940, aluminum heads became standard on the "61" and optional on the "45" and "74." Another option for that year were 500 × 16 balloon tires.

A super powered 74 cu. in. overhead valve model began moving down the assembly line in 1941. It never had a chance to show what effect it would have on that year's motorcycle market, though. Before many of those new "74s" could reach the public, the bombs on December 7, 1941 put a halt to all civilian production. Japanese pilots were teaching America the true meaning of deception, and a lunatic little dictator with a Charlie Chaplin mustache had begun his reign of terror.

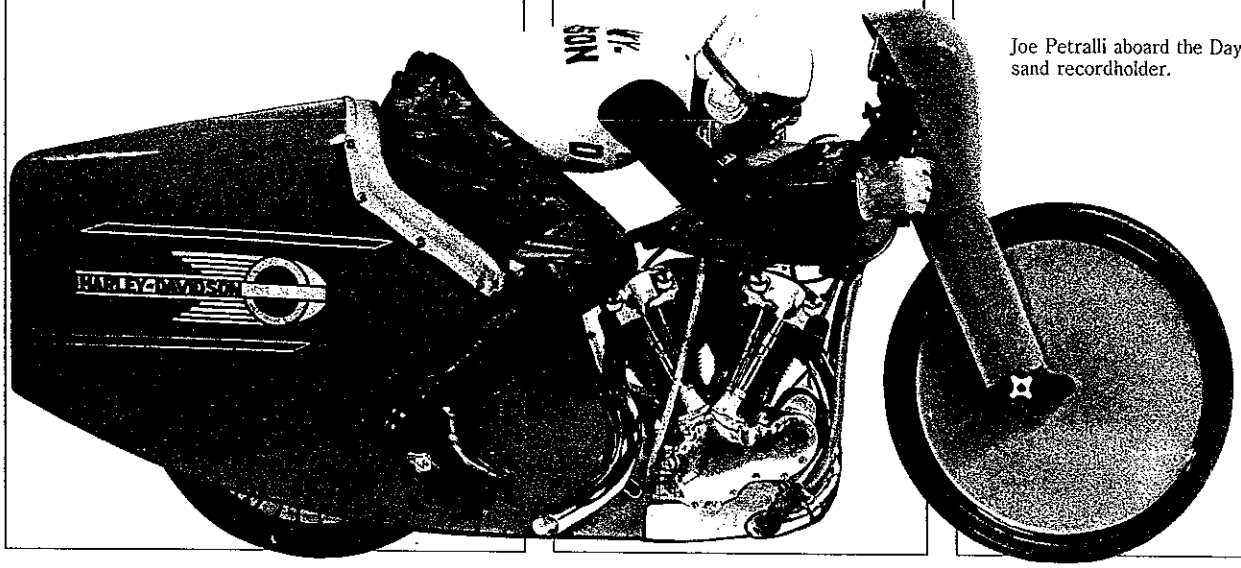
Again Harley-Davidson was called on to serve its country and the world, in a time of greatest need.



The Juneau Avenue plant, in a 1926 rendering, had already been a part of Milwaukee's facade for more than a decade.



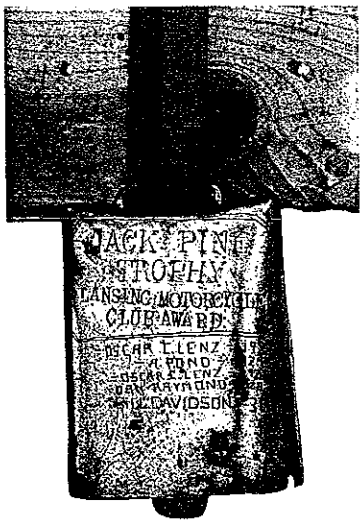
The 61 cu. in. OHV engine, in its 1937 form. "Knucklehead" was to become the "61's" nickname.



Joe Petralli aboard the Daytona sand recordholder.

(From left): Arthur and Walter Davidson, William S. Harley and William A. Davidson inspect the first '36—"61" to come off the assembly line.

William H. Davidson, company president from 1942-1971, winning the 1930 Jack Pine Enduro.



Helping to Win the Big One: 1941-1947

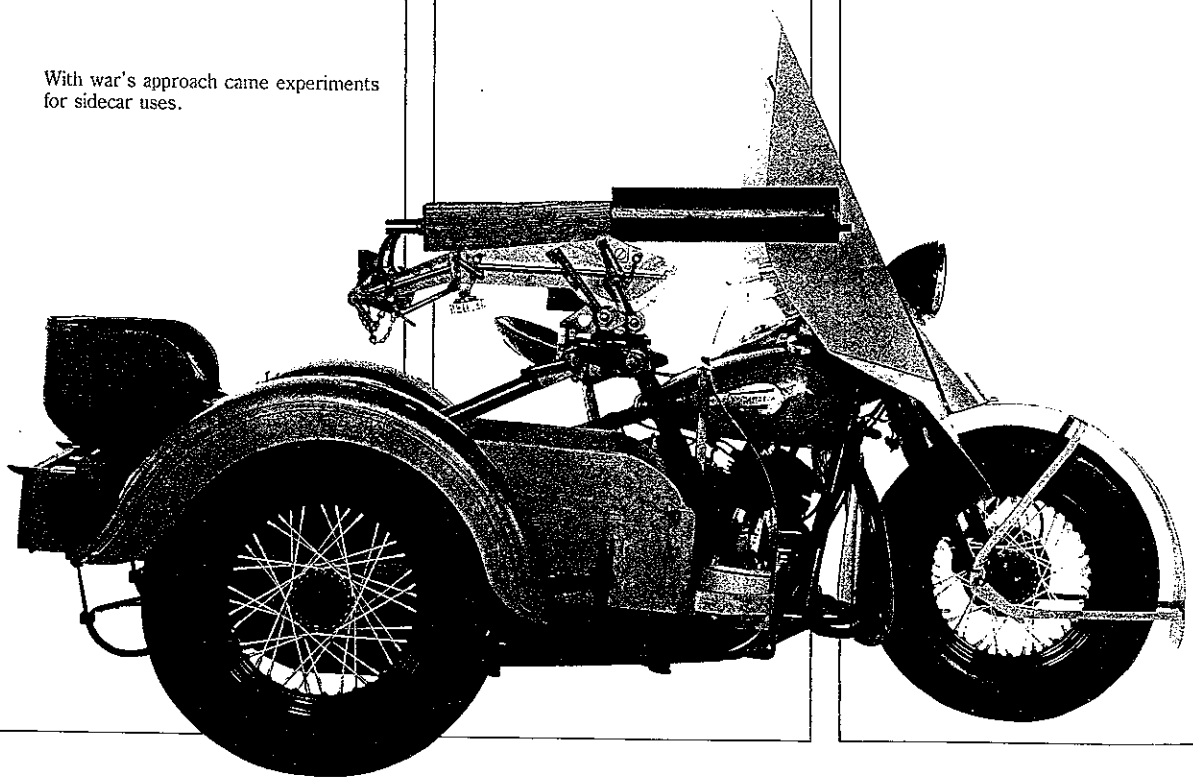
Actually, since the late Thirties, the government had been giving the American manufacturers (H-D and Indian) ever-growing orders for motorcycles. These went both for war preparedness at home, and to supply the Allies with bikes since the British bike industry had been crippled by the German air blitz.

Almost immediately after Pearl Harbor, Harley-Davidson's entire motorcycle output was produced for U.S. and Allied government use in scouting and dispatch work. Production of military 45 cu. in. twins, known as WLAs (the "A" was for "Army"), kept the factory busy day and night. By war's end, more than 90,000 WLA's had been built and shipped. Spare parts enough to build another 30,000 machines were produced as well. It was a truly remarkable feat, for which the company would earn the Army-Navy "E" Award for excellence in wartime production.

As war clouds again gathered, Harley-Davidson provided the service training.

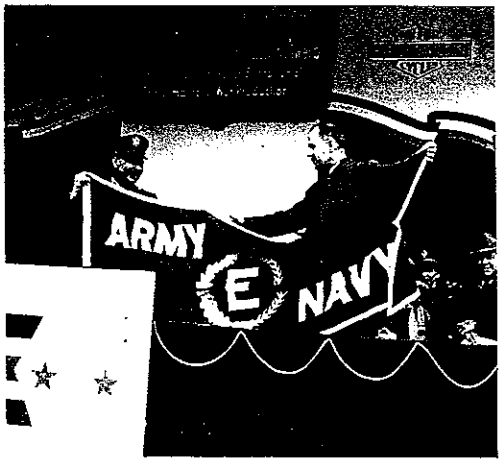
An Army Armored Division's contingency of "45" WLA-mounted soldiers made an impressive and frightening sight.

With war's approach came experiments for sidecar uses.



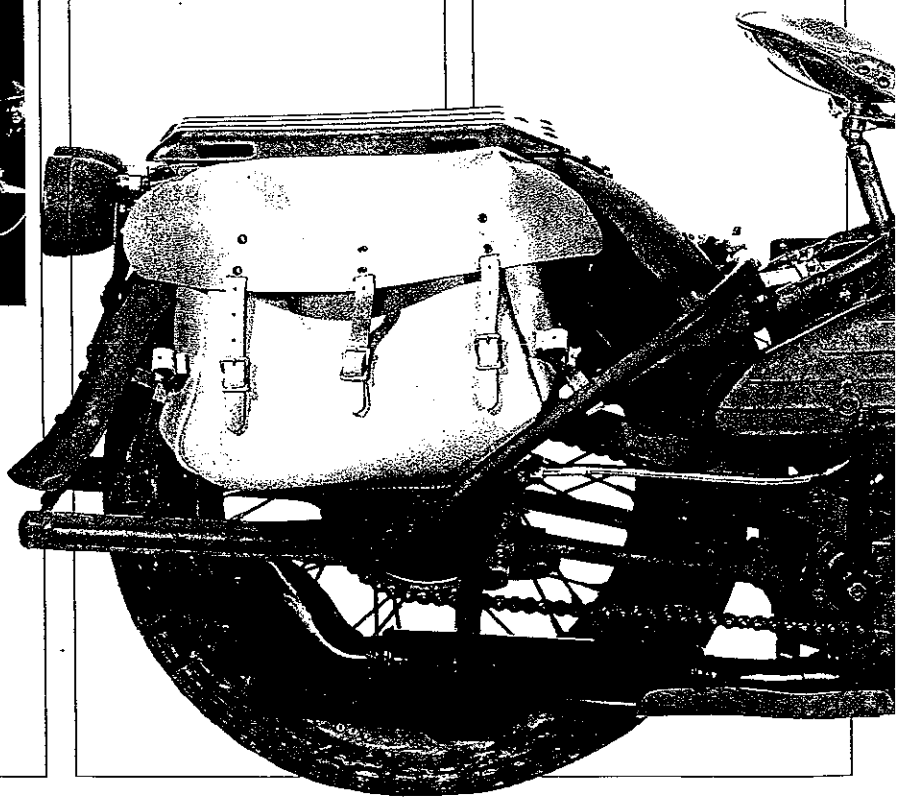
World War II was also responsible for another unique Harley-Davidson twin. It was called the XA, and displaced 45 cubic inches. What made it unique was the configuration of the two cylinders. The XA was a horizontally-opposed twin and the only shaft drive Harley-Davidson produced. The idea was to have a motorcycle suitable for use by the Allies in desert warfare in North Africa. But only 1,000 came out the factory doors before that phase of the war was over. The 45-WLA would carry the banner on its own throughout the War. Those big olive drab cycles repeatedly proved up to the task.

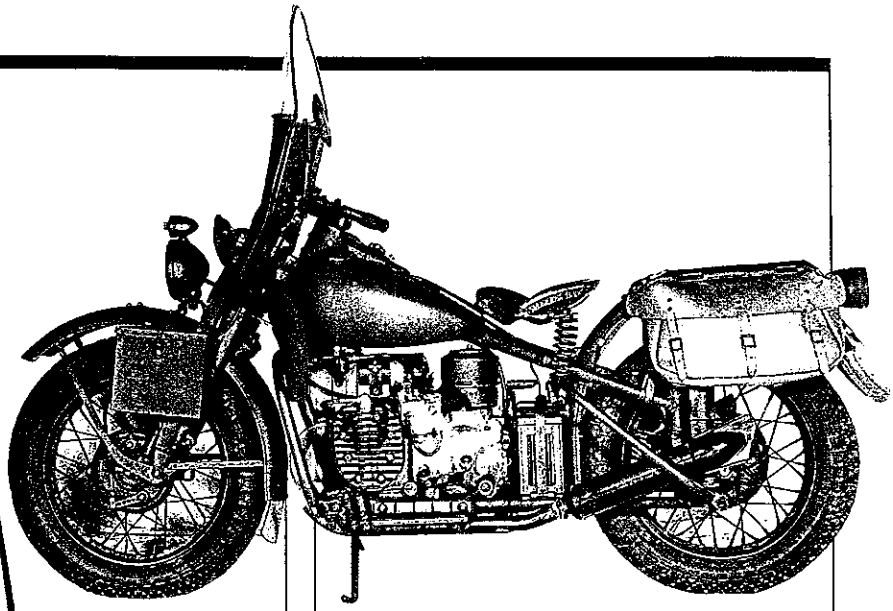
When the war was over, one of the first things on every motorcyclist's mind was a new vehicle to replace the one that carried him through the early forties. Returning GIs were hungry to get their hands on a piece of civilian machinery and Harley-Davidson was ready to meet the demand.



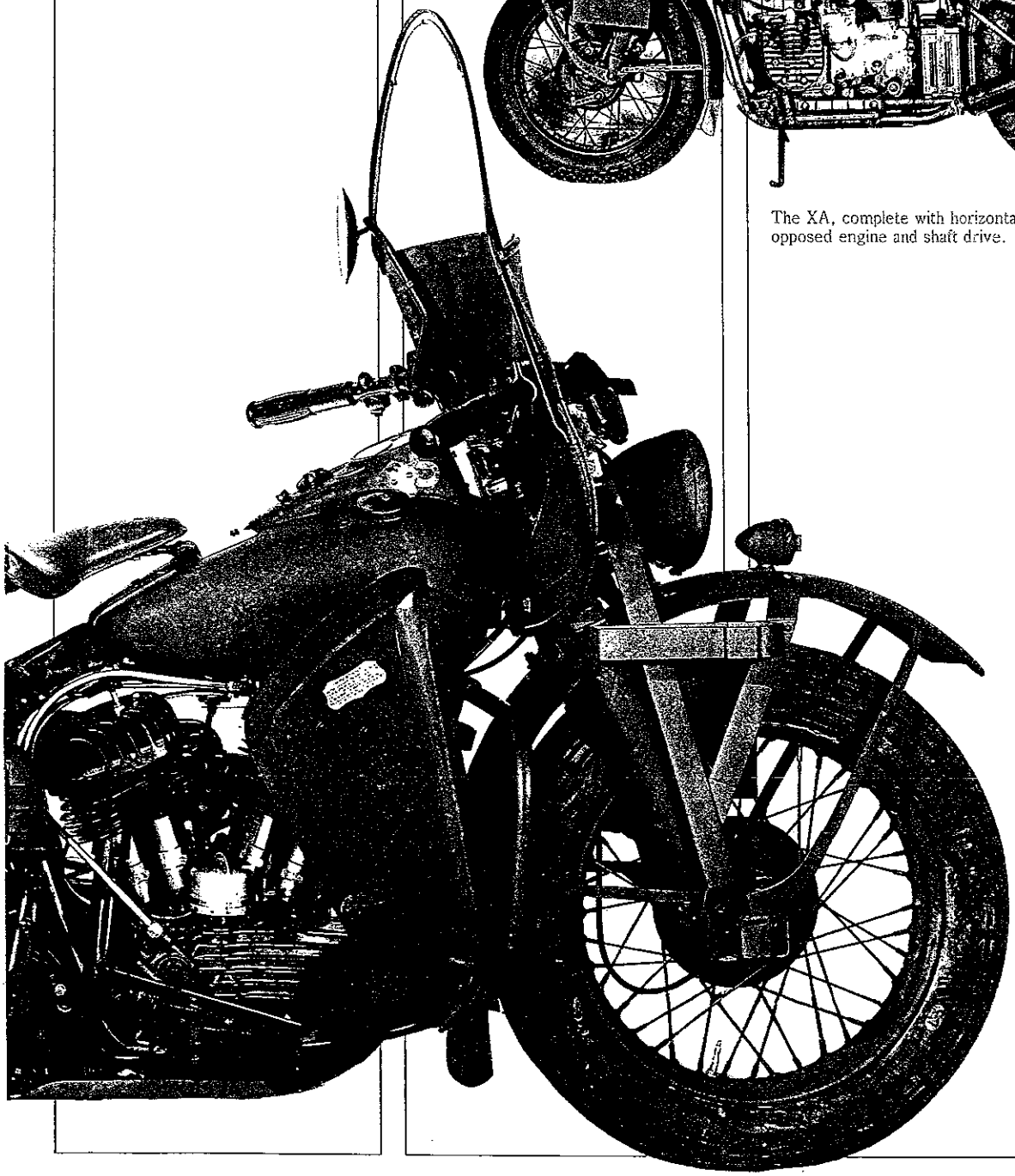
Company President William H. Davidson proudly accepts the World War II Army-Navy "E" Award on behalf of all employees.

A legend — The WLA.





The XA, complete with horizontally opposed engine and shaft drive.



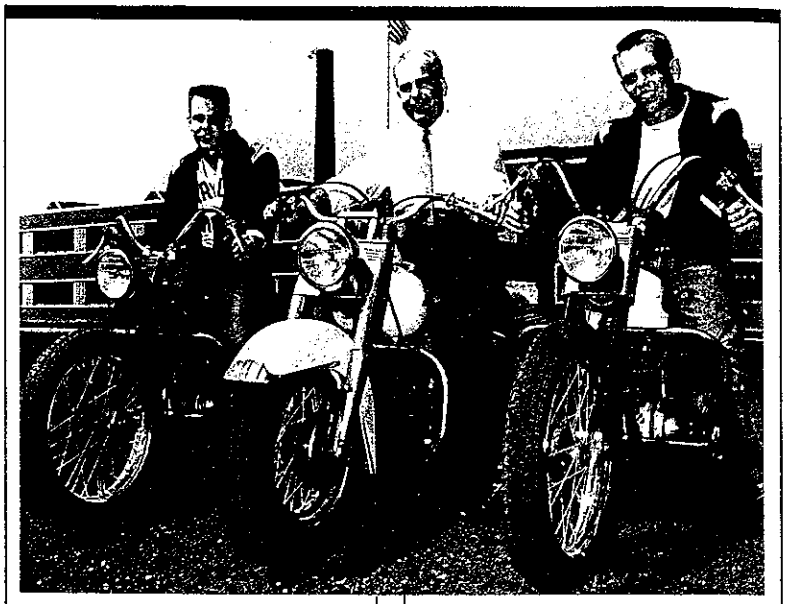
The Civilian Machine Returns: 1947-1955

Unlimited civilian motorcycle production resumed in 1947. The first big step for Harley-Davidson was to replace the 74 and 80-inch side-valve twins with the hot new "74" overhead valve cycle the company had begun production on in 1941. During the war years, the OHV was already seeing the results of the refinement philosophy in the form of engineering planning and by 1948, the new "74" came with hydraulic valve lifters and aluminum heads. The "Panhead" was born.

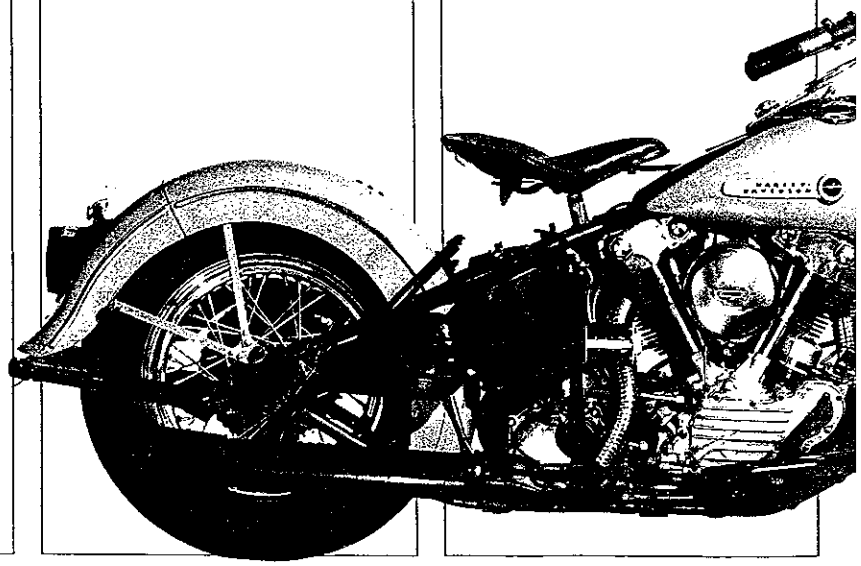
Seeing the need for additional manufacturing space, Harley-Davidson purchased a modern, single-story factory in the Milwaukee suburb of Wauwatosa in 1947.

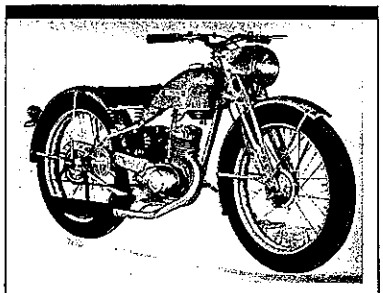
Late summer, 1947 hosted the introduction of a 125cc single cylinder lightweight. This 1948 model was Harley-Davidson's first two-stroke motorcycle. The 125 was the company's contribution to those who wished to ride, but needed something smaller and less expensive than a V-Twin. It was the first in a long line of postwar lightweights to be built by Harley-Davidson.

When racing resumed after the war, things stayed much as they had been up to that point—which is to say, with Harley-Davidson supremacy. Nineteen-forty-seven saw Harley-Davidson motorcycles take checkered flags in the National TT, National Miniature TT and Nationals at Richmond, Springfield and Milwaukee. Seven of the top 10 finishers at Daytona rode Harley-Davidsons. In 1948, Harley-Davidson riders won 19 of 23 National Championship races. The following year they took 17 of 24.

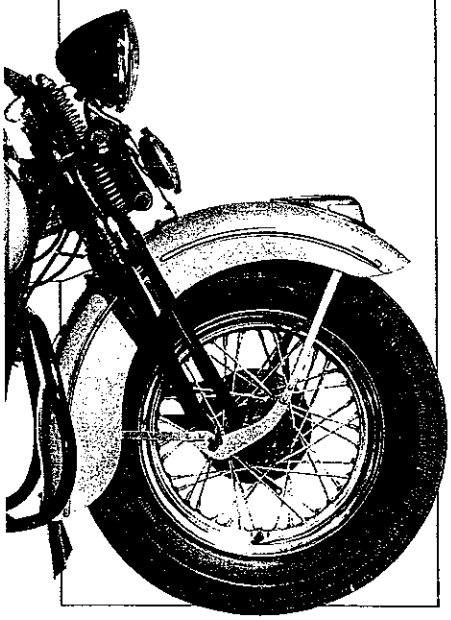


Second and third generation. William H. Davidson is flanked by sons John (left) and William G.

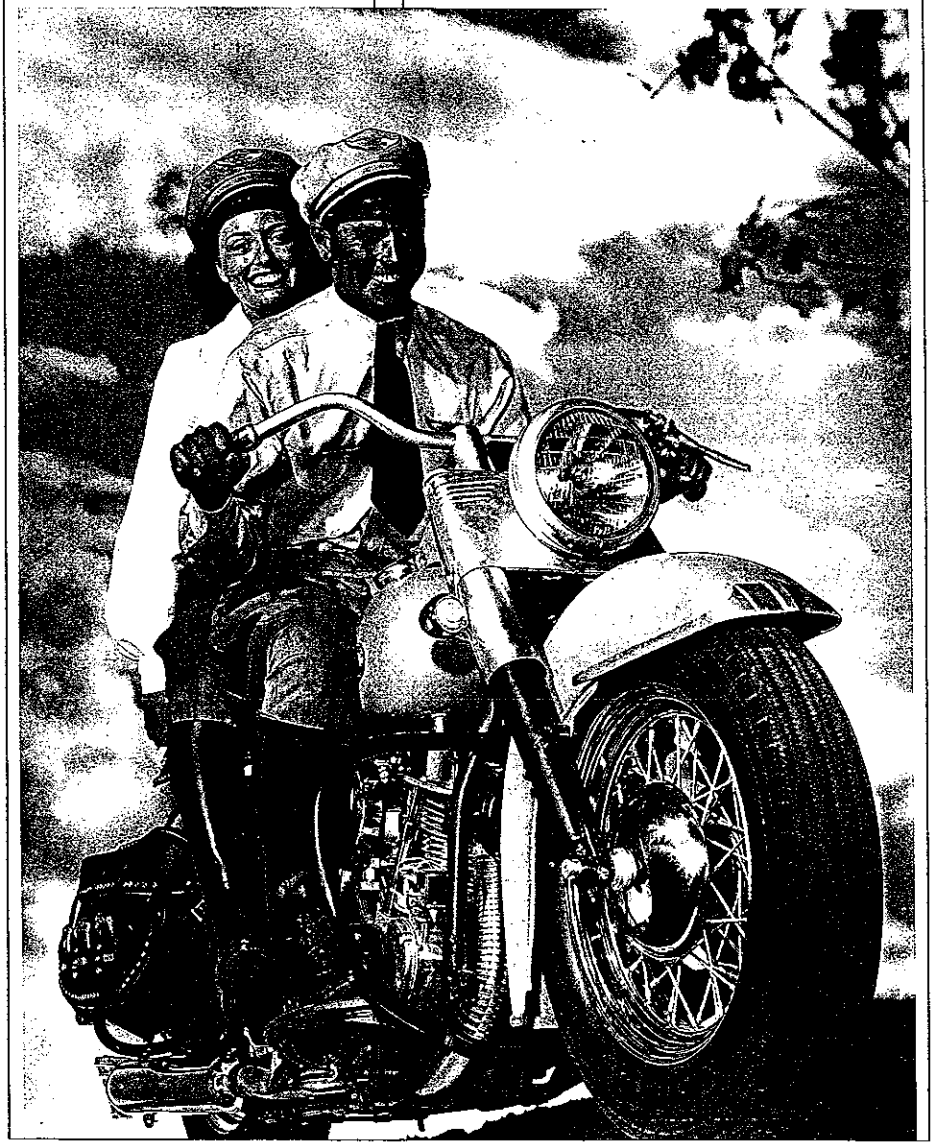




Harley-Davidson's first two-stroke, the 1947, 125cc single.



The big twin became the Hydra-Glide®, with the introduction of hydraulic front forks in 1949.

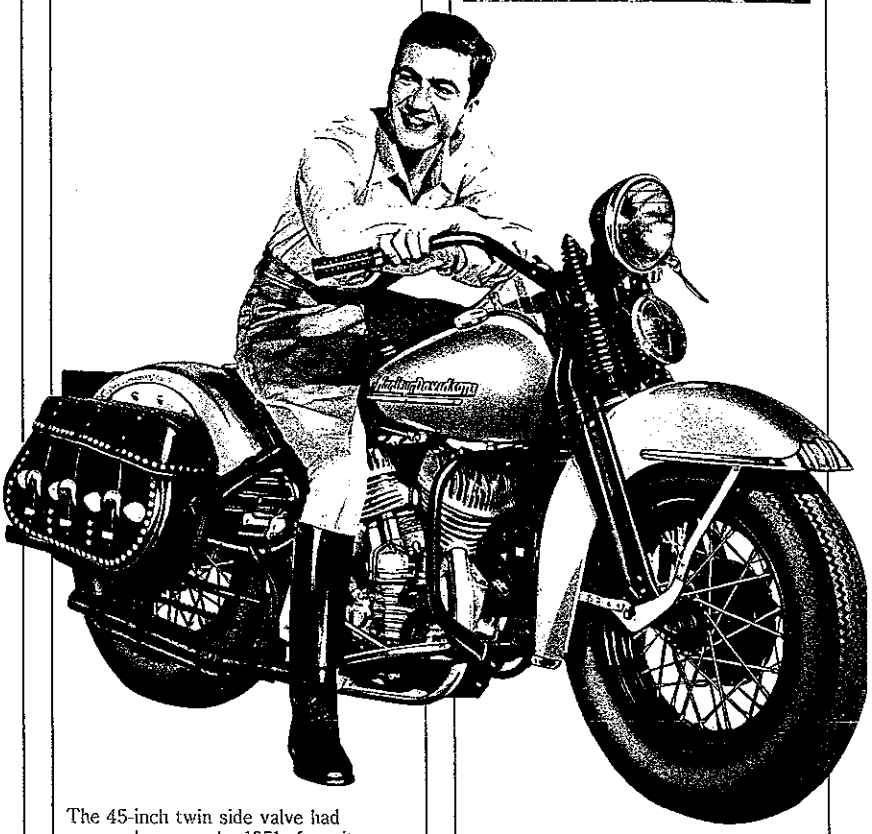


Also, in 1949, the hydraulic front fork was introduced on the big twins, giving birth to the Hydra-Glide. It used helical springs, hydraulically dampened with oil. Tele-Glide, a telescopic fork, appeared on the single two years later.

As Harley-Davidson carried on through the Forties, a new generation of Harleys and Davidsons prepared themselves to succeed the company's founders. William A. Davidson had died back in 1937 and Walter, early in 1942. Bill Harley died in 1943. Their passings were a heavy blow to the company they founded, the city they called home and the world community of motorcyclists. But, the family tradition continued. William H. Davidson had joined the company as a factory worker in 1928. Gordon Davidson began work in the Sales Department a few years later. And soon after that, William J. Harley and Walter C. Davidson came to work in the shop. William H. Davidson succeeded Walter Davidson as company President in 1942, a position he would hold for nearly three decades. When Arthur Davidson, the last of the four founders, died in a car accident on December 30, 1950, the new generation of Harleys and Davidsons was completely on its own.

Major changes came to the Harley-Davidson line in 1952 and 1953, the years Marlon Brando became a superstar in "On the Waterfront" and "The Wild One." Chrome plated piston rings were placed in every model. The 1952 K-model 45 cu. in. twin took the place of the 45-WL. It came with a low slung frame with hydraulically dampened front forks and rear suspension.

Amateur competition, 1948 style.



The 45-inch twin side valve had come a long way by 1951, from its origins in 1929.

"Smokey" Joe Leonard became the first of the modern-era Grand National Champions, in 1954.

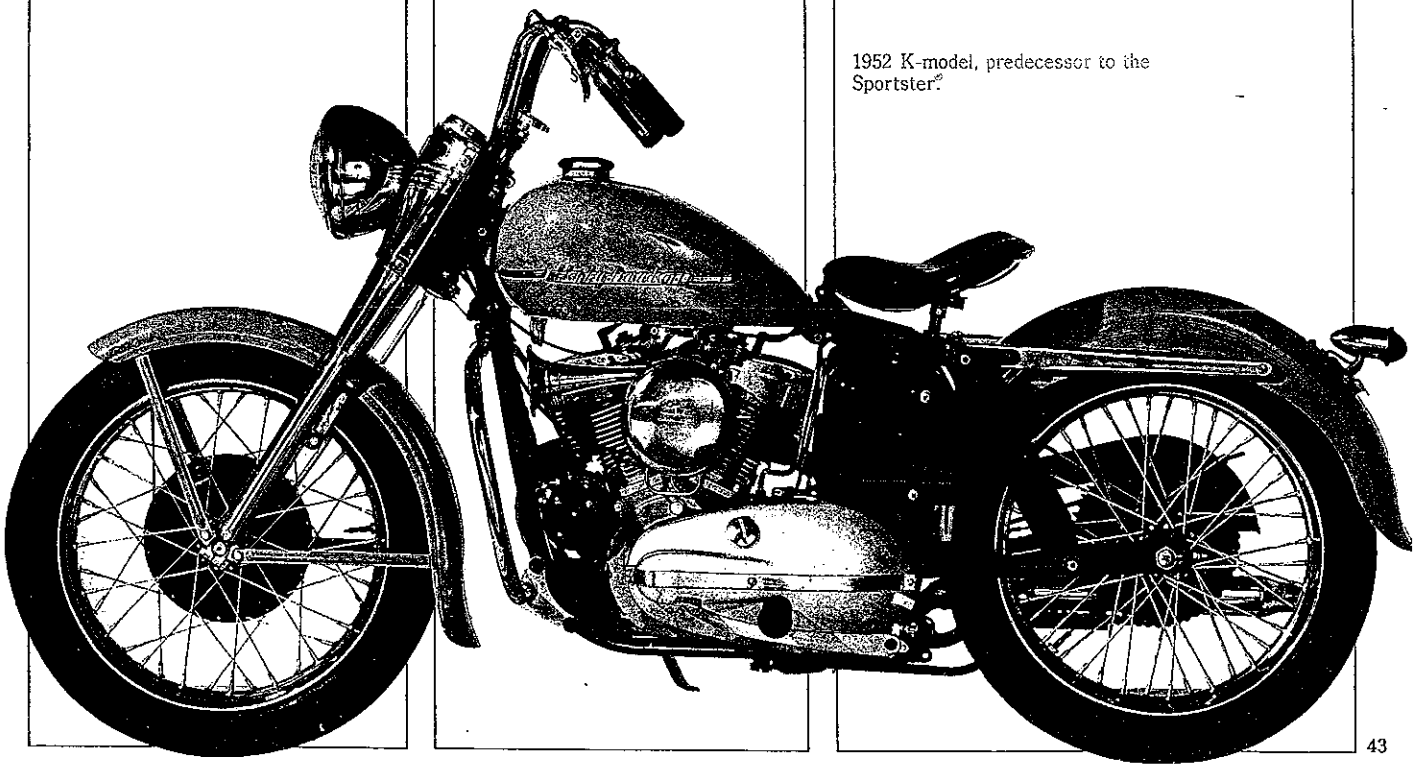
"Willie G." Davidson, after winning a 1952 endurance run.

A 165 cc single replaced the 125 in 1953, and the 61 cu. in. twin disappeared from view, as the "74" gained in popularity.

As Harley-Davidson celebrated its Golden Anniversary and looked toward the future, one of its oldest and closest competitors, Indian, decided it had no future, then quietly passed from the American scene.

When 1954 rose over the horizon, Harley-Davidson was the lone survivor in a once overcrowded American motorcycle marketplace.

The early fifties also brought a new concept to National motorcycle racing, with the naming of a champion based on a point system applying to American Motorcyclist Association sanctioned races. Joe Leonard, on his Harley-Davidson, became the first National Champion in 1954. Brad Andres took it in 1955.



1952 K-model, predecessor to the Sportster®

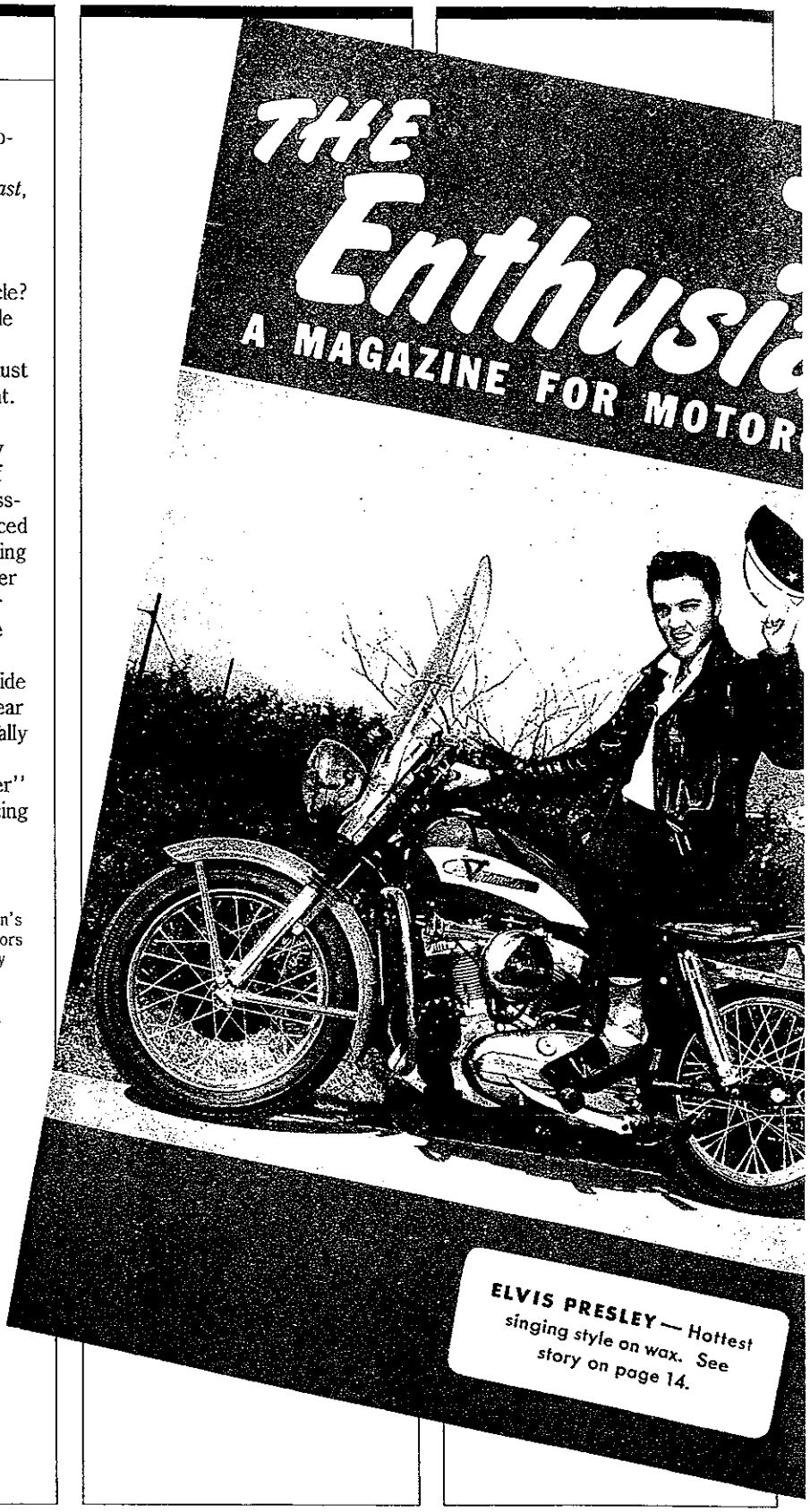
A Whole New World: 1955-1969

Rock and roll was king on car radios and juke boxes. Harley-Davidson was the two-wheeled king of the road.

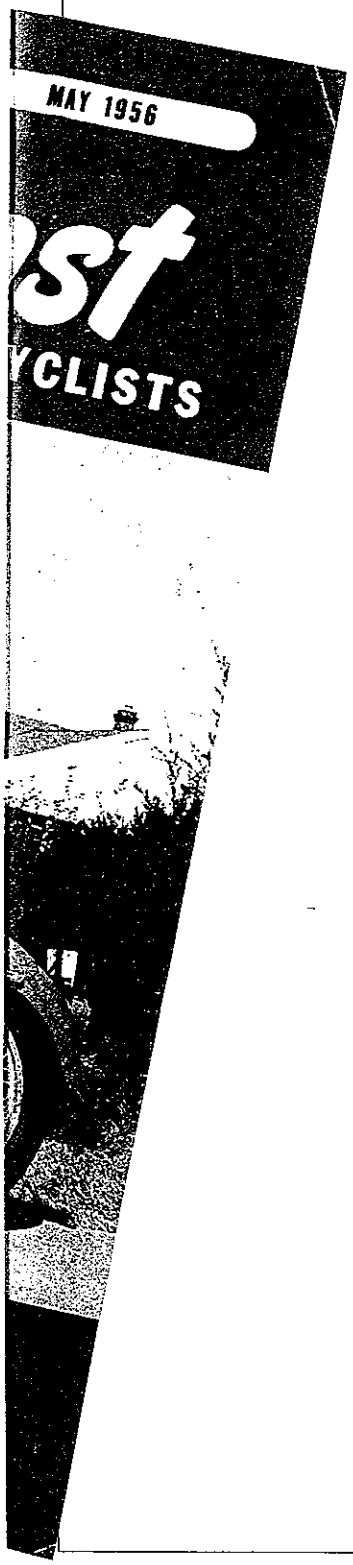
In the May, 1956, issue of *The Enthusiast*, a short article appeared titled "Who is Elvis Presley?" The young singer from Memphis also appeared on that issue's cover. What was Elvis' favorite motorcycle? Why, his 1956 KH, of course. The article ended with Harley-Davidson saying, "Good luck for your future, Elvis." It must have worked, because the boy did alright.

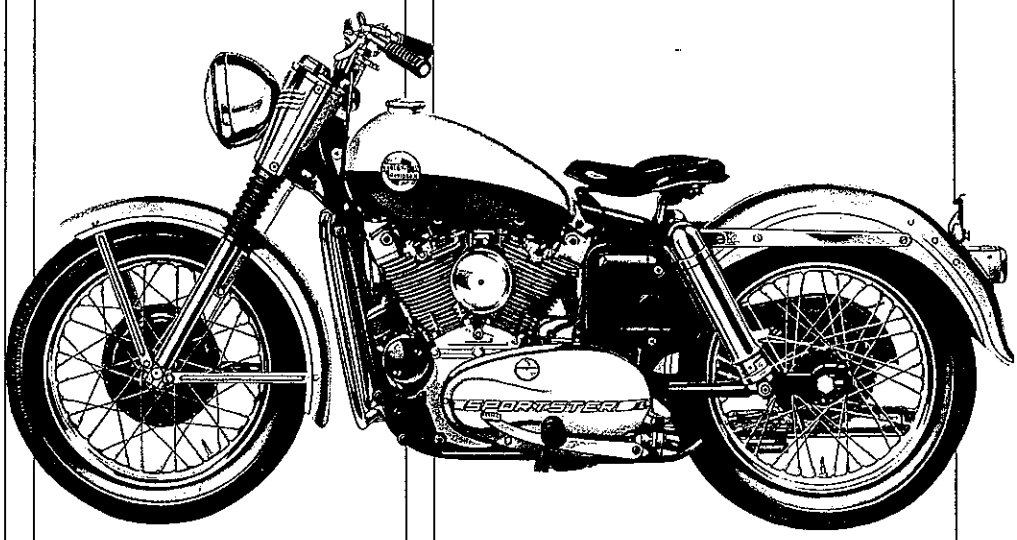
Nineteen-fifty-seven got underway with the introduction of the exciting new Harley-Davidson XL Sportster, father of the superbikes. This immediately successful, 55 cu. in. overhead valve model replaced the venerable 55-inch KH. It was motoring news to equal Chevrolet's "One H.P. per Cubic Inch." The following year a hotter version of the Sportster appeared as the XLCH ("Competition Hot") model.

The Hydra-Glide gave way to Duo-Glide in 1958, with the addition of a hydraulic rear shock suspension to go with its hydraulically dampened front fork. It also featured a hydraulic rear brake. A 125 cc "Hummer" was added to the lightweight line, replacing the M-125.

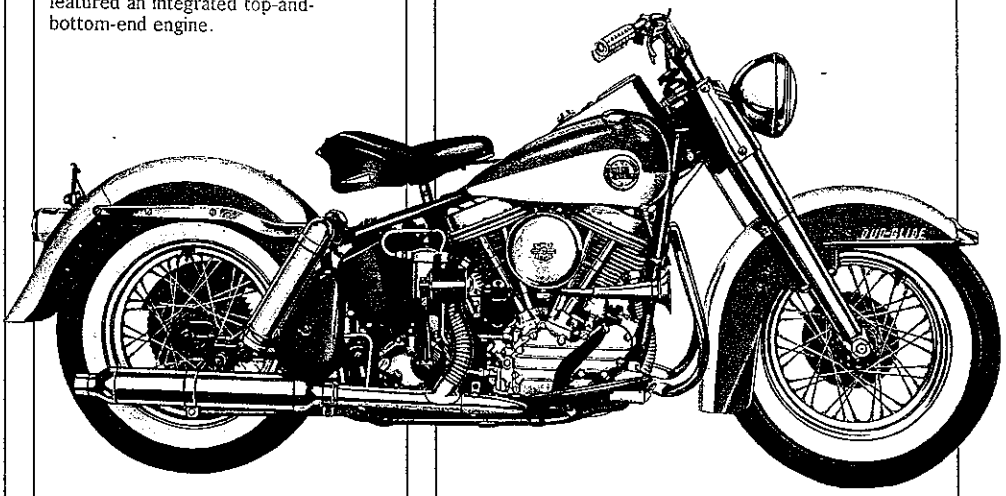


The "Enthusiast," Harley-Davidson's magazine for riders, takes the honors as "America's Oldest Continuously Published Motorcycle Magazine." Originating in 1916, this May, 1956 issue featured a familiar face.





The revolutionary 1957 Sportster® featured an integrated top-and-bottom-end engine.



Hydra-Glide® became Duo-Glide® in 1958, with the introduction of rear swing arm suspension.

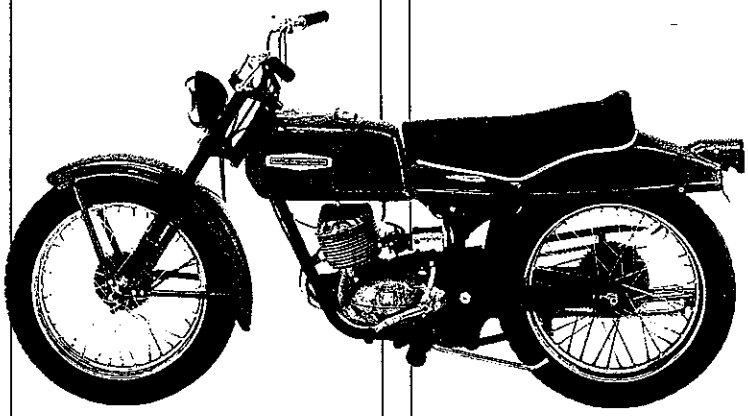
In 1960, Harley-Davidson manufacturing went international, through an agreement with Aeronautica Macchi S.p.A. in Varese, Italy. Over the next 18 years, a Harley-Davidson line of light and middleweights would be produced there. Machines ranging from 50 cc up, with names like Shortster, Legero, Baja, Z-90, the SS and SX series and of course the Sprint, came from the Milwaukee-Italy connection.

A futuristic 165 cc motor scooter, called the Topper, with automatic transmission and fiberglass body, appeared in 1960. It was sold through 1965.

In racing, the name Carroll Resweber dominated from 1958 to 1961 with his four consecutive National Championships. In fact, the Cedarburg, Wisconsin native finished 1961 having come in first at 98 percent of the races he started. Resweber was succeeded as Harley-Davidson's leading man on the race circuit by Bart Markel and Roger Reiman. Ralph White, Cal Rayborn and Mert Lawwill carried on the winning tradition right up to the end of the decade.

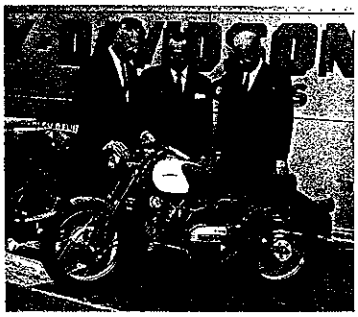
Harley-Davidson entered an entirely new leisure field in the early Sixties, when production of gasoline and electric powered golf cars began, in both three and four-wheel versions, with wheel or tiller steering.

When it became apparent that fiberglass was becoming more versatile and more useful for golf cars and motorcycles, Harley-Davidson established its Tomahawk (Wis.) Division in 1963. The Company purchased a fiberglass boat company and converted it to manufacture fiberglass components for various models.

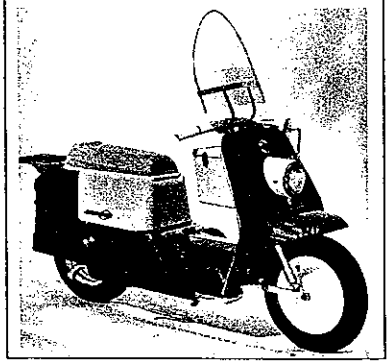


The 1966 Bobcat was powered by a 175 cc engine.

The ultra-lightweight 1965 M-50 Sport.



William J. Harley, Walter C. Davidson and William H. Davidson inspect the first cycle shipment from the Italian connection, Aermacchi Harley-Davidson.



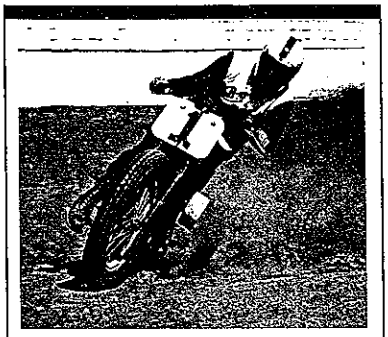
The company entered the scooter market in 1960. Shown is a 1963 Topper.

Impressing a favorite girl was easy if you had a 1960 Super 10. It was a continuation of the 165 cc line started in 1953.

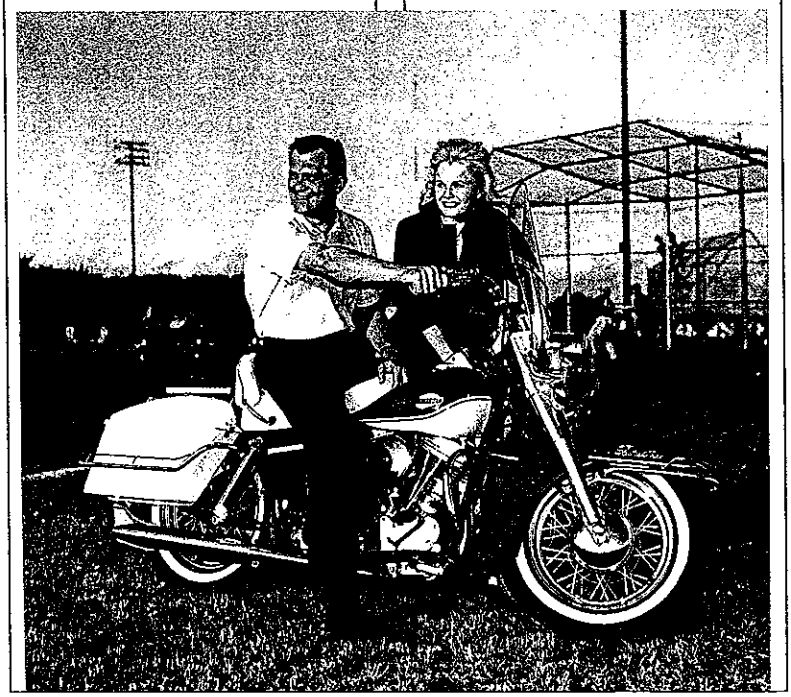
In 1965, the Duo-Glide became the Electra-Glide with the addition of an electric starter and a voltage increase from six to twelve. Later, the generator would be replaced with an alternator, hydraulic disc brakes would be added front and rear, and carburetors would be updated. In 1967, an electric start version of the Sportster appeared.

The first break in the second generation chain of the founding families came in 1967 when Gordon Davidson died following a brief illness. Shortly afterward, John Harley became an active force in the company's always important Parts and Accessories Division. A third generation came to the forefront as the sixties drew to a close with John Davidson entering sales and William "Willie G." Davidson taking up the post of design director. John had joined the company in 1959 and would later serve as president. Willie G. joined the company in 1963.

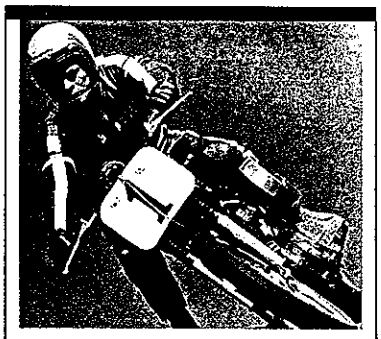
As the world said goodbye to the stormy decade of the Sixties, Harley-Davidson, too, passed into a new era. The company, a privately held corporation for more than 60 years, went public in 1965 and merged in 1969 with the American Machine and Foundry Company.-AMF was chaired by Rodney C. Gott, a Harley fan who learned to ride on a 1933 VLD prior to World War II.



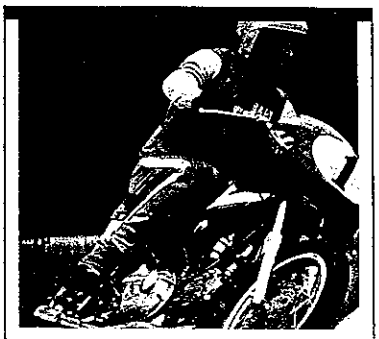
Carroll Resweber, one of the best all-around racers ever.



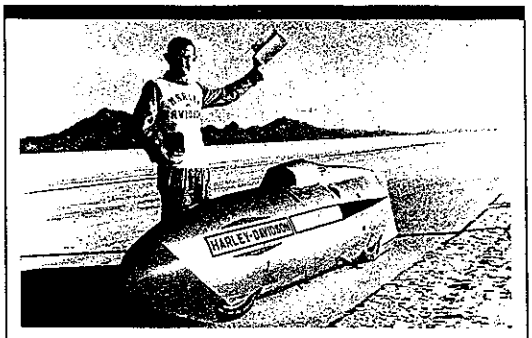
"King of the Highway," The first year Electra-Glide® (featuring electric starting) was unique, in that the 1965 model was also the last year for the "Panhead" engine.



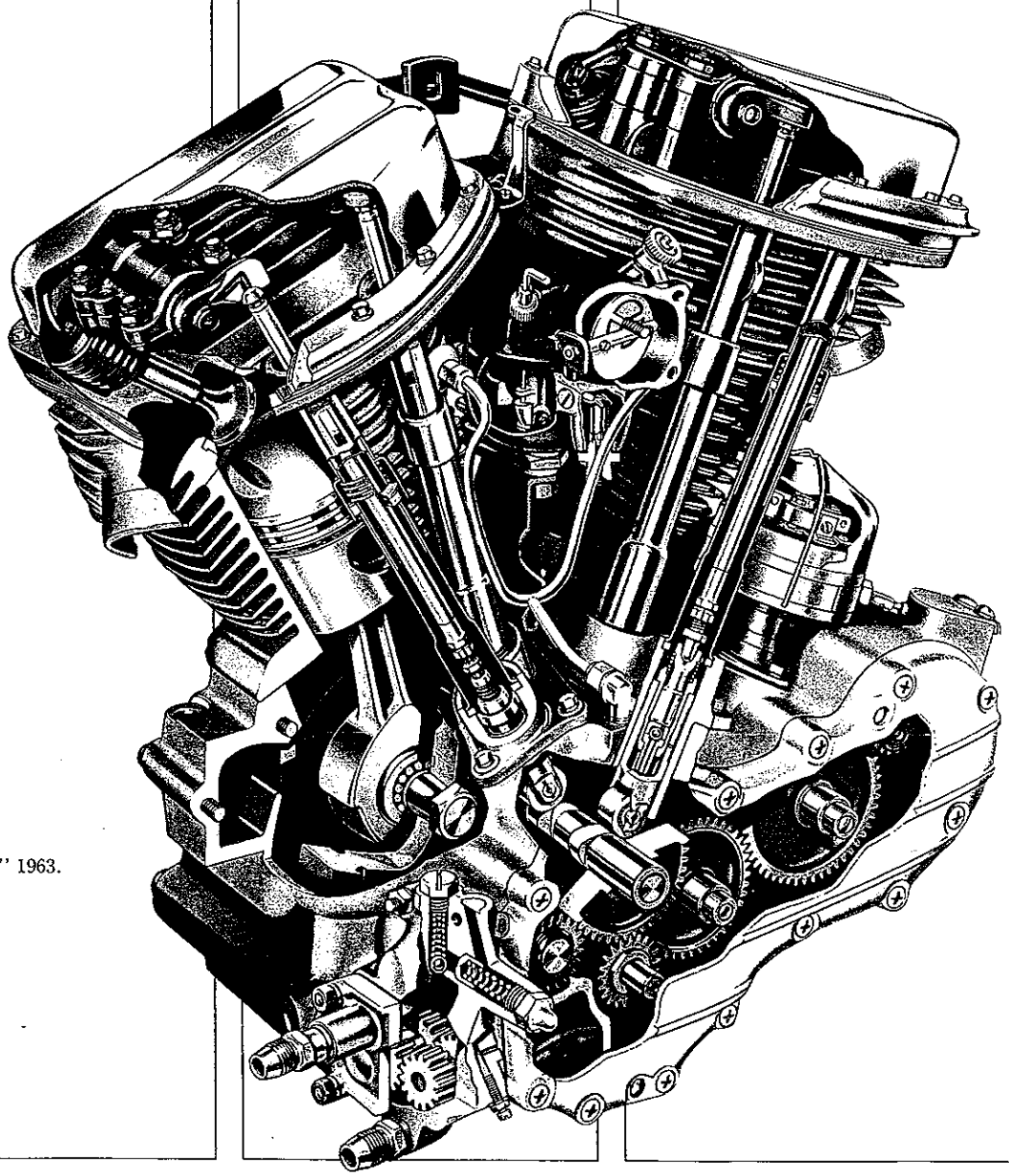
1964 Grand National Champion Roger Reiman. Both Reiman and George Roeder became Harley-Davidson dealers.



Dirt track start "Black Bart" Markel, champion in 1962, 1965 and 1966.



In 1965, George Roeder set a World Land Speed Record of 177.225 mph for 250 cc motorcycles on a Harley-Davidson Sprint.



The "Panhead," 1963.

The AMF Years: 1969-1981

The merger of Harley-Davidson and AMF provided continuing growth and resource availability for Harley-Davidson as it entered the Seventies.

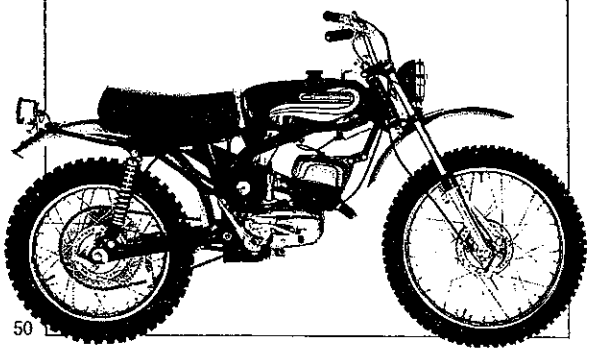
The 1970 models remained much the same as the previous year. In 1971 a new two stroke trail bike, the Baja 100, and of greater significance, the new FX Super Glide, with its 74 cu. in. engine, entered the market. The Super Glide was a hybrid outgrowth of the FLH and Sportster. The following year, larger bore pistons made the Sportster grow to 1000 cc's.

In mid-year 1974, the FX Super Glide got an electric starter as an option; enter the FXE. But the biggest news that year was the move of chassis manufacturing and assembly operations, excepting engines and transmissions, to a facility in York, Pennsylvania, with its production line built around a massive overhead conveyer system.

The move to York provided a much-expanded facility to handle a growing market and the need to make more bikes. When AMF merged with Harley-Davidson, H-D was producing about 14,000 vehicles per year. By the end of the decade, that number would grow to 50,000. Clearly, the manufacturing plants had to keep pace. York production began with the 1975 models.

The 1976 Harley-Davidson line consisted of an Electra Glide (1200 cc), two Super Glides (1200 cc), two Sportsters (1000 cc), six lightweights (ranging from 125 to 250 cc) and optional Bicentennial "Liberty" editions of the five existing V-Twins.

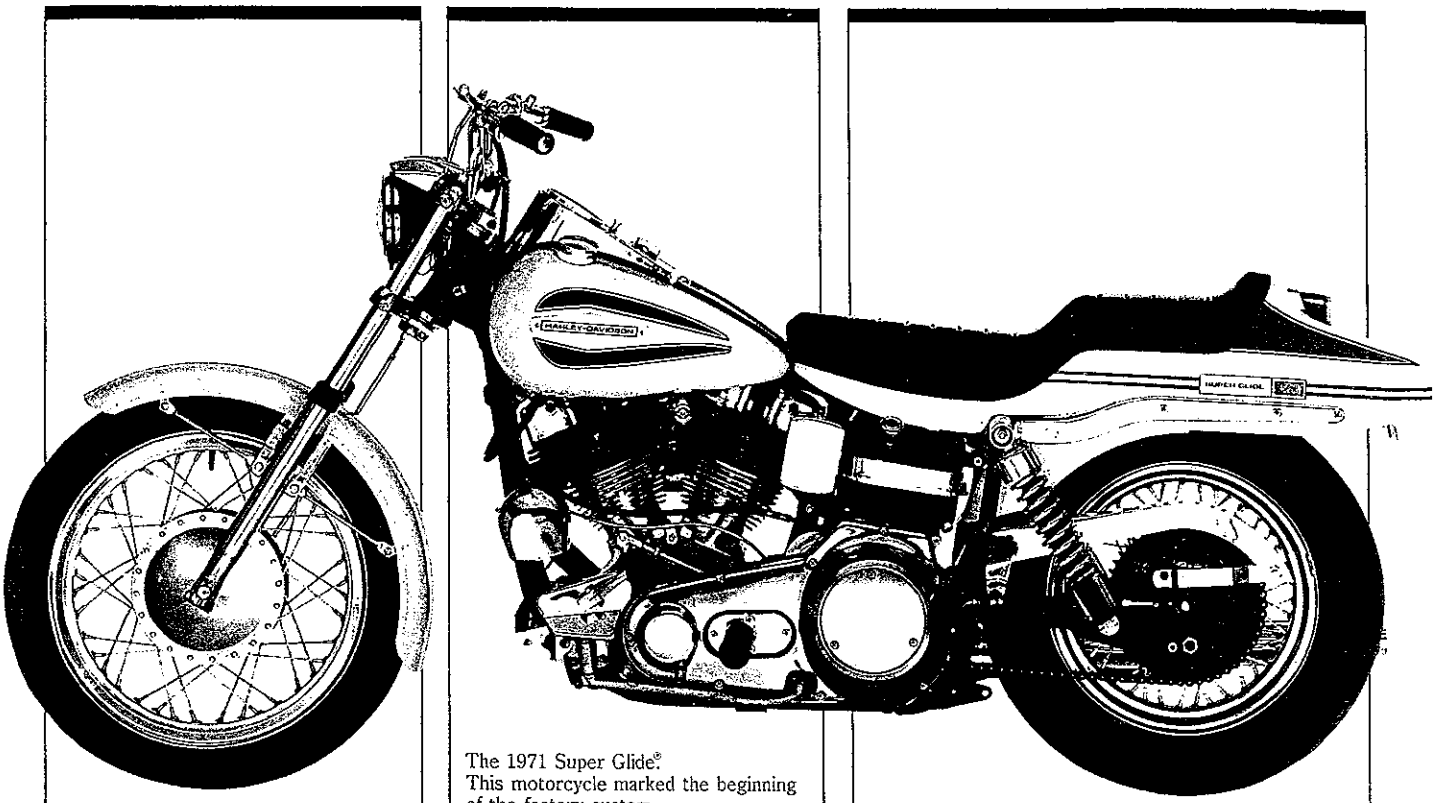
The Baja-100 two stroke trail bike made its appearance in 1971.



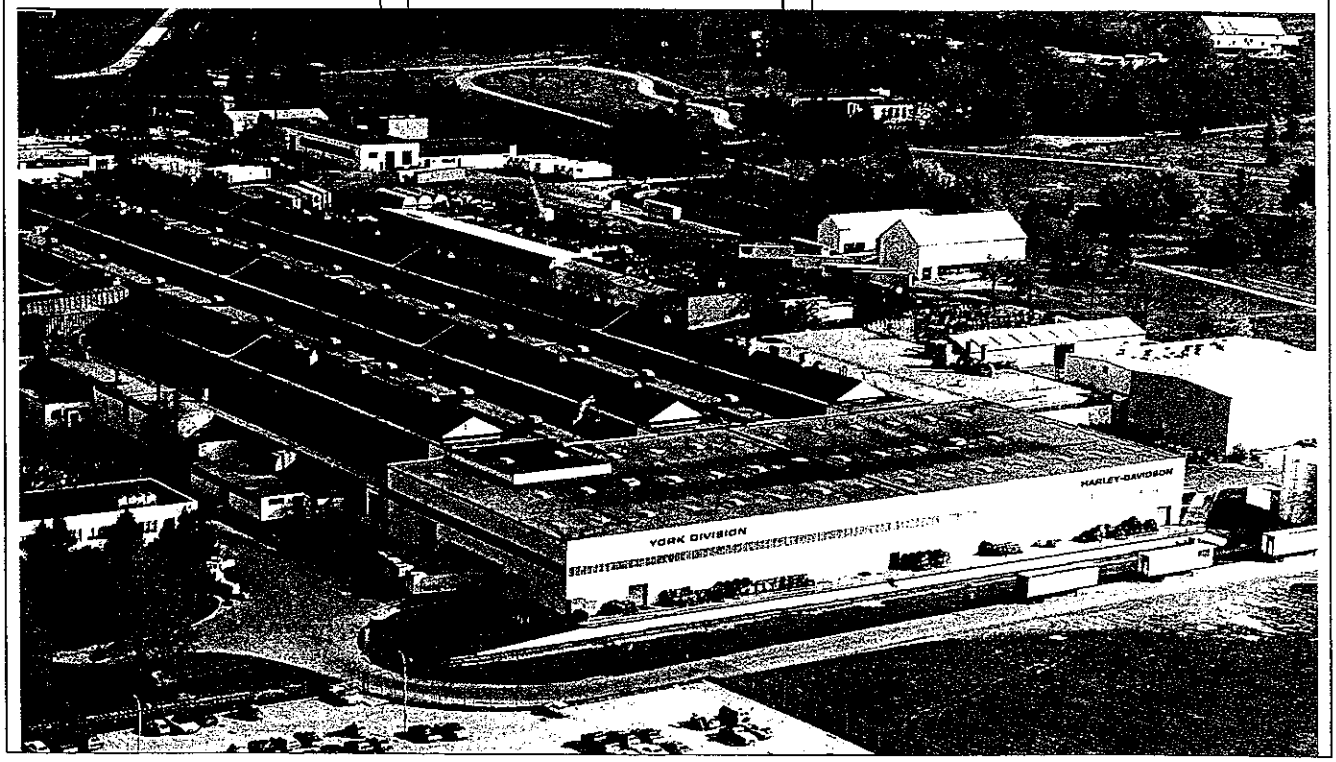
Engine and transmission manufacturing remained in Milwaukee.

Rodney C. Gott

Final assembly operations moved to York in 1974.



The 1971 Super Glide.®
This motorcycle marked the beginning of the factory custom.



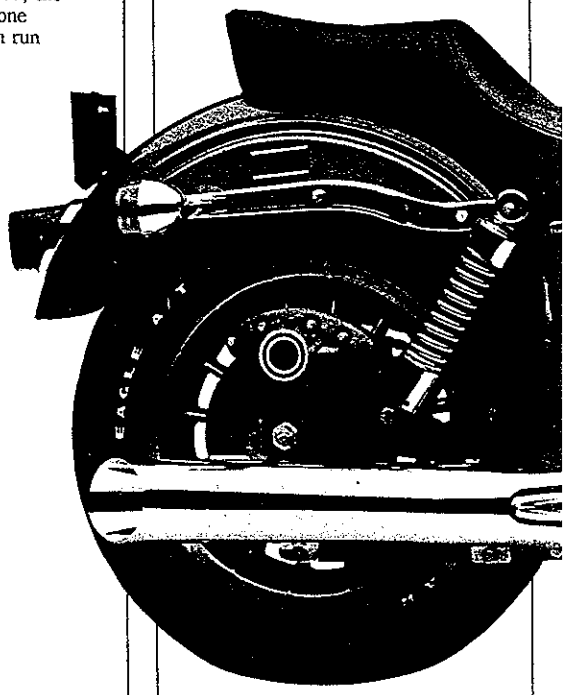
The next year saw the birth of two exciting new heavyweights, the XLCR Cafe Racer, an internationally flavored street machine and the FXS Low rider, the name of which described it perfectly.

On June 8, 1977 the Rodney C. Gott Harley-Davidson Museum was dedicated at York, named to honor the AMF chairman. Early on, the company had started the practice of saving at least one motorcycle from each production year for the collection. Thus, the museum collection spans all of Harley-Davidson history, including one of the first three motorcycles produced.

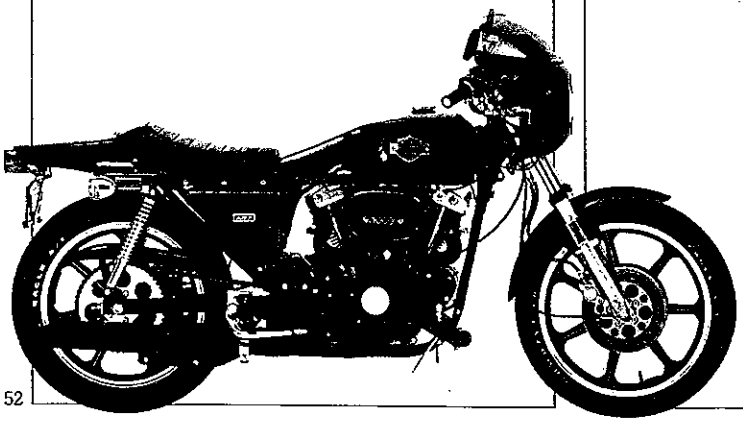
The late Seventies also brought a new challenge... the challenge of meeting increasingly stringent government environmental regulations. While the regulations resulted in changes to carburetion, ignition and exhaust systems, the company didn't miss a beat in making the adjustments. Indeed, Harley-Davidson advanced technology in the process, with such things as the introduction of V-fire Electronic Ignition.

Harley-Davidson marked its 75th Anniversary in 1978 with a giant cross-country ride by executives. It remained the leader in the heavyweight cycle field as well. Sportster, Roadster, Low Rider and Super Glide were the big names in big bikes, along with Electra Glide, updated to 1340 cc's (80 cu. in.) in 1978.

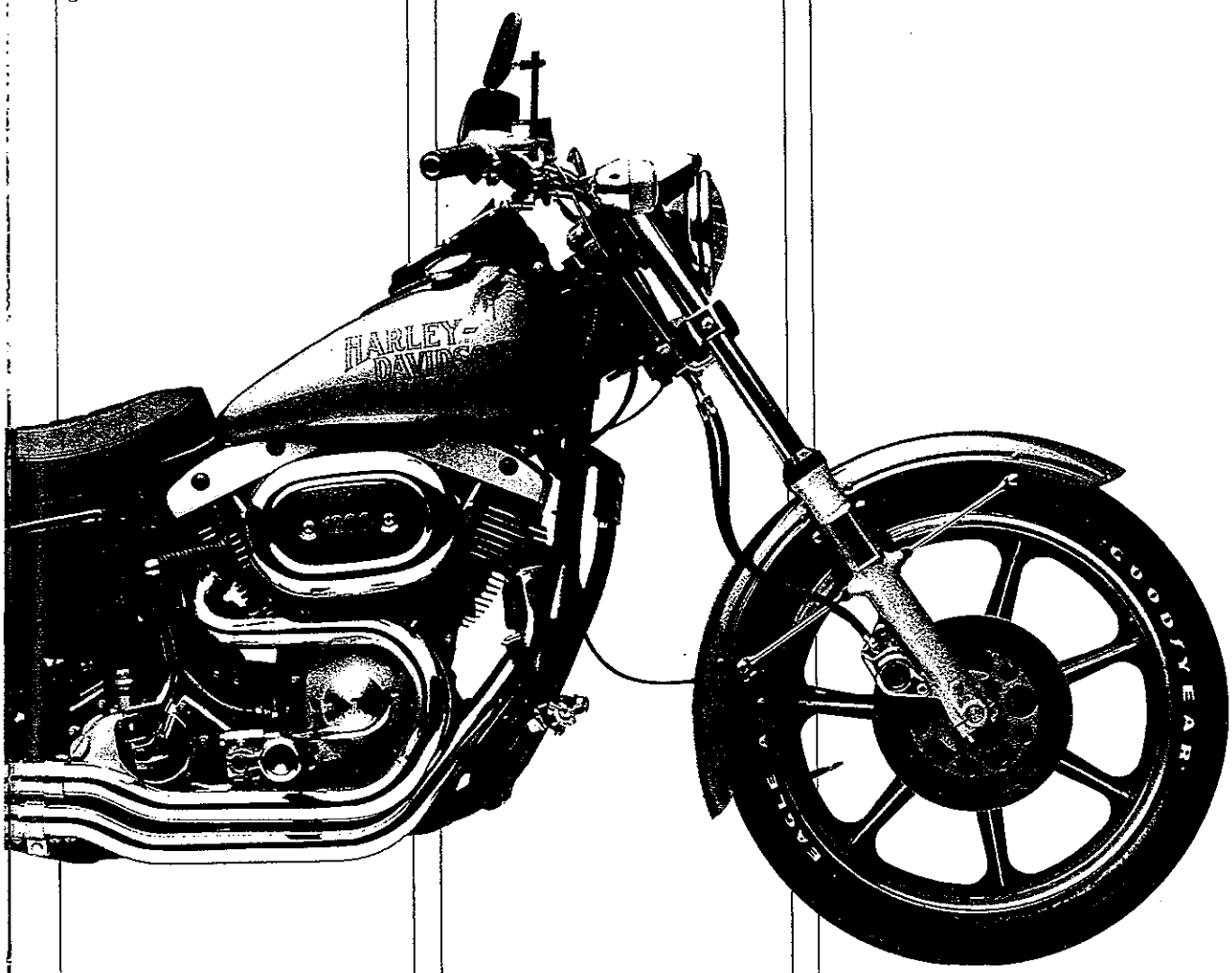
Harley-Davidson opened a motorcycle museum at York in 1977; the company had kept at least one model from each production run for the collection.



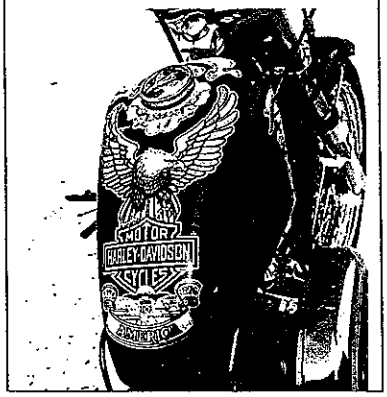
The sleek black Cafe Racer® joined the Low Rider™ as a 1977 introduction.



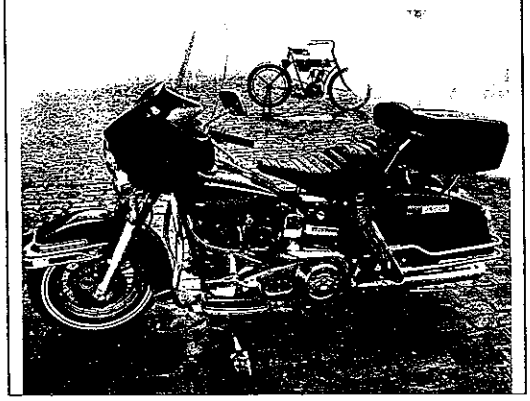
The 1977 FXS "Low Rider™" continued the "factory custom" genre.



Motorcycles got patriotic decals as the Bicentennial Editions celebrated America at 200.



The Diamond Anniversary Electra Glide® creates quite a contrast with its 1903 ancestor, as Harley-Davidson turned 75 in 1978.



The 1980 model year brought more exciting introductions. The 80 cu. in. FLT Tour Glide was born, with five speed transmission, oil bath enclosed rear chain and a vibration isolated engine. Together with a totally redesigned frame and steering geometry for "sport bike handling," the FLT was destined to become the inheritor of the FLH's "King of the Highway" crown. Also introduced was the 80-inch Wide Glide factory custom and the Sturgis. What made the latter so unique was that the 80-inch engine transmitted its power to the road through twin belt drive. Thus the belts, which are lighter and simpler than a shaft, smoother than a chain and require no lubrication, made a comeback after a several-decades absence—with the latest in modern technology applied, of course.

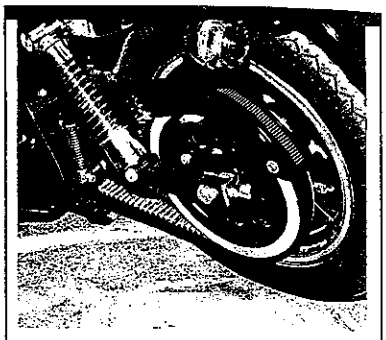
Racing successes continued, with riders like Walter Villa, Corky Keener, Randy Goss, and the incredible Jay Springsteen. "Springer" came on like a whirlwind, taking the 1976, 1977 and 1978 championships, charging for the career wins record and chasing Carroll Resweber's four titles feat.

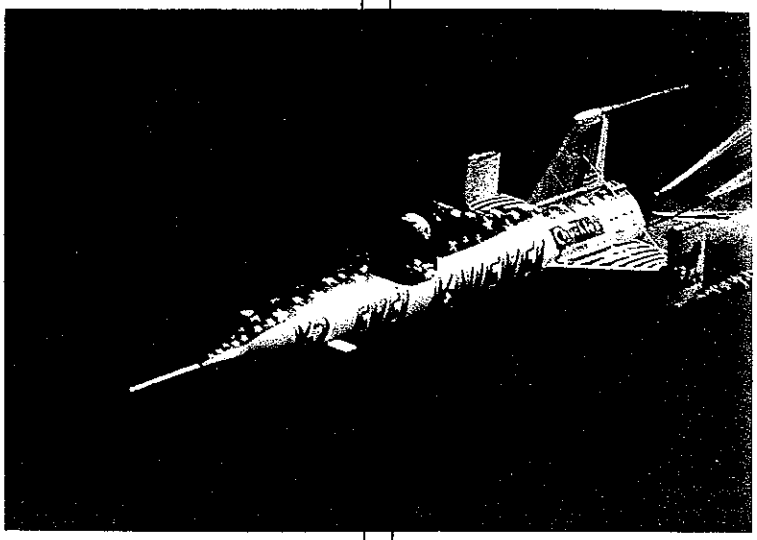
The company also held an increasing number of consumer activities, like the annual motorcycle show at Daytona during Bike week, and sponsorship of the "Bikers' Fight Against Muscular Dystrophy."

At the 1981 Daytona activities, the air was full of big news concerning the company's future.

The Number One logo was created to publicize Mert Lawill's 1969 Grand National Championship.

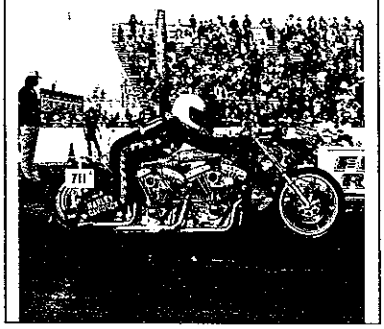
The belt drive concept saw its successful reincarnation on the 1980 FXB Sturgis.



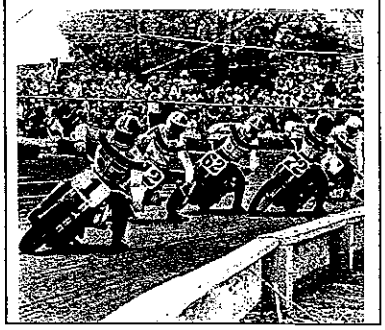


Evel Knievel captured the public's attention as he tried his most daring jump ever—the Snake River Canyon in 1974.

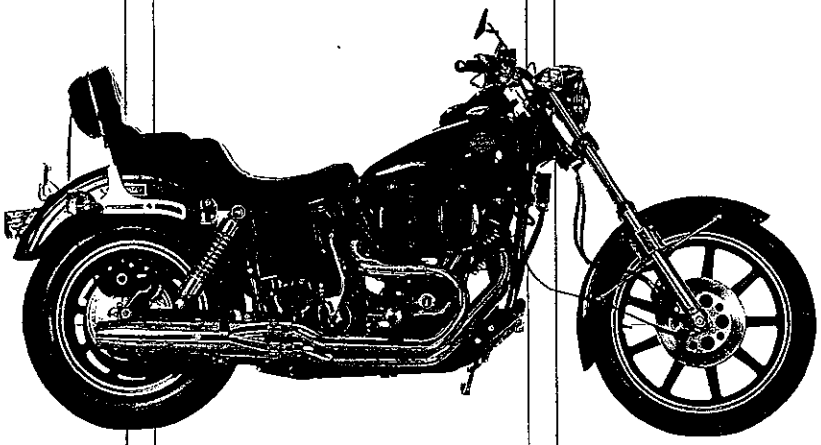
Double engine dragsters proved their awesome power.



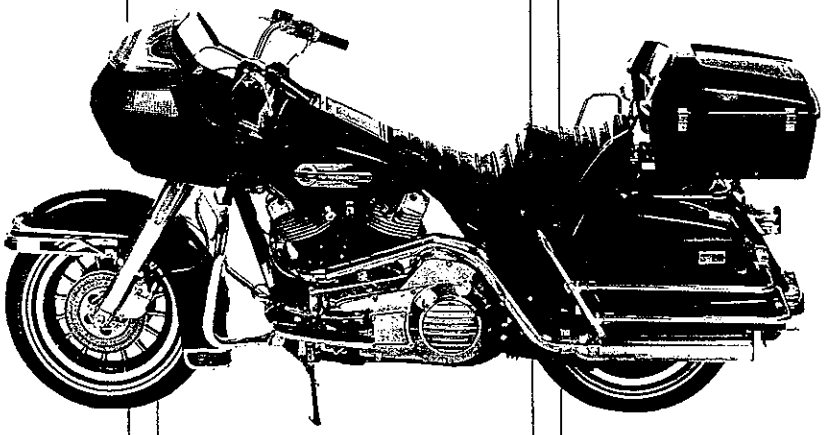
Harley-Davidson dominance continued on dirt tracks of the seventies.



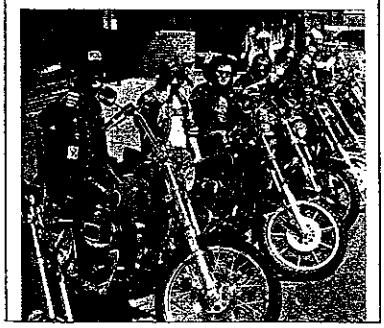
The Sturgis also represented further advances in custom styling.



The 80 cu. in., 1980 FLT Tour Glide,® introduced the five-speed, vibration-isolated engine and unique "balanced" front end. It also brought its own version of the enclosed chain.

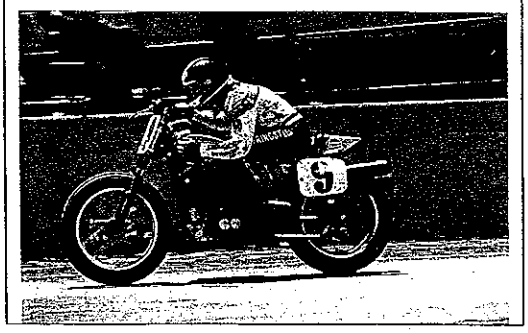


That's entertainment. Celebrities using harley-Davidson have abounded through the years, including "The Doobie Brothers" Rock group.



Michael Parks of "Then Came Bronson" fame.

Jay Springsteen claimed his rank at the top, taking the 1976, 1977 and 1978 championships.



The Eagle Soars Alone: 1981

The big news came on February 26, 1981, when a group of senior Harley-Davidson executives signed a letter of intent with AMF to purchase Harley-Davidson Motor Company from AMF. The purchasing group was headed up by Vaughn Beals, an AMF executive in charge of Harley-Davidson operations, and included Charles Thompson, company president; William G. Davidson and others in the company.

During a press conference at Daytona Beach, on March 3, 1981, Beals talked about the positive aspects of the Harley-Davidson merger: "From 1969 through 1980, AMF's substantial capital investment in the motorcycle and golf car businesses permitted Harley-Davidson revenues to grow from $49 million to approximately $300 million..."

Beals went on to say, "AMF helped the Motor Company through a critical stage of growth...The most tangible evidence of their success is the company's ability to now stand on its own once again, and to look to the future with pride and expectation."

The return of the company to private ownership was completed June 16, 1981 as the shareholder group of the new Harley-Davidson celebrated the event with a York-to-Milwaukee ride, proclaiming "The Eagle Soars Alone." In addition to Beals, Thompson and Davidson, Dr. Jeffrey Bleustein, David Caruso, John Hamilton, Timothy Hoelter, David Lickerman, James Paterson, Peter Profumo, Chris Sartalis, Ralph Swenson and Kurt Woerpel formed the officer and shareholder group of motorcycle enthusiasts.

Signing documents to mark the return of Harley-Davidson to stand-alone status, in June, 1981, were (from left): Ralph Swenson, Charles K. Thompson and seated, AMF President Ray Tritten and Vaughn Beals.

In June, 1981, the new owners and full time employees of Harley-Davidson pose for an official portrait. Standing (from left) are: John Hamilton, Dr. Jeffrey Bleustein, Kurt Woerpel, Chris Sartalis and William "Willie G." Davidson. Seated (from left) are: James Paterson, Timothy Hoelter, David Lickerman, Peter Profumo, David Caruso, Ralph Swenson, Charles Thompson and Vaughn Beals.

New Harley-Davidson Chairman Vaughn L. Beals, and wife Eleanore, suited up and ready to ride from York to Milwaukee to commemorate the company buy-back.

The first non-AMF, Harley-Davidson off the assembly line gets a gold-plated oil dipstick.

The buy-back was accompanied by an even firmer resolve to build motorcycles in the best American tradition of quality and durability. An internal program called "I Make The Eagle Fly" was instituted in all areas of the company and in dealerships, with a commitment to build, sell and service the products with a new level of quality. Two models introduced for 1982, the FXR Super Glide II with its rubber-isolated five-speed powertrain and a new welded and stamped frame Sportster quickly became prime examples of the company's commitment to a future of exciting products in the best of the American tradition.

After nearly 80 years as the leader of America's motorcycles, Harley-Davidson was embarking on a course that was very much a reflection of the company's pioneering spirit and founding standards of excellence.

A pioneering spirit would be essential to the survival of the new privately-held Harley-Davidson. In 1982, the demand for motorcycles in the 651+cc market (Harley-Davidson's niche in the motorcycle industry) dropped by over 33,000 units compared to 1981 figures. Harley-Davidson laid off employees to bring production and inventories in line with demand while Japan continued to export in record numbers.

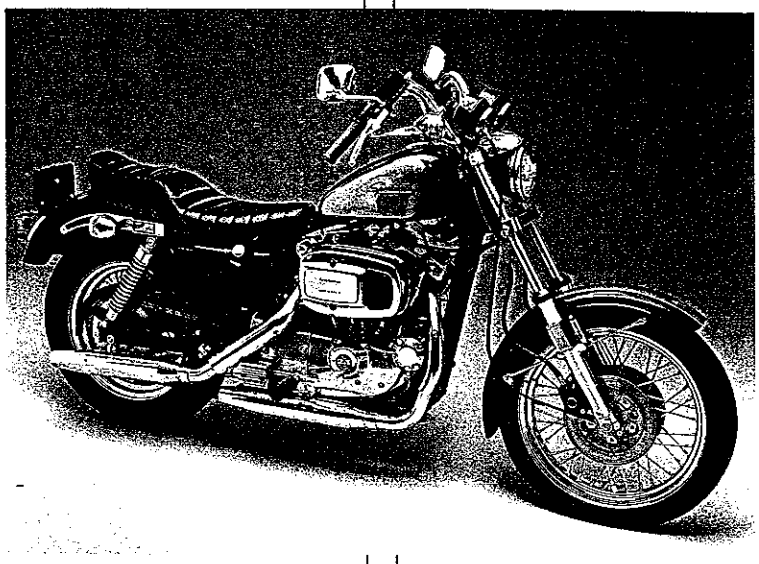
In September of 1982, Harley-Davidson petitioned the International Trade Commission (ITC) for tariff relief from Japanese manufacturers who were building up inventories of unsold motorcycles.

On April 1, 1983, upon ITC recommendation, President Reagan imposed additional tariffs on all Japanese motorcycles 700cc or larger. The additional tariff was to be effective for a five year period ending in April, 1988, at annually declining rates of 45, 35, 20, 15 and 10 percent.

Harley-Davidson had made it clear from the beginning that special tariffs were not aimed at preventing free market competition. According to Vaughn L. Beals, Jr., Harley-Davidson chairman and chief executive officer, "We simply wanted the U.S. government to restore order to a motorcycle market under seige by Japanese manufacturers who increased production in the face of sharp market decline."

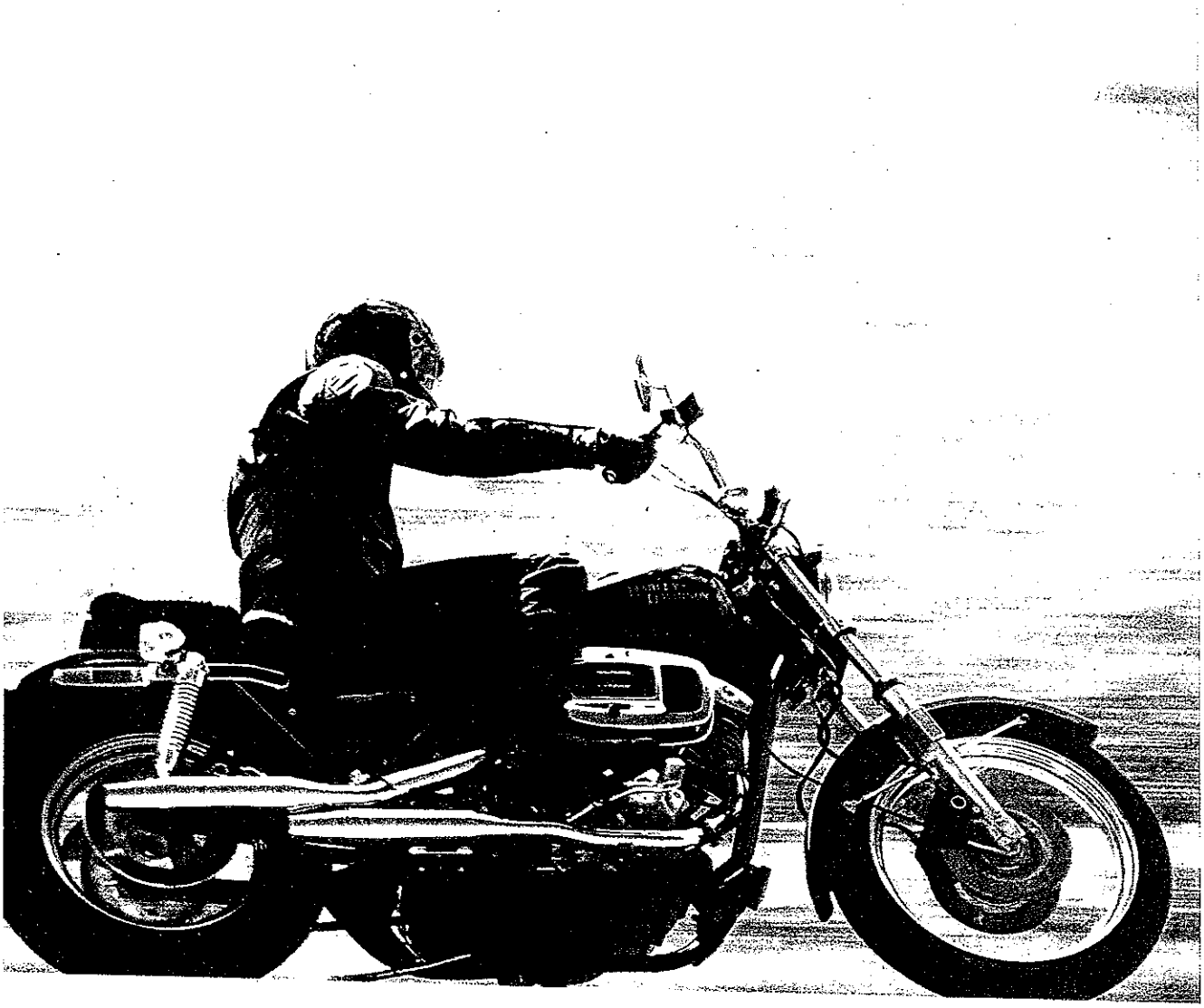
One of the major factors in the ITC's decision to recommend tariffs was the fact that Harley-Davidson had started a major revitalization campaign in the late 1970s. The campaign was aimed at improving efficiency and product quality through programs like Just-In-Time manufacturing, Employee Involvement and Statistical Process Control.

Programs like Statistical Process Control gave employees a tool to track their machining process, and help to ensure quality.



In 1982, the Company produced a special 25th Anniversary Sportster® to celebrate the proud motorcycle's heritage as the first of the superbikes.

The introduction for 1982 of the evolutionary FXR Super Glide® II (right) and a redesigned Sportster® (above) were fitting models to mark the spirit of the 79 year old company.



A different campaign was aimed at getting Harley-Davidson owners more involved in the sport of motorcycling. The Harley Owners Group (H.O.G.), the only factory sponsored motorcycle club in the world was formed in 1983. H.O.G. played a significant role in the Company's revitalization as it re-focused attention to customer satisfaction after the sale.

H.O.G.'s special benefits and motorcycle rallys and events have helped to boost membership to over 90,000 in six years.

During this time, Harley-Davidson was also working on further improving the product. In 1983 Harley-Davidson introduced a critically acclaimed "anti-dive" air assisted suspension system. Harley-Davidson also introduced the first computer-controlled ignition system in 1983.

Although the new designs did a lot to improve the motorcycles, the big V-Twin shovelhead engine didn't live up to the current levels of consumer's expectations for function and durability.

In 1984, Harley-Davidson introduced the 1340cc V^2 Evolution engine on five models. The product of seven years of development, the Evolution engine produced more power at every engine speed, was lighter, cooler and cleaner running and extremely oil-tight. It was designed for high reliability and durability with a minimum of scheduled maintenance.

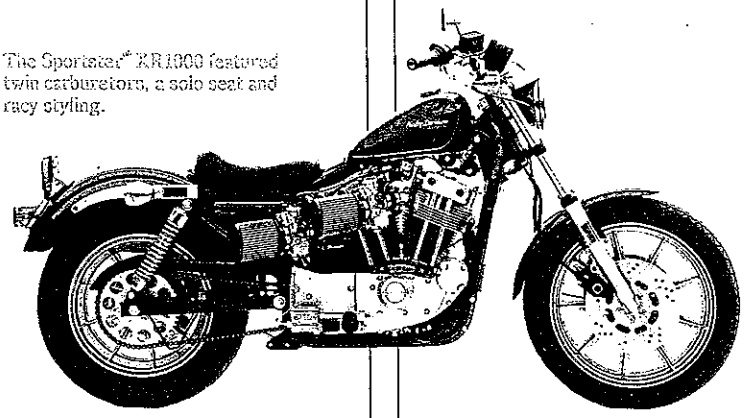
Revolutionary new motorcycles like the FXST Softail, an industry trend setter in styling, and the XR1000, with an engine based on the XR750 racing power plant, were also introduced in 1984 and did a great deal to help increase sales.

For the first time in years, Harley-Davidson motorcycles were given good grades in reviews by motorcycle magazines. Belt drive, five-speed transmissions and rubber isolated engines improved the product line.

The sight of a Harley-Davidson® mounted highway patrol officer is becoming more common in California.

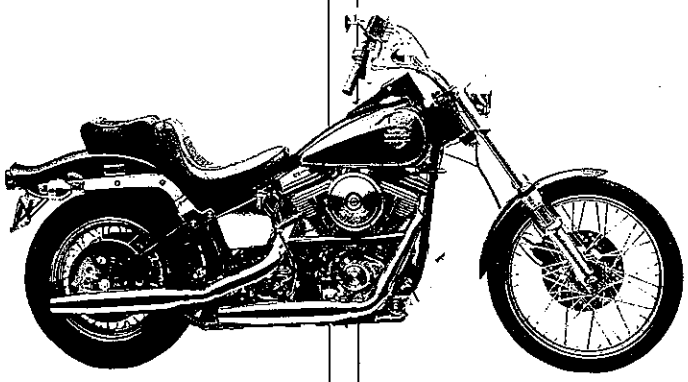
The Harley Owners Group® (H.O.G.) has a unique way of bringing riders together as evidenced by the people attending this H.O.G. rally in 1993.

The Sportster® XR1000 featured twin carburetors, a solo seat and racy styling.



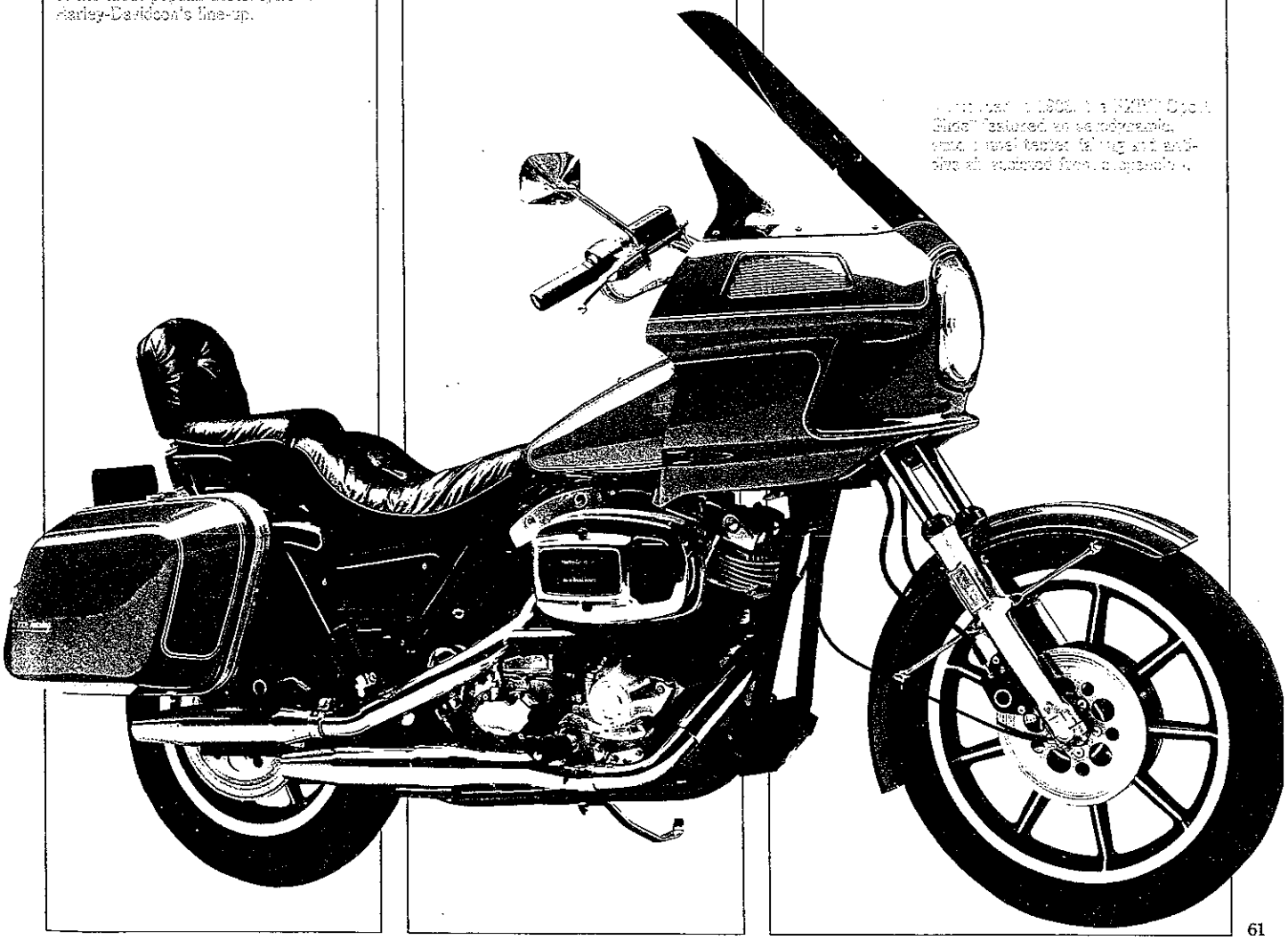
To get the word out to the public, the Company created an industry "first" when it started a "Super Ride" demo program at dealerships nationwide. A fleet of demo bike was also put into service at all major motorcycle rallies to let riders everywhere experience the new Harley-Davidson quality.

Harley-Davidson also won the California Highway Patrol contract in 1984. This was the first time in ten years that a Harley-Davidson motorcycle was able to meet the rigid standards of the CHP — a tribute to Harley-Davidson's improved quality and performance. The contract awards were repeated in 1985, 1987 and 1988, increasing the number of Harley-Davidsons in the CHP fleet.



The eighty cubic inch Evolution motor and unparalled styling [illegible] make the 1984 FXST Softail™ one of the most popular motorcycles in Harley-Davidson's line-up.

[illegible] 1983, the FXRT Sport Glide™ featured an aerodynamic, [illegible] tested fairing and anti-[illegible] from [illegible].



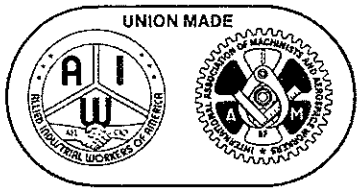
Harley-Davidson's 1985 motorcycles received a special AIW/IAM union label. The label was a tribute to the two international unions that represent the Harley-Davidson work force — the Allied Industrial Workers of America and the International Association of Machinists and Aerospace Workers. AIW Local 209 President Jerry Knackert said, "The union label is a reassurance to consumers that the people responsible for the product have confidence enough to put their seal of approval on it."

Harley-Davidson also created three special "Liberty Edition" models in 1985—1,750 Liberty Edition motorcycles in all. In a salute to the Statue of Liberty and the loyal riders of American-made Harley-Davidsons, the Company donated $100 for each Liberty Edition purchased to the Statue of Liberty/Ellis Island Foundation, Inc., for restoration of the statue. Harley-Davidson also organized a cross country "Ride for Liberty."

Vaughn Beals traveled on a northern route from the west coast to the east and Willie G. Davidson took a southern route. They rendezvoused in Washington D.C., and led thousands of riders to Liberty State Park, New Jersey. At the concluding ceremony there, Vaughn Beals presented a check for $250,000 to the Statue of Liberty/Ellis Island Foundation.

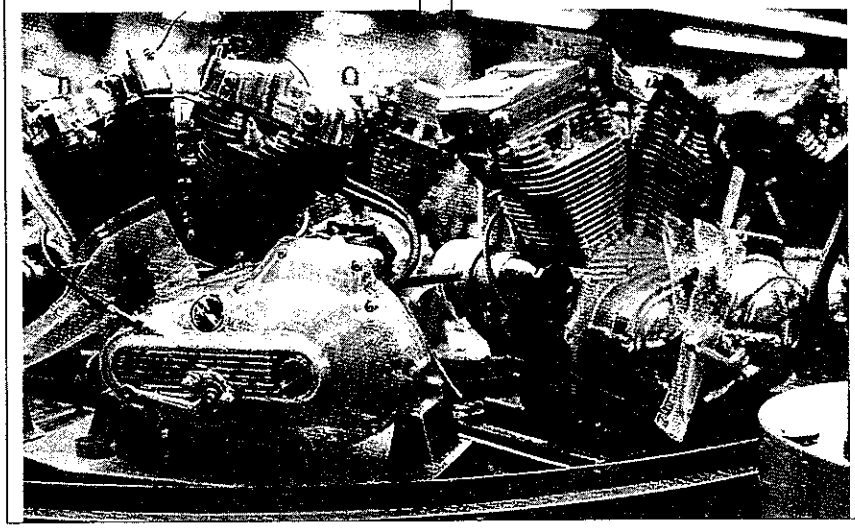
The big product news for 1985 was the introduction of Harley-Davidson's 1986 V² Evolution Sportster 883. The 883cc aluminum V-Twin engine gave Harley-Davidson its first entry in a decade in the smaller than 1000cc market and carried a suggested retail price of $3995 — eight hundred dollars less than the 1985 XLH 1000. The Evolution® XLH 883 Sportster gave Harley-Davidson a full line of Evolution engined motorcycles.

The introduction of the Heritage Softail® had Harley-Davidson's competition scratching their heads. In an era of space-age technology, the Heritage sported a look right out of the '50s.



The Union Label is something you won't find on any other motorcycle in the world.

The Evolution Sportster® marked the end of an era as the last Shovelhead Sportster Engine rolls off the assembly line followed by the first Evolution Sportster Engine.



But with all the hoopla over the new Sportster and Liberty Editions, Harley-Davidson didn't forget about its own heritage. A new addition to the FL family emerged, the Heritage Softail, a motorcycle with the timeless look of the 1950s backed by the technology of the 1980s.

The Heritage front end sported a wide front fender and a front suspension that looked like the first telescopic fork on the 1949 Hydra-Glide. The rear end of the Heritage Softail had the no suspension, hard tail look of the 1950s and a contemporary soft ride, due to the concealed gas-charged, horizontally mounted rear shocks.

The Liberty Ride brought the riders of American Freedom machines together in support of a common cause — the restoration of America's symbol of freedom.

A column of riders heads for the Capital of the United States on the final leg of the Liberty Ride.

Word of Harley-Davidson's improved quality had spread far beyond the motorcycle industry. In April of 1986, Harley-Davidson Chairman and Chief Executive Officer Vaughn L. Beals, Jr. accepted the prestigious Corporate Quality Award from the three Colorado sections of the American Society for Quality Control (ASQC).

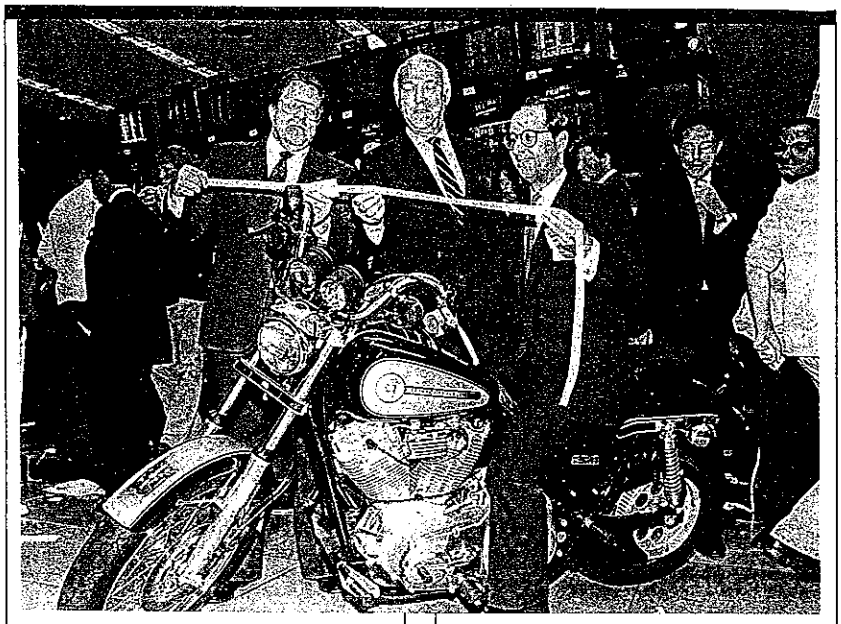
The ASQC is a nationwide organization of more than 50,000 professional members dedicated to the improvement of quality and productivity in American industry.

Also in 1986, the lead bank among the four that loaned the buyback team money decided they wanted out of the deal. The Company needed to round up cash in a hurry. To the rescue was Rich Teerlink, Harley-Davidson's Chief Financial Officer. Teerlink, who successfully returned the Company to public ownership by offering two million shares of common stock and a concurrent offering of $70 million principal amounts of subordinated notes due 1996. This offering helped reduce outstanding debt.

It also enabled Harley-Davidson to acquire Holiday Rambler Corporation, the world's largest privately-held producer of recreational vehicles, and a major supplier of specialized commercial vehicles.

Headquartered in Wakarusa, Indiana, Holiday Rambler Corporation was a perfect complement for Harley-Davidson, Inc. Richard Teerlink, Chief Financial Officer, Harley-Davidson, Inc., said, "We found Holiday Rambler to be a natural fit because it is in a closely-related industry and because of the many similarities it has to Harley-Davidson. Like Harley-Davidson, Holiday Rambler is a manufacturing-intensive, leading producer of premium quality recreational vehicles."

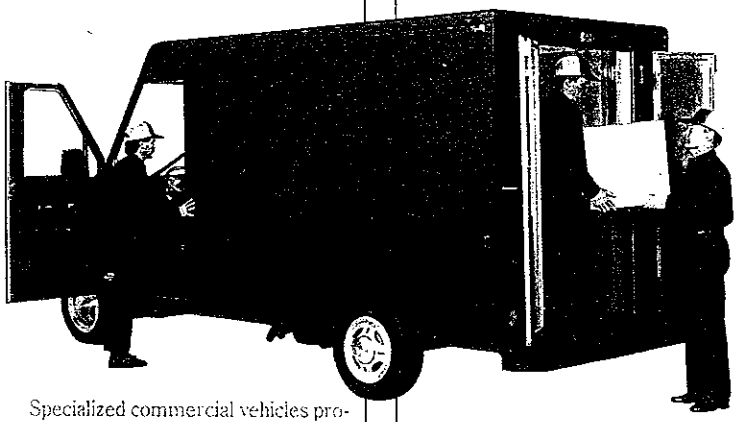
From its inception in 1953, Holiday Rambler Corporation developed high brand name recognition, a reputation for high-quality products and a broad base of loyal dealers and customers. The acquisition helped Harley-Davidson to broaden its earnings base.



Chairman Vaughn Beals and President Rich Teerlink monitor the ticker on the day Harley-Davidson listed on the American Stock Exchange.

Two heavyweight contenders joined forces as Harley-Davidson acquired the Holiday Rambler Corporation.

HRC
HOLIDAY RAMBLER CORPORATION



Specialized commercial vehicles produced by its Utilimaster Corporation subsidiary play an important role in the total Holiday Rambler Corporation picture.

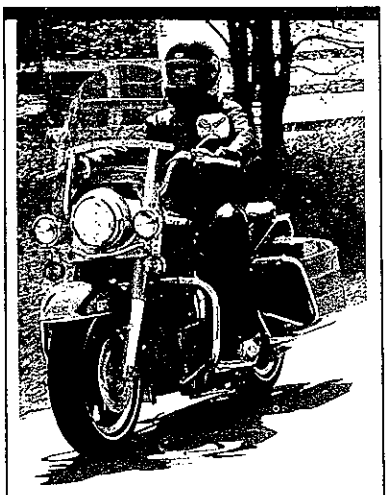
In 1987, Harley-Davidson initiated a bold new marketing strategy that guaranteed a resale value of $3,995 on the Evolution Sportster XLH-883 motorcycle. Riders who traded their 883 within two years for an FL or FX model Harley-Davidson would be allowed $3,995 for the trade-in, a program that was unprecedented in any industry.

Four new motorcycles were introduced for the 1987 model line. The FLHS Electra Glide Sport, FLSTC Heritage Softail Classic, the FXLR Low Rider Custom and the 30th Anniversary 1100 cc Sportster. The 30th Anniversary Evolution Sportster marked the first time the XL engine received the chrome and black engine treatment found on many of its FL and FX relatives. Available in limited quantities, the 30th anniversary Sportster featured a special orange and black paint scheme with 30th anniversary graphics on the gas tank and front fender.

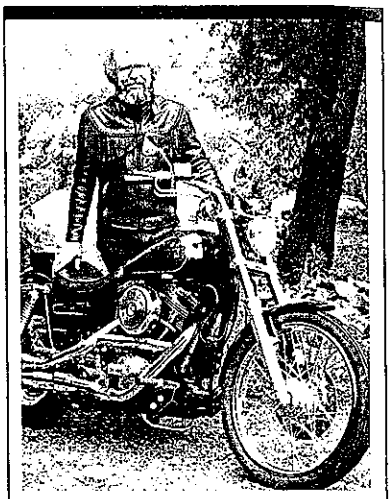
The FLST Classic featured a black and chrome power train and custom two-tone paint, similar to the colors that were original specification on Harleys during the 1950s. The Special also featured some touring amenities: windshield and passing lamps; leather saddlebags and a two piece seat and backrest all complete with studs and conchos. Wire wheels and floorboards were also standard equipment.

The FLHS Electra Glide Sport, a sportier version of Harley's premium touring machine, featured lighter, more nimble handling in the style of traditional American touring bikes of the '50s.

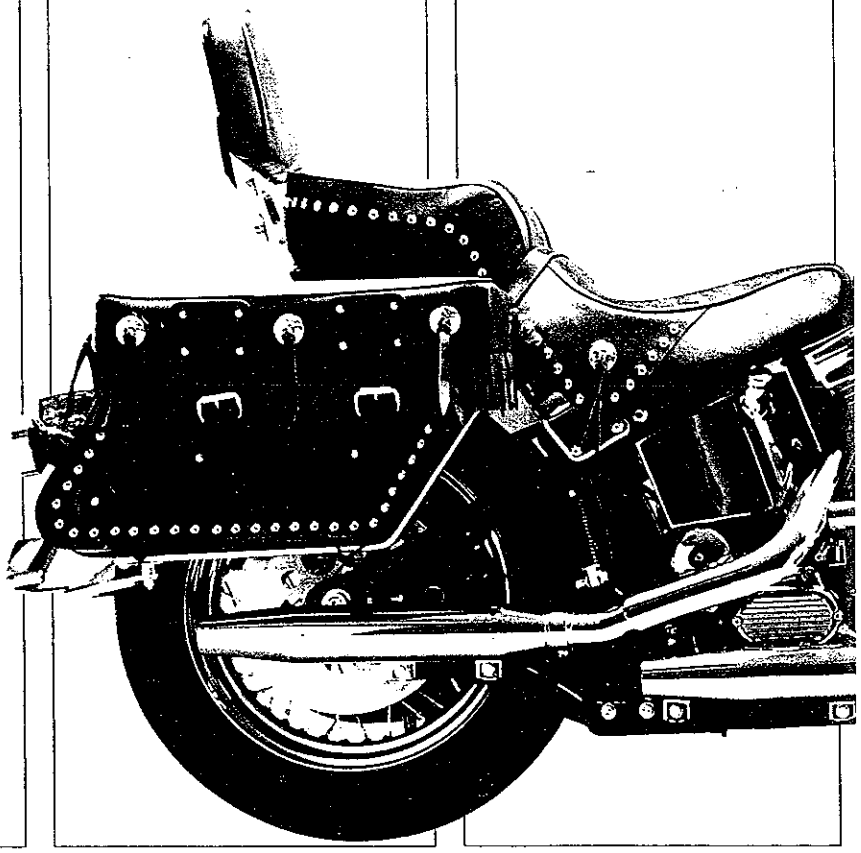
THE FXLR celebrated the 10th anniversary of the Low Rider. It featured a unique handlebar and gas tank complete with a 10th anniversary leather center strap.



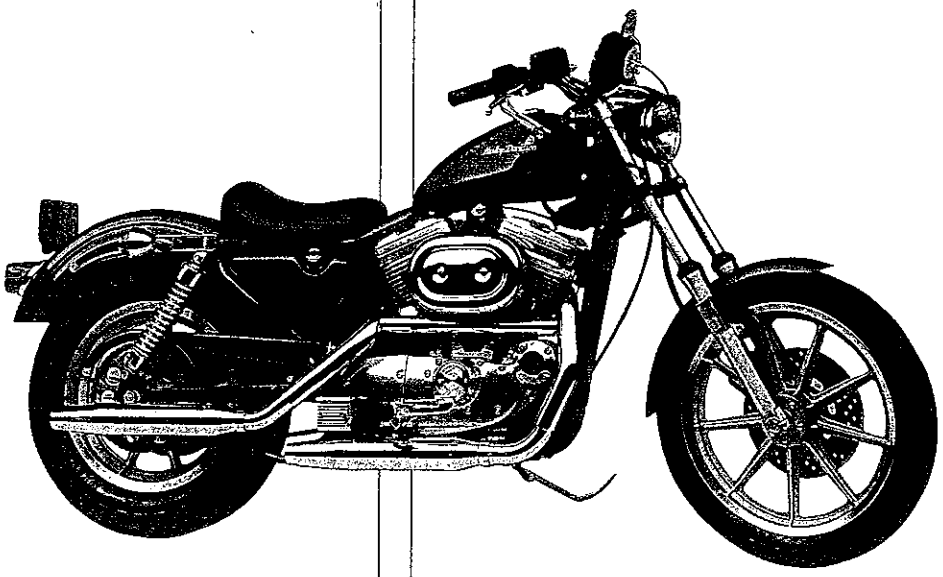
The FLHS Electra Glide® Sport is right at home on a country road or a city street.



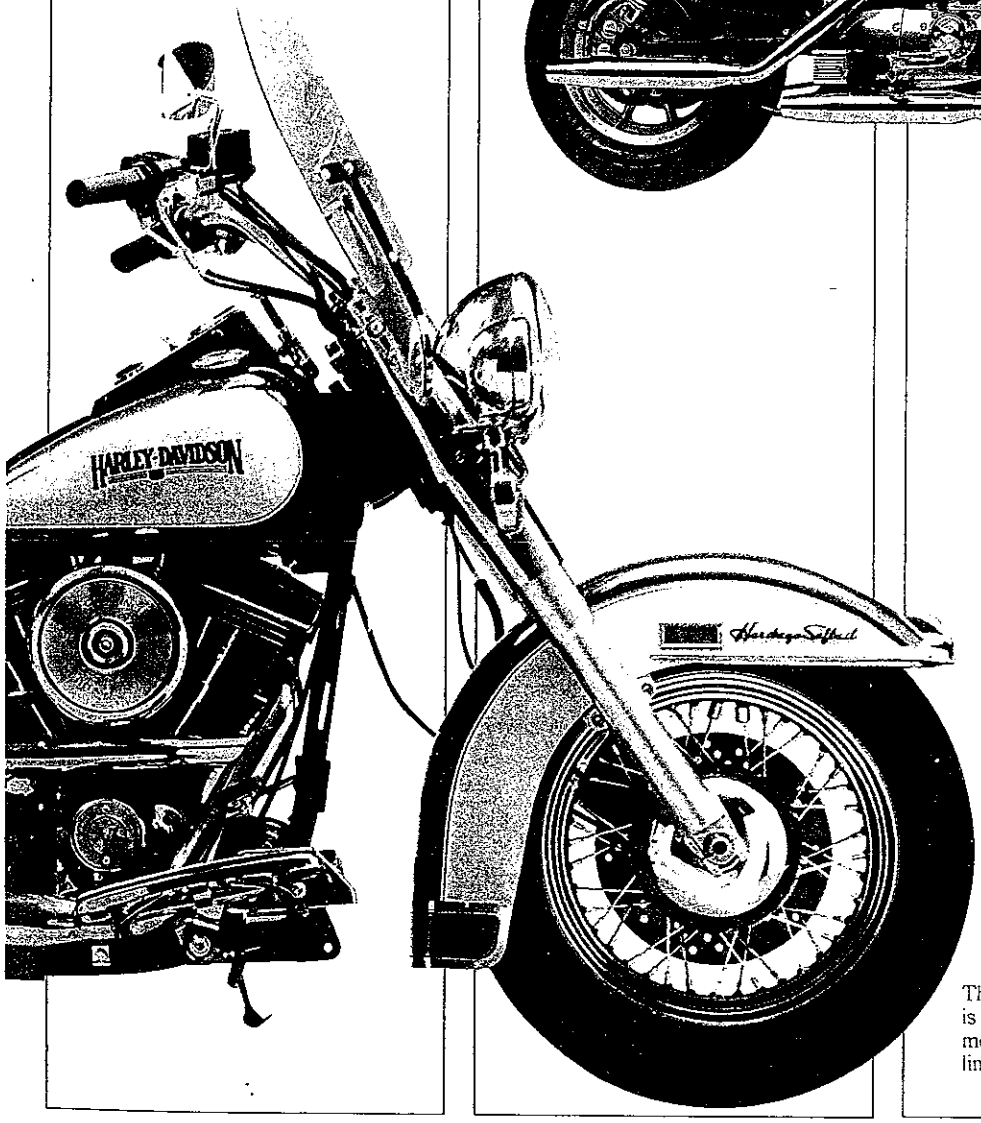
Willie G. Davidson with his 1987 styling innovation, the FXLR Low Rider® Custom.



The $3995 Ride Free Guarantee made sense to value conscious riders.



The revolutionary Evolution 883 Sportster® captured the essence of Harley-Davidson's design philosophy. Low maintenance features and new technology help extend service intervals from 2,500 to 5,000 miles.



The FLSTC Heritage Softail® Classic is one of the most visually striking motorcycles in the Harley-Davidson line-up.

But the new bikes were not the biggest news for Harley-Davidson in 1987. On March 17, 1987, Harley-Davidson, Inc. petitioned the International Trade Commission for early termination of the five year tariffs on heavyweight motorcycles. The move was unprecedented! No other American company had asked for removal of import protection. It was hailed by the press as one of the best public relations moves in history.

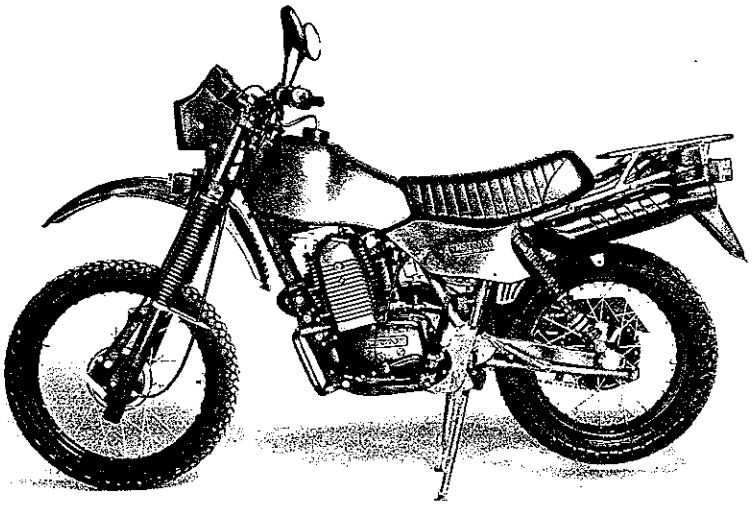
"We have informed the ITC that we no longer need tariff relief to compete with the Japanese," said Vaughn L. Beals, Jr. "We're taking this action now because we believe we're sending a strong message out to the international industrial community: U.S. workers, given a respite from predatory import practices, can become competitive in world markets."

To celebrate Harley's successful turnaround, Mr. Beals invited President Ronald Reagan to visit Harley-Davidson's final assembly plant in York, Pennsylvania. On May 6, 1987, a presidential helicopter landed at the test track behind the York Plant.

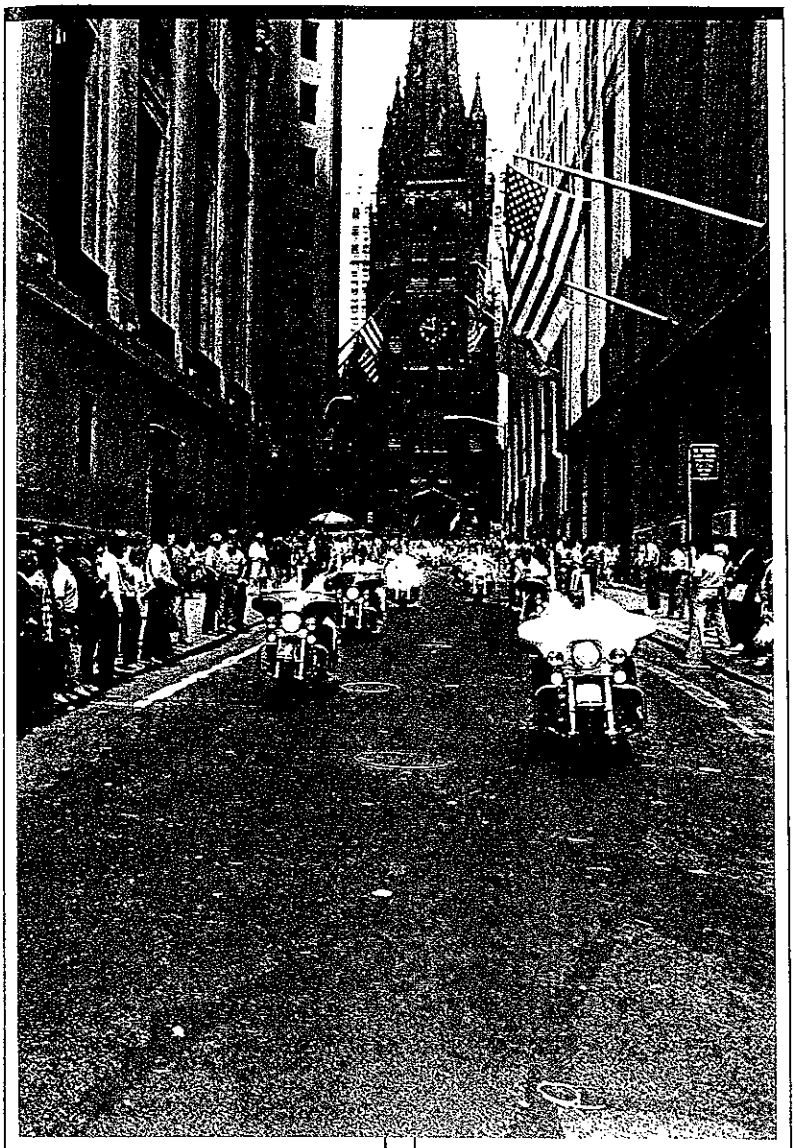
Accompanied by presidential aides and security people, representatives from Harley-Davidson led President Reagan on a tour of the final assembly facility. After touring the assembly line, President Reagan started up the engine of a newly built 30th anniversary Sportster. He then met with a group of employees in a round table forum prior to delivering a speech hailing Harley's comeback.

"We looked at you carefully," said Reagan. "We asked 'Is Harley-Davidson really serious about getting into shape?' And the answer came back a resounding 'yes.' Harley was hard at work with new products and finding better ways to make better bikes. And Harley's shape-up was not relying just on the top management. Everyone from the board room to the factory floor was involved. No matter how we looked at it, we could see that everyone at Harley-Davidson was serious about getting into fighting shape," said Reagan.

President Reagan got a feel for the new Harley-Davidsons when he started the engine on a 30th Anniversary Sportster™ that just rolled off the assembly line.



Armstrong's general purpose military motorcycle is designed to be strong, for use in off-road conditions. A range of engines from 350 to 560cc can be fitted into the welded steel, box-section frame. It features heavy duty suspension, sealed wheel bearings, and dust and water resistant brakes.



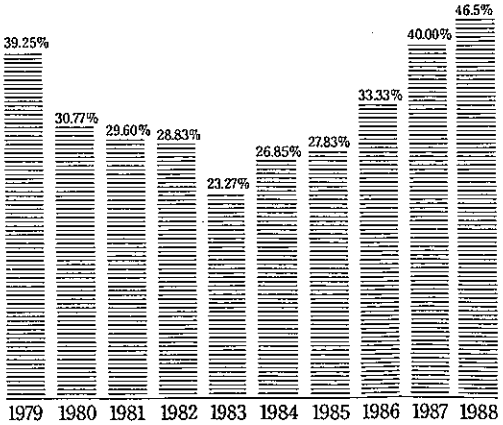
The perfect way to celebrate the listing on the New York Stock Exchange was to parade through the streets of New York on the machines that made Milwaukee famous.

Apparently the people at the New York Stock Exchange (NYSE) felt the same way about Harley-Davidson's accomplishments. On July 1, 1987, Harley-Davidson, Inc. was approved for listing on the NYSE. Harley-Davidson, Inc. had been listed on the American Stock Exchange since its initial public offering in July, 1986.

According to Vaughn L. Beals, Jr., the move "provided Harley-Davidson with improved market liquidity and visibility and will bolster our stature as a broadly diversified, international company."

On October 10, 1987, Harley-Davidson acquired from Armstrong Equipment, plc. of North Humberside, England, the design and worldwide manufacturing rights for its model MT500 military motorcycle. "This purchase is part of Harley-Davidson's plan to continue looking at new opportunities to expand its earnings base," said Richard F. Teerlink, President and Chief Operating Officer of the Motorcycle Division of Harley-Davidson, Inc. The MT500 is a single cylinder, 500cc four-stroke, off-road motorcycle.

United States
Market Share



After an all-time low of 23.3 percent of the 851 + cc motorcycle market, Harley-Davidson rebounded to gain 46.5 percent of that market in 1988.

The 1988 product line featured the biggest Sportster ever. The Sportster 1200, with its 74 cubic inch engine and 40mm constant velocity carburetor, put out 12 percent more horsepower and 10 percent more torque than the 1987 1100cc Sportster. The 1200 Sportster also featured a 39mm front fork and revised rear suspension.

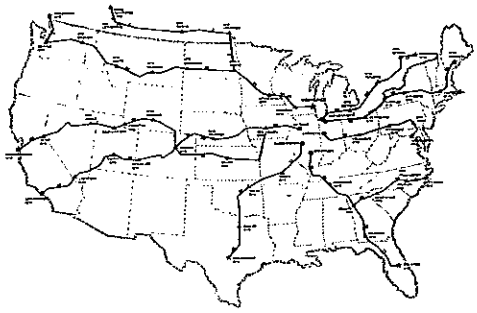
The FXRS Low Rider was also revamped for 1988. Its twin-cap Fat Bob gas tank sported a built-in fuel gauge and brought back fond memories of the 1977 Low Rider. The new 39mm fork replaced the former 35mm unit on all FXR and XL models.

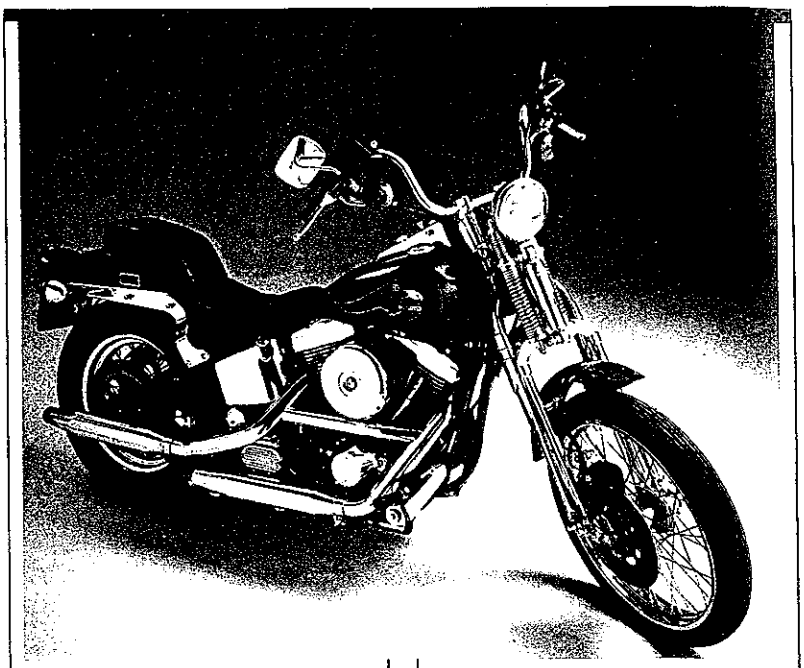
Also new for 1988 were the special 85th Anniversary motorcycles. Four models sported special 85th Anniversary graphics in celebration of the Company's 85th birthday. One bike created especially for the 85th Anniversary was the FXSTS Springer Softail. The "Springer" front end was the subject of more CAD and finite element computer analysis than any other component in Harley-Davidson's history.

Harley-Davidson also organized a special 85th Anniversary celebration and tied in a cross country ride—all to benefit the Muscular Dystrophy Association. Riders departed from ten points around the United States and headed for festivities in the motorcycling mecca of Milwaukee.

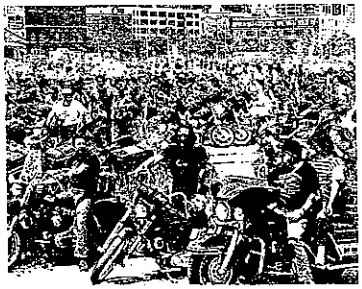
The event was attended by over 35,000 motorcycle enthusiasts and helped to raise nearly $600,000 for Muscular Dystrophy. It typified Harley-Davidson's close to the customer philosophy and changed some people's image of what a Harley-Davidson rider is really like.

The Milwaukee Ride for MDA was one of the biggest motorcycling events of the century and did a great deal to fuel the fight against Muscular Dystrophy.





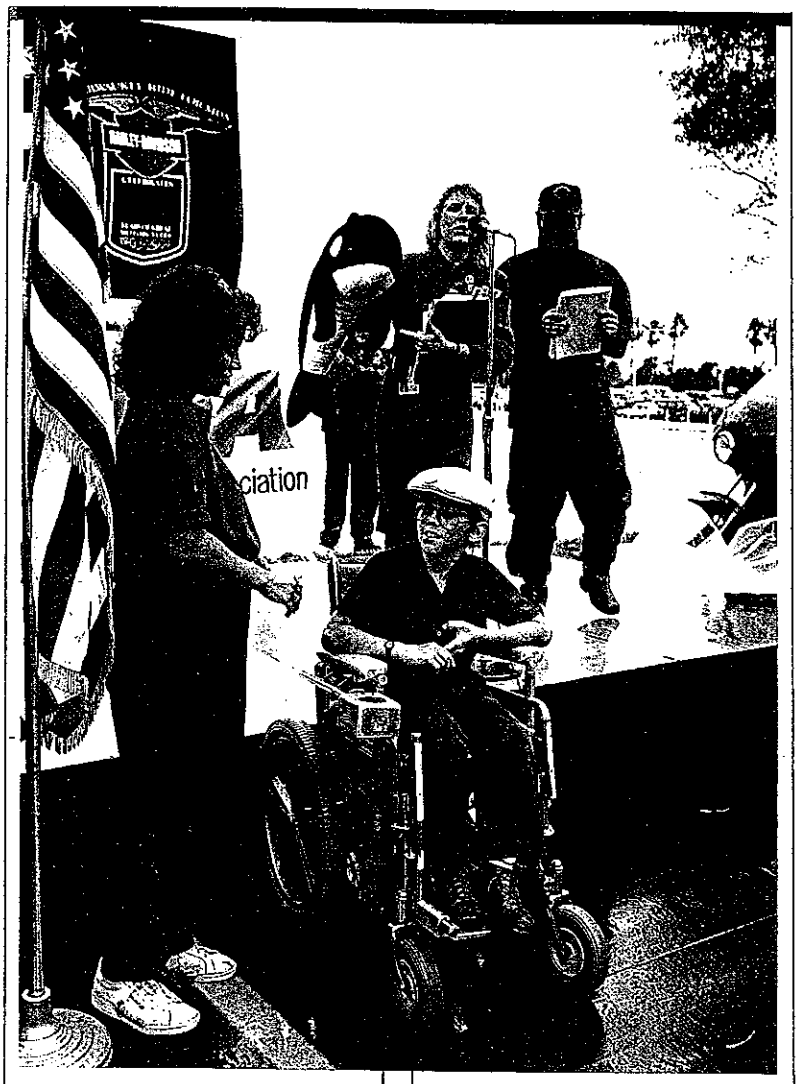
The FXSTS Springer™ Softail® featured a Springer front end that sported a look of the '40s backed by engineering of the '90s.



Motorcycles filled the parking lots of Milwaukee's Lakefront Festival Park. The event brought riders of all brands together to help the Muscular Dystrophy Association.

A huge birthday cake was wheeled on stage and nearly 20,000 joined in the singing of "Happy Birthday."

The Milwaukee Ride for MDA, in conjunction with Harley-Davidson's 85th Anniversary, brought motorcyclists from around the country, home, to Milwaukee.



At the Orlando, Florida Milwaukee Ride departure site, stormy skies couldn't dampen the spirits of the riders bound for Milwaukee. On hand for the kick-off were, from left: Leslie Battalen, MDA Representative; Teddy Field, Florida MDA Poster Child; Becca Moore from Sea World and John Crowell, Regional Sales Manager for Harley-Davidson.

As the events of the summer of 1988 started to cool down, the race for the presidency of the United States started to heat up. Vice President George Bush, the Republican candidate, and Democratic candidate Michael Dukakis both mentioned Harley-Davidson as success stories in their campaign speeches.

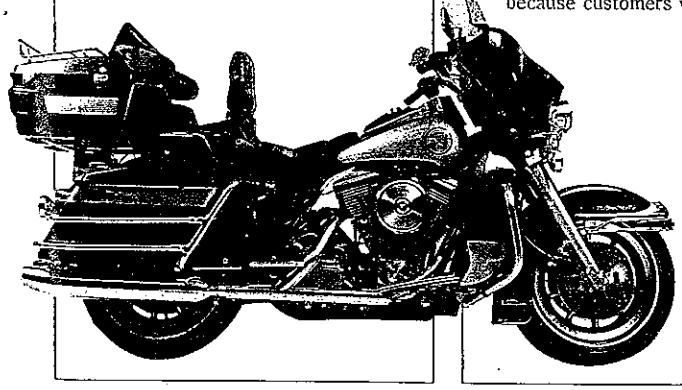
In a different kind of election in August of 1988, the board of Directors of Harley-Davidson, Inc. elected Richard F. Teerlink to the new post of president and chief operating officer of Harley-Davidson, Inc. and James H. Paterson to the position of president and chief operating officer of the Motorcycle division.

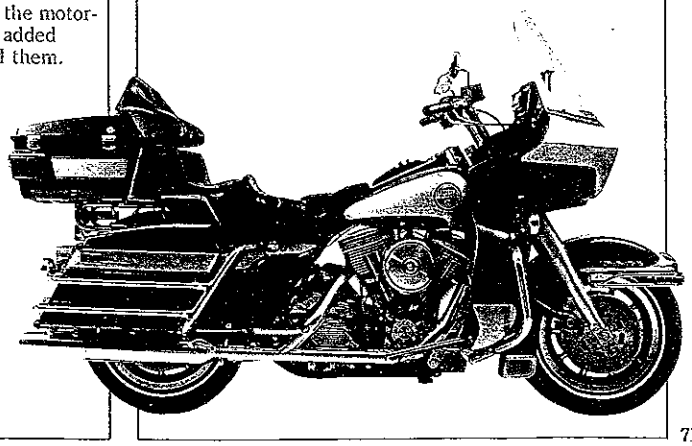
Meanwhile, Harley-Davidson was aiming for a successful 1989 model line with the introduction of some new motorcycles. A line of touring machines called Ultra Classics with luxurious standard equipment was introduced. The Tour Glide and Electra Glide Ultra Classics feature cruise control, fairing lowers with a built-in glove compartment, an 80 watt four speaker stereo system with volume and tuning control for the passenger, built-in CB and special silver and black paint.

The special 85th Anniversary Springer Softail was carried over for 1989 and offered in a variety of colors. FL touring models received a newly designed gas tank, 32 amp alternator and also featured self-cancelling turn signals controlled by a micro-processor.

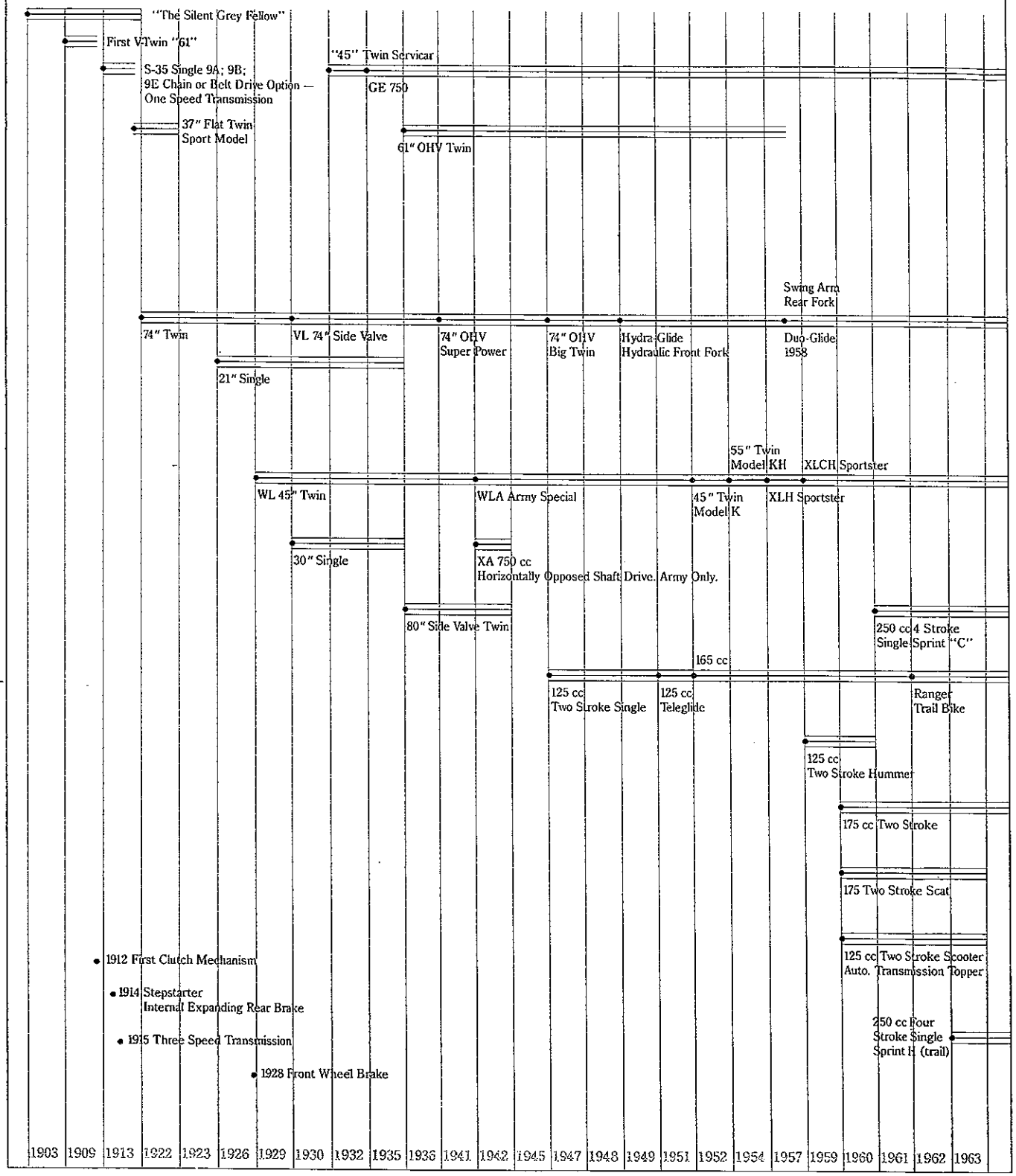
As Harley-Davidson headed for the 1990's, the emphasis on technological improvements was balanced by the emphasis on the rich heritage of the past. America's only surviving motorcycle manufacturer hasn't lost sight of what it has taken to get this far and plans to keep improving into the 21st century.

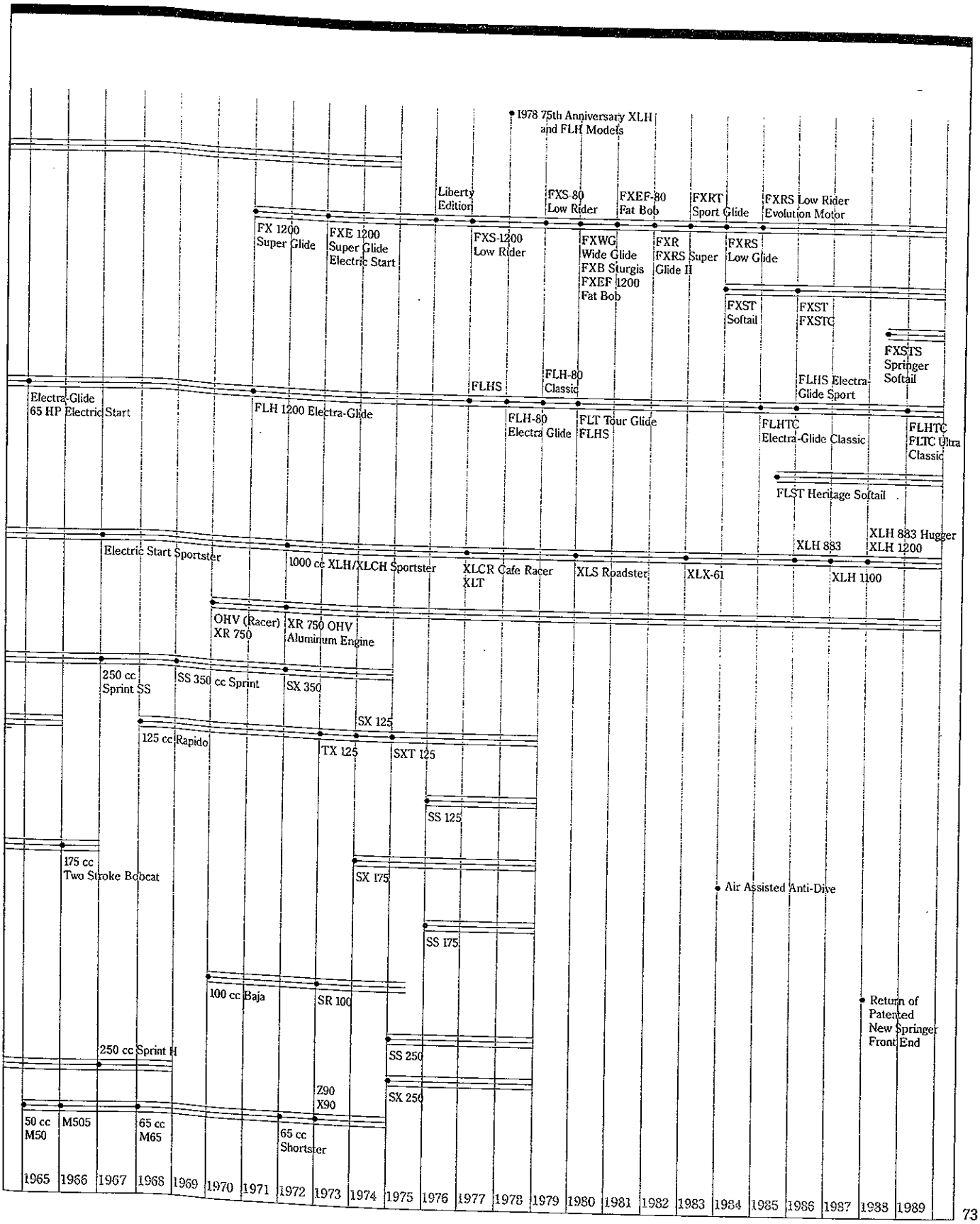
The FLTC and FLHTC Ultra Classics™ feature luxury touring accessories that enhance the styling of the motorcycle. Most features were added because customers wanted them.





Harley-Davidson
Model Evolution 1903-1989




1978 75th Anniversary XLH and FLH Models
Liberty Edition
FXS-80 Low Rider
FXEF-80 Fat Bob
FXRT Sport Glide
FXRS Low Rider Evolution Motor
FX 1200 Super Glide
FXE 1200 Super Glide Electric Start
FXS-1200 Low Rider
FXWG Wide Glide
FXB Sturgis
FXEF 1200 Fat Bob
FXR
FXRS Super Glide II
FXRS Low Glide
FXST Softail
FXST
FXSTC
FXSTS Springer Softail
FLHS
FLH-80 Classic
FLHS Electra-Glide Sport
Electra-Glide 65 HP Electric Start
FLH 1200 Electra-Glide
FLH-80 Electra Glide
FLT Tour Glide
FLHS
FLHTC Electra-Glide Classic
FLHTC
FLTC Ultra Classic
FLST Heritage Softail
XLH 883 Hugger
XLH 1200
XLH 883
Electric Start Sportster
1000 cc XLH/XLCH Sportster
XLCR Cafe Racer
XLT
XLS Roadster
XLX-61
XLH 1100
OHV (Racer) XR 750
XR 750 OHV Aluminum Engine
250 cc Sprint SS
SS 350 cc Sprint
SX 350
SX 125
125 cc Rapido
TX 125
SXT 125
SS 125
175 cc Two Stroke Bobcat
SX 175
Air Assisted Anti-Dive
SS 175
100 cc Baja
SR 100
Return of Patented New Springer Front End
250 cc Sprint H
SS 250
Z90
X90
SX 250
50 cc M50
M505
65 cc M65
65 cc Shortster
1965
1966
1967
1968
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MOTOR
HARLEY-DAVIDSON
COMPANY®

American-made motorcycles

Through the years, there have been many American motorcycles. Some were on the scene for decades; others burst upon the scene, and just as quickly faded away. The 306 marques on this page represent most of them.

A.B.C.
A.M.C.
Ace 4
America
American
American Rocket
Apache
Argyle Scooter-Cub
Armac
Arrow
Atco
Aurora
Auto-B
Auto-Ped
Auto-Scoot
Badger
Bailey-Flyer
Barber
Barr Steam
Bi-Auto-Go
Black Diamond
Black Hawk
Bonanza
Bradley
Breed
Briggs & Stratton
Buckeye
Caille Traveler
California
Camden
Camfield-Steam
Carson
Centaur
Century
Champion
Chicago 400
Clark Cyclone
Clarke
Clement
Cleveland 1 & 4
Clinton-Tower
Columbia
Comet
Commando
Constructa-Scoot
Copeland Steam
Crawford
Crocker
Crouch
Crown
Culp
Curtiss
Cushman
Cycle-Scoot
Cyclemobile
Cyclemotor
Cyclone
Davis
Dayton
Delaware
Delong
Deluxe
Detroit
Detroit Bi-Car
Doherty
Doodlebug
Driver
Duck
Duesenberg
Dukelow
Dyke
Dynacycle
Eagle
Electra
Elk
Emblem
Erie
Eshelman
Evans
Excelsior
Fairchild
Feilbach-Limited
Flanders
Fleming
Flischer
Flying Merkel
Fowler Four
Franklin
Freyer & Miller
Geer
Gelbke Auto-Four
Gerhart
Gibson Mon-Auto
Globester
Green Egg
Greyhound
H&H
Hampden
Harley-Davidson
Hausman
Haverford
Harry R. Geer
Hawthorne
Heald
Hedstrom
Hefelfinger
Henderson 4
Hercules
Herring
Hillman
Hoffman
Holley
Horten Autoette
Hudson
Imperial
Indian 1, 2 & 4
Iver-Johnson
Ives
Jack & Heintz
J.B. Special
Jeepette
Jefferson
Johnson
Jordan
Kaye, Pennington, Keating
Keifler
Kelecom
Kellog Bearcat
Kenzler-Waverly
Kokomo
Kulture
Lampson
Langford-Steam
La Roy Power Cycle
Lamson
Landgraf
Langford
Lea
Liberty
Light
Limited
Lowther Lightning
Lanford
M.B.
M. & M.
Majestic
Mansen-Marsh
Manson
Marathon
Marks
Marman
Marsh
Marsh-Metz
Marvel
Maxim
Mayo
Merkel
McDonald
Meadowbrook
Mead Ranger
Meteor
Miami
Michaelson
Midco
Midget Bi-Car
Mid-Land
Millitare 4
Militor
Minneapolis
Minerva
Mitchell
Mohs
Monarch
Moore
Morgan
Morse-Beauregard
Moto-Glide
Moto-Master
Motopede
Moto-Scoot
Motorette
Mustang
N.F.U
N.S.U.
Nelk
Ner-A-Car
New Era
New London
Nilsson's Uno Wheel
Nyberg
Oaks-Steam
Octo-Auto
Orient
Overman
P.T.
Pam Autocyclette
Pansy
Paramount
Parkin
Patee
Peerless
Phoenix
Pierce-Arrow 1 & 4
Pilot
Pillsbury
Pioneer
Pirate
Playboy
Pony
Pope
Powell
Pratt
Puddlejumper
R & H
Racycle
Rambler
Razoux
Reading Standard
Red Arrow
Redman
Regal-Green
Reliance
Riotte
Rocket
Rockola
Rockon
Rolloway
Roper Steam Velocipede
Royal
Royal Pioneer
Ruggles
Rupp
S.D.M.
Sachs
Safticycle
Salisbury
Schickel
Scout
Sears
Servicycle
Shaw
Simplex
Sinclair Militor
Singer
Skoot-Mobile
Smith
Snell
Spacko
Speedibike
Spiegel Airman
Springcycle
Spiral
Stahl
Starlite
Steam Flyer
Steffy
Sterling
Stepper
Stratford
Super X
Sylvester & Jones
Thiem
Thomas Auto-Bi
Thompson
Thor
Thoroughbred
Throup
Tiger
Torpedo
Torque 4
Tourist
Tribune
Triumph
Twombly
Unicycle
Valiant
Vard
Victor
Victory Clipper
Wagner
Waltham
Warwick
Wasson
Waverly
Westover
Whipple
Whizzer
Williams
Williamson
Willis
Wilson
Wizzard
Woods
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Yale-California
Yankee
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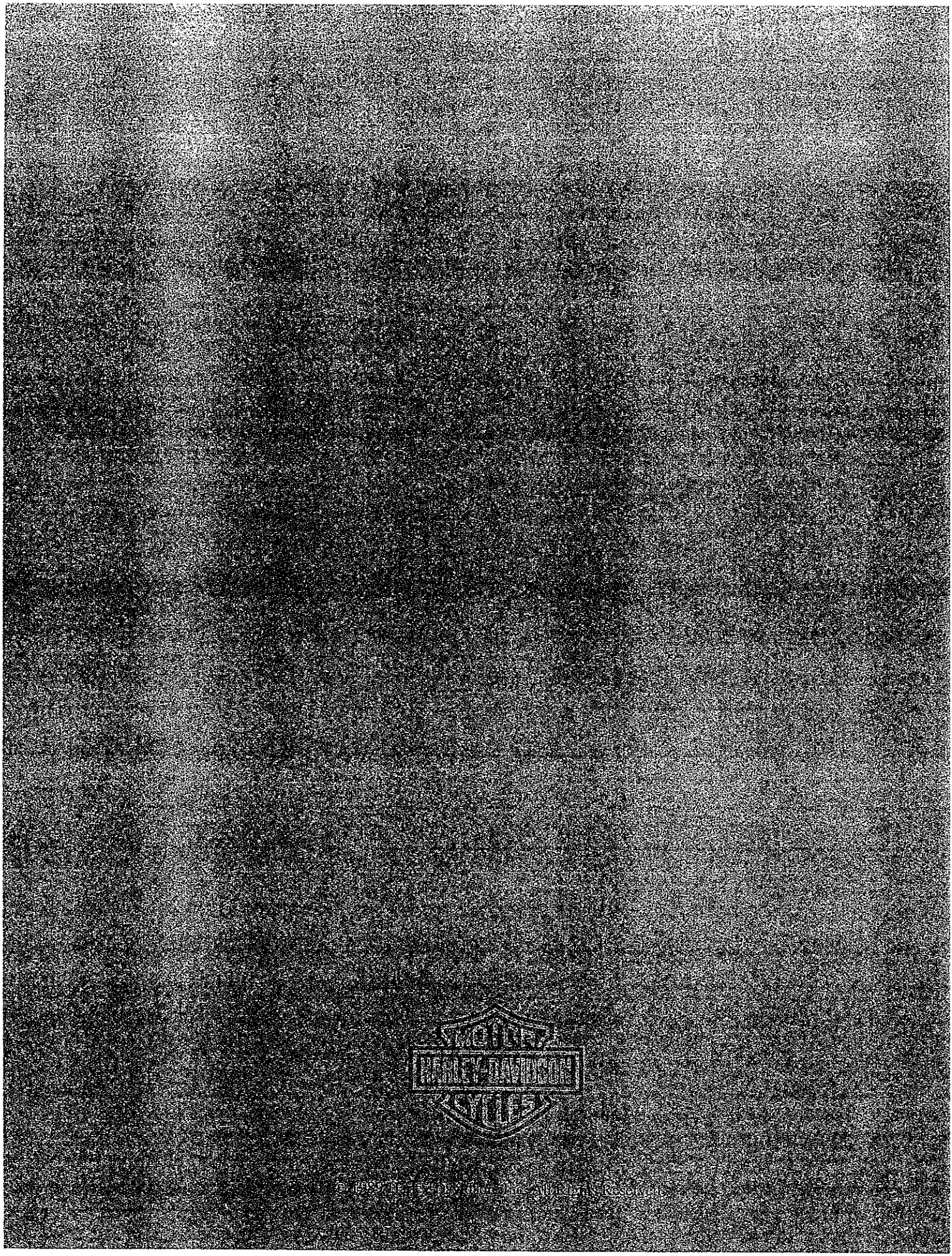

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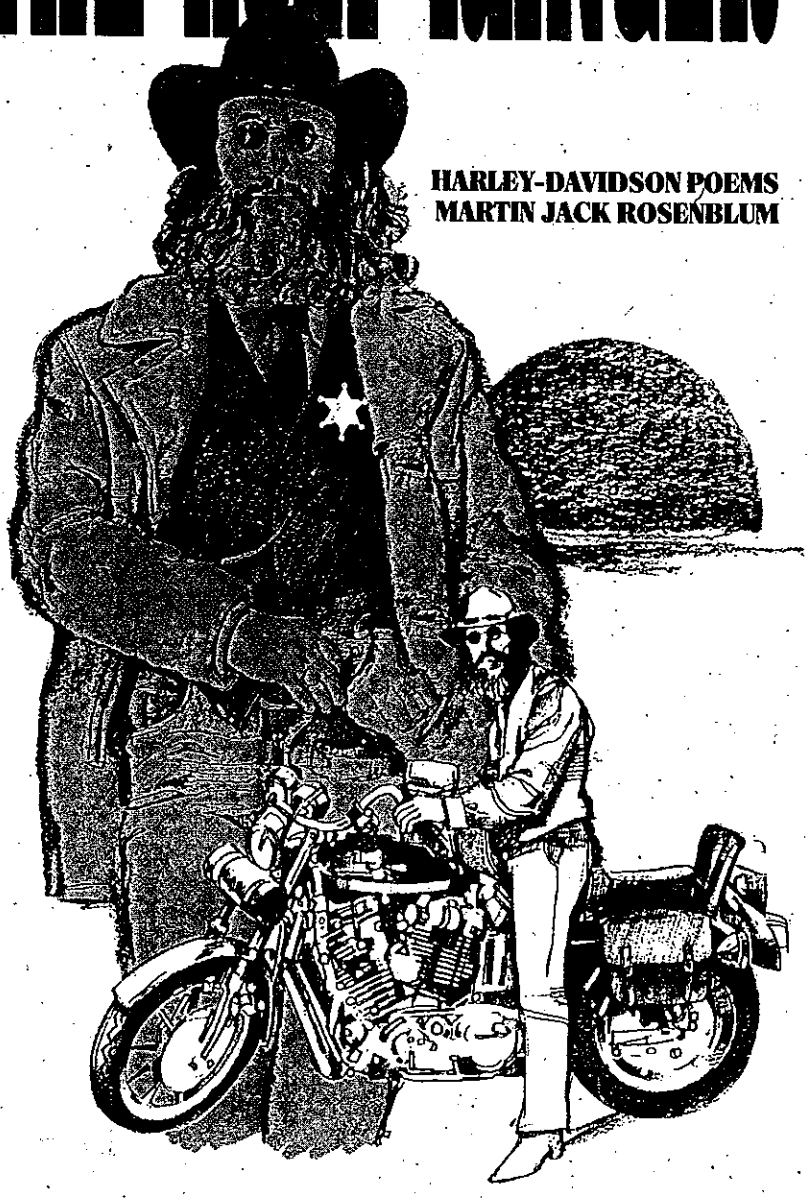
THE HOLY RANGER™

HARLEY-DAVIDSON POEMS
MARTIN JACK ROSENBLUM



THE HOLY RANGER HARLEY-DAVIDSON POEMS MARTIN JACK ROSENBLUM

THE HOLY RANGER™
EVOPOETICS™

THE HOLY RANGER: HARLEY-DAVIDSON POEMS

MARTIN JACK ROSENBLUM

RANGER INTERNATIONAL PRODUCTIONS
LION PUBLISHING/ROAR RECORDING
MILWAUKEE
1989

Some of the poems in this text appear revised from the limited edition chapbook, *Harley-Davidson Poems*, and none can be reproduced in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage and retrieval systems, without written permission from the author - exceptions are brief passages quoted in newspaper, magazine, radio or television reviews. All rights reserved.
First Edition, August, 1989.

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Since little is closer to the heart of a Harley owner than a natural American landscape, this book has been printed on 100% recycled paper; and like a Harley, this book was made in the U.S.A.

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Author's Note to the First Edition

The author extends appreciation to many Harley-Davidson representatives, from executive offices to dealerships, who supported this project through practical considerations and inspirational comradery. Quoting from the author's "mailbag" letter in the fall, 1988 Enthusiast will explain further: "As a Harley owner, I am proud to be part of the organization that goes to such caring and detailed lengths to make riding a Harley-Davidson so much more than just being on a motorcycle -- when one rides a Harley, one sits on top of an important tradition that transcends the machine itself. One steers a certain American spirit into personal territory." *Harley-Davidson Poems* is this personal territory, then, steered into through the poetic process of Harley ownership, riding and fraternal zeal.

This book is dedicated to Sarah Terez and Molly Dvora, little girls who would not consider themselves to be properly dressed unless they are showing Harley emblems, and to Maureen, whose willingness to have a Sportster next to the dinner table in winter has got to be an expression of true love for the author.

Author's Preface to the Present Edition

The first edition of my Harley poetry was limited and less ambitious, but was given trademark approval by Tom Parsons, Trademark Manager, Harley-Davidson, Inc., who was as moved as I was to witness *Harley-Davidson Poems* sell out in a matter of months following its release in December, 1988. There was a book release party at Jerry Renner's House of Harley-Davidson, sponsored by the Milwaukee Chapter of Harley Owners Group that month, and the attendance defied all expectations. Tom was then instrumental in making *The Holy Ranger: Harley-Davidson Poems* an Official Licensed Product and he has my gratitude, as does Judge Robert Schneider who provided the material spark to keep the visionary flame lit; my appreciation also goes to my loving family again for putting up with my eccentric ways and sometimes overbearing inspirations. I have always known what I must do, and admit to doing it with an intensity that gets the job done: without the understanding of my wife and daughters, I would not be writing as forcefully as I now am.

We are men and we have words.
Paul Blackburn

Introduction to the First Edition
Joel McNally
The Milwaukee Journal

Martin J. Rosenblum describes his limited edition Harley-Davidson Sportster as the ideal urban steed. He rides it into an American past populated with Texas Rangers and mountain men and political outlaws.

Rosenblum did not fulfill his childhood dream of owning a Harley until he was entering his forties. By that time, he had established himself among an international community of artists known as the Objectivist Poets and earned a doctoral degree as a scholar in this field. He had undergone a career change. He quit trying to teach poetry at the university level to take a job that he considered of more use to his community, advising students who lacked college skills. He was recovering from a near-fatal illness.

"I realized that it was time to do the things I wanted to do. One of these was to own a perfect specimen of a Harley."

He had it delivered on a snowy, mid-winter day even though it would be months before he would be able to ride it. Rosenblum remembers going through an ordinary workday filled with joy at the incredible notion: "I've got a Harley-Davidson in my living room." Late that night, he got up and went downstairs alone. The only lights he turned on were the lights of the bike. He sat next to it in a chair for a long time.

"It's a subject of curiosity on both sides that I'm this intellectual poet-philosopher who wears leathers. But, on the Harley side, I'm more understood than on the university side. They know why I love Harleys."

A student of American history, Rosenblum collects what he considers the essence of American products in areas he has practical expertise -- Colt pistols, Gibson guitars and, now, a Harley-Davidson. He identifies Harley with the rugged individualists of the past. He sees no reason why bikers should be considered criminally inclined. "The image of a Harley owner as some kind of degenerate is false

just as the image of an artist as a degenerate is false. Both can be healthy lifestyles. Owning a Harley has something to do with an archetypal sense of the frontier, just as being an artist does but there the frontier is more internal. Riding a Harley motorcycle is a spiritual feeling of being out on the range, and my *Harley-Davidson Poems* is the result."

Although he has no love for Japanese motorcycles, he compares Harley-Davidson riding to Eastern meditation and the discipline he has pursued for years in martial arts.

"Each time I get on, I quiet myself. I have no other purpose. I'm not running an errand. I don't use this bike to go to work. When I'm on my Sportster, I'm really riding it. It's like the oriental tea ceremony. When you pour the tea, you're really pouring it and you don't spill a drop. This is my understanding of what meditation is. I probably pray more in a twenty-four hour period than most holy men do. I just do it on a Harley."

Re: Marty Rosenblum, The Holy Ranger
From: Buzz Buzzelli, "Enthusiast" Editor
To: Readers of this Harley Poetry

Poetry? About Riding Harleys?

I'm sure! And how about using humming birds to power freight trains? After all, poetry (you know, that boring i * am * bic * pen * ta * meter stuff that reads like plagiarized hillbilly song lyrics) can't possibly communicate the feeling of riding, right?

Then I met Marty . . . Okay, so I was wrong.

People who ride Harley-Davidson motorcycles understand that motorcycling is a unique, individual experience. It can mean many things to different people: the sensation of motion, the sensual feeling of the wind, the reflection on other thoughts and feelings or simply enjoying a comradery with others who also enjoy riding, to name a few. A rider may feel one of these, or all, and more, from one moment to another.

Like the fluid experience of riding, Marty's poetic rustle through the mind triggers unique reactions that result from each rider's individual experience. This isn't just about riding; it's about life surrounded by Harleys, about a motorcycling lifestyle.

Marty's poetry and riding Harleys? A natural combination!

Introduction to The Holy Ranger: Harley-Davidson Poems
Howard McCord, Professor of English Literature

The Holy Ranger is a pure crystal in the complex solution of contemporary American mythopoetics. Martin Jack Rosenblum has achieved this concentration of clarity and intensity by living through language the fusion of the many versions of the American hero, his steed, and his quest for freedom. The Holy Ranger is not only the rider, but his Harley-Davidson as well, his single-action Colt, and the wild roar of the wind as he rides into pure, timeless actuality.

Martin Jack Rosenblum is a poet who has dipped into the archetypal reservoirs of our culture for themes and images which possess great energy and he has articulated them with precision into richly original language alive with music, idea, and emotion. His poems carry the reader into the wilderness of perfect perception, into moments when act and will and being are fused and whole. In "The Heart Must Beat In An Accurate Hand," he speaks of "objects in absolute/need of control, " which describes the poem as succinctly as it describes our hearts, and the difficulty of bringing either to conformity with an ideal is the process of our lives. The Holy Ranger must exercise control over his Sportster and the Colt in his hand, as well as his line-breaks and images, if he is to live free in mastery of himself. The sense of freedom Martin Jack Rosenblum creates and celebrates is a reflection of the mastery and control he possesses as an artist.

Parallel with ideals of mental discipline and intensity are their social counterparts: loyalty, honesty, chivalry, trust, and the responsibility for self-reliance. The social order proposed is profoundly American. The armed freeholder who is quick to defend himself and the common good, and determined to preserve his own independence, provide his own livelihood, and to preserve the peace with diligence is the ideal citizen in the eyes of the framers of the Constitution. The dilution and corruption of this ideal by a political ideology that proposes that the government knows

best how its citizens should live, and legislation which limits individual freedoms and responsibilities by creating greater dependency on government alms is cause for righteous anger and wrath in the Holy Ranger.

"The Holy Ranger As Avenging Angel" is a central poem in the collection which examines and mourns the losses of liberty suffered under a paternalistic, cosseting government, and in a social order corrupted by the lies and distortions of the press and television, the wheedling, vapid mouthings of politicians, clergy, and money-grubbers, and the machinations of a judicial system less interested in punishing criminals than in protecting their "rights." It is clear that in a society both drifting and being driven into decadence, it is imperative that the Holy Ranger obey such a dictum as Whitman's "resist much, obey little."

But if the Holy Ranger is an idealist, he is also a sensualist, an artist as appreciative of elegant form and function in motorcycle and firearm as he is of beauty and passion in a woman. That Americans are not supposedly capable of sophisticated sensuality is a canard of French critics and their ilk (who can legitimately be accused of most sins most of the time), and dour souls soured by the bad breath of Puritanism. Such forget the Puritans were as they were because they were so randy.

It is no great leap of imagination to see Tom Jefferson astride a Harley, roaring down the paths of Monticello in full delight, or know with what passionate interest Ben Franklin might have carefully disassembled one of Samuel Colt's or John Browning's pistols. We are a nation of practical sensualists, Frenchmen, and don't you forget it!

Martin Jack Rosenblum is uniquely aware among poets of the way technology has shaped our consciousness, and entered the myth of our vision of ourselves. Whitman understood the psychic power of the locomotives which were linking and binding the several States into unity. Rosenblum understands how individualized technology -- as the motorcycle and the pistol are designed to be controlled

by one will only -- preserve and strengthen the individual in an age of homogenization and reduction.

It is with the spare and direct language so characteristic of the Objectivist poets that Martin Jack Rosenblum shapes his poetry. The Objectivists form a proud lineage in American poetry of the twentieth century, getting their impetus from Pound and Williams, and numbering such great poets as Louis Zukofsky, George Oppen, Lorine Niedecker, Basil Bunting, Carl Rakosi, Charles Reznikoff, Cid Corman, Carl Thayler, and Theodore Enslin among them. Each of these has a distinctive voice and presence certainly, but they share much also:plain speech, hard thinking, precise conceptualization, and rich musicality. Martin Jack Rosenblum is a worthy younger member of this important group of American poets, and in *The Holy Ranger: Harley-Davidson Poems* he has added a significant volume to that canon.

Now turn the page. Ride. Live free.

FIRST SEQUENCE: ESSENTIALS

No, don't nod.
Look me square in the face:
see the glittering in my eyes.

Karl Young

The Holy Ranger returned from that ride, begun at sunrise much earlier this day, with sidepipes rumbling in the rhythm of twin cylinders beating an American pulse. He dismounted, and before going into Holy Ranger Headquarters, considered just how to relate the adventures of the road to those who understand what it can mean. Poetry was a suitable medium, he realized, for he knew it well by now and recognized that it was as close to the rhythm of the iron mount he rode as any form of communication might be.

He had a dream last night about historical identities -- people who have influenced the course of American life. The Holy Ranger believes that it is the individual who should be studied, not the times or events; it is the brave, solitary person who is responsible for all that makes an era or incident take on meaning for others to share.

Before going to sleep, he had been taking the first look at an old photograph of the men whose names have literally become motorcycle reality: he watched as one inventive genius, standing there next to his Harley-Davidson, among the others who have also become cultural eponyms, and who are --like us all-- on the ride, suddenly roared from black and white truth to full color vision in front of the original shack where real motorcycles were first bred in Milwaukee.

It is by this route, then, that poetry is created regarding the Harley experience, and the Holy Ranger will call it *EvoPoetics*: common occurrence comes into its intrinsic nature through an evolutionary process of visionary content. The engine that is now an evolution wonder itself has pounded a poetic meter into the lives of many rugged individualists, and this book is written to celebrate all that handling American Iron horsepower maneuvers into The Holy Ranger's fountain pen.

He does not use word-processing, for computers do not function when the power goes out. The Holy Ranger is prepared for the failures of modern civilization, and rides

in search of the Old American Way with an understanding that an advance has to mean a hard look back. There are people behind us from whom present lessons must be learned, and people now, too, whom we must judge by virtue of their knowledge of the past as they bring us into future possibility. The Holy Ranger writes his poetry as a tribute to these pioneers, past and present, who cut the trail into a more promising American Way of life. These are the horsemen who are on an apocalyptic ride.

The Holy Ranger is blessed and humbled to know some of them, and intends to celebrate their individuality and style, for there is no greater contribution he can make to a nation that still is being carved out of territories unknown by riders who can righteously handle where they journey.

The Name Is Harley

standing there with the look
of invention in front of that
original shack new ideas took
hold which built a reputation
all the way into the American ideas

that govern individuality & style :
William S. Harley has lent his name

to the modern horsemen whose
apocalyptic ride strengthens
open trail visions that make

this photographic action take place
this sunrise in April as I take the
keys to my Harley machine then walk

the irregular stone path to
the garage contemplating in
poetic anticipation exactly
what will
be coming
within an
afternoon -
upon this
Iron Name

Two Meditations Upon an XLH 1100 Sportster

1.
the view from behind
these buckhorns down
Hiway Q with
peanut tank
in sun & this V-Twin
a pounding metaphor:
distant birds single
file along meadows &
the downshift into
second gear brings
flight nearer road
speed when my

Harley-Davidson cracks
the envelope of visionary carburation.
2.
standing on the footpegs in Wisconsin:
nearer dusk then
easing back into

saddle posture away
from plains with a twitch
in the right wrist sending
a message out from shorty duals
that arriving has occurred just by
starting this Sunday morning when a
pleasing vibration was sent through
chrome headers to assure a dominant

pioneer strength even from
an urban Milwaukee range .

Talking with Willie G.
at the Harley Homecoming Ride Celebration

now here's a guy who
likes to ride which is
what happens when you talk

with him
suddenly

that sense of steel-tipped
boot up on the shifter gets
into sentences through the gears

Harley-Davidson Is In Milwaukee

the Monday James Marsh called
from England I was delayed from
my university office having spent
time with the 1989 Harley Accessory
Catalog in the bathroom after Wisconsin
cheese melted on a whole wheat muffin made
in Milwaukee County caused the body to stir

not unpleasantly for admiring the possibility of
a windshield on "Ranger" takes requisite pushing

of imagination as a Sporty with one never stirred
sensibility nor impulse until this winter's eye
injury still fresh now on the first day of
spring we have March snow & the fireplace
stoked but I put the battery right off
a trickle-charger into the bike still
tucked into its vinyl eagle nest
(sloshing through the ice to
the garage the stone curved
path a slippery uncut
trail we're used to
with winter growling nearly as loud
as the V-Twin melting
rumble that announces spring
in Milwaukee better than any frightened
bulb shipped in from the East Coast unable
to poke through ground frost will)

so a call from the BBC got me into a DC-9
saddle cutting this air trail to the Harley-

Davidson Museum stuck in York Pennsylvania
& from my first seat row I rode backwards:

which is appropriate
because I can keep my eye
on Juneau Avenue & Capitol Drive
original facilities in Milwaukee
Wisconsin with my back
to Pensylvania's
Milwaukee Iron .

Midwestern Handling

for Jack Grassel,
Dear Friend

next door there's
one of those Jap bikes with
the cowl painted to give an
international racing scream
to the rider sitting behind
fiberglass that gets colder
than leathers

up my front walk
an ancient Harley-Davidson
Sportster is ridden this
Sunday & into my house
a dear friend & his
son bring along the
fast temperature drop
that has sucked early spring
back into winter's exhaust
when he leaves his little
boy hangs onto this
mastodon from hell
& those sidepipes
burn leftover leaves
that are not ready now for
summer's rake

nor does that red, white
& blue cabaret racer with
its anodized pipes start
as an owner pushes it
toward a garage the
only smoke from
his breathing here in

Milwaukee where cold
hangs onto you as
the roar of bright
chrome headers while
your friend tears down
hardening gutter water
blowing heaven's grace
further into Midwestern hands

Evolution Amulet

the 30th Anniversary XLH sat in the diningroom
during winter months & once after a late movie
when all slept & the first real snow landed
I got on it & turned the lights toward a
front window shining into the blanket
being tossed upon the birch tree
as winter's comfort & signaling
with yellow flashes reflecting
on an empty television screen:
the first spring rain bringing
this Sportster down the ramp
& across the lawn & sidewalk
to the garage where it
fires up once the carb
swallows ample passion
but the rain keeps any
travel in the alley to
just beads upon fresh
wax or upon the chrome my reflection
while I get down nearer the exhausts
to hear what winter kept in silence.

Praise Our Ladies

these Harley women
straddle their choppers
with lustrous precision
& when packing behind you
with hands tucked under the
belt buckle at your waist a
man rides amidst powers of
awesome potential & the
bike actually lathers
like a stallion
bulging at that
barndoor .

Ranger Visionary

when I was not a teenager the Harley newsletters
would come by subscription even though my father
did not permit any talk of motorcycles
& the photos in these of those Highway
Patrol riders remind me now
not a teenager either : of the
sofa I called
my mount when I would either
ride a horse as a Texas Ranger
or a cycle but on both there were
my chaps & holsters & with cap guns
blazing the living room would contain
dead bad guys especially when I pulled the lever
-action from the scabbard
father had been in the Swedish Palace Guard Corps
& then a marksman in the U.S. Army but no members
of his household could talk of motorcycles beyond
finding them as he did once in a sidecar that was
driven by a drunken Swede through Norwegian roads
so I collected those newsletters that
started in elementary school fantasy.
hell, now I
have the chaps
once again & while
I can't holster my Colt
Peacemakers in Wisconsin
I sure have nice saddlebags
slung over the back fender for
them and no scabbard but that Winchester
might knock against either horn or carburator
as I dig my still imaginary spurs (as these would
certainly be unnecessary with forty-five degrees
worth of horses to throttle) into "Ranger" -- close
enough to the name I had for that old green sofa
in my father's house to keep being grown-up more
useful than it would be if I wasted child's play

Balance
(Required Off Motorcycle)

I.

our dog wanders
in a circle tracing
on the kitchen floor
before settling down .
this does not
do much but cause
her dismay as she

bumps into our
daughter on the
floor as well staking
out territory for toys .

Sarah Terez moves over the surface
with a stuffed reindeer which might
be a moose heading for the dollhouse
where assorted rubber people watch the
dog finally flop down on a bracelet & two
rings . Sarah pats Marta
now old & white muzzle draped with
silk scarves as she is part of the
game to deserve space this Sunday
on the head as if
to congratulate
for making it
a safe place
in this wild
place & then kicks her nose playing
with a truck . the leaves

begin to fall .
there is colder

air along floorboards
& earlier against the
sharp sky geese flew
honking stirrings
belonging
to divided years my
garden finally felt
its first frost
last night & my

ability to listen to a new
recording master of untamed
music made before last night
an instrumental version is altered
by visions
of beasts nearing a family dwelling &
I am wandering at the edges of our
housed autumn in dismay .

II.

I open a window
& let weighted air
in or out : I do not
know which will help

III.

I come up after the hall
light went back on so she
could sleep she said &
entered our own room &
was a

witness to the lady
on the corner turning
on her overhead bulb that got
                spliced by
            blinds into light
            edges contoured

    by your hips
    in the dark
    they went
    onto the   carpet arranged

by a dog breathing now in hot
weather & I patted her onto me
they came & when I got to where
they rose & fell or your long legs
did by morning another bright source
through blind slats less artificial but
the familiar impact of entering this
southeast division etched relative
to neighborhood & planetary
resources placing something
        over my eyes as I   get up
                                 with which
        to see
        I look   at your sleep
                                 falling up the
pillow against shelf items away
from a bed I will be in again &
                again with you traced

IV.

a different dog now
since I watched Marta
go with shoulders down
in compliance to surgery
& death this one pedigreed
quite willing to slaughter
those unwelcome to a
widening circle but
within narrowing
grace :
clamping a blueprint
to scale my
arms resting on a sticky
maple table as the Waterman
nears the end of its reservoir
& I would get
more ink but there is no
emergency path cut from
kitchen to study .

V.

there is another child
now pulsing in Maureen
so I will just watch .

VI.

before I
am out in
Downer's Woods ample
Canadian Geese in unison their
clock feathers
mark earth fog
none wanders

VII.

once in the Northern Wisconsin

forests I heard the Loon
in morning fog
a ghost flight
to the water & its sound

a genuine dismay over the firelanes, not mine

Motorcycle Noon

with the sun straight as the road
there is a wind tattoo
upon my bare hands designed by which route I
have taken
through Milwaukee County farmland where
a Soo Line freight will pass on the track
side of me & on the field's edge to the
other a John Deere tractor pulls a
spreader in a turn : all reflection in pond
water is still & ahead
full reverie in tire hum inks raw prayer to
motorcycle designs that respond
to clutch upon religious shifts.

EvoPoetics: Harley Poetry Mechanics

the toolbox has been spilled
onto the office floor behind
the garage & there are books
with wrenches thrown in them
for poetic meter is valuable

when it chugs inside
a process evolved
up from literary
origins down
roads upon
which chunks from an

old wooden bridge foundation
laid over with blacktop will

protrude in the worn spots
& present dangerous travel
that no book tells you how
to avoid & the wrench then
with instinct replaces any
mechanical study: the ride

will take you
where it goes

Holy Ranger Vision Territory

along 5 Mile Road off Interstate 94
The Holy Ranger met up with that
lost rider often heard on
Wisconsin back routes
rumbling near gravel
shoulders on an Iron Redskin at the
edge of summer
just before the heat rises from day
clear into evening's ground gully fog

the year had been 1846 & this
ghost rider was among the Texas Ranger
bunch riding victoriously to secure US
borders & when in the following year
the advancing horsemen lost their
commander fresh from meeting Samuel
Colt who put a brace of Walker pistols
in this brave leader's leather gunbelt
this man went down with
Captain Walker a musket round
into each(from
that saddle then he fell into summer's
early Wisconsin rural roads where once
into Holy Ranger Territory he dismounted

"poetry rides the wind
we prowl" the old gent
said: with history's
footpegs under
his boots to balance
against headwind The
Holy Ranger along an open Heartland
cement trail
snapped handgrip reins
& saluted this phantom patriot who
survived to ride upon one summer's
edge in sacred territorial vision.

Early Spring on a Harley-Davidson

with trees
against sky
& earth grass

dusted upon snow

there are hollow
rusted cars along
the road as though

hungry deer in fields

SECOND SEQUENCE: VISIONS

What did not happen --
brought in ways
that seem to be.

Ted Enslin

The Holy Ranger

climbs into the
easy chair from
his saddle then
lights his pipe

& removes leather
gloves to hold his
fourteen-month old girl
while the nine-year old

girl tosses soup bones to
Harley the dog whose size
has increased the food budget
this fall & as he gets a kiss
from all these critters he is
still on the ride with Corey
to Butler Biker Days as that

Softail cut trail moving through
traffic like a chrome scout & his
wife hands him a favored Hank Williams, Jr.
album over the baby pulling at white hairs in
his beard : then settling into reveries with
Jim trying to keep the generator trailer
sending power to tattoo needles singing
Fat Bob images or earlier in the week
a wizard chanting on Kelly's arm as
he reaches into a Shovelhead while
out back Doug's trigger job is
explored on the 1911 Model &
then Steve has sold that
Sturgis but only if no
handlebar alteration
takes place when the

Rabbi pulls in on his Full Dresser
which moors at the edge of a photo
taken of Smiley in the Arizona six
gun sun wearing a Derby but by now

Molly has to be in her crib & Sarah
in her bath & me & Maureen might even
meet later on once the house settles into
hallowed silence but for the rasp of exhaust
stutter meditations as The Holy Ranger leans
across a late dinner table reaching for Sunday
night leftovers flavored by a season of roads
taken with comrades chasing mysterious winds

The Sportster Accessory

I sure like those Springers
& a Low Rider has always been
my idea of a real motorcycle,

yet this 30th Anniversary Sportster
feels more like a quarter horse for
me with its vibrations instead of bucking:

but one morning I came out to the garage
to find horseshit on the floor & would say
this is quite an official Harley accessory

that research & design got just right
for us who want things rustic & natural --
it's the ideal XLH option

that I'm sure will be
an Eagle Iron catalog
addition with less of a stink to it but
just as much
of a pile

Memory Inversion

The old beast crooks his finger
and the winds start up.
Tonight
it's his only power.
-- Howard McCord

1.
hey, baby(which
sounds better during
a guitar break, sure
I know that, you
slink back when
sleep pops open
!today
it is cold, yes
-terday, why
, the sun -- it
was just terrible .

2.
every time
I hit that

spot on the trail
that spring
leading to the lake
right around dawn I
hear a woodpecker &
rabbits jump out at
the same places .

once I found a snapping
turtle laying eggs too
close to the path &
lifted her out of
the trench & she

hissed & tried
to hurt me
but I got
her into
cover to
complete
the act.

3.
from here
I can see

the sun moving yet
across the courtyard
into bushes
under my window & in my
office across the sill
onto a typeface expanding
through inverted
slats just like
remembering upon
the office dimmed
& there's a need
to switch on that
lamp I light
Virginia flake in
a briar instead
& do not go home, another backlit surface
moved upon from
another source

4.
so that other morning
a turtle is flattened

probably by a car & dried
out it is on the walk in front
of me, timing the final stretch
I ran every day in the fashion
of erupting similarity as with
the hammer on this antique Colt
Pocket Navy clicking into
historical penetration
zones that must synchronize
with those

5.
after adjusting the stop-
watch compensating for an

urgent Kung-fu rooting motion
then sweeping kick relieving
this slab from its flat death
onto a trim Lake Drive lawn:

as though a burner through
my left shoulder in a power
drift with free weight rattle
syncopation injury back then
a healing root sprouted in
arcane cells nearer the
warrior blood
which when
spilled
greets dark with dark to have light
for this kind
shines into

6.
was it yesterday
again, baby (& again
better coming down at
the dominant into minor
riffing to get under more
when I sliced
open in kitchen
psychosis scars
evidently not
tempered until
I crook my whole
hand deflecting lit porch lamp
beams starting up into night wind

7.
around dawn seekers muddle back to the stones
& invention will have proven itself or ritual

shall take over

8.
mounting the saddle
above chrome V-Twin

Harley-Davidson heads
& turning inserted key
not yet to Sportster light
on position as system wired
capable that way then as initial
gear after sidecut pipes have
produced the familiar rumble
is gotten by leather boot
down on shifter arm
buckhorn bars held:

power has produced only exhaust
-ing morning idle which leads
to where cobwebs
still hang dew along roadside
& a stop to warm hands on oil
tank in hunched reverie
while pulling the Randall
from saddlebags to stab a hunk
of hard bread inverts
memorable use
so then
the best
move is to
be just warm
enough to cut
the bread only

as feet upon
hiway pegs next
pull miles beneath
for afternoon sun heat
reflects upon dials that are measuring how far to go
that are lit by unseen bulbs
along the bezel & when I ease
into the tall gear & punch Milwaukee Iron
stones will scatter wasted upon the surface

Four Wisconsin Photos
Taken from a Harley Pillion Pad

1) for a distance
a brick wall
is in its parts
pieces sorted along
railroad track edges
to the destination
(more of the purpose
is hidden by that oak.
there's
a sloppy wooden fence with
a door in it on both sides
the fencing weathered away
one
can
either enter properly
or step through
the fence proper

2) some shopping carts
in a meadow
black birds on them
four cows pushing
brush around the siding
an old Plymouth
the watering bin
other cars perch in directions
some newer forming
a rusted grid

3) power lines
hung on vectors
bridges over
parallel passages
the scene goes in
or out it goes seen

4) snow increases
its pattern
binding the landscape
.look into
dark white
tree branches fallen
poking out
shocking grass this
too a graphic setting .

Harley-Davidson
85th Anniversary Homecoming Contemplation

out of the Kenosha holding strip
onto 94 with all areas alongside

covered by raised fists & victory
then on p. 43 of the HD magazine I

find my Harley racing orange front
fender in that photo coming around

the bend in back & my beard sprouting
out from the black helmet -- well being

there in June & here now in my office
between appointments just from buying

this to read & opening my napkin
to keep sandwich crumbs off that

front fender it coming at me
as I was upon it with cycles

behind in columns roaring
& such lovely ladies with

leather fringe sparkling
upon the interstate path

into Milwaukee Iron
coming home I rode:

a pack of Strokers
at my side & front

to rear passion
burning V-Twins

in the mystical
gas tank logos'

signatures that
chant the poems

I cannot write.

My Photo With a Young Woman

who has a dragon tattoo on her tummy,
is something my dear wife of eighteen
years sees with the knowledge it is a
different kind of chrome for my cycle
& that women are not objects really a
picture like this, man, cannot be taken
away from me as I near my birthday of
forty-two years & anyway with my dear
lady on the pillion pad I cannot find
that photograph especially when there
is a swell in the road & she hangs on

The Right Version of the Real War

6,000 U.S. Marines for
77 days held Khe Sanh
while from the Puzzle
Palace all those
Ringknockers told
President Johnson
what he did not want
the six o'clock news
to bring for supper:

that another Dien Bien Phu
could be boiling up from
the Laotian jungle for
which Walter Cronkite
would blame him
so to defoliate
criticism & not

get the proper sight
picture on the NVA's
Dac Cong he arranged
a boondoggle that is

of no use to the Marines
who hold out anyway from

simple anger & an American
interest in proving those
in the field superior to
those who think they are

The Holy Ranger as Avenging Angel

for Justice Robert F. P. Schneider --
the only Righteous Hanging Judge left

I. *The Necessity of History*
an American gunfighter is hired by Mormons
who would not protect themselves after
the Civil War & becomes known as an
angel who destroys for those not
inclined to do so

another but also an American gunfighter
his name never in print
disappeared into Mexico
& was more than likely

the night reflected into
snow iced over as though
fears upon the vision an
instant necessary coming
from a sidestreet looking
through you on a motorcycle
not even seeing this slip as
centered into future's crosshairs

:& you cannot open
fire at the vehicle nearing
as you are unseen & must wrangle
loose from its incoming blindness not now
as when sighting buffalo running your own
horse down for now we look the collimator
bore-sighting tube in the eye while there
is yet another incoming object from
the side ripe from looking at visions
of my father's death last fall(when I got called

I had already dreamed the night before that
I would & this kind of interloping mania of

predisposition magnum disbelief would make
a man's aim steady & choice of pistol only

perfect for the job

II. *The Restraint of Politics*
somewhere across the border hooves pound
an approach & doves make it damn near illegal
to protect whether one would or not because hawks
of any flight receive legal penalties & if they are
victims their predators have more freedom: because we
are living when an avenging angel suffers not pride but
jury trial & weapons don't work when even a lost gunfighter
cannot ride easily back into proper use & the imagination of
those without help

III. *The Wisdom of American Origins*
the U.S. Constitution gives me the right
to own firearms of any kind yet I will
not hire out as a gunslinger and due
to an awful demise of courage & ethical sense
I wonder if that
destroying angel needs a job
or if the lost outlaw shall
experience resurrection on our
behalf for if we should pull
the trigger lawyers trained
to attack decent motives
feared by cowardice left over from wary
politicians who have eaten too much for
supper will pander us to a legal ambush
unlike those who originated that sacred
American document might ever imagine in
their most worried hearthfire visions of
American determination seen by a common
eye through iron sights:
that is what Thomas Jefferson spoke for
us on 19 August 1785:

"A strong body makes the mind strong.
As to the species of exercise, I advise
the gun. While this gives moderate exercise
to the body, it gives boldness, enterprise and
independence to the mind. Games played with
the ball and others of that nature are too
violent for the body and stamp no character on
the mind. Let your gun
therefore be the constant
companion of your walks.
Never think of taking a book with you."
books says The Holy Ranger are to be taken where

you can park the Harley-Davidson when your
sweetie couldn't make it & the ride needs
hermetic unraveling or even where the
night is falling & she was not there: but
on the ghost journey
indeed that constant companion
must be a Single-Action in .45
Long Colt preferably outfitted
with ivory stocks slung inside
a leather rig worn as well from use as the
binding on a book gets when it is read any
time action needs primer
ideas as ammunition rage

IV. *The Possibility of American Resurrection*
we consider death when the most common details
remind us of past experiences with it .
there are those times too when
the future dies right into
our present preoccupation: here is the time
an Avenging Angel
the last of the gunfighters
dreams a steel & chrome steed upon the land .

V. *The Harley-Davidson Factor*
it is more than pulling out
the choke & snapping the switch
then turning the petcock & key before
twisting the handle a few times & hitting
the starter button :
it involves a leg over a saddle to easing
back against the soft embrace of a lady
there in buckskin with fringe falling
slowly over curves that cannot be
found on any road alone
then adjusting that
knife sheath &
hearing a first gear shift that sounds
like the horseshoe on cobblestone near
my father's store where I would head
in the morning before school to wash
the windows & one walk (which was
always taken down the Chicago
& North Western tracks until
I hit Appleton Street in
that the steam engines
made iron horse paths
to follow for a nine
year old Wisconsin
boy lost in Texas
Ranger comics) led me straight into the rasp
of an elegant Harley fitted
with a sidehack & ridden
by a man in black leathers
who asked me if I needed a
lift so the rest of the way
that day I rode to work & never

could get out failing my math
test & barely passing English
I immediately understood what
it has taken forty-two years
to put into gear -- that
riding an American Vision is the efficient
revenge for
all the cowardice those who deem
it unfair to defend family with cowpoke
technology spend upon laws that weaken
democracy & turn men into snotnosed
kids needing permission to wipe & ride
away those
who would do us harm

VI. *The Courage In That Grace*
handling a Harley around a corner when blacktop
immediately turns to gravel & a foot down won't
save it
gives an
awful strength
to the heart & your hands can hang on
to mindful courage all
the time with graceful force & a power
rises from history that will not be
toppled by fashionable modern laws.

VII. *The Nature of Present Adversity*
there was a time
when a person seen
stealing your horse
would not keep a lawyer
in business for taking
transportation away
was close to murder then

today we see
crimes worse

than horsestealing
pass easily into a

barrister's bargain that
time though was
right for you & me & your kids & mine
& your girl & the one to whom I've been
married for nineteen years ,hell ,we have got
to listen for the
hooves pounding as tire
treads rounding
corners of adversity & those not
inclined to be of worthy comradery
not
able to stare death down cracking
lips as one cracks the visionary
ground barrier with evolution fury
not
willing to take their troubles all
alone when proper with power fire
burning into
unfair practices even if
they are in writing & defense cash

will have to be raised like an
American Flag -- those are not a
bunch to respect so we must hear a

parting of heavenly boundaries
with angelic rumbling & the avenging
holy rider enters our stride & there
comes mystical knowledge chromed for
strength & pride but meaning a

lot more than poetry yet less than
we can say to one another as we
gather around the campfires
hanging onto righteous
sparks that rise into
the night leaving
tracers the eye
alone follows
beyond pages
written by
this light

Harley Ownership:
Weekday Morning Rider

leather briefcase
sat upon lawn
  being yanked by
  the woman, removing
weeds flowering (that
my daughter would put
  in a diningroom vase

he waited
as on the
  Harley
I cruised
the alley

I could see his glasses
rise when his salutation
  caught me but his return
  to this briefcase & his
woman there on the property
as well pulled a long root
  above the surface

Upon Finding A Prowler
In The Neighborhood On
The First Warm Morning

the screen door used
to slap shut in 1959

but the sound of a
deadbolt clunking
into this 1989
doorframe made

the night's first
summer bugs even
fly from the porch
light snapped on
by a miserable plastic

switch that has taken its place on
the hall wood painted over & much
too layered to strip
of its protection

Mid-Summer on a Harley-Davidson

Wisconsin cornfields strangled without water
& gravel shoulders coughing dust in the wake

of that eighteen-wheeler ahead
so the downshift & then faster

onto this county trunk
as blackbirds' chatter

stick in the windless
hum of tires going to

the broken yellow
lines as a center

for the holy
morning ride

THIRD SEQUENCE: DISTINCTIONS

What man
goes through to
arrive.

Cid Corman

History's American Springer

> *"I speak of aesthetic satisfaction.*
> *This want, in America, can only be*
> *filled by knowledge, a poetic knowledge ...."*
> William Carlos Williams
> ***In The American Grain***

all the imports hid behind plastic
farings and their riders crouched
on top of them wearing bright
tennis shoes
in the later
eighties when exposed satisfaction
aesthetically sprung onto those
Softail front ends in chromed
memories of the
future here in an
American reply with
our riders deep inside
of these machines such
that every element
upon Milwaukee
street poetry was concretely observed through that
Springer expanding & contracting any
time the rider's heart would & blood
pulsed through the sparkling coils straight from homemade poetic

In Awe of Friendship

Across the tribal brow's hewed ridge.
Carl Thayler

the Holy Ranger's buddy
Theodorik woke his wife
one morning in the Maine
light to sing: "hey hey Martin J.!
how many miles have ye rid today?
the boys on the bikes is waitin' fer you,
and so's that girl with the blue tattoo."
the Old Iguana has told tales of the campfires on the low plains around which steeds were kickstand down & bores are cleaned & guitars readied for action after seething trail heat has been dispersed in stories that can be whistled (in deference to Col. Cooper who asserts memorable poetics must stay put with traditional meters & who would argue) : sometimes the riders must
have nicknames to completely
master their feats that day for
these have been such mythological
wonders & on this night the Holy Ranger
was called "Stroker" because he rode with
such passion beyond speed limits accused
of the eleven hundred limit his mount
Ranger possessed so as the Iguana
told it

Theodorik in his boonie hat chopped wood in the Maine sun that day whistling the rhyme

the Old Iguana cranked his Jeep through the Ohio bog with greater tales for the plains

then Stroker walked the wooden steps up to Holy Ranger HQ in Milwaukee to spin the end

which would not be worth
much without the friends
such as Kenosha Bandit whose
machine puts these images in
type much the same as having
been there can
so when an end
comes riding across the page

it has been on a mysteriously long journey into title awe

Wisconsin Winds

Wisconsin winter crowds the roads
cutting the center line & wrapping
the shoulders
then off into the fields fenceposts
stick up as reminders
of spring's territory
& the blackbirds upon
those telephone wires
call to winter's
attention that
they aren't being scattered by
the holy exhaust roar from the

Harley Sportster that is restrained
by vinyl covering & plastic-coated
chains upon an insulated board in
a garage that is visited late at
night when the house is tight &
the yard flushed by the light
coming from my office window
where the walls are covered
with pictures of motorcycle

Kabbalah: the Old Iguana wearing
a shoulder rig in the Bog
the ivory grips like open
April sunlight
Willie G. shaking hands
on a hot June afternoon
that front mudflap made
from carriage leather by
Hunt's Harness on one
visit to Colgate in
summer's late heat
the Holy Ranger
firing a Buntline Special
at rogue soda cans along

the road to the Monches
dump having dismounted
to take care of that
situation before it
got out of hand
that Gibson found in a
sixties ecstasy still
strung for trouble
in its hardshell
battered from
barroom blues

--these offroad memories found in frames to contain their snowbound imagery that develops further an instant after Wisconsin spring on the roads cutting about evolution power drifts like so many friends in the continuous Midwestern wind

Gibson Guitars On The Old Creek Bed

once I'd selected that
one with the fastest
neck & prettiest
spruce flat-top

I'd head for the ravines
behind my Appleton house

where there was a dried
creek dent in the dirt
& if there upon it
this axe shared
acoustic sustain with a
sparrow then it would go
to the gig : & this selection
of guitars still
can sing like a bird picking
at the old creek bed .

They Were
(After Motorcycle Tour)

for Steve Nelson-Raney,
Territorial Rider

a Cardinal
sits on our
redwood table
next to the lilacs
with an abandoned
Robin's nest
chased away
they were
by this
dog who
can ask to go
out with the smile
of charity & who

will protect my daughters
with frozen terror that
even Robins cannot live
near in summer daughters

I say as the second shall

come this summer as
Molly Dvora to join
Sarah Terez
& this Cardinal who

will not give up the perch
shared by a mate too & the

dog realizes there is no good
challenge or that their calls

are not for territory just
for ease of flight
there is peace in the yard

:the grass simmers
down the cherry tree moves
up &
I am

settling into Zazen
sitting right where

the dog must defecate
so in moving I meditate
in ecstasy with my scooper

Harley And The Art Of Motorcycle Magnificence

do not give me any
of that Zen & some

art of motorcycle
maintenance stuff

: just ride your
bike & if it is

not a Harley-Davidson
then maybe you should

just affix it to where
the sun don't rise any

place except through
those rustholes upon

foreign designs stuck
out on American roads

The Blues

this gets played in twelve-bar progressions
on my old 12-string with its cherry sunburst
radiating notes that hit the morning sun just
like drops of rain on the backyard grass stepped
upon unmowed & stained where the dog squats to mark
his spot we all later sit with beer cans tucked into
the velvet guitar case which mats the grass like a coffin
would the earth for once we're done all we'll hear is the
blues muffled harking & splitting the night that drops in

The Heart Must Beat In An Accurate Hand

for the House Compadres

at fifteen feet or thereabouts
John Wesley Hardin shot playing
cards then autographed them right
before his death dating them in
his last hand -- today we have
General Hatcher's Relative
Stopping Power mathematics
which has sought to gamble
without an ace-in-the-hole
through multiplication of the bullet
weight in pounds times the square of
the velocity and dividing by . . . well

last night a band of us pistoleros left
Greenfield where House of Harley-Davidson
was the fortress from which we rode for Racine
to shoot those nasty bowling pins that created
problems for bowlers all too long & now must
stand before the firing squad & those of us
in the posse who did well were gamblers not
mathematicians (with the exception of yours
truly who is neither mathematician nor any
gambler but who missed those rascal bowling
pins more than not even with that Silvertip
fodder feeding a hungry Colt Combat Elite :
for the art of bringing aim into splintered
wooden bad guys comes from mind to eye with

one's heart as the lens through which
intelligence gets focus & last night
this heart of mine beat to poetic
vision that of course is
material accuracy but still
unsuited for combat measure

so once the cards were shuffled
in the kinetic deck with an ace
beneath my fountain pen I imagine a Colt
Single-Action Army in my saddlebags & crank
my Harley against early spring weather
resistance to face objects in absolute

need of control & at fifteen feet the next day
or thereabouts I was dealt an inside
winning hand so I bid on a heart &
raised some & shot
the center right
out of the rusty pot hanging on a fencepost .

Creed

> *Fifty years ago young people were made to understand -around the dinner table- that strife was part of life, and that they might well encounter it, and that it would then be their duty to face it without blinking - ready, willing and able to use force quickly and expertly if necessary. Boys were taught to shoot and use their hands, and girls were taught to expect that in their men.*
> Col. Jeff Cooper
> ***To Ride, Shoot Straight, And Speak The Truth***

the present fear of conflict is producing
reactions that weaken those who would
prefer freedom: if we choose to ride
our motorcycles without helmets
drive our autos without seatbelts then we
have an
insurance controlled legislature to reckon
with which creates laws that favor our own
best interests whether we like it or not .

this is not a proper function of my government
& especially since it operates out of scare

we learn that we cannot take care of ourselves
unless it is written that we are doing so well

:the point is not to go without a helmet
nor without a seatbelt but
to decide without assistance

around the family dinner table
in the absence of television
with the sun's final light
moistening homecooked

meat brought to the
table with a steady aim or
an honest dollar .

there is a natural order
to all things & the creed
must be to find it beneath
frightful camouflage designed
by those who cannot sense the
power without wanting to take
this from the rest of us now: fifty years ago
boys were boys,
girls were not,
assistance meant friendship & I mean business.

Pioneers

these damn papercollar soldiers
Major (Old Gabe) James Bridger

fearing wild beasts
plain & forest
Sarah Terez
sleeps in
the hall with her head through
the doorway to our room &

Julia on her way to the water
bowl I clear my eyes :
her German Shepherd ears cock
just as a Winchester 94 when
she spots my daughter's nest

then I watch my wife rise
in sleepless splendor
(baby nausea in her flesh

& mine chilled/this winter's edge ,

before this day starts
as light I walk
upstairs without
a lantern or fire
in the hearth
my Hawken rifle hangs
with its powder horn
upon a wall as I hunt
for a hardbound book
to lay safely

across my lap

Physical History

I had a fever during
that deadly spring &
came closer to watch & stood in
my backyard one morning
as Cole Younger rode up

& it is best in a ballad better
yet over a cardgame but he rode

as the fog lifted & wind
comes off the lake that
Bowie slung in a scabbard
& a carbine on the saddle
I could not
make out which
pistol it was but
I believe he was just
from Texas before hitting
Minnesota & still on decent
terms with the James Brothers

but as I
leaned forward just to wipe
mud from my boots he took
the chase & I stumbled
into our fence &
sweating took
off my hat
in disgust he would
get caught & I
had to get
into the clinic
before bleeding more than
could be replenished
from the slugs

left inside
from a
pistol that went off
in a genetic outlaw
draw:
an indistinguishable gun held by a rider that morning
& the Rebel yell
as sunlight
slit by
this fir tree when I
was brought to my
knees then vision
clearing brought summer's bloom
one night as I stood up to hear my own pulse as a
driven horse into
history's body .

When There Has Been No Fire

for some time
it can usually
be found traced

& I consider
wagontrails or
paths cut by
mountain men at

odds with
wagoneers yet
ash is the usual

distance covered
& this can be felt
as I shove my hands
beneath the leaves &

entirely past
the waist of
her slip .

Joining

as when
meeting
it gets
this
pioneer/inversion
which is
that snow
upon edge
, unfrozen
: we never doubt
it will melt
nor do we fear
gardens will feed
us serpents any-
more/than

keeping loved ones
together it is the same
bond that kept the rage

vicious then a ceremonious
parting to enhance civilization
leaving her at the sink & he drove

their old Buick
into the leafpile
while their hall lights
protected the neighbors

Air Pirate Disposal Memo

the sign on the U. S. Air jetliner
toilet said: DO NOT THROW FOREIGN
OBJECTS IN HERE.
THANKYOU.
hell, I had figured that hole
to be a good place to toss
any terrorists on board.
BUT YOU'RE WELCOME.

Here Goes Proper Country Picking

this Gibson ES-335 resonates through
its cherry top as the Hubbard Park
tunnel flattered my sidecut pipes
& with a slide down the neck
& around a fast curve
hands in gauntlets
& engineer boot
down for one
but just fingerpicks
yet the same boot down
for the other: combine this Delta beat
& that acoustic
tunnel rasp for
proper country music
picking Milwaukee
style when the heart's
kickstarter blues goes

Enter
(From The Last Autumn Ride)

the scattered leaves
against the side
of the garage

wet from
an afternoon
rain this fall
the slight wind
in later afternoon
light qualities :
images receding
from cut edges

into burnt ridges
against a backlit
storm door entry.

At Milwaukee Chapter
Harley Owners Group
Meetings
We Will

often marvel
at the chance
meetings & when
one is arranged
possessing that
element of pure
acausal shock
the intimacy

defines luck :

as though a tattoo
upon chrome values
tales of the rides
are spun around an
evening's pleasure
& unwound on roads

where luck
is hardened
not always by
helmets but in
the rush of wind
there are omens of
divine protection.

Legacy: EvoPoetic Confessional

for Rob Kaleta,
Caballero

an eagle mind
an even road will suddenly twist
a wolf heart
a straight shot can quickly ricochet

:evolution thunder balance
while heading through poetry territorials:

let me admit that my hands
get windburn when I prowl
& cold stiffens them but
win hot lose or draw I
slap leather & hang
onto power that cycles primitive need for the ride
which turns & crooks unleashing
wild pacts made with tight grip
upon buckhorns thrashing as
though wounded in this hunt for significant wind
but if so then healing glove fringe rolls out in
the reach for brake levers only
when crossroads give hesitation

Late Fall on a Harley-Davidson

the leaves scatter into heaps still wet
from night rain & the fog lifts valleys
onto shaded helmet visor visions coming
upon a road kill
as though a ranger
having followed the trail
that led to frigid air
impossible to breath quick
so head down right over the stench

The Holy Ranger hits the sack early because he is up at sunrise to ride and then is due back at Holy Ranger Headquarters for steak, eggs and contemplation before the day begins.

This night just before dark he has come from the stable where his steed, *Ranger*, has been wiped down and fed high octane in preparation for the morning trail, and in the distance The Holy Ranger thought he heard riders approaching: but there were none to be seen by the time he reached his back door, so he just went in through the kitchen and grabbed a hunk of hard bread and coffee, lit his favorite pipe as a good omen for the evening's writing, then walked up to his office after lowering The Holy Ranger Flag that flies over Lake Michigan in Milwaukee from Shorewood.

As he eased into his chair to read that morning's poetic meditations for signs to follow this night, he again discerned approaching riders coming up from the ravines along the lake, but when he got up to look out from his room above the treeline there was nothing to be seen but the barn owl from Downer's Woods sitting in the crotch of a tree towering over the flagpole.

He remembered a couple of lines from a poem written long ago: "The owl turns his head from day to night, Never moving his eyes within his turning head." The unrelenting stare of an owl always fascinates, for it reminds us that somebody is always watching -- somebody with knowledge beyond that which we have.

It was soon dark and the only sounds were the ticking of night insects and the rustling of raccoons along the paths out of the woods onto Headquarter property. The following morning, as the cardinals living in the high bushes near the flagpole issued their volleys, The Holy Ranger was uncertain as to whether or not he ever slept; but he decided that perhaps he did, for while the cards

were still on the oak table next to his leather chair, the gamblers were nowhere in sight any longer and he did not recall their leavetaking.

He had a clear recollection of their arrival, however, for when Samuel Colt, Orville Gibson, William Harley and the Davidson Brothers climb the stairs to get into a game of five-card stud poker and designate The Holy Ranger as the dealer, leaving their mounts out back to rest after such a hard ride, well, this is a night not easily forgotten. The Holy Ranger dealt hand after hand while he listened to the conversation between his honored guests, and kept a supply of Jack Daniels Old No. 7 on the table for all to increase the warmth of comradery that brisk Wisconsin late October eve.

Samuel Colt was displeased with the ways by which the U.S. Constitution was being weakened to make his invention look bad. He kept shaking his head, swearing that the American form of government was established to protect the common man and woman, and not to make their lives *less* free.

Orville Gibson was not pleased, either, with the situation in 1989. He kept upping the ante, remarking that lewd behavior, strutted behind his invention, made more money for those who had no morals than it did for those who simply handled his design well.

Colt and Gibson agreed that they had no idea their equipment would be abused to such extents, but were pleased their guns and guitars were at least still being made in America.

William S. Harley cut the cards. Arthur Davidson threw chips into the pot, as did Walter and William Davidson. The Holy Ranger dealt from the deck slowly and would often offer his meditations upon the subjects being discussed by his guests. His visions were taken by his

elders to mean that he was interested in voicing the ideas that were being brought to the gambling table in a style that was uniquely his own, true, but founded on traditional ideas upheld by innovators outside the territories of literary inspiration.

Harley and the Davidsons agreed that there had to be a revitalization of the Old Ways in this country that produced the rugged individualists of the past, and emphasized that even today it was still possible to Ride Free. Suddenly, the wind picked up outside and we could hear the trees shaking and more leaves falling, and it was time to deal the last hand so these travelers could get back before the Midwestern winter took hold.

It had been a friendly game, though the stakes had been high all along. On the final draw of cards, all players deferred to the dealer to decide the winner of the hand; for while play was by traditional rules assigned to the deck, the cards suddenly were obscured by the ground fog that had risen in the wind off the lake and was blown in through the windows which were open to the pre-dawn fresh air. The room had been filled with smoke and the ashtrays were as full as the bottle was empty.

The Holy Ranger carefully considered each gambler's bid, then cautiously examined as well as he could their individual cards which were on the table for the call.

The sound of the owl could be heard as the day's primary light entered the room. The Holy Ranger was still studying the hands laid around the table when, again, he heard riders; and when he looked up, it dawned on him that his room was as empty as it was the night before his guests arrived.

He felt rested, as though he had a good night's sleep, but there were six groups of five cards laying upon his table and the poker chips were clustered in the center; the morning was coming in and his pipe was out. He got up from his chair to look out the window. The owl, still there,

flew away abruptly -- almost as though his watch had ended. Those cardinals fired their waking rounds. There was just enough sunlight rising from the lake to burn off the fog.

The Holy Ranger walked down the wooden stairs from his office to find that his wife and two daughters were still sleeping safely, and that his faithful dog was keeping an eye on the situation so was left in command.

Ranger fired-up immediately, and into the saddlebags went some eats and a flat canteen, and the road along the lake was traveled for some distance before a stop was made to watch the full sunrise: all was quiet in the distance now, as The Holy Ranger, feeling blessed and humbled from the ceremonious night spent at the poker table, realized he saw who had won the game. He looked in his rearview mirrors, the sun ahead causing tears, understanding at last that victory comes to the individual who knows the American past enough to present the future for those who have their gauntlets pulled on, chaps secured and boots on against the bitter years ahead. Out of neutral then into first gear, checking the mirrors to see behind, top gear was reached that morning and held as forward speed was maintained through the first Milwaukee snow shower. The Holy Ranger rode well into that day, returning with sidepipes rumbling in the rhythm of twin cylinders beating as the American pulse is felt by all those who travel this road.

About the Author

Martin Jack Rosenblum has a doctorate in Modern American Poetry and has been affiliated with the University of Wisconsin - Milwaukee for many years, having taught English and presently advising educationally disadvantaged students.

He has published numerous books of poetry and literary philosophy and has edited anthologies of contemporary poetry.

Dr. Rosenblum has a professional standing in the martial arts and is a consultant for a prominent firearms journal.

He has performed as a blues guitarist and toured internationally as a poet and scholar, giving readings from his work and lectures on his research.

He lives with his wife and two daughters in Milwaukee at Holy Ranger Headquarters in Shorewood near the lake.

Selected Books by Martin Jack Rosenblum:

Home (1971)
Brewing: 20 Milwaukee Poets (1972)
The Werewolf Sequence (1974)
as i magic (1976)
Protractive Verse (1976)
Scattered On: Omens & Curses (1976)
Divisions/One (1979)
Brite Shade (1984)
Burning Oak (1986)
Geographics (1986)
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Selected Audio Tapebooks:

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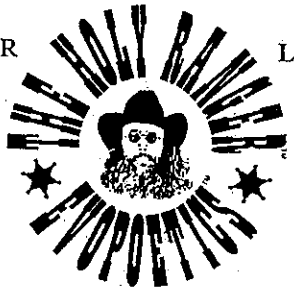
HOLY RANGER  LOGO ITEMS

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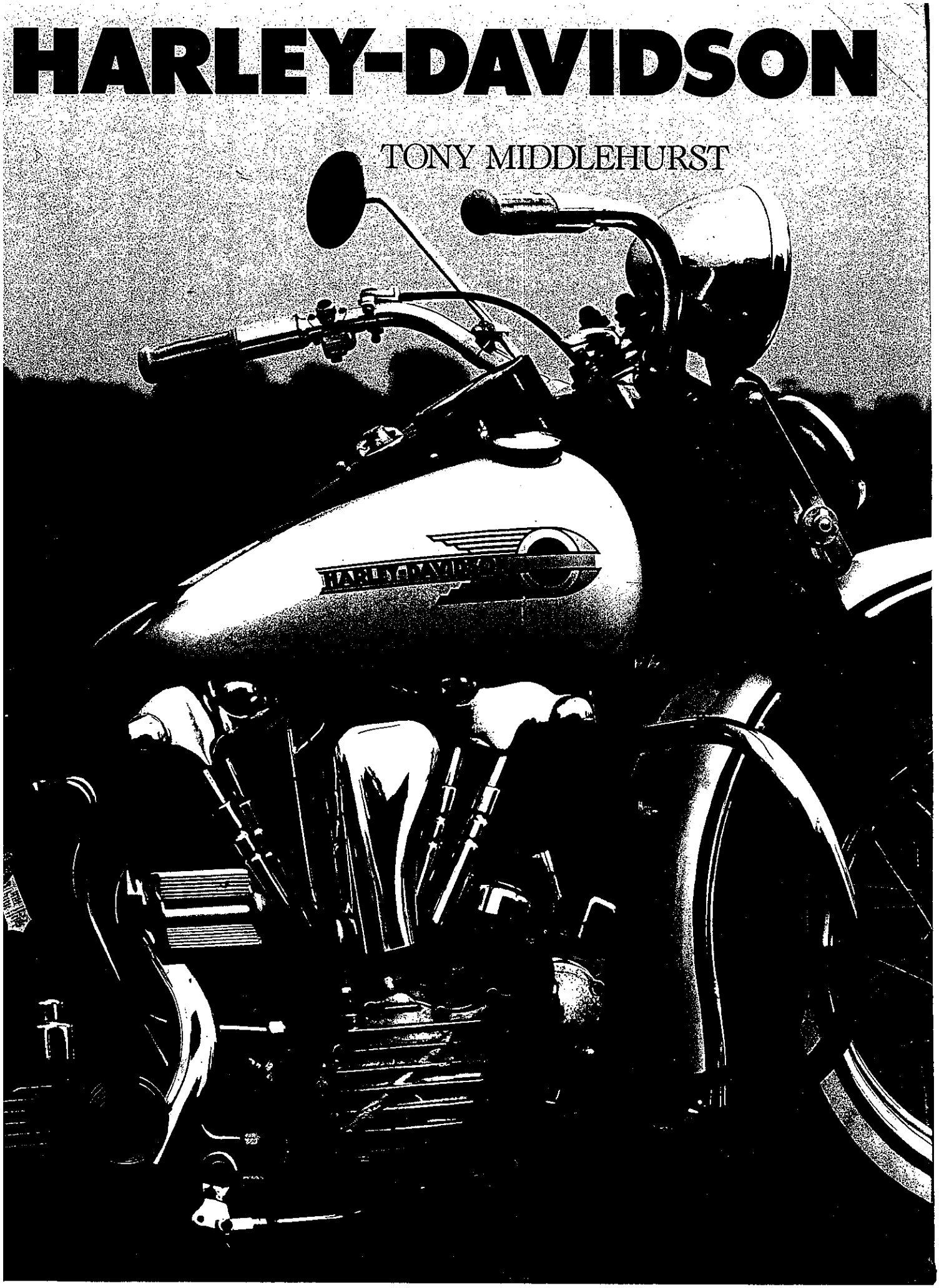
HARLEY-DAVIDSON

TONY MIDDLEHURST



HARLEY-DAVIDSON

TONY MIDDLEHURST

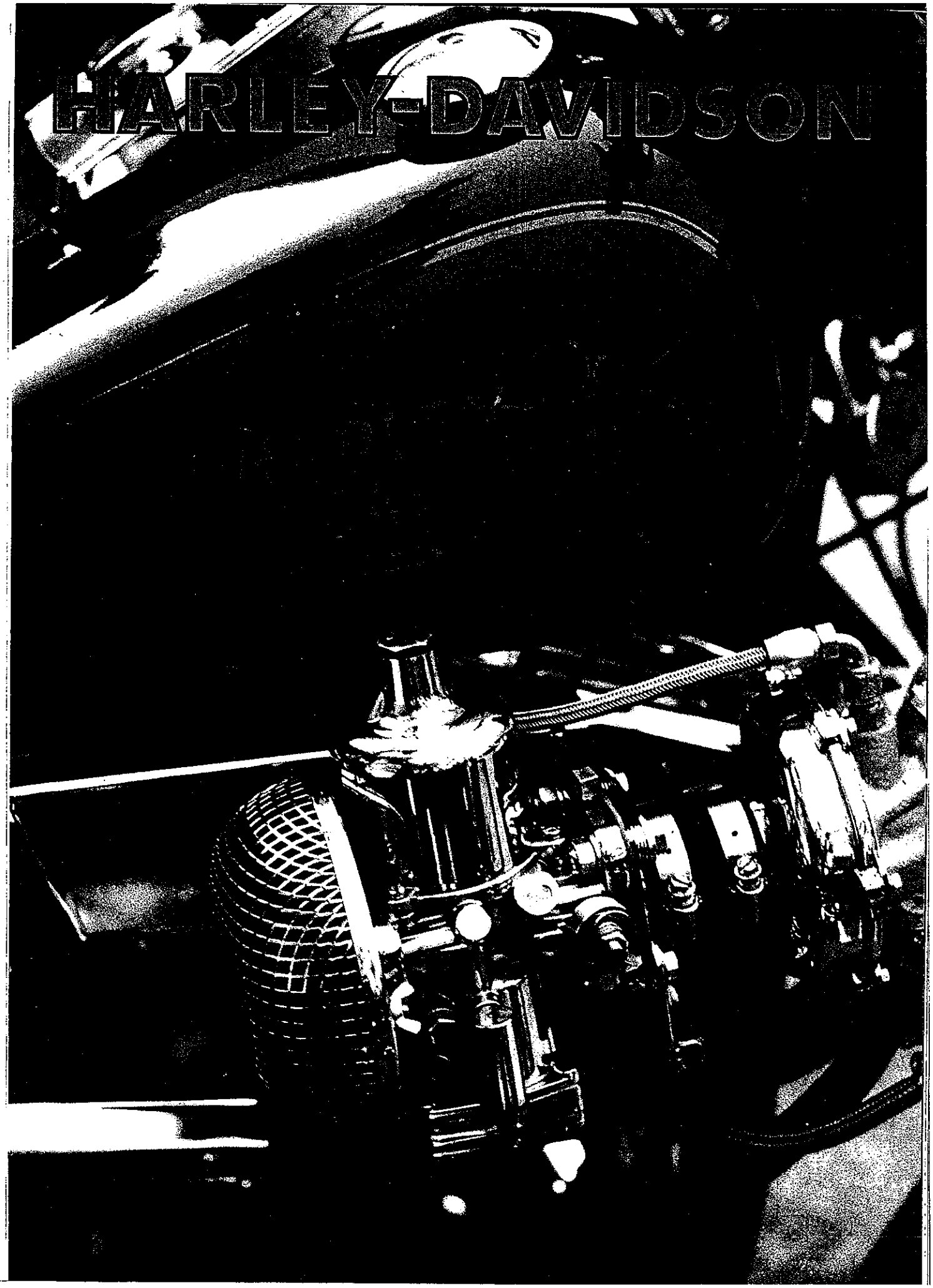
MAGNA BOOKS

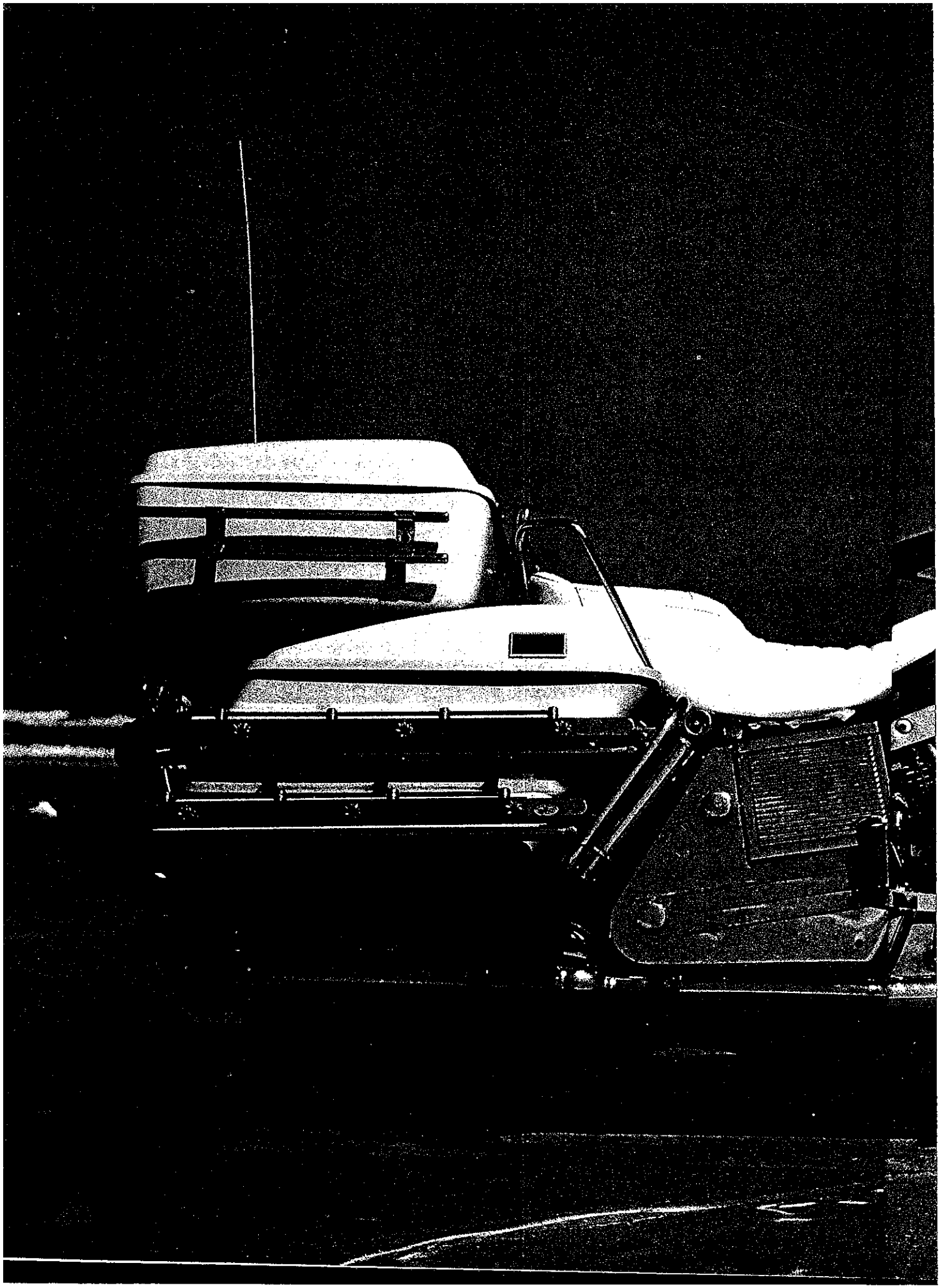
HARLEY-DAVIDSON

There aren't many automotive manufacturers left, two wheeled or four, which can truthfully include the phrase 'Established 1903' on their letter headings. Harley-Davidson can. In nearly ninety years of continuous production, swinging from the boom times of the late 1910's and early 1920's to the desperation of near-bankruptcy in the early '30s and the 1960's, Milwaukee's best-known firm has grown from a back-yard garden-shed operation into a major corporation conservatively valued at several hundred million dollars. The intervening period saw many disasters and triumphs, and intrigues which on more than one occasion affected the lives of politicians right up to Presidential level.

H-D, a company which typifies the 'American spirit', has always strongly resisted any outside influences which threatened that spirit. Their products have as a consequence always been spirited in themselves, big-hearted machines plowing their own unique furrow in an age of indentikit quick-fire consumerism. For enthusiasts nothing can compare to the low roar of a Harley. Bought and lovingly cared for by bikers, many are chromed and polished, many more customized and decorated until they resemble mobile works of art. Their owners are then ready to gather at Daytona or cruise the freeways to show off their prize possession – a gleaming Harley-Davidson.

This lavishly illustrated book takes a look at the history of Harley-Davidson, at the characters who made that history live, and at the bikes which today hold a special, almost generic, place in the public's consciousness.


HARLEY-DAVIDSON



HARLEY-DAVIDSON

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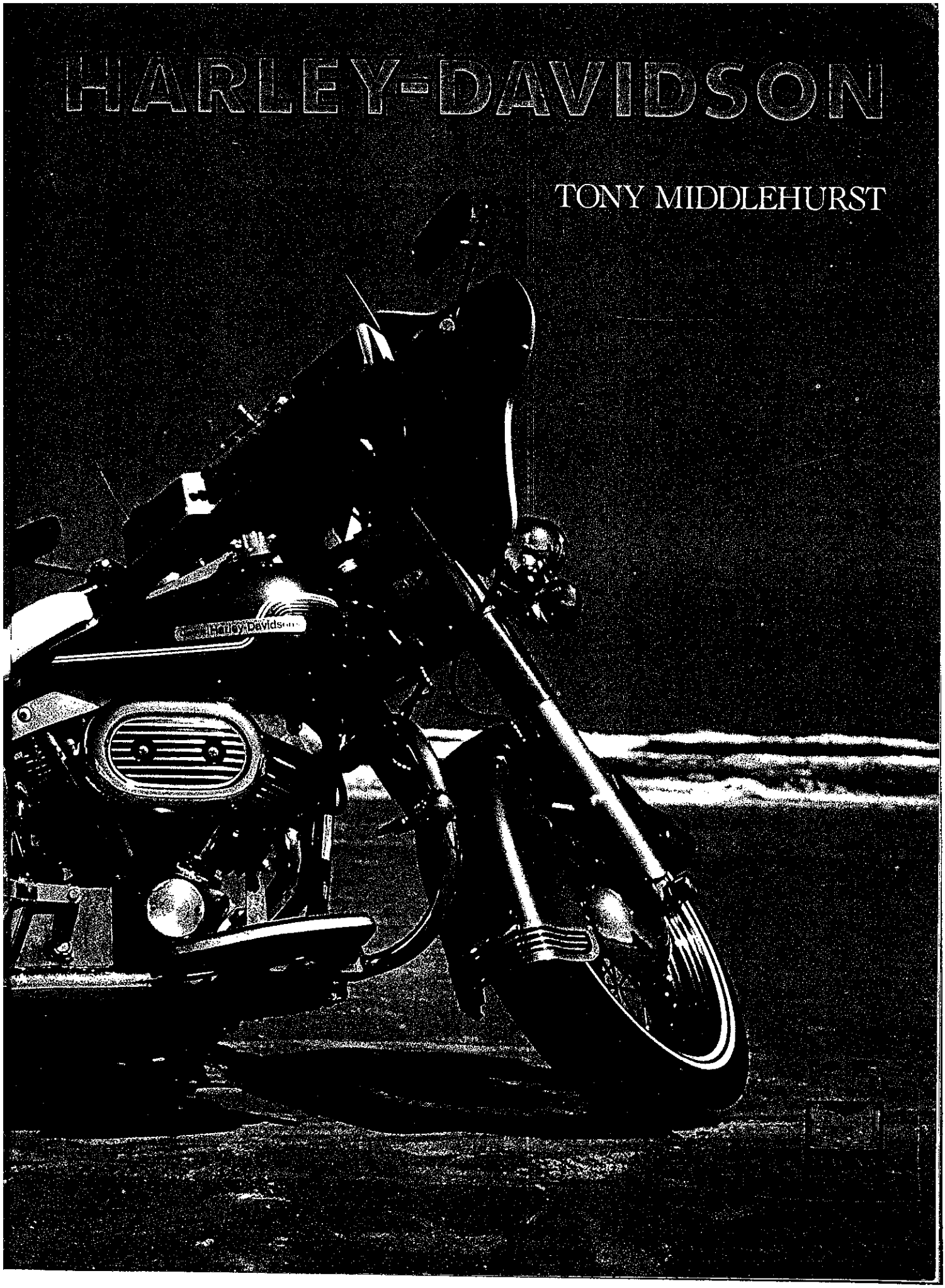

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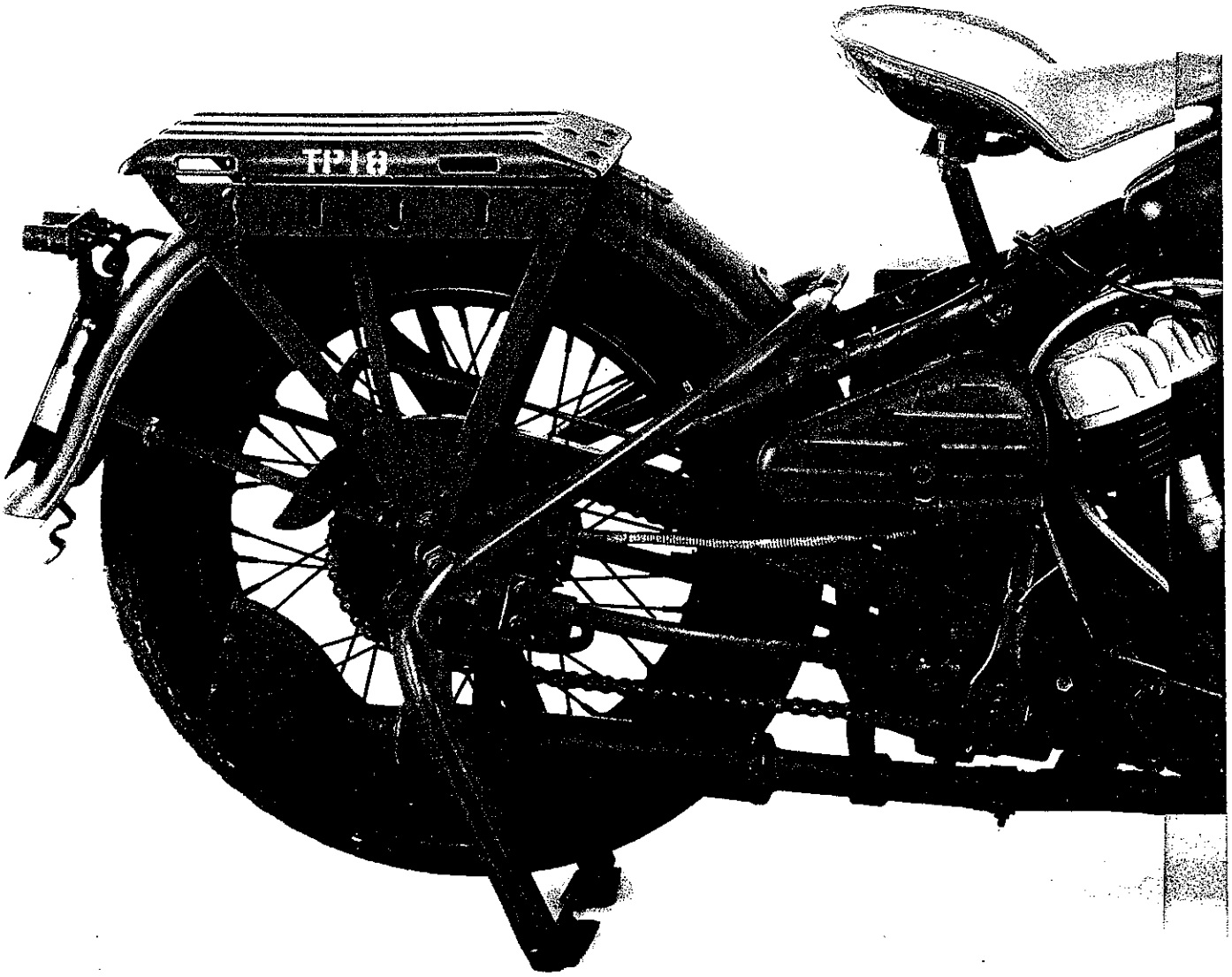
Page 1: Power and beauty...Rivera-carbed Evolution Low Rider ticks at rest after a leisurely cruise in the sun.

Pages 2-3: Archetypal Harley: the gold, chrome and white leather excess of a '76 Electra Glide in a classic setting – Daytona Beach.

Below: Everyone's dad knows at least one story about a guy who took despatches to the front line on one of these – the ever-dependable WLA45 (1942).



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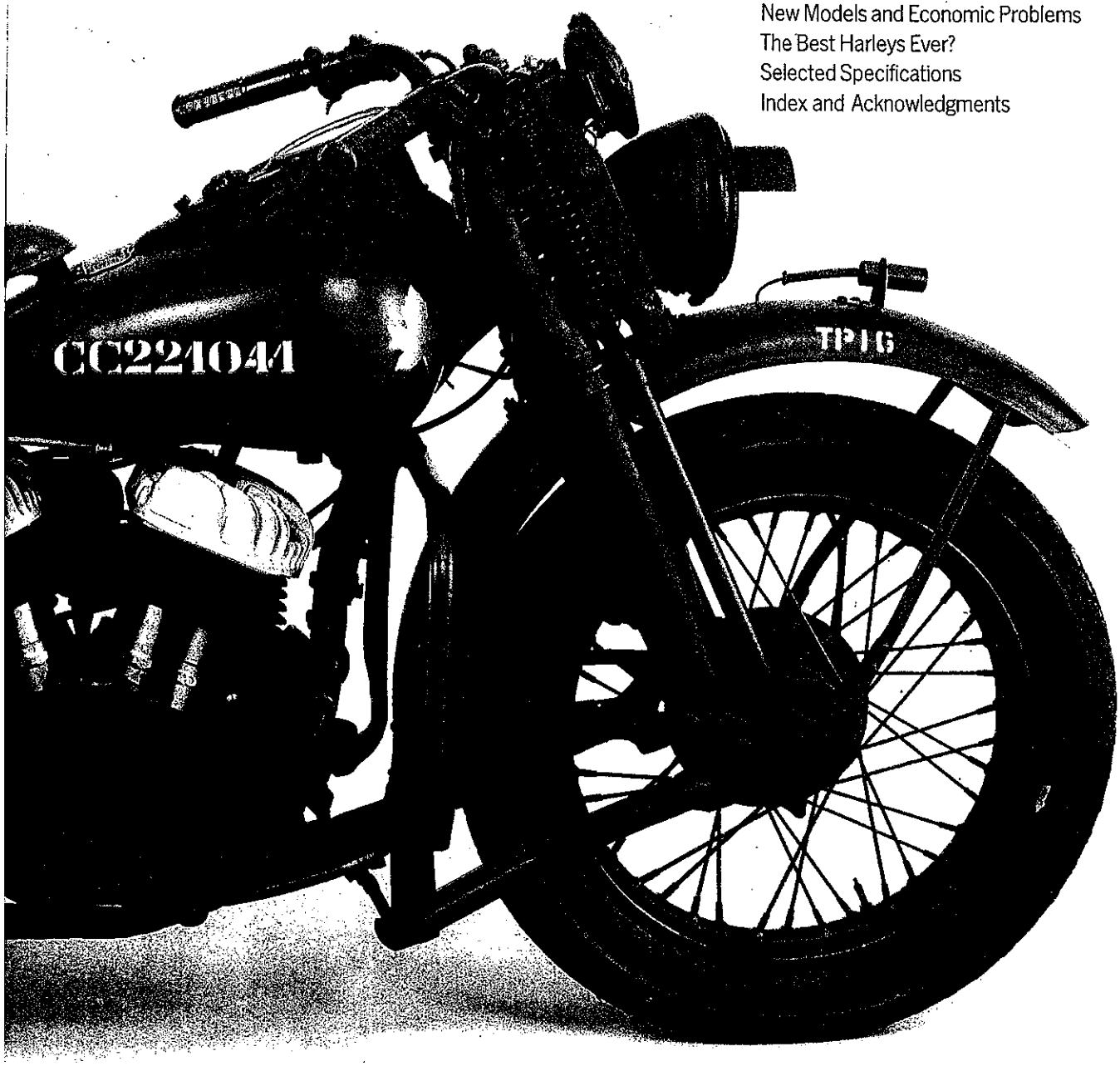


Introduction

I'll never forget my first ride on a Harley.

It was the back end of the 1970's, when the summers seemed so much hotter and the roads so much more open. I was a callow youth then, still buzzing with the adrenalin – and the disbelief – that came from having landed a job as assistant road tester on a motorcycle magazine. I'd been 'broken in' on a succession of mind-numbingly quick Japanese superbikes, until finally I was ready to be trusted with my first 'hog' – a cherry red 1000cc Sportster.

Nothing that I had sampled before could have prepared me for the otherworldliness of that Sportster. Crimson peanut tank set off by acres of chrome, crude V-twin motor leaping about (rather alarmingly, it seemed) inside an impossibly spindly frame, freeway forks plunging and heaving in protest at the English A-roads, rock-hard seat and suspension pummelling my spine . . . Right then, the Sportster seemed about as inaccurately named as any motorcycle could be. Agricultural, noisy, thirsty, uncomfortable – it was the ultimate in excess. And I loved it.

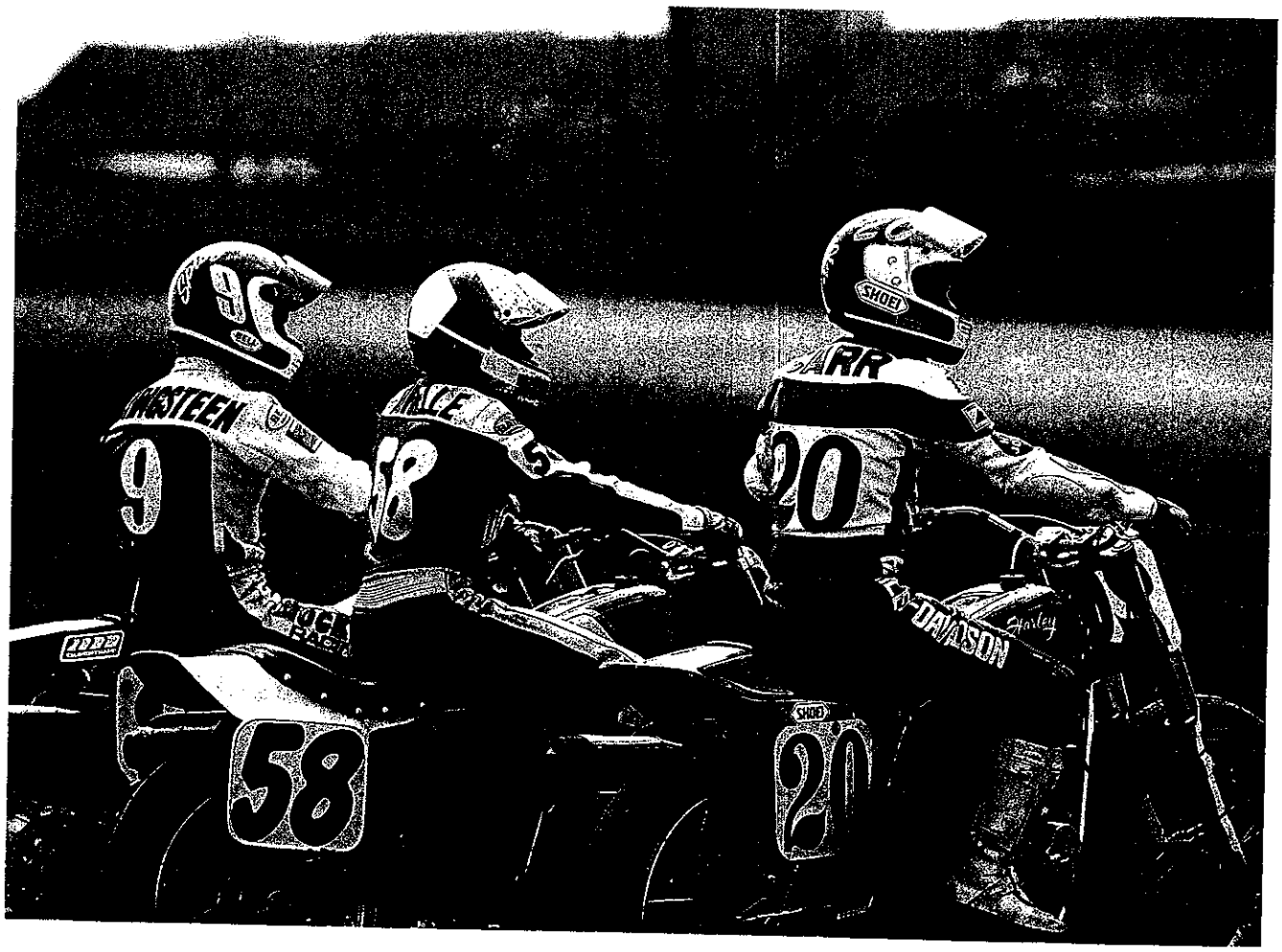
I loved it even when, less than two miles into what was supposed to be an uplifting ride down to the Sussex coast (shared by an at first reluctant lady passenger), the clip holding the exhaust pipes together fell off. One piece of bent wire and several burned fingers later, the bike sounded disturbingly like an ailing World War II bomber, but at least we were rolling again. The lady was less than impressed, so I cut my losses and headed home. Just as well, since the clutch lever was so unbelievably heavy that I had been in some serious doubt about the long-term health of my left wrist.

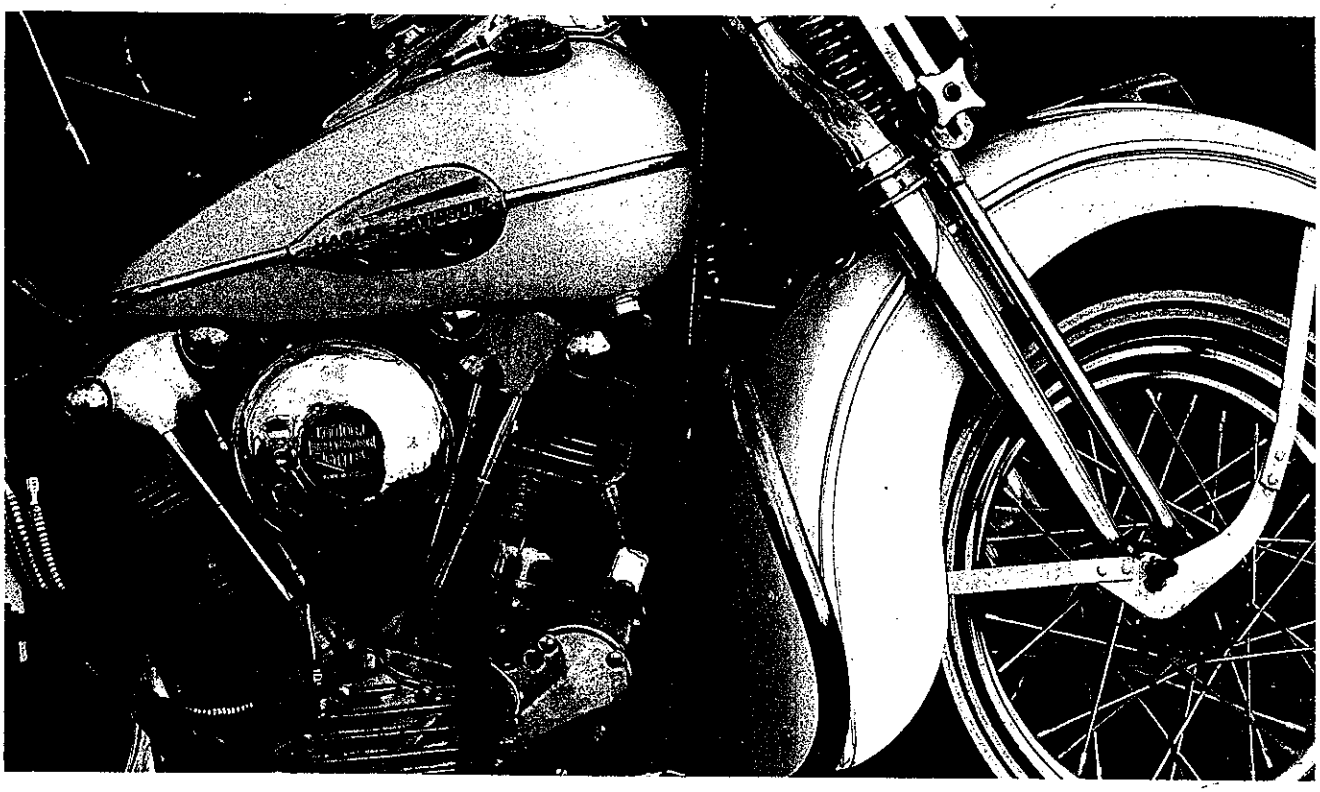
Before the Evolution motor came along in the early 1980s, it had never been an easy job defending Harleys against their many detractors. Things are different now, of course. Now H-Ds can stand comparison with a surprisingly wide cross-section of competitors. But in nearly ninety years of continuous manufacture, the world's most famous and charismatic motorcycle company has always had a devout following among motorcyclists who recognise (and can afford to pay for) that certain indefinable quality which sets the Milwaukee machines apart from the rest.

In my time on *SuperBike* magazine, I lost count of the number of times photographic sessions involving test Harley-Davidsons were interrupted by members of the public. Misty-eyed men seemed to appear from out of nowhere, each of them with an H-D anecdote to retell. No other test bikes ever aroused anywhere near the same level of awed curiosity as Harleys did.

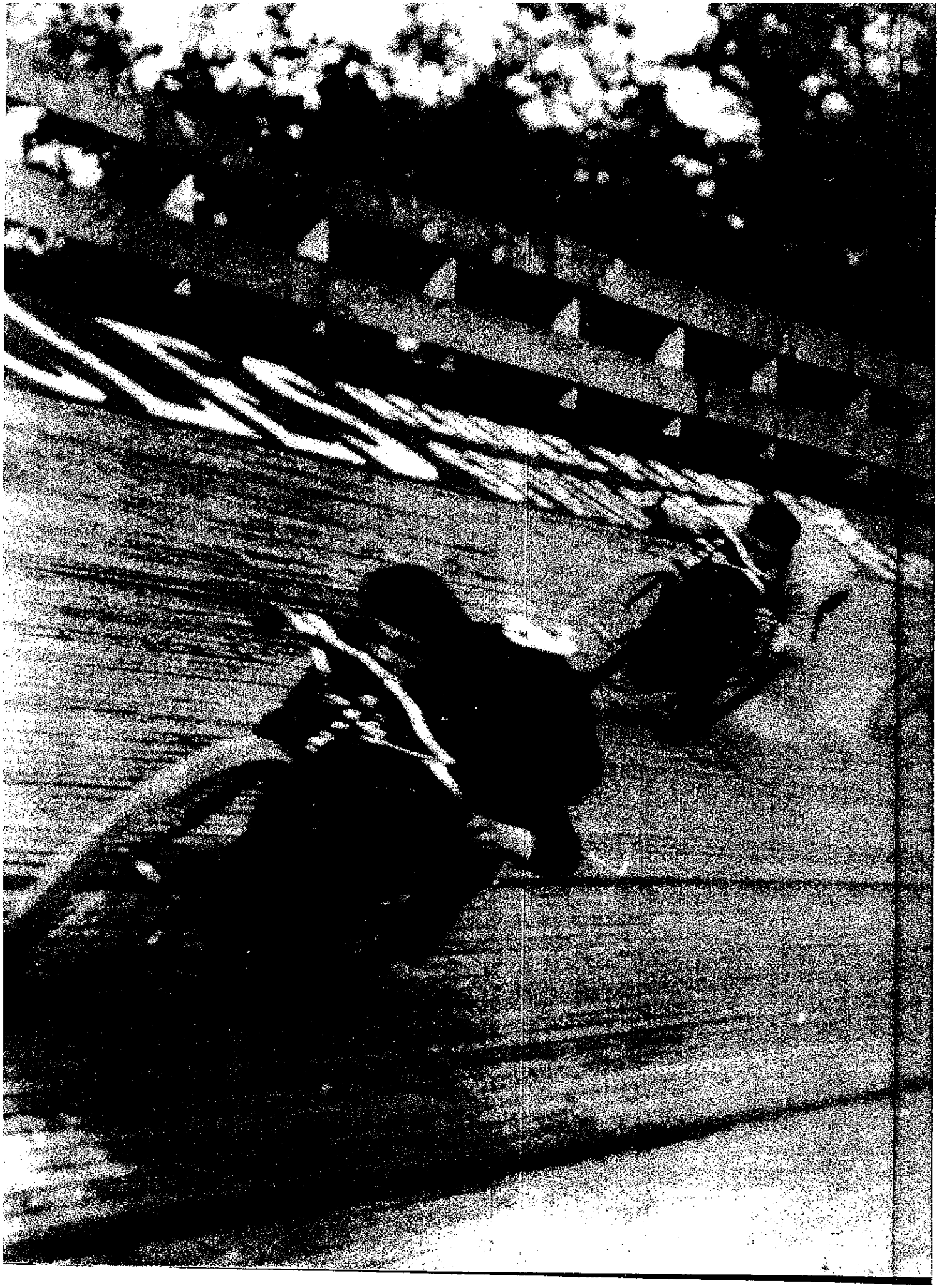
I always listened to those fellows, on the basis that I'll end up the same way when I'm an old man . . . and then I'll need someone to listen to *my* anecdotes.

Did I ever tell you about the time I was riding an '84 Low Rider across the Arizona desert, for example? Now, *that* was an adventure . . .





Whether you're a racer or an antique collector, a loner or a club rider, there is a motorcycle with the words 'Harley-Davidson' written on the tank just waiting for you. Pictured here are the storming XR750 dirt trackers, the classic '30s knucklehead and the buddy seat and tank emblem which set all Harleys apart in a crowd.



Three Men and a Shed

History abounds with stirring 'rags to riches' tales of successes achieved through adversity, of triumphs snatched from the jaws of disaster, of fulfilments forged on the unlikeliest of anvils.

The Harley-Davidson story is a classic example of this genre. Despite two world wars and several economic depressions, both global and local, the world's most charismatic motorcycle manufacturer has survived intact, right through to the present day. In truth, to regard it as merely survival is to understate the magnitude of H-D's achievement over some ninety years of existence. The extraordinarily humble nature of the company's beginnings in the first decade of the twentieth century only serves to add extra poignancy to the robustly healthy situation in which Harley-Davidson now finds itself.

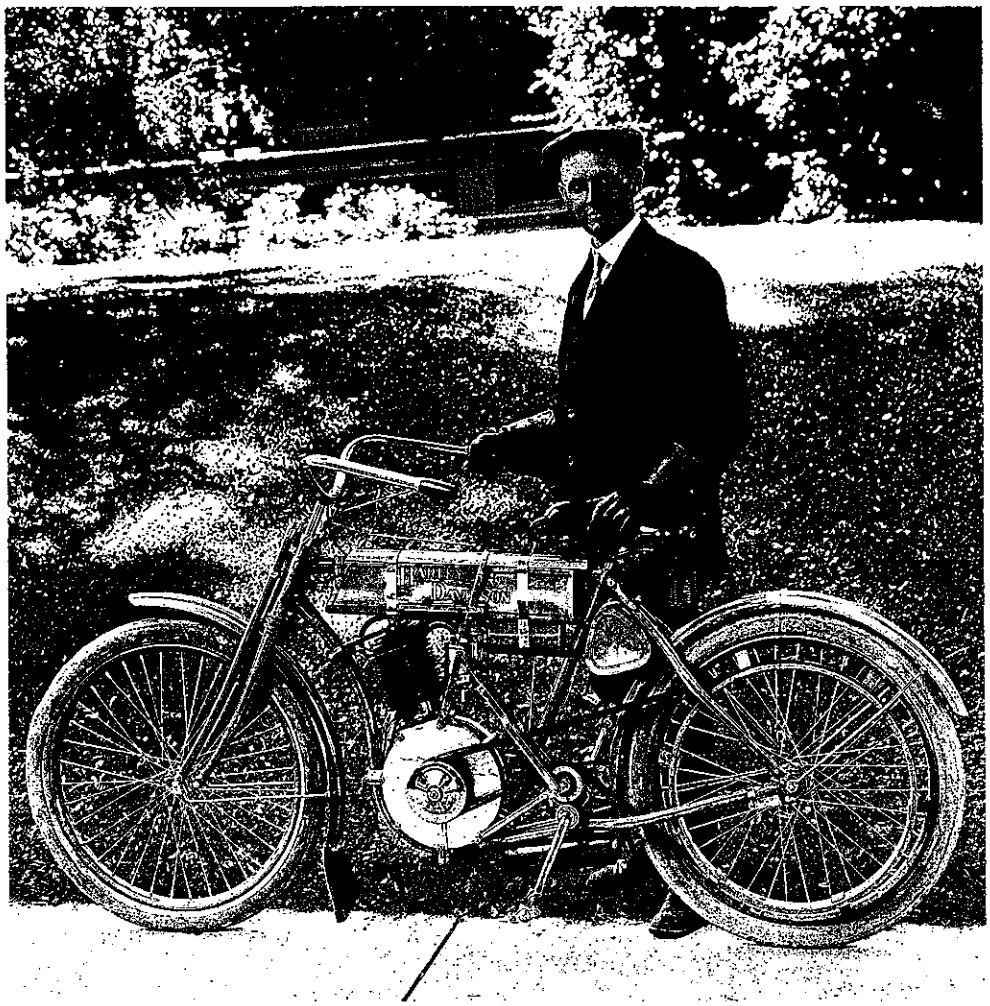
Despite the best efforts of ever more aggressive opposition, Harley-Davidson have flourished. Ironically, the springboard for the present prosperity – which could not have been predicted by the most optimistic of observers as recently as the 1960s – did not result from slavish pursuit of the 'if you can't beat 'em, join 'em' philosophy resignedly adopted in the 70s and 80s by other, non-Japanese motorcycle manufacturers. Rather, it has been secured through a dogged determination – at times perceived by industry pundits as bordering on the suicidal – to stick with the original values of strength and simplicity embraced by the factory founders all those years ago. Now, Harley-Davidson are well placed to move confidently towards the next century, building on their curiously traditional (some would say old-fashioned) range of motorcycles – and on one of the most potent product images in history.

This image, a particular quality exclusive to Harley-Davidson which is as hard to define as it is easy to recognise, has in the past formed the basis of countless treatises and dissertations by writers, academics, psychologists and even theologians. It is a quality spread over a wide canvas, defying categorisation and transcending all barriers. Old or young, enthusiast or antagonist, advertising copywriter or abbatoir cleaner – not matter what your social class or upbringing might be, the name of Harley-Davidson is almost certain to evoke some kind of response.

Like Band-Aids, Harleys have gradually assumed a near-generic identity in the public's mass consciousness. Even the frailest of grandmothers knows that a Harley-Davidson is a motorcycle; how many would know the same of a Kawasaki? At the other extreme, there are groups of diehards who refuse to acknowledge the existence of any other make of motorcycle, such is their blind allegiance to the Harley creed. And creed is not too strong a word in the opinion of those whose entire lifestyle is based on the near-religious experience of riding in a pack of thundering H-Ds. When it bites, the Harley bug bites deep.

It is unlikely that William S Harley or his ex-schoolchum Arthur Davidson anticipated such a degree of reverence being accorded to their products when, in 1903, they stood back to admire the first fully-mobile fruits of their labors. As so often seems to be the case with individuals and companies that later go on to achieve great fame, there were no shining beacons, flashes of light or thunderclaps of inspiration at the beginning of Harley-Davidson's history, no indications as to what might happen in the future. Few could have foreseen a time when decisions concerning the future of Harley-Davidson would be taken by no less a personage than the President of the United States, so great would be the importance attached to what had by the 1980s become one of the most sacrosanct of America's national institutions.

Interestingly enough, although Harley-Davidsons have always been ranked right up alongside apple pie and bald eagles in terms of their 'American-ness' – even the corporate logo is an unashamed clarion call to patriotism – the American lineage of both Harley and Davidson could hardly have been shorter. William Harley was born in Milwaukee in 1880, son to one of the many couples who had emigrated from England (in Harley's case, from



Left: Walter Davidson Snr with one of the early singles which helped build H-D's reputation as a manufacturer of sturdy (if somewhat unadventurous) machines in the early part of this century.

Right: Bill Harley's engineering skills were honed in a Milwaukee pedal cycle factory before he made the big jump to motorisation. This early publicity shot, taken outside Hirsch's Harley dealership in Seattle, acknowledged and paid homage to this heritage.

Previous page: If the lack of brakes didn't kill them, the punctures caused by wood splinters probably would. . . . American board-racing velodromes in the 1910s and '20s were battlegrounds for only the bravest Harley men.

HIRSCH

the industrial north-west) at around that time. Arthur Davidson's American antecedence was just as shallow, his parents having shipped out from Aberdeen, Scotland only ten years before his birth in 1881. His was a family of three boys and two girls; all three brothers would go on to become founder members of the Harley-Davidson Motor Company.

But that was later. In the beginning, it was Arthur Davidson and Bill Harley who fired up the operation. With hindsight, bearing in mind their shared interests in bicycles and in the still new four-stroke internal combustion engine, it was perhaps inevitable that they would form a partnership to produce motorcycles. And yet, in another of these strange and unexpected twists which shape the genesis of great companies and institutions, it appears from the scanty records extant from this period that boats came before bikes in the history of Harley-Davidson.

The crucial turn of fate which effectively ushered in the H-D dynasty was Bill Harley's decision to sharpen up his fitter's skills (which up to then had been put to good use in one of Milwaukee's bicycle works) by taking up a draftsman's apprenticeship at the nearby Barth Manufacturing Company. Already holding down a patternmaker's job at the same metalworking shop was Arthur Davidson.

Their schoolboy friendship was quickly rekindled, as was their mutual interest in the outdoor life. Lying on the western banks of lake Michigan, hard by many other smaller lakes, Milwaukee was a handy base of keen anglers like Bill and Art. The two teenagers made numerous fishing trips together in a small rowboat, regretting only the fact that their sphere of activity was necessarily limited by their boat's restricted range. The prime fishing areas, in the outlying tributaries and deep water zones, were always out of reach.

At this time, in the final years of the nineteenth century, the dominant and most copied automotive engine was the seminal four-stroke single created in 1895 by Frenchmen Count Albert de Dion and Georges Bouton. Also at this time, as luck would have it, another (rather less well-known) European was working at Barths. There was nothing particularly extraordinary or remarkable about Emil Kruger. He was German, but then so were many of the men who had left Europe in the late nineteenth century to look for fame and fortune in America's 'boiler room', the north-central industrial heartland of Wisconsin, Illinois and Michigan.

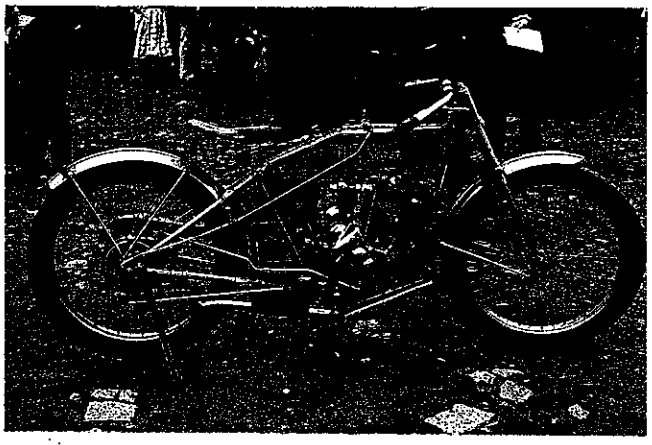
What made Kruger interesting to the two young men from Milwaukee was the fact that he had brought with him some detailed construction plans for a De Dion-type engine from Aster, his previous employers in Paris. With Kruger's cooperation, Harley and Davidson set to work building a short series of motors, culminating in one which turned out to be a more than adequate power source for their fishing boat.

Although this was their first and last direct involvement in the marine world, the watery connection did not disappear entirely. While working on separate freelance engineering assignments prior to the formation of the Harley-Davidson Motor Co., Arthur Davidson collaborated extensively with another young engine 'nut' by the name of Ole Evinrude. The Evinrude badge would later become synonymous with powerful outboard motors for sports and leisure marine craft.

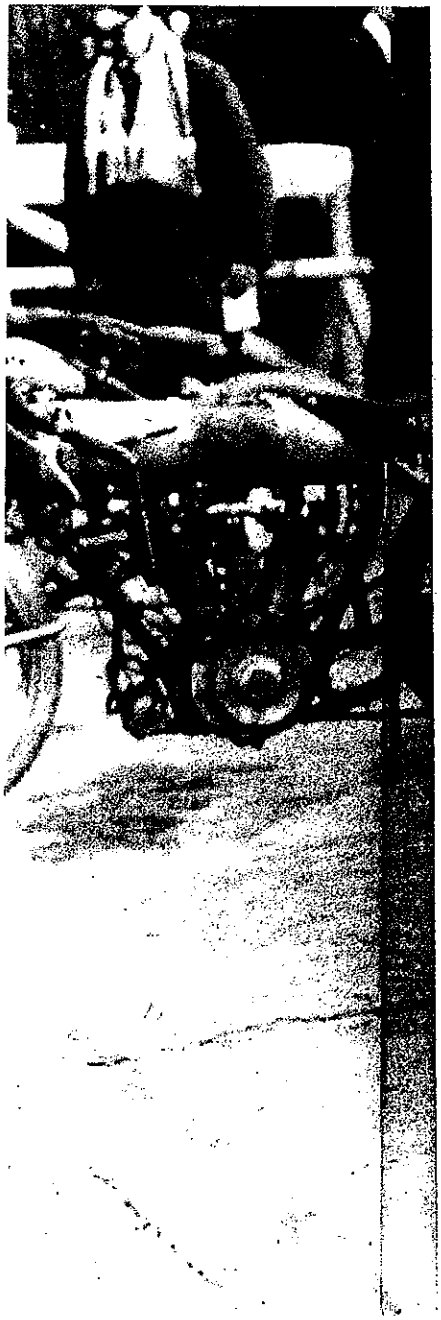
Back in 1900, having cracked the fishing problem, Harley and Davidson were turning their attentions back towards dry land, and specifically towards the commercial potential of a motorised bicycle. Reasoning, with some justification, that they were unlikely to reach a standard any lower than that already being displayed by a disturbingly large number of 'get-rich-quick' manufacturers, whose expertise seemed to lie more in the fields of charlatanry and intrigue than in engineering, Bill and Arthur began to develop their own engines, based once more on Kruger's Aster/De Dion plans.

Arthur's parents proved supportive of their son's ambitions. This was fortunate, since all the development work was going on inside their respectable middle-class Milwaukee home. Art's elder brother Walter, up to then working as a railroad machinist in the great empty wastes of the central United States, got wind of all the feverish activity and decided in 1902 to return to the homestead for a piece of the action, albeit in a part-time role. This 50 percent boost to the staff complement was both helpful and at the same time awkward, since it put near-intolerable extra strain on the already cramped working conditions.

Harley was able to come up with some temporary relief in the shape of a friend's workshop. That was enough to bring about the existence, in the spring of 1903, of the first fully-functioning cycle powered by a Harley-Davidson motor – or at any rate, by a motor bearing the name of Harley-



Above: A typical 5-35 type single, as produced in considerable numbers (and with little modification) between 1904 and 1918. Relatively good silencing and a conservative paint scheme earned it the nickname 'Silent Gray Fellow'.



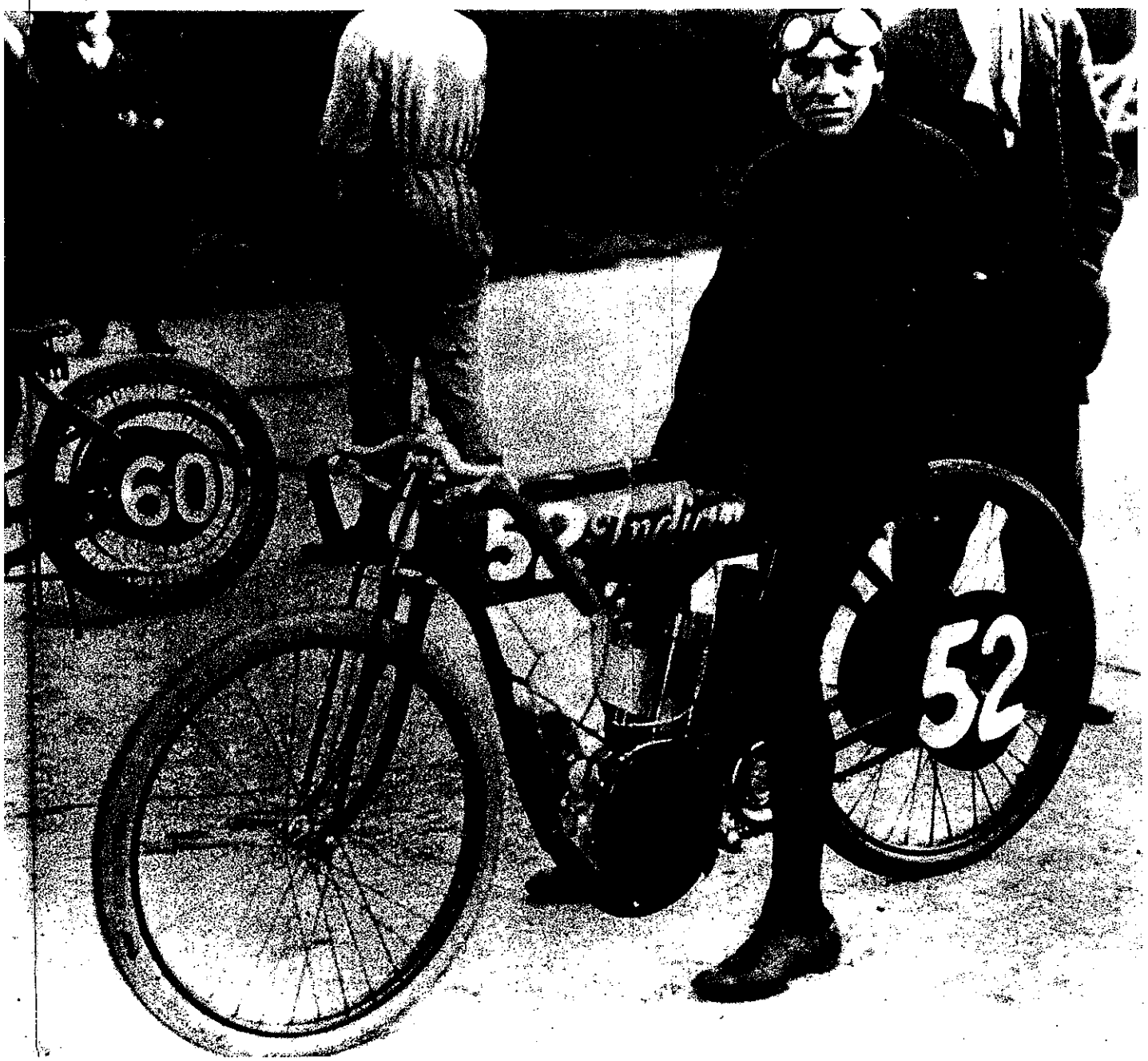
Right: Indian's high-tech racers were a thorn in Harley's flesh for decades. This confident pilot is about to try his luck at Brooklands in 1911.

Davidson on its crankcase. The engine broke no new ground; it was a conventional single, featuring the so-called 'atmospheric' valve arrangement typical of the day (the valves' function being controlled purely by the movement of gases inside the combustion chamber). It displaced around 400cc. This power unit was fitted into its guinea-pig cycle frame by the simple expedient of bolting it into the space beneath the crossbar, a logical design whose precedent had been successfully set one year before by George Hendee and Oskar Hedstrom in Springfield, Massachusetts in the construction of the first 'Indian' motorcycle.

Although the concept was admirable in its simplicity, it soon became clear to the H-D men that an arrangement where the power source was considerably more potent than that of the average human being's leg muscles invariably brought destructive forces to bear on the bicycle's now-overstressed parts. Breakages were frustratingly frequent in the early stages of testing, and the situation was in no way improved by the imperfect condition of American roads at the time.

Assuming they were of serious intent, and wishing to sell machines in the long as well as the short term, would-be motorcycle builders at the beginning of the century had little choice but to embrace the worthy principles of strength and simplicity. Apart from the obvious need to build something that would survive for more than a few minutes, there was precious little else in the way of foundations on which to build. The automotive industry in general was still in its nascent stage, with only minimal technological trickle-down to the even younger two-wheeled market. The best that an honest motorcycle maker could hope for was to acquire a reputation for reliability in a world scourged by appalling road surfaces and infested by fly-by-night shysters out for a quick buck.

That first Harley-Davidson was designed by chief engineer Bill Harley (the only college graduate among the founders), and built up by Walter Davidson, using patterns made by his brother Arthur. Though much effort was put into getting the machine up and running, an apocryphal tale still persists to the effect that this cycle was not immediately regarded by its creators as the progenitor of a long line of motorcycles intended for sale to the general public. Indeed, legend has it that the partners only began to see the commercial



possibilities when a mutual acquaintance asked them to build another 'Harley-Davidson' for his personal use.

Given the single-minded and concerted fashion in which the three men went about their task, with literally months of experimentation, fabrication and aggravation being capped by a not insignificant testing program on local roads, this admittedly attractive yarn is difficult to credit. The hard-headed approach displayed in later years by the company in regard to business matters tends to confirm the alternative that the founders knew exactly what they were doing all along. It is also a fact that both Bill Harley and Arthur Davidson were avid consumers of whatever information they could find within the covers of automotive and scientific journals. Harley in particular, with his level-headed attitude and better education, would certainly have been all too aware of the shortcomings of contemporary motorcycles and, by extension, of the yawning gap in the market that was so obviously waiting to be filled by a workmanlike and reliable offering.

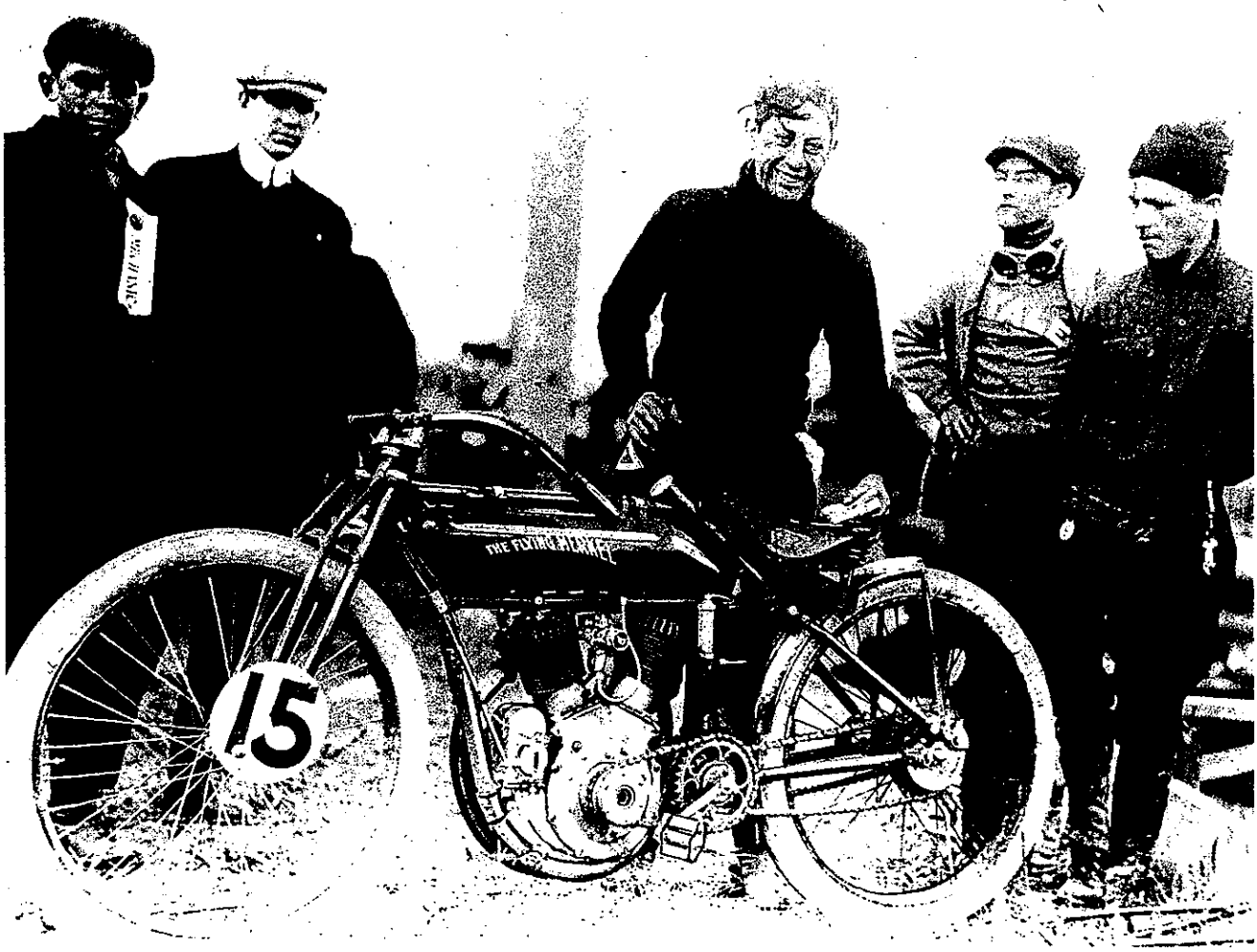
The major problem with the first H-D machine was the fact that it was a compromise, designed and built as a motorised bicycle rather than as a true motorcycle. The drawbacks of this concept became all the more apparent when a more powerful, 25 cubic inch (420cc) version of the first engine was shoehorned into the by now severely overstressed frame. Still, the new motor proved to be a powerful and reliable enough base unit on which to build for the next three years, and was initially installed in H-D's first 'proper' motorcycle chassis which made its debut in the latter part of 1903.

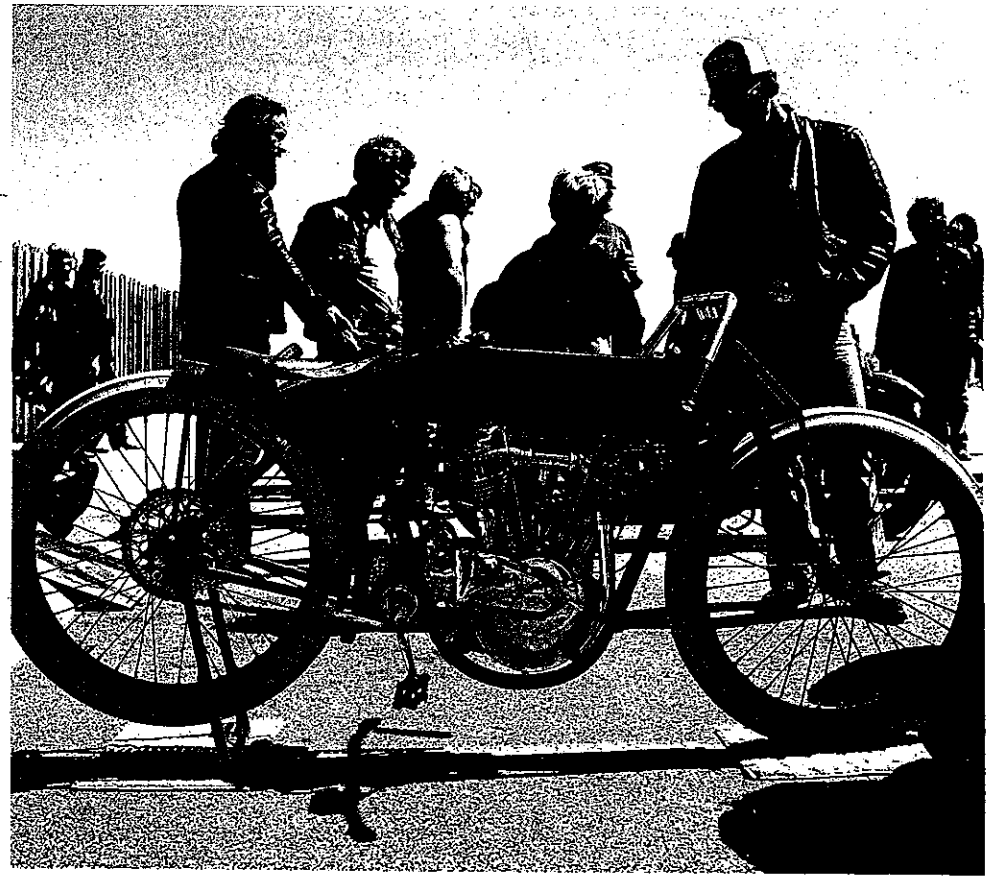
Only one example of this, Harley-Davidson's first real motorcycle, was built. Although the original machine has long been lost to posterity, reconstructions still exist in museums. The most obvious advantages this revised model had over the prototype were in the area of wheelbase dimension (sensibly extended for better stability), and in the general beefing-up of the steering head and wheel bearings, the frame tubes, and the wheels. Final drive followed the fashion of the day, being a leather belt which could be tightened or slackened by the rider in order to modulate the degree of grip on the large diameter rear sprocket (thereby altering the rate of forward progress).

The fuel tank hung from the crossbar, again an utterly conventional move. George Hendee's 1902 Indian, by contrast, featured a gas tank mounted in a novel position atop the rear fender. Throughout the fifty-year rivalry between H-D and Indian, the Milwaukee products would always be cast in the durable, slightly plodding role, while the Springfield machines had an altogether more glamorous and sporty image. The tortoise eventually triumphed over the hare, however, the 1953 demise of Indian bringing to an end that firm's glittering record of race wins and technological innovation.

Upon completion of the first 'real' Harley-Davidson, things suddenly began to happen. Over the winter of 1903-04, orders for two more models were fulfilled by the Davidsons, now operating out of a soon-to-be-enlarged 15ft by 10ft shed which had been erected by their father in his own back garden. Walter Davidson committed himself full-time to the fledgling business, and four more part-timers were taken on in early 1904 to help cope with the steadily increasing flow of orders. Bill Harley meanwhile had gone back to school to the University of Wisconsin in order to brush up on and redirect new engineering techniques back into the motorcycle's development process.

By 1905, production was up to eight machines a year, and even the extended shed was proving impossibly small. Once again, the Davidson family came to the rescue, the cost of a purpose-built factory site in Milwaukee being met by an uncle, James McLay. This was the turning point in H-D's history. From eight bikes in 1905, production shot up to 49 bikes in 1906, and tripled every year thereafter until 1910, at which point well over 3000 machines per annum were passing through what eventually became known as the Juneau Avenue works.





Below left: Ohio's 980cc Flying Merkel V-twins occasionally split the warring H-D and Indian racers in the 1910s. Braking systems were regarded by some as unmanly. . .

Right: . . .particularly on board racers like this H-D twin, where every pound shaved off the weight meant a little more speed. This example might be thought a trifle over-restored.

By this time, the only Davidson brother still remaining outside the family firm had also joined up. William A Davidson, the eldest of the three, had already acquired a reputation for hard but fair treatment of the men who had been working under him in his previous position as a foreman on the Chicago & Milwaukee Railroad. His new job at H-D of Vice President and Works Manager helped free up more of Arthur Davidson's time, allowing him to move into the increasingly vital area of sales promotion, where he spared no efforts in exploiting the public's hunger for mobility at a time when motor cars were still prohibitively expensive.

He was also able to make some capital out of the fact that Harley had concentrated on refining and improving the solitary model in their 'range', rather than taking the risky route attempted by some other manufacturers – often with disastrous results – of wholesale development and release of several models at one time. The inevitable consequence of such a shortsighted policy was that the image of motorcycling as a whole suffered, with riders often to be seen marooned at the side of the road, let down by poor quality machinery.

Not helping with this image problem was the inadequate silencing tacked onto many of the big single-cylinder bikes of the age. Here was one area in which Harley-Davidson had been especially careful, reasoning (again, quite rightly) that customers were more likely to be attracted by silence than scandal. If they wanted to soup up their machines later on by sawing a length off the exhaust pipe, well, that was their choice. But Harley-Davidsons would all chuff along quietly when they came out of the factory; that was the management's choice. As was the color, an inoffensive swathe of grey relieved only by the founders' names and the odd pinstripe, a scheme which gave rise to the H-D's popularly adopted sobriquet of 'The Silent Gray Fellow.' This nickname stuck with the factory for many years.

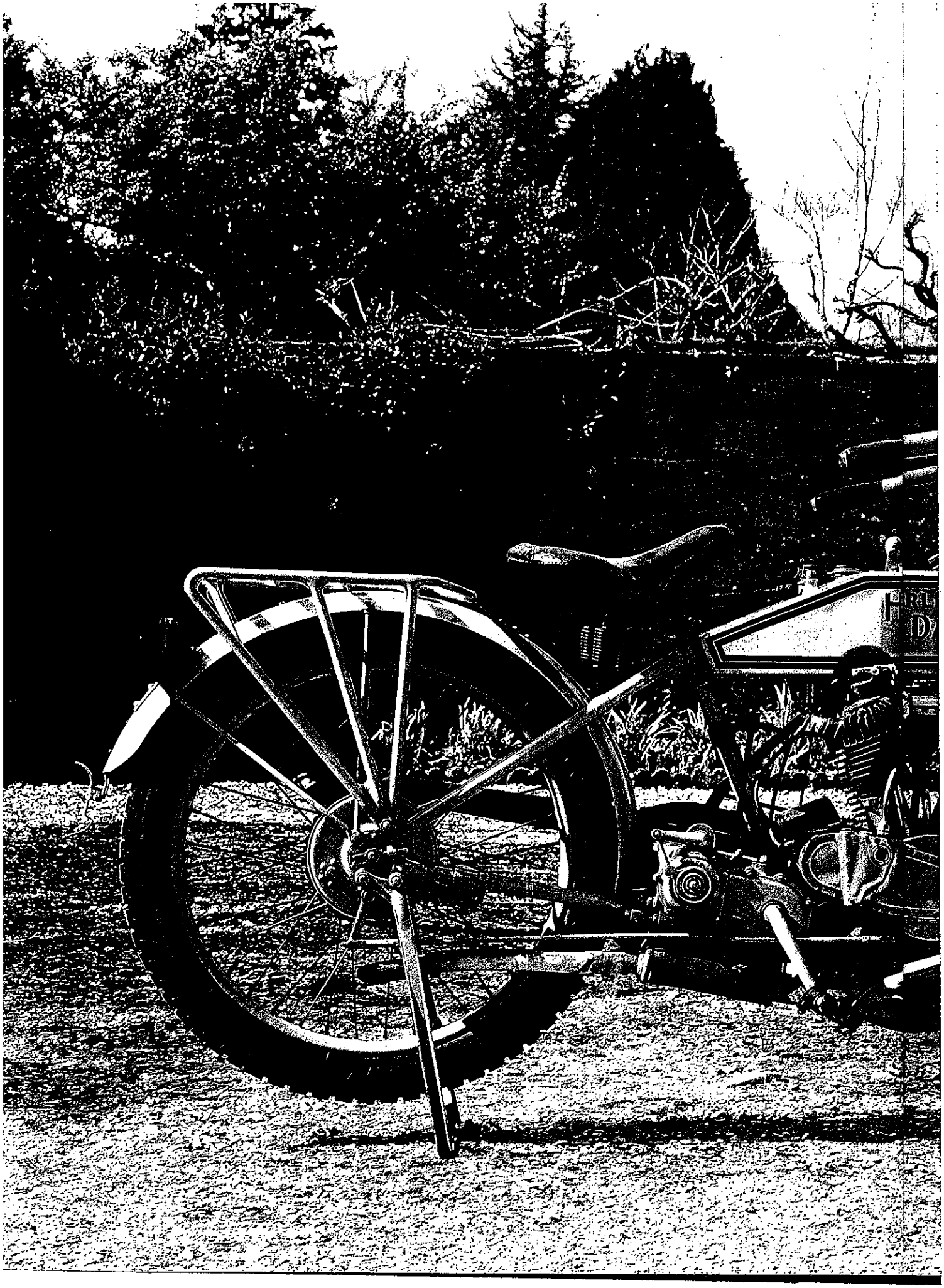
Despite the factory's efforts to promote its cycle as nothing more than a rugged and reliable mode of transport, many of the more intrepid owners were using these valuable attributes to good advantage in the excitingly new and challenging arena of motor sport. Although H-D did not actually frown on this practice, neither did they do anything to encourage it. The factory attitude to competition in general eventually evolved into a high state of mean-spiritedness, and became the cause of much disgruntlement among those private racers who were expert enough to bring favorable publicity to the marque without so much as a cent's worth of works assistance.

Nonetheless, the company was not averse in the early days to putting its own products to the test. In 1908 Walter Davidson, who by this time had been appointed President and General Manager of the recently incorporated company (Bill Harley being the Chief Designer and Engineer, and Arthur Davidson the Secretary and General Sales Manager) decided to have a bash at the newly-formed Federation of American Motorcyclists' inaugural 'Endurance Run.' The route began at Catskill, New York, and took in Brooklyn, before finishing with a circumnavigation of Long Island. Plodding along in typically methodical style, Walter completed the course with a perfect score, beating 83 other riders on 21 other marques in the process. He then went on to take part in the FAM's Economy Run on the same machine, recording no less than 188mpg en route to victory.

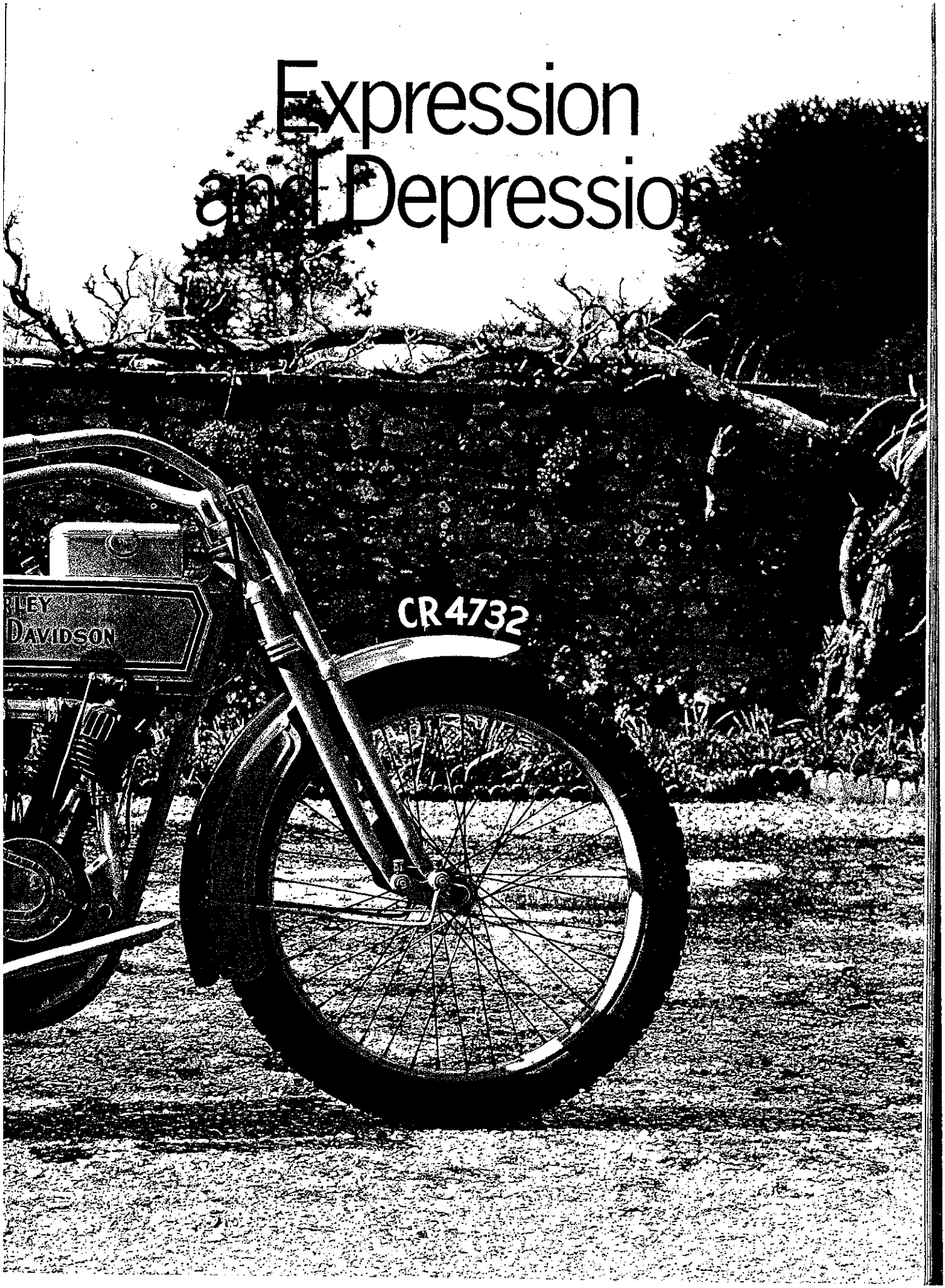
The original 3 horsepower H-D had by then been on the streets for some six years. Bill Harley, returning from his successful spell at university, announced that it was time for an upgrade. By boring and stroking the motor to a new capacity of 35 cubic inches (around 575cc) and reinforcing the sprung front forks, Harley had his upgrade ready in time for a 1909 launch. It went under the model name of 5-35, reflecting the new horsepower rating as well as the piston displacement.

More significant by far, however, was Harley's other project, which involved the grafting onto the 5-35's crankcases of a second cylinder, at a 45 degree angle to the first. The V-twin idea was not a new one; the first Isle of Man TT race, held two years earlier in 1907, had been won very easily by Rem Fowler on a Peugeot-engined Norton employing this same format. Harley-Davidson had immediately noted the potential of such a layout, and had been tinkering with a mule engine of their own since Fowler's victory, but difficulties with the atmospheric inlet valve system had delayed the entry of a feasible production model.

By 1909, a solution had been reached with the fitment of mechanically activated valves – and the way was suddenly made clear for a whole new chapter to open up, not just for Harley-Davidson, but for motorcycling itself.



Expression and Depression



The heart of any motorcycle is generally held to be its engine. Before the current era of fully-enclosed machines, it was always the art of motorcycle designers not just to integrate the power unit into the bike's overall styling, but to highlight it, draw attention to it, and turn it into a statement of the company's philosophy.

No manufacturer has succeeded so well in this totemisation game as Harley-Davidson. Harley equals V-twin; V-twin equals Harley: it's taken as read. Hardly surprising, considering the fact that V-twins have been exiting Milwaukee in an unbroken stream since 1909, first with the F and then in 1911 with the renowned J.

The appeal of the V-twin was clear enough in those early days. In exchange for a relatively small weight penalty, the single-cylinder engine's power capability could be increased by as much as 100 percent. In North America, with its vast travelling distances and thinly scattered law enforcement agencies, this feature alone was enough to convince motorcycle showroom browsers (many of whom were young and devil-may-care) that V-twins were the only way to go.

There was no shortage of choice in the market by the time Harley-Davidson moved into it. All the big domestic manufacturers – Indian, Excelsior, Flying Merkel – had at least one big 45 degree vee on their books, and all were doing well by them. There were disadvantages associated with this format, quite apart from the extra weight (which in any case was seen as a plus point by riders all too accustomed to being bounced out of the saddles of their lightweight singles).

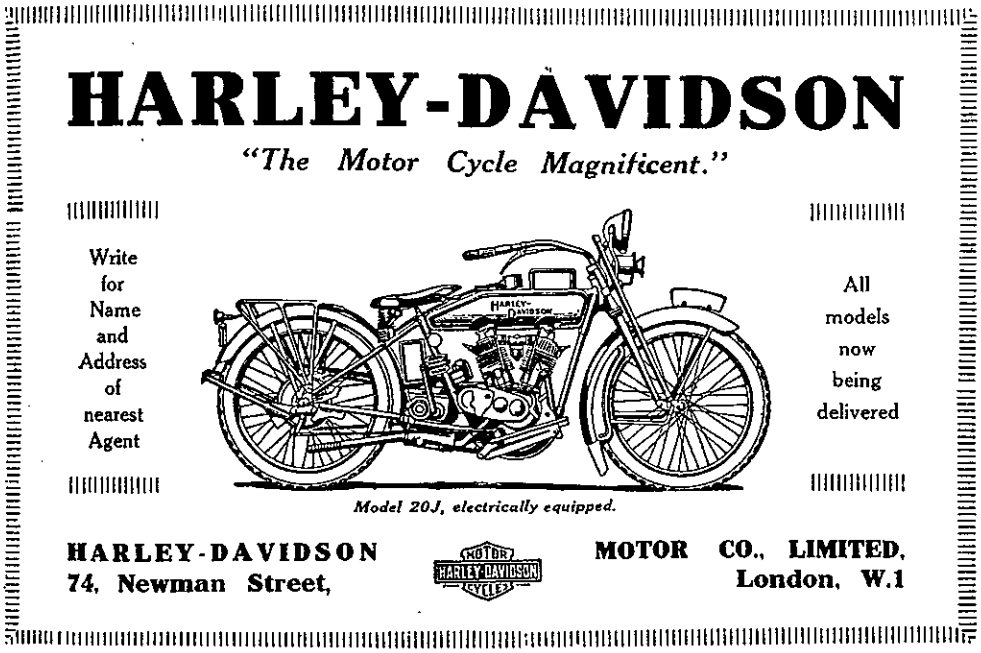
The major negative was undoubtedly the V-twin's inherent vibration at higher engine speeds. By way of compensation, the excellent low-end performance more than made up for this shortcoming. With high gearing fitted to maximise the easy cruising properties of a luxuriant torque curve, the vibration could, to all intents and purposes, be relegated to the status of a minor annoyance.

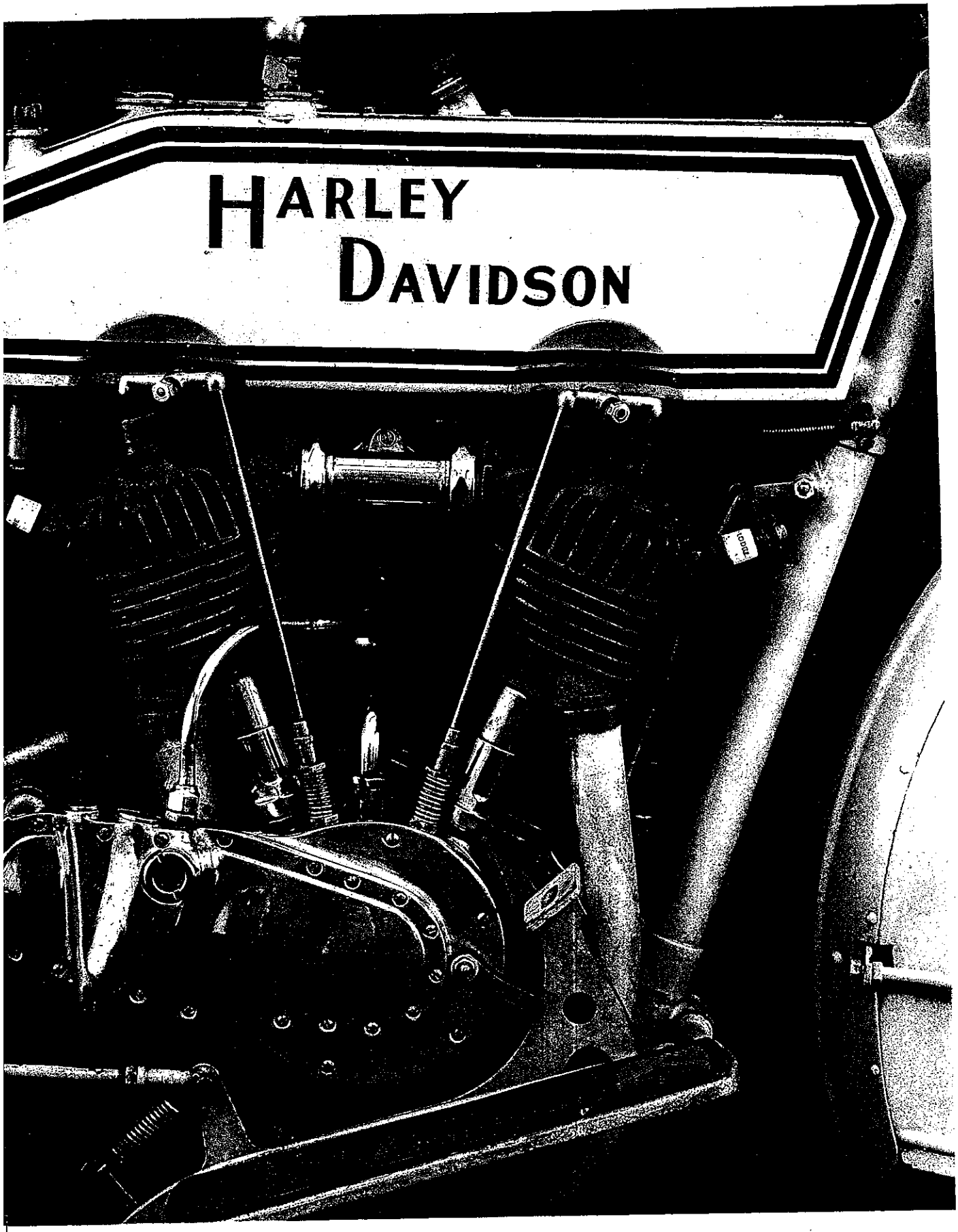
With one cylinder lying directly behind the other, and hence out of the cooling airstream, the provision of copious finning on the cylinder barrels was even more critical on the V-twins than it had been on the singles. The practical effect of this was to restrict the potential for engine enlargement via the normal route of increasing the cylinder bores; there simply was not sufficient room between the pots to expand in that direction. Instead, significant capacity increases could only be gained by the more involved method of lengthening the stroke, a technique which certainly resulted in even better bottom end response, but only at the expense of a rather limited ability to rev out at the top end. Almost all of the American companies quickly came to the conclusion that the best compromise between smoothness and power in a V-twin was to be had in an engine capacity of 61 cubic inches (1000cc) – a size which remains popular for V-twins even now.

Previous page: The J model was perhaps Harley's best-liked. Its 18-year production run ended in 1929.

Right: A closer look at the J's 61 cubic inch (1000cc) engine, here shown in a 1915 model. The classic 45-degree angle between the cylinders is still a major feature of Harleys going into the 1990s.

Below: A 1920 advertisement for the J from Britain's *Motor Cycle* magazine.

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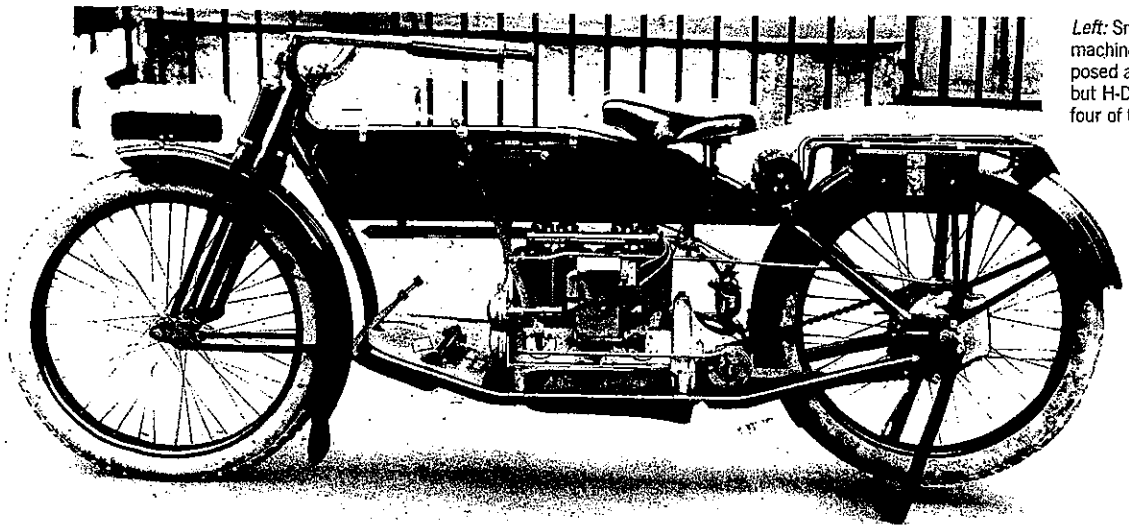


Left: Smooth-running four cylinder machines like this 1914 Henderson posed a threat to Harley's vibey twins, but H-D chose not to respond with a four of their own.

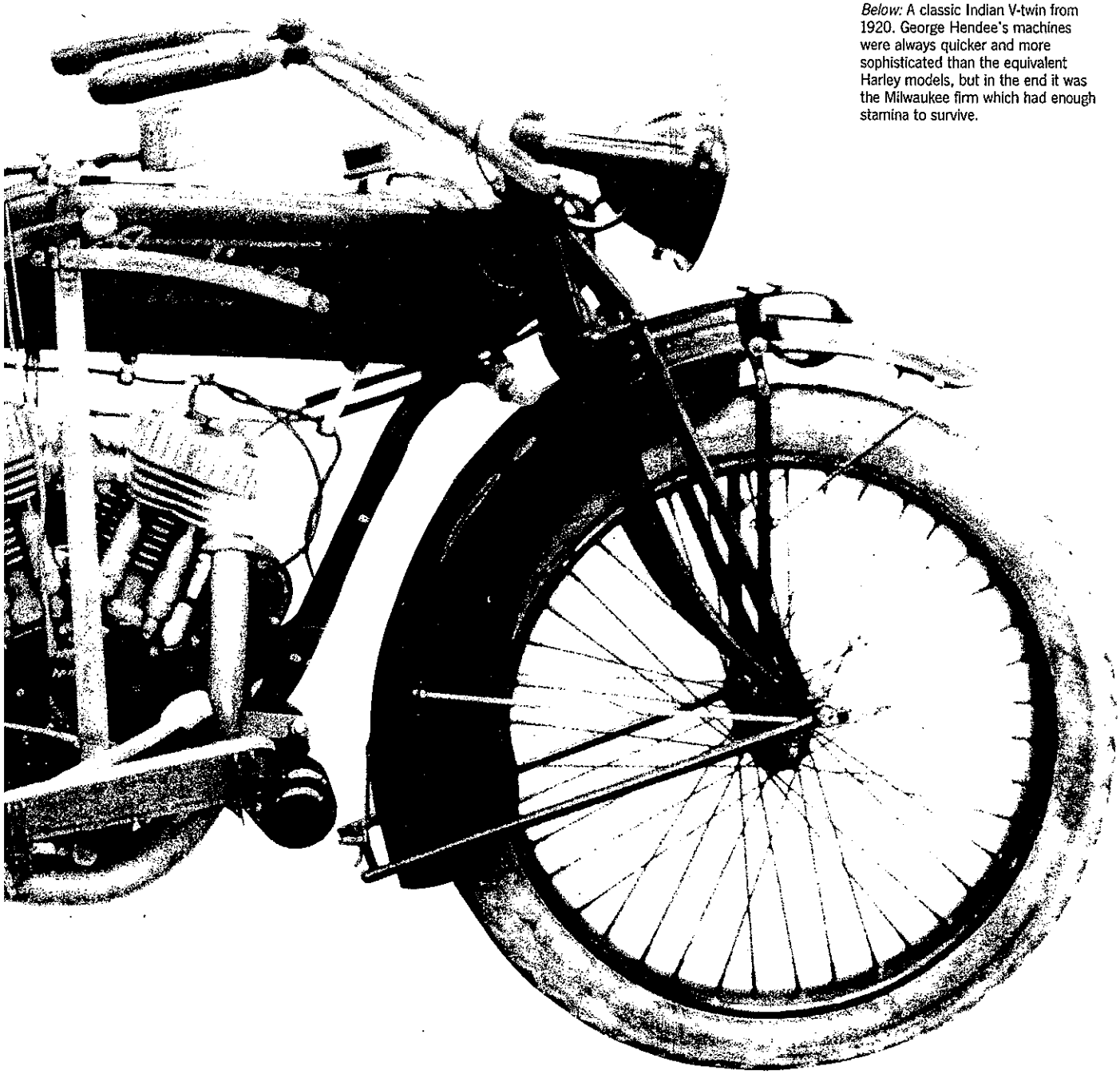
Going into the second decade of the century, the mushrooming popularity of competitive motorcycle sport, particularly on the new board tracks and dirt ovals, underlined the timeliness of H-D's move into big twins. Not that the factory officially approved of this trend, of course; at least, not if sponsorship was being requested. Their support remained confined to the more sedate world of reliability trials and the like, highlighting with some justification the less overtly sporting strengths of their motorcycle.

Number one rivals Indian, meanwhile, were profiting from H-D's reticence, enjoying success after success on racetracks around the world. Events in 1911 were symptomatic of the two firms' different attitudes. While Indian were sweeping the board at the Isle of Man Tourist Trophy races in June, the feathered headdress emblems shining proudly on the fuel tanks of the first three machines home, Harley-Davidson were busy putting the finishing touches to a primitive 'idler' mechanism, designed to allow manual disconnection of the drive to the rear wheel at temporary halts.

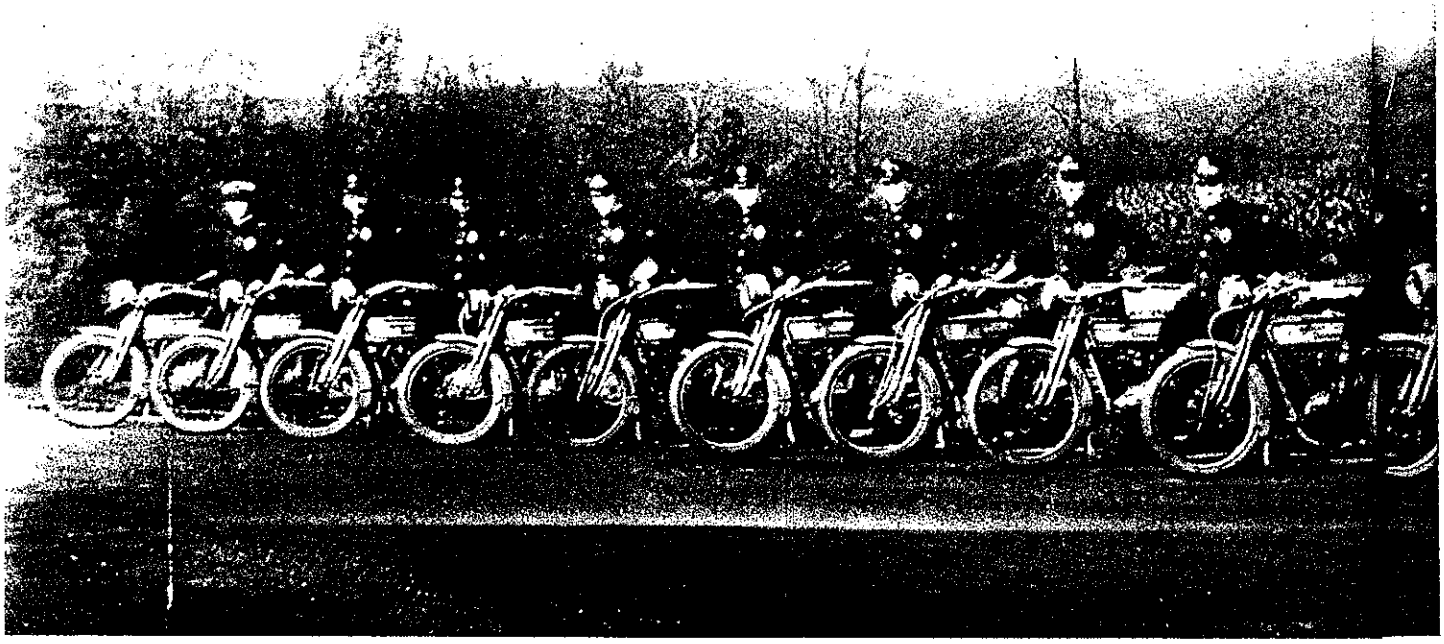
Although H-D were publicly criticised by dealers and racers alike for what was seen as their unenterprising and poor-spirited policy of non-involvement in racing, the fact of the matter was that H-D's ordinary street machines were – like every other manufacturer's, if they were honest enough to admit it – in sore need of basic development. Advances like the idler mechanism were of direct benefit to the ordinary H-D rider, who up to that point had been obliged to pedal-restart his machine after all but the very briefest of stops.

Nonetheless, the factory's view that a dollar spent on research and development in the workshop was better than a dollar spent on funding the antics of a bunch of speed-crazy fools, was one that was destined to change, in spite of the unyielding dogmatism which was being displayed by H-D's founders at this time.

More useful advances were made in 1912, particularly in the transmission department. The inclusion in the specification of a multiplate clutch allowed the factory to replace the 8E V-twin's unreliable old leather belt (which nevertheless continued to appear on the single until 1914) with a far more trustworthy chain.



Below: A classic Indian V-twin from 1920. George Hendee's machines were always quicker and more sophisticated than the equivalent Harley models, but in the end it was the Milwaukee firm which had enough stamina to survive.



Meantime, the Milwaukee factory was continually growing to keep pace with the public's apparently insatiable demand for cheap transport. Sidecars were particularly popular. By 1912, annual production was up to more than 10,000 machines, and Arthur Davidson's unstinting efforts to build up a comprehensive dealer network were beginning to bear fruit, with Harleys becoming increasingly common on roads in the more remote parts of the United States.

Inevitably, booming sales of street bikes only served to stimulate still further the activity on the nation's racetracks. Harley-Davidson's detached stance in this area was becoming more and more inappropriate; so much so that in 1913 the founders were finally forced to accept the need for change. They engaged the services of William Ottaway, ostensibly as Assistant Engineer under Bill Harley, but in reality as the head of a newly created racing department.

Ottaway's credentials were impeccable. Up to that time he had been responsible for the production of the highly competitive 'White Thor' racers for the rival Thor Motorcycles group. His new brief at Milwaukee was to extract more power from H-D's existing engines, while Bill Harley addressed the long overdue matter of designing the two-speed gearbox that would be essential for racing. Ottaway quickly vindicated the founders' decision to hire him, not only by bumping up the 1000cc V-twin's power output, but also by putting together an all-new, limited edition competition bike – the 11K. This machine, incorporating all of Ottaway's tuning modifications in a purpose built lightweight chassis, went on to thrust Harley-Davidson straight into the forefront of motorcycle racing – quite a jump for a company which had up to that point shown no interest in such frippery.

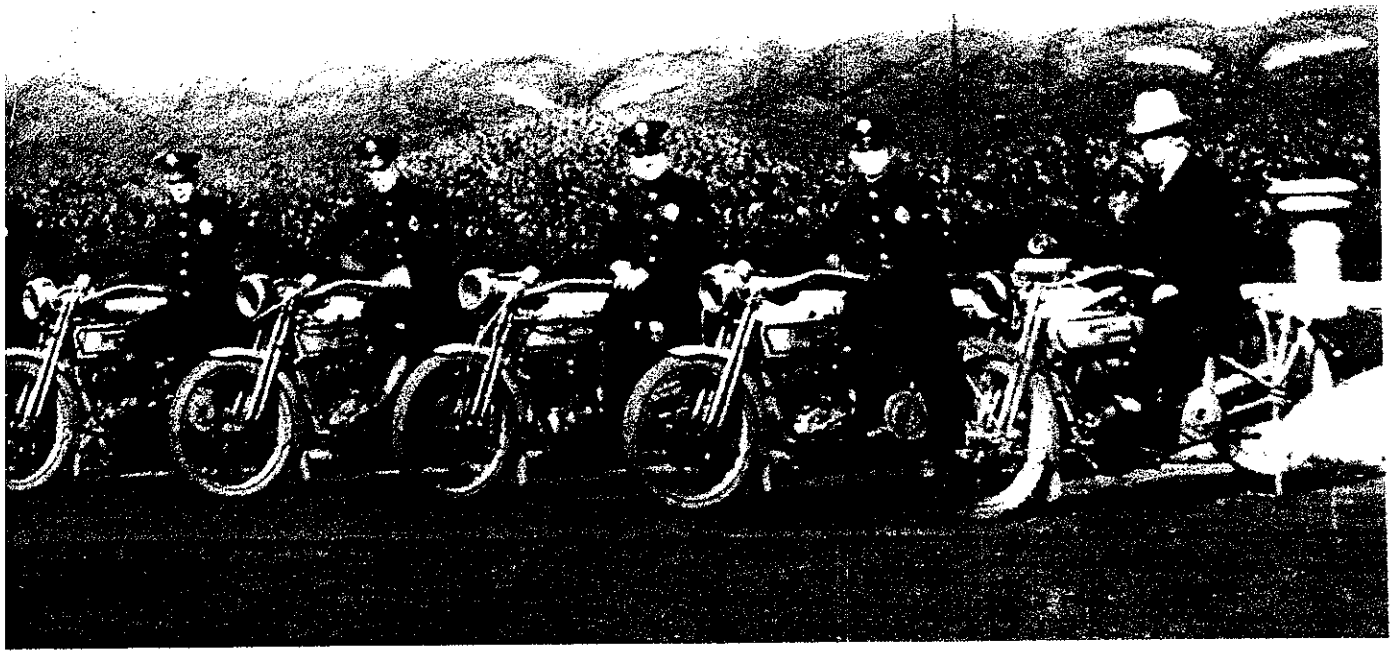
The 11K almost made a sensational debut at the inaugural 300 Mile Classic race on Dodge City's two-mile track in July 1914, H-D's works rider Walter Cunningham storming into the lead at the 100-mile point ahead of well-established riders on rather more distinguished machinery. Glen Boyd prevented the upset by taking the chequered flag on one of George Hendee's all-conquering eight-valve Indians, but only after Cunningham had been sidelined by chain and spark plug problems while still in the lead. The well-drilled Harley teamsters continued to show good form in the remaining 1914 season races, doing everything bar actually winning. That pleasure would have to wait until 1915, a year which marked the start of a long spell of success by the works 'Wrecking Crew' team, sweeping all before them on Ottaway-designed eight-valve versions of the 11K racer.

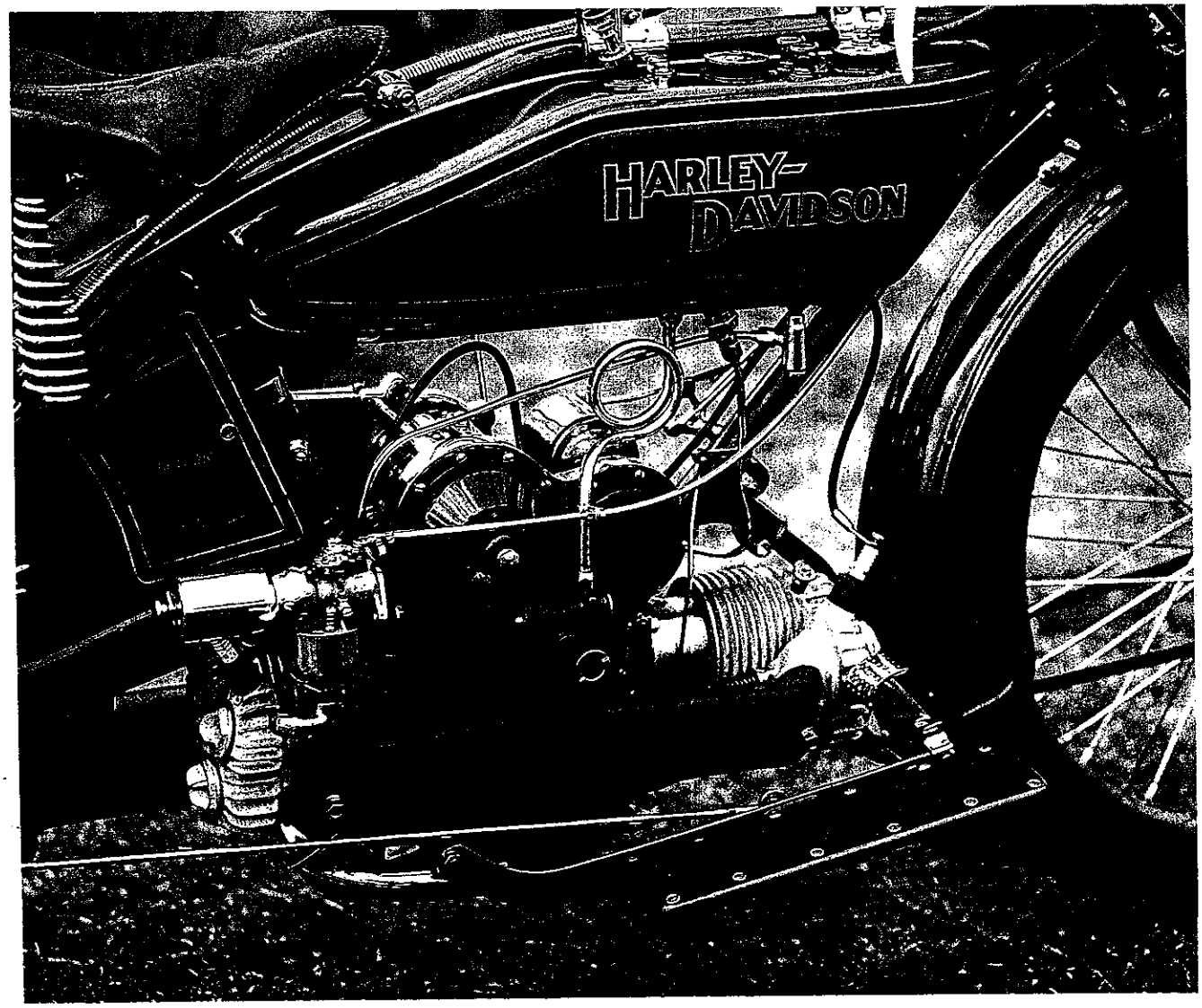
It was a shame that H-D's overdue blossoming as a performance-orientated motorcycle company coincided with two epochal events which shaped the destinies of ordinary people all over the world. Despite its name, the first of these events – the World War – in some ways had less direct effect on the American people than did the second, which was full implementation of production line techniques by the automobile manufacturer Henry Ford. Almost overnight, motor cars became affordable for the common man; at the same time, warning bells began to sound for those motorcycle manufacturers

Top: Harleys were used extensively by the American forces of law and order, often because they were somewhat cheaper than rival machinery. This is a typical 1916 squad.

Left: In the same year, the US Expeditionary Force found a use for Harleys in Mexico, for the pursuit of famed bandit Pancho Villa.

Right: One of Milwaukee's less popular releases, the fore-and-aft 584cc 'W' flat twin, which ran from 1919 to 1922.

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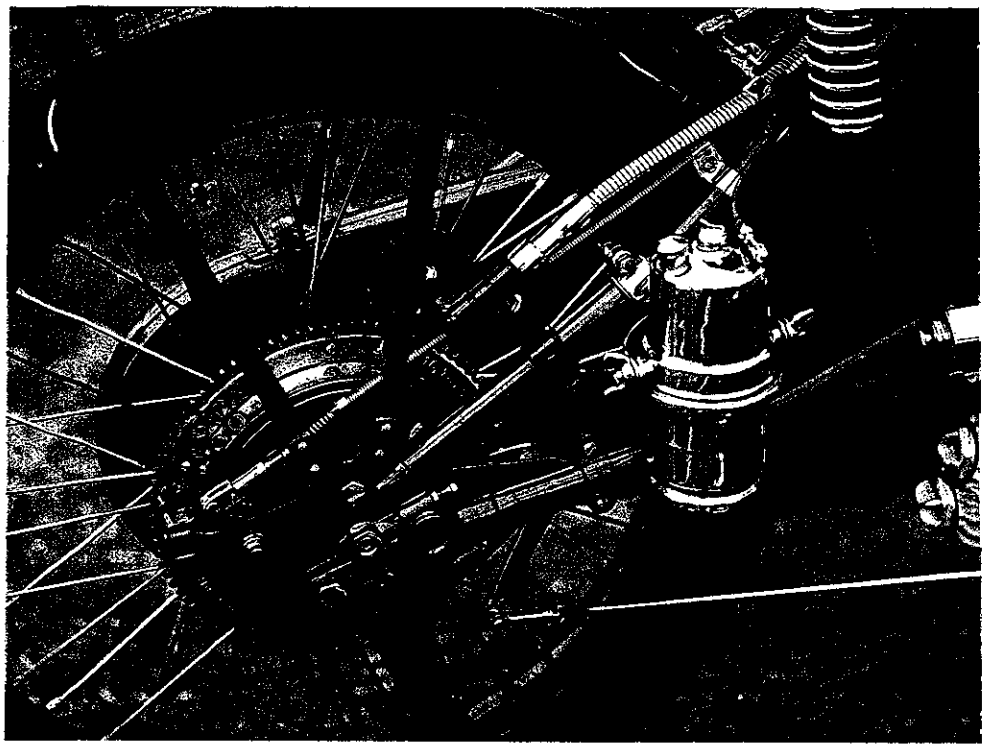


Left: Though the 'W' Sport Twin was a reasonable attempt at cashing in on a format which was popular in Europe, it proved too unexciting for the power-hungry USA market.

Right: Harley's big Milwaukee plant on Juneau Avenue, seen here in the latter part of the 1920s, was the subject of many expansion programs after its humble start in 1906.

Below right: Claude Temple enjoyed many successes on H-Ds outside of his own career as a motorcycle manufacturer. He won this 1921 Brooklands race at an average speed of 92.37mph.

whose prosperity had been founded on the relative cheapness of their products. The gradual weeding-out process affecting the weaker American marques gathered pace as war conditions severely restricted the importation from Europe of ancillary items not then produced by the native industry.

Indian, at that time the biggest motorcycle firm in America, suffered greatly in the war from self-inflicted wounds caused by the commitment of too great a proportion of their total output to military motorcycle production. In keeping with their conservative traditions, Harley-Davidson adopted a more circumspect posture. By offering a much smaller portion of their output to the government, they were able to maintain a healthy home market. Indeed, by exploiting Indian's short-sightedness, H-D were able to expand their agency network by poaching many of the Springfield company's under-supplied and understandably disaffected dealers.

When the war ended in 1918, Indian's home market had been effectively plundered. Harley-Davidson had improved their own position relative to Indian, such that the two companies were now very much on an equal footing with around 1000 dealers each. Detecting a bright future ahead, H-D's founders authorised another factory expansion programme in readiness for what they expected to be a doubling up of production from their sub-20,000 annual output during the straitened war years.

To take maximum advantage of the new trading conditions, the faithful old Model 9 single, the 'Silent Gray Fellow', was discontinued in 1918, to be replaced in 1919 by a totally new model. The horizontally-opposed 37 cubic inch (600cc) Model W 'Sport Twin' was a Douglas lookalike, aimed squarely at Indian's highly rated Scout lightweight.

Unfortunately, and not for the last time, the market had been misjudged by Harley-Davidson. American motorcyclists were still in love with the big, fast 'Model J' V-twin. The Sport Twin was not what they wanted at that time, being rather slow and uninspiring. It sold reasonably well in H-D's recently created European export market, its abstemious consumption of fuel being perfectly suited to the depressed post-war conditions, but the home market dictated its early demise in 1922 – a year which turned out to be one of the worst in the American motorcycle industry's short history.

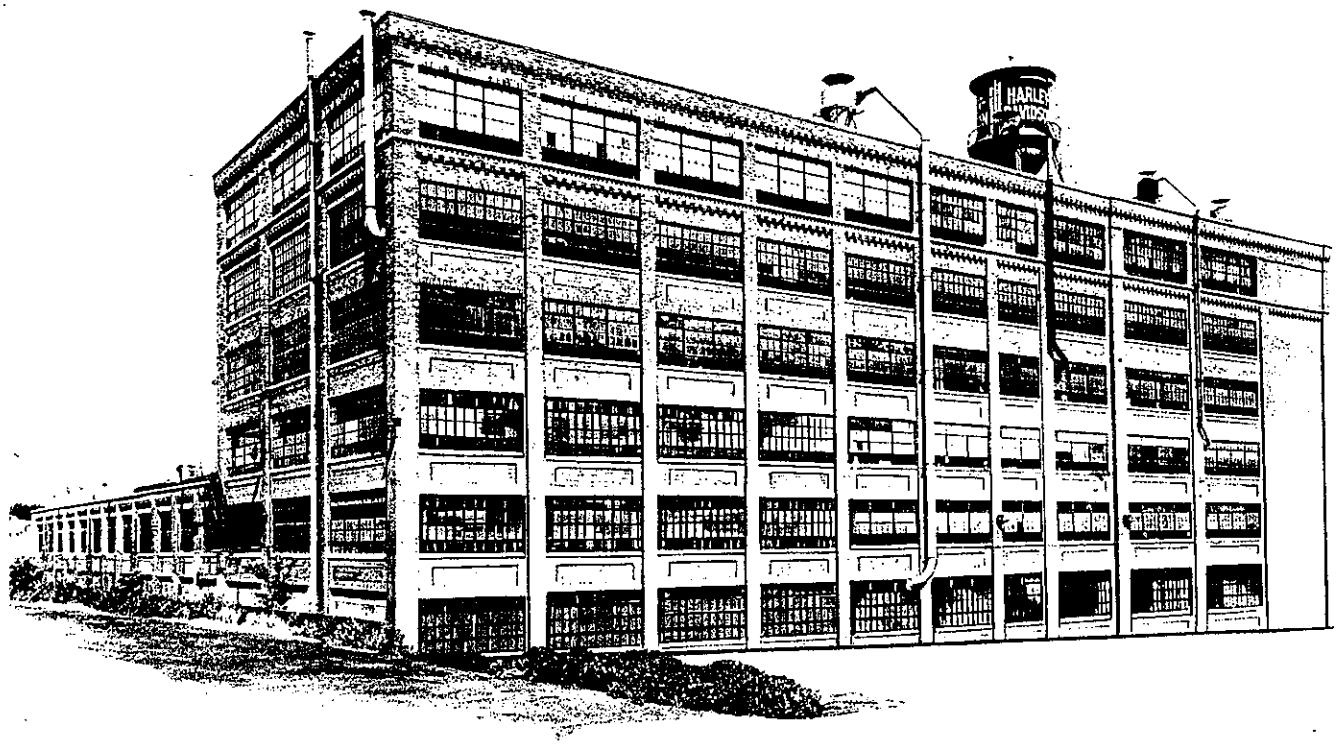
As the 1920s began, Henry Ford's master plan to swamp the country in a tidal wave of black Model Ts was already well advanced. Waking up to the threat, the other big players in the US auto industry launched a counterwave of competing econo-cars. This was all very bad news for the bike firms, whose fortunes immediately nosedived as precipitously as Ford's had soared. The problem was that the role of motorcycling had suddenly changed from that of essential transport provider into a far less crucial one based on leisure. The sea-change was partly attributable to the bike manufacturers' own realignment towards competition in the mid-1910s. Many of Harley-Davidson's older and wiser employees predictably saw this as a belated vindication of Harley's much-criticised pre-war position on non-involvement. Nobody had foreseen the threat from Ford, nor the transformation it wreaked on the world of transport; accordingly, nobody had made any plans to reposition the motorcycle in the marketplace.

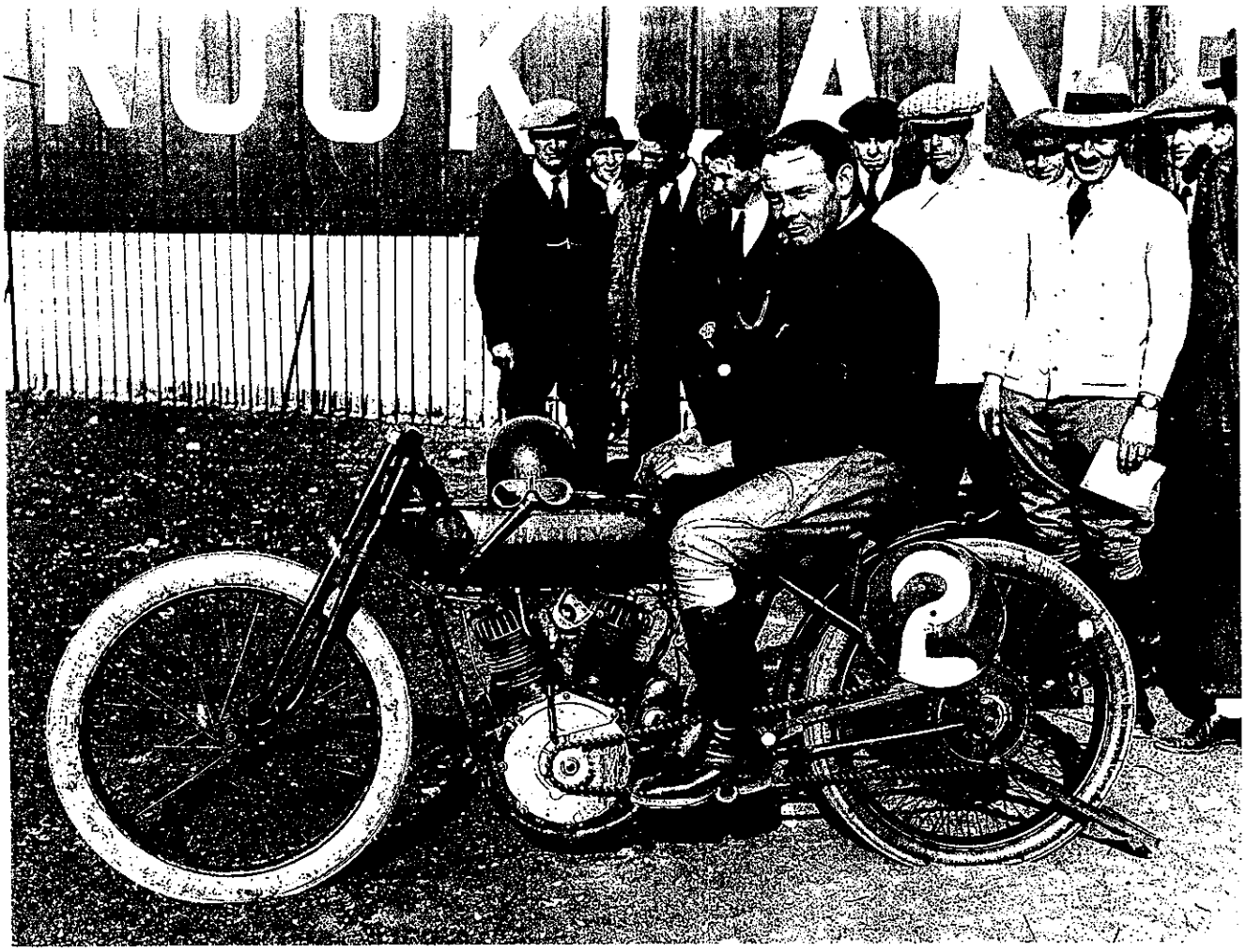
Ironically enough, Harley-Davidson's race team were by this stage breaking records at board and oval meetings all over the country, including the posting of the first ever 100mph-plus team victory at the Fresno, California track in early 1921. The 'Crew' also won the fifth Dodge City 300 Mile event in that same year. But the parlous economic conditions, combined with the futility (and expense) of attempting national domination over the still-strong Indian and Excelsior-mounted opposition, finally forced H-D to pull out of racing altogether at the end of 1921. The announcement was made by President Davidson in a circular release to Harley dealers: 'We find that we have become engaged in two distinct businesses at the factory; one, the business of racing, with a complete separate organisation, and the other, the legitimate business of making and selling motorcycles.'

A ruthless program of cost-cutting came into immediate effect, not just in the racing department, whose staff were literally disowned in the middle of a race meeting, but right throughout the entire company. If H-D were badly off, Indian were in a terrible state, their 1920 production figure of 20,000 being slashed to less than 7000 the following year. Both firms somehow staggered through to 1922, albeit in a severely trimmed state.

To avoid further blood-letting, a truce was arranged between the two companies. Over lunch in New York's Astor Hotel, Arthur Davidson and Indian's general manager Frank Weschler agreed to standardise the prices of competing models, so as to kill off the potentially ruinous effects of price-cutting. Nowadays, such an arrangement would, if uncovered, be vilified under the heading of cartel price-fixing; in 1922, it was the natural solution to a simple problem, and one which allowed both parties to make sensible plans for the future without having to keep looking over each other's shoulders. These price-fixing meetings went on to become an indispensable annual appointment for the managers of Indian and Harley-Davidson.

Having established the rules of the game in the most gentlemanly fashion, the two motorcycling giants then went away to lay plans for each other's destruction. For their part, Harley-Davidson's sales strategy was based on the

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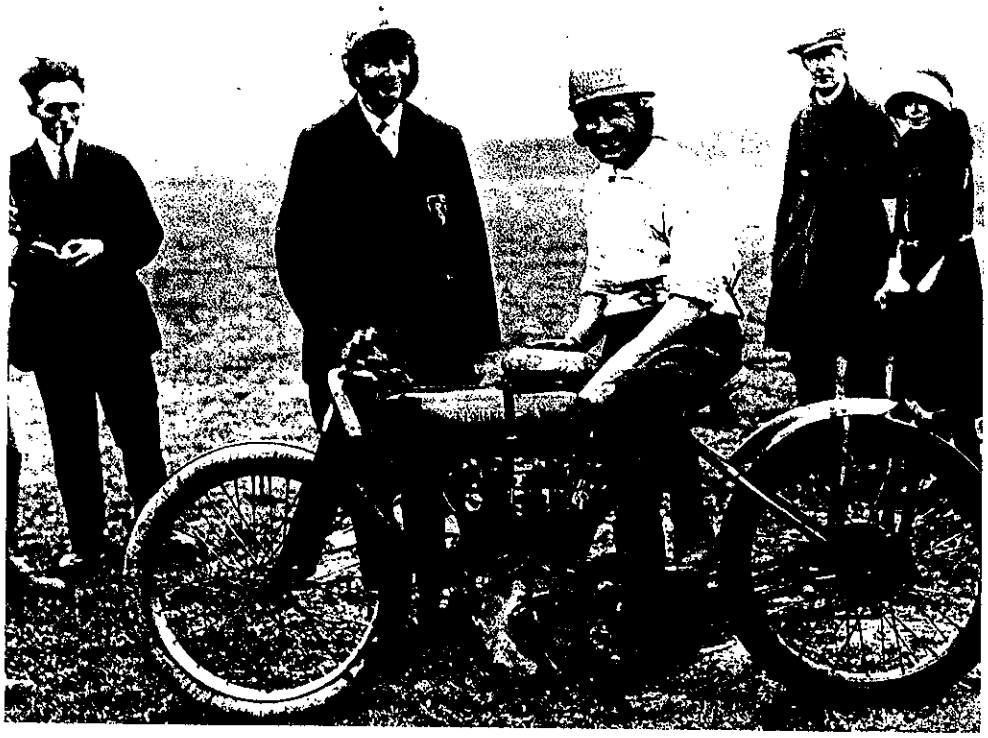


Left: Legendary British ace Freddie Dixon had good cause to grin after yet another win (this time at the 1923 Clipstone Speed Trials) on his modded JD racer.

Right: Douglas Davidson (no relation), here pictured at Brooklands in July 1921, had achieved a place in the record books one year earlier by becoming the first British rider to top 100mph.

Below right: Freddie Dixon again, making one schoolboy's dream come true in 1921.

launch of the JD, a larger-engined version of the faithful 1000cc J V-twin. Although the 1200cc JD was primarily aimed at the heavy duty three-wheeler commercial market, which still persisted despite the car-induced demolition of the private sidecar market, the new motor's extra power struck a sympathetic chord among the new breed of enthusiast motorcyclists moving in to fill the vacuum left behind by the Model T defectors. In this connection, the '74' (the JD's capacity in cubic inches) was also a useful response to the Chief, Indian's highly capable and well-favored entry in the heavyweight stakes. Looking back, the 74 could certainly be deemed a success, as this engine size and type featured in the Harley-Davidson lineup right up to 1980, and thereafter (in Sporster format) until the present day.

Following the success of their talks the previous year, Arthur and Walter Davidson arranged another meeting with Indian's Frank Weschler in 1923. The subject this time was the ejection from H-D and Indian sales showrooms of all other motorcycling marques, such as Excelsior, Cleveland and Reading Standard. Although Weschler was reportedly less than keen on this idea, having enjoyed the benefits of business cooperation and personal friendships with the representatives of these 'second division' companies for many years, the Davidsons finally prevailed upon him to agree to their proposal. The aim was to establish true solus franchises; the human consequence of this ruthless scheme was, inevitably, the demise of many smaller makes.

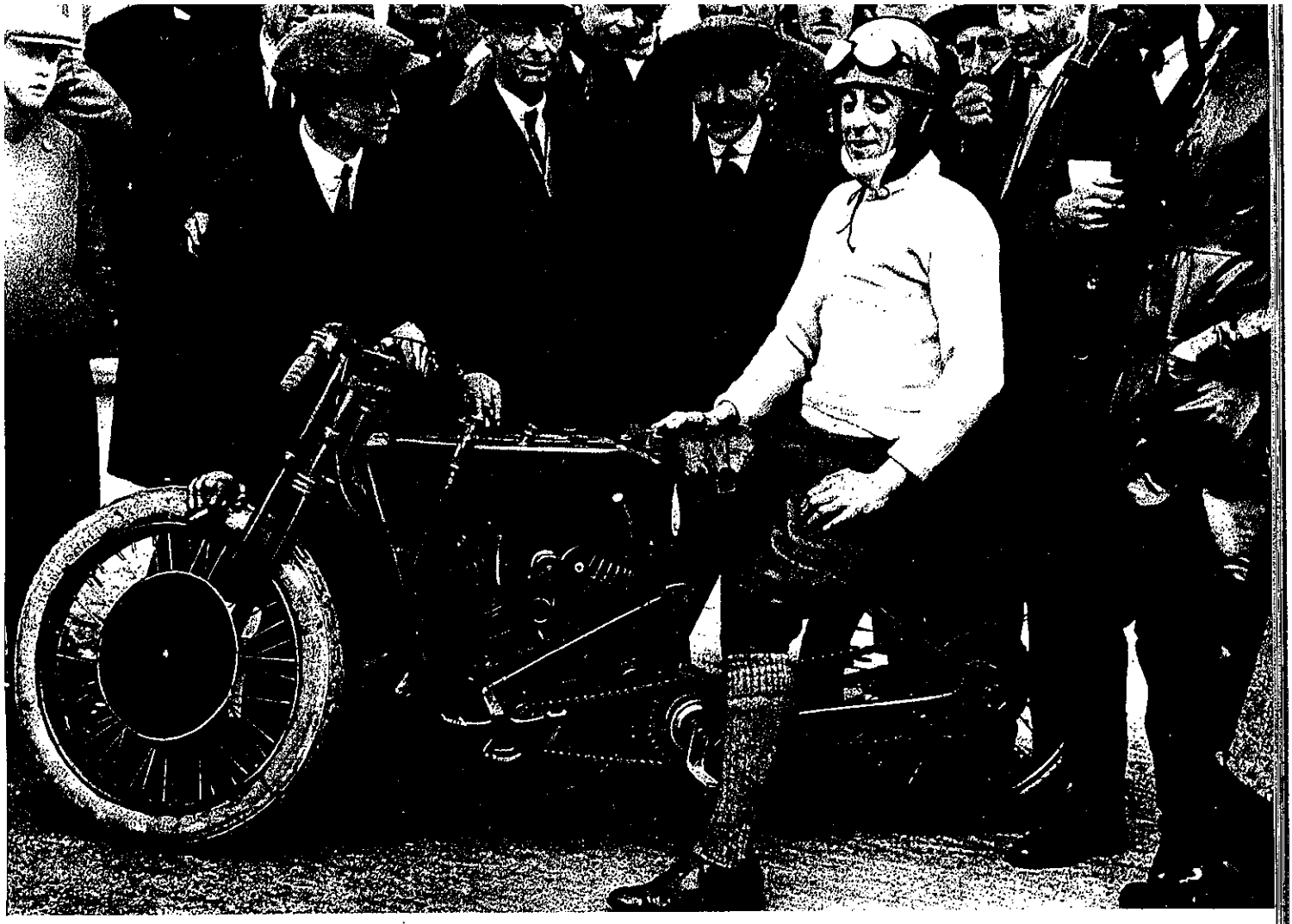
Another consequence of this pact was the creation of conditions suitable for a consolidation of Harley-Davidson's position at home, in Europe, and even Japan, where they established a foothold to challenge Indian's already firmly rooted Tokyo-based operation. This Japanese connection would eventually result in the setting up of a Harley-producing subsidiary in the Ginza district, which was in fact the first motorcycle manufacturing plant in Japan. Given the state of enmity which now exists between Harley riders and the Japanese 'opposition,' it is extraordinary and not a little ironic to think that the first motorcycles to be built on a commercial basis in Japan were Harley-Davidsons sold under the Rikuo badge.

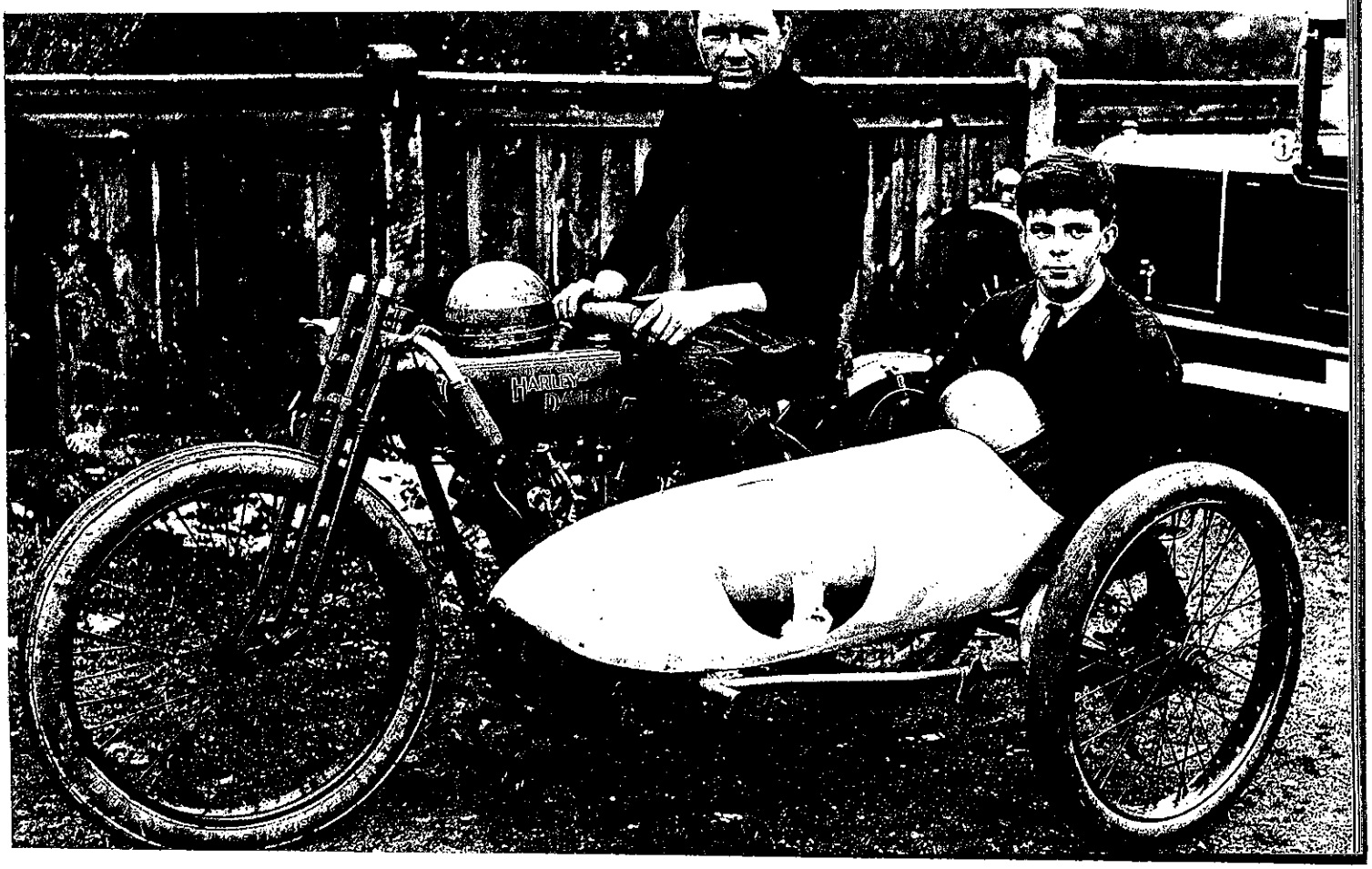
In the mid-1920s, the transportation demands of America's forces of law and order were such that firms could make a healthy contribution to their own balance sheets by securing contracts to supply police motorcycles. The vibration problem that was an inbuilt design fault of big V-twins led many police officers to prevail upon their employers to let them use the much smoother four-cylinder offerings of Henderson and Ace. The 1924 disappearance of Ace from the motorcycling scene cut down the choice somewhat, and naturally aroused the interest of Harley-Davidson, who could see big potential sales in the offing for any firm willing to put up a viable alternative to the Henderson.

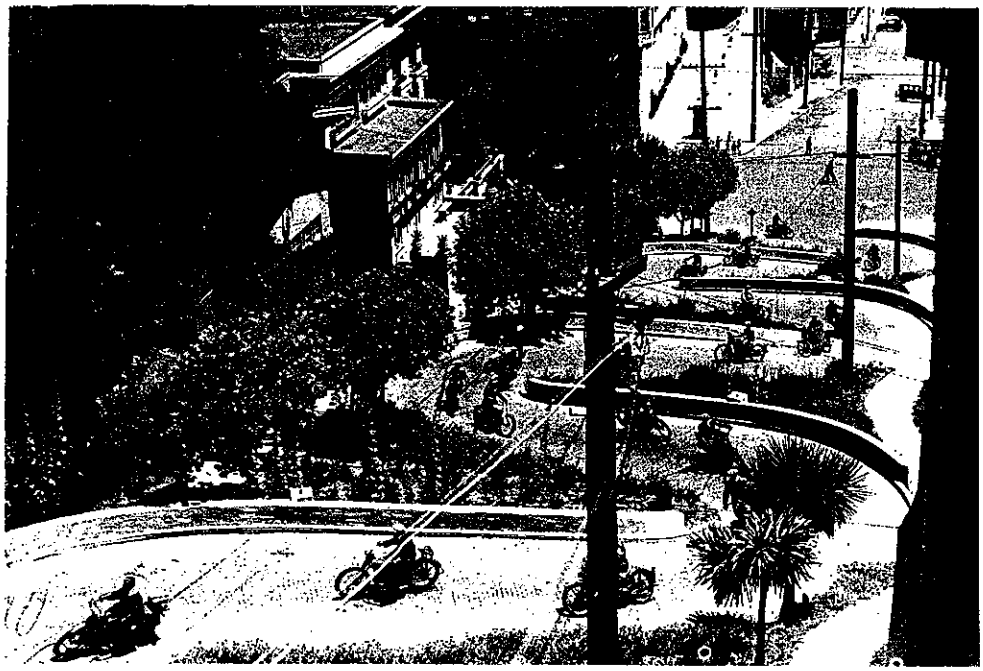
Recognising that they did not possess the in-house expertise to produce an all-new engine, H-D immediately employed Ace's now redundant chief design engineer, Everett DeLong, on a brief to come up with a cheap new four-cylinder unit. Working in secret, DeLong quickly penned what he and the few others who were privy to the project considered to be a commercially worthy design. Effectively two sleeved-down J 74 twins laid side by side, the DeLong motor seemed to meet H-D's criteria. Bill Davidson, however, was not convinced; using his power as the company's leading shareholder, he vetoed the project on the grounds that it would have been too expensive to produce. Shortly afterwards, DeLong left the company to work for Cleveland, and all traces of the stillborn four-cylinder Harley-Davidson were destroyed.

The founders thus had to content themselves with a simple cosmetic revamping of the justly popular but by then old-fashioned J. Their options were necessarily limited by the fact that the J was their only high-profile model throughout the period of 1922-1929, after the Sport Twin's extinction in 1922 and before the arrival of the 45 cubic inch (750cc) model D in 1929. The improvements made to the J included a few welcome modifications to the engine, specifically to the valvegear and lubrication system, which were enough to ensure continuing loyalty among the 74's large and devoted band of followers.

Another continuing trend, and a somewhat less pleasant topic for discussion at H-D board meetings, was the apparently inexorable waning of motorcycling's popularity in the mid 1920s. Harley-Davidson were obliged to move into the ancillary parts business because of the fact that so many of their suppliers were being forced into closure by the prevailing economic circumstances. Their total output of machines was running at pre-war levels, only around 12,000 bikes being built in 1924. Even so, that made Harley-Davidson the biggest American manufacturer, with Indian producing approximately half as many machines as H-D. The only other manufacturer of note, Excelsior, was running at about half Indian's capacity, relying heavily on its police sales of Henderson fours.



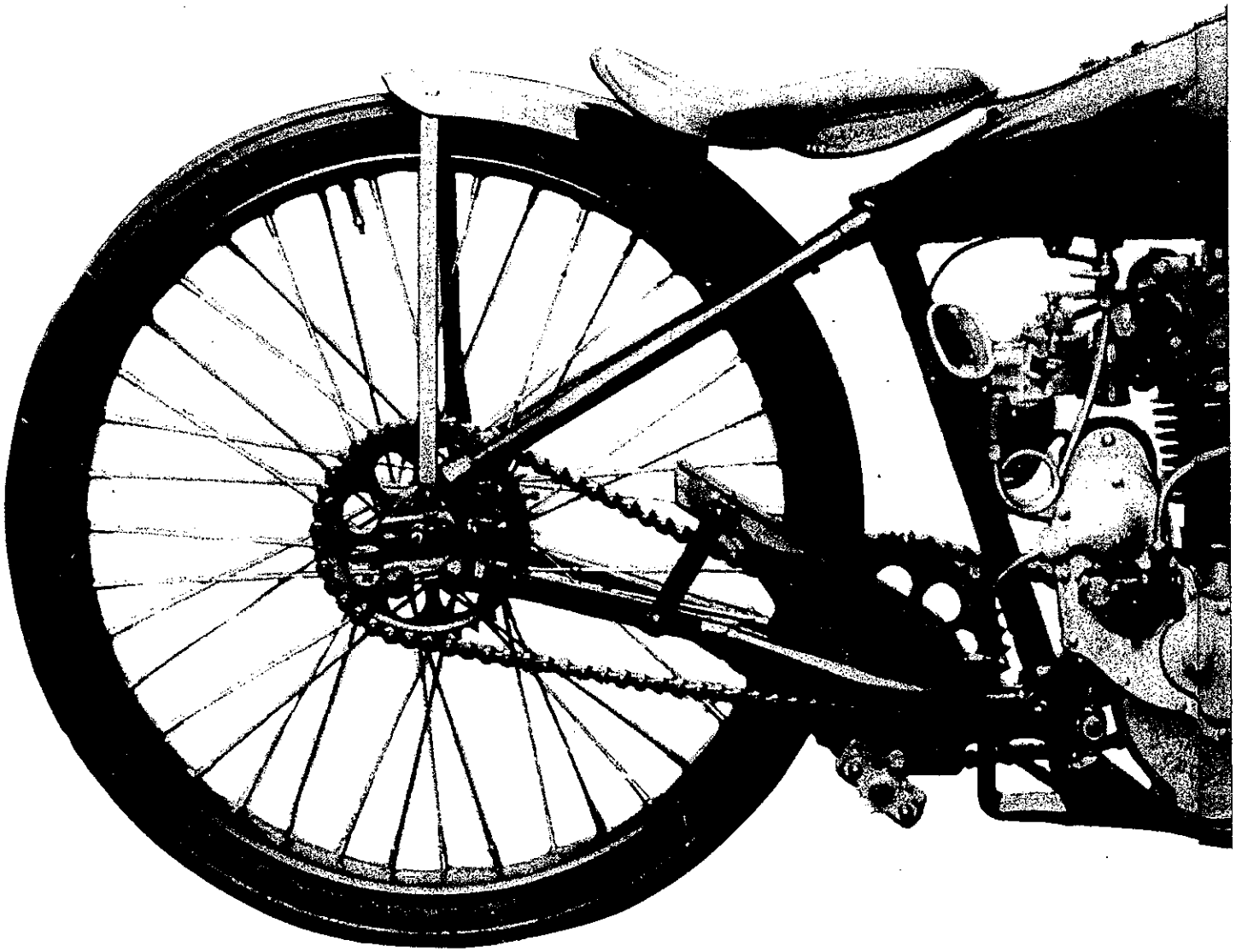

HARLEY

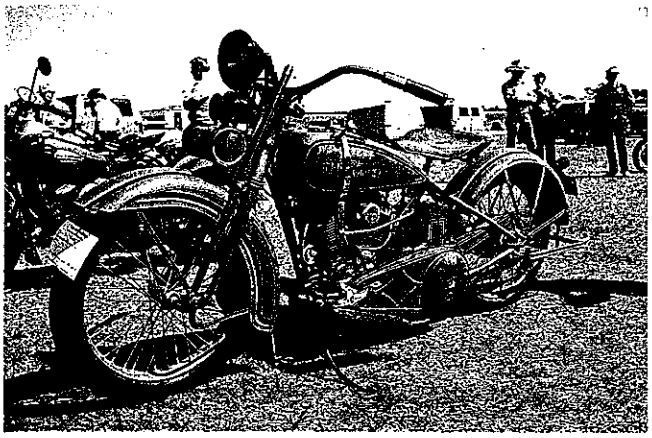


Left: Harleys were designed to run best on America's ultra straight freeways, but that didn't stop this 1920's group from tackling the crookedest street in San Francisco.

Right: From 1922, the 1000cc 'J' had a big brother, the 1200cc 'JD'. Gray had turned to olive by then too.

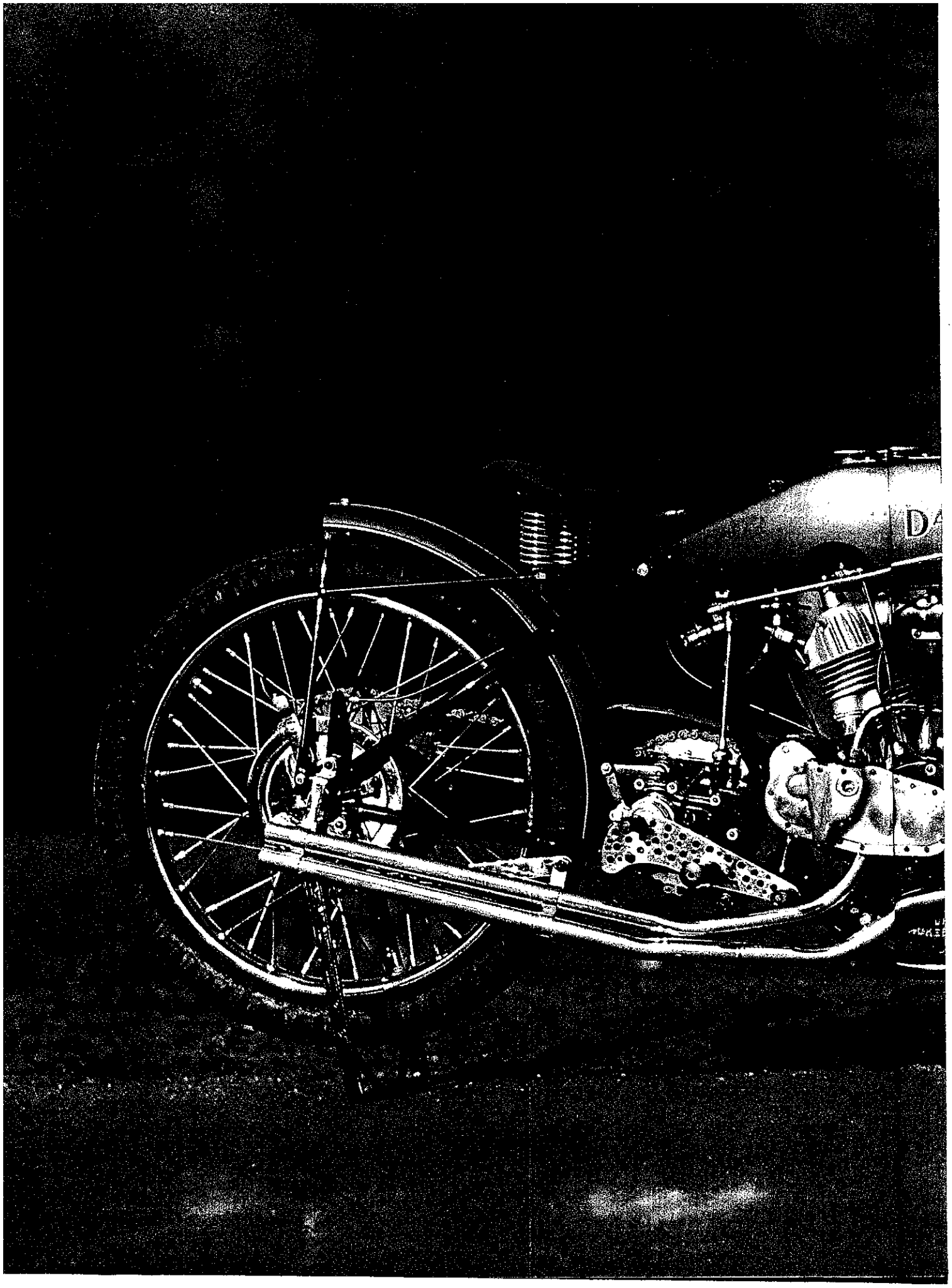
Below: The 350cc Peashooter, available in both side valve and ohv formats, was campaigned on American tracks to great effect by Joe Petrali.

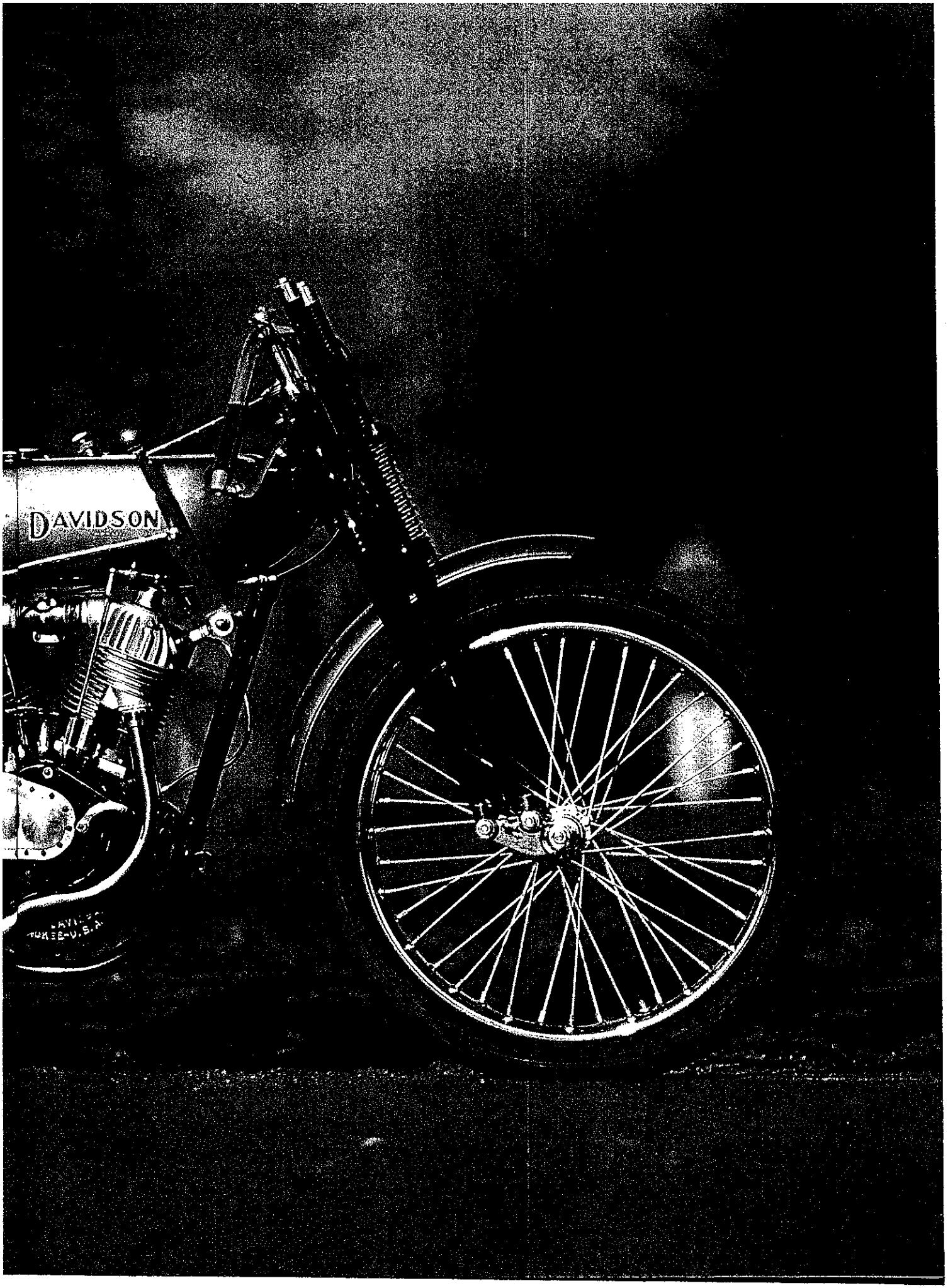


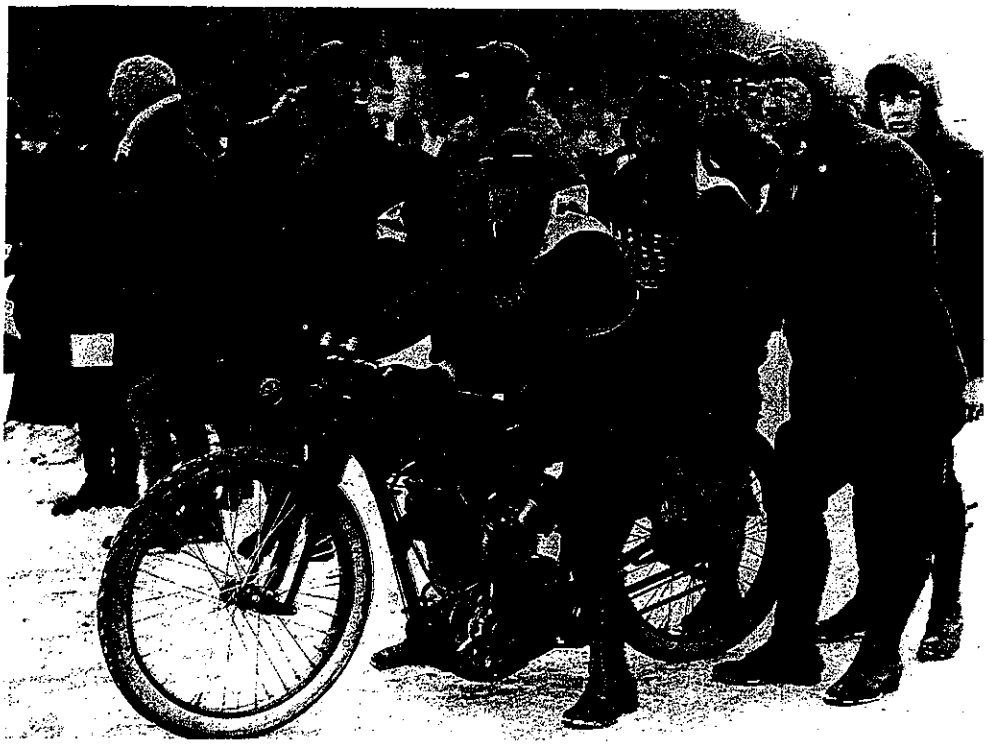


In 1925, Indian and Cleveland attempted to revitalise their flagging fortunes by launching lightweight single-cylinder bikes of 21 cubic inch (350cc) capacity. This engine size was extremely popular in England, home of the world's biggest motorcycle market at that time, so the American firms' decision to try and break into that field was a logical one. Equally predictable was Harley-Davidson's response the following year, in the shape of two separate 350cc singles. Model A was a sidevalve plodder capable of around 50mph (assuming that the piston could be persuaded to hold together at such a giddy speed). Model B differed in that it featured overhead valvegear, which endowed it with a considerably higher and more reliably obtainable top end of around 65mph.

The Harley dealership network, bred on a steady diet of fast V-twins, was less than enthusiastic about the new singles. But, after cynically dubbing the bikes 'Peashooters,' the same dealers were later required to eat their words. Although sales success was not instant in the US, where riders were not especially bothered about the 350's economy (its most obvious selling point), its race successes in the national series specially created for this class




DAVIDSON

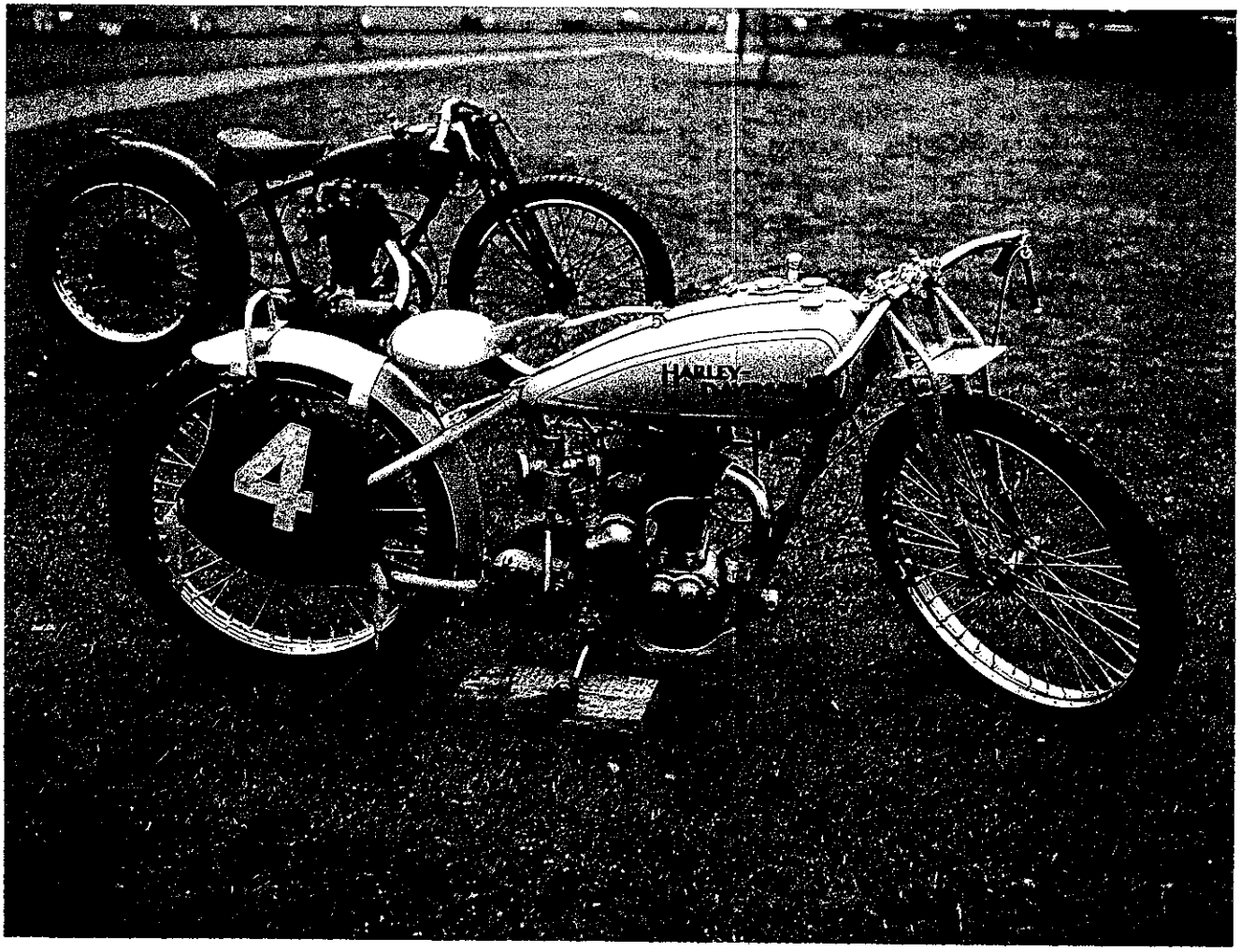


Previous page: A long-track specification overhead valve Harley racer of the Great War period.

Left: Swedish daredevil Erik Westerberg did 104mph on his Harley on the ice of Stockholm's Edsviken Bay – without studs or spikes. . .

Below: Speedway was a popular sport in England in the late 1920s. Harley's Peashooter variant (foreground) had its work cut out against BSAs like the background example.

Right: Motorcycle sport of all kinds was incredibly well supported in the 1920s. This hillclimbing Harley sidecar entry looks like a family affair.

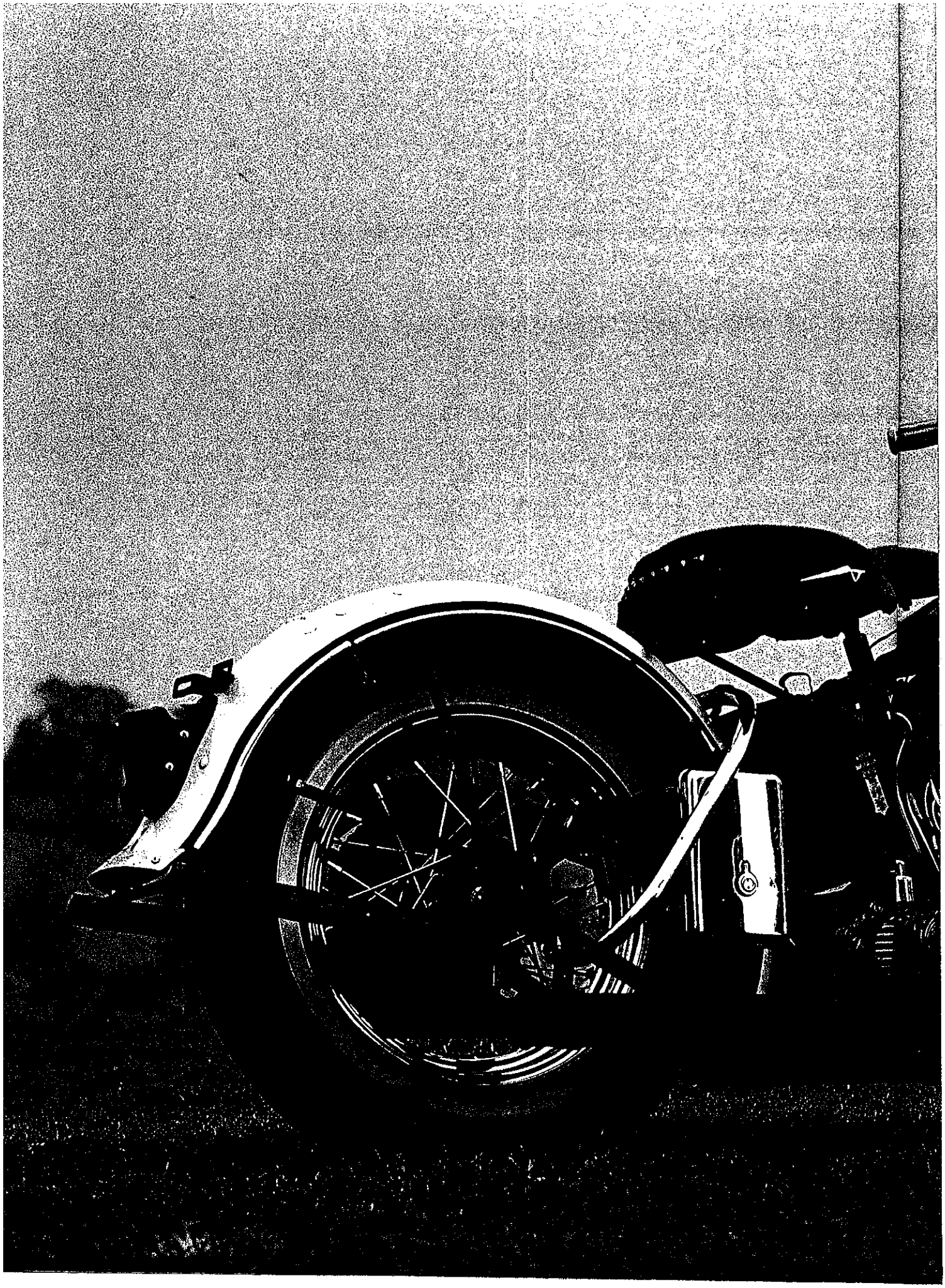


of machine were more difficult to ignore. The heroic feats of Joe Petrali on America's new 'flat track' circuits and on the notorious 'widowmaker' hill climbs were to assure him of a position of honor in the annals of Peashooter and, indeed, Harley-Davidson history.

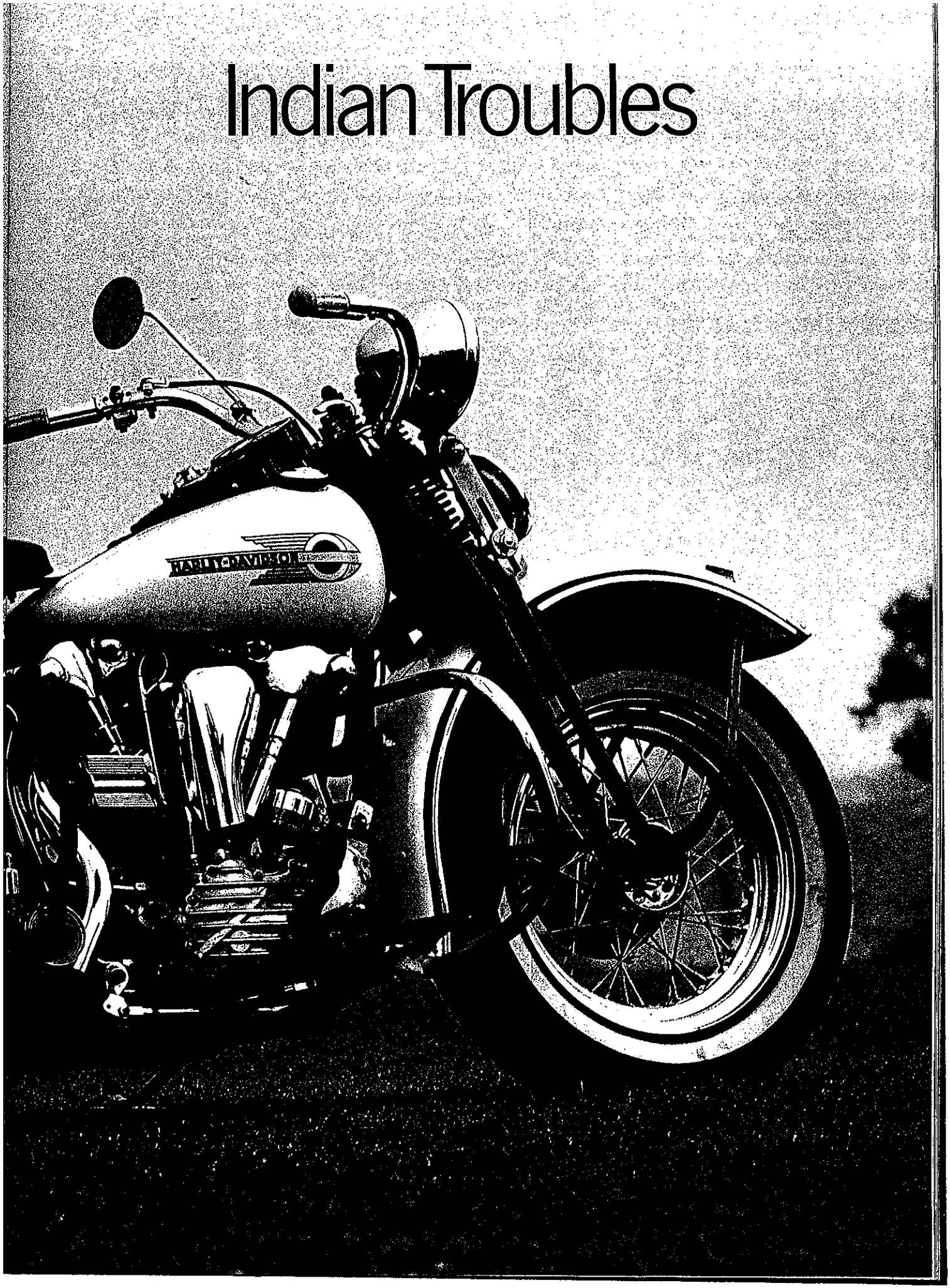
Pressing home their advantage, H-D delighted their big twin fans with the announcement in 1927 of the JH (61ci) and JD-H (74ci) variants, scheduled for production in 1928. The most notable and attractive feature of these new roadburners was the utilisation of twin camshafts to operate the valves. Although aimed at the very top end of the market, with a suitably lofty price ticket nearly 20 percent higher than that of the ordinary J, the twin cammers were sufficiently impressive machines to earn themselves the reputation as the best Harleys ever made. It was unfortunate that the factory chose to wait so long before indulging itself in such a commendable upgrading exercise, since the worthy but venerable J was by this time fast reaching the end of its run.

There was about to be a major shakeup in the Harley range, in fact, with the launch of two new models in 1929 and 1930. The first new model was destined to underwrite the company's future for the next twenty years; the second one nearly damaged the company's reputation beyond repair.

And in between the two launches, events on Wall Street threatened to bring about the ruin not just of Harley-Davidson, but of every other company, corporation and conglomerate in the industrialised world.



Indian Troubles



At the close of the last chapter, mention was made of Harley-Davidson's launch of two new models at the end of the 1920s.

In fact, *three* machines were announced by the factory in 1929, but only two of these were to play a significiant role in the company's history. Moreover, two of these three machines were all but identical, and hence could almost be classified as one model – though this was far from being the image the factory was trying to portray. At a casual glance, these two machines were practically indistinguishable from one another. The fact that one was powered by a 500cc single, and the other by a 750cc V-twin, was indicative of the extraordinary simplistic thinking behind Harley-Davidson's model range policy at this time.

With or without hindsight, it now seems astonishing that any motorcycle company could simultaneously offer such an ill-considered pair of models as the 45 cubic inch (750cc) D V-twin and the 30.5 cubic inch (500cc) C single for sale to the general public. In this case, not for the first time, Harley-Davidson's almost fanatical concern with keeping costs down nearly led to their undoing.

The notion this time was, quite simply, a brazen attempt to make two motorcycles out of one. The 750cc D started off badly by being encumbered with a torquey but over-lazy and decidedly underpowered sidevalve motor. While contemporary equivalents from Indian and Excelsior were easily capable of speeds approaching 80mph, Harley's supposedly competitive 45 could not even touch 60mph. Worse yet, it had a nasty tendency to destroy itself if the frustrated rider decided to fly in the face of reason by attempting to keep up with the rapidly-departing opposition.

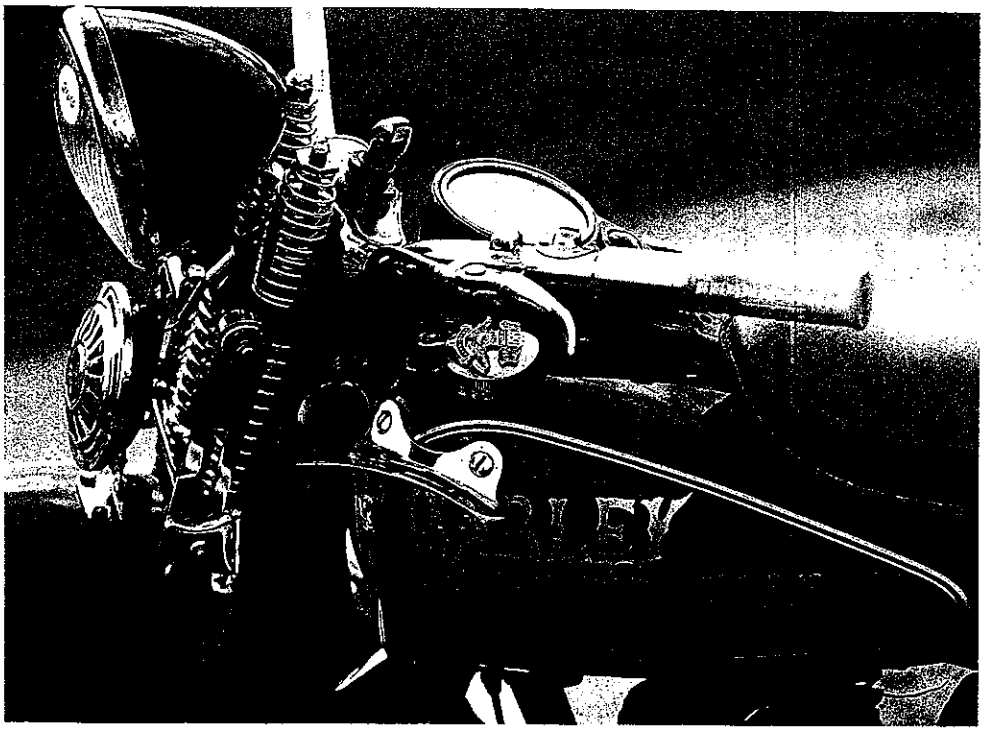
Other compromises had had to be built into the D, for no other reason than that H-D had wanted to make use of exactly the same frame and cycle parts for the C. Of necessity, these frame components had to be beefy enough to contain the bigger and more powerful engine of the two. The inevitable consequence was that the C's rather feeble 500cc single motor had a decidedly hard job pushing the excess weight of a 750cc-sized chassis along the road. The whole ill-conceived exercise was a classic example of over-rationalisation, a felony which was then compounded by inadequate development.

The only saving grace on either machine was the provision of a front brake, a feature which, somewhat incredibly, had made its first appearance on Harleys only one year earlier on the 61 and 74 cubic inch V-twins. Even then, it had been regarded with some skepticism by those who thought of themselves as true Milwaukee men. These riders considered front brakes to be abominations and the work of the devil. In a curious way, applying this idea to Harley-Davidsons in isolation, they were half right.

Previous page: A beautifully kept 1936 61-E Knucklehead.

Right: The tough WLA army bike gave sterling service in the testing conditions of World War II, where the Harley's reliability and ease of servicing were of key significance. Some 89,000 were produced.

Below: The wheel has come full circle, with H-D now offering a springer-forked model for the '90s, but this is an original springer, with gold-plated custom touches.



USA
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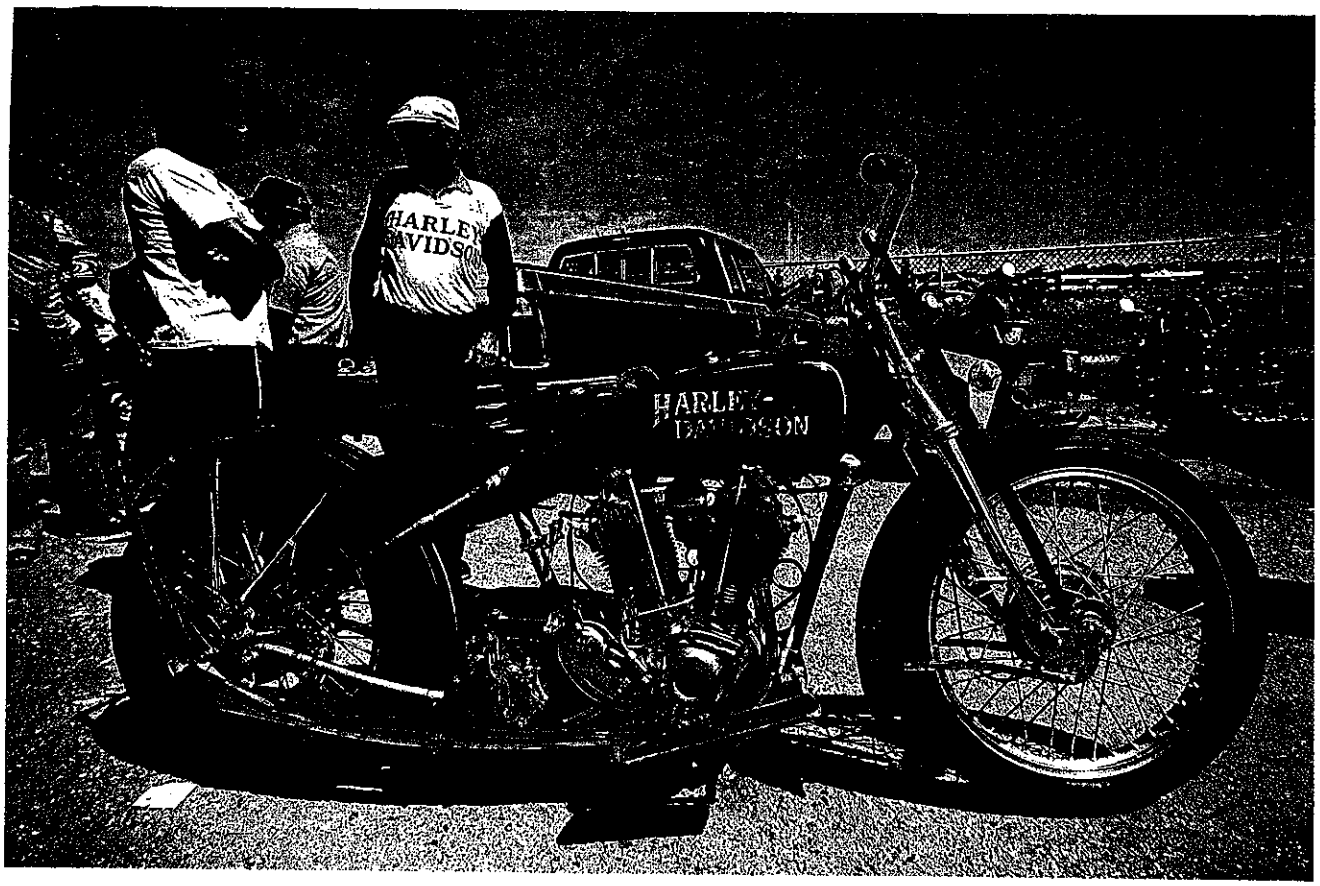


With the notable exception of the XLCR Cafe Racer in 1977, Harley-Davidsons for the street have always been designed along cruising rather than racing lines. As such, they have traditionally featured riding positions which require the rider to maintain a straight back and forward-extended limbs, in a posture not too dissimilar to that assumed when driving a car. Such a posture has the effect of biasing the overall weight distribution towards the rear of the cycle, which in turn permits enthusiastic use of the back brake without too much risk of wheel lockup. Even today, a certain degree of care is advisable when using H-D front brakes, particularly on models featuring skinny 'custom' front tyres. The distrust of Harley's 1928 customers (riding on somewhat less tenacious rubber) was, therefore, not wholly unjustified.

In the event, buyers of the 1929 D and C sidevalve models had other things to worry about, thanks to the factory's failure to put either model through a serious development program. The nature of the shared frame meant that, while there was no problem fitting the single-pot C motor, serious difficulties were encountered when it came to shoe-horning in the much bigger twin. Although the basic engine went in all right, there was insufficient clearance for the 45's generator to be sited in its usual V-twin location, ahead of the crankcase. Instead, provision had to be made for it to be fitted slightly ahead and to the left of the vee made by the cylinders. From a distance, bystanders observing the passage of a D mistook the large cylindrical generator for an extra cylinder; the unsurprising result was that the D quickly acquired a 'three-cylinder Harley' misnomer.

It took even less time for this unfortunate machine to acquire a hatful of less innocent nicknames, bestowed upon it by angry dealers and their customers once it had become obvious that the generator's botched-up bevel gear drive was not strong enough to hold together under pressure. Worse still, the clutch components (which were already in service on the small capacity A and B singles, as well as on the new C model) were plainly inadequate for use in a motor twice the size – even if it was almost certainly less than twice as powerful. Harley-Davidson were not inclined to release horsepower figures at this time, probably with good reason in the 45's case.

Besieged by complaints, the factory hurriedly revamped the D, fitting bigger bearings in the generator drive and, in an attempt to rectify the performance shortcomings, including a larger bore carburetor in the specification. This modification hauled the 45's top speed over the 60mph mark, hardly an earth-shattering tune-up but a step in the right direction at least. The new 'performance' image was further enhanced by a quick restyle of the fuel and oil tanks. Despite all its initial teething problems, the 45 eventually became the backbone of Harley's model range, continuing in production as the power unit for solo mounts until 1953, and in the role of commercial slave in Harley's three-wheel Servicars right up until 1974.

The C proved rather less resilient. America's predilection for big-inch cruisers had already been firmly established long before the end of the 1920s. The much smaller market for European-style singles was by definition more difficult to satisfy, but having opted to compete in that market, H-D's approach was then inexplicably casual.

There was sales resistance even before the C was launched. The so-called 'Baby Harley' was far from being a worthy example of the sports single genre, combining as it did the twin failings of unexciting performance and unremarkable reliability. When it was unveiled, weighing in at a hefty 365 pounds, it seemed that the motorcycling public's advance appraisal of the machine was uncomfortably accurate. Like the D, it was hard pushed to reach the 60mph claimed for it by its manufacturers; also like the D, it proved itself to be fragile right out of the crate. Cooling was its weakness. The piston displaying an alarming propensity to eat itself in the hands of anyone who felt inclined to test its open-throttle behavior.

By 1931, the Baby Harley had lost its relatively lightweight Model B-derived frame, in favor of the 45's by then revised chassis. In the process, the C gained over 60 pounds and became even more sluggish than before. Though it did not officially disappear from the H-D catalog until 1937 (thanks in large part to its popularity as a commercial hauler in Japan of all places), sales in the USA had never been anything other than desultory.

If the C was bad, then the all-new 74 cubic inch V-twin revealed in August 1929 was a disaster. While Harley-Davidson's strong following might have allowed them to commit one *faux pas* in what was for them an unfamiliar market in small singles, a similar failure in their own specialist niche of

Left: The 'Twin Cam' JD and JDH big twins were only produced for a short time at the end of the 1920s, but were an instant hit with sports-minded riders.

Right: Charles Lindbergh, the first man to fly the Atlantic, was an enthusiastic Harley man in his spare time.

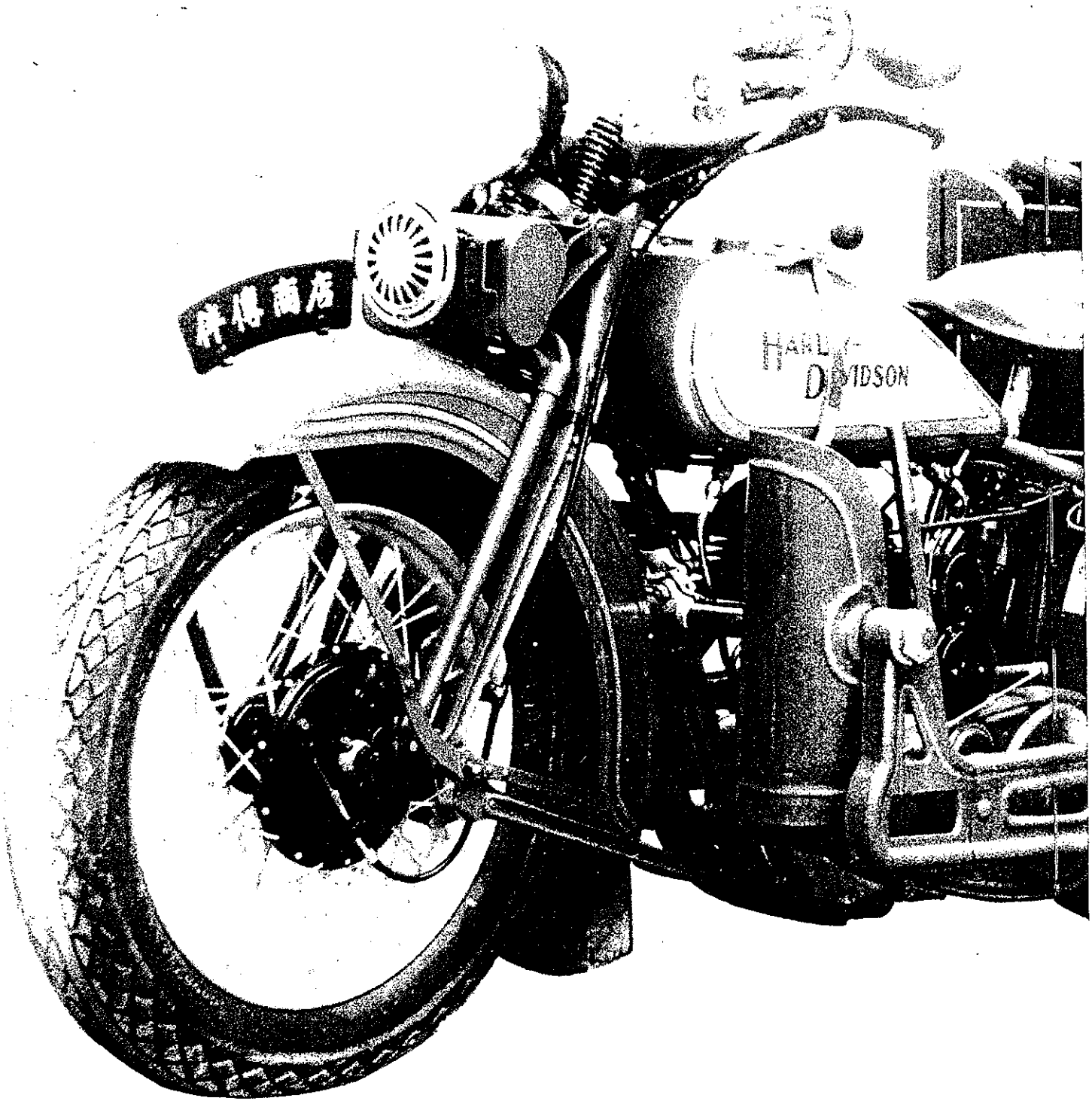
Below: The 45 cubic inch DLD of 1929 was known as 'the three-cylinder Harley' because of its unusual generator placement, but this more modern mutant (spotted at Daytona) really does have three cylinders.

V-twins – coming so soon after the 45's inauspicious debut – should have been unthinkable.

And yet, unbelievably, it appeared that the company had not learned its lesson. The new VL, put forward as the long-overdue replacement for the 15-year-old J, was a 74 cubic inch (1200cc) lookalike of the 45ci D. With a new frame and stronger forks, it was nearly 25 percent heavier than the J at around 550 pounds fully wet, and offered little in the way of innovation, other than quickly-detachable wheels and the option of a more contemporary style of sidecar. In fact, the main 'advance' claimed by the factory was not an advance at all, but simply a retention of existing sidevalve technology. The most often-quoted benefit was that maintenance would be made easier by dint of the fact that the engine could be left in the frame during routine top-end work. Retention of the total-loss lubrication system was further evidence of the VL's conservative specification.

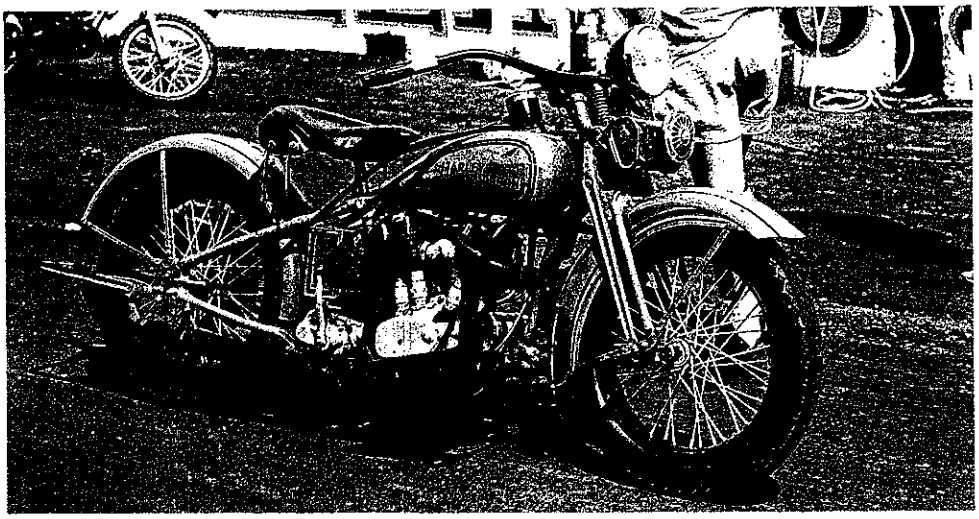
On the face of it, the VL did not look like the kind of machine that might upset H-D's traditionally conservative clientele. Quality of construction had never been a problem at Milwaukee, and the VL was no exception to that rule. The bike's deficiencies were as much conceptual as mechanical.

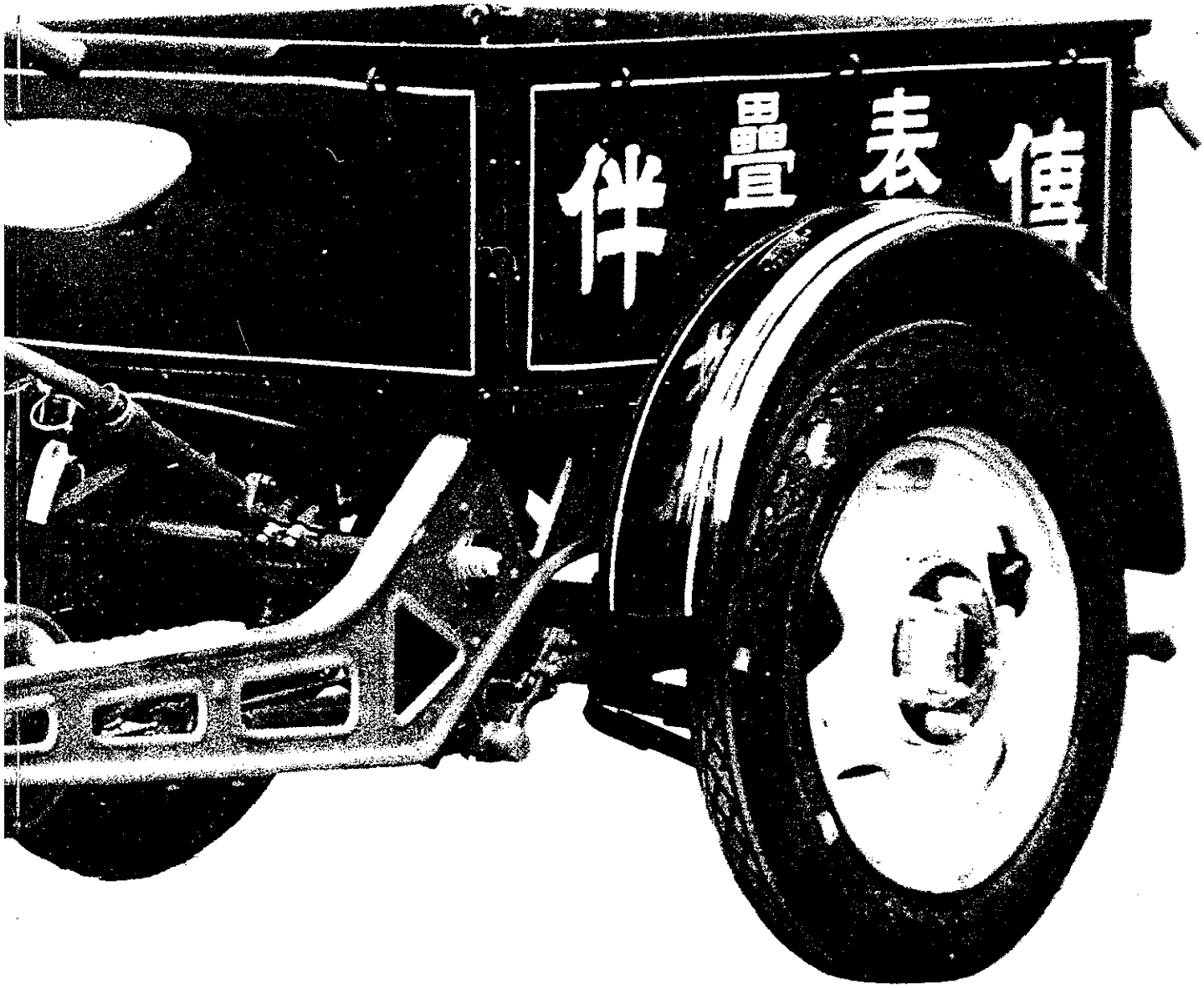
Ricardo-designed heads, in conjunction with unusually small flywheels, were intended to pep up the engine's performance. These flywheels certainly enhanced the bike's low-speed pickup and accelerative qualities, but only at the cost of severely diminished top-end power. The VL's output turned out to be no greater than that of the J, and such power as it did have seemed to vanish altogether at higher engine speeds, a disappearing trick signalled all



Right: The 74 cubic inch VL sidevalve twin did not represent much of a step forward for Harley-Davidson. It was discontinued in 1936.

Below: Harleys have always been very popular in Japan. In fact, the first recorded importation took place as early as 1912. The three-wheeled Servicar derivative found especial favor in crowded Tokyo.





too painfully by the coincident commencement of serious vibration. The flywheels were too small, a fact pointedly brought to the factory's attention by disappointed dealers and owners worldwide. Once again, Harley-Davidson had released a machine for public consumption without having put it through any sort of serious test program.

New crankcases incorporating bigger flywheels were hastily fabricated and shipped out to H-D dealers, along with newly enlarged frames, with the instruction that these items should be retro-fitted to all VLs either sold or still on the showroom floor – a total of over 1300 cycles. Power-increasing alterations to the camshaft and valves were handed down at the same time. No financial assistance was offered to the dealers to help them in this massive clean-up operation, with the result that more than a few tore up their Harley franchises in protest. Other dealers who pleaded with the company to put the much-loved J back into production were also disappointed by H-D's negative response.

Additional pressure was put on the already struggling dealer network in 1929 as a result of a misguided decision by America's newly-elected President Hoover to erect import barriers in order to protect the nation's farmers from the ruinous effects of cheap imports and rising inflation at home. Faced with the prospect of having to negotiate Hoover's tariff hurdles, foreign governments predictably retaliated by hoisting import barriers of their own. America's exporting potential was strangled at a stroke, obliging companies like Harley-Davidson to streamline their home marketing in order to survive. Dealers were whipped into action in search of turnover in the civilian and (increasingly important) police sales areas, competing furiously against Indian and Excelsior/Henderson.

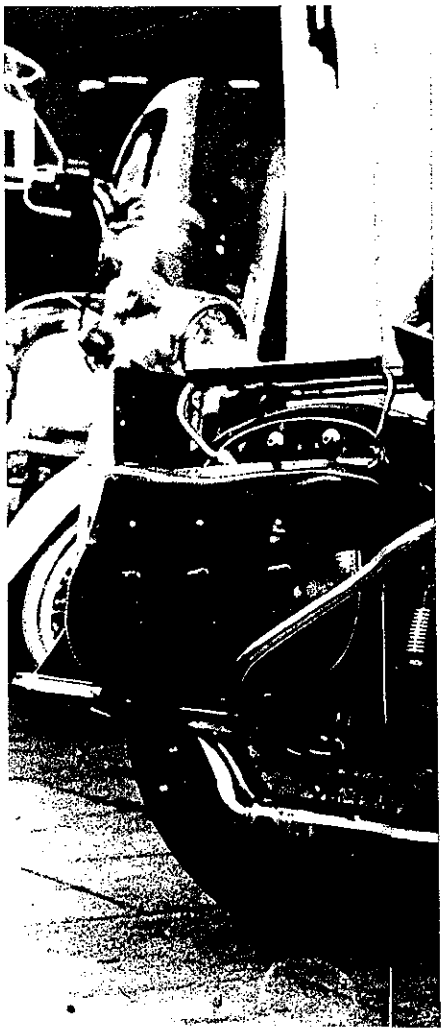
The extra effort looked like it might pay off, with signs of a slight upturn in the domestic motorcycle market despite the launch fiascos perpetrated by Harley-Davidson. But then, in October 1929, came the stock market crash on Wall Street. Suddenly there was unemployment on a massive scale as first banks and then businesses went under. The value of transportation fell through the floor as Americans across the country found themselves struggling to stay alive. Gasoline became a luxury item. Cars became next to worthless. Sales of motorcycles, at the bottom of the heap, began a downward slide which was to bottom out for Harley-Davidson in 1933, when just over 3300 units were sold – only slightly above the equivalent figure for 1910.

H-D's founders were in no position materially to assist their rapidly-shrinking dealers. All they could do was encourage them to greater efforts in the fight to take as big a proportion as possible of whatever market remained open to them. That effectively meant squeezing out their main competitor, Indian. Going into 1930, this was a prospect which seemed on the cards, as the Springfield company had been slowly bleeding to death for years at the hands of successive incompetent managers.

But in April of 1930, Harley-Davidson's plans received a setback when the fabulously wealthy industrialist E. Paul du Pont bought a majority stake in Indian, announcing at the same time his intention to ensure the firm's continuing involvement in the production of motorcycles. Excelsior, meanwhile, were capitalising on Harley's discomfiture over the VL (which had led to the cancellation of many police force orders), increasing production of their own Hendersons to fill the gap. Fortunately for H-D, however, this additional threat to their position was dissipated almost immediately by Excelsior themselves with their suicidal decision to fit cheaper – and considerably less reliable – ignition systems to their police-specification machines. An important order by the Californian Highway Patrol was botched by Excelsior as a result, and marked the beginning of their withdrawal from the motorcycle industry.

It was now a straight fight between Harley-Davidson and Indian for control of the American market. H-D had their gloves off right from the start, outraging motorcyclists nationwide with a scheme which encouraged their dealers to scrap any non-Harleys which were brought into their shops as part-exchanges for (very attractively priced) VL police specials. This dubious policy had the effect of decimating the number of Indians on the road, and lifted the state of rivalry between the two firms to such a pitch that ordinary civilian riders of Harleys were turned away from Indian dealerships, and vice versa. So much rancour was caused that even the ruthless H-D management felt morally obliged to discontinue the offer, dropping it six months after its introduction.

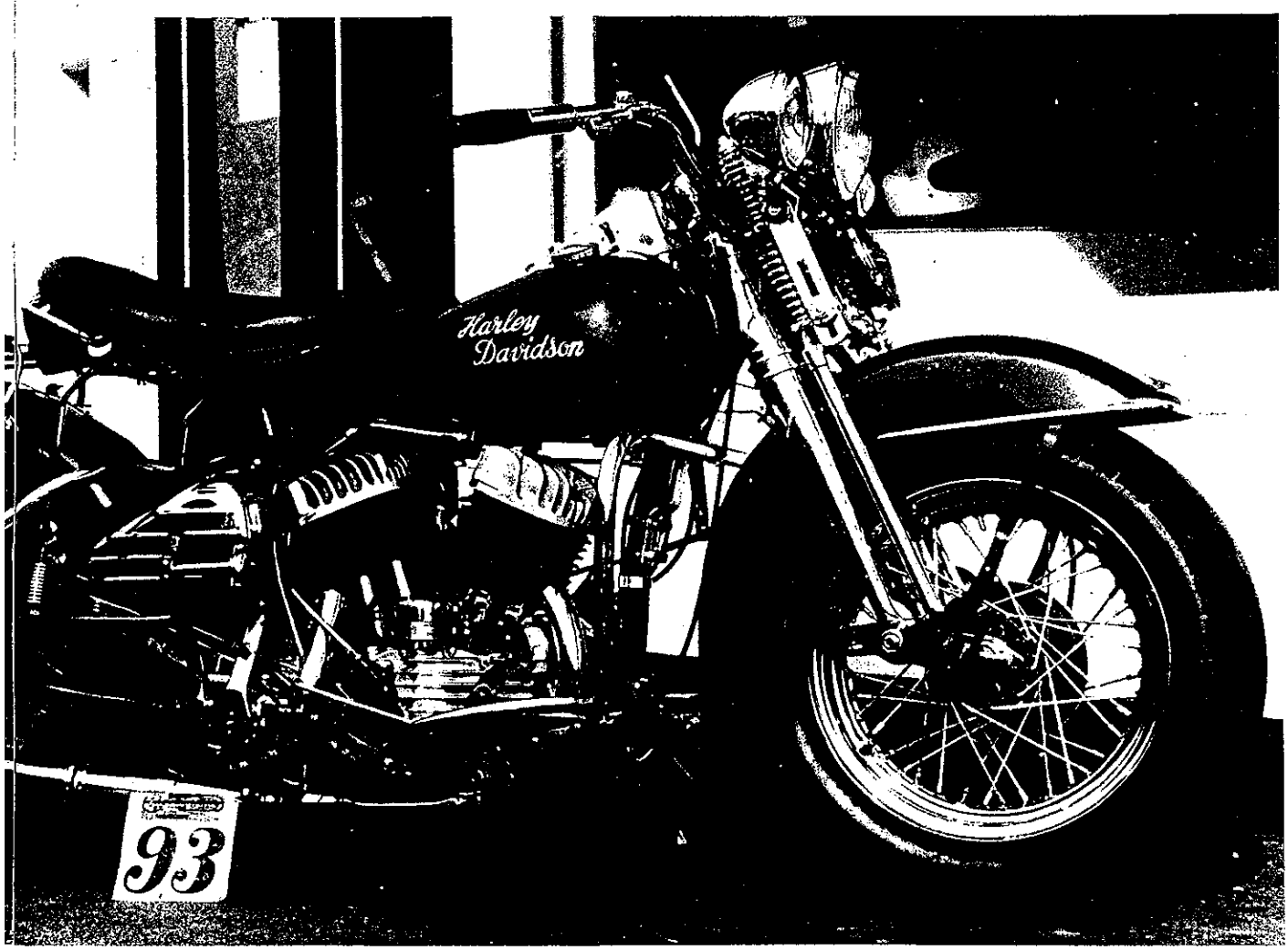
Great damage had been done to the public images of both manufacturers by then. Nonetheless, the annual price-fixing conferences between H-D and Indian continued to take place. The cosiness of the 1932 meeting was disturbed by the surprise attendance of E. Paul du Pont, who took the opportunity to lecture the Davidson brothers Walter (President) and Arthur (Sales Manager) on the subject of business ethics in general. Du Pont was especially caustic on the subject of H-D's seeming duplicity in the case of the VL police bikes deal, the details of which had of course not been divulged to Indian's representative at previous meetings.



One of Harley's longest-lived and most successful models was the sidevalve '45', a docile plodder in the best H-D tradition. Thousands of 45s are still in use today; this one has been the subject of much tender loving care.

Recovering from their initial shock at du Pont's outburst, the Davidson's calmed a potentially explosive situation by apologising to the French-born industrialist, and citing the need for desperate measures in a desperate situation. By this time, the 45 had been revamped, with a new frame (which allowed the troublesome generator to be sited in its proper place, ahead of the front cylinder) and a new purpose-built transmission. The 74ci VL had also benefitted from the upgrading of its previously suspect clutch. By 1932, both twins had secured a measure of public trust. They may not have been the world's most exciting motorcycles, but at least they were reasonably reliable.

This image of Harley-Davidsons as rather prosaic, functional motorcycles seems at odds with the marque's currently glamorous profile, but the reputation of the Milwaukee products was undoubtedly built on humble foundations. The Servi-car, launched in 1932, exemplified this practical aspect. Although this curious looking three-wheeled contraption has strong Harley associations, Indian had actually pre-empted H-D in the States with their own three-wheeler, the 'Dispatch-Tow', a device whose purpose was to facilitate the delivery of motor cars to and from garages by providing transport for the driver before and after such deliveries (the Dispatch-Tow being hitched behind the car).



The Servi-car/Dispatch-Tow format had already been a common sight on Japanese roads for some time before the Indian appeared, in the shape of H-D single-powered commercial 'rear cars'. In the States, the Servi-car soon found a niche as a light-duty delivery vehicle, and also as a means of transport for parking penalty officers. Because of the easy starting capability of the D 45ci engine, motorcycling experience was not a necessary prerequisite for would-be meter attendants; indeed, many of them were women.

By 1933, Harley-Davidson's model lineup was beginning to look quite respectable, although Indian's competing machinery was still dynamically superior in most respects. It was a pity that the full effects of the national recession were biting at their hardest at this time. Motorcycle production was troughing out, and racetrack activity had just about ground to a halt. In a desperate attempt to inject some life back into the sport, the American Motorcyle Association instigated a new racing framework.

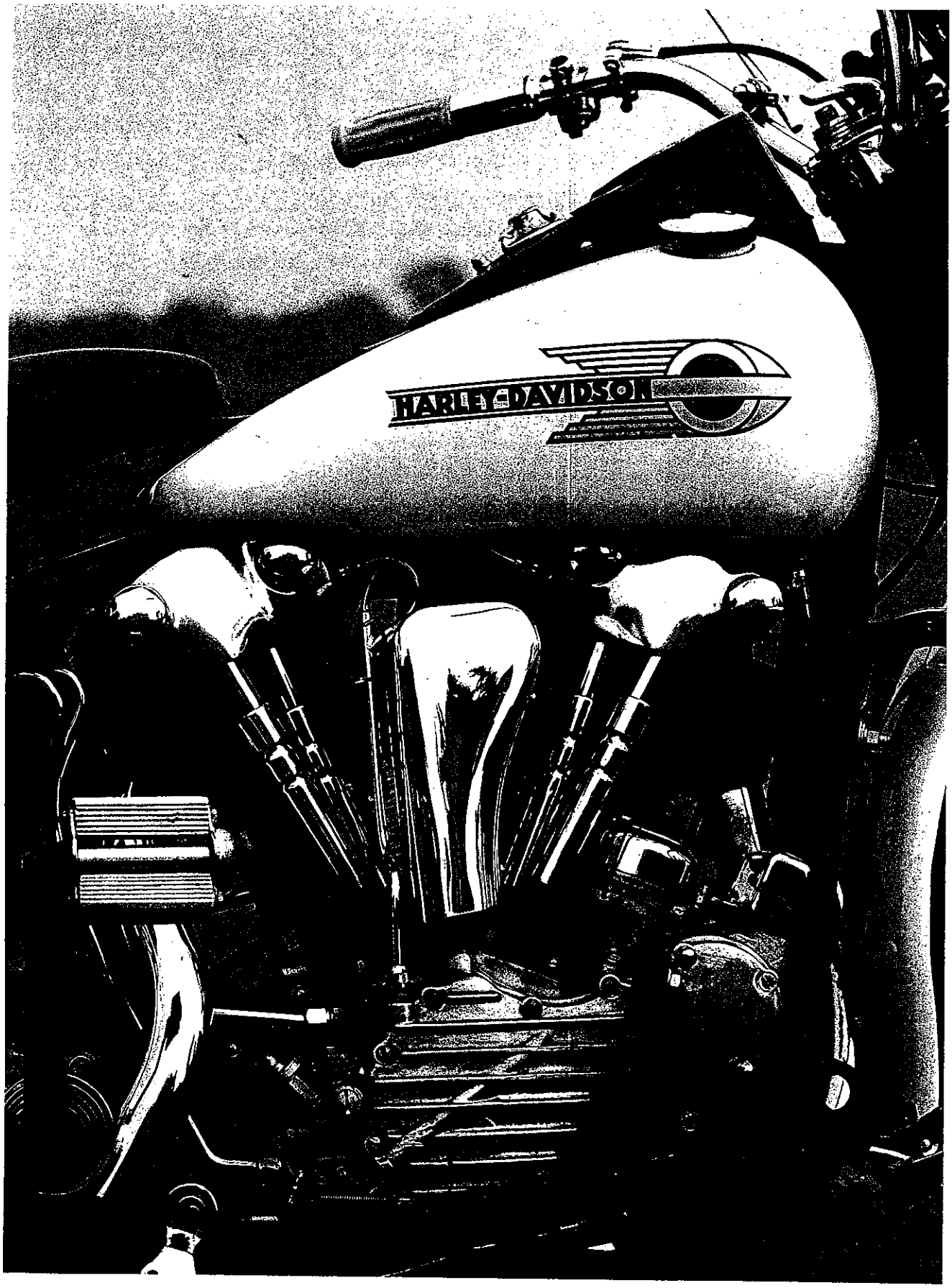
The most significant feature of the new setup was the formation of Class C racing, aimed primarily at private riders on 45 cubic inch motorcycles. Harley-Davidson were initially not displeased by this turn of events, since it would pitch their revamped 45 against Indian's discontinued – but still fast – 101 Scout 750. Their confidence was to be undermined in 1935, however, by the reappearance of a new and still better Scout. Only through the expert ministrations of ace tuner Tom Sifton were H-D able to keep their 45 in the running for honors against the lighter and more maneuverable Indians.

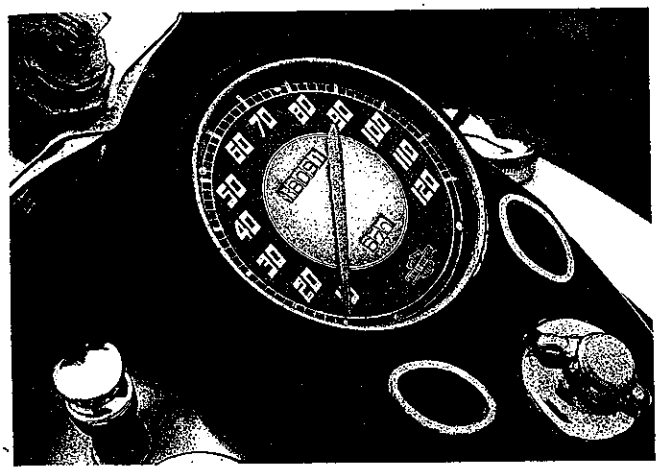
Through a quirk in the rules, Class C also allowed overhead valve 500cc machines to compete. This provision had little immediate impact, but it would ultimately lead to friction within the American motorcycle industry with the arrival from England of Norton's astonishingly successful International. Harley's own 21 and 30.5ci singles were coincidentally withdrawn from the home market in 1934, the factory having accepted that their future lay in big, powerful V-twins. Four-stroke singles would not resurface in the model range until 1961.

At the other end of H-D's product line-up, the 74ci VL was maturing into the kind of motorcycle which would reaffirm the public's faith in Harleys as solid and reliable mounts. For the 1936 model year, it was bored out to 80 cubic inches (1340cc), not to make it any quicker especially, but to endow it with even more lugging power for commercial and sidecar applications. An optional transmission with three forward gears and a reverse was included in the catalog with these duties in mind. The new 80 (factory designation VLH) displayed an advanced tendency to vibrate and/or overheat – sometimes to the point of seizure – if it was subjected to extended hard use, but other than that it was a workmanlike machine with much to recommend it over Indian's now slower and often cantankerous Chief.

H-D widened the appeal of their cycles in the mid-1930s with the invention of the 'buddy seat', a foreshortened dual seat which allowed the Harley man to take his girl for an outing. The outing would for preference be short, however, or the girl of a very friendly disposition, since a buddy seat placed the two riders in very close contact with one another. One is forced to the conclusion that there are indeed many friendly girls in the US, since the buddy-style seat (admittedly rather more spacious now) still figures on modern-day Harleys.

1936 was one of the most important years in Harley-Davidson's history, ushering in as it did a new age of overhead valve V-twins. First in what was to become a 16-year line of highly-regarded ohv machinery was the 61 cubic inch (1000cc) model E, an all-new, 36 horsepower, duplex framed blockbuster aimed squarely at the sporting rider. As the 61E gradually moved into Harley-Davidson's hall of fame, its distinctively shaped rocker covers eventu-


HARLEY-DAVIDSON



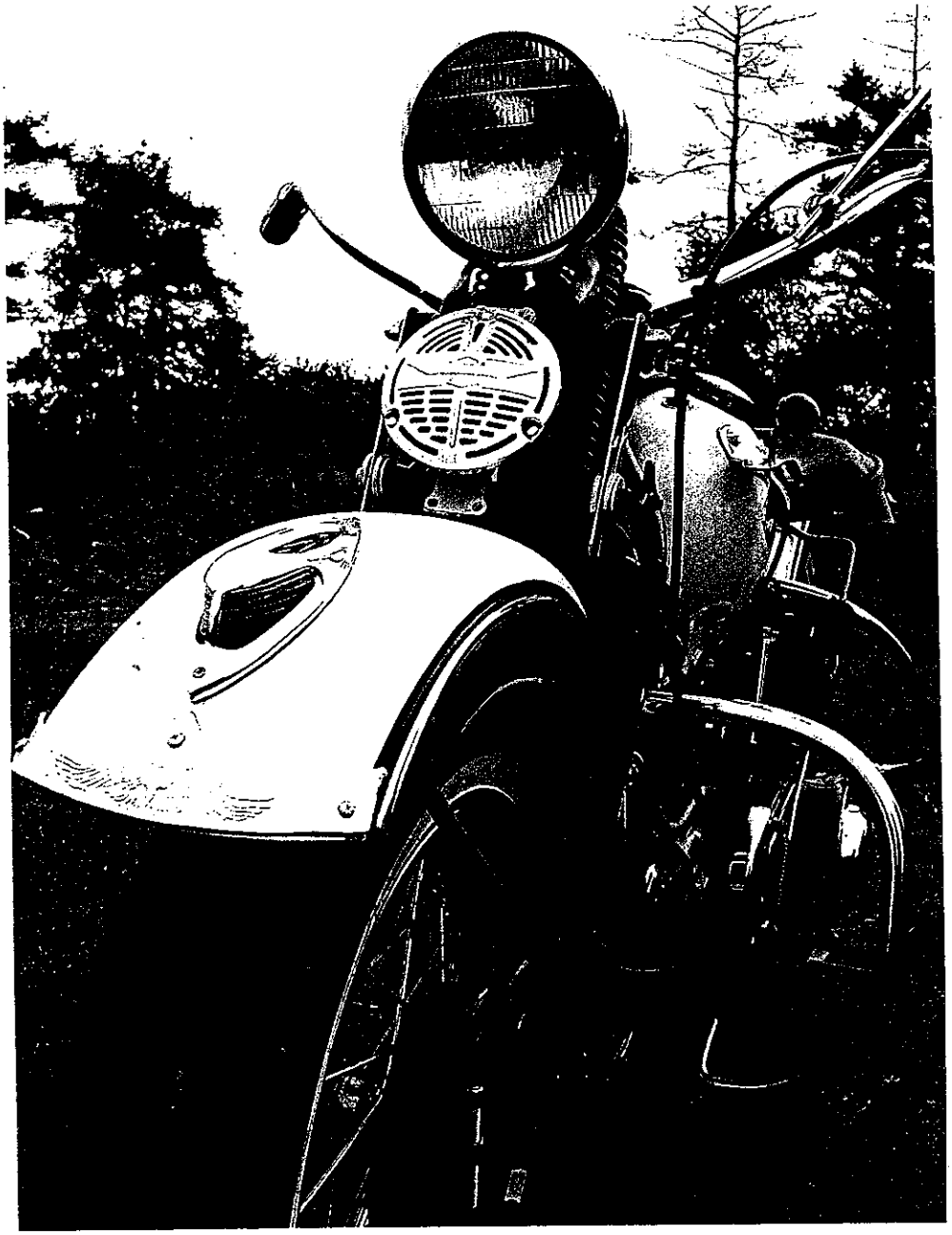
ally gave rise to the 'knucklehead' sobriquet used to describe this type of engine. The regard in which this motor came to be held may be measured by the fact that it is still one of the most prized powerplants among America's outlaw and custom fraternities, even though the last factory unit was built in 1952.

And yet, once again, the fate of a new Harley was almost sealed before it had had a chance to make a favorable impact, thanks once more to the factory's indecent haste in rushing into production before adequate testing had been carried out. In the manufacturer's defense, they did allow William Harley's son William J to put in some development miles on two 61E prototypes. But, having done so, they then refused to take cognisance of the faults which were brought to light by this testing.

The most serious shortcoming was in the ohv arrangement itself, which showed itself capable of leaking large quantities of oil. Ignoring all advice concerning the importance of getting it right first time with his ohv debutant, President Walter Davidson insisted on sticking to the June 1936 launch date. No delays could be contemplated.

The results were predictable – and disastrous.

All pictures: The 61-E 'Knucklehead' of 1936 was a watershed machine in Harley's history. The first overhead valve big twin, this engine is effectively the father of all models currently on sale. Gears were selected by hand via the tank-mounted lever. Production ceased in 1952, but the knucklehead motor is still very much sought after as a basis for one-off specials.



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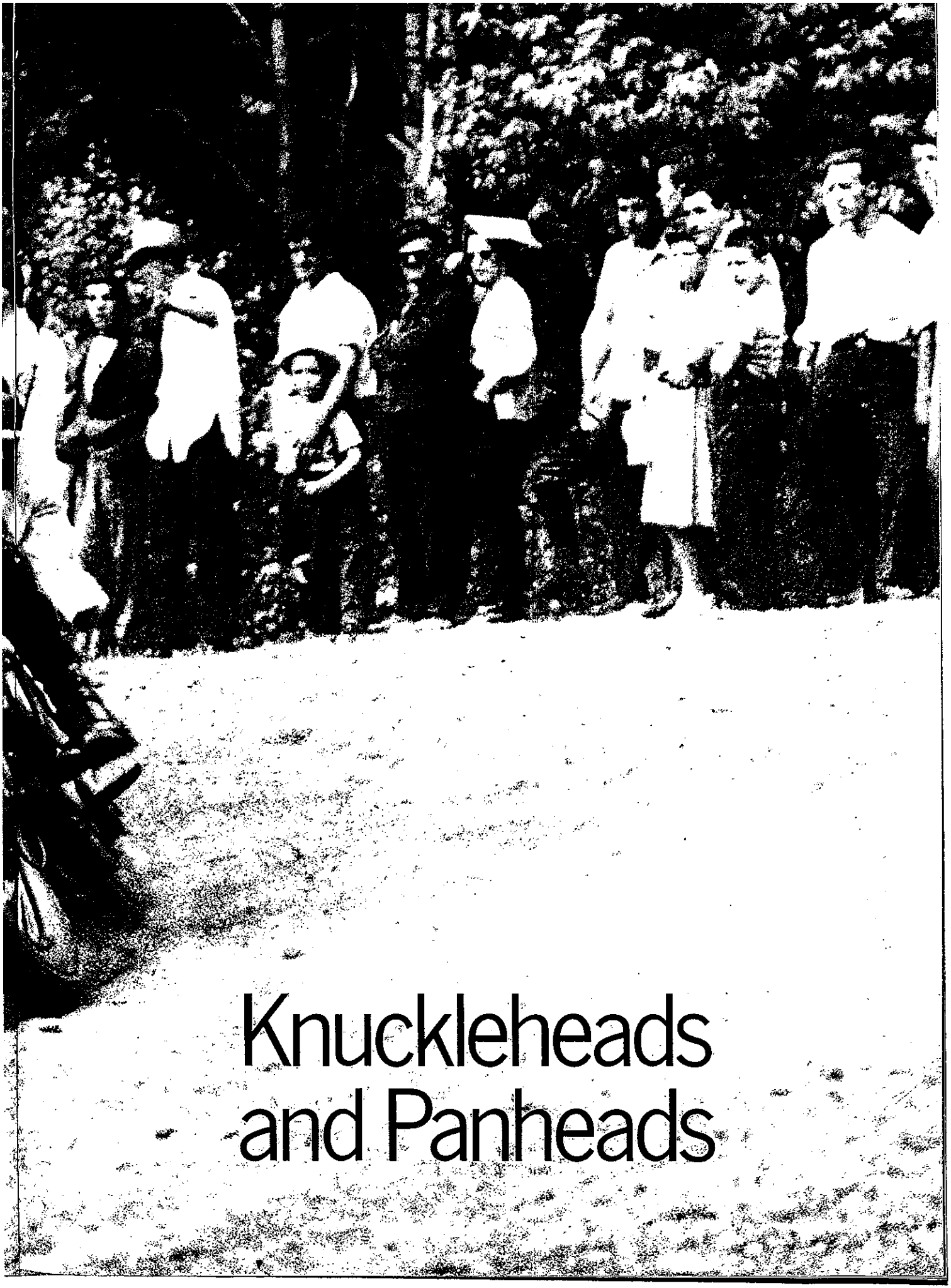


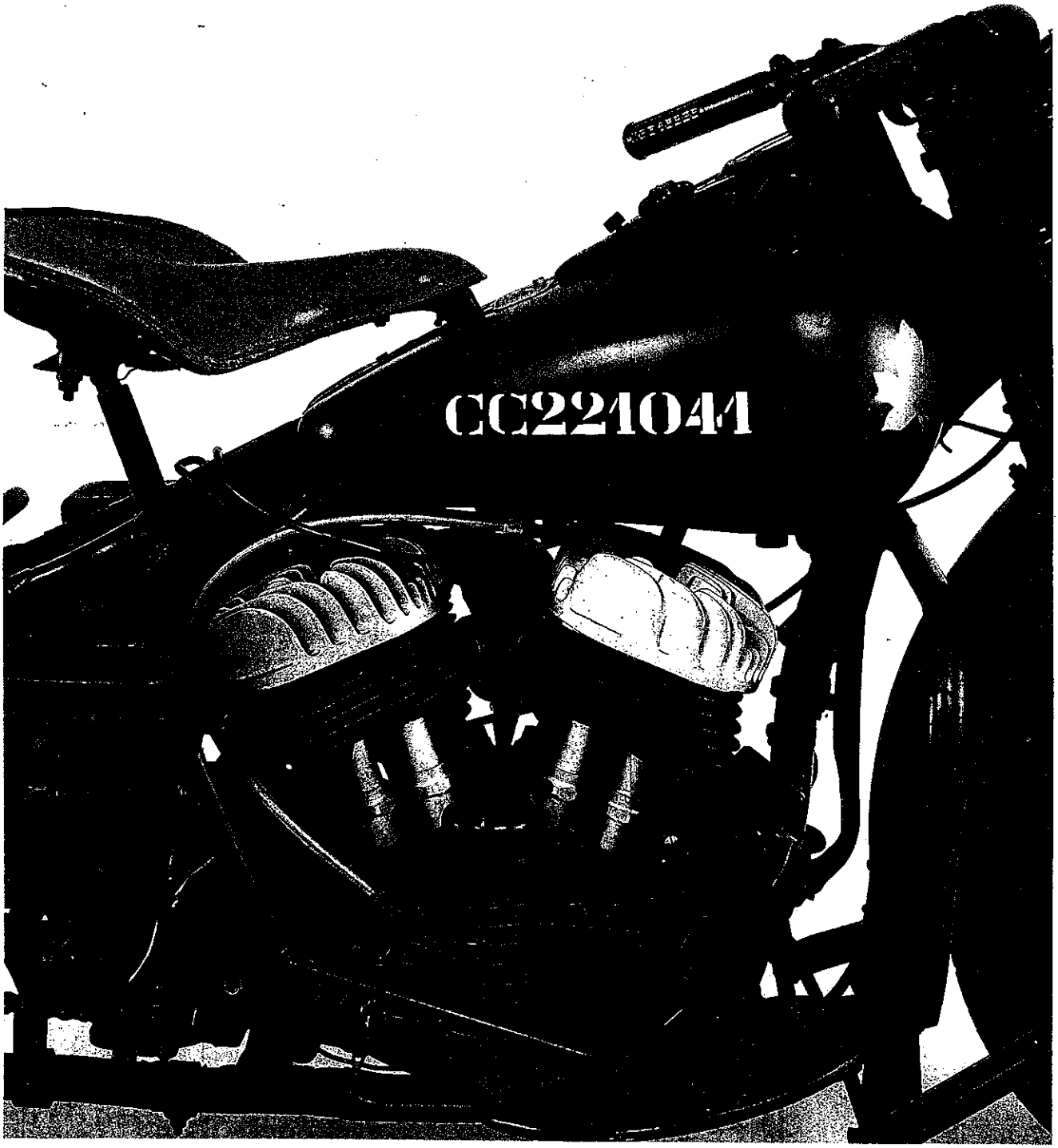
Knuckleheads and Panheads

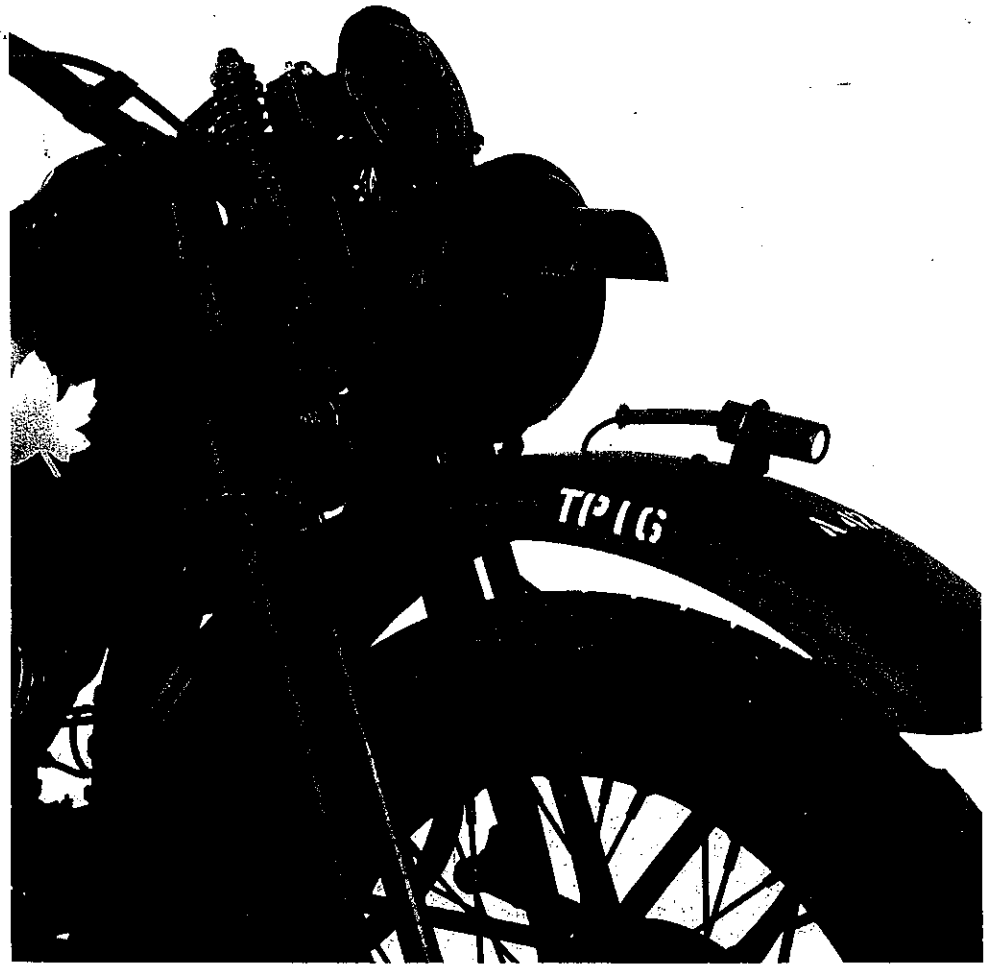
The 61E of 1936 was a pivotal machine in Harley-Davidson's often troubled history. As their first overhead valve V-twin, the 'Knucklehead' led the way forward into a fifty-year dynasty of overhead valve-engined motorcycles which now shows every sign of propagating itself right into the 21st century.

Looking back at the E's launch, however, it is all too easy to imagine a very different set of consequences which, if they had been allowed to happen, and given the teetering state of H-D's economic position at the time, might well have jeopardised the existence of the company itself. Only the dogged resilience of the founders – coupled with their already well-known firmness with dealers – saved the Knucklehead from sudden and ignominious death.

It was not long after the release of the 61E before the inadequacy of the new bike's valvegear was discovered by dealers and customers. Public confidence in the factory's ability to produce reliable machinery, already dented earlier by the equally unimpressive debuts of the 45 and 74ci VLs, took another severe knock. The feeling of *deja vu* experienced by Harley's long-suffering customers was further underlined when the factory followed previous custom and practice by hastily sending out a revised valvegear kit for the E, to be fitted to all 1900-odd machines produced during 1936.

Upon completion of the restitution programme, the factory asked their works rider Joe Petrali to make an attempt on the Daytona Beach mile record with a modified and lightened 61E, in an effort to reassure any remaining doubters. Petrali duly obliged, setting a new record of 136.18mph, and in the process stamping the E as the performance model in Harley's range. The E was a significant trend-setter for H-D in another way; it was the first Harley-

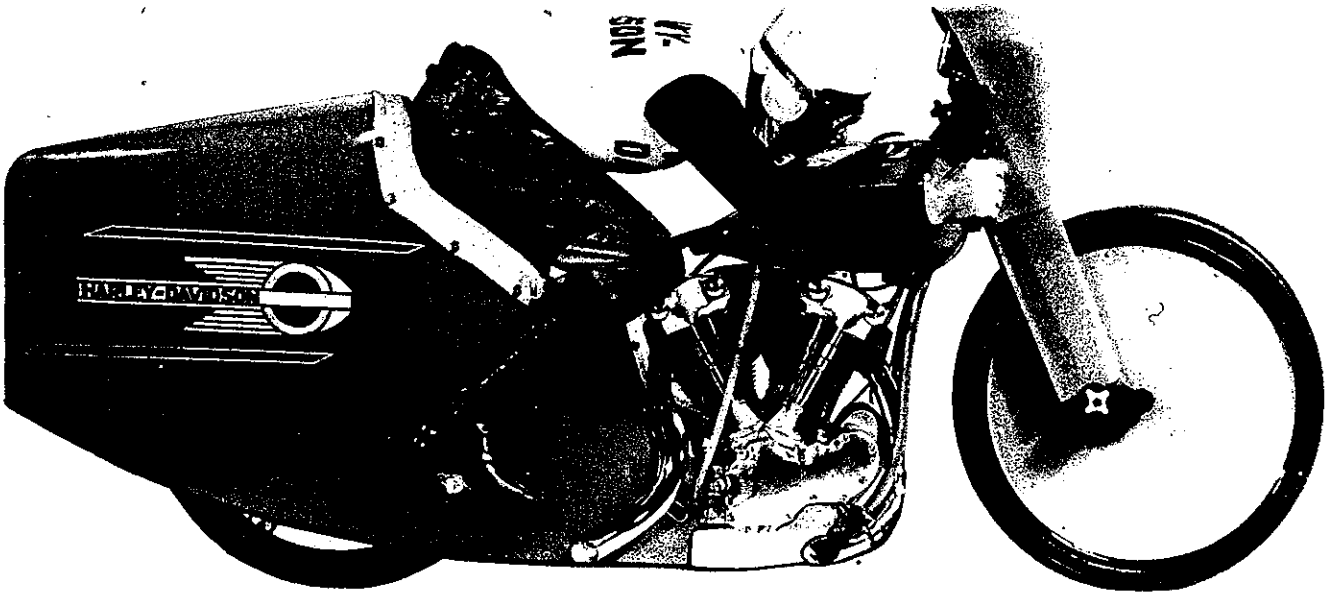




Previous page: Babe Tancrede, veteran Rhode Island Harley campaigner, takes another victory, this time in the Laconia 100 Mile Road Race in June 1947.

Left and right: This superbly restored 1942 model WLA 45 is one of a select group of motorcycles considered worthy of exhibit in Britain's National Motor Museum at Beaulieu, a reflection of the esteem accorded it by a war-torn generation.

Below: Harley's attack on the World Land Speed record in March 1936 was meant to have been launched by Joe Petrali on this streamlined knucklehead, but in fact his record-breaking speed of 136.18mph was set without this bodywork, as it was found to upset the handling.



Davidson to feature a large and easily-read speedometer on a console between the two halves of the fuel tank. This styling touch has been retained on F series Harleys to this day.

More importantly, the 61E had at last put Harley-Davidson one step ahead of their long-time rivals, Indian. There was no equivalent 1000cc machine in the 'Iron Redskin' range. Their 1200 Chief was actually cheaper, but then so was Harley's own identically priced 74. The ohv 61 was in its own exclusive niche, a sports machine embodying what was, for Harley at least, modern engine technology. In late 1940, a bored and stroked 74 cubic inch version of the E was launched to run alongside the existing 61ci model. This, the first F series Harley-Davidson, showed itself to be considerably more powerful than the seminal 61, with a top speed in the region of 100mph; the extra performance was only obtained at the cost of exacerbated vibration, but with careful running-in and a reasonably realistic attitude, most enthusiasts were agreed that the gains were greater than the losses.

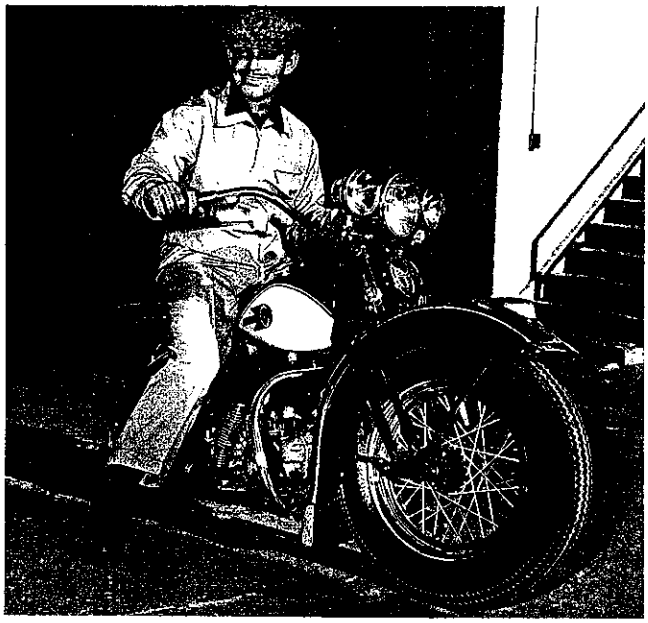
Three years beforehand, with depression-hit sales still languishing at around 10,000 units annually, H-D had been very much concerned with consolidation rather than experimentation. Trading on their humble origins, the founders announced two more sidevalve twins for the '37 season. The 74ci UL and its 80ci brother, the ULH, were unashamedly aimed at the conservative end of the market, being rather heavy and plodding in the old Harley tradition. With the future so uncertain, the company's cautious approach was both rational and excusable. The UL line ran successfully until 1941, proving especially popular for sidecar and police work, and fulfilling an essential function in helping to drag H-D out of the thirties depression.

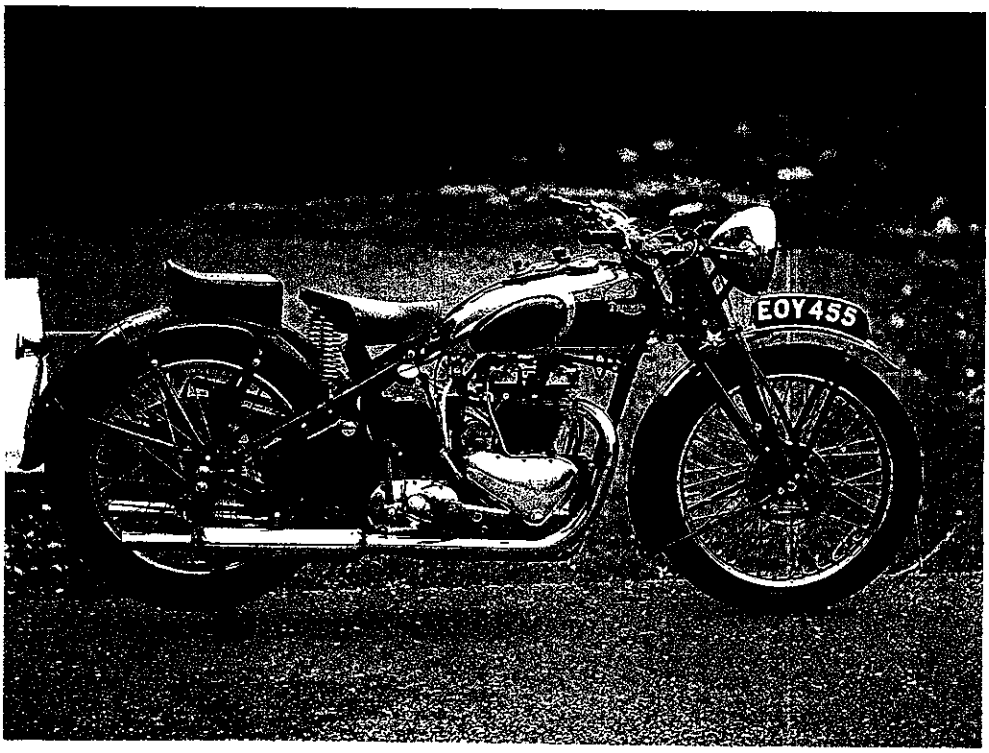
The trusty old 45 was still battling on too, improved for 1937 with enhanced lubrication, cooling, and styling. In truth, it was still outshone by Indian's dynamically superior Scout, but the D's supporters came to value its solid dependability, a virtue of arguably greater importance in those straitened times. For those who wished to compete in 750cc Class C races, H-D offered the DLDR, a somewhat ersatz machine which did not really answer the enthusiasts' demands for a hotted-up thoroughbred worthy of doing dirt-track battle with the Indian Scout. Not until the arrival of the heavily-tuned WLR in 1941 would these demands be met.

Back in 1937, however, there was an unexpected crisis with the death in April of William Davidson. This was a big loss to both workforce and management. In his role of Production Head, Davidson had assumed a larger-than-life reputation on the shop floor. He had earned the respect of the ordinary men on the line, who saw him as 'one of them.' Like them, he enjoyed the simple pleasures of life, and also like them, he did not stint in the indulgence of his trencherman's appetites.

His death was coincident with a growing movement towards unionisation in the American automobile industry, a process to which 'Big Bill' was bitterly opposed. When the union's spotlight was finally turned upon the Juneau Avenue factory, Davidson's bull-headed decision to fight against the inevitable was a policy doomed to failure. Davidson's successor, William Ottaway, quickly recognised the futility of confronting the powerful United Auto Workers union, and agreed to the principle of negotiating with the union's representatives on the question of wages and conditions.

By the late 1930s, American motorcycling at the top end had taken on all the trappings of a lifestyle pastime, exemplified by the increasing profusion of clubs which went in for regular meetings, runs, social events, and bike shows. At this time, Harley-Davidson had a strong vested interest in the

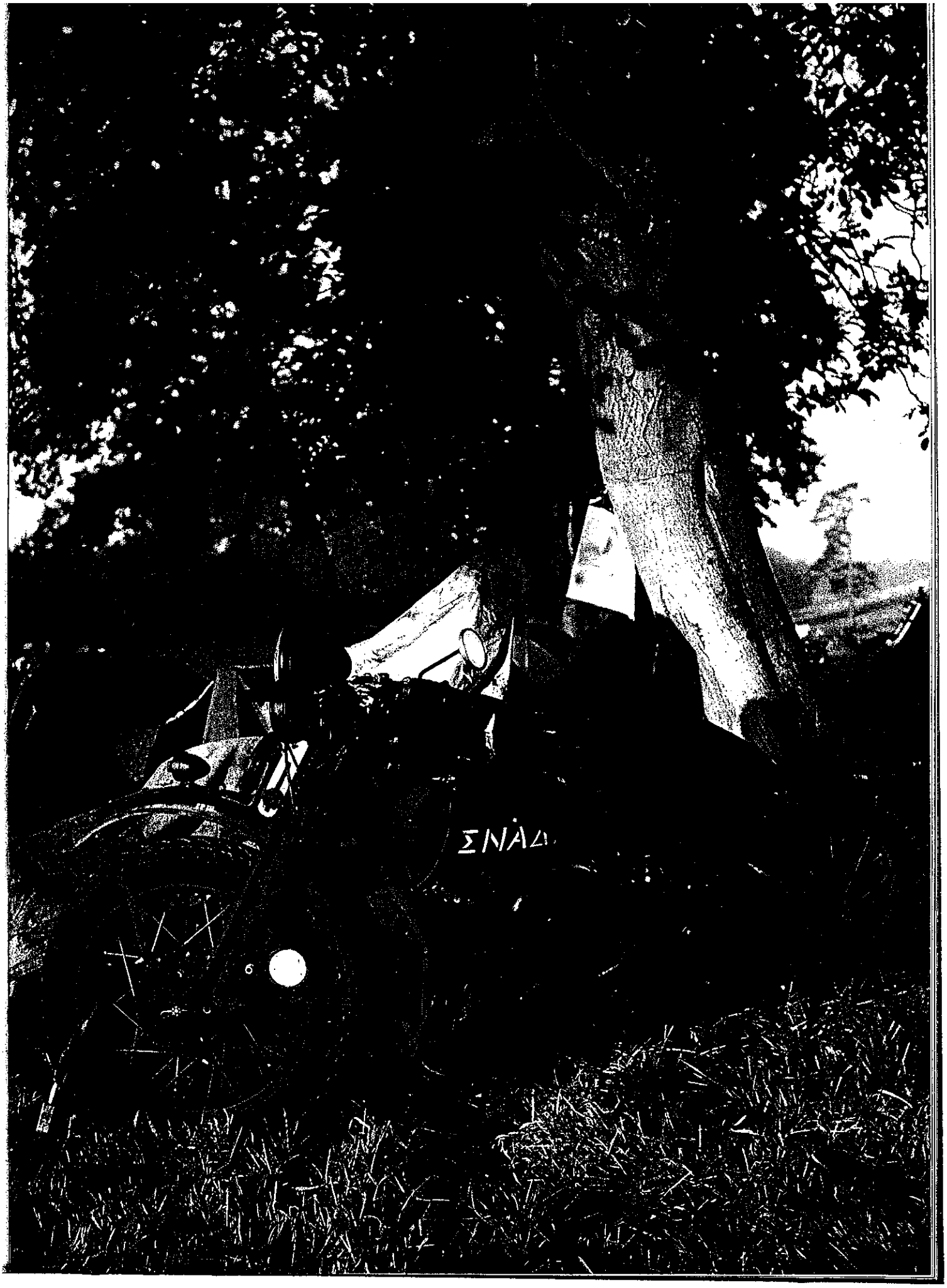




Above: Easily the most famous H-D rider in the early 1940s was *Gone With The Wind* star Clark Gable. He reputedly rehearsed his lines on the bike.

Left: Excellent machine though it was, the 61-E faced stiff competition from England in the shape of bikes like this 1939 Triumph Speed Twin.

Right: WLA-derived 'rat bikes' run for ever and never lose their value.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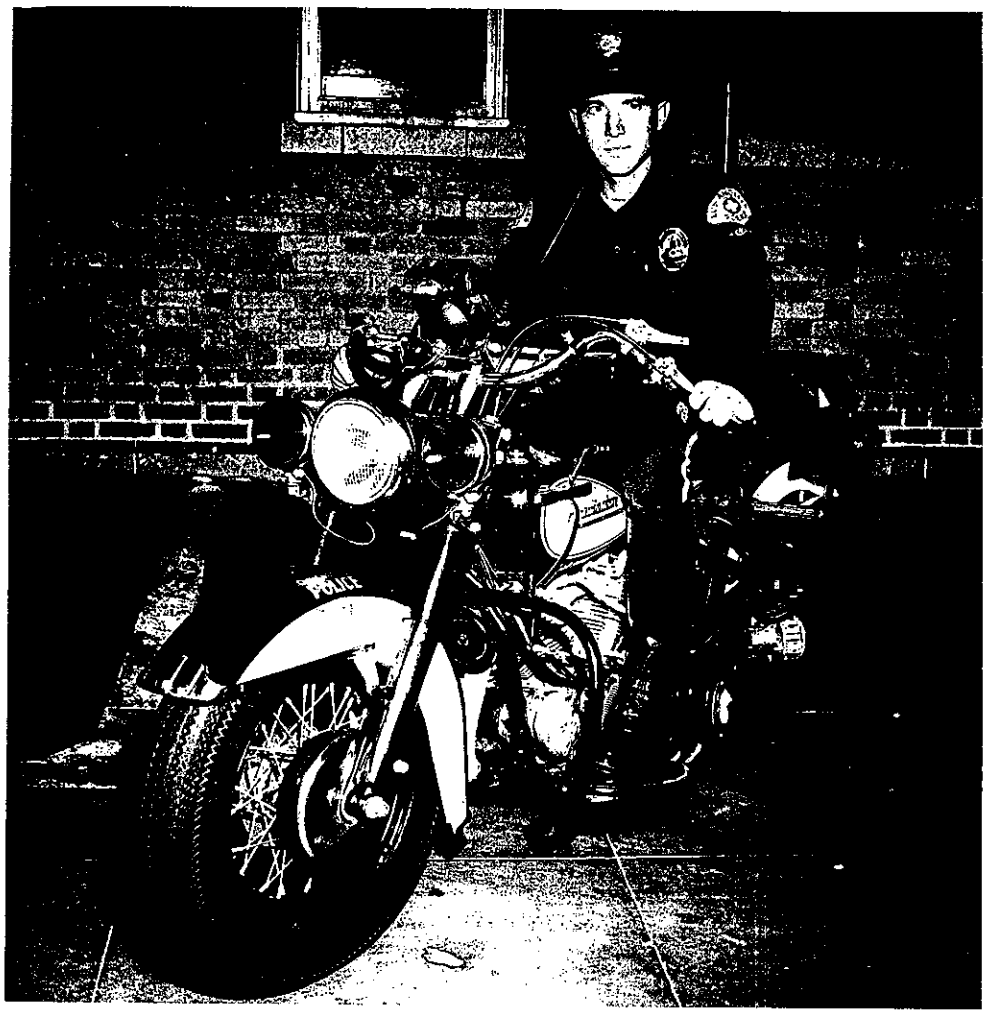


Left: Harley-Davidson fought hard to secure and retain police contracts, pitching prices very low to squeeze the competition.

Right: The founders examine their new baby for 1947, the 125cc Hummer two-stroke, an unashamed copy (like BSA's Bantam) of the German DKW.

Below right: Another proud patrolman, this time on a Servicar trike. These models were popularly used on parking violation duties.

American Motorcycle Association, contributing most of the funds necessary for the organisation's continued existence. Through the AMA, H-D had noted the propensity of bike club members to embellish their machines with all manner of accessories. The era of the 'dresser' motorcycle had arrived. Clubs were encouraged to become affiliated to the AMA, and awards were sponsored by H-D for the 'Best Equipped' bikes at shows. The money-spinning potential of a factory-supplied accessory market was not lost on H-D's management; winning machines at club shows tended to be selected on the basis of quantity of items fitted rather than quality, owners being especially profligate in the attachment of chrome-plated running lights front and rear. This aftermarket aspect of Harley's business was a not insignificant factor in the company's road back to profitability during the late thirties and early forties.

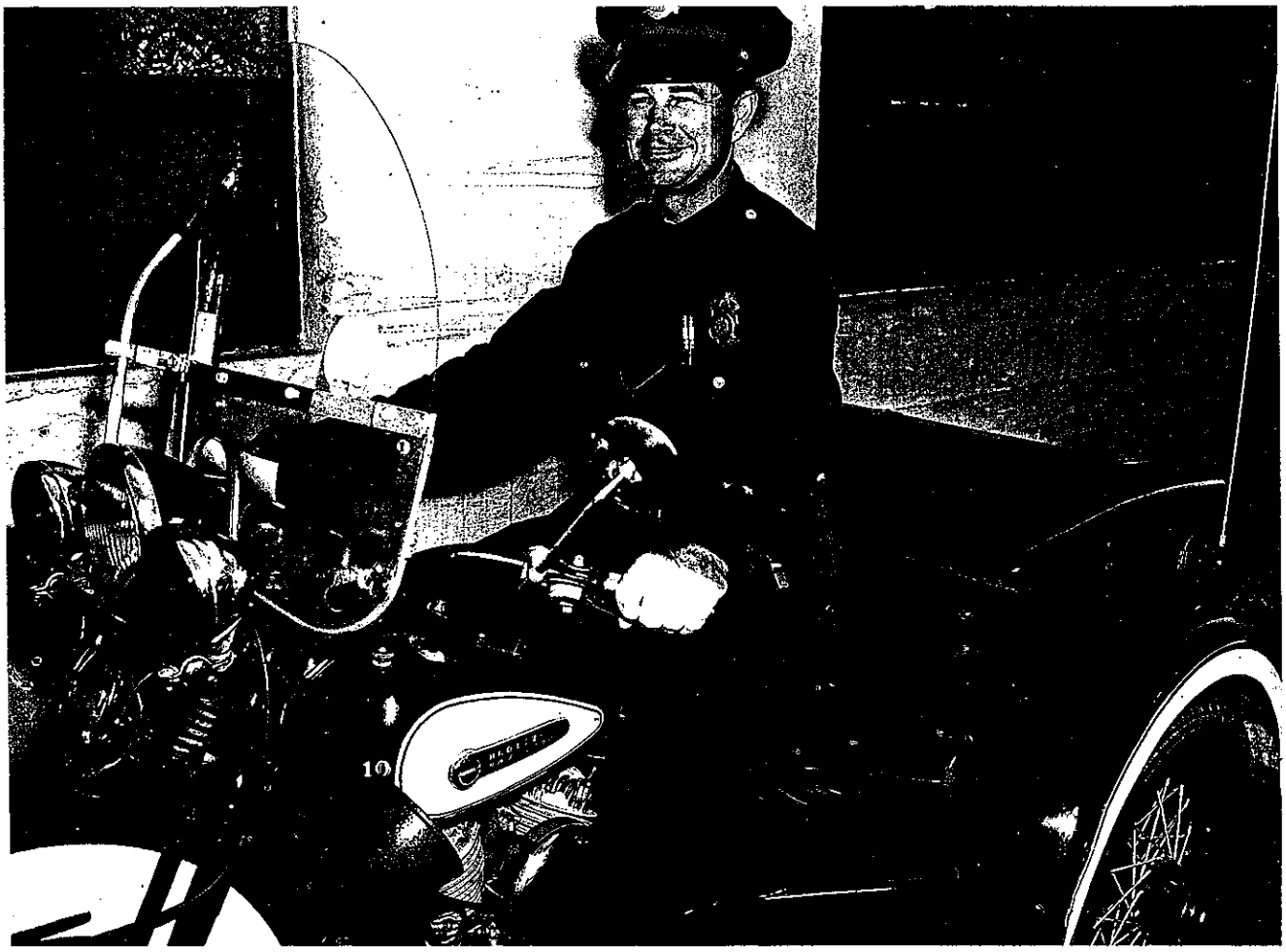
America's national economic position in general was looking brighter by the start of the 1940s, but motorcycling was still very much a minority interest. There was a war going on in Europe, but far from plunging the States back into depression, the conflict helped to fuel the economic upturn by bringing big orders to American firms. Soon after the start of the war, both Harley-Davidson and Indian were asked to supply 5000 motorcycles by the British government following the destruction by the German air force of Triumph's factory near Coventry.

Harley's offering was the WLA, a kitted-out variant of the low-compression 45 which by then had been in production for ten years. Designed to withstand abuse, the WLA featured protective bash-plates underneath the engine and chain, high-clearance mudguards, bigger engine-cooling fins and a heavy duty air cleaner. Leather panniers, ammunition boxes and a rifle holster on the front forks completed a well-adapted package which proved itself to be perfectly suited to the rigorous demands of a wartime application.

A less effective warbike bearing the Harley-Davidson name came about as a result of the US Government's request in 1942 for H-D to produce shaft-drive flat twin military bikes along the lines of the BMW boxers which were then in widespread use by the German forces in Europe and Africa. Complying with the request, H-D came up with the sidevalve 750cc XA, only to find – not for the first time – that their new engine suffered from top-end lubrication problems. Before these almost customary faults could be rectified, a shift in the war's emphasis put a premature end to the production run after just 1000 XA's had been built. In total, Harley-Davidson produced some 88,000 motorcycles during the war, the vast majority of them WLAs, WLBs and WLCs (the Canadian version), supplemented by a smattering of 74s and 61s for police and shore patrol duties on the home front.

In the middle of the war, and within the space of less than two years, two more of the company's founders had died. President Walter Davidson's death in February 1942, at the age of 65, was from liver problems complicated by overwork. His position at the head of the boardroom table was taken by 'Big Bill's' son, William H Davidson, a long-term employee of broad experience within the managerial structure of the firm and, thanks to his late father's foresight, the biggest company shareholder also.

Then, in September 1943, William S Harley suffered a fatal heart attack at the age of 62. Harley, who was as happy photographing birds as he was designing and riding Harley-Davidsons, was succeeded as Chief Engineer by Bill Ottaway; Harley's son, William J, moved into the vice president/engineering berth. Ottaway took up his new post just in time to witness the downward turn of H-D's sales graph from its war-inspired peak years of 1942 and 1943. As the focus of the war moved to the Pacific in 1944-45 in answer to the Japanese threat, the American government cancelled its orders for military motorcycles. These machines, including some 15,000 Harley WLA's, found their way back onto both home and export markets in 1945, but they could only be sold at a government-stipulated price of $450 each.



Although H-D's wartime production figures were impressive enough, earning them fulsome commendations from the government after the war, their profit margins were so small during this period that the company was hardly any better off in financial terms than it had been before the war. One positive benefit brought about by the war was the creation in the States of a buoyant market for motorcycling among the vast numbers of soldiers returning from combat, many of whom had already experienced first-hand the Harley 45's excellent qualities of reliability and sturdiness under duress.

Unfortunately for Harley-Davidson, although the aftermath of war and the dismantling of the military machine may have paved the way for a new era of prosperity in America, the effects elsewhere effectively prevented H-D from taking advantage of the newly favorable trading conditions. The Allies had won the war – but at what price? A massively expensive regime of rationing and rebuilding had had to be implemented across most of Europe; as this came hard on the heels of the war itself, the concept of buying pricey American motorcycles was the last thing most Europeans had in mind.

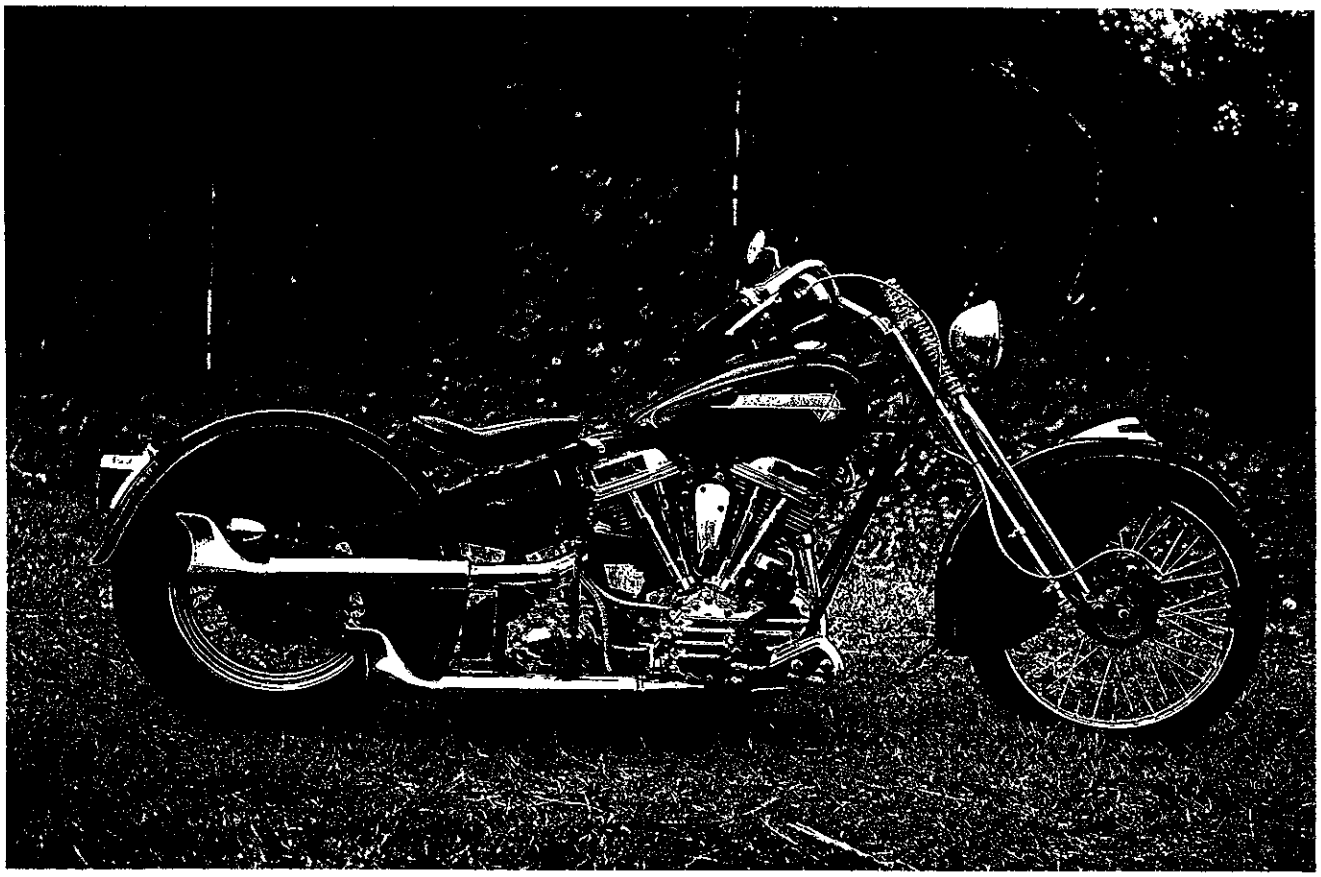
Worse still for Harley-Davidson was their own government's Marshall Plan, a huge foreign aid program aimed at helping to rehabilitate Europe. The success of this plan depended on (among other things) the diversion to overseas destinations of almost all the base products produced in the US for transportation engineering-type projects. American firms attempting to regenerate their own positions at home found themselves hamstrung by severe Government restrictions on the allocation of essential materials, and hence unable to supply a market that was suddenly baying for consumer goods after a long period of enforced austerity. Adding insult to injury was the decision to relax import tariffs relating to goods brought into the States from abroad – another move designed to help in the revival of European manufacturing industries.

One such industry whose boom time had been rudely interrupted by the war was that of British motorcycling. Firms which seized the American opportunity with both hands at this time included Triumph, BSA, Norton, and Ariel, aided it must be said by the willingness of many Harley-Davidson dealers to transfer their allegiance to marques which could keep them supplied with saleable stock. Long-standing edicts handed down from Milwaukee to the dealer network, warning of the dire retribution which would befall anyone daring to sell non-Harleys alongside the home-grown product, were peremptorily pushed into the background as dealers sought to maintain their own livelihoods.

Other, more circumspect, members of the trade opted for a more 'softly softly' approach, latching on instead to the new and growing trend in cheap lightweight motorcycling, reasoning that they could get away with selling scooters from such companies as Cushman alongside the traditional heavyweight V-twins on the grounds that there was no conflict of interest. H-D appeared to accept this for a time; at least, they accepted it until the launch in 1947 of their own entry into the small two-stroke market, the 125cc Model M ('Hummer'). This machine was a straightforward copy of the DKW from Germany, the rights to produce it having been seized by the Americans and the British as part of war reparations. Britain's version was manufactured by BSA and sold under the Bantam name.

By this stage, the number of foreign motorcycles imported into the States had risen to around 15,000 units per annum, equivalent to nearly 75 percent of Harley-Davidson's total output. Most of the invaders were British middleweights of 350cc capacity, and not really ideal for riding conditions prevalent in America's most active motorcycling areas (the western states). But, by the end of the 1940s, a new breed of fast, neatly-handling 500's – including Ariel's Red Hunter and Edward Turner's classic Triumph Speed Twin – had established a much firmer following in the US. These sportsters went unchallenged by Harley-Davidson, whose smallest four-stroke was then the lumbering 45.

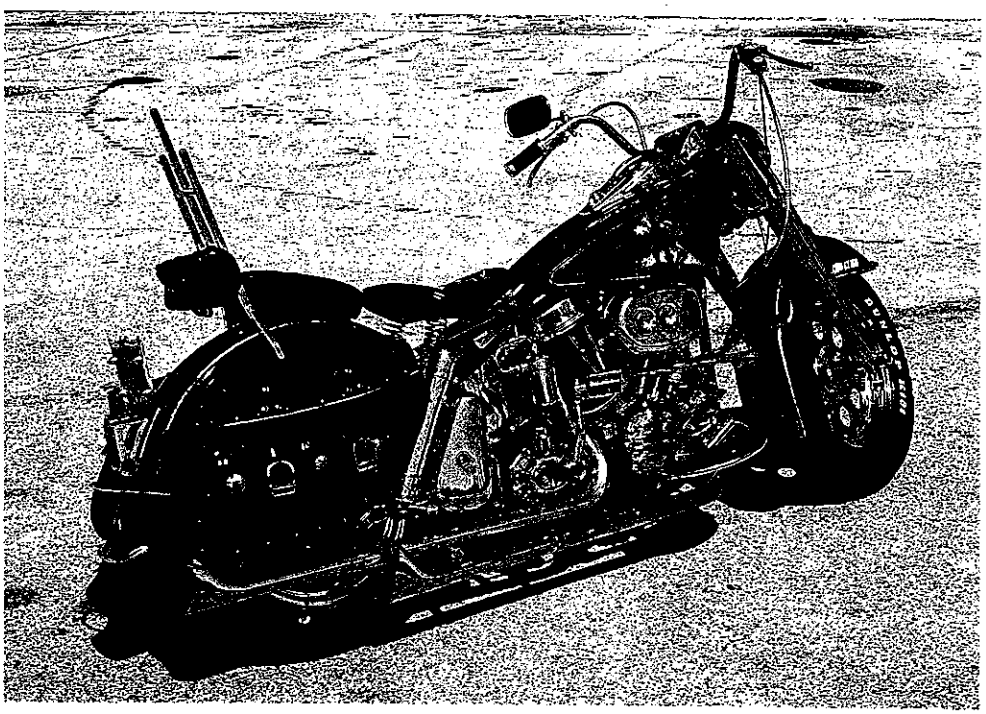
Those dealers who had stuck with H-D through thick and thin were understandably miffed by the factory's negative response to their suggestions that Harley should re-enter the middleweight field with something a little more adventurous than the C and a little more powerful than the similarly defunct A and B 350cc Peashooters. The company line was to point to the excellence of the 45, 61 and 74 cubic inch machines, to remind dealers of the exorbitant costs involved in designing and producing new models, and to exhort them always to emphasise the inherent superiority of 'American motorcycling' in their dealings with customers.



Above: Specialised use for the Servicar, this time as a verge-sprayer in a leafy Californian suburb.

Left: A beautiful custom panhead, capturing the '30s look in the '80s.

Right: Purists generally agree that the panhead is the most aesthetically pleasing Harley engine – with or without chrome.



Above: No big-name movie star did more to glamourise the Harley image in the 1960s than Peter Fonda. *Easy Rider* (1969) remains one of the seminal biker films.

Above right: Fonda again, this time defying authority in Roger Corman's less well known work *The Wild Angels* (1966).

Left: Another panhead special, echoing the fishtail exhaust look popularised in Fonda's films.

This latter duty was made more difficult for Harley dealers immediately after the 4 July celebrations of 1947, when a large group of Harley-riding revellers descended on the Californian town of Hollister. Although the misdemeanors which took place there over the course of a weekend were almost exclusively of a rather petty drink-related nature, *Time-Life* magazine considered it deserving of several pages provocatively illustrated by such classic photographs as the now-infamous (and reputedly 'posed') cover shot of an overweight clubman brandishing a beer bottle from the saddle of his parked Harley.

Almost overnight, motorcycling's image in the eyes of the non-riding public took a nosedive, and much of the AMA's assiduous PR work was undone at a stroke. The concept of bikers as a uniformly evil bunch of no-good hoodlums was nailed to the mast again in 1954 with the release of Stanley Kramer's feature film *The Wild One*, a Hollister-inspired fantasy starring Marlon Brando and Lee Marvin. In private life Brando actually rode a Harley, but in his film role of 'misunderstood but basically sound' rebel, he was cast as a Triumph rider. The real baddies, captained by hard-drinking Marvin, naturally rode H-Ds.

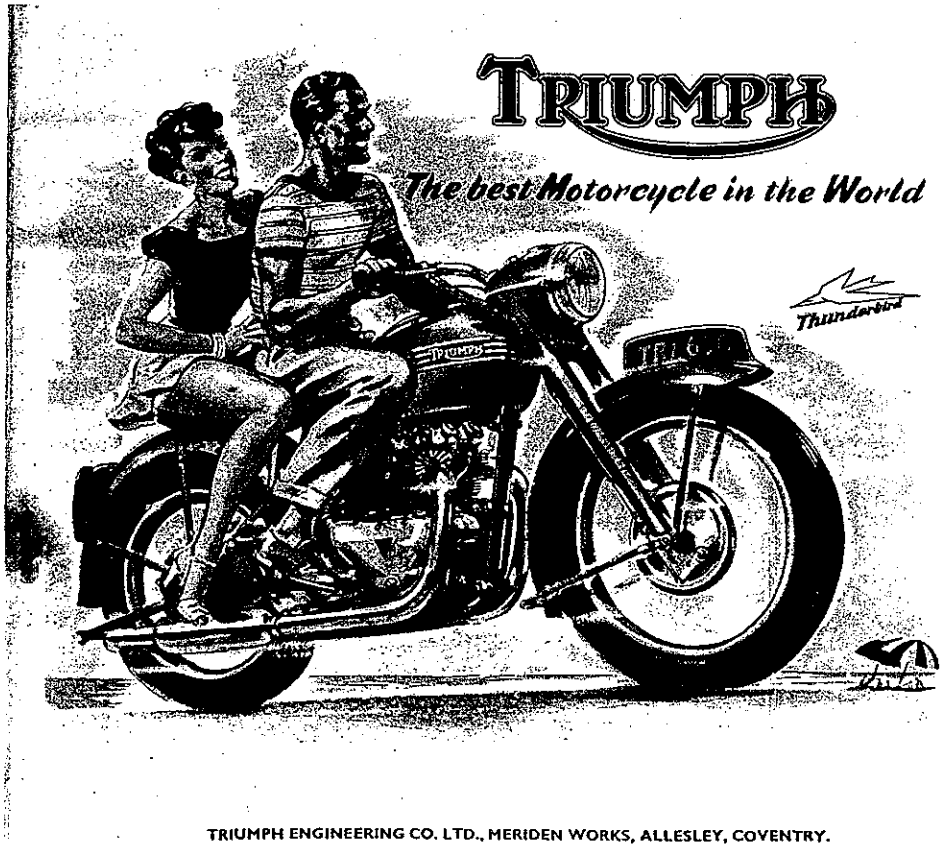
Back in the real world, 1947 was a big year for Harley-Davidson. For one, it saw the last knucklehead motors coming off the production line. The dry-sumped knucklehead engine had never managed to shake off its reputation as an oil-burner. Valve clearances had to be regularly checked and reset in the interests of engine longevity, and the choice of iron as the material for both the cylinder heads and the barrels meant that the motor was unnecessarily heavy and at the same time prone to overheating under arduous riding conditions.

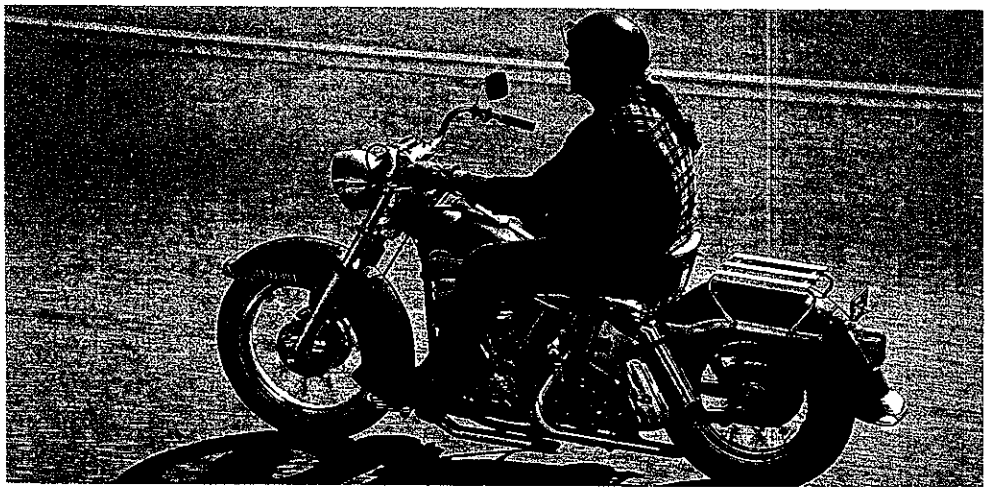
The arrival in 1949 of the 'panhead' replacement motor was meant to tackle and solve all of the knucklehead's shortcomings. The barrels were still made out of iron, but the heads were now aluminum alloy for cooler and lighter running. All the engine's previously external oil lines were re-sited inside the cases, and the lubrication system was redesigned with an uprated oil pump so that crankcase pressure was no longer the less-than-dependable method employed to recirculate oil back into the holding tank.

Valves were activated by hollow, oil-filled tubes rather than the previously 'solid' valve lifters, the idea being that valve clearances would thereby be automatically maintained. Still more precise valve actuation would come about in 1953, following a decision (held by some enthusiasts to be long overdue) to reposition the lifters between the pushrods and the cam lobes, instead of in their less efficient position atop the lifter tubes, between the rocker arms and the pushrods.

From the start of its seventeen-year run, the panhead's valvegear was hidden by the chromed covers which gave the motor its nickname. Affixed to the underside of each 'pan' were felt pads, the purpose of which was to collect flying droplets of oil and then drip them back onto the valvegear as a backup to the main pump system. The pads performed the additional function of damping down the racket produced by the rocker arms. Owners were occasionally fooled by this vaguely Rube Goldberg-ish feature, thinking the pads to be some form of factory packing left inside the covers by mistake. Those home mechanics who left the pads out on re-assembly quickly learned the error of this assumption, as the increase in noise was very marked.

It almost goes without saying that there were teething troubles with the new engine, again in the lubrication department. The hydraulic valve lifters were very sensitive to changes in oil pressure, sometimes sticking at either extreme of travel. One positive (if slightly back-handed) bonus of the





Left: This 1950 ad for Triumph's potent 650cc Thunderbird development of the already popular Speed Twin only served to make life more difficult for the already beleaguered US Harley dealers. The British bike was ahead of its time; the Duo-Glide of 1958 (*below left*), by contrast, was the first Harley with suspension front and rear.

Above right: Harley's answer to the Triumph was the KH of 1952, but the answer only became effective in 1957 when it was replaced by the ohv Sportster.

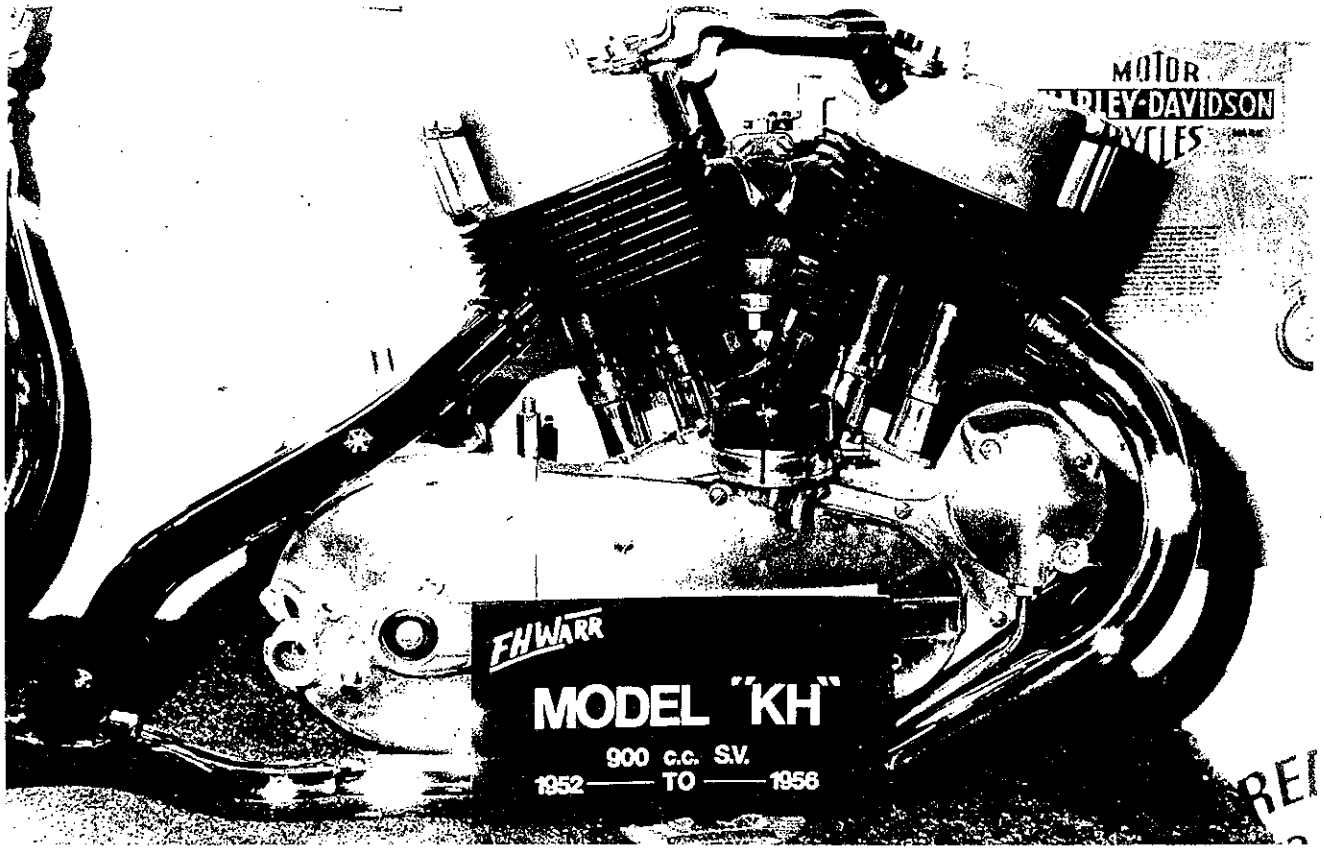
Below right: Norton took their Manx 500cc singles to Daytona in the early 1950s and shocked the establishment by winning.

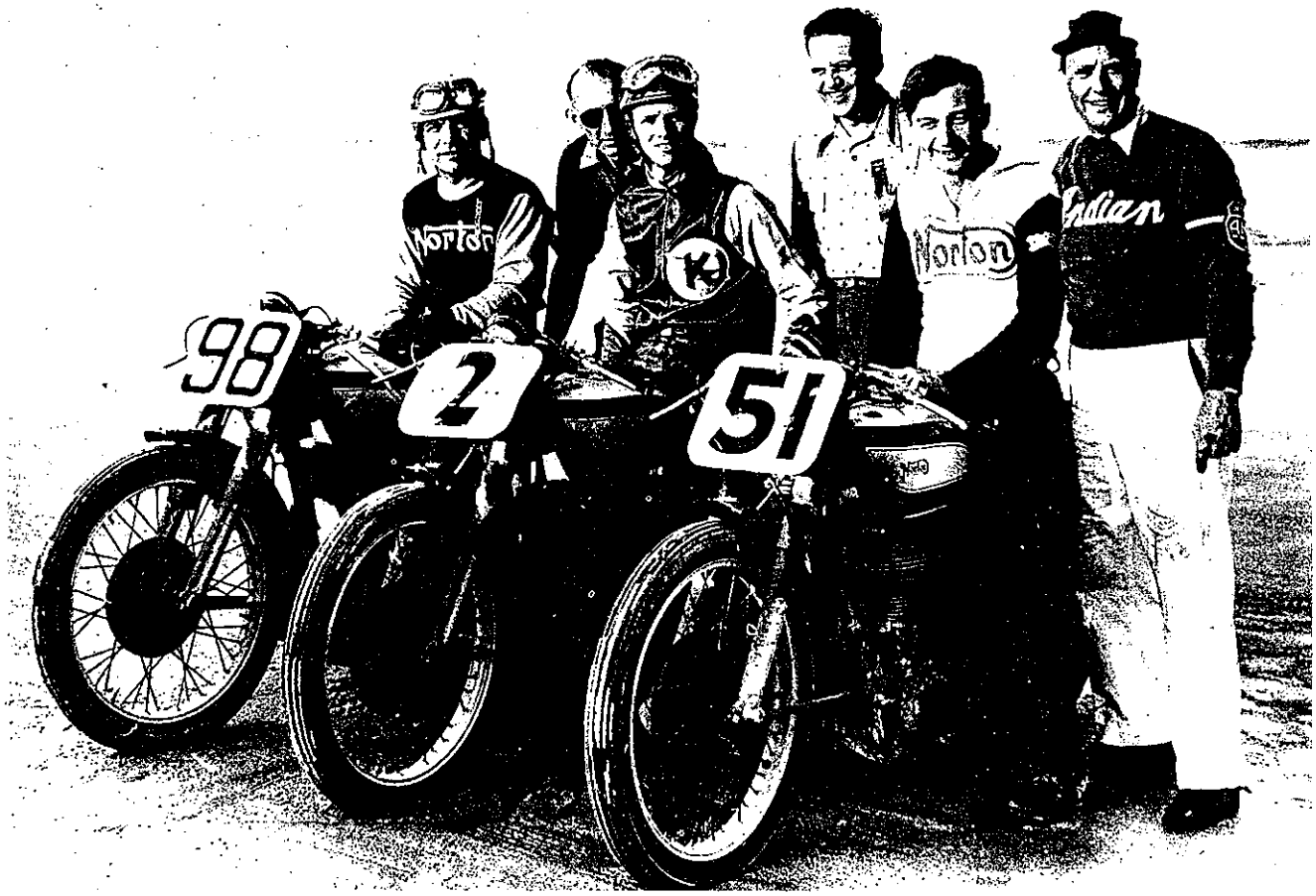
hydraulic system was that it reduced the likelihood of major engine damage caused by insufficient oil; without oil, the lifters simply wouldn't function, and the engine wouldn't run.

The panhead's arrival on the roads of America in 1949 was upstaged by Harley-Davidson themselves in that same year, with their long-awaited adoption of tele-hydraulic front forks. This was indeed a major change for a company which had been using springer forks since the First World War. Once more, the release of a new Harley again proved to be a searching test of their customers' patience, the teaser this time being the fitment of vented forks which occasionally sprayed their owners with oil. This quirk was ironed out before too much damage had been done, and the new model was officially christened 'Hydra-Glide' – another first, in that all previous models up to that time had gone under a simple letter designation. None of the 'handles' in popular use up until then – Knucklehead, Seventy-four, Forty-five etc – had originated from, or even been sanctioned by, the factory.

It is worth noting here that the rear end of the Hydra-Glide remained 'solid,' that is, suspended by nothing other than the bike's oversized balloon tires. Not until 1958, and the advent of the Duo-Glide, would full suspension be specified front and rear on the big FL cruisers. The rentention of a hand gearshift and foot-operated clutch was another indicator of the Hydra-Glide's underlying traditionalism.

Although Harley were more or less forced into a conservative model policy by the prevailing economic circumstances, it was a fact that by 1950 those same economic circumstances (favorable import tariffs, unfavorable export barriers) had led to a home market which was in danger of being dominated by foreign – and primarily English – manufacturers. It was also a fact that Harley-Davidson had no truly sporting motorcycles in their line-up with which to challenge the likes of Vincent's formidable 1000cc Black Shadow and Norton's Manx, a superbly-handling racer which had already begun to exert a stranglehold on the annual Daytona races.


MOTOR
HARLEY-DAVIDSON
CYCLES
FHWARR
MODEL "KH"
900 c.c. S.V.
1952 — TO — 1956


Norton
Norton
Indian
98
2
51

Faced with this bleak outlook, and having only a couple of years before purchased a massive new plant on Capitol Drive in Wauwatosa, Wisconsin, in anticipation of an increase in sales which was suddenly looking less and less likely, Harley-Davidson took the unusual step of petitioning the US Government's Tariff Commission in 1951, requesting that a 40 percent import tax be imposed on all non-American motorcycles coming into the country. The petition was fiercely contested by the well-organised British Motorcycle Dealers Association, and ultimately sunk by testimony from Alfred Rich Child, one of the many disaffected ex-Harley dealers who had been on the receiving end of bullying treatment from the company in the past.

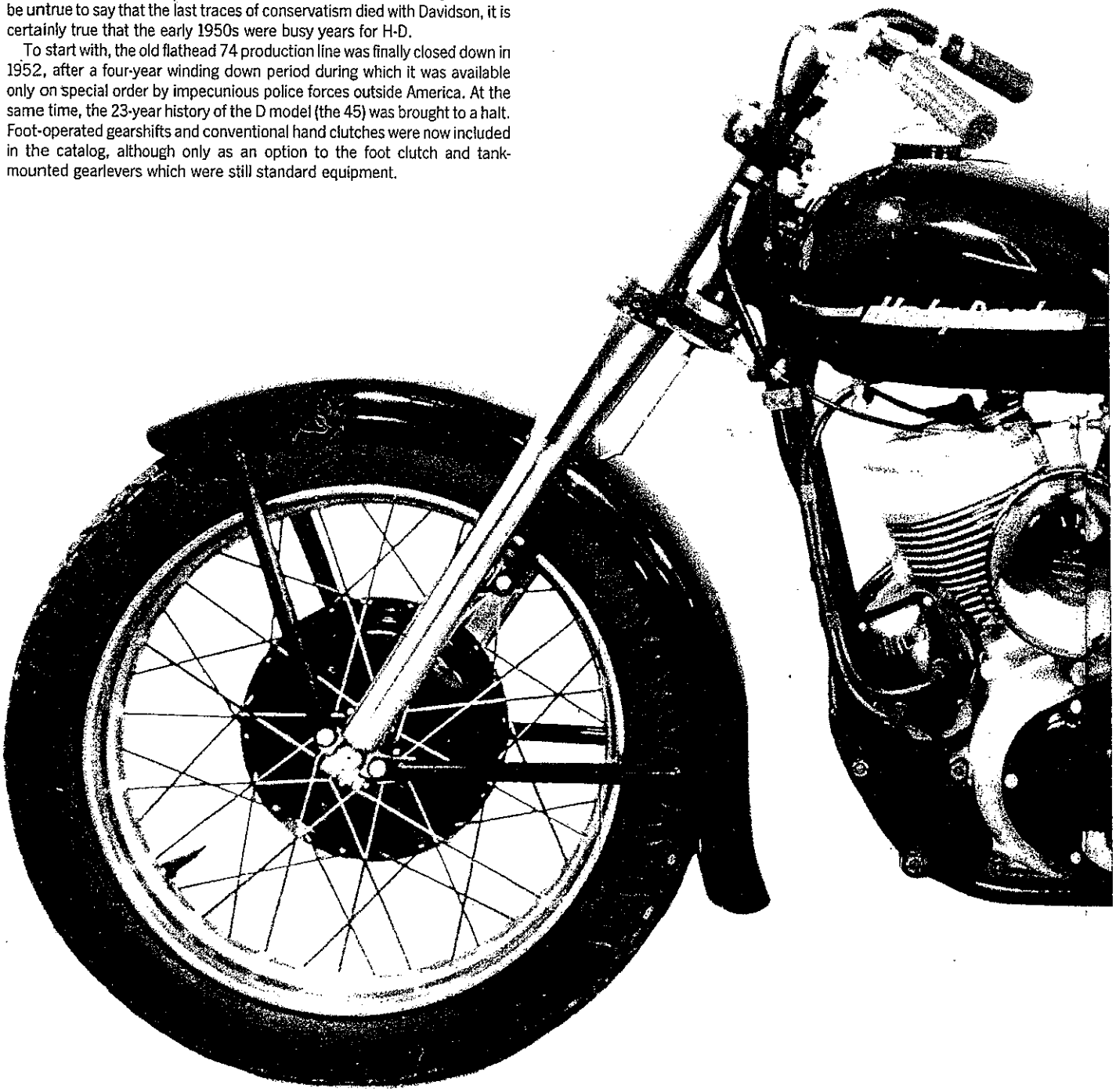
Having thus been forced to recognise that the only way to beat the Limeys was to compete with them on their own terms, Harley-Davidson entered into a new phase. The last surviving member of the original four founders, Arthur Davidson, had been killed on the day before New Year's Eve, 1950, the victim (with his wife) of an accident involving a speeding car. Although it would be untrue to say that the last traces of conservatism died with Davidson, it is certainly true that the early 1950s were busy years for H-D.

To start with, the old flathead 74 production line was finally closed down in 1952, after a four-year winding down period during which it was available only on special order by impecunious police forces outside America. At the same time, the 23-year history of the D model (the 45) was brought to a halt. Foot-operated gearshifts and conventional hand clutches were now included in the catalog, although only as an option to the foot clutch and tank-mounted gearlevers which were still standard equipment.

A new 750cc (45ci) middleweight was unveiled in the same year, featuring the foot change and hand clutch as standard. But that wasn't all. There was also suspension front and rear, and unit construction (engine and transmission in one housing) in the style of the successful British bikes. Lest Harley observers should faint at the sight of all this new technology, the new bike's flathead engine was reassuring evidence that the boys at Milwaukee had not gone completely mad.

This new middleweight, Harley's definitive answer to the foreign invaders, was assigned the letter K. It was accompanied in the catalog by a racing version, the KR, which was to take over from the flagging WR. Styling was clean and contemporary; everything looked right, in fact.

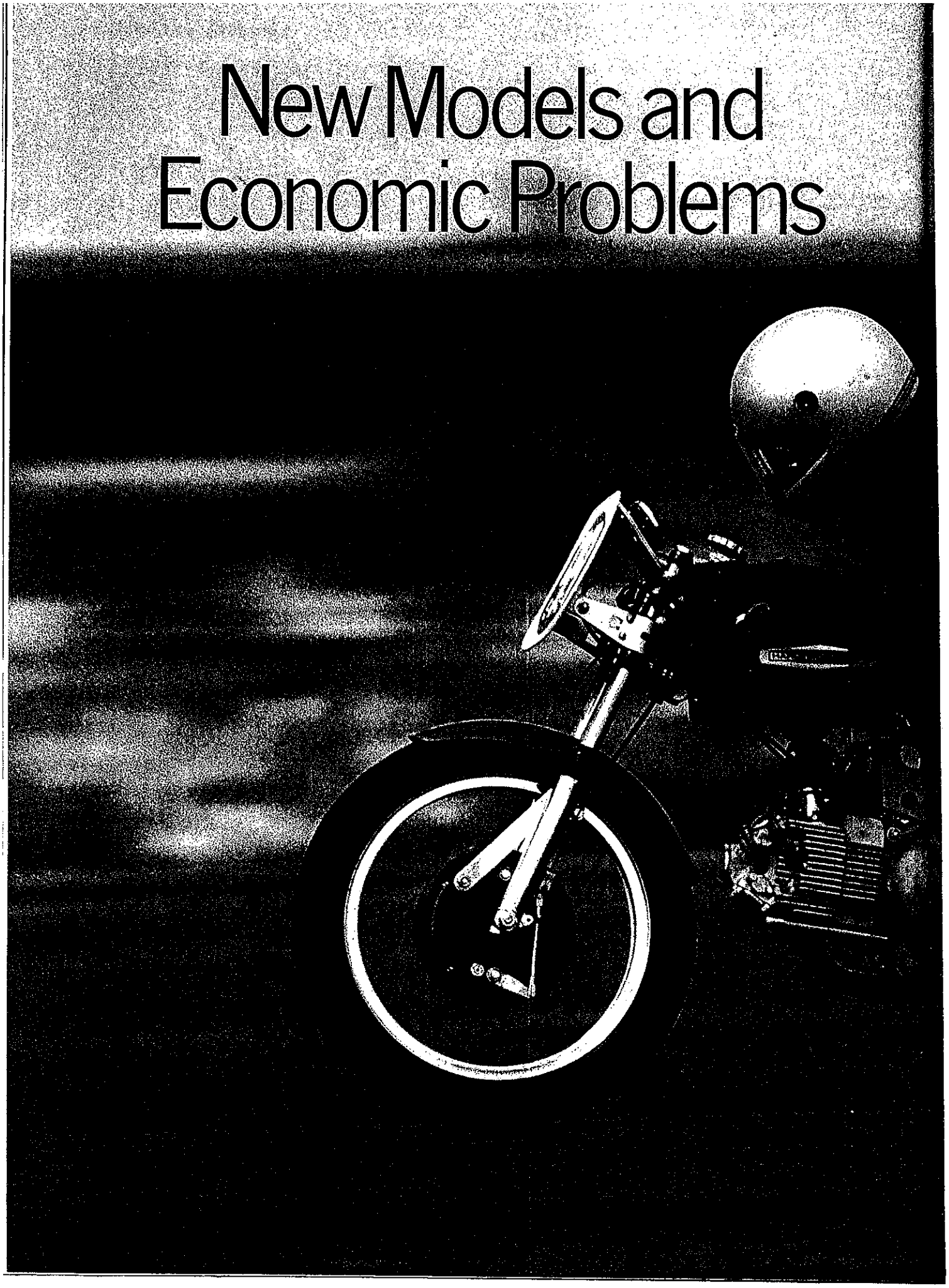
But then, the new wonderbikes went on sale.

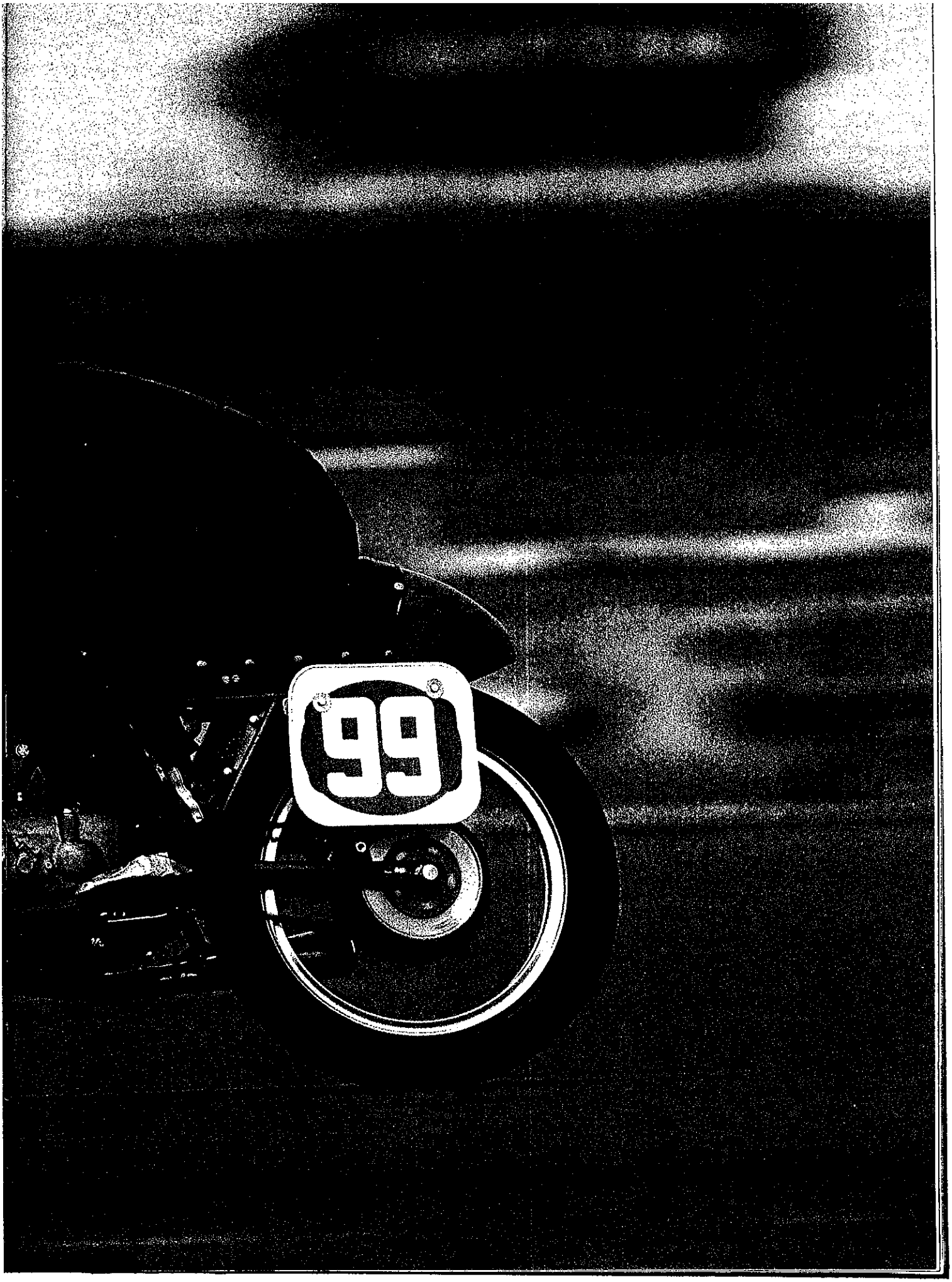


Right: The racing KR series ran alongside the Ks, even when they were still sidevalvers like these '55 examples. The advent of the ohv versions helped to turn H-D's racing fortunes around.

Below: Another shot of the early KR sidevalve racer, complete with fender pad to allow the rider to adopt a wind-cheating posture.

New Models and Economic Problems

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That Harley-Davidson should so regularly have been able to release such palpably imperfect new models as the K for public consumption, while still somehow managing to retain such a loyal hard core following, is a topic which almost merits a separate volume of its own. If nothing else, it is certainly eloquent testimony to the marque's magnetic appeal.

As has already been mentioned, the 1952 K looked right. It undoubtedly represented a quantum leap forward from the uninspiring twenties styling of the D it was meant to replace. The powerplant was a letdown, however. Although its unit construction gave it a modern facade, the mundane side-valve format marked it down as very much the son of its father. Norton, along with a whole host of equally successful road and race machines from Italy, had proved the inherently superior power-producing capabilities of the overhead valve arrangement. Harley-Davidson themselves had sixteen years of ohv experience with the 61 and 74 big twins, but for the 45ci K they still elected to go down what was evidently expected to be an even safer flathead route.

It should have been a safer path. Extraordinary though it may seem, despite all the lessons learned in the past, the Harley engineers still had not cottoned on to the importance of proper product development. The KR racing version fell victim to early problems in the clutch department, notwithstanding the fact that its engine was actually no more powerful than its established predecessor, the WR. The straight K was revealed to be disappointingly sluggish, hard pressed to hit a top speed of 80mph. With a posted output of no more than 30bhp, it was patently lacking in the kind of lugging power demanded by those touring riders who preferred to travel two-up with luggage.

The K also suffered from its share of mechanical niggles, most notably a tendency to break gear teeth. Tuning parts were available to hoist the performance up to a more satisfactory level, and there were a few KK models produced in 1953, created by the insertion of the KR's hotter cams, polished ports and ball bearing crank into the K streetbike. By all accounts, these KKs were everything that the ordinary Ks should have been.

1953, Harley's 'Golden Anniversary' year, was celebrated with a bang: K panniers could now be ordered in the wonder material of white plastic, as well as in the usual fringed leather. In spite of this and many other anniversary temptations, the Ks continued to languish on showroom floors, kept company only by a larger version of the DKW-derived 125cc Hummer two-stroke. This, the new Teleglide, displaced 165cc, and sat in a chassis featuring rudimentary telescopic forks. The new machine rekindled a smoldering interest in the small strokers, and led to the reintroduction of the 125 in 1955. Both machines then ran alongside one another in the range up to and including 1959.

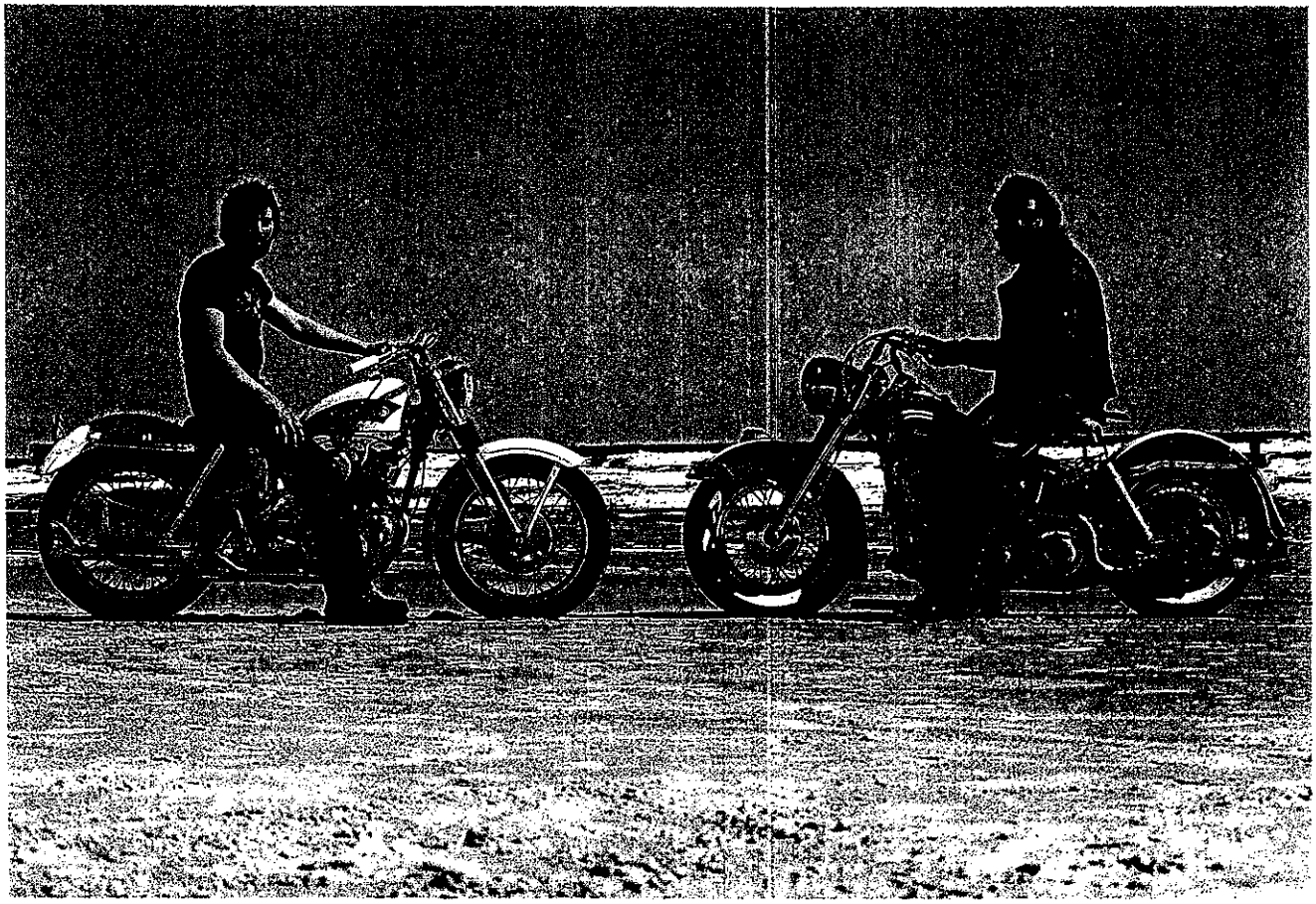
The lightweight end of H-D's range might have looked reasonably healthy, but by 1954, it was painfully obvious to all – including Harley's management – that the 750cc K was desperately in need of more power. This was achieved by the commonly-used Harley expedient of lengthening the stroke by three-quarters of an inch, to give a new displacement of 54ci (883cc). The new model, designated KH, also benefitted from revisions to the clutch and transmission, and breathed more easily through larger valves. Again, there was a street/racer hybrid, the KHK, and again, this was considered to be *the* K model to buy, if only because the 'racing' innards endowed it with performance to trade punches with quite ordinary imported sports machines.

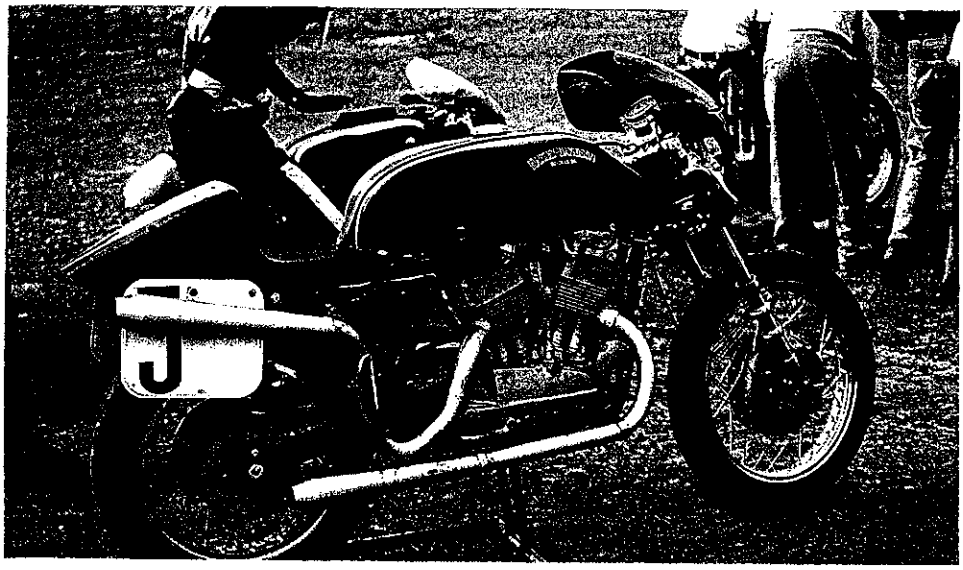
Previous page: Fred Mork gives his Aermacchi-Harley single a run out at Daytona in 1985. These machines were still competing successfully at big events like the Isle of Man TT races right through until the mid 1980s.

Below left: The advent of the factory 'dresser' in the mid 60s, in the shape of the Electra Glide, legitimised a rebellious splinter group of the 50s.

Right: It didn't take long for the customisers to start work on the Duo-Glide.

Below: By the 1980s, diehards were harking back to the image, if not the lifestyle, of the 50s rebels.





Left: Another KR750 racer, this time the short-circuit version. It was also available in long track, short track, TT oval and off-road formats, a truly versatile (and eventually quite competitive) clubman racer.

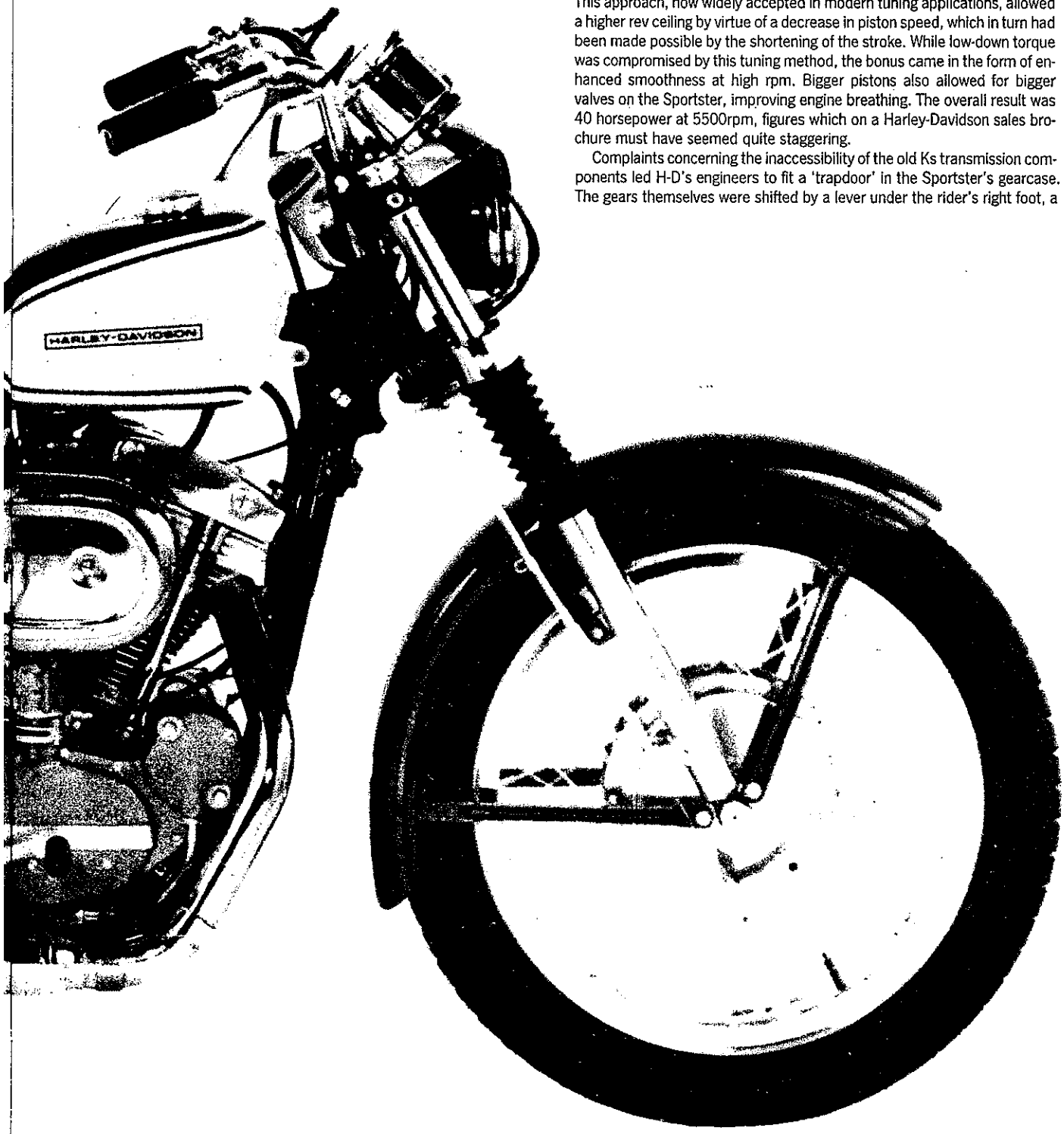
Below: The Chevrolet Stingray of motorcycling in the '60s, Harley's ohv Sportster featured unit construction, light weight, short-range touring ability – and lots of image.

Let down by the factory's timidity in the choice of engine format, the K series was by no means an unqualified success for Harley-Davidson. In their defense, H-D did experiment in the mid fifties with an all-aluminum engined replacement for the K, the KL, and even got as far as testing a running prototype before guillotining the project. This error was to be put right in 1957, one year after the KH's discontinuation, with the resounding arrival of the XL Sportster.

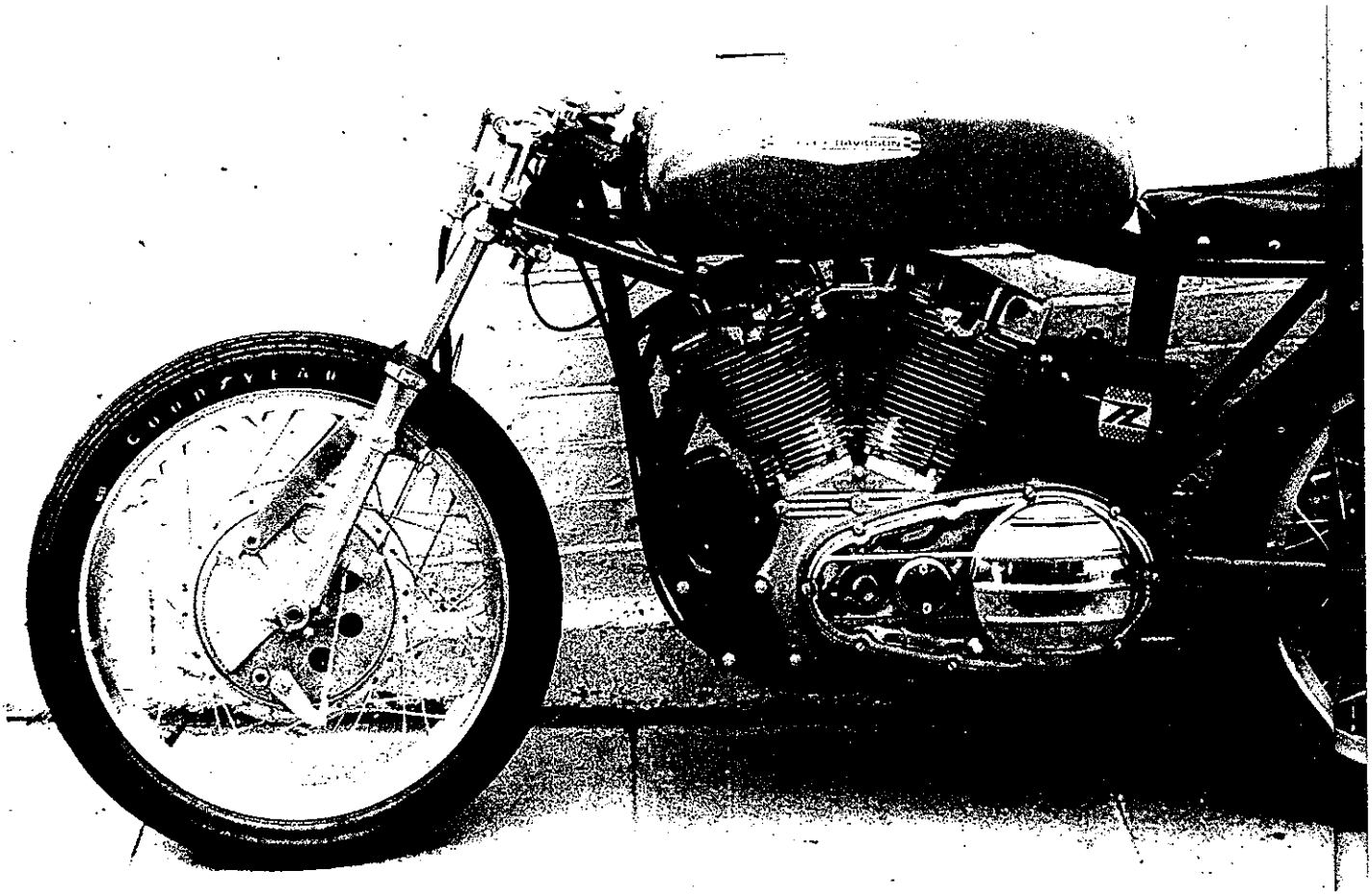
Before that happened, however, in 1955 the 74ci Panhead's bottom end was beefed up with sturdier main bearings, leaving the motor wide-open for the ex-works horsepower enhancement. To reflect this new 'high performance' aspect, the designation for the F was changed to FLH, a letter-code which is still used today to denote definitive big twin Harleys.

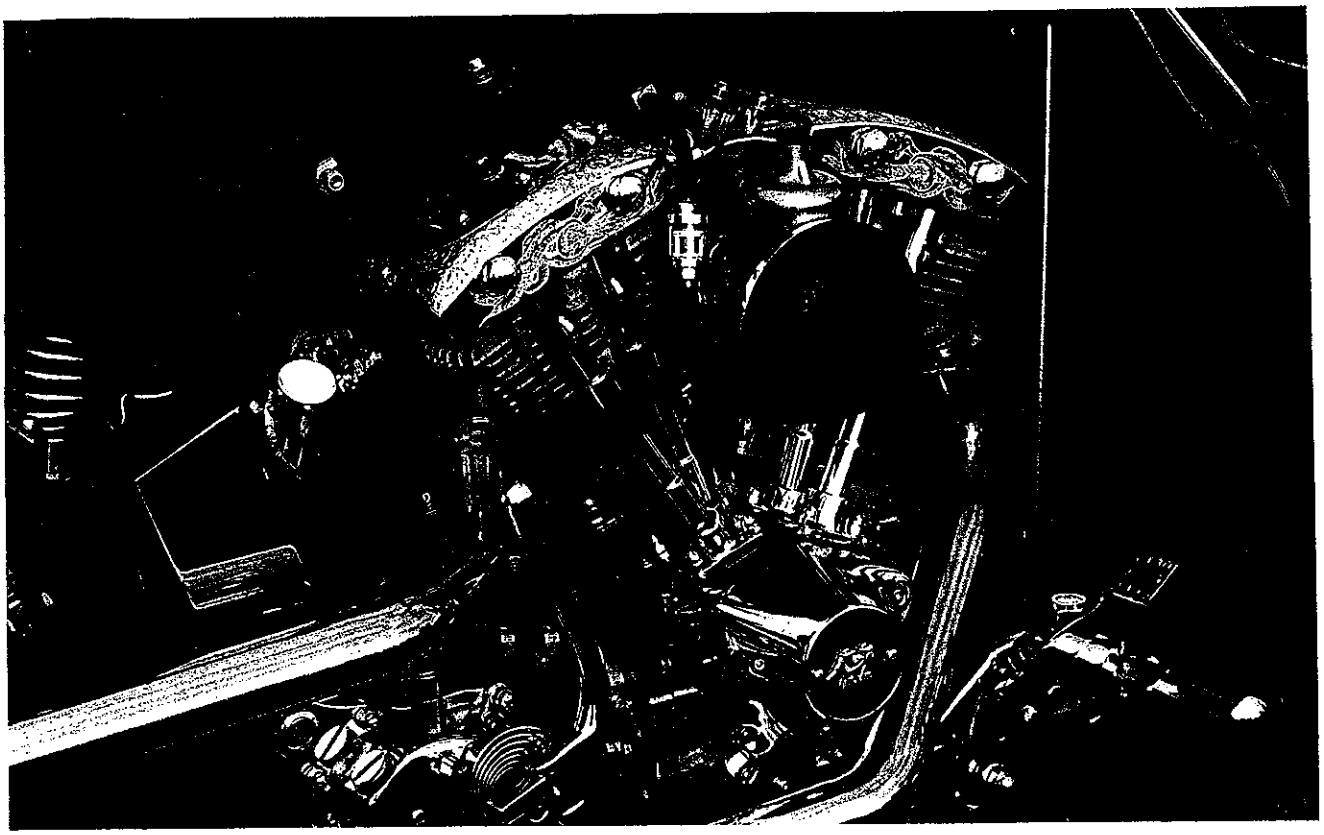
The spark of excitement thus lit among H-D disciples grew to fever pitch two years later, with the 1957 launch of the XL Sportster. In reality, it was nothing more than a logical development of the KH. Practically identical to it in most respects, it differed only in one major aspect: the provision of a decently powerful overhead valve engine. Although there were few visible differences between the old and the new engines, the Sportster reflected rather more advanced thinking in regard to the extraction of a more refined kind of power. Reverting to the original 750cc K's shorter stroke, the XL achieved the KH's extra displacement of 883cc by an increase in the bore. This approach, now widely accepted in modern tuning applications, allowed a higher rev ceiling by virtue of a decrease in piston speed, which in turn had been made possible by the shortening of the stroke. While low-down torque was compromised by this tuning method, the bonus came in the form of enhanced smoothness at high rpm. Bigger pistons also allowed for bigger valves on the Sportster, improving engine breathing. The overall result was 40 horsepower at 5500rpm, figures which on a Harley-Davidson sales brochure must have seemed quite staggering.

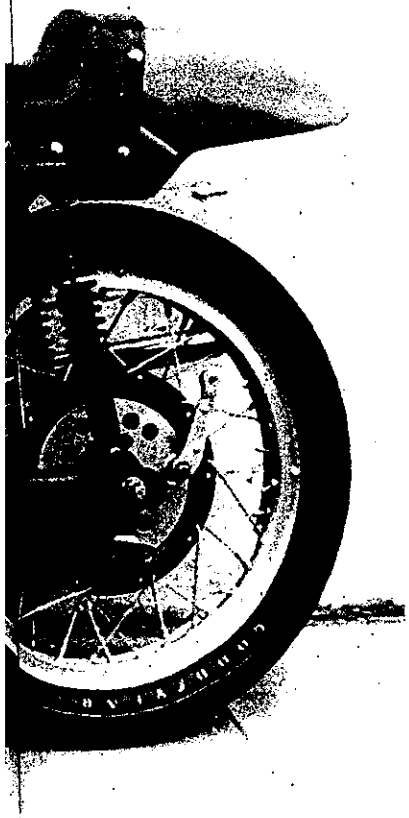
Complaints concerning the inaccessibility of the old Ks transmission components led H-D's engineers to fit a 'trapdoor' in the Sportster's gearcase. The gears themselves were shifted by a lever under the rider's right foot, a



Mobil







Above left: The ingenuity of the custom Harley builder knows no bounds. This fully street legal double-engined shovelhead was spotted at Daytona.

Above: The engine has always been the focal point of any custom Harley. This 74 features exquisite engraving.

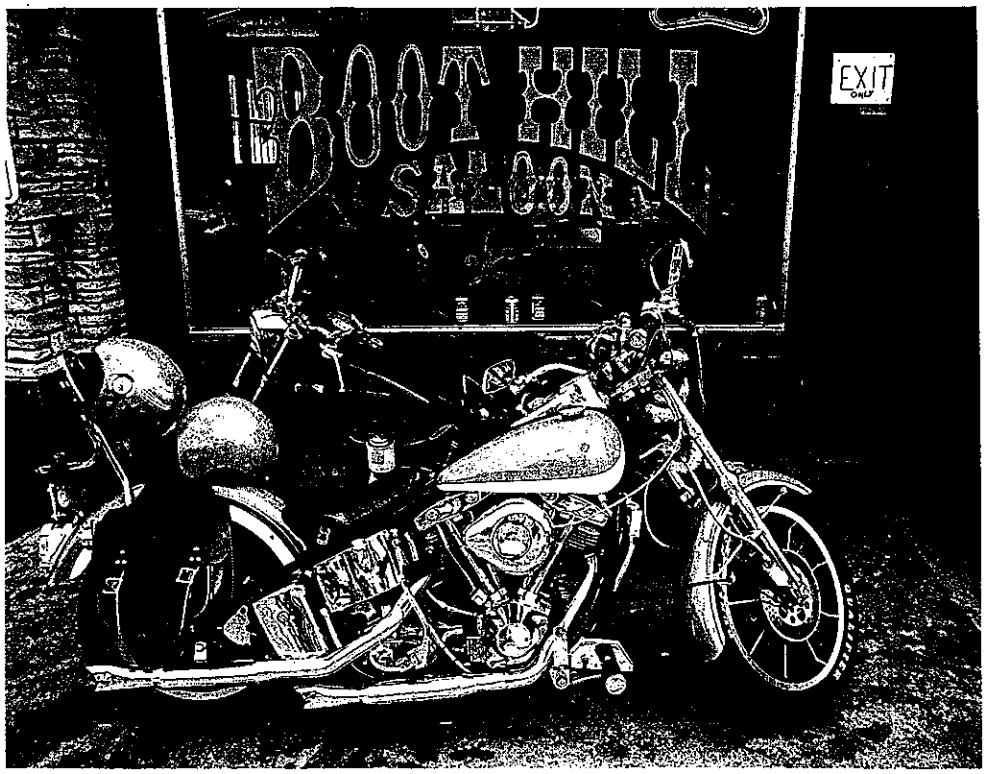
Left: The racing version of the ohv Sportster went under the XLR model name. With 82bhp from its 883cc, it won races both on its native dirt tracks and on some European road circuits.

nod in the direction of the British bikes that were still prevalent in sporting circles at that time. Although the new machine's image was overtly sporting, the factory endeavored to spread the Sportster's appeal by offering such factory options as panniers, screens and luggage racks. By this unsubtle device, Harley-Davidson hoped to cast the Sportster as a multi-purpose machine which might possibly be perceived as a smaller version of the FLH tourer.

In the event, this role-modelling fooled no one. It was plain that the Sportster had at last tapped into the potentially rich sportbike seam which had theretofore eluded Harley-Davidson. At long last, here was a home-grown, 100mph American motorcycle capable of overpowering the upstart Triumphs – in a straight line, anyway. Soggy coil suspension at the rear and inaccurate steering at high speed tended to confine Sportster riders' exuberance around corners. The package was nonetheless an instant hit.

For the 58 season, power was lifted still further for the new XLH model, by raising the compression ratio from an innocuous 7.5:1 to a rather more purposeful 9:1, and by the fitment of still larger valves. But America's excited motorcycling enthusiasts wanted even more; the XLCH was Harley's answer. Magneto ignition, high-level separate exhaust pipes and a small 'peanut' fuel tank distinguished the 'Competition Hot' XL from its humbler cousins. Strangely, the 1959 XLCH came with semi-knobbly off-road type tires, even though its true milieu was plainly the street. Factory publicity shots of the time show gritted-teeth company representatives hurling XLCH's up and down hills, presumably in an effort to persuade buyers that the Sportster's potential market extended all the way out to dirt riders. Needless to say, few buyers of what was after all still a heavyweight machine (nearly 500 pounds) cared to take up the off-road option.

By 1959, all XL derivatives had been given higher performance camshafts, hiking horsepower up to a claimed 55bhp. This period in American motorcycling history was marked by a general demand for more and more horsepower, to be used not only on the streets but also on the quarter-mile drag strips that were becoming increasingly popular towards the end of the 1950s. Harleys were especially handy for this latter purpose, being eminently susceptible to both weight-trimming and tuning. 'Hot' engine parts were readily available from any one of a myriad of aftermarket outlets which had been set up specifically to attend to the needs of those heretics who insisted on modifying their H-Ds. Harley-Davidson frowned upon this practice,



Left: A '70s shovelhead motor inside an aftermarket hardtail frame – a popular expression of individuality among Harley riders which is now being tapped by the factory.

Right: The archetypal 'crucifix' look: not as uncomfortable as it looks.

Below: Standard factory aircleaners might be legal, but they strangle performance. Big power gains are available by swapping carbs too.

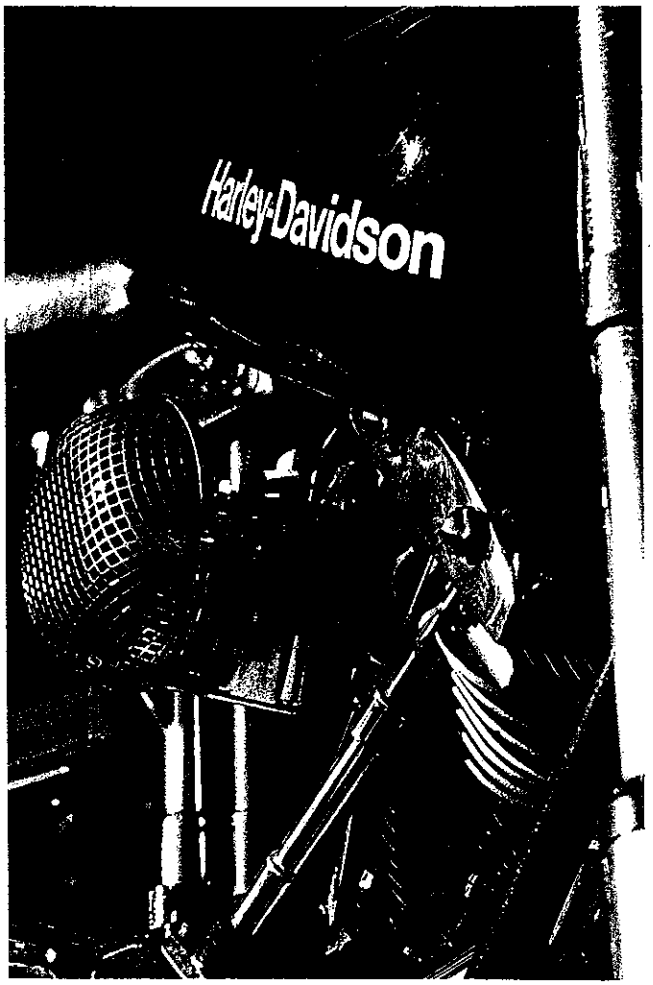
as did their more dyed-in-the-wool dealers, with the unbelievable result that many of them would refuse to service or tune machines which had been so altered.

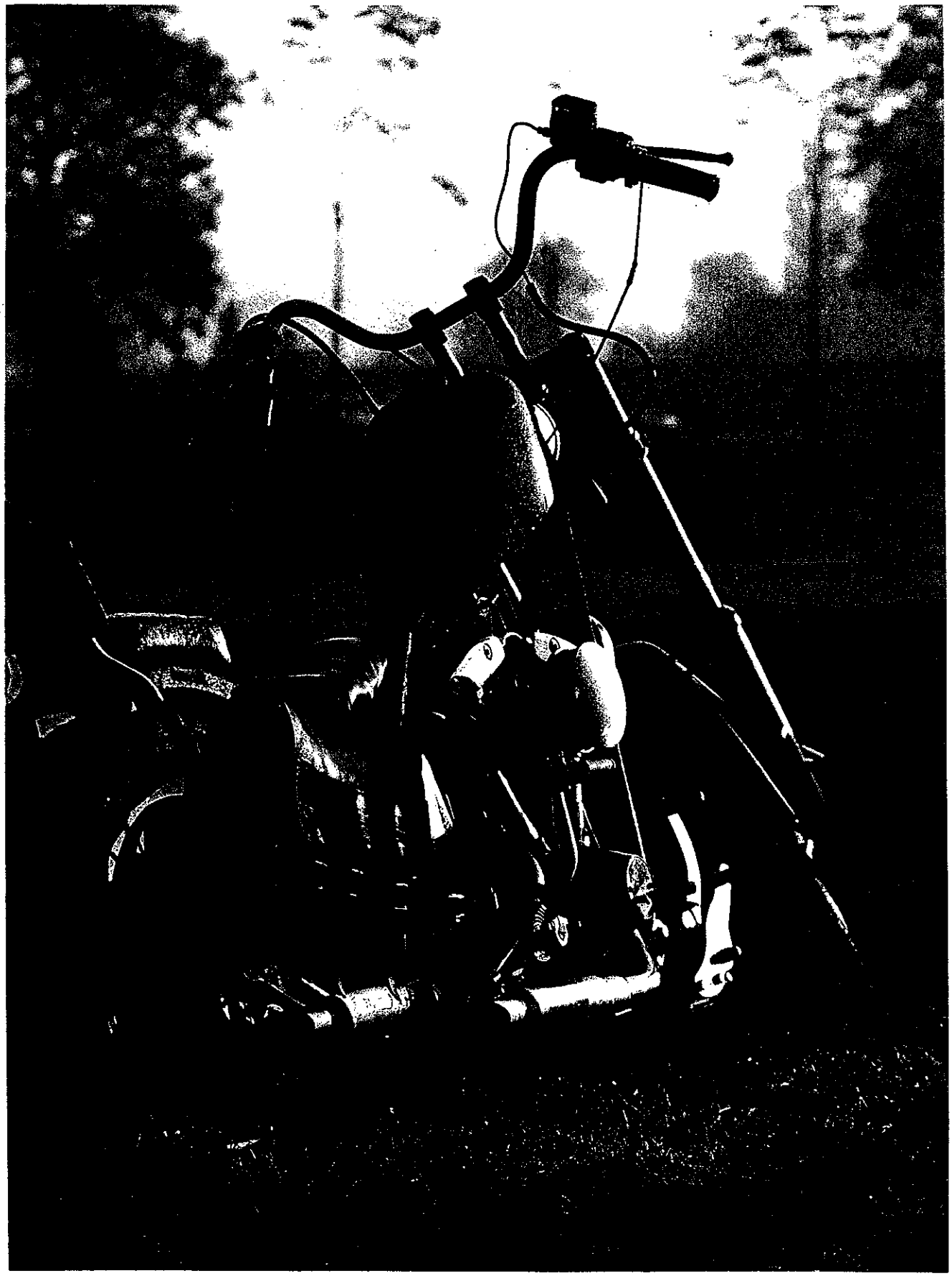
A widening division thus began to open up between the 'respectable' dresser-riding Harley owners and the shadier, denim-wearing 'outlaw' elements who, although just as organised and non-individualistic in their own way, still liked to think they were thumbing their noses at authority. Whether they realised it or not, Harley-Davidson were contributing to this rift by producing two such divergent machines as the Sportster and the FLH supercruiser. Perversely, the outlaw riders tended to favour FLs as base vehicles for their customising efforts, an attitude which only served to enrage the traditionalists all the more.

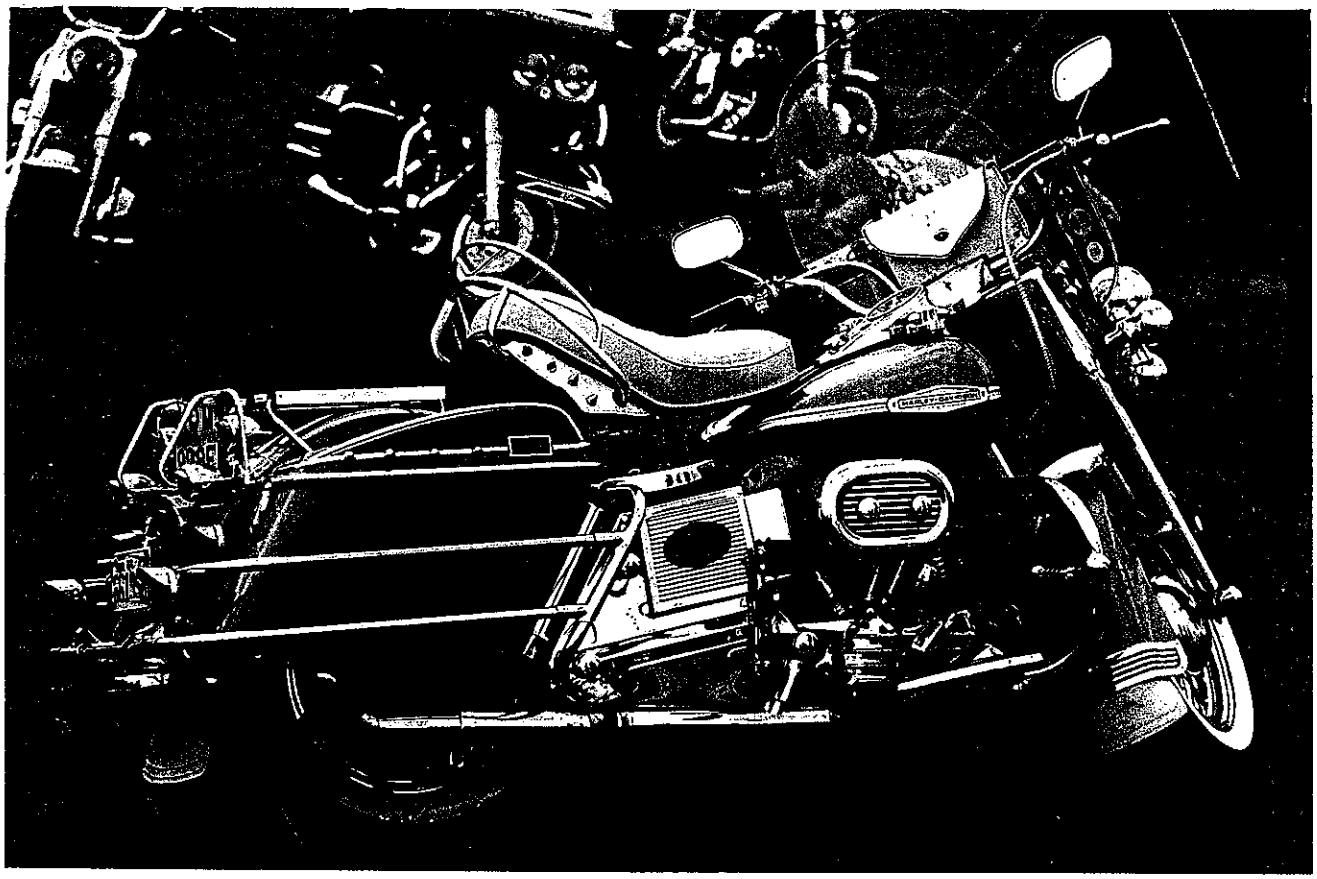
As 1960 came around, non-traditionalists were still bemoaning the lack of a true middleweight in the Harley range. H-D themselves were concerned by the fact that their annual production figures had been more or less constant throughout the previous decade, hovering around 12-15,000 units in the second half of the fifties, after having started off the decade with annual sales closer to 20,000. A chance to kill two birds with one stone came up in 1960, when H-D's management heard the news that Aermacchi, a successful but underfunded Italian sports motorcycle manufacturer in Varese, were casting around for partners to help them break into new markets. After a short period of negotiation, Harley were able to purchase a 50 percent share in Aermacchi at a bargain price, setting up a situation whereby the Italians' best machine, the 250cc Ala Verde four-stroke single, could be imported into the States under the H-D banner.

Sadly, Harley's timing was wrong. The 'Sprint', as it was entitled for Stateside consumption, was introduced onto the American market just as the superior (and cheaper) four-stroke singles and twins from Japan were starting to arrive. Compounding the problem was the lingering antipathy displayed toward the 'Italian Harleys' by the less progressive dealers in the US network. In fairness, many of the dealers' misgivings were justified, in that many Americans thought it demeaning to be seen riding a foreign bike. Even worse, the Aermacchi was not just a foreign bike; it was a *small* foreign bike. The combination was doomed to failure.

And if that lot wasn't enough, there were inevitably problems associated with the sheer distance between Milwaukee and Varese. Although H-D always had representatives on site in Italy, these men were quickly frustrated by the discovery that American 'get tough' techniques were not re-







cognised by imperturbable Latin types in times of difficulty. The Sprint (supplemented from 1962 by the off-road H, or Sprint Scrambler) did as well as could be expected under these impossibly adverse conditions, its sales record being more notable for its length (thirteen years) than for its volume.

The Italians were nothing if not prolific, however, as evidenced by the throwing-up of a 50cc two-stroke minibike between 1966 and 1968, namely the Leggero M-50. This machine grew to 65cc in '68, from which point it ran parallel with the 125cc Rapido, an uninspiring little 10bhp runabout which stuck around until the end of the 1970s. From '73 to '77 these bikes were joined in a somewhat confusing line-up by the SS range of two-stroke singles, in 125, 175, and 250cc sizes, and by a new 350 Sprint four-stroke single.

Although all these motorcycles bore the name of Harley-Davidson on their tanks, the gulf between them and the 'real' H-Ds was so great that nobody who bought one of the Italian lightweights seriously considered himself (or herself) to be a true Harley owner. The two-strokes were soon consigned to the rubbish heap of history anyway, victims of the anti-pollution paranoia that was sweeping across the States in the mid-seventies – yet another example of unfortunate timing by Harley-Davidson. The Varese link was finally severed in June 1978 with the closure of the factory in Italy. The facility was later bought by Cagiva, who went on to build many thousands more of lightweight SS/SX type two-strokes (primarily for the European market) before expanding into a motorcycling monolith in the mid-1980s with the capture of the classic Italian marque, Ducati.

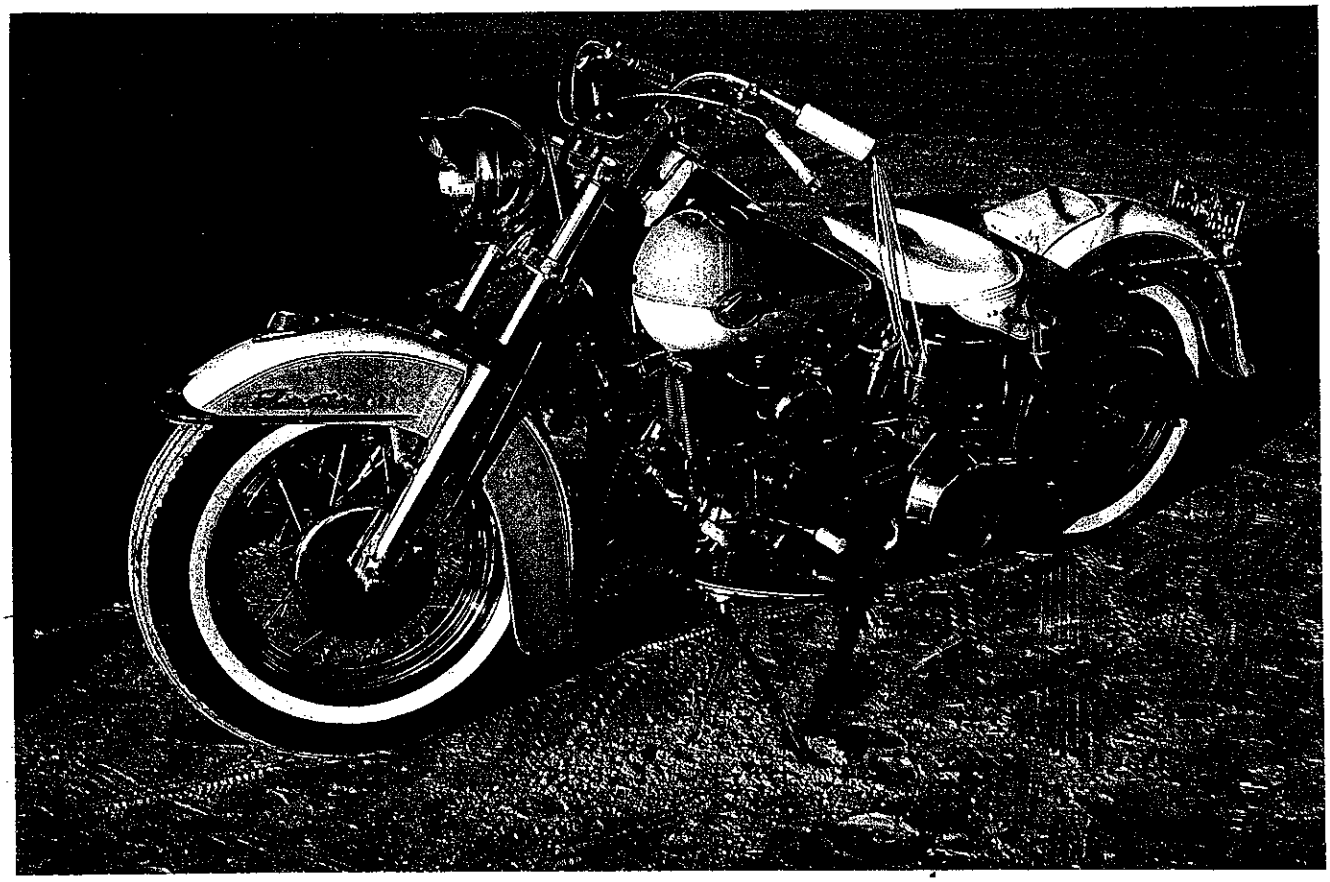
Back in 1960, Harley-Davidson were again displaying their occasional tendency to produce the wrong thing at the wrong time. This time they were attempting to enter the scooter market. Their Topper offering was a heavy-bodied affair – what else from H-D? – powered by what turned out to be a too-lightweight engine, the Teleglide's 165cc two-stroke unit. Too small for the highway, too cumbersome for urban work, the 5bhp belt-driven hybrid limped on until 1965, when it was 'souped up' to 9bhp in a last attempt to inject it with some sales-generating pep. The damage had been done by then, sadly; the Topper was axed in that same year.

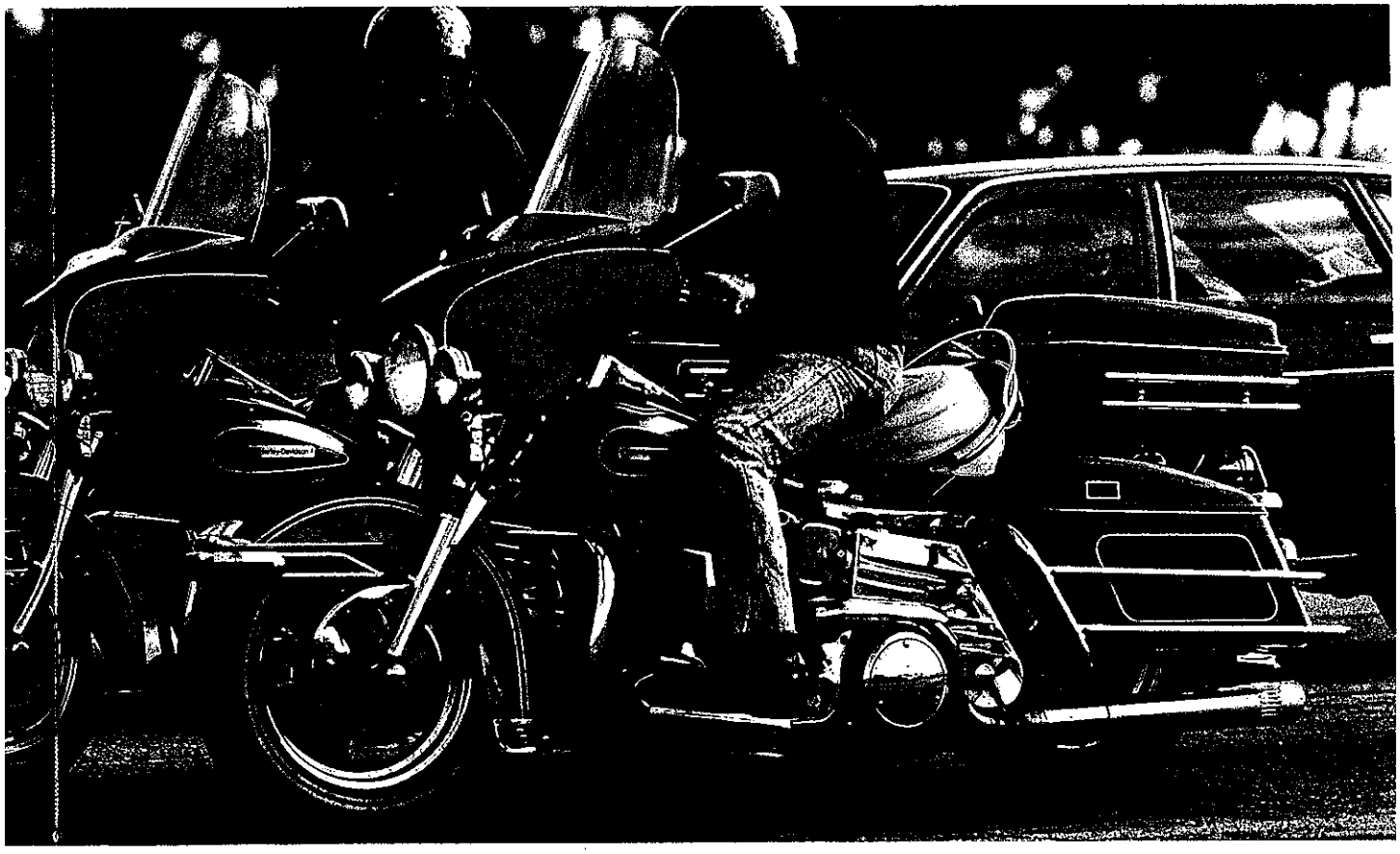
Paradoxically, while mistakes were undoubtedly being made during this late fifties-early sixties period of exploration of uncharted territories, racing

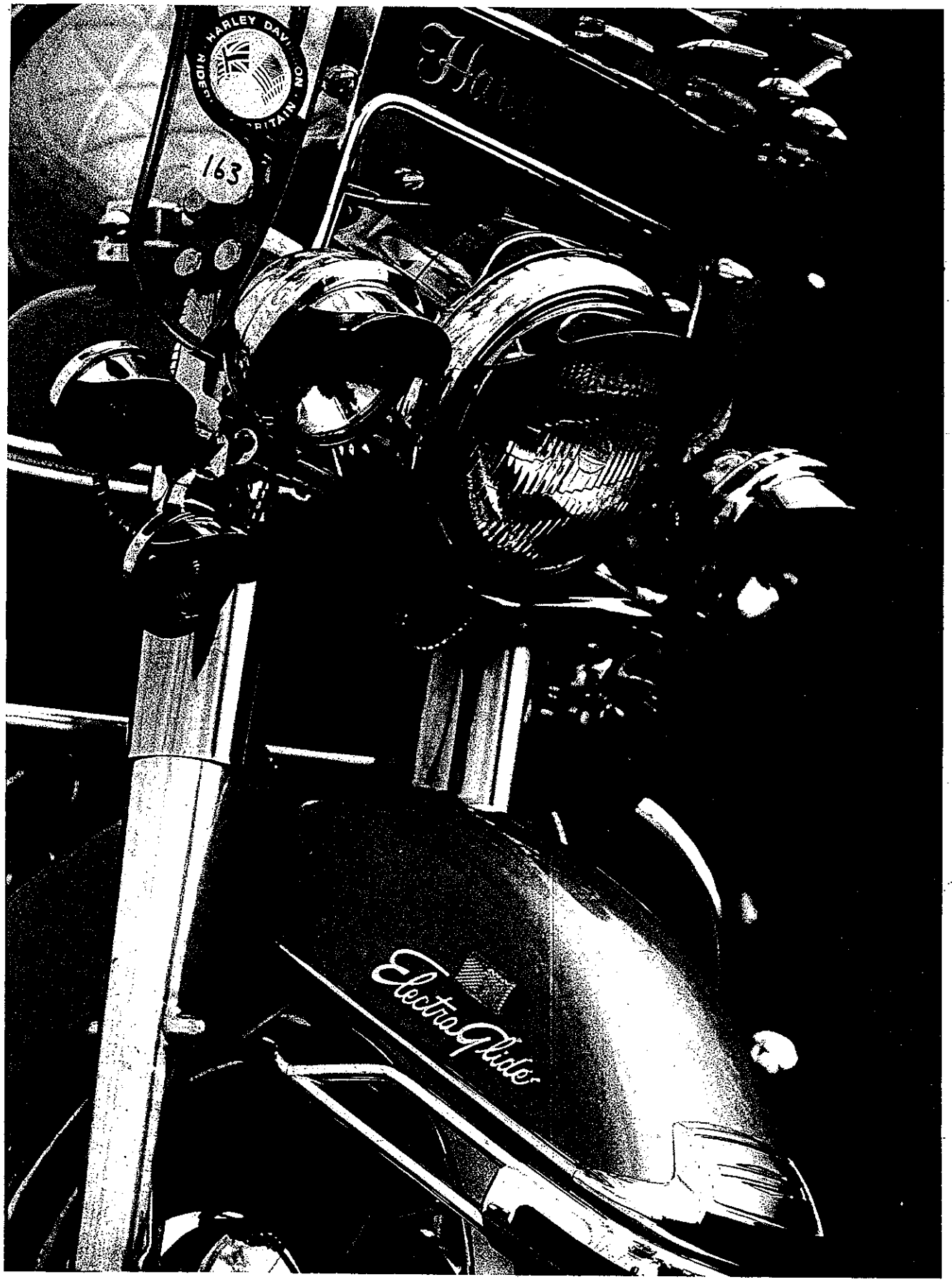
Above: For many, the Electra Glide represents the rolling embodiment of American excess.

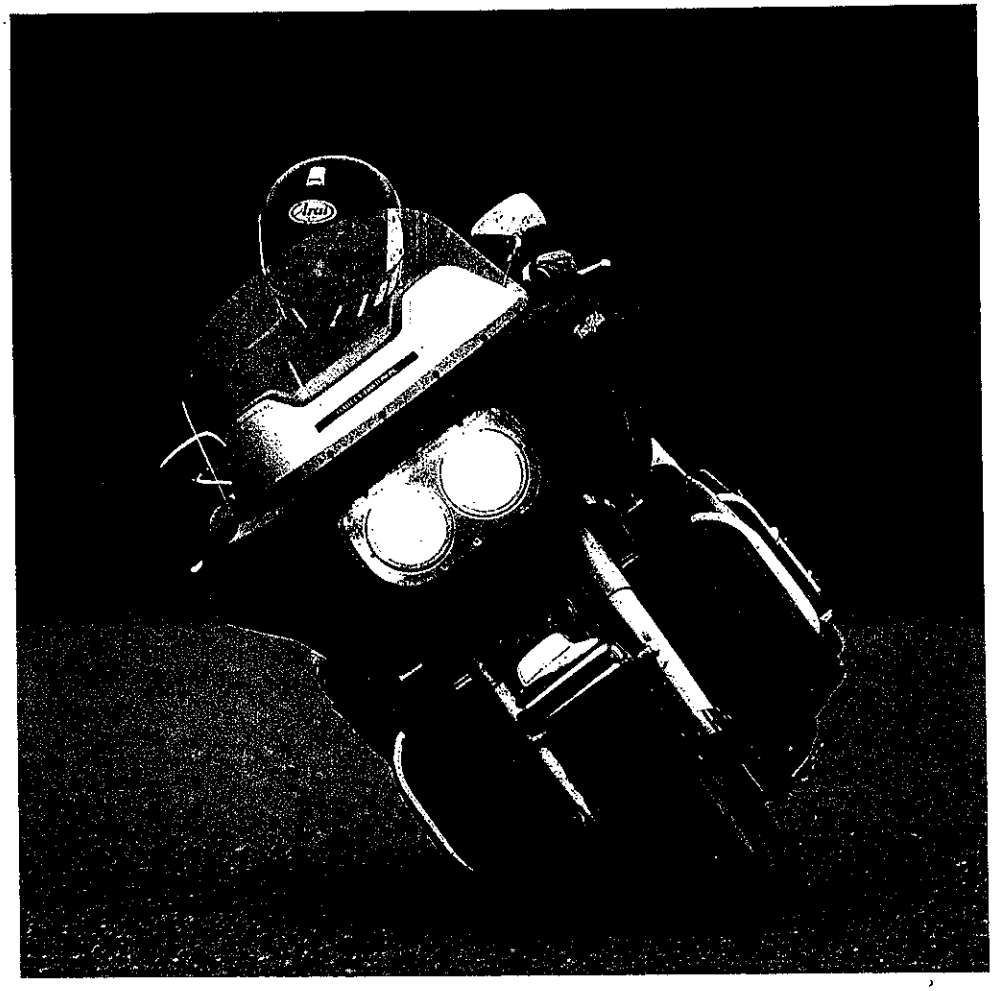
Above right: Stripped of its bodywork and luggage boxes, the Electra Glide takes on an entirely different 'retro' identity. Again, the factory have latched onto this nostalgia-driven trend, and are nowadays producing their own 'stripped' Glides.

Right: The ultimate double-take?



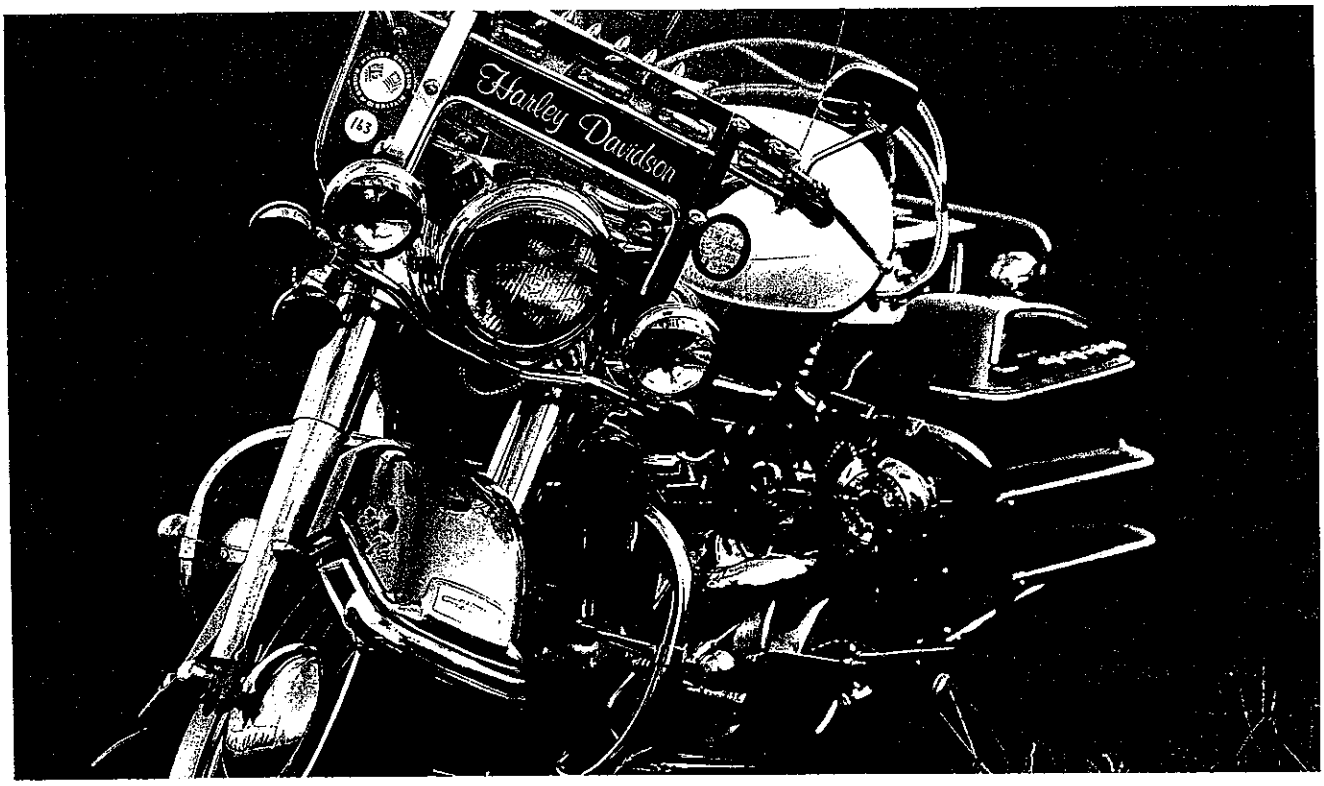


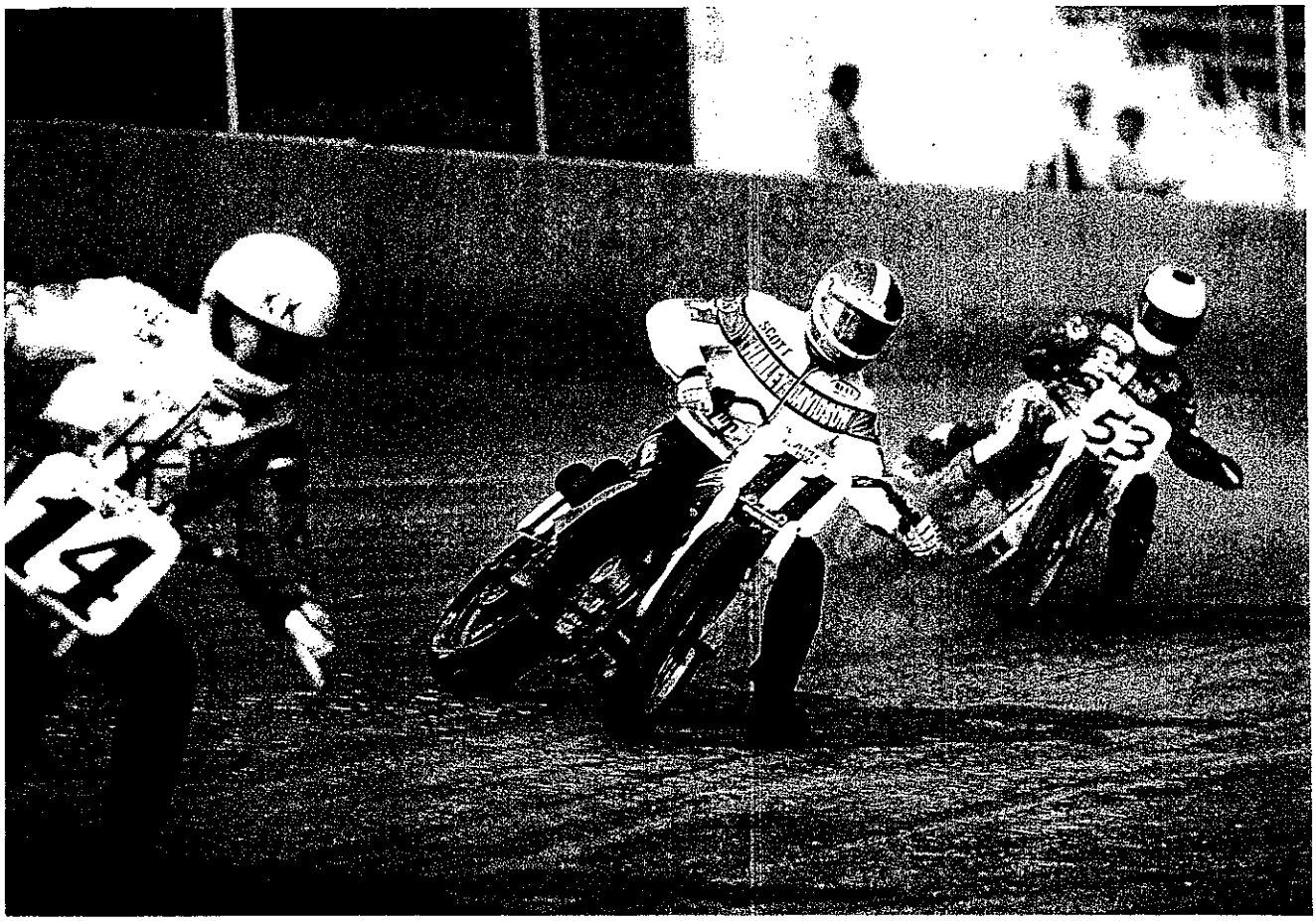

HARLEY DAVIDSON
163
ElectraGlide



Right: When the Electra Glide became the Tour Glide, handling improved along with everything else. For its size, the FLT is surprisingly easy to ride at the limit.

Left and below: Weight was never a major consideration for riders into serious personalisation of their Electra Glides.





Harleys were enjoying some of their best years on the native oval tracks that were so well suited to their particular brand of raw wheel-sliding power. The KRs and KHRs that had started out so unimpressively eventually metamorphosed into highly adaptable and winning machines, campaigned with great verve and localised success right up until the late sixties.

In 1963, Harley-Davidson bought the Tomahawk Boat Company, a fiberglass plant in northern Wisconsin which was originally intended to slot into the H-D jigsaw as a supplier of bodies for Servi-cars, sidecars and golf carts. From 1969, fairings, pannier cases and other fiberglass sundries were also sourced from Tomahawk.

1964 saw the fitment of a full-width brake drum to the Sportster's front wheel. Otherwise things were beginning to stagnate. By 1965, Harley's position was suddenly perceived to be far from stable. Precious little development had taken place in the big twin range. The company had been marking time, selling only a few thousand FLs every year, and even fewer XLs. Total annual production was struggling to top four figures, Aermacchis included, despite the fact that the company owned massive – albeit outmoded – production facilities. According to the figures, the company's turnover had increased substantially since the late fifties, but nowhere near as substantially as it should have done. Profit margins were unbelievably small, and the model range dormant; neither was there any immediate prospect of the situation changing, since there was no cash available for much-needed investment in the machine tooling necessary for new model development. Money had to be raised – and quickly.

The decision to 'go public' precipitated a series of share offers during the course of 1965 and 1966. While such an offer nowadays would result in a stampede of investors beating a path to Milwaukee, it was apparently not such an attractive proposition in 1965. The number of shareholders was small, in the hundreds rather than the thousands, and a big enough proportion of them were sufficiently closely connected to the Harley and Davidson families to ensure that control of the company did not fall into outside hands.

Funds duly raised, it was deemed appropriate to devote some attention to the FL cruiser. Since being given a more effective – though still somewhat inadequate – braking system in 1958 (disk brakes not becoming standard equipment until 1972), this trusty model had been rather neglected. For 1965, the electrical system was upgraded from six volts to twelve, an electric starter was grafted onto the engine behind the cylinder block – and the Electra Glide was born. In a repeat of a similar Luddite outburst many years previously when front brakes had first been fitted to the big twins, a significant number of owners and dealers protested that the electric starter was a retrograde step. With some justification, they pointed out that it was easy enough to start the softly-tuned 1200cc twin engine; they also queried the extra 75 pounds which was the weight penalty of the electrical conversion.

While the electric start had long been a common fixture on Japanese motorcycles, it was quite revolutionary for the FL, a machine which after all could still be ordered with a hand gearchange (this option running on until the 1973 model year). The engineers were not unaware of the performance-sapping aspects of their modifications. They also knew that a new engine was on the stocks, scheduled to come into production the following year. As a stopgap measure, to help the panhead engine cope with its extra duties, the compression ratio was raised and the cam profiles revised for a new (claimed) power output of 60bhp, an increase of a little more than 10 percent. With the compression ratio increase, the 'easy starting' argument had, at a stroke, become slightly less tenable.

A larger five-gallon fuel tank was also added at this time, although it was still dwarfed by the Electra Glide's slightly absurd 'overgrown bicycle seat', a well stuffed perch (usually supplied in highly impractical light colors) which looked comfortable from a distance but which was in reality too big for a solo rider and too small for a pillion. Critics also noted the disappearance of the tool box, squeezed out of the chassis by the Electra Glide's enlarged battery box. Tools would not reappear on Harley-Davidsons until the 1980s, and only then as an expensive option. They were very high quality, however.

Predictably, there were warranty claims on the first all-electric FLs. The starters gave trouble, and in the wrong hands the motor's extra power could

Left: The alloy-engined XR750 dirtracker achieved extraordinary dominance on the American circuit throughout the 60s and 70s, and was still competitive in the late 80s.

Right: The shorty helmet 'patrolman' look has become associated with civilian Electra Glide motorcycling.

– and did – place a breaking stress on the relatively spindly final drive chain. New, stronger parts were sent out in the time-honored way. By this time it must have been increasingly obvious to experienced H-D customers that the best time to buy a brand new model was most assuredly not in its first year of manufacture.

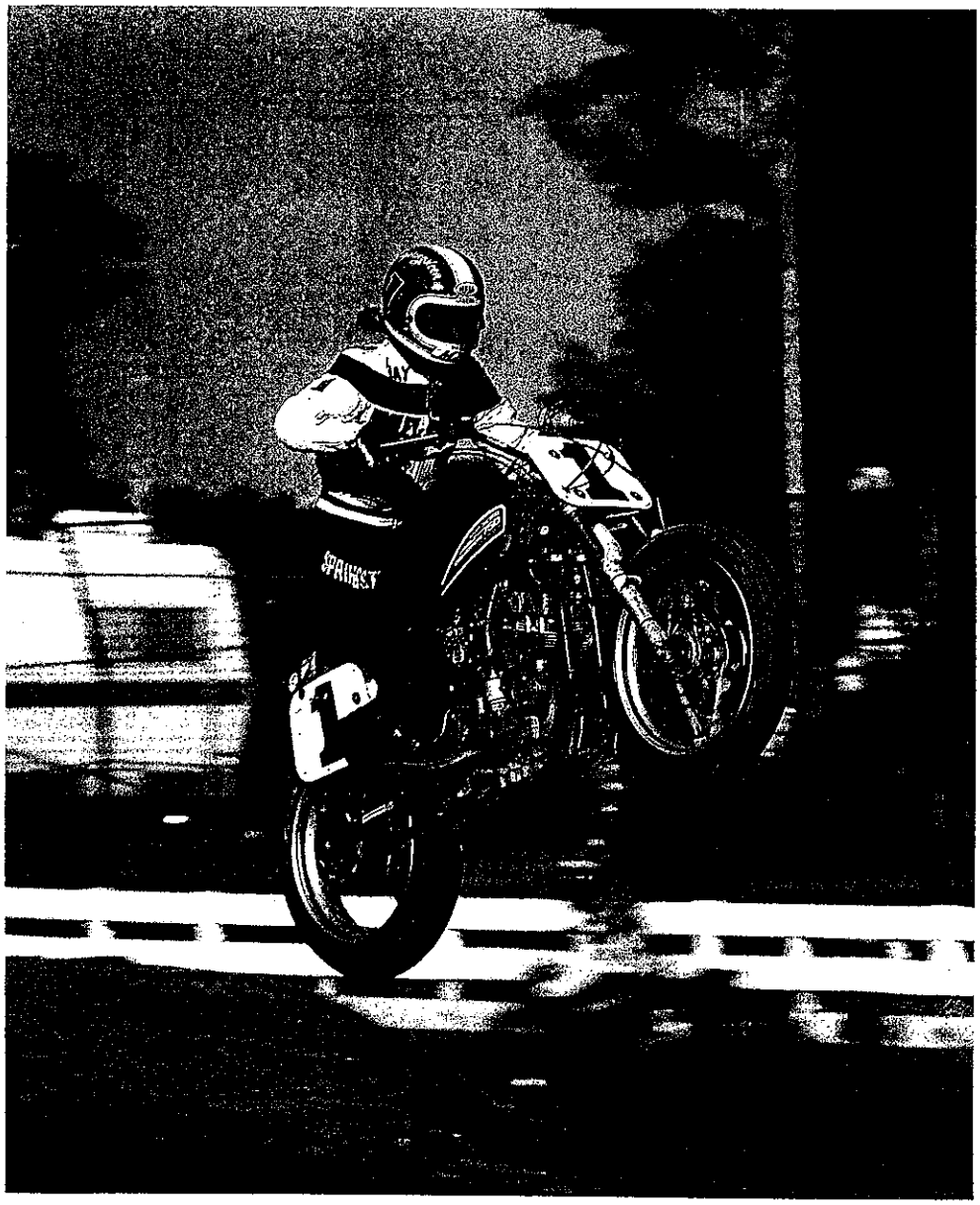
There was accordingly some degree of agonising among the serried ranks of the faithful in 1966, when Milwaukee made a double announcement: the end of the Panhead after 18 years of generally good service, and the birth of its successor, the 74 cubic inch 'Shovelhead.' Like the Sportster, the Shovelhead featured rocker arms pivoting inside castings bolted to the cylinder heads. These castings were somewhat fancifully reckoned to resemble coal shovels, hence the nickname. Unlike the smaller Sportster motor, the 74 shovel retained the separate transmission format already established through long usage. In the eyes of many enthusiasts, the new motor represented the ultimate V-twin development – in theory, at least. The apparent oil-tightness of the engines in practice was further cause for celebration.

Harley-Davidson thought highly of it too, dubbing their Electra Glide 'King Of The Highway' by way of acknowledgment. If sheer physical size was the criterion, no other motorcycle manufacturer could challenge this grandiose-sounding claim, for a fully-fuelled FLH now tipped the scales at just a few pounds short of the 800 pound mark. Nonetheless, in spite of its incredible bulk, the bike remained well balanced and easy to ride at low speeds, thanks mainly to its gratifyingly low center of gravity. By contrast, behavior at speeds anywhere near the beast's 100mph maximum was unruly enough to make most riders think twice about exploring the upper reaches of performance. Suspension was too soft and ground clearance too low for any liberties to be taken. Most riders knew and accepted this, and stayed well within the FLH's limits as a consequence.

Though well received, the arrival of the new shovelheaded Electra Glides and Sportsters had not been enough to revitalise the company. By the end of 1967, it was clear to the management that more stock issues would not be enough either. the kind of major financial input required to ensure the company's future could only be obtained in one way. A 'white knight' had to be found, in the shape of a strong but benevolent corporation which would take over Harley-Davidson – preferably without disturbing the status quo.

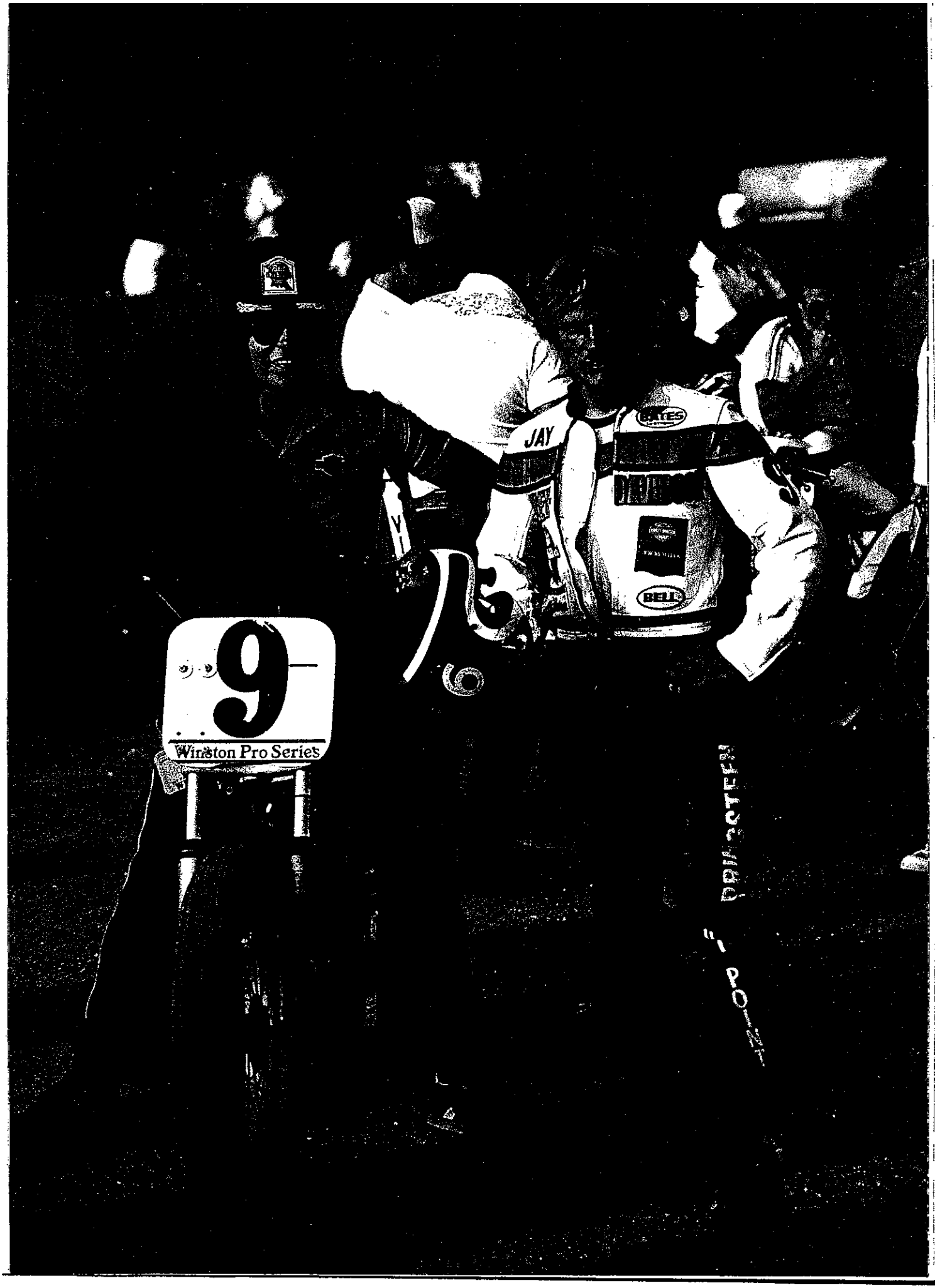
After a protracted and complicated battle with the New York-based firm Bangor Punta, during which the value of Harley-Davidson shares multiplied several times, Rodney C Gott's giant leisure products conglomerate, AMF – the American Machine & Foundry Company – finally came through and emerged as victors.

Takeover was scheduled for January of 1969 – and a dark chapter in Harley's history was about to be opened.



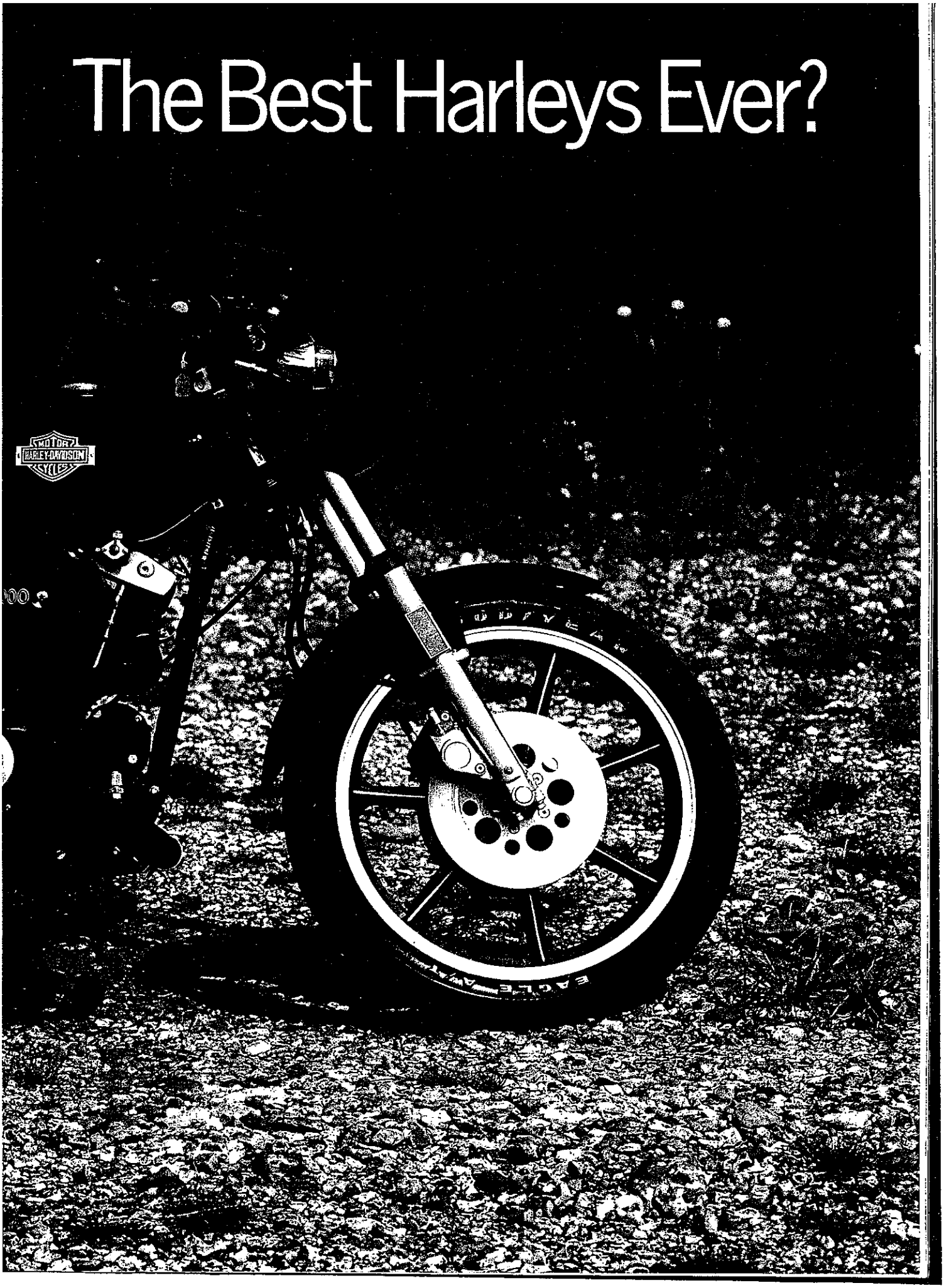
Left: Jay Springsteen takes the back straight jump on an American 'TT' dirt track. Springsteen's name became all but synonymous with victory during his heyday on the XR750.

Right: Springsteen with his tuning guru Bill Werner – an unbeatable combination. The XR motor had exactly the right type of power delivery for fast and efficient loose-surface broadsliding.


9
Winston Pro Series
JAY
BATES
BELL

AMF

The Best Harleys Ever?

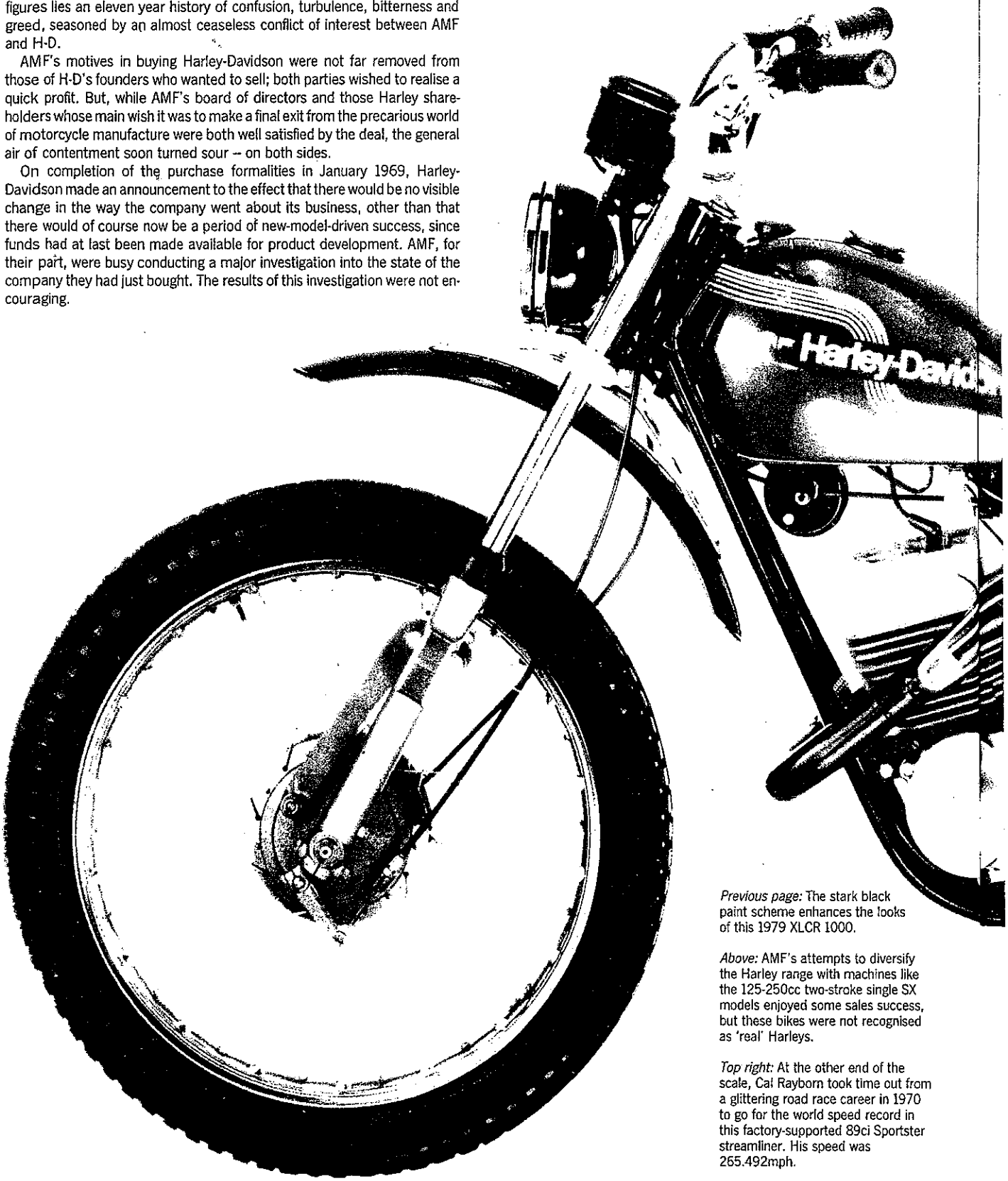


The story of AMF and Harley-Davidson can be told in one sentence. In January 1969, AMF paid $21 million for Harley-Davidson; in June 1981, they sold the company for $80 million.

Set out in such bald terms, it sounds like a perfectly run of the mill example of a successful business undertaking. But behind the impressive figures lies an eleven year history of confusion, turbulence, bitterness and greed, seasoned by an almost ceaseless conflict of interest between AMF and H-D.

AMF's motives in buying Harley-Davidson were not far removed from those of H-D's founders who wanted to sell; both parties wished to realise a quick profit. But, while AMF's board of directors and those Harley shareholders whose main wish it was to make a final exit from the precarious world of motorcycle manufacture were both well satisfied by the deal, the general air of contentment soon turned sour – on both sides.

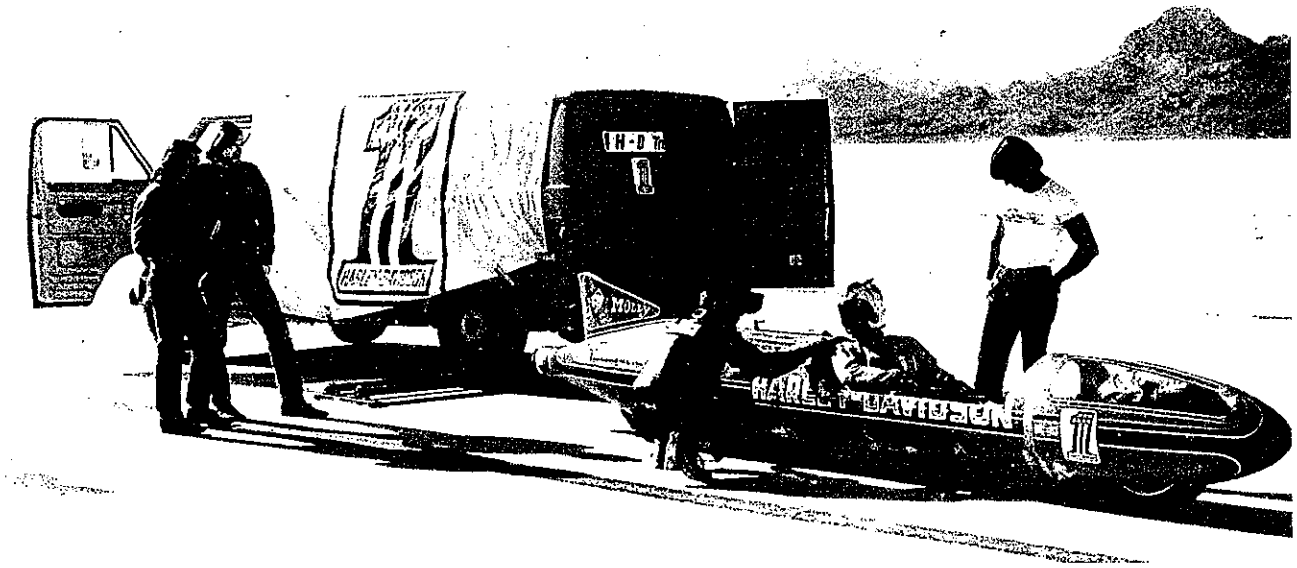
On completion of the purchase formalities in January 1969, Harley-Davidson made an announcement to the effect that there would be no visible change in the way the company went about its business, other than that there would of course now be a period of new-model-driven success, since funds had at last been made available for product development. AMF, for their part, were busy conducting a major investigation into the state of the company they had just bought. The results of this investigation were not encouraging.

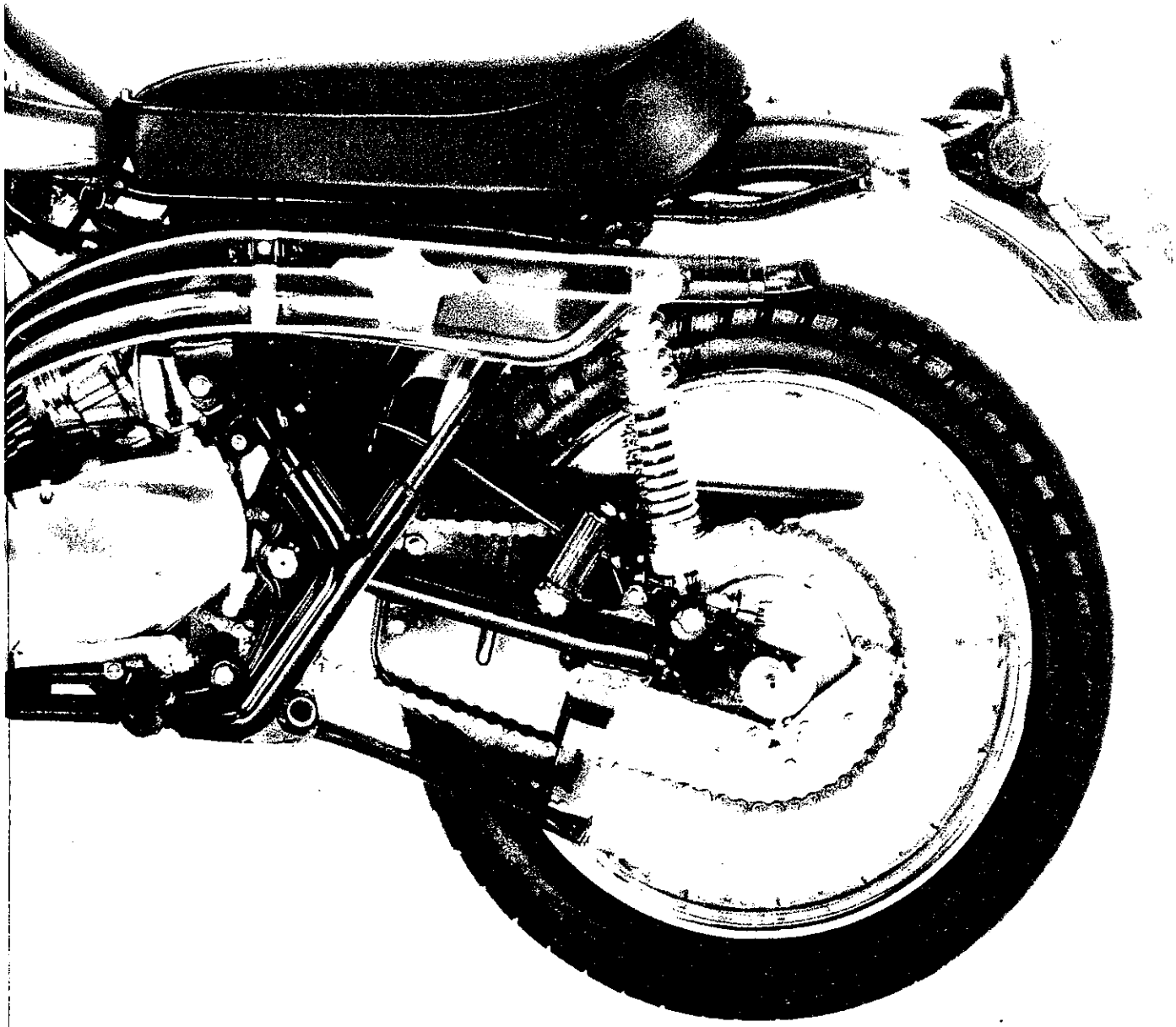


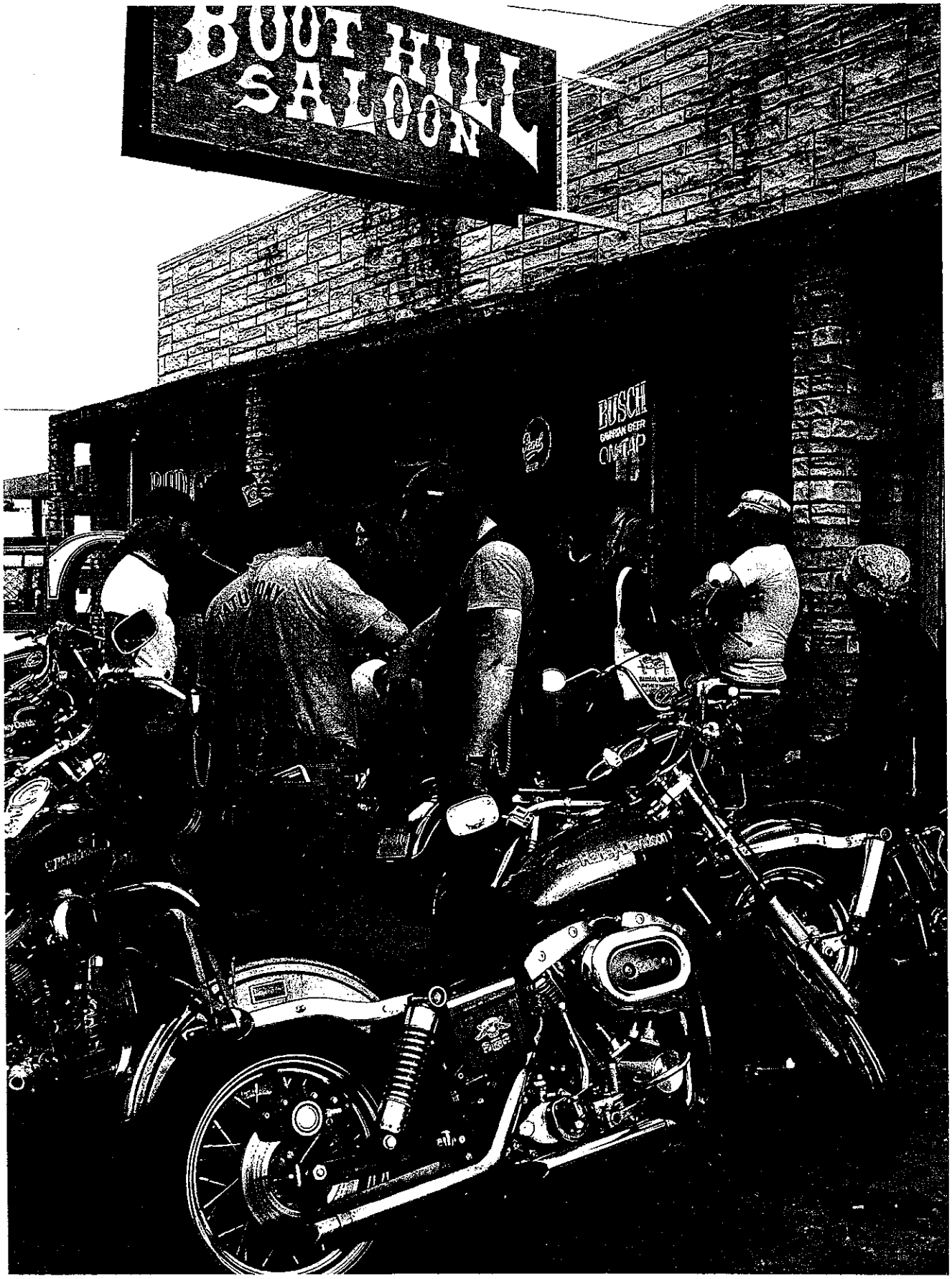
Previous page: The stark black paint scheme enhances the looks of this 1979 XLCR 1000.

Above: AMF's attempts to diversify the Harley range with machines like the 125-250cc two-stroke single SX models enjoyed some sales success, but these bikes were not recognised as 'real' Harleys.

Top right: At the other end of the scale, Cal Rayborn took time out from a glittering road race career in 1970 to go for the world speed record in this factory-supported 89ci Sportster streamliner. His speed was 265.492mph.


HARLEY-DAVIDSON




BOOT HILL
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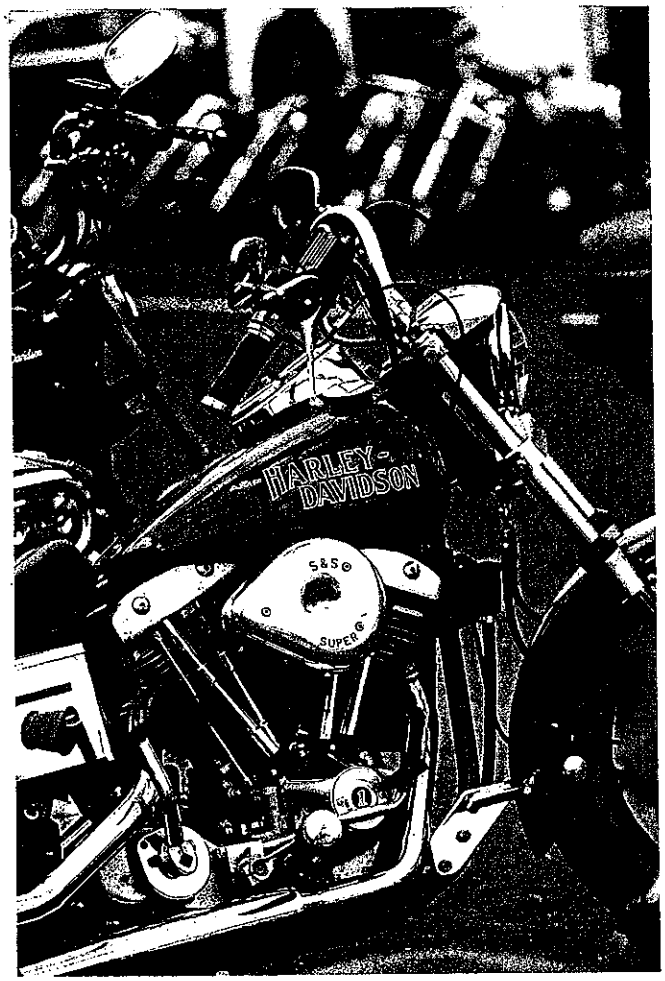


Management appeared to be in disarray, a throwback to the days when all decisions were taken by the four original founders. Marketing seemed to be non-existent, with no realistic indication as to the direction in which the company was heading. Chances to restructure the company had been ignored; new model development had been similarly spurned; and the whole company ethos appeared to be heavily biased towards cost-cutting and the maximisation of short term profits.

This latter approach dovetailed nicely with Harley's non-interventionist policy on new models, but the feeling among AMF's upper management was that H-D had been 'getting away with it' for too long. A more dynamic position had to be established. The ohv V-twin engine that had been powering Harleys in basically unchanged format since 1936 was considered long overdue for major revamping – if not actual scrapping. Harley-Davidson's view was, not surprisingly, rather different. They were able to point to the continuing racetrack successes still being enjoyed by such riders as Cal Rayborn on KR's powered by even more primitively-conceived engines than the shovelheads that were under criticism. They also maintained that the strong heritage of conservatism running through their customer profile could easily lead to mass rejection of anything that might be seen as too 'new-fangled.'

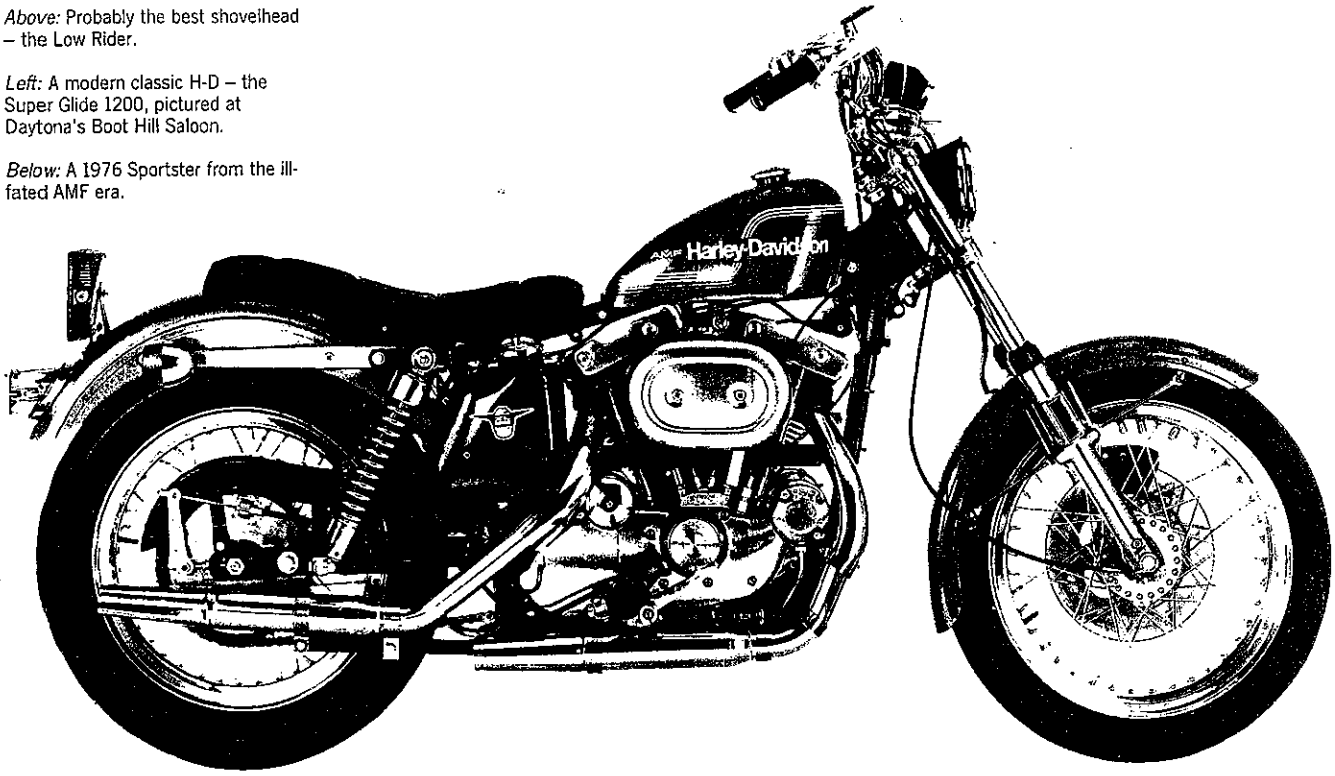
Sweeping aside H-D's misgivings, AMF embarked upon an expensive program of re-tooling for the Juneau Avenue and Capitol Drive plants. This move, while not greatly benefiting Harley's fortunes during AMF's period of ownership, was to prove crucially important in safeguarding the company's future after AMF's departure.

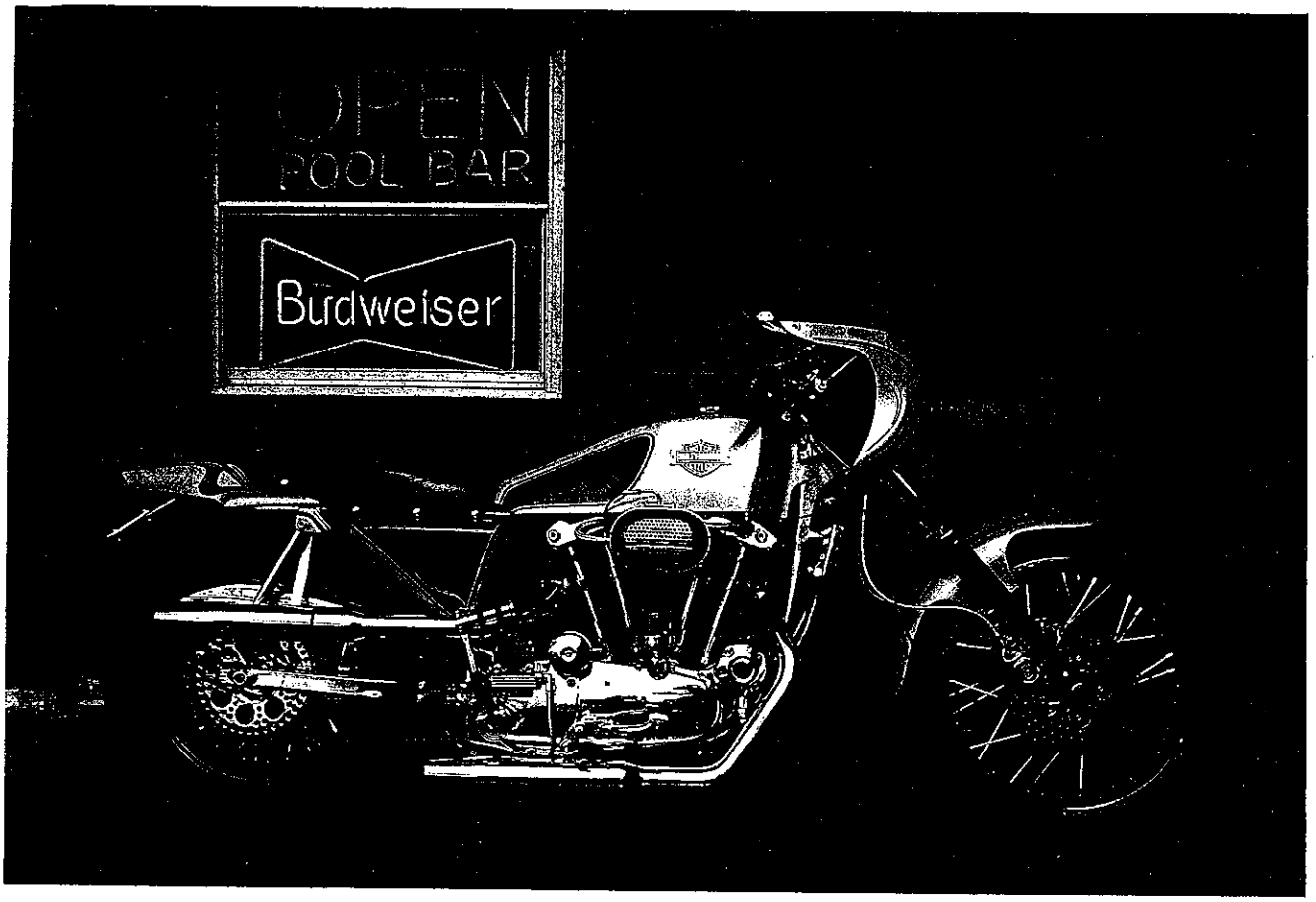
In the meantime, Harley continued with their own relatively humble but ongoing development plans. Breakerless ignition was specified for the 1970 FLs, and the new 350cc four-stroke from Aermacchi was added to the line-up for that model year. A new racing motorcycle, the XR750, was designed and built to take over from the KR. This machine, powered by a downsized and tuned version of the 883cc Sportster engine, was to be made available in both flat track and fully-faired circuit racer options. Making full use of their influence over the AMA, Harley secured an agreement from the sport's governing body for the old Class C regulations to be broadened to take in overhead-valve engines. The new XRs went on from there, ushering in yet another golden age for H-D's competition department. They proved especially dominant on the half-mile, mile, and 'TT' dirt courses from the time of the factory's transition to alloy engines in 1972 right up to the model's eventual demise in 1985, at which point it was still competing successfully.

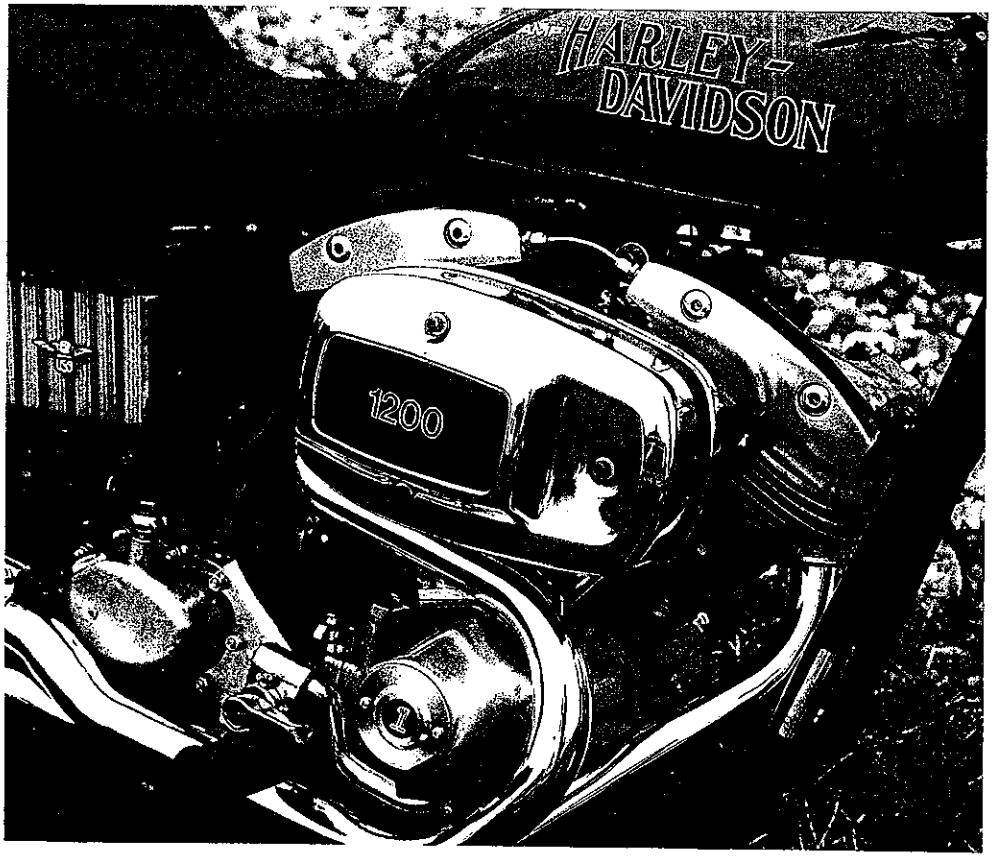
Above: Probably the best shovelhead – the Low Rider.

Left: A modern classic H-D – the Super Glide 1200, pictured at Daytona's Boot Hill Saloon.

Below: A 1976 Sportster from the ill-fated AMF era.







Above: Now rapidly becoming collectable (though not necessarily in this rather lurid non-standard paintjob), the XLCR1000 Cafe Racer looked like it went – mean and moody.

Left: The Super Glide of 1979, complete with convoluted factory exhaust headers.

Near right: H-D chairman Vaughn Beals (seated) celebrates the listing of his company on the New York Stock Exchange in 1986.

Far right: Flying the flags at Harley's factory, one of the last bastions of US patriotism.

Although it may not have seemed so at the time, the launch in 1970 of the FX 'Super Glide' can now be viewed as one of the most momentous events in Harley-Davidson's history. The 74 cubic inch (1200cc) 'Glide', a simple amalgam of the XL Sportster's front end and the FL frame/engine package, was offered in kick-start (FX) and electric start (FXE) options. Its singular plainness, as evidenced by the total lack of Electra Glide-type bodywork, was the very feature which made it so unusual. It represented the factory's first recognition of the fact that there were other kinds of H-D rider other than the straight-backed mature clubmen whom it had up to then fondly imagined to be its exclusive clientele.

Brainchild of the design department's Willie G Davidson (son of Chief Executive William H Davidson, and unquestionably the highest-profile 'biker' on the board), the FX was a perfect base machine for customising. This practice, previously regarded with a kind of sniffy hauteur by H-D, had been so facilitated by the explosion of aftermarket parts outlets, and so glamorised by motion pictures such as *Easy Rider*, that it had become virtually impossible to ignore. On the somewhat grudging basis of 'if you can't beat 'em, join 'em,' H-D had finally locked into the populist groove which was destined to steer them through the murky waters ahead. Later on, in the 1980s, the company's conversion in this direction was completed by their wholehearted entry into the immensely profitable arena of 'factory approved' custom parts and accessories.

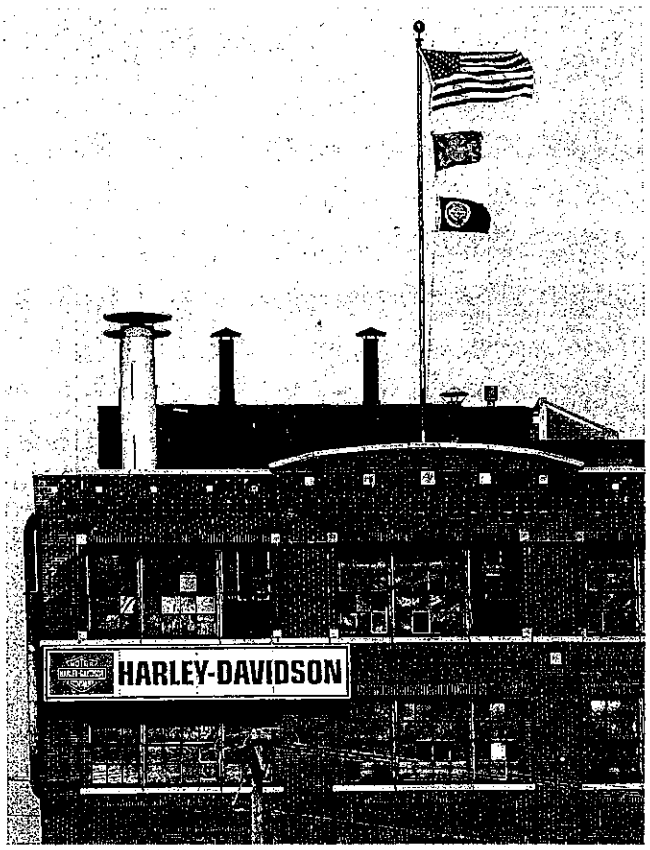
Back in 1970, meanwhile, a new corporate logo had been created. It featured a prominent figure '1' and referred to Harley-Davidsons as 'The All-American Freedom Machines,' but problems on the production line in AMF's first few months of command turned this proud boast into a sick joke for a large number of dealers and customers. An integral part of AMF's crusade to wrench H-D into the twentieth century was a determination to crank the line up to automobile speed; unfortunately, this plan was at severe odds with the existing production facilities in Milwaukee. There was simply not enough time, space or technology in the Juneau Avenue works to meet the doubled targets newly set by AMF's line controllers. Quality control went out of the window as staff worked feverishly to build over 50,000 motorcycles a year. Many experienced workers had had enough and quit in disgust, further exacerbating the problems.

The atmosphere in the factory was at an all-time low. Out in the country, H-D dealers were aghast at the state of some of the machines they were receiving from the factory. And of course, as usual, they were the ones who were obliged to spend time and money making those machines saleable. In many cases, the bikes were so appallingly put together that they could not be made to work at all. In the final analysis, it took over two years to put matters to rights, by which time it had become a positive stigma to be seen running an 'AMF Harley'. Even now, bikes built in this era tend to be shunned by buyers in the secondhand market.

In 1971, in the midst of the quality scandal, AMF attempted to bring order to the situation by transferring a large part of the assembly process to one of their existing factory premises in York, Pennsylvania. Engines and transmissions continued to be built at the Capitol Drive works in Milwaukee, and then trans-shipped to York for mating with the chassis and cycle parts. Two years later, in 1973, the historic Juneau Avenue facility became a warehouse-cum-office complex. The severing of old links had been tragically underlined in August of '71 with the death of William J Harley, son of founder Bill Harley, and less traumatically by the resignation from the Vice Presidency of Walter Davidson Jr, nephew of Arthur Davidson.

1971 was a big year for the Sportster, in every sense. The XL motor was taken out to the 61ci (1000cc) size which many pundits had said it should have displaced from the start. The extra power thus created was to some extent vitiated by the commensurate increase in the amount of heat and vibration generated. It also further highlighted the shortcomings of the four-speed transmission, with its sticky action and its big jump in ratios from third to top. This latter expedient, intended to provide reasonable smoothness at the 55mph freeway speed limit, only did so at the expense of tractability in town. It was to be some years before H-D would properly address this question.

By 1973, Harley president William H Davidson decided he had had enough and retired, to be replaced by John O'Brien, one of AMF's production experts. A drive to weed out the less dynamic H-D dealers ensued, the idea being to put the company in a better position to defend itself from the rapidly growing Japanese threat. Fuelled by what turned out to be a false dawn in America's economic outlook, production was by then running at record levels, with over 70,000 motorcycles built in 1973 alone. The quality control



difficulties were still blighting the company's image, however. AMF supervisors on the shop floor were becoming increasingly frustrated by their inability to change the customs and practices of decades.

Behind their desks, the AMF directors were also becoming increasingly convinced that they had bought a pig in a poke, a dry and empty hulk which had already had all the profitability squeezed out of it by successive generations of the Harley and Davidson dynasties. Even though vast sums of money had been pumped in by AMF, there seemed to be no way of turning the company back out of the cul-de-sac into which it had been driven by H-D's over-cautious model policy. The FLs had become expensive anachronisms in a marketplace newly populated by Japanese mega-tourers of superior performance, such as Honda's Gold Wing. The Sportster was likewise being ridiculed by mold-breaking superbikes such as Kawasaki's 900cc Z1. Worse still, the Middle Eastern oil-producing nations had hoisted the price of crude to a level which was suddenly threatening the viability of all heavy industrial concerns, Harley-Davidson among them.

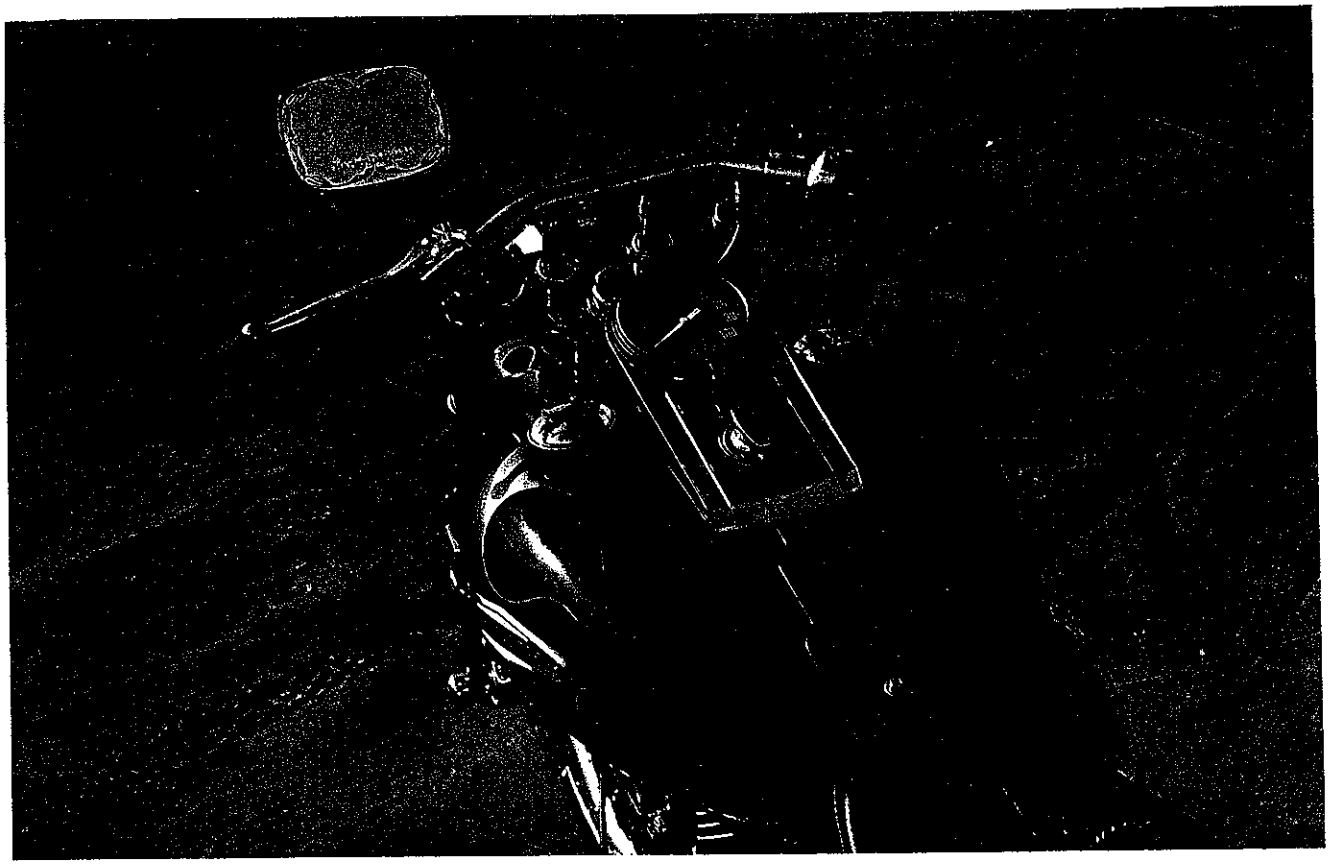
While considering their next move, AMF began recruiting engineers to work on H-D's listing ship. One of those engineers, Vaughn Beals, found himself lashed to the helm. By the end of 1977, his view from the bridge was daunting, to say the least. Annual production had dropped back down to 45,000 from a '76 figure of 61,000; a new Sportster variant, the XLCR Cafe Racer, had bombed in the showrooms; and there was a strong suspicion that the big four Japanese firms were 'dumping' their excess production on the American market, undercutting H-D by discounting their bikes to incredibly low price levels.

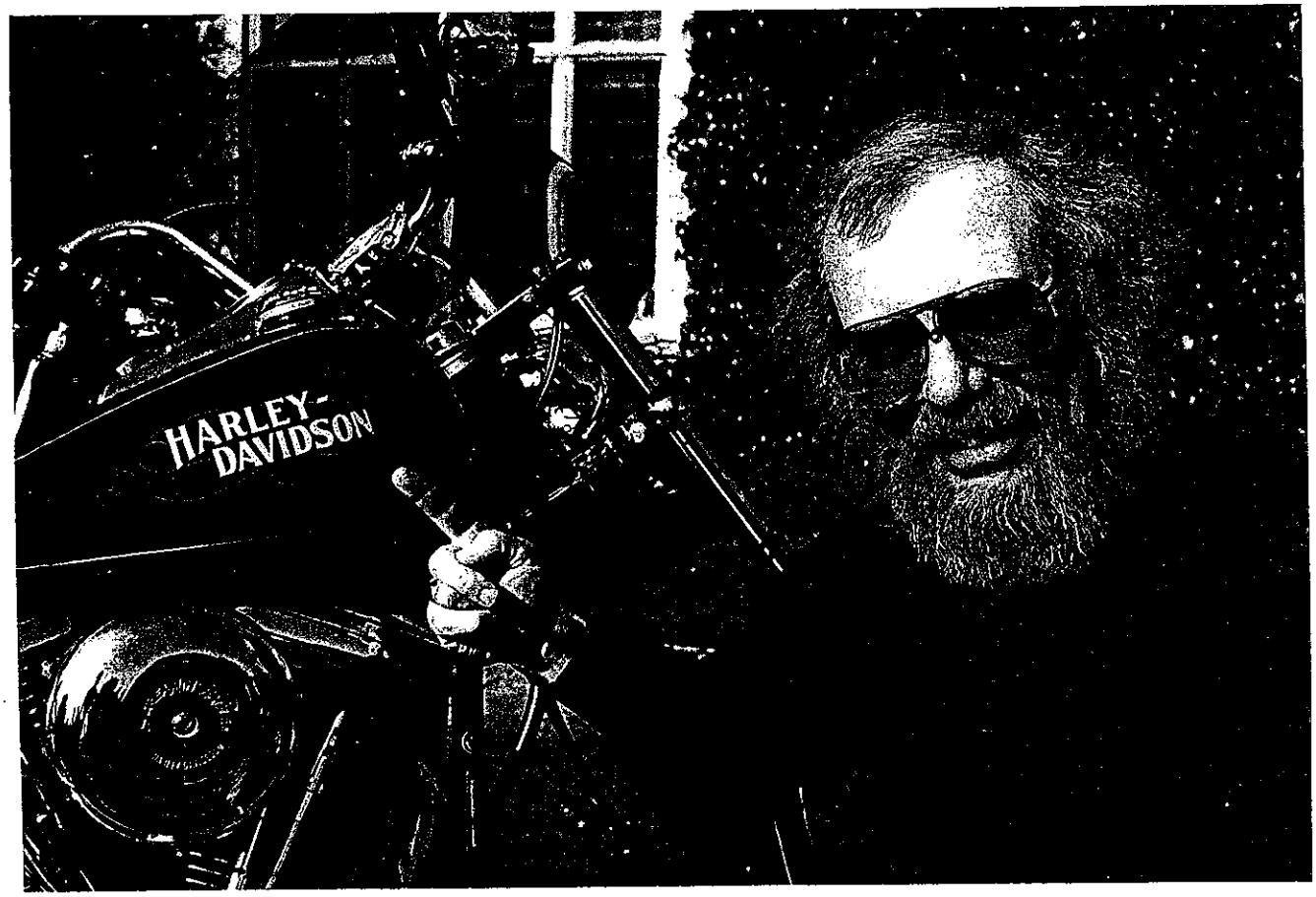
In 1978, AMF paid heavily for the luxury of testing this suspicion in front of the government's Tariff Commission. As had happened in 1951, H-D's case was effectively killed off by testimony from their own dealers, who gave vent to many years' worth of pent-up bile by denigrating Harley's regressive attitude in regard to model development and other matters. As had happened in 1951, the Commission listened closely to the damning evidence before throwing out H-D's claim of unfair Japanese competition.

Left: Late 80s Evolution-engined FXRS Low Rider is arguably the best all-round Harley street bike yet.

Right: Believe it or not, this 'hogged out' drag-racer style 93-incher started off life as a police bike.

Below right: Highest profile descendant of the founders still working for the old firm is Willie G Davidson. He has masterminded the styling changes which have revolutionised sales in recent years.

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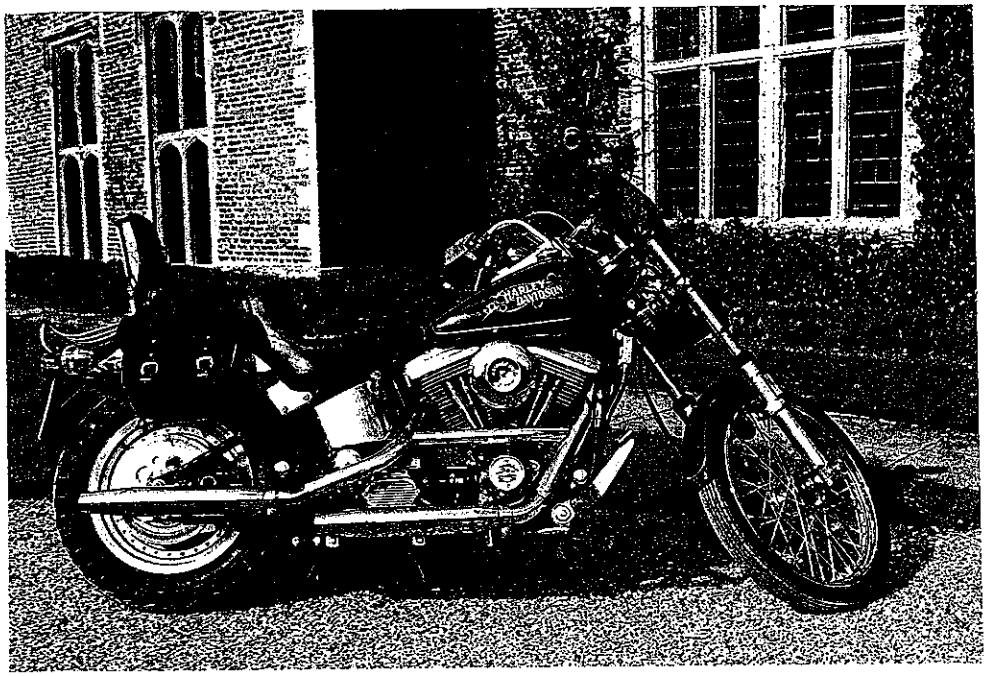


Left: 1987 Softail Custom married traditional hardtail look with the convenience of hidden suspension.

Right: Harleys are now finding their way into the garages of well-heeled professional types. . .

Below right: . . .as well as into the hearts of true enthusiasts who mortgage their houses to buy one.

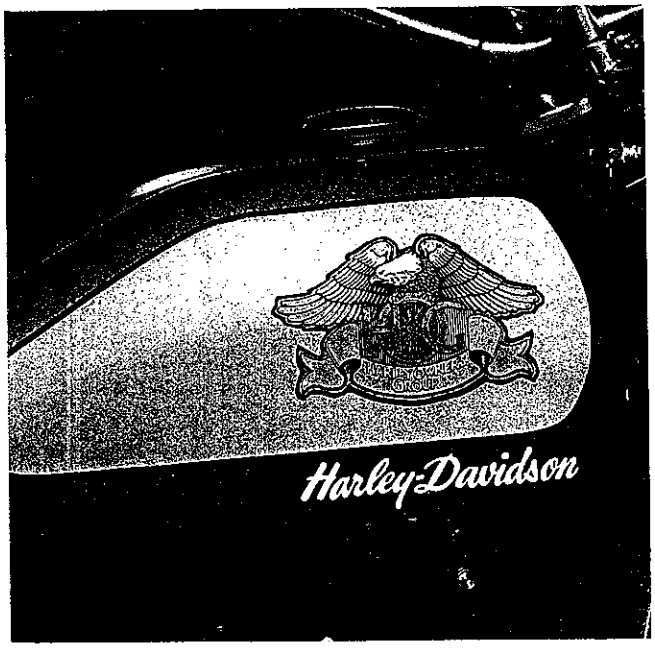
Below: HOG (Harley Owners Group) liaises with factory on product policy matters.

Licking their wounds, AMF's bosses fell back in a disorderly retreat to the bread and butter business of selling – or attempting to sell – motorcycles. To rekindle some interest in the ancient FL, its engine size was increased to the old sidevalver's capacity of 80 cubic inches (around 1340cc). By 1980, all the FLs and FXs were powered by this motor, killing off the once-classic 74ci/1200cc class (the 1200 would actually return to the range in the late 1980s, but only in the Sportster's unit construction format). A much more welcome step forward was the provision of a five-speed transmission on the 1980 FLT tourer, an advance which combined with vibration-isolating engine and footboard mounts to make this the most relaxed cruiser ever to bear the H-D badge.

Further evidence of the company's new-found commitment to enhanced rider comfort was to be found on the 1980 Sturgis, a new variation on the 'stripped-look' FX theme. Named after the annual bike rally venue in the Dakota hills, the all-black Sturgis was distinguished by its toothed-belt final drive. The claim that this would provide up to 50,000 miles of lubrication-free, adjustment-free motorcycling was not always borne out, and there were additional complications attendant upon the replacement procedure, but the Kevlar-reinforced Gates belt undoubtedly made a noticeable contribution to the FX's quietness and smoothness in operation. The Sturgis and the FLT, both of which were benchmark machines in their own way, had been designed by Erik Buell. A talented engineer, Buell subsequently left H-D to set up his own business producing purposeful XR1000-based specials aimed at the 'Battle of the Twins' races, first instituted at Daytona in the mid 1980s.

1980 was the crunch year for AMF. Cutting their losses, and having failed to find a suitable outside buyer, they offered Harley-Davidson up to a management-led buyout group headed by Vaughn Beals. Following lengthy negotiations throughout 1980 and the early part of 1981, the handover was finally completed on 1 June 1981, with Beals becoming the new Chairman. Reaffirming his commitment to the principle of combining the best aspects of the old and the new, Beals set out on the long and uphill road towards re-establishment of Harley's once-great name.

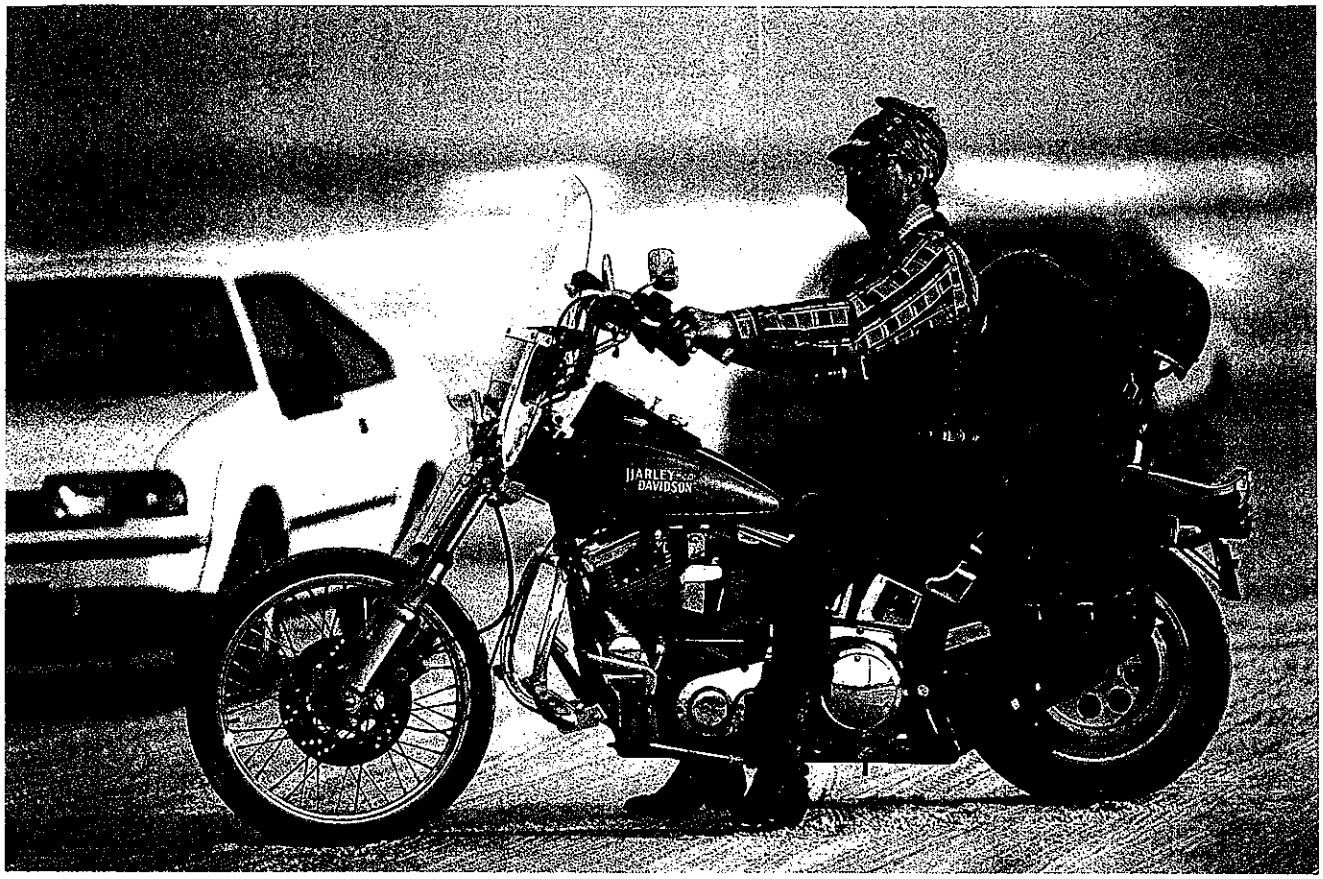
The journey began, symbolically at least, with an organised ride by members of the new management from the York assembly plant (which had been given over to the buyout group by AMF as part of the deal) to the Milwaukee engine-building facility. The last echoes of the takeover hullabaloo had only just died down when the cold shadow of economic recession fell across Harley's portals – not for the first time. Inflation was eroding the saleability of H-D's products from one side, while the continued landing of massive quantities of Japanese motorcycles in American ports was chipping great lumps out of their customer base. Discounting was once again rife, but even the



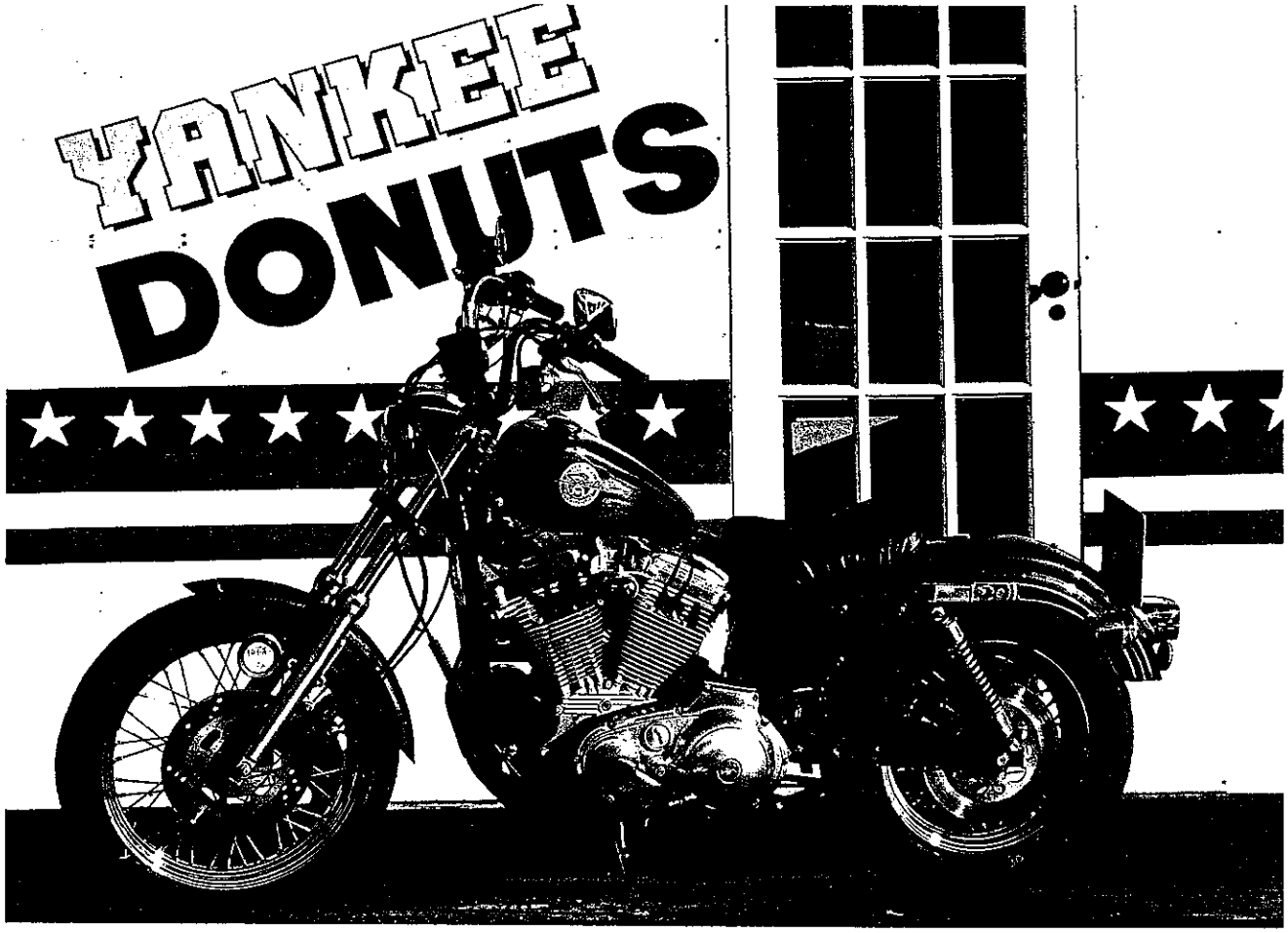
truly desperate discounting measures taken by the Japanese to reduce their massive overstocking in the States proved inadequate.

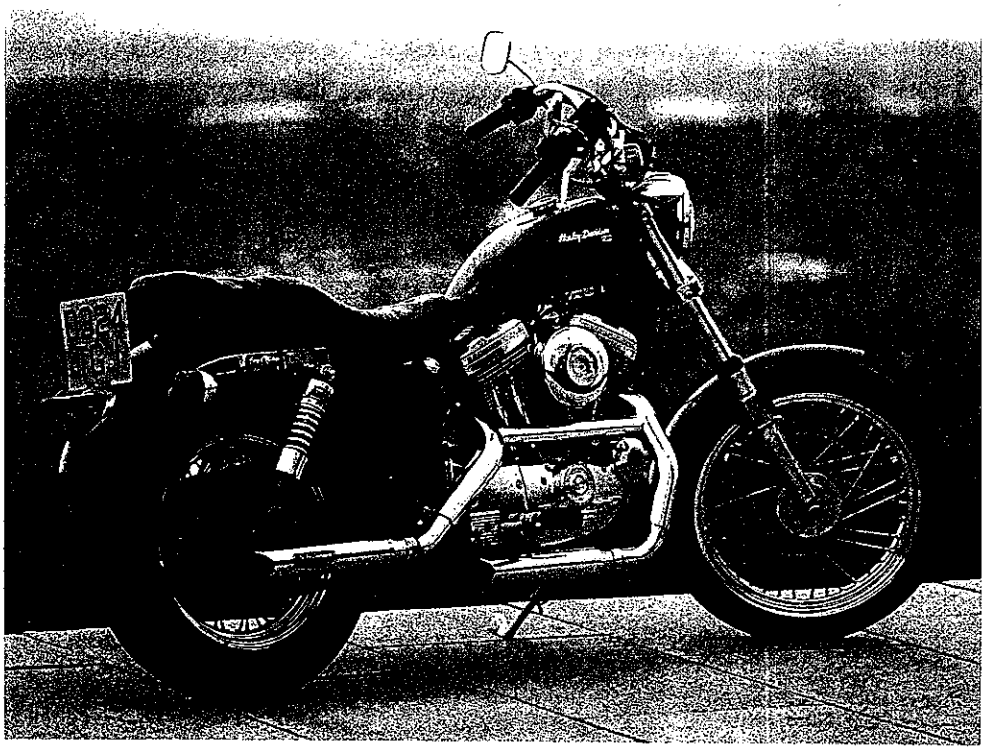
H-D were hit very hard at this time. Hundreds of workers had to be laid off as domestic sales all but dried up. A new stripped-to-the-bone Sportster, the XLX-61, was released with a bargain price tag of just $3995 in an attempt to stimulate some showroom action, and streamlined new 'materials as needed' (MAN) production line techniques were brought into force. This latter move gave rise to real financial benefits in the longer term, and to increased worker contentment in the short and long terms. But the short term financial benefits were not so easily gained. The company's financial position was still parlous.

So it was that in early 1983, Harley-Davidson were obliged to petition the Tariff Commission for a third time in search of relief from the damaging effects of cheap Japanese imports. Much preparatory effort went into ensuring that their case would seem more reasoned than it had on the two previous abortive occasions. Rather than tarring all Japanese motorcycles


HARLEY-DAVIDSON

YANKEE DONUTS

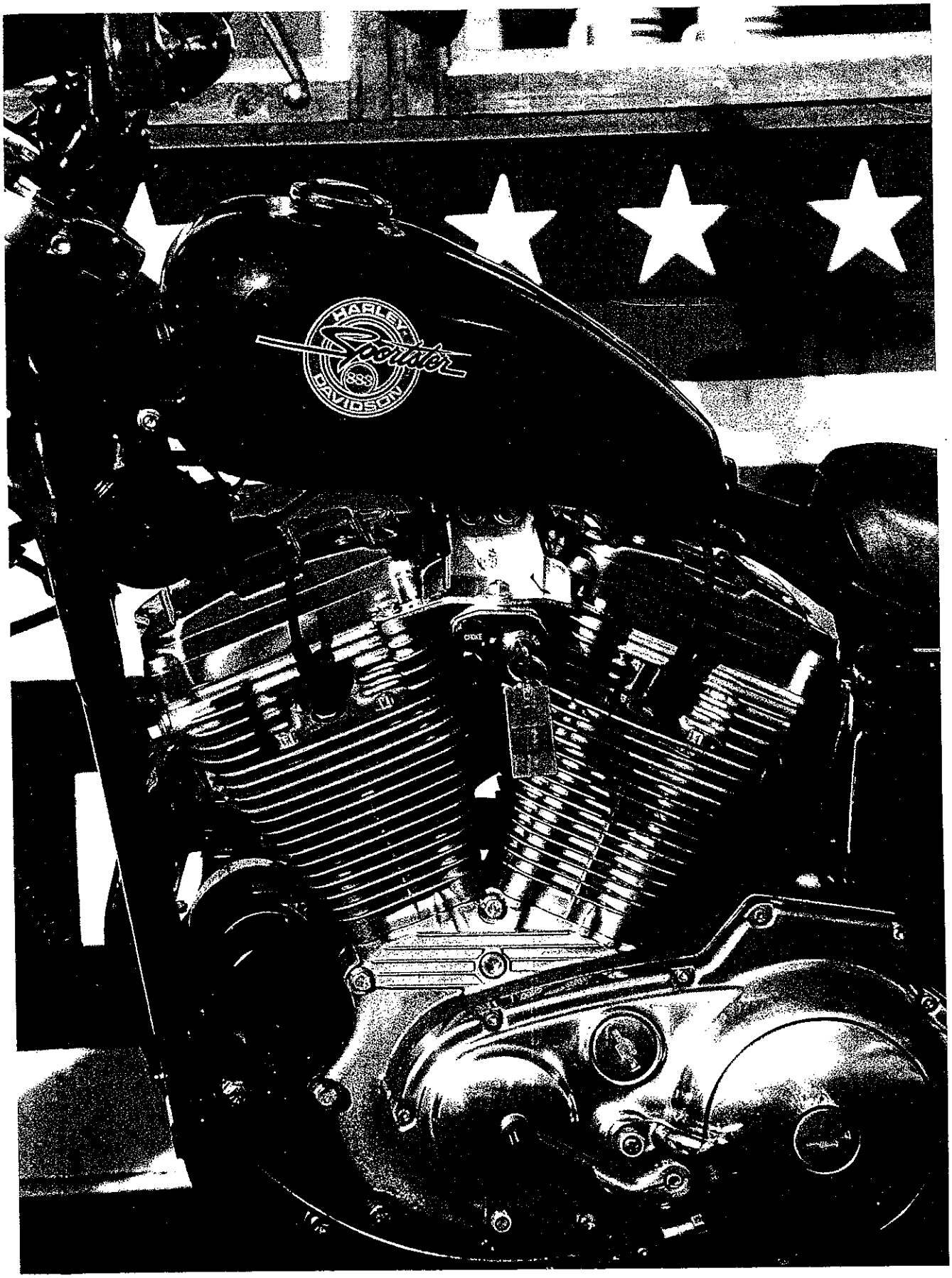


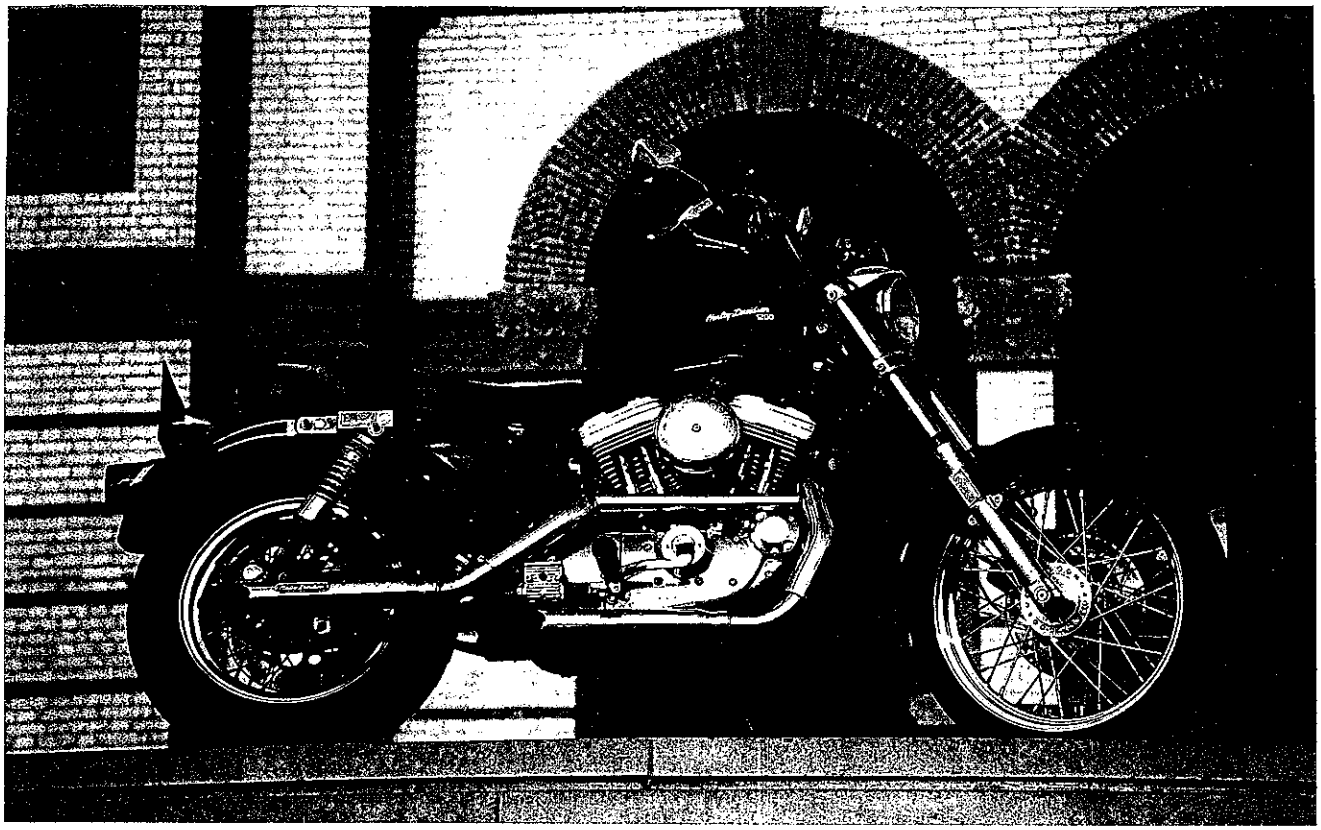


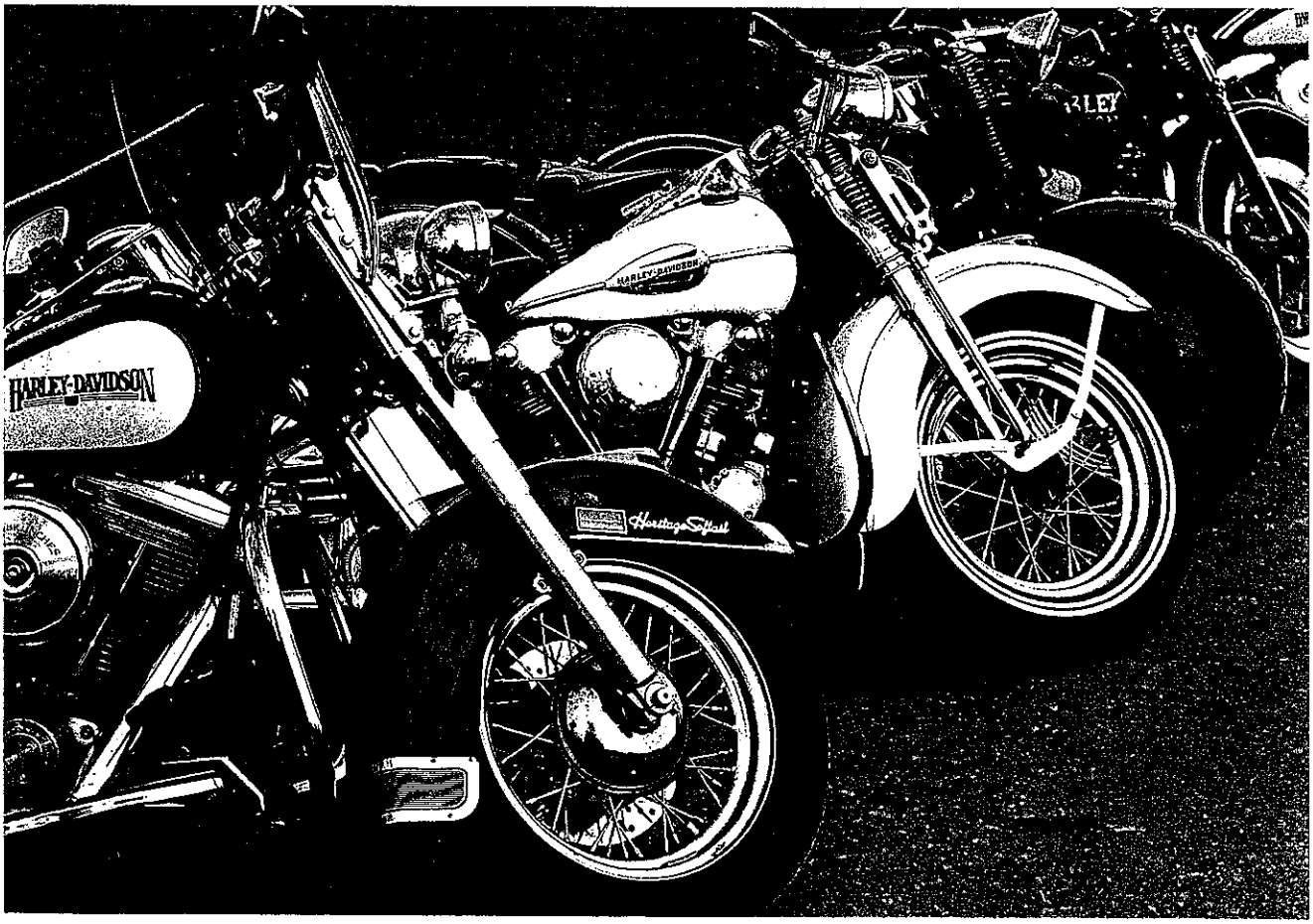
Above: Harley ownership was brought within the reach of the mass biking population in the 1980s with the arrival of the $3995 Sportster 883.

Left: For a reasonable extra outlay, the base Sportsters could be easily transformed into poky 1200s.

Right: The stuff of which dreams are made – a shiny new Sportster, fresh out of the crate.


HARLEY
Sportster
883
DAVIDSON




HARLEY-DAVIDSON
HARLEY-DAVIDSON
Heritage Softail

with the same brush, H-D's representatives sought to penalise only those displacing 700cc or more, since these were the only machines which could reasonably be claimed to have had an adverse effect on Harley's own sales.

The tactic worked, and in April 1982 brought onto the statute books a sliding scale of import tariffs which would diminish from high to low over a five-year period. The idea was to give Harley-Davidson some breathing space in which to establish themselves as true competitors in the American motorcycle market. Although the Japanese government initially threatened to erect retaliatory barriers in protest at the Commission's decision, discretion eventually proved the better part of valor. In the long run, there was some political expediency in graceful acceptance of the situation – quite apart from the very real possibility of terminally alienating the American consumer as a consequence of what would have been ill-advised direct action. As it happened, Harley's situation had improved so markedly before the end of the five-year period that they were able to offer to discard the protective cloak which they had fought so hard to drape around themselves.

1983 saw the formation – by H-D – of the 'Harley Owners Group', a choice of title which incidentally recognised the 'hog' nickname that had long been part of the Harley *argot*. At this time, rumors concerning H-D's collaboration with Porsche on the design of an all-new multivalve engine were gaining currency, but the new engine that actually made it out of the R&D shop in 1983 was the V2 Evolution motor.

As in previous reincarnations of the Milwaukee V-twin, the 'Evo' was externally identifiable by its new rocker boxes. Also new this time around was the use of aluminum alloy for both heads and cylinders. The ignition system featured twin advance curves, while the motor burned unleaded fuel in spite of its higher compression ratio. Pistons were flat-topped instead of domed, and ran inside iron liners.

The new motor soon showed itself to be both powerful and, a first for Harley, just about oil-tight. It was first featured in the new FXRS Sport Glide, an unfaired FX derivative with rubberised engine mounts and unprecedentedly generous ground clearance. The combination of the new engine in this excellent chassis resulted in what was without question the best all-round stock machine ever to roll off the H-D production line. Journalists who had previously either criticised all Harleys or acted as apologists for them were relieved to find a Milwaukee machine which could at last be fairly compared, like for like, with other 'normal' motorcycles.

Better yet, there were increasingly positive signs that the quality control problem was well on the way to being conquered. Warranty claims were well down, and the deep sheen of the paintwork and chroming was redolent of earlier and better times. Improved reliability records (and a very favorable tender) even persuaded the influential Californian Highway Patrol police force to switch back to Harleys after a long spell aboard Kawasakis.

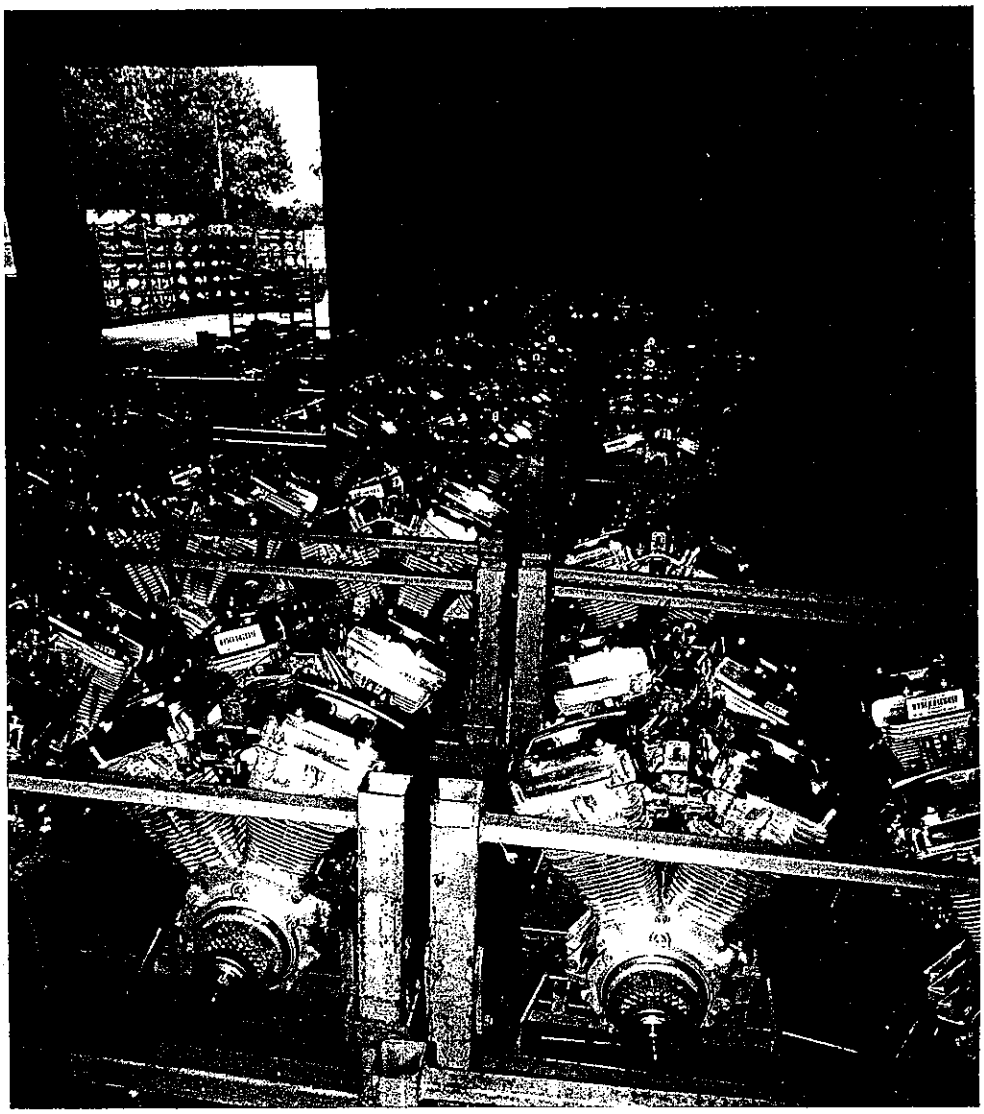
The new model for 1983 turned out to be a high performance version of the Sportster, the XR1000. What started out as a good idea somehow lost its way between the drawing board and the showroom; fast-sounding engine internals were fitted inside what was effectively the cheapest Sportster (the XLX), and a whopping price tag of a whisker under $7000 was attached to the result. Although real performance could be obtained by further expenditure on a factory-approved tuning kit, the basic machine was still a

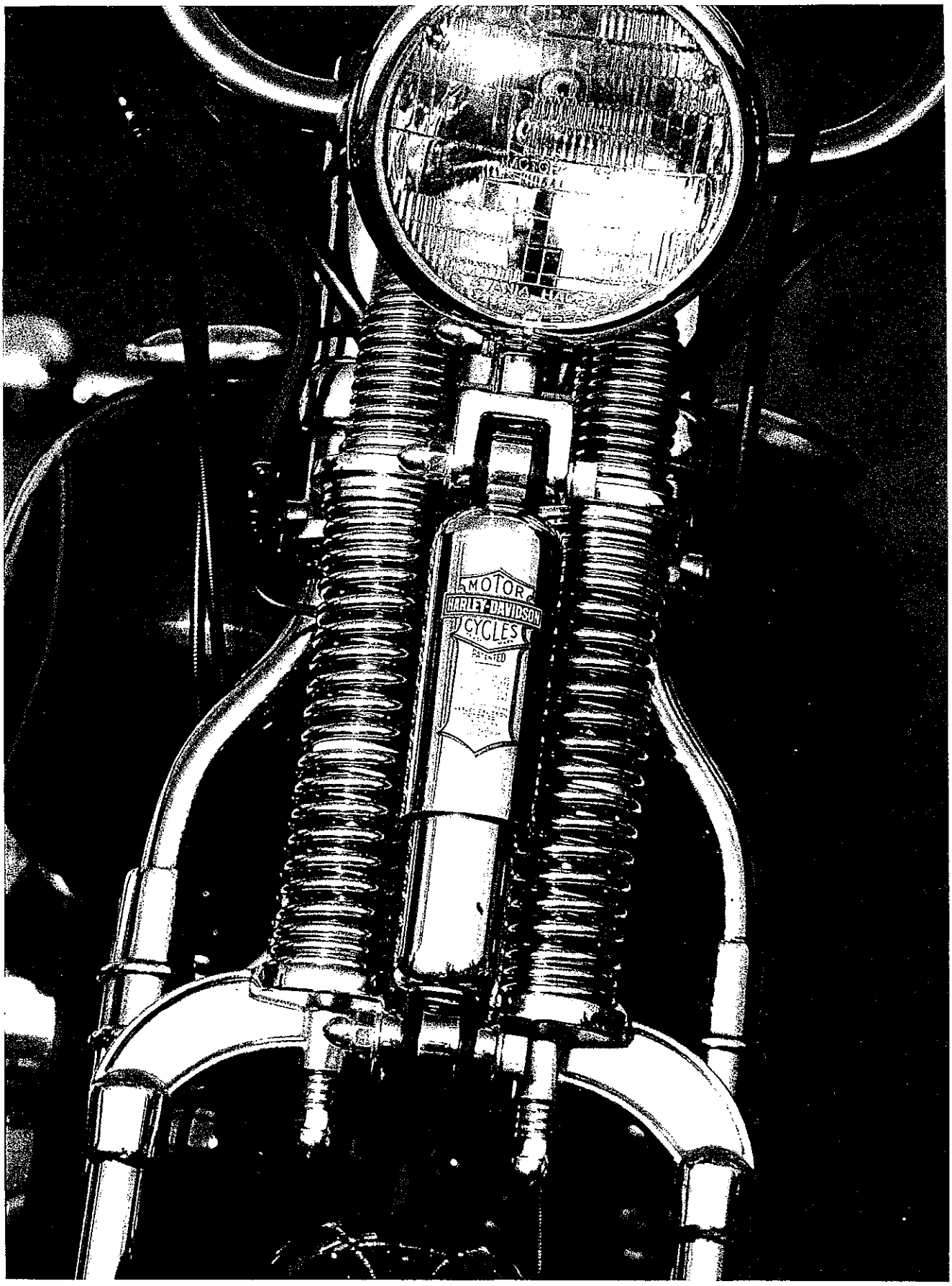
Above left: Going into the 90s, the Sportster's classic lines are finding more support from a motorcycling public increasingly disenchanted by the offerings from Japan.

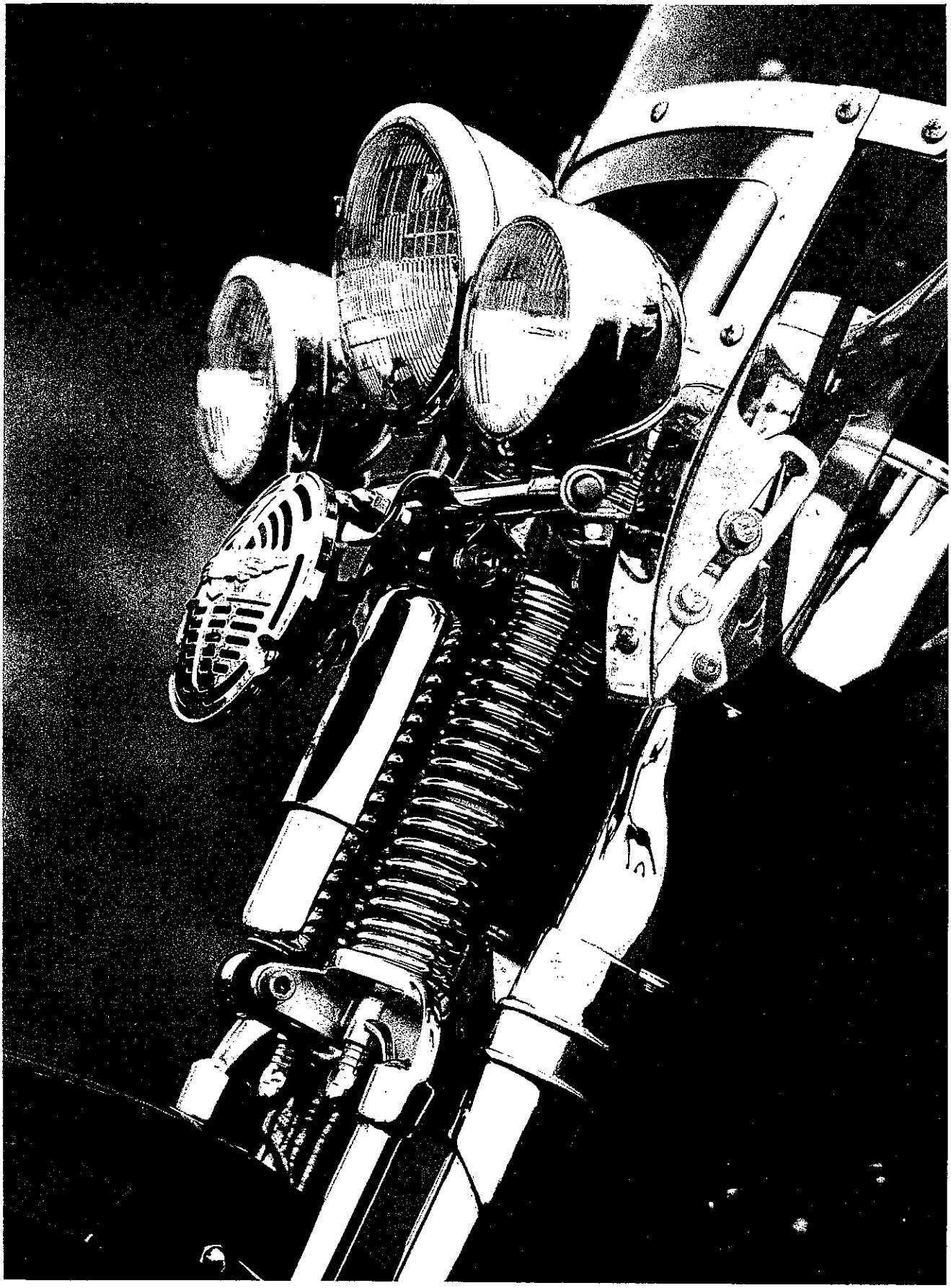
Below left: New lamps for old – the modern Heritage Softail (foreground) rubs shoulders with its knuckleheaded forebear.

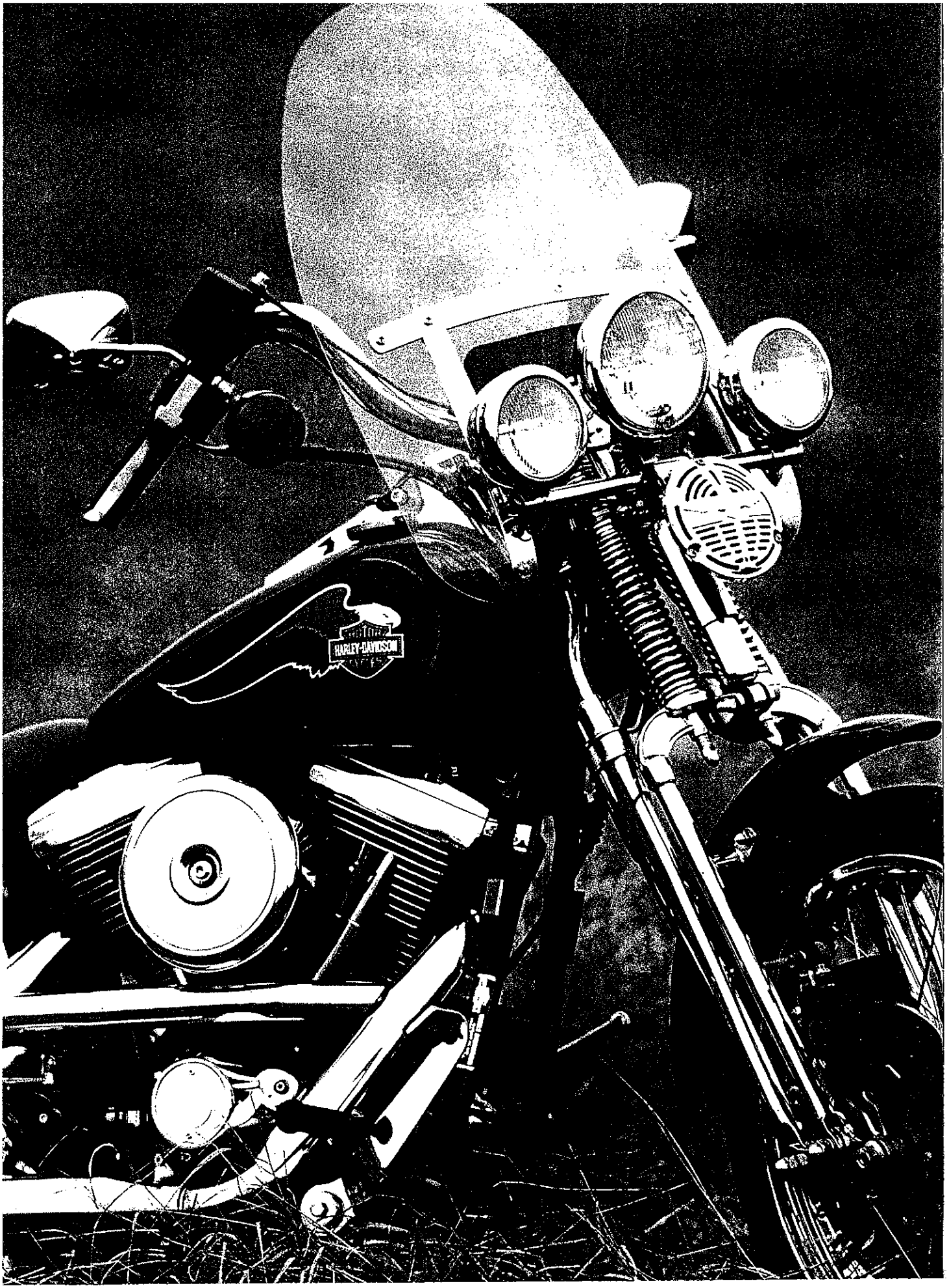
Right: Oh, for a giant-size shopping trolley... Evolution engines await shipment.

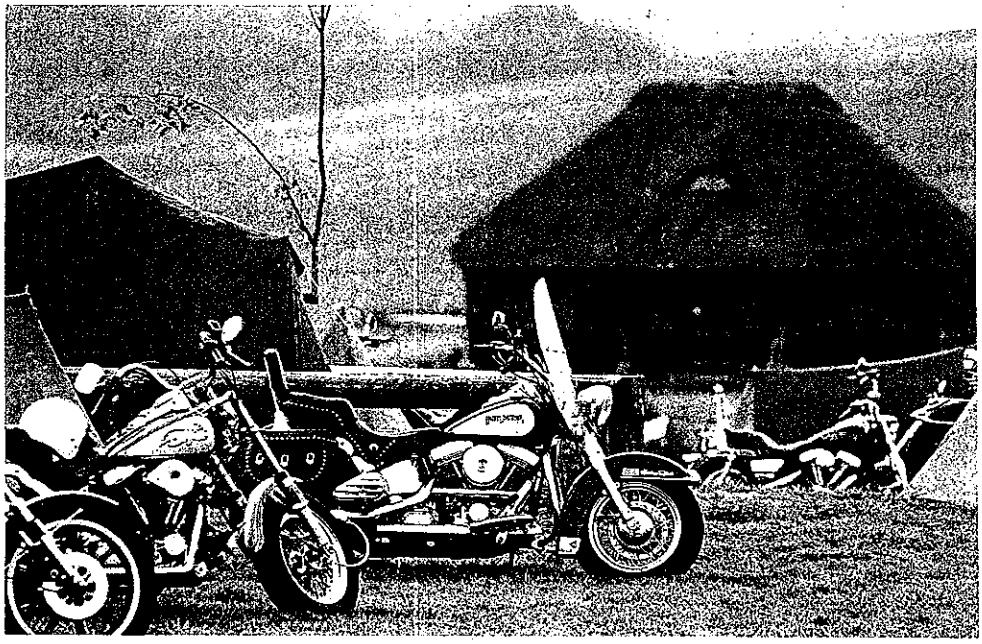
Overleaf: The revival of the springer front end struck a chord among old and young customers, and worked reasonably well too.




MOTOR
HARLEY-DAVIDSON
CYCLES

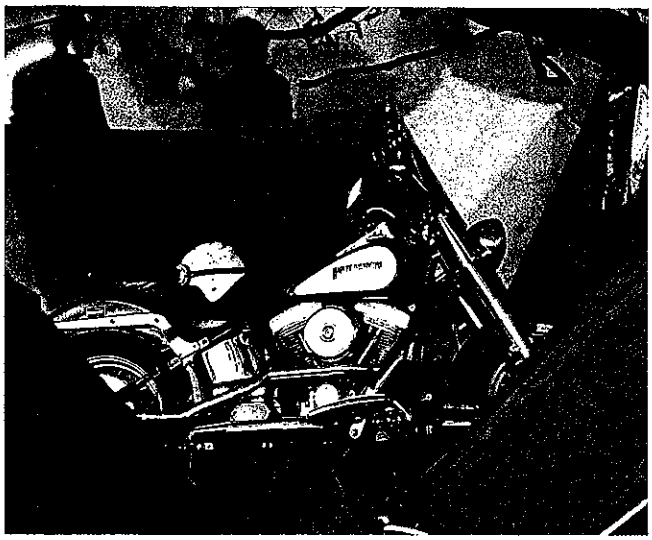



HARLEY-DAVIDSON



Left: The only real drawback with the Softail Springer, in the wet at any rate, was the limited grip offered by its skinny front tire.

Right and below: The Heritage Softail, featuring a solidly-mounted Evolution engine, hearkened back to the hardtail Hydra Glide of the 1950s.



base model Sportster, with all the shortcomings that that entailed. XR1000 production ran for a couple of years and then faded away, a sad end to what could so easily have been a great bike.

Willie G Davidson's evident willingness to spend time with and listen to the people who were buying his motorcycles was also beginning to show dividends in the mid-1980s. Taking an ever greater role in all aspects of product design, Davidson quickly identified a nostalgic element in the aspirations of customers both old and young, potential or existing. The FX 'Softail' of 1984 was the first tentative realisation-in-the-metal of this apparent yearning.

Embodying the styling appeal of the old rigid-rear-ended classics of the forties and fifties, and the comfort and sophistication of a hidden underframe suspension system, the Softail offered the best of old and new in a single attractive package. Originally sold with a four-speed transmission and kick-start lever so as to emphasise its traditionalism, even these sops to the die-hards were abandoned after the 1985 model year in favor of five speeds and an electric foot. Additional transmission sophistication was brought to bear on the 80-inchers in mid-1984, with the incorporation of a wet multiplate clutch. The solid engine mounts remained on some models, however (including the Softail), making available the dubious pleasure of Harley's equally 'traditional' hammering vibrations to anyone who cared to explore the upper reaches of the engine's rev range.

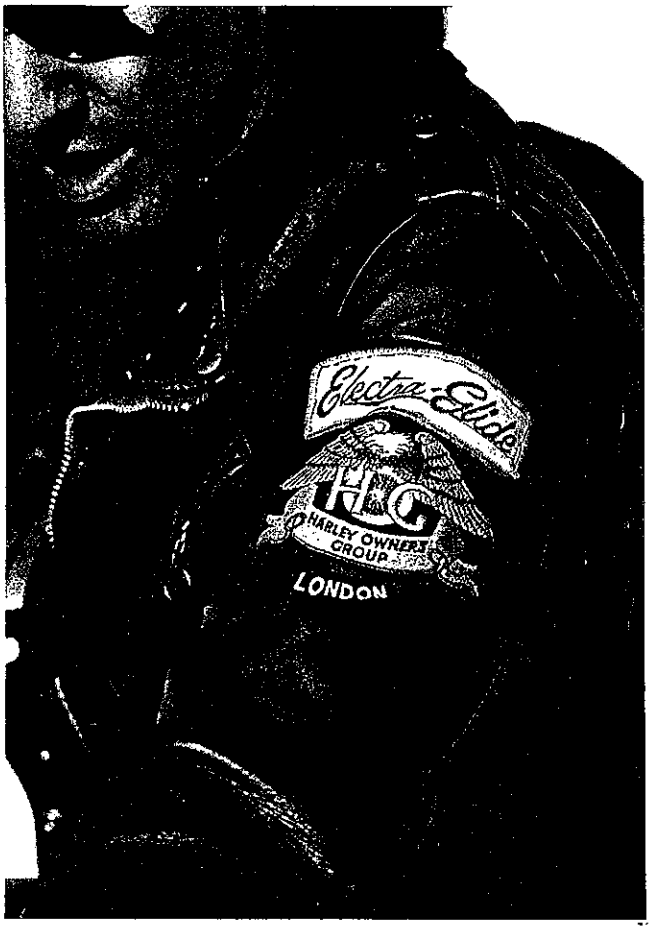
Diversification was the name of the game in the mid 1980s, with the purchase of a three-wheel sports car manufacturer (Trihawk) in '84 and the securing of various contracts to make gunshell casings for the US Navy. While the Trihawk connection is at the time of writing still to be exploited in any obvious way, the munitions contracts have proved very lucrative, allowing H-D to move into yet more areas outside motorcycling. Their purchase of the highly profitable Holiday Rambler motorhome group in 1986 was perhaps the most visible example of these new-found acquisitional activities, although British enthusiasts will doubtless also recall Harley's takeover of the Armstrong off-road motorcycle specialists in 1988.

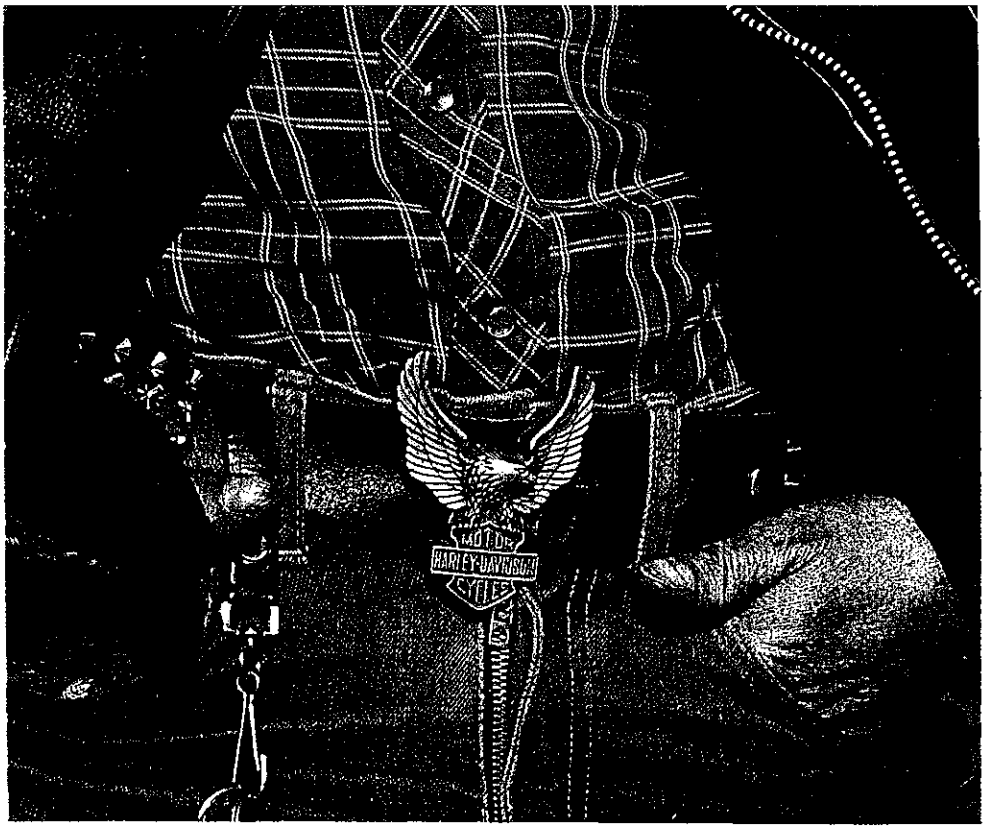
1986 was notable for the unveiling of the Evolution-powered Sportsters, available once more in the old 883cc capacity as well as in 1100 and (later) 1200cc alternatives. The transmission ratios were closed up a little too, but the real solution – a five-speed box – is yet to make an appearance. The ultimate expression of H-D's nostalgia-driven return to prosperity did make its appearance in 1986, however.

The Heritage Softail was an unashamed replica of Harley's 1949 FLH Hydra Glide, complete with pseudo-hardtail frame, deeply valanced mudguards, and optional fringed leather panniers. Sensibly, white plastic panniers were *not* on offer this time. Though priced at the top end of the range, the superbly detailed Heritage soon found a ready market. Fitted with performance add-ons from the company's recently introduced 'Screaming Eagle' selection of tuning parts, the Heritage could even be made to move with what many might consider to be indecent haste for such a gentlemanly conveyance.

Rather more curious was the company's 1988 decision to reintroduce springer forks on the FXSTS Springer Softail, a full eighty years after their first appearance on the front of a Harley-Davidson and, more significantly perhaps, forty years after they had made an unlamented departure in favor of telehydraulic forks. Although almost universally praised in its homeland, some non-American testers found the Springer's skinnily-tired front end to be a trifle unpredictable, not to say skittish, in damp conditions. Such criticisms as there were went largely unnoticed amid another enthusiastic take-up by the growing numbers of motorcyclists in search of something a bit different.

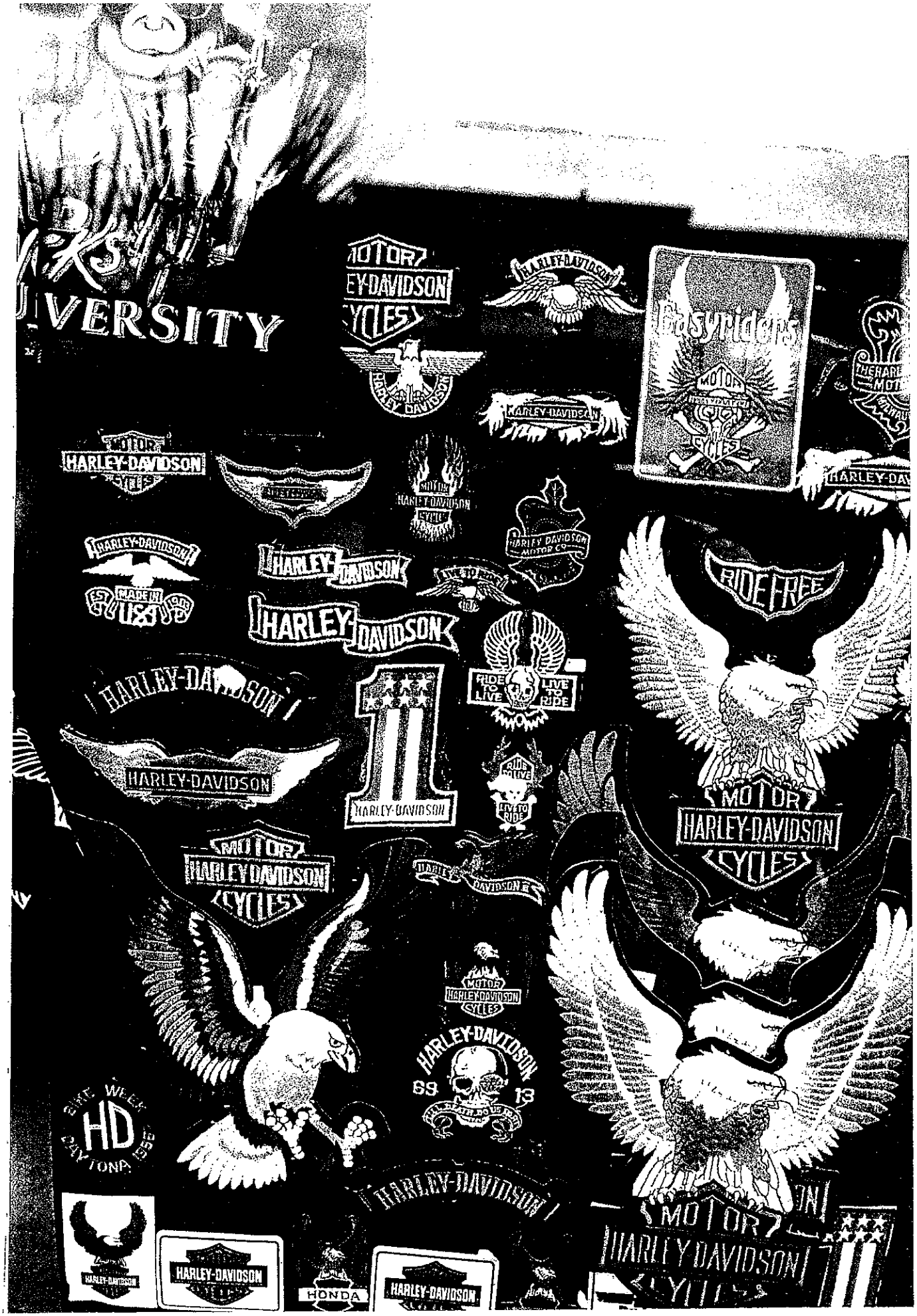
Niggles aside, the Springer is an appropriate machine on which to wrap up this condensed history of one of the world's most charismatic automotive marques, for it typifies the weird dichotomy behind Harley-Davidson's current success. The idea of putting new wine in distinguished-looking old bottles might sound less than honest, but if the wine is good enough to carry off the subterfuge, who are we to complain? And, like fine wines, Harley-Davidsons possess a unique capacity to improve with the passing of the years. Long may the vintages continue to be laid down.





Insignia and artefacts are an inseparable part of the Harley-Davidson experience, and identify the wearer as a believer in the true way. Again, the factory has legitimised this aspect of the sport by producing its own range of highly profitable geegaws. You can even buy removable tattoos now for that street-credible look in the bars at Daytona Beach.

VERSITY
MOTOR
HARLEY-DAVIDSON
CYCLES
Easyriders
RIDE FREE
RIDE TO LIVE
LIVE TO RIDE
HARLEY-DAVIDSON
MADE IN
BIKE WEEK
HD
DAYTONA 1966
69
13


VERSITY
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HARLEY DAVIDSON
MOTOR CO
RIDE FREE
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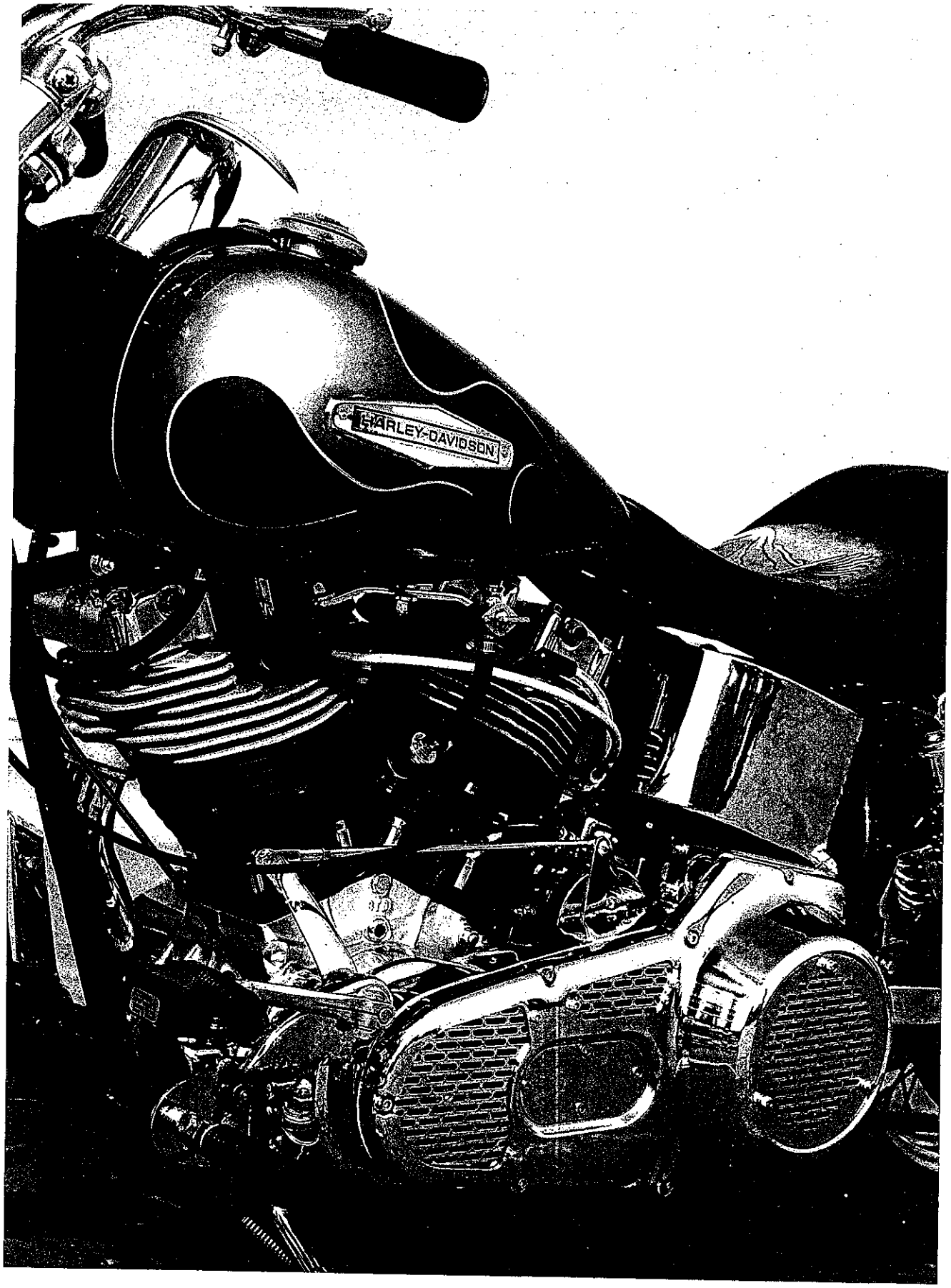
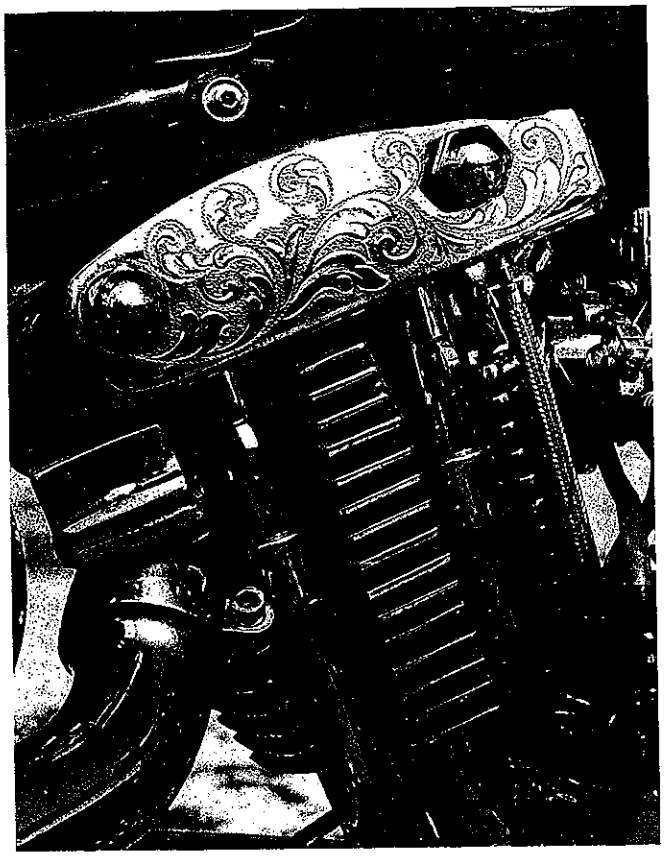
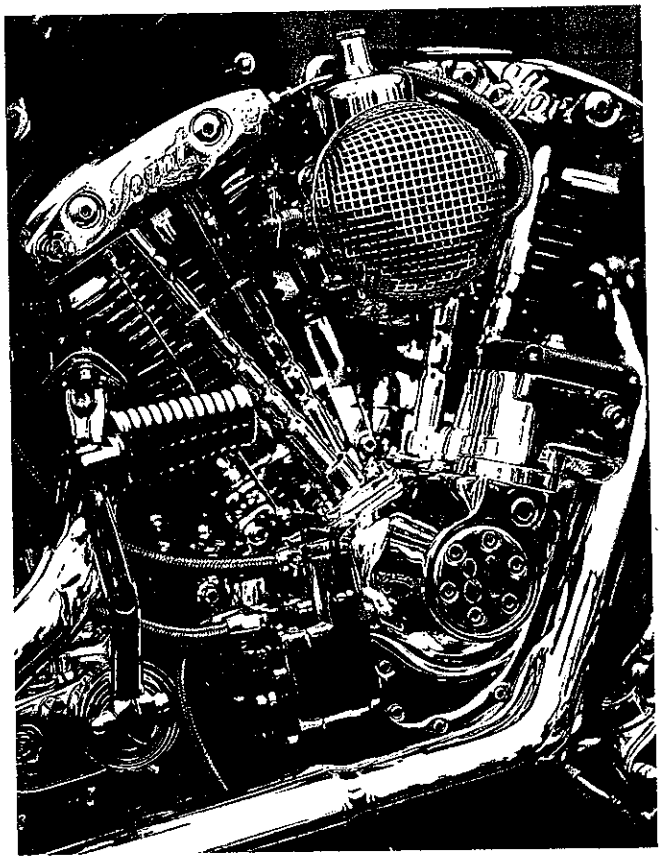
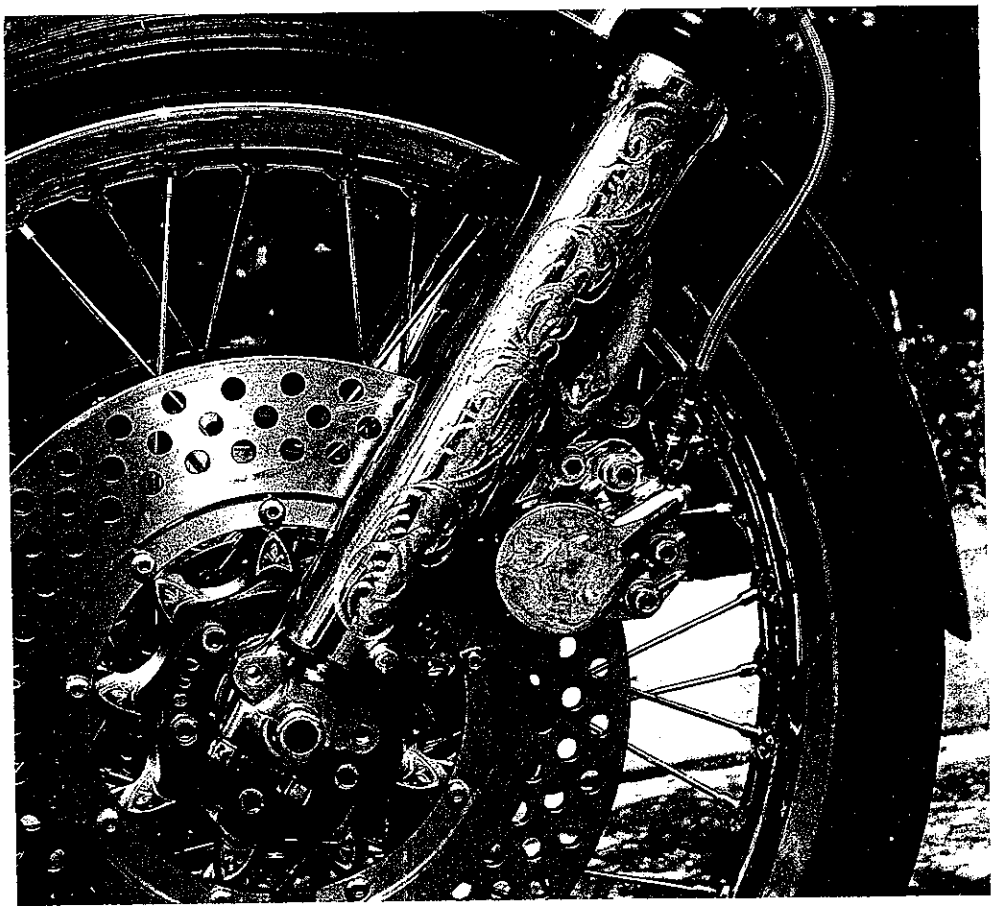

HARLEY-DAVIDSON

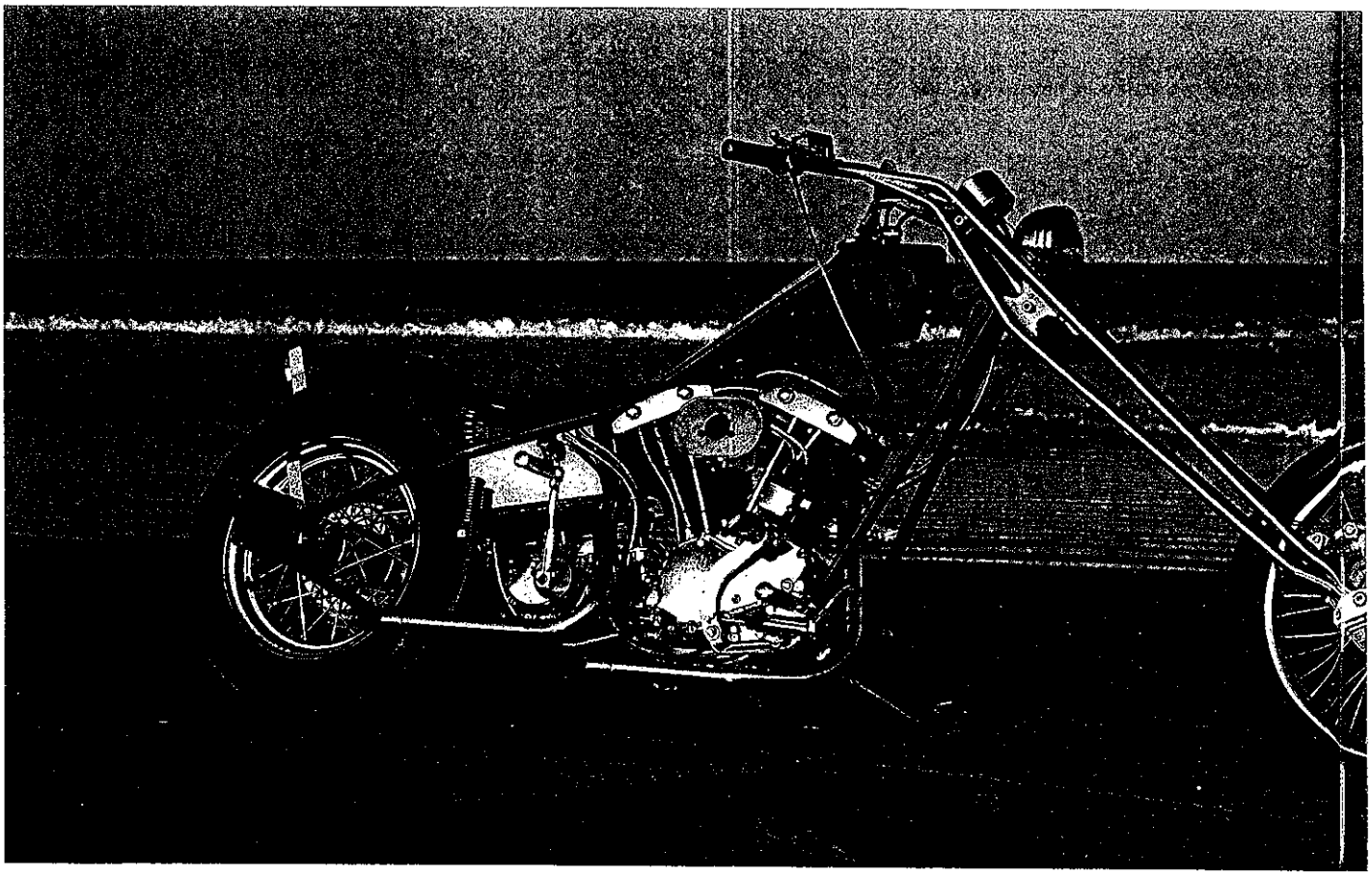


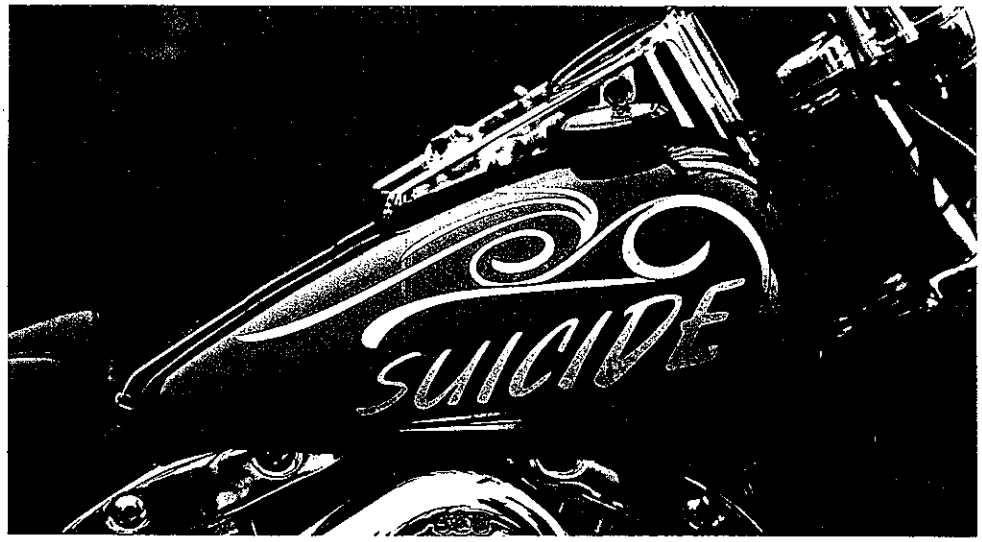


Engraving, gold plating, even jewel-encrusting – there are no limits, either aesthetic or financial, to what some Harley owners will do to their trusty steeds. In the modern age of factory-prepared 'customs', it is becoming increasingly difficult to make your own personal statement, but that doesn't mean you can't try. . .

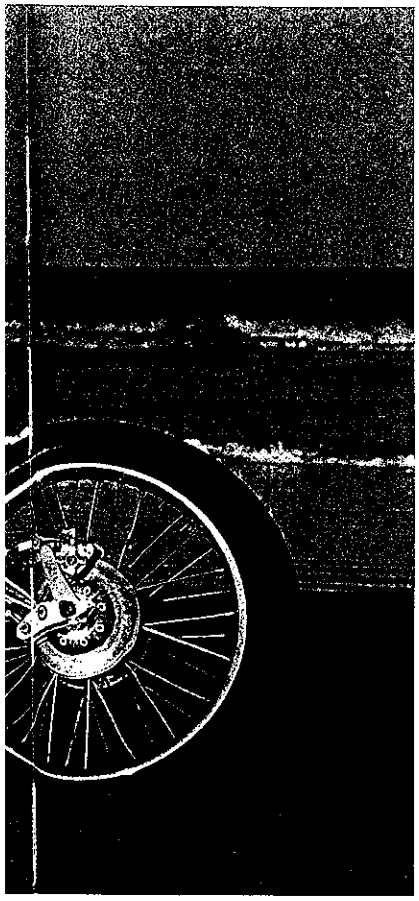


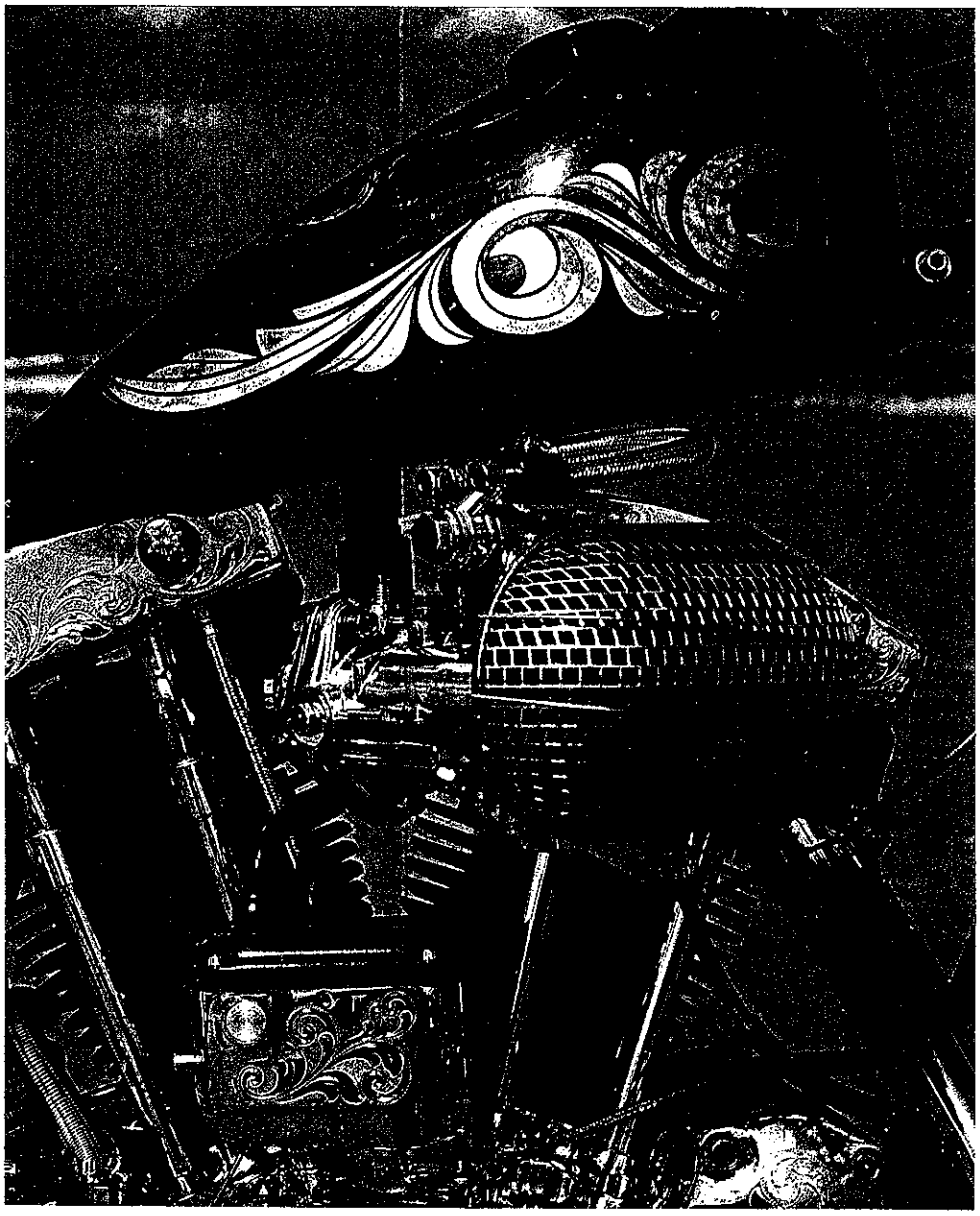
HUNT'S
HAWG



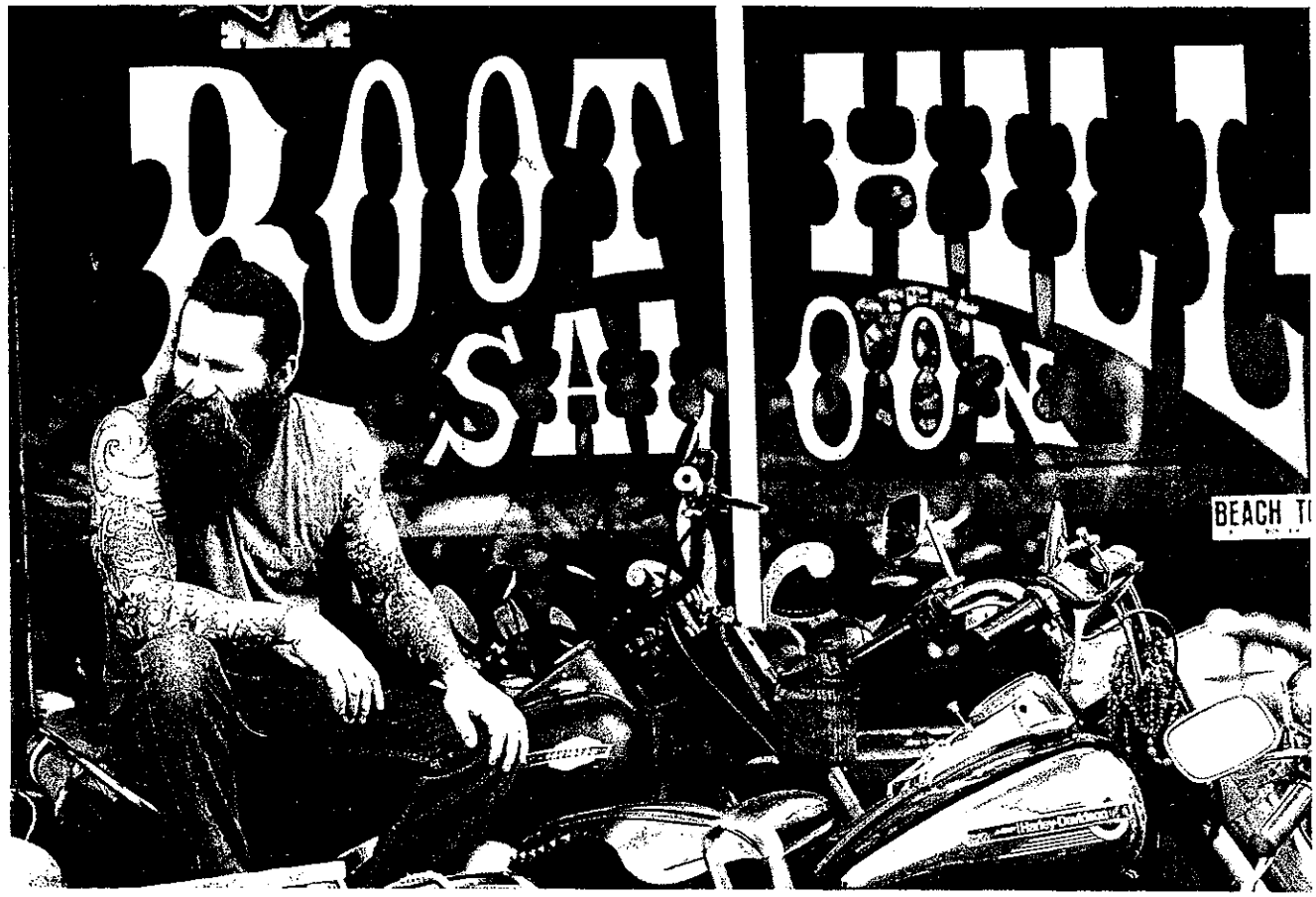


There is no doubting the talent of many customisers, particularly in the United States, where there exists a wide and sophisticated range of painting and plating facilities. One positive upshot of the factory's recognition of these customer desires has been a continual rise in the quality of their own painting, which is now second to none.

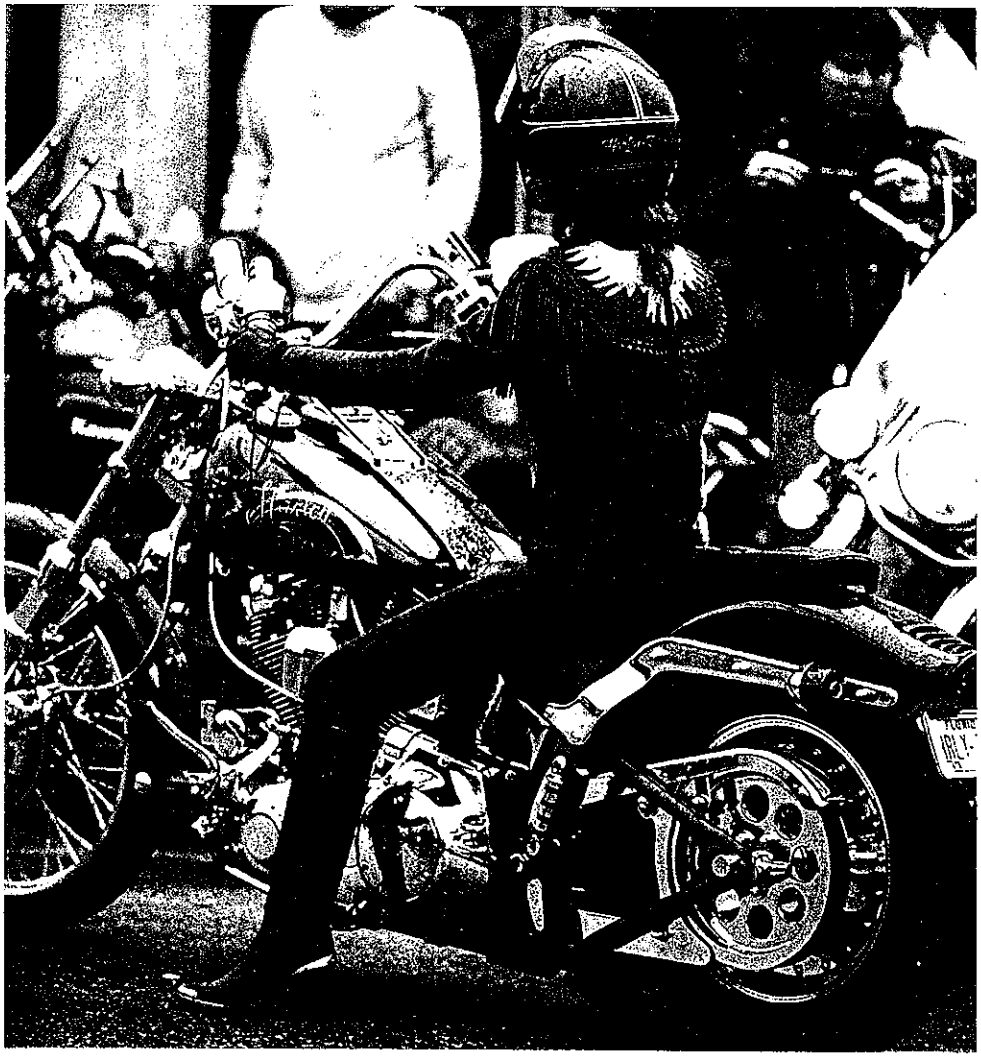




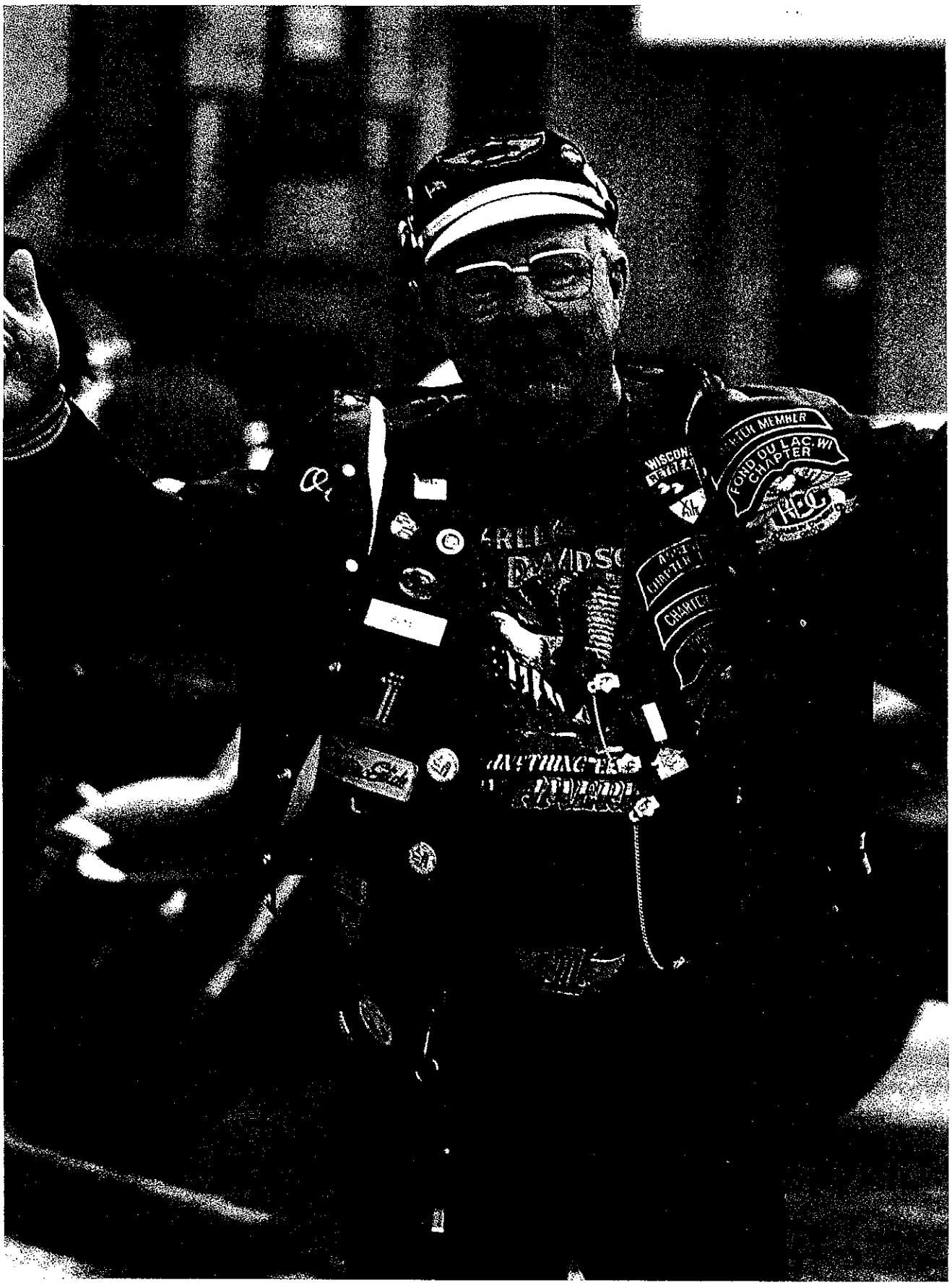
ONE
WAY


BOOT
SAL
HILL
OON
BEACH

Every February, thousands of motorcycling enthusiasts from all over the world congregate in Daytona, Florida. Ostensibly, the event is a week long series of road races held inside the Daytona speedbowl, but in practice the vast majority of spectators are there for the social scene, to cruise downtown bars. . . or simply to watch one another.



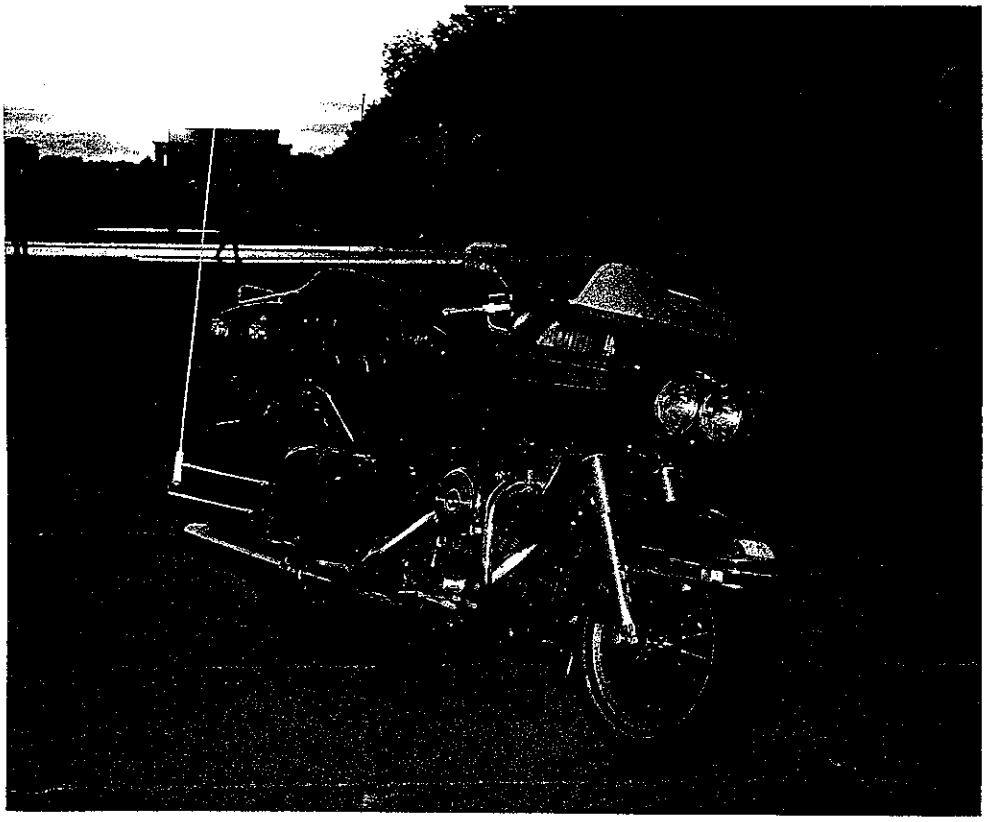
M.C. LEEUWARDEN


FOND DU LAC, WI
CHAPTER
H.O.G.

Selected Specifications

	JD/JDH 61 & 74 cu.in.	61-E	Hydra-Glide	XL Sportster	Duo-Glide	Electra-Glide	FX Super Glide
First Year of Manufacture	1928	1936	1949	1957	1958	1965	1971
Engine Type	Twin Cam	Knucklehead	Panhead	XL-Shovel	Panhead	Panhead (1965)	Shovelhead
Capacity	1000/1200cc	1000cc	1200cc	883cc	1200cc	Shovelhead (1966 on)	
Bore and Stroke (inches)	3.31×3.50/ 3.41×3.50	3.31×3.50	3.43×3.96	3.00×3.81	3.43×3.96	1200cc 3.43×3.96	1200cc 3.43×3.96
Horsepower Rating (claimed)	8.68hp/9.5hp	40bhp	55bhp	40bhp	55bhp	60bhp	65bhp
Transmission	3 speed	4 speed	4 speed	4 speed	4 speed	4 speed	4 speed
Weight (wet)	575lbs	600lbs	600lbs	500lbs	600lbs	780lbs	575lbs
Top Speed (est)	90mph	98mph	100mph	85mph	100mph	97mph	99mph

	XR 750 (Alloy)	FXS Low Rider	FLT Tour Glide	FXB Sturgis	FXRS Low Glide	FXST Softail
First Year of Manufacture	1972	1978	1980	1980	1982	1985
Engine Type	XL-Shovel	Shovelhead	Shovel/Evo	Shovelhead	Shovel/Evo	Evolution
Capacity	750cc	1200cc	1340cc	1340cc	1340cc	1340cc
Bore and Stroke (inches)	3.12×2.98	3.43×3.96	3.50×4.25	3.50×4.25	3.50×4.25	3.50×4.25
Horsepower Rating (claimed)	90bhp	65bhp	65bhp	65bhp	65bhp	65bhp
Transmission	4 speed	5 speed	5 speed	4/5 speed	5 speed	4 speed
Weight (wet)	320lbs	640lbs	795lbs	630lbs	640lbs	650lbs
Top Speed (est)	130mph	100mph	98mph	100mph	102mph	108mph



Left: The ultimate expression of luxury touring – the FLT Tour Glide.

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HARLEY-DAVIDSON

Tony Middlehurst is a highly experienced motorcycle journalist and author. An avid motorcycling enthusiast, he has travelled all over the world testing bikes, including thousands of miles on many different Harleys. A motorcycling writer for more than 10 years, he is a former editor of the major British magazine *Superbike* and his previous publications include *The Pictorial History of Motorcycling*.

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Front cover: A classic Harley – a 1939 61 cubic inch overhead valve V-twin 'Knucklehead'. (Photo Andrew Morland).
Back cover: One of the most famous emblems of the world of motorcycling. (Photo Don Morley).

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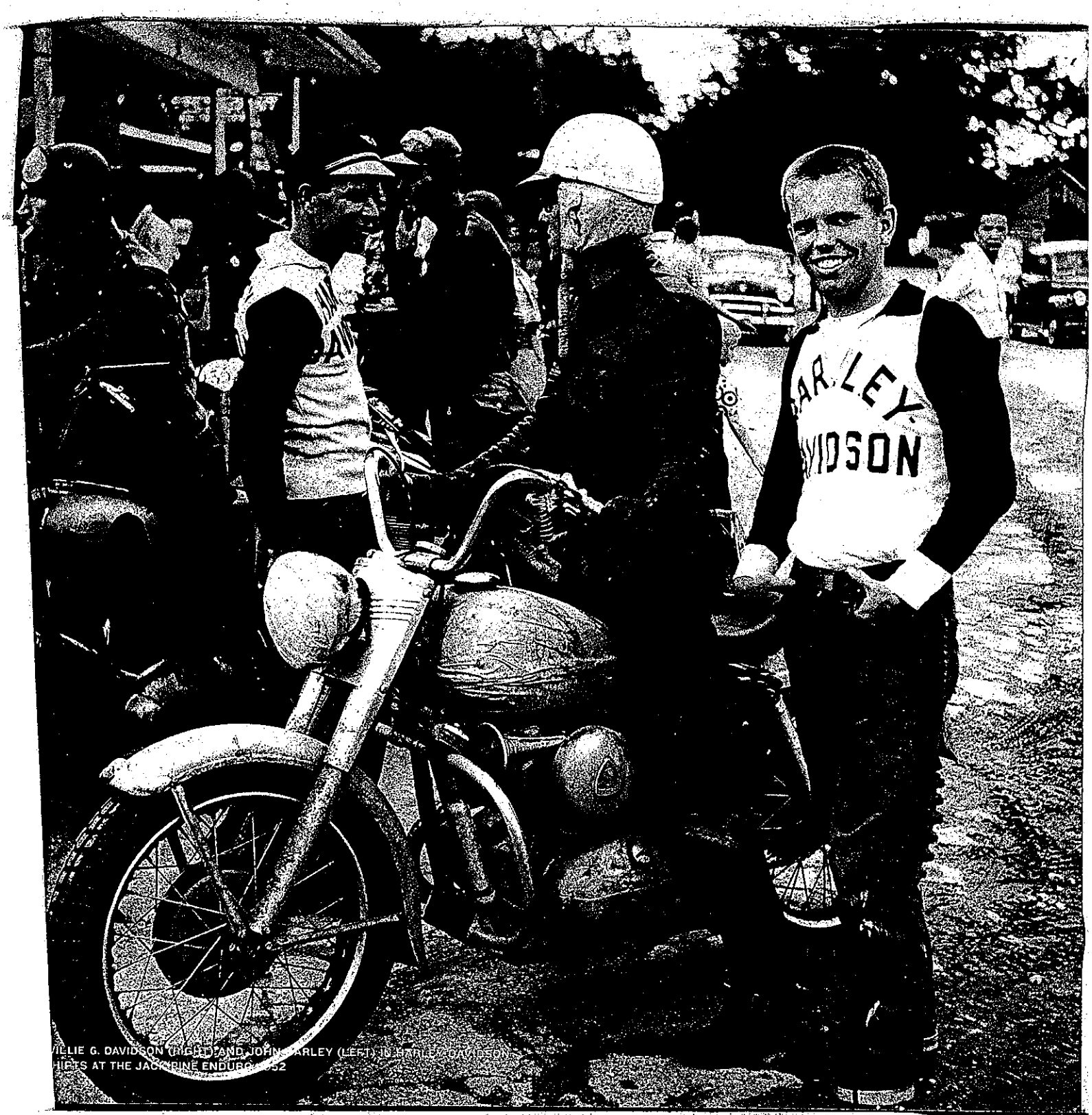
100 YEARS OF HARLEY-DAVIDSON

BY WILLIE G. DAVIDSON



VILLIE G. DAVIDSON (RIGHT) AND JOHN HARLEY (LEFT) IN HARLEY-DAVIDSON
HIRTS AT THE JACKPINE ENDURO, 1952

100 YEARS OF
HARLEY-DAVIDSON

BY WILLIE G. DAVIDSON

Produced by MELCHER MEDIA, INC. *for*

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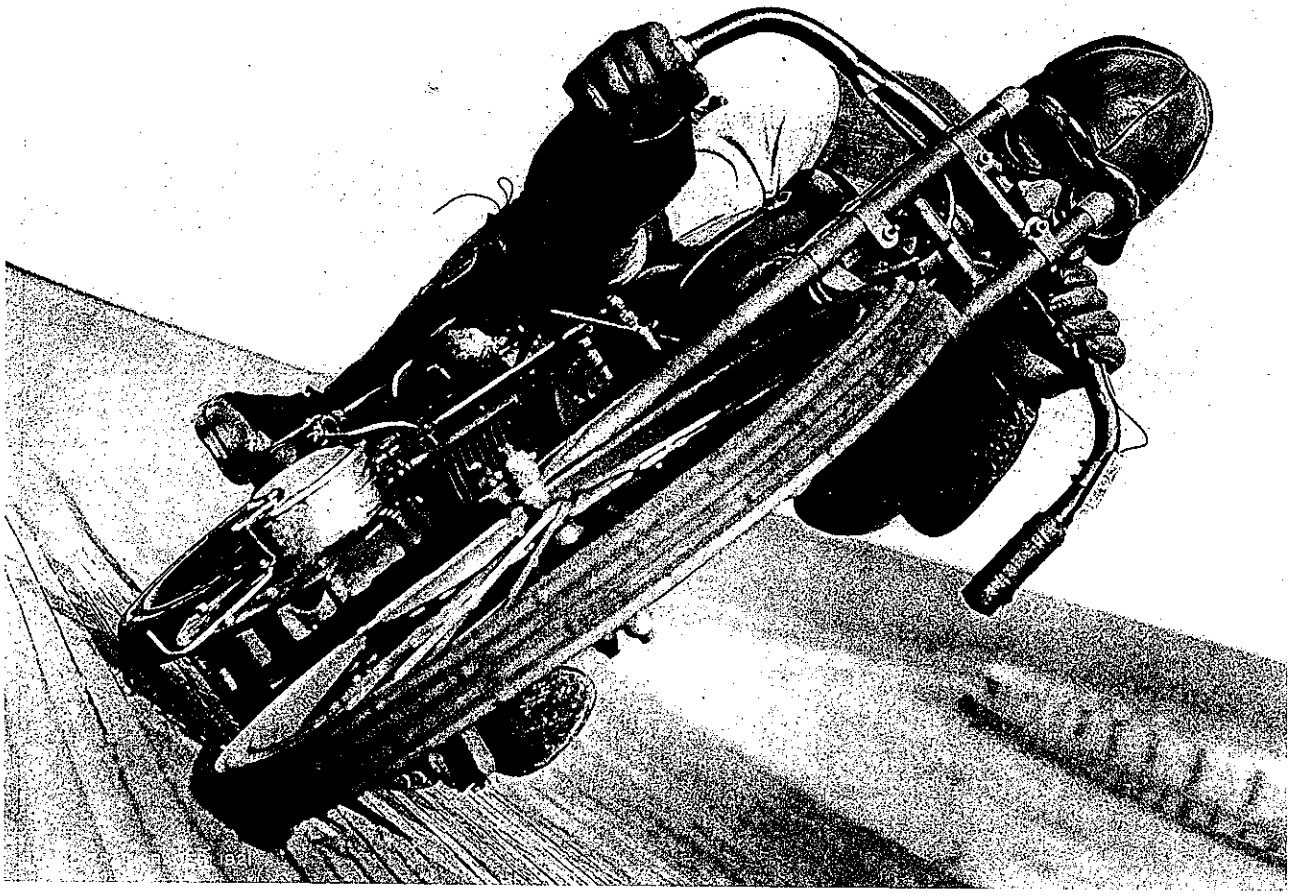


The role that I have lived throughout

my life as a contributor to this great company has been a fortunate one. My predecessors were here to protect and promote the brand, and I have tried to keep that flame burning through my design and by being involved with the sport of motorcycling.

In fact, I truly believe that our brand belongs to everyone involved with our company—the riders, dealers, employees, and enthusiasts throughout the world. And it is our job to carefully manage and protect our great trademark and everything that it implies. We do this with respect.

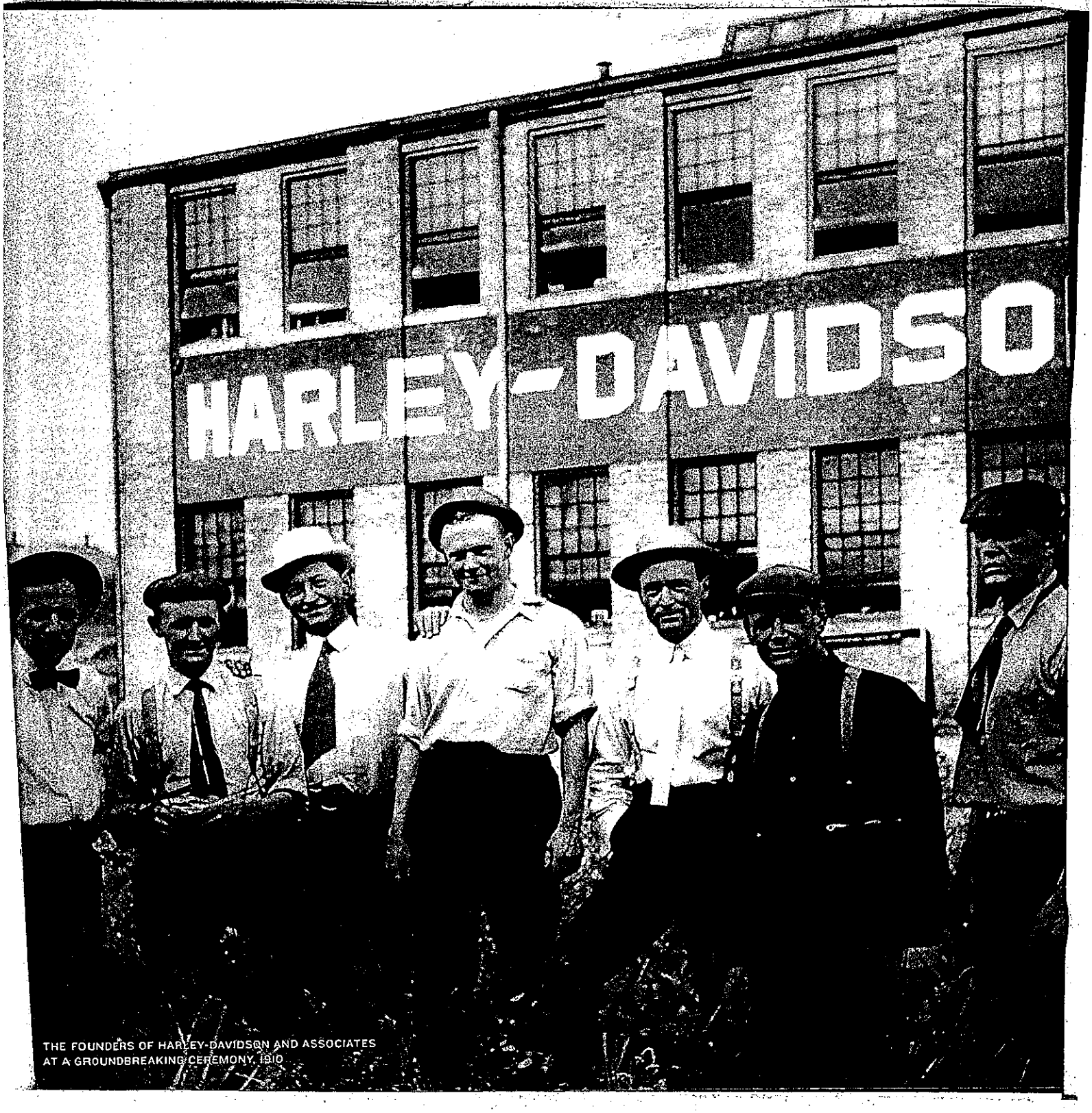
In the fast-moving world we live in, you don't always have the luxury of time to consider the elements that have shaped your life and those around you. But while working on this book, I've had an opportunity to reflect. I feel I'm a lucky individual to be able to talk about our history and my life as a designer and rider. The book is non-technical by intent, because it is meant to appeal to a general audience. The frustrating part of doing a book is not being able to mention all the people—dealers, enthusiasts, designers, engineers, suppliers, buddies, acquaintances—who have touched my life and my family's life in a very meaningful way over all these years in our history. For all of you whom I've had fun with on rides and at events or working on special projects, you are not forgotten.

I was able to chase my dream over the years, and I've been able to do it through the support of my wife, Nancy, and my children, Bill, Karen, and Michael, who are now very active in the company. I think for a parent to see his children become successful in any field is extremely satisfying, but to have them join Harley-Davidson is frosting on the cake. In his product development role in the marketing department, Bill is the voice of the customer. Karen works with the General Merchandise group, providing creative direction, which is used to inspire the creation and development of MotorClothes fine leather garments and apparel. Michael's interest in company history suits his job perfectly, because in his role as design liaison he is now assembling many of the items that will be showcased in the Harley-Davidson Museum. Not only are my children avid riders, they also share my love of art and design.

I would like to thank Harley-Davidson for the opportunity to enjoy a very exciting lifestyle—people, places, and great products. One hundred years is a major milestone for the Motor Company, and celebrating this is really a thrilling time for my family and me. The 100 years ahead will truly be an exciting road.

Enjoy the pleasures of motorcycling as I have,
and ride free always!

Willie



THE FOUNDERS OF HARLEY-DAVIDSON AND ASSOCIATES
AT A GROUNDBREAKING CEREMONY, 1910

1903

A LEGEND IS BORN

1927

WHILE WORKING IN THAT SMALL SHED

DURING NIGHTS AND WEEKENDS,

COULD THESE

YOUNG INVENTORS

HAVE ENVISIONED WHAT WAS TO COME?

I TRULY BELIEVE THE ANSWER IS NO.

THE FOUNDERS NEVER COULD HAVE IMAGINED THAT THEIR ENTERPRISE

WOULD TURN INTO A

TREASURE

RESPECTED BY ENTHUSIASTS AROUND THE WORLD.

MOST STORIES ABOUT THE EARLIEST DAYS OF Harley-Davidson focus foremost on the hardware—that first engine, the bicycle frame, and so on—then the narrative builds from there. That's fine, but I don't think they begin to scrape the surface of how difficult it was for Harley-Davidson's founders to actually build a motorized bicycle in 1903, or for anyone to build any kind of motorized machine in the early 1900s. To me, the context for the company's history begins before the idea for that first motorcycle even took hold.

Transport yourself back in time to what Milwaukee, Wisconsin, must have looked like a hundred years ago. Imagine how tough people of that era had to be just to survive. If you were fortunate, your home had electricity, but you certainly would have known people who weren't so blessed. Outside the city, lots of people didn't even have indoor plumbing. The strong, icy winds blowing off Lake Michigan made for brutal winters. Journeys to school or work could be very tough.

The Industrial Revolution brought technology and wealth that earlier generations couldn't have imagined. But for most people life just after the turn of the century involved considerable struggle. Men and women could expect to live only about fifty years. Children died from incurable diseases. Most of the creature comforts we take for granted today simply didn't exist.

Milwaukee had an active manufacturing economy then, with mills forging and bending tons of metal

Transportation in late 19th-century Milwaukee was dominated by streetcars, horse-drawn buggies, and shoe leather.

Harley-Davidson's early reputation was based on a product rugged enough to endure rough country roads.

Far right: The earliest known Harley-Davidson advertisement from the January 1905 issue of Cycle and Automobile Trade Journal.

every day. Factories were humming, while many of the first- or second-generation immigrants like my Scottish ancestors worked hard on dangerous shop floors.

Horse-drawn carriages dominated the busy city streets, but electric-powered trolleys, considered the epitome of progress, had started to appear. Still, for the average person, the primary mode of transportation was honest-to-goodness horsepower. Those who didn't have horses walked or rode bicycles.

There were no highways to speak of, and coast-to-coast travel was extremely challenging. Most city streets were cobblestone. The remaining thoroughfares were gravel and dirt. And you can imagine the harsh road conditions after a pounding by hooves or heavy rains.

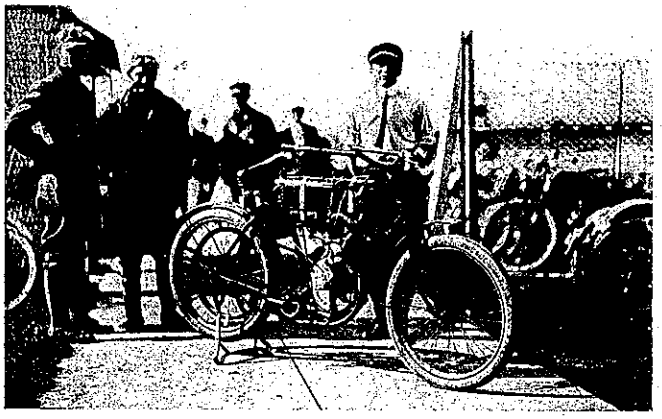
The primary method of travel between cities was rail. It must have been a major production for a family to board a train in Milwaukee and steam south to Chicago before heading east or west. But people wanted to go places. There was a desire to see and experience what this country was all about. That historic need served as an impetus for Harley-Davidson.

Inventors of the era were trying to make it easier to get from point A to point B. Steam engines were widely used by railroads and ships. But their offspring, gasoline-burning internal combustion engines developed in the late 1800s, were starting to become more popular. Inventors saw tremendous potential in these crude machines, notably used in powering carriages, which were the precursors to modern automobiles. In turn-of-the-century Milwaukee, the occasional gas-powered carriage—a rickety, spindly, slow-moving thing—always drew a crowd. Ownership was strictly reserved for the rich or the inventors who built them.

An equally rare sight was a motorized bicycle. The first models featured a leather belt connecting the motor to the rear wheel. In Europe, these vehicles and the stories about them intrigued the creative imaginations of many early inventors. In Milwaukee, Harley-Davidson's founders began experimenting with a gasoline engine.

Two of the company's founders were my dad's uncle, Arthur Davidson, and his next-door neighbor Bill

Harley-Davidson's founders (L-R) in 1912: Arthur Davidson, Walter Davidson, William S. Harley, and William A. Davidson.



Nearly a decade after it was built in 1912, one of the first Harley-Davidson motorcycles was still on the road, and by some accounts had run 100,000 miles.

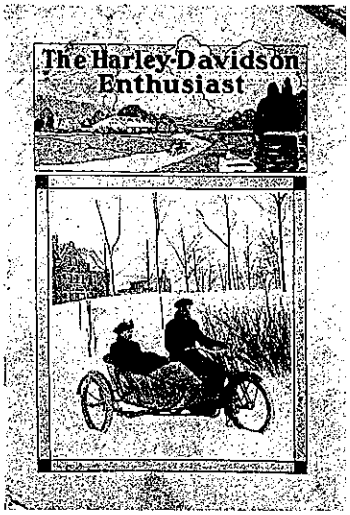
Far right: Harley riders had a magazine of their own by 1916. Shown here is the premier issue of The Enthusiast, *the oldest continuously published motorcycle magazine in the world.*

Harley. They were lifelong pals and worked for the same Milwaukee metal fabricator when they were in their early twenties. Arthur was a pattern maker and the kind of person who was naturally liked, since he was very friendly. Bill Harley was an apprentice draftsman and an extremely bright guy. But most importantly, both were after-hours tinkerers. Hobbyists. Inventors. They were fascinated by the idea of building a motor-driven bicycle from the ground up. This was a major challenge: they had to design a gasoline engine from scratch.

At one time Bill Harley had been an employee of a local bicycle manufacturer, so he knew the hardware. Arthur had experience making patterns for gasoline engines. For additional help, they enlisted one of their coworkers, a German draftsman with a working knowledge of gasoline engines and some familiarity with European motorcycles. In those days, you couldn't run out and buy parts or order them from a catalog; every part of that first motorcycle had to be designed and fabricated by these men. (Think about that the next time you need a part!)

Evenings were spent experimenting and building in the Davidson family basement at 315 North 37th Street, only a block away from the company's Juneau Avenue offices. Early on, the motorcycle development work moved into a shed behind the house.

After two years of experimentation, the founders were making headway but needed more expertise with the mechanics. They decided to approach Arthur's brother Walter, a railroad machinist living and working in Kansas. Walter was planning to visit Milwaukee to attend the wedding of their brother, my grandfather William A. Davidson, so the timing was right to solicit his help. Apparently, Arthur and Bill succeeded in capturing Walter's imagination. When Walter arrived back home, he familiarized himself with the blueprint and decided to remain in Milwaukee to help them finish that first bike.



Walter found a job with the Chicago, Milwaukee & St. Paul Railroad, where my grandfather worked along with my great-grandfather William C. Davidson, who also worked for the railroad after emigrating from Scotland in the 1850s. My grandfather was a toolmaker and toolroom foreman who was known for his skill and trustworthiness. He must have been excited by the motorcycle project at the family house.

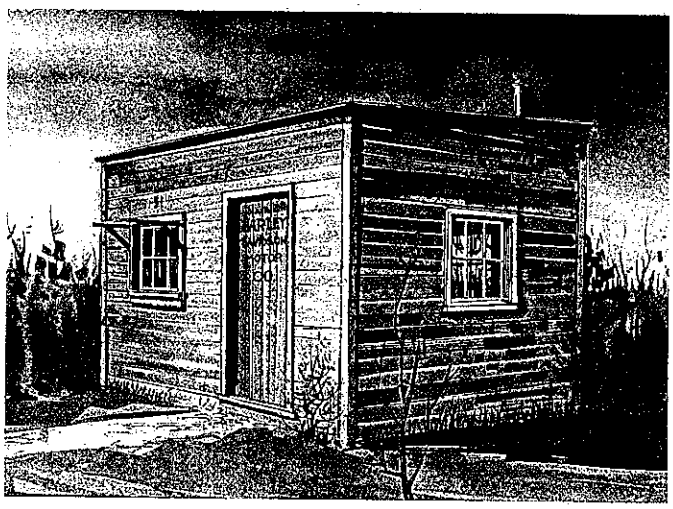
Help with the project came from other sources as

well. One of Bill Harley's neighbors, Henry Melk, had a home machine shop and made his lathe available to the men. When they couldn't quite configure their first carburetor properly, Arthur consulted an inventor friend from childhood, Ole Evinrude. Ole later went on to great fame and fortune with the outboard boat motor company that bears his family's name.

The folklore that surrounds that first engine centers on the carburetor. Legend has it fashioned from a tomato can, and in my heart I'd like to believe that. But given the founders' seriousness and the efforts they put into developing exact drawings and patterns, I can't see them settling for something so primitive.

The makeshift operation in the family basement finally produced positive results, and the first engine was completed and mounted to a bicycle frame. However, it was too small to generate enough power. So they returned to the drawing board. If the engine had to be stronger, so did the bicycle frame that carried it. They determined that the traditional "diamond" bicycle frames lacked the necessary strength. They adopted a loop design that would become standard for their vehicles.

With their first prototype behind them and drawings and parts piling up, they found themselves in need of more space. With that in mind, my great-grandfather, an accomplished carpenter, built a small ten-by-fifteen-foot wooden shed in the backyard devoted exclusively to the project. HARLEY-DAVIDSON MOTOR CO. was painted on the front door. It was the first time those names were put together. I don't think they cared whose name came first. Sometimes things take on a life of their own, and the details of the real story will always be shrouded in mystery. I like it that way.



This watercolor painted by Willie G. portrays the original 1903 workplace. The shed, located in the Davidson family backyard, was built by William C. Davidson for his sons.

The question is this: While working in that small shed nights and weekends, could these young inventors have envisioned what was to come? I truly believe the answer is no. The founders never could have imagined that their enterprise would turn into a treasure respected by enthusiasts around the world. What they established was monumental, though probably hard to place in any real context because everything was yet to come. Put simply, it was the beginning.

1903/04 | SERIAL NUMBER ONE

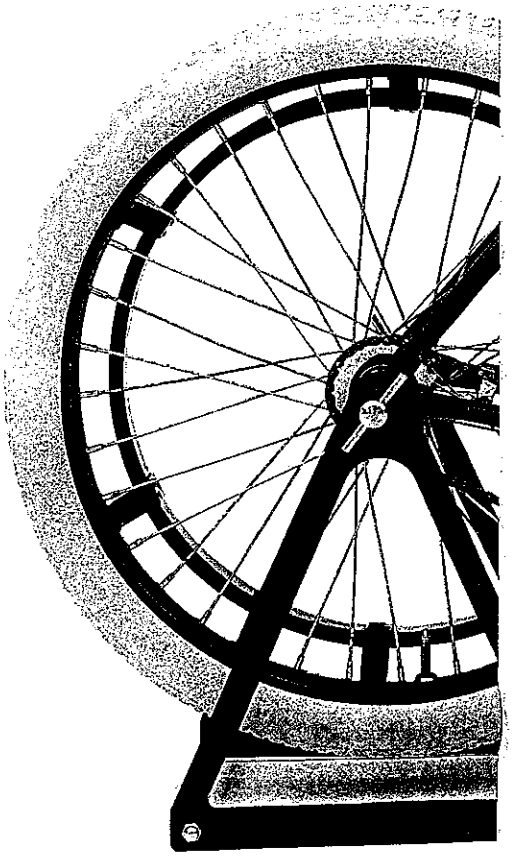
This is the very first production Harley-Davidson motorcycle (though prototypes likely existed before it). It took a lot of experimentation to determine whether a truly viable form of transportation could be created. Performance back then was everything, and the founders achieved this through ingenuity, engineering knowledge, and entrepreneurial spirit.

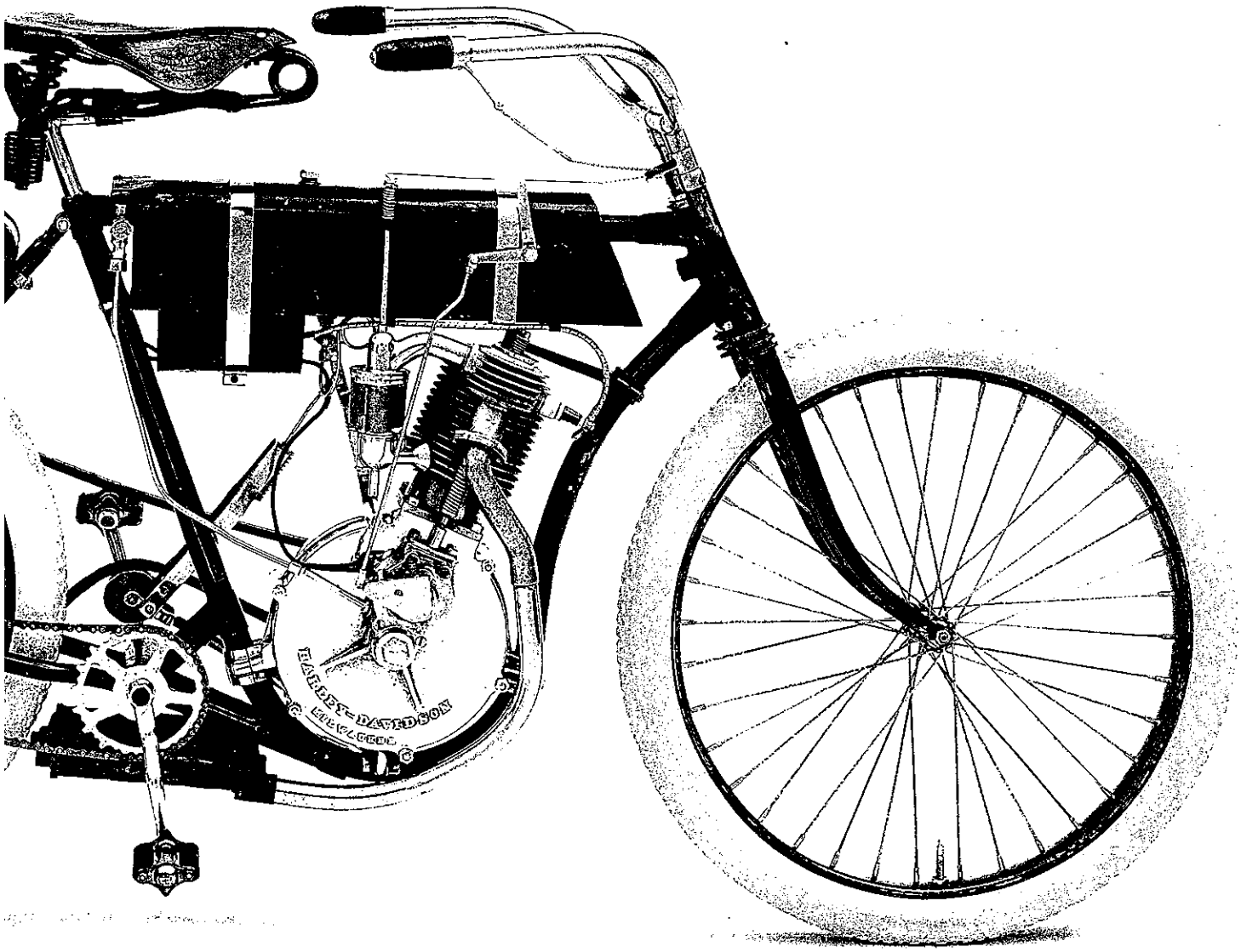
The beauty of this motorcycle is its simplicity. Form follows function—the curvature of the front downtube follows the front wheel and then surrounds the circular crankcase. It is believed that the earliest model was probably used for some type of competition. It didn't have any fenders, and it was a minimal device—an engine and a set of wheels. It had a pedal system, by which the motorcycle was pedaled to get the engine started.

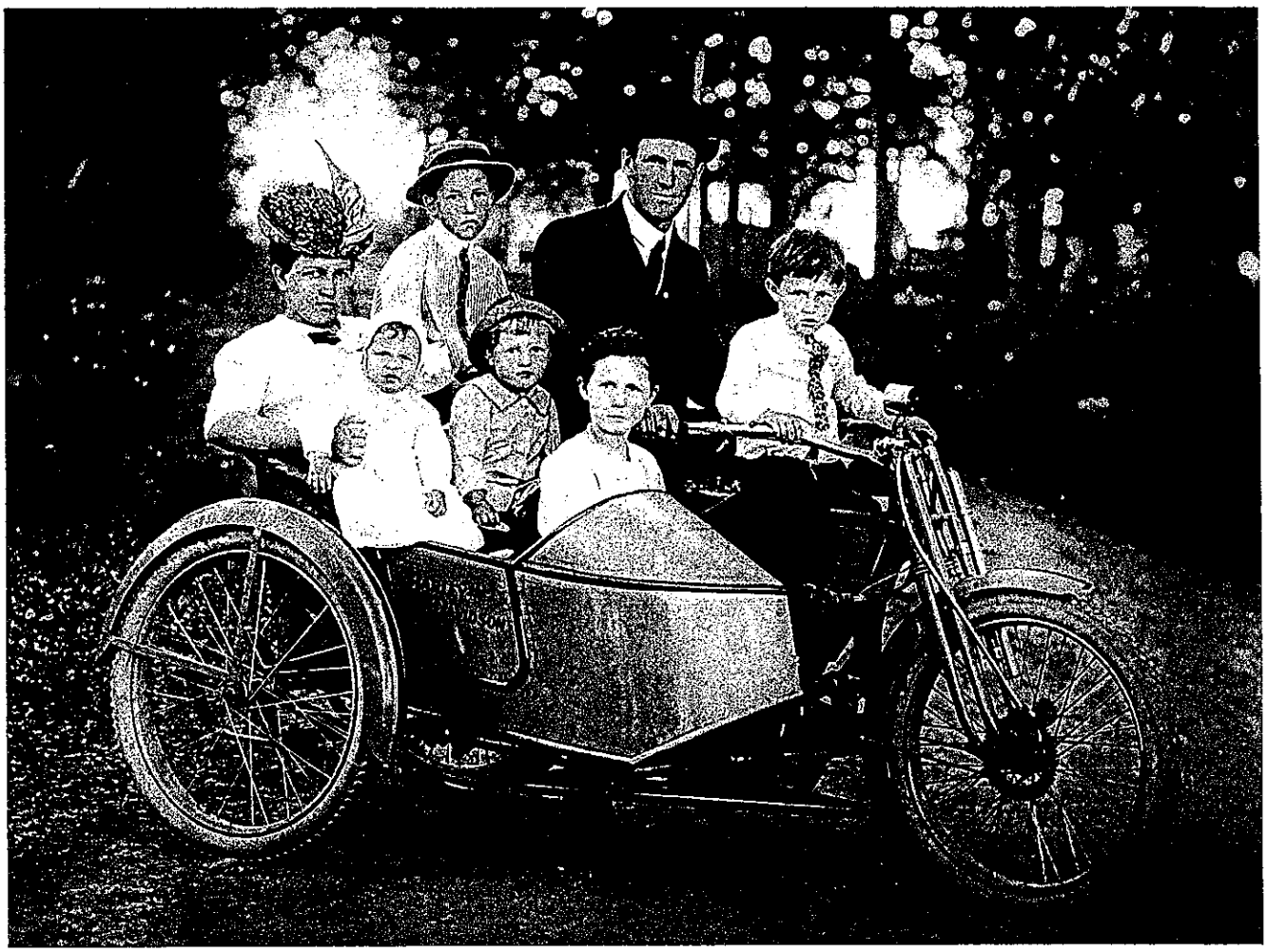
Serial Number One has been in our Archives Collection for a long time, and it now resides in the front lobby of Juneau Avenue. It was not always recognized as being the first Harley-Davidson. One day Ray Schlee, a member of the Harley-Davidson Archives restoration team, was restoring what we all thought was an early 1903/04 model. While disassembling some of the parts, Ray noticed that the original machinist had marked some of the castings with a small number "1." It was a monumental discovery. Ray called, and I came running down. He had the parts laid out on a cloth on the table. In my hand I was holding some of the very first machined parts ever used on our motorcycles. It was exciting to know that this was the earliest-known production Harley-Davidson motorcycle in the world.

POWERTRAIN
Engine: Single cylinder with atmospheric valve
Displacement: 26.84 cubic inches
Transmission: Direct drive
Primary drive: Leather belt
Secondary drive: None
Brakes: Back-pedaling, bicycle-style internal rear hub (rear only)
Ignition: Total-loss with three dry-cell batteries

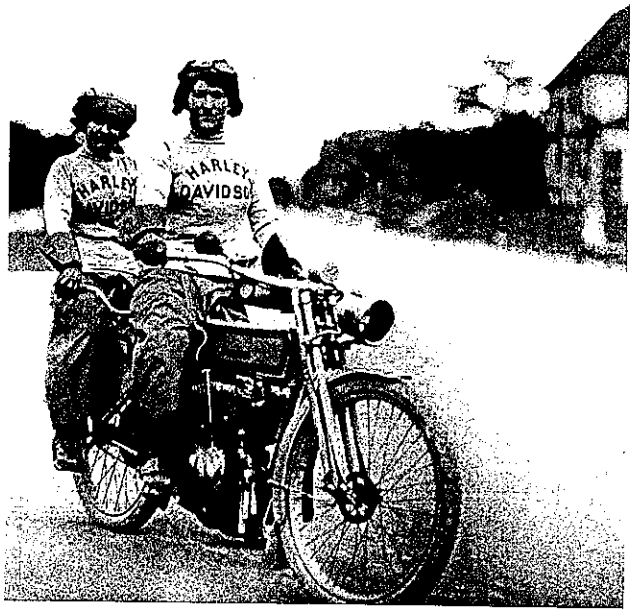
CHASSIS
Frame: Single loop
Suspension: None
Wheelbase: 51 inches
Gas tank: 1 gallon
Oil: 1 quart
Tires: 28 inches (front and rear)
Color: Piano Black




HARLEY-DAVIDSON

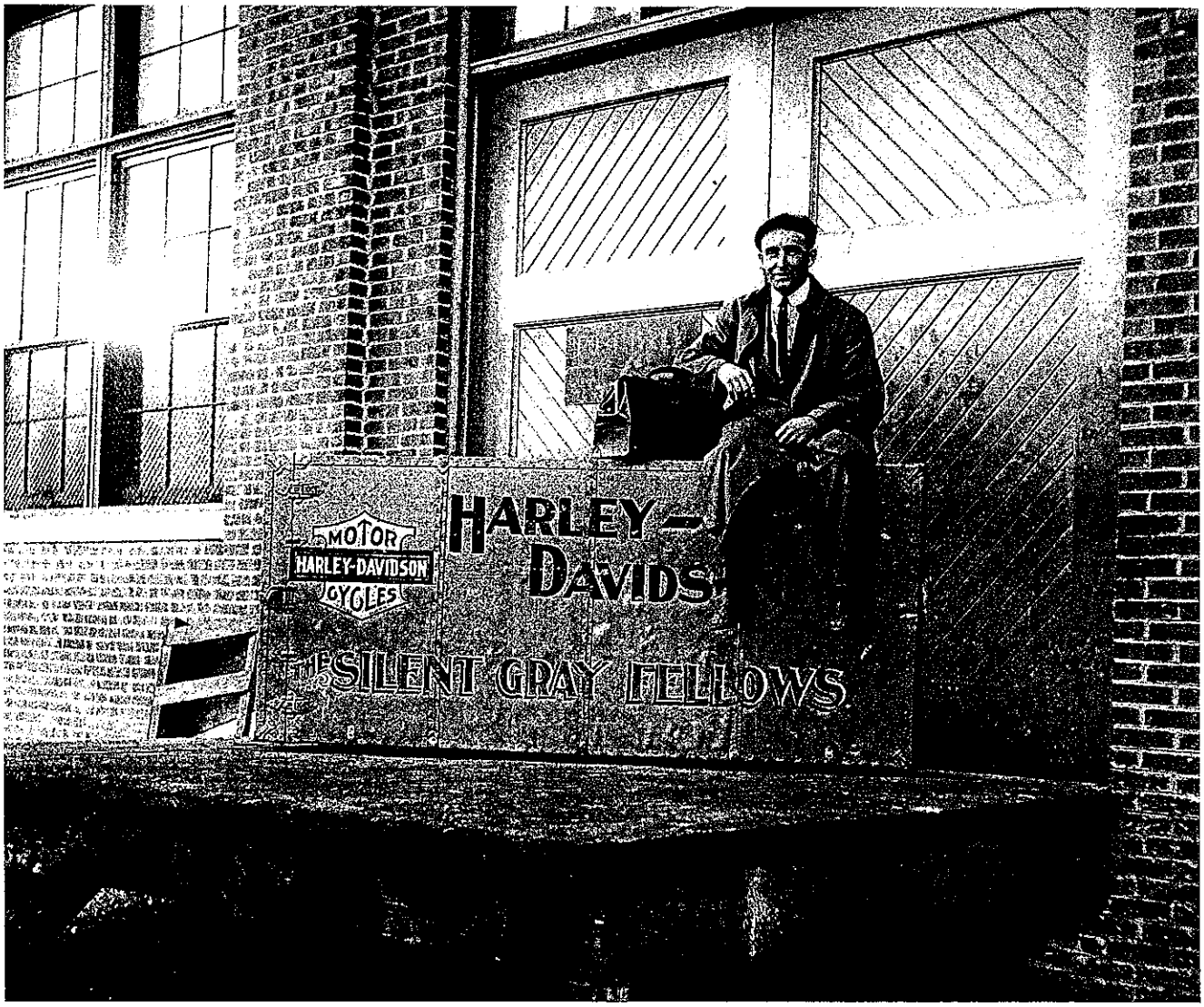


1914 | *The whole family could join the ride when a sidecar was attached.*

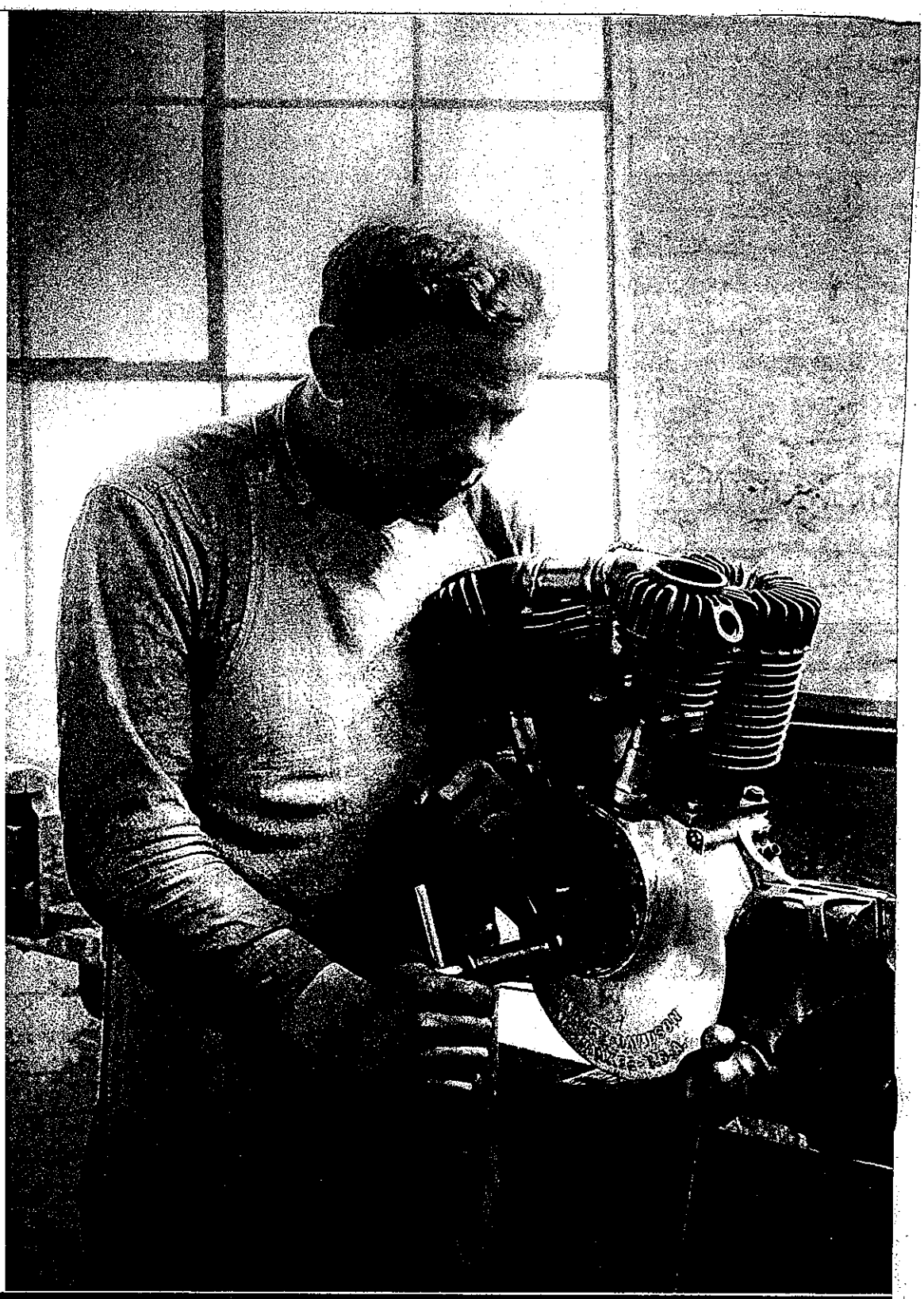


1912 | *These women are on a tandem-seat Harley-Davidson motorcycle with two sets of handlebars. The former Davidson family home is on the right.*

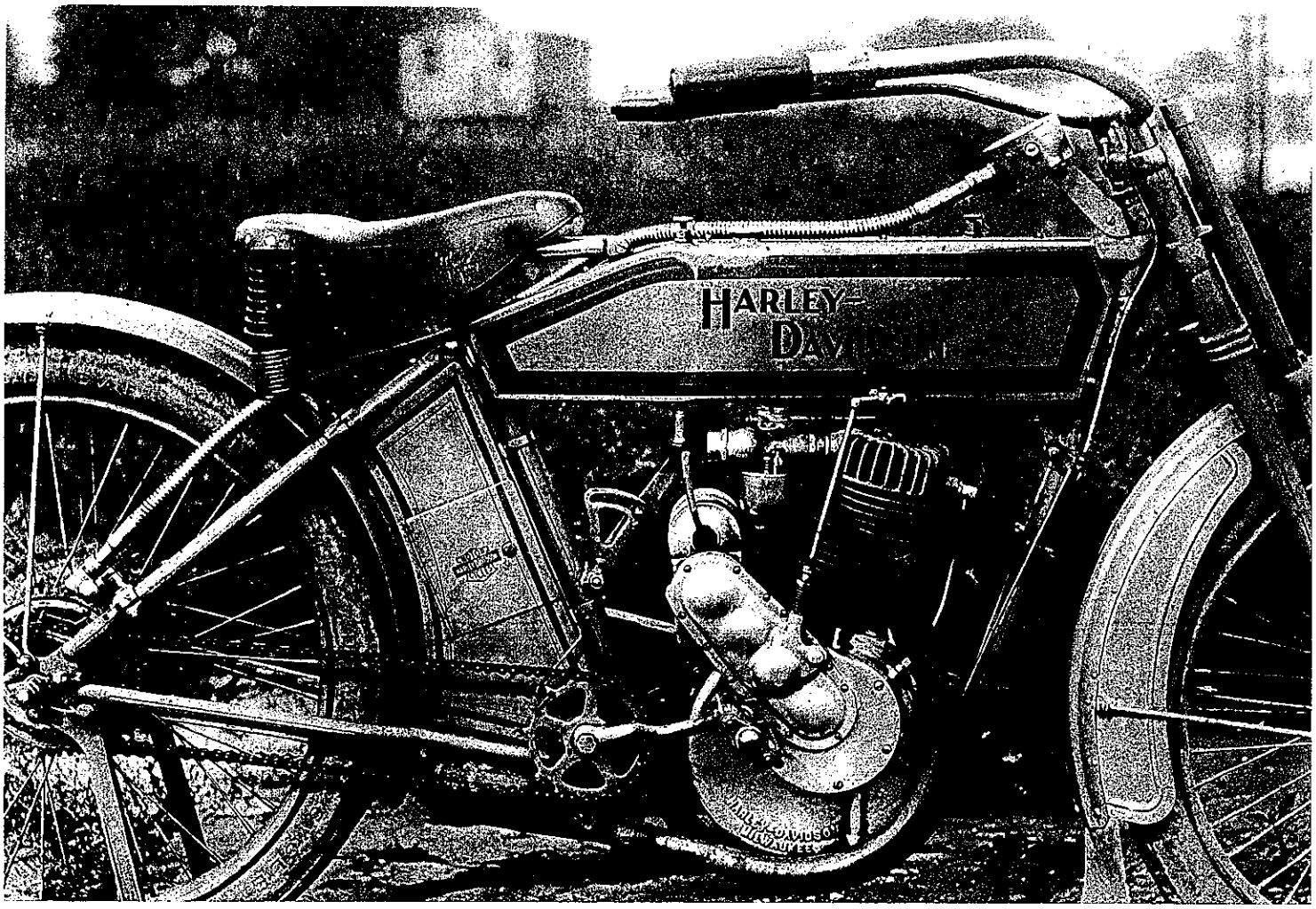
1911 | *Two couples ride through Milwaukee's Washington Park, a short distance from the original Harley-Davidson factory.*



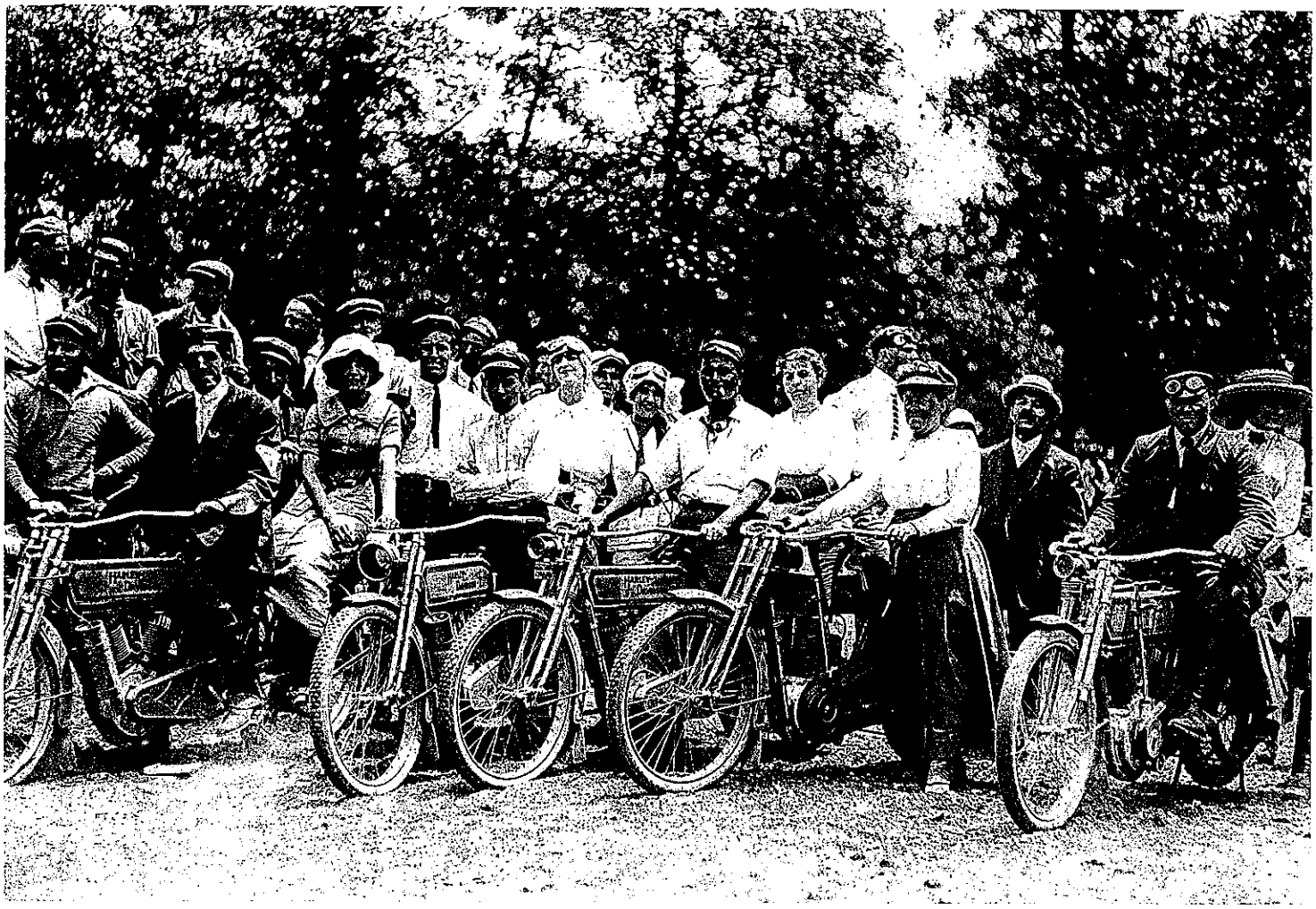
1912 | *Traveling salesman George Puls on a loading dock with a Milwaukee original. The "Silent Gray Fellow" nickname for Harley-Davidson motorcycles was made popular around 1910.*



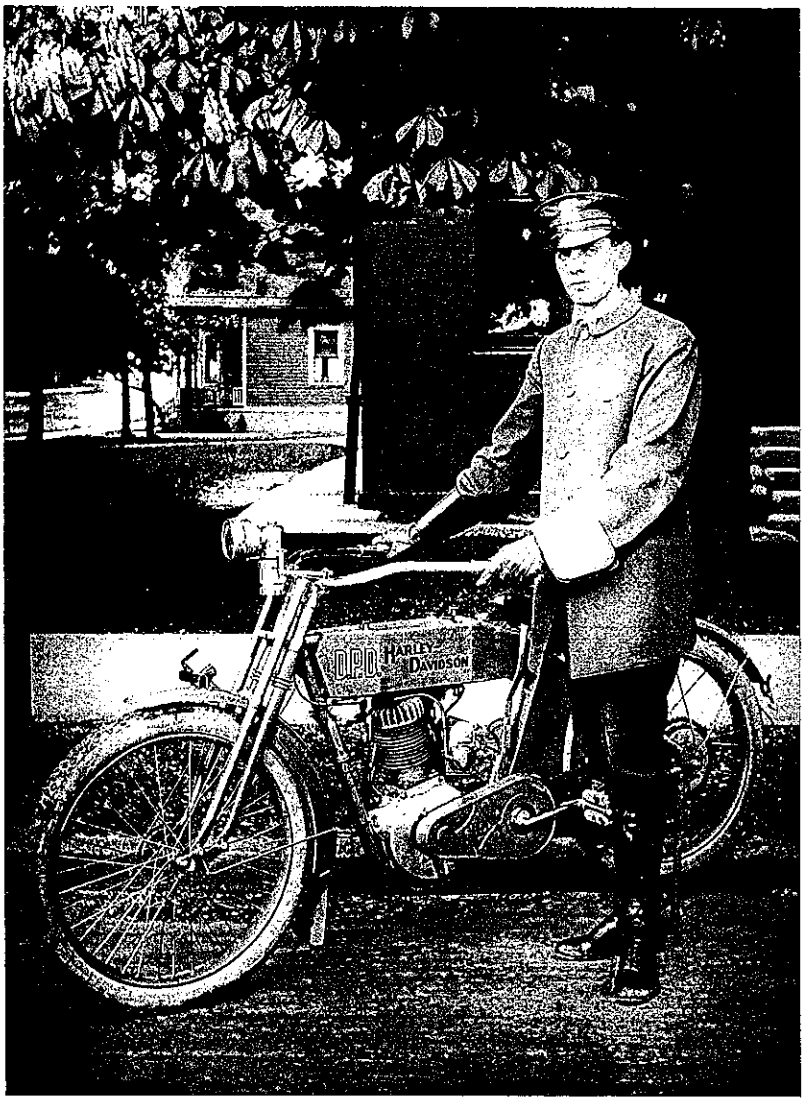
1916 | *An early Big Twin engine in the hands of a factory technician.*



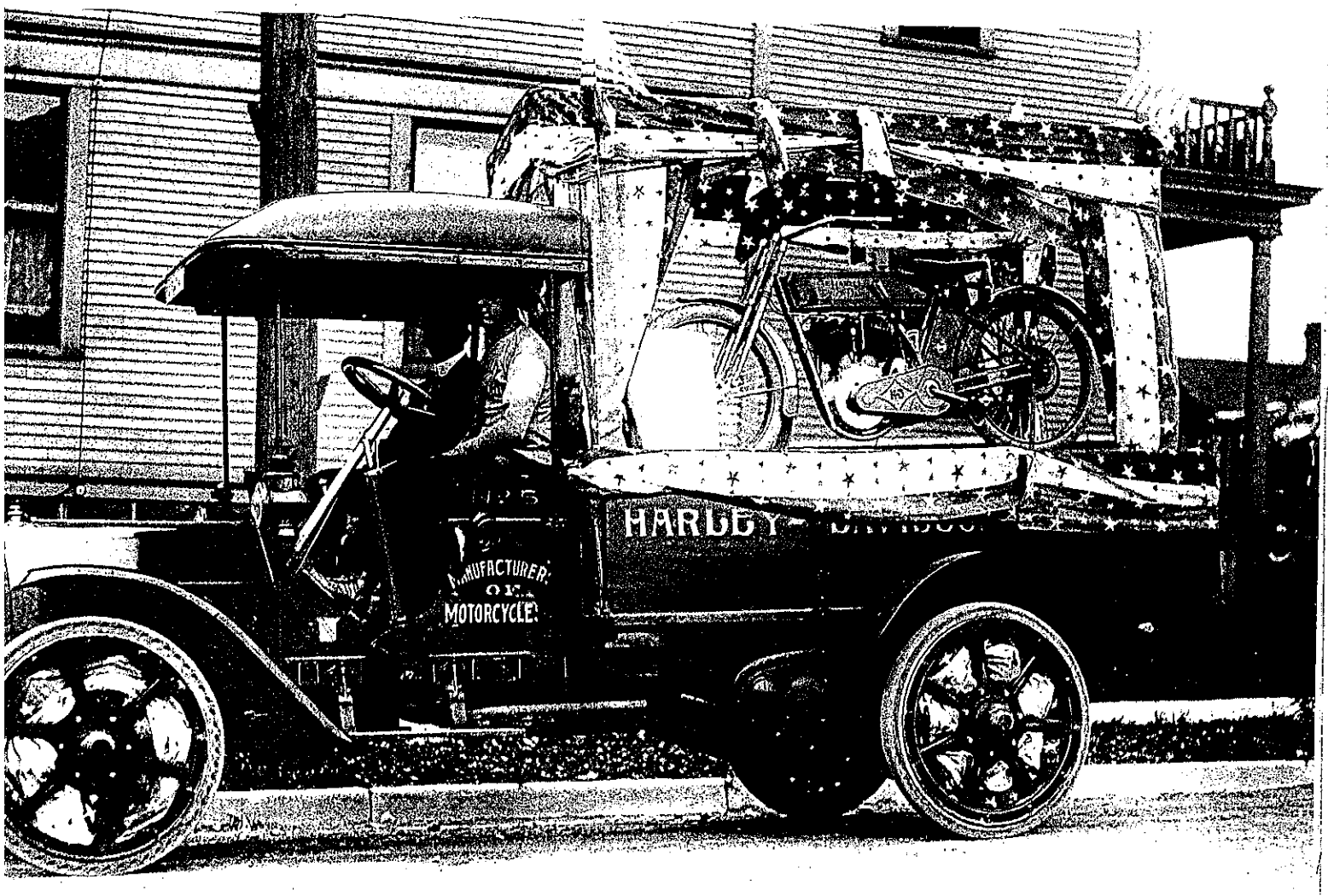
1913 | *A magneto-equipped, single-engine model.*



1912 | *Early motorcycle runs were social events in which women often participated—as both passengers and riders.*



1912 | *By 1908, police departments were using Harley-Davidson motorcycles to nab speeders. This model has a fork-mounted speedometer.*



1912 | *A truck from Harley-Davidson's early fleet decorated for an Independence Day parade.*

1909 | MODEL 5-D (V-TWIN)

Harley-Davidson introduced its first production V-Twin engine in 1909. This was during the major growth years of the company. By this time sales volume was up to 1,149 bikes, and Harley-Davidson was becoming known.

The 45-degree V-Twin has a classic beauty that helped bring about the popularity of our motorcycles. The frame and engine shapes complement each other. The frame is wide at the top and has natural angles that correspond to the 45-degree V-Twin engine. It gives the observer a complete view of the engine.

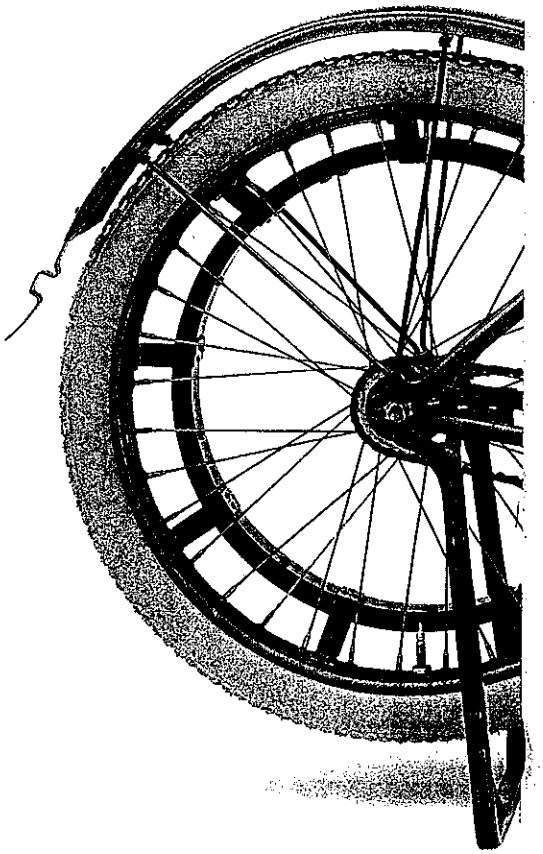
The Model 5-D was designed in the era of gray paint, which is why a Harley-Davidson motorcycle at the time was referred to as the Silent Gray Fellow. Harley-Davidson has an interesting paint history. The first motorcycle Harley-Davidson produced was black, and our motorcycles remained that color until 1906; from 1907 to 1909, the colors were black or gray; and in model years 1910 through 1916, only gray was offered. Then in 1917 the company offered olive green for the first time and exclusively until 1932. In 1933, at the height of the Depression, a more dramatic two-tone paint scheme was introduced. In 1909, when this V-Twin was made, motorcycles were considered a form of transportation, and therefore had a more utilitarian paint scheme. There is a spindly handsomeness about them.

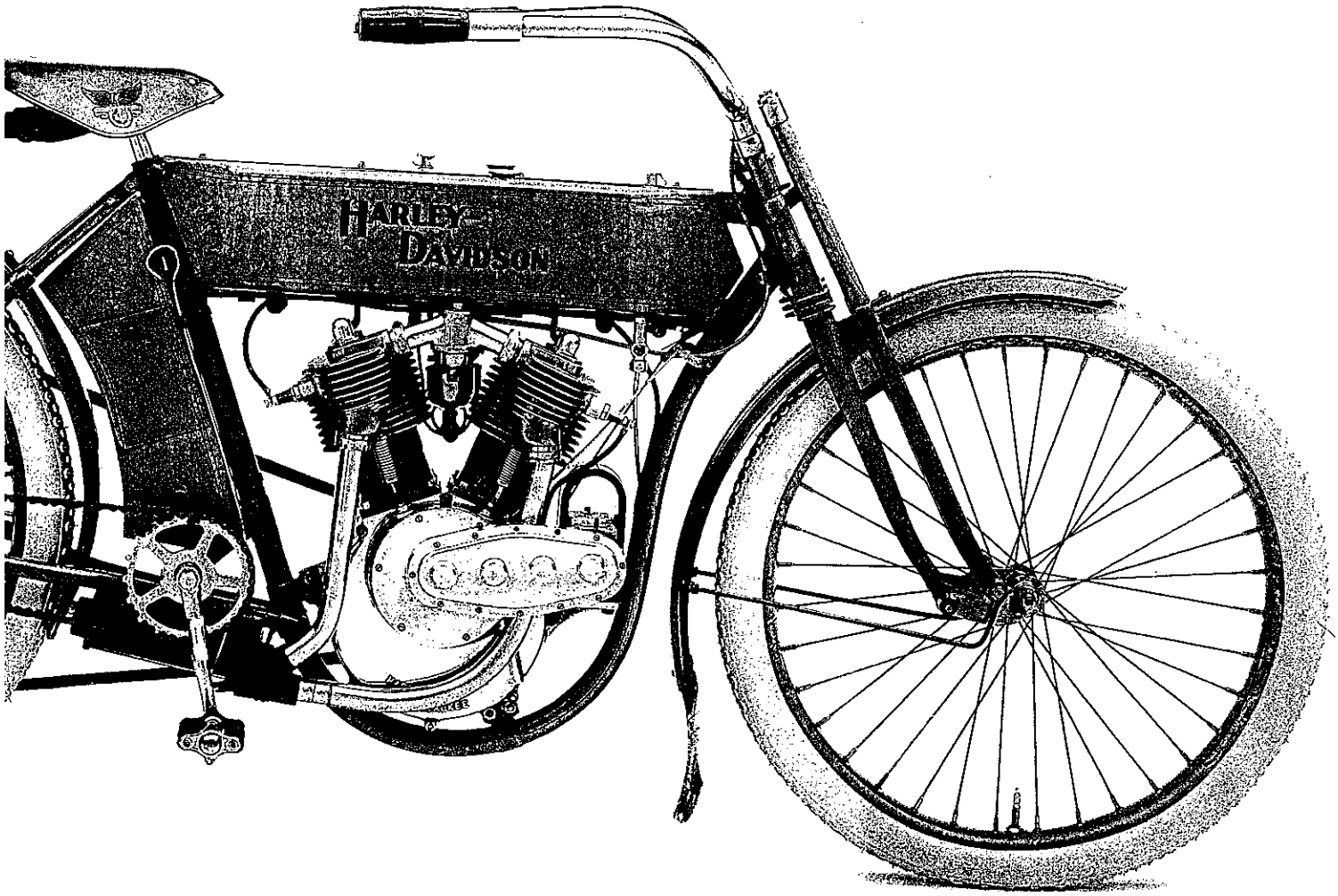
POWERTRAIN

Engine: 45-degree V-Twin with F-head cylinders
Displacement: 49.48 cubic inches
Transmission: Direct drive
Primary drive: Belt
Secondary drive: None
Brakes: Back-pedaling, bicycle-style internal hub brake (rear only)
Ignition: Magneto

CHASSIS

Frame: Single loop
Suspension: Leading link (front)
Wheelbase: 60 inches
Gas tank: 2 gallons
Oil: 1 gallon
Tires: 28 x 2.5 inches (front and rear)
Colors: Light Gray with Carmine striping; Piano Black




HARLEY-
DAVIDSON

MOTORCYCLE RACING

IS IN MY BLOOD

AND

ALWAYS WILL BE.

WHEN I WAS A KID,

MY BEDROOM WALLS WERE

COVERED WITH POSTERS

OF MY

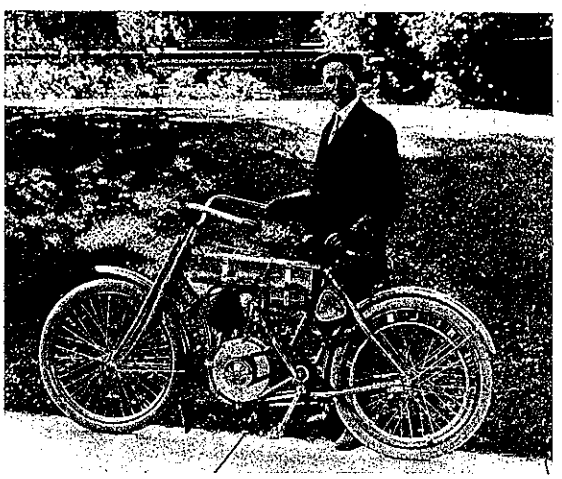
FAVORITE RACERS.

RACING IS A PASSION. JUST WATCH A MILE DIRT-TRACK race, and you'll understand. You'll see superior riders running at 130 mph, bunched so close that you could throw a blanket over them. Sometimes one rider will touch another to make his presence known before passing. Then he'll throw his bike into a slide using his metal shoe as a sliding surface. This slows down the bike from high straightaway speeds. Upon leaving the corners, the riders tuck themselves in, minimizing wind resistance as they head down the backstretch. There are only a handful of motorcycle riders who have the riding talent to compete in these races. The lead changes and the sound of those XR750s keep you on your feet throughout the race and the hair on your neck standing straight up.

Motorcycle racing is in my blood and always will be. When I was a kid, my bedroom walls were covered with posters of my favorite racers. Trips to the Milwaukee Mile with my dad—seeing my heroes up close—are some of my best childhood memories. When Nancy and I married in 1957, we spent our honeymoon in Laconia, New Hampshire. There we watched one of my favorite racers, Joe Leonard, win the road race. Nancy and I still spend a lot of time at the racetracks.

Race bikes are simple and handsome machines. The older ones, from the board track era of the teens and early twenties, are especially stunning. I have an 8-Valve board-track racer in my personal collection. It sits in a special place that was created for it when I designed the room.

The 8-Valve has an uncomplicated frame. The engine is the major visual, along with the large-diameter wheels, tiny seat, fuel tank, and low bars. It's aggressive looking and projects power. The rider of this machine would have worn a leather helmet, goggles, puttees (leather lower-leg wraps that protected against oil shed from the total-loss oil system used in engines of that period), boots, and a jersey with "Harley-Davidson" embroidered across the front.



Walter Davidson after his Diamond Medal win in the 1908 National Endurance Run.

In 1908, Harley-Davidson's fifth year of production, our racing heritage began. Young motorcycle companies of that era had to go to great lengths to convince customers that two-wheeled machines were worth owning. Speed was one thing, but reliability was a much bigger issue. If a person was going to retire his horse or bicycle in favor of an expensive motorcycle, the last thing in the world he wanted to worry about was breaking down.

The need to prove dependability was the likely inspiration for the industry's first race events: endurance runs. These were long-distance affairs through and over woods, sand, steep inclines, river crossings, and all kinds of rugged terrain that tested both rider and machine.

At the start of an endurance run, participants were given 1,000 points, and then they rode to various checkpoints; judges would deduct points for early or late arrival. At the end of the run, the rider with the most points went home with a trophy, and the winning brand won some valuable marketing advantages. It was an endurance run like this that helped to establish the young Harley-Davidson company, and its young president, as industry leaders.

In addition to being president of the company, Walter Davidson was a talented rider. In his and Harley-Davidson's major racing debut, an endurance event through the Catskill Mountains in New York, Walter excelled. He bested more than 60 competitors in the two-day, 365-mile race and not only finished first but did so with a perfect score. This achievement says a lot about the kind of person Walter was and the motorcycle his company built.

After the event Walter revealed that, unlike most of the other racers, he hadn't bothered to carry spare parts. This showed how much faith he placed in the vehicle. Remember, it was an unmodified stock motorcycle. Word spread far and wide about the sureness of Harley-Davidson's motorcycles—and about the endurance racer Walter Davidson.

Some might assume that the founding fathers would aggressively pursue endurance runs to build further awareness of the brand. But with the increases in horsepower that resulted from the introduction of twin-cylinder engines, such as our first V-Twin in the 1909 catalog, speed became the new focus. Motorcyclists and the general public were intrigued.

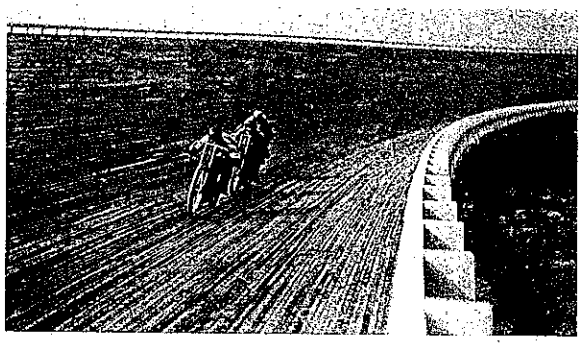
It must have been amazing in small-town America, where very few people owned motorized vehicles, to see racers on bikes hitting speeds in excess of 100 mph on special board tracks. The large oval-shaped tracks, lined with boards and banked steeply like bicycling velodromes, allowed for very high speeds. They also

increased the possibility of danger and accidents. The founders decided to steer clear.

Board track racers were the daredevils of their time and drew huge crowds. They rode on the high-banked tracks in very tight packs, on 61-cubic-inch, 8-Valve, V-Twin racing machines. No brakes. These racers had total-loss oil systems; once the oil flowed through the engine it wasn't recirculated, and the wooden tracks could get slippery. Maintaining the tracks was a challenge. Over time, the boards rotted or splintered. Injuries and deaths were all too frequent.

I remember talking to Jim Davis, a member of our famous early racing team, the Wrecking Crew. (Jim lived to be 104!) It was a thrill for me to hear firsthand stories of the early board tracks. The one that stands out in my mind was his pulling into the pits with a splinter that entered through the palm of his hand and extended up into his forearm. Board track racing was not for the fainthearted.

When the company stayed away, privateers took to the board tracks on Harley-Davidson motorcycles, so the name got good exposure anyway. The publicity or



the fiercely competitive battles between company-sponsored teams convinced the founders to formally reenter the racing game in 1914. Under Bill Harley's direction, a new racing department sponsored teams that soon cleaned up in major events across the country.

By the late twenties, there was a movement to increase safety by reducing speeds. The company launched the Peashooter, a single-cylinder Harley-Davidson racer with a 21-cubic-inch (350cc) or 30.5-cubic-inch (500cc) engine: one of the most beautiful motorcycles we've ever created. By this point, board tracks were disappearing and dirt-track racing was becoming the dominant style. We were now the largest motorcycle producer in the world and had a reputation to uphold—which we did, on the tracks.

The 1929 introduction of the DL, a street model, signaled the beginning of the Peashooter's short but successful career and ushered in the era of Class C racing. This was racing for the everyday rider. Owners could ride standard machines—like our 45-cubic-inch side-valve WL models—to the track, remove the headlights, and race. My good friend Armando Magri (now deceased), who was a dealer in Sacramento, California, told stories of doing just that back in the forties. Our WLs and WRs, or Flatheads as they were called, were

Speeds on these banked board tracks broke the 100 mph barrier.

Far left: Pit stops were coordinated events with mechanics attending to refueling and adjustments.

In 1930, the Jack Pine Endurance Run was won by future company president William H. Davidson. The prize was a cowbell trophy.

the kings of the Class C circuit for many years. Flatheads are also known as side-valve engines, which differ from overhead arrangement in that the valves are alongside the piston; thus, the head of the engine can be virtually flat.

Some of our engine names were derived from terminology commonly used in our engineering department, while others came from street lingo that described the upper parts of the engine. "Knucklehead," for example, is purely a street name. It describes the gnarly look of the rocker cover, which supports the valve mechanism at the top of the head. "Shovelhead" and "Panhead" are also street names. We used the name "Evolution" internally for an engine, and then developed it as an official name; there were some other street names for this engine, but none of them really caught on. "Twin Cam" has clicked as the name for the variation of the Evolution engine, a combination of the internal and external term. It's tough to predict which nicknames will stick. Panhead and Shovelhead are used universally both here and abroad, while other names have come and gone.

"Jack Pine Trophy"
WON AGAIN!
HARLEY-DAVIDSON

It's worth mentioning that one of the most intriguing aspects of our early racing history is the lack of information about the hardware. Because these weren't standard machines, we didn't build a lot of them or keep detailed records. We know, of course, that the racers and race teams modified their bikes. There was a lot of trial and error. These were experimental vehicles, and Harley-Davidson was open to innovation.

Racing is significant to engineering, but it is also important to marketing and brand support. The camaraderie among dealer, factory, customer, and competitor brings riders to a place where everyone enjoys the events. Racing does not exist only to support engine development. That would be a myopic view of racing, in my opinion.

Racing is engineering in the sense that you're learning every time you build a bike, whether it's for racing or the street. There are certain race features that can't be used on the street because they don't meet requirements for longevity. You tear apart a top-performance racer after every event. There are no noise or lighting or cost restrictions. Racing isn't always an easy path to the next street bike.

In 1930 a young man named Bill Davidson—otherwise known as William H., my dad—established an endurance-run legend similar to his uncle Walter's feat in 1908, when he won one of the industry's best-known endurance events, the Jack Pine Enduro. An endurance run is a time/distance event with a miles-per-hour average that must be maintained. The prescribed speed can differ depending on how the run is set up. You arrive at checkpoints where judges clock how long it took you to get there, and determine whether or not you maintained your average. At the start of the event, each racer is given a map that he tapes to the top of his tank. One challenge is not to get lost, given the roughness of the terrain and the fact that you ride as fast as you can. It's rare to be early at the checkpoints. You try

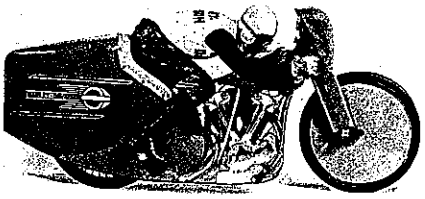
to make up as much time as possible. And you're always trying to combine the capabilities of the machine and your riding style with your ability to maintain the average speed. Riders can also get hopelessly bogged down. The mud, sand, and river crossings are difficult, and the terrain of endurance runs varies with the geography of the area.

Dad won that two-day Jack Pine Enduro event in 1930—which wound through the wilds of northern Michigan and was regarded as one of the most brutal of endurance runs—with a near perfect score of 997. He did this, as Walter had before him, on a stock motorcycle. This solidified Harley-Davidson's already firm reputation for building stock motorcycles capable of superior performance.

Hillclimbing—racing motorcycles directly up the face of steep inclines—became extremely popular in the early 1930s and established itself as one of the most colorful elements of the sport. Each racer individually attempts to gain the top of the hill in the fastest time. Successful hill climbers must be very skilled riders and their machines highly modified. Hillclimbing pits man against nature and marries man and machine in extreme circumstances.

It's human nature to seek situations that challenge our competence. The mere fact that motorcycles exist means they will be raced. It's like climbing mountains because they're there. Events such as hillclimbing and board track racing were the extreme sports of their respective eras. They became popular because people liked watching and talking about them. And the local Harley-Davidson dealers did a terrific job of supporting the riders and promoting the events, including hosting tie-in events at the dealerships. Hanging out with the dealers before a race has been going on forever.

There have been so many tremendous riders in Harley-Davidson's racing past that it would take a book to cover them all. But it's impossible to talk about racing without highlighting a rider like Joe Petrali, a man for whom the word "legendary" is an understatement. He would race anything—board tracks, dirt, the beach at Daytona, hill climbs—and set record after record wherever he competed. To promote our early Knucklehead, a one-off streamliner was created in 1937. Joe promptly set a record with that bike on Daytona Beach sand—where all land-based speed records occurred at the time—that stands to this day: 136 mph. (The shrouding that surrounds the upper fork area on that bike is actually the fuel-tank sheet metal turned on end.)



The popularity of hillclimb competitions peaked in the early 1930s.

Bottom: Racer Joe Petrali is on a '61 OHV Streamliner that set a landspeed record at Daytona Beach in 1937.

During the Flathead era, we introduced the KR (like the WR, based on a street model, the 1952 K Model). KRs quickly powered their way to national championships. The British brands—Triumph, BSA, and

Young Willie G. stands in front of his 165 Model with a first-place trophy for his victory in a 50-mile race through the Kettle Moraine hill country near Milwaukee.

Norton—were our primary competitors, especially after the original Indian's demise in 1953, so victory on the tracks was important to ensure supremacy in the showroom. The KR, incidentally, had a peanut-shaped fuel tank borrowed from the 1948 125cc S Model. This peanut tank soon became synonymous with Harley-Davidson performance, and found its way to the overhead-valve Sportster XLCH Model in 1958. It continues to be a recognizable Sportster trademark.

I got involved in Enduros in the early fifties. I was riding a 165 (a later version of the 125cc S) and eventually a K Model. I won a few trophies in those days.

The Sportster, powered by a 55-cubic-inch overhead-valve engine, was introduced in 1957 and ushered in the era of muscle bikes. The new XL standard models were accompanied by a race-inspired brother, the XLCH (for "competition hot").

In 1961, Daytona racing moved from the beach to the new high-banked Daytona International Speedway. The use of fairings was permitted on road racers, and Harley-Davidson racers competed with numerous variations of our KR Model, including big front fairings, larger fuel tanks, different chassis, and suspension systems. Over the next several years, we presented a strong racing program with everything from our Aermacchi-built motorcycles and Sportsters to tried-and-true KRs.

One of the world's most famous race bikes, the XR750, debuted in 1972. The familiar orange and black XR has been the bike to beat on dirt tracks since its introduction. Some of the biggest names in dirt-track racing—Jay Springsteen, Chris Carr, and the most winning dirt-track racer of all time, Scott Parker—earned their fame on XRs.

I have great admiration for both the XR and its riders. I was presented with an XR750 from our racing department on my 30th anniversary with the company in February 1993. The people instrumental in giving it to me were Louie Netz, my longtime collaborator in styling, Trev Deeley, a former racer and long-time friend of the Motor Company, and Vaughn Beals, a former president of the company and a great leader. Louie told me that there was a meeting down the hall. When I entered the room, there was a motorcycle under a cover. I wasn't surprised to see it, because we always have meetings around motorcycles. I started looking around the room and noticed that Vaughn was there, and then more people walked in. They pulled the tarp off, and I was blown away! It was a current model XR750. I had both Scott Parker and Bill Werner, our legendary race mechanic, sign it.

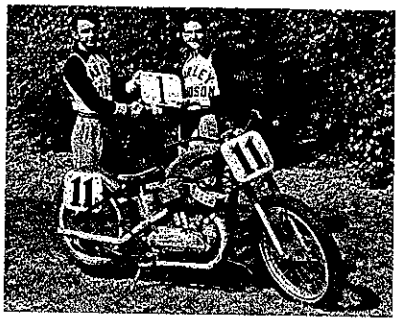
During his racing career, Scott Parker set a record with nine Grand National championships. Two of the wins were at Del Mar, in 1997 and 1998. In 1998, his ninth Grand National win, Scotty came into the pit after winning the race. Of course, Nancy and I were all excited and gave him hugs like we always do. He then took the number plate off of his motorcycle and gave it to me. It's framed on a wall at my home. The next year,

the event organizers asked me to wave the checkered flag for the final race. Again, the winner was Scotty. I was thrilled, because this win determined the points for the championship. The winner always does a lap around the track with somebody on the back of the bike, and he took me, carrying the checkered flag.

My favorite type of racing is dirt track. Some of my favorite racers were Joe Leonard, Carroll Resweber, and Brad Andres, who raced during the early part of my life. Joe Leonard was unique in winning several AMA championships from 1958–61; he went on to win the Indianapolis 500 racing Indy cars. Leonard is the only racer to achieve both and is a hero to me. Carroll Resweber, who is from the Milwaukee area, was also a national champion from 1958–61, and at one time worked in our racing department. Brad Andres—the son of our dealer in San Diego, Leonard Andres—was a friend of mine when I was going to Art Center in Los Angeles. I would go to the races in nearby Ascott on Friday nights to watch Andres race. It was a wonderful diversion for me. These racers were friends and still are. They're all in the Dirt Track Hall of Fame.

I am proud to also be a member of the AMA Hall of Fame. The AMA Dirt Track Hall of Fame held a special event at the Springfield Mile to honor top racers several years ago. It was neat to be there and shake their hands. The setting of the Springfield Mile, a one-mile dirt track that goes way back in my memory, made the event even more special. My brother and I rode down there many years ago on our early K Models. It was always the high point of the year. It's a beautiful track, and to this day I look forward to attending the Springfield races.

Reflecting our dirt-track heritage, today's Sportster 883R brings the XR's look to a street-legal machine. The potent orange yoke sewn on our dirt-track team leathers, which I designed years ago, can be seen on jackets worn by Harley enthusiasts around the world. The orange and black colors are offset by a white pinstripe.



Three-time Grand National Champion Joe Leonard (left) hands the No. 1 plate to Brad Andres. A KR, the model they both raced, is in the foreground.

Our recognizable orange, white, and black paint scheme would also grace the tanks, fairing, and fenders of our 1994 entry into superbike racing, the VR 1000. When we designed the visual elements of the VR, we aimed to create a look that would be instantly recognized on the track. To achieve this, we painted one side black and the other orange, so the bike would look different depending on your view. The tail section's shape was inspired by our XRs, and the fairing had strong family ties to our earlier road racers.

The VR1000 provided inspiration for us when we designed the motorcycle that would help launch our second century: the VRSCA V-Rod. The V-Rod's successful development and introduction owe a lot to our rich history in racing. From Walter Davidson's legendary 1908 endurance run to now, the victories and losses on the racetrack have made us better at building motorcycles. And if you've seen the V-Rod, you'll understand what I'm talking about.

1921 | WJ (SPORT)

I'm intrigued with the 1921 WJ because of its unique engine. Harley-Davidson had been producing V-Twins, and suddenly the Motor Company introduced a "flat twin." Rather than forming a V, the two cylinders are opposed. The WJ and the XA army model are the only two Harley-Davidson motorcycles with flat twin engines, and only the WJ has a horizontal front-to-rear configuration.

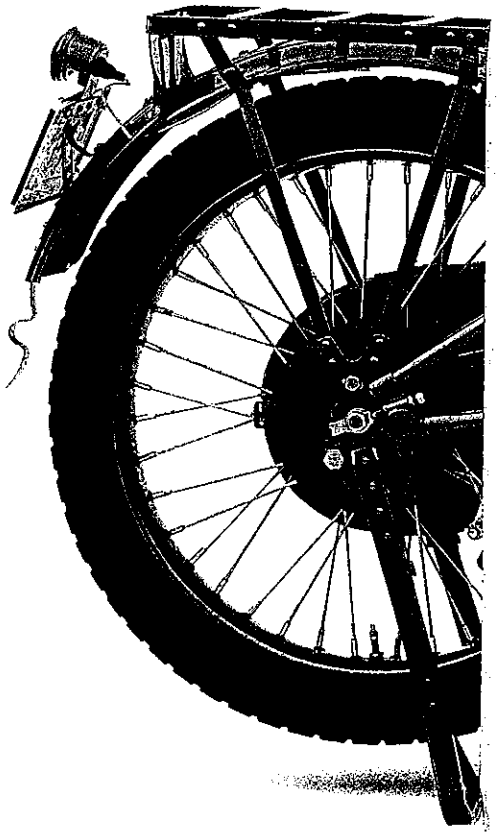
Stylistically, this motorcycle was a departure for Harley-Davidson. The frame, the tank shape, the forks—everything on this motorcycle was new and different. Looking at the WJ engine, I don't see the beauty I see in the V-Twin. The cylinders and heads are lost under all of the covers, manifolds, and housings. Even so, it was a radical design for Harley-Davidson in its day.

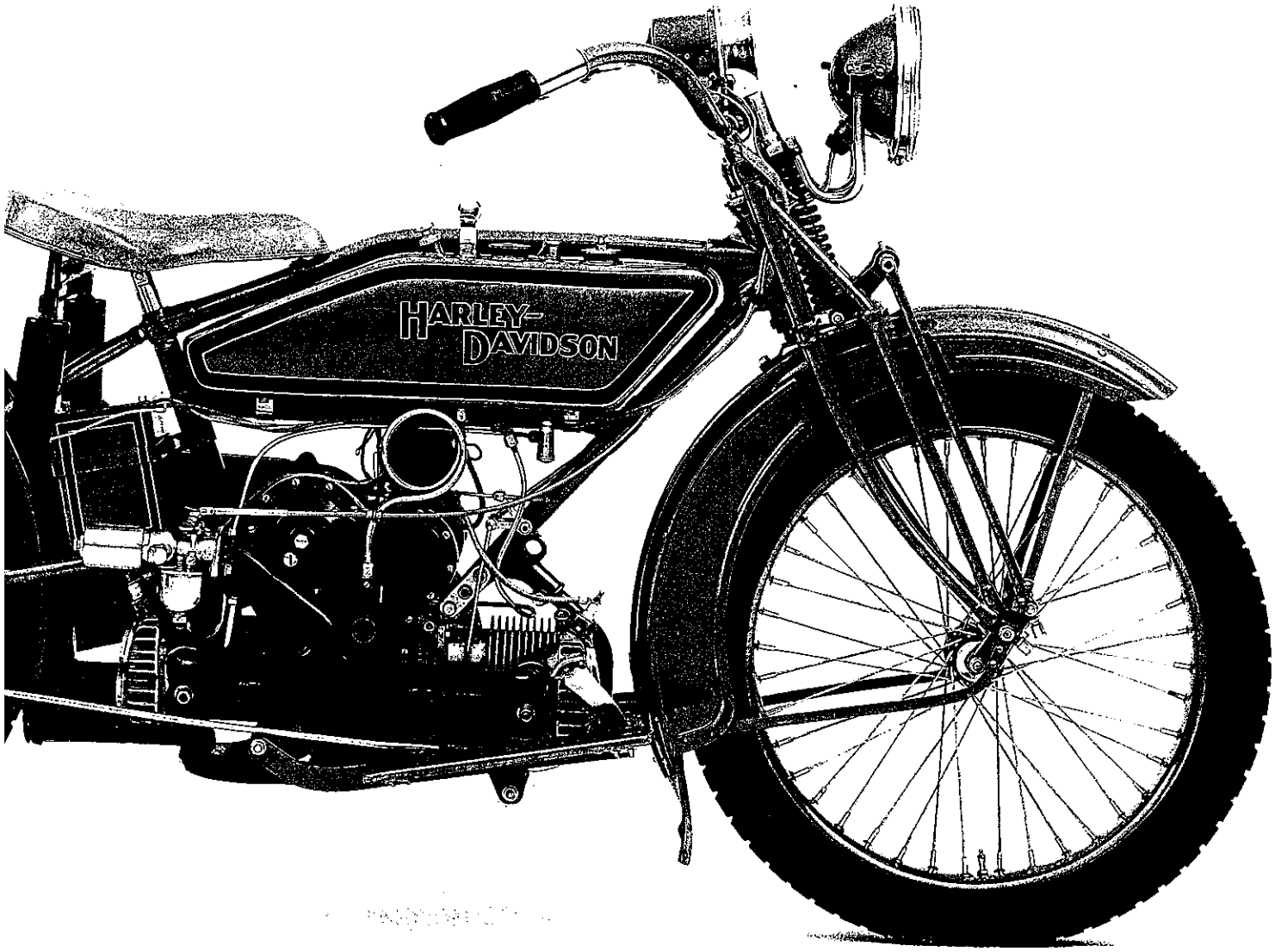
Recently, I was in the Harley-Davidson Archives with my son Michael, our design consultant for the Harley-Davidson Museum. Michael showed me an early *Enthusiast* magazine cover with my father on a WJ. Bill Harley and another man are riding on either side, watching over him. Though there is no caption, Michael and I think the picture shows an early riding session; I know my father learned to ride on a WJ.

Motorcycle design for new riders has always been a part of product development at Harley-Davidson. To be viable and profitable, you have to appeal to various people at different levels of ridership. With the WJ, the company was looking for a smooth engine that would attract new riders. It was not as fast as the other models of its time and did not have their classical beauty. But it demonstrates the company's willingness to branch out, to keep many ideas on the drawing board.

POWERTRAIN
Engine: Fore and aft opposed twin
Displacement: 35.6 cubic inches
Transmission: 3-speed hand-shift
Primary drive: Gear
Secondary drive: Enclosed chain
Brakes: External contracting shoe (rear only)
Ignition: Battery and coil

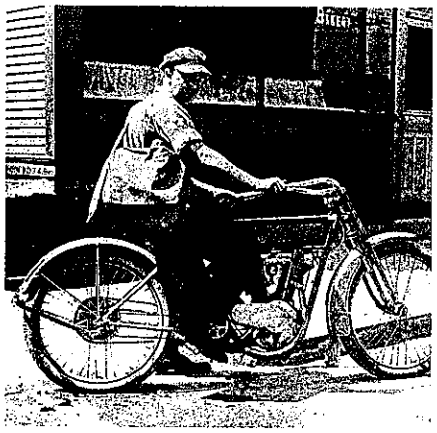
CHASSIS
Frame: Keystone
Suspension: Coil spring leading link (front)
Wheelbase: 57 inches
Gas tank: 3 gallons
Oil: 2 quarts
Tires: 26 x 3 inches (front and rear)
Color: Olive Green

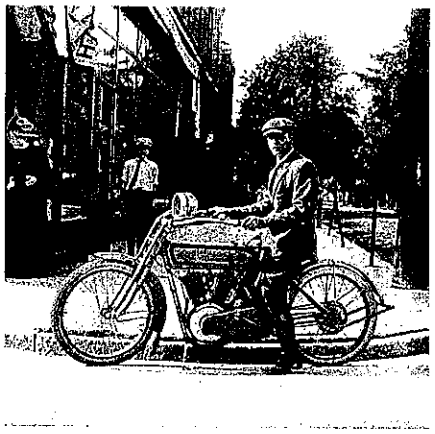


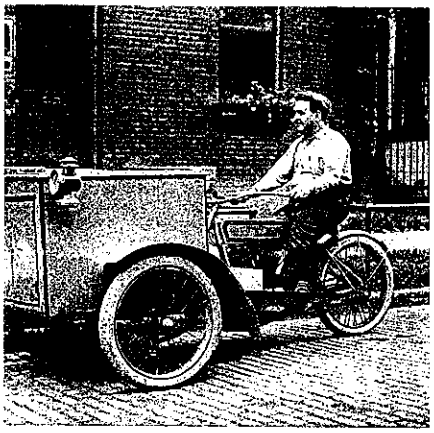

HARLEY-
DAVIDSON

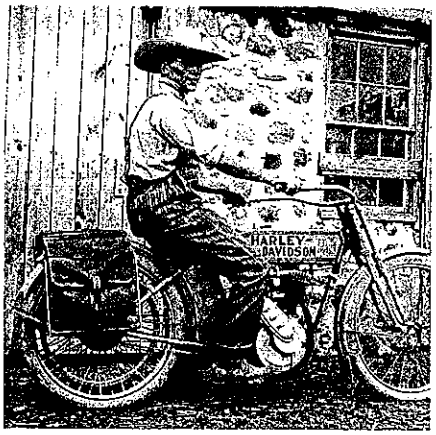
1913 | *This Twin shows the bold striping scheme for 1913 models. Great care was taken during the enameling process, with three hand-rubbed coats of paint followed by a protective varnish.*

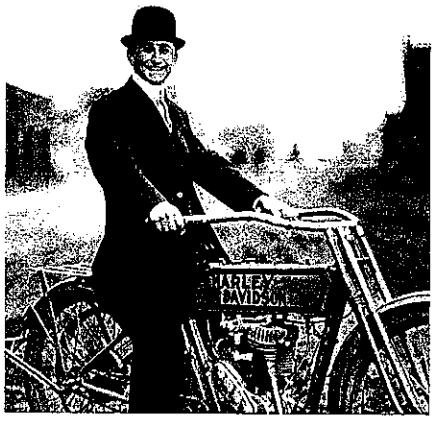
1912–13 | *In the early years of the sport, Harley-Davidson motorcycles appealed to a wide variety of people—from urban commuters to farmers to delivery boys.*

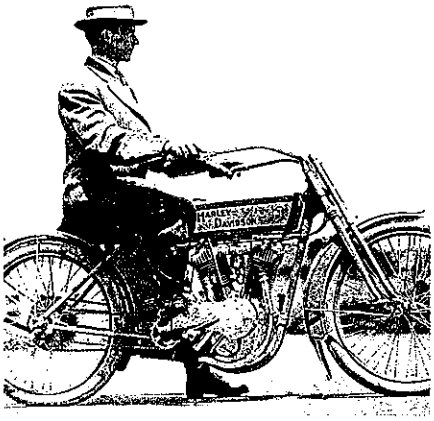


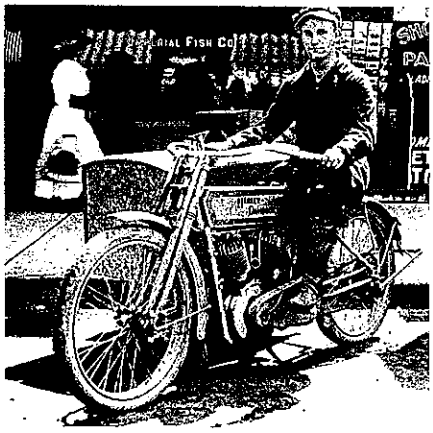


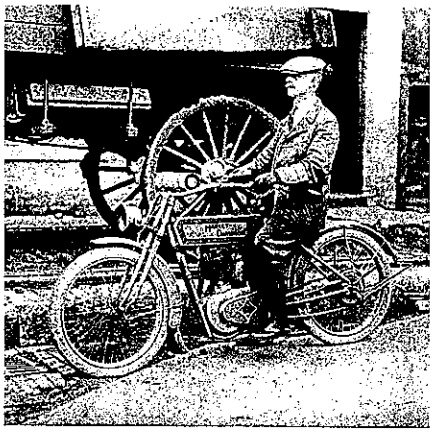


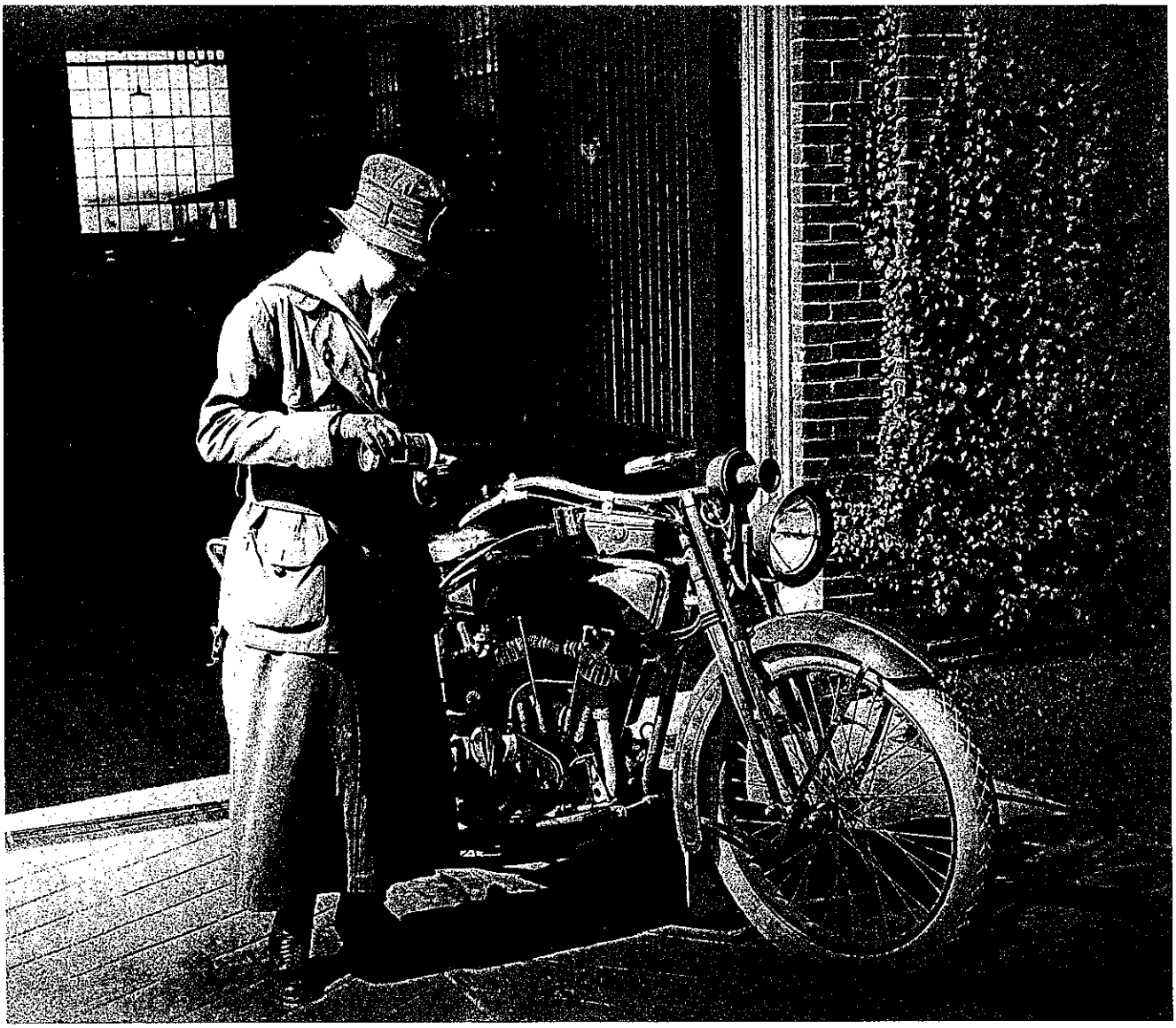

HARLEY-
DAVIDSON



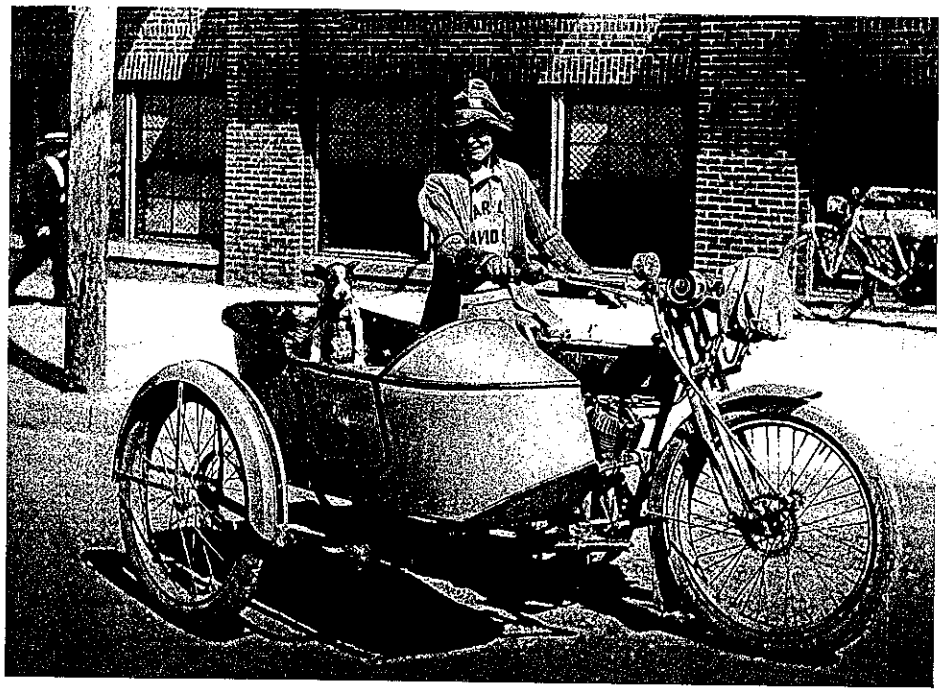




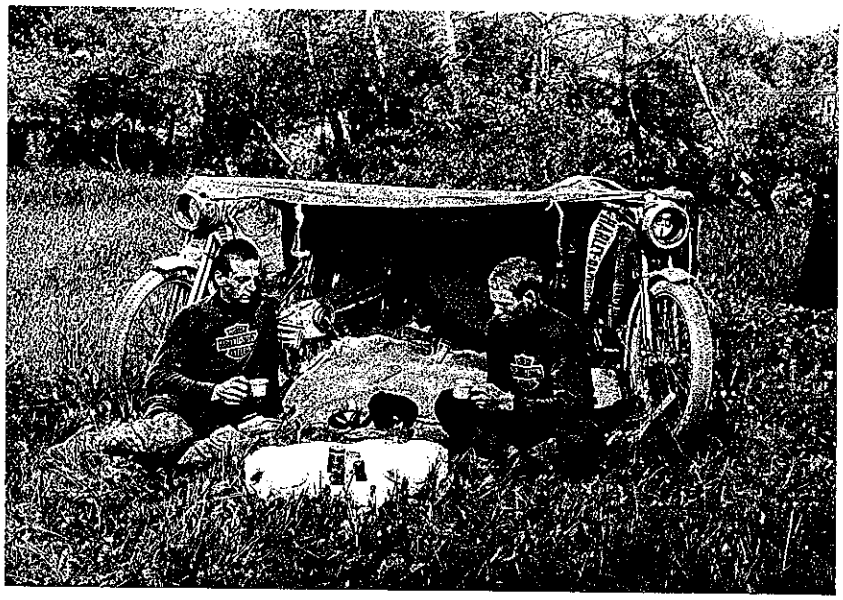




1917 | *Lillian Haver was a popular female rider from Milwaukee. She logged 65,000 miles by 1921.*

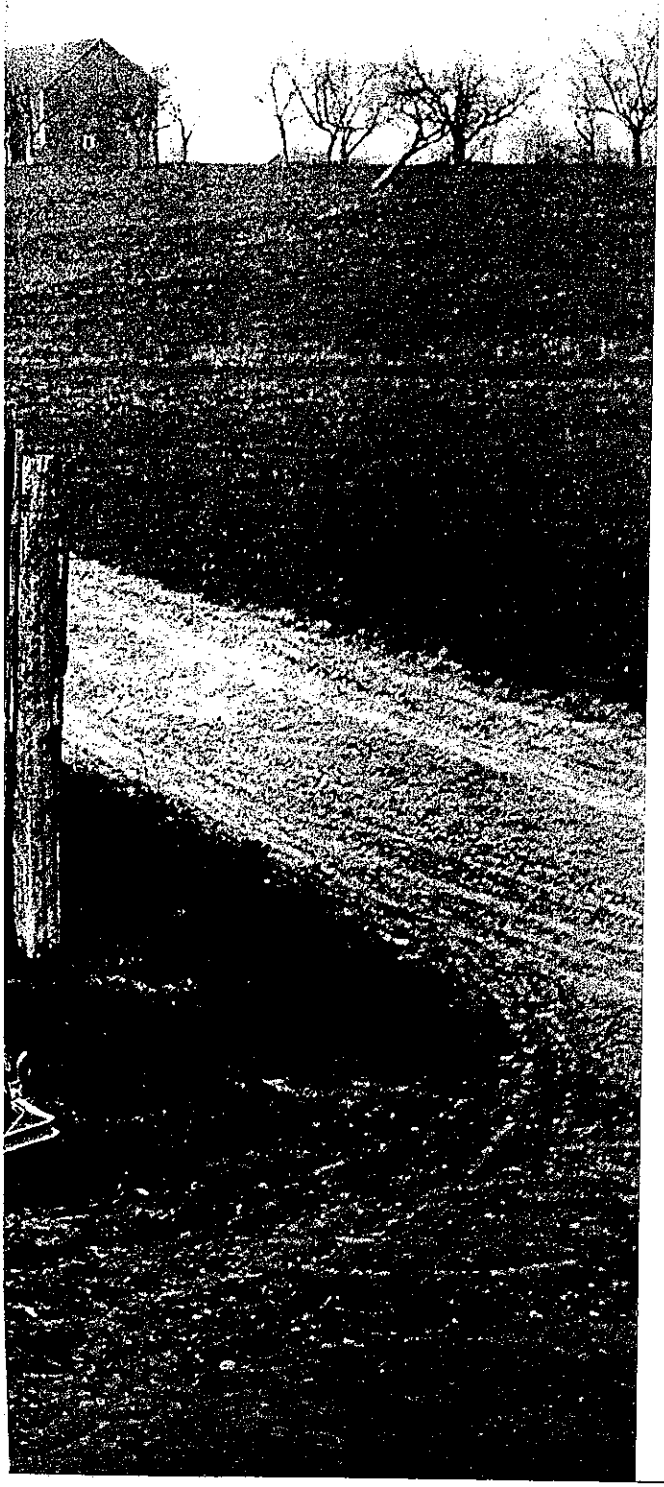


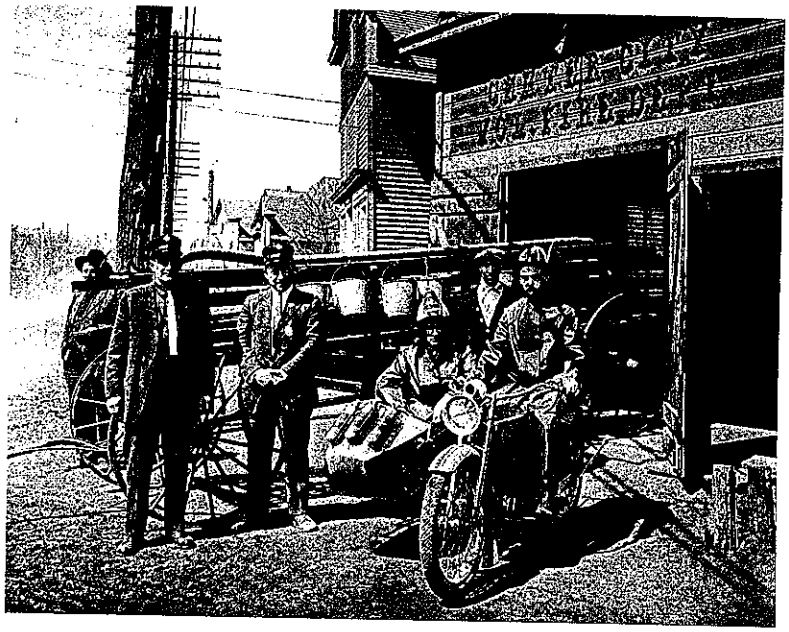
1914 *A canine passenger sits in this Roger's-type sidecar pictured here in front of Harley-Davidson's Juneau Avenue factory.*



1915 *These young men share a picnic and make a tent from a tarp and their Harley-Davidson motorcycles.*

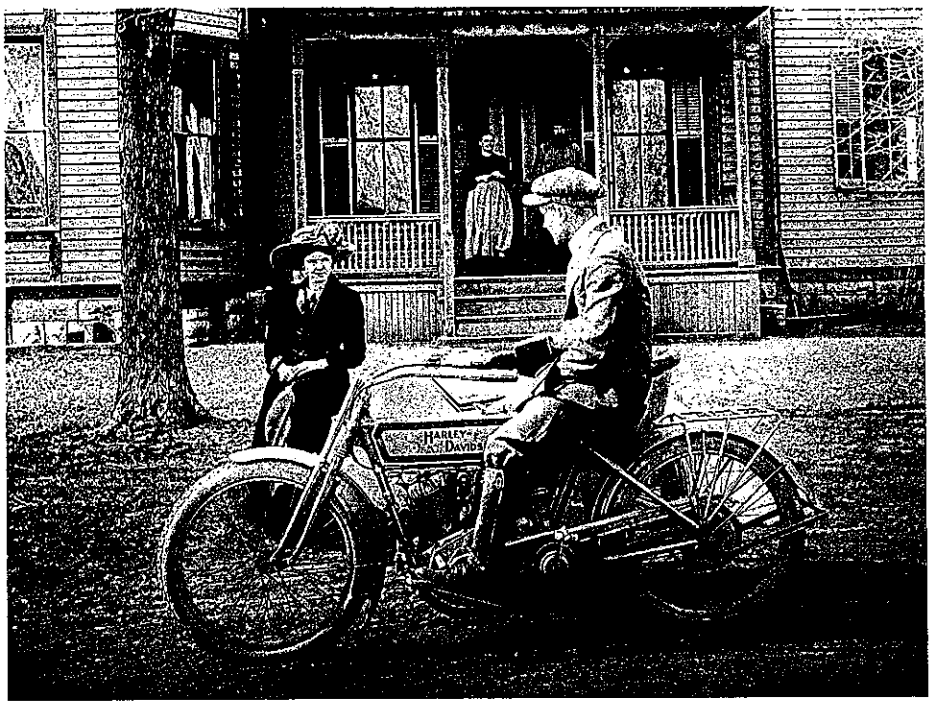
HARLEY-
DAVIDSON



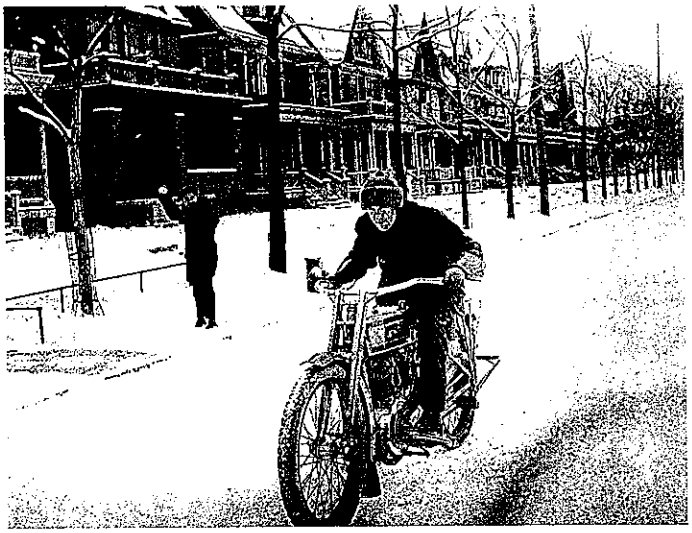


1915 *Fire departments were early customers of the Harley-Davidson Motor Company because motorcycles could reach an emergency faster than horses.*

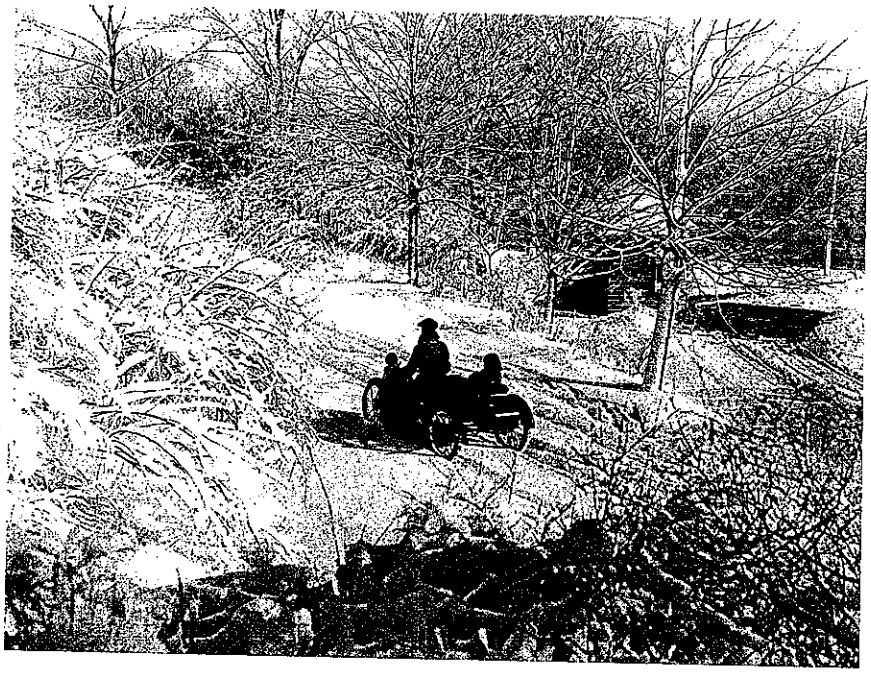
1914 *Rural postal carriers were quick to adopt Harley-Davidson motorcycles, which eliminated the feeding, hitching, and stabling of horses, while also cutting delivery time in half.*



1914 | *For some young people in the early part of the twentieth century, having a motorcycle was a part of the courting ritual.*



1915 | *For dedicated riders, a snowfall was no reason to put their Harley-Davidson motorcycles away for the winter.*

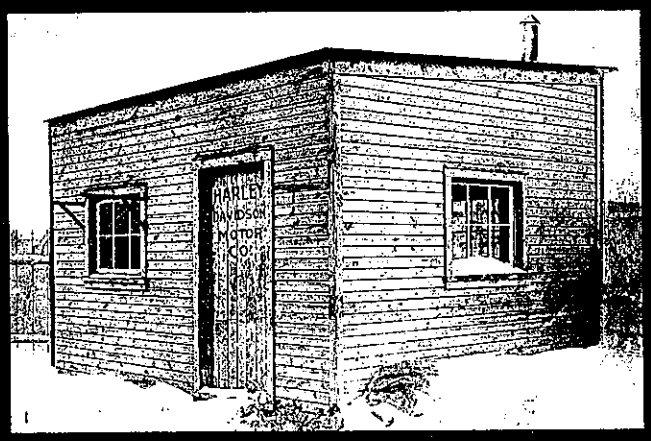


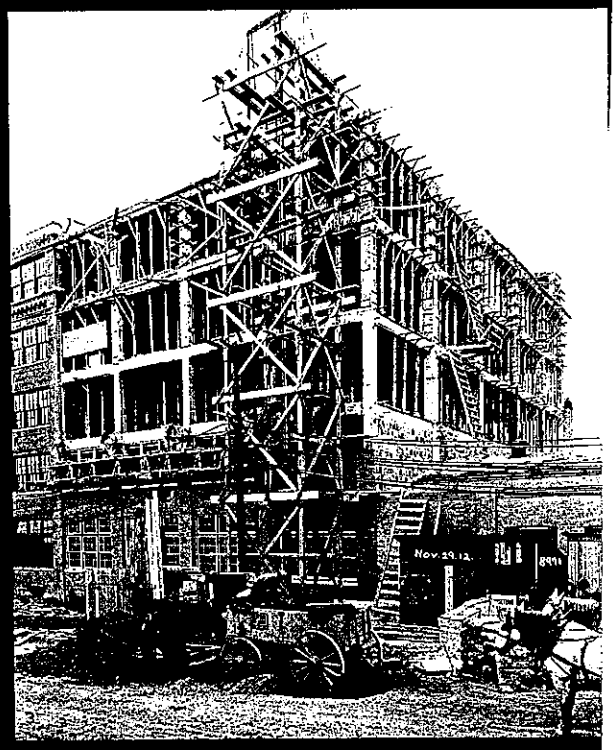
1921 *This motorcycle's drive wheel was equipped with tire chains to get through the snow.*

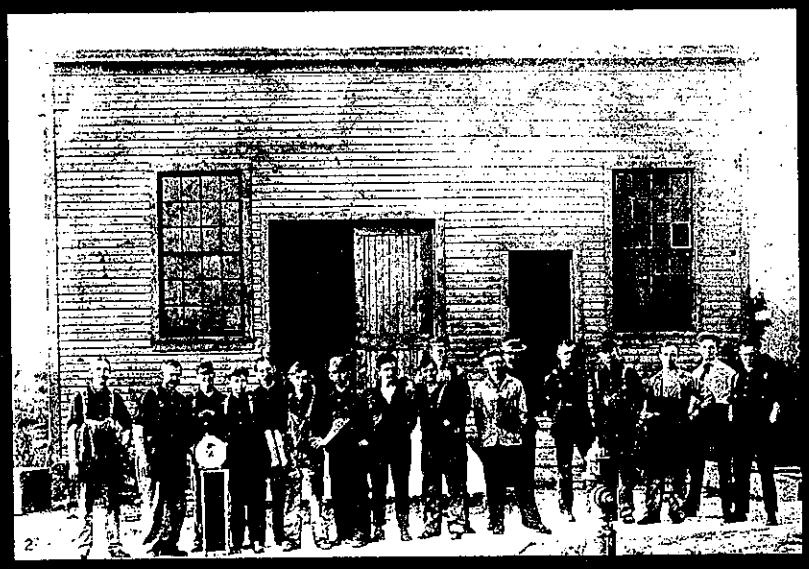
1917 *This scene, shot along the Milwaukee River, demonstrated a Harley-Davidson motorcycle's ability to reach an out-of-the-way fishing spot.*

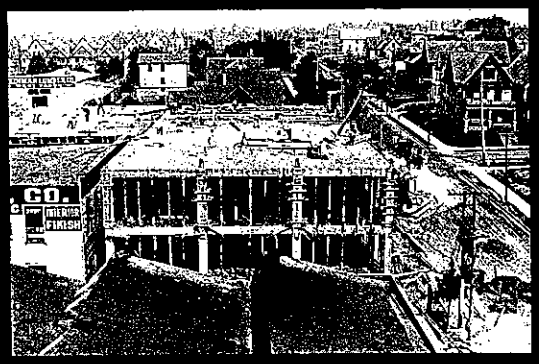
Expansion

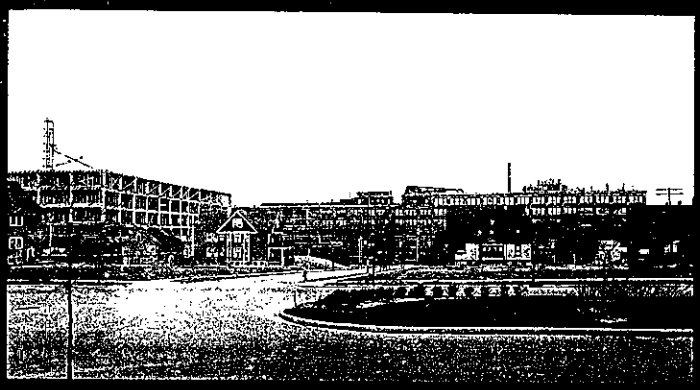
Harley-Davidson Motor Company headquarters has been in the same neighborhood for 100 years. The facilities can be traced from a wood shed at the Davidson home in 1903 to the red brick building that was built in 1913 and still stands today. I have fond memories of trips to Juneau with my dad during the forties and fifties, when Juneau Avenue was utilized for the manufacturing of finished products. The last completed motorcycle came off the line at Juneau in 1974.

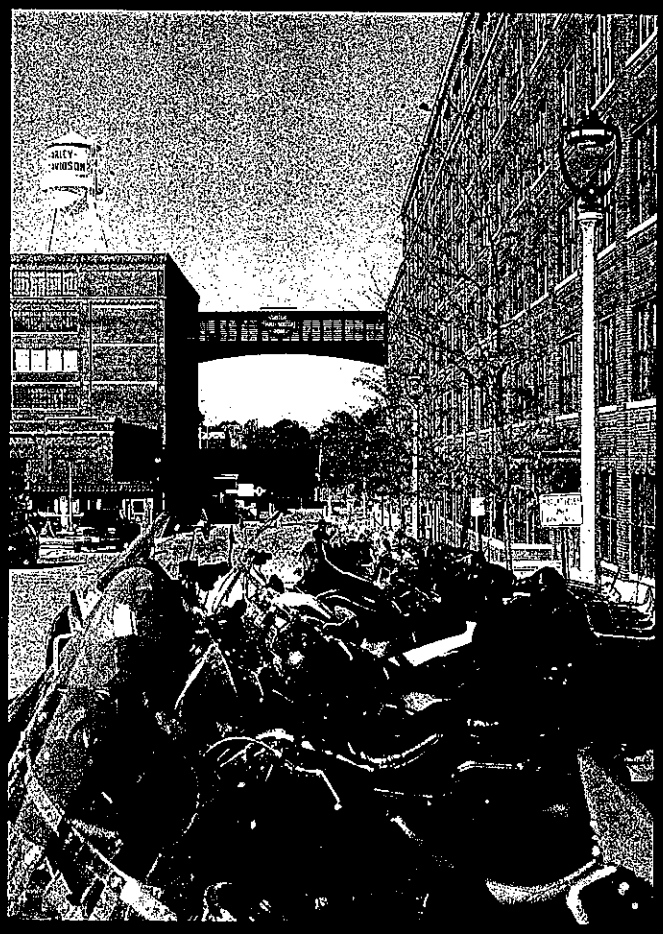


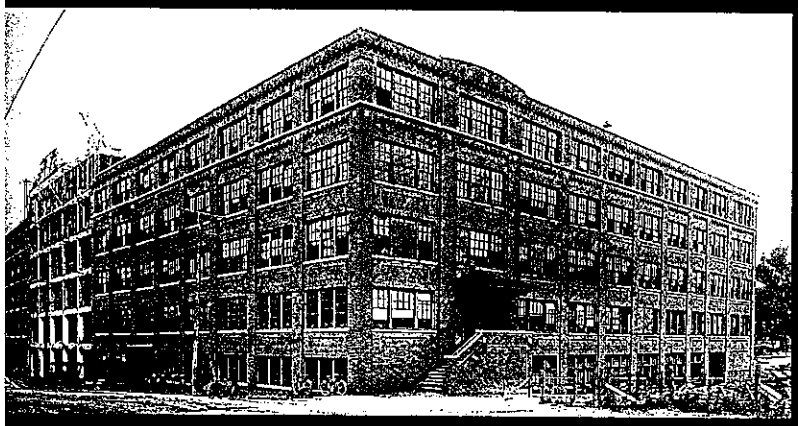












OPPOSITE PAGE
(1) Original shed, 1903 (2) First shed expansion, 1907 (3) Wooden scaffolding at the Juneau Avenue building site in 1912 (4) Addition at 37th and Juneau, 1911.

THIS PAGE
(1) The complex in 1919 (2) A connector between buildings being completed, 1912 (3) Interior "sawtooth" building construction, 1918 (4) Harley-Davidson world headquarters today.

IS THERE A BETTER FEELING

THAN ESCAPING FROM

EVERYDAY LIFE

FOR A WHILE

AND DOING SOMETHING

THAT'S JUST PLAIN

FUN?

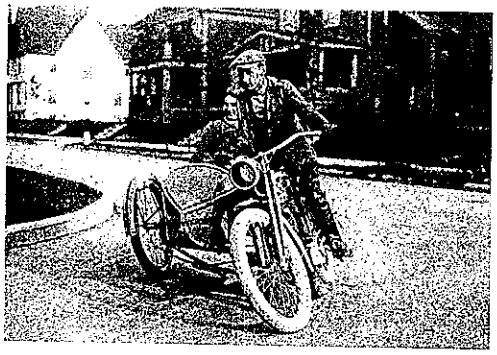
'VE RIDDEN MOTORCYCLES HUNDREDS OF THOUSANDS OF miles on every kind of road: from the twisty blacktops of southern Wisconsin to the arid straightaways of Australia, from high above the tree line in the Austrian Alps to the Pacific coast of Hawaii, and just about everything in between. I logged those miles in all kinds of weather, and every minute has been memorable. There is no such thing as a bad motorcycle ride.

Even after all that saddle time, I can't adequately explain what it feels like to ride one of our motorcycles to someone who's never done it. Harder still is trying to explain Harley-Davidson's mystique and why so many people believe so powerfully in it.

When describing the ride, riders talk about the heightening of the senses on two wheels, the feeling of power during a roll-on, the exciting sensation of counteracting centrifugal force during cornering.

There's also the simple intrigue of our motorcycles. Whether they're kids staring out of school buses or truckers or rank-and-file commuters whose heads turn every time a motorcycle goes by, people are drawn to Harley-Davidson motorcycles.

Riders mention how much more in touch with our surroundings we can be on a bike as opposed to enclosed in a car. We are continually bombarded with sensations—the scent of evergreens, freshly cut grass, sea air. We hear the pulsing of the V-Twin and we feel the wind on our faces. The temperature changes with



The Flexible brand, shown here on a 1913 Harley-Davidson model, was developed to give the sidecar a distinctive feel.

These 1914 riders from Chicago are equipped with enough gear to take them far from home.

every dip in the road. Everything we're seeing and feeling is right there, unfiltered and pure.

Riders also speak of freedom, one of the hardest concepts to get across because of its emotional value. Is there a better feeling than escaping from everyday life for awhile and doing something that's just plain fun? Or setting off on a journey, whether it's for fifteen minutes

or fifteen days, where the destination is of secondary concern and the main objectives are exhilaration and pure adventure?

We might try to compare motorcycling to other thrill-seeking pursuits, like flying or sailing. But the comparisons are inadequate because the traveling environments are so vastly different. The rider will invariably wind up saying, "You'll just have to get on a motorcycle and ride."

If you think it's hard to communicate the riding experience today, think about how difficult it would have been back in its earliest days, when the majority of people had never experienced motor-powered transit of any kind.

While the founders were introducing Harley-Davidson vehicles as a means of transportation, they were also inadvertently providing a glimpse of the sheer fun of motorcycling. Folks in Milwaukee knew about bicycling, of course, and a few might have even seen a motorized bicycle or two, but only a handful had actually ridden one.

As Harley-Davidson and other manufacturers established themselves and grew, the public became more aware. It was as true then as it is today: motorcycling isn't for everybody. Only the adventurous souls followed through and fulfilled a dream.

And "adventure" was the key word. As alluring as seeing the countryside from a motorized vehicle was, surprises could pop up almost anywhere. Not only were most roads primitive and challenging to handle, but mechanical engineering was in the early phases of development. Things we take for granted on motorcycles today—like the engine running flawlessly and brakes working efficiently—were not guaranteed then. Riders needed a great deal of mechanical know-how, especially since breakdowns could occur far from home where assistance was unavailable.

As with any new device, though, once ease of use and soundness were established, the fascination spread to the non-mechanically inclined, just as it has with everything from cars to computers.

As the motorcycle began to gain acceptance as a useful and enjoyable means of personal and commer-

cial transportation, motorcycling also grew as a hobby. And hobbies have a way of attracting like-minded people. Within a few short years, small gatherings of riders naturally appeared and expanded over time. What better way to enjoy your new hobby than to share stories and experiences with others who enjoy it as much as you do?

By Harley-Davidson's fifth year in production, motorcycle companies were cropping up across America. Endurance runs and racing increased the visibility of stronger brands, and as we've seen over the decades, riders are attracted to a winning brand. In particular, they wanted a durable, reliable machine, along with power and speed.

Early indications that specific makes were becoming important to riders and spectators can be seen

in photos of Walter Davidson in an early endurance run. Walter loved to ride and was a competitive person, both on our vehicles and in business. He and that 1908 Enduro helped to establish Harley-Davidson as a strong, trustworthy brand.

Motorcyclists gather outside C.H. Lang's Chicago dealership in 1912. Lang was Harley-Davidson's first dealer.

Far left: Racer Ray Weishaar rewards his hog mascot after the 1920 Marion Championship.

By the mid-teens, motorcycle racing had evolved into a popular spectator sport. With speed and performance being proved and publicized each weekend on tracks or endurance runs throughout the country, names like Harley-Davidson, Indian, and Excelsior-Henderson rose to the top as popular favorites.

In pictures from around that time, you can see riders wearing jerseys similar to those worn by our race teams, with "Harley-Davidson" embroidered across the front. It was evidence of a following, one that endures to this day. These were the first indications of people wanting to be associated with Harley-Davidson. Our brand was taking on emotional meaning.

Because the founders were so visibly involved with the motorcycle community and spent so much time with customers, they quickly realized the value of this camaraderie. Customers had a great time riding together. The founders, through their commitment to riding, instituted a spirit of shared experience that riders still appreciate today, 100 years later.

As cars gained favor in the 1920s, Harley-Davidson touted the joys of fresh air and the open road in a sidecar.

This philosophy of customer involvement thrives within our dealer network. Early riders would gather at dealerships to learn from the salespeople and meet with friends. Dealers recognized the value of this opportunity by sponsoring clubs and promoting events. The tradition of riders hanging out at dealerships still continues.

The founders also made it a priority to help dealers strengthen their ties with riders. By striving to ensure that what happened after the sale of a motorcycle was as important as the sale itself, and by keeping customers active and involved with the brand, our dealers have always played a crucial role in the ongoing success of our company.

By 1920, Harley-Davidson was the largest motorcycle manufacturer in the world and saw fit to advertise its leadership position widely. Arthur Davidson was a natural marketer and the driving force behind our sizable investments in advertising and promotional materials, which were always artistically designed and are highly collectible today. Advertising and promotion communicated our role as the industry leader with a brand that people aspire to own and feel good about being associated with.

We instill our pride in our product, which comes across loud and clear in our advertising and at the dealerships. Our motorcycles were not mere commodities. Harley-Davidson stands for something more powerful, something beyond hardware.

In the 1930s, Walter Davidson made a more concerted marketing push that probably had something to do with the diminishing practicality of owning a motorcycle for transportation purposes. Automobile mass production had become so efficient that cars were now becoming affordable. Understandably, many people preferred being protected from the elements.

But for those riders whose interest extended beyond basic transportation, the apparent logic of owning a car may have been precisely what kept them on their motorcycles. They preferred to ride. And they knew that a car could never give them as much pleasure as riding a Harley-Davidson motorcycle. The company's challenge, then, was to find new customers.

At the onset of the Great Depression, which posed a threat to our future and forced many smaller competitors into extinction, company management and the dealer network placed more emphasis on promoting rider gatherings. Club rides communicated the fun of motorcycling. The company also worked closely with dealers to build traffic in showrooms, increase owner satisfaction, fuel positive word of mouth, and expand parts and accessories offerings.

I have great respect for the founders' early philosophies and their flexibility in reacting to the ups and downs of this business. Their close-to-the-customer philosophy would not only protect the brand during

future market slowdowns but would serve us well through the Depression and World War II, our turnaround in the 1980s, and in our current success today. By keeping our riders excited and involved, dealers kept motorcycling alive and attracted new generations of riders.

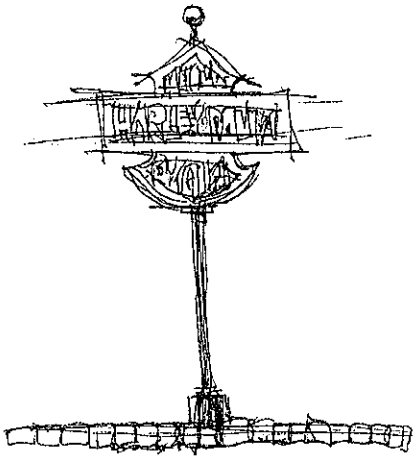
When our riders had a positive experience at a dealership, race, or event, they told their friends about it, which created demand for motorcycles. Our mystique—that impossible-to-describe essence of the brand—grew stronger with each story, as did our customer base. Just saying the name "Harley-Davidson" practically guaranteed a positive reaction.

I believe that the extraordinary efforts of all the great people in this company to bring riders together is what has separated Harley-Davidson from its competitors. Our name generates passion, which is brought to life and perpetuated by our dealers and, ultimately, by everyone who owns and enjoys Harley-Davidson products.

I also believe that if our mystique could be put into words, it wouldn't be mysterious anymore. Feelings were never meant to be fully understood; that's their true beauty. And since emotions are essentially personal, it means simply that there are millions of reasons why people choose to ride Harley-Davidson motorcycles.

The more involved a person becomes with Harley-Davidson, the more he or she values the experience. We all have a limited time on this good earth, and we're blessed to have something like this in our lives that gives us such pleasure. So we owe it to ourselves to enjoy it to the fullest. Then, as generations of riders did before us, we'll share our stories and pass this wealth down to the next generation. They'll treasure it, too—and have just as much difficulty explaining why.

This advertisement from 1931 illustrates the concept of motorcycling as a sport, rather than merely a form of transportation.



1927 | 8-VALVE

When I think of the 8-Valve and the history of the board tracks, I visualize excitement we will never again witness. This was Harley-Davidson's first foray into serious racing. Only a handful of top racers could manage the 8-Valve. They ran these machines wide open around the boards—a steep, high-banked track made out of two-by-fours.

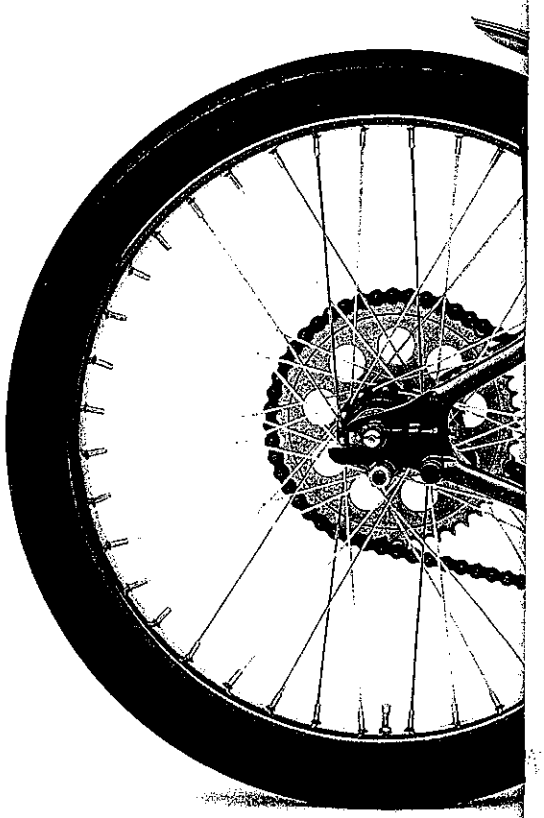
The boards were very difficult to maintain, because the wood deteriorated quickly. The bikes were total loss oil systems—as the engine used oil, it was eliminated onto the track surface. Just think of it—the riders went all out with virtually no suspension and no brakes on an oily, deteriorating surface.

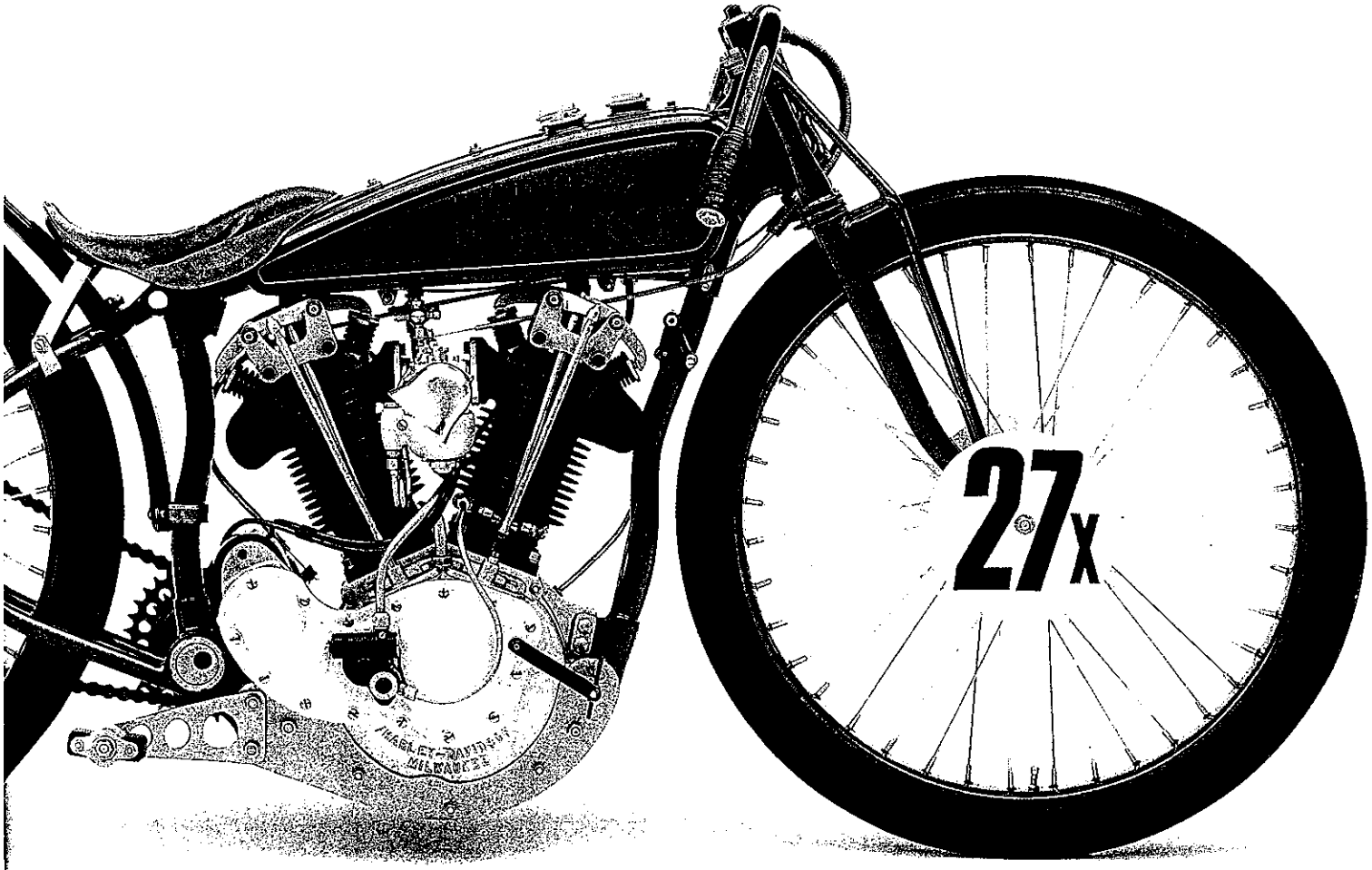
We only made a handful of 8-Valves, and each was different. They had different styles of exhaust ports and pipes, and sometimes no pipes at all. Each model was tweaked to maximize horsepower. Not only did the factory make changes from one model to the next, but the riders would then tailor the bikes to their specific tastes.

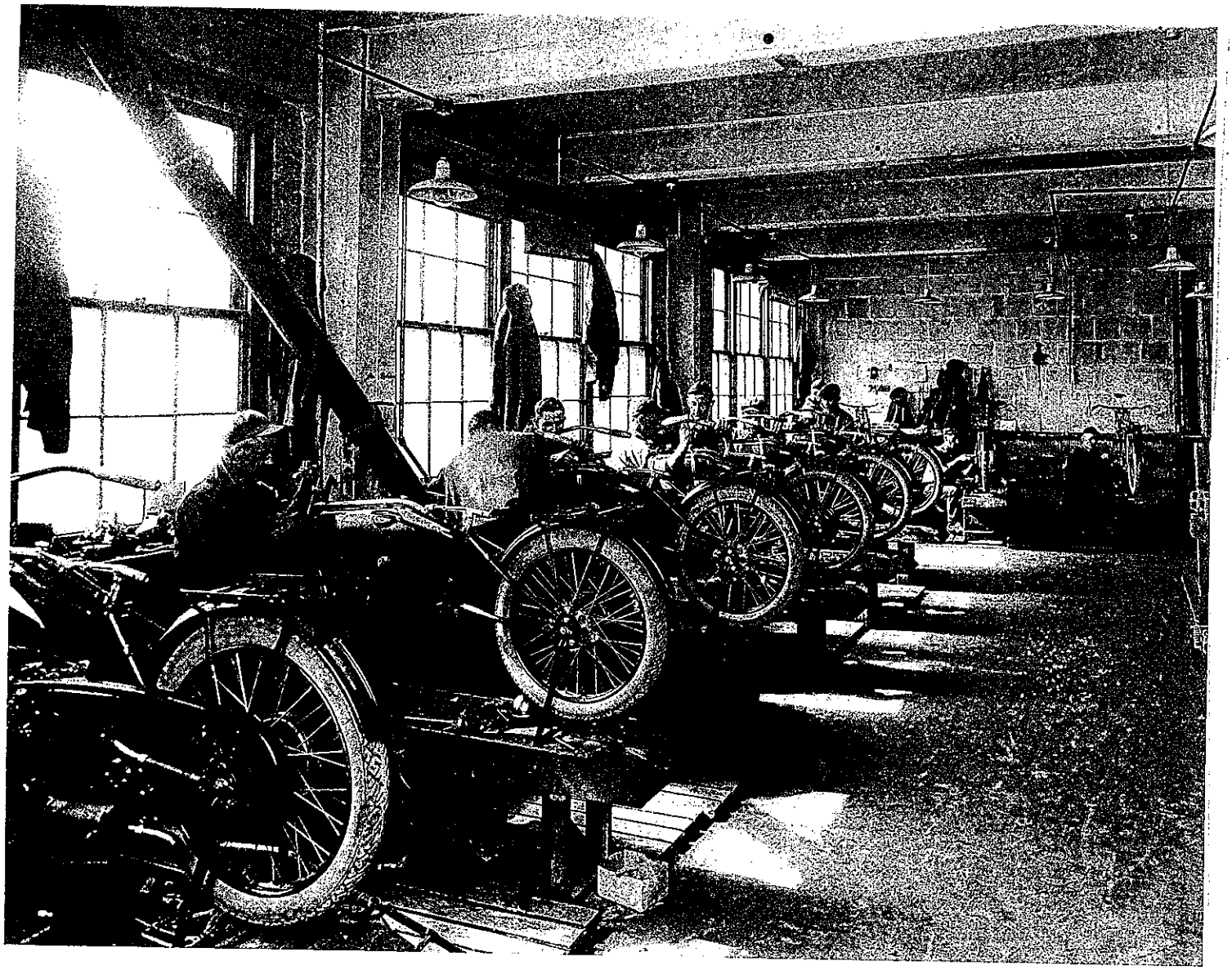
Any kind of racing bike has two pronounced visual elements: the engine and the wheels. Racing bikes look aggressive because of the low engine and drop handlebars. The wheels dominate what you see because there is no sheet metal and no front fender. The large diameter of the wheels adds to their visual impact. Because it is extremely rare and beautiful, the 8-Valve is one of the most desired collector's models.

POWERTRAIN
Engine: 1927 V-Twin 8-Valve factory race engine
Displacement: 1000 ccs
Transmission: None
Primary drive: Direct single-row chain
Secondary drive: Direct single-row chain
Brakes: None
Ignition: Magneto

CHASSIS
Frame: Single loop
Suspension: None
Wheelbase: 52 inches
Tires: 28 x 2.25 inches (front and rear)
Color: Olive Green

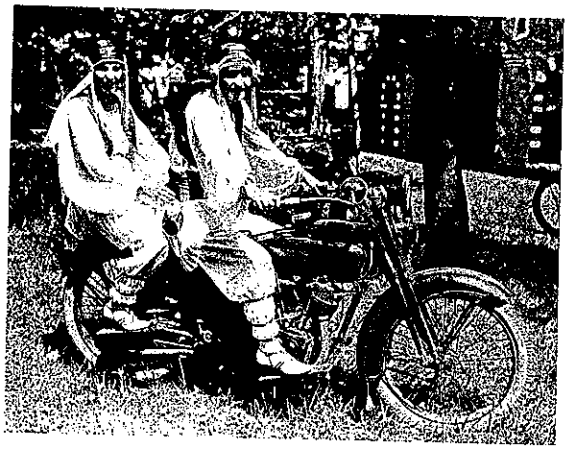



27x
HARLEY-DAVIDSON
MILWAUKEE

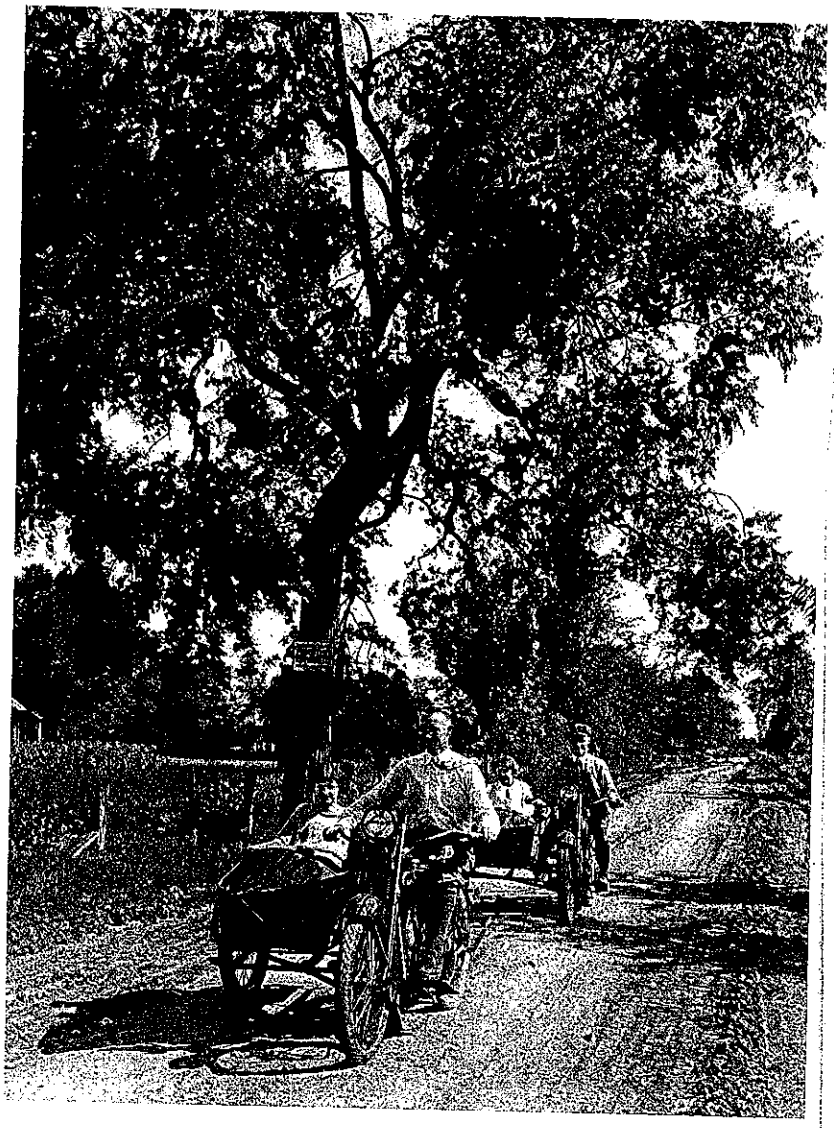


1923 | *Harley-Davidson motorcycles being assembled on the factory floor.*

1919 | *George Connors and Bill Manz (in sidecar) took second place in the thousand mile U.S. Navy recruiting tour—a round-trip endurance run between Milwaukee and northern Michigan.*



1924 | *Posing for the Arabian Nights Fete in Bayshore, Long Island, these women represent an aspect of motorcycle culture.*



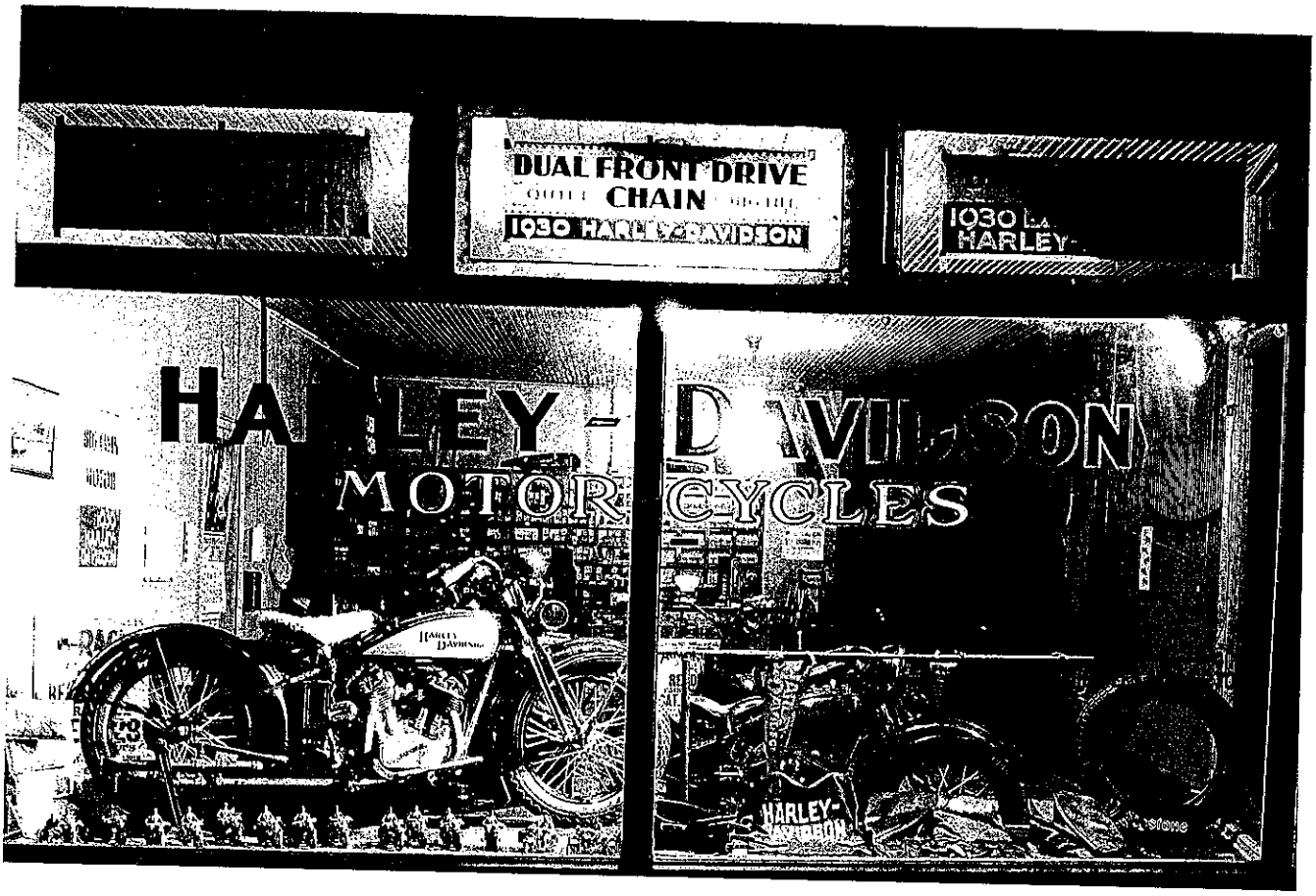
1921 | *Two couples enjoy the timeless pleasure of a summer jaunt along a country road.*

1926 | *"Hap" Jameson, an early editor of* The Enthusiast *magazine, and his passenger out for a ride in the country.*

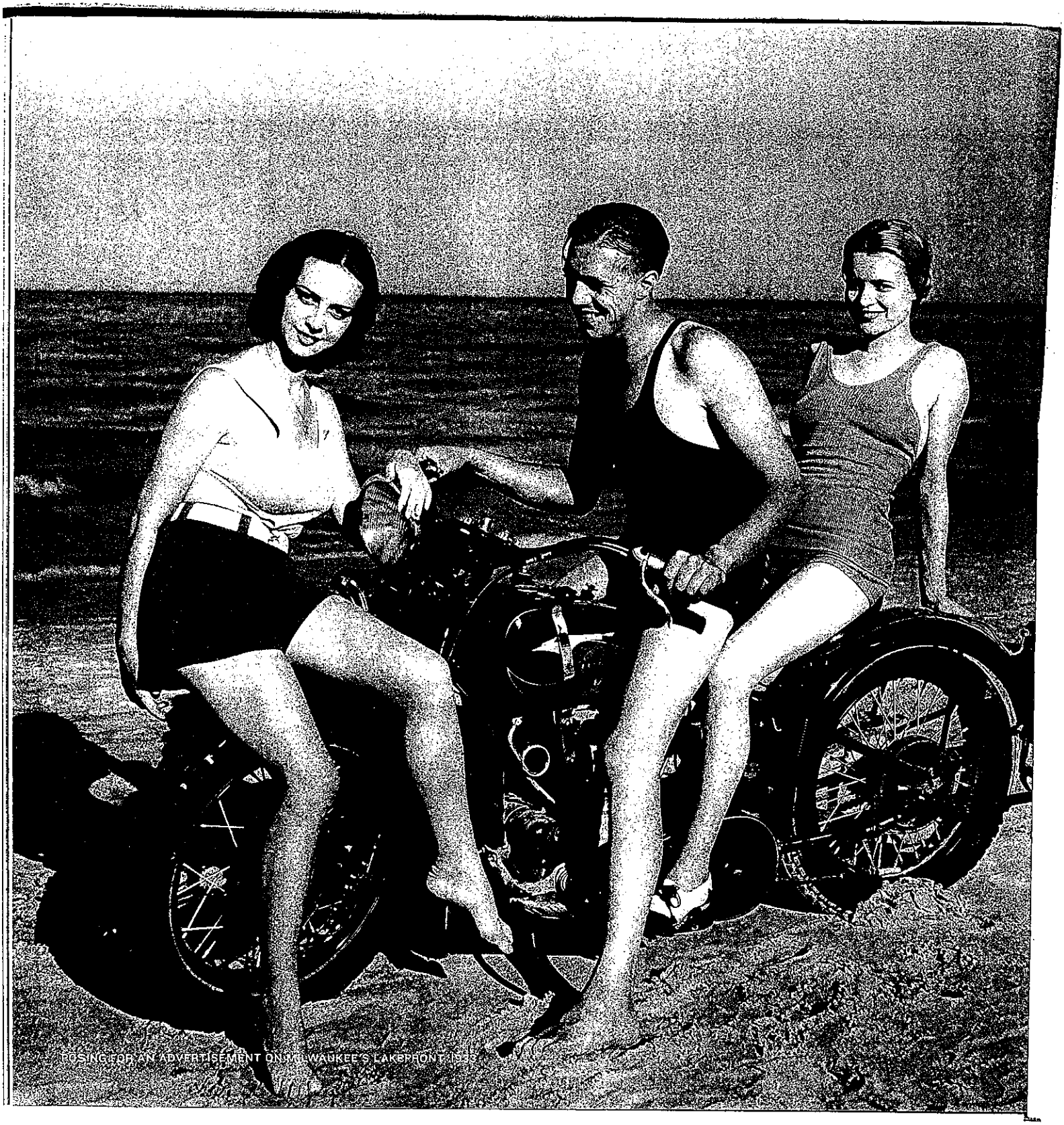
1923 | *Dudley Perkins at the Mount Rainier National Park Hillclimb.*

1930 | *Hillclimbs drew large crowds during the Great Depression, especially when professional riders participated. Shown here is a view of the event from the finish line.*

1929 | *This employee inside the Harley-Davidson factory is applying striping to fuel and oil tanks.*



1930 | *The new VL side-valve model is on display in the window of Red Wolverton's Reading, Pennsylvania, dealership.*



POSING FOR AN ADVERTISEMENT ON MILWAUKEE'S LAKEFRONT, 1936

1928

DEPRESSION AND DARK DAYS

1938

THROUGHOUT THE COURSE OF

THE TWENTIETH CENTURY

HARLEY-DAVIDSON MOTORCYCLES

WERE WOVEN INTO THE FABRIC

OF AMERICAN LIFE.

IN MANY WAYS,

HARLEY-DAVIDSON

CAME OF AGE AND MATURED

WITH AMERICA.

HARLEY-DAVIDSON OWNERS, MYSELF INCLUDED, WILL TELL you that their motorcycles are very close to the center of their lives. When we're not riding them, we're thinking about them. But it's not just enthusiasts whose lives have been impacted by Harley-Davidson. Throughout the course of the twentieth century Harley-Davidson motorcycles were woven into the fabric of American life. In many ways, Harley-Davidson came of age and matured with America.

For much of the first half of the century, groceries, mail, or laundry may have been delivered right to your front door by a Harley-Davidson vehicle, be it an early package truck or the later Servi-Car. You might also have seen a policeman on one of our motorcycles. These bikes had an aura of authority. We once did a great advertising poster for our police bikes with a headline that read THERE'S SOMETHING UNDENIABLY RIGHT ABOUT A COP ON A HARLEY- DAVIDSON. It's hard to imagine a presidential motorcade or a downtown parade, now or at any time in the last century, without a police escort on Harley-Davidson motorcycles. If you see a policeman on a motorcycle in an old black-and-white movie or newsreel, you can be pretty sure that vehicle was a Harley-Davidson.

Less visible in our home market but also vital were the more than 90,000 military Harley-Davidson models used during World War I. They were symbols of American ingenuity and strength around the globe and played recurring roles not only in the history of our company but in the history of the world.

As much as we enjoy talking about our motorcycles in the context of sport, fun, and leisure, we need to remember that, since nearly the beginning, there has been a key commercial element to our company. The utilitarian side of motorcycling—use of the bikes for work rather than pleasure—has allowed us to broaden our marketing base and generate additional volume. It has also provided some memorable products and vivid stories.

While I have no doubt that our reputation for quality

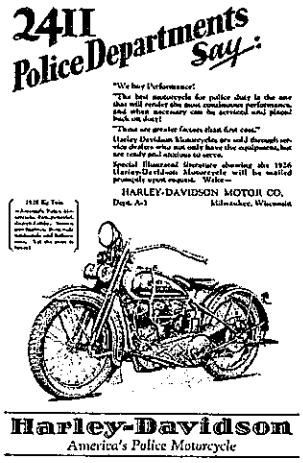
had a lot to do with the Detroit Police Department's decision to purchase some of our bikes in 1908, I've always imagined that even in the earliest days, people recognized that a police officer on a Harley-Davidson would command immediate attention and a large degree of respect.

Police use of Harley-Davidson motorcycles dates back to 1908 when the Detroit Police Department purchased police models. This officer poses with a 1913 chain-drive model.

As other police departments saw Detroit's success with our motorcycles, many of them purchased Harley-Davidson police models, and a new side of our business developed. Within a few years, police departments around the country were using our motorcycles, and our reputation as the vehicle of choice for law enforcement spread. The policemen on our motorcycles sent a message to potential motorcyclists and other commercial users that if Harley-Davidson motorcycles can stand up to continuous police use, they've got to be good.

There were other trade applications for our vehicles. The U.S. Postal Service started using Harley-Davidson vehicles to deliver mail in the early 1910s. A motorcycle's size and maneuverability offered distinct advantages over horses and horse-drawn wagons, especially for rural deliveries, and motorcycles were relatively inexpensive to operate.

The company realized it was time to further diversify. Certain businesses could gain a competitive edge by using motorcycles for their deliveries. So Harley-Davidson introduced its first delivery vehicle in 1915: a wooden container with a hinged lid mounted to the sidecar chassis. Soon our motorcycles were being used for a variety of commercial deliveries, from groceries to auto parts. Even some funeral homes used them. We had a department that painted signage for these delivery vehicles, so businesses could custom-order directly from the factory.

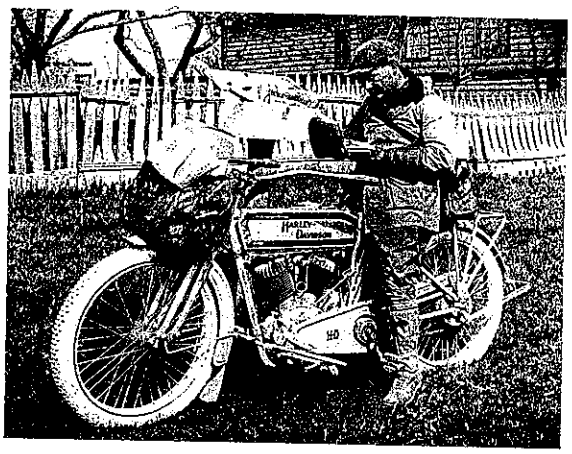


It's hard to determine how many of our motorcycles were used for commercial versus personal use during the early decades of our history. We do know, however, that Harley-Davidson motorcycles were widely favored among commercial users.

It was our growing reputation for quality that earned us our first contract to provide motorcycles to the military back in March 1916. A band of Mexican revolutionaries, led by Pancho Villa, had attacked and killed several Americans in the town of Columbus, New Mexico. Within days, Harley-Davidson received a telegram from the War Department, requesting motorcycles to help track down the rebels in the desert terrain. The motorcycles included sidecars developed by Bill Harley that could be used with mounted machine guns.

The War Department recognized our motorcycles'

Top right: By the late 1920s, Harley-Davidson police motorcycles were an important component of the Motor Company's business. Law enforcement sales and service would help carry the company through the Depression years.



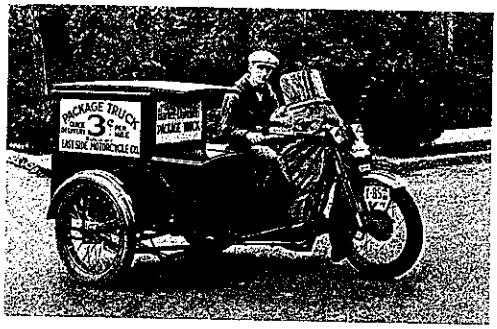
superior performance and was impressed by the speed with which we delivered the motorcycles to New Mexico. A few months later, during the first full year of U.S. involvement in World War I, they purchased nearly half of our production output—some 18,000 motorcycles—for the war effort in Europe. Harley-Davidson motorcycles proved their worth in scouting missions and in quickly transporting messages.

An unexpected benefit of shipping thousands of motorcycles to Europe was establishing a brand presence there. The majority of motorcycles we sent to Europe for the war stayed there, with some of them eventually reconfigured as pleasure vehicles.

World War I changed everything. By the early twenties, we had become the largest motorcycle manufacturer in the world, in no small part because of our production of military motorcycles. The end of the war, though, marked the beginning of some tough times for Harley-Davidson. The economy was rocky, and the explosive growth of the automobile industry, especially in the twenties, lowered the demand for motorcycles. More and more people were choosing four- instead of two-wheeled vehicles.

The Great Depression delivered another devastating blow to the motorcycle industry. Ultimately, only two U.S. motorcycle manufacturers, Harley-Davidson and Indian, would live through it. Some 3,000 police departments were using our vehicles by this time, along with many businesses and, of course, many thousands more who bought strictly for pleasure. All these bikes would continue to need replacement parts and service, and their mere presence on the streets fortified our brand.

Around this time, we introduced our three-wheeled



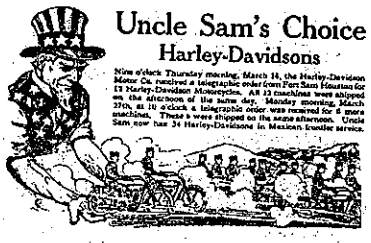
Servi-Car, which would become a mainstay for decades among police and commercial users. We even designed a special tow bar to allow a garage employee to ride the Servi-Car to a customer's house, hitch it to the bumper of the customer's car, and drive the car to the shop for maintenance work. The employee would then return the car, towing the Servi-Car, which was the employee's

By the mid-1910s, motorcycle use in rural mail delivery service was widespread.

Bottom: Motorcycle delivery vehicles with specially designed sidecars and custom graphics were used in the 1920s and beyond.

transportation back to the shop. Car shops across the country used this simple, effective idea.

The Servi-Car also caught on with police departments and became a great vehicle for tire checkers, who could comfortably patrol streets for parking violations.



One of the most important chapters in our history opened during World War II, as America's allies increasingly relied upon motorcycles to shore up their defenses. Again, the conversion of some overseas motorcycle facilities into wartime manufacturing facilities created a need for Harley-Davidson motorcycles, and this time we responded with our new WLA, a military version of the 45 WLD. The Russian army, a U.S. ally at that time, purchased around 30,000 WLAs over the duration of the war. Our motorcycles were used for everything from scouting missions to overall reconnaissance and were highly regarded for their ability to negotiate rough terrain. By the time America was directly involved in the fighting, virtually every Harley-Davidson motorcycle being built was for use in the war effort, and more than 90,000 of our military motorcycles would see action around the globe.

Harley-Davidson contributed to U.S. Army efforts in 1916 when specially equipped sidecars mounted with machine guns were used for Mexican border duty.

Bottom right: An officer mounted on a Harley-Davidson motorcycle led the way in 1951 for the return of General Douglas MacArthur to his boyhood home of Milwaukee.

Shortages of raw materials meant civilian motorcyclists often had to wait for replacement parts. A lack of metal forced us to ship oil in glass jars, which a few civilian riders have kept to this day to remind them of Harley-Davidson's involvement in the war effort. These rare items are highly desirable in the collector market.

Letters from soldiers flowed into Harley-Davidson headquarters praising the performance of the WLAs. The American motorcycle was proving its mettle under the most brutal circumstances, and Harley-Davidson owners followed the stories of brave Americans and their motorcycles in our magazine, *The Enthusiast.*

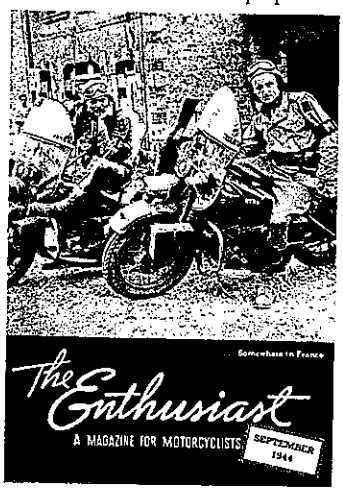
As soldiers returned home, many who had learned to ride in the military were now eager to continue their love affair with motorcycles. So they turned to the brand they knew and respected from their time in the war: Harley-Davidson.

A few years later, in 1953, our largest domestic competitor, Indian, shut its doors and left Harley-Davidson as the only American motorcycle manufacturer. Indian redesigned their motorcycles to become more competitive in the market, but I believe they hadn't allocated enough test time. They were anxious to release an all-new lineup to the public, but inadequate testing marked the beginning of their downfall. From a field

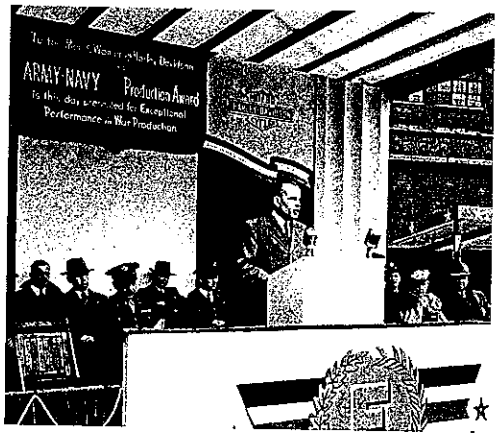
that once held over 155 American-based competitors, we were the last survivor.

In the postwar era, Americans felt relieved and secure, and they wanted to get out, have fun, and see the country. There's no better way to do that than on a motorcycle, so thousands of new or war-vet riders took to the road on Harley-Davidson vehicles. Pleasure-motorcycle sales at Harley-Davidson ramped up quickly.

To help spur Europe's postwar economy, import tariffs were lifted on many European products being shipped into the United States, and British bikes like Norton, BSA, and Triumph began to gain a degree of favor here. In the late fifties and throughout the sixties and beyond, the U.S. saw an influx of Japanese motorcycles. These non-domestic competitors met us head-on on the roads and on racetracks, but also solidified our position as "America's motorcycle." Our unique look had evolved. We had imprinted an imagery and a style of motorcycle in people's minds.



Decades later, after wide swings of great market growth, devastating declines, and growth again, Harley-Davidson's position as America's motorcycle has become even more firmly grounded. As we became more successful, many large foreign competitors, one by one, began imitating the look of our motorcycles. They always claim they're not copying Harley-Davidson, simply evoking "American styling." That's actually a great compliment to us, since motorcyclists around the world associate American styling with Harley-Davidson. We've worked very hard over the past 100 years to earn this distinction. Producing America's motorcycle is something we do with a tremendous amount of pride and honor.



On a platform erected outside the Juneau Avenue plant in Milwaukee, company president William H. Davidson accepts an Army-Navy "E" Award for exceptional industrial performance during World War II.

Far left: World War II soldiers grew fond of their military Harley-Davidson motorcycles and wrote to The Enthusiast *telling of overseas adventures.*

1927 | S (PEASHOOTER)

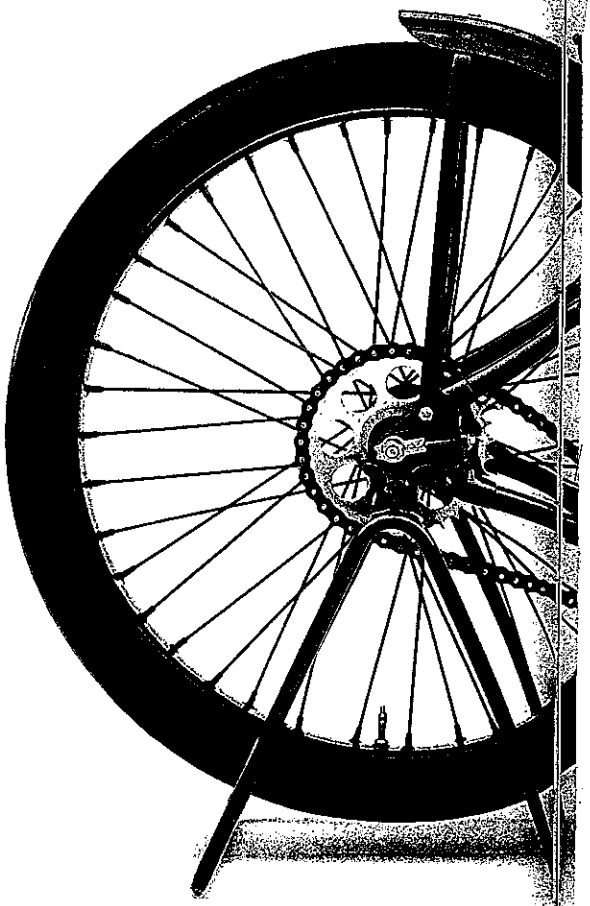
The Peashooter appeared as the era of the board track and the 61-cubic-inch 8-Valves ended. Peashooters were equipped with either 21-cubic-inch (350cc) or 30.5-cubic-inch (500cc) engines. With these smaller engines, you would no longer see the tremendous speeds of the 8-Valves. Peashooters were used in several types of racing, from dirt track to cinder track. The cinder track is a very short track where a special variation of the S motorcycle raced.

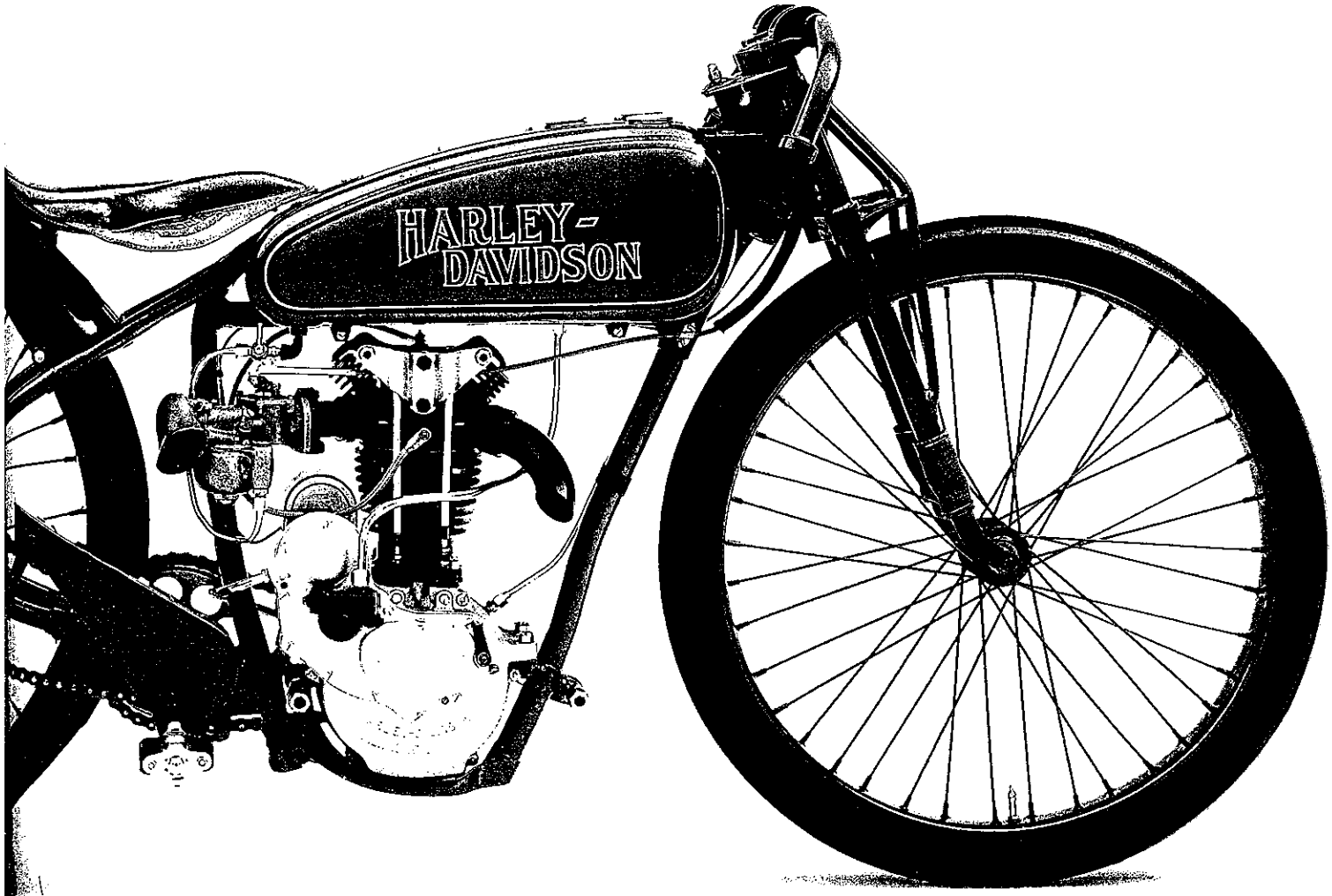
Every piece on a racing bike is designed for a specific function. The 1927 Peashooter is a minimal machine. It has no lights or brakes; the fuel tank is sensuous; the rear fender is tiny; the exhaust pipe is short. The chain guard is a beautiful little teardrop. These extremely functional forms represent the combination of art and science.

I am fascinated by racing bikes because of their proportions. The 1927 S Peashooter has big, large-diameter wheels. The proportion of those wheels to the low seat and the drop handlebars—even the way the whole frame sits low—is handsome. The exposed valve springs at the top of the engine are mechanically handsome. I just love these motorcycles. That's why I have two iterations of the Peashooter in my personal collection—one restored and one "barn fresh."

POWERTRAIN
Engine: Single-cylinder overhead valve
Displacement: 350 cubic centimeters
Transmission: Direct drive
Primary drive: Chain
Secondary drive: Chain
Brakes: None
Ignition: Magneto

CHASSIS
Frame: Single loop
Suspension: Telescopic forks (front)
Wheelbase: 49.625 inches
Tires: 28 x 2.25 inches (front and rear)
Color: Olive Green

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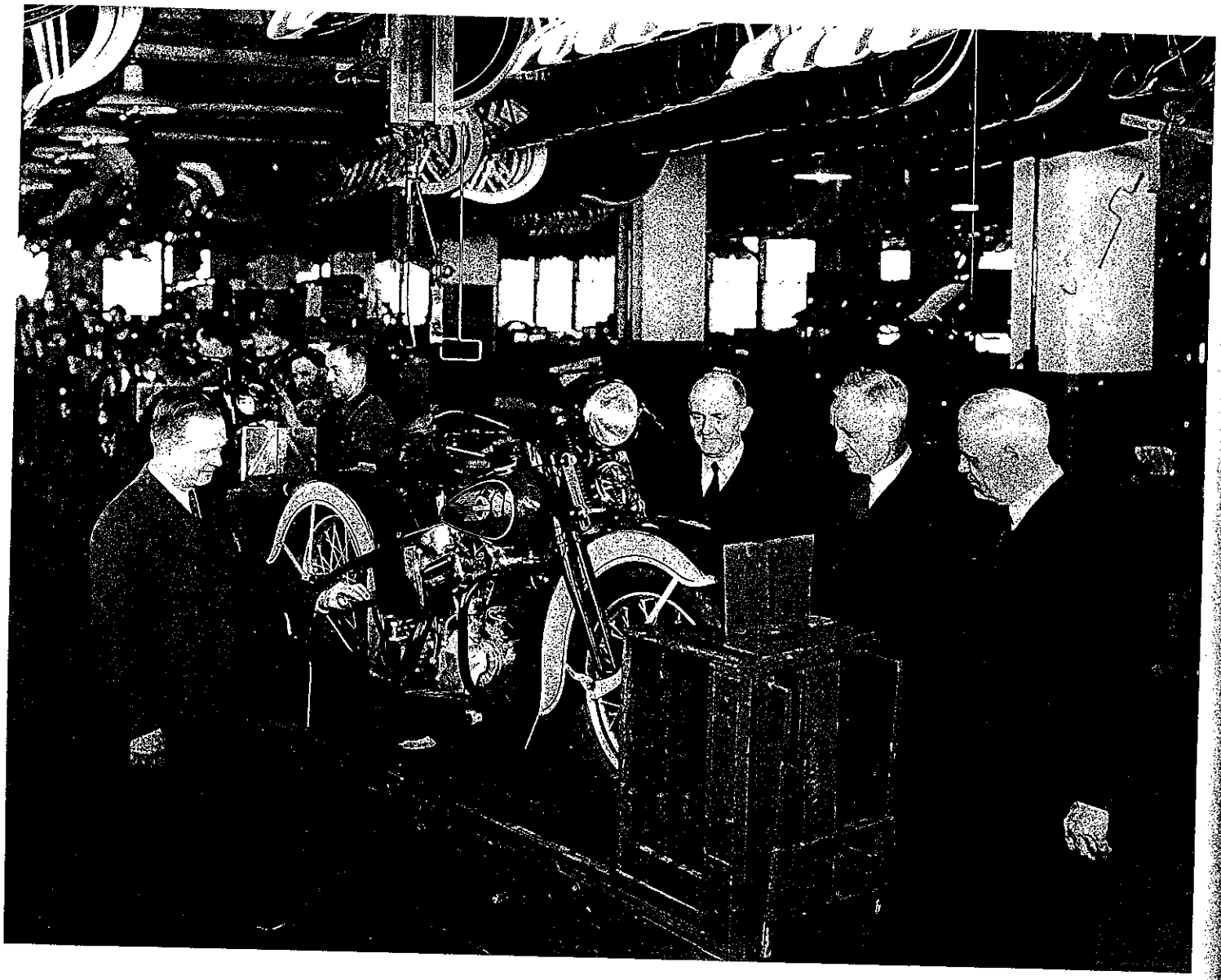
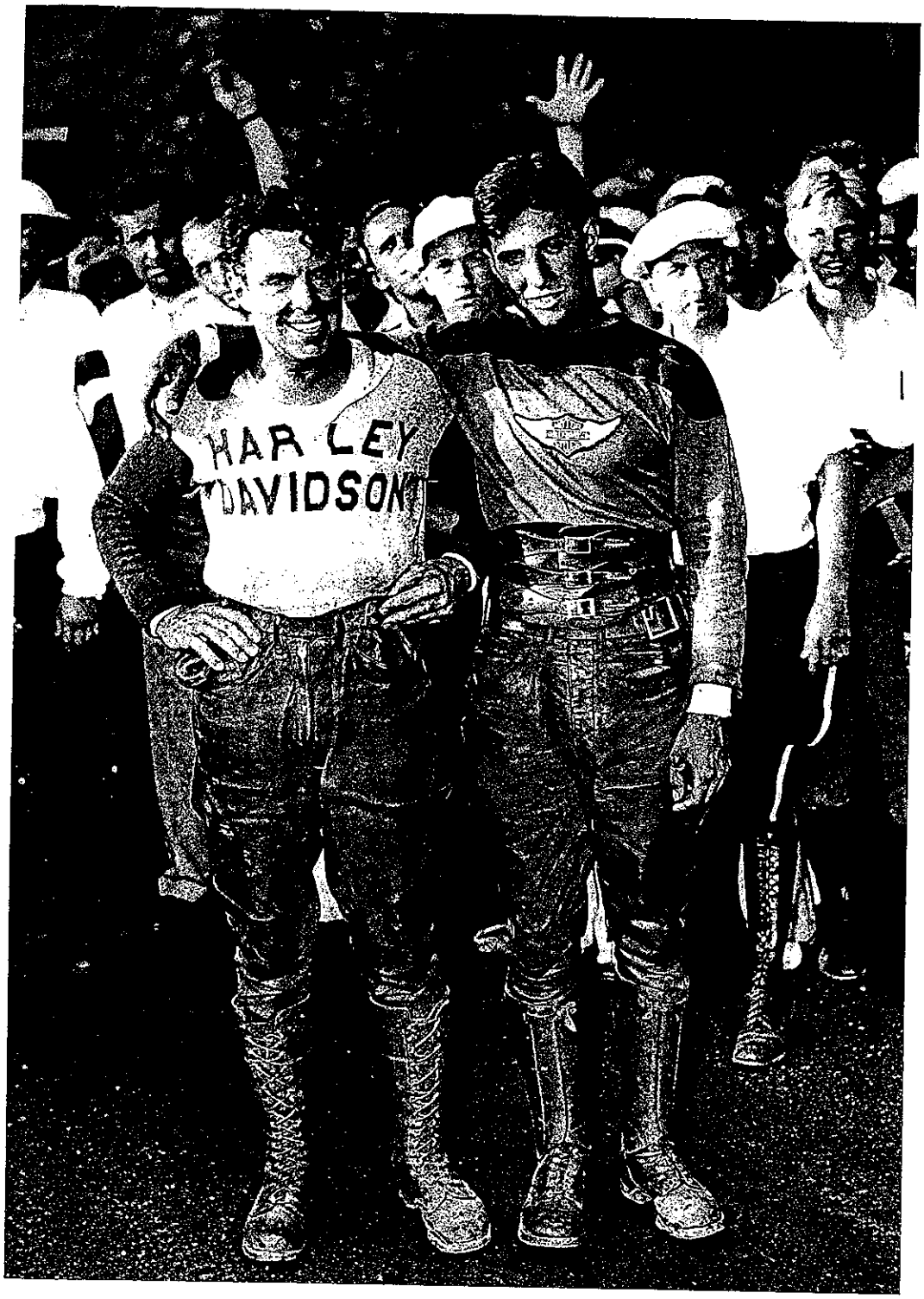


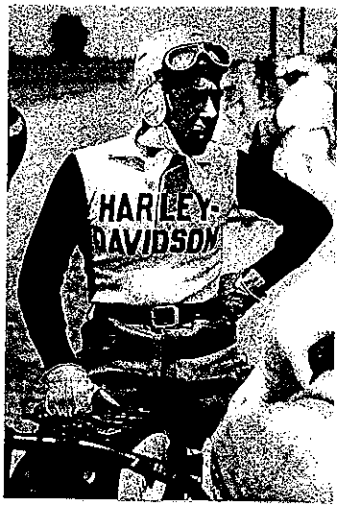
1936 *Harley-Davidson founders, from left to right: Arthur Davidson, Walter Davidson, William S. Harley, and William A. Davidson. They are inspecting a prototype 61 OHV model, a motorcycle that would set styling and engineering standards for all subsequent Big Twins.*

1929 | *Second generation Gordon, Walter Jr. and Allan Davidson in San Francisco with dealer Dudley Perkins. One stop on their 8,000-mile cross-continent motorcycle tour.*



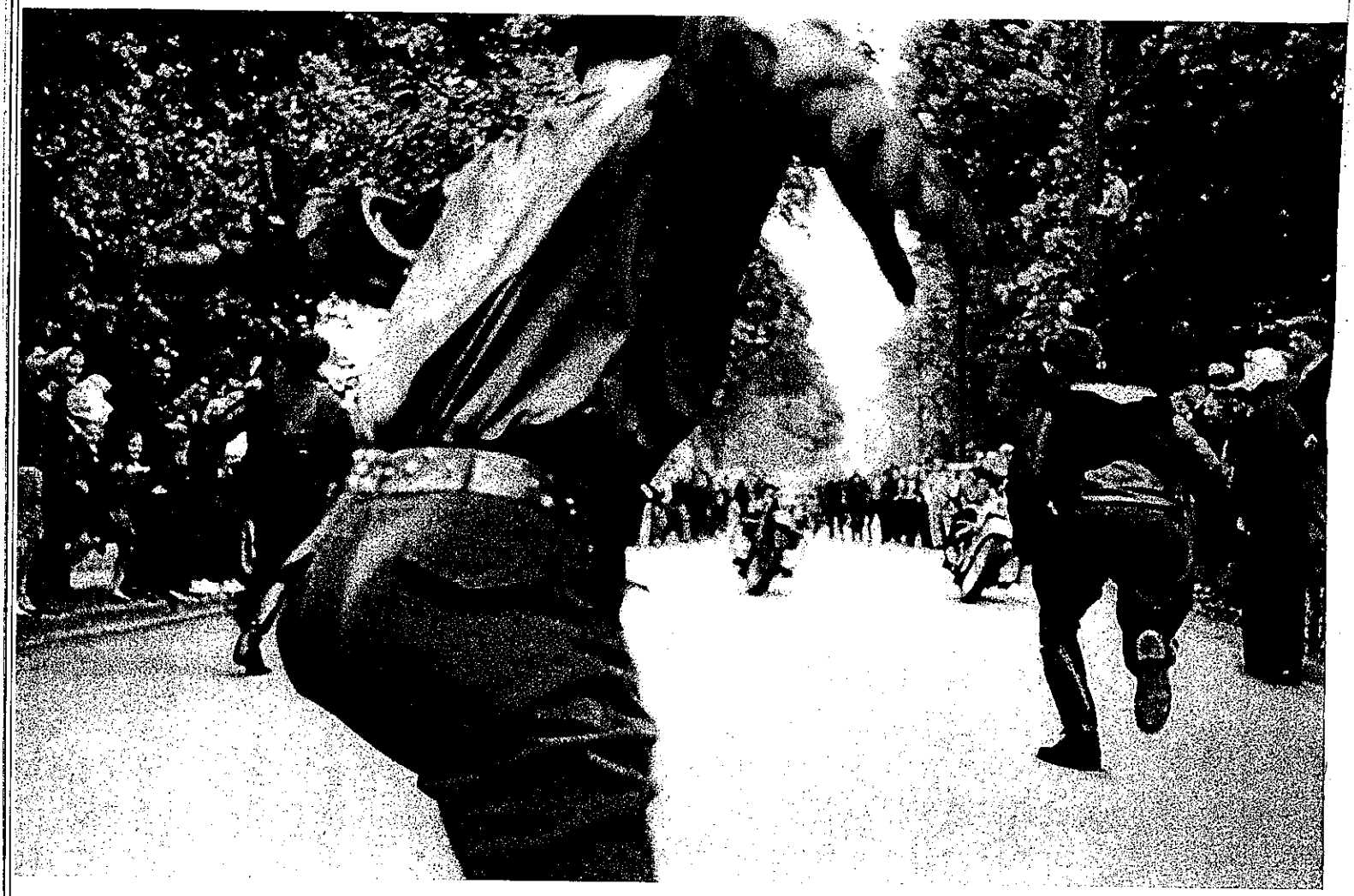
1935 | *Dirt track stars Babe Tancrede and Benny Campanale wearing stout boots, riding belts, leather pants, and Harley-Davidson jerseys.*

1935 | *This finish line view at Hornell, New York, shows Joe Petrali doing what he did best.*



1937 | *Joe Petrali was one of the great names in 1930s racing and was dominant at both track and hillclimb events.*

1938 | *Babe Tancrede at Laconia, New Hampshire, on a WLDR dirt track racer. This 45-inch side-valve model put out 29 horsepower at 5,500 rpm and could reach a speed of 90 mph.*



1938 | *In the motorcycle foot race, riders ran to their bikes, kick-started them, and vied to be the first to cross the finish line.*

1932 | *The Milwaukee Motorcycle Club at their Friess Lake summer cottage west of the city. The club was established in 1926 and had nearly 100 members by the early 1930s.*

1929 | DL

The 1929 DL marked the first appearance of the flathead engine, which uses side valves for both intake and exhaust. This engine had a remarkable lifetime. Harley-Davidson used it for forty-four years, from 1929 to 1973. Apart from the alternator, the engine had very few changes in that time period.

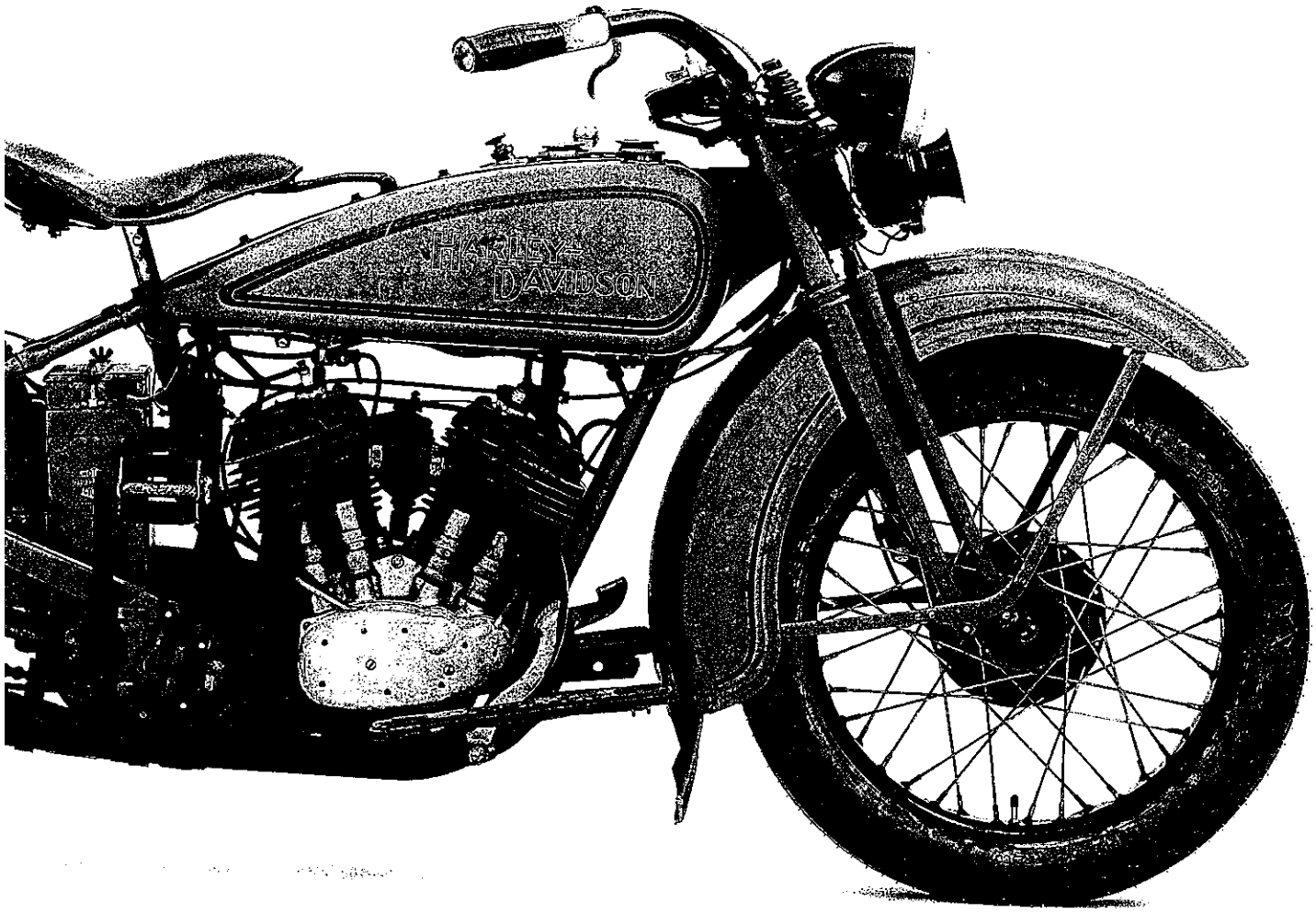
This motorcycle comes from the days when there were no design departments to beautify the shapes of functional parts. Engineers created the forms. Some ideas lasted, some were abandoned along the way. The DL, for example, has two headlights and four mufflers—more than any other Harley-Davidson model. We made motorcycles with twin headlights only in 1929 and 1930. The small bullet-shaped mufflers appear on both sides of the bike.

The look of these motorcycles makes them very collectible today. The DL's tank shape, for example, is absolutely beautiful. The first version of the teardrop-shaped tank appeared on the 1925 JD. From 1925 to 1936, the fuel tank wasn't completely rounded. It had a flat top and somewhat curved sides. Eventually, in 1936, the tank design evolved into the form seen to this day.

Back in 1929, everything was done by hand. The paint on the DL is olive green. There was maroon striping on the fuel tank, but that's as far as they went with color. The years of two-tones and bright colors were yet to come. If people then could see what we're doing today, they wouldn't believe it.

POWERTRAIN
Engine: 45-degree V-Twin flathead
Displacement: 45 cubic inches
Transmission: Three-speed, hand-shift
Primary drive: Double-row chain
Secondary drive: Chain
Brakes: Internal expanding (front), external contracting (rear)
Ignition: Battery and coil

CHASSIS
Frame: Single loop
Suspension: Coil spring leading link (front)
Wheelbase: 56.5 inches
Gas tank: 3 gallons
Oil: 3 quarts
Tires: 25 x 3.85 inches (front and rear)
Color: Olive Green


HARLEY
DAVIDSON

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But I had some new ideas.

WHEN YOU GET DOWN TO IT, AT THE END OF A DAY'S WORK at Harley-Davidson, motorcycles are as pure as they've always been: two wheels, a motor, a seat, and handlebars. But as simple as the product may seem, this is a difficult industry in which to compete. Ask anyone who's tried.

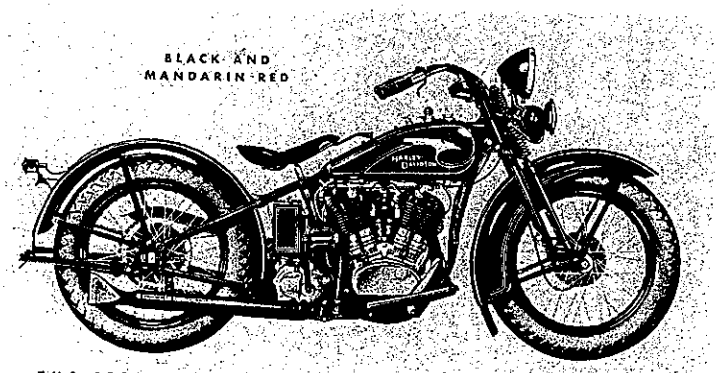
Each new company that has entered this business over the past 100 years has believed it could take this basic two-wheels-motor-seat-handlebars idea to new levels and improve the riding experience. Only a few succeeded. Harley-Davidson is the longest-standing motorcycle company in the world.

Motors were the obvious starting point. Since day one, better, faster, and more reliable motors have evolved. These improvements excited riders, generated sales, and motivated the entire industry. Over time, especially in the early decades of the century, those who had the resources to stay ahead of the motor-development and engineering-improvement curve—and the ability to profitably mass-produce new, improved products and get them to market—lived.

Each time the bar was raised, the surviving companies were forced to take greater leaps and dig deeper into their pockets to remain competitive and keep their customers loyal. But the stakes quickly grew too steep; many companies couldn't keep up with the pace and folded their tents.

Engineering reached levels of near-parity throughout the industry, and companies needed more ammunition to make their brands unique. Dealer training, racing, and event sponsorship became elemental to success. But during the periods of economic instability, like the Great Depression or the recession of the late seventies, declining demand meant motorcycle companies had to create or maintain greater brand differentiation. This is where styling comes into play.

The essence of a motorcycle is its function. What those of us in styling try to do is embellish the basic vehicle to give it character in support of the brand. We respect the Harley-Davidson heritage, and we aim to



THE 1933 HARLEY-DAVIDSON 74 BIG TWIN MODEL

To revitalize the declining motorcycle market, new colors and tank graphics were introduced in 1933 to replace the long-running olive green paint and block typography.

Far right: With contoured surfaces, intriguing mechanical details, and chromed accents, the Knucklehead engine was a visual masterpiece that set the pattern for later Big Twin OHV engines.

preserve its spirit. The styling process creates a recognizable look by injecting some of our own inspiration and individuality through custom touches. This can work only when we have a group of talented people, with each contributing.

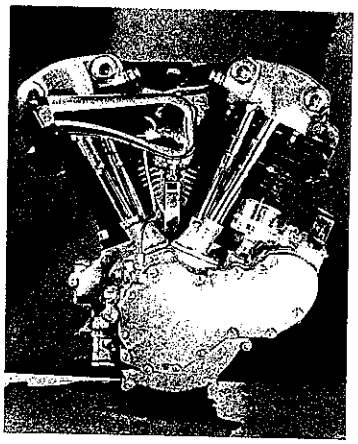
There were times when styling was the most vital aspect of new motorcycle development. When the company was financially unable to develop new engines and models, the focus was on styling to keep the bikes looking fresh and modern. The Great Depression, for example, wiped out many industries and came a whisker away from killing ours. People with no jobs and empty pockets were worried about covering the rent and feeding kids, not shopping for motorcycles.

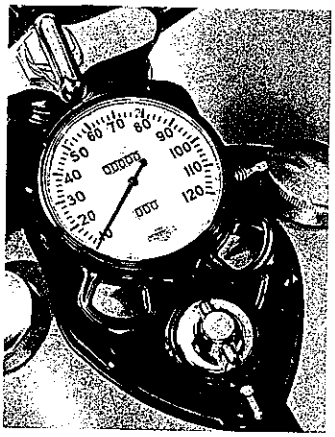
By 1933, with the country's economy at its lowest ebb, Harley-Davidson and Indian were the two domestic motorcycle manufacturers still standing, from a field that once numbered more than 150 competitors. Many took their last breaths during the Depression. Our police and military contracts, plus the devotion of our dealers and riders, kept us alive in that period.

To create excitement and perhaps spark interest in this shriveling market, a decision was made to change the appearance of our motorcycles. It turned out to be a good strategy. Our traditional olive-green paint scheme and block-lettered tank graphics were replaced with vivid reds, blues, two-tones, and the hand-painted art deco eagle graphic. This was the earliest factory custom paint job, and custom paint would eventually become one of our core competencies. Our unique paint treatments became fundamental to the magic of our motorcycles, and this was the beginning of that trend.

The first motorcycle, Serial Number One, was black; then came the Silent Gray Fellow, followed by the greens. But the change to custom paint involved us more intimately in the relationship between the customer and styling. We were starting to see that styling has to do with emotions, and that riders have a deep emotional attachment to their vehicles.

The people behind this new effort weren't trained designers, and there was no styling department then. I don't think the term "industrial design" even existed. What Harley-Davidson had were some self-taught artistic people with a flair for proportions and creativity. The fact that these folks constructed such innovative machines, and that company leadership supported their efforts, boded well for our future.





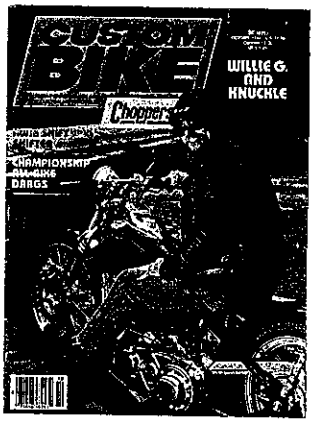
The revamped bikes were striking and riders liked what they saw. The sales numbers, though still small, inched upward through the rest of the thirties. Clearly, the lesson had been learned that introducing paint variations could add a considerable competitive advantage.

A few years later a landmark vehicle, a favorite of mine, was introduced: the 1936 EL. The EL featured a new and potent overhead-valve 61-inch motor, fondly nicknamed the "Knucklehead" because its rocker boxes (atop each cylinder head) resembled fists. In and of itself, the Knucklehead was big news, and it's the grandfather of our current overhead-valve V-Twins. But in addition to the motor, the EL had numerous industry-first design features. Its teardrop-shaped fuel tank was topped with an instrument panel (dubbed the "Cat's Eye") that bundled all the gauges into one graceful package. Our first-ever oil circulation system featured a wraparound oil tank. To this day, the wraparound oil tank is a key visual component, as noted in the Softail line.

The development of the oil circulation system was a major deal. The oil now circulated through the engine and returned to an oil tank, as opposed to a total-loss system, where the oil flows through the motor, lubricates it, and then is vented out of the motor. The new oil circulation system meant that oil would remain on board.

The EL is one of the most beautiful models we've ever produced. It established a look for Harley-Davidson and remains an influential motorcycle. The overall proportions of sheet metal to wheels to tires and the handsome engine are elements that make the EL stand out to me. I have five of them in my personal collection. Among my Knuckleheads are a '47 (last year of production) sidecar rig, a '36 (first year of production) white Knuckle that's a totally restored original, and an early Bobber. The Bobber is based on a 1946 Knuckle. It's a classic custom that demonstrates the way motorcycles were being customized after World War II, when fenders were changed or removed. The Bobber is prominent in my collection because customs have become a big part of our success story.

How the leadership and employees of Harley-Davidson were able to pull off the EL, given the market dynamics of that time, is as much a reflection of their passion and skill as their drive to achieve extraordinary things against very difficult odds. Followers of Harley-Davidson are quick to recognize that these traits are part of our roots and continue to exemplify the people who work here today.



As time went on, Harley-Davidson created a wide range of motorcycle accessories. We were always evolving and giving our riders the custom touches they came to expect from us. From

The 1936 EL Model introduced new features that have stood the test of time. The integrated "Cat's Eye" instrument panel combined the speedometer, warning lights, and ignition switch into a smart-looking console.

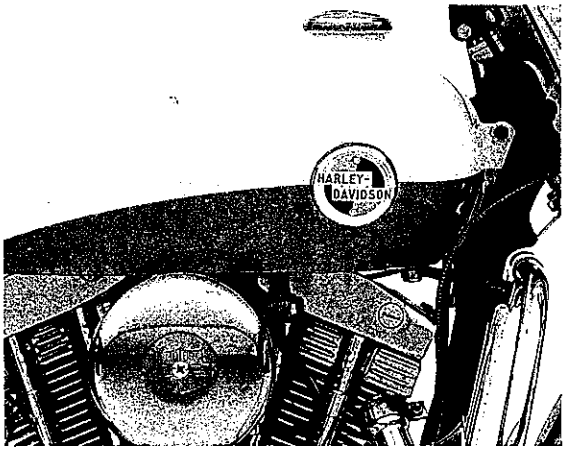
Bottom: Willie G. was featured on the October 1982 cover of Custom Bike *with his Knucklehead bobber.*

The 1936 EL model set a standard for design and engineering with its exquisite lines and excellent proportion.

Bottom: Willie G.'s first design contribution to the Motor Company was the tank emblem on the 1957 XL Sportster model.

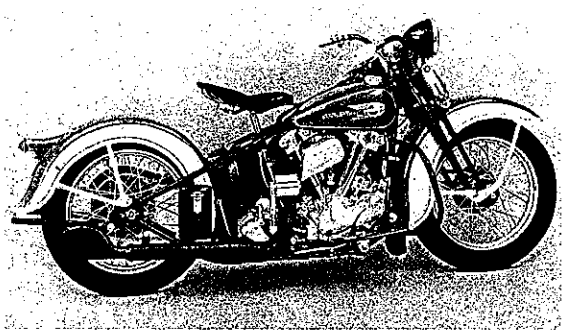
the thirties on, expert styling had taken hold and was gradually becoming synonymous with Harley-Davidson motorcycles.

Anytime I flip through our product brochures from the forties and fifties, my eye immediately picks up the subtle but attractive year-to-year changes in the overall style of the bike—fenders, tanks, seats, trim, paint. These enabled us to distinguish new bikes from prior models and helped us to keep our product offerings fresh, without the enormous tooling costs of entirely new motorcycles. As parts were being designed and created, they also helped fuel our rapidly



growing parts and accessories business.

One of the first things I ever designed for the company was the tank emblem in 1957. I wasn't an employee at the time, just moonlighting as a young designer, getting my feet wet. Badging is the main way to distinguish a model from one year to the next. It's also the place where we carry our most valuable



asset, our name. I'm proud to have designed many of our fuel-tank logos over the years. The fuel tank is the first part of the motorcycle I look at to determine its year.

Another significant model in Harley-Davidson history is the 1952 flathead K Model. The K was a lean-looking motorcycle with barebones styling—an engine and two wheels. I appreciate its spare look. In 1954 a larger engine was added to the K, and the KH was born—for the boulevard. The racing version, the KR, was the undisputed king of the dirt track. It exemplifies everything I love about this era of motorcycling. My first big motorcycle was a K Model, and those were my formative years as a rider on a big bike. As a young man I was an avid follower of the AMA dirt-track championship (and still am), and here was this new KR. I was riding a K Model, and the KR was a derivative of it.

When you're young, there are certain things in your life that make strong impressions. In my case, it was the era of Joe Leonard, Carroll Resweber, and Brad Andres. They were my heroes when I was a young guy blasting around on my bike. The emotion from this era fires my psyche. It's indelible in my mind.

In 1957 the K Model was changed from a flathead to an overhead-valve engine design, which brought improved performance. As a result of this change, the

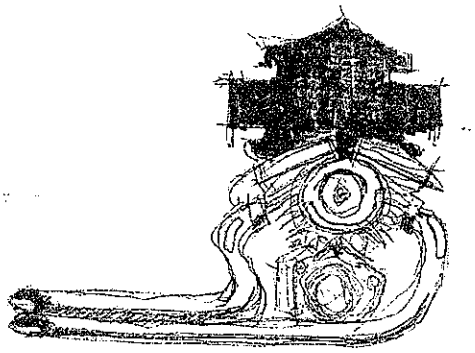
world now had its first muscle bike, and Harley-Davidson had a best-seller.

As important as styling and design had become to Harley-Davidson, there was no formal styling department when I joined the company in 1963. Engineers and various design consultants (including me) had carried the ball. By then the company was involved with golf cars and Topper scooters. Harley-Davidson had also purchased the Tomahawk Boat Company for their plastic-forming expertise, which enabled us to design and manufacture saddlebags and tour boxes. There was also an Italian partner for a line of light-weight motorcycles, Aermacchi. These products were in addition to the existing line of Harley-Davidson motorcycles. My dad was company president then. He and I would have lunch together, and we started talking about the company's need for a stand-alone styling department.

In this 1952 picture taken by future wife, Nancy, Willie G. stands next to his first big bike, a K Model.

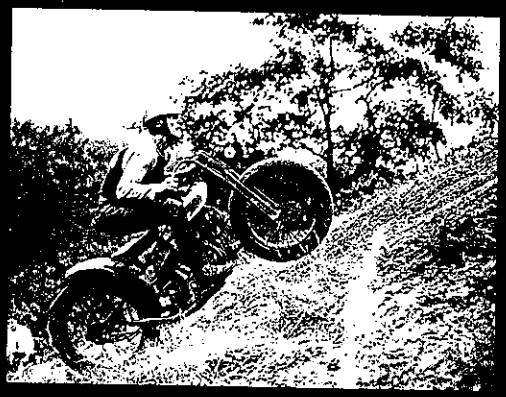
At first the styling department consisted of me and a model maker, which made things challenging but exciting. Harley-Davidson was a small company and we had a lot of freedom, which is a huge plus to any designer. It was truly a dream world.

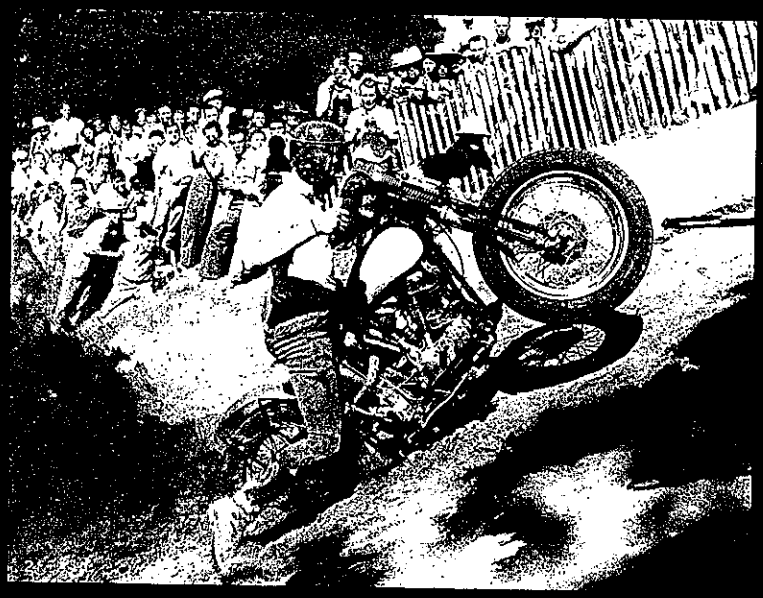
I had no desire to radically change things right out of the gate because the purity and simplicity of our bikes were their greatest strengths. But I had some new ideas. We were not in the custom market, but that didn't mean we couldn't experiment a little. As the years passed, with the help of many loyal coworkers and friends, we started to stretch our design wings. We would end up styling some groundbreaking models (and even a few that didn't catch on). But our philosophy remains true to what brought Harley-Davidson success in hard times—to maintain the heritage of our styling past while always keeping an eye firmly trained on the future. It's what makes a Harley distinct from every other motorcycle on the road, and keeps us on the leading edge.

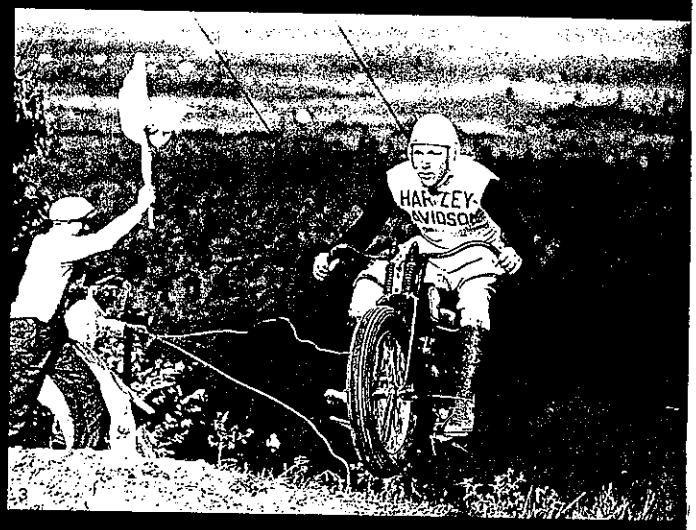


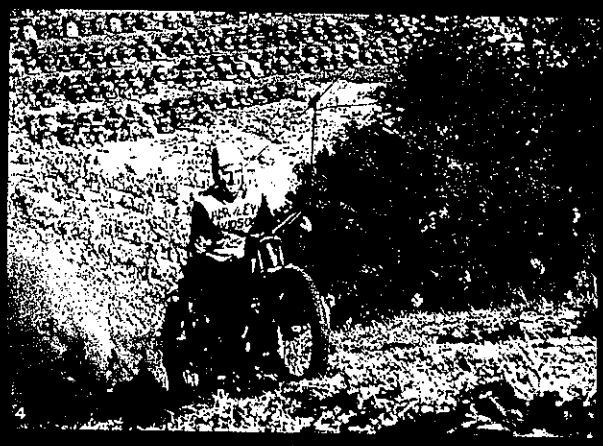
Hillclimbs

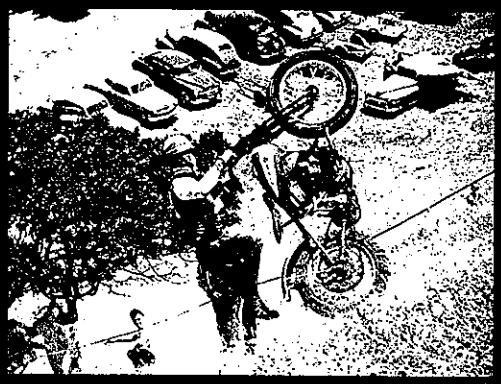
These hillclimb photos bring back fond memories for me. As a child, I attended hillclimb events in the area around Milwaukee. There's drama in a two-wheeler climbing a very steep hill. It harks back to early motorcycling, and has been depicted in painting and sculpture. Of course, it was more popular back then than it is today. But there's just something about these guys in their football helmets, on these old Springer models, climbing these vertical hills that will always be fun to look at.

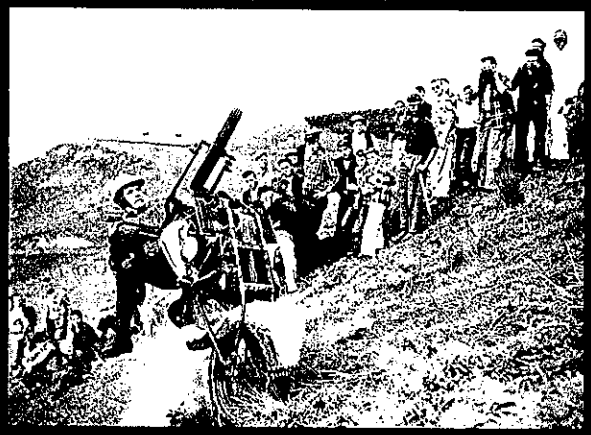


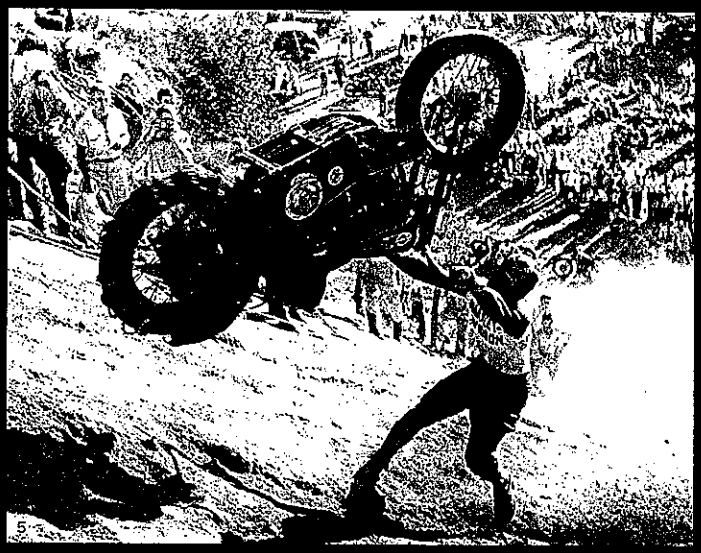


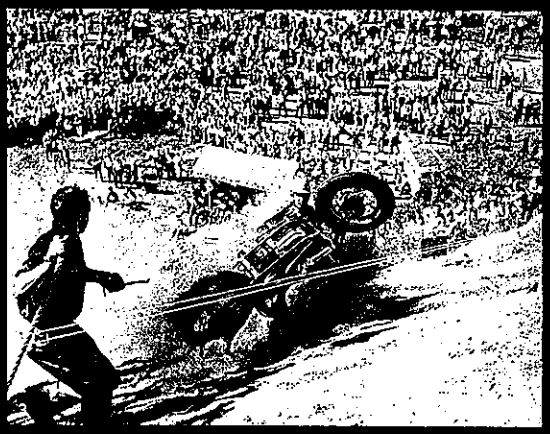












OPPOSITE PAGE
(1) Displaying determination in 1951 (2) Spraying dirt with the back wheel (3) A Harley-Davidson motorcycle at the finish line in 1940 (4) Powering up the hill in 1948.

THIS PAGE
(1) A spectacular mid-air loop in 1939 (2) Everyone watches an apprehensive moment at a 1952 competition (3) Top-hill view in 1947 (4) The drama intrigued the crowds (5) An uphill wheelie at a 1952 climb.

1936 | EL (KNUCKLEHEAD)

The EL (Knucklehead) is on anybody's list of Harley-Davidson milestones. The Knucklehead engine is the granddaddy of our air-cooled V-Twins. It defined a look—through the combination of engine style and small, defined shapes—that lives on in today's motorcycles.

The Knucklehead engine was the first overhead valve model, which meant better performance for Harley-Davidson motorcycles. It also marked the beginning of a tradition of names the street gave to the configuration of covers on the rocker boxes. In this case, the gnarly top area of the motor looks like a knuckle.

People talk about this motorcycle with reverence. Riders liked it then, and it is a major collectible now. Its shapes and forms mark a defining moment in Harley-Davidson history. The instrument console was the first one to be located at the top of the fuel tank. It's fondly known as the "Cat's Eye." The defining style element, which continues to this day, is the teardrop fuel tank. Other distinctive styling elements include the wraparound oil tank, the fenders, and the dramatic flying wheel on the fuel tank.

The paint scheme on the EL reflects the art deco era. Prior to 1933, Harley-Davidson paint colors were plain, almost dull: gray, green, black. But in 1933, the Motor Company used dramatic graphics in order to survive harsh economic times. The colors on this 1936 EL continued that trend.

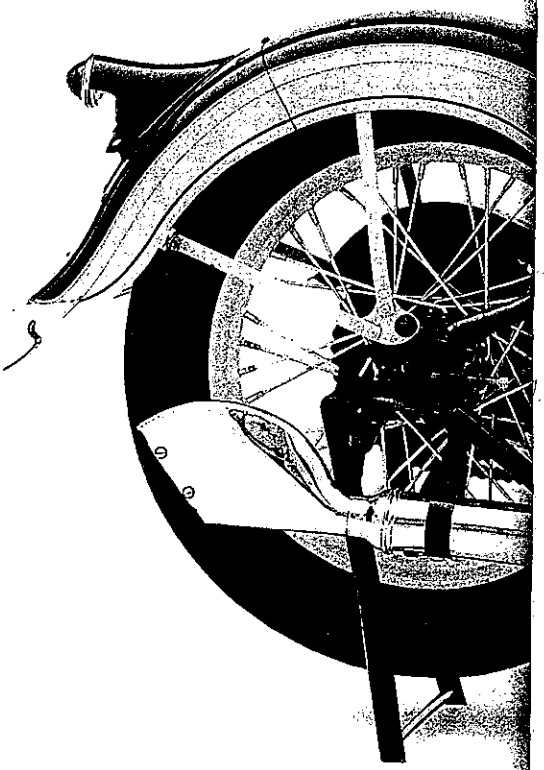
I was a young kid when the 1936 EL was introduced. It has a fond place in my memory.

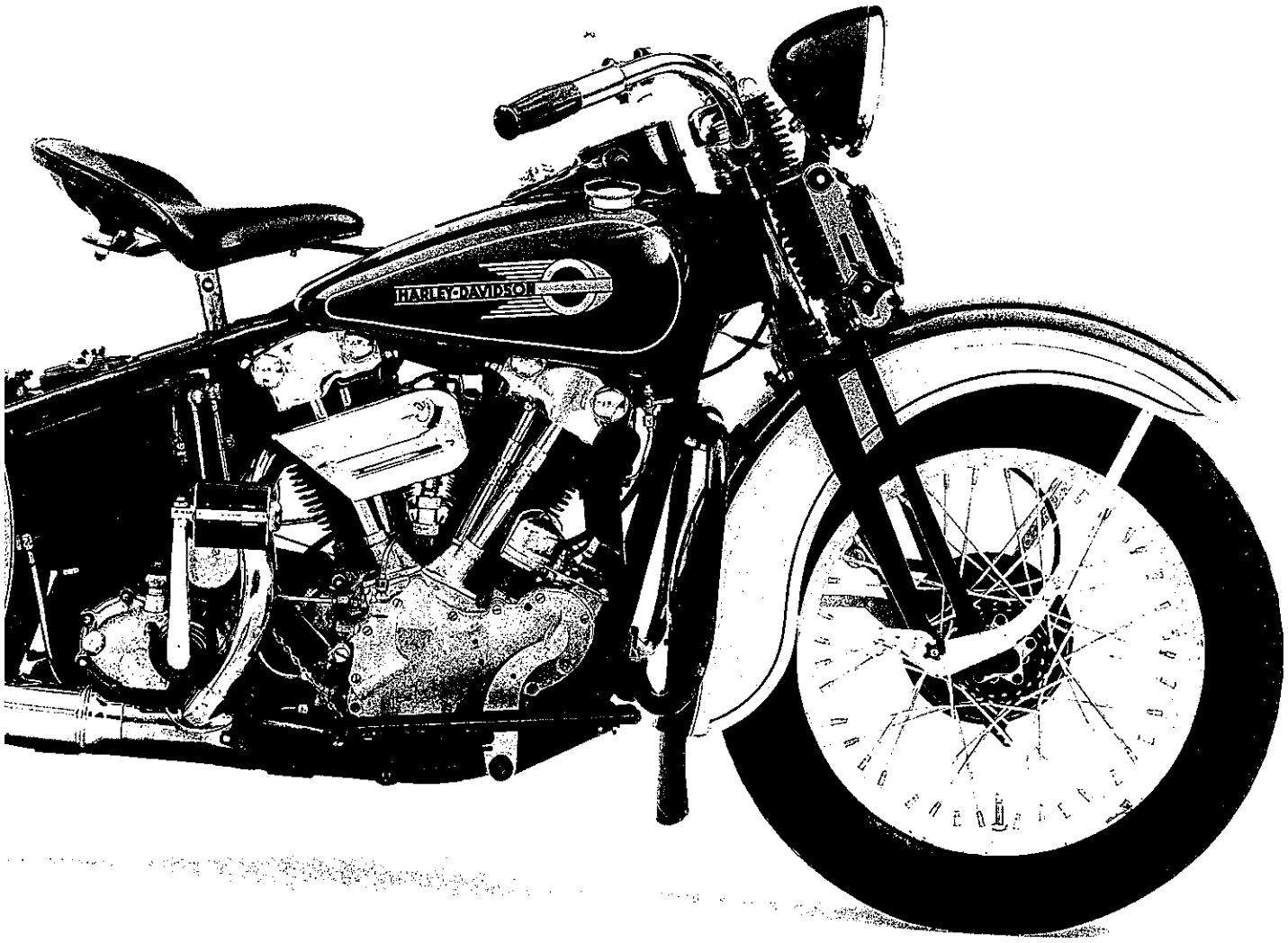
POWERTRAIN

Engine: 45-degree, overhead-valve V-Twin
Displacement: 61 cubic inches
Transmission: Four-speed, constant mesh, hand-shift
Primary drive: Double-row chain, oil-mist lubrication
Secondary drive: Chain
Brakes: Drum and shoe (front and rear)
Ignition: Battery and coil

CHASSIS

Frame: Steel, double downtube
Suspension: Coil-spring leading link Springer fork (front)
Wheelbase: 59.5 inches
Gas tank: 3.75 gallons
Oil: 1 gallon
Tires: 18 inches (front and rear)
Colors: Sherwood Green/Silver; Teak Red/Black; Dusk Gray/Buff; Venetian Blue/Cream; Maroon/Nile Green




HARLEY-DAVIDSON

A RIDER IN THE JACK PINE ENDURO, 1974

1939

PATRIOTISM AND PASSION

1955

AFTER MANY VISITS TO THE PLANT,

IT BECAME CLEAR TO ME THAT

THE EMPLOYEES WERE THE PEOPLE

WHO MADE THE MAGIC.

THERE HAS ALWAYS BEEN

GREAT EMOTION

WITHIN THE WALLS OF

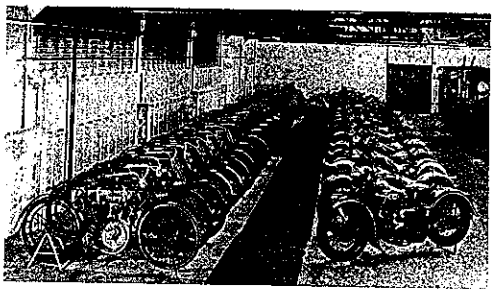
HARLEY-DAVIDSON.

WHEN I WAS A BOY, MY BIGGEST THRILL WAS GOING down to the factory at 3700 West Juneau with my dad. It was a special treat. This was the magical place where raw metal entered through one door and finished motorcycles exited through another.

Back then, every Harley-Davidson motorcycle was assembled in that building (which is now our corporate headquarters). You could walk through the plant and observe every step in the creation of a motorcycle. A vast system of overhead belts powered the lathes and other machinery that performed the cutting, shaping, drilling, and grinding of parts.

After the chassis were welded together by workers in masks and leather smocks, they'd be loaded onto wooden supports and pushed to each workstation via a system of rollers. Employees manning these stations would add parts, assemble systems, and gradually create a finished motorcycle. Everywhere you looked there were racks of engines, wheels, tires, frames, tanks, seats, fenders, and headlights.

No trip was complete without a stop at the racing department, which, for a kid, was an incredibly cool place. It seemed sacred. The bikes, which represented experimental technology, looked much different from the standard models, and they had that simple, handsome look that I have always appreciated. Sometimes I'd hang around with the test riders. They rode in all kinds of weather, testing prototypes and generally ensuring the safety and stability of our motorcycles. I loved listening to their stories.



Beginning in 1915, a motorcycle from each production year was placed into a special collection at the Juneau Avenue plant.

Service department technician Johnny Powers (kneeling, in white) instructs mechanics about the finer points of the Big Twin military motorcycle in 1941.

And then there was the bike collection, going all the way back to the oldest existing Harley-Davidson motorcycle, which resides today in the lobby of that same building I visited as a boy. The founders made it a rule to keep one model from each year. When I visited as a kid, the collection just looked like a roomful of great old bikes to me. But something must have sparked, because I have been an avid collector since.

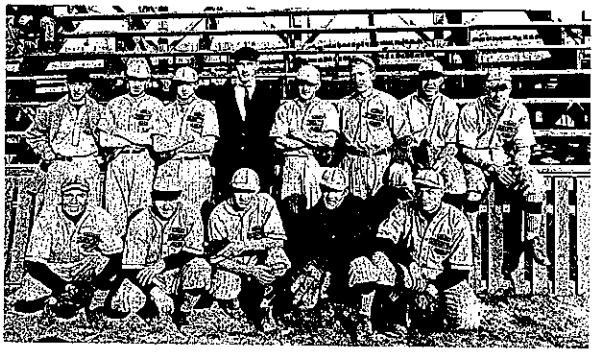
I can distinctly remember how much I enjoyed watching my dad talking with employees. He made himself accessible. He got along well with everyone, just as his father had. I'm proud to say that this friendly relationship between employees and leadership at Harley-Davidson, established in the company's earliest years, continues today.

After many visits to the plant, it became clear to me that the employees were the people who made the magic. There has always been great emotion within the walls of Harley-Davidson. The original founders were true enthusiasts—they rode, raced, and ignited the passion in the company. I'm sure they tried to create a working environment in which employees could share in their excitement.

I have learned over the years that Harley-Davidson employees believe wholeheartedly in the brand and what it represents. In fact, many of our employees are avid riders themselves.

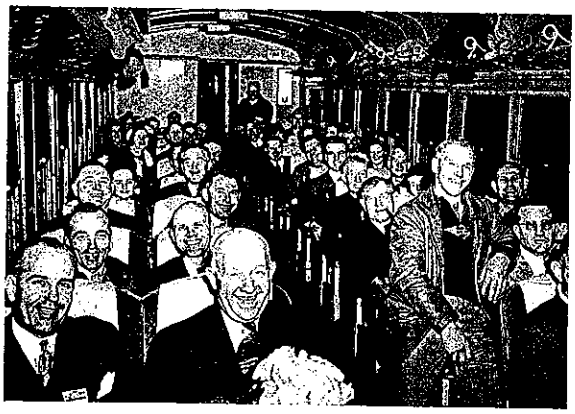
Of course, there are quite a few more Harley-Davidson employees now than the few hundred who worked at the plant I visited as a boy. In addition to our headquarters, we now have five facilities in Wisconsin—Powertrain Operations, Menomonee Falls, which builds Big Twin engines and transmissions; Powertrain Operations, Wauwatosa, which manufactures Sportster and Buell engines and transmissions; Tomahawk Operations, in Tomahawk, a plastic-forming and painting facility (i.e., saddlebags, fairings, Tour Packs, sidecars, and windshields); and a parts-and-accessories distribution center in Franklin.

This photo of the Motor Company baseball team, made up of both office and factory personnel, was taken in 1916.



The newest Milwaukee-area facility is our Willie G. Davidson Product Development Center, which is home to our styling, engineering, and purchasing departments among others. I'm honored that our executive leadership named this facility after me.

Our largest plant, in York, Pennsylvania, produces the Softail and Touring motorcycle assembly. The plant in Kansas City, Missouri, assembles the Dyna, Sportster, and V-Rod models. We have other key business operations located in Chicago, Illinois; Franklin, Wisconsin; Talladega, Alabama; Highland Heights, Ohio; Ann Arbor, Michigan; Carson City, Nevada; and Plano, Texas. Harley-Davidson also maintains operations in strategic international markets throughout the



Harley-Davidson dealers and their Motor Company hosts ride on a private train to the new Capitol Drive facility in 1947. William H. Davidson (in front on left) is seated next to dealer Dudley Perkins.

continent of Europe, as well as in Japan, to support its worldwide dealer and distributor network.

More than 9,000 people around the world carry badges identifying themselves as Harley-Davidson employees. As remarkable as that is, it's even more impressive that we've maintained much of our small-company feeling. I still love to go into our manufacturing facilities and watch the magic happen. Visit any of our plants today (and I encourage everyone to take a tour or visit an annual open house) and you'll see a singular mixture of hands-on craftsmanship and state-of-the-art robotic technology.

Our machinery can produce parts that are nearly perfect, but only because there are people guiding the process, tweaking the equipment, measuring the results, and striving to reduce the possibility of defects. Our tools may have changed, but our philosophy and dedication to quality haven't.

Inside headquarters and in the Product Development Center, teams work behind the scenes to improve the ownership experience and to bring new customers into the fold. What people see in our plants and in the marketplace is the tangible evidence of all this hard work. Most people have no idea how complicated it is to bring a Harley-Davidson motorcycle to the showroom.

Harley-Davidson employee dedication extends far beyond our offices and factories. Formally through company initiatives and informally on their own time, employees are Harley-Davidson's eyes and ears in the riding community. In 1983 we launched our demo fleet program and the Harley Owners Group (H.O.G.). The feedback we get from this connection is very valuable. When employees, myself included, attend rallies, we feel in tune with the sport and hobby—and our customers.

As I've said, our founders introduced this philosophy, but its continuing success must be attributed to the quality and flexibility of our current leadership. The major changes implemented during our turnaround years and beyond have made Harley-Davidson a company respected around the world for its progressive approaches to managing and retaining good people.

The hard times we went through forced us to re-examine our approaches to our products, our customers, and, above all, our employees. When we were in survival mode, we believed that every bit of effort we gave contributed to keeping the company alive.

To take better advantage of our most valuable resource, we introduced the concept of employee involvement. We formalized processes for listening to our people and acting on their suggestions. We saw across-the-board improvements almost immediately. Who knows more about how to enhance the quality of a machined part than the person who's been running that machine? When employees realized that leadership

was genuinely interested in their input and willing to give them freedom to act on their suggestions, enthusiasm was rekindled and measurable advances resulted.

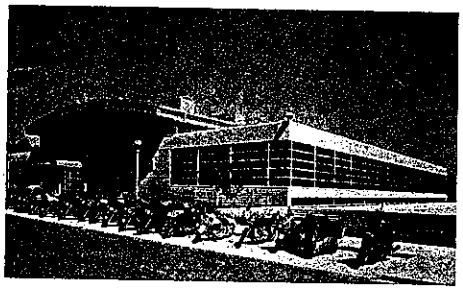
We introduced other innovative manufacturing philosophies as well; we were one of the first companies in America to institute "just-in-time inventory control," a monitoring system that eliminates large inventories of parts. This practice generated much-needed capital for us and is now commonly used by manufacturers the world over.

To identify and prevent defective parts or materials before they find their way into finished products, we introduced "statistical operator control," a sophisticated measurement system that gives employees direct accountability for everything they produce. This system formed a work culture in which continual refinement became standard procedure.

Our employees were proud to be among the very first people in America to use these highly innovative manufacturing, measurement, and improvement procedures. Their pride was evident not only in the quality of their work but in the way they made their voices heard. As word spread throughout the motorcycle and business communities about the great things our people were doing, more and more interested parties, including leadership from many of the world's best-known companies, started touring our plants to learn from our processes.

Designing, engineering, manufacturing, marketing, distributing, and servicing motorcycles, parts and accessories, and general merchandise—while providing unique ownership experiences that continue to evolve and exceed customer expectations—is a complicated task, with very little margin for error. It can't be done without knowledgeable and engaged employees.

When asked how it is that the people of Harley-Davidson receive so much obvious gratification from their work, I always say that if you are involved with your products and able to contribute to the company's success, you will be more productive and have a desire to exceed expectations. Your workday won't be drudgery; you'll be motivated to be more efficient and to strive for higher quality. And if your participation leads to a better understanding of the people who purchase and use what you make, there's no limit to what you can do.



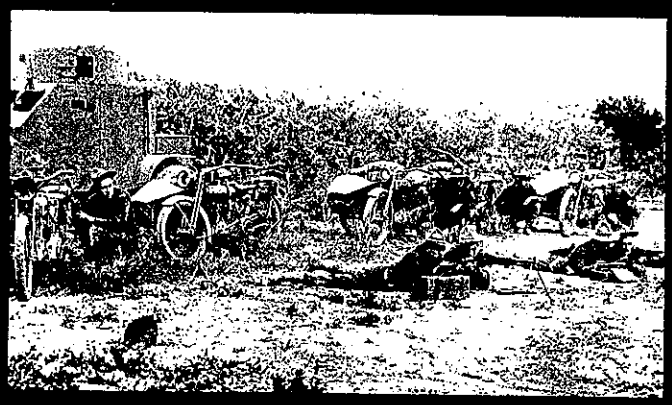
The Willie G. Davidson Product Development Center was dedicated on June 7, 1997.

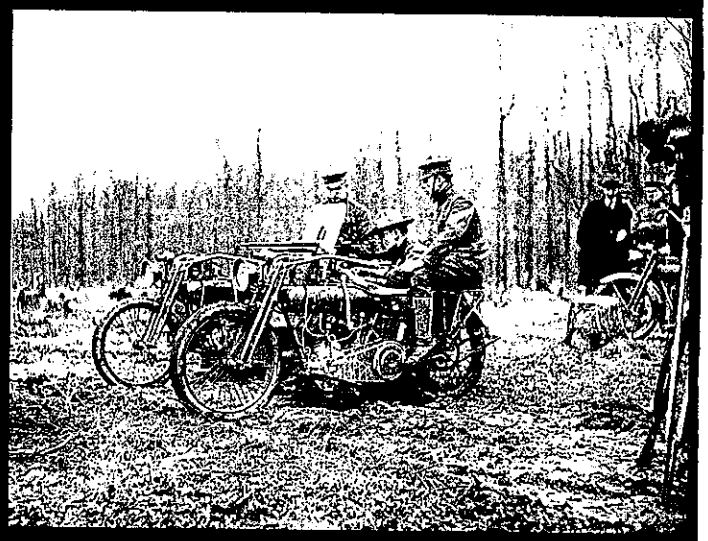
Far left: Shown here is a 1940s era small-parts assembly area at the Juneau Avenue plant.

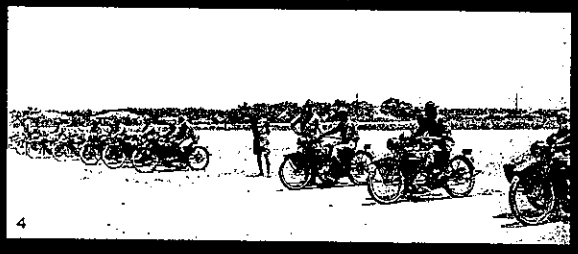
Our company has grown dramatically, compared not just to our early years but to only a few years ago. But our roots have been preserved, and words like "family" and "heritage" still mean a lot to us. The marriage between the Harley-Davidson Motor Company and its employees is a century strong. We understand the value of the relationship and continue to do everything we can to make sure it thrives for another 100 years.

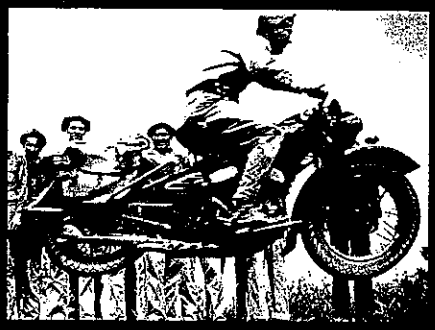
The War Years

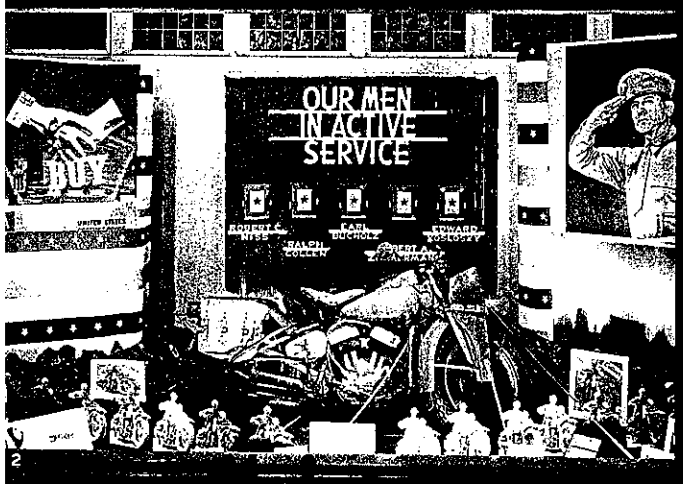
Motorcycles have always been maneuverable in tight areas and on rough terrain. This attribute lends itself well to special needs during times of war. Harley-Davidson was eager and ready to modify vehicles to meet the rugged demands required by our armed services.











OPPOSITE PAGE
(1) Armed troops on Mexican border in 1916 (2) Corporal Roy Holtz enters Germany in 1918 (3) Testing fighting motorcycles near Milwaukee in 1916 (4) Military motorcycles line up in camp, 1917.

THIS PAGE
(1) A rider shows the troops how it's done, 1942 (2) A dealership window honors those who served, 1942 (3) American G.I. in Paris, 1945 (4) Training for desert warfare, 1942 (5) U.S. soldier trains in England, 1943.

1942 | WLA

With the WLA, we helped win World War II and created some Harley-Davidson enthusiasts along the way. The motorcycles we shipped to different parts of the world stayed where they landed. We still hear about WLAs in remote places where American soldiers served.

The entire WLA trim has a military purpose. The U.S. military spec'd the motorcycle, and we manufactured it to their specifications. At the heart of the WLA is the Flathead, Harley-Davidson's longest-serving engine. An obvious military feature is the Thompson submachine gun and scabbard. The headlights are less obvious—blackout lights with unique lenses that only appear on Army models. The rider could only see directly in front of him, and his light could not easily be seen by the enemy except head-on.

These vehicles were often used in off-road situations, hence the metal leg shields and high-clearance fenders. If you are in deep mud, the mud builds up on the tire and doesn't contact the fender. A skid plate underneath the bike protects the engine from rocks.

Every detail on the WLA is highly functional. The three seat studs keep the rider's gun and holster from wearing through the seat leather. Some WLAs have an Army star on the fuel tank. This model has a decal with instructions. The name Harley-Davidson would never appear on the fuel tank. You'll find a small Bar & Shield on the speedometer, and our name on the spark plugs.

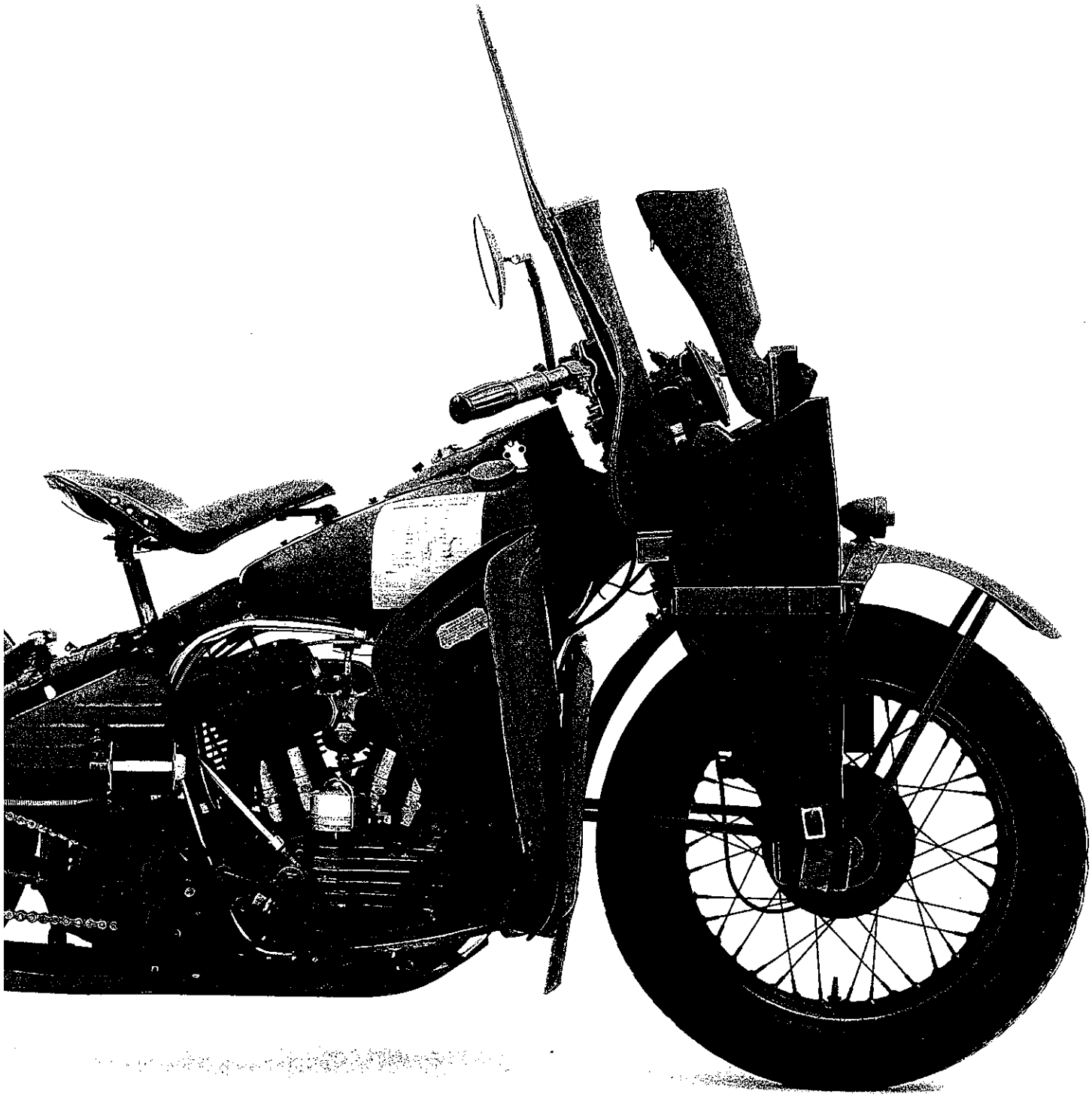
In the past people would take off the military accessories and repaint the sheet metal to make the WLA look like a street bike. Today, an unrestored model is a highly desired collectible.

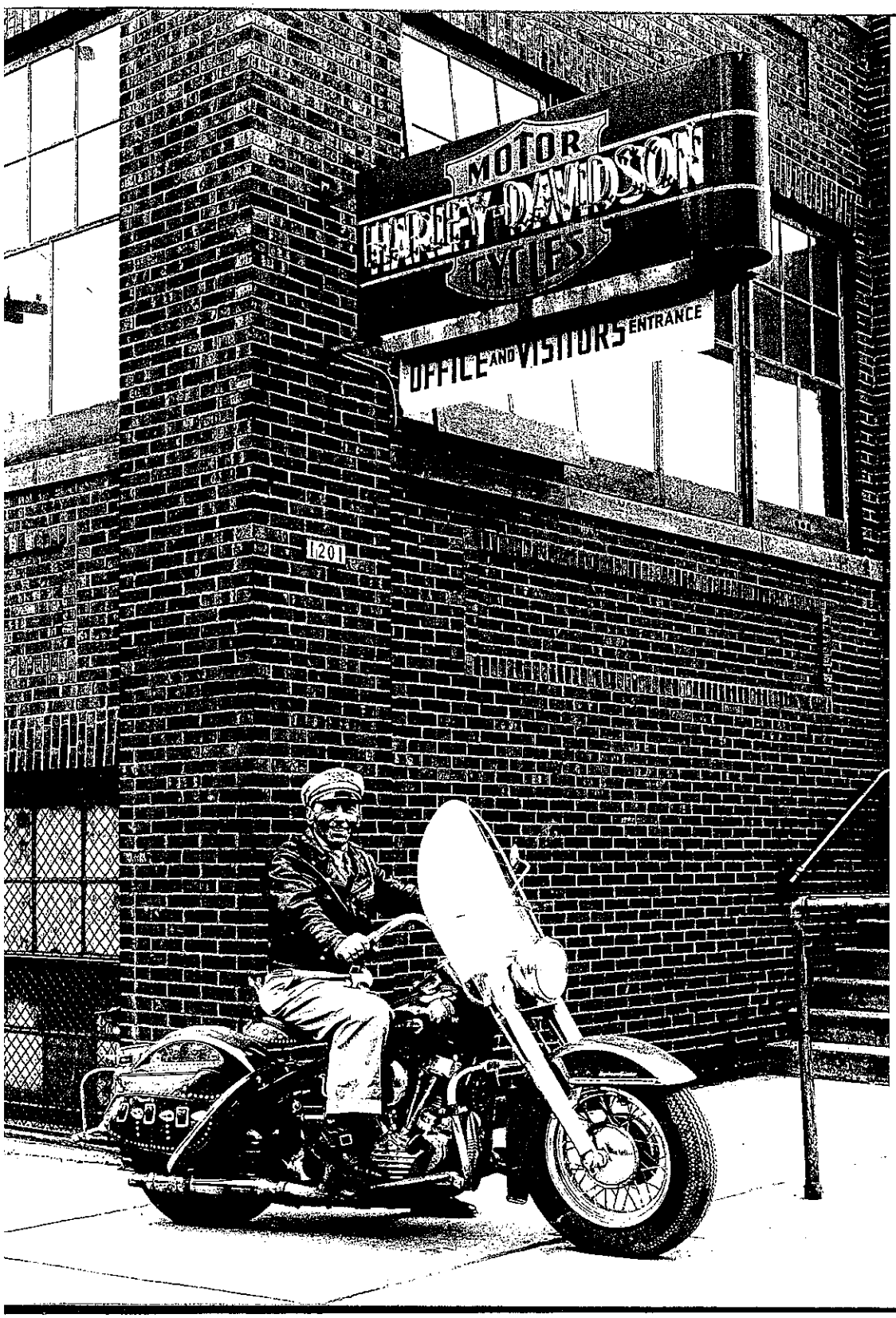
POWERTRAIN

Engine: 45-degree, side-valve V-Twin with aluminum heads
Displacement: 45 cubic inches
Transmission: Three-speed, hand-shift
Primary drive: Double-row chain, oil-mist lubricated
Secondary drive: Single-row chain
Brakes: Drum and shoe (front and rear)

CHASSIS

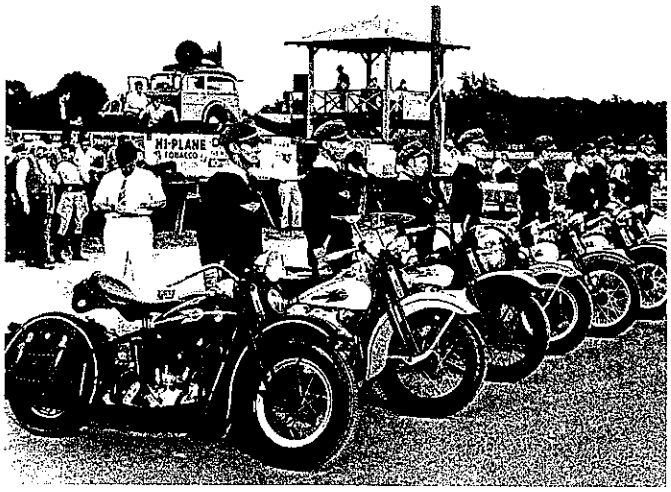
Frame: Rigid
Suspension: Springer leading-link, with exposed springs (front)
Wheelbase: 57.5 inches
Gas tank: 3.35 gallons
Oil: 1.2 gallons
Tires: 18 inches (front and rear)
Color: Olive Drab



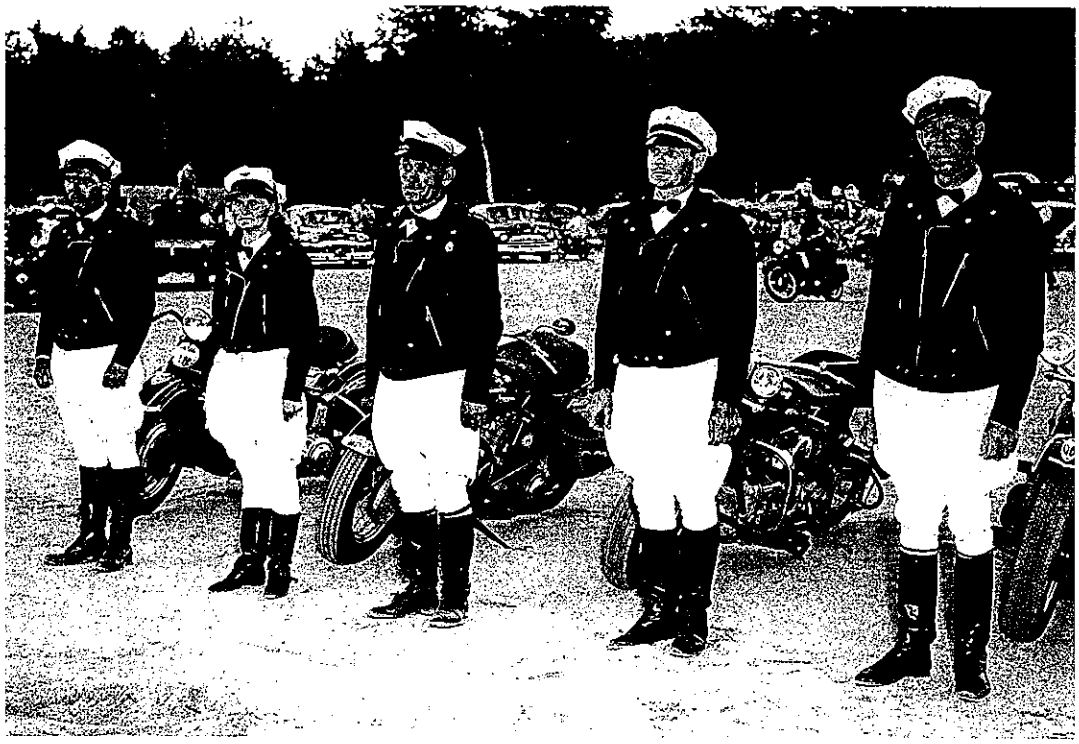


1950 | *An enthusiast on a visit to the Harley-Davidson plant.*

1943 | *Milwaukee's Motorcycle Civil Defense Dispatch Unit conducting a paper drive during World War II. Both Harley-Davidson and Indian motorcycles are shown in this photo.*



1939 | *A club lines up for the "best uniform and cleanest bike" contest at a rally in Richmond, Virginia.*



1949 | *The breeches and high boots with a short, zippered motorcyclist jacket worn by these Baltimore Ramblers displays a combination of pre- and post-World War II club attire.*

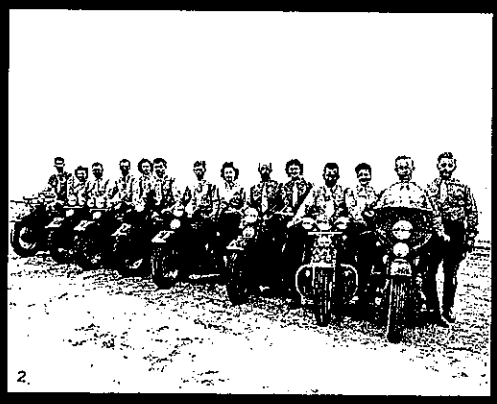
1948 | *Motorcycle club members and their children pose beside their beloved I'L model.*

1951 | *Mud holes and steep slopes were purposely laid out in the Jack Pine Enduro to bunch contestants together and cause confusion.*

1953 | *This dramatic crossing of the Tobacco River during the Jack Pine Enduro demonstrates the extreme nature of such contests.*

Clubs & H.O.G.

When out riding Harley-Davidson bikes or attending special events and rallies, camaraderie with fellow enthusiasts is an important part of the experience. Our brand has attracted loyal followers from day one. In order to provide a way for more people to share this common interest, Harley-Davidson developed the Harley Owners Group (H.O.G.) in 1983. Today over 640,000 riders enjoy their membership in H.O.G.



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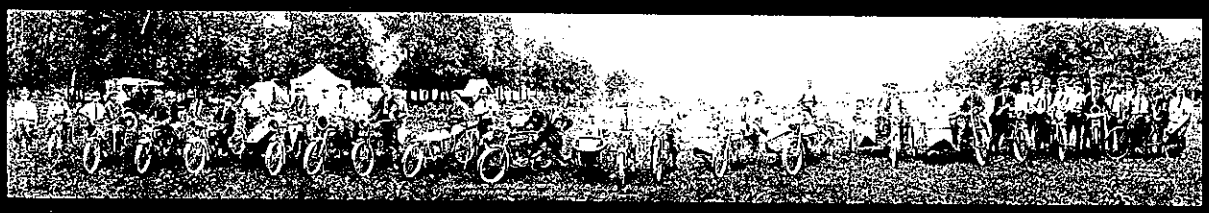
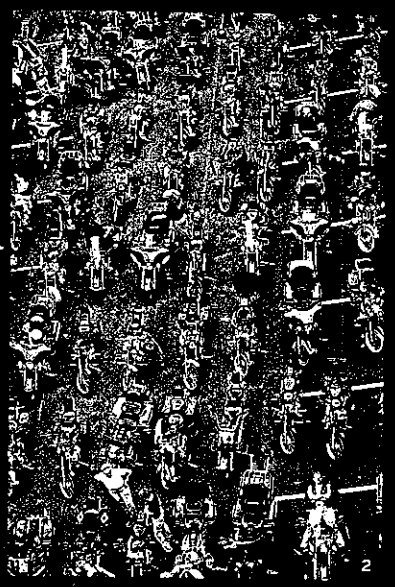
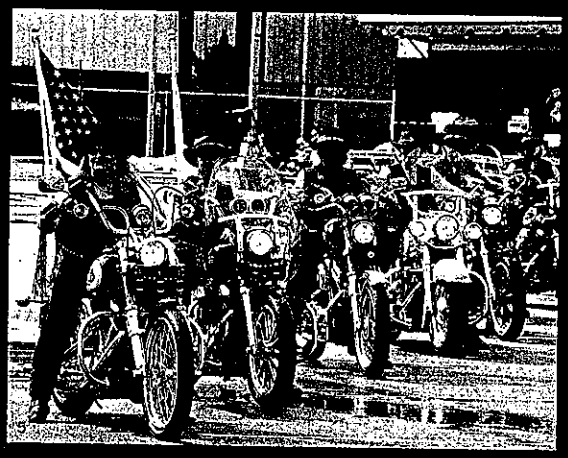






OPPOSITE PAGE
(1) The Rosencranz family tour group in 1912 (2) The Power City club on the beach in 1948 (3) A panoramic shot of a 1915 club (4) The 1938 Wheel Cycle Club (5) A club social scene in 1948.

THIS PAGE
(1) A 1941 trick-riding club (2) Annual H.O.G. rally in 2000 (3) Sporting patches from years of H.O.G. events (4) A rider takes a break from the events of the day (5) The Motor Maids riding club.

I'M CONVINCED THAT THERE'S

A LITTLE OUTLAW IN ALL OF US.

AND BACK THEN, AS NOW,

A LOT OF PEOPLE

WANTED TO

BREAK AWAY FROM THE NORM

FROM TIME TO TIME.

THE DAYS FOLLOWING WORLD WAR II SIGNALED A CHANGE in motorcycle culture—and in Harley-Davidson's business. Our shift back into civilian manufacturing after years of producing for the military was difficult. We had to struggle to meet the new demand. Lots of riders had returned from the war and were eager to get back on two wheels and to great times with friends. Many of these were GIs who learned to ride on WLAs during the war effort. When they got home, they were anxious to buy bikes and hit the road.

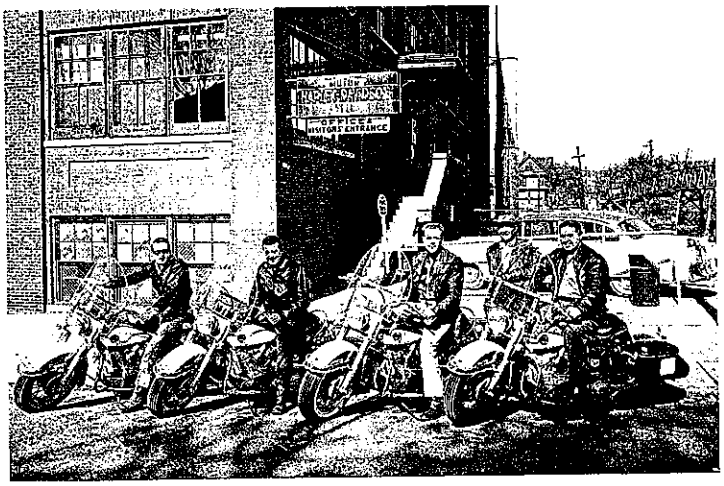
The economy was growing, people were earning discretionary income, and a lot of them were spending it on motorcycles. As with any community, though, there was a handful of riders out there—hell-raisers—eager to have too much fun. These riders were the kind who made a little more noise and let off a little more steam than anyone else. This was a very small fraction of the overall riding population. Because they were flamboyant and rode extreme motorcycles, they attracted attention. And as we've seen time and again at Harley-Davidson, a small handful can create a look that soon gets copied.

Around this time, some of these riders started using their motorcycles to express themselves and stand out from the crowd. To make their bikes lighter and faster, they started removing parts, such as front fenders and front brakes. They would replace the heavy front tire with a 21-inch rim and 3-inch tire. Small seats were mounted directly to the frames. Rear fenders were shortened or "bobbed," which is where the nickname "bobber" came from.

When these riders rode together on their loud and fast machines in their black leather jackets—many military-style, held over from the war—they created a scene that was hard to ignore. They were rebels who didn't adhere to the rules, and they continued to raise more and more hell. They would ride through Smalltown, U.S.A., get speeding tickets, and spend a few nights in jail. Nothing they did would generate even a tiny blip on today's national radar. But at Harley-

Davidson there was a quiet concern that the image of motorcycling was being threatened by growing awareness of this antisocial behavior.

In the summer of 1947, a disturbance at a three-day Fourth of July motorcycle gathering in tiny Hollister, California, set off a media frenzy. A bunch of riders from California (the media claimed there were 4,000, though those who were there say 400) came to enjoy the racing and camaraderie. Well, some noise was made and some booze was consumed. Some of the riders got a little crazy, a few fists were thrown, and police made arrests. Things got out of hand but certainly didn't warrant the massive media exposure that would ensue.



Riders at the front entrance of the Juneau Avenue facility demonstrate the evolving look of post–World War II enthusiasts.

A photo of a tough-looking guy holding a beer bottle in each hand, sitting on a Harley with dozens of broken bottles in the foreground, found its way into the pages of *Life* magazine. Hollister was depicted as a large-scale riot. The caption added to the hype: "Racing their vehicles down Main Street and through traffic lights, they rammed into restaurants and bars, breaking furniture and mirrors." *Life* hit a nerve. Newspapers far and wide were running headlines like HAVOC IN HOLLISTER and RIOTS—CYCLISTS TAKE OVER TOWN.

Bring a few hundred people into any small town for a three-day party, mix in a little booze, and something is likely to happen. In this case, though, the fact that the people in question were motorcyclists made for great national drama.

There were no reports of any townspeople being injured in Hollister. In fact, the infamous photo was later proven to be a setup. (The man on the bike wasn't even a motorcyclist!) But the damage was done. An aura of menace surrounded motorcyclists, especially those who rode in groups. They now inspired fear.

This was before the days of instant, blanket television coverage of big, visual events. The press hungered for photo ops. If you look at it from their perspective, you couldn't ask for more dramatic material, since motorcycles and the people who rode them made for interesting photos. Post–Hollister motorcycle gatherings tended to attract media. The outlaw coverage was unprecedented. The general public was becoming increasingly conditioned to view such gatherings and their participants with fear.

A few years later, in 1954, Hollywood added to the hype with *The Wild One*, a hugely popular movie starring Marlon Brando and Lee Marvin and based partly on Hollister. In a world where people have always been

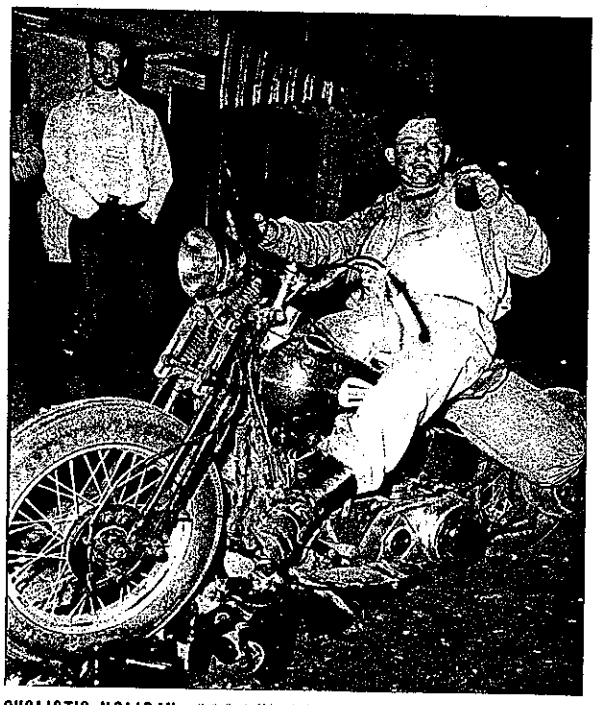
fascinated by the good guy/bad guy formula, motorcyclists represented the perfect bad guys for Hollywood. The film reinforced the stereotypes, and public resentment toward "bikers" grew.

There was serious concern at Harley-Davidson about our future. Things were snowballing. A *Saturday Evening Post* writer noted in 1954 that "Nobody, except another cyclist, likes a man on a motorcycle."

But even the very worst situation can create some positives. The Hollister event and the rising visibility of outlaw riders were either horrendous or magnetically attractive, depending on your point of view. I'm convinced that there's a little outlaw in all of us. And back then, as now, a lot of people wanted to break away from the norm from time to time. Well, for those people, riding a Harley-Davidson was (and still is) a means to do that. Thanks to all the media and Hollywood attention, everybody on the planet recognized that. So those seeking a certain level of thrill in their lives, at a higher level of intensity, had their opportunity to "escape."

I was always attracted to the hardware the "outlaws" rode. While I wasn't interested in getting involved in the whole scene, it fascinated me because everything about it was so extreme. Think of the hardtails—motorcycles with no rear suspension. These were the modified Softails of their era, the coolest of the customs. The seats featured suspended sprung posts to cushion the rider. The chopper crowd removed those and mounted the seats low on the frame. It's a great look. Rider comfort on hardtails, though, was minimal.

People were riding to declare their rebel status and to prove just how tough they were. The word "outlaw" has been around forever. Think of the Wild West. Outlaws are enthusiasts, but they're wilder. The Hells Angels was the most prominent motorcycle club, among many, to spring up and grow in the outlaw era of motorcycling, especially during the 1960s. These clubs could immediately empty out a bar just by showing up on Harley motorcycles with patches on their vests. And whatever they did, wherever they went, there were always onlookers who felt obligated to exaggerate what they'd seen.



CYCLIST'S HOLIDAY

He and friends terrorize a town

On the Fourth of July weekend 4000 members of a motorcycle club roared into Hollister, Calif., for a three-day convention. They quickly tired of ordinary motorcycle thrills and turned to more exciting stunts. Having their vehicles leave the main street and through traffic lights, they roared into restaurants and bars, breaking furniture and mirrors. Some rested (while by the curb liquor). Officers hardly paused. Valiee arrested many for drunkenness and indecent exposure but could not restore order. Finally, after two days, the cyclists left with a brazen explanation. "We like to show off. It's just a lot of fun." But Hollister's police chief took a different view. Waited his, "It's just one hell of a mess."

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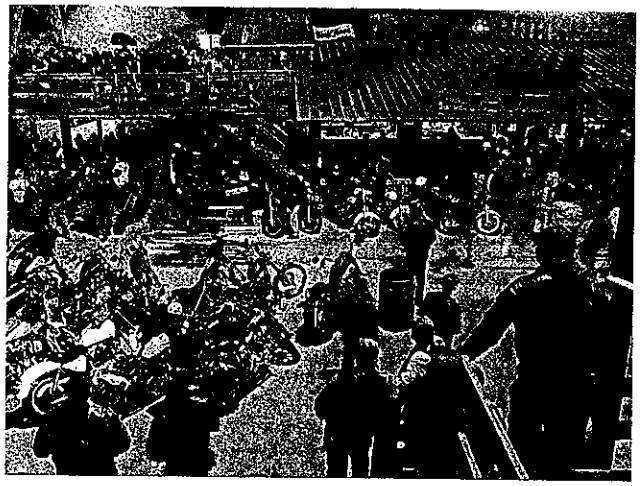
This staged photo was taken during the Hollister rally and appeared in a 1947 issue of Life *magazine.*

In a scene from The Wild One, *rival gang leader Chino (Lee Marvin) tussles with Johnny (Marlon Brando) as a crowd gathers to watch.*

Over the years, I've met outlaw club members. They are people who love motorcycling. They, like all enthusiasts, seemed to have respect for our longevity and what our brand represents. The Harley-Davidson brand is a common denominator, attracting a great variety of people from all walks of life: police officers, outlaws, the rich and famous, pleasure riders. This was notable at the grand opening of the Harley-Davidson



Café in New York City in 1993. There were famous people there like Donald Trump with his bodyguards, plus a whole group of Hells Angels and lots of other motorcycle enthusiasts.

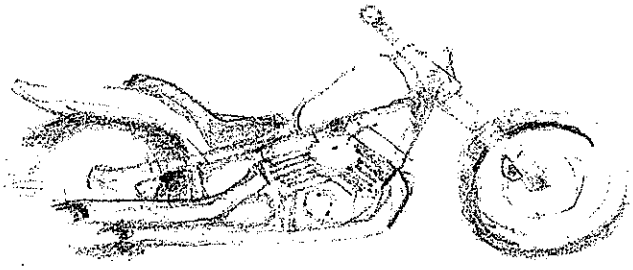
Many of the outlaw clubs are still around today, but the media has moved on. With today's instant-saturation coverage of just about everything, people have taken on more of a "I have to see it to believe it" stance. If people don't witness motorcyclists doing bad things, maybe we aren't such bad people after all. The explosion of interest in motorcycling over the past dozen or so years has been accompanied by very positive media coverage of Harley-Davidson.

Still, if you take a look around at any motorcycle rally these days, much of what you'll see—custom bikes, black leather, tattoos—stems from the era of the late forties through the sixties. And check out all those Softails! You can talk all you want about the bad-boy reputation of that era, but it didn't prevent us from getting where we are today.

WOULD YOU SELL AN UNRELIABLE MOTORCYCLE TO THESE GUYS?

A 1988 Harley-Davidson advertisement played off of the biker image of an earlier era.

Far left: Riders congregate at the Iron Horse Saloon.



1948 | FL (PANHEAD)

The simplicity of the 1948 FL is very appealing. A lot of collectors have a great love affair with the Panhead motor, which first appeared in 1948. The name refers to the top of the engine, because it looks like an upside-down kitchen pan.

Many other aspects of the FL stand out visually. It has the look of its time, and yet it's not outdated. We've gone back to this bike more than once for its styling. The FL has a hardtail frame, which was used on motorcycles prior to rear suspension. We recreated the visual effect of this frame on the '84 Softail model. Draw a straight line along the frame from the fork pivot to the rear axle and you have a hardtail.

We recreated the FL fork for the '88 Springer Softail. With its exposed springs, thin front leg and thicker, rigid back leg, this fork is easy to spot. Until then, the '48 FL was the last Harley-Davidson to use that fork.

We went deeper into the FL legacy when we designed the '97 Heritage Springer. That bike was tailored to resemble the '48 FL, using the fork, the 16-inch front wheel, the early-style front fender and running light, and the tombstone taillight that are representative of that model.

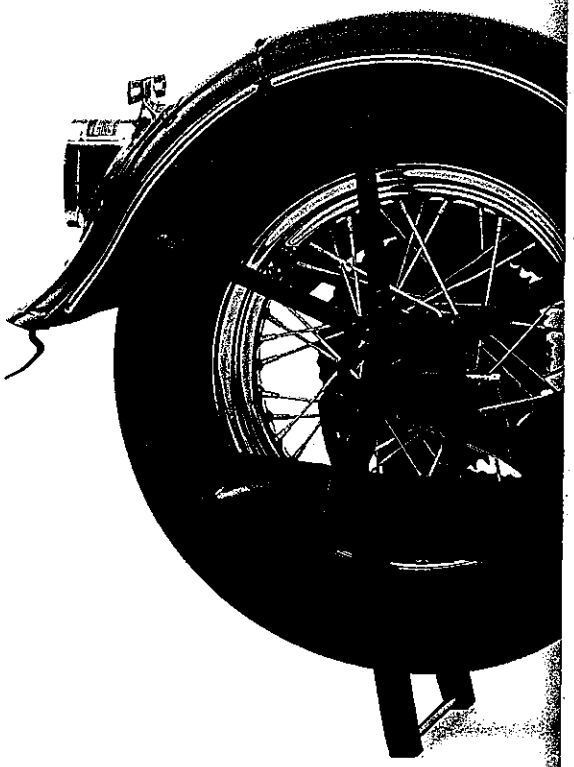
To kick off the dealer launch of the Heritage Springer, Harley-Davidson made a film about its links with the '48 FL. I was shown riding the '48 FL, and my son Bill was riding the '97 Heritage Springer. Here we were, fifty years out, and the FL elements were still a part of our style and identity.

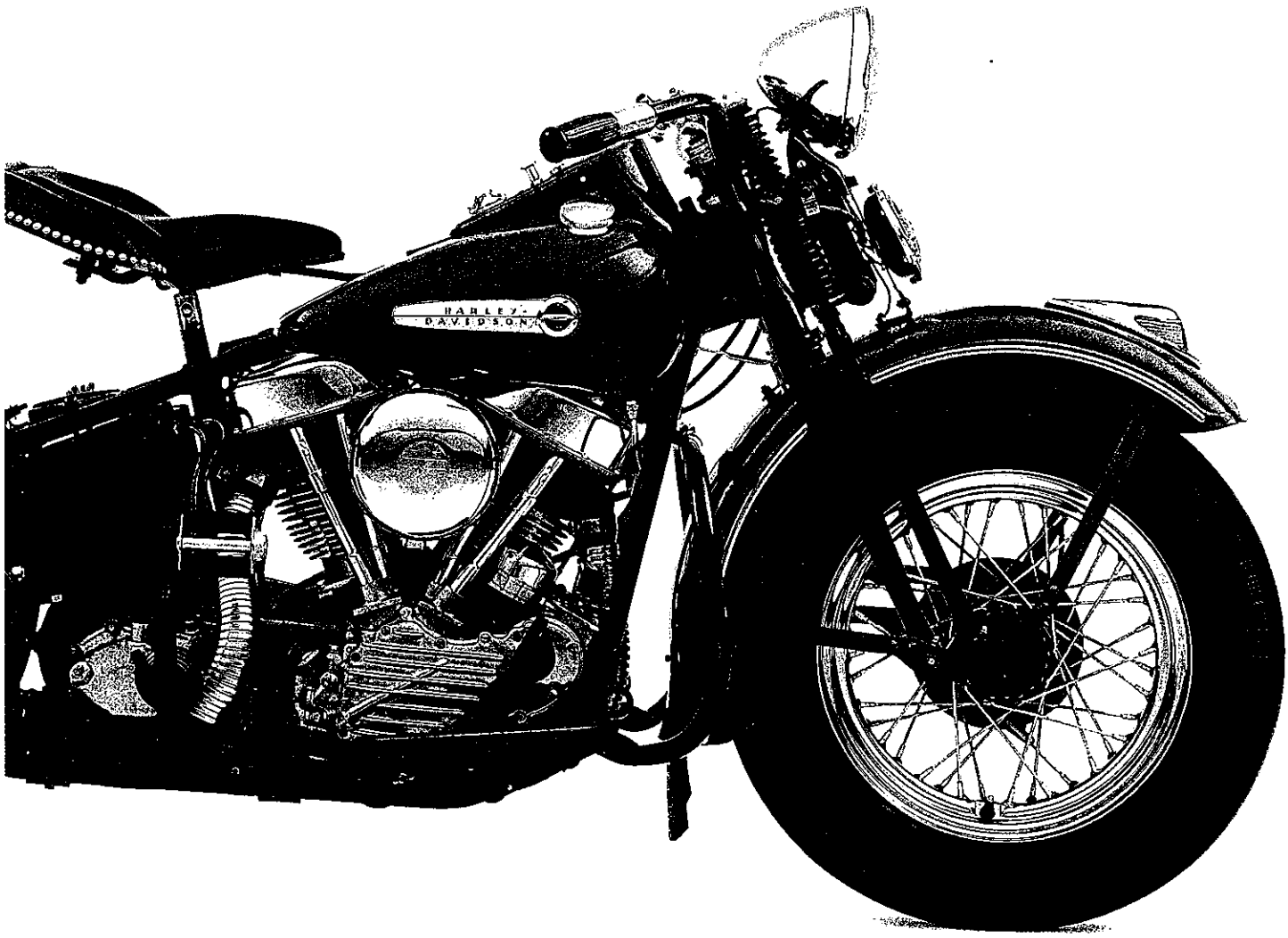
POWERTRAIN

Engine: 45-degree, overhead-valve V-Twin with aluminum heads and hydraulic lifters
Displacement: 74 cubic inches
Transmission: Four-speed, hand shift
Primary drive: Double-row chain, oil-mist lubricated
Secondary drive: Single-row chain
Brakes: Drum and shoe (front and rear)
Ignition: Battery and coil

CHASSIS

Frame: Steel, double downtube
Suspension: Springer leading-link (front)
Wheelbase: 59 inches
Gas tank: 3.75 gallons
Oil: 1 gallon
Tires: 16 x 5 inches (front and rear)
Colors: Azure Blue; Flight Red; Black

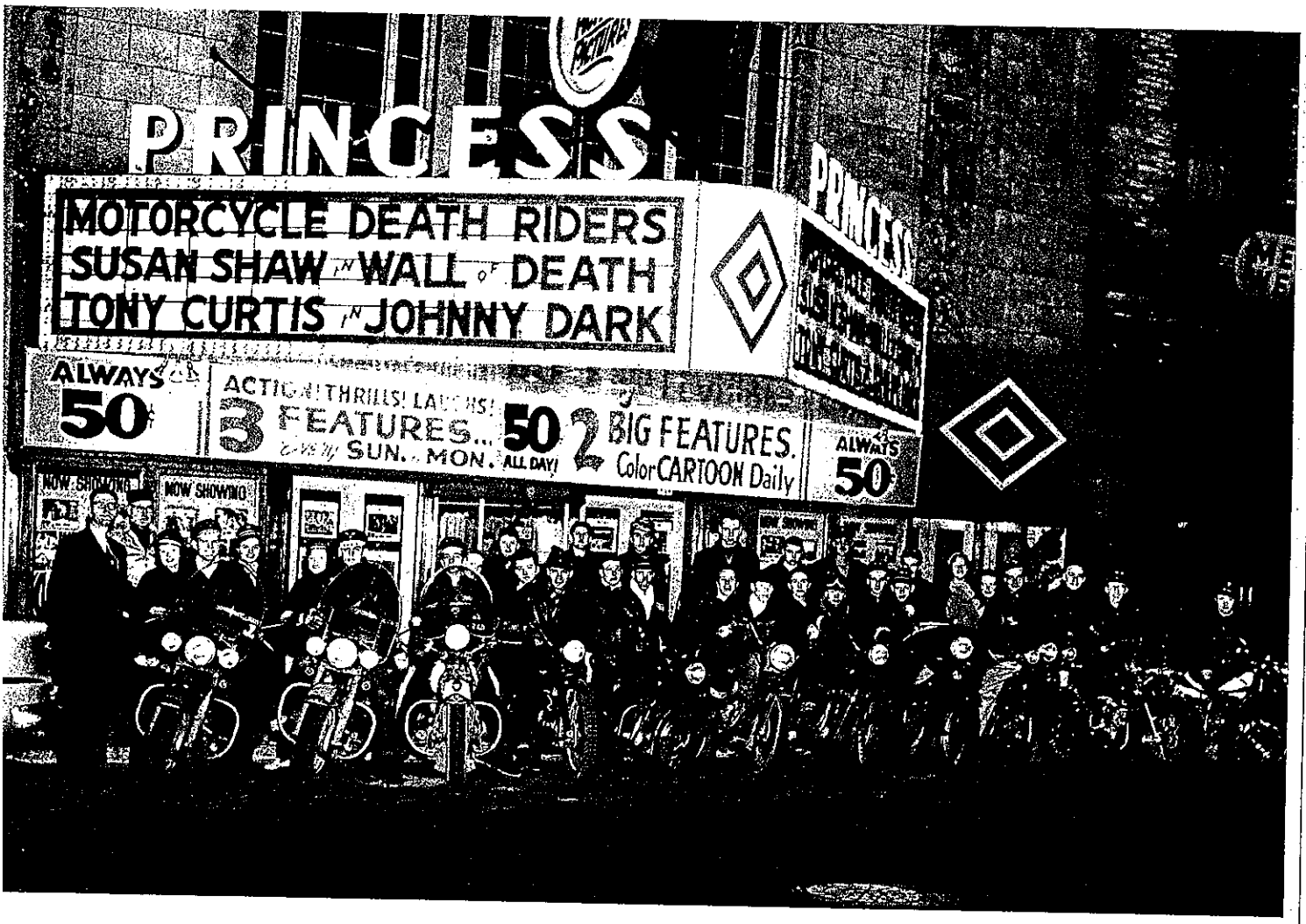



HARLEY-
DAVIDSON

1951 | *In the bucket contest, riders had to maneuver through a twisting course while spilling as little water as possible.*

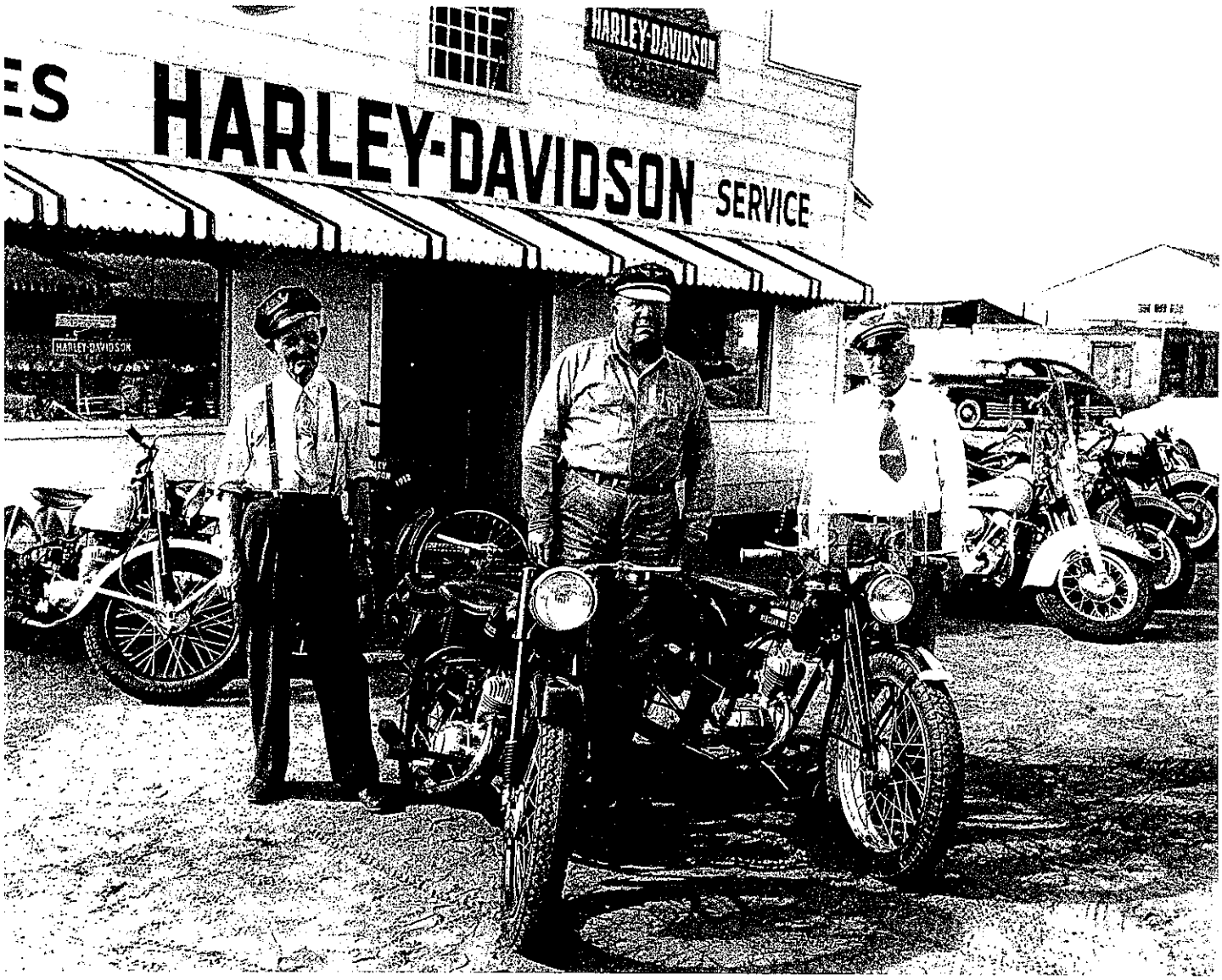
1954 | *Boy-on-bike-meets-girl was the theme of this advertisement for the KH model.*

1952 | *The Shriners have long favored the Harley-Davidson Big Twin motorcycle for formation riding. This lodge hails from Atlanta, Georgia.*



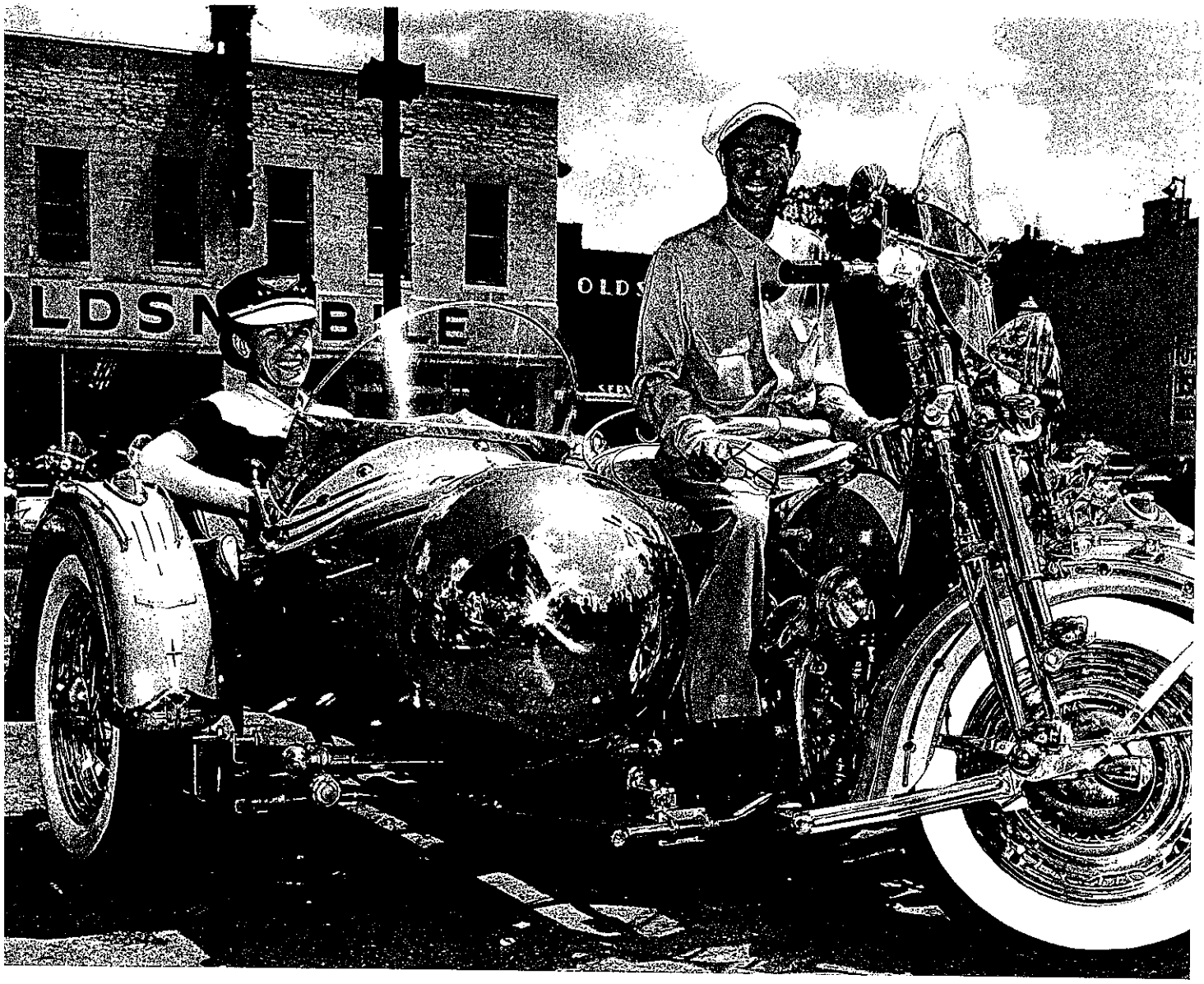
1954 | *South Milwaukee's Black Panther Motorcycle Club beneath the marquee of a downtown theater.*

1951 | *A Christmas display in Milwaukee dealer Bill Knuth's northside store.*



1951 | *Meridian, Mississippi, dealer Frank Burriss stands in between two lightweight 125cc models and a pair of customers.*

1950 | *This lightweight 125 model with bobbed fenders and extra chrome was introduced in 1948.*



1951 | *Customizing took off in the 1950s as this heavily chromed, highly accessorized motorcycle with sidecar demonstrates.*

THERE WAS NO FORMAL

DESIGN DEPARTMENT

AT THE TIME,

WHICH MADE THE OPPORTUNITY

TO SET UP THE COMPANY'S

FIRST FORMAL STYLING DEPARTMENT

VERY ATTRACTIVE.

SO I PACKED UP MY BOX OF CRAYONS

AND SAID,

"I'LL BE RIGHT OVER."

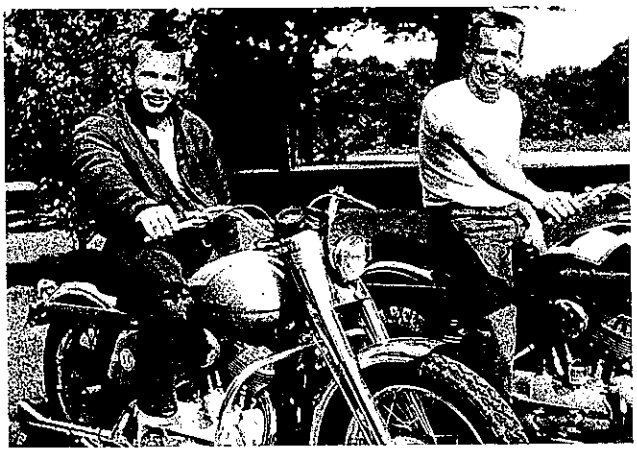
IN THE EARLY NINETIES, OUR AD PEOPLE DID A PIECE THAT featured a baby wearing Harley-Davidson pajamas and the tag line: "When did it start for you?" I know from personal experience that the fascination with motorcycles can start quite young. Riders are often asked when they first got interested in riding. Given my own family's history, I was exposed to the brand practically from birth.

Being surrounded by parents and friends, photos, films, and clothing that reflected Harley-Davidson's history really influenced me. When I was old enough to hold a crayon, I started to draw. Shape, form, and color intrigued me. I had an early interest in design, but I didn't get into styling and customization until my teen years. My involvement with designing and customizing in many ways mirrors the evolution of the whole custom movement. I've been happy to be a contributor.

I knew something about motorcycles before my first riding experience. My dad rode motorcycles every day. Growing up, I would always run to the window with great excitement when he came home from work. I was fascinated by his vehicles, so I went out to the garage with him as often as he'd let me. I'd sit on the bike and get familiar with the throttle and the brakes and so on. Just by being around my father, and hearing about the company during family discussions at the dinner table, I became submerged in motorcycle lore. So by the time I got my first motorcycle, I knew what everything was and how to ride to a certain extent.

Fifteen-year-old Willie G. is pictured here on his first bike, a 1948 125cc S Model.

My first ride, under the watchful eyes of my dad, was on a 1948 125cc single-cylinder S Model when I was fifteen. We went to a neighborhood back street. After a few miles on the shiny new 125, I was hooked. This was mine. I had dreamed about this, and now my dream was real.



Brothers John and Willie G. as teenagers pose for a photo on their K Models in 1952.

Nineteen forty-eight was the first year for the S Model. This model was unique in its girder-style front fork and parallelogram-movement front suspension displaying very large rubber bands. I'll always remember that. The company produced the S Model after the war to appeal to a younger market and widen the spectrum of riders. This vehicle was smaller than others offered at the time.

History often repeats itself. In the early twenties, we developed a single-cylinder transportation motorcycle. We ran a big billboard about getting to and from work at a very economical number of miles per gallon, a campaign to attract a new type of rider and broaden the market. We took the same approach with the 1948 S Model. Its role was similar to that of today's Buell Blast—learning how to ride on a smaller motorcycle that isn't intimidating.

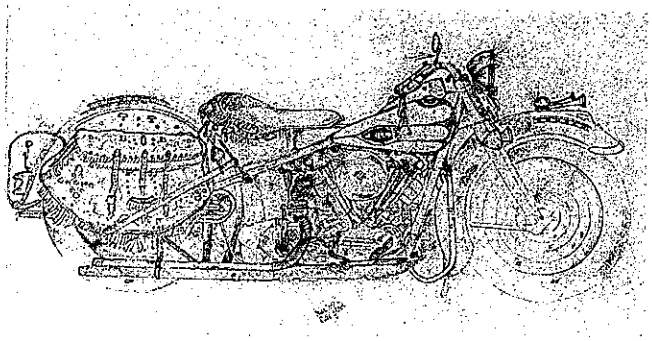
By the time I was a senior in high school, I was riding a 165 Model that had a slightly larger engine (165cc as opposed to 125cc). I made my first modifications to a bike during that time—a unique two-tone paint scheme, some chrome plating, and a shortened and flared rear fender. These were my early years with bikes, and I was already starting to change them.

While I was still in high school, I started participating in endurance runs organized and advertised by local dealers. I was able to compete in these off-road competitions fairly close to home because urban sprawl had not yet occurred. My younger brother, John, and I would go over with friends to Bill Knuth's Harley-Davidson dealership in Milwaukee, where we would pick up what we needed—map, schedule card, directions—before heading out to participate. We were riding hard all the time and having fun. Usually we'd end up at some gathering place like a tavern or roadhouse after the event, telling everybody how many times we fell off, had to push the bike through the mud, that kind of stuff. It was neat. And I even picked up a few trophies in some locally sanctioned Enduros. Those are great memories.

Following my 165 Model, I graduated to the new 45-cubic-inch model for Harley-Davidson, the K. It was a full-size bike. At the time, I was interested in many facets of motorcycling, though I had two passions: one was to ride off-road, which beat up the bike; the other was to customize the bike. But I didn't have the luxury of owning several vehicles, so I went back and forth between riding my K in Enduros and customizing it.

My high school heroes were the hot-rod and custom-bike guys. Other kids admired football players and movie stars, but these enthusiasts were the epitome of cool to me. I was drawn in by the unique hardware. It's hard to explain how powerful the attrac-

tion was. You have to remember that back in late-forties and early-fifties America, it was a big deal for a high school kid to have his own motorcycle or car. To have a hot rod or a custom bike and a leather jacket was an even bigger deal.

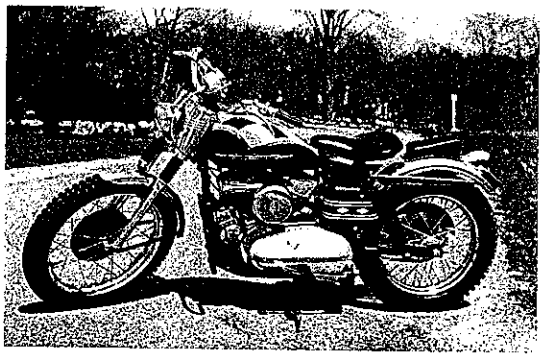


These guys had powerful modified engines that were faster and louder than stock. Middle America was still a bland place, so modified vehicles were special. There were only a few guys in my school who had motorcycles like this. To see a beautiful early Knucklehead with bobbed fenders parked next to a shaved and decked '39 Ford was magnetic. I spent my lunch hours outside just staring at them.

The custom-bike guys were gearheads. They didn't get their parts and ideas from 700-page after-market catalogs, because there were none. A quick hop over to the parts store or dealership wasn't an option. They had to design, build, and modify their bikes themselves in back-alley garages. They could form metal in a rudimentary way and had hands-on knowledge learned from doing. It was and still is very impressive to me. Tailoring a bike to one's vision is among the purest forms of self-expression.

These guys who adapted their motorcycles drew me in with their engine mods, exhaust, paint, and detailing. During homeroom, when I probably should have been studying, I was always drawing artistically converted bikes and hot rods. And I had my face in every kind of enthusiast magazine available. But from these sketches came my first very own custom. My K Model was painted in a red-and-white diamond design that rolled over the top of the tank. For that time period, it was very distinctive. The bike had minimal aluminum fenders, an aluminum tail light, and a compact headlight.

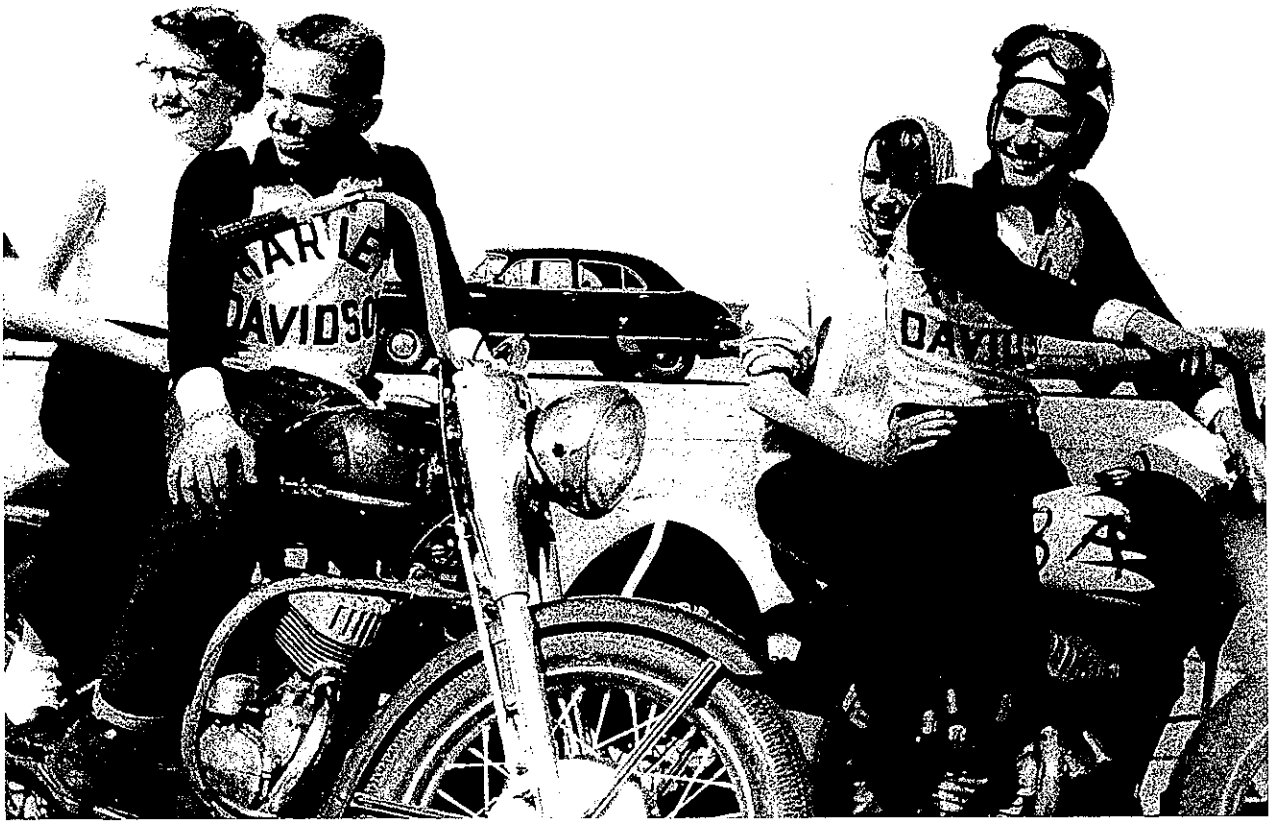
After-school and weekend hours were spent with friends, riding and thinking about modified motorcycles as minimal, elegant, and tasteful—the qualities



I admire most even now. I was always talking about future custom vehicles. Without knowing it, I'd more or less pointed my compass in the direction I'd follow later in life.

A 1947 drawing by Willie G. of an EL (Knucklehead) model demonstrates his early fascination with art and custom motorcycles.

Bottom: Willie G.'s customized K Model, with a red-and-white diamond paint scheme, one-off prototype short aluminum fenders, small solo saddle, and rear racing pillion.



Willie G. and his future wife, Nancy (at left), on a K Model in 1952 with friends at the drag strip in Half Day, Illinois.

Another influence was journeying to a drag strip in Half Day, Illinois. Some pals and I—including my girlfriend, Nancy (who's now my wife), and my brother, John—would ride down and race. There were no high-dollar teams with semis and huge trailers. It was mostly a bunch of homebuilt hot rods and motorcycles—frames, wheels, motors, and a pair of goggles. Again, the rule was simplicity—and, of course, to have fun.

More and more, racing captivated me, and making my own adaptations was right up there, too. But professional racing wasn't in the cards as a career path, and customizing bikes was basically a hobby. It was time to go to college, and I'd made my decision about where to go and what to study. I loved my art courses in high school and also enjoyed photography, so I enrolled at the University of Wisconsin at Madison and took art courses there. But UW had no programs in industrial design, which was a new discipline then.

Around this time, I read a story in *Post* magazine that changed the course of my life. It was about dream cars created by students at the Art Center College of Design in Los Angeles. The pictures showed students doing exactly what I wanted to do—combining their interests in art and vehicles. I realized this was the place

for me and convinced my parents to support my plan to go there.

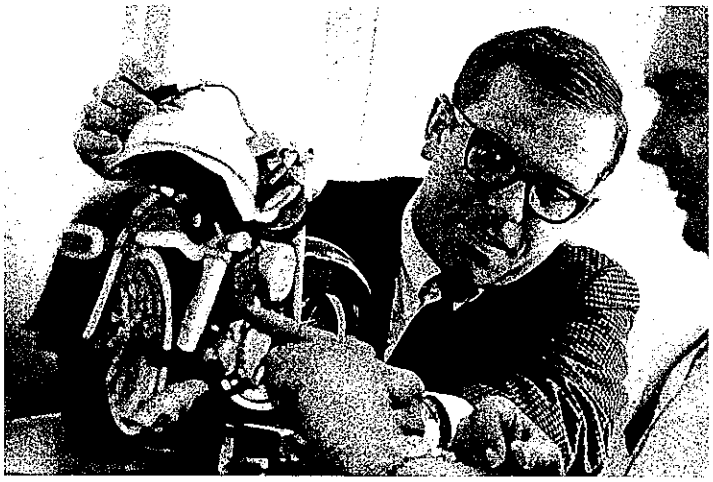
My classwork there focused on automotive design, and I learned about proportion, form, and stance—essentially, how a vehicle sits on the ground—and how the pieces fit together to determine image. I also learned to see things from a designer's perspective, and how to draw and build clay models. Eventually, I began to include motorcycles in my project work.

As busy as I was with school, I still needed to stay plugged in to the motorcycle scene. Sometimes on weekends I'd borrow a bike from a local dealer and head out to the races, or ride up Highway 1 to hang out with friends in San Francisco and northern California. The custom-bike scene there, which was in its infancy in the early fifties, was still far more vibrant and colorful than it was back in Milwaukee. Choppers were the mainstay, mostly with bobbed fenders, custom paint, and detailing.

One night after the races in Ascot, I saw something that I will always remember. I stopped to fill my tank at a gas station, and in rode a guy on a bike with a springer front end and a skinny front wheel. I distinctly remember that 21-inch front wheel with a 3-inch cross-section tire on a Big Twin. It was a striking design element that really changed the character of the motorcycle. What I'm describing is common today. As a young student in 1953, I had not seen a Big Twin with that styling approach. It illustrated to me how a wheel and tire change can dramatically affect the look of a motorcycle. To understand this, consider what solid wheels do to the look of our Fat Boy model.

While enthusiasts were enjoying riding stock machines, a movement was afoot to modify stock motorcycles. After seeing that springer, I started noticing more and more inspired motorcycles, stretching further and further away from stock. I came to think of this as customization art. It influenced me. Every self-tailored bike is an opportunity for people to make a personal statement.

At graduation time I wasn't sure that I wanted to live away from Milwaukee and, especially, Nancy. Fortunately, Brooks Stevens Industrial Design, a company that had a consulting relationship with Harley-Davidson, was headquartered in the Milwaukee area. Brooks hired me, and I was able to cut my professional teeth doing design work on everything from furniture to outboard motors. This included work on automotive projects like Studebaker and Willys. On the two-wheel



In the late sixties, Willie G. works with a 1/4-scale, scratch-built FL model used for developing styling concepts.

Willie G. is at work in the Juneau Avenue Styling Department in the late sixties, before he "blossomed" and lost the tie.

side, I did design work on Cushman scooters. I also moonlighted for Harley-Davidson.

I talked about my design projects over many lunches with my dad. After a while, he started to discuss the Motor Company's need for an industrial designer. He recognized my design abilities and training, and opened up the opportunity for me to join the company. He wasn't the kind of person to put my name on the door at Harley-Davidson if it didn't deserve to be there. I had to earn the chance, and once earned, the decision to join would need to be my own. There was no formal design department at the time, which made the opportunity to set up the company's first styling department very attractive. So I packed up my box of crayons and said, "I'll be right over."

I didn't immediately start designing custom vehicles. I had to get my feet wet first. At the time, our priority was big bikes. But I got the chance to stretch myself and work on things like golf cars, lightweights, and scooters.

We had learned over the years that one of the things Harley-Davidson owners most appreciate about our hardware is its familiarity. My new department stayed true to the company's core identity and concentrated on refinements and improvements to the existing product lines. We improved products but were always careful with the imagery. We added features while appreciating that there's a critical look about a Harley-Davidson; the motorcycle itself changes, but its design is still familiar.

The first important new product I was involved with was the Electra Glide, introduced in 1965. The Electra Glide exudes familiarity; it was major because it was the first time we used an electric starter on one of our pleasure motorcycles, and the styling was revolutionary. Look up the word "motorcycle" in a dictionary, and in my mind, you should see a picture of an Electra Glide, possibly a police version. This is the bike that from any distance is unmistakably a Harley-Davidson. It continues to be a very popular motorcycle for a range of riders.

By the sixties, the custom movement had gained a lot of momentum. I remember being in Daytona around then and watching a group of riders pull out of a drive-in. A guy made his way onto the street with an extreme long-raked, pushed-out front end. It was the first time I had seen an extended front fork.

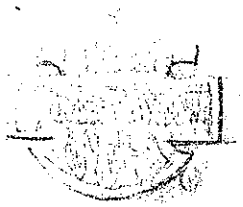
Motorcycles have always been dramatic. They're not for everybody and never will be. This is a product that people can take to an extreme as a means of self-expression. Combine this with what was happening in America in the late sixties, and you have

all the elements for a custom-bike culture.

I think of people who adapt motorcycle designs as folk artists. The vast majority are self-taught, using their own inspiration to craft their visions. Experimentation is a crucial part of the process. Look at how the basic anatomy of motorcycles has evolved over the years: wheels, fenders, forks, chassis, handlebars, seats, and a multitude of unique accessories. Changes to any one of them can radically alter the look of a motorcycle. The possibilities are limited only by the imaginations of the artists.

At Harley-Davidson we were well aware of the fact that many of our riders were customizing their vehicles. We have always tried to stay in tune with motorcycle culture. I felt it was time to become an active part of the custom movement. As an experiment, I built a mock-up that would become the Super Glide model, and we were on our way. In relatively short order, factory customs would become synonymous with Harley-Davidson. The Super Glide. Low Rider. The entire Softail line. Now the V-Rod. They are beautiful customs straight from the factory.

We've provided the parts, accessories, inspiration, and the talent of our dealer network, and individual customization has become a large part of owning a Harley-Davidson. Custom-bike owners are forever experimenting. It's the same approach we have used in the styling department at Harley-Davidson since I brought my box of crayons in, in 1963. We're always searching for that special look.



1957 | XL SPORTSTER®

The Sportster era began in 1957, when we introduced an overhead-valve, 55-cubic-inch engine. Before that, our motorcycles were side-valves (Flatheads), referred to as the K-Models. In 1957, we added the overhead-valve cylinder heads, which gave the motorcycle increased horsepower and performance. Today there are many iterations of the Sportster, but this was the beginning.

This motorcycle was king of the street. Stoplight to stoplight, the Sportster had a lot of power compared to other motorcycles of the time. As a higher-performance sport model, the Sportster was not loaded down with saddlebags, luggage racks, or extra lights. Many of them were as you see here, light and nimble, which added to the performance image.

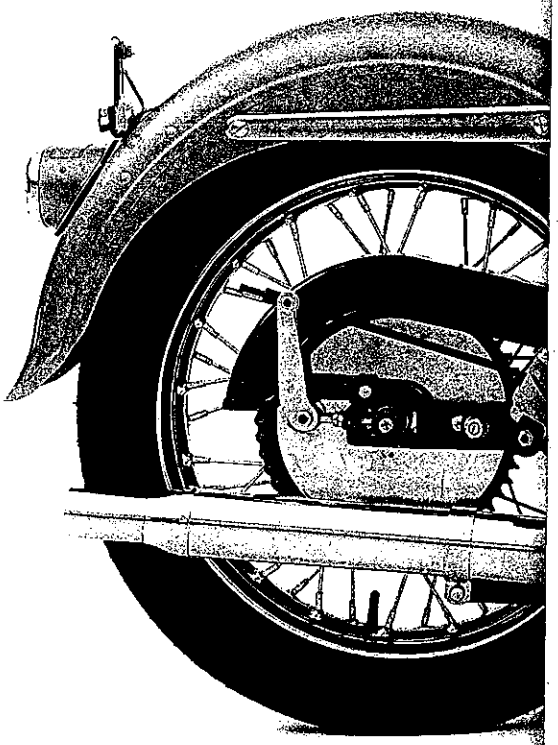
I put a lot of miles on Sportsters as a young man and owned the '57 XL. It was my bike of choice. What's more, just out of design school, I was moonlighting for Harley-Davidson when I designed the circular tank emblem used on the 1957 and 1958 Sportster models. It's one of the first production jobs I ever did for the Motor Company.

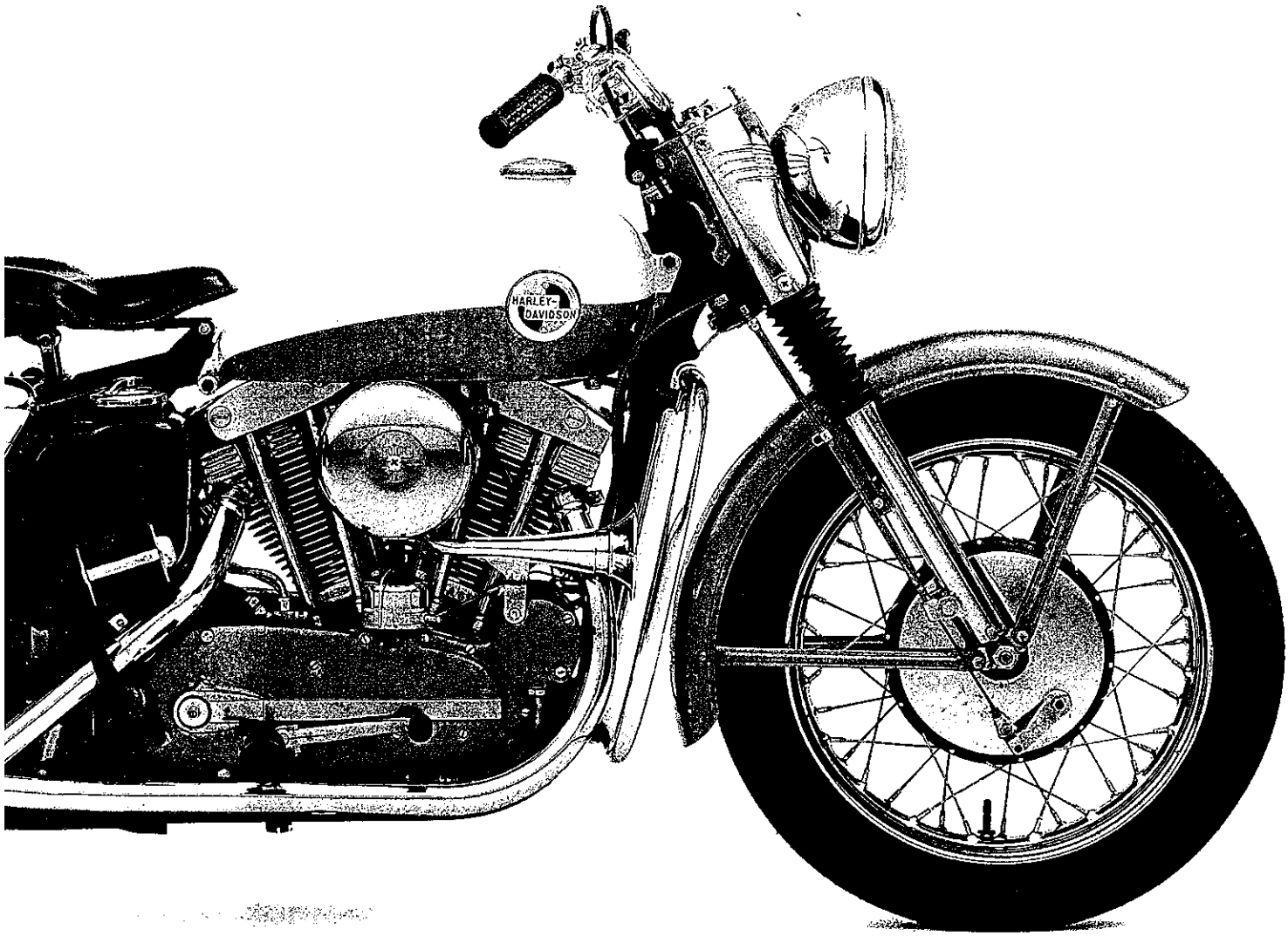
POWERTRAIN

Engine: 45-degree, overhead-valve V-Twin
Displacement: 55 cubic inches
Transmission: Four-speed, four-shift, single-unit construction with engine
Primary drive: Triple-row chain, oil bath
Secondary drive: Single-row chain
Brakes: Drum and shoe (front and rear)
Ignition: Battery and coil

CHASSIS

Frame: Steel
Suspension: Telescopic forks (front); swinging arm, hydraulic shocks (rear)
Wheelbase: 57 inches
Gas tank: 4.4 gallons
Oil: 3 quarts
Tires: 18 x 3.5 inches (front and rear)
Colors: Pepper Red with Black; Skyline Blue with White; White with Black; Black with Pepper Red




HARLEY-
DAVIDSON

HARLEY-DAVIDSON DEALERS ASSOCIATION RALLY
MILWAUKEE, WISCONSIN 1957

1956

CULTURE AND COMPETITION

1970

BIKES ARE BACKED UP TO THE CURB,

HANDLEBAR TO HANDLEBAR,

FOR BLOCKS.

THOUSANDS AND THOUSANDS OF THEM,

THEIR LICENSE PLATES

A PATCHWORK QUILT OF COLORS

REPRESENTING EVERY STATE.

IN 1978, I TRAVELED TO STURGIS FOR THE FIRST TIME AS A rider. It was much less corporate and commercial in the seventies than it is now. There were fewer motorcycles by a large number, you could still camp at City Park, and it was much wilder. The Deadwood and Sturgis of the seventies was a Wild West scene of outlaws and all kinds of motorcycle characters.

Things have certainly changed. Because of the great expansion of the rally, Deadwood has restrictions about where you can park your motorcycle, and camping at City Park is no longer allowed. But I'm happy to have experienced the Sturgis of yesterday and today.

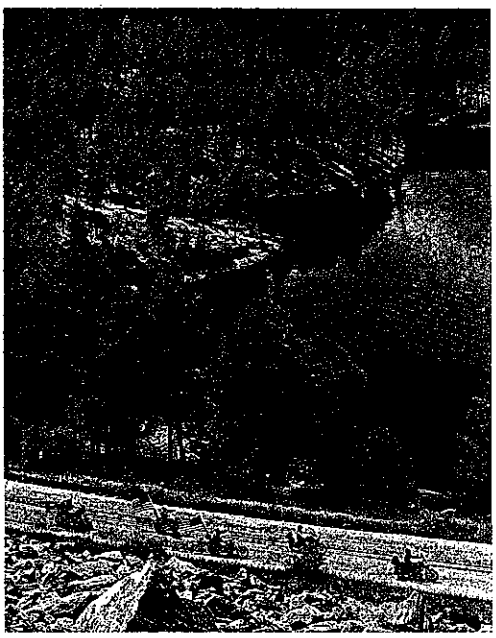
Riding to Sturgis for more than 20 years has been such a blast for me because I'm always with friends and family. In the evening hours at Sturgis, we reminisce about our travels and the weather we journeyed through on the trip. Of course there's a story or two for each year, and retelling them is part of what makes the experience unique. One particular year on the ride to Sturgis, we hit road construction right after a rain. I'll never forget it. We nicknamed the journey the "Mud Ride," because the section of road under repair had six to eight inches of wet, watery mud on it. Cars were sliding all over; it was a real challenge just to ride through it, but we did. However, we needed to clean off right afterward, so we rode into a spray-and-wash car wash and stayed right on our bikes. Everything was full of mud—us, our helmets, you name it. We took turns spraying each other with water wands to free ourselves and our bikes of mud. It ranks as one of my favorite memories of the journey to the Sturgis rally.

A rider gets the thumbs-up sign from a group of kids in Sturgis during the 1990 rally.

Traveling from Milwaukee to Sturgis is a lot like watching a movie on a big screen. It starts out with the lush green farmlands of Wisconsin, then you cross the Mississippi into Minnesota. Eventually you come upon massive stretches of the Great Plains, which are as flat

Some riders break away from Sturgis to enjoy a tour of the Black Hills in 1999.

Far right: This watercolor painting by Willie G. was inspired by countless rides through the Great Plains on the way to Sturgis.



as you can imagine. It's one of my favorite places to ride for a number of reasons. Foremost is the way light plays on the open fields and how it breaks through the clouds. The sheer size of the Plains against the horizon in the distance makes you feel minimal.

But the Plains are also a subtle landscape. You'll travel past a house that has been abandoned and know that somebody, at some time, was trying to farm the surrounding land. It begs the questions: Who lived there? What did they do? Where are they now? It's what I think about when I blow across the Plains—it's something I look forward to every year. As a collector of Native American artifacts, I can almost see the early tribes on this landscape. I believe that we're also a kind of a tribe, on bikes, moving across the Plains.

As you ride to Sturgis, the landscape goes from lush green to open plains. Soon, you start to see cattle, cross the Missouri River, then enter South Dakota. You notice the outcroppings of the Black Hills. The terrain starts to undulate. All of these elements are distinct pictures in my mind. And experiencing them on a motorcycle is one of the great benefits of riding.

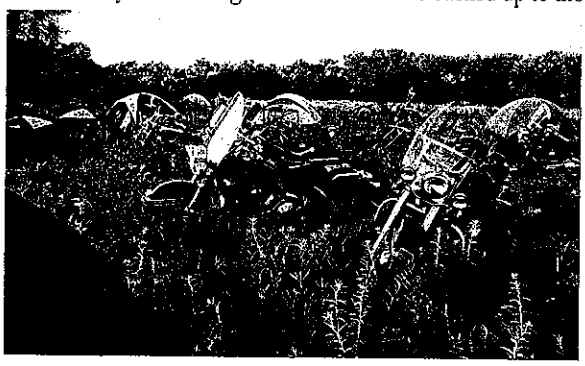
The conditions you ride through on the journey makes Sturgis more of a special place once you arrive, but the area doesn't need any embellishing. The early rally organizers knew all along that the Black Hills near Sturgis were the perfect setting for motorcycle riding. With Wyoming state parks and Yellowstone National Park nearby, and all the great roads and little towns surrounding Sturgis, it's a place like no other.

For those who haven't experienced what happens after the ride, I'll paint a picture: It's mid-afternoon

on an early August day. You and your wife find yourselves standing on Main Street in the small Black Hills town of Sturgis, South Dakota. For years you've heard stories about the legendary motorcycle rally known simply as "Sturgis," one of the largest annual motorcycle gatherings and a must for Harley-

Davidson owners. You've wondered, Is it really possible for more than a quarter of a million riders to be in the same place at the same time? You rode your bike all the way from home to see for yourself.

There are endless streams of motorcycles as far as you can see. You're trying to look at the bikes because each is different. The city is alive with the sound of Harley-Davidson V-Twins. You can't see any open spaces anywhere along the street. Bikes are backed up to the



curb, handlebar to handlebar, for blocks. Thousands and thousands of them, their license plates a patchwork quilt of colors representing every state.

The sidewalks are packed with T-shirt-clad humanity, flowing in and out of storefronts and between bikes. You peer in through a shopwindow and see people trying on jackets and chaps. Through another window, you see an artist with a customer getting tattooed.

You're in an extremely big crowd, but there's a very friendly atmosphere.

You wander into an alleyway packed with stalls selling every conceivable motorcycle-related product, from T-shirts, belt buckles, sunglasses, leather belts to saddlebags, chrome parts, and decals. You smell the smoky aroma of frying buffalo meat, sausages, and onions coming from food stands.

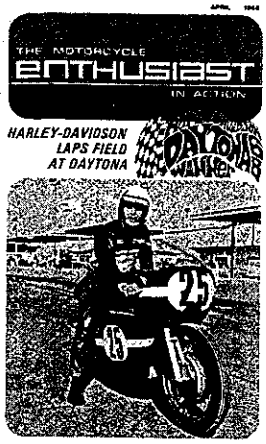
Right about here you start to realize that Sturgis is a thrill. You then pull out your camera and try to find a shot, any shot, that will somehow capture this for friends and family back home.

Before the week is up, you will have ridden hundreds of miles through the beautiful Black Hills, read in the local paper that indeed more than a quarter of a million motorcyclists are here, watched the sun go down behind Mount Rushmore, taken demo rides on brand-new Harley-Davidson motorcycles, heard hundreds of great road stories, attended informational seminars, seen a couple of bands that you thought were pretty good, spent a few hours in Harley-Davidson's massive display area, made new friends, bought some raffle tickets to help raise money for the Muscular Dystrophy Association, got an oil change, lost money gambling in Deadwood, spent a wild night at the racetrack, and bought so many souvenirs that you had to ship them home. Finally, you hit the road for home, hoping the return trip will be just as much fun as the ride here. And it will be.

Once home, you'll do what millions of other riders have done over

For many, the rally experience includes nights spent on the campground among friends, as this Iowa scene shows.

Bottom: Even a rainy day in 1990 won't discourage the crowds from gathering on Main Street in Sturgis.



This April 1968 cover of The Enthusiast *celebrates a Harley-Davidson victory in the Daytona 200.*

Far right: Wier's Beach is a popular spot for riders to congregate at the annual Laconia Rally in New Hampshire.

the last 60-odd years. You'll tell anyone who will listen where you've been, what you did, and what a super time you had. You'll tell your Harley riding friends they missed the time of their lives and encourage them to join you next year. The stories—the legends—will grow. And next year's gathering will be larger.

We love rallies. Nancy and I have been to several hundred, big and small, and we never tire of them. Events like Sturgis; Bike Week in Daytona Beach, Florida; and Motorcycle Week in Laconia, New Hampshire, are among the greatest, and certainly most visible. Although the big three draw the largest crowds and are the best known, every weekend of every year, somewhere in the world, rallies are taking place, bringing riders together and generating excitement.

Almost since the days when motorcycles first appeared, enthusiasts have been coming together to enjoy the spirit of community. Even during the most trying times in our nation's history, motorcyclists have gathered to share their passion, trade road stories, compare hardware, laugh and ride together—and simply escape from the everyday world for a while.

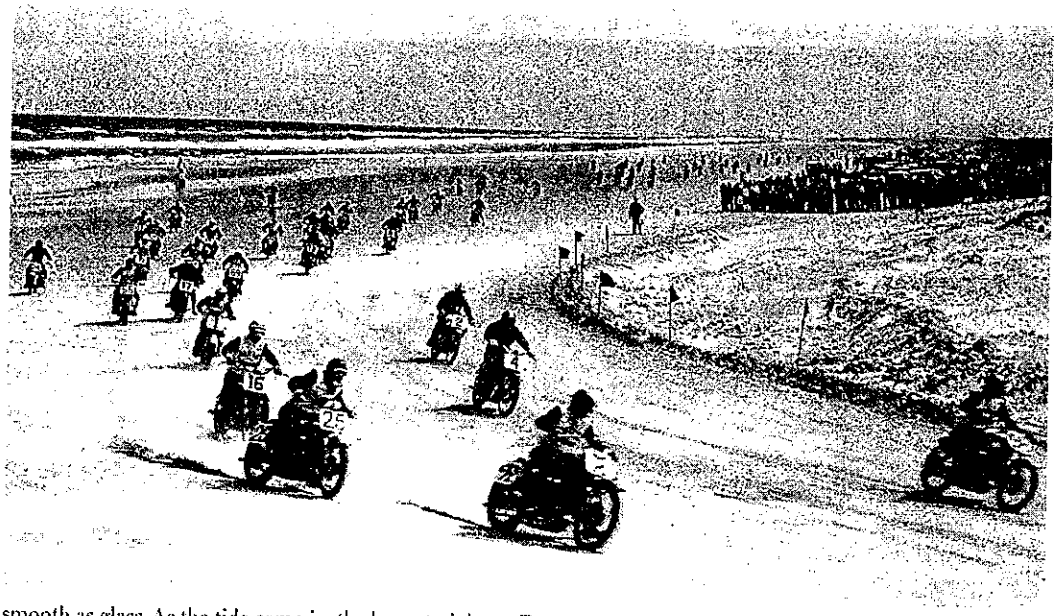
As a boy, I remember hearing my dad tell stories about the fun he and my uncles had at Daytona. I saw the pictures in motorcycle magazines and couldn't wait to go myself. For a racing fan like me, Daytona was a dream destination because of the Daytona 200, where some of the top racers in the world competed. The thought of being on the beach with thousands of bikes and riders while there was still snow on the ground in Wisconsin seemed so awesome.

On the night at the dinner table when my dad told me he was going to take me on the journey south, I was elated. This was back in the early fifties, and the Daytona scene was nowhere near today's massive scale, but the event was still spectacular.

It was all there, even beyond what I'd dreamed about. Beautiful custom bikes were everywhere. There were a few representatives of the emerging chopper crowd, with their lean bikes and black leather jackets.

There were club riders in their pilot-like uniforms, with pressed shirts, knee-high boots, jodhpur pants, and white-brimmed hats. The motorcycle community was still relatively small at that time, so to see this many bikes in the same place, and how cool everybody looked, and how much fun they were having, just blew my mind.

Then there was the racing. The races were actually held on the beach, on hard-packed sand that was



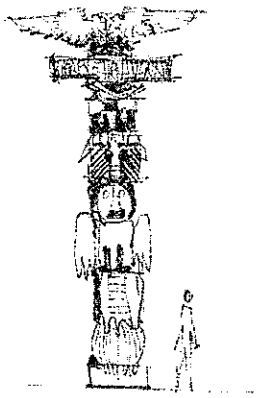
The annual races at Daytona were once partially held on the hard-packed sand. In 1961, the races were moved to the Daytona Speedway.

smooth as glass. As the tide came in, the long straightaway would narrow, which gave the racers less room and added to the drama. With the waves in the background and crowds of cheering fans, a mass of Harley-Davidson KRs—along with Indians, British bikes, and some older Harley WR tank shifters—would come roaring down the beach.

As the bikes reached the end of the long sand straightaway, they'd have to slow and make a tricky, tight turn onto the back straightaway, which was a paved but bumpy road. They moved so fast on that rough back stretch that they needed special knee grips on their bikes to lock themselves on. No pictures could ever do it justice. You needed to be there.

These memories are very special to me. And I love to talk about them. When we do this, we're keeping the legends alive.

Motorcycle rallies are a lot like tribal gatherings. They allow a community of people to share in a culture and celebrate it. This is a tradition worth protecting and perpetuating. And that's what we're doing at Sturgis, Laconia, Daytona, and everywhere else riders gather together.



1966 | FL (SHOVELHEAD)

Historically, our engines have been street named. Three familiar names are Knucklehead, Panhead, and Shovelhead. We discontinued the Panhead in 1965 and introduced the Shovelhead in 1966. The Shovelhead engine had a long life. It ran until we introduced the first Evolution engine in 1984.

The FL motorcycle with Shovelhead engine was one of the first to have Harley-Davidson fiberglass saddlebags. The acquisition of a fiberglass manufacturer in Wisconsin in 1962 allowed us the flexibility of tooling and manufacturing small production runs of custom fiberglass shapes. From a styling standpoint, the ability to work with this material was an important development. Though fiberglass saddlebags have been used on many of our motorcycles since, the side profile shape has always referenced the one used on the first Shovelhead. It remains a recognizable form that is a defining part of our big touring bikes.

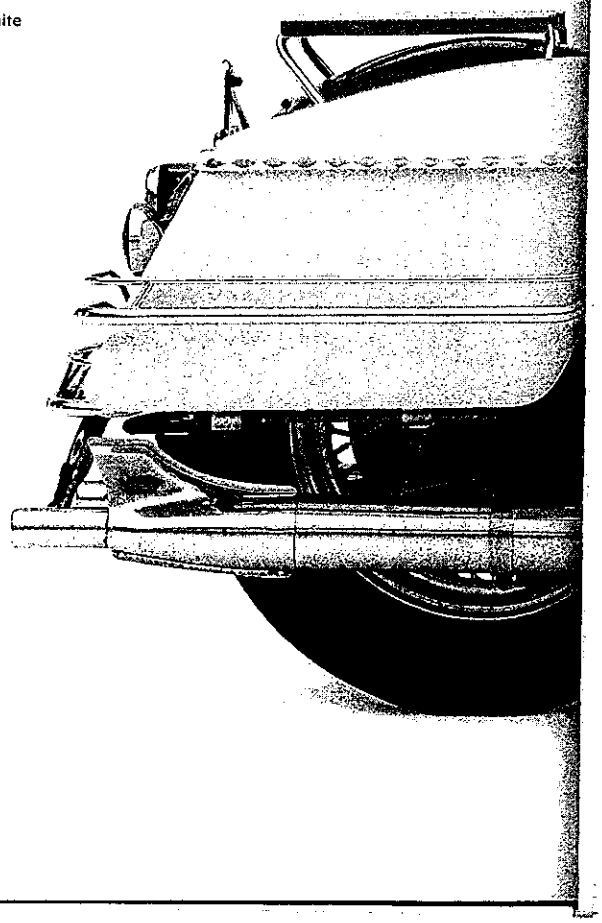
A feature you see on the FL (Shovelhead) pictured here is the sprung seat post. This was a two-up seat, on which riders sat at a higher position than they would today. The last seat-post model was offered in 1981, and we mounted the seat rigid to the frame in 1982.

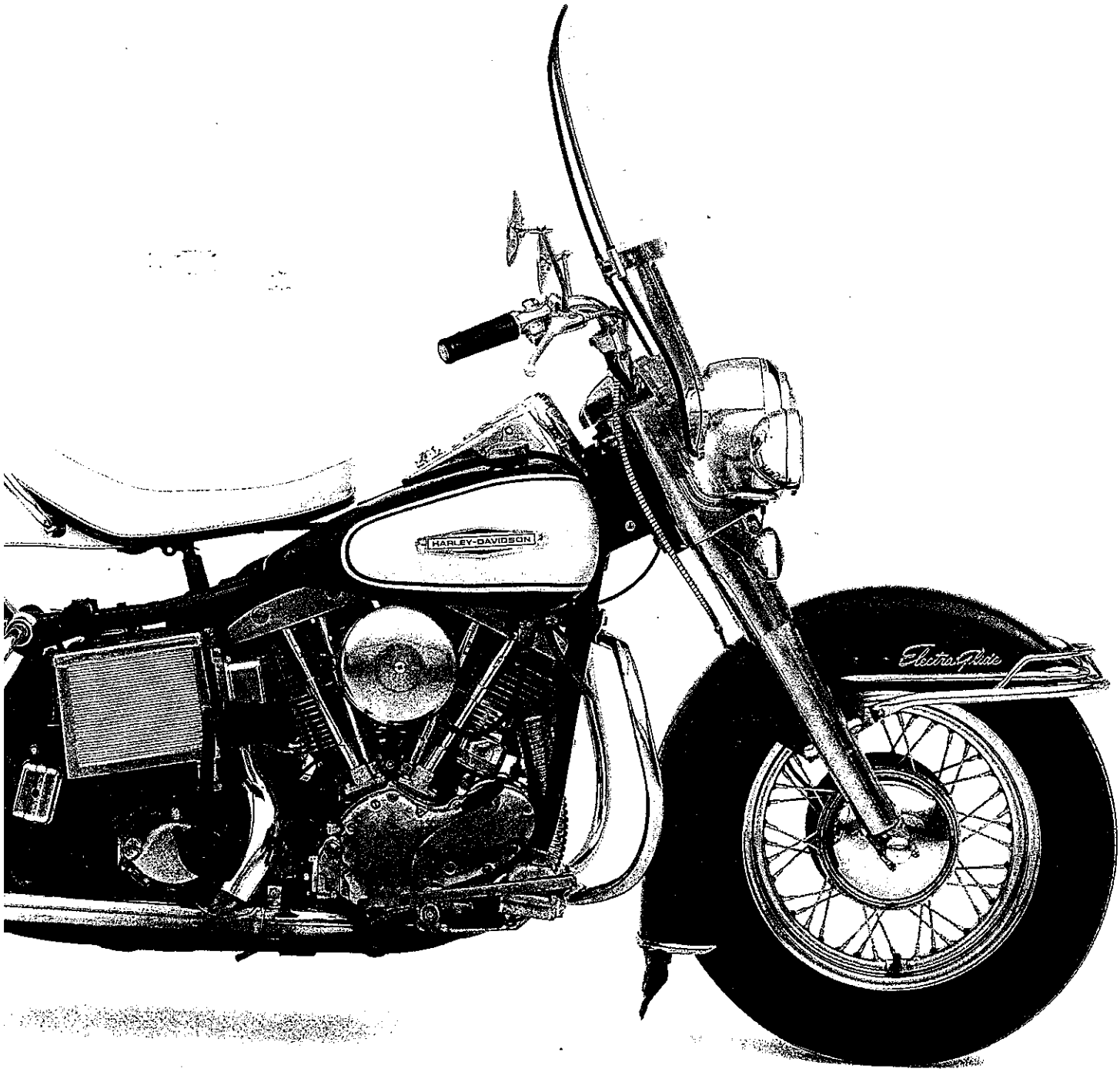
POWERTRAIN

Engine: 45-degree, overhead-valve V-Twin Shovelhead
Displacement: 74 cubic inches
Compression: 8:1
Transmission: 4-speed foot-shift or hand-shift
Primary drive: Double-row chain
Secondary drive: Chain
Brakes: Drum and shoe
Ignition: Battery and coil

CHASSIS

Frame: Double downtube, cradle type
Suspension: Telescopic forks (front), hydraulic shocks (rear)
Wheelbase: 60 inches
Gas tank: 5 gallons
Oil: 4 quarts
Tires: 16 x 5 inches (front and rear)
Colors: Black with White; Indigo Metallic with White

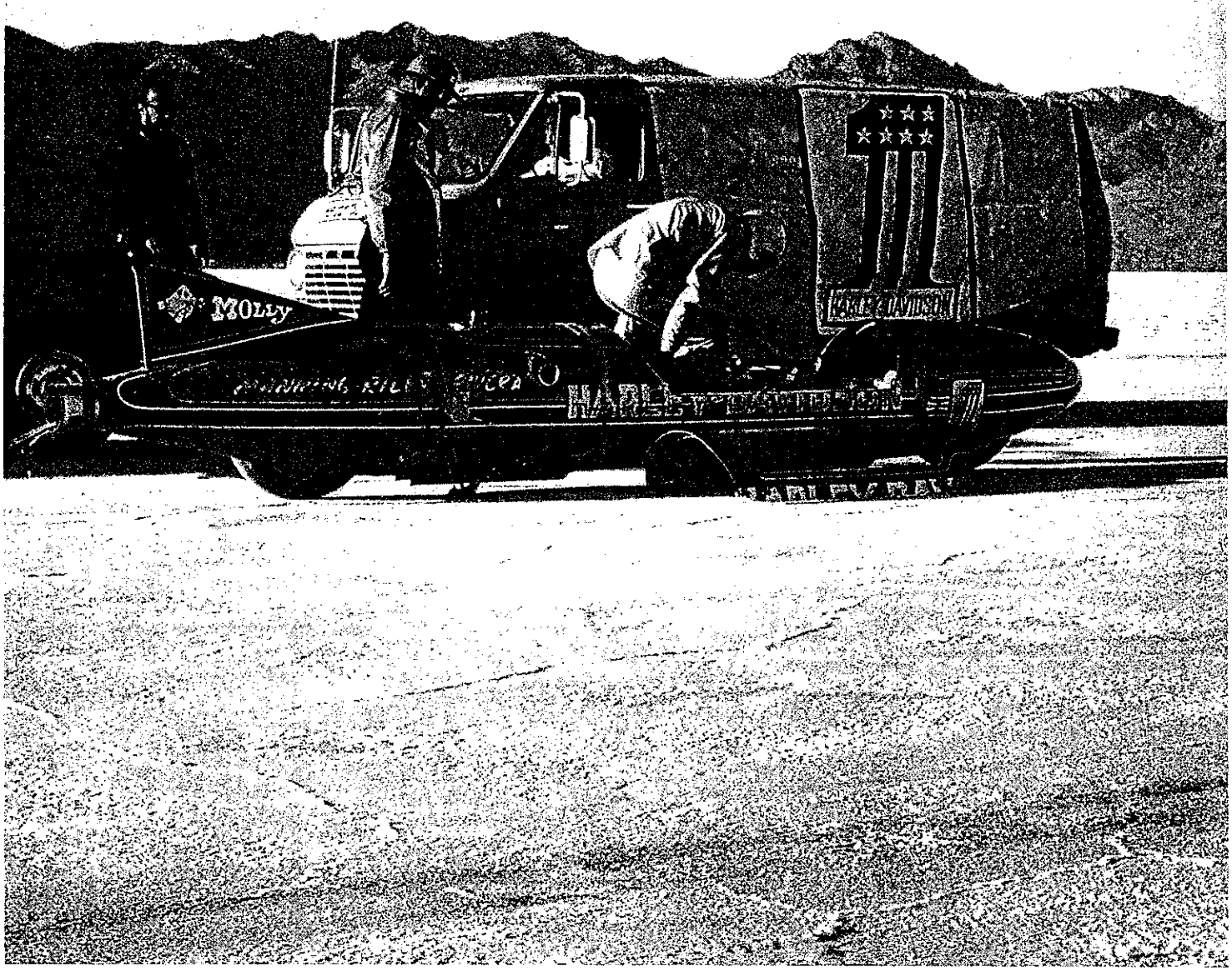


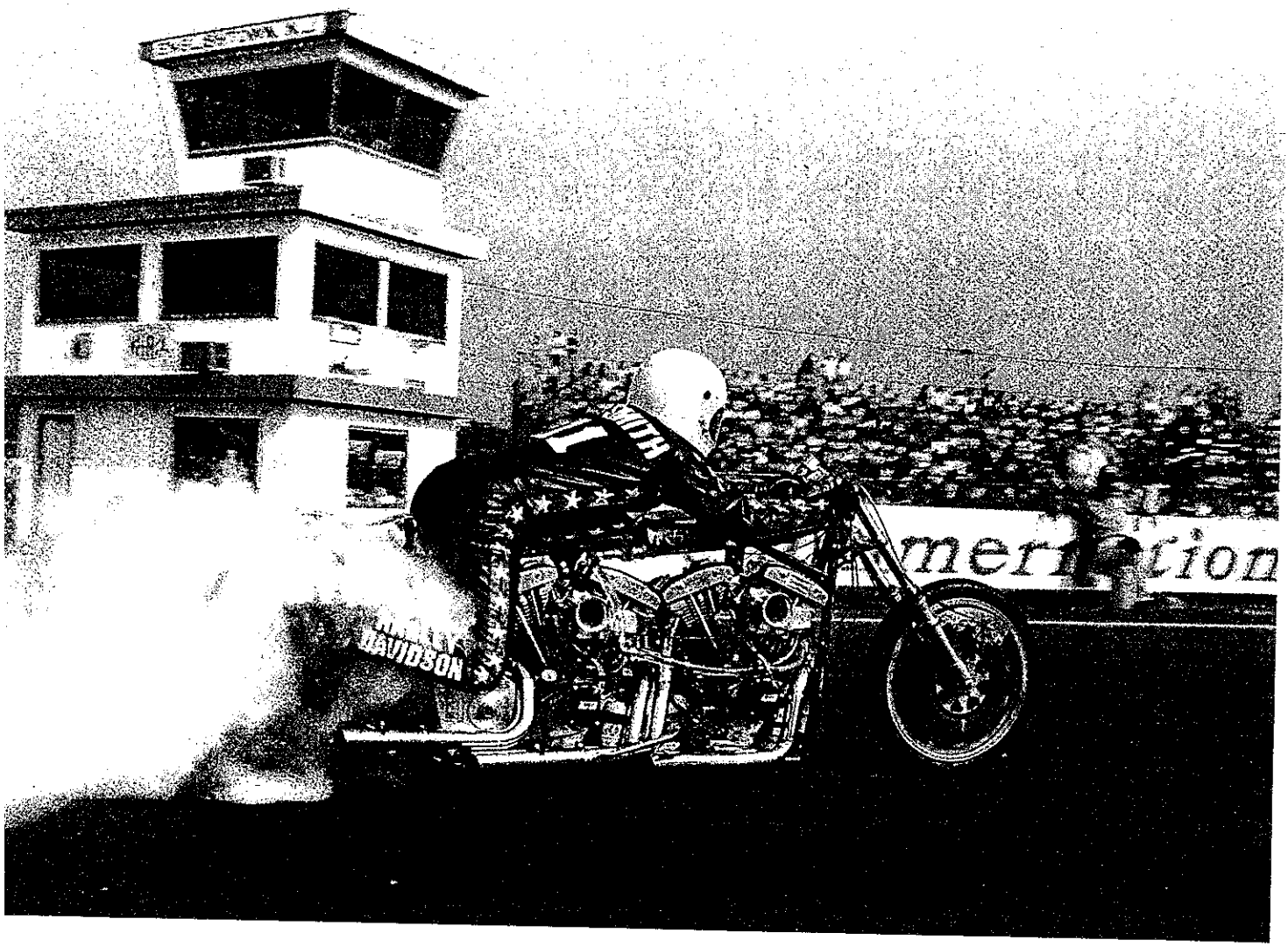

HARLEY-DAVIDSON
Electra Glide

2817

1966 | *Memorial Day Run, Milwaukee.*

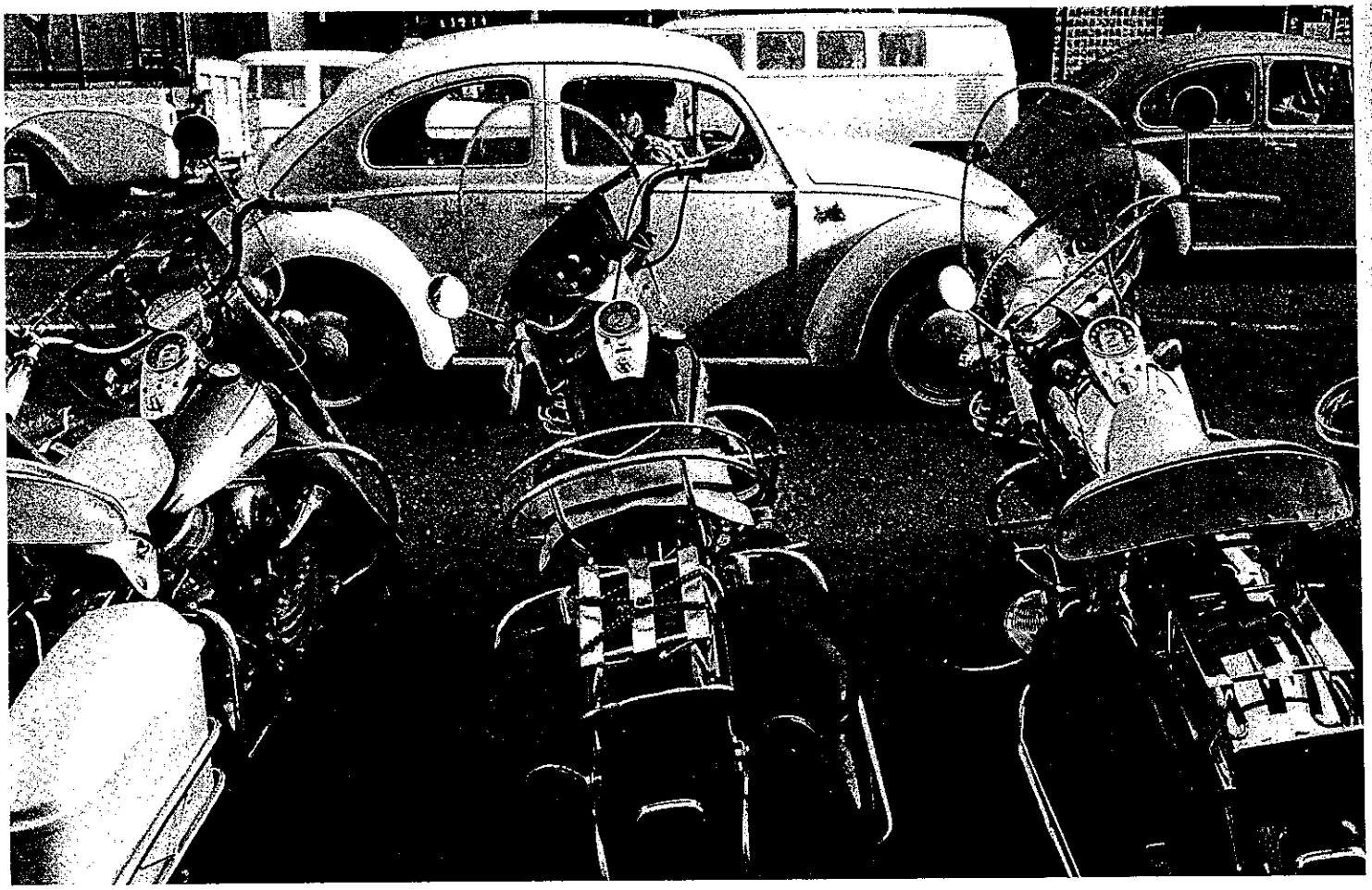
1955-56 | *Riders at a rally in Indianapolis.*


MOLLY
HARLEY-DAVIDSON



1970 | *Factory racer Cal Rayborn set a new land speed record of 265.492 mph in a streamliner on the Bonneville Salt flats.*

1970 | *Joe Smith broke the nine-second barrier for the quarter mile on a double-engine, Harley-Davidson dragster.*

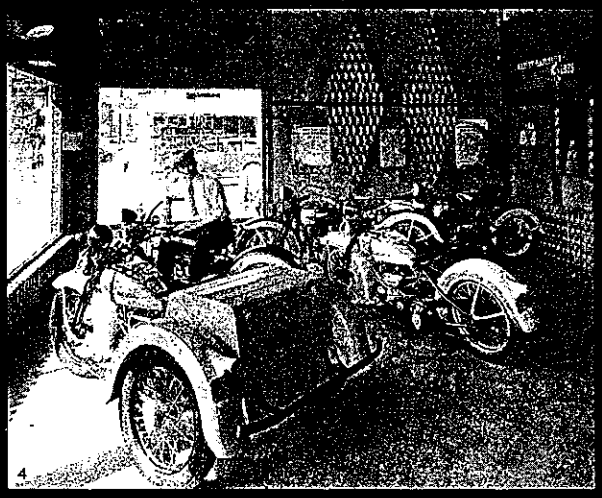


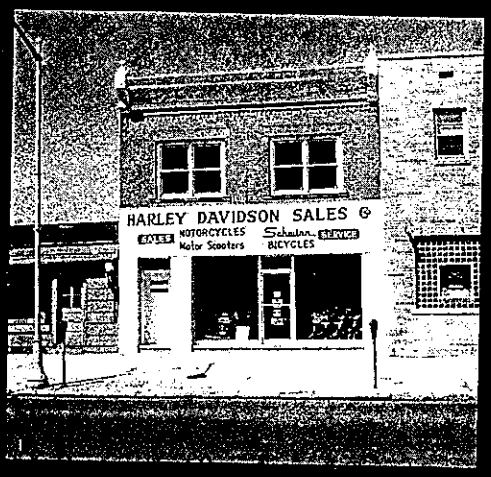
1967 | *Harley-Davidson motorcycles line the curb on High Street in San Francisco, California, during the "Summer of Love."*

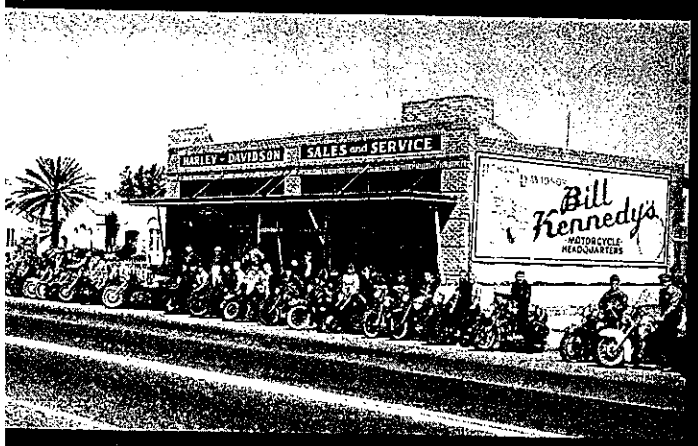
1967 | *Golden Gate Park in San Francisco, California, is the setting for this display of choppers. Extended forks, high bars (or long sissy bars), and small tanks were popular modifications in the sixties.*

Dealers

I've always said that dealers are on the firing line. They interact daily—one-on-one—with our customers. The Motor Company is nothing without a great, worldwide dealer organization. Dealers are our most important business partners, and their spectacular new stores truly are a commitment to a great future.







OPPOSITE PAGE
(1) Harley-Davidson produced a line of bicycles until the early 1920s (2) Omaha dealership in 1937 (3) A new two-speed (4) A Servi-Car model on display in a dealer showroom.

THIS PAGE
(1) This dealer sold Harley-Davidson models and Schwinns in 1967 (2) The Gypsy Tour getting ready to depart from Bill Kennedy's dealership in 1951 (3) A 1951 group shot (4) A contemporary Harley-Davidson dealer storefront (5) The larger interiors of today's dealerships allow for more room to showcase Harley-Davidson merchandise.

MY DAD WANTED TO KEEP

THE COMPANY AS IT WAS.

THE IDEA OF

GIVING UP

CONTROL OF HARLEY-DAVIDSON

TO A COMPANY

HE WAS CONVINCED

COULD NEVER TRULY UNDERSTAND US

WAS SOMETHING

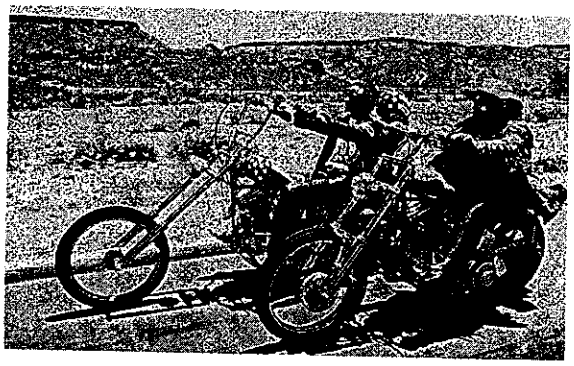
HE DID NOT AGREE WITH.

JUST HEARING THE WORDS "LATE SIXTIES" EVOKES VIVID memories and imagery for me, as I'm sure it does for anyone who was around then. I can't think of another time that had as many dramatic contrasts, both in the culture and at Harley-Davidson. The events of this era had a major effect on me and anyone involved with our motorcycles.

The anti-war movement and hippie lifestyle were blossoming. Televised scenes of Vietnam violence appeared in our living rooms every night. Some of the greatest rock and roll ever made was being recorded, and it captured the way young people in particular were feeling. Our motorcycles, too, reflected the spirit of the times.

Riders were building increasingly creative bikes that expressed their growing distaste for the status quo, and stressed their individuality and passion for freedom. The influence of tie-dyed shirts, beaded jewelry, and psychedelic art began showing up in custom paint, accessories, and clothing. These details, combined with long front forks and coffin tanks, made bikes look more and more extreme.

Then the film *Easy Rider* appeared. I don't think anyone could have predicted it would succeed the way it did. I remember how exciting it was to see those two guys riding beautiful custom bikes, inspired by Harley-Davidson, across the country. I can still see the sun reflecting off the spokes. The movie triggered so many feelings—and still does. I personally liked *Easy Rider*



Billy (Dennis Hopper) and Wyatt (Peter Fonda) ride the open road in the 1969 film Easy Rider.

Customized Harley-Davidson motorcycles played a role in the sixties counter culture. Here, Jimi Hendrix is on a highly modified bike with a Panhead engine.

very much. But others at the time reacted differently. And more pressing factors were commanding our attention at Harley-Davidson.

Honda and other overseas competitors were cranking out more and more bikes, selling them at good prices, and gaining market share here in the U.S. Harley-Davidson wasn't as nimble as it once was. Our lightweight motorcycle line had grown larger over the past several years. We were spread thin. But aside from these problems, there was something else we absolutely didn't see coming.

Until 1969, I don't think I'd ever heard the term "hostile takeover." But suddenly the phenomenon was spreading through the business world, as strong companies or investor groups seized publicly owned companies by buying controlling interests in their stock. Since Harley-Davidson was a company with major cash-generating potential, it became a takeover target. A manufacturing group called Bangor-Punta approached our executives, major shareholders, and many of our dealers, offering to buy stock. Most of our dealers weren't impressed by the offers. But, given the way things were going at the company, some of the executives and shareholders were.

The board of directors and executive leaders held several heated meetings. To people not accustomed to such offers, selling seemed like a viable action. Some felt it would be in their best interest not to have all of their personal wealth tied to Harley-Davidson. My dad wanted to keep the company as it was. The idea of giving up control of Harley-Davidson to a company he was convinced could never truly understand us was something he did not agree with.

It became apparent that the only way to avoid the Bangor-Punta deal would be to find a buyer capable of understanding and perpetuating our business—cash-rich enough to make that happen. So we looked for a white knight and found one in the form of a major conglomerate. American Machine and Foundry, known to the world as AMF, made everything from food- and tobacco-processing machinery to boats and bowling equipment. We figured that, with AMF's reputation for leisure products, strong engineering emphasis, and deep pockets, Harley-Davidson would benefit. We would avoid a hostile takeover and remain intact. The acquisition was completed in January 1969.

AMF soon made its presence known. I've always viewed our name on the fuel tanks as hallowed ground. But not long after the merger, I was informed that AMF's logo would also appear on our fuel tanks, directly to the left of our name. I was stunned. Didn't AMF realize that the words "Harley-Davidson" evoked positive reactions and feelings? What did AMF evoke?

It hit me that the new corporate ownership would soon have an impact on our product planning and development. AMF wanted Harley-Davidson to

become the next high-volume producer. But we weren't built for that.

I tried my best to stay focused on design. I was able to retain my creative freedom. I was actually starting to feel good about some of the cool stuff we were working on, like the #1 logo.

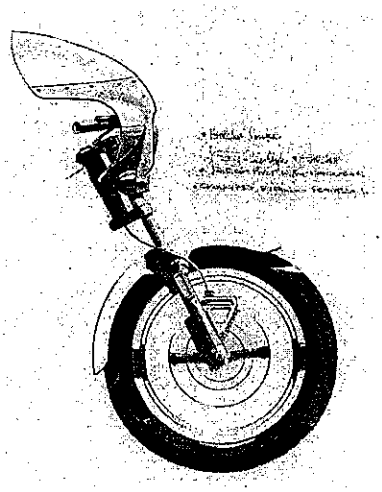
A great racer, Mert Lawwill, won the AMA #1 plate for Harley-Davidson dirt-track racing, and I wanted to mark the occasion with something extra special. The numbers on dirt track number plates have an aggressive angle to them. I designed a logo that incorporated a large, angled number one. I also wanted a sense of Americana, so I included a hint of the flag and our name across the bottom. It quickly became a well-known logo for us, and I'm very proud of it.

A new motorcycle of the AMF era, the Super Glide, wore that logo and is a design milestone. We married a Sportster fork and front-wheel assembly to our FL—or touring—chassis and gave it a dramatic red, white, and blue paint scheme. But what was radical was the tail section, nicknamed the "boat tail." It was bullet-shaped, with a recessed tail lamp.

Probably because the Super Glide looked so different, it became the subject of a great deal of debate and wasn't a big seller. But this model was important, because it established us as a custom manufacturer. It was the seed of a new family of custom motorcycles, the popular FX series.

Fortunately for me and everyone else who rides our bikes, I gained a new colleague around this time—Louie Netz, a talented young designer who joined the company in 1974 and became my partner and friend. He's a true motorcycle enthusiast, excellent designer, and company leader.

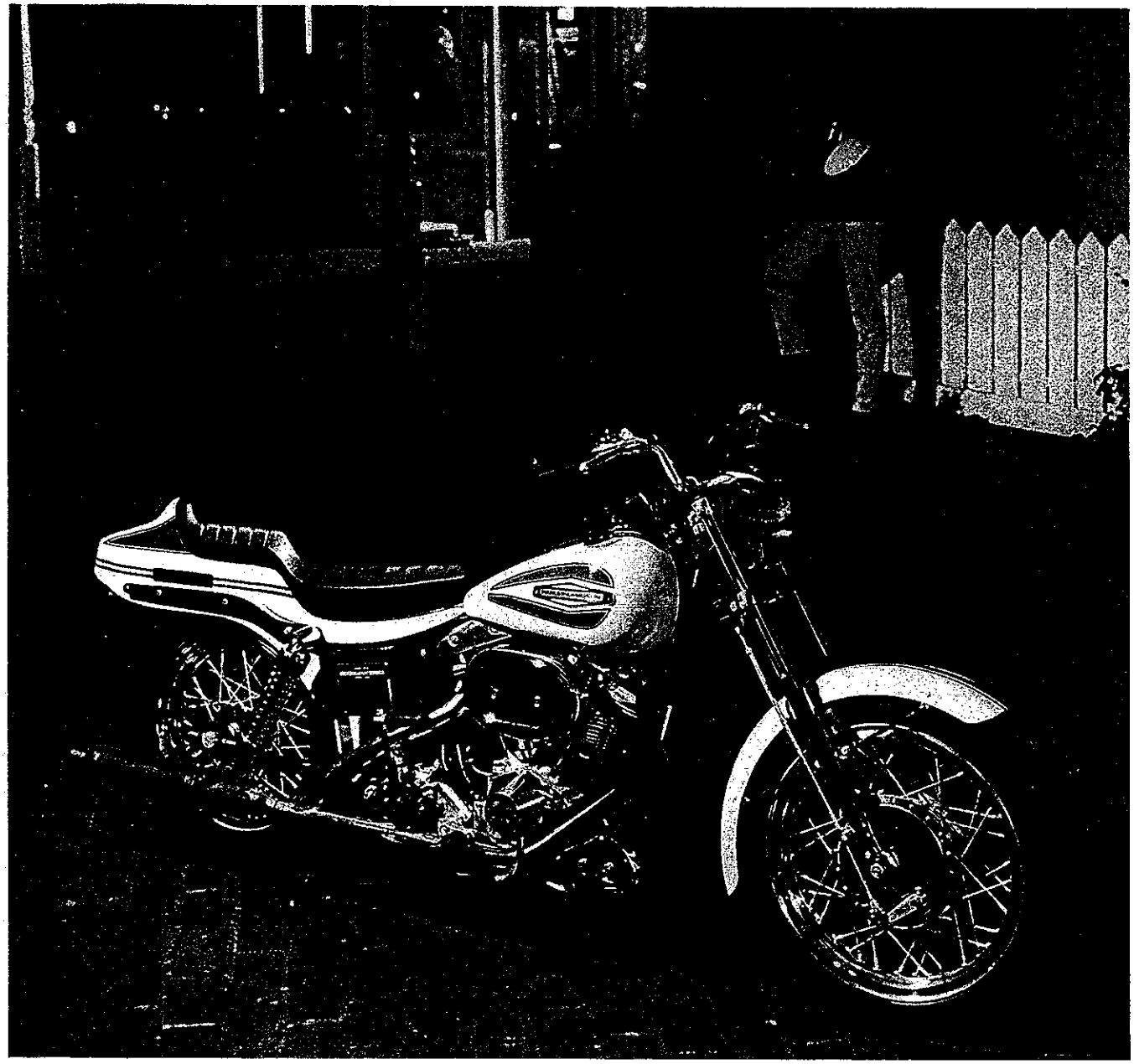
Our next successful iteration in the FX family was the 1977 Low Rider. A classic roll-type fender replaced the boat tail of 1971. Lowering the seat so it stood only 27 inches from the ground gave it a custom look. We used drag-style handlebars and a black treatment on the cylinders and heads, and we polished the outer fin edges for contrast. The outer engine covers, the tank, and the fenders were painted silver. The logo's red lettering was inspired by an early style dating back to our 1917 race bikes. The tank was topped with a unique speedometer/tachometer console. We were enthusiastic about what we'd created, but unsure whether it would stand up to the scrutiny of riders at Daytona.



This Willie G. drawing of a wheel and front fairing from the late sixties is a design concept sketch.

Far left: The Harley-Davidson #1 logo, designed by Willie G., was among the most popular in Motor Company history.

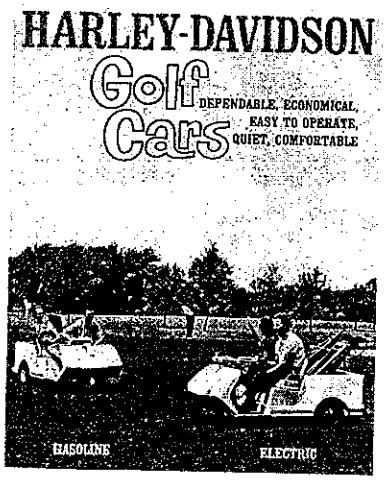
In March 1977, Louie and I picked up two Low Riders at Harley-Davidson's motorcycle assembly facility in York, Pennsylvania—a retrofitted AMF facility—and hit the road. We could tell by the way riders on the highway were reacting to the bikes' low seat height, drag bars, and overall look that we were in for favorable reviews when we hit Daytona. We were right. The stares, thumbs-ups, and enthusiastic



The Super Glide, pictured in this seventies advertisement, was later nicknamed the "Night Train," after a popular song at the time.

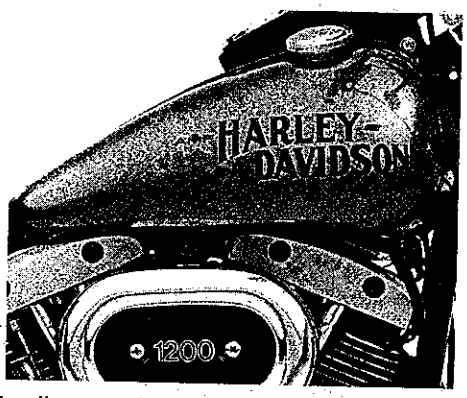
comments seemed contagious. When it became apparent that everyone thought the bikes were one-offs rather than factory-built, we knew we were on to something. We didn't need focus groups or surveys. Positive reaction from our customers told us what we needed to know.

The dealer launch of the Low Rider was a hit right out of the gate—just when we and our dealers needed one. At the time, showroom traffic was down, as low-priced Japanese motorcycles were winning more new customers than we were. Our dealers were happy to see a great-looking motorcycle.



But the Low Rider wasn't the only new model introduced in 1977. Our highly modified—and, ultimately, controversial—Sportster, the XLCR Café Racer, was announced that year. The Café Racer was built to make a distinct visual statement. My partner in the prototype process was Jim Haubert, an excellent fabricator who previously worked in our racing department. We designed the motorcycle as a racer-looking vehicle. We modified the frame, created a new fuel tank, new tail section and seat, and a quarter fairing up front. We took it further with cast wheels, which were new at the time, and a unique all-black exhaust system. It was the first blacked-out motorcycle and had a sinister XR road-racer look.

After all the excitement and effort, the XLCR model did not generate major sales. One school of thought has it that timing was off, since we delayed production for a full year in order to get quality in line. When people get emotionally wrapped up in the visuals and the excitement of a product, they want to buy it right now. The delay killed the buzz, and people lost interest. But the XLCR eventually connected with them, as evidenced by the demand and prices in today's collector market. Without question, it's one of my favorites, and to this day I have retained serial number one. This experience taught us some valuable lessons.

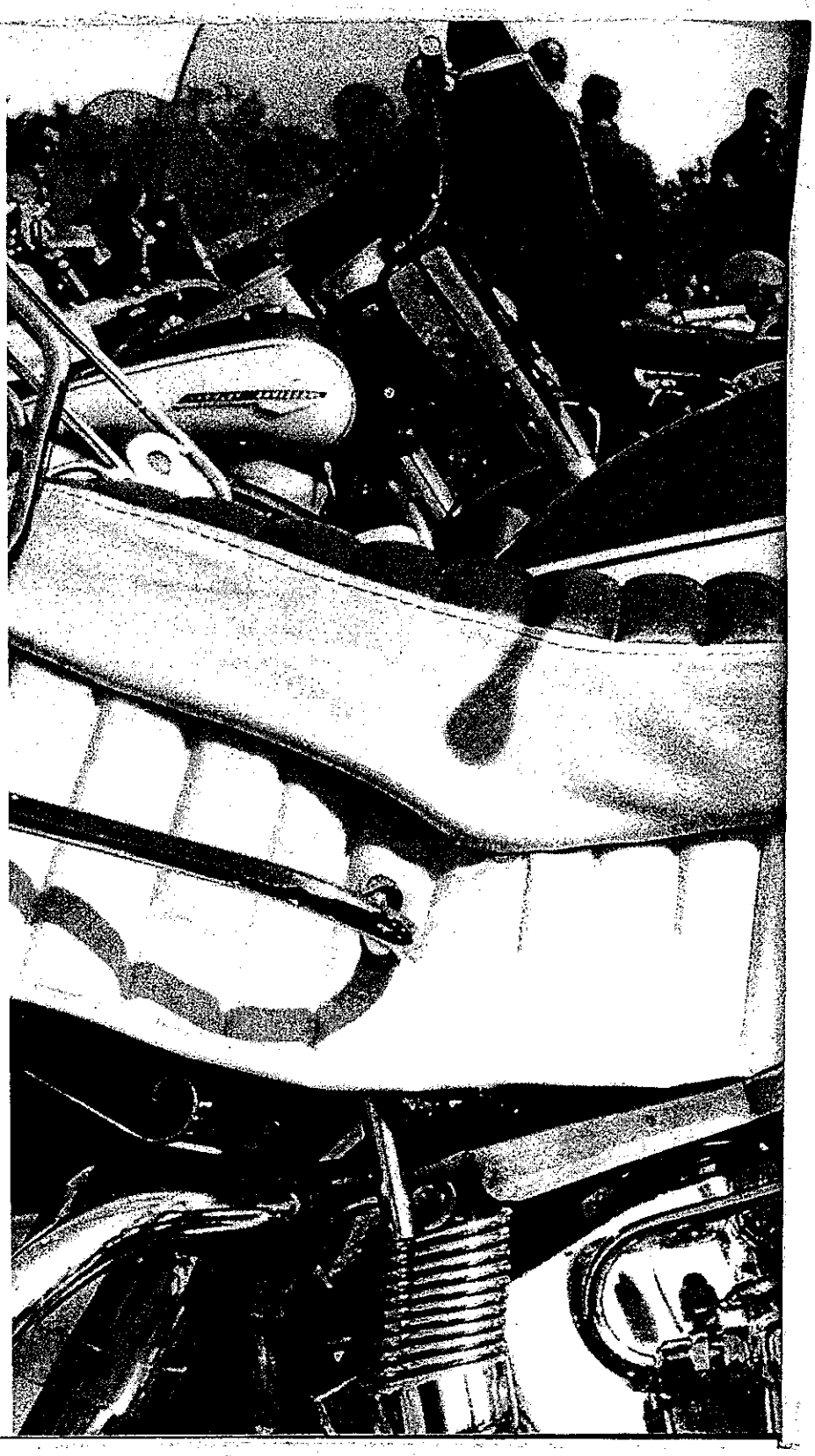


Shortly after AMF assumed control of Harley-Davidson, their corporate logo appeared on the gas tank. Pictured here is a tank from the 1977 Low Rider model.

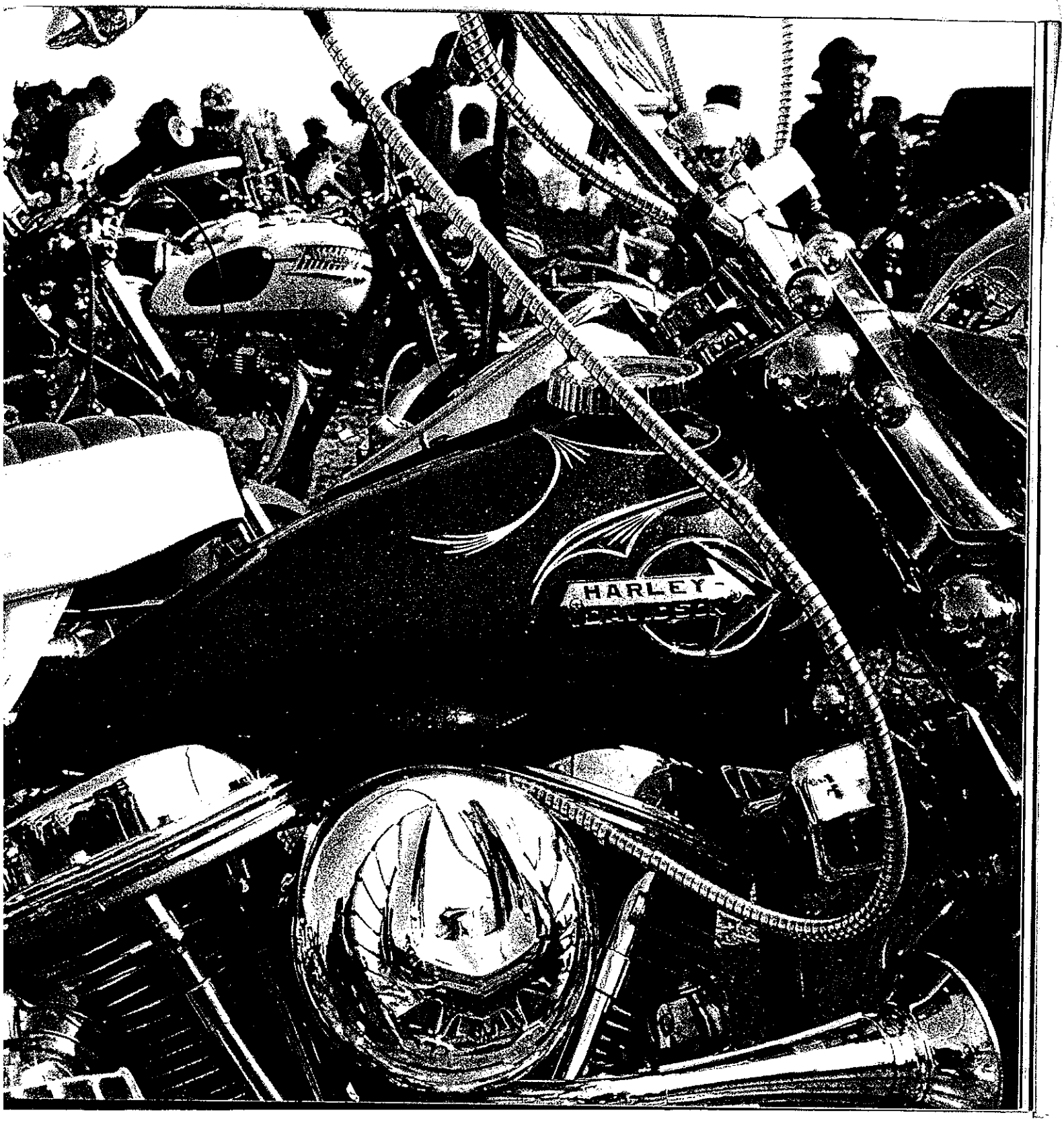
Far left: Harley-Davidson introduced a line of golf cars in the early sixties. By the end of the decade, under AMF, Harley-Davidson accounted for a third of the U.S. golf car business.

1966 | *Brucie, his CH, and Crazy Charlie, McHenry, Illinois.*

1966 | *From Lindsey's room, Louisville.*



1965 | *Field Meet, Long Island, New York.*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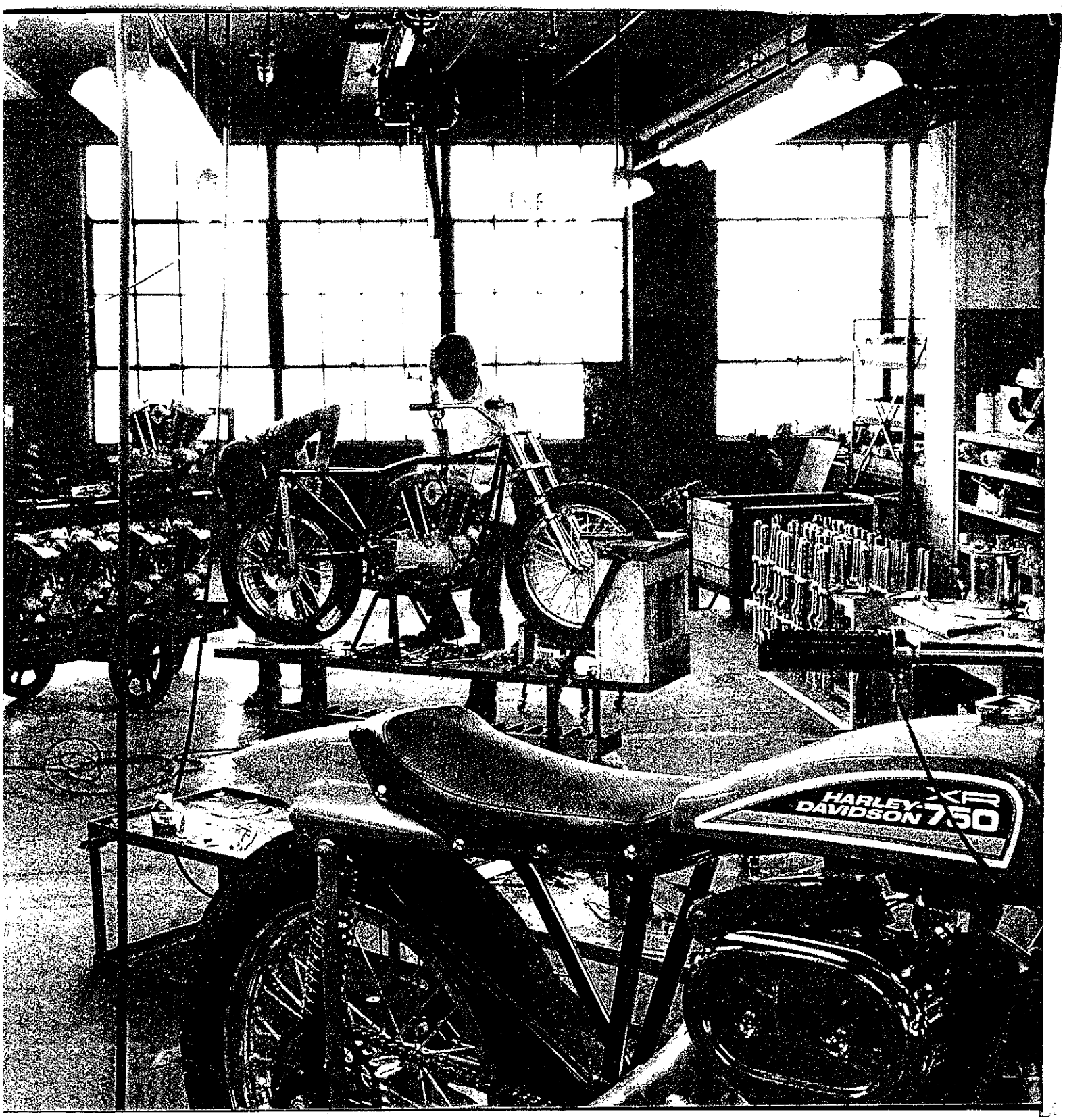
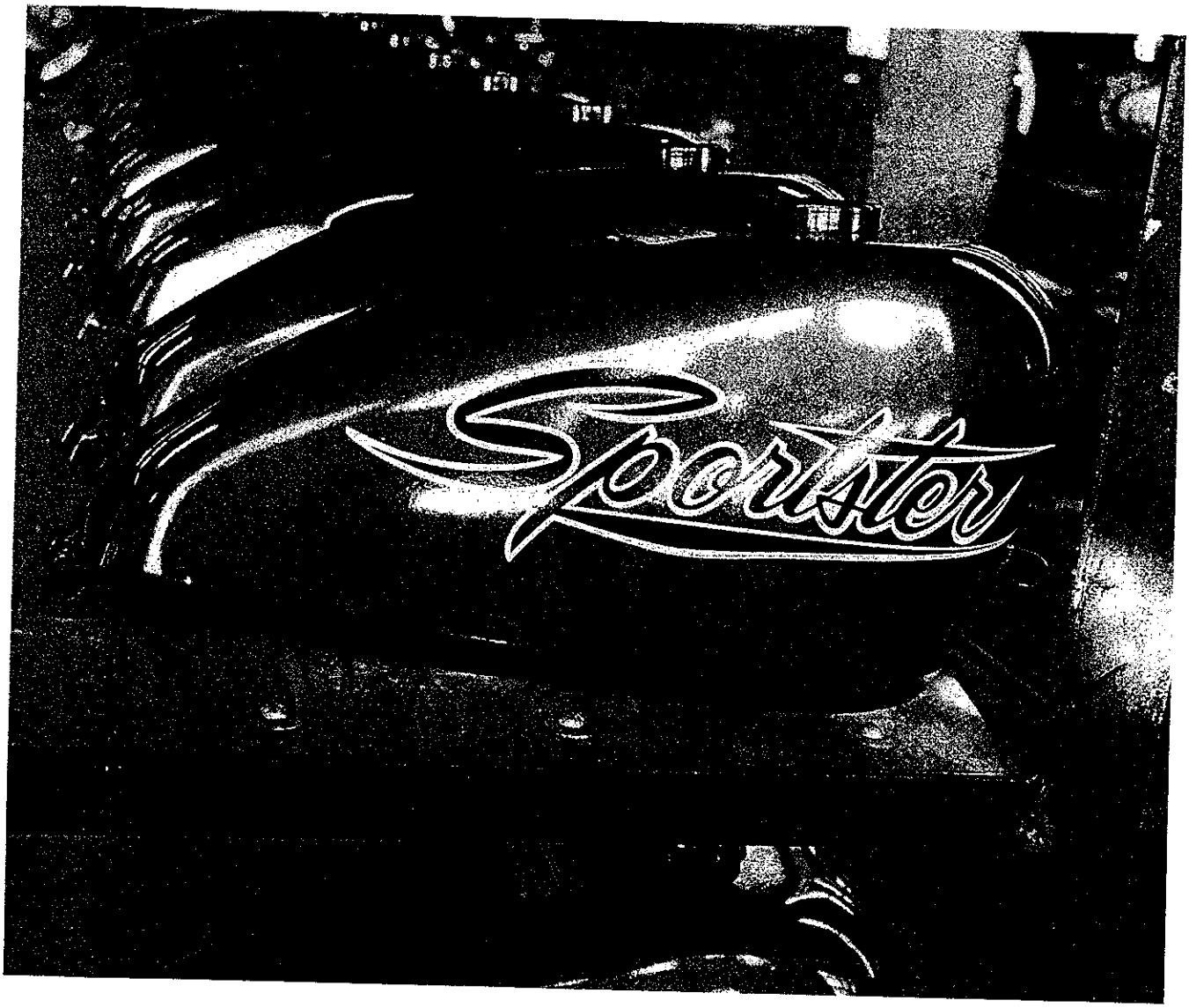
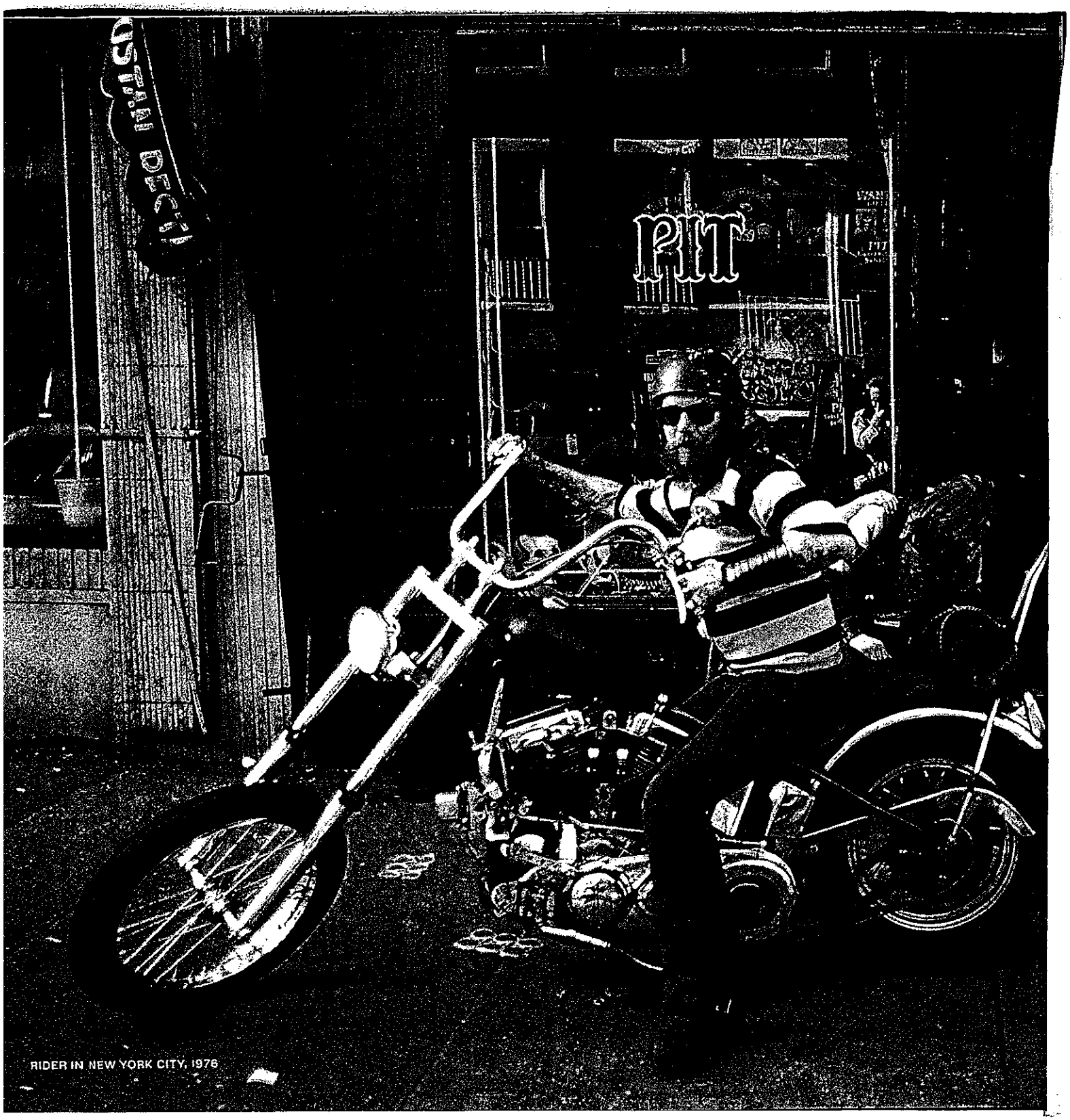

HARLEY-DAVIDSON
XR
750



1970 | *These racing models were assembled and tuned in the XR750 racing shop.*

1970 | *The famous Sportster script and peanut tank.*



RIDER IN NEW YORK CITY, 1976

1971

DARK DAYS REVISITED

1983

I LEARNED AT A VERY YOUNG AGE

HOW IMPORTANT IT IS

TO UNDERSTAND THE ATTACHMENT

SO MANY PEOPLE HAVE TO

OUR COMPANY

AND TO

OUR NAME.

THE WORLD IS FILLED WITH FAMILY NAMES, EACH SPECIAL IN its own way. Simple names like "Harley" and "Davidson," when associated with our products and our brand, have become more than stand-alone family names; they carry an emotional weight for millions of people.

"Harley-Davidson" is located on the most prominent part of the motorcycle—the tank. It's embroidered across jackets and displayed on many of our other MotorClothes products. Worn as a tattoo, it demonstrates a personal level of loyalty.

Our brand conjures the experiences of riding—rallies, camaraderie, and freedom. Harley-Davidson employees are involved with the sport, which means connecting with our customers. We attend rallies and special events as riders and enthusiasts. I firmly believe that to fully understand motorcycle design, you have to be immersed in the sport. It's one of the reasons we're successful.

The four founders subscribed to this same philosophy, though it hadn't been formalized. They knew the value in something as simple as a handshake and a road story or two shared with a customer. Throughout the history of the company, our management people have enjoyed the sport. In back issues of *The Enthusiast*, the world's oldest, continuously published motorcycle publication, you will find lots of stories telling of management's fascination with riding over the years. Walter Davidson won some of those early endurance runs. And the second generation crossed the country on their motorcycles in their teens. My dad competed in the 1930 Jack Pine Enduro with William J. Harley riding alongside him. Somehow my dad's watch got damaged, which was serious since the event was a time-distance race. William J. gave his watch to my dad, who went on to win the event with 997 points over two days. From these stories and more like them, I understand it was a hands-on deal from the beginning.

My dad believed strongly in our dealer organization and the dealers' role in promoting and protecting the

William H. Davidson addresses dealers during the launch of the K Model in 1951.

Far right: A toddler gets a Willie G. welcome at a Harley Owners Group rally.

brand. As president, Dad always gave the keynote address at the dealer shows. He was good at it, probably because he enjoyed it. He was a dedicated man who recognized dealers as crucial parts of the whole.

Harley-Davidson products don't come from some invisible, faceless corporation. Our visibility as passionate participants in our sport, whether we're Motor Company employees, dealers, or dealer employees, sends a clear message: we ride and we do it because we love it, and we're enthused by the pride that comes from all the people who support our brand. I'm very grateful to my family, especially Nancy, for being so supportive throughout these weekends when we're away from home. We're together in this; it's been a major part of our lives. Our children have gotten more and more active at events, which is terrific, because it illustrates the continuation of a family tradition.

I've had many moving conversations with riders. Lots of people have come up to me and said that their experience with Harley-Davidson has changed their lives. They're talking about a positive change that's a result of being involved in activities—riding their bikes on memorable trips and meeting people, often lifelong friends and sometimes significant others.

When a Harley-Davidson rider has a chance to talk to a "factory person"—one of our engineers, H.O.G. staff, or employees from the assembly line—they make a powerful connection. The bond between a rider and his motorcycle becomes stronger when there's a human face behind the machine. On our end, it helps to learn more about the customers' expectations. It's why Harley-Davidson places such a premium on mixing it up with our customers.

I learned at a very early age how important it is to understand the attachment so many people have to our company and to our name. I'm fortunate to be a direct

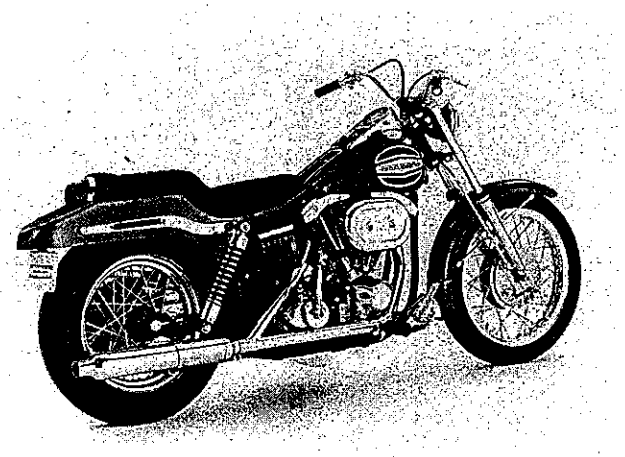
descendant of one of the founders of this company I love so much. I've never taken the brand lightly, nor do my wife, my sons, or my daughter. We have tremendous respect for our heritage, and we hold it very close to our hearts.

One of my contributions to protecting the brand is through design. My artistic interests in Harley-

Davidson motorcycles and custom-vehicle design are long-standing. I can't say enough about my influences in high school, when I was drawn to custom vehicles and spent a lot of time with the motorcycle and hot-rod crowd. In 1963, I joined Harley-Davidson as a designer and took note of the product lineup. There were dressed-out baggers, which had their own beauty. And there was the Sportster, a muscle bike from the late fifties and early sixties. Though these were significant models, there was a missing piece. Through involvement in our sport and closeness to our customers, I realized riders had a growing desire for a factory custom.

As detailed earlier, I took it upon myself to put together a prototype that was extreme for its time. Other than the rear fender section, it was a marriage of existing parts. To emphasize the custom look that was taking hold among riders, I put a Sportster front fork and front-wheel assembly on the Big Twin chassis, which emphasized the Big Twin engine and rear wheel. To further distinguish the back of the vehicle, I created what I call a "racerly" boat tail, with a streamlined look. I recessed a Chevrolet taillight in the boat tail. We utilized a dramatic red, white, and blue paint scheme and the new #1 logo on top of the fuel tank.

The first photos of this FX were planted in *Motorcycle Sport Book* magazine. We purposely didn't indicate that it was a Harley-Davidson prototype. We hoped to get a response that would tell us whether we had touched a nerve in the custom market. As it turned out, there wasn't enough to suggest that we should create an original-equipment motorcycle like this. But company management believed in the prototype and was willing to fly with the model as a test. So we built it as a production bike.

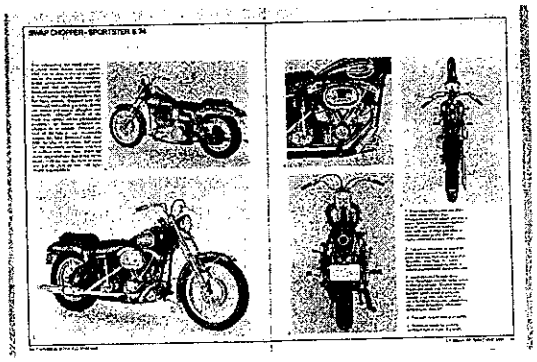


A prototype of the 1971 Super Glide is shown here with a dark green color scheme. The final model was produced with a red, white, and blue paint job.

Far left: This May 1972 cover of The Enthusiast *promotes "The Great Stars and Handlebars Road Racer Revival," which was designed to stimulate sales.*

The production motorcycle was featured on the cover of *Cycle* magazine with the editor standing on the seat. I named this the Super Glide FX—for "Factory Experimental." The FX was intended to be in the line for a long time.

In all honesty, the Super Glide was not a great commercial success. I believe the tail section was probably too extreme. But there was value in creating this model. It was a seed that eventually blossomed into an entire line of custom FX motorcycles, and the current collector market has shown an interest in the Super Glide. Today the word "custom" is essential to our overall model lineup. Creating that motorcycle will always be a bright light in my past.



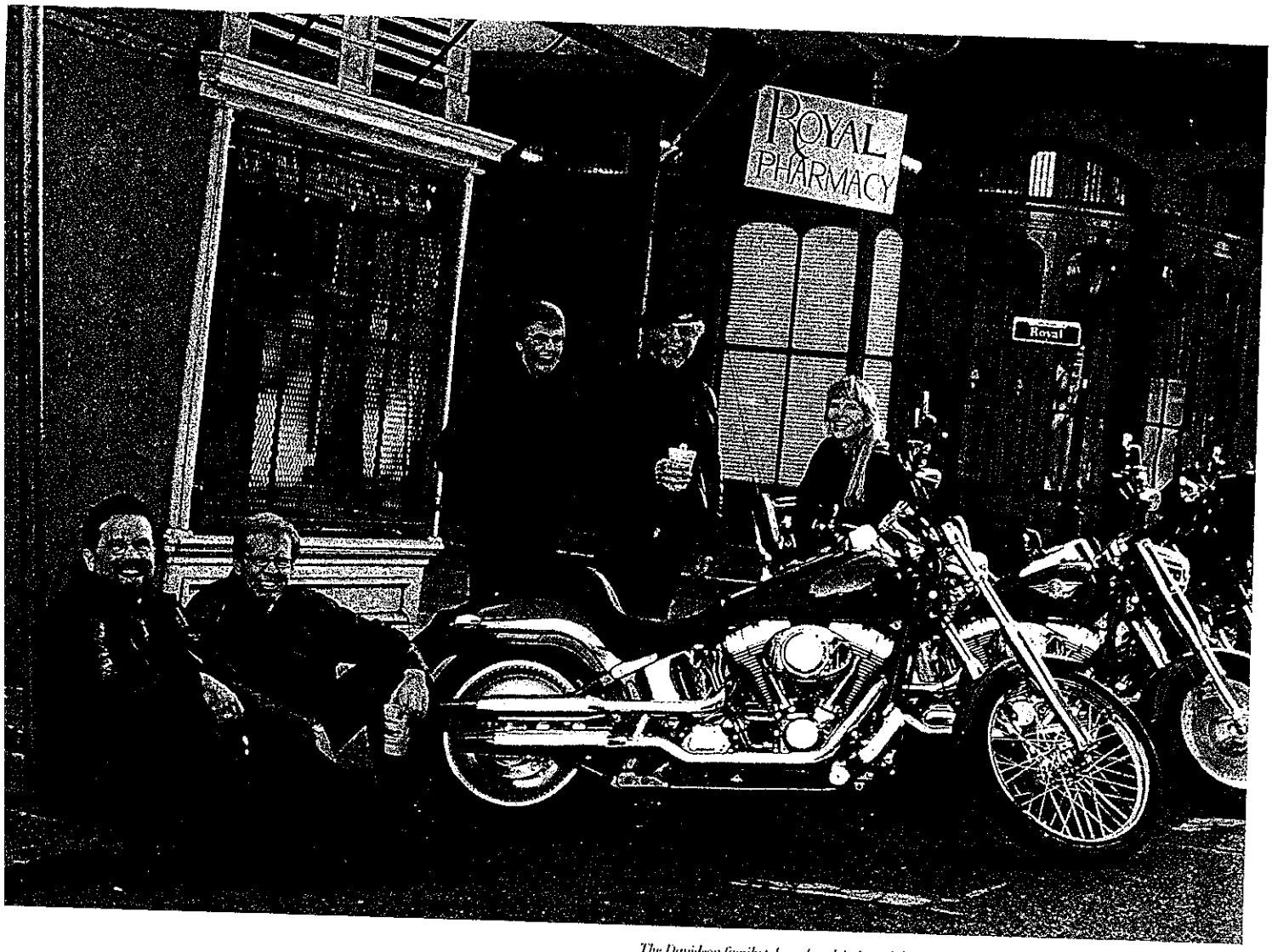
Willie G. worked with editor Bob Greene to plant these prototype photos of the Super Glide in the 1969 fourth annual edition of Motorcycle Sport Book.

These early days brought many memorable changes. When I joined the company, I did so as Bill Davidson. But as can happen when two members of a family with the same name work in the same location, there was confusion between my father, William H. Davidson, and me, William G. Davidson, both known as Bill. Just as it is today, our work environment was casual and friendly. Eventually, people started calling me Willie G., which helped to reduce confusion. Like most nicknames, it wasn't planned, but it fits: I'm an informal type of person.

Customers were first introduced to my nickname in 1976, when our marketing department created an ad to support the launch of the XLCR Café Racer. Because the XLCR was so unique, marketing focused on differentiating our motorcycle design process. This model was created by a "skunkworks"—a creative group located off campus. The guy we worked with was Jim Haubert. Louie Netz also came on board around this time. The ad agency came up with the idea to feature the non-committee design, using "Willie G." to symbolize it. The design was a dream of mine. Working with Jim and Louie, we put the bike together. And that motorcycle was something people liked to talk about. Today the Café Racer is a highly collectible vehicle with an enthusiastic cult following.

At rallies or events after the ad ran, more and more people approached me to talk, calling me Willie G. Our sport has always attracted fun people from all walks of life, and of course they ride great motorcycles. I go to the rallies to be part of the happening. If you do this for a number of years, as Nancy and I have, you make lots of friends who are riders. Going to these events is our chance to see these people. The autograph thing is a by-product, and though it can sometimes get a little intense, I'm not the type of person who's going to say no if I can help it. I'm happy to sign my name. It's really a two-way street—I enjoy it, and the riders seem to appreciate it.

Over the years, I've seen some things that amazed me. I've seen my likeness airbrushed on a fairing, and—believe it or not—tattooed on a person's leg. I once signed a man's arm, and he had my signature tattooed. A lot of riders are aware that I've been in the design game for a long time, but I think the reason they request my autograph goes beyond this. It has to do with having the family name on the tank.



The Davidson family takes a break in New Orleans (l. to r): Bill, Michael, Nancy, Willie G., and Karen.

1971 | FX SUPER GLIDE®

The Super Glide was the first Harley-Davidson motorcycle created for the custom market. We had big touring bikes and the nimble Sportster, but we didn't have a custom. I knew that riders wanted unique variations of our Big Twins so we gave them the Super Glide model.

It's extreme, and it was meant to be. The goal was to achieve a dragster look: big rear tire and big engine with a lighter, smaller-looking front fork wheel assembly. To get that look, we used the FL chassis from the fork neck rearward and the engine from our Big Twin. The lighter front end—front fork, wheel, and headlight—came from our Sportster.

To add to the dramatic presentation, I gave the seat, taillight, and rear section a strong, long appearance. The tank graphic is an extended version of the Bar & Shield. On top of the tank, there's a red, white, and blue logo of the number '1.' I designed this logo initially for a poster that celebrated a winning AMA championship and it became the inspiration for the bike's paint scheme.

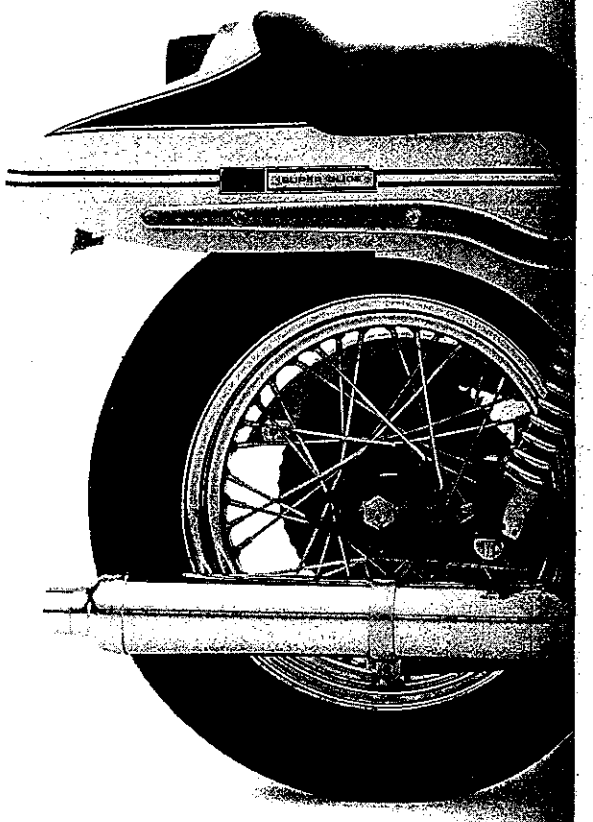
The FX Super Glide was considered very extreme for its time, but it has become a significant part of our identity. The Super Glide would be the beginning of many FX custom Harley-Davidson motorcycles to come.

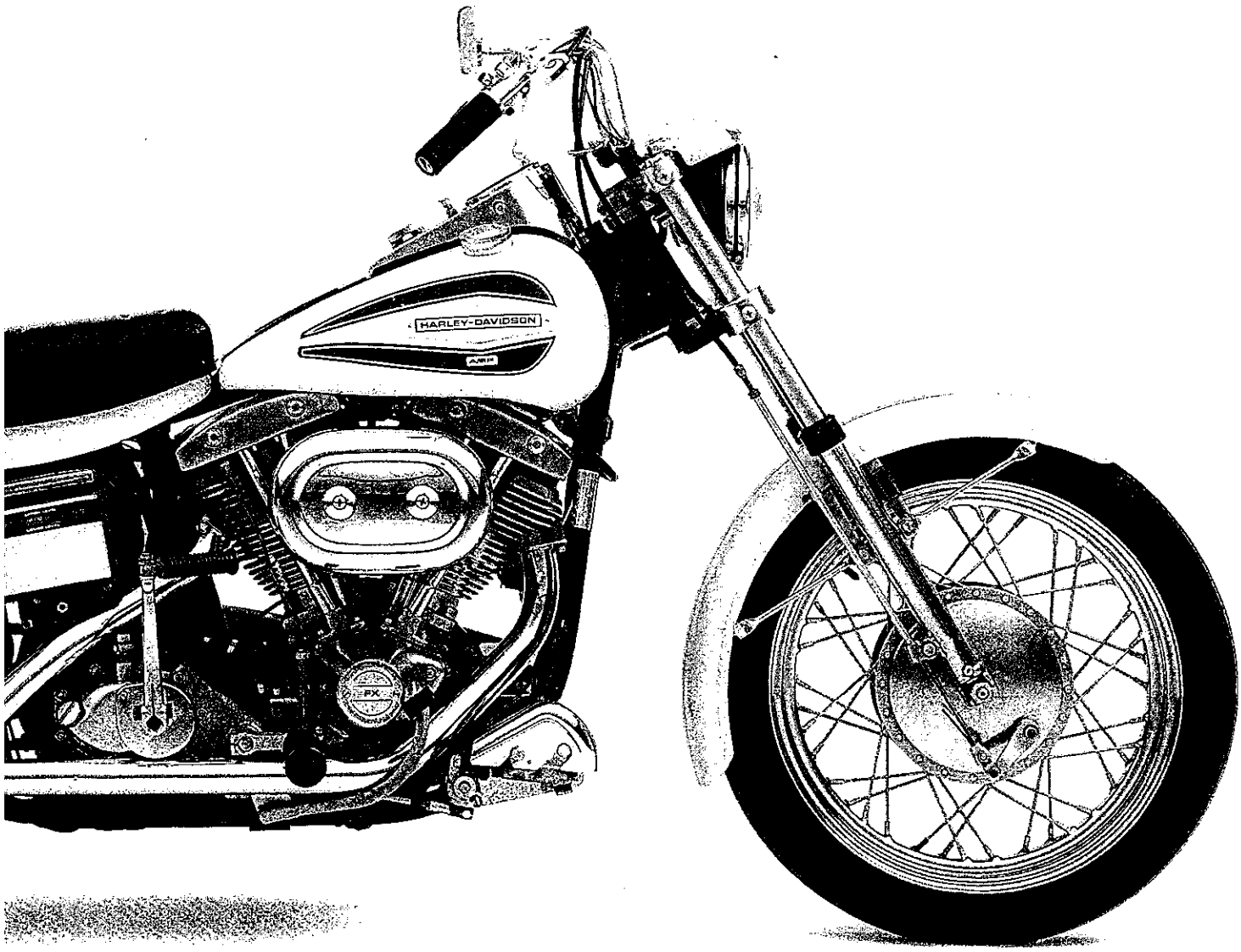
POWERTRAIN

Engine: 45-degree, overhead-valve V-Twin
Displacement: 74 cubic inches
Transmission: Four-speed, constant mesh, foot-shift
Primary drive: Duplex chain
Secondary drive: Chain
Brakes: Drum and shoe (front and rear)
Ignition: Battery and coil

CHASSIS

Frame: Steel, double downtube, cradle type
Suspension: Telescopic fork (front); swingarm with exposed hydraulic shocks (rear)
Wheelbase: 62.75 inches
Gas tank: 3.5 gallons
Oil: 1 gallon
Tires: 19 x 16 inches (front and rear)
Colors: Sparkling America (red, white, and blue)




HARLEY-DAVIDSON
FX

1972 | XR750

The all-alloy XR750 is a legendary racer that dominates the dirt track to this day. Dirt-track racing, especially on the one-mile track, is second to none for excitement. Great dirt-track riders like the Springsteens and the Parkers of the world are my heroes. Their racing fame started with this model, which has lasted through many iterations.

The XR750's performance originates in the alloy engine, developed under Dick O'Brien. Dick was the head of our racing department then. The advances he made in the engine design were significant. The lighter weight and better cooling of the aluminum alloy improved the engine's performance. The design of the combustion chamber and the valve angles also increased horsepower. While we have changed the XR750 somewhat over time, we've had thirty years of great racing from this motor.

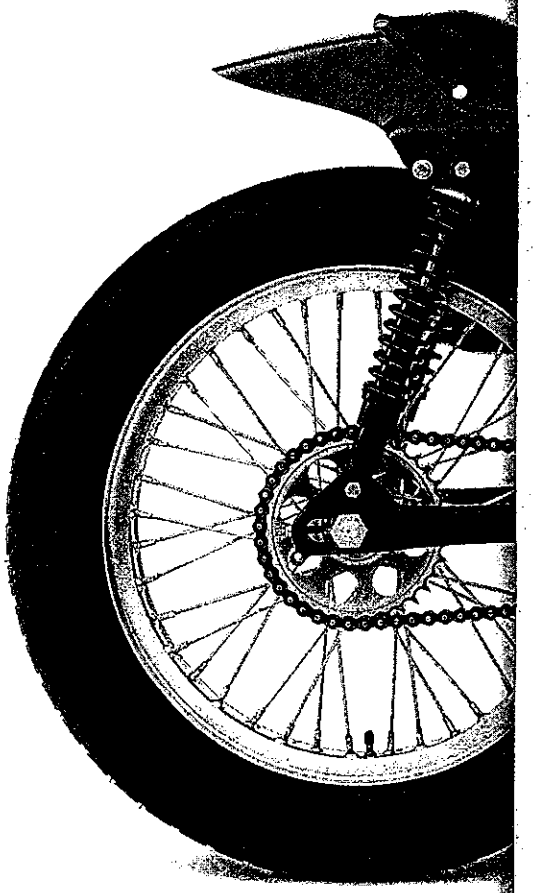
The XR750 is a functional motorcycle—all business. You can compare its beauty to that of an 8-Valve. You see its performance characteristics in its minimal fuel tank, its very short fender, two carburetors with pronounced air cleaners, and its unique cylinders, heads, and rocker covers.

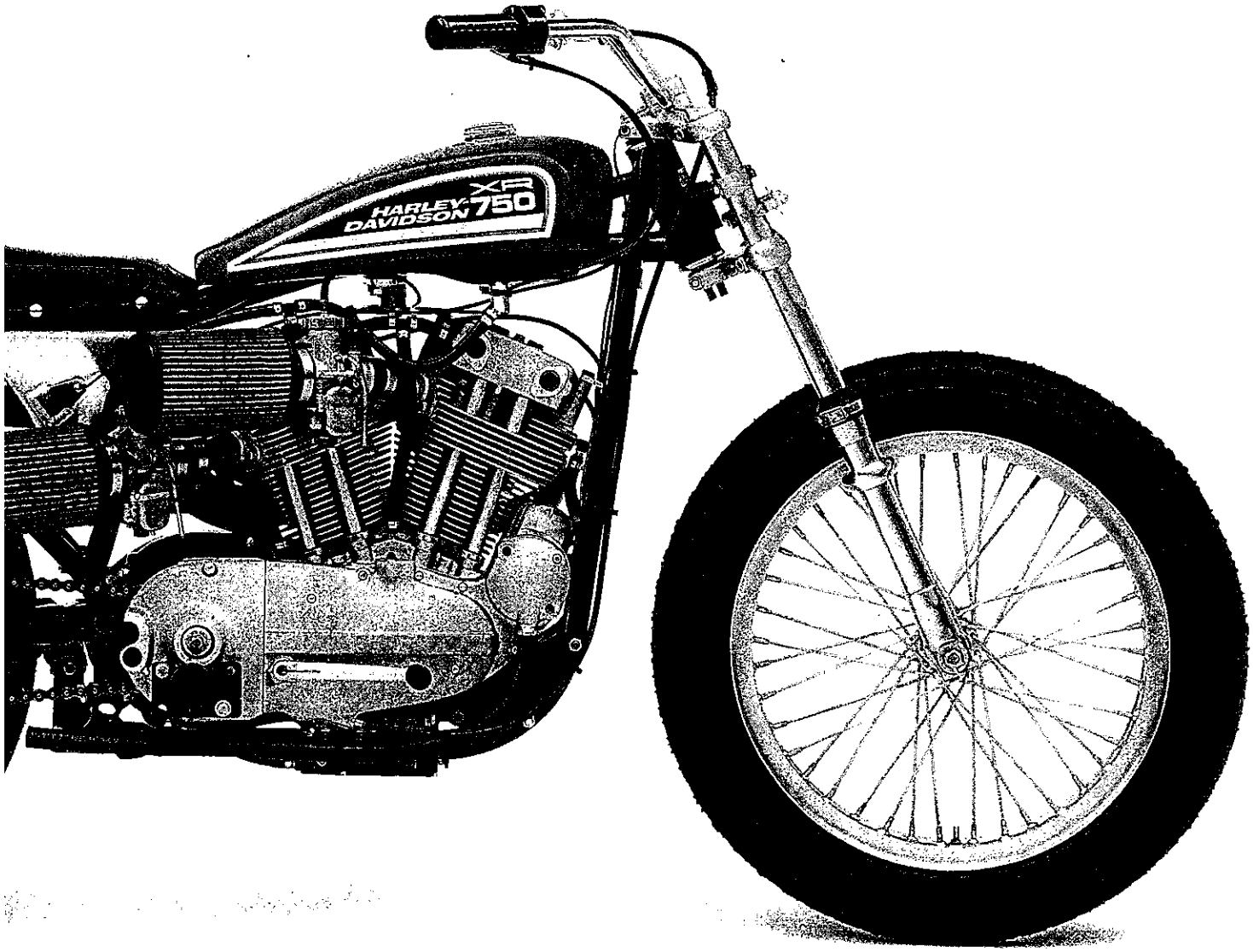
The relationship between the 750 and the Sportster shows up in the name: "X" for Sportster and "R" for racing. Like the Sportster, the XR750 combines power, weight, performance, and handling, but in a more extreme way.

On the XR750, I designed the tank using the classic Harley-Davidson orange and black with white trim. The character of this color scheme is reflected in today's 883R.

POWERTRAIN
Engine: 45-degree, overhead-valve V-Twin
Displacement: 750 cubic inches
Transmission: Four-speed, foot-shift
Primary drive: Triple-row chain
Secondary drive: Chain
Brakes: None
Ignition: Magneto

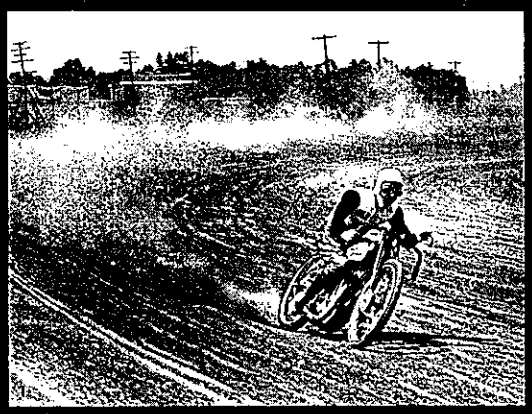
CHASSIS
Frame: Double downtube
Suspension: Telescopic forks (front); hydraulic shocks (rear)
Wheelbase: 56.25 inches
Weight: 295 pounds
Gas tank: 2.5 gallons
Oil: 3 quarts
Tires: 19 x 4 inches (front and rear)
Color: Jet Fire Orange

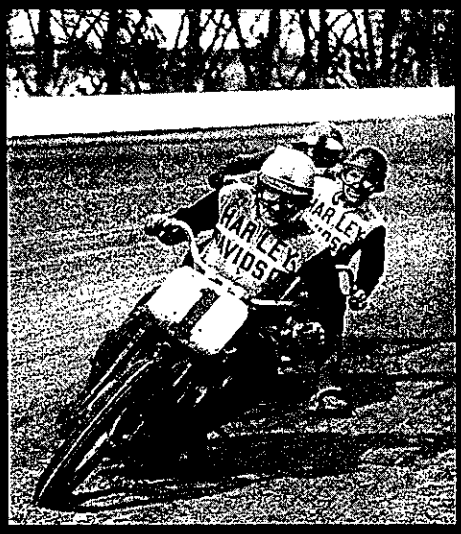


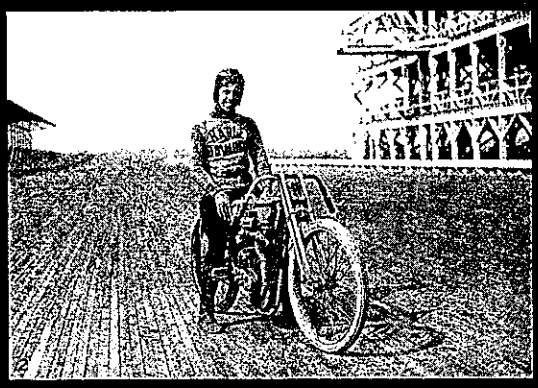

HARLEY-DAVIDSON
XR
750

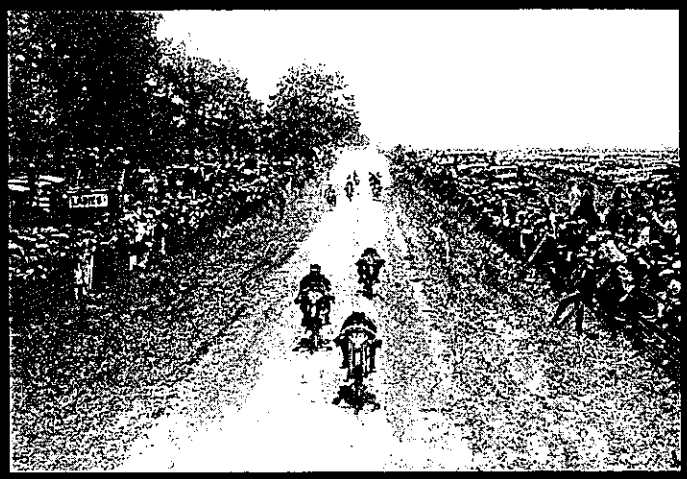
Racing

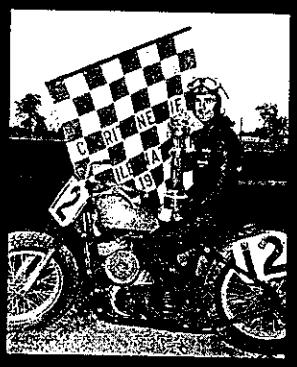
Racing motorcycles are stripped down to the bare essentials, and this equates to beautiful sculpture in my mind. Observing them in hot competition is sheer excitement. The sights, sounds, and smells are all part of the emotional experience of being at the races.

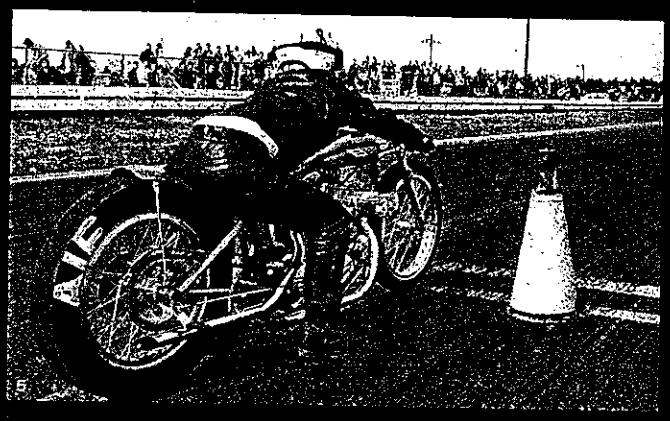










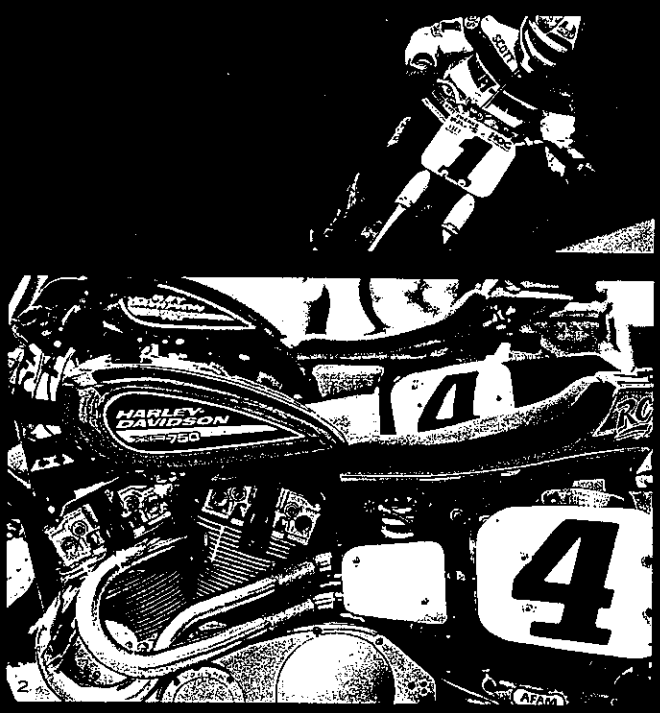


OPPOSITE PAGE
(1) Joe Petrali on the dirt track in 1937 (2) Portait on the board track (3) A 1936 portrait of Joe Petrali (4) A 1948 dirt track race (5) An early-twenties race.

THIS PAGE
(1) Sliding on the turn in 1961 (2) Joe Leonard airborne on the dirt track in 1956 (3) Roger Reiman in 1961 (4) Carroll Resweber in 1957 (5) A drag strip in 1968.

Racing (cont'd)

There are many faces of racing today—road tracks, dirt tracks, and drag strips. My family and I have spent endless weekends enjoying this aspect of our sport, and the participants are truly heroes to me. Dirt track events are usually very close, tight races. Many times the final lap will have several riders approaching the finish line in a virtual dead heat.



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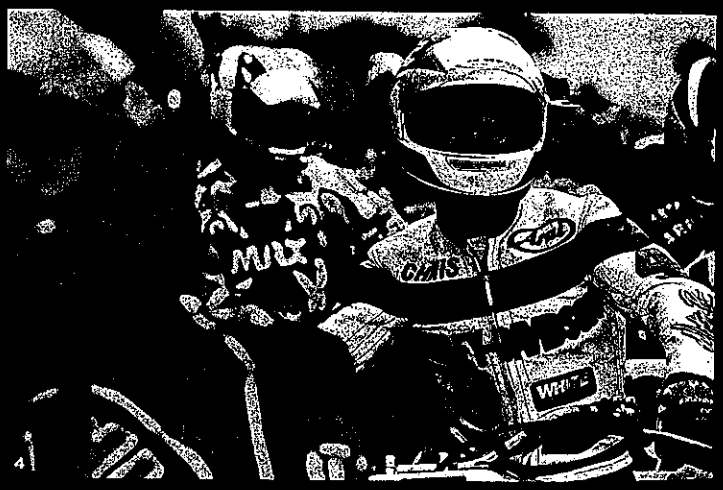

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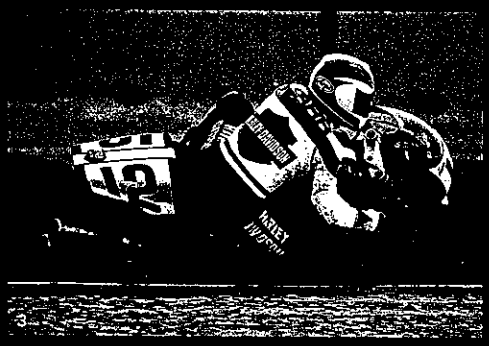

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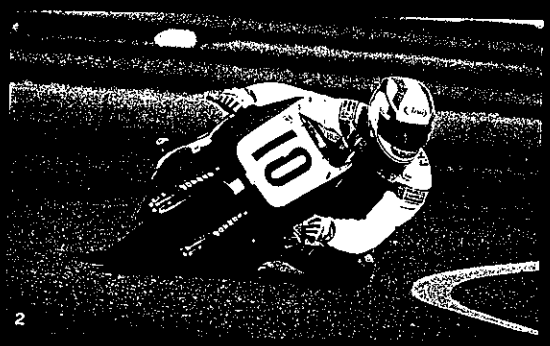

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OPPOSITE PAGE
(1) Scott Parker with the Number 1 plate (2) A pair of XRs at the track (3) Chris Carr on a VR1000 (4) Chris Carr at the starting line (5) Scott Parker leads the pack.

THIS PAGE
(1) Chris Carr heads to the finish line (2) Racer Chris Chandler leans into a turn (3) Former Harley-Davidson drag racer Lori Francis (4) G.T. Tonglet, rider of the Screamin' Eagle Vance & Hines NHRA pro-stock bike.

1977 | XLCR CAFÉ RACER

The term "café racer" originated in England. These motorcycles looked like road racers, but were street legal. In 1974, I had an idea to build a Sportster motorcycle in a racerly mode. The Sportster bore the closest resemblance to performance vehicles like our famous XR dirt track racer. Although the engines differ in many ways, they're still cousins. The Café Racer has that stripped-down, lean and mean look of the XR, especially in the tail section.

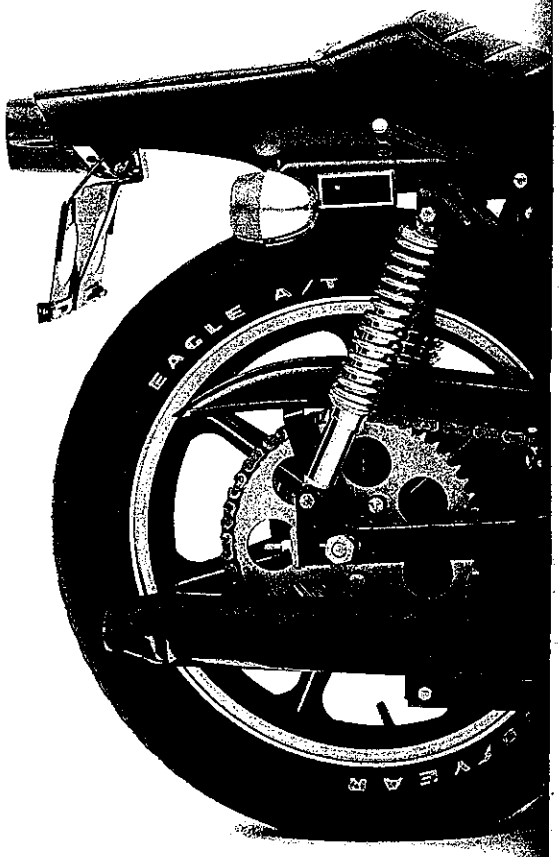
I'm always looking for dramatic ways to pull these bikes together by adding finishes that do not appear to be too flamboyant. The Café Racer is entirely blacked-out, with the simple, gold-toned Bar & Shield on the fuel tank. We played with different finishes of black. We used wrinkle black on the gear cover and flat black on the exhaust system. The air cleaner uses gloss black.

The Café Racer featured cast alloy wheels, which was a first for us. We continued with a very tight-fitting, minimal front fender and short, drag-style bars. A small quarter-fairing surrounds the headlight and includes a dash panel around the speedometer and tachometer.

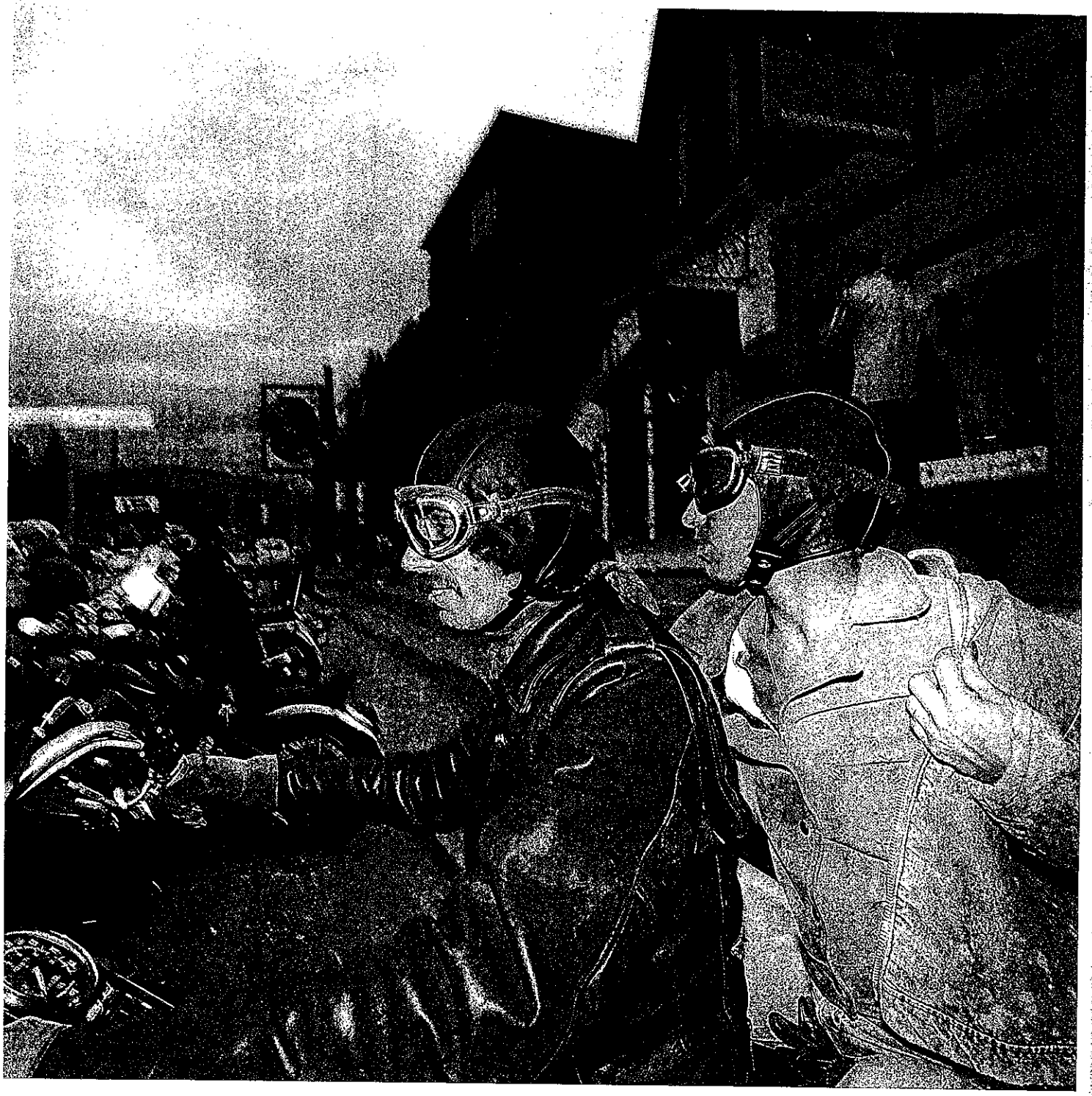
Though the style of the Café Racer was well received, I don't believe that the market was quite ready for it. However, the bike is now a highly collectible motorcycle with a strong cult following.

POWERTRAIN
Engine: 45-degree, overhead-valve V-Twin
Displacement: 61 cubic inches
Transmission: Four-speed, foot-shift
Primary drive: Triple-row chain
Secondary drive: Single-row chain
Brakes: Double-disc (front); single-disc (rear)
Ignition: Battery and coil

CHASSIS
Frame: Steel, double downtube
Suspension: Telescopic forks (front); box-selection swingarm and hydraulic shocks (rear)
Wheelbase: 58.5 inches
Gas tank: 3.75 gallons
Oil: 3 quarts
Tires: 19 x 18 inches (front and rear)
Color: Black on Black

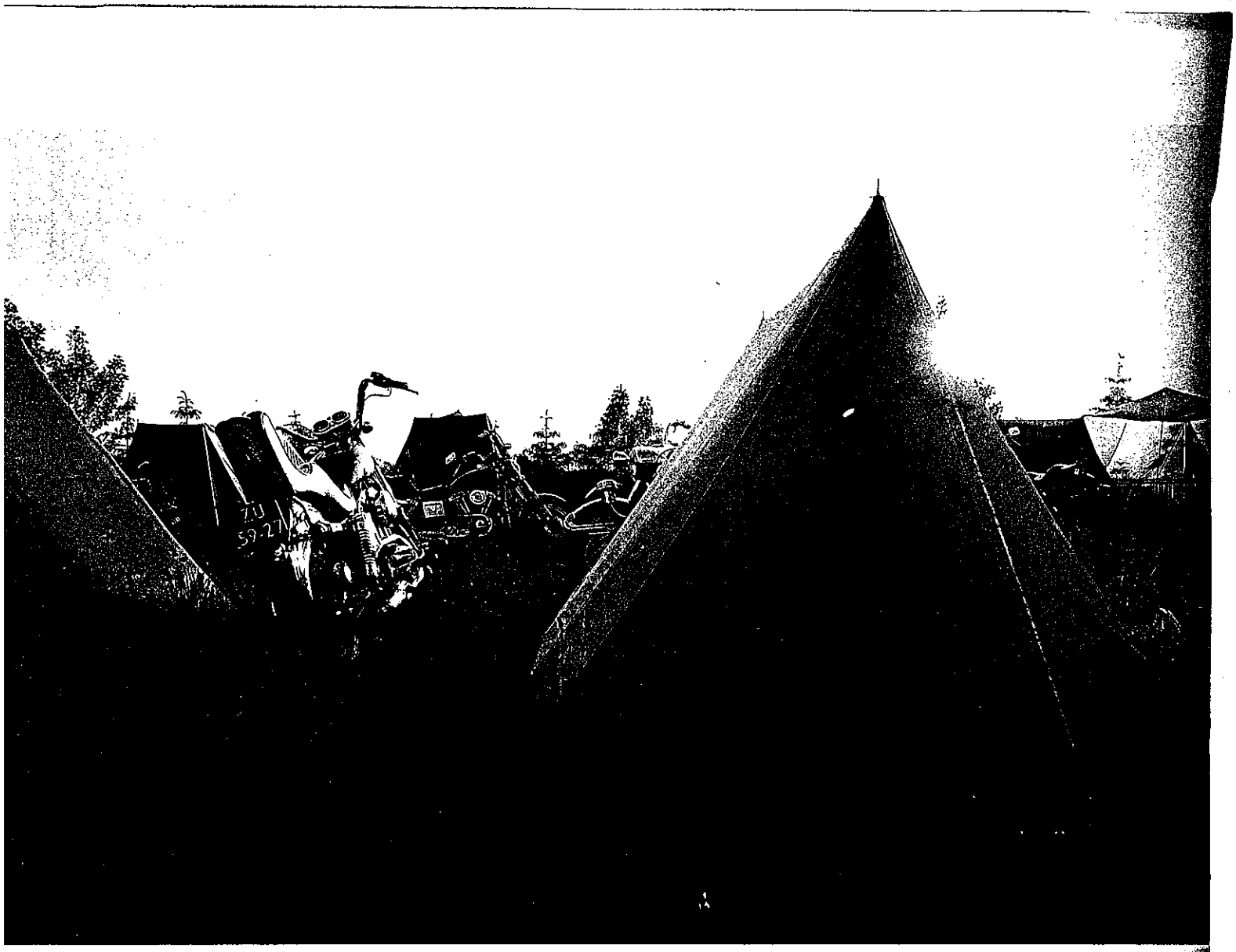


HARLEY-DAVIDSON
1000
GOODYEAR
EAGLE A/T

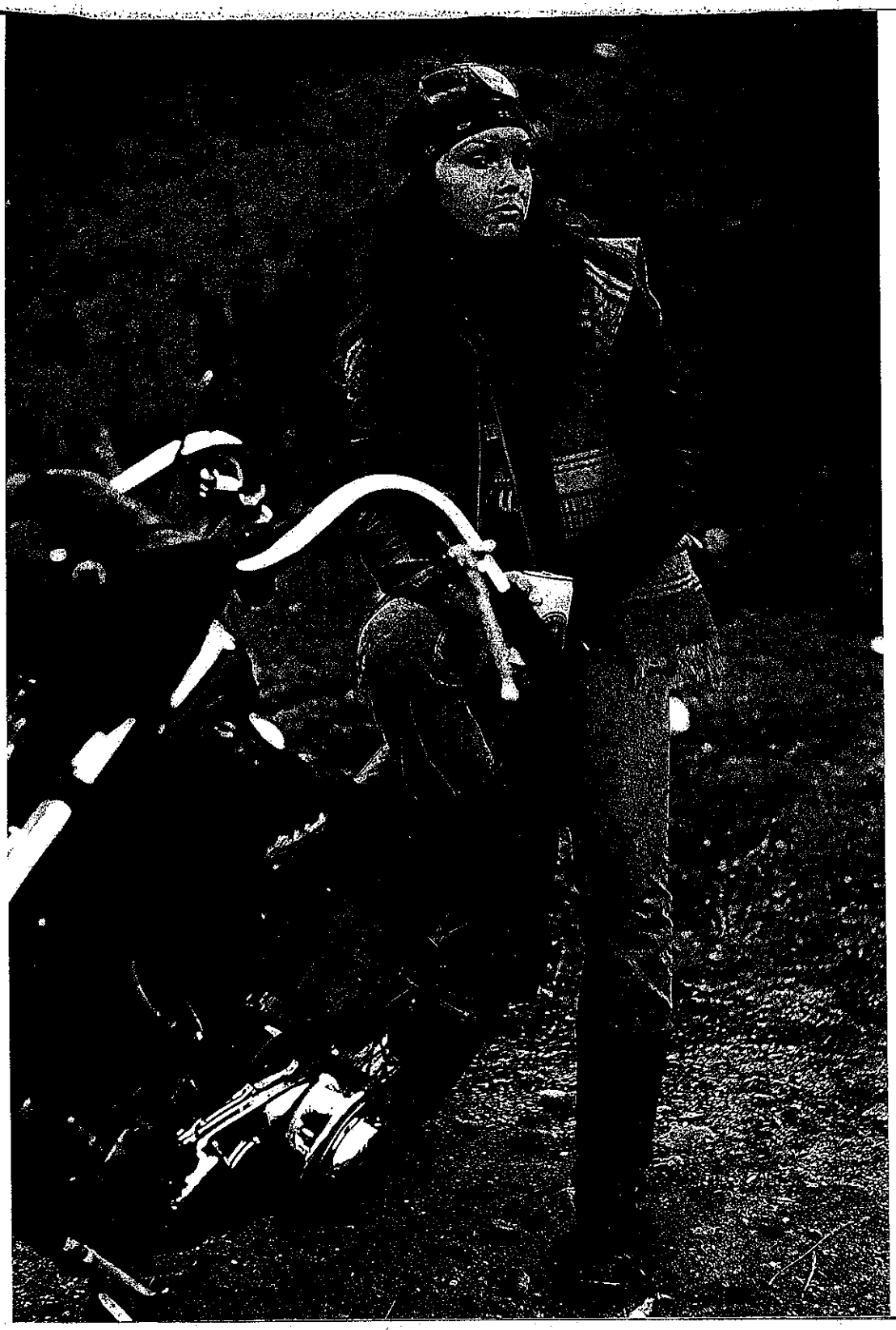


1980 | *Newlyweds "Sportster" John and Arlene in Evergreen, Colorado.*

1981 | *A New York City motorcycle club makes its way through city traffic.*



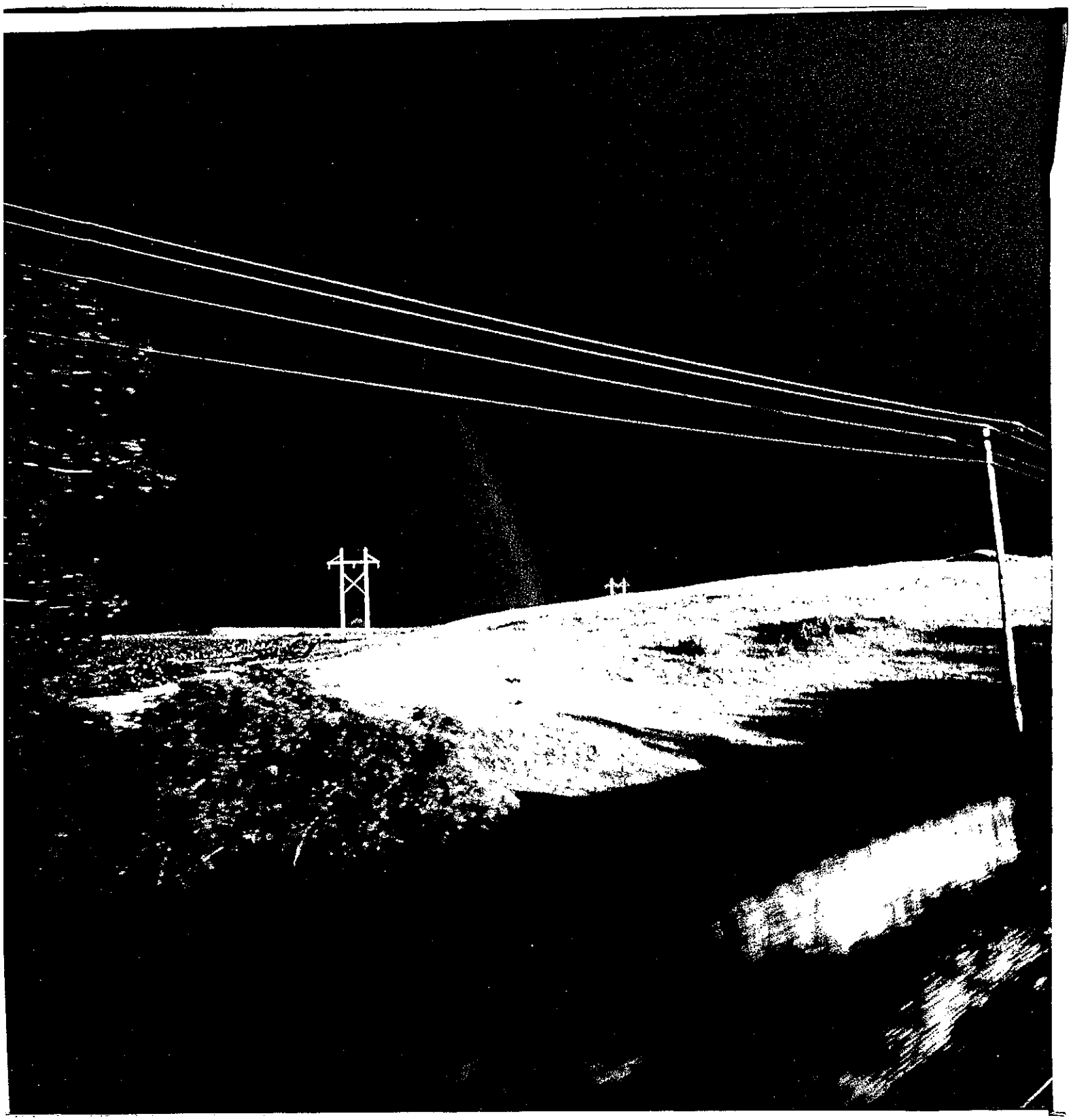
1981 | *Sunrise at a campsite outside Sturgis.*

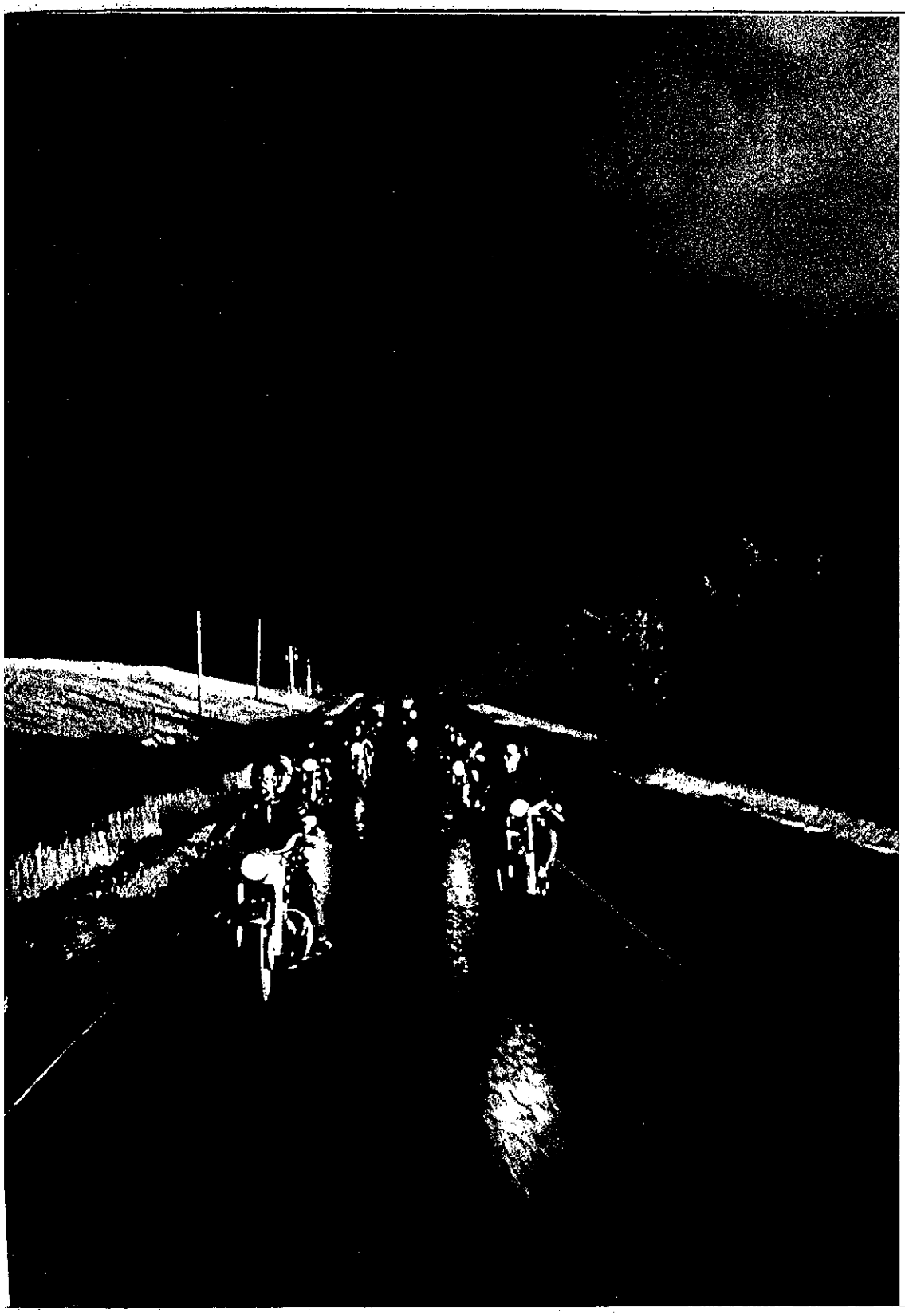


1982 | *End of the day, Sturgis.*

1981 | *Willie G. points excitedly at the Harley-Davidson logo on his gas tank during the Buy-Back ride, which celebrated the new ownership of the company.*

1983 | *Renewed energy and dedication marked the post-buyback years at the York Final Assembly Plant.*





1980 | *Leaving Sturgis en route to the drag strip at Belle Fourche, South Dakota.*

1977 | FXS LOW RIDER®

The '77 Low Rider was a later iteration of the '71 Super Glide model—our first foray into the custom market. The Super Glide had an extravagant paint job and a pronounced, sculptural rear seating area (boat tail). You either loved it or hated it. The Low Rider had more popular appeal. It was a volume seller that established us in the custom market. If the Super Glide was the seed for Harley-Davidson customs, the Low Rider was the flower.

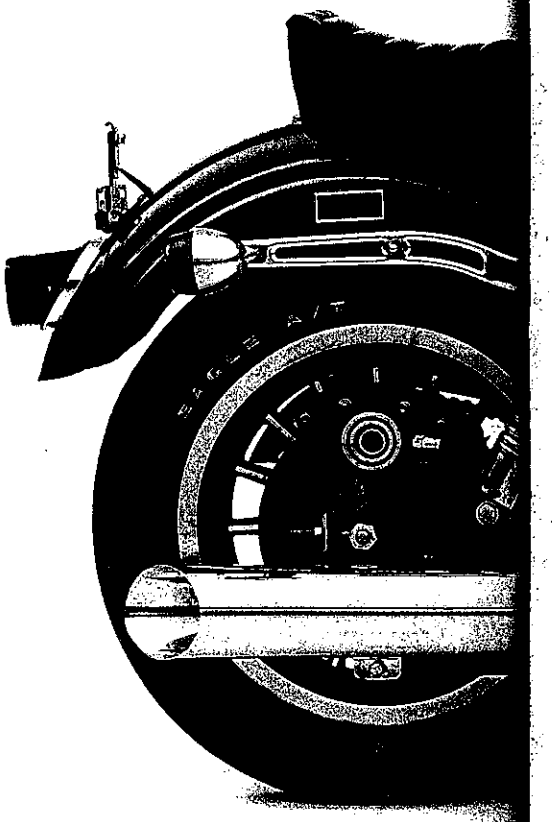
The Low Rider represented a milestone in the use of certain design elements, some of which are still active today. For the first time, we painted and highlighted the engine using a monochromatic paint scheme. We blacked out cylinder heads and highlighted the fins. We painted the rocker boxes, timer cover, and outer primary silver.

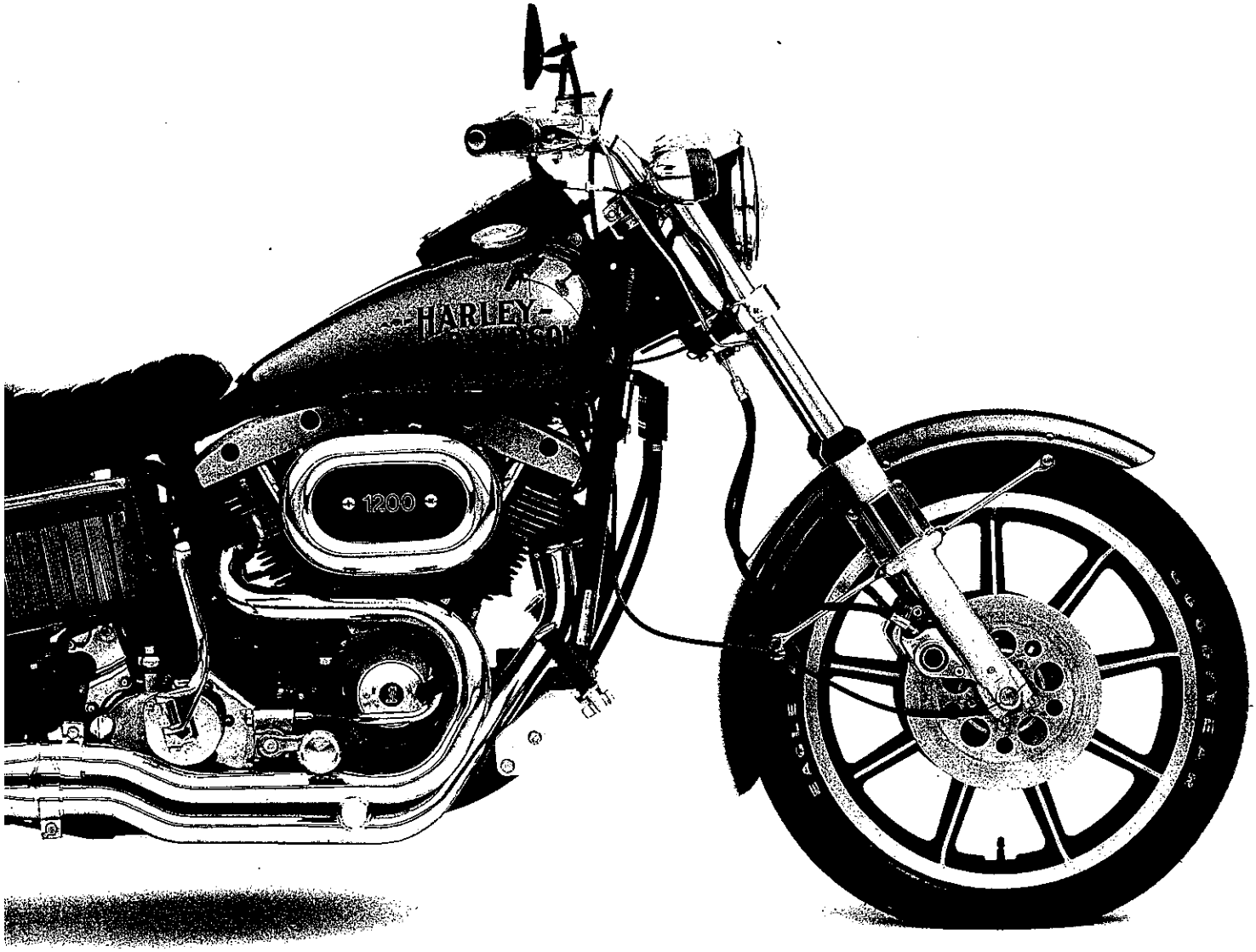
Note the bike's exhaust system—the way the rear cylinder exhaust swings forward, wraps around the timer cover, then joins the large collector-style muffler and gives it a performance look.

The low seat height—27 inches—was a significant change. When you sit low, you feel like you're wearing the motorcycle. The handlebars are an extension of your hands and the footpegs and rear brake lever are an extension of your feet. You're out in the open. How you feel and look on that bike is important to your sense of pleasure and confidence. The Low Rider is all about that. It not only looks good parked, it feels great on the road.

POWERTRAIN
Engine: 45-degree, overhead-valve V-Twin
Displacement: 74 cubic inches
Transmission: Four-speed, foot-shift
Primary drive: Double-row chain
Secondary drive: Single-row chain
Brakes: Double disc (front); single disc (rear)
Ignition: Battery and coil

CHASSIS
Frame: Double downtube
Suspension: Telescopic forks (front); swinging-arm and springs (rear)
Wheelbase: 58.5 inches
Gas tank: 3.5 gallons
Oil: 4.5 quarts
Tires: 19 x 16 inches (front and rear)
Color: Charcoal Silver Metallic




HARLEY
1200
EAGLE

1980 | FXWG WIDE GLIDE®

The FXWG Wide Glide motorcycle was our answer to the classic chopper. "Wide Glide" refers to the distance between the fork legs. The bike uses a classic 21-inch front wheel. The color scheme—orange and black with white trim—is very recognizably Harley-Davidson and fondly referred to as the "flamed Wide Glide." It was the first of our motorcycle products to feature tank flames inspired by early motorcycles and hot rods.

The flame paint job was one of our most complicated production paint jobs. It took several masking operations to create the white outline and the flames themselves range from yellow to orange. The paint was applied wet on wet, which means that the flames were fogged, only adding to the challenge of achieving a high-quality paint job across high volume in a production environment.

Good-looking flames should have an interesting variation and flow in the pointed areas of the design. How the designer handles the thick and thin sections and the pockets is critical.

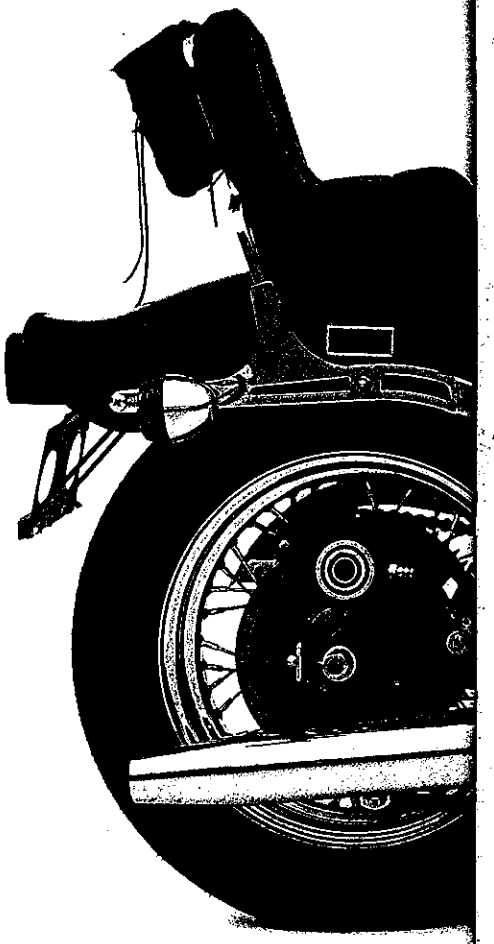
We designed these flames to surround and enhance our legendary Bar & Shield. The flames aren't overdone; they are concentrated for a dramatic, visual impact.

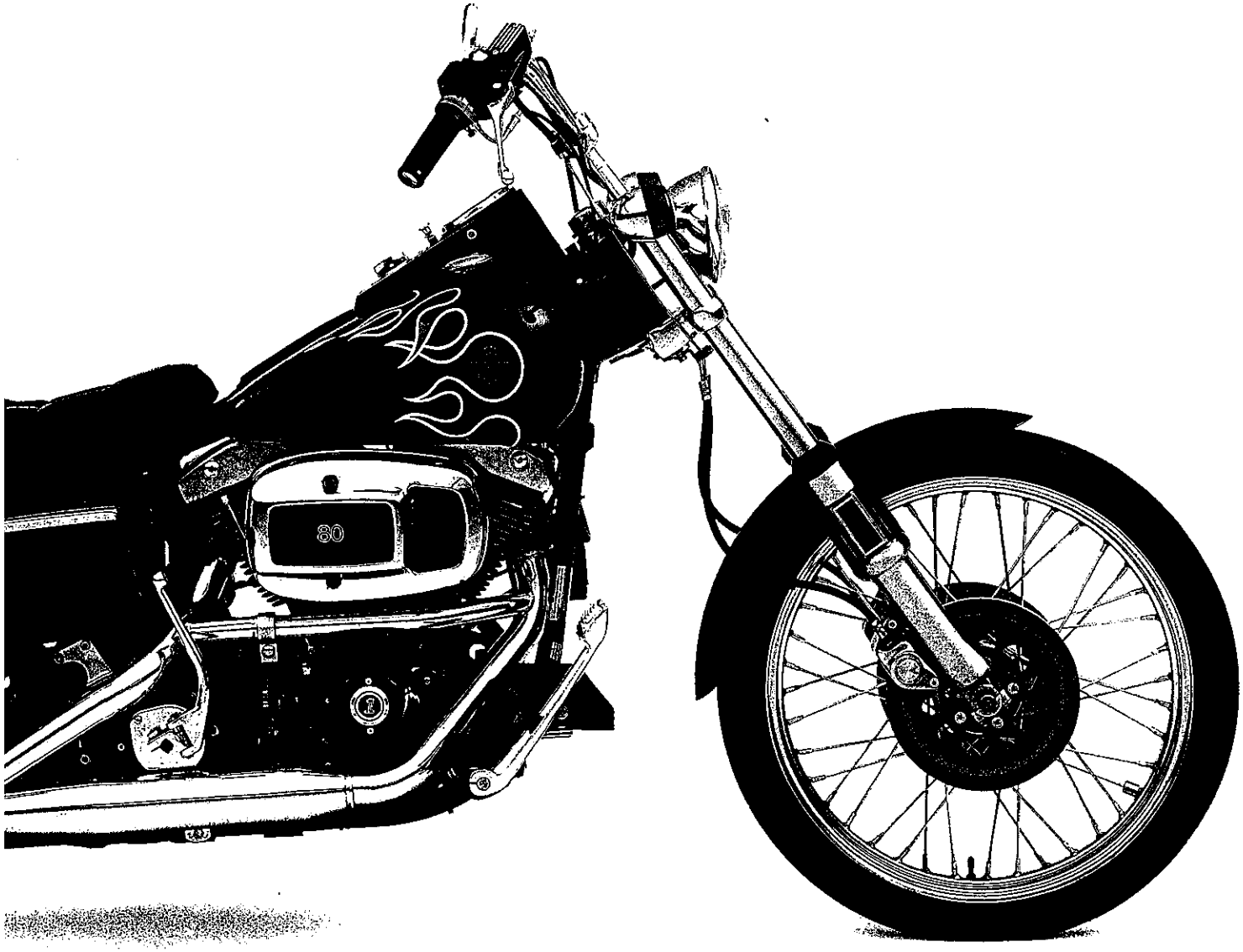
POWERTRAIN

Engine: 45-degree, overhead-valve V-Twin Shovelhead
Displacement: 80 cubic inches
Transmission: Four-speed, foot-shift
Primary drive: Double-row chain
Secondary drive: Chain
Brakes: Dual discs (front); single disc (rear)
Ignition: Electronic

CHASSIS

Frame: Double downtube
Suspension: Telescopic forks (front); hydraulic shocks (rear)
Wheelbase: 65 inches
Gas tank: 5 gallons
Oil: 4.5 quarts
Tires: 21 x 16 inches (front and rear)
Color: Black (with flames)




80

WE WERE A SMALL GROUP OF BELIEVERS

LOOKING TO RAISE ENOUGH MONEY TO

PULL OFF THE DEAL OF A LIFETIME:

A HIGHLY-LEVERAGED, HIGH-RISK BUYOUT OF A

COMPLEX MANUFACTURING COMPANY . . .

I HAVE TO SAY,

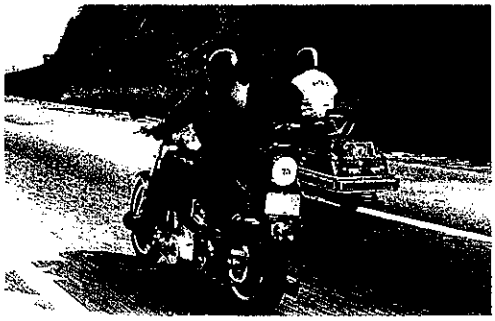
A LOT OF PEOPLE

thought we were nuts.

IT WAS FIVE YEARS AFTER HARLEY-DAVIDSON'S MERGER WITH AMF, and our sales still hadn't reached the levels that they'd envisioned, so they weren't allocating a lot of capital for new motorcycle development. My challenge was to take existing hardware, making the most of available parts, and freshen our product line with new colors, trim, and imagery.

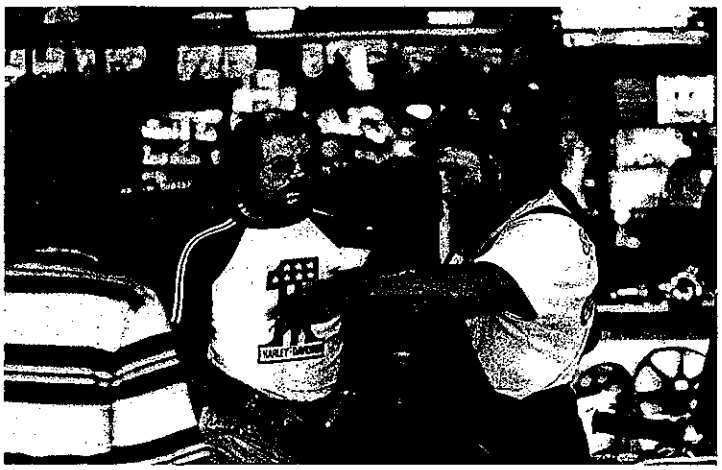
AMF was seeking a rapid return on its huge investment in the York facility and was pushing for record numbers of vehicles to be built and shipped. Unfortunately, evidence was mounting that this corporate-wide emphasis on numbers, and the need to continually drive them higher, was having a negative impact on product quality. Contrary to popular belief, not every one of our motorcycles of the AMF era was of shoddy quality, but the truth remains that many of the bikes we shipped were ones we wish we'd held on to a little while longer.

Our long-standing closeness to customers was diminishing in an effort to make the numbers, and it was becoming painfully obvious that we had a big problem on our hands. Instead of all those great conversations I was used to enjoying at Daytona or Sturgis or other rallies, I was hearing more and more about problems that people were having with their bikes.



Former Augusta, Georgia, dealer Vic Crenshaw escorts Willie G. on the ride out of town during the 75th Anniversary Executive Ride in 1978.

Judging by the letters we received, we were jeopardizing our customers' hard-won loyalty. Though the letters would start out conveying frustrations about the product, I noticed that they always ended with statements like, "We love the company and we're going to



Willie G. listens to product comments during a stop at a dealership on the 75th Anniversary Executive Ride in 1978.

stick with you." You could feel that the person was going to do his or her best to support us. I'll always be thankful to all the riders who did this.

Rather than dwelling on the negatives, we came up with ways to redouble our efforts. Unlike our competitors, we didn't have vaults full of cash to advertise and promote. And even if we had, that approach probably wouldn't have worked, because our riders eventually would have seen through the smokescreen.

For our 75th anniversary in 1978, we organized a series of cross-country group rides, each led by a different member of the management team. We saw it as a way to get out on the road, reconnect with customers and dealers, and have some fun. This idea was driven, in large part, by the group executive of the motorcycle products division, Vaughn Beals, who would become one of the most celebrated figures in our history. Vaughn was pushing hard to get the leadership team out of the office and onto our motorcycles.

Although this wasn't a huge marketing initiative and we didn't draw anywhere near the kinds of crowds and media coverage such rides do today, several of our dealers planned local events, and groups of riders joined our processions when we rode through their towns. We shook a lot of hands and made new friends wherever we stopped. And we did a lot of listening.

By the time all of the ride routes converged in Louisville for the AMA National Dirt Track Championship Race, our leadership had gotten excited. The conversations with dealers and customers were revelations for those who didn't regularly get out and ride.

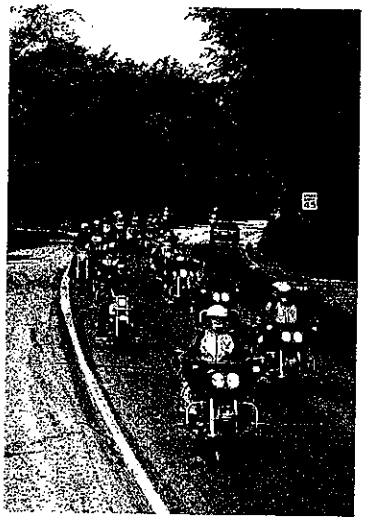
With the ride instilling a stronger connection to customers, our improvement efforts took on greater meaning. Vaughn was pushing to get quality back on track. Also, extensive changes in engine and chassis engineering were on the drawing boards, spearheaded by a talented man named Jeff Bleustein, our current CEO.

Vaughn was the kind of leader who commanded your attention. In addition to being a good engineer, he was a true believer. He realized that Harley-Davidson was a gem and was frustrated that we were falling off AMF's radar. He couldn't fathom how a company with our heritage and mystique could be of minimal interest to its parent company. AMF had started out with the expectation that we would become another General Motors, but since we weren't producing that level of profits, they were losing confidence. But there was so much potential.

As the seventies wound down, we were dealt a few very bad hands. The headlines announced an economic recession and interest rates rose into the mid-teens, so discretionary income diminished. Suddenly, fewer people were buying motorcycles, ours or anyone else's.

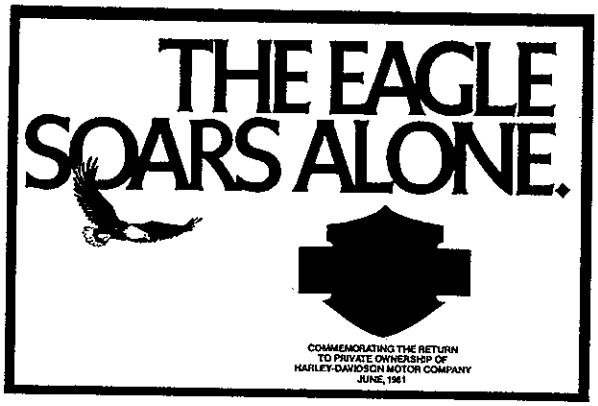
The market was evaporating. With everything else we were going through, we didn't need this. Resources became even scarcer, and employee morale was at an all-time low.

To make matters worse from a financial standpoint, the environmental movement generated extensive emissions regulations. For motor-vehicle manufacturers, this meant large capital investments for new equipment. This was a rude awakening for AMF. They found that mass-producing motorcycles was a capital-intensive enterprise.



Although Harley-Davidson had many supporters within the AMF ranks, some folks started seeing us as a losing proposition that would never generate the profits they were after. They started taking a hard look at what it would take to get us into fighting shape, both financially and competitively. Those who saw us purely from a profit-and-loss standpoint missed the whole emotional side to Harley-Davidson. AMF put us on the block in 1980. I don't know whether they ever realized that our brand, our relationship with riders and dealer organizations, and the styling—function and emotion—of our motorcycles are what make us so strong. These are truly the reasons why we're around today.

It wasn't exactly a seller's market for a U.S. motorcycle manufacturer whose prime competition came from Japan. And our company required a large amount of capital investment. Not surprisingly, the same factors



that prompted AMF to sell us turned off potential buyers. Months were passing, the market was sliding deeper, and I couldn't help but feel that if things didn't turn around for us soon, we were in real danger of extinction.

Then, on an afternoon for which I'll forever remain grateful, Vaughn pulled together a meeting. He had come up with the idea of a small group of company leaders buying Harley-Davidson from AMF. He had explored the possibility and the risks involved. This was not an easy sell, but his enthusiasm was infectious. He got us excited about the idea, but each individual had to make a decision based on financial considerations and how the decision might affect his family.

"The Eagle Soars Alone," was the slogan the Motor Company adopted to spread the word about its freedom from corporate parent AMF.

Far left: Harley-Davidson celebrated its independence from AMF in 1981 with a "Buy-Back" ride.

The Buy-Back team completes the deal on June 16, 1981 (standing from left): John Hamilton, Dr. Jeffrey Bleustein, Kurt Woerpel, Christopher Sartalis, and William G. Davidson; (seated from left): James Paterson, Timothy Hoelter, David Lickerman, Peter Profumo, David Caruso, Ralph Swenson, Charles Thompson, and Vaughn Beals.

Thirteen of us decided we wanted in, at various levels of financial commitment. We were a small group of believers looking to raise enough money to pull off the deal of a lifetime: a highly leveraged, high-risk buyout of a complex manufacturing company. On a dollars-and-cents level, we had to face the fact that we might be putting ourselves and our families at risk. I have to say, a lot of people thought we were nuts.

In the winter of 1980–81, with thick legal documents flying back and forth, the proposal fully in motion, and loan contracts being drafted, I went to Nancy and the children and said, "I'm about to take on a major risk. Here's my opportunity, and I am going to take it. There are no guarantees it will work, but I have faith in Harley-Davidson." It was an emotional moment for me. But for me to do anything other than support this venture just wouldn't have been true to my mind and heart. From every perspective, both past and future, this event had great significance to my family. The loves of my life understood this and gave me their support.

On February 27, 1981, the pending buyback deal was announced. This was an extraordinary time. One of the most memorable events in my life was the ride from York to Daytona that year, on an olive-green 1981 Electra Glide. I borrowed its unusual retro paint scheme from a 1936 model. There was a lot of fringe on the oversize bags, which I refer to as "Big Bertha" bags. I

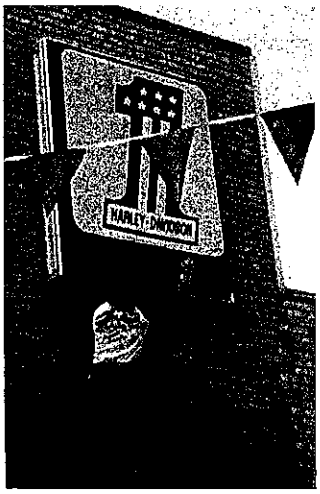
was at York preparing for the ride when I heard the news that we had achieved the buyback. Before leaving, I took some black tape and crossed out the AMF logo on my fuel tank. When I arrived in Daytona, I parked by

the landmark Boothill Saloon, at the end of Main Street. Riders were wishing us good luck and offering lots of thumbs-up signs. I was elated that Harley-Davidson was going to be back in the hands of enthusiasts. We had done the right thing.

On June 16, 1981, the thirteen of us sat down with lawyers in York, Pennsylvania and signed reams of paper. This was the real deal, and now it was a very done deal. We had a final signing ceremony outside on a platform. Employees celebrated with us, and word spread quickly throughout the motorcycling world that Harley-Davidson now belonged to Harley-Davidson. If we'd learned anything from our 75th Anniversary Ride, it was that there was only one real way to celebrate our independence. And you know what that is.

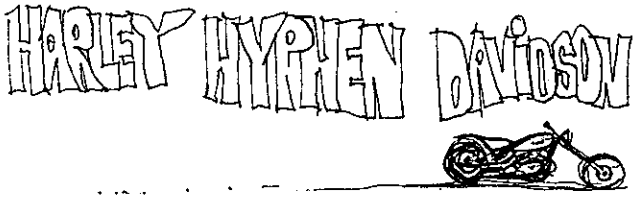
Mounting commemorative bikes that I'd embellished with some special trim and striping, we headed back to Milwaukee, making stops at dealerships along the way. We were met with a lot of support. At a dealership in Pittsburgh, an employee climbed the dealership sign and painted "AMF" off. The shirts we wore were printed with a slogan that captured the spirit of the moment beautifully: "The Eagle Soars Alone."

There were question marks ahead of us, but for now we were happy to be out riding motorcycles. Our motorcycles. We were free again.



A Harley-Davidson dealer employee spray paints black over the AMF logo on a dealership sign in 1981.

Far left: Willie G. sports a T-shirt that commemorates Harley-Davidson's newly independent status in 1981.



1980 | FXB STURGIS

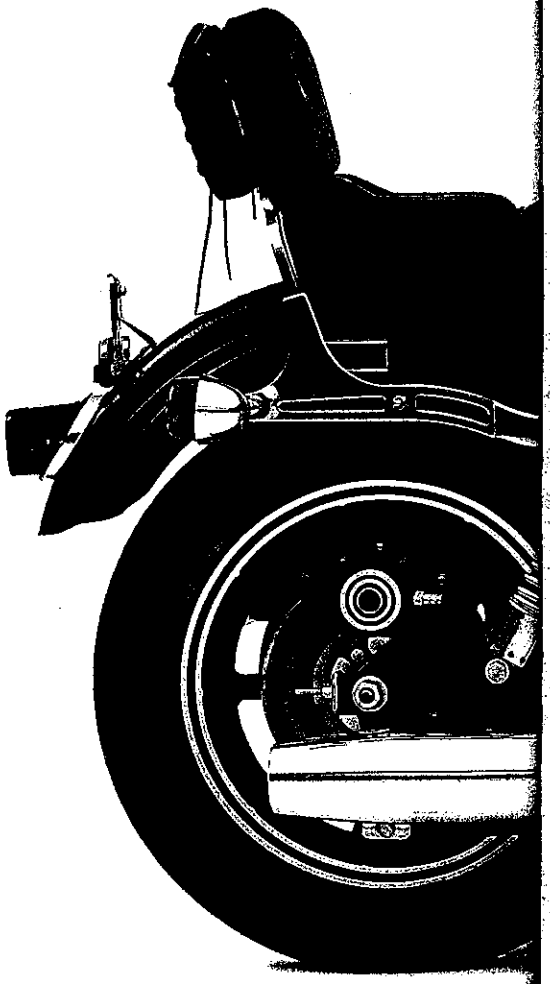
I have a lot of passion for this model, which is a variation on the original Low Rider. In the late seventies, the company was at a deciding point on the belt drive. Going from a chain to a belt drive would be a major change. (The belt is on the left side of the motorcycle, not seen here.) Sometimes you need to take these styling changes out to the public to get feedback. So I rode one of the first belt prototypes to Sturgis.

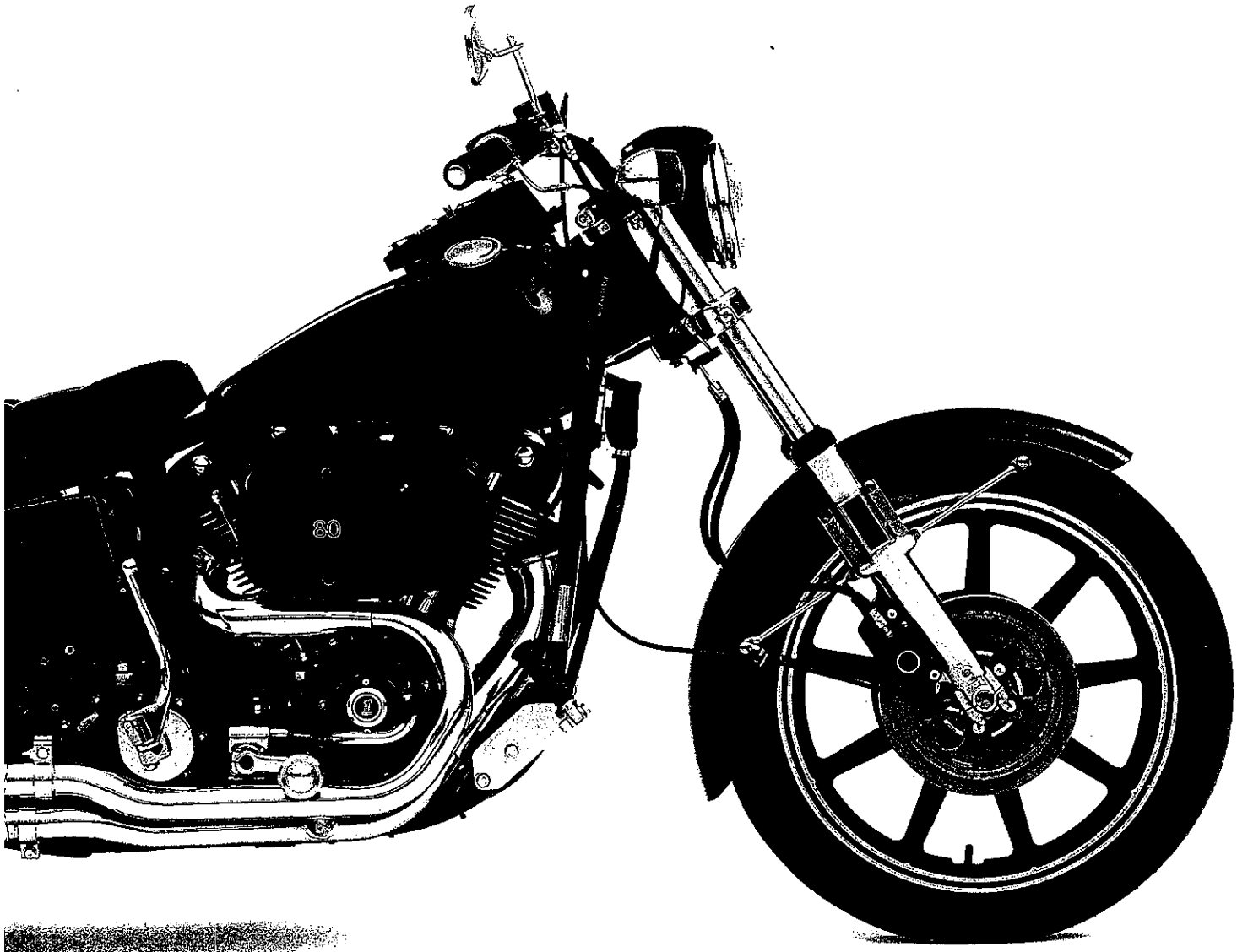
You have time to think when you're on the highway, riding cross-country. On my ride home from the rally, I was thinking about how we would style this bike. When we stopped at a wayside, I said to myself, 'We should do a blacked-out bike with some very subtle orange highlights and name it the Sturgis.' So I pulled a paper bag out of a trash can and wrote down some thoughts: an all-black air cleaner, engine, cylinder heads, rocker covers, blacked-out wheels, and, of course, all-black sheet metal on the fenders and tank. Orange would be used sparingly on the wheels and on the Bar & Shield on the fuel tank. Here and there we would add little pieces of chrome. The bike should have drag-style handlebars and a unique pouch on the back with lacing to give it a handmade look. The "Number 1" logo could be used on the timer.

We went on to build this bike, which is a collectible now. I still have that paper bag in my personal collection.

POWERTRAIN
Engine: 45-degree, overhead-valve V-Twin Shovelhead
Displacement: 80 cubic inches
Transmission: Four-speed, foot-shift
Primary drive: Belt
Secondary drive: Belt
Brakes: Dual discs (front); single disc (rear)
Ignition: Electronic

CHASSIS
Frame: Double downtube
Suspension: Telescopic forks (front); hydraulic shocks (rear)
Wheelbase: 63.5 inches
Gas tank: 3.5 gallons
Oil: 4.5 quarts
Tires: 19 x 16 inches (front and rear)
Color: Black




80

TO BE ABLE TO GET TOGETHER

WITH OUR CUSTOMERS,

HAVE A BLAST

RIDING OUR BIKES,

AND KNOW THAT BY DOING SO

WE'RE HELPING OTHERS,

IS A

GREAT PLACE TO BE.

THE 85TH, 90TH, AND 95TH ANNIVERSARY RIDES HAVE BEEN SOME of my, and my family's, most memorable experiences. The festivities kicked off with parties on the coasts, and from there, several rides made their way home to Milwaukee for the birthday celebrations. We invited enthusiasts to join us along the way.

My family's starting point has always been on the West Coast, and we've taken many memorable cross-country rides just getting out there.

Once we're on the official company rides, we set certain mileage requirements to meet each day. We stop in cities to meet with press and media, and we attended local parties and auctions. We also did a lot of storytelling—sharing of the day's road experiences, whether you were riding in sunshine, rain, or wind, and what you observed along the way.

It's easy to make friends on these rides, because you're all participating in the same activity. Conversation flows easily. Of course, everyone's excitement grew as we neared Milwaukee. The group changed as we rode, shrinking or growing based on personal schedules. Some rode for a short way, while others opted to join us for the whole distance.

And there was a big parade to look forward to when we arrived in Milwaukee, with the freeway closed for the event. All lanes were jammed with thousands of Harley-Davidson motorcycles, six across, in staggered formation—for miles.

Loyal Harley-Davidson riders jam the freeway entering Milwaukee for the 90th Anniversary celebration in 1993.

The sides of the freeway, all the overpasses, and the sidewalks lining the city's main street were packed with cheering spectators. Many were holding handmade signs saying WELCOME HOME, waving American flags, and sharing thumbs-ups signs with the riders, who looked like heroes returning from some far-off victory. Numerous riders wore Harley Owners Group (H.O.G.) chapter patches on their vests, with Harley-

Davidson pendants and American flags jury-rigged to the backs of their bikes. The license plates were from all over the United States, and some bikes were even shipped here from overseas. Vanity plates had all kinds of clever, creative names.

Television helicopters hovered overhead, and cameras were everywhere. The enormity of the event and the outpouring of warmth from the crowd overcame many of the riders. Sometimes you saw a few tears sliding from under sunglasses. Many riders commented on the fact that emotions welled up during the parade. Everyone was affected, even the most grizzled, well-traveled attendees.

A Harley Owners Group (H.O.G.) member from the San Jose chapter checks in at a local event.

Tens of thousands of motorcycles were parked in endless rows at the city's beautiful festival grounds on the shores of Lake Michigan. There, riders spent the entire day being entertained by top-name performers and motorcycle drill-and-stunt teams, feasting on food and world-famous Milwaukee beer, participating in charity auctions for Harley-Davidson memorabilia and collectibles, shopping in massive dealer and vendor tents, checking out rare motorcycles from our collection, and generally having the time of their lives. Many riders broke away in the afternoon to tour Harley-Davidson manufacturing facilities or take demo rides on our newest models, returning for the evening festivities.

Everything built up to the final night, when everyone joined thousands of Harley-Davidson employees, the company's leaders, children afflicted with muscular dystrophy, and celebrity emcees in singing "Happy Birthday." It was a remarkable feeling to be onstage there with my family. I'm always excited and a little nervous at this point, recognizing the responsibility. It's tough to express my feelings to the enthusiasts in a few short sentences and accentuate the importance of the moment.

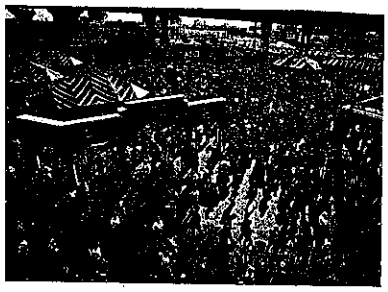
What sticks out in my mind is how anxious people were to talk afterward. It's always intense, which reinforces how vital these people are to the company's folklore. It comes from a unique quality of loyalty in our motorcycle family.

Events like this happen only in Harley-Davidson's hometown of Milwaukee. The city leaders, business owners, residents, and, of course, our employees and local dealers roll out the red carpet anytime we invite the family home to celebrate with us. The hospitality is a key component of the sharing that goes on. Everybody has a good time, riders and non-riders alike.

Some of the greatest emotional highs I've ever ex-

perienced have come from these kinds of events, helping lead the rides along with Nancy, my family, and members of our leadership team, and sharing stories with customers. Such events are monumental undertakings, saved for special occasions. They give all of us the opportunity to participate in an experience that shows the world what we're about.

We rarely need a reason to ride. As soon as some free time presents itself, we're up on two wheels. Most Harley riders are adventurous people. We just want to get out on our bikes, alone or with friends, escape from reality for a while, explore, and have fun—plain and simple. But when the call goes out for a group ride, local H.O.G. chapter rides, parades, or dealer-sponsored rides, it's about camaraderie and shared passion.



Group rides always have a planned destination and some sort of gathering awaiting their arrival. When you hear people describe owning and riding a Harley-Davidson motorcycle as a "lifestyle experience," this is a big part of what they're talking about. The riding, along with this social element, make for an unforgettable combination.

Over the years, I've participated in numerous rides from Milwaukee to Daytona or Sturgis, cross-country anniversary rides and H.O.G.-sponsored rides, and countless parade runs through the towns that have hosted H.O.G. events. Whether there are 500 bikes or 50, I've loved them all.

Many of the company-sponsored rides are fund-raisers for the Muscular Dystrophy Association, a cause that is close to our hearts at Harley-Davidson. To be able to get together with our customers, have a blast riding our bikes, and know that in doing so we're helping others, is a great place to be. Over the last 20 years, these rides have helped the Harley-Davidson family raise nearly $40 million for the fight against neuromuscular diseases.

The summer 1980 Enthusiast *cover details Harley-Davidson's involvement with the Muscular Dystrophy Association. Willie G. and Nancy are shown here with former MDA National Poster Child Rocky Arizzio.*

Far left: The Harley-Davidson 95th Anniversary celebration was held at Milwaukee's Summerfest Grounds in 1998.

From very early on, whenever Harley-Davidson employees and customers have gotten together to ride, we've had a special time. These fund-raising rides have been a fairly recent addition to our heritage. But the benefits to us, our customers, and those less fortunate can't be measured. Relationships with family and friends are basic elements of our lives that I treasure. Harley-Davidson brings people together and hopefully adds another dimension to their lives.

I've had a lot of riders come up to me and say that since they purchased their Harley-Davidson motorcycle and got involved, their lives have changed for the better. They always have something positive to look back on or something on their calendar to look forward to. They've discovered how significant it is to get out and have fun with friends, and to make new ones. If you travel 1,000 miles with a group of riders, you're almost certain to establish some bonds—and you'll hear from them again, whether it's a note or a

This 1984 advertisement for H.O.G. encouraged like-minded enthusiasts to join the Motor Company's newly established rider's group.

phone call or a big hug at some distant rally.

As mentioned earlier, our first noteworthy anniversary ride occurred in 1978, to mark our 75th year. This was during our time under AMF. Vaughn Beals championed the idea of our leadership team getting out and riding with dealers and customers, so we organized a series of cross-country rides, each led by members of the management team, culminating at the AMA National Championship race in Louisville, Kentucky.

We had to plan our rides in the same flexible way customer groups planned theirs. We might be riding in the rain some days, arriving late on others, and changing plans midstream. We also learned quickly that events of this magnitude require a tremendous amount of planning and logistics. We relied on our own common sense as riders and the expertise of road captains to show us the way. Event planning has become a critical part of what we do at Harley-Davidson. The people who run H.O.G., those who are involved in planning birthday celebrations, and many more have a huge assignment, and they do it well.

While modest by today's standards, our executive-led 75th Anniversary ride held some of the atmosphere that is common now. Dealers were actively involved in events at our ride stops, where we'd have a little party and the chance to talk with our riders. I remember what an eye-opener it was for some of the AMF management, especially those who were new to the motorcycle business, to see customers asking me to autograph their motorcycles. One of them said he couldn't imagine someone asking to have his car signed by a representative of the manufacturer. Prior to this ride, many of these folks didn't realize the strength of our riders' loyalty and how symbolic our heritage was to them.

I think the most valuable discovery that management made on this ride was the importance of being accessible to our customers, to listen to them, and participate in the sport the same way they do. In this way, we would create an emotional connection, allowing our customers to express their loyalty to our products. This wasn't news to me, since I'd been out riding with customers and visiting with dealers my whole life. It became obvious that we should be doing more of it, and slowly but surely, these rides became a part of our culture.

After our management-led buyout from AMF in 1981, we celebrated our independence with a group ride from York, Pennsylvania, back to Milwaukee, with numerous dealer stops along the way. Soon after that, I started leading Muscular Dystrophy Association fund-raising pledge rides to Daytona each March. We were making a more concerted effort to stay involved with our riders.

Times were still challenging. The buyback team was in deep debt, and the company was suffering from an economic downturn. We were in creative survival mode, in need of ideas that would accentuate our value. Here was this terrific community of riders who shared our passion for Harley-Davidson motorcycles. We thought, "What better way to tell our story than by riding?" So in

1983 we formed a company-sponsored riding club, the Harley Owners Group.

We started H.O.G. as a way to bring people into the riding experience, but nobody could have predicted that it would grow the way it has. From around 30,000 members in its first year, H.O.G. ranks have swelled to over 640,000 members in 115 countries, with 1,200 chapters around the world.

Every weekend, all over the world, H.O.G. members are gathering somewhere and having an awesome time, whether it's a group ride to a local state park, or a weekend-long state rally, or maybe one of the club's mega-national or international events.

Nearly every Harley-Davidson dealership worldwide sponsors a local H.O.G. chapter, which meets anywhere from once a month to once a week. The meetings are often at the dealerships, which have always been popular local hangouts. As a part of their affiliation with H.O.G., many dealers have built special meeting rooms for their chapters. The focus is on having fun. H.O.G. chapter-event calendars are filled with rides, rider training, maintenance seminars, and parties. And nearly every chapter sponsors fund-raising events for local causes, such as the MDA. Because club members frequent their sponsoring dealership, dealers and their personnel naturally develop stronger relationships with their local customers, and vice versa.

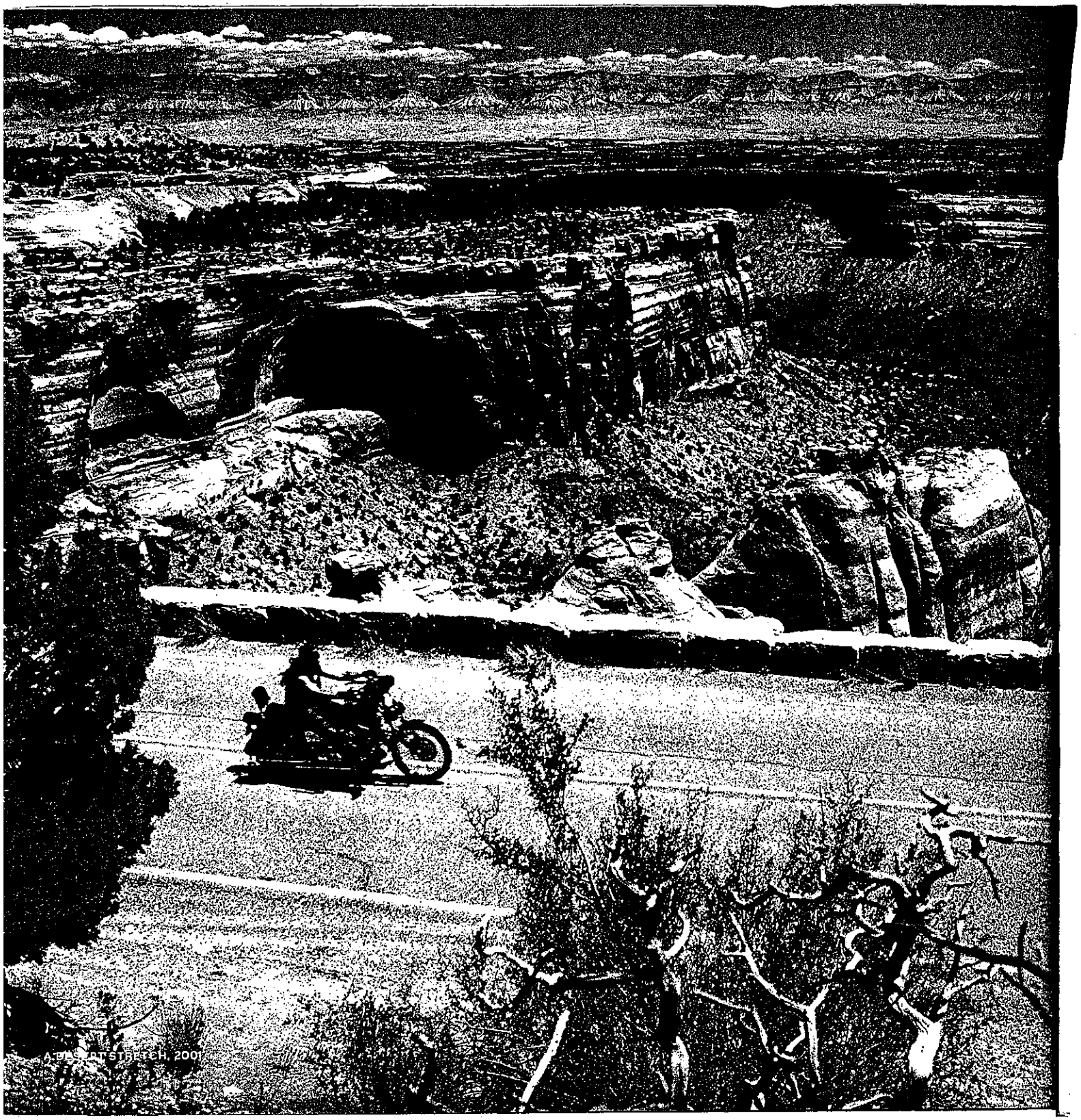
To me, the real beauty of H.O.G. is in the riders, who have made it what it is today. Although the H.O.G. staff in Milwaukee provides guidance and training, local chapters and state events, which can attract thousands of riders, are entirely volunteer-run. A lot of people put a lot of time and effort into H.O.G.

Harley owners can now choose among hundreds of company, dealer-sponsored, H.O.G.-sponsored, or private club events at the local, regional, national, and even international levels. And that's in addition to the classic rallies like Sturgis, Daytona, and Laconia. The size and scale of many of these events has increased dramatically over the years. But at their most basic level, they reflect the same passion that brought our riders, dealers, and company leaders together in the earliest days.

I recall being in the 95th Anniversary parade through Milwaukee. As the procession went down Wisconsin Avenue, I could hear the roar of the engines echoing off the buildings and all the cheering people. I was in awe.

Patches cover the back of this H.O.G. member's riding jacket. They mark everything from events attended to the length of H.O.G. membership.

Below: Founded in conjunction with the birth of H.O.G. in 1983, H.O.G. Tales *magazine is devoted to chapter members and their activities around the world.*


A. BASERT STRETCH, 2001

1984

RISING TO THE CHALLENGE

2003

THE RESPONSE WAS

IMMEDIATE AND POSITIVE.

EVERYTHING ABOUT THE SOFTAIL JUST SEEMED TO WORK.

THERE'S NOTHING LIKE

HITTING A HOME RUN

WHEN YOU

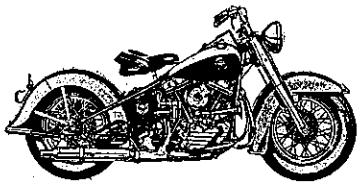
REALLY NEED ONE.

WHEN IT COMES TO DESIGN, EVERYONE'S FAMILIAR with the phrase "Form follows function." But at Harley-Davidson, we've realized over the years that to continue engaging our customers and attracting new ones, form must follow *emotion* as well as function. We know that the shapes and forms we use, and their familiarity, can ultimately determine how successful a new vehicle will be. We could build a motorcycle that meets all performance criteria in an efficient way, but if it lacks the magic of proportion and style, and if it doesn't have the right rider-to-vehicle-to-ground relationship, the market won't accept it.

In recent years, this "American Look"—which is industry lingo for "the Harley-Davidson Look"—has taken center stage with the U.S. cruising-motorcycle community. Many of the shapes and forms we and our customers hold dear have been copied or slightly modified by other manufacturers. While we're somewhat flattered by the attention, I can't help but wonder how exciting it would be if these same manufacturers expanded upon their own traditional looks to evoke emotional responses from their riders.

A chopped Harley-Davidson hardtail motorcycle from the forties or fifties is representative of why our Softail line has been such a huge success. Hardtails are a vital part of our history: they are just plain beautiful—the rawest of the raw when it comes to pure custom motorcycles. They represent an era of customization and personalization when less was more.

Look at a hardtail frame and the first thing you notice is the spare profile. There's nothing beyond what is absolutely necessary. There's no rear suspension, so the frame is extremely low, which gives it the side profile that so perfectly lends itself to customization. The top frame forms a continuous line from the fork pivot to the rear axle. The rear fender is mounted close to the tire. The early years of customization saw hand-shift bikes modified, a suicide clutch, an open primary, high bars and



The 1957 FLH model marked the end of the hardtail (no rear suspension) era. The Duo Glide was introduced in 1958 with a suspension system located under the seat.

The Harley-Davidson Bad Boy was another iteration of the Softail platform of motorcycles. Its all-black Springer front end gave it the tough look that inspired this 1995 advertisement.

shotgun pipes added. It is a piece of art, a wholly American look with raw mechanical appeal.

But anyone who's ever been on an early hardtail will tell you that it's not the most comfortable ride. I've always said that you don't really ride a hardtail, you wear it. That rough tail section bounces over bumps in the pavement without allowing the bike to absorb the shock. Roll over a wet match and you feel it. The only cure for the harshness was to compensate for the tail section with seat suspension. For the chopper crowd, the lower the better, which usually meant a wafer-thin seat mounted to the frame. There was a spartan look about these choppers that added to their appeal.

I'd always loved the idea of hardtails but couldn't reconcile the lack of rider comfort. So I figured their days were long gone. But out of the blue one day, in the midst of some of our roughest times in the late seventies, a rider who would change all that came into our Milwaukee headquarters. Bill Davis, a knowledgeable craftsperson and designer with a passion for motorcycling, said he had something to show us.

Bill showed us a motorcycle that resembled a hardtail, but its modified frame had suspension hidden under the seat—it was a suspended motorcycle with the look of an old hardtail. Unfortunately, we were so involved with trying to keep Harley-Davidson afloat, and so heavily entrenched in the Evolution motor project, that we didn't have the resources to jump into a new chassis. The idea went dormant but never disappeared from our consciousness.

A few years later, just after our buyback from AMF when we were mired in our darkest hours, we knew we were in need of a home run to kick-start our market again. Jeff Bleustein (who was at that time head of engineering) said, "Hey, Willie, let's get Bill Davis back in here and look at that frame again," and the internal interest snowballed from there. He and Vaughn Beals, himself an engineer, saw great potential in it and were very supportive. We met with Bill several times, and eventually the styling department mocked up a modified version of his idea, putting the spring shock combination underneath the transmission, so that it was completely invisible. Soon we found ourselves developing our hardtail-look chassis in concert with the Evolution engine, so the timing couldn't have been better. Bill became a trusted partner we would work with for many, many years.

In 1984, we stepped up to the plate, introduced our FXST Softail, and surprised everyone. Up front was a classic 21-inch laced front wheel married to a minimal fender and an increased rake angle that gave the motorcycle a long look. Its bobbed rear fender exposed more of the laced rear wheel than traditional fenders. The minimal hardtail-like frame, staggered dual exhaust, and the 1340cc Evolution engine created an extremely handsome look that combined history with an inventive platform. That platform enabled us to introduce

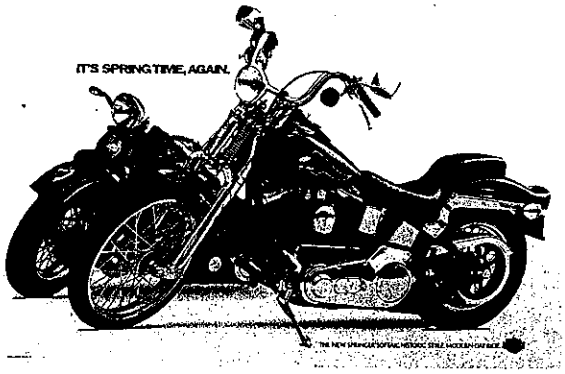
many iterations of the Softail platform over the years. It also had a lot to do with our ability to keep our doors open in the eighties. The response was immediate and positive. Everything about the Softail just seemed to work. There's nothing like hitting a home run when you really need one.

Although we were pleased with the success of the launch, we weren't entirely surprised by it. The Evolution motor, with its belt drive, lit a fire under the market and signaled our return to competitiveness. Blending the hardtail look into the Softail worked so well for us because it was perfectly natural. The challenge was to design exciting iterations on the Softail platform.

We followed the first Softail model with the FLST Heritage Softail, incorporating the hardtail look with an FL-style motorcycle, clearly reminiscent of our 1949 Hydra-Glide. With its telescopic front forks and full FL-style fender over the 16-inch laced front wheel, plus floorboards instead of pegs, it was a near dead ringer for the classic fifties-era hardtails and an immediate success. Two years later, we added a black-and-chrome powertrain, two-tone paint scheme, windshield, passing lamps, studded leather saddlebags, and passenger seat and backrest, and christened it the FLSTC, the Heritage Softail Classic—a bike that was as much at home cruising the boulevard as it was touring the freeway. The proportions were right; all the parts fit together perfectly.

We marked the next year, 1988, our 85th anniversary, with another modification on the Softail, this time focusing almost exclusively on the front end. The FXSTS Springer Softail paid homage to our Springer front ends, which largely disappeared from our product line in 1948. Recreating the look of the exposed chrome springs and forks while staying true to the original form was itself a huge task. But to do so while also providing comfortable levels of front-end suspension required engineering expertise. As you're going down the road on a Springer, there's a lot of visual excitement going on. The front leg and the front springs are moving up and down relative to road surface. It's "kinetically" exciting to watch the chrome motion reflected in the head-lamp shell. It really defines the bike and is part of the reason why Springers have long been favorites of customizers.

There are certain trigger points that motorcycle designers zero in on. For example, the wheels can have maximum styling impact. Think of the visual effect you

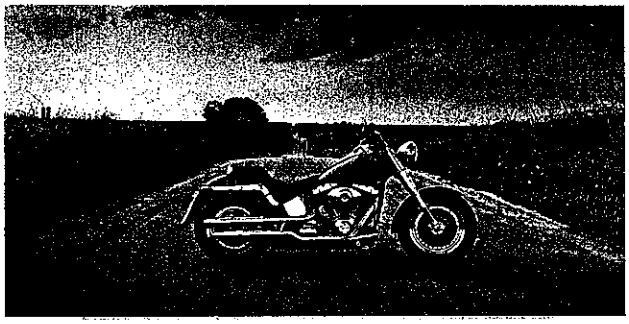


This 1989 poster features the new FXSTS Springer Softail in front of its grandparent, an early Springer model.

Far left: The Spring 1986 Enthusiast *introduced the FLST Heritage Softail by referencing the new model's styling connection to the 1949 Hydra-Glide (inset).*

In 1990, the Fat Boy model was added the Softail platform of motorcycles. Its unique styling and tongue-in-cheek name were among the reasons it was an instant hit with riders.

can create on a motorcycle by going all the way from laced, traditional wheels to solid cast-disc wheels. That's an instant, night-to-day change without altering your chassis or sheet metal. Then change the trim, seat, and exhaust system and paint and accessorize the entire package and you've created a fresh look.



INSIDE EVERY MAN THERE'S A FAT BOY TRYING TO GET OUT.

Now plug yourself in to our design department back at the end of the eighties. We were working on a Softail model for our 1990 product line that would incorporate disc wheels, an FL front end with a minimal front fender, and a monochromatic silver paint scheme. As it came together, I felt that it needed something to increase its potency—color accents. When it comes to creating impact, few colors are as powerful as yellow, so we added some to our trim pieces like the derby and timer covers, instrument panel, rocker box spacers, and tank graphic. With these simple touches, we gave the model some extra character.

I rode the bike to Daytona, and its look was well received. In August 1989, we introduced a motorcycle that would eventually become one of our best-selling models of the nineties, the FLSTF Fat Boy.

You're probably wondering how we came up with a name like "Fat Boy," and I've heard a lot of tales about this, nearly all of which are untrue. Here's the real story: it's tough to come up with names that will be popular on the street, given the number of products our customers have nicknamed over the years (Knucklehead, Panhead, Shovelhead, hardtail—you get the idea). We always have to ask ourselves, "What's the street going to name this?" and work from there. We were looking for something unusual and maybe even a little irreverent, because there's something sort of cool about poking fun at your products from time to time. To me, and to a lot of other insiders who'd seen it, the bike had a massive "fat" look. So the folks in marketing came up with the name "Fat Boy"—and the street picked it up.

Another Softail iteration came in our 1997 model-year lineup with the FLSTS Heritage Softail Springer, a vehicle that takes our Springer theme to a completely different level. While the FXSTS Springer replicates the front end of early choppers, the Heritage Springer is reminiscent of our 1948 FL. It has a laced 16-inch front wheel mated to an all-new fender that replicates the '48 model; a massive, chromed springer front end; crossover dual fishtail exhaust, passing lamps, fringed bags and seat, a tombstone taillight, and a chrome passenger grab rail. Even the horn cover was designed to match the '48 model. In designing this bike, we wanted to make a statement. It has so many intricate visual details that riding it is like having your own parade.

For those riders who prefer a simpler, clean-looking vehicle, we created the FXSTB Night Train, introduced in 1999. We've always liked monochromatic, low-contrast, minimalist motorcycles because they look so tight. The black-on-black look is at once subtle and severe. We used different types of black—wrinkle, flat, and gloss—to give the vehicle texture and degrees of reflection and to create visual interest.

We know only too well that not everybody likes blacked-out motorcycles. There is a basic philosophy behind product design that we follow when broadening the line—there is no such thing as a motorcycle for everybody. Controversy, in my mind, is positive. Without it, you would have a bland product line. No one would want to talk about the changes. I think all of our product designs should generate some degree of debate—it's healthy.

As we began planning for the 2000 model year, we took a hard look at the Softail line. By now, the Softail had been in the lineup for well over a dozen years, so it made sense to review the various pieces of hardware with an eye toward reinvigoration. But questions always surfaced: "How much change is too much, and is this the right time to do it?" With the pending introduction of the dual counterbalanced Twin Cam 88B engine, the timing part of the equation seemed logical. "How much" posed our greatest challenge, but we were eager to push the envelope.

From front to back, our new-generation Softail was going to get a complete makeover, without sacrificing our traditional look. We updated the front end with bottle-shaped chrome lower-fork legs; hid the fasteners that mounted the front fender; resculpted the triple trees; and added a stunning stretched fuel tank with a chrome instrument panel. Out back, we added a seventeen-inch solid-disc rear wheel with a 160 rear tire. We used a minimal new fender with sculpturally clean fender supports and a simple frenched taillight. Bottom line? We dramatically changed the image of our original Softail, and the 2000 FXSTD Softail Deuce was one of the best-received vehicle introductions ever. The media called it the most handsome Softail vehicle we'd ever created, and the model won several awards from major motorcycle magazines.

The Harley-Davidson styling team astride a 1984 FXST Softail: (from left to right) Dan Maire, Gene Ikeler, Willie G. Davidson, Louie Netz, and Vern Hunt.

We're entering our 100th year of business with seven models in our Softail platform, and each of them has a unique character. They all stem from the original. I'm proud of these significant iterations. My design team is always working on the "next" vehicle, and they're the best damn design team in the industry. My partner Louie Netz and I have a small group of dedicated, highly creative enthusiasts who challenge one another and explore future products. I know that we'll continue to surprise our riders.

1984 | FXST SOFTAIL®

This model marks a very significant milestone. As a trend-setting custom, the 1984 Softail model introduced two major features: the Evolution engine and the new Softail frame. The frame is unique in that visually it has the simple straight lines of a classic hardtail.

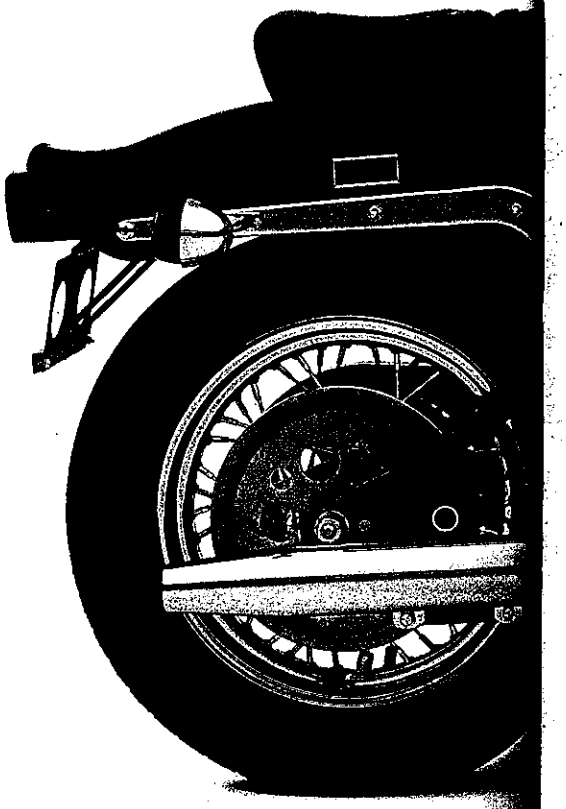
Yet through its pivoting rear section, the frame allows for hidden rear wheel suspension—the rear shocks are underneath the transmission. This structure has allowed us to have the flexibility to create many Softail iterations, each with its own distinct look.

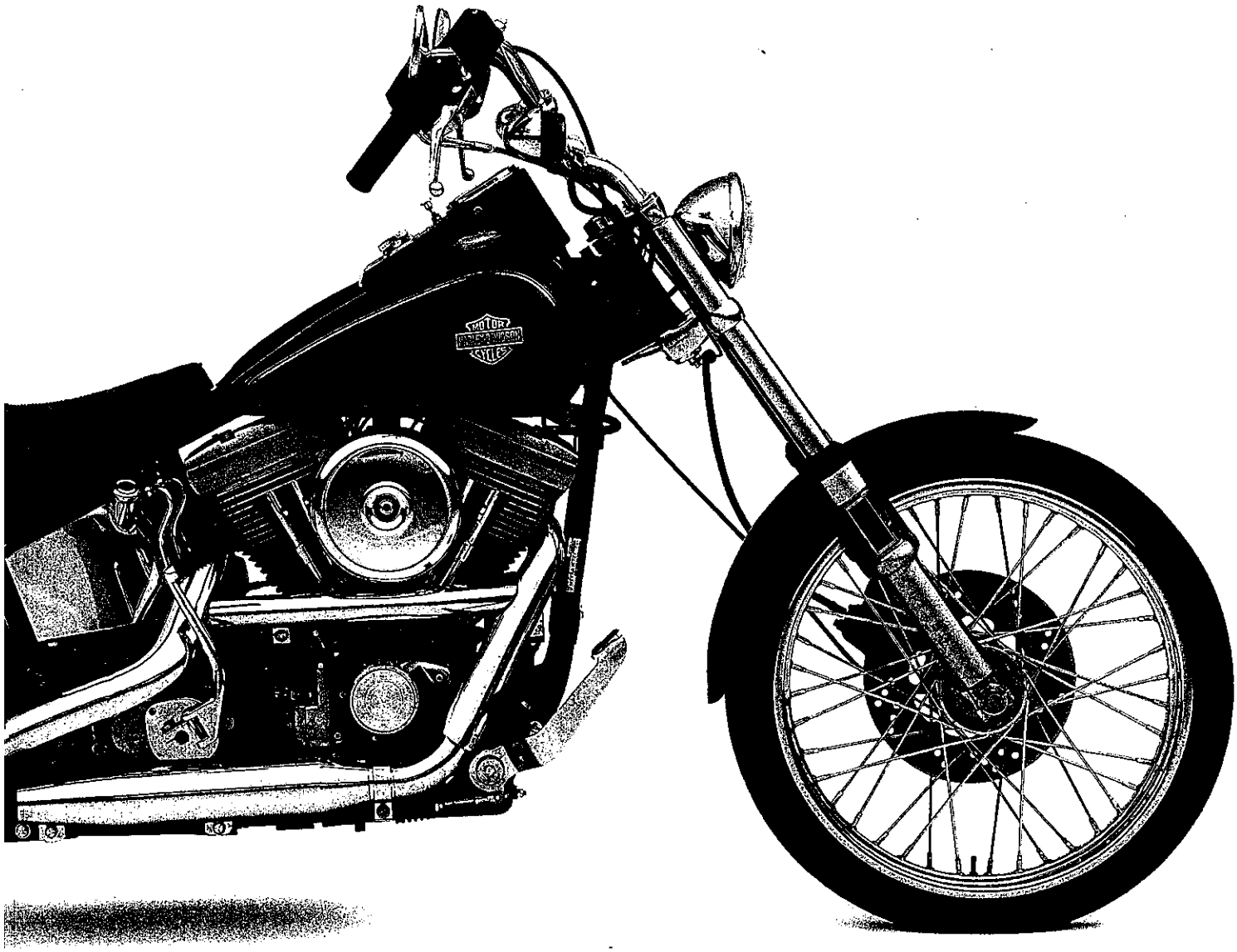
Coupled with the contemporary styling version of the hardtail were a horseshoe wraparound oil tank, the bob tail rear fender, a deep pocket seat, and 21-inch front wheel. The tank identity is our most important symbol: the Bar & Shield.

When I think back to the timing of this model (we were struggling new owners), and its impact on the market, I realize how critical this great new engine and chassis were to our survival. The Softail line has been a perennial best-seller for us and a favorite among motorcyclists. It successfully blends the past with current technology and appeals to Harley riders everywhere. It was a modern bike with roots in our heritage.

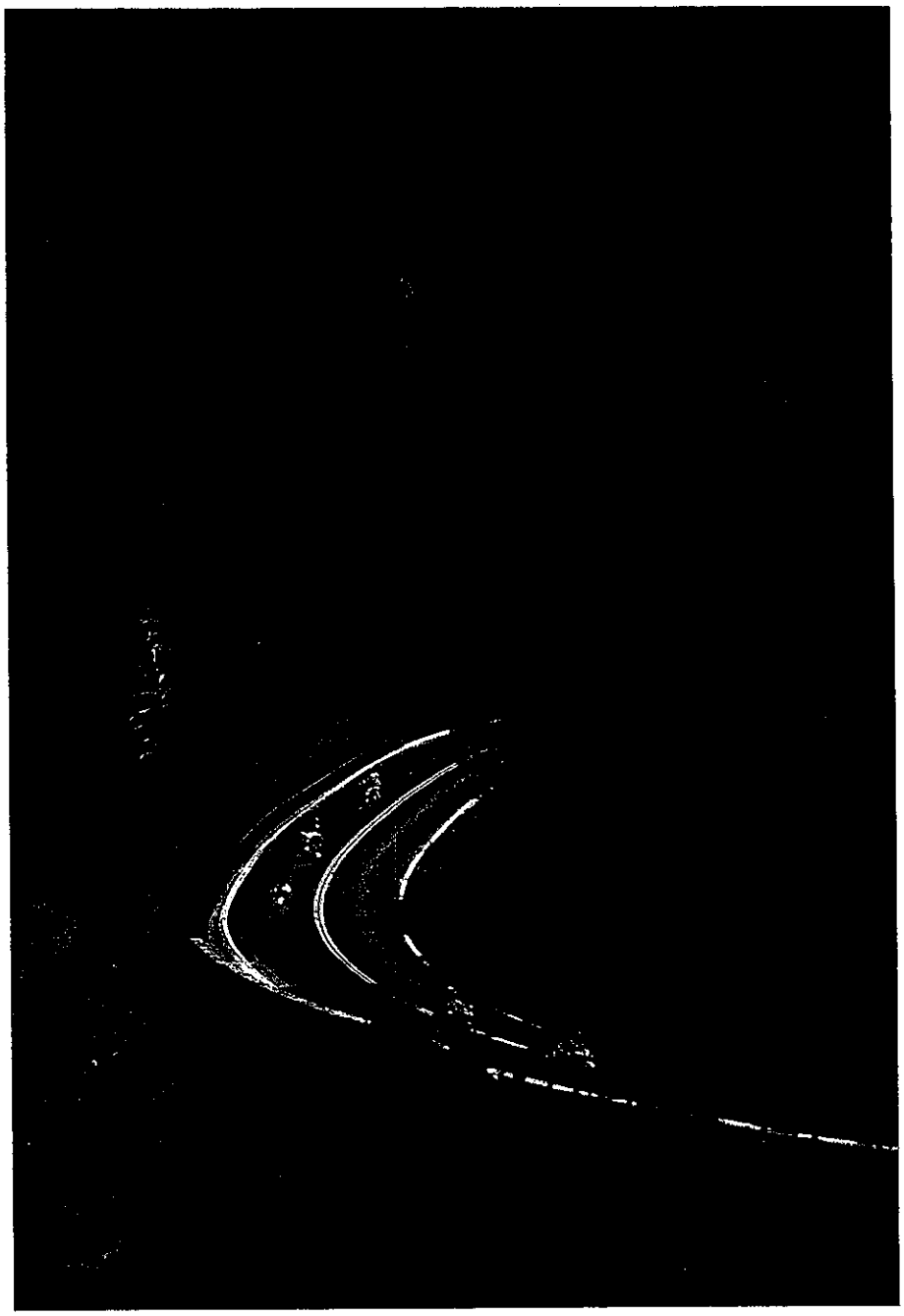
POWERTRAIN
Engine: 45-degree, overhead-valve V-Twin Evolution®
Displacement: 80 cubic inches
Transmission: Five-speed foot-shift
Primary drive: Double-row chain
Secondary drive: Chain
Brakes: Single disc (front and rear)
Ignition: Electronic

CHASSIS
Frame: Double downtube
Suspension: Telescopic forks (front); horizontal gas-charged shocks (rear)
Wheelbase: 66.3 inches
Gas tank: 5 gallons
Oil: 3 quarts
Tires: 21 x 16 inches (front and rear)
Colors: Vivid Black; Candy Red

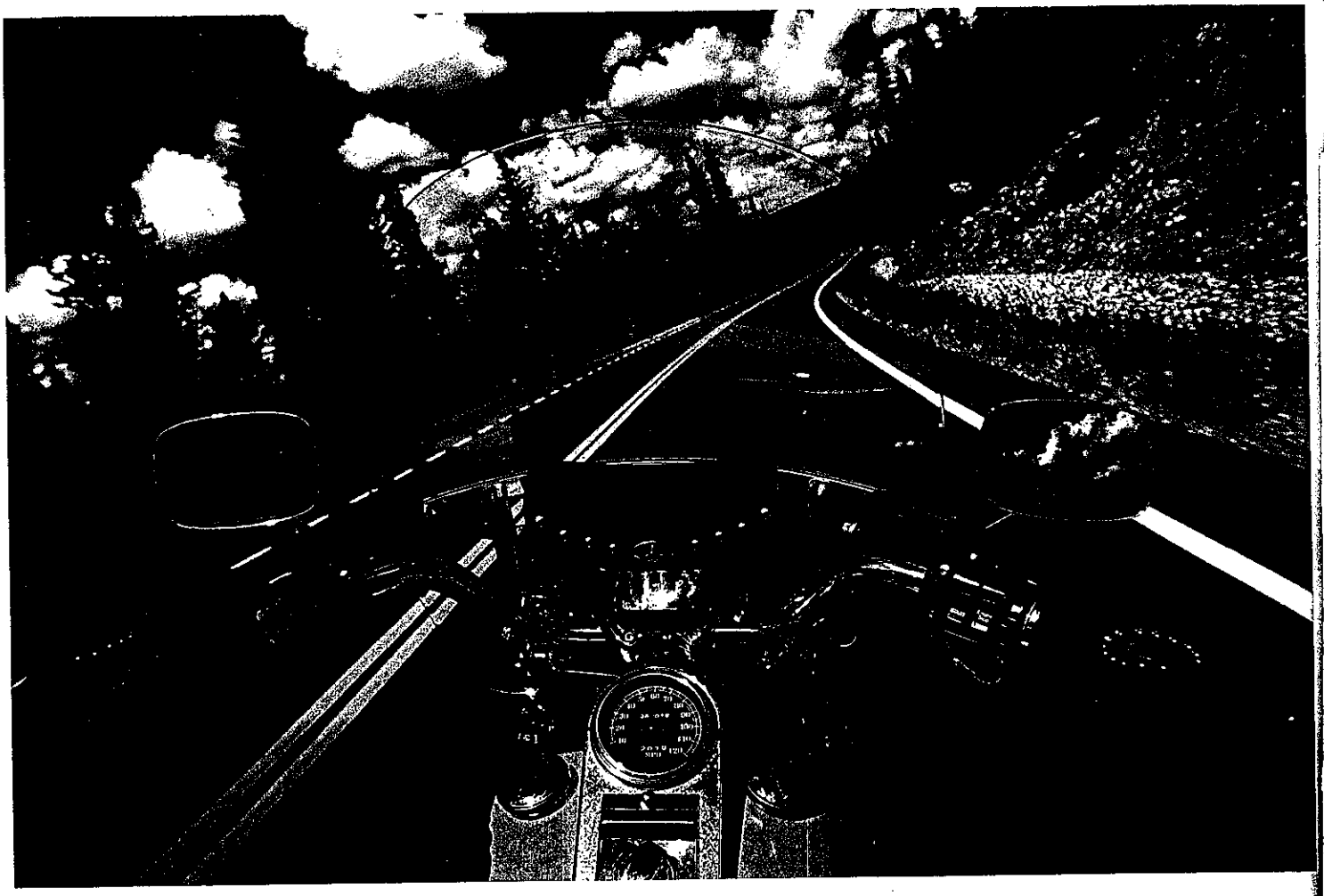



MOTOR
HARLEY-DAVIDSON
CYCLES

1997 | *The faithful at an annual gathering in Laconia, New Hampshire.*

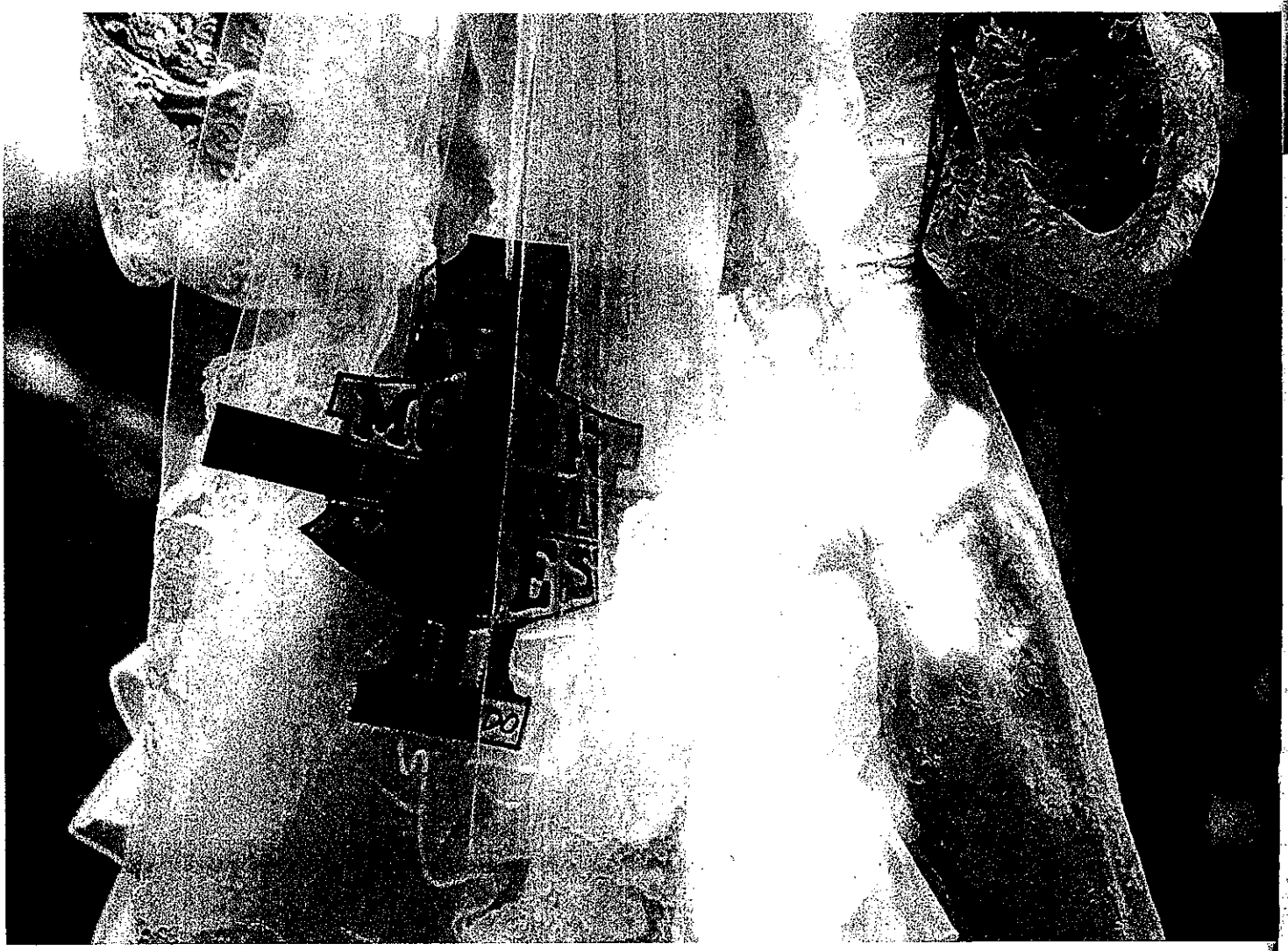


1996 | *This stretch of the ride winds through Flagstaff, Arizona.*



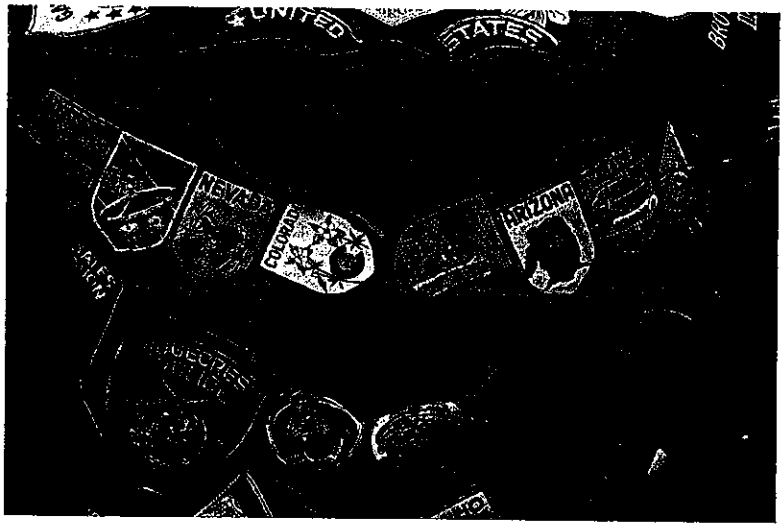
1990 | *Nothing compares with the road ahead, seen over the console of a Harley-Davidson motorcycle.*

1998 | *There's barely enough room to admire all the bikes parked along Main Street during Bike Week at Sturgis.*



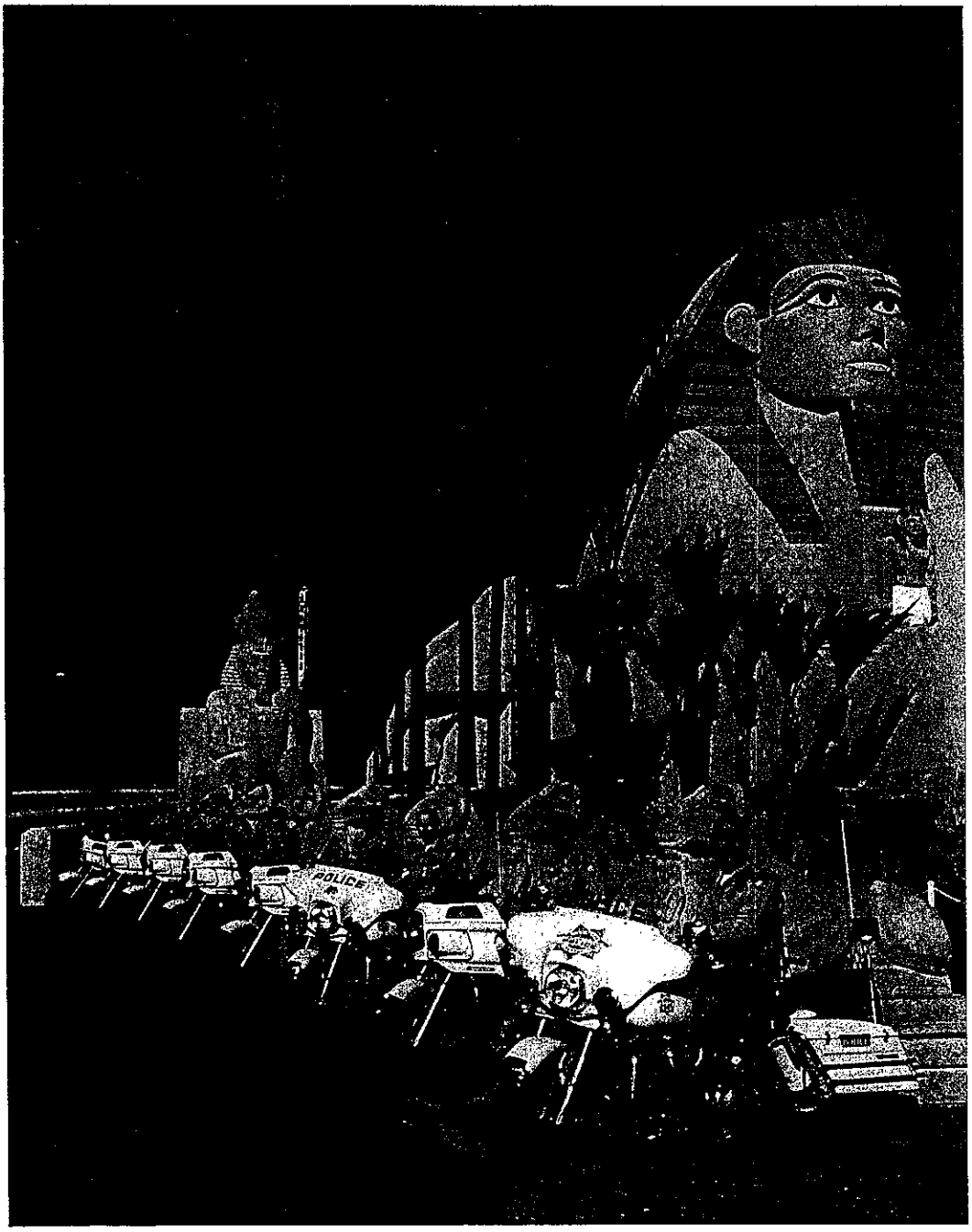
1984 | *Enthusiasts find many ways to express their passion for the brand.*

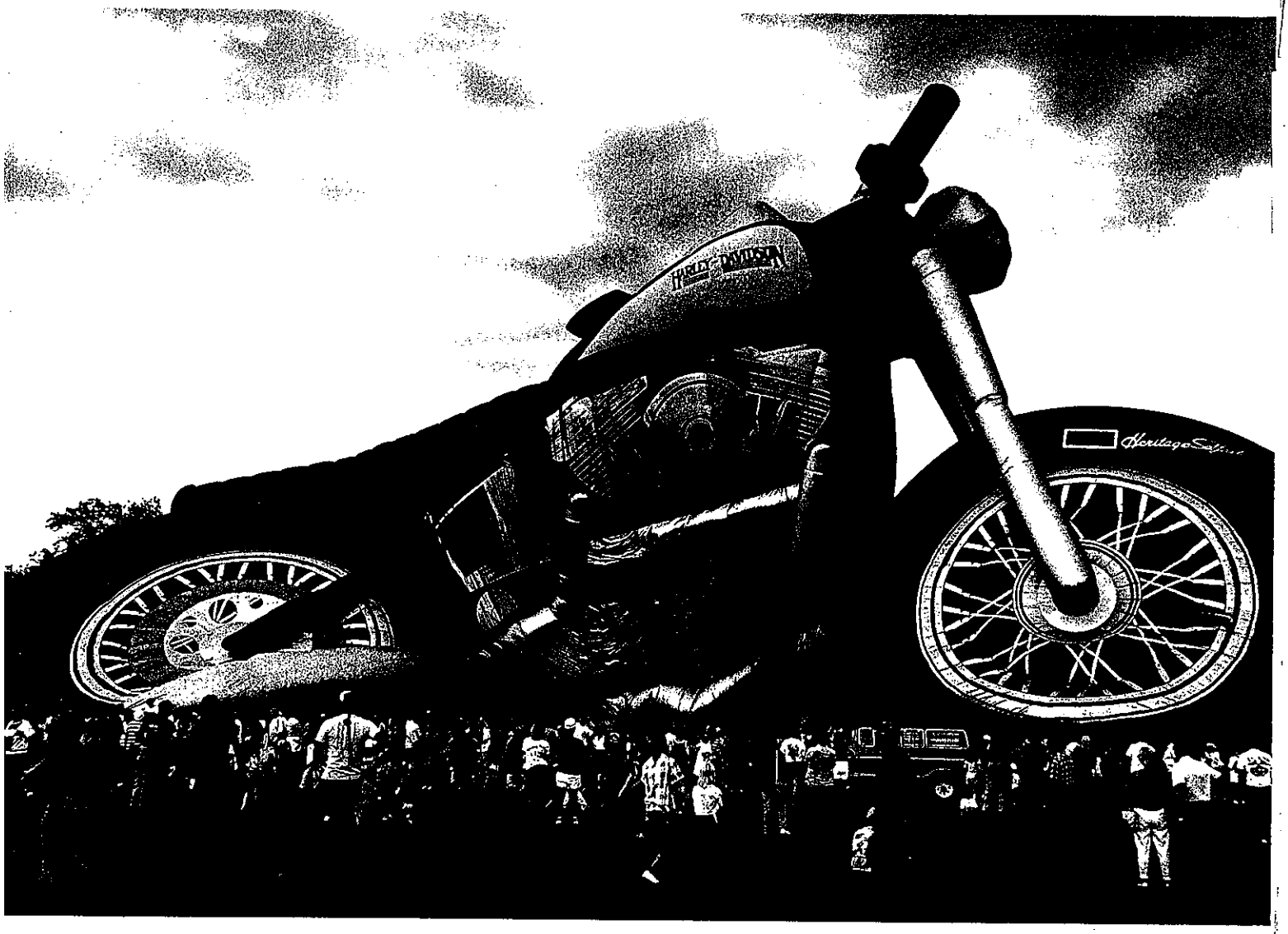
1994 | *A trio of German riders compare their tattoos at a rally in Spain.*



1993 | *During the 90th Anniversary celebrations in Milwaukee, enthusiasts from all over the world showed off their ride and rally patches.*

1992 | *Harley-Davidson patches make an unique statement.*


POLICE



1994 | *The Las Vegas Metropolitan Police Department poses in front of the Luxor hotel.*

1991 | *During the 50th Annual Sturgis Rally, Malcolm Forbes launched a hot-air ballon in the shape of a Harley-Davidson Heritage Softail motorcycle.*

1986 | XLH SPORTSTER®

In 1986, we introduced the Evolution heads and engine to the Sportster model. It was a major development for this motorcycle. The Evolution engine castings are aluminum, making it a more efficient engine than the so-called "Ironhead" on previous Sportster motorcycles. The Evolution is unit constructed, which means that the transmission is an integral part of the crankcase, whereas our Big Twins have a separate crankcase and transmission. With its Evolution engine configuration, the Sportster has remained in production to this day and represents approximately 20 percent of Harley-Davidson sales.

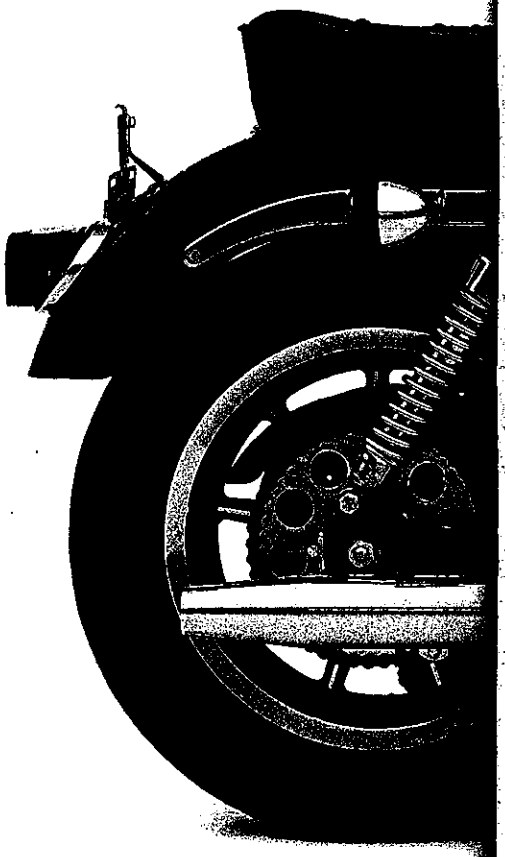
Visually, the character of the Sportster comes across in minimalist and unique ways. If you take a quick view—looking down on the bike—the Sportster is very narrow relative to our other models. The fuel tank, fondly referred to as the peanut tank, is a strong visual cue in identifying this motorcycle. And there isn't a console on this fuel tank, just a fuel cap. The speedometer and tachometer instrumentation is on the handlebars. The profile shows a triangulated oil tank under the seat, the racetrack-shaped air cleaner, and the shorty duals. Another major identifier on the lower half of the engine is the cam cover. And, like all Sportster models, the 1986 XLH has a small headlight.

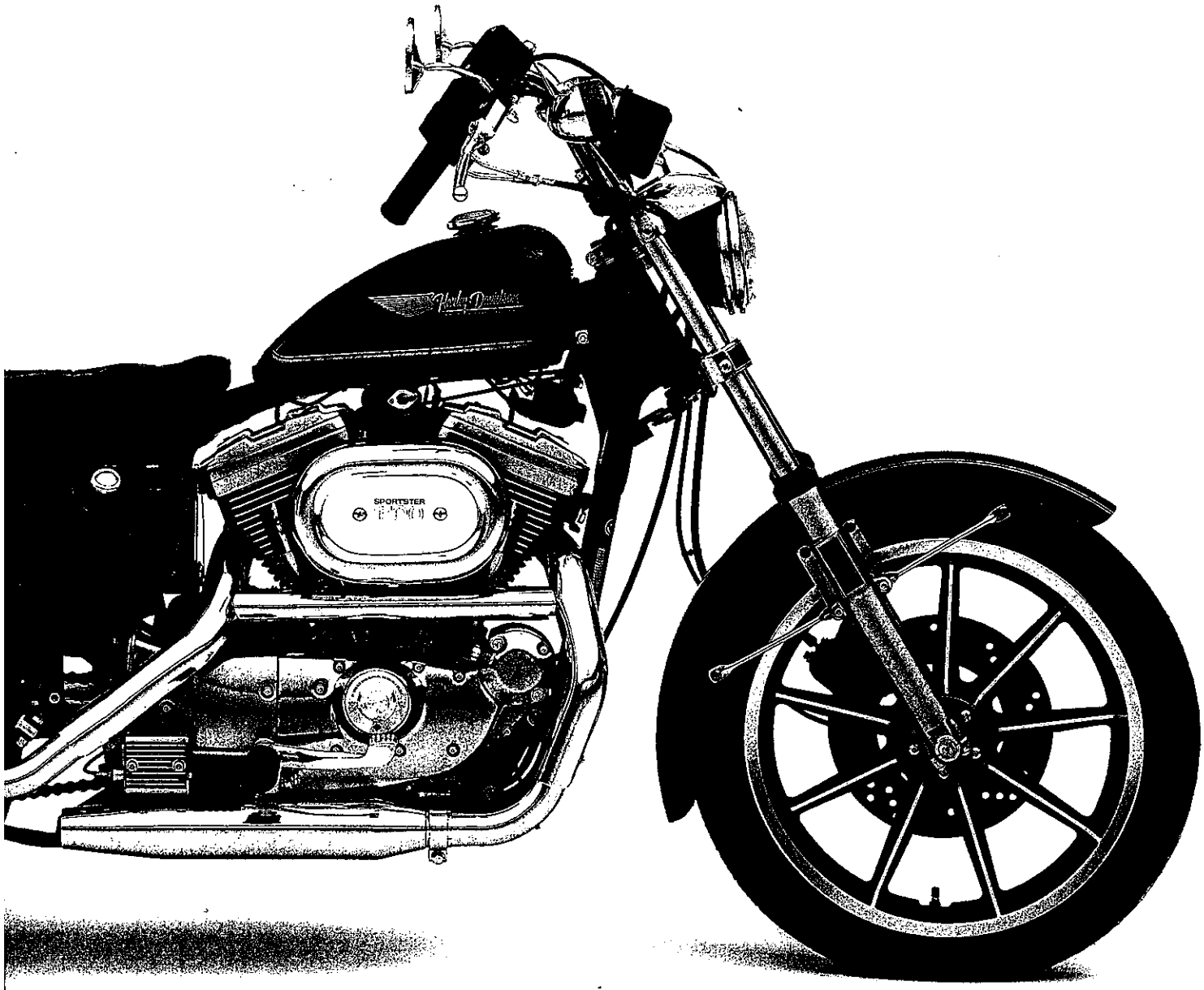
POWERTRAIN

Engine: 45-degree, overhead-valve V-Twin Evolution®
Displacement: 1100 cubic centimeters
Transmission: Four-speed, foot-shift, unit construction with engine
Primary drive: Triple-row chain, oil-bath lubrication
Secondary drive: Single-row chain
Brakes: Single disc (front and rear)
Ignition: Electronic

CHASSIS

Frame: Steel, double downtube
Suspension: Telescopic fork (front); dual shocks (rear)
Wheelbase: 59.3 inches
Gas tank: 2.25 gallons
Oil: 3 quarts
Tires: 19 x 16 inches (front and rear)
Colors: Vivid Black; Signal Red/Slate; Candy Blue; Candy Burgundy/Slate; Candy Purple/Silver; Liberty Edition




Harley-Davidson
SPORTSTER

I, AND MANY OTHERS, BELIEVED THAT

THE COMPANY WOULD SURVIVE

THANKS TO THE INTRINSIC VALUE OF OUR BRAND

AND THE

LOYALTY

OF THE RIDERS, DEALERS, AND EMPLOYEES.

HARLEY-DAVIDSON WAS DOWN

BUT NOT OUT.

WISH I COULD SAY THAT THE THRILL OF OUR BUYBACK FROM AMF was enough to carry us through our first years as an independent company. The truth of the matter was that we almost immediately found ourselves bogged down in a huge, complicated mess that would eventually put the very existence of Harley-Davidson into jeopardy.

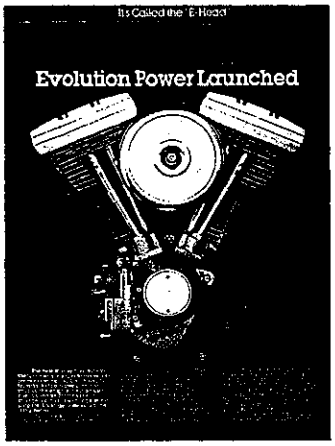
In the span of a few years, an economic recession had dragged the entire motorcycle industry to its knees. High unemployment and interest rates greatly reduced the demand for motorcycles. Those factors, along with intense competition from Japan, were killing us. Our sales volumes were plummeting, and we hit our all-time low U.S. market share in 1983. We had been bleeding red ink.

We responded with belt-tightening measures such as huge budget cuts and extended payment schedules for our nervous suppliers. But it wasn't enough. To keep the doors open and cover our debts, we had no choice but to lay off employees. We were on such shaky financial ground that we would eventually need to ask 40 percent of our workforce to leave.

The pain of seeing people I'd known and worked with for years, people who had remained loyal to Harley-Davidson after all we'd been through, carrying boxes out the door and taking the bad news home to their families was devastating. Though our dealers were justifiably worried about whether they'd survive, they stood by us; the leadership group and employees were in survival mode. However, the glass was half full, not half empty. In other words, yeah, it was tough, but we were on a course. I, and many others, believed that the company would survive thanks to the intrinsic value of our brand and the loyalty of the riders, dealers, and employees. Harley-Davidson was down but not out.

The difficulties were far from over; even though we'd taken these painful steps to cut expenses, our Japanese competitors seemed to take a different view of the U.S.'s economic situation. Rather than cutting back as the market sank, they continued to export

motorcycles at the same volume. So their dealerships were bulging with more inventory than they could possibly sell. The only way for dealers to unload the bikes was through ridiculously low pricing, against which there was no way we could compete. When an imported heavyweight motorcycle sold for considerably less than a Harley-Davidson motorcycle, it created an unfair market advantage. We felt defeated.



The 1984 introduction of the V² Evolution engine marked the first radically new Harley-Davidson motor since the 1966 Shovelhead engine.

Desperate, we approached the International Trade Commission (ITC), the federal watchdog for international competition. We made the case that an uneven playing field threatened not only our company but an entire American industry. We knew it was a long shot, since other industries had asked for government protection and received none. Several newspapers predicted that we'd soon be finished.

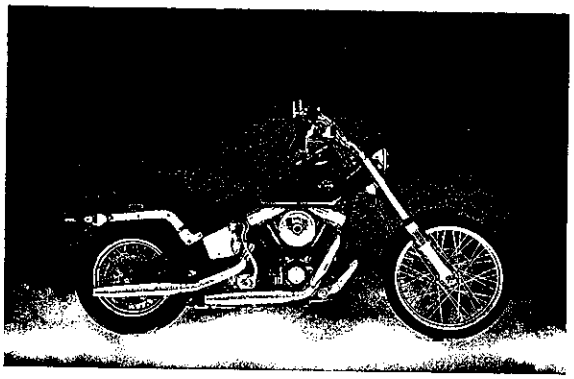
Maybe it was the bags of letters from our dealers, customers, and employees that arrived every day at the White House and the ITC. Or maybe it was just a feeling that a great American company, making some major efforts to revitalize itself, was dying. Whatever it was, in early 1983, the ITC recommended to President Ronald Reagan that he impose taxes on imported heavyweight motorcycles to protect American jobs and help us complete our revitalization efforts. Reagan agreed on April 1, and gave us five years of protection to ensure a level playing field.

The tariff announcement gave us a tremendous lift and sent a message to the marketplace that Harley-Davidson wasn't going down without a fight. We got some positive media exposure, too, which boosted employee morale. In spite of the skeptics, we could see that a lot of people out there were rooting for us. That felt good.

The next challenges were to bring rider confidence back to Harley-Davidson and soothe our bankers, who were becoming increasingly impatient. It was a critical test for us. Thankfully, the new owners were determined to survive this crisis. Under Vaughn Beals' leadership, Harley-Davidson was becoming lean, tight, and focused. We were instituting groundbreaking programs for employee involvement, extensive quality improvement, and "just in time" inventory control. Employees were rallying behind these ideas and generating success. All of which was reassuring, but it was understood that we couldn't make any big mistakes or we'd never pull ourselves out.

We also knew that the Evolution motor project that Jeff Bleustein had been leading was about to launch. And we had high hopes for the Softail motorcycle. But funds were tight. We didn't have the money to develop some of the other vehicles we had on the drawing board, so we did as much as possible with existing models—creating different nameplates, instrument consoles, handlebars, paint, seats, exhaust systems, and wheels. As challenging as this was, it motivated my team and me. Our leaders understood the value of styling and that raised morale. Still, we were under continuous financial pressure.

With the 1984 model-year product launch came our



1340cc V² Evolution motor. It was an instant hit with the motorcycle press. They called it our greatest engineering effort to date. It was our first major engine project in nearly 20 years and was stronger as well as more reliable and fuel-efficient than anything we'd ever built. We powered five models with the V² Evolution that year. The new FXST Softail had a time-honored "hardtail" look with concealed rear suspension. It raised the styling bar and gave customers a "canvas" for customizing creativity. It's still an important vehicle for us. The Softail chassis served as a springboard for significant model variations.

Word of mouth in the marketplace was slowly starting to shift, and we could see some light at the end of the tunnel. We were spending more time with our customers than ever before, thanks in large part to the growing ranks of the Harley Owners Group. I'm convinced that this growing closeness with our customers was absolutely vital to rebuilding the trust we'd lost over the years. Even though the quality of our motorcycles was much improved, the sour taste of recent years lingered. We were learning that the only real way to regenerate trust was face-to-face, one customer at a time. So we were looking for opportunities to ride with our customers—and, of course, to recruit new ones.

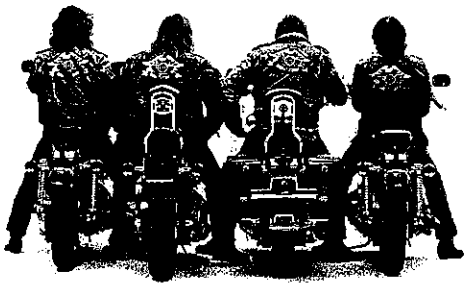
You'd probably never dream of buying a car without a test drive. Well, for years, test rides didn't exist in the motorcycle industry. We were so eager to put riders on our current bikes that we experimented with a demo-ride program. By loading new motorcycles onto trucks and hauling them to events and dealerships around the country, we showed riders both the equipment and our commitment to them. The program was an immediate success and would soon become an industry standard.

Through discussions with riders and employees, including management, we were gaining a practical sense of what customers wanted and expected from Harley-Davidson. We were starting to move in the right direction, and our sales data reflected it. We got a shot in the arm when the California Highway Patrol awarded us a sizable contract in 1984. This endorsement reinforced the positive perception spreading in the marketplace. But we still faced financial challenges. We were far from being out of the woods.

In August 1985, we introduced another motorcycle

The 1984 FXST Softail was one of five models to feature the new V² Evolution engine, which gave riders more torque and improved reliability.

Below: The overwhelming popularity of the H.O.G. (Harley Owners Group) provided a new outlet for loyal riders.



Harley-Davidson pioneered the concept of demo rides, which offered would-be customers test rides on different models.

Far right: Executives and friends make a stop on the 1986 Liberty Ride.

that would be very well received—the FLST Heritage Softail. This bike had the classic look of a fifties-era Harley-Davidson, and its wide front fender and Softail rear suspension brought to mind the early Hydra-Glides.

In the fall of that year, an opportunity presented itself. The restoration of the Statue of Liberty was being widely reported in the media. We decided to run two simultaneous cross-country fund-raising rides for the Statue. Vaughn led a customer group on the west-to-east route across the northern U.S., while I led the southern route. We rode limited-edition Liberty motorcycles with a unique paint scheme and Statue of Liberty graphics. We built 1,750 of them and promised to donate a hundred dollars for each one sold.

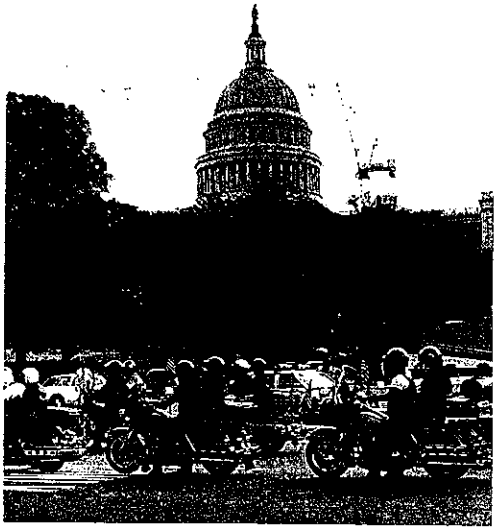
For some of us, this ride was a first—getting our feet wet on a cross-country journey, inviting riders, stopping in cities, visiting dealerships for special events, the whole deal. More and more riders joined us along the way. Meanwhile, the press was starting to warm to us. They obviously enjoyed the spectacle of a large group of motorcyclists riding these beautiful machines. It was a welcome change to be interviewed by reporters who were starting to understand what we were all about and wanted to see us succeed.

When we reached the Statue of Liberty, Vaughn presented a check for $250,000, raised through the sale of the limited-edition motorcycles and other pledges received from customers. The media coverage gave the general public a sense of how exciting it would be to join a cross-country ride.

Sales and market share continued their upward trend. In fact, virtually every productivity measure was improving, and it looked like we were going to close the year on a high note.

But then a bomb went off that put us hours from

insolvency. In October, our lead lender announced that they were going to discontinue overadvance financing (lending above a borrower's credit line limit) to Harley-Davidson because they thought we were too risky. The part I remember clearly is being called into a meeting as an investor (one of thirteen) and owner of the company to hear that the bank was



pulling the plug and we might have to file for bankruptcy. We were in shock. Here's this national treasure, Harley-Davidson, and you're given this news. It's your whole life, and you absolutely don't know what to do. Then you have to go home and tell your wife and family that, hey, maybe this company isn't going to make it. It's gut-wrenching, much stronger than words can express.

Vaughn Beals and then-chief financial officer Rich Teerlink went up and down Wall Street, trying to beg, borrow, or steal financing. They were getting beaten down and rejected by some of the biggest names on the Street. Words like "bankruptcy" and "Chapter 11" started floating through the halls. The buyback group met with the lawyers. It became painfully clear that if a new financing deal wasn't struck by December 31, we'd be filing for Chapter 11 protection in January 1986.

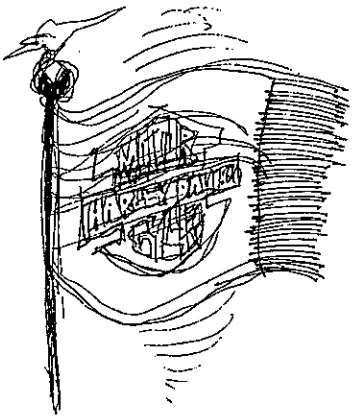
What better time than the holidays for good news? Vaughn and Rich teamed with Steve Deli of Dean Witter's Chicago office and found a lender who offered a verbal commitment to finance us. We had hope.

But the story doesn't end there.

On the afternoon of December 31, Rich received the devastating news that the lender couldn't possibly gather the needed signatures and transfer funds before banks closed for the holiday. I'm not sure how Rich did it, but he convinced the lender to keep the office open a little longer and literally ran from desk to desk to obtain the necessary signatures. The paperwork went through, and money was transferred with only minutes to spare. Harley-Davidson would be open for business in 1986.

I knew all along, going back to the early buyback discussions, that we were taking a big risk in buying Harley-Davidson. But I believed then, as I do now, that our name—our brand—is a gem. And I knew there were a lot of people out there who agreed. Harley-Davidson survived, and today we are where we once imagined we could be.

The 1985 Liberty Ride helped fund the Statue of Liberty renovation. Harley-Davidson's contribution to the effort came from the sales of special Liberty Edition motorcycles.



1986 | FLST HERITAGE SOFTAIL®

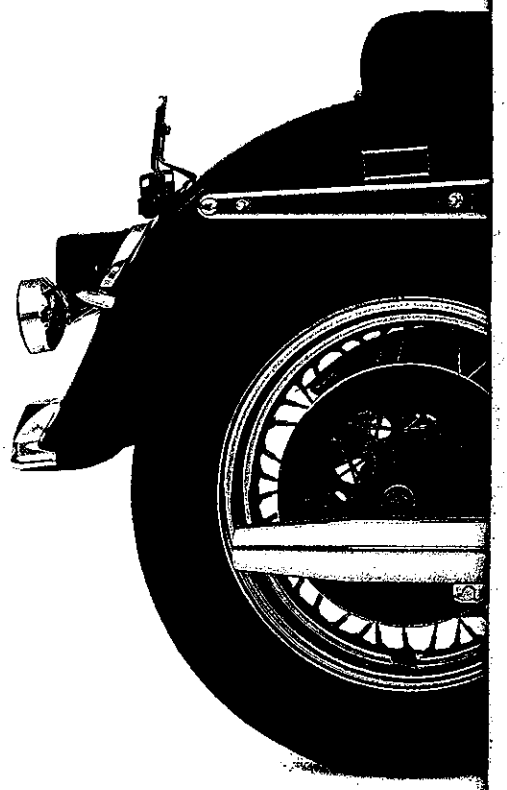
I was out riding the Heritage Softail motorcycle just after it launched in 1986. When I stopped at a filling station, a man said to me, "Nice restoration." I told him that this was no restoration—it was a brand-new motorcycle.

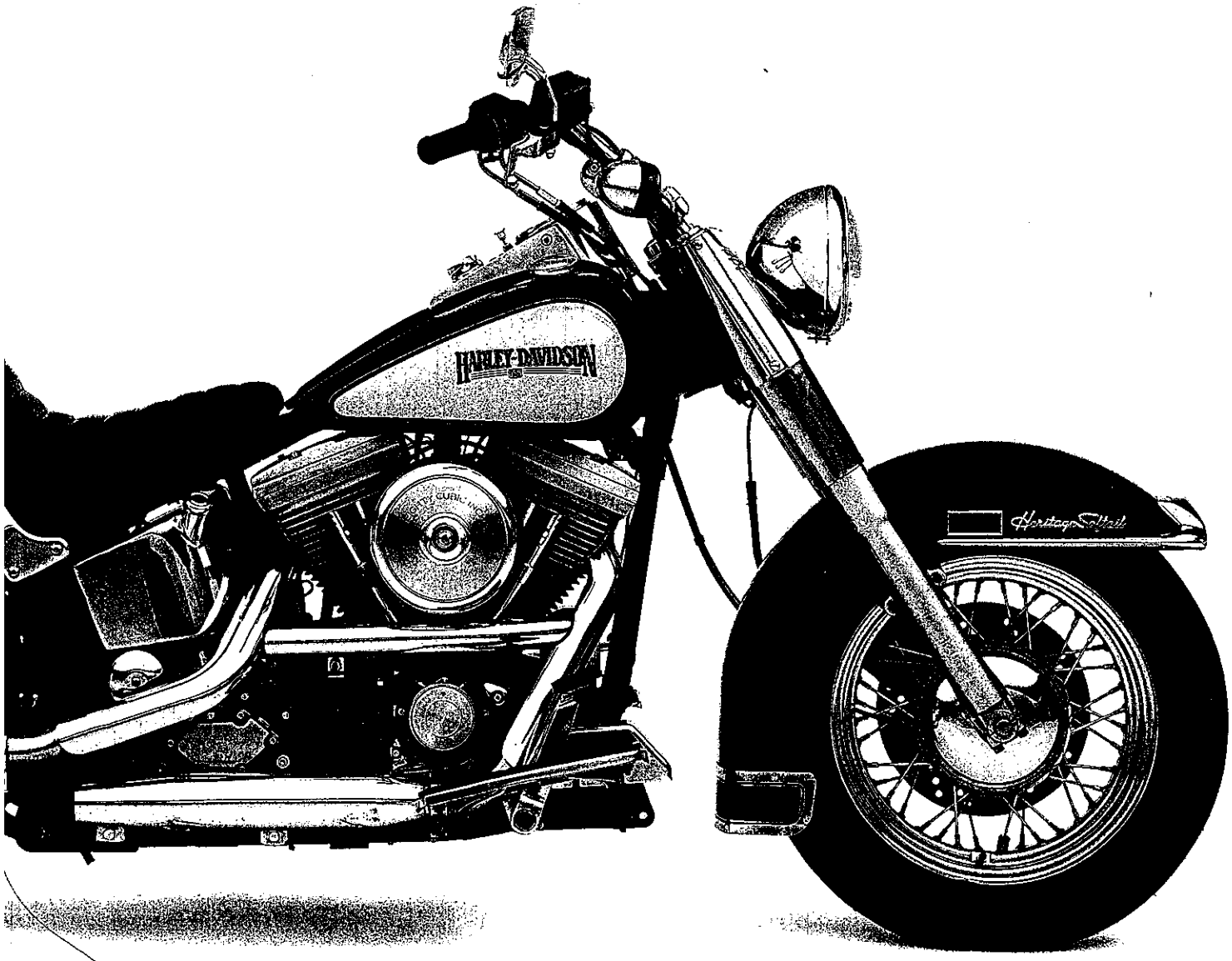
The Heritage Softail, which is the second major iteration of the Softail frame, has a look that reflects styling elements of the 1949 Hydra-Glide. While the first Softail models had a narrow, small front tire with a 21-inch rim and a 3-inch cross-section tire, the Heritage Softail has a big 16-inch front tire rim and a traditional large touring-style fender, coupled with a substantial headlight and front fork mechanism. You can see the Hydra-Glide styling clearly in that fork assembly. It's classic Harley-Davidson. The laced front wheels with the big chrome hubcap also come from Hydra-Glide styling.

These design elements were popular in the fifties, and their application to the Heritage Softail remains popular to this day. It's a basic look, which is why our customers like it.

POWERTRAIN
Engine: 45-degree, overhead-valve V-Twin Evolution®
Displacement: 80 cubic inches
Transmission: Five-speed foot-shift
Primary drive: Double-row chain
Secondary drive: Belt
Brakes: Single disc (front and rear)
Ignition: Electronic

CHASSIS
Frame: double downtube
Suspension: Telescopic forks (front); horizontal gas-charged shocks (rear)
Wheelbase: 62.5 inches
Gas tank: 3.5 gallons
Oil: 3 quarts
Tires: 16 inches (front and rear)
Colors: Signal Red/Cream




HARLEY-DAVIDSON
Heritage Softail

PRESIDENT REAGAN PRAISED OUR EMPLOYEES

FOR THEIR EFFORTS AND SAID

HARLEY-DAVIDSON HAD SHOWN

THAT AMERICAN BUSINESS,

GIVEN THE OPPORTUNITY TO COMPETE FAIRLY,

COULD TAKE ON THE GREATEST COMPETITION IN THE WORLD.

EVERYONE CHEERED,
FLAGS WAVED, TEARS FLOWED.

GOD BLESS AMERICA.

AT HARLEY-DAVIDSON, WE'RE IN THE BUSINESS OF HAVING fun. But that doesn't mean we'll ever forget how it felt to get knocked down during the mid-eighties. In the latter half of the decade, we were starting to move in a positive direction. Good times were starting to roll in the marketplace, and we were getting a strong sense of this back at headquarters.

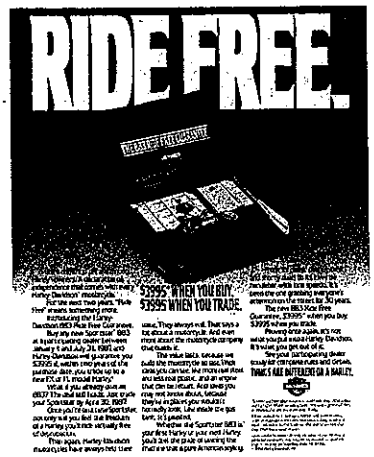
After Vaughn Beals and Rich Teerlink secured our future with some financial wizardry in late 1985 to keep the doors open, we entered 1986 with renewed energy and spirit. I guess we figured that after all the headaches, heartbreaks, disappointments, and damn hard work—and the shocking fact that we came within a few hours of disaster—we were long overdue for a little sunshine. We were winning back riders and attracting new customers to the brand.

This was a wonderful time for Harley-Davidson employees to be out with riders. We got the message that our customers, especially those who'd been with us through our dark period, were pumped up. Their support and loyalty, then and now, is crucial. After some admittedly uncomfortable years, it was nice to get slaps on the back and thumbs-up signs.

The non-motorcycling world also saw that we were getting our act together: some of the country's most influential manufacturing publications began showcasing our innovative business techniques. Our public relations people showed these write-ups to national newspapers and encouraged them to publicize our efforts. The word "turnaround" started appearing in connection with the name Harley-Davidson. Fortune 100 companies sent teams to study our manufacturing methodologies.

Given our run of financial trouble, it might not have seemed like the ideal time for a public stock offering, but Rich and Vaughn saw it as a realistic way to raise capital and reduce our massive debt. They did a super job of convincing Wall Street we were a safe bet. When our stock was offered on the American Stock Exchange

in June 1986, brokers found that there was more demand than there were available shares. This, of course, is what drives stock prices up.



For two years beginning in 1986, Harley-Davidson offered a rebate for the entire purchase price of a Sportster toward a new, larger Harley-Davidson model.

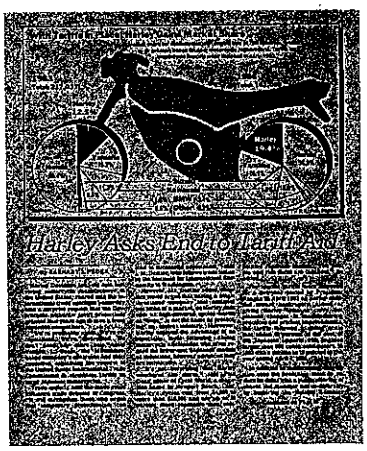
The next day, Vaughn came in my office, shut the door, and put a bottle of champagne on my desk. We had gone from a highly leveraged and risky buyout in 1981 to near bankruptcy in late 1985, and now, just six months later, to a successful stock offering. Since the initial offering, our stock has been one the nation's top performers, which has allowed many thousands of investors to share in our success. And I still have that bottle from Vaughn; it's a little remembrance that will never be opened.

But the year was far from over. Our marketing people devised a brilliant play. Purchasers of new Sportster models could trade them in any time over a two-year period and receive the $3,995 purchase price toward the price of a larger Harley-Davidson motorcycle. This was totally unheard of and conveyed an important message: if Harley-Davidson believed enough in the quality, reliability, and resale value of its motorcycles to buy them back from customers for the full selling price, they must be super bikes.

We received vast amounts of attention for this program, and customers took full advantage. The timing was perfect, too, since we had just launched some pivotal motorcycles, in particular the Heritage Softail and the Low Rider Custom, both of which became big sellers for us.

The Heritage Softail was a significant bike in the Softail lineup and was a contemporary throwback to the '49 Hydra-Glide, so that's why we named it "Heritage." It was a stylish combination of a period look with our current engine.

The FXLR Low Rider Custom was the second generation of the 1977 Low Rider. The 1987 version had a rubber-isolated engine, which meant greatly reduced vibration. We also added a five-speed transmission, so the package required a brand-new frame design.



Far right: The New York Times *was quick to note Harley-Davidson's financial recovery after company leader requested that a tariff against large foreign motorcycles be lifted a year early.*

Late in the year, fueled by all the positive marketplace momentum, we achieved the number one market-share position for 651cc and above in the U.S. market. We were becoming a product people talked about and dreamed of owning. We had a much better holiday season than the year before!

Nineteen eighty-six was a banner year for us, but 1987 was even better. We'd been looking at the tariff situation very closely. After the International Trade

Commission and President Reagan levied the increased tariffs on imported heavyweight motorcycles for a five-year period back in 1983, our competitors started finding imaginative ways to sidestep them. Because the tariffs applied to bikes 700cc and above, they imported motorcycles with engine configurations just below 700cc. Knowing that there was only one year left under the tariff provisions, and feeling confident about our status in the marketplace, we made an epic decision.

In March, in a room filled with government officials and national media, Harley-Davidson told the world that it no longer needed tariff protection to be competitive, and requested that the tariffs be lifted. Essentially, the announcement said we were strong enough to take on the best competition in the world. This tactic was unprecedented, and within 24 hours, the story was everywhere. The press was now hailing Harley-Davidson's turnaround as an "American success story."

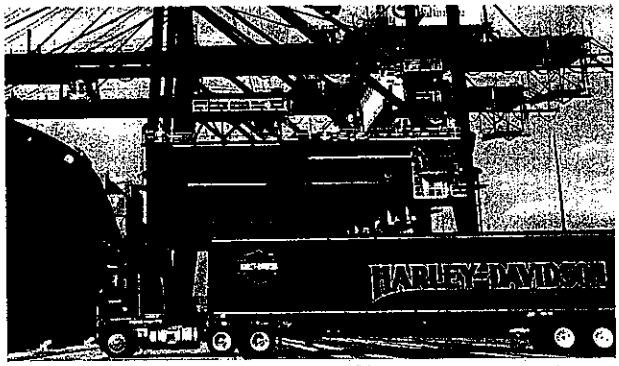
We were on the map. Our turnaround was the kind of story that made people feel good. Other American companies that had struggled to survive against foreign competition took some inspiration from us. Our brightest moment, though, was still to come.

We sent a letter to President Reagan, who at that time was drumming up support for his administration's initiatives to strengthen America's businesses in the global marketplace. Since he'd been so supportive of Harley-Davidson, we thought he might be interested in joining us for a celebration. After a few weeks, the call came in from the White House: the president wanted to pay a visit to our York manufacturing facility.

When I got to York several days later, the first thing I saw were a dozen or so of our beautiful orange and black semi trailers tightly positioned, nose to end, across the entire edge of our property that faced the freeway. I was proud to see this. I had originally designed the truck graphics to create a rolling billboard with our orange and black colors, alongside the bar and shield. With the positioning of the trucks, nobody could possibly get through. The plant was fortressed behind a wall of our trucks! It was a marvelous display of American muscle.

In May, 1987, President Ronald Reagan visited the Harley-Davidson York Final Assembly Plant in Pennsylvania to congratulate employees on the company's recent turnaround. Then-chairman Vaughn Beals is at left.

Secret Service agents and dogs were everywhere, checking everyone and everything. They even had snipers in towers around the place. They went through



The Harley-Davidson trailer truck is a rolling sign of the Motor Company's dedication to its riders.

Far right: A proud threesome monitors the ticker tape on the day Harley-Davidson was first listed on the American Stock Exchange in 1986: (from left) Former Motor Company C.E.O. Rich Teerlink, former chairman and C.E.O. Vaughn Beals, and Dean Witter's Steve Deli.

the plant, and wherever there was a small opening in the floor, they filled it; they didn't want anyone having access to a hidden spot. Some of the event pictures show cardboard shipping crates with our logo. The crates had a disguised opening that could serve as an emergency escape route for the president if it was needed.

Employees were invited to hear the president's speech. The agents led them into one of the warehouse spaces, in the plant itself, where he would speak. They were excited. It was their day. They had earned this.

In the early afternoon, we could tell by the way the Secret Service agents were acting that it was getting close to show time. Way off in the distance, we spotted a helicopter. As the rotors slowed, the door dropped open and out came the White House press corps. But no president. One of the Secret Service agents told me the first helicopter was a decoy. A few minutes later, an identical helicopter floated into view and landed. The president slowly walked down the steps, made his familiar salute, and jumped into the limo, which drove into the plant. The president of the United States of America was in our house. And all those TV cameras meant that everyone in the world was watching.

Reagan attended a roundtable discussion with our corporate and union leaders, along with a few lucky employees, before delivering an inspiring speech to our workers. I was delighted to present him with a Harley-Davidson jacket on this momentous occasion.

President Reagan praised our employees for their efforts and said Harley-Davidson had shown that American business, given the opportunity to compete fairly, could take on the greatest competition in the world. Everyone cheered, flags waved, tears flowed. God bless America.

After the president and his entourage left, we scrambled to watch the national news to see how it all played out. It was an emotional high point to see our logo on the screen behind the network anchors, and Reagan touring our plant and congratulating our employees. When the president of the United States tells the world that Harley-Davidson is a great company building superior products, you feel honored.

There were so many factors that contributed to brand recognition and stronger media attention, and the president's visit was one of them. The local press started to cover motorcycle rallies. Hollywood was approaching us to use our motorcycles in movies and music videos. All of the positive exposure was driving people into our dealerships.

A few months later we announced our move from the American Stock Exchange to the larger New York Stock Exchange and marked the event with a motorcycle parade down Wall Street. Nothing grabs the attention of Wall Street (and media crews) like several dozen Harley-Davidson motorcycles pulling up in front of the Stock Exchange.

We were about to usher in our 85th Anniversary. It was time to plan a customer celebration. In the summer of 1988, our leadership team led cross-country rides from ten North American cities, all headed for Milwaukee, where we enjoyed a day of music and entertainment. One of the benefits of the rides was that we were fund-raising for the Muscular Dystrophy Association. I can't think of a better way to celebrate your birthday and say thank you than to get on your motorcycle and ride with a bunch of customers across this great nation. As I stood next to a monstrously large birthday cake at the party, listening to thousands of customers sing "Happy Birthday Harley-Davidson," I was bursting with pride. We had made it!

Bill Davidson waves the Harley-Davidson flag at one of the 85th Anniversary celebrations in 1988.

1988 | FXSTS SPRINGER® SOFTAIL®

Harley-Davidson discontinued the original Springer on solo FL models in 1948. In the eighties I kept in the back of my mind the idea that someday we should resurrect the Springer fork. That fork is a defining part for a Harley-Davidson. If you look at the front fork, all of its visual excitement is in the chrome springs and the two legs of the fork. In the mid-eighties, a collaboration between many departments at Harley-Davidson, including Engineering, Marketing, and Styling, brought an improved version of the Springer fork back on the market.

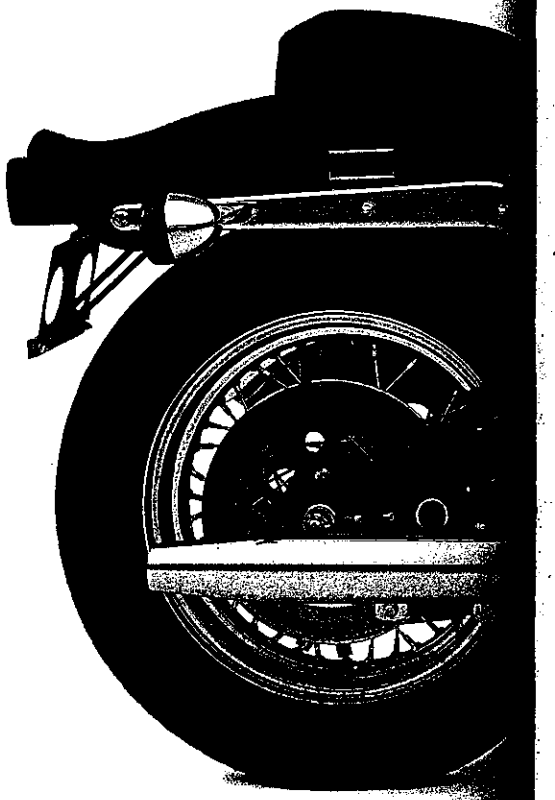
It was a dramatic direction to take because today motorcycle front forks are basically all internal hydraulic. The Springer fork is exposed. Reviving this front fork style after all these years was a major departure from industry norms and took a lot of people by surprise. We brought it back because it's classic Harley-Davidson.

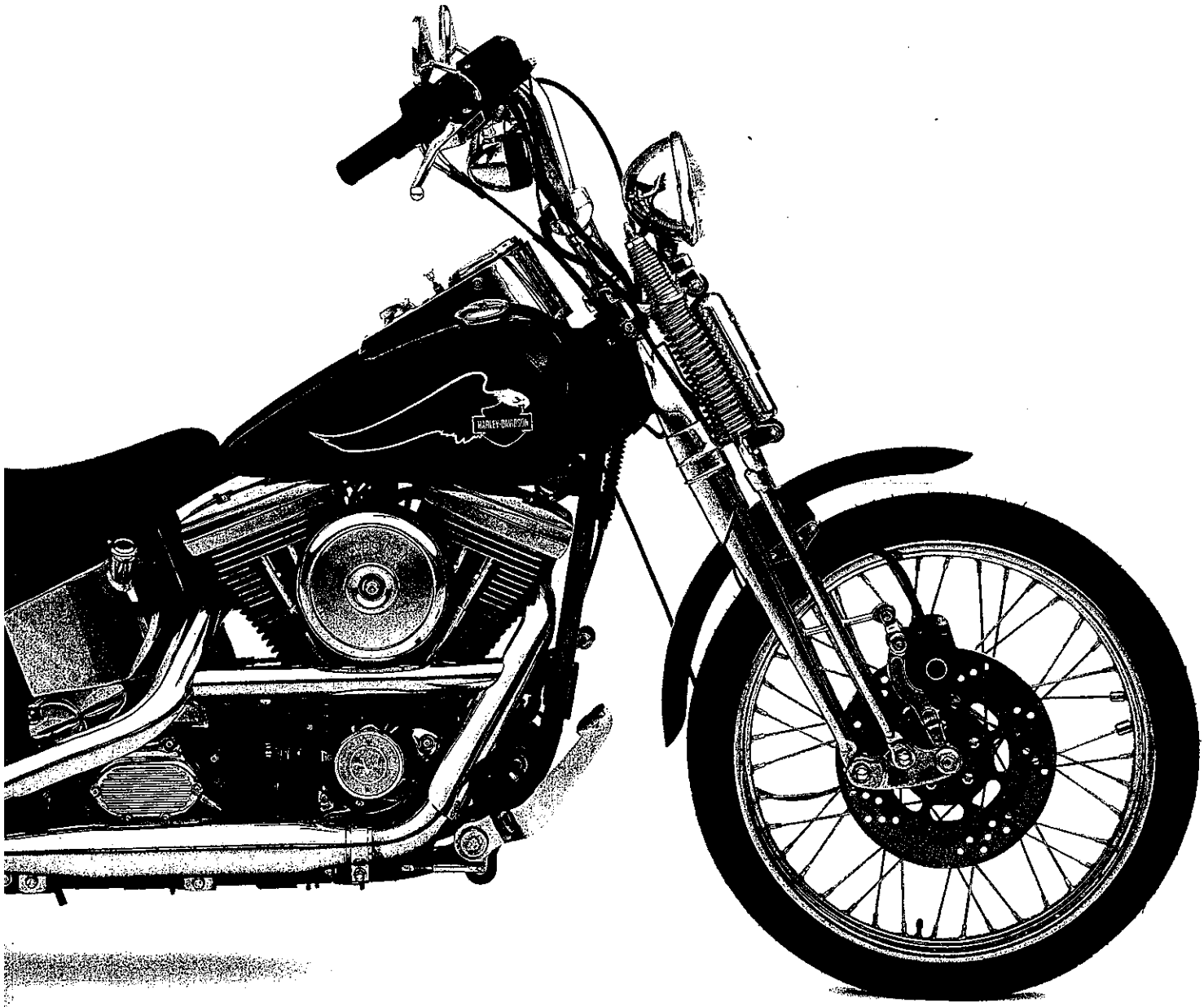
We had a lot to celebrate when we launched this bike in 1988. Manufacturing went the extra mile for this model. You'll notice how the rigid leg tapers in a faithful reproduction of the original fork. We could have done it in a much less expensive way, but we wanted to be true to the original, even though chrome plating the Springer was difficult because of its intricacies.

The tank profiles a unique eagle graphic with a large wing shape that flows out of the Harley-Davidson Bar & Shield. It's a version of the graphic used for our 85th Anniversary bikes.

POWERTRAIN
Engine: 45-degree, overhead-valve V-Twin Evolution®
Displacement: 80 cubic inches
Transmission: Five-speed, foot-shift
Primary drive: Double-row chain
Secondary drive: Belt
Brakes: Disc (front and rear)
Ignition: CDI

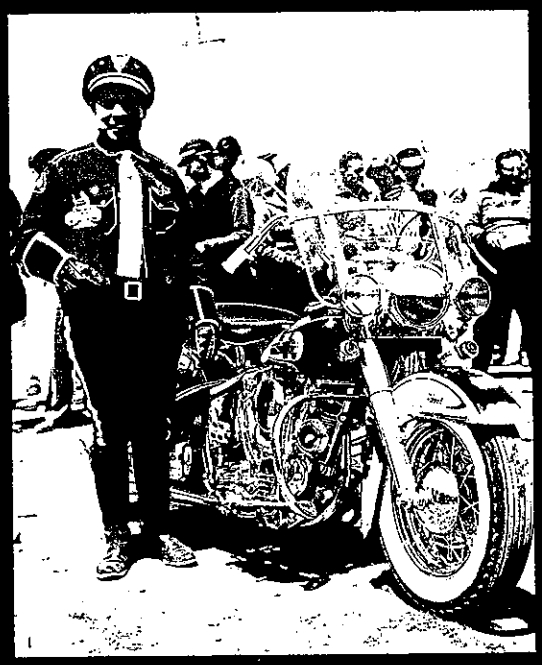
CHASSIS
Frame: Steel, double downtube
Suspension: Springer fork (front); horizontal gas-charged shocks (rear)
Wheelbase: 64.5 inches
Gas tank: 4.2 gallons
Oil: 3 quarts
Tires: 21 x 16 inches (front and rear)
Color: Vivid Black

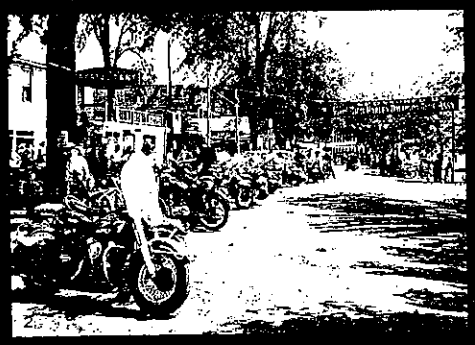


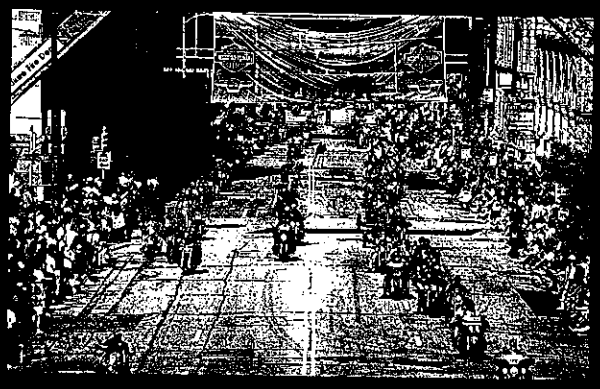

HARLEY-DAVIDSON

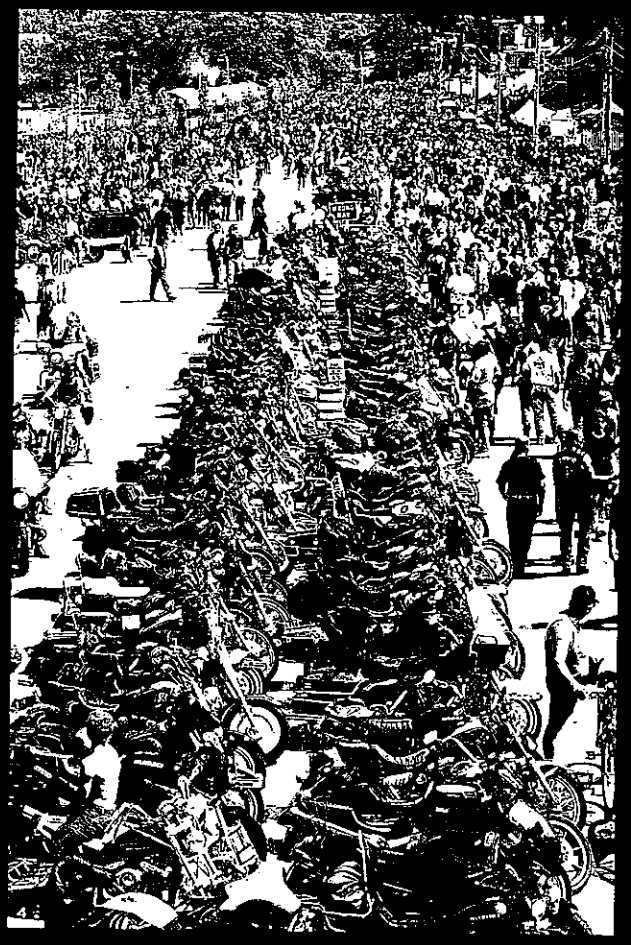
Rallies

Rallies are a way of life, and the journey to get to one is magnetic. I don't know of many riders who don't have some kind of a mark on their calendars for a road trip that more than likely ends up at a rally. There's no better way to see the world's beauty than from the seat of a Harley-Davidson motorcycle. At the end of the trip, there are always shared stories among friends, both old and new.









OPPOSITE PAGE
(1) Best dressed rider, 1936 (2) Gypsy Tour in Crystal Lake, Michigan, 1955 (3) Game time at the rally (4) Daytona Beach pit area, 1959 (5) Chicago Motor Club picnic in 1912.

THIS PAGE
(1) Ninety-fifth Anniversary parade through Milwaukee (2) Taking a break from the day's ride (3) Rallies throughout the world allow riders to gather and talk about their bikes (4) A gathering at Weirs Beach, Laconia, New Hampshire, in 1997.

1990 | FLSTF FAT BOY®

This Softail frame allows for many variations on fender, wheel, and fork treatments. On the 1990 Fat Boy model, the wheels are the defining characteristic. The idea was to create a distinctive look using solid-cast disc wheels.

We pushed this distinction further with a silver monochromatic paint job and silver powder-coated frame. Since the entire bike was silver, we needed something bright to set it off. I added yellow trim to the rocker boxes, the derby cover, the timer cover, and the ignition switch.

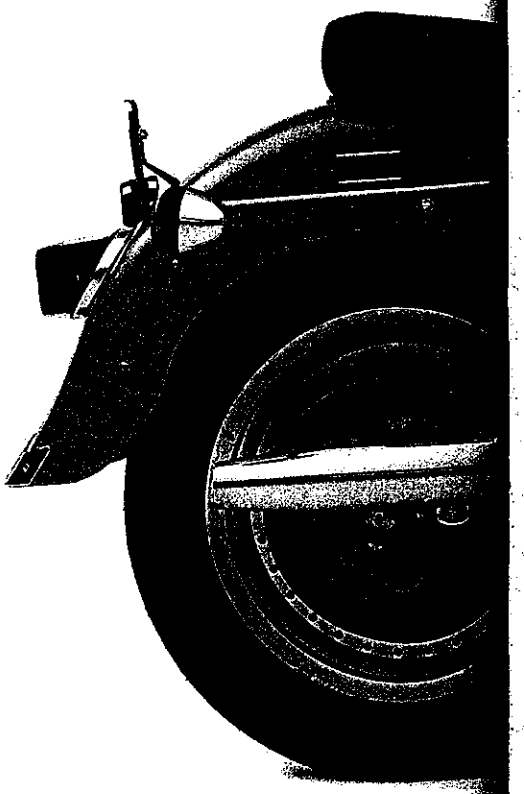
I've always been intrigued with the handmade look. On the seat, the valance has the trademark Fat Boy edge lacing with six eyelets; the lacing is also found on the fuel tank trim strip. We laced rawhide to give it a hand-sewn look, which is reminiscent of our jacket and vest designs. We have retained this element through all production years of the Fat Boy.

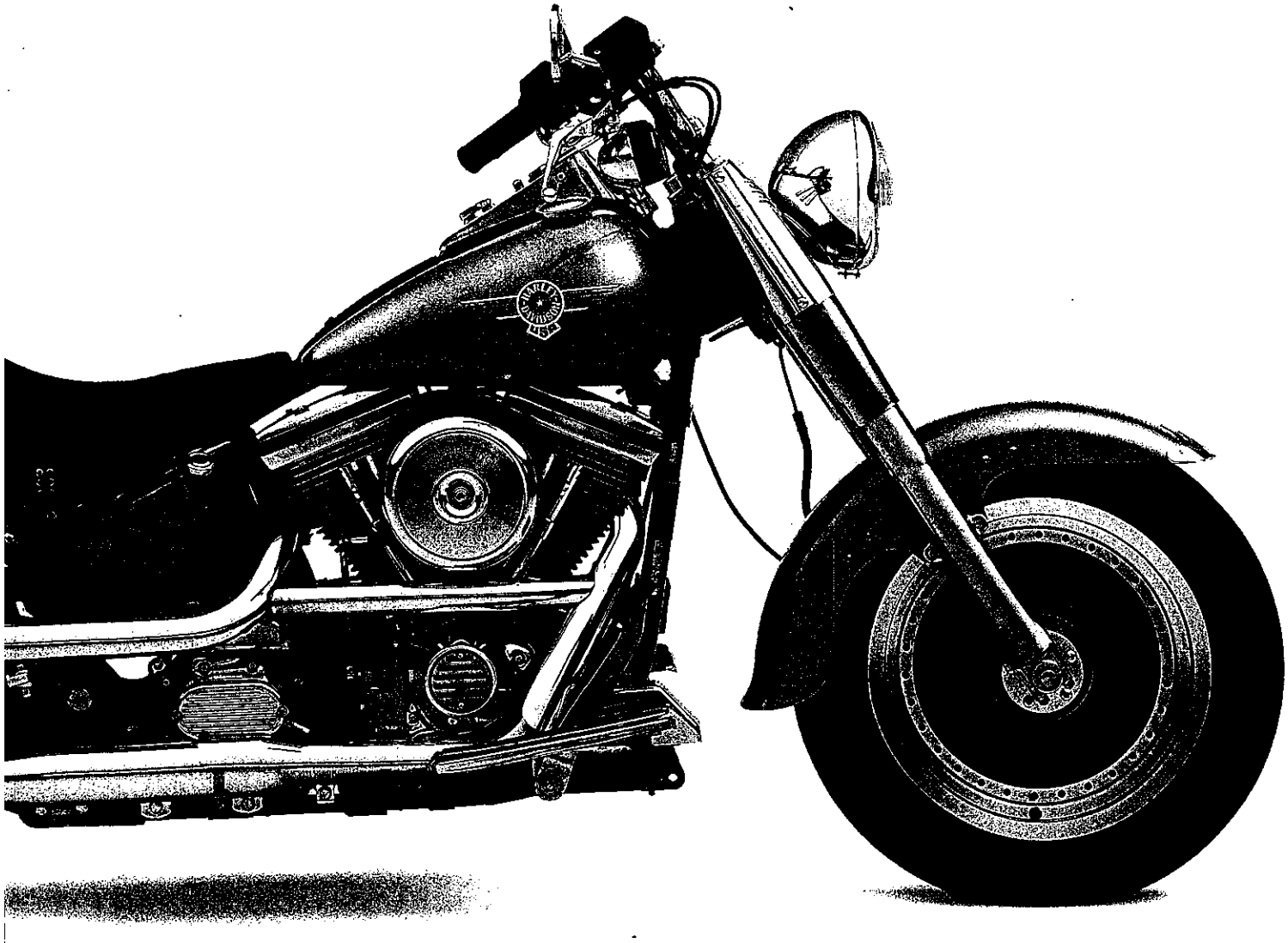
Another interesting element on this model is the tank logo, which I designed for the Fat Boy. It's one I'm very proud of. The star, the U.S.A. on the base, and the circular Harley-Davidson with the contemporary wing shape can be found on every Fat Boy tank from 1990 through today, with only slight tweaking. It's part of the impact of this bike—it's patriotic and nostalgic.

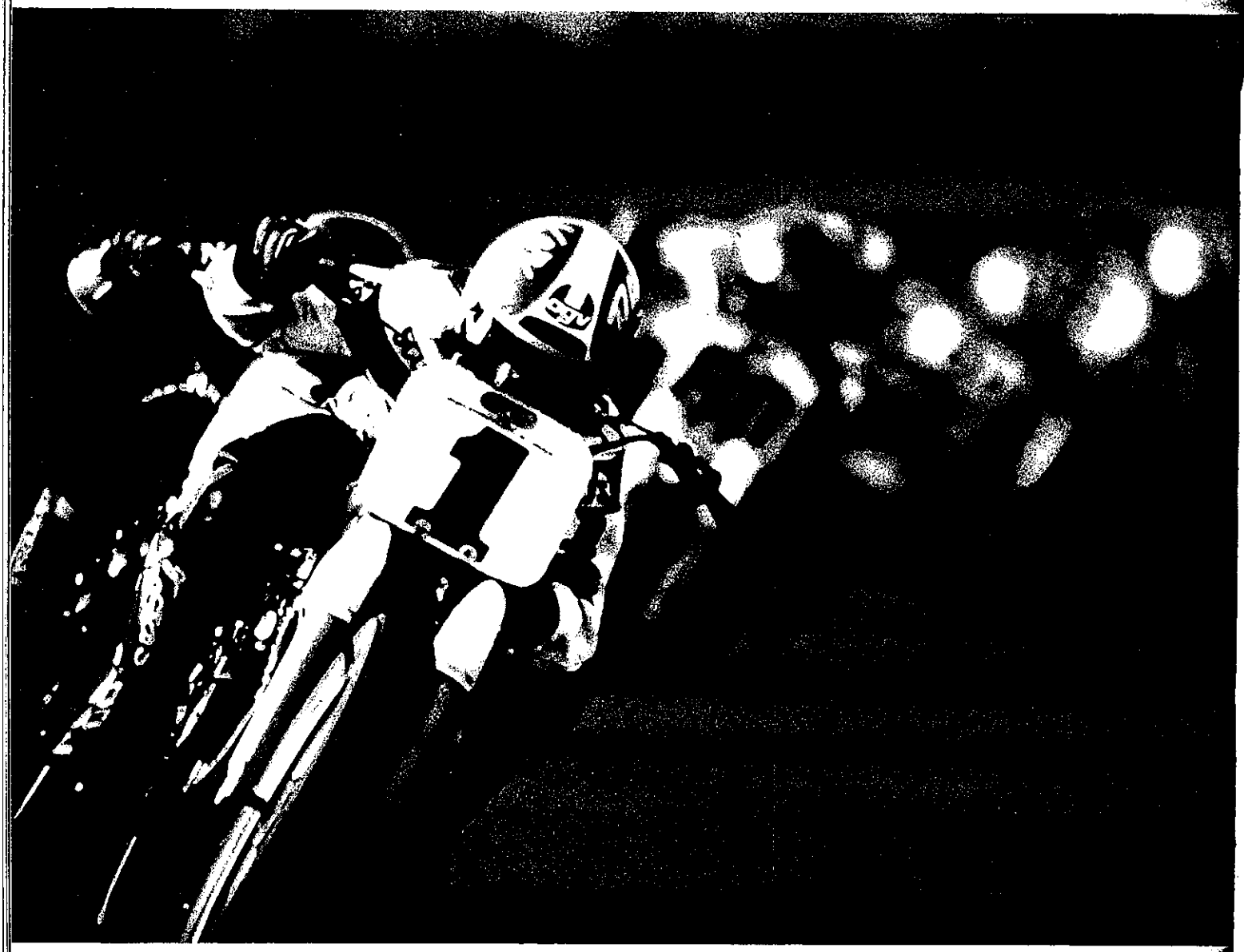
Today's version, with the balanced engine and its great look is one of our most popular models worldwide.

POWERTRAIN
Engine: 45-degree, overhead-valve V-Twin Evolution®
Displacement: 80 cubic inches
Transmission: Constant mesh, foot-shift, five-speed
Primary drive: Duplex chain
Secondary drive: Belt
Brakes: Disc (front and rear)
Ignition: CDI

CHASSIS
Frame: Double downtube
Suspension: Telescopic forks (front); horizontal gas-charged shocks (rear)
Wheelbase: 62.5 inches
Gas tank: 4.2 gallons
Oil: 3 quarts
Tires: 16 inches (front and rear)
Color: Fine Silver Metallic

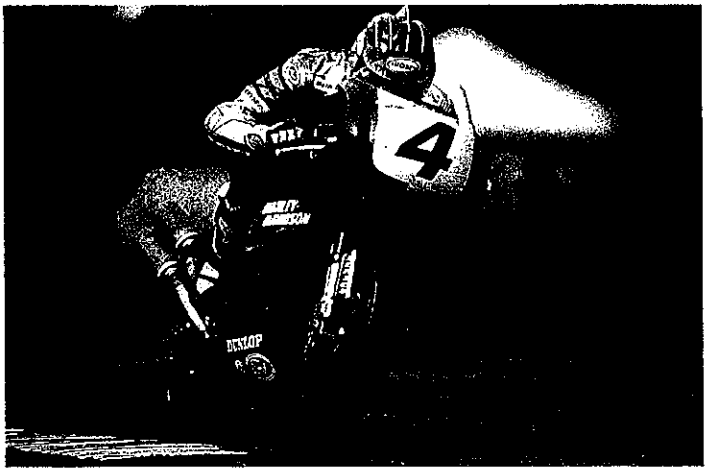



HARLEY-DAVIDSON
USA



1998 *Scott Parker, displaying his No. 1 plate, was the AMA Grand National Championship title winner at Springfield, Illinois, for the Hall of Fame Race.*

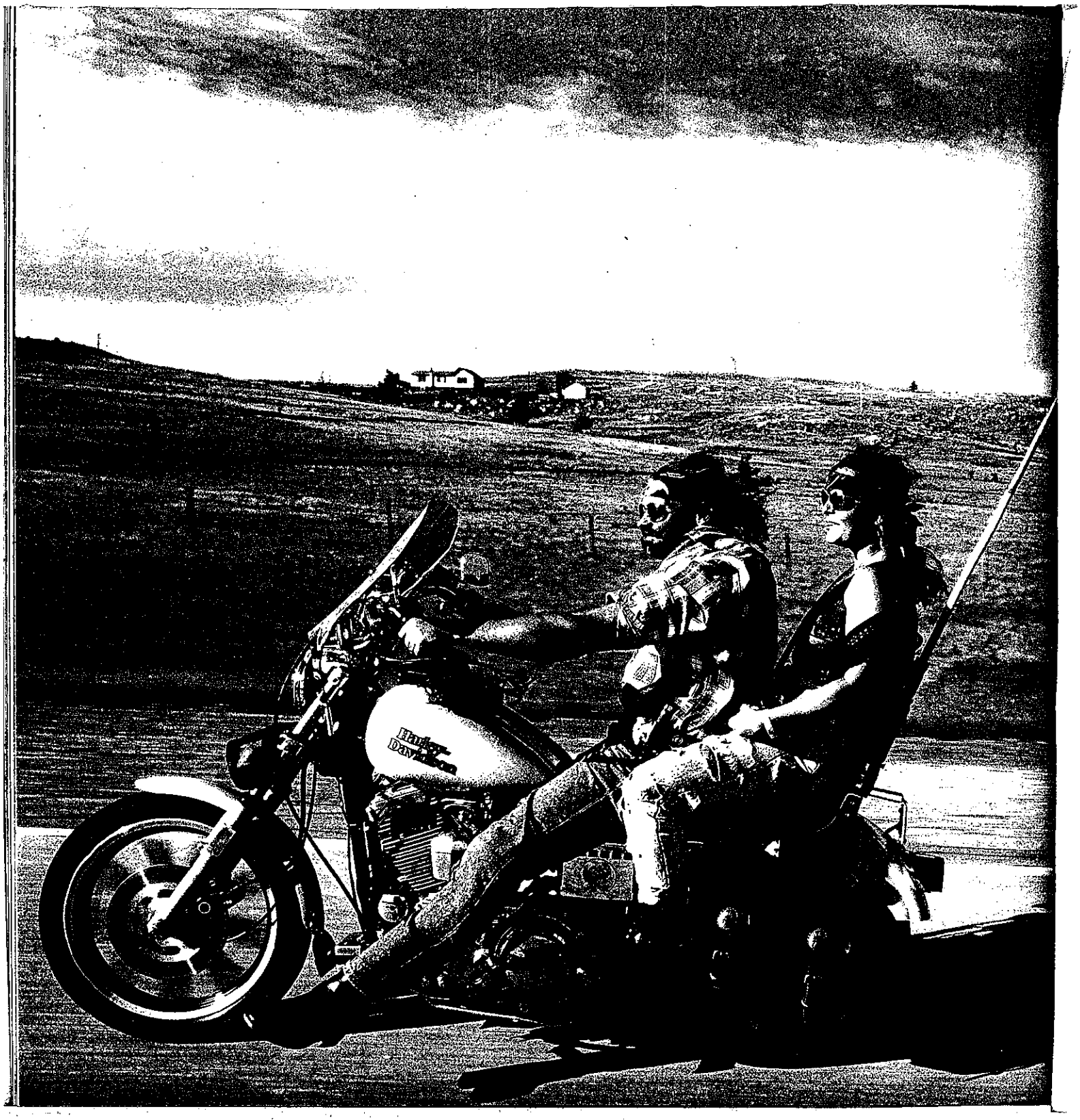
1993 | *Scott Parker is the winningest racer in history with five consecutive Grand National Championship victories. In total, he won nine Grand National Championships.*



2000 | *Harley-Davidson reentered the Superbike category with the VR1000.*

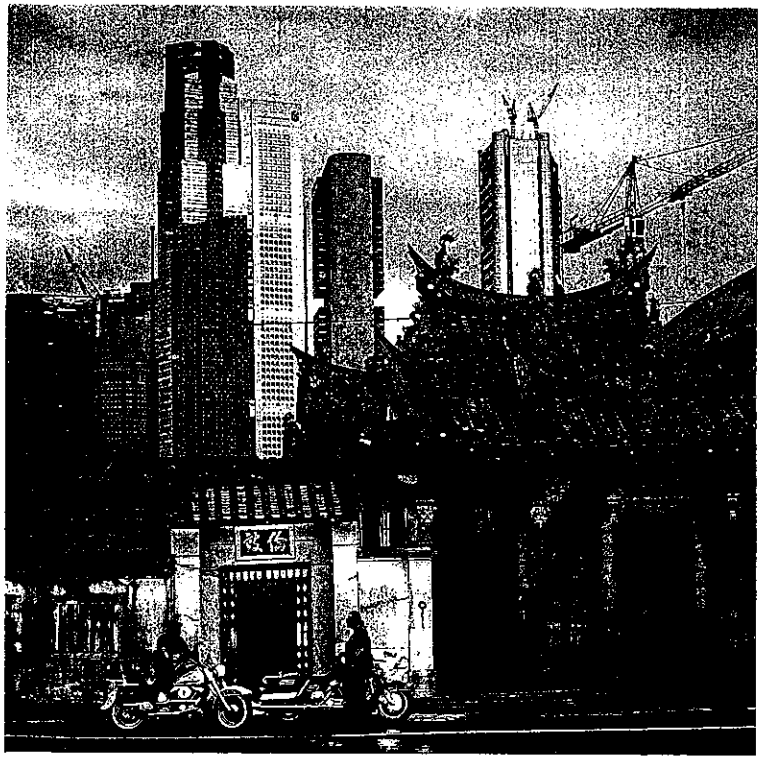
1996 | *A Harley-Davidson employee at the York Final Assembly plant in Pennsylvania crafts a forged gas tank.*

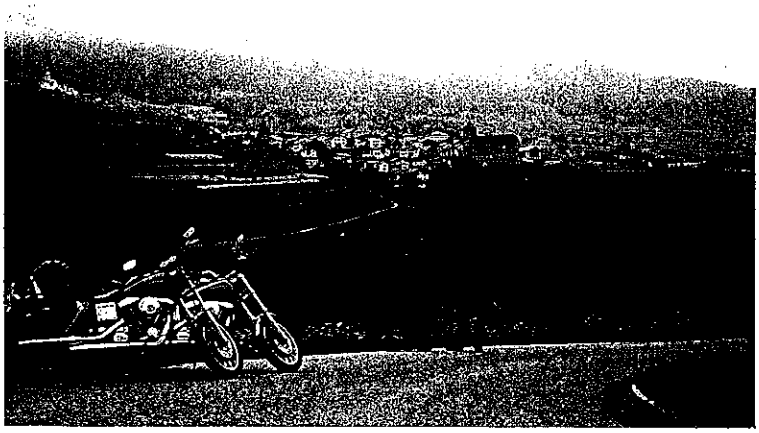
1997 | *When a Harley-Davidson model comes off the assembly line at the York, Pennsylvania, factory, it is carefully inspected and wrapped for delivery.*

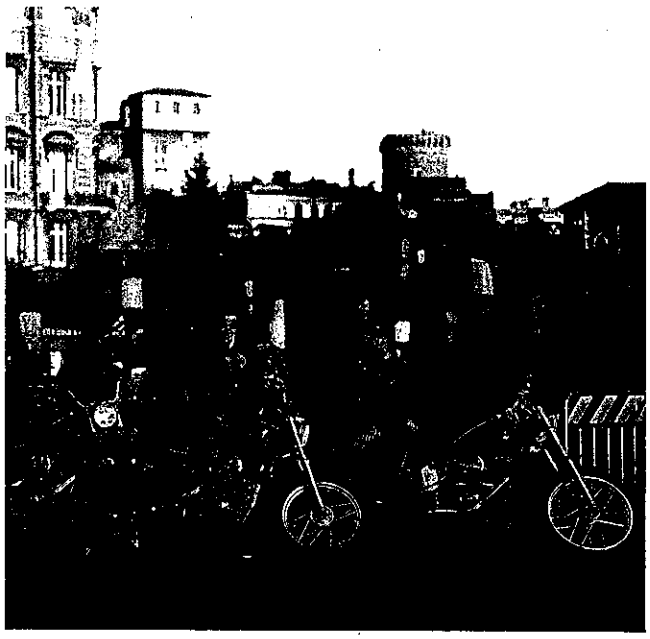


1999 | *A rider takes a break on the Big Dam Tour.*

1994 | *A proud pair of riders fly the flag on the road between Sturgis and Rapid City, South Dakota.*







1994–2000 | *Enthusiasm for Harley-Davidson motorcycles knows no boundaries. Clockwise from top left: Downtown Singapore; Paris, France; Italian street scene; Swiss Alps.*

1998 | *Created as an advertisement for Harley-Davidson, this image romances nothing but wide-open road ahead.*

1994 | FLHR ROAD KING®

When we introduced the Road King model in 1994, we broadened the market for our FL chassis and created a motorcycle that works equally well in both the touring and custom categories.

The 1960 headlamp nacelle enclosure is the defining shape of this motorcycle. It also uses a windshield rather than the full "batwing" fairing used on our Ultra Classic FLs. The result is a lighter, nostalgic look. Another classic element is the vibration-dampened, rubber-mounted engine drivetrain, which dates back to the original 1980 FLT.

At Harley-Davidson, we continuously create new models and innovate going forward, but we are always looking in the rearview mirror out of respect for our history—the '94 Road King is an example of this. A few years later the Road King Classic took this thinking a step further when we offered covered hard bags with the nostalgic look of leather.

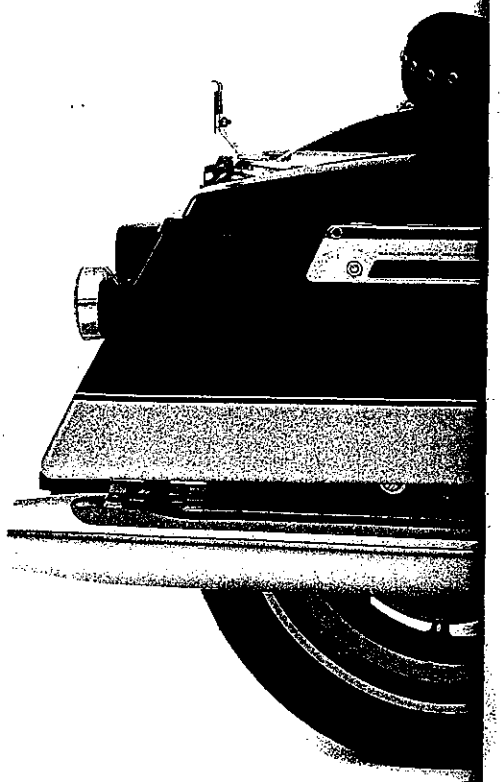
Depending on how the motorcycle is accessorized, the appearance of the Road King could be looked upon as either contemporary or historic. A large variety of Genuine Harley-Davidson Parts & Accessories add-ons help to accomplish this, but the rider creates the desired look. Because of this, the Road King continues to be one of our most popular sellers.

POWERTRAIN

Engine: 45-degree, overhead-valve V-Twin Evolution®
Displacement: 80 cubic inches
Transmission: Five-speed, foot-shift
Primary drive: Double-row chain
Secondary drive: Belt
Brakes: Double disc (front); single disc (rear)
Ignition: Electronic

CHASSIS

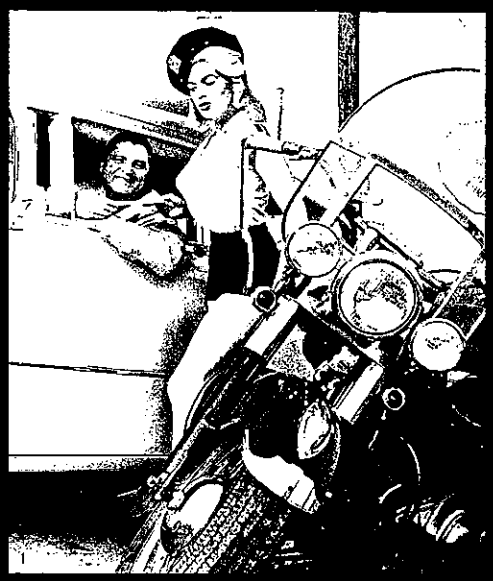
Frame: Double downtube
Suspension: Telescopic forks (front); swingarm and shocks (rear)
Wheelbase: 62.94 inches
Gas tank: 5 gallons
Oil: 4 quarts
Tires: 16 inches (front and rear)
Colors: Aqua Pearl/Silver; Black/Silver

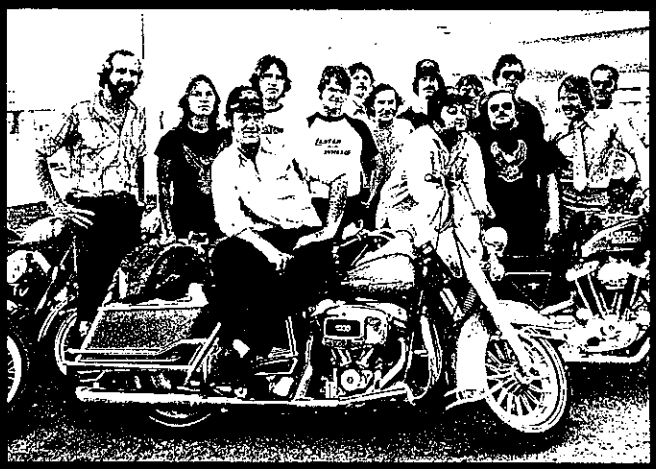


Harley-Davidson
Road King

Celebrity

The Harley-Davidson motorcycle is as famous as some of the celebrities who have ridden. The image of Clark Gable on a Knucklehead (below) is from the cover of a 1941 *Enthusiast*—a copy of which is in my personal collection; they're two timeless celebrities.





OPPOSITE PAGE
(1) Jayne Mansfield (2) Dan Aykroyd and John Belushi with the Blues Brothers Band (3) Elvis Presley (4) Peter Fonda (5) Clark Gable.

THIS PAGE
(1) Jay Leno (2) Cher (3) Mickey Rourke (4) Joe Frazier (5) Bruce Willis in *Pulp Fiction* (6) Liz Taylor and Malcolm Forbes (left, in background) with the Sportster motorcycle nicknamed "Passion."

1995 | FLHTC I ULTRA CLASSIC® ELECTRA GLIDE®

Our touring bikes have a strong visual impact. Our first electric-start Big Twin touring model, the Electra Glide, was introduced in 1965. Thirty years later, it continues to be popular and is considered a benchmark. Riders have really embraced the look of this bike, so when we upgraded it to celebrate the model's thirtieth year, we made subtle styling changes, introduced fuel injection, and trimmed the motorcycle in gold. Gold was also used for the air cleaner insert, an insert in the timer cover, the wheels, and in the striping that accentuates the paint and tank logo.

When you look at this motorcycle, it says "touring" loud and clear. From the front, our batwing fairing, headlight, and spotlights are very distinctive. The various fiberglass pieces on the rear of the motorcycle—the tour box, saddlebag, and side covers—are defining elements, and classic Harley-Davidson.

The front nameplate says "Ultra Classic Electra Glide." "Ultra" is appropriate because this bike is loaded. There's major storage capacity, an excellent sound system, and a CB radio. The lowers provide protection from the elements. The backrest in combination with the large, comfortable seat make for enjoyable cross-country touring for two-up riding. This 1995 Anniversary edition also marked the advent of fuel injection, a major development in Electra Glide history. When you add it all together, you have a truly great touring motorcycle.

POWERTRAIN
Engine: 45-degree, overhead-valve V-Twin Evolution®
Displacement: 80 cubic inches
Transmission: Five-speed, foot-shift
Primary drive: Double-row chain
Secondary drive: Belt
Brakes: Dual discs (front); single disc (rear)
Ignition: Electronic

CHASSIS
Frame: Double downtube
Suspension: Telescopic forks (front); hydraulic shocks (rear)
Wheelbase: 62.88 inches
Gas tank: 5 gallons
Oil: 4 quarts
Tires: 16 inches (front and rear)
Color: Burgundy Pearl/Vivid Black

HARLEY-
DAVIDSON

WE HAD TO DELIVER THAT PERFORMANCE

IN ORDER TO CREATE

A NEW RIDING EXPERIENCE.

WE WERE TRYING TO

DESIGN A BIKE

THAT WOULDN'T BE A COPY OF ANYTHING;

IT WOULD BE IN A CLASS OF ONE;

IT WOULD BE OURS.

LAKE GENEVA, WISCONSIN: MAY 1995. CORE HARLEY-Davidson people from the styling, engineering, manufacturing, purchasing, and marketing departments are gathered at a confidential offsite product-planning meeting to discuss what we call a "build direction" for a new vehicle. This is a crucial stage to getting a totally original platform off the ground.

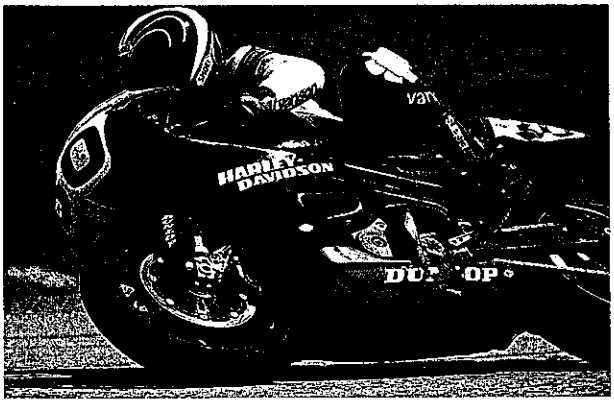
Initial development work for this platform dates back to 1988, when our engineering department began running data on a high-performance, liquid-cooled motor that would be a radical departure from our traditional air-cooled V-Twin designs. It was our entry into superbike racing. We debuted the liquid-cooled, fuel-injected V-Twin with dual overhead camshafts on our VR1000 Superbike in 1994.

Going in, we knew competition against top superbike teams would be a challenge. They'd been in this for a long time, and we were the new kids on the block. We were coming in with a lot to learn in a short period of time. Cutting-edge technology and the world's best riders and support teams are expensive. But we were in this to learn and to give our customers something to cheer about. The VR program was helping us develop and refine technologies, such as Harley-Davidson's approach to liquid cooling and electronic fuel injection. It was also exposing our people to different ways of looking at our motorcycles.

We had developed this engine for racing. Now we were going to take it to the streets. Our experiences racing the engine and gaining a better understanding of its applications eventually led us to the 1995 meeting in Lake Geneva, where the product-planning committee was brainstorming our future.

There were some major questions: could we design and engineer this motorcycle to perform in a way that would speak of Harley-Davidson and entice customers? Was this something we could build, market, profit from—and sustain?

We wanted to give riders a high-performance experience. We were talking about a performance custom,



Harley-Davidson entered the Superbike racing circuit in 1994 with a new water-cooled engine.

which was a nonexistent market segment at that time. On the performance side, we set a goal of creating an acceleration feel of one G. Acceleration is a forward thrust created by engine torque. It's one of the most endearing aspects of Harley-Davidson motorcycles and has been for many years. Our low-end torque is what a lot of riders feel (and love) in our motorcycles. Riders talk about the Harley-Davidson Look, Sound, Feel—well, that Feel is embedded in our low-end torque. It's a positive force designed into an engine characteristic. Horsepower peaks at different levels of rpm. There are engines that have a lot of horsepower, but that doesn't mean they have low-end pull. We emphasize torque. In the new engine platform, torque was an essential spec, since it would determine horsepower, drive chassis stiffness, and handling characteristics, all of which would have a sizeable impact on our styling and feasibility decisions.

We had to deliver that performance in order to create a new riding experience. We were trying to design a bike that wouldn't be a copy of anything. It would be in a class of one; it would be ours.

One of our challenges was to maintain the image: The motorcycle had to be recognizable as a Harley-Davidson product. The V-Twin achieved this, preserving the long lineage of our great V-Twins, the heart of a Harley-Davidson motorcycle. We also needed a strong identity that would make a visual statement with its finishes and shapes.

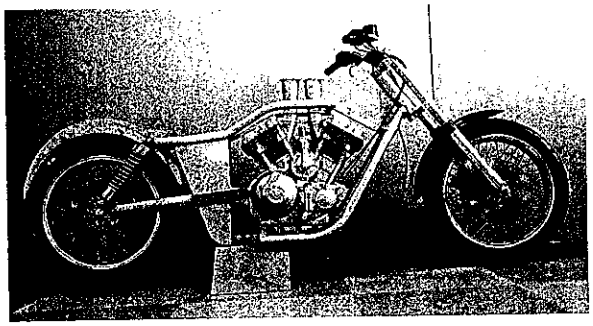
By the time we left Lake Geneva, we were determined to go forward with the platform, though we knew the costs and risks would be high. Harley-Davidson designed the VR1000 water-cooled racing engine. But our engineering department was also in the middle of developing the Twin Cam 88 engine and the Softail Deuce model. These were significant projects, which meant that we didn't have adequate manpower to work on a street-legal version. So our engineers partnered with Porsche Engineering Services, providing the VR1000 water-cooled racing engine, and a collaboration began to design the technology for what would become the Revolution engine. Together with Porsche, we'd make Harley-Davidson's first water-cooled engine ready for the street.

Styling was another key component in the design of this vehicle. We had actually tried a few iterations with the VR motor in some of our traditional vehicles, but they didn't work. Instead, we decided to create a high-tech visual from the frame up, which would require starting from scratch with the chassis and sheet metal. We knew we wanted this vehicle to be low and long, with an extended front end, like a dragster. Dragsters have always had a pure performance look—minimal sheet metal, long front ends, and massive rear wheels. As it had so many times throughout our

history, racing would give us our cues.

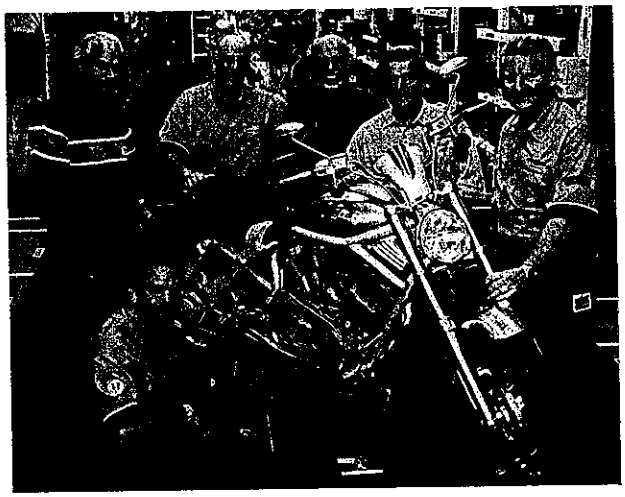
We were starting to envision this dragster-inspired machine with a fast-looking air box, a massive engine, and a sleek exhaust system. And we knew we wanted it to look aggressive standing still. We just didn't know how to get there yet. We code-named the project "Digger," in homage to its drag-racing roots.

The design team was spending a lot of time brainstorming, sketching, and looking at shapes and forms, and it didn't take long to figure out that the task was going to be more complicated than we'd envisioned. Designing a wholly new model is a slow and sometimes painful process. Even though this was our first design project to extensively use the best available computer-aided industrial design technology, we still wanted to rely on our tried-and-true methods. When the styling team would start to get comfortable with a specific



direction, we'd have a full-size, three-dimensional clay model built, so we could gather everyone around and critique it the way a potential customer would.

This practice is crucial to design at Harley-Davidson. I'm often singled out for credit on our motorcycles' great style, which is always flattering but not usually accurate. Much of what we've produced since I began my watch in 1963 reflects the work of those who



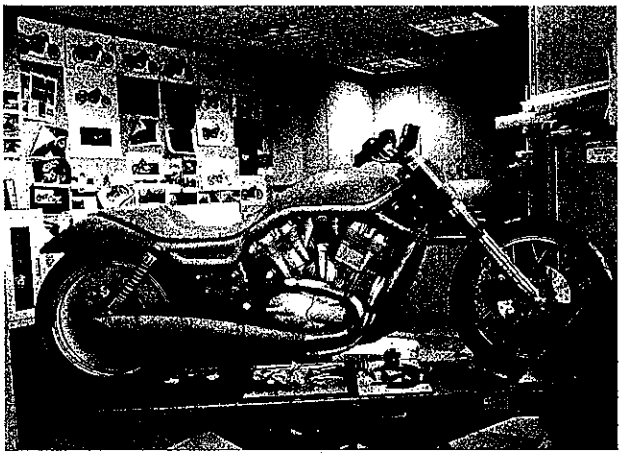
came before me. The story behind their efforts—and the inspiration it gives me and my design team today—is remarkable.

And teamwork is what styling is really about. Each member of the team contributes in a characteristic fashion. Louie Netz, our director of styling, has been with us for more than 25 years. His background in racing (he competed on ice and the short track) is invaluable, and he's a natural design leader. Our constant partners are the folks in engineering and marketing. Without their cooperation, we'd never get further than clay models. Other central members of the styling group include Ray Drea, the department manager, an accomplished artist who works on graphics,

The first V-Rod comes off the assembly line at Vehicle and Powertrain Operation in Kansas City (from left to right): Bill Davidson (kneeling), Louie Netz, Jeff Bleustein, Willie G., Carl Eberle, and Earl Werner.

Far left: This chassis consists of steel tubes and fabricated parts configured to the desired motor position, wheelbase, and fork angle. The powertrain is machined plastic and represents internal components with no styled covers.

new model upgrades, and paint schemes and who was a pivotal contributor to the Road King Classic model. Brian Nelson has excellent two-dimensional rendering abilities. Earl Golden is our department's 3-D model maker, and Doug Clarkson is our hands-on craftsman who redefined the model shop and works with computer-aided design. Kirk Rasmussen, our chief computer pilot, came on board with the V-Rod project; and Frank Savage, a skilled craftsman with form and shape work, has excellent sculptural abilities. Christine Eggert tracks our schedules, keeps us on time, and is our gatekeeper. Most importantly, we're all riders.



After numerous critiques of the clay model, the overall gesture of the V-Rod begins to emerge. Note the 2-D concept sketches and competitive analysis on the back wall.

Our first major decision on the V-Rod had to do with its frame. We knew we wanted it to have an uncluttered look, showcasing the jewel: our V-Twin. The frame would need to be strong and handsome. To frame the engine, we used a process called "hydroforming," which uses liquid under intense pressure to form complex frame bends and shapes. The long swing arm is a visual identifier with an attractive sculptural shape.

In keeping with our styling philosophy—that function, properly designed, can be beautiful—we spent a lot of time conceiving engine shapes, covers, fasteners, and finishes. There's an inherent elegance to the V-Twin, which is entirely exposed; the styling department's job was to make sure the engine was a work of art. All the elements had to work together visually, of course, but the engine also had to meet high performance requirements.

One of our styling challenges was designing the air intake area. To meet our one-G goal, the engine would have to move a lot of air, which would require a massive air box and exhaust system. But locating an air box on the right side of this engine, our traditional approach, would hide the cylinders. So we put the air box above the engine, where the fuel tank would ordinarily be, and moved the tank under the seat.

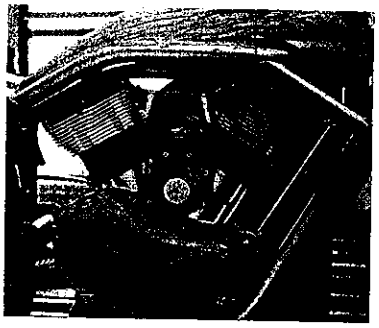
The necessity of the large exhaust system presented another styling hurdle. We needed to provide adequate exhaust volume in order to achieve horsepower goals while meeting sound regulations. We had to get very creative with exhaust shapes. The curved forms we designed looked terrific—and also disguised major volume.

Our next test with liquid cooling had to do with the radiator. With high-rpm performance motors, air alone can't dissipate the heat; thus the necessity for radiators. But there was no way we were going to hang an ugly black box on the front-frame down tubes. The radiator is a classic example of a functional necessity that we felt should be turned into good-looking hard-

ware. The area behind the front wheel has poor airflow. We designed air intakes to the right and left of the frame center that pick up clean air for adequate cooling; instead of hiding the radiator, we accentuated it. We wanted to make it look like it belonged to the motorcycle, rather than an afterthought.

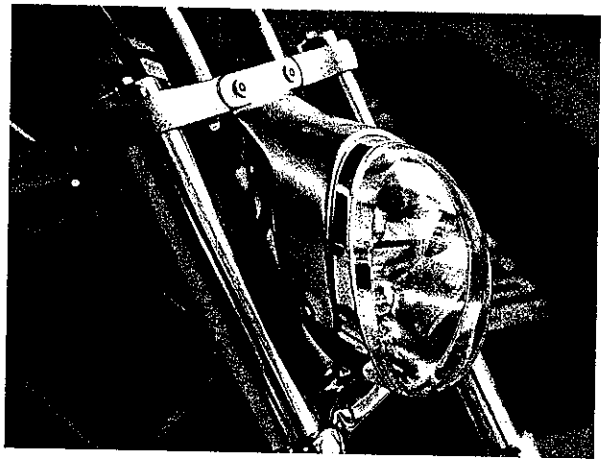
The 38-degree raked front end was an early visual decision. This feature creates an aggressive side elevation. In other words, it looks like it's moving when it's standing still. A combination of a 34-degree frame head angle with the 38-degree fork angle gave us the handling characteristics we were after. This, paired with a dramatic rear shock angle, accentuated the horizontal long, low look.

To create front-end identity, we designed a unique headlamp with an angle that emphasized the dragster look. We paired the headlamp with a sleek, high-tech instrument panel.



We have a strong reputation in the industry for the quality and appearance of our paint applications. When you think of mechanical beauty, what comes to mind? Metal. Pure, monochromatic, metallic silver. So we did a 180 and didn't paint it at all. The bodywork would be brushed, anodized aluminum. This sophisticated look alludes to performance. It reminds me of aircraft and race cars.

Design and engineering worked hand in hand for more than five years in order to get this vehicle right. Each time we walked around the clay model or built another prototype, we felt that more changes were necessary. It was time-consuming, but this is the process of design.



I vividly remember the test track in Texas. It was in March 1998. A group of us traveled down to test-ride an early prototype, along with some competitive vehicles. I walked into a garage that was full of other manufacturers' bikes, along with our all-black (disguised for confidentiality purposes) prototype. The dramatic rear shock and front fork angles, plus the overall proportion (even in its unsightly finish) created a presence that was startling. When I test-rode the vehicle, I knew we were near completion.

Right up until launch time, close-to-finished prototypes were being tested on tracks in Germany as well as in the U.S. To ensure that our water-cooled Revolution motor could stand up to even the most extreme condi-

Computer modeling and rapid prototyping techniques were among those employed in the design of the V-Rod headlight. Shown here is a sintered nylon prototype of the V-Rod headlight assembly.

Far left: Preliminary clay concepts begin to take shape. The styling effort on the powertrain became a priority over the chassis and body parts due to the critical timing required for engine development between H-D and Porsche.

tions, we left models idling in a shed in the Arizona sun. They were closely monitored. This would be our most extensively tested motorcycle in history.

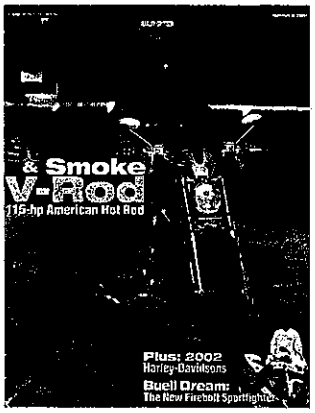
In June 2001, six years after the Lake Geneva meeting, we were ready to unleash this performance custom, which we'd named the VRSCA V-Rod—"VR" to tie in to its VR1000 lineage, and "SC" for street custom. The V-Rod was very different from what people expected. We knew some people would be downright shocked by what they saw.

The V-Rod's liquid-cooled engine and radical styling caught the motorcycle press by surprise, as demonstrated by this Motorcyclist *cover from October 2001.*

Our first task was presenting the V-Rod to the international motorcycle press—the industry's toughest critics and the folks who had seen it all. Rumors had been flying that a water-cooled vehicle was coming from Harley-Davidson. When we invited reporters to this special meeting, they suspected that they were about to see it. I knew they were in for a bigger surprise than they could've imagined.

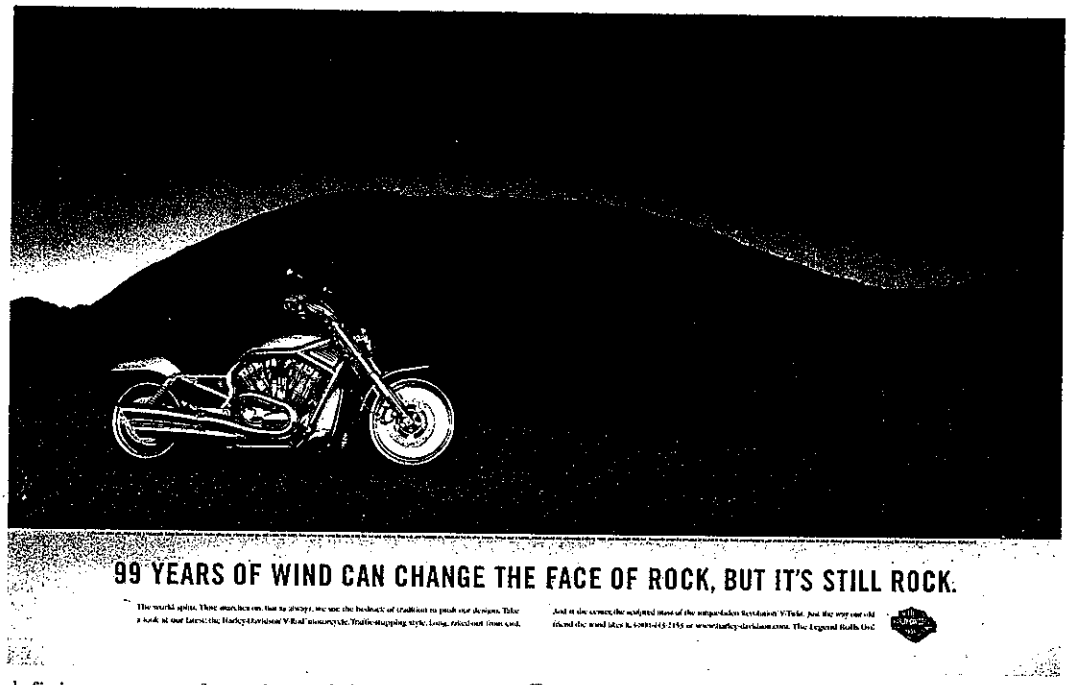
The meeting was held July 9, 2000, at the Motor Speedway in Irwindale, California. My son Bill, my design partner, Louie Netz, and I had the pleasure of kicking off this bike launch. We each made presentations. It was the defining moment. You've worked on this motorcycle for a number of years, and here you are in front of media from around the world. The model is under a cover. This is the end of the project, and your adrenaline is running strong. I described the philosophy behind the vehicle. When that cover came off, for the first time in my life I heard a collective gasp from the motorcycle press. We'd succeeded in shocking the press. When they finally were able to speak, their comments were positive.

The next day, we started a series of demo rides for the writers at a nearby drag strip. That was a smart move: the first time these editors rode a V-Rod was with the front wheel pointing down a straightaway. These were the near-first production vehicles, and they were getting ridden hard and fast. Burnouts, speed-shifting, the whole deal. In all the passes down the strip, none of the vehicles required any work. After the reporters rode on the drag strip, they then took the bikes for a ride up into the foothills of the San Gabriel Mountains. We were demonstrating different types of usage. It was obvious to everyone that our relentless testing had paid off.



Far right: This Summer 2001 cover of The Enthusiast *took a more subdued approach to the V-Rod's introduction than its unsuspecting motorcycle magazine counterparts.*

We then staged our announcement show with the dealers in Los Angeles at the Summer Dealer Meeting. Several thousand dealers from around the world were there. Jeff Bleustein, our leader, gave us an intro. My son Bill and I rode the V-Rod motorcycles from opposite sides of the stage to the center, then dismounted and hugged each other. It was very emotional for me. I think the dealers felt that. It was the culmination of a supreme effort involving many people. It had a lot to do with our family, my son, and this extreme motorcycle. Our company's success in these years had allowed us to do this. We relished that



This 2002 advertisement for the VRSCA V-Rod points out the obvious.

defining moment of emotion and shared it with all those people.

By the time we got to Sturgis, word had spread that the V-Rod was hot. The buzz was amazing. It wasn't unanimous love at first sight, but we definitely struck an emotional chord. Everyone was talking about the V-Rod, arguing pros and cons, which was exactly the reaction we'd expected. The magazines, both domestic and international, were featuring the V-Rod on their covers. The amount of print coverage this bike generated was staggering.

As exciting as the V-Rod is, it is in no way a replacement for any model in our product line. It's another branch on our family tree, intended to broaden our market by appealing to riders who want a different style of motorcycle. We are here celebrating our 100th birthday because of these air-cooled motorcycles, and we will continue developing them in the future.

Will the V-Rod be a home run? I think so, and am anxious to pick mine up at the local dealership. Memories of the '52 K Model I rode in high school still occupy a special place in my heart. Hopefully, the V-Rod will inspire similar love affairs for the next generation of riders.

2000 | FXSTD SOFTAIL® DEUCE™

Certain classic forms are important to the Harley-Davidson design philosophy.

The Deuce walks a fine line. People know right away that they're looking at a Harley-Davidson motorcycle, yet its new shapes make a very modern design statement.

The Deuce is a new iteration of the famous Softail platform. If you trace the Softail through its many variations, it has always been the ultimate custom motorcycle. We modified many pieces of the Softail to give the Deuce a contemporary custom appearance. A balanced Twin Cam 88 motor with improved performance, coupled with sheet metal changes make this motorcycle important to the custom market.

When I look at the Deuce, my eye travels from the front of the fuel tank along the bike to the smooth rear fender supports and the sculptural, fast-looking rear fender with a flush, somewhat recessed—or "frenched-in"—taillight. The custom fuel tank and narrow console give the motorcycle length. So does the exhaust system—it's a classic shotgun style. The back of the vehicle is finished off with a 17-inch rear wheel with a wide 160 tire.

The front of the Deuce also adds to its fast, classic look. Fender brackets are hidden inside of the fork legs. The lower legs—the sliders—on the fork have a simple bottle shape with a small fin at their base. The triple trees and handlebar risers are very sculptural forgings.

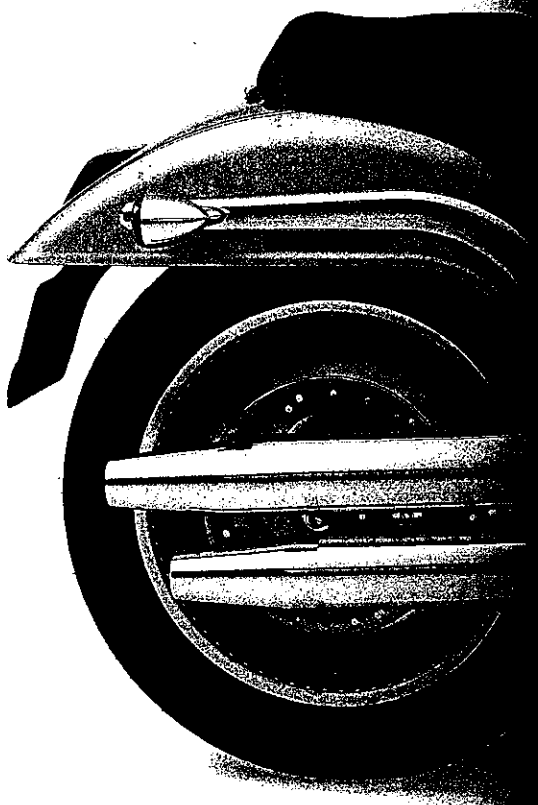
The Deuce combined dramatic visuals with the new 88-cubic-inch balanced engine, which greatly reduced vibration, further making this Softail model very desirable. It's a motorcycle that has won high design marks from motorcycle publications.

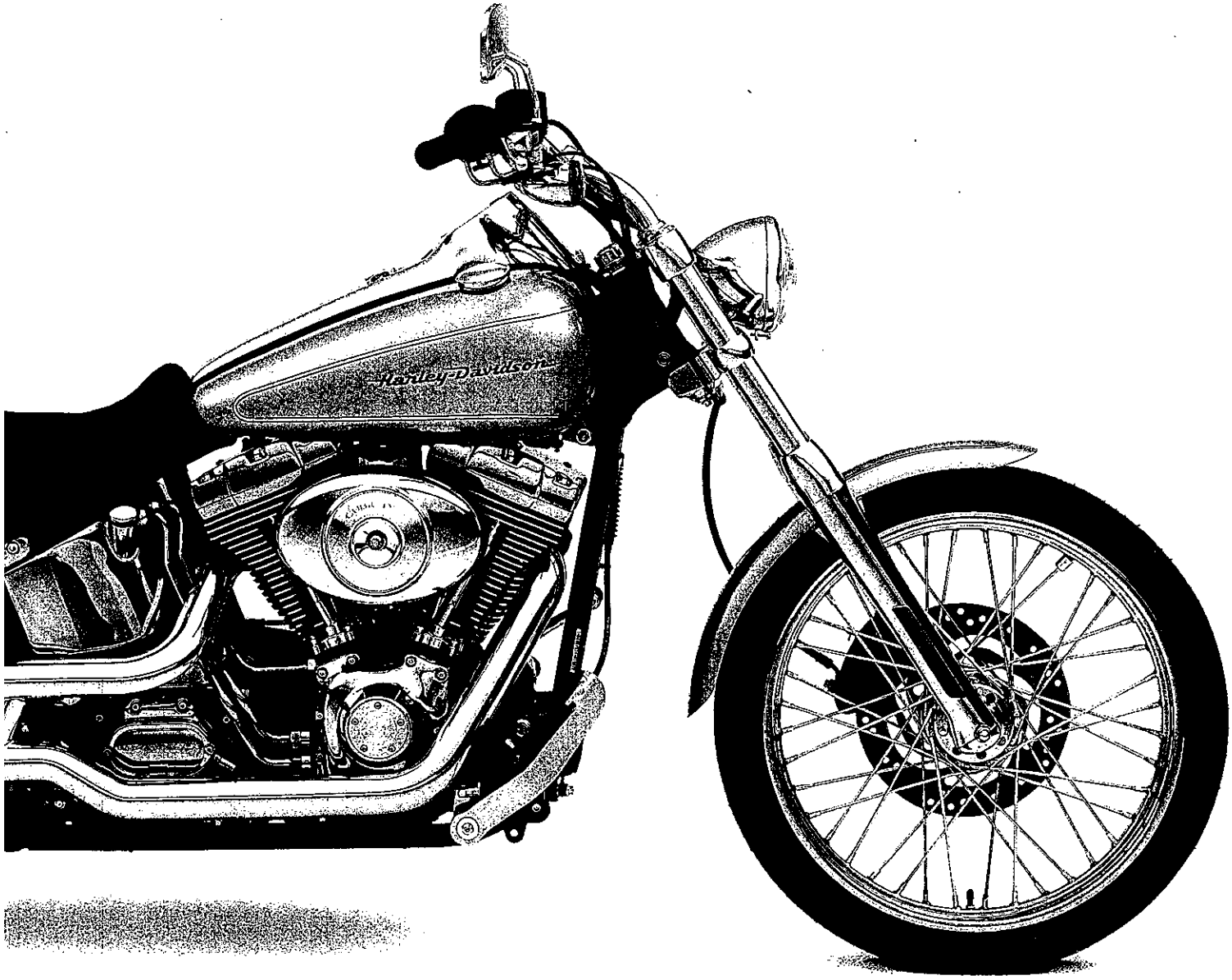
POWERTRAIN

Engine: 45-degree, overhead-valve Twin Cam 88B™
Displacement: 88 cubic inches
Transmission: Five-speed, foot-shift
Primary drive: Double-row chain
Secondary drive: Belt
Brakes: Single disc (front and rear)
Ignition: Electronic

CHASSIS

Frame: Double downtube
Suspension: Telescopic forks (front); horizontal gas-charged shocks (rear)
Wheelbase: 66.75 inches
Gas tanks: 5 gallons
Oil: 3.5 quarts
Tires: 21 x 17 inches (front and rear)
Colors: Vivid Black; Diamond Ice Pearl; Aztec Orange Pearl; Sinister Blue Pearl; Luxury Rich Red Pearl; Concord Purple Pearl; Sinister Blue/Diamond Ice; Aztec Orange/Diamond Ice; Luxury Rich Red/Black




Harley-Davidson

Fashion

Early on, Harley-Davidson developed functional clothing for riding comfort, and through that process, a distinct fashion statement evolved. Cultures around the world have unique decorative dress—everything from military jackets with ribbons and pins, to a hand-sewn tribal piece. Harley-Davidson is also a culture, where form follows function, and the result is a unique type of beauty.

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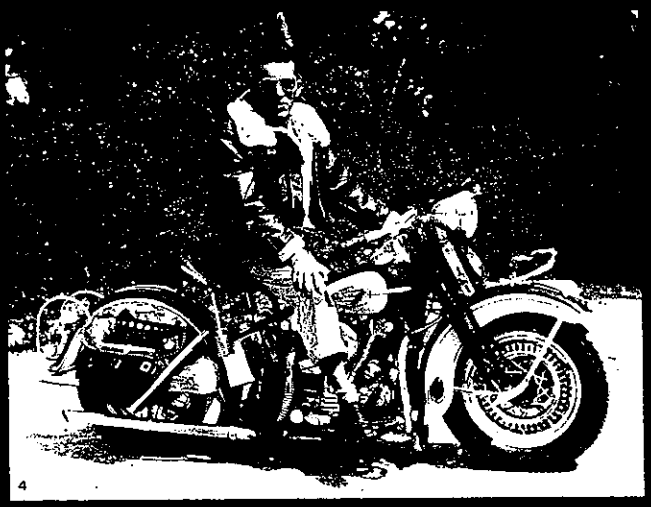

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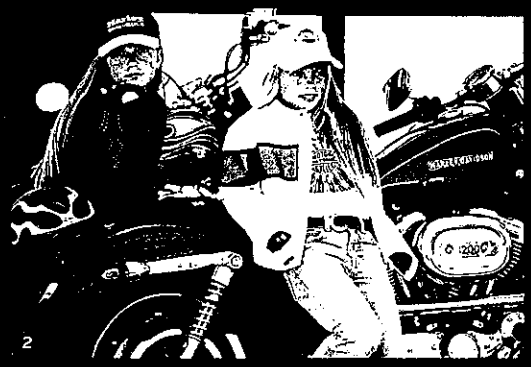


OPPOSITE PAGE
(1) Alva Stratton in 1914 racing garb (2) A 1917 riding uniform with puttees (3) Gauntlet gloves were worn as early as the twenties (4) Early forties shearling bomber jacket.

THIS PAGE
(1) Harley-Davidson MotorClothes, functional riding apparel in action (2) Never too young to gear up with H-D style (3) Harley-Davidson bandanas make great skull caps (4) Harley-Davidson MotorClothes jackets—classic Harley-Davidson.

2002 | VRSCA V-ROD®

Our challenge with creating the V-Rod was to maintain a distinct Harley-Davidson image and create a radically new bike. The V-Twin engine achieves this. It has always been the jewel of our motorcycles and the V-Rod model is an extension of this principle.

For styling inspiration, we turned to what has always given us cues throughout our history: Racing. We knew we wanted this vehicle to be low and long, with a very dramatic, extended front end, like a dragster. It would have to feature minimal sheet metal, and a massive rear wheel. We started to envision a bike with a fast-looking air box, a large engine, and a sensuous exhaust system.

We wanted it to look aggressive standing still. The frame has a minimal, uncluttered look, yet is strong and handsome. The long swing arm is a definite visual indentifier with a sculptural shape. Instead of hiding the radiator, we accentuated it. The 38-degree raked front end was an early styling decision. Paired with a dramatic rear shock angle, it helps to accentuate the horizontal long, low look.

We have a reputation in the motorcycle industry for our strong paint applications, quality, and appearance. But when you think of mechanical beauty, what comes to mind is metal. Pure, monochromatic, metallic silver. The body work on the V-Rod is brushed, anodized aluminum.

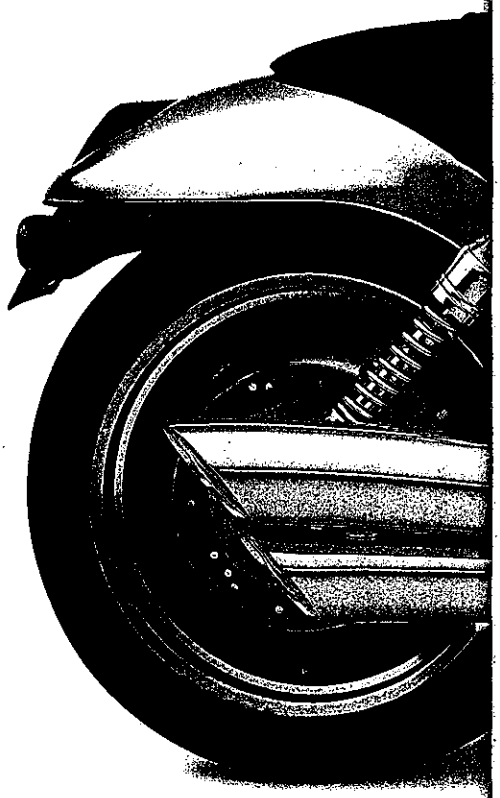
We set out to give riders a high-performance experience, but without sacrificing the Harley-Davidson "Look" they'd expect. The result is a first for us and the market: a performance custom.

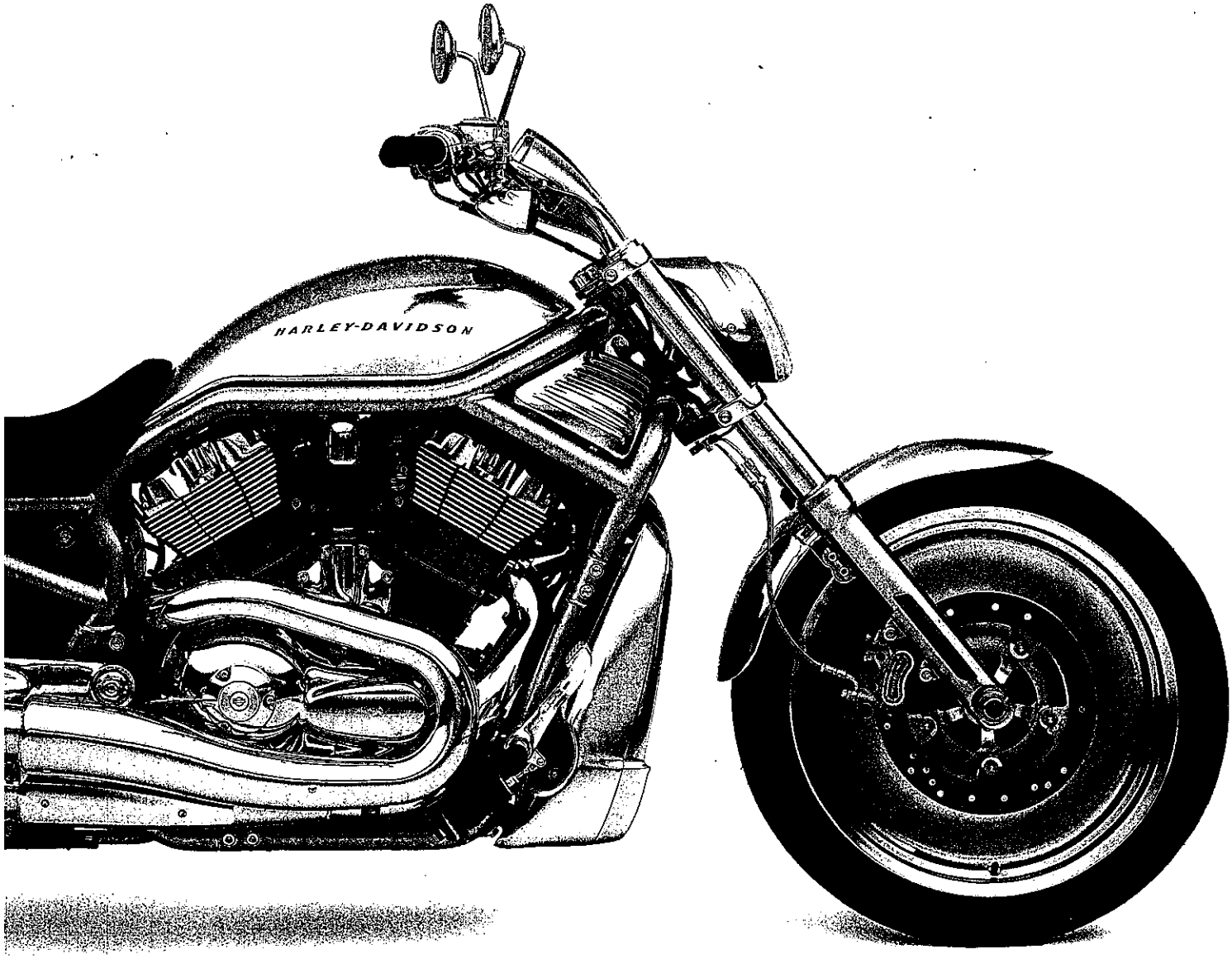
POWERTRAIN

Engine: 60-degree, dual overhead cam, liquid-cooled V-Twin Revolution™
Displacement: 1,130 cubic centimeters
Transmission: Five-speed, foot-shift
Primary drive: High contact ratio spur gear
Secondary drive: Belt
Brakes: Dual disc (front); single disc (rear)
Ignition: Electronic

CHASSIS

Frame: Hydroformed perimeter type
Suspension: Telescopic forks (front); hydraulic shocks (rear)
Wheelbase: 67.5 inches
Gas tank: 4 gallons
Oil: 4 quarts
Tires: 19 x 18 inches (front and rear)
Color: Anodized aluminum




HARLEY-DAVIDSON

WE'VE BUILT

OUR ENTIRE BUSINESS

ON A MISSION STATEMENT

THAT BEGINS WITH THREE WORDS.

IT ACCURATELY DESCRIBES

WHO WE ARE AND WHAT WE DO:

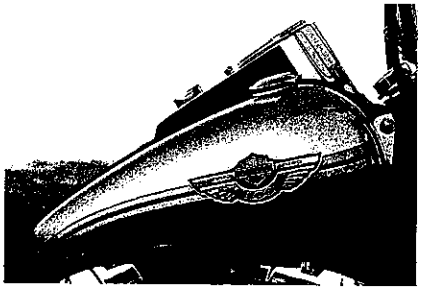
WE FULFILL DREAMS.

OUR SIMPLE PHILOSOPHY OF STAYING TRUE TO THE Harley-Davidson basics, while always adding value to them, has allowed us to keep growing and reach this 100th Anniversary milestone.

Look at our motorcycle line and you can't help but notice the consistency from year to year. Our customers want this and have come to expect it. But examine them more closely and you'll see the improvements, some as subtle as a slight bend in a support bracket, and the surprises, like the first Softail or the V-Rod, and you'll start to better understand what makes Harley-Davidson so unique—and what will keep it going. Over the next several years, people will be excited by the changes and surprises that are in the product-development pipeline. I can't tell you what's coming, but it's perfectly okay for you to dream a little.

I can honestly say that the view from where I'm standing today is inspiring and positive. Reaching the century mark in any business is a rare achievement, so all of us here are extremely proud of that. But we're even more proud that we reached this mountaintop on very sound footing, with our gaze trained on the next summit.

Demand for our products remains strong worldwide, and we've continued our steady growth, despite some hurdles that we've faced internally and those that are confronting the global business community. We've enjoyed the kind of success that most companies never do, and we're well aware of that. Today Harley-Davidson is one of the most admired companies in the world.

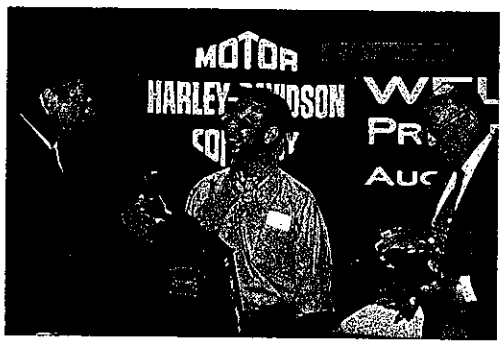


The never-before-seen show-car brilliance of the Sterling Silver paint is the key ingredient in this 100th Anniversary Dyna Wide Glide model.

Reaching our 100th birthday is one thing, but no one could have possibly predicted that the road from our 85th to our 100th would be paved with such incredible success. Growth, managed well, is its own reward. Just ask any of the tens of thousands of riders who've joined the ranks in recent years, or any of the thousands of employees who've

President George W. Bush receives a MotorClothes jacket from Harley-Davidson President Jim McCuslin. Motor Company C.E.O. Jeff Bleustein is standing at right.

Far right: C.E.O. Jeff Bleustein and his wife, Brenda, demonstrate that Harley-Davidson remains a company of riders.



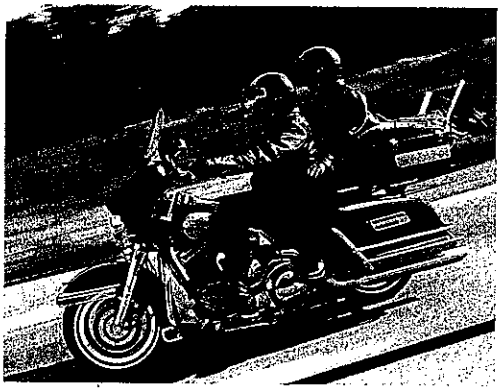
joined our company. Or, if you want to see a totally different kind of smile, ask anyone who invested in us back then and stayed with us through the years.

But managing growth well is a huge challenge, and I think the way we've done it is what's put us on those "most admired" lists and earned the loyalty of our riders. What many people don't realize is how dramatically size changes everything. It took all of our resources to build about 50,000 motorcycles in our 85th year. We'll soon surpass 250,000 motorcycles per year, with our highest-ever levels of quality. We had about 85,000 H.O.G. members then, versus 640,000 now. Our parts and accessories book was only about 80 pages long then, and now it's over 700 pages.

Since 1990, we've invested over $1 billion in new manufacturing facilities and equipment to keep the product flow running smoothly. Construction crews are at work again to give us more space. The Willie G. Davidson Product Development Center was completed back in 1997. Now construction crews are pouring concrete to greatly expand its size.

Successfully guiding all this development while focusing on our basic business and keeping the flame burning isn't easy. Thankfully, we have amazing employees—less than 2,000 back in 1985, and more than 9,000 today. Our people hold themselves to high standards and have tackled many trials while also planning, executing, and participating in customer events. All of this says a lot about the quality of our employees and the culture our leadership group has nurtured over the years.

While many of the obstacles have been invisible to people outside our doors, our most glaring one was the wide gap between demand for our motorcycles and our production capacity. Despite our significant investments and steady increases in annual production, there simply weren't enough Harley-Davidson motorcycles to go around in recent years.

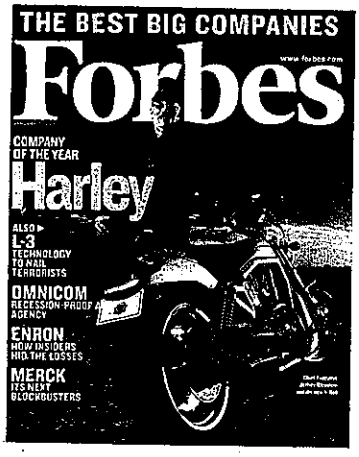


While most businesspeople would think rampant demand is a dream come true, it creates tough problems for a company like ours that cares so deeply about customers. Sometimes the demand/supply imbalance has resulted in long waits, which creates very understandable

frustration for people who want to ride with us. So over the past 15 years, we have done everything possible internally to increase production output without sacrificing quality.

Our steady increases in production also means more motorcycles for our dealers to maintain. The majority of our dealers have substantially expanded their facilities and staff to better serve their customers. Their investments are paying off in improved service operations and higher levels of customer satisfaction.

We want our customers to be able to visit a dealership, sit on a variety of bikes, pick out the one they want, and buy it. Local demand may spike and alter this situation from time to time, but I'm confident we'll achieve a workable balance. Lead time on some of our models today has been considerably shortened.



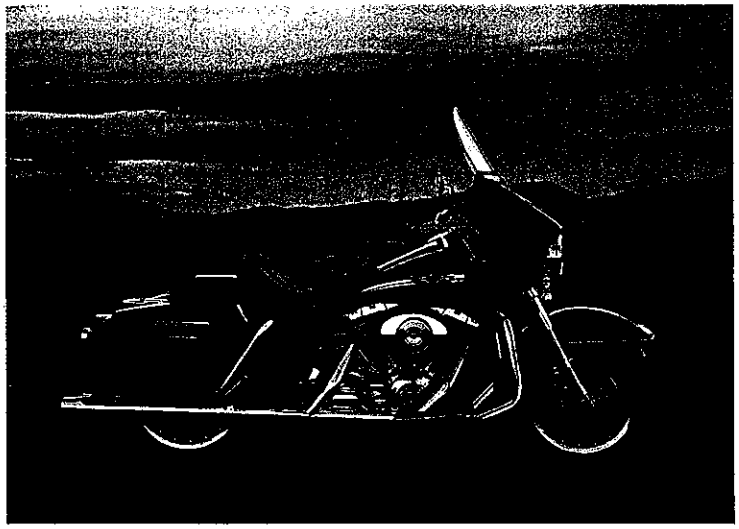
We're already deep into planning and execution for the future. The 100th Anniversary is more of a checkpoint for us than an end point. It's a once-in-a-lifetime deal, but the truth is, all the activities, celebrations, and special products will probably just fan the flames at Harley-Davidson, and we'll be running harder when it's over than we are now.

We also have to avoid saying our 100th is just the beginning. That devalues all the incredible things that have happened up to this point, which we're not willing to sweep under the rug. The founders working in that shed in my great-grandparents' backyard, all those beautiful motorcycles, the racing, the war years, the economic roller coaster, the turnaround, anniversary rides and rallies, H.O.G., worldwide growth, and millions of faces that have come and gone. All these experiences, events, and people are like great chapters in a book that will never end.

Harley-Davidson launched its next-generation Screamin' Eagle/Vance & Hines NHRA pro-stock drag racing motorcycle in 2002.

Far left: Forbes *magazine recognized Harley-Davidson as its "Company of the Year" in its 2001 survey of best big companies. Pictured on the cover is C.E.O Bleustein with a V-Rod.*

What makes me so certain Harley-Davidson will endure? Consider this simple fact: no matter the era, the drama, the hardware, the people involved, or the enormity of change we've witnessed, there's one constant that has carried us forward from Serial Number One and will doubtless be with us through our next



This 100th Anniversary Electra Glide Standard, in Vivid Black, has a broad band across its gas tank with a subtle repeating pattern of the word "Harley-Davidson."

century. It is the experience of riding a motorcycle, which has always been and always will be exciting and fun. Period. Explain riding any way you want, but it all comes down to two wheels propelled by an engine. It's leaning during cornering. It's the exhilaration of the wind, the powerful sound, and the total joy we feel every time we swing a leg over one of these beauties and blast into the unknown. That experience will never die.

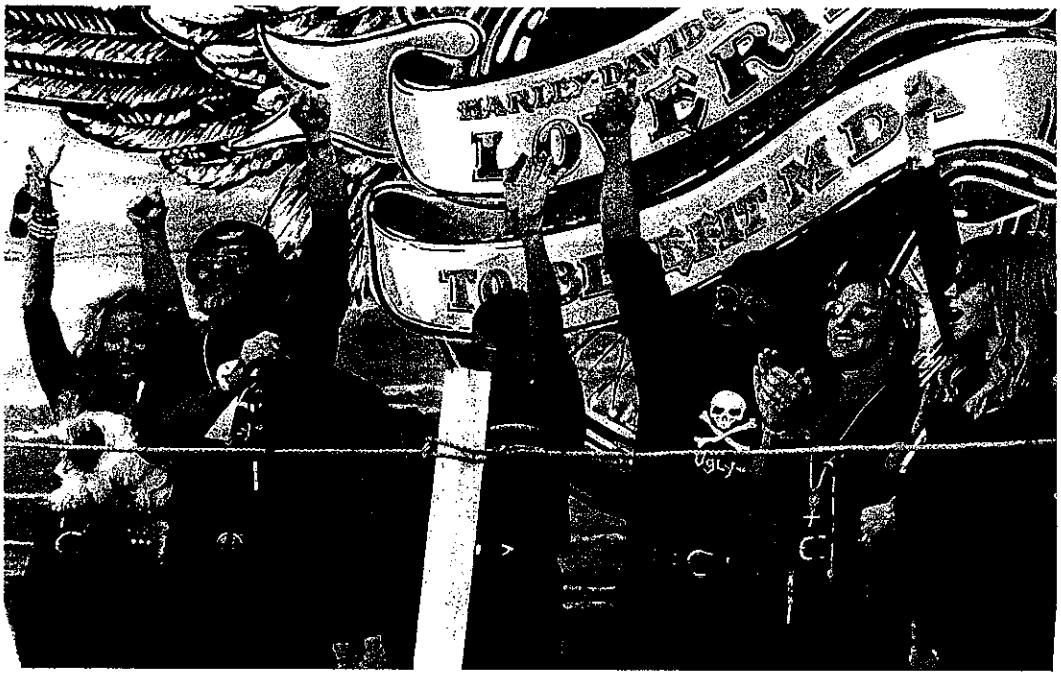
Add to that the power of Harley-Davidson's heritage, the imagery and emotions it evokes, the feeling that lodges in our hearts and inspires our dreams, and you've got one strong package. This won't change. Our task is to build on the trust we have with our current riders so coming generations can enjoy the same kinds of experiences that we're having and share in the Harley-Davidson mystique.

We know that the percentage of people in the world who say they'd love to own a Harley-Davidson motorcycle is very large. If we continue to do things right, we'll be here when the time comes for them to join our family. Once you get the desire to own a Harley-Davidson, it never goes away. In fact, it grows stronger over time. As you see people riding, read about Harley-Davidson in motorcycle magazines, hear stories from friends, visit dealerships to look around, and take a training course, you gradually become an enthusiast. Maybe it's a Buell Blast or a Sportster to build confidence and get comfortable with riding. And maybe, when the time is right, you trade up for a bigger model. The 100th-Anniversary celebration alone will probably kick-start enough dreams to keep us cranking for years to come.

Here's another reason our story won't be ending anytime soon: the world is getting more and more complex. Some of the technologies—communication networks and those damned cell phones—that were supposedly created to free up time for us to enjoy life have had the opposite effect. People are working harder and experiencing higher levels of stress. So, more than ever, we need to break free and escape from time to time on our motorcycles.

It's no accident that I use the word "dream" so much. It's one of the most important words in our vocabulary at Harley-Davidson. We've built our entire business on a mission statement that begins with three words. It accurately describes who we are and what we do: we fulfill dreams. We're here to put people on two wheels and smiles on faces. That's what this amazing brand is all about. As long as we continue to follow that mission—and we will—our future will be bright.

Today, as I'm writing this, I'm getting ready to leave

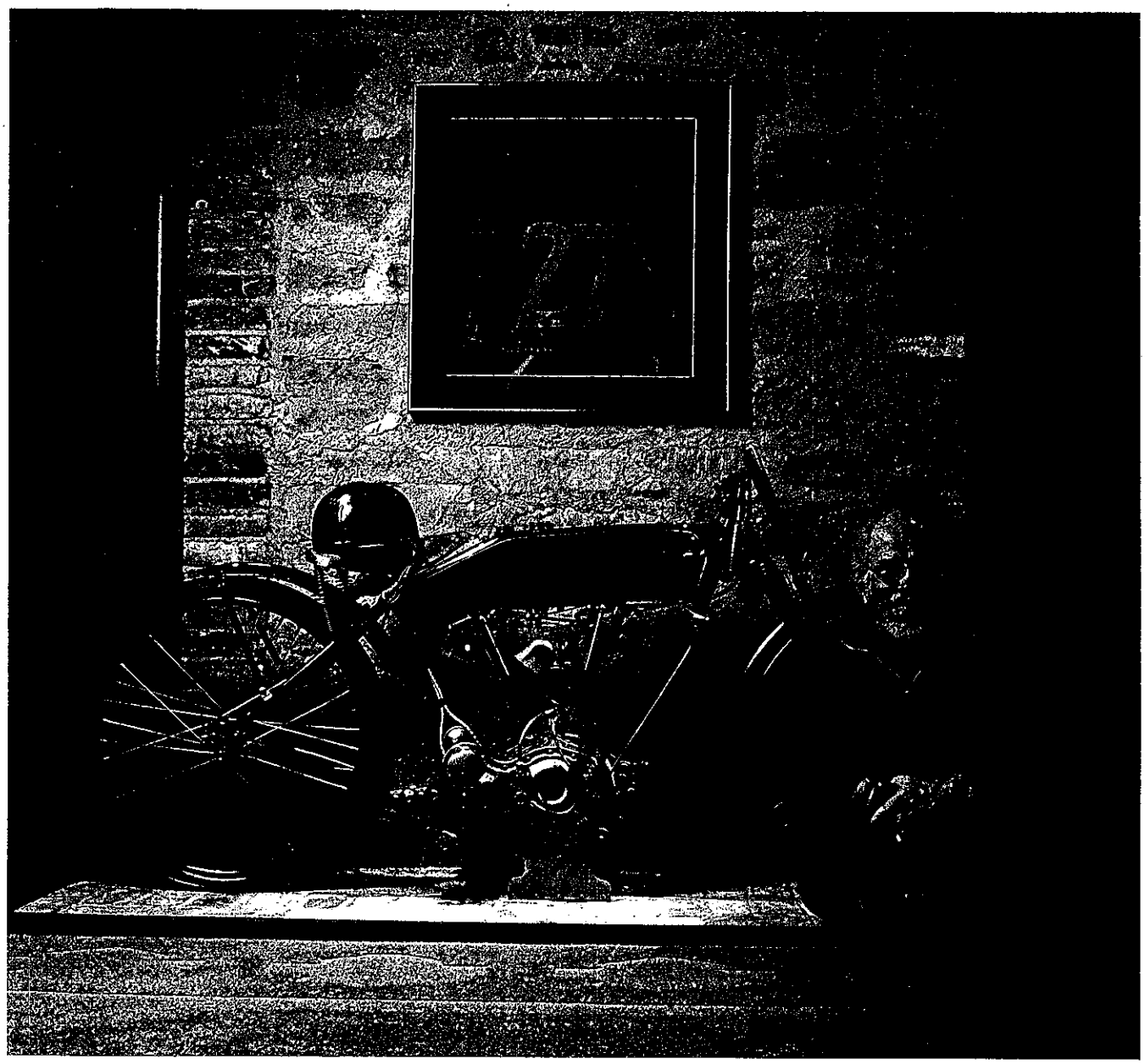


Glendale, California, Harley-Davidson dealer Oliver Shokouh started the Love Ride, an annual fund-raising rally. The Ugly Motorcycle club (with members Willie G. and son Bill pictured here) began in the early years of this ride. From left to right is actress Sally Kirkland, Willie G., his wife, Nancy, Bill Davidson, his wife, Callie, and Karen Davidson.

for Daytona for the umpteenth time. The honest-to-God truth is, I'm very excited about it and have been thinking about it constantly. I'm in my sixties and I've been riding forever, and I still get this thrill when I know I'm about to hit the road. I can't wait to go home, pack up the gear, then get on my bike and ride the back roads all day long with my friend Louie Netz and a bunch of our pals. Upon arrival in Daytona, I'll park my motorcycle and watch as a crowd gathers. That's all the proof I need that we're doing the right things, and that the riding experience is still exhilarating and always will be.

This is as true for me now as it was for the founders way back when. Our motorcycles may look different as a result of evolutionary improvements, but the feeling of riding has never changed, and that's what makes all of this sensible in my mind. I know that the excitement I feel in my heart is the same excitement they felt. They, too, were out riding Harley-Davidson models, or dreaming about their next ride, or what their next bike would look like. How could they not feel the same way I do? My wife and kids are no strangers to this feeling. Eventually, my granddaughter and all future generations of Davidsons will know it. And so will everybody else who rides a Harley-Davidson.

We *do* fulfill dreams.



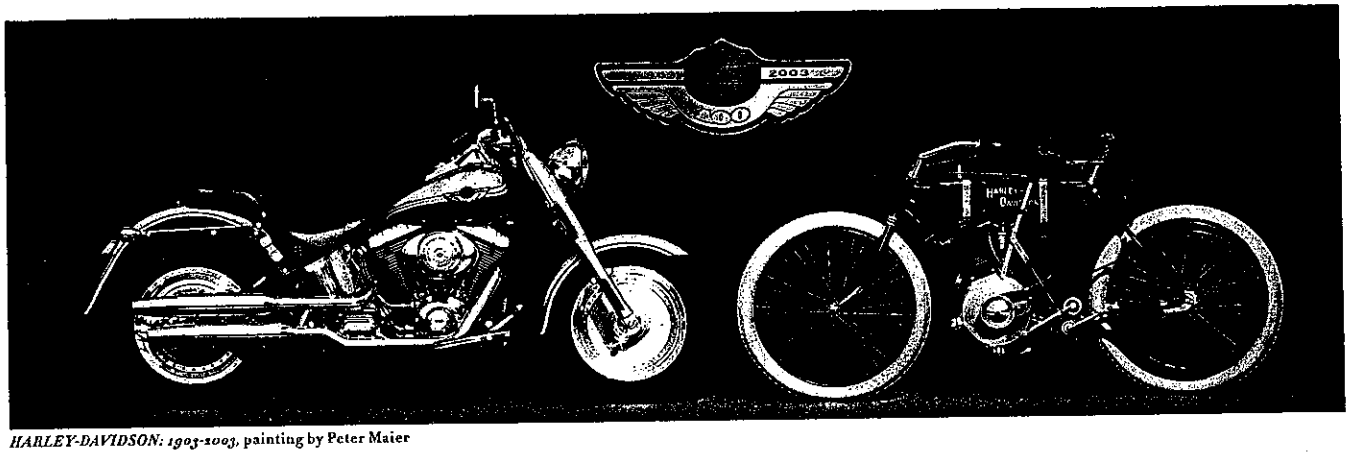
Willie G. and his restored 8-Valve racer.

Opposite: Three generations of Davidsons and family, left to right: Cara, Callie, Bill, Michael, Karen, Scott, Willy G., and Nancy.

William "Willie G." Davidson serves as vice president of Styling for Harley-Davidson Motor Company. Davidson is responsible for the successful designs of Harley-Davidson motorcycles. All motorcycle products are styled by Davidson and his associates at the Willie G. Davidson Product Development Center.

Davidson is the son of former Harley-Davidson president William H. Davidson and the grandson of one of the original founders, William A. Davidson. He is generally credited for developing the unique motorcycle designs that kept Harley-Davidson motorcycles selling while the company completed its technological and manufacturing improvements. Davidson oversees the look of all Harley-Davidson motorcycles, including classics such as the Super Glide, Low Rider, Café Racer, Heritage Softail Classic, Springer Softail, Fat Boy and V-Rod.

A native of Wisconsin, Davidson attended the University of Wisconsin for three years before transferring to the Art Center College of Design in Los Angeles. He spent more than five years with an outside design firm, designing products ranging from furniture to outboard motors. Davidson joined Harley-Davidson in 1963. He is one of 13 executives who purchased Harley-Davidson from AMF, Incorporated, in 1981.



HARLEY-DAVIDSON: 1903-2003, painting by Peter Maier

Enjoy your ride! Willie

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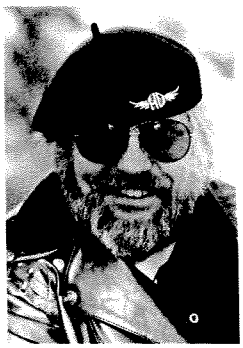
100 YEARS OF HARLEY-DAVIDSON

WILLIE G. DAVIDSON

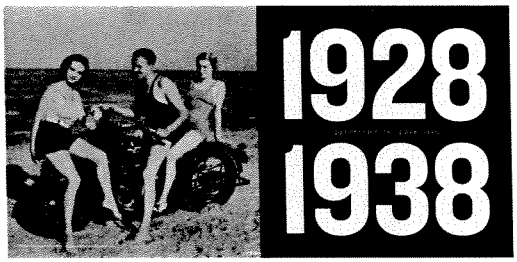
Celebrate the 100th anniversary of a legendary American company with the official book on Harley-Davidson—the bikes, the brand, the legend. Willie G. Davidson, grandson of one of the four original founders and a legend in his own right, shares the inside story behind this remarkable company, from the making of the first production Harley-Davidson motorcycle in 1903 to the teams of designers and factory employees whose passion for producing inspired motorcycles drives its success today.

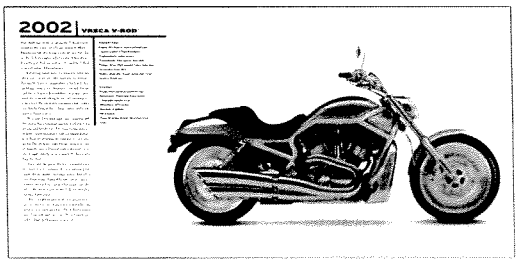
Built in a wooden shed by four young men almost one hundred years ago, the first Harley-Davidson motorcycle spawned a culture all its own. Here, the remarkable story is told with over 350 spectacular images—including vintage photographs from the early days of Harley-Davidson, full-color spreads on twenty-six milestone bikes in Harley-Davidson history, and pictures of the riders who have embraced the Harley-Davidson motorcycle as a symbol of freedom and individuality the world over.

This remarkable book was compiled with full access to the Harley-Davidson Motor Company Archives and includes unique personal anecdotes and styling insights from Willie G. Davidson. *100 Years of Harley-Davidson* is a stunning tribute to the craft and culture inside an American success story.



Willie G. Davidson became Harley-Davidson's Vice President of Styling in 1978. Willie's grandfather, William A. Davidson, along with his two brothers and William S. Harley, started the company nearly a century ago. Since the 1960s, Willie G. has been instrumental in the design of every motorcycle the Motor Company has produced.





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