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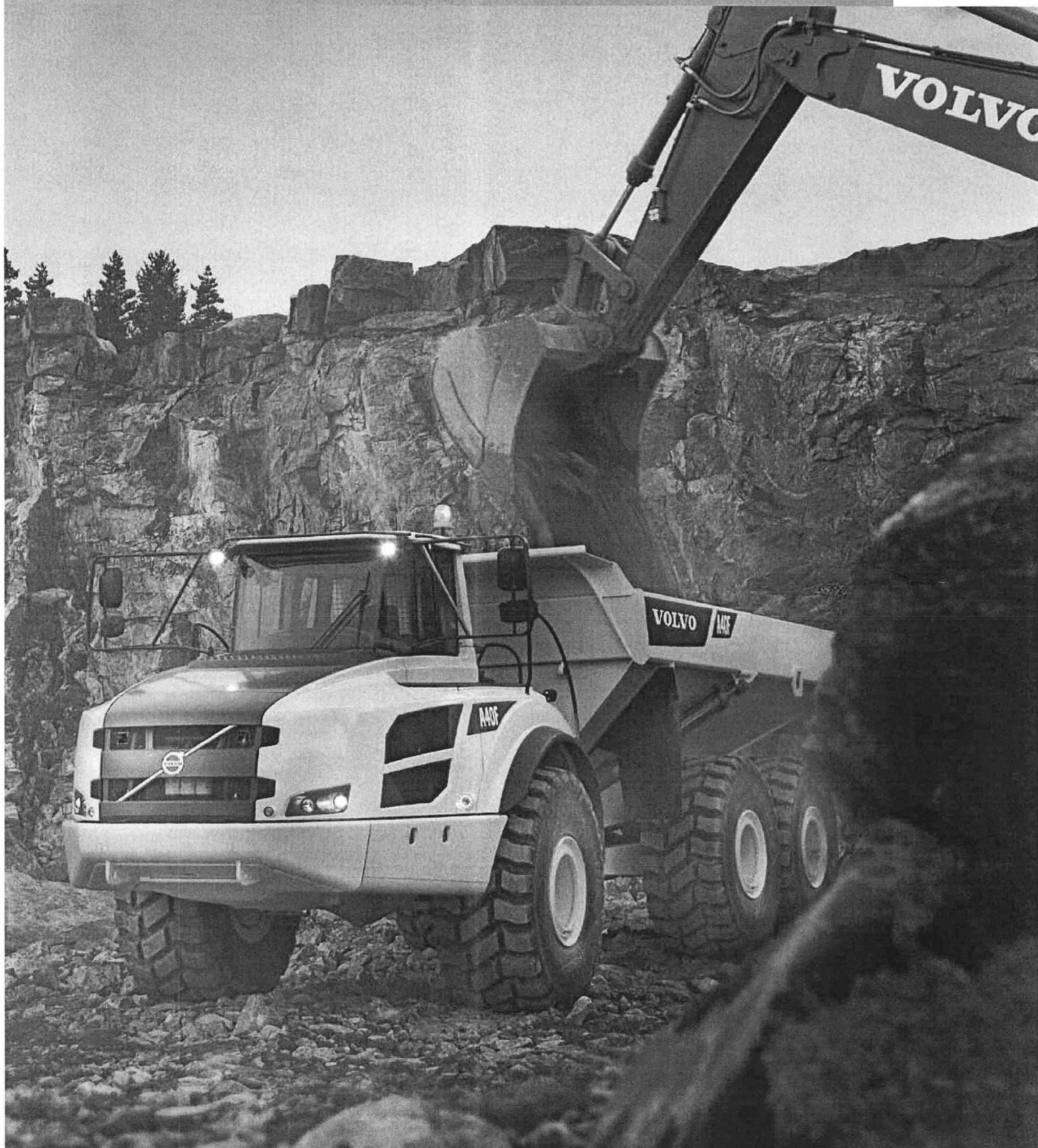
Proceeding	91207836
Party	Plaintiff Volvo Trademark Holding AB
Correspondence Address	LEIGH ANN LINDQUIST SUGHRUE MION PLLC 2100 PENNSYLVANIA AVENUE NW WASHINGTON, DC 20037-3202 UNITED STATES tm@sughrue.com, llindquist@sughrue.com
Submission	Testimony For Plaintiff
Filer's Name	LEIGH ANN LINDQUIST
Filer's e-mail	tm@sughrue.com, vmullineaux@sughrue.com
Signature	/Leigh Ann Lindquist/
Date	05/11/2016
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EXHIBIT 14

VOLVO ARTICULATED HAULERS

A35F, A40F

37.0-43.0 ton capacity 438-465 hp, net



A PASSION FOR PERFORMANCE.

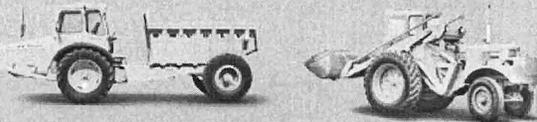
At Volvo Construction Equipment, we're not just coming along for the ride. Developing products and services that raise productivity – we are confident we can lower costs and increase profits for industry experts. Part of the Volvo Group, we are passionate about innovative solutions to help you work smarter – not harder.

Helping you to do more

Doing more with less is a trademark of Volvo Construction Equipment. High productivity has long been married to low energy consumption, ease of use and durability. When it comes to lowering life-cycle costs, Volvo is in a class of its own.

Designed to fit your needs

There is a lot riding on creating solutions that are suited to the particular needs of different industry applications. Innovation often involves high technology – but it doesn't always have to. Some of our best ideas have been simple, based on a clear and deep understanding of our customers' working lives.



You learn a lot in 175 years

Over the years, Volvo has advanced solutions that have revolutionized the use of construction equipment. No other name speaks Safety louder than Volvo. Protecting operators, those around them and minimizing our environmental impact are traditional values that continue to shape our product design philosophy.

We're on your side

We back the Volvo brand with the best people. Volvo is truly a global enterprise, one that is on standby to support customers quickly and efficiently – wherever they are.

We have a passion for performance.

A strong, dedicated, capable dealer network.

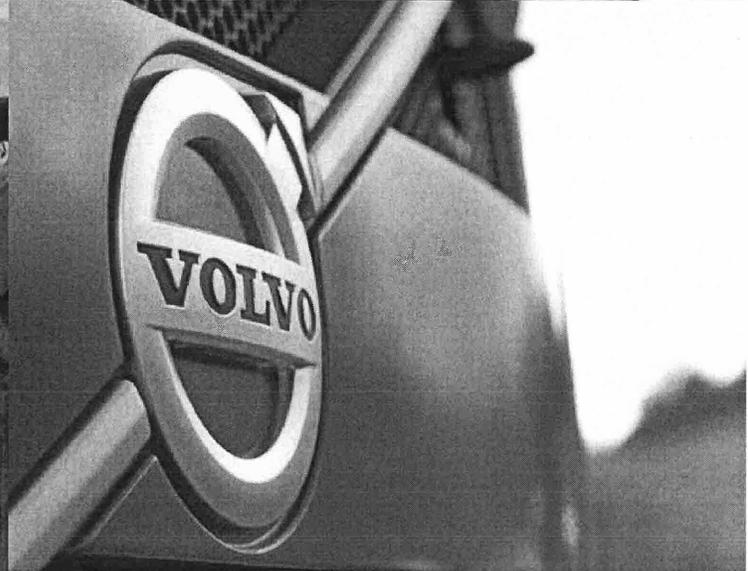
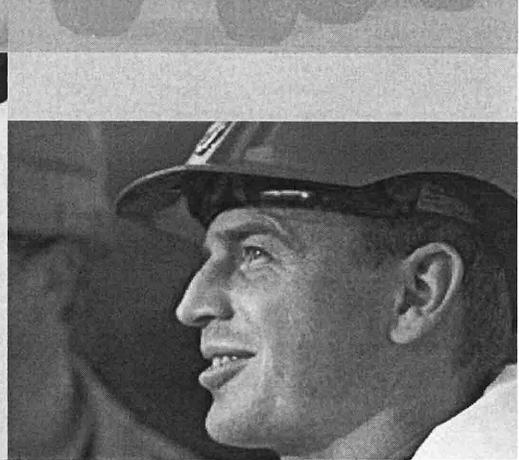
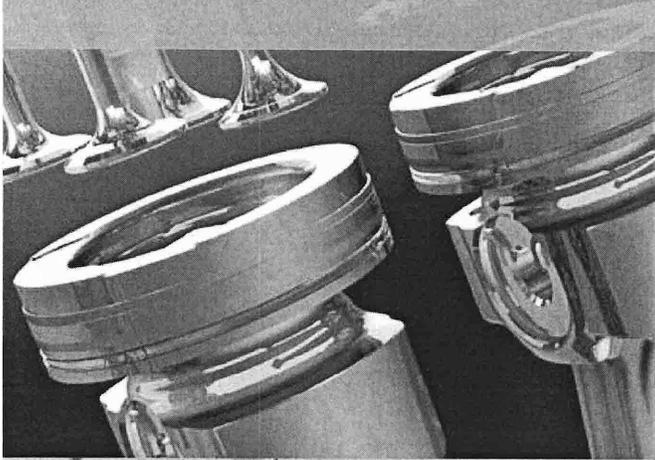
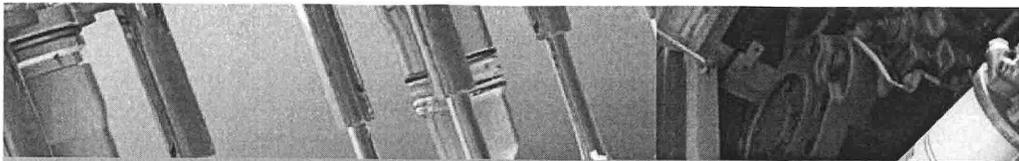
Our dealers are strategically located throughout North America to provide the equipment you need and the parts and service support you demand for a productive and profitable operation.

The strength of our dealer network is enhanced with extensive individualized product and product support training at our state-of-the-art Technical Training Center in Asheville and through hands-on training. At our nearby 80-acre Product Demonstration Center, visitors operate equipment from our entire product line under a variety of simulated working conditions. Both facilities are in year-round use by our dealers and customers – more than 2,000 visit each year. **Building the best starts right here.**

The products designed and manufactured by Volvo Construction Equipment have their beginnings at the most advanced Research & Design centers in the industry. Volvo CE machines are designed in 11 R&D centers and produced in 15 manufacturing facilities across the world.

The major R&D center and manufacturing plant in the Americas is located in Shippensburg, Pennsylvania. This facility has been in operation for over 30 years and – with its recently added 200,000 sq ft expansion – now covers 570,000 sq ft on an 80 acre campus. Dedicated work teams and highly advanced technologies and techniques using the Volvo Production System ensure continuous quality improvements, labor savings and cost control to reach the high quality that our customers have come to expect from Volvo.





Mack Trucks



Volvo Construction Equipment



Volvo Penta



Volvo Trucks



Renault Trucks



UD Trucks



Volvo Buses

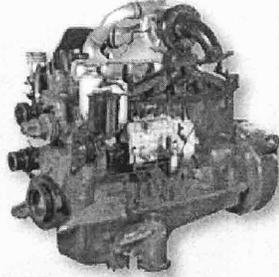
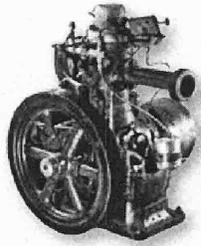


Volvo Aero



Volvo Financial Services

VOLVO ENGINE MANUFACTURING. OUR HERITAGE.

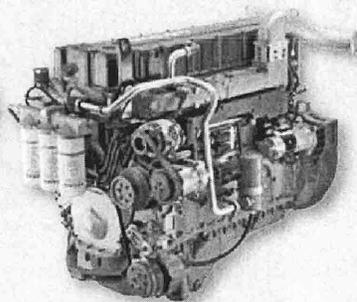
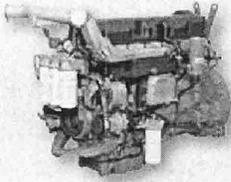
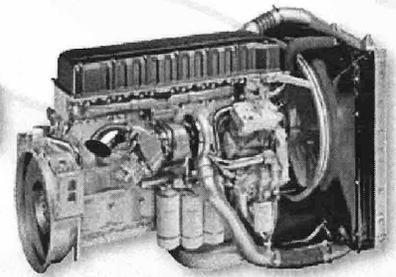
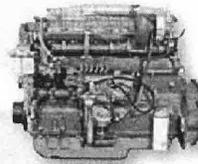


1893 - 1946 Volvo develops its first crude oil powered internal combustion engine which are followed by small two-stroke, low-speed (1000 rpm) diesel engines.

1946 - 1954 Volvo introduces three and four cylinder diesel engines with direct injection which are followed by turbocharged, direct injection heavy-duty diesel engines.

1978 - 1990 Intercooler technology is introduced leading to the world's first truly low-emission diesel engines - constant engine refinement ensures greater fuel efficiency.

1991 - 2000 In anticipation of Tier 1 emission standards, Volvo introduces air-to-liquid intercoolers with a Twin Pump device for higher engine efficiency and lower emissions.



2001 - 2004 Volvo introduces the Engine Management System which ensures high performance and low emissions - this innovation precedes Tier 2 emission regulations.

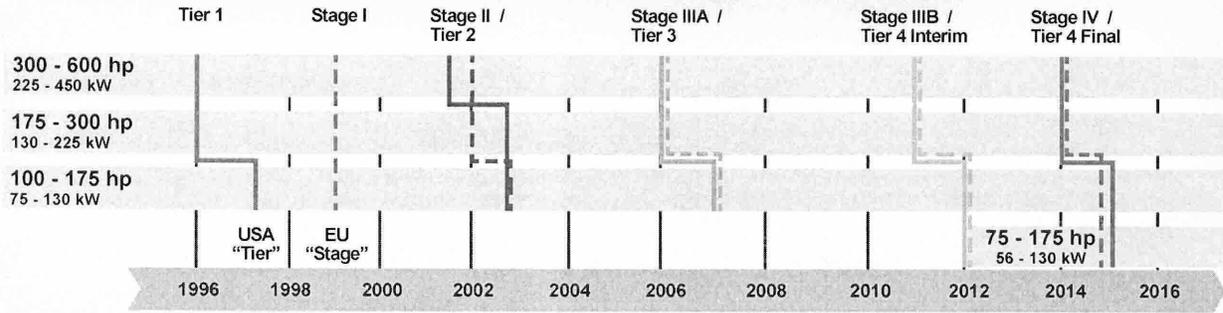
2005 - 2010 To meet Tier 3 emission regulations, Volvo introduces Advanced Combustion Technology allowing in-cylinder emissions control and helps lead the way to Tier 4 compliance.

2011 - 2014 Building on V-ACT, Volvo's Tier 4i platform exceeds regulations - an accomplishment made possible by leveraging our extensive on-highway experience.

2014 Volvo Construction Equipment is preparing for the final tier of emission regulations and this technology will have been proven through our on-highway presence.



PROVEN TIER 4-INTERIM TECHNOLOGY. FREQUENTLY ASKED QUESTIONS.

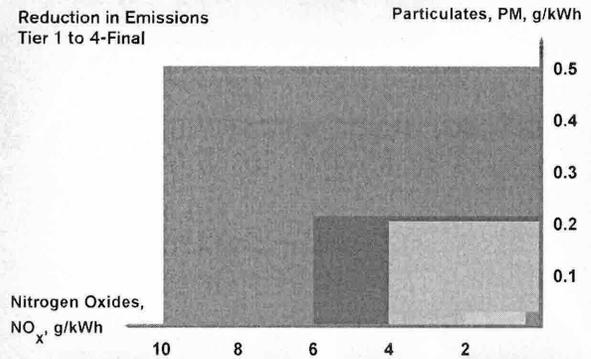


What does Tier 4-Interim mean?

Tier 4-Interim focuses primarily on the reduction of particulate matter (PM) and nitrogen oxides (NOX) with focus on reducing hydro-carbons (HC) as well as carbon monoxide (CO).

Is Volvo CE's Tier 4-Interim engine solution proven or will a new design be required like others in the industry?

Over the past decade, Volvo has been the world leader in 9-18 liter engines with extensive experience gained over multiple industries. Since 2007, Volvo Trucks has proven our Tier 4 technology reliable and ready for off-highway performance. Volvo CE leverages this expertise providing you with the performance you demand for your extreme conditions.



What is DPF regeneration and why is it needed?

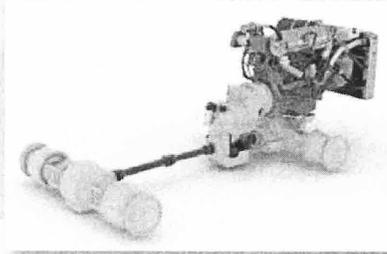
DPF regeneration means cleaning the filter by way of burning off particulate matter (soot) that has accumulated in the filter during operation - a process needed in order to ensure proper engine and machine performance. Under normal operating conditions, regeneration will take place every 8 to 10 hours and take approximately 20 minutes. There will be no loss of machine performance and will not interfere with the normal operation of the machine. The operator will be fully aware of the status of regeneration due to safety and service criteria through electronic monitoring.

From draft board to final product, Volvo has designed the entire system and has ensured that the quality and durability of the system components including cooling and packaging of the system have been given full attention, bearing in mind the demanding operational conditions of construction equipment.

Will Volvo's construction equipment see fuel consumption impacts due to the Tier 4-Interim technical solutions?

The high efficiency of our regeneration system and Tier 4-Interim solution ensures that the impact on fuel consumption is minimal. The impact varies somewhat depending on engine size and engine load / application. Our target is to achieve enhanced performance, emission reductions and optimized fuel efficiency, which, depending on the engine duty cycle, will translate into somewhat lower fuel consumption compared to current levels. In some products and applications the reduction in fuel consumption will be up to 5% on average.

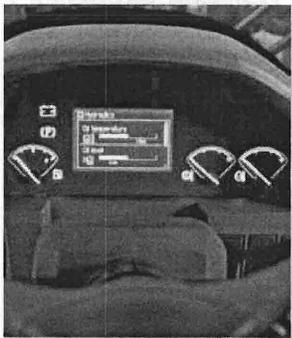
VOLVO ENGINE TECHNOLOGY. LEADERS IN THE INDUSTRY.



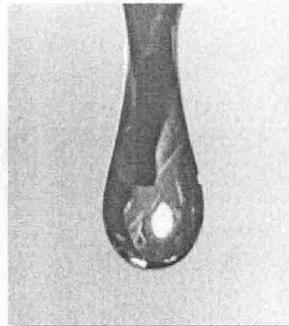
All the power you expect from one of the world's largest engine manufacturers, alongside perfectly matched drivetrains and components to maximize performance in any application.



Not only do our engines meet and exceed emissions requirements, we work to reduce noise levels and vibrations to **keep the operator comfortable** over the long haul.

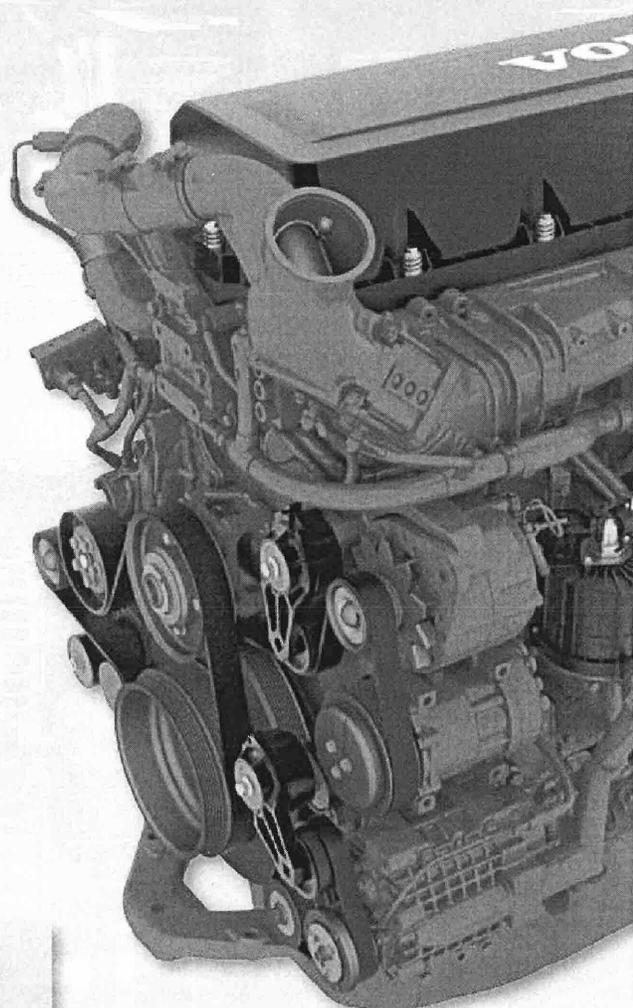


Refined computer programming will alert operators when regeneration needs to occur. Operation is possible while the machine regenerates, thus reducing downtime.



Engine oil requirements

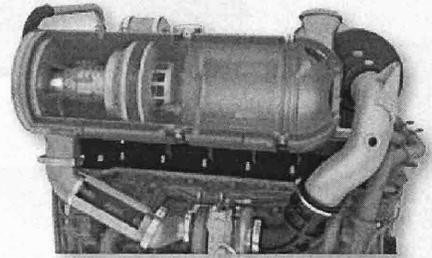
VDS-4 Ultra Diesel Engine Low-Ash Oil has been available from Volvo since 2007 with on-road trucks.



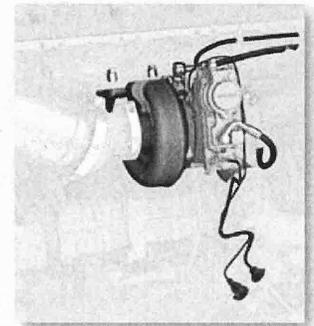
INNOVATING ACROSS ALL PRODUCTS.



Volvo's **particulate filter** cleans itself by oxidizing particulate matter during regeneration and only needs service every 4500 hours. Regeneration cleans the filter every 8 to 10 hours during machine operation.



The **variable turbocharger** helps increase power and provides instant torque. It helps enhance performance and promotes high fuel efficiency.

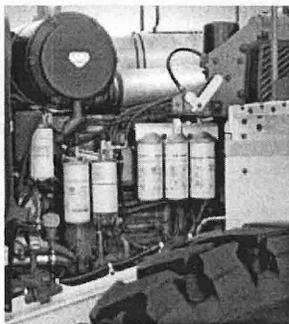


Ultra low sulfur diesel is required in order to operate machinery with Tier 4 engines. This fuel is the same fuel that has been used with on-highway trucks since 2007.

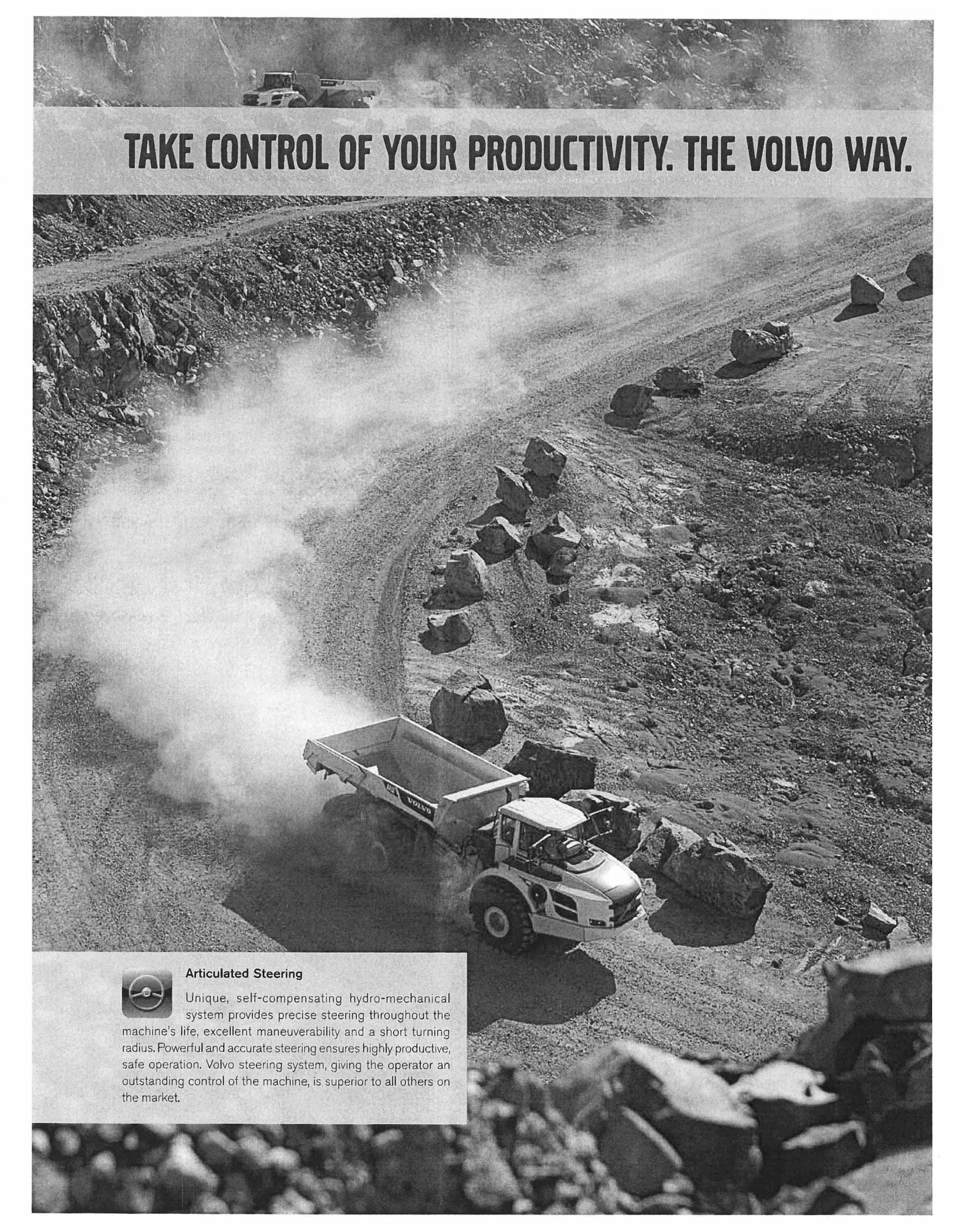
**ULTRA-LOW SULFUR
HIGHWAY DIESEL FUEL**
(15 ppm Sulfur Maximum)

Required for use in all model year 2007 and later highway diesel vehicles and engines.

Recommended for use in all diesel vehicles and engines.



Quality components and strategic placement of filters provides for easy service, keeping machine downtime at a minimum and production time at a maximum.



TAKE CONTROL OF YOUR PRODUCTIVITY. THE VOLVO WAY.



Articulated Steering

Unique, self-compensating hydro-mechanical system provides precise steering throughout the machine's life, excellent maneuverability and a short turning radius. Powerful and accurate steering ensures highly productive, safe operation. Volvo steering system, giving the operator an outstanding control of the machine, is superior to all others on the market.

A typical work cycle for an articulated hauler includes loading, travel, maneuvering and dumping. The Volvo A35F and A40F machines perform these operations in the most efficient and safe way, excelling all others.

Volvo's Unique Steering System

The steering system design provides high steering force, even at low engine speeds for the toughest off-road operating conditions, e.g. deep mud. Hydraulic damping prevents the transmission of impacts and jolts to the steering wheel and operator. The system also ensures precise steering and directional stability at high-speed hauling on roads, so there is no need for the operator to compensate with the steering wheel.

Volvo's Unique Load & Dump Brake

The patented user-friendly Load & Dump Brake enhances productivity and safety, improving ease of operation and reducing operator fatigue. When in position for loading or dumping, the operator presses a single button which results in automatic application of the service brakes and shifting the transmission to neutral. Once completed, selecting a gear then deactivates the function, releasing the brakes.



Beneficial Body Design

A strategically located body hinge provides a long distance between the rear bogie axle and the chute's rear edge together with high dump clearance when the body is raised. Allowing placement of the load directly in the right position, it maximizes productivity while dumping over an edge, into a hopper or stockpiling. The high tipping angle and design of the body, made from high strength steel, promote efficient material ejection.

Powerful Hydraulics and Effective Dumping

The load sensing hydraulic system with variable displacement axial-piston pumps, powering the double acting single-stage hoist cylinders, allows easy rising of the fully loaded body even on very steep grades. Precise dumping control ensures short cycle times and safety in all applications.

SMOOTH AND STEADY. ANYWHERE.

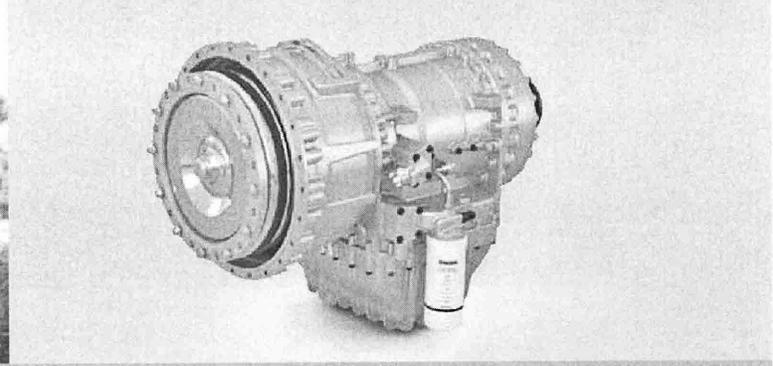
Off-road hauling performance is enhanced when every wheel is firmly on the ground. Stable and smooth, Volvo haulers keep you moving ahead in full control, even in the worst operating conditions.

Rotating Hitch

The hitch allows independent movement of the tractor and the trailer without frame twist and provides the required oscillation for good ground contact in rough operating conditions. The high hitch position close to the load's center of gravity improves stability and ensures high ground clearance for unique off-road mobility and steady high-speed hauling.

All-Terrain Tires

Tires are an important part of the drivetrain and the articulated hauler concept. Large and wide tires ensure low ground pressure, good flotation and excellent off-road mobility, providing smooth, comfortable ride. F-series machines feature durable radial tires with long service life, designed for hauling applications to ensure good traction and stability.

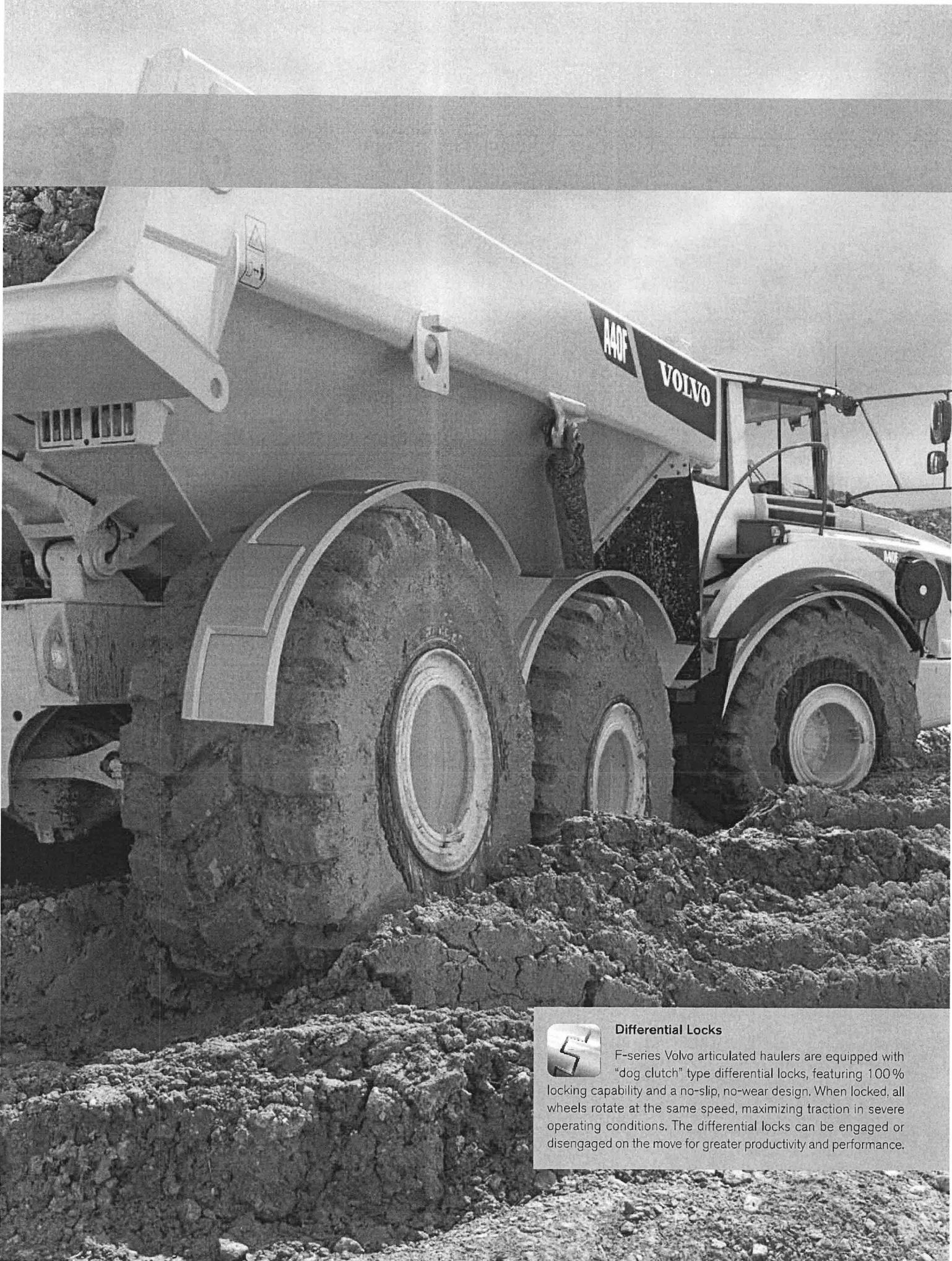


Bogie Suspension

Unique, 100% maintenance free, 3-point bogie beam design allows the rear wheels to move independently, ensuring good ground contact, traction, vehicle stability and less strain on the frame. This, together with long suspension travel ensures superior off-road performance, keeping the body level and preventing material spillage, even when moving over large bumps and ruts. A smooth "floating" ride for high operator comfort reduces cycle times and improves productivity. Durable components provide more uptime and reduced operating costs.

Volvo Transmission

Purpose-built by Volvo and newly updated, the Powertronic planetary transmission with lockup function is designed to ensure fully automatic, accurate and smooth gear selection for reduced operator fatigue and increased productivity. The transmission has 9 forward and 3 reverse gears, which can be skipped while shifting for faster acceleration. An integrated transmission protection reduces the risk for operator error, improving safety.



Differential Locks

F-series Volvo articulated haulers are equipped with "dog clutch" type differential locks, featuring 100% locking capability and a no-slip, no-wear design. When locked, all wheels rotate at the same speed, maximizing traction in severe operating conditions. The differential locks can be engaged or disengaged on the move for greater productivity and performance.

LESS PAIN. MORE GAIN.



Volvo Care Cab

Good all-around visibility is essential for both high safety and productivity. Comfortable Volvo Care Cab with centrally positioned operator station, sloping hood, large rear-view mirrors, wide front windshield and a full-glass door feature excellent visibility. A new instrument panel, Contronics and tipping lever ensure ease of operation.

Spacious interior, large storage compartments, conveniently located pedals, controls and switches minimize operator fatigue throughout the whole shift. The well-designed cab is built from high strength steel, meeting ROPS/FOPS safety standards.

Volvo offers a world-class operator environment for low fatigue, high productivity and safety. Just enter the legendary Care Cab and look around. All instruments are in view, all controls are within reach – right where you want them. The steering wheel and seat can be easily adjusted for optimum comfort.

User-Friendly Operator Communication System

Contronics continuously provides valuable information on the machine's systems and operation, with early warning via easy to understand malfunction indicators, alerting abnormal machine or operator behavior, improving availability. A new large color monitor is visible at a glance and a new keypad, located on the right instrument panel, allow easier navigation between different screens and functions.

Climate Control System

The high-capacity heating and ventilation system provides excellent comfort, enhancing productivity. Efficient incoming air filtration ensures a clean operator environment even in dusty conditions. Strategically located air vents provide even temperature in the cab. Separate defroster vents keep all windows clear. Optional Electronic Climate Control (ECC) system automatically maintains the desired temperature.



Safe and Easy Cab Access

Designed for safe, easy entry and exit, the Care Cab features a wide door opening with no threshold, correctly positioned non-slip steps and new, convenient handrails.

Dumping Functionality

A35F and A40F feature new dumping functions, improving ease of operation, safety and productivity – detent body lowering and adjustable tipping angle. The angle can be easily set by the operator, using Contronics to limit the machine height, when operating under electrical wires, in tunnels or underground.

Noise Reduction

The Care Cab features very effective sound insulation and is mounted on optimally positioned rubber pads to reduce vibration. Comfortably low internal noise level (only 74 dB (A) – ISO 6396) reduces fatigue to help boost operator productivity.

NO DAILY OR WEEKLY MAINTENANCE. SERVICE SIMPLIFIED.

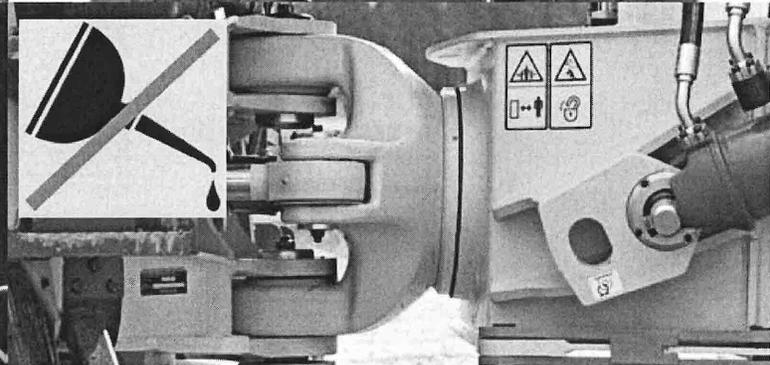
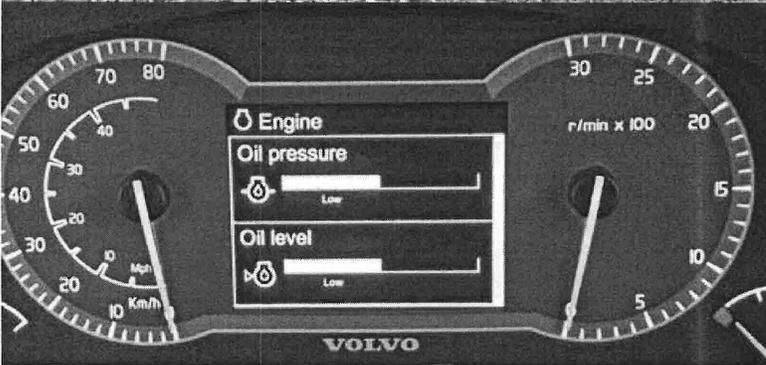
Volvo articulated haulers help you get more out of each working day. They feature a low need for maintenance, long service intervals, excellent serviceability and availability. All this contributes to more uptime for productive hauling.

Brake and Retardation Systems

A35F and A40F are equipped with oil cooled wet multiple disc brakes on all wheels. The design ensures high braking performance and long service life, even on very dusty or muddy sites. Additionally, both machines feature easy to operate retardation system, using the wheel brakes and VEB (Volvo Engine Brake – compression brake plus exhaust retarder EPG). Powerful retarders are used to control speed while hauling downhill, slowing down before curves or cross roads, reducing the need for service brakes use. It ensures low operating costs plus fast and safe hauling.

Service Friendly

Daily and weekly maintenance is not required. Engine oil filters are grouped and easily accessed via the swing-down front grill. The special valve in the belly plate and a dedicated drainage hose, stored in the front grill, ensure oil change without spillage, reducing environmental impact. Remote-mounted drains are located for convenient reach. All service and grease points are easily accessed either from ground level via non-slip platforms. Excellent serviceability and long service intervals reduce machine downtime.



Automatic On-Board Monitoring

The Contronics system electronically monitors fluid levels, providing warnings for any deviations and scheduled service reminders, which minimizes downtime and increases machine availability.

Maintenance Free Rotating Hitch

All F-series haulers feature 100% maintenance free, completely sealed, durable hitch with permanently greased tapered roller bearings. No need for maintenance means reduced downtime and operating costs.



Easy Service Access

The front grill swings down, acting as a service platform with anti-slip steps. The hood tilts up to 90 degrees for full and safe access to the engine compartment. This makes reaching service points, changing filters, cleaning the cooling package much easier and less time consuming.

FOLLOW THE LEADER.



CareTrack

CareTrack is the Volvo telematics system. It is equipped as standard on this machine and is designed to provide information to help improve productivity and efficiency.

Heavy Duty Body

Durable body made from high strength HB400 steel. Body design, high dump clearance and tipping angle promote excellent material ejection.

Powerful Hydraulics and Effective Dumping

Load-sensing "closed-center" hydraulic system, with variable displacement pumps. Easy body raising, even on steep grades. Precise dumping control ensures short cycle times and safety. Detent body lowering and adjustable tipping angle improve productivity.

Durable Frames

Heavy-duty front and rear frames, with optimized load carrying design. Developed for severe off-road operations and long service life.



Differential Locks

No slip, no wear, "dog clutch" type differential locks provide 100% locking capability. "Dog clutch" longitudinal differential lock in drop box.

Maintenance-Free Rear Suspension

Straddle mounted bogie beams reduce the strain on the frame. 3-point axle mounting allows individual wheel movement and long suspension travel, keeping the body level, even when operating in very rough terrain.

Powerful Brakes and Retardation

Oil cooled, multiple wet disc brakes on all wheels ensure high braking performance and long lifetime. Easy to operate, powerful retardation system, using the wheel brakes and VEB, provides low operating costs.





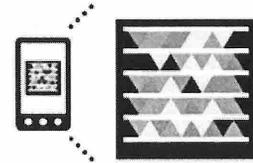
Volvo Care Cab

Quiet, spacious, comfortable, with excellent visibility and ergonomically positioned controls for safe, productive operation. Meets ROPS / FOPS safety standards.

Unique Load & Dump Brake

Easy to operate: a single button press applies the service brakes and shifts the transmission to neutral, reducing operator fatigue, enhancing productivity and safety.

To watch the walk around video on your mobile device



Get the free mobile app at <http://gettag.mobi>



Efficient Cooling

Two hydraulically driven variable speeds cooling fans consume engine power only when needed, lowering fuel consumption and noise. Side-mounting simplifies service and maximizes uptime.



Easy Service Access

No daily or weekly greasing. 90 degree tilting hood and swing down front grill with integrated steps, acts as a service platform. All grease points and remote mounted drains are accessible from ground level or non-slip platforms.

Gas-Hydraulic Front Suspension

Soft and progressive 3-point axle suspension shortens cycle time and increases productivity. Featuring operator comfort and reducing fatigue, it improves overall efficiency.



Articulated Steering

Unique, hydro-mechanical, self-compensating system. High steering force, accurate steering, directional stability for productive and safe operation.



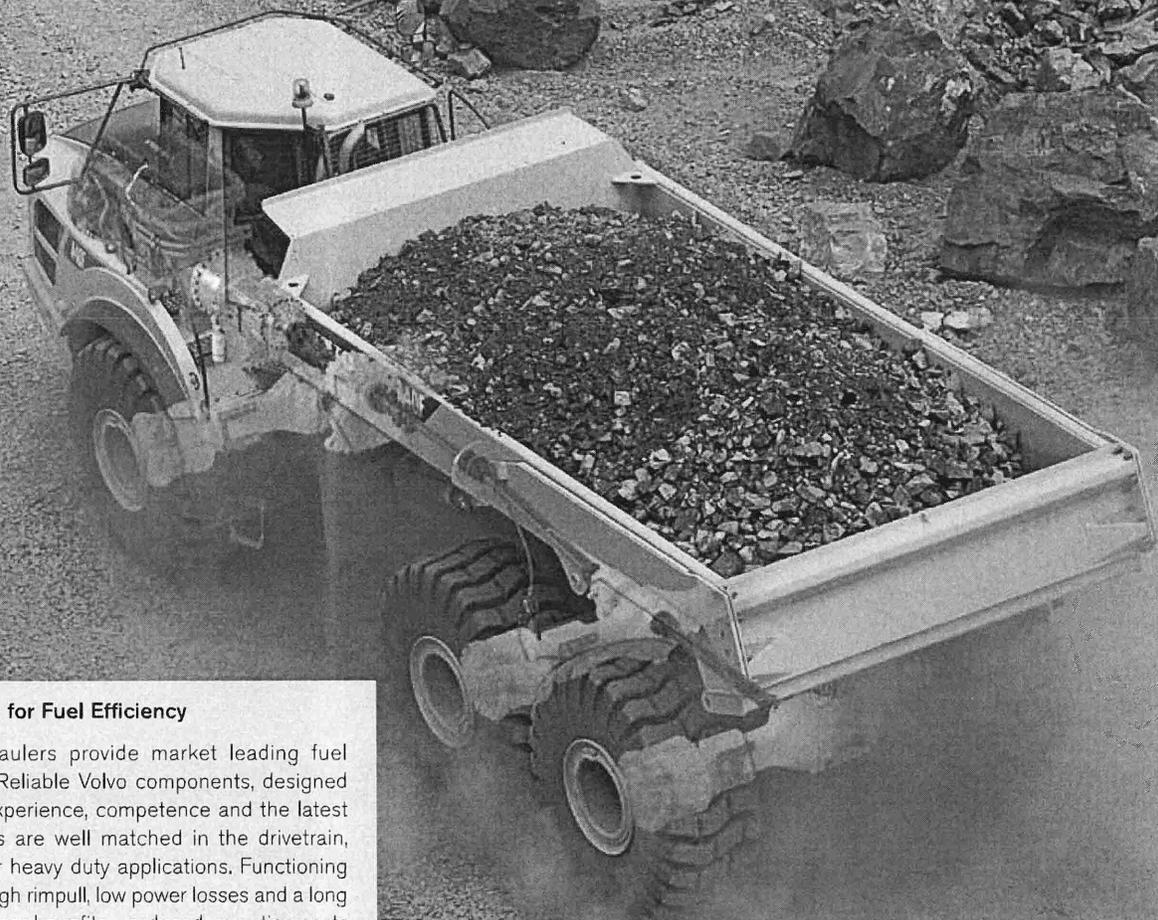
Fuel Efficiency

Environmentally-friendly, electronically controlled, powerful diesel engine. High torque at low rpm, well matched drivetrain and Automatic Traction Control (ATC) reduce fuel consumption.

Maintenance-Free Hitch

Rotating hitch with permanently greased tapered roller bearings eliminates frame twist, providing better off-road mobility. High placement ensures excellent ground clearance and stability.

EFFICIENT HAULING. DEFINED.



"F" Stands for Fuel Efficiency

F-series haulers provide market leading fuel efficiency. Reliable Volvo components, designed using over 40 years experience, competence and the latest industrial technologies are well matched in the drivetrain, specially developed for heavy duty applications. Functioning together, they ensure high rimpull, low power losses and a long service life. Main customer benefits – reduced operating costs and environmental impact.

Customer trust is not just given, but earned over years. Volvo developed the hauler concept in the 1960s and retains its position as the world's leading articulated hauler manufacturer. When choosing A35F or A40F, you can be sure – the job will be done quickly, cost effectively and safely, with low environmental impact.

Automatic Traction Control (ATC) System is Standard on All F-Series Volvo Articulated Haulers

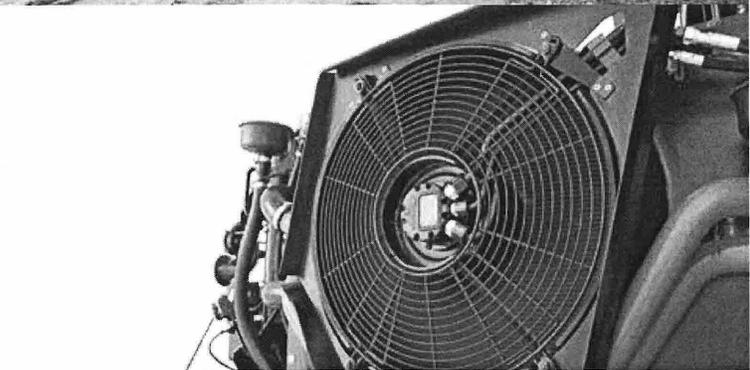
Constantly changing underfoot conditions are quite common when operating an articulated hauler. To keep the traction and mobility, ATC system automatically selects the optimal drive combination on the move. The possibility to shift between 6x4 mode (lower fuel consumption, less tire wear) and 6x6 mode (maximum rimpull) is a Volvo exclusive.

Since operators do not have to engage/disengage differential locks manually, they can focus on proper operation, which improves safety and reduces operating costs. The ATC system not only simplifies operation, maximizing off-road performance, but also protects the drivetrain from misuse and unnecessary wear, prolonging machine service life.



Environmentally-Friendly Engine

A35F and A40F are equipped with electronically controlled, low emission diesel engines. Powerful engines are characterized by high torque at low rpm, resulting in excellent fuel efficiency, high performance, quick response, less wear and long life. Purpose built by Volvo, they optimally match the drivetrain, ensuring maximum utilization of power and torque even in the most demanding applications.

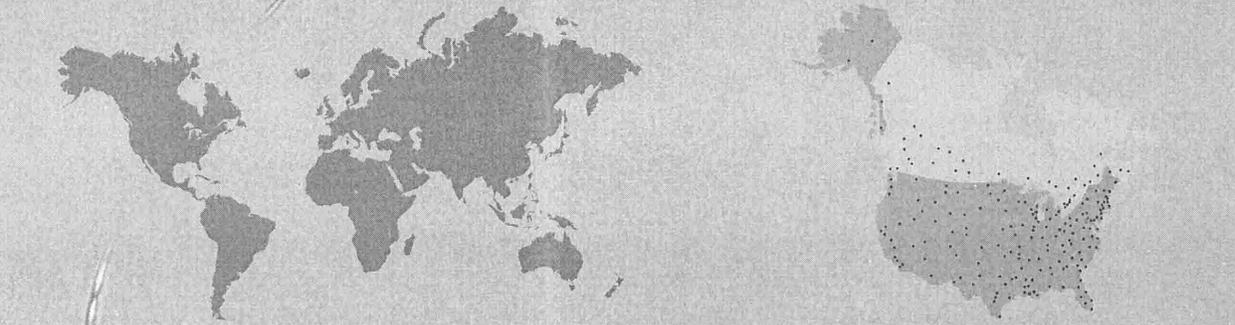


Effective Cooling

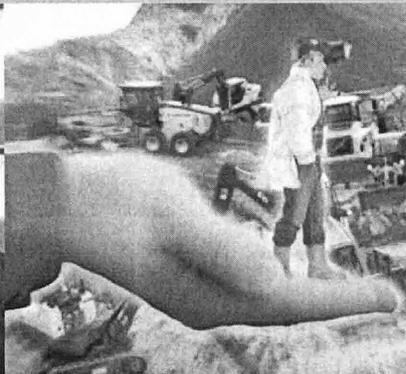
Two hydraulically driven variable speed fans consume engine power only when needed, perfectly responding to cooling demands. Most of the time, they rotate at idle speed, lowering fuel consumption and noise. The system ensures effective cooling, providing optimal temperatures in all conditions. Side-mounting simplifies service, maximizing uptime.

STRENGTH TO SUPPORT YOU AND YOUR BUSINESS.

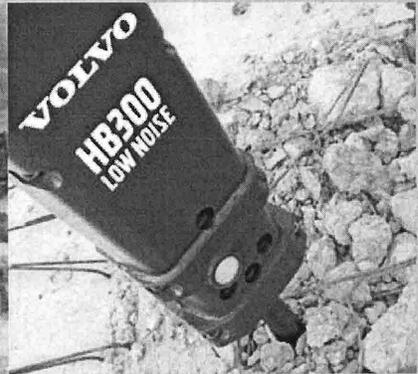
The day you receive your new Volvo Articulated Hauler is just the start of your working relationship with Volvo. From service and maintenance to our CareTrack telematics system – Volvo has a comprehensive and sophisticated aftermarket portfolio to continuously add value to your business.



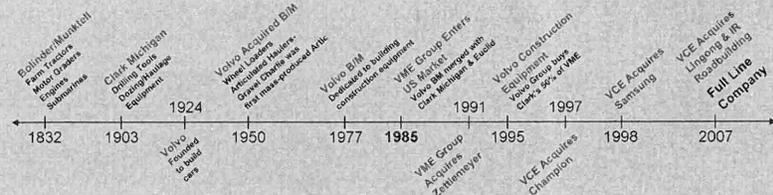
CareTrack - Volvo's telematics system works with our exclusive machine tracking info system, MATRIS, using guided diagnostics to track and analyze machines remotely - minimizing costs and maximizing uptime.



Customer Support Agreements - Gives you peace of mind by reducing total ownership costs, maximizing uptime, and distributing maintenance and major repair costs.



Attachments - Providing customers with a wide variety of attachments keep your machine working and open up new job opportunities.



Volvo designed and built your machines, so no-one knows how to keep them working in top condition more than us. When it comes to your machine, our Volvo trained technicians are the experts.

Our technicians work with industry leading diagnostic tools and techniques, using only Genuine Volvo Parts to deliver the highest levels of quality and service. Talk to your Volvo dealer about how genuine Volvo services can best provide the service and maintenance plan that is the right fit for you and your business.

State-of-the-art machines require state-of-the-art support and your Volvo dealer can provide a catalogue of services designed to get the most out of your machine, helping you maximise uptime, productivity and residual value. Your Volvo dealer can provide a number of sophisticated support offers, including:

Service plans ranging from routine wear inspections, through to comprehensive maintenance and repair agreements.

Analysis and diagnostics to help you understand how your machine is running, highlight potential maintenance issues and identify where performance can be improved.

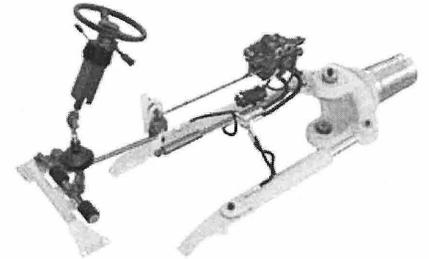
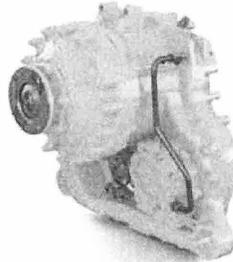
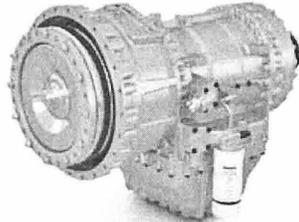
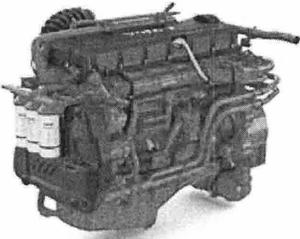
Eco Operator training courses can help your operators work towards a safer, more productive and fuel efficient performance.



CareTrack

Each Volvo Articulated Hauler comes standard equipped with CareTrack, the Volvo telematics system. CareTrack provides information for better planning and smarter working; including fuel consumption reports, location reports and service reminders. Save fuel. Reduce costs. Maximise profitability. You can with CareTrack.

VOLVO A35F, A40F IN DETAIL.



Engine

Fuel efficient, environmentally friendly, powerful, 6-cylinder, V-ACT diesel engine with 4 valves per cylinder, variable geometry turbo (VGT) and external exhaust gas recirculation (EGR). High pressure fuel injection system (2500 bar). High torque at low rpm. Long service life. Diesel particulate filter (DPF) with thermal regeneration. Two-stage incoming air filtration is standard. Cooling system: high capacity cooling system with easy accessible, power and fuel saving, variable speed hydraulically driven fans.

A35F	Volvo D13H-A / D13H-B (Tier 4i)			
Max power at	r/s	31,7	r/min	1 900
SAE J1995 Gross	kW	329	hp	447
Flywheel power at	r/s	31,7	r/min	1 900
ISO 9249, SAE J1349 Net	kW	327	hp	435
Max torque at	r/s	20	r/min	1 200
SAE J1995 Gross	Nm	2 360	lb ft	1 740
ISO 9249, SAE J1349 Net	Nm	2 345	lb ft	1 729
Displacement	l	12,8	in ³	781

A40F	Volvo D16H-A / D16H-B (Tier 4i)			
Max power at	r/s	30	r/min	1 800
SAE J1995 Gross	kW	350	hp	476
Flywheel power at	r/s	30	r/min	1 800
ISO 9249, SAE J1349 Net	kW	347	hp	465
Max torque at	r/s	17,5	r/min	1 050
SAE J1995 Gross	Nm	2 525	lb ft	1 862
ISO 9249, SAE J1349 Net	Nm	2 500	lb ft	1 843
Displacement	l	16,1	in ³	982

Drivetrain

Torque converter with built-in lock-up function.
Transmission: Volvo PowerTronic planetary fully automatic transmission with 9 forward gears and 3 reverse gears.
Dropbox: Volvo-developed, in-line design with high ground clearance and 100% longitudinal "dog clutch" type differential lock.
Axles: heavy duty, purpose built Volvo design with planetary type hub reductions and 100% "dog clutch" type differential locks.
Automatic traction control system (ATC).

A35F/A40F

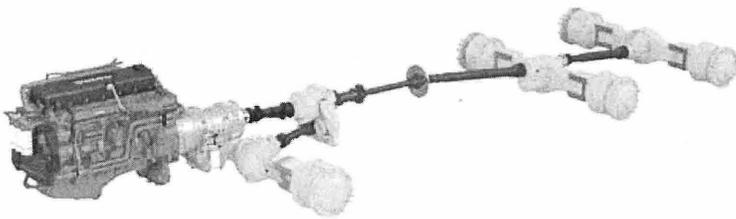
Torque converter	2,1:1
Transmission, Volvo	PT 2519
Dropbox, Volvo	IL2 ATC
Axles, Volvo	ARB H35/H40

Electrical System

Cables are enclosed in protective plastic conduits, secured to the frame.
All cables, sockets and pins are identified. Prewired for options.
Connectors meet IP67 standard for water-proofing.
Easy accessed battery disconnect switch.
Powerful halogen lights.

A35F/A40F

Voltage	24 V (2x12V)
Battery capacity	2x170/2x225 Ah
Alternator	2,26 kW (80 A)
Starter motor	9,0 kW (12 hp)



Brake System

Complies with ISO 3450.
 Fully hydraulic, wet brakes with enclosed, oil-cooled multiple discs on all wheels. Separate brake cooling for each axle.
 Two independent circuits: one for front axle and one for bogie axles.
 Parking brake: spring-applied disc brake on the propeller shaft.
 Retarders: using wet brakes in axles and Volvo Engine Brake
 Volvo Engine Brake: compression brake and exhaust retarder (EPG).

Steering System

Hydro-mechanical, self compensating design. Two double-acting steering cylinders.
 Steering angle: 3,4 steering wheel turns lock-to-lock, $\pm 45^\circ$.
 Steering system, including secondary steering fulfills ISO 5010.

Chassis

Frames: box type, heavy duty. High strength steel, robot welded.
 Rotating hitch: 100% maintenance free, fully sealed, with permanently greased tapered roller bearings.
 Front suspension: 100% maintenance free. Independent wheel movement via a 3-point mounting system.
 Rear suspension: 100% maintenance free. Straddle mounted bogie beam. Independent wheel movement via a 3-point mounting system.

Cab

Mounted on rubber pads. Ergonomically designed. Easy entry and exit. Wide angle forward view. Operator centrally positioned above the front axle. Adjustable operators seat with retractable seat belt. Tilt/telescopic steering wheel. Ergonomically positioned controls. Filtered air. Optional climate control system.
 Operator communication system: Contronics. Large color display, user-friendly and easy-to-understand information, all vital machine functions are constantly monitored.
 Instructor seat with seat belt.
 Safety: ROPS/FOPS standards approved according to ISO3471, SAE J1040 / ISO3449, SAE J231.
 Sound level in cab according to ISO 6396: 74 dB(A).
 External sound level* according to ISO 6395: 110 dB(A).

* with Noise Reduction Kit

Hydraulic System

Pumps: Five engine-driven variable displacement piston pumps driven by the flywheel PTO. One ground-dependent piston pump mounted on the dropbox for emergency steering.
 Two return oil filters with magnetic cores provide effective oil filtration.
 System max working pressure is 25 MPa (3626 psi).

Dumping System

Patented Load and Dump Brake.
 Dumping Cylinders: two single stage double acting.

A35F/A40F

Tiping angle	72°/70°
Tiping time with load	12 s
Lowering time	10 s

Body

Plate thickness:		
Front	8 mm	0.31"
Sides	12 mm	0.47"
Bottom	16 mm	0.63"
Chute	16 mm	0.63"
Material: HB400 steel		
Yield strength	1000 N/mm ²	145000 psi
Tensile strength	1250 N/mm ²	181000 psi

Load Capacity

	A35F		A40F	
Standard Body				
Load capacity	33 500 kg	37 sh tn	39 000 kg	43 sh tn
Body, struck	16,0 m ³	20.9 yd ³	18,4 m ³	24.1 yd ³
Body, heaped 2:1	20,5 m ³	26.8 yd ³	24,0 m ³	31.4 yd ³
With overhung tailgate				
Body, struck	16,4 m ³	21.5 yd ³	18,8 m ³	24.6 yd ³
Body, heaped 2:1	21,4 m ³	28.0 yd ³	24,7 m ³	32.3 yd ³

SPECIFICATIONS.

Fill capacities

	A35F		A40F	
	litre	US gal	litre	US gal
Crankcase	50.0	13.2	54.0	14.3
Fuel tank	480.0	126.8	545.0	144.0
Cooling system	95.0	25.1	95.0	25.1
Transmission, total	45.5	12.0	45.5	12.0
Dropbox	9.2	2.4	9.2	2.4
Axles, front/ bogie	28.0 litre/ 57.0 litre	7.4 US gal/ 15.0 US gal	29.0 litre/ 59.0 litre	7.7 US gal/ 15.6 US gal
Brake cooling tank	121.0	32.0	121.0	32.0
Hydraulic tank	262.0	69.2	262.0	69.2

Operating weight unloaded

	A35F		A40F	
	kg	lb	kg	lb
Tires	26,5R25*		29,5R25**	
Front	15 700	34 500	16 550	36 400
Rear	13 400	29 500	14 250	31 400
Total	29 100	64 000	30 800	67 800
Payload	33 500	73 700	39 000	85 800

Operating weight includes all fluids and operator

*) A35F with tires 775/65R29, add 200 kg (441 lb)/axle ***) A40F with tires 875/65R29, add 300 kg (661 lb)/axle

Speed

	A35F		A40F	
	km/h	mph	km/h	mph
Forward				
1	6	4	6	4
2	9	6	9	6
3	11	7	10	6
4	15	9	15	9
5	22	14	22	14
6	28	17	27	17
7	37	23	36	22
8	49	30	48	30
9	57	35	57	35
Reverse				
1	7	4	7	4
2	10	6	9	6
3	18	11	18	11

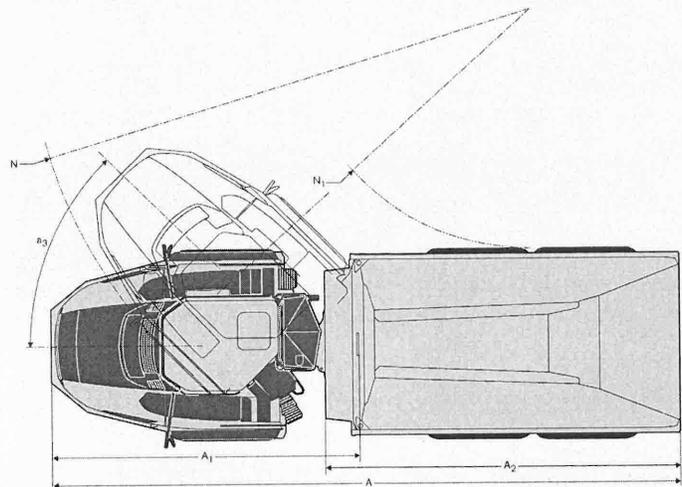
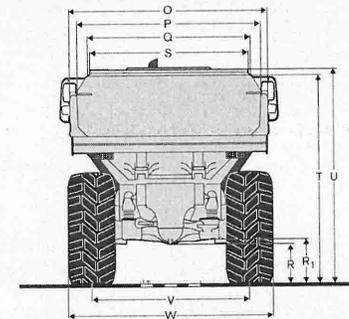
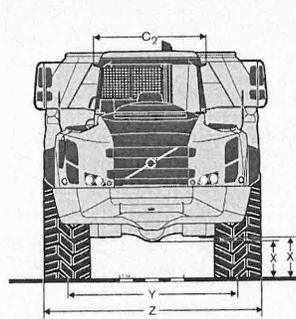
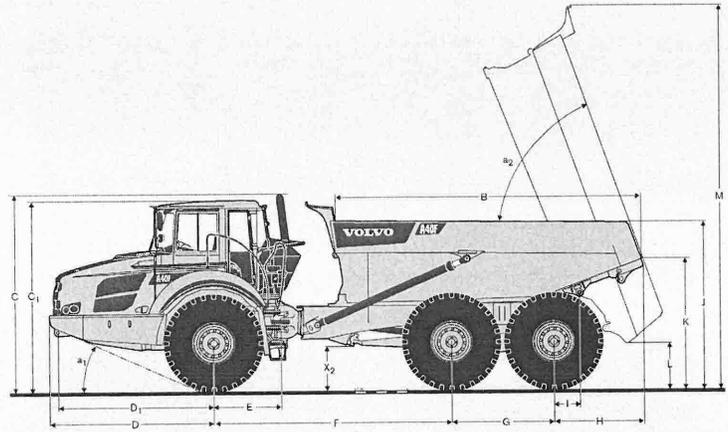
Total weight

	A35F		A40F	
	kg	lb	kg	lb
Tires	26,5R25*		29,5R25**	
Front	18 700	41 100	20 500	45 100
Rear	43 900	96 600	49 300	108 500
Total	62 600	137 700	69 800	153 600

Ground Pressure

	A35F				A40F			
	26,5R25	775/65R29	29,5R25	875/65R29	26,5R25	775/65R29	29,5R25	875/65R29
Unloaded								
Front	133 kPa	19 psi	112 kPa	16 psi	118 kPa	17 psi	99 kPa	14 psi
Rear	57 kPa	8 psi	48 kPa	7 psi	51 kPa	7 psi	44 kPa	6 psi
Loaded								
Front	158 kPa	23 psi	133 kPa	19 psi	146 kPa	21 psi	123 kPa	18 psi
Rear	186 kPa	27 psi	156 kPa	23 psi	176 kPa	26 psi	147 kPa	21 psi

Pos	A35F	A40F	A35F	A40F
	mm		foot	
A	11 180	11 263	36'8"	36'11"
A ₁	5 476	5 476	18'0"	18'0"
A ₂	6 241	6 404	20'6"	21'0"
B	5 540	5 821	18'2"	19'1"
C	3 621	3 673	11'11"	12'1"
C ₁	3 546	3 597	11'8"	11'10"
C ₂	1 772	1 772	5'10"	5'10"
D	3 101	3 101	10'2"	10'2"
D ₁	2 941	2 942	9'8"	9'8"
E	1 277	1 277	4'2"	4'2"
F	4 578	4 518	15'0"	14'10"
G	1 820	1 940	6'0"	6'4"
H	1 683	1 706	5'6"	5'7"
I	650	495	2'2"	1'8"
J	2 995	3 154	9'10"	10'4"
K	2 314	2 457	7'7"	8'1"
L	900	844	2'11"	2'9"
M	7 248	7 287	23'9"	23'11"
N	8 853	8 967	29'1"	29'5"
N ₁	4 395	4 307	14'5"	14'2"
O	3 106	3 374	10'2"	11'1"
O**	3 304	3 497	10'11"	11'6"
P	2 870	3 074	9'5"	10'1"
Q	2 553	2 730	8'5"	9'0"
R	579	635	1'11"	2'1"
R ₁	668	722	2'2"	2'4"
S	2 422	2 653	7'11"	8'8"
T	3 401	3 462	11'2"	11'4"
U	3 516	3 565	11'6"	11'8"
V	2 534	2 636	8'4"	8'8"
V*	2 625	2 709	8'7"	8'11"
W	3 258	3 433	10'8"	11'3"
W*	3 410	3 570	11'2"	11'9"
X	521	571	1'9"	1'11"
X ₁	607	658	2'0"	2'2"
X ₂	754	807	2'6"	2'8"
Y	2 534	2 636	8'3"	8'8"
Y*	2 625	2 709	8'7"	8'11"
Z	3 258	3 433	10'8"	11'3"
Z*	3 410	3 570	11'2"	11'9"
a ₁	23,6°	24,3°	23,6°	24,3°
a ₂	72°	70°	72°	70°
a ₃	45°	45°	45°	45°



A35F: Unloaded machine with 26,5R25
A40F: Unloaded machine with 29,5R25
*) A35F with optional 775/65R29 tires;
A40F with optional 875/65R29 tires.
**) with overhung tailgate.

EQUIPMENT.

STANDARD EQUIPMENT

	A35F	A40F
Safety		
Anti-slip steps and platforms	•	•
Dump body lock	•	•
Handrails on steps and platforms	•	•
Hazard lights	•	•
Horn	•	•
Protective grill for cab rear window	•	•
Rear-view mirrors	•	•
Retractable 3-inch safety belt	•	•
ROPS/ FOPS protected Care Cab	•	•
Secondary steering	•	•
Steering joint lock	•	•
Windshield washers	•	•
Windshield wipers with interval function	•	•
Drivetrain		
6x4 and 6x6 automatically engaged drive modes	•	•
"Dog clutch" type 100% diff-locks in all axles	•	•
Full automatic transmission	•	•
Single stage dropbox with longitudinal diff-lock	•	•
Torque converter with automatic lock-up	•	•
Engine		
Direct injected, electronically controlled, turbocharged, intercooled	•	•
Grouped oil filters, for ease of change	•	•
Preheater for easier cold starts	•	•
Remote oil drain valve and hose for easy access	•	•
VEB (exhaust retarder EPG + compression brake)	•	•
Electrical system		
80 A alternator	•	•
Battery disconnect switch	•	•
Extra 24 V socket for lunch cooler	•	•
Lights:		
• Back-up light	•	•
• Brake lights	•	•
• Cab lighting	•	•
• Direction indicators	•	•
• Headlights	•	•
• Instrument lighting	•	•
• Parking lights	•	•
• Rear lights	•	•
Rear vision system, color LCD monitor in the cab	•	•
Brake system		
Load & Dump Brake	•	•
Parking brake on propeller shaft	•	•
Two circuit, fully hydraulic brakes with enclosed, oil-cooled multiple discs on all axles	•	•

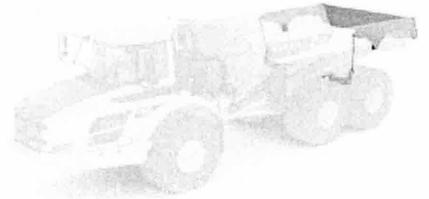
	A35F	A40F
Comfort		
Ashtray	•	•
Cab heater with filtered fresh air and defroster	•	•
Can holder /storage tray	•	•
Cigarette lighter	•	•
Instructor seat with seat belt	•	•
Overhead console for radio	•	•
Sliding window	•	•
Space for lunch cooler	•	•
Storage box	•	•
Sun visor	•	•
Tilt/telescopic steering wheel	•	•
Tinted glass	•	•
Operator information interface		
Gauges:		
• Brake pressure	•	•
• Fuel	•	•
• Speedometer	•	•
• Tachometer	•	•
• Wet disc brakes cooling oil temperature	•	•
Warning lights grouped and easy to read		
Central warning (3 levels) for all vital functions	•	•
Central positioned information display:		
• Automatic pre-start checks	•	•
• Clock	•	•
• Hour meter	•	•
• Operational information, easy-to-navigate menu	•	•
• Troubleshooting diagnostics	•	•
Body		
Body prepared for exhaust heating and optional equipment	•	•
Exterior		
Front mudguard wideners and rear mud flaps	•	•
Tires		
26.5R25	•	
29.5R25		•
Service and maintenance		
CareTrack telematics system	•	•
Drainage hose stored in the front grill	•	•
Machine Tracking Information System MATRIS	•	•
Service platform integrated in the front grill	•	•
Tool box	•	•

OPTIONAL EQUIPMENT

	A35F	A40F
Safety		
Fire-extinguisher and first aid kit	•	•
Warning triangle	•	•
Engine		
Air pre-cleaner, cyclone type	•	•
Air pre-cleaner, heavy-duty, dry type EON	•	•
Air pre-cleaner, oil bath type	•	•
Diesel engine heater, Eberspächer	•	•
Electric engine heater (120V or 240V)	•	•
Engine automatic shutdown	•	•
Engine shutdown timer	•	•
External emergency engine stop	•	•
High engine idle speed	•	•
Electrical system		
Anti-theft system (prevents engine start)	•	•
Reverse alarm	•	•
Rotating warning beacon, collapsible mount	•	•
Working lights, front-facing, roof mounted	•	•
Working lights, rear-facing, fender-mounted	•	•
Cab		
Air suspended, heated, fully adjustable seat	•	•
Armrest for operator seat	•	•
Cable kit for cab heater (120V or 240V)	•	•
Electrically heated and adjustable rear view mirrors	•	•
Electronic Climate Control (ECC)	•	•
Head restraint for operator seat	•	•
HEPA cab air filter	•	•
Radio installation kit, including loudspeakers	•	•
Radio with CD player	•	•
Body		
Exhaust heating	•	•
Extra front spillguard, bolt-on	•	•
Light material extension, bolt-on kit	•	•
Overhung tailgate, wire or linkage operated	•	•
Side extensions 200 mm (8"), welded	•	•
Wear plates for heavy duty applications	•	•
Tires		
775/65R29	•	•
875/65R29	•	•
Service and maintenance		
Automatic lubrication system	•	•
Electrical hood opening	•	•
Tool kit with tire inflation unit	•	•
Other		
Arctic kit	•	•
Fast fuelling system, bolt-on kit	•	•
Lifting tools, wheel mounted	•	•
Siberian kit, -40°C	•	•
Synthetic hydraulic oil (biologically degradable)	•	•

SELECTION OF VOLVO OPTIONAL EQUIPMENT

Overhung tailgate,
wire operated



Extra front spillguard,
bolt-on



Electrically heated and
adjustable rear view mirrors



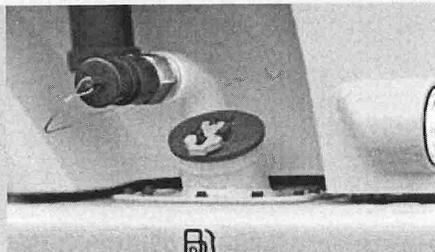
Engine shutdown timer



Air pre-cleaner,
oil bath type



Fast fuelling system,
bolt-on kit



VOLVO CONSTRUCTION EQUIPMENT

Volvo Construction Equipment is different. Our machines are designed, built and supported in a different way. That difference comes from an engineering heritage of over 175 years. A heritage of thinking first about the people who actually use the machines. About how to help them be safer, more comfortable, more productive. About the environment we all share. The result of that thinking is a growing range of machines and a global support network dedicated to helping you do more. People around the world are proud to use Volvo. And we're proud of what makes Volvo different.

Not all products are available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

VOLVO

Volvo Construction Equipment
www.volvoce.com/na

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USA

EXHIBIT 15

VOLVO CONSTRUCTION EQUIPMENT

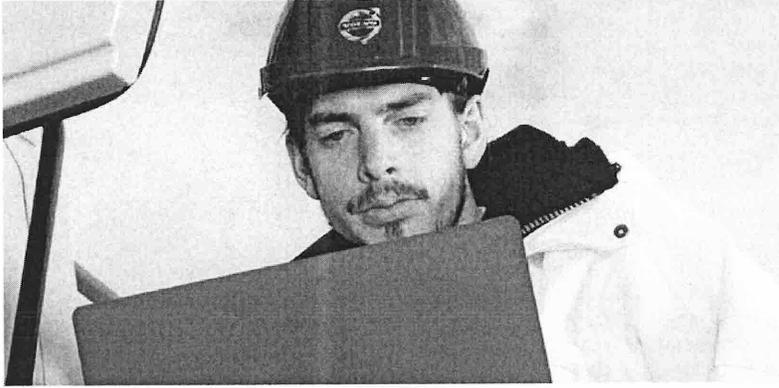


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[Introduction](#) | [Engine Auto Shut Down](#) | [Speed limiter](#) | [Increased Engine Protection](#) | [Engine Shut Down Timer](#)



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Improve your machine with Software Options

Are you interested in making your machine even better than it already is?

Our Software Options are easily installed by your dealer, since no hardware is needed. Here you find benefits and features. Which ones do you need?

Volvo offers you a number of Software Options to improve your machine. Some of them increase safety and productivity, others reduce fuel consumption.

VOLVO CONSTRUCTION EQUIPMENT

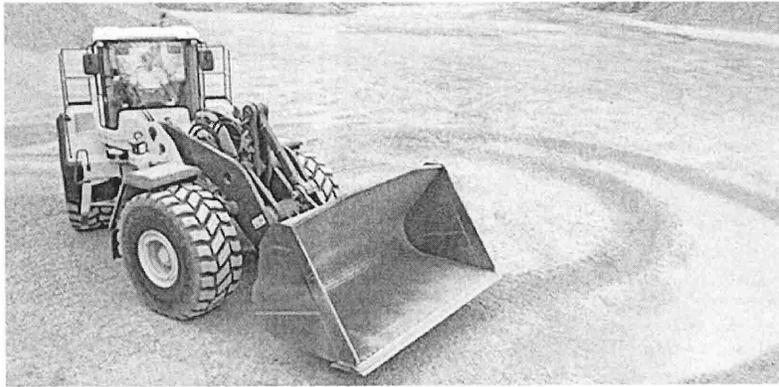


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Cut down fuel consumption with Engine Auto Shut Down

The Engine Auto Shut Down option is an easy way to cut down fuel consumption and decrease total costs. And while saving money, you also put less strain on the environment. Depending on the situation, a construction machine will often be idling for as much as 40 – 60 percent of its operating time. The Engine Auto Shut Down reduces this without impacting on productivity. It shuts down the engine when idling for more than 4 minutes when the machine is stationary and not in gear.

Reduced maintenance costs:

You are able to reduce your maintenance costs since you get longer service intervals. With reduced maintenance costs and less down time, you are able to achieve better efficiency.

Available for:

Articulated Haulers	F-Series
Wheel loaders	F-Series
	G-Series

VOLVO CONSTRUCTION EQUIPMENT

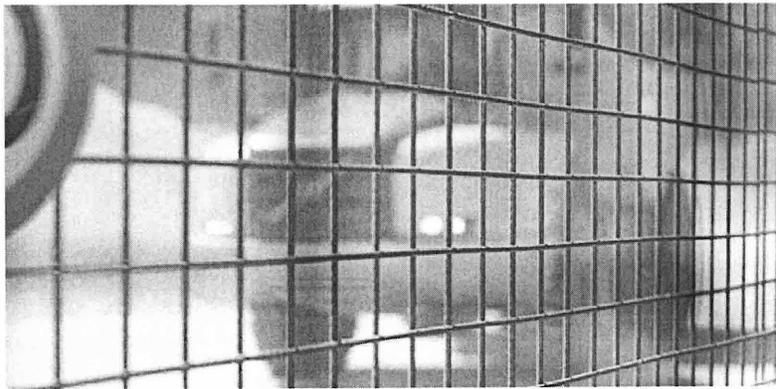


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Increased safety with Speed Limiter

The speed limiter option makes it possible to operate in worksites and countries where speed limitations are imposed. It automatically regulates maximum speed and removes the possibility for the operator to increase the speed and exceed the limit.

Legal requirement or not, this means a safer working environment.

For more information about Speed limiter, [contact your local Volvo dealer](#).

Available for:

Articulated Haulers	F-Series
Wheel loaders	F-Series
	G-Series

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Protect your engine from damage caused by warning signals being overridden

The Increased Engine Protection option protects the engine from further damage due to problems in different engine systems, and thus reducing unnecessary and costly downtime. It automatically idles and shuts down the engine if critical levels are reached, such as coolant level and temperature, oil pressure and temperature, and boost pressure and temperature.

Extra protection:

This option prevents breakdowns caused by overriding of alarms and provides extra protection.

For more information about Increased Engine Protection, [contact your local Volvo dealer](#).

Available for:

- | | |
|-------------------------------|--------------------------|
| Wheel loaders | F-Series |
|-------------------------------|--------------------------|

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Cool down with Engine Shut Down Timer

Before shutting down the engine at the end of a hard shift, the operator should let it idle for at least one minute to cool down. With the Engine Shut Down Timer option, the engine will run on idle automatically before shutting down. This means that the operator can leave the cab, lock the machine and finish work without having to wait.

Longer lifetime and less wear of engine
This option helps the operator follow the correct procedure for stopping the machine, and thus it gives the machine's turbocharger longer lifetime and prevents unnecessary wear of engine.

For more information about Engine Shut Down Timer, [contact your local Volvo dealer](#).

Available for:

- [Articulated Haulers](#)
- [F-Series](#)

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This app is designed for both iPhone and iPad

Free

Category: Productivity
Updated: Feb 27, 2014
Version: 1.8.1
Size: 47.8 MB
Languages: English, German, Northern Sami, Spanish
Seller: Volvo Construction Equipment SA
© Copyright Volvo Construction Equipment North America, LLC
Rated 4+

Compatibility: Requires iOS 5.0 or later. Compatible with iPhone, iPad, and iPod touch. This app is optimized for iPhone 5.

Customer Ratings

We have not received enough ratings to display an average for the current version of this application.

More by Volvo Construction Equipment

Description

The Volvo CE Insider app is the primary application used for sharing Volvo Construction Equipment information. It contains details on products and services, specifications, videos, images and much more. In addition, users will be able to review dealer information, view news and events, interact with social and special features. This app can be

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What's New in Version 1.8.1

- * Attachment selector section for products
- * Added Used Equipment section
- * Added Volvo news feed

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Screenshots

iPhone | iPad



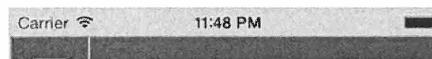
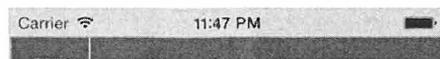
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Description

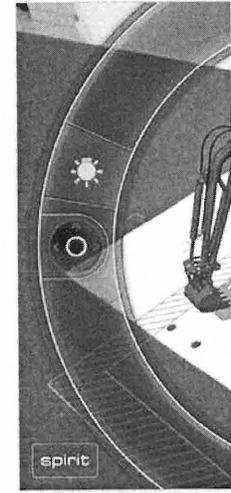
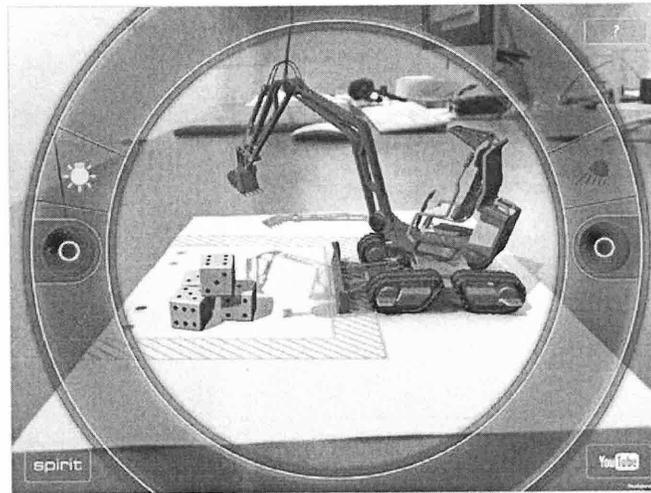
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Category: Games
Released: Mar 04, 2014
Version: 1.0
Size: 38.8 MB
Language: English
Seller: Volvo Construction Equipment SA
© Volvo Construction Equipment
Rated 4+

Compatibility: Requires iOS 5.0 or later. Compatible with iPad.

Customer Ratings

We have not received enough ratings to display an average for the current version of this application.

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Customer Reviews

it rocks ★★★★★
by TONY ENG

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Category: Productivity
Updated: Aug 20, 2014
Version: 1.17
Size: 32.3 MB
Languages: English, French, Japanese, Korean, Portuguese, Russian, Simplified Chinese, Spanish, Thai, Traditional Chinese, Turkish
Seller: Volvo Construction Equipment SA
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Rated 4 +

Compatibility: Requires iOS 6.0 or later. Compatible with iPad.

Customer Ratings

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Description

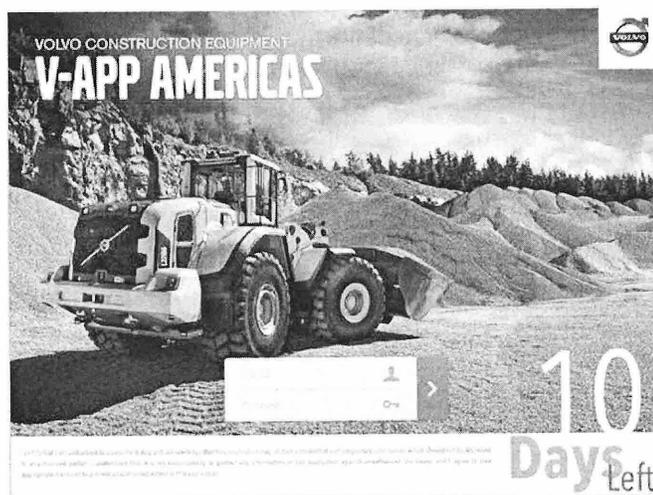
V-App Americas is an application for Volvo Construction Equipment employees, dealers and their staff only. The purpose of this tool is to provide users with online and offline files, as well as links to systems and websites to assist in the sales and marketing process. It includes brochures, specification sheets, PMIs, images, videos and other

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What's New in Version 1.17

General Improvements

iPad Screenshot



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Category: Business
Updated: Sep 10, 2014
Version: 52
Size: 4.8 MB
Language: English
Seller: Volvo Construction Equipment SA
© 2014 Volvo CE
You must be at least 17 years old to download this app.
Unrestricted Web Access

Compatibility: Requires iOS 6.0 or later. Compatible with iPad.

Customer Ratings

We have not received enough ratings to display an average for the current version of this application.

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Description

Spirit magazine is written for anyone interested in Volvo Construction Equipment products and services. It features job stories from around the world showing Volvo CE machines at work as well as interviews with different people connected with Volvo CE, be they employees or stakeholders such as customers and dealers. The Spirit App includes

Volvo CE Spirit Magazine Support

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What's New in Version 52

Welcome to Issue 52 of Spirit magazine from Volvo Construction Equipment. This issue covers September, October and November 2014.

...More

iPad Screenshots





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Vocational



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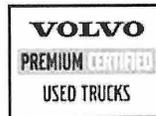
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XE13 Operating Tips

»Watch this video for driving the XE concept and the Volvo I-Shift transmission.



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10/7/2014

Kriska Holdings Limited, Britton Transport, Inc. Recognized as 2014 Volvo Trucks Safety Award Winners

»Kriska Holdings Limited and Britton Transport, Inc. were honored today with a 2014 Volvo Trucks Safety Award during a ceremony at the American Trucking Associations Management Conference & Exhibition in San Diego, California. Recognized for their exceptional safety performance and training programs, each company received \$25,000 to further develop their safety-related efforts.

10/6/2014

Volvo Trucks to Again Sponsor America's Road Team in 2015

10/2/2014

Volvo Trucks Delivers 1,000th VAH Model to Auto Transporter Hansen & Adkins

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