

ESTTA Tracking number: **ESTTA699034**

Filing date: **09/29/2015**

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

Proceeding	91200832
Party	Plaintiff Briggs & Stratton Corporation and Kohler Co.
Correspondence Address	ROBERT N PHILLIPS REED SMITH LLP 101 SECOND ST, STE 1800 SAN FRANCISCO, CA 94105 UNITED STATES ipdocket-chi@reedsmith.com, nborders@reedsmith.com, robphil- lips@reedsmith.com, knowakowski@whdlaw.com, dkalahahele@rddsmith.com, ebridge@whdlaw.com, mgi
Submission	Testimony For Plaintiff
Filer's Name	Kenneth R. Nowakowski
Filer's e-mail	knowakowski@whdlaw.com, sherring@reedsmith.com, mgiftos@whdlaw.com, robphillips@reedsmith.com
Signature	/Kenneth R. Nowakowski/
Date	09/29/2015
Attachments	Reisel Deposition Transcript (Public Version).PDF(2799599 bytes) Reisel Deposition Exhibits (Public Version).pdf(5321298 bytes)

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

3 - - - - -

4 BRIGGS & STRATTON CORPORATION and
5 KOHLER COMPANY,

6 vs. Opposers, Opposition No. 91200832 (parent)
7 vs. Opposers, Opposition No. 91200146

8 HONDA GIKEN KOGYO KABUSHIKI
9 KAISHA, Applicant. Application Serial No. 78924545

10 - - - - -

11 DEPOSITION OF: MR. JOHN REISEL
12 TAKEN AT: WHYTE HIRSCHBOECK DUDEK, S.C.
13 LOCATED AT: 555 East Wells Street, Suite 1900
14 Milwaukee, Wisconsin

15 July 16, 2015

16 9:00 a.m. to 2:40 p.m.

17 REPORTED BY: VICKY L. ST. GEORGE, RMR.

18 - - - - -

19
20
21
22
23
24
25

1 A P P E A R A N C E S

2 REED SMITH, by
3 MR. SETH HERRING
4 101 Second Street
5 San Francisco, California 94105
6 (415) 543-8700
7 sherring@reedsmith.com
8 Appeared on behalf of the Opposers, Briggs
9 and Stratton.

6 WHYTE HIRSCHBOECK DUDEK, S.C., by
7 MR. KEN NOWAKOWSKI
8 33 East Main Street, Suite 300
9 Madison, Wisconsin 53701-1379
10 (608) 255-4440
11 knowakowski@whdlaw.com
12 Appeared on behalf of the Opposers, Kohler Company.

10 WILMER CUTLER PICKERING HALE AND DORR, LLP, by
11 MS. VINITA FERRERA
12 MS. CARRIE SEARES
13 60 State Street
14 Boston, Massachusetts 02109
15 (617) 526-6208
16 vinita.ferrera@wilmerhale.com
17 carrie.seares@wilmerhale.com
18 Appeared on behalf of the Applicant, Honda.

15 ALSO PRESENT: MR. AARON MITCHELL, Senior IP Attorney,
16 Kohler Company.

17
18 I N D E X

19	WITNESS	PAGE
20	MR. JOHN REISEL	
21	DIRECT EXAMINATION BY MR. NOWAKOWSKI	6
22	CROSS-EXAMINATION BY MS. FERRERA	63
23	REDIRECT EXAMINATION BY MR. NOWAKOWSKI	177
24	RECROSS-EXAMINATION BY MS. FERRERA	179

25

E X H I B I T S			
NUMBER	DESCRIPTION		PAGE
OPPOSERS			
4	Opposers' Curriculum Vitae		10
5	Exhibit 23		
6	Opposers' List of Documents Reviewed		23
7	Exhibit 24		
8	Opposers' Pictures of Engines		35
9	Exhibit 25		
APPLICANT'S			
12	Applicant's Photograph of Kohler Command Pro 6	6	78
13	Exhibit 19	Engine	
14	Applicant's Photograph of Kawasaki FE250 Engine		79
15	Exhibit 20		
16	Applicant's Photograph of Briggs and Stratton		79
17	Exhibit 21	Intek 900 Engine	
18	Applicant's Photograph of Subaru EX35 Engine		79
19	Exhibit 22		
20	Applicant's Photograph of Subaru EX17 Engine		79
21	Exhibit 23		
22	Applicant's Photograph of Vanguard 9 Engine		79
23	Exhibit 24		
24	Applicant's Photograph of Kawasaki FE170 Engine		79
25	Exhibit 25		

1	Applicant's	Photograph of Subaru SP170 Engine	79
2	Exhibit 26		
3	Applicant's	Photograph of Briggs and Stratton	79
4	Exhibit 27	750 Engine	
5	Applicant's	Photograph of Predator 346 cc Engine	79
6	Exhibit 28		
7	Applicant's	Photograph of Champion 338 cc Engine	79
8	Exhibit 29		
9	Applicant's	Photograph of Lifan 190F Engine	79
10	Exhibit 30		
11	Applicant's	Photograph of Kawasaki FJ180 Engine	79
12	Exhibit 31		
13	Applicant's	Photograph of All-Power 208 cc	79
14	Exhibit 32	Engine	
15	Applicant's	Drawing	97
16	Exhibit 33		
17	Applicant's	Photograph of Tiller with Honda GX	147
18	Exhibit 34	Engine	
19	Applicant's	Photograph of Honda GX200 PowerShot	147
20	Exhibit 35	Gas Pressure Washer	
21	Applicant's	Photograph of Kohler Command Pro 7	165
22	Exhibit 36	engine	
23	Applicant's	United States Patent Des. 309,458	168
24	Exhibit 37		
25	Applicant's	United States Design Patent Number	171

1 Exhibit 38 US D595,737S
2 Applicants United States Design Patent No. 172
3 Exhibit 39 D605,611S
4 Applicants United States Patent No. Des. 174
5 Exhibit 40 282,071

6

7

8

9 (Original exhibits attached to original transcript.)

10

11 (Original transcript was delivered to Attorney
12 Nowakowski.)

13

14

15

16

17

18

19

20

21

22

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

P R O C E E D I N G S

MR. JOHN REISEL called as a witness
herein, after having been first duly sworn on oath,
was examined and testified as follows:

DIRECT EXAMINATION

BY MR. NOWAKOWSKI:

Q. Good morning, Professor Reisel. Could you please
provide your full name and address to the reporter?

A. John Reisel, R E I S E L, and 7415 North Lombardy,
L O M B A R D Y, Road in Fox Point, Wisconsin.

Q. Professor Reisel, have you been retained by Opposers
Briggs and Stratton and Kohler to render expert
testimony in this trademark opposition matter?

A. Yes.

Q. Specifically have you been asked to render expert
testimony regarding the Honda trademark applied for
and previously identified as Applicant Exhibit 6?

A. Yes.

Q. Professor Reisel, what is your fee in this matter?

A. I am paid \$200 an hour.

Q. Do you have any financial interest in the outcome of
this opposition proceeding?

A. No.

Q. I'd like to have you give your educational background
after high school. So if you can just provide that

1 generally to the reporter, and then we'll ask some
2 specific questions as necessary. So can you explain
3 that for us, please?

4 A. Okay. I received my bachelor of mechanical
5 engineering degree from Villanova University in 1989.
6 I received my masters of science in mechanical
7 engineering from Purdue University in 1991 and my
8 Ph.D. in mechanical engineering from Purdue
9 University in 1994.

10 Q. What was the subject of your doctoral thesis?

11 A. The subject -- the broad subject of my doctoral
12 dissertation was the -- was the measurement and
13 modeling of nitric oxide which is a pollutant from
14 laminar flames.

15 Q. And how long was your graduate program?

16 A. In total five years.

17 Q. Does that include the masters and the Ph.D. program?

18 A. Yes.

19 Q. Together with your undergraduate program then you've
20 essentially had nine years of post high school study
21 in engineering?

22 A. As a student, yes.

23 Q. Do you have any licensing or certifications?

24 A. I am a registered professional engineer in the State
25 of Wisconsin.

1 Q. Are there any continuing education requirements as a
2 result of that professional engineering
3 certification?

4 A. Yes. The State of Wisconsin instituted continuing
5 education requirements for that beginning in the last
6 renewal cycle, so that has been going on for three or
7 four years now.

8 Q. And I take it you are current on your necessary
9 continuing education to maintain your professional
10 engineering certification?

11 A. Yes.

12 Q. You're a mechanical engineer; is that correct?

13 A. Yes.

14 Q. Can you describe, please, the field of mechanical
15 engineering?

16 A. In a simple, general definition of mechanical
17 engineering, it would be the design, analysis and
18 manufacturing of devices that involve moving parts.

19 Q. As part of your education in mechanical engineering,
20 did you learn any general principles in mechanical
21 engineering that apply to the design, analysis and
22 manufacturing of devices with moving parts?

23 A. Yes.

24 Q. Can you describe some of those principles for us?

25 A. Well, some of the broad topical areas that I learned

1 included heat transfer, thermodynamics, fluid
2 mechanics, design of mechanical systems, vibrations,
3 engineering economics.

4 Q. Do those general principles of mechanical engineering
5 apply to small general purpose internal combustion
6 engines?

7 MS. FERRERA: Objection.

8 THE WITNESS: Yes.

9 BY MR. NOWAKOWSKI:

10 Q. We talked a little bit about your education as a
11 student. Let's talk a little bit about your job
12 history. Can you describe for us your job history
13 after graduation?

14 A. After graduation I spent a few months as a post doc
15 in the laboratory I was working at at Purdue
16 University. That was to carry over over the summer
17 between when I graduated in May and when my job
18 started in August, my permanent job. And that was at
19 the University of Wisconsin at Milwaukee as an
20 assistant professor. That was in 1994 that I
21 started, August of 1994.

22 Since then I've been promoted to associate
23 professor and full professor and have been there for
24 almost 21 full years now.

25 Q. And can you generally describe for us the activities

1 A. It is current as of the spring of this year, and
2 there has not been any particularly significant
3 changes or additions to it since then.

4 Q. Professor Reisel, do you understand that the engine
5 which is the subject of this opposition is an
6 overhead valve horizontal shaft general purpose
7 engine?

8 A. Yes.

9 Q. Do you also understand that from time to time people
10 describe a general purpose engine as a utility
11 engine?

12 A. Yes.

13 Q. Do you also understand that the trademark application
14 is for the Honda GX engine?

15 A. Yes.

16 Q. Do you know what a general purpose utility engine is?

17 A. Yes.

18 Q. How would you define a general purpose utility
19 engine?

20 A. I would define -- I do define a general purpose
21 utility engine as a small generally one or two
22 cylinder engine that is designed to operate in a
23 variety of products and having a light weight and
24 small shape that can be -- that generally will have a
25 horsepower or power rating of less than 25

1 horsepower.

2 Q. And what is an overhead valve horizontal shaft
3 engine?

4 A. A horizontal shaft engine is one in which the crank
5 shaft will exit out in a horizontal plane. Utility
6 engines can be both a horizontal shaft or a vertical
7 shaft engine. This would be specifically one where
8 the crank shaft is exiting in a horizontal plane.

9 An overhead valve engine is one that has
10 the intake and exhaust valves located in the cylinder
11 head above the point where the piston would stop
12 moving up in the cylinder reaching its -- giving a
13 minimum volume in the cylinder, the valves of those
14 engines are located above that -- in the cylinder
15 head above that location.

16 Q. Professor Reisel, based on your education, training
17 and experience, have you gained specialized knowledge
18 about engine design?

19 A. Yes.

20 Q. Can you explain, please, your education, training and
21 experience which has led to your specialized
22 knowledge of engine design?

23 A. Well, in my career I have been assigned by our
24 department to teach our Mechanical Engineering 432
25 course which is internal combustion engines.

1 Therefore, through textbooks and journals I had to
2 learn the material to teach that adequately to the
3 students in that course. And in addition to that, I
4 also have conducted, overseen and conducted research
5 projects involving utility engines.

6 Q. Typically -- well, first of all, what level course at
7 UWM is this 432 course?

8 A. Mechanical Engineering 432 is what we would call a
9 senior level technical elective course. It also is
10 available for graduate credit, so it is taken by some
11 graduate students.

12 Q. And the students that you teach, for example, in the
13 Mechanical Engineering 432 class as well as some of
14 your other classes I take it, get jobs or at least
15 hopefully get jobs in the market?

16 MS. FERRERA: Objection.

17 THE WITNESS: Yes, many of the students at
18 least have the desire to get jobs in the internal
19 combustion engine field, and many of them do succeed
20 in that. And many of them have already been working
21 in the field.

22 BY MR. NOWAKOWSKI:

23 Q. So is it fair to say that the mechanical engineering,
24 through the Mechanical Engineering 432 class, you are
25 teaching future designers of engines including

1 utility engines?

2 MS. FERRERA: Objection.

3 THE WITNESS: I am considering that I am
4 preparing the next generation of engineers to be
5 working in the internal combustion engine field,
6 both at the utility engine level and at a higher
7 level, larger size engines as well.

8 BY MR. NOWAKOWSKI:

9 Q. How often have you taught Mechanical Engineering 432
10 class regarding internal combustion engines?

11 A. I believe I have taught it 14 times.

12 Q. In addition to the course on Mechanical Engineering
13 432, you mentioned that you advise undergraduate and
14 graduate students on special projects. Can you
15 explain that, please?

16 A. Yes. Over the years I have conducted research
17 projects on -- that have involved engines, they
18 generally have been lawnmower engines which would be
19 vertical shaft utility engines. And over the years I
20 have had 11 undergraduate students working on these
21 projects and three graduate students working and
22 writing their masters theses on these projects.

23 Q. And typically what do these projects entail for the
24 students?

25 A. These projects entail studying -- well, the aspects

1 that we have looked at for the most part for these
2 engines have been looking at the performance of the
3 engines from a pollution standpoint. And so the
4 students will have to be operating the engines,
5 performing pollution measurements of the engines and
6 also modifying components of the engines to assist in
7 our analysis and study of the pollution generating
8 mechanisms.

9 Q. Do your students in ME432 -- withdraw that question.

10 Are your students in ME432 required to do
11 any special projects as part of the class work that
12 they do?

13 A. As part of the ME432 course I have set up a semester
14 long design project in the course. And the students
15 have to propose what they wish to design. Most of
16 the students will design a modification to an engine
17 of some sort. And as part of their conducting of
18 those projects, I will be providing advice and input
19 to their designs as they ^{proceed} -- and answer their
20 questions as to what they may wish to do to develop
21 their design.

22 Q. Does the course ME432 include any sort of analysis of
23 the market and cost factors that go into the design
24 of engines and engine components?

25 A. Many of the students will include a cost analysis of

1 their individual design that they have produced. So
2 if they are proposing that we have a new engine part
3 added on, they will often times include what that
4 cost -- what that part would cost. But it is not a
5 formal requirement of the project.

6 Q. I note from your curriculum vitae that you have been
7 the associate director for the Center For Alternative
8 Fuels. Can you tell me what that is?

9 A. The Center For Alternative Fuels is, but mostly was,
10 it's a long story as to what its current status is,
11 but it was facility that was designed and whose
12 purpose was to increase the use of alternatives fuels
13 in the marketplace and to study the impact of the use
14 of alternative fuels in various markets.

15 Its primary focus was on automotive,
16 automobile and truck uses. So we were looking at
17 developing the use of alternative fuels by fleets in
18 particular. So a company that would have a fleet of
19 vans, for instance, may have chosen to convert their
20 vehicles over to alternative fuels, and we would do
21 studies as to whether or not that was -- how that was
22 affecting the performance of the vehicles, how it was
23 affecting their pollution emissions and the cost
24 associated with that.

25 We also did some work with small engines

1 and studying the effects of alternative fuels on
2 small, in particular lawnmower engines but in the
3 utility engine class. And as the associate director
4 for the Center of Alternative Fuels, my focus was
5 primarily working with the small engines.

6 Q. And how long did you do this?

7 A. That, again, is a tricky question here. I would say
8 formally working on projects with this was about 12
9 or 13 years. And at that point we were entering --
10 we were finishing up an era in which people were
11 interested in supporting alternative fuel research,
12 so the center itself started to run out of funding.
13 And so we are still in existence but aren't really
14 doing anything for the last six or seven years.

15 Q. There is a reference to something called the
16 Wisconsin Small Engine Consortium. Was that part of
17 the associate -- or part of the Center For
18 Alternative Fuels?

19 A. The Wisconsin Small Engine Consortium was the primary
20 funding mechanism for our small engine work in the
21 Center For Alternative Fuels. The Wisconsin Small
22 Engine Consortium was set up by the State of
23 Wisconsin to organize many of the small engine
24 manufacturers in the state to help those
25 manufacturers stay competitive in the marketplace by

1 studying all sorts of aspects of the technology. We
2 generally focused on their pollution, but over at UW
3 Madison they were studying other aspects of engines
4 for them as well.

5 The center was -- the consortium at least
6 while I was involved with it was funded 50 percent by
7 the State of Wisconsin and then 50 percent through
8 contributions that generally were on the 10 to
9 \$20,000 a year level from different small engine
10 companies, and those small engine companies were
11 Briggs and Stratton, Harley-Davidson, Kohler, Mercury
12 Marine, there was another company that I never
13 remember their name as I keep saying it instead of
14 actually looking up their name, but another name that
15 was a catalytic converter company out in Stoughton.
16 And then for awhile OMC was a member of that
17 consortium as well. OMC was then bought out -- they
18 moved their businesses out of the state, so they were
19 no longer eligible to be in it.

20 And then since I have left working with
21 the consortium, I believe Polaris has joined them as
22 well. And there may be another company.

23 Q. During the course of your work with the Center For
24 Alternative Fuels and the Wisconsin Small Engine
25 Consortium, did you interact on a regular basis with

1 companies that designed and sold small engines?

2 A. Yes. We would have, depending on the time,
3 timeframe, either monthly or bimonthly or quarterly
4 meetings with the companies. And then the students
5 that were working on these projects also would
6 interact more frequently with engineers at those
7 companies.

8 Q. And from time to time were there discussions about
9 design aspects of small engines, for example, the
10 market for small engines and similar matters that
11 were relevant to your -- to the work of the Center
12 For Alternative Fuels and the Wisconsin Small Engine
13 Consortium?

14 MS. FERRERA: Objection.

15 THE WITNESS: Yes. There would be
16 discussions as to what the companies were attempting
17 to achieve in the marketplace.

18 BY MR. NOWAKOWSKI:

19 Q. And in your work as the associate director for the
20 Center For Alternative Fuels and working with the
21 Wisconsin Small Engine Consortium, did you use these
22 general principles of mechanical engineering that you
23 testified to, heat transfer, thermal dynamics, fluid
24 mechanics, machine and component design, material
25 science and engineering, economics?

1 MS. FERRERA: Objection.

2 THE WITNESS: Yes.

3 BY MR. NOWAKOWSKI:

4 Q. And during the course, in your view, did you refine
5 the skills with regard to those general mechanical
6 engineering principles during the course of your
7 associate directorship with the Center For
8 Alternative Fuels and your work with the Wisconsin
9 Small Engine Consortium?

10 A. Yes. The skills as taught are generally to be
11 applied to -- or are possibly applied to a wide
12 variety of products. And so they have to be refined
13 and certain details have to be learned to address
14 particular products, yes.

15 Q. Are these general mechanical engineering principles
16 that you discussed that you apply to vertical shaft
17 engines in the context of your work as the associate
18 director for the Center For Alternative Fuels equally
19 applicable to horizontal shaft utility engines?

20 MS. FERRERA: Objection.

21 THE WITNESS: Yes.

22 BY MR. NOWAKOWSKI:

23 Q. Did you make any presentations over the years in
24 connection with your work at the Alternative Fuels
25 program?

1 A. Yes, we would have to make presentations at each of
2 the Small Engine Consortium meetings, whether that be
3 monthly or bimonthly or quarterly. And in addition I
4 had several conference presentations, professional
5 conference presentations on our work.

6 Q. Can you describe in general terms, I know it was a
7 long time ago, but can you describe in general terms
8 what these types of presentations would involve?

9 A. Yes. They were generally -- the presentations for
10 the consortium were generally presenting updates as
11 to what we had accomplished in the last month or two
12 months on our results and what progress we were
13 making on any modifications that we were making with
14 the engines. The professional conference
15 presentations were more of a complete reporting on
16 the whole research project as to what had taken place
17 for a year or two years as part of the study.

18 Q. And there were students involved in this program over
19 the years?

20 A. Yes, that's -- all the students, all the 11
21 undergraduate and three graduate students were all
22 involved with this project.

23 Q. And was it your responsibility again to supervise and
24 make recommendations to those students who were
25 working on those projects?

1 A. Yes.

2 Q. And did that supervision and the recommendations
3 involve, again, these general principles of
4 mechanical engine -- mechanical engineering that
5 you've testified to today?

6 MS. FERRERA: Objection.

7 THE WITNESS: Yes, as well as their
8 specific application to the utility engines.

9 BY MR. NOWAKOWSKI:

10 Q. I'm going to shift topics a little bit, come back to
11 this particular matter. Professor Reisel, can you
12 estimate the time you've spent with regard to your
13 engagement in this matter, that is the opinions that
14 you have to render regarding the opposition?

15 A. At this point it is right around 80 hours.

16 Q. And that was over the several years of work?

17 A. That was starting in 2012, yes.

18 Q. And in general terms can you describe what you did,
19 Professor Reisel?

20 A. As my work on this matter, I reviewed materials, both
21 provided to me and that are readily publicly
22 available, I met with engineers at Briggs and
23 Stratton and Kohler, and I conducted my own analysis
24 of the different aspects of the proposed trademark
25 and to develop my opinion as to their potential

1 functionality.

2 (Opposers' Exhibit 24 marked.)

3 BY MR. NOWAKOWSKI:

4 Q. Professor Reisel, I've handed you what has been
5 marked as Opposer Exhibit 24. Do you have that in
6 front of you?

7 A. Yes.

8 Q. Can you please identify that for me?

9 A. This appears to be a listing of the various documents
10 that I have reviewed as part of my expert witness
11 work on this project.

12 Q. Professor Reisel, you prepared several reports in
13 connection with your work on this opposition; is that
14 right?

15 A. Yes.

16 Q. And during the course of the preparation of those
17 reports, you included the materials that you
18 reviewed, correct?

19 A. Yes.

20 Q. And is this a listing of those materials and
21 information that you obtained and reviewed in
22 connection with your work on this matter?

23 A. Yes.

24 Q. You said that you interviewed people at Briggs and
25 Stratton and Kohler in connection with your work.

1 Can you tell me who it was at those companies that
2 you talked to?

3 A. At those companies I met with engineers, and in
4 general there would be one or two legal
5 representatives present at those meetings as well.

6 Q. All right. Why did you speak with the engineers at
7 Kohler and Briggs and Stratton?

8 A. I met with the engineers to gain a couple of pieces
9 of information. One, I wanted to understand what the
10 requirements in the marketplace of these engines
11 were, and I also wanted to learn and understand their
12 reasoning for making their design choices as to how
13 they were trying to meet the marketplace
14 requirements.

15 Q. Did you believe it was important to speak with
16 engineers from Briggs and Stratton and Kohler in
17 connection with the opinions that you would render in
18 this matter?

19 A. Yes.

20 Q. Why is that?

21 A. By meeting with the engineers, I was A, able to get a
22 better understanding of the marketplace that they
23 were trying to meet, and also I thought it was
24 important to understand their thought process as to
25 why they would have made particular choices in their

1 designs.

2 Q. As a professor in mechanical engineering, I take it
3 you are presented with different applications for the
4 general mechanical engineering principles from time
5 to time?

6 A. Yes.

7 Q. And is it your regular practice as someone who works
8 in the mechanical engineering field to examine the
9 particular application, that is the particular
10 equipment or engine as it may be, in connection with
11 drawing any inferences or opinions regarding that
12 when applying the general engineering principles you
13 testified to in this?

14 A. Yes, you would like to be able to see the object and
15 observe the object and investigate the object as
16 closely as possible.

17 Q. Is the information you received from your interviews
18 with Briggs and Stratton and Kohler engineers and the
19 information you obtained for your review of the
20 documents at Exhibit 24 the type of information you
21 would typically seek out and rely upon in rendering
22 opinions or drawing inferences regarding engines and
23 in particular utility engines?

24 A. Yes.

25 Q. Based on your education, experience and expertise,

1 the materials you reviewed and the interviews you
2 conducted, have you formed any opinions regarding the
3 trademarks shown in Exhibit 6?

4 A. Yes.

5 Q. What are those opinions?

6 A. Well, it is my opinion that there are at least seven
7 elements of the claimed trademark description that
8 directly impact the functionality and cost
9 competitiveness of the competing engine, of the
10 competing engines.

11 Those elements would be, first, the
12 overall cubic design; second, the slanted fan cover;
13 third, the position of the fuel tank on the right
14 side of the engine above the fan cover; fourth, the
15 position of the air cleaner on the left side of the
16 engine; fifth, the recessed area on the carburetor
17 cover for the control levers; six, rectangular shape
18 of the fuel tank and the presence of a rib on that
19 fuel tank; and 7th, the cubic shape of the air
20 cleaner cover.

21 Q. We'll go into detail on each of those opinions,
22 Professor Reisel. But before I do that, you used the
23 term functionality. Can you tell me the definition
24 of that term as you used it in your opinion?

25 A. The way that I am using functionality is that I am

1 considering it to be the ability of a product to
2 successfully meet the intended use and purpose of the
3 engine in a manner that is competitive from a
4 performance and quality standpoint as well as a cost
5 competitive standpoint.

6 Q. Let's talk about each of your opinions regarding the
7 trademark features shown on applicant Exhibit 6.
8 Starting first with overall cubic design, what is
9 your understanding of how Honda uses the term overall
10 cubic design?

11 A. My understanding of Honda's use of the term of the
12 overall cubic design is that it is a -- that there
13 are a few elements to this. First, if you look at a
14 two dimensional frontal projection, so if you were
15 looking face-on at the engine itself, it would give a
16 square-ish appearance. It wouldn't have to be a
17 perfect square, but an appearance that is basically
18 if somebody were to look at it, they would say that
19 looks like a square to me.

20 In addition, it has a box-like design for
21 its individual accessory components such as the fuel
22 tank and for the air cleaner, that if someone were to
23 look at that, they would say that looks like a
24 rectangular box as they would see it. In order to
25 meet these, this is also going to result in a design

1 that has a lot of straight lines involved with it.
2 So that is my understanding of Honda's interpretation
3 or use of the term of an overall cubic design.

4 Q. Did you come to this understanding through review of
5 some of the materials on Exhibit No. 24, Opposer
6 Exhibit No. 24?

7 A. Yes. I came to that understanding primarily through
8 the deposition of Mr. Fujita who was presented by
9 Honda who is an employee of Honda who was presented
10 as one of their people most knowledgeable in their
11 design of this product.

12 Q. And is your understanding of Honda's use of the term
13 overall cubic design consistent with what you
14 understand overall or cubic design to be?

15 A. Yes. I would have -- and in fact initially I would
16 have looked at it as the entire three dimensional
17 shape of the engine being roughly a cube design,
18 again, something that may not be a perfect
19 geometrical cube but something that if someone were
20 to be asked what does that overall shape most closely
21 resemble, they would think a cube.

22 So an object that has roughly straight
23 edges -- straight sides, straight top, flat top, flat
24 bottom and with those sides and tops and bottoms
25 meeting at 90 degree angles. That fits in well with

1 the way that Honda is considering an overall cubic
2 design because if you were to take that three
3 dimensional object that I was referring to and look
4 at that straight on, it's going to be a square or
5 square-ish in nature. And in order to efficiently
6 fit in the various components into that square-ish
7 design, they're going to take on a box-like nature to
8 fit in most -- to best use that entire space.

9 Q. Is your understanding of Honda's use of the term
10 overall cubic design the understanding upon which you
11 based your opinions in this opposition?

12 A. Yes.

13 Q. And what is your opinion with respect to the overall
14 cubic design component of the Honda trademark shown
15 at Applicant Exhibit No. 6?

16 A. It is my opinion that the overall cubic design is
17 necessary from a functional and cost competitive
18 standpoint for this engine.

19 Q. Can you explain that, please?

20 A. As revealed by several -- many sources including a
21 deposition from Mr. Connor from Honda, from Honda's
22 own website on their development of the GX engine as
23 well as discussions with engineers at Briggs and
24 Stratton and Kohler, the marketplace for this type of
25 engine demands that the engine be compact in

1 design -- in size. So it should be -- and something
2 that will easily fit into and mate with other -- from
3 the original device that's being manufactured by the
4 OEM. So the OEMs want this to be small, and they
5 want it to be -- able to be easily fit into their
6 systems.

7 In order to achieve -- the best way to
8 achieve those elements is to have a overall cubic
9 design. The overall cubic design is going to result
10 in flat surfaces that are easily mated to another
11 device, and the overall cubic design is most
12 efficiently going to be utilizing as small of a space
13 as possible to meet, put all the necessary components
14 into that system.

15 And so as a result the overall cubic
16 design is really what is being required for the
17 compact designs required by the OEMs.

18 Q. In your opinion is the overall cubic design as shown
19 in Applicant Exhibit No. 6, that is the Honda
20 trademark, relevant at all to the versatility of the
21 engine?

22 MS. FERRERA: Objection.

23 THE WITNESS: The overall cubic design is
24 going to be something that will be able to be used
25 in many different applications. And so it becomes a

1 more versatile engine for the manufacturer and a
2 more cost effective engine for the manufacturer to
3 make.

4 The way I would look at this is that you
5 can always fit a smaller object into a larger
6 envelope than that object happens to be, but you
7 can't fit a larger object into a smaller envelope.
8 And so by developing an engine that is compact and
9 in which this overall cubic design is, it is able to
10 be mated into a variety of sizes that do not have to
11 be specifically that particular size. So it gives
12 the engine manufacturer the ability to design one
13 engine that can more readily fit into multiple
14 applications. And that can cut down on their
15 manufacturing and development costs.

16 BY MR. NOWAKOWSKI:

17 Q. Does the -- in your opinion does the overall cubic
18 design shown in the Honda trademark Applicant Exhibit
19 No. 6 affect the overall cost of the engine, either
20 in its manufacture or marketing?

21 A. Yes. The overall cubic design in its manufacturing
22 process will enable the system to use less materials
23 in the first place. And by having fewer materials in
24 use, you're able to cut down on the material cost
25 that would go into the construction of the product.

1 In addition, the overall compact design is
2 going to be an engine that is going to be easier to
3 ship, it's going to be smaller to -- you'll be able
4 to fit more engines into a smaller shipping area or
5 into the same size shipping area, you can fit more
6 engines that are smaller in nature and that are more
7 box-like because they're easier to assemble into --
8 onto a pallet for shipping.

9 In addition to -- so that's going to cut
10 down on the amount of money you need to spend on
11 shipping an engine to a supplier on a -- in terms of
12 filling an order. And it's going to -- I just lost
13 my train of thought there on that. The lighter
14 weight is also going to cost less to ship.

15 Q. In your opinion does the overall cubic design shown
16 in the Honda trademark application at Applicant
17 Exhibit No. 6 have any competitive effect on
18 maintenance of the engine?

19 A. The overall cubic design will -- well, the overall
20 cubic design will enable certain maintenance
21 operations to be more easily performed depending on
22 the application in which it's being used. In some
23 cases if you try to make things too compact, it can
24 make elements more difficult to maintain.

25 But in terms of being able to fuel, refuel

1 the engine easily, in terms of changing the air filter
2 more easily, in terms of changing the controls for
3 the operation of the engine through the carburetor
4 more easily, the overall cubic design is generally
5 preferable for that.

6 Q. Now, you reviewed a lot of materials as shown on
7 Exhibit No. 24 in preparation for your opinion. Are
8 there any particular references on Exhibit No. 24
9 that come to mind as supporting your opinion
10 regarding the overall cubic design of the Honda
11 trademark?

12 A. Yes. As I mentioned, the deposition of Steven Connor
13 was -- would support the need for a cubic design.
14 The 2007 deposition of Mr. Fujita discussed the
15 functional benefits of a cubic and compact design as
16 well. US patent 7086389 also in that stated that a
17 general purpose engine usually needs to be compact so
18 that a work machine that includes the general purpose
19 engine does not become large.

20 Q. In connection with your opinion regarding the overall
21 cubic design of the Honda trademark as shown on
22 Applicant Exhibit No. 6, did you look at any Japanese
23 utility model or utility patents?

24 A. Yes.

25 Q. Which ones?

1 A. Those are listed on Exhibit 24. The one most
2 relevant to this was S63-32344.

3 Q. And why is that?

4 A. That application -- that utility model application
5 also included a brief discussion on the need to have
6 a general compact design.

7 Q. Did that utility model have any figures attached as
8 you reviewed it?

9 A. As I recall, yes, it did. And the figures that were
10 presented in there were very similar to the figure
11 being presented in the Honda trademark application.

12 Q. Now, Professor Reisel, you're not an expert in
13 patents, are you?

14 A. No.

15 Q. And you've never been hired to talk about any sort of
16 claim construction regarding patents, correct?

17 A. No.

18 Q. Why is it that these particular patents in your
19 review were important to your opinion?

20 A. In my opinion -- well, they were important to my
21 opinion because of the text that was used in the
22 description itself where they would make statements
23 such as that the general purpose engine needs to be
24 compact. And so by using those -- I was looking less
25 at what the particular item that was being patented

1 or claimed to be patented was referring to and
2 looking more at how they were generally describing
3 the overall design needing to be compact.

4 Q. In connection with your opinions regarding the
5 overall cubic design of the Honda trademark shown as
6 Applicant Exhibit No. 6, did you review any engines
7 of competitors of Honda in the marketplace?

8 A. Yes.

9 (Opposers' Exhibit 25 marked.)

10 BY MR. NOWAKOWSKI:

11 Q. Professor Reisel, I show you what's been marked as
12 Exhibit 25. Please take a look at that and then tell
13 me whether you can identify Exhibit 25.

14 A. Yes. These are pictures of engines that I reviewed.

15 Q. In addition to the review of the pictures, did you do
16 anything else with respect to the engines shown on
17 Exhibit 25?

18 A. In what way? I mean I would find -- these were
19 pictures that were available on websites indicating
20 that this -- these engines were available for
21 purchase in the United States at the time of my
22 opinions.

23 Q. So you actually went out and looked at websites to
24 find the engines that are pictured on Exhibit 25?

25 A. Yes.

1 Q. Did you draw any inferences from your review of the
2 engines shown on Exhibit No. 25 that are relevant to
3 your opinion regarding the overall cubic design of
4 the Honda trademark application shown as Applicant
5 Exhibit 6?

6 A. Yes. After studying and viewing these engines, what
7 I concluded -- well, my opinion of this was that they
8 each contained approximately the same general
9 configuration and that the relative components of the
10 engines were the same and that they took on an
11 overall cubic nature. They were generally box-like
12 in appearance.

13 Q. Professor Reisel, was this consistent with your
14 opinion regarding the market requirements for small
15 general purpose utility engines?

16 A. Yes, it was appearing that the engines were all being
17 designed to -- in the same general fashion to meet
18 the market demands.

19 Q. Are there any other aspects of your opinion with
20 regard to -- you can put -- I withdraw that question.
21 You can put Exhibit 25 to the side.

22 Are there any other aspects of your opinion
23 regarding the overall cubic design that we haven't
24 covered this morning?

25 A. I believe we've covered them.

1 Q. Okay. So let's then move on to your next opinion
2 regarding the Honda trademark, and that had to do
3 with the slanted fan cover. Can you tell me what
4 your opinion is with respect to the slanted fan cover
5 that's shown on the Honda trademark Applicant Exhibit
6 No. 6?

7 A. Yes, it is my opinion that the slanted fan cover is a
8 functional element -- as referred to in the Honda
9 trademark is a functional element of the design
10 affecting its performance, the engine's performance.

11 Q. And why is that?

12 A. The purpose of the fan cover is to assist in the
13 direction of the air towards -- of the cooling air
14 towards the hottest parts of the engine. So what's
15 going to happen with the fan cover is that the air is
16 going to be brought in, it's going to be accelerated
17 around in the spiral -- spiral fashion and then
18 directed towards where the engine most needs cooling.

19 An engine is going to get hot as it
20 operates. You've got combustion taking place,
21 usually hundreds of -- potentially thousands of times
22 per minute depending on how fast the engine is
23 operating, so you constantly have heat being added to
24 the engine. The materials that make up an engine
25 cannot withstand those temperatures that would

1 eventually be generated by the combustion process and
2 would eventually fail. So all engines need some sort
3 of cooling.

4 The fan cover is designed in such a way as
5 to direct the cooling air, the external air that was
6 brought in for cooling the engine, towards the
7 hottest part of the engine which would be the
8 cylinder head.

9 Q. And when you refer to the fan cover, are you
10 referring to the fan cover with the -- that's shown
11 on Applicant Exhibit No. 6 and is the part of the
12 Honda trademark?

13 A. Yes. The fan cover shown in the Honda trademark
14 is -- has a slanted design that is designed to direct
15 the air towards the hottest part of the engine that
16 needs cooling. And if it does not receive that
17 cooling, the engine will likely fail, perhaps not
18 instantly, but it will fail much more rapidly and
19 need replacement than consumers would tolerate.

20 Q. And taking a look at the diagram on the last page of
21 Applicant Exhibit No. 6, can you tell me which or
22 what aspect of the fan cover in your opinion is
23 directing the air to the cylinder head which is the
24 hottest part of the engine?

25 A. Right. The part that is directing the air towards

1 the cylinder head is going to be the lower left
2 slanted line of the fan cover, the slant that's going
3 from the bottom right to top left. The air is
4 brought in and is swirling around headed towards --
5 at the bottom of the picture it's going to be headed
6 from right to left along the bottom, and then that
7 slant is going to be directing it up along the
8 cylinder to the cylinder head.

9 Q. And is it -- so is it the slant or angle that
10 essentially directs the air cleaner cover up toward
11 the bottom edge of the carburetor?

12 MS. FERRERA: Objection.

13 THE WITNESS: It's going to be directing
14 the cooling air towards the bottom of the
15 carburetor, yes. That is the slanted line that I'm
16 referring to.

17 BY MR. NOWAKOWSKI:

18 Q. Is there any other aspect of your opinion with regard
19 to the functionality of the slanted fan cover shown
20 on the Honda trademark Applicant Exhibit No. 6?

21 A. That is its primary functional purpose. So that
22 would be the primary reason behind it. The fan cover
23 itself needs to be present so that debris does not
24 get into the cooling air flow and potentially
25 interrupt it. But that is the element of the fan

1 cover that is -- the functional aspect.

2 Q. Your next opinion with regard to the Honda trademark
3 application was the position of the fuel tank on the
4 right side of the engine above the fan cover. Can
5 you, first, state your opinion with regard to that
6 element of the Honda trademark?

7 A. Yes. The position of the fuel tank above the fan
8 cover on the right side of the engine is necessary
9 for the functionality of the engine as well as its
10 competitiveness in the marketplace.

11 Q. Can you explain the basis for your opinion?

12 A. Well, there are a number of aspects that have to be
13 considered here with the placement of the fuel tank.
14 First of all, the fuel needs to be fed into the
15 carburetor in some fashion. By putting the fuel tank
16 above the fan cover and above the engine cylinder and
17 above the carburetor for that matter, you're able to
18 use a gravity feed of the fuel in towards the
19 carburetor. If you were to put the fuel tank below
20 the carburetor, you would need to pump the fuel into
21 the carburetor, and that would require the use of a
22 fuel pump which would increase the weight and the
23 cost of the engine significantly.

24 So in order to have gravity feeding the
25 fuel into the carburetor, you need that fuel tank

1 above the rest of the engine. Placing it above the
2 rest of the -- above the fan cover, that is, placing
3 it there also allows for easy refueling of the engine
4 because someone here can access the fuel tank
5 directly from the top of the engine as opposed to
6 having to reach under the engine or find some side
7 valve, side method to get the fuel into the engine.
8 So putting it up top is going to make it most
9 competitive from an operator standpoint in terms of
10 refueling.

11 Q. Let me interrupt for just a second there, Professor
12 Reisel. Based on your -- the work that you've done
13 over the years both as a professor and in your
14 experience working in -- as an associate director of
15 the Alternative Fuels, are you aware that some
16 applications for these types of utility engines have
17 an open top to access the engine as opposed to a side
18 access, for example?

19 A. Yes, yes. Most of the applications are going to have
20 the top be open with the access for the fuel through
21 the top.

22 Q. Okay. Go ahead. Continue, please.

23 A. So we've now got two reasons for having the fuel tank
24 above the carburetor and, therefore, also above the
25 fan cover in the way this is set up. The question

1 now is why would it be there as opposed to somewhere
2 else on the top of the engine. There are two reasons
3 for that.

4 The first reason is by putting the fuel
5 tank above the fan cover on the right side of the
6 engine, you are putting the fuel tank above a cooler
7 section of the engine. If you were to put it over on
8 the left side of the engine, it would then be
9 positioned over the cylinder head which we already
10 said was the hottest part of the engine. And that
11 leads to potential problems if you have spillage of
12 fuel while you're refueling the engine, you would run
13 the risk of that fuel dripping down onto the hottest
14 part of the engine and potentially igniting. So
15 there is a safety reason for putting it on the right
16 side of the engine as opposed to the left side of the
17 engine.

18 In addition, you also are trying to mate
19 all of the various accessories in a compact fashion.
20 And the various accessories that have to be put
21 together would be the fuel tank, the air cleaner
22 cover and the muffler. And those are all going to be
23 positioned on top of the engine.

24 There are functional reasons as to why you
25 would put the air cleaner cover and the muffler on

1 the left side of the engine. So if that space is
2 taken up in addition for safety reasons but also from
3 a functionality standpoint by other elements, that
4 leaves the right side of the top of the engine for
5 the location of the fuel tank. In addition, there is
6 nothing else there interfering with the fuel tank, so
7 you can have a larger fuel tank positioned in there
8 because it's not sharing that space with any other
9 element.

10 Q. And, Professor Reisel, just so there is no confusion
11 on the record, you've used the term on the right
12 side, on the left side. Is that from the perspective
13 of facing the trademark, for example, the picture of
14 the trademark application on the figure on the last
15 page of the trademark application?

16 A. Yes, yes. I'm referring to the right side as the
17 part that's above the fan cover and the left side
18 that is containing the carburetor and the air cleaner
19 cover in that picture.

20 Q. Professor Reisel, is there any other aspect of your
21 opinion regarding the position of the fuel tank and
22 the right side of the engine above the fan cover on
23 the Honda trademark?

24 A. Nope, that covers my opinion.

25 Q. I believe the next aspect of your opinion regarding

1 the functionality of aspects of the Honda trademark
2 was the position of the air cleaner on the left side
3 of the engine. Can you please provide your opinion
4 in that regard?

5 A. Yes. It is my opinion that the position of the air
6 cleaner to the left side of the fuel tank is
7 necessary for engine performance and, therefore,
8 engine functionality.

9 Q. Why is that?

10 A. Well, to understand why that is the case, we need to
11 think about how an engine in general is going to
12 develop its power. An engine develops its power by
13 the -- from the amount of fuel that is placed into
14 the engine and that goes into the engine. The amount
15 of fuel that goes into the engine is going to be
16 determined by how much air can be brought into the
17 engine.

18 So we are often times looking at, in terms
19 of a metric for assessing that, a parameter for
20 assessing that, we would call that the volumetric
21 efficiency. And that's going to compare the mass of
22 the air, so the amount of air that goes into the
23 cylinder in comparison to how much air would fill up
24 that cylinder if it was just exposed to the
25 atmosphere. So if we just had air -- if we just had

1 the volume of air or the volume of the cylinder
2 opened to the atmosphere, how much air would go into
3 there.

4 So what we're trying to do here is we're
5 trying to bring in the air through several elements
6 into the engine to give it and still maintain a high
7 volumetric efficiency. By maintaining a high
8 volumetric efficiency, we're able to generate more
9 power out of the engine.

10 The volumetric efficiency -- you might be
11 wondering well, why doesn't the air just
12 automatically flow into there as it would if it were
13 just open to the atmosphere while the engine is
14 operating. For this we have to look at the pressure
15 of the air as we experience it.

16 As the air surrounds us and as the air
17 surrounds the engine, it would be usually at
18 atmospheric pressure. It might be slightly above or
19 slightly below, but it's basically at one atmosphere
20 of pressure. As air or any fluid flows through
21 different devices, it's going to experience friction
22 with the walls of that device or it will experience
23 friction passing through the filter, for example.

24 As the air passes over walls or past
25 walls, it experiences that friction and its pressure

1 drops. And result is by the time it gets to -- in
2 the case of an engine, by the time it gets to the
3 intake valve where it's going to be ingested into the
4 engine as the vacuum that's created by the piston
5 moving down the cylinder is formed, it's going to be
6 at a pressure less than atmospheric pressure and so
7 less air is going to enter the cylinder than would
8 have happened if it had just been exposed to a blob
9 of air at atmospheric pressure at the intake valve.

10 So what you want to do with this type of a
11 design is you want to minimize the passageways that
12 the air is flowing through and experiencing a
13 pressure reduction as it goes through. And so in
14 order to accomplish that, you want to put your air
15 induction and your air intake -- your air cleaner as
16 close as possible to the carburetor and then
17 subsequently the intake valve as possible.

18 Because the cylinder head of this engine
19 which is where the intake valve is located is present
20 on the left side of the engine as we look at it
21 face-on. You want to put the air cleaner cover as
22 close as possible or on that left side of the engine.
23 You want to put the whole air cleaner element on that
24 left side of the engine to reduce the passageways
25 and, therefore, the pressure drop that the air would

1 experience. And that will give you a higher power
2 and so you can generate a desired amount of power
3 from potentially a smaller engine than you could if
4 you had much longer passageways for the air to flow
5 through.

6 Q. So if you were, for example, Professor, to move the
7 air cleaner from the left side of the engine, for
8 example, to the right side of the engine, it's your
9 opinion that that would be -- that would affect the
10 performance of the engine because there would be a
11 likely reduction in the air that was getting into the
12 engine and, therefore, a -- result in a lower
13 performing engine?

14 MS. FERRERA: Objection.

15 THE WITNESS: Yes, it is my opinion that
16 if you position the air intake and subsequent air
17 cleaner on the right side of the engine, you would
18 have to have the air pass through longer passageways
19 which would reduce its pressure and would reduce the
20 performance of the engine.

21 In addition to that whole aspect, it's
22 desirable to have the air filter on top of the
23 engine when that's acceptable or desired by the OEMs
24 because you're drawing in less -- you have the
25 engine filter further from the ground. And on the

1 ground there is more likely to be debris or dust
2 that would be picked up and sucked into the engine
3 and clog up the air filter more quickly. So from a
4 maintenance standpoint, you also would prefer to
5 have that air cleaner element on top of the engine.

6 BY MR. NOWAKOWSKI:

7 Q. So in some way wouldn't it be efficient to move the
8 air cleaner from the left side to the right side of
9 the engine?

10 A. So it would not be efficient to move it, the air
11 cleaner, to the right side of the engine because that
12 would decrease the power and performance of the
13 engine.

14 Q. Are there any other aspects to your opinion regarding
15 the positioning of the air cleaner on the left side
16 of the engine on the Honda trademark application?

17 A. Well, if we look at the Honda trademark application,
18 they have the air cleaner on the front of the engine
19 as well. It's clearly not being blocked by some
20 other object. What the other third part of the
21 engine that you have on top of the engine would be
22 the muffler. And so one might ask why wouldn't you
23 put the muffler in front and the intake -- the air
24 cleaner behind that.

25 The muffler is going to be also, like the

1 cylinder head, very hot. It has a constant stream of
2 hot gases, hot exhaust gases passing through it. And
3 so the muffler will get to be very hot over time.
4 You would like to keep that as far away as possible
5 from the operators of the engine. And so by putting
6 the muffler behind the air cleaner, you're able to
7 essentially hide that muffler from the operator.
8 You've got a protective barrier with this air cleaner
9 cover that is preventing anybody from walking up and
10 accidentally brushing into the hot muffler which
11 could burn them. So from a safety aspect, you would
12 like this air cleaner cover to be in front and the
13 muffler to be in back.

14 Q. So now have we covered the essence of your opinions
15 regarding the position of the air cleaner cover on
16 the left side of the engine on the Honda trademark?

17 A. Yes.

18 Q. I believe the next aspect of your opinion related to
19 the carburetor cover and the receded area and control
20 levers. Could you please provide your specific
21 opinion with regard to that on the Honda trademark
22 shown on Applicant No. 6?

23 MS. FERRERA: We've been going for about
24 an hour-and-a-half. Would it be good to take a
25 break before you move into this next area?

1 MR. NOWAKOWSKI: Sure.

2 (Recess taken.)

3 BY MR. NOWAKOWSKI:

4 Q. Professor Reisel, we're back on the record. We were
5 about to have you talk about your opinions regarding
6 the carburetor cover and controls. Before I do that,
7 I did realize during the break that I forgot to ask
8 you a question regarding the position of the air
9 cleaner, and my question is simply this.

10 In your opinion is there any impact on the
11 cost of the engine shown in the Honda trademark based
12 upon the position of the air cleaner on the left side
13 of the engine?

14 A. Yes. By placing the air cleaner on the left side of
15 the engine, you are, again, able to reduce the amount
16 of piping that you need to deliver the air to the
17 intake valve. So by positioning -- if it were to be
18 positioned on the right, you would have to have
19 additional passageways, additional piping, put in,
20 and that's going to carry an additional cost along
21 with it.

22 Q. Great. Okay, Professor Reisel, let's move to your
23 opinions regarding the carburetor cover and controls
24 with regard to the Honda trademark. First, can you
25 express your opinion for us, please?

1 A. It is my opinion that the carburetor cover requires a
2 recessed area for the positioning of the control
3 levers in order to provide adequate durability and
4 performance and functionality of the engine.

5 Q. Is there, in your opinion, any reason to have the
6 controls near the carburetor as opposed to someplace
7 else on the engine?

8 A. Yes. First of all, we want to have the carburetor,
9 again, over by the intake valve. And because the
10 further that you place the carburetor away from the
11 intake valve, there is a greater likelihood that fuel
12 will fall out of the fuel air stream.

13 So the carburetor is placing fuel droplets
14 into the air as the air passes through there. And
15 those droplets are heavier than the air stream.
16 Those droplets can start to accumulate over a longer
17 passageway and potentially fall out and not reach the
18 engine cylinder in a desired fashion. So you want to
19 have the carburetor close to the intake valve to
20 minimize that possibility.

21 Q. Professor, before you go further, where is the intake
22 valve as shown on the trademark Exhibit No. 6?

23 A. It's hidden in there, but what it's going to be is
24 it's going to be located on the left side of the
25 engine in the cylinder head as we've already

1 described as being on the left side.

2 Q. Fair enough. Continue, please.

3 A. So we want the carburetor to be over close to the
4 intake valve, and we want the control levers to be
5 close to the carburetor to increase their durability
6 and -- or potential durability and also to decrease
7 their initial cost. To position the control levers
8 further from the carburetor would require a more
9 complex mechanism to transmit any change in the
10 position of the control lever to the appropriate
11 control object in the carburetor that you're trying
12 to control. So the longer that mechanism becomes,
13 the more expensive it becomes to implement and build
14 into the system.

15 In addition, that longer control mechanism
16 would make it potentially more easy to -- it would
17 give it the ability to break in more locations. So
18 to maintain that simplicity and cut down on the
19 material costs that are necessary in the first place
20 and hopefully increase its durability, you want those
21 control levers close to the carburetor.

22 Q. And that's as shown on trademark Applicant Exhibit
23 No. 6?

24 A. Correct, as shown on the trademark from Honda, and
25 they're shown on the left side by the carburetor.

1 Q. And do you have an opinion with respect to the
2 recessed area that's part of the trademark, the Honda
3 trademark, shown on Applicant Exhibit No. 6?

4 A. Yes. Having the control levers in a recessed area as
5 shown on the trademark should increase their
6 durability or at least it gives them the potential to
7 increase their durability and, therefore, make the
8 engine more desirable to the customer.

9 By being recessed, these levers are not
10 protruding out from the engine as much as they
11 otherwise would have to be if they were mounted onto
12 a flat surface in front of there. That is going to
13 reduce the potential of something brushing up against
14 it, breaking off the lever, changing the position of
15 the lever in an undesirable fashion.

16 And as you can see now, while the rewind
17 handle for the starter is -- does not have to be in
18 the position as shown in the trademark application,
19 that is a common configuration. And as you can see,
20 if that is to be pulled and then be flying back into
21 the starter, if you have exposed protruding control
22 levers, they're going to be potentially knocked off
23 by that -- as the control lever rewinds. And they
24 can also interfere with the pull start in the first
25 place for that.

1 That is a convenient position to be
2 starting engines. It allows for an upward pull but
3 not a direct upward pull, so you're pulling upwards
4 at an angle, and it's convenient for someone pulling
5 with their right hand as well for that. So that's a
6 convenient orientation of the pull handle. And by
7 recessing the levers, you are making a more durable
8 design that is going to be more functional in meeting
9 its purpose.

10 Q. In your opinion is there any cost -- I'll withdraw
11 that.

12 Does the position of the controls as shown
13 on the Honda exhibit have any effect on the cost of
14 the engine shown on Exhibit No. 6?

15 A. By placing the controls as close as possible to the
16 carburetor, you are reducing the materials needed to
17 transmit any input that you're making through the
18 control lever to the carburetor. And so by reducing
19 the materials that are necessary for the control
20 mechanism, you're reducing the cost.

21 Q. In your opinion does the position of the control
22 levers on the carburetor cover as shown on the Honda
23 trademark on Applicant Exhibit No. 6 have any effect
24 on the safety of the engine?

25 A. It is not my opinion that they are directly impacting

1 the safety of the operator of the engine.

2 Q. Thank you. Have we heard all of your opinions
3 regarding the control levers for the carburetor and
4 the receded area as shown on exhibit -- Applicant's
5 Exhibit No. 6?

6 A. Yes.

7 Q. I believe the next area of your expert testimony
8 related to the rectangular shape of the fuel tank and
9 the fuel tank rib shown on the Honda trademark on
10 Applicant Exhibit No. 6; is that correct?

11 A. Yes.

12 Q. And what is your opinion in that regard?

13 A. It is my opinion that the rectangular, roughly
14 rectangular, shape of the fuel tank as well as a rib
15 for that fuel tank as shown on the trademark
16 application is a necessary feature for a
17 competitively functional engine and also comes about
18 as a consequence of the manufacturing process.

19 Q. And can you explain that opinion, please?

20 A. Well, from a competitive standpoint, you want a
21 engine that can hold as much fuel as possible inside
22 the envelope that you're trying to fit the engine
23 into. To accomplish that from a volumetric
24 standpoint, you want to have a rectangular or a
25 box-like fuel tank meeting with roughly flat edges

1 and flat sides as that will most efficiently use the
2 volume that's available on top of the engine that can
3 then give you the maximum amount of fuel. The more
4 fuel that you can put into the engine, the less
5 frequently that the fuel -- that the engine needs to
6 be stopped and refueled while it's in operation. So
7 from an operator's standpoint, having a large -- as
8 large of a fuel tank as possible is a desirable
9 feature for that engine.

10 The manufacturing process, the way these
11 fuel tanks are going to be manufactured is they're
12 going to be manufactured in two parts, a top part and
13 a bottom part. And these two parts will be mated
14 together. Now, if it's a metal fuel tank that will
15 come about from pressing out into a die, the metal
16 into the shape that's desired, if it's a plastic fuel
17 tank, that plastic will be molded into that shape.
18 And by making it into two parts, you're able to have
19 two parts that are easily able to be removed from
20 either their mold or their die, and then those two
21 parts have to be mated together.

22 Mating together those parts will result in
23 a rib so that there is no leakage from that tank. So
24 from a manufacturing standpoint and, therefore, from
25 a cost of the product standpoint, it is most

1 efficient and least expensive to make them in this
2 two-part configuration and then mate those two parts
3 together.

4 Q. Do you have any other opinions with respect to the
5 shape of the fuel tank and its rib on the -- with
6 regard to the Honda trademark?

7 A. One other thing that I would like to mention with
8 that is that the shape itself is generally going to
9 result in straight lines. It's going to be generally
10 easiest and least expensive to make a die that would
11 be -- or a mold that would have straight lines as
12 opposed to lots of curves.

13 You will have bevelling on the edges to
14 make the part a little bit easier to remove from the
15 die and also a little bit easier to actually press
16 into its shape in the first place. But it's
17 generally going to result in a design that has got
18 straight lines which fits in with the overall cubic
19 design expectation of this being a box-like
20 structure.

21 Q. I believe the next area of your testimony related to
22 the I think what Honda refers to in its trademark as
23 the cubic shape of the air cleaner cover; is that
24 right?

25 A. Yes.

1 Q. Do you have any opinion with respect to the cubic
2 shape of the air cleaner cover as shown in the Honda
3 trademark Applicant Exhibit No. 6?

4 A. Yes. It is my opinion that the cubic shape of the
5 air cleaner cover is a necessary -- as illustrated in
6 the Honda trademark, is a necessary functional
7 element for a competitive engine in this market.

8 Q. And why is that?

9 A. This market -- many applications in this market
10 demand or expect or require, depending on the
11 individual, a high mount air cleaner. And so that is
12 an air cleaner that is going to be positioned above
13 the cylinder head as we have illustrated in the
14 trademark application.

15 In order to get a surface area for that
16 air cleaner that is at a maximum size in a minimum
17 volume, it's best to make that in a circular or oval
18 shape for the air cleaner so that the air is going to
19 be passing through a cylindrical shape which may
20 either be an immediate circle or an oval for that.
21 The circle is going to be the least expensive to
22 manufacture and build for that, but it's going to
23 pull in air from all directions through that air
24 cleaner and then pull it in as opposed to spreading
25 it out flat which is going to then require a larger

1 footprint for the air cleaner itself to have the same
2 surface area.

3 So in order to bring in a sufficient
4 amount of air, you're generally going to want to make
5 this into a cylindrical shaped air cleaner. That air
6 cleaner needs to be covered by something in order to
7 A, help direct the air into this and also to keep
8 large debris from getting into the air cleaner or
9 covering up the air cleaner and destroying its
10 utility much more quickly.

11 Q. By the way, before you go any further, what's
12 generally the purpose of an air cleaner on a utility
13 engine like this?

14 A. The purpose of an air cleaner is to basically clean
15 out any small dust that would be otherwise flowing in
16 with the air. And we know the air surrounding us
17 always has dust in it. If you're in a work
18 environment such as a construction site where many of
19 these engines will be used on certain pieces of
20 equipment or if you've got a pressure washer, you've
21 got a situation where you're going to be outside,
22 often times in a dusty environment so there is even
23 more dust that's potentially in the air.

24 If that dust gets into the engine itself,
25 it can start to damage engine components such as

1 cylinder walls or piston faces, and it -- it can lead
2 to additional deposits on the engine cylinder which
3 can cause hot spots that would perform -- result in
4 the engine malfunctioning over time. So it's to keep
5 the air coming into the cylinder free of dust and
6 obviously large debris, but that is covered more by
7 the air cover cleaner as opposed to the -- the air
8 cleaner cover as opposed to the air cleaner element
9 itself.

10 Q. Okay. Now, you can -- please continue with your
11 explanation of your opinion.

12 A. So we have a cylindrical cleaner that -- element that
13 needs to be covered in some way. The two most cost
14 effective means of doing that would be either in a
15 box-like structure, a rectangular box-like structure
16 or a cylindrical structure that would surround that.
17 The box-like structure is, depending on the size of
18 the cylinder that is, is generally going to give the
19 ability to draw more air into the air cleaner element
20 in the first place.

21 If you were to have an oval shaped or
22 cylindrical shaped air cleaner, to draw in enough
23 air, you would want to spread that out so that it
24 would be roughly the same size as shown in the
25 trademark application for the width of the air

1 cleaner.

2 Fundamentally then you've got an air
3 cleaner cover that is going to be that width and
4 either is going to be of a rectangular shape or is a
5 rounded cylindrical shape. However, when you look at
6 both of the box-like structure or a cylinder
7 structure from a frontal view and a two dimensional
8 view of that, it's going to appear as a rectangle as
9 shown in the trademark application.

10 So if you're -- you're basically with the
11 type of cleaner cover that is going to be the most
12 cost effective and performance effective to have for
13 this type of an air cleaner, it's going to take on
14 the appearance of a rectangular box when viewed in a
15 two dimensional form.

16 Q. In connection with your opinions, did you see some
17 engines, utility engines, that had a more -- from a
18 three dimensional standpoint have a more cylindrical
19 looking air cleaner cover than a cubic air cleaner
20 cover?

21 A. Some of the engines do have a -- would use what I
22 would say if you were looking at a three dimensional
23 perspective a cylindrical as opposed to a box cubic
24 cover.

25 Q. What is the appearance from the front of a

1 cylindrical air cleaner cover?

2 A. From the front it's going to appear as a rectangle.
3 You won't have any depth to be able to see that it's
4 rounded off.

5 Q. Are there any other opinions that you have to express
6 relating to the cubic shape of the air cleaner cover
7 on the Honda trademark?

8 A. No, I do not.

9 Q. Do you have any other -- I'll withdraw that question.

10 Have we now covered the opinions that you
11 have with respect to the functionality of the
12 trademark elements shown on the Honda trademark and
13 expressed on Applicant's Exhibit No. 6?

14 A. Yes, I believe we have covered my concerns with the
15 trademark application and my opinions that the
16 trademark application infringes upon the
17 functionality and cost competitiveness of the engine.

18 Q. Are all the opinions that you have rendered here this
19 morning based on your education, experience and
20 expertise and the materials you reviewed and the
21 interviews you conducted with regard to your
22 retention in this matter?

23 A. Yes.

24 Q. I have one final question for clarification. Exhibit
25 No. 24 which you've identified as a list of the

1 information you received and reviewed in connection
2 with your opinions, correct?

3 A. Yes.

4 Q. That Exhibit No. 24 lists a number of deposition
5 transcripts; is that right?

6 A. Yes.

7 Q. And I take it the deposition transcripts that you
8 reviewed in connection with this matter also included
9 the exhibits to those transcripts?

10 A. Yes.

11 MR. NOWAKOWSKI: Professor Reisel, I have
12 no further questions. I turn over the mic to
13 counsel for Honda.

14 CROSS-EXAMINATION

15 BY MS. FERRERA:

16 Q. I think it's still good morning. Good morning, just
17 barely, Professor Reisel. You testified earlier
18 about your education and professional experience.

19 And I'm correct, am I not, that you did not study
20 engines in any context during either your
21 undergraduate or graduate education, correct?

22 A. I did not have a specific course in internal
23 combustion engines.

24 Q. You didn't study engines -- you didn't specifically
25 study engines at all in either your undergraduate or

1 graduate education, correct?

2 A. I did not also do research on reciprocating internal
3 combustion engines.

4 Q. So the answer to my question is you did not study
5 engines at all in either your graduate or
6 undergraduate education?

7 A. That's what I've said.

8 Q. And you did not study engine design at any time
9 during your undergraduate or graduate education
10 either, correct?

11 A. I did not study a specific course on engine design.
12 The elements covered in a machine design class often
13 have applicability to engines.

14 Q. You didn't specifically study engine design in any of
15 your undergraduate or graduate courses, right?

16 A. Correct.

17 Q. And during your undergraduate and graduate education,
18 I believe you took one course regarding manufacturing
19 processes; is that right?

20 A. Yes.

21 Q. And other than in the context of that course, you did
22 not study how to develop cost analyses for
23 manufacturing products at any time during your
24 graduate or undergraduate education, right?

25 A. We would have covered cost analyses as well in our

1 senior design course and how to conduct those, so
2 there would have been an additional course that
3 covered that.

4 Q. Well, let's look back at what you testified in your
5 deposition. Do you recall having given a deposition
6 in this case?

7 A. Yes.

8 Q. And that was on May 21st, 2015?

9 A. Yes.

10 Q. And you were under oath at the time that you gave
11 that deposition correct?

12 A. Yes.

13 Q. And you answered the questions truthfully to the best
14 of your ability, correct?

15 A. Yes.

16 Q. And you had a chance to review your deposition
17 transcript after it was completed?

18 A. Yes.

19 Q. And to make any changes to the transcript, to your
20 answers?

21 A. Yes.

22 Q. And you did not make changes to the substance of your
23 answers, correct?

24 A. Correct.

25 Q. Now, if you turn to page 15 in the deposition

1 transcript to line 23, do you see you were asked the
2 question:

3 "Other than in the context of that course,
4 did you study or perform any kind of cost analysis of
5 different manufacturing options for mechanical
6 products as part of your education?"

7 Do you see that?

8 A. Yes.

9 Q. And your answer was:

10 "I would say no."

11 Do you see that?

12 A. Yes.

13 Q. That's the question you were asked and the answer you
14 gave back on May 21st, 2015, right?

15 A. Yes.

16 Q. Now, after completing your Ph.D. you started a
17 post-doctoral program; is that right?

18 A. Yes.

19 Q. And you didn't do any research regarding engines as
20 part of that program, correct?

21 A. I did combustion research which is involved with
22 engines, but I did not do any research particularly
23 on a internal combustion engine, no.

24 Q. So you didn't do any research on engines as part of
25 your post-doctoral program, correct?

1 A. I did research on combustion which is part of an
2 engine, which is part of the engine operation, but I
3 did not perform any research on a particular engine.

4 Q. You did not do any research regarding engines as part
5 of your post-doctoral program, right?

6 A. No. Combustion regards engines.

7 Q. Well, let's look at your deposition, again, Professor
8 Reisel. If you turn to page 19. Look at line 14.
9 You were asked the question:

10 "Question: During your post-doc program
11 did you do any research regarding engines?"

12 Do you see that?

13 A. Yes.

14 Q. And your answer was:

15 "No."

16 Correct?

17 A. Yes.

18 Q. And that was the question you were asked and the
19 answer you gave back on May 21st of this year, right?

20 A. Yes, yes.

21 Q. And you didn't teach -- sorry, you didn't design any
22 engines during your post-doctoral program, correct?

23 A. Correct.

24 Q. And you didn't teach any courses on engine design as
25 part of that program?

1 A. Correct.

2 Q. Now, since completing your post-doc, you've been
3 teaching at the University of Wisconsin here in
4 Milwaukee?

5 A. Yes.

6 Q. And none of the courses that you teach address the
7 external appearance of engines, correct?

8 A. None of them discuss it explicit although as part of
9 the internal combustion engines course, when you're
10 discussing how engine components will be put
11 together, there will be -- it does refer to its
12 appearance, but it is not discussing how you would
13 set up the appearance necessarily.

14 Q. Right. And none of your courses have discussed
15 designing the external appearance of an engine,
16 right?

17 A. They -- the courses are designing the individual
18 components, and those individual components will have
19 an external appearance, but it would not necessarily
20 be the entire engine put together as an external
21 appearance.

22 Q. And in the context of your ME432 class which I think
23 is your internal combustion class, there has been no
24 discussion of the external appearance of the engine,
25 correct?

1 A. I cannot say that over 14 times of teaching it that
2 there has never been any discussion of the appearance
3 of an engine, but it is certainly not a focal point
4 of the course.

5 Q. Sitting here today, you don't remember having
6 discussed the external appearance of an engine as
7 part of that course, right?

8 MR. HERRING: Objection.

9 THE WITNESS: Certainly in a broad sense I
10 would say we have not discussed it. Is there an
11 individual possibility for a situation where this is
12 how this is going to look, we may have said that.
13 But we didn't discuss it in any great depth.

14 BY MS. FERRERA:

15 Q. And you don't remember having discussed it today?

16 A. I cannot recall, correct.

17 Q. You've never lectured about horizontal shaft engines,
18 have you?

19 A. We have not had a specific discussion of horizontal
20 shaft engines.

21 Q. And you've never lectured about the manufacturing
22 costs of engines, correct?

23 A. We have not lectured on the details of the
24 manufacturing cost of engines. We've probably -- we
25 have discussed relative costs.

1 Q. Now, you talked earlier about your role as the
2 associate director of the Center For Alternative
3 Fuels at the University of Wisconsin, right?

4 A. Yes.

5 Q. And you said that in that role you've had an
6 opportunity to conduct some research on small utility
7 engines?

8 A. Yes.

9 Q. And I think you said that that's been focused
10 primarily on lawnmower engines, right?

11 A. Yes.

12 Q. And primarily on vertical shaft utility engines,
13 correct?

14 A. Yes.

15 Q. You've not done any research in that capacity on
16 horizontal shaft engines, right?

17 A. Correct.

18 Q. And as part of your work at the Center For
19 Alternative Fuels, you've never studied the external
20 appearance of any engines, correct?

21 A. We have never focused our attention on what the
22 external appearance is looking like for that, yes.

23 Q. And as part of your work at the Center For
24 Alternative Fuels, you haven't designed any engines?

25 A. We have not designed any entire engines. We have

1 designed and built engine components but not entire
2 engines.

3 Q. You have a number of academic publications or
4 presentations relating to engines; is that right?

5 A. Yes.

6 Q. And all of those publications arose out of the work
7 that you conducted at the Center For Alternative
8 Fuels, right?

9 A. For the publications involving engines, it's my
10 recollection that they all came out of that work,
11 yes.

12 Q. And they all related to the emissions from the
13 vertical shaft lawnmower engines that you were
14 studying as part of that project?

15 A. Yes, although there were some that weren't focusing
16 necessarily directly on the emissions and more on the
17 impact of the type of fuel being used on the
18 engine -- on the engines for their -- yes.

19 Q. But none of them talked about the external appearance
20 of any engines, correct?

21 A. Correct.

22 Q. So Professor Reisel, it's fair to say that outside
23 the context of this case you have not analyzed the
24 external appearance of any engine in connection with
25 any of your research from your undergraduate

1 education through today, correct?

2 MR. NOWAKOWSKI: Objection to form. You
3 can answer.

4 THE WITNESS: Correct.

5 BY MS. FERRERA:

6 Q. You've never held a professional position outside of
7 academia, have you, Professor Reisel?

8 A. No.

9 Q. And you've never worked for a company that designed
10 or manufactured engines?

11 A. No.

12 Q. And you're -- you've done some consulting for
13 companies from time to time, correct?

14 A. Yes.

15 Q. But outside of the work that you did at the Center
16 For Alternative Fuels, the only consulting that
17 you've done relating to engines was one to two hours
18 back in the 1990s, correct?

19 A. To my recollection, yes.

20 Q. You've never actually designed an engine, correct?

21 A. Correct.

22 Q. You've never designed a component for any engine,
23 correct?

24 A. I have not personally solely designed a component to
25 an engine, but I have provided input and

1 recommendations and assistance to students as they
2 have done so.

3 Q. You've never personally designed a component for use
4 on an engine, right?

5 A. Solely as the sole individual, correct.

6 Q. And you've never provided any input to an engine
7 manufacturer regarding the external appearance of any
8 engine, correct?

9 A. Correct.

10 Q. And you've never designed any applications that use
11 the utility engine, correct?

12 A. Correct.

13 Q. I think you talked a little bit earlier about the
14 Wisconsin Small Energy Consortium?

15 A. Small Engine Consortium.

16 Q. Small Engine Consortium. And am I correct that the
17 work that you did at the Center For Alternative Fuels
18 on vertical shaft lawnmower engines, all of that
19 research was funded by the Wisconsin Small Engine
20 Consortium in conjunction with the State of
21 Wisconsin, right?

22 A. The Wisconsin Small Engine Consortium gets half of
23 its funding from the State of Wisconsin. So I would
24 say that -- you could almost say that it was funded
25 by the State of Wisconsin as supported by the

1 Wisconsin Small Engine Consortium if you were going
2 to split it up like that. But yes, that's where the
3 funding came from.

4 Q. So actually your funding came from the Wisconsin
5 Small Engine Consortium?

6 A. Correct.

7 Q. And since 1998 you've received five grants from that
8 organization?

9 A. Something like that, yes.

10 Q. And those grants have totaled about \$270,000, right?

11 A. That sounds about right.

12 Q. And that accounts for about 12 percent of your
13 research funding over the last 20 years; is that
14 correct?

15 A. As we got into this discussion with the deposition
16 before, no.

17 Q. Well, in terms of your research funding, Wisconsin
18 Small Engine Consortium grants account for about 12
19 percent over the past 20 years, correct?

20 A. What are you listing as my research funding?

21 Q. Well, let's see. Let's look at your CV. If you look
22 at Opposers' Exhibit 23 which I believe was your CV
23 starting on page 30 and continuing to not quite the
24 bottom of page 31, there is a section research grants
25 funding, do you see that?

1 A. Yes.

2 Q. That's what I'm referring to.

3 A. Right. You are ignoring, as we brought up
4 previously, you're ignoring the education funding
5 components, education projects that have a research
6 component associated with it. For example, I have
7 received almost \$2 million dollars as the PI from the
8 National Science Foundation for a STEP grant from
9 which -- which was primarily designed to develop and
10 study interventions to improve the retention of
11 students.

12 That has resulted in two journal
13 publications currently and is in the process --
14 research journal publications, and is currently in
15 the process of producing at least one additional one
16 and perhaps two. That should also have a portion of
17 that considered to be research funding.

18 Q. Well, you list that under your -- in your CV as
19 education grants, right, not research funding?

20 A. There -- let me check the form of the CV. It is
21 listed under that category. I want to check one form
22 here for this. You will notice that there is an
23 asterisk at the end of that with the note saying the
24 education grants designated with an asterisk also
25 contain a significant amount of engineering education

1 research activities.

2 Q. In any event, Professor Reisel, under the category of
3 research grants funding as you've listed it in your
4 CV, the grants that you've received from the
5 Wisconsin Small Engine Consortium account for about
6 12 percent over the past 20 years, correct?

7 MR. NOWAKOWSKI: Objection to form.

8 THE WITNESS: In the -- that category as
9 listed, that is approximately 12 percent. But it is
10 not approximately 12 percent of my overall funding.

11 BY MS. FERRERA:

12 Q. And I think you testified earlier that Briggs and
13 Stratton is a member of the Wisconsin Small Engine
14 Consortium?

15 A. Yes.

16 Q. Kohler is also a member of the Wisconsin Small Engine
17 Consortium?

18 A. Yes.

19 Q. But to your knowledge Honda has never been a member
20 of that organization, correct?

21 A. Honda was never a member of that consortium while I
22 was participating with them. I don't know if they
23 subsequently have become one.

24 Q. Okay. Now, if you could pull out Applicant's Exhibit
25 6 from the documents that your counsel provided to

1 you, and you understand that's the application that
2 Honda filed in this case for trademark?

3 A. Yes.

4 Q. And if you turn to the last page of that document,
5 there is a drawing there, and you understand that
6 that's the mark that Honda is seeking to register?

7 A. Yes.

8 Q. And you understand that the engine depicted in that
9 drawing is a Honda GX engine?

10 A. Yes.

11 Q. Now, prior to this case you had never heard of a
12 Honda GX engine?

13 A. I may have heard of it but didn't particularly pay
14 any attention to it.

15 Q. As far as you know, you had not heard of a Honda GX
16 engine prior to this case?

17 A. I cannot recall hearing of one.

18 Q. And prior to this case you hadn't seen a Honda GX
19 engine in person, right?

20 A. I would not have known I was seeing a Honda GX in
21 person, engine in person, but I may have seen it and
22 not known that that's what it was.

23 Q. You don't have any specific recollection of having
24 seen one?

25 A. Correct.

1 Q. In fact, sitting here today, the only time that you
2 recall having seen a Honda GX engine in person was on
3 one occasion, correct?

4 A. I can recall one occasion, yes.

5 Q. And that was at a meeting with Briggs and Stratton
6 shortly after you were retained on this case,
7 correct?

8 A. Correct.

9 Q. That was back in late 2011, early 2012?

10 A. Yes.

11 Q. We're going to put a number of different photographs
12 in for here --

13 MS. FERRERA: Maybe for convenience, let's
14 mark these all at once. This one has already been
15 marked as Applicant's Trial Exhibit 17. If we could
16 mark this one as Applicant's Trial Exhibit 19,
17 please.

18 (Applicant's Exhibits 19-32 marked.)

19 BY MS. FERRERA:

20 Q. So Professor Reisel, you have now in front of you
21 Applicant's Exhibit 17 and then 19 through 32, do you
22 see that?

23 A. Yes.

24 Q. And if you'd look at Applicant's Exhibit 17, do you
25 recognize that as a photograph of a Kohler Command

1 Pro 7 engine?

2 A. Yes.

3 Q. That's a horizontal shaft engine, correct?

4 A. Yes.

5 Q. And am I correct that you don't remember having seen
6 this engine any time prior to being retained as an
7 expert in this case?

8 A. I would say that's correct.

9 Q. You're not aware of any performance differences
10 between the Honda GX engine and the engine depicted
11 in Exhibit 17?

12 MR. NOWAKOWSKI: Objection to form.

13 THE WITNESS: I do not know any specific
14 differences for at least a comparable GX engine of
15 that size.

16 BY MS. FERRERA:

17 Q. Fair enough. And you have no reason to believe that
18 the engine shown in Exhibit 17 is at a competitive
19 disadvantage to the GX engine as a result of its
20 external appearance, correct?

21 MR. NOWAKOWSKI: Objection to form.

22 THE WITNESS: I do not know.

23 BY MS. FERRERA:

24 Q. You do not have any --

25 A. I do not have any specific knowledge of that.

1 Q. Okay. And if you could pull out Exhibit 19, you
2 don't remember having seen the engine in Exhibit 19
3 prior to this location, correct?

4 A. Correct.

5 Q. You're not aware of any difference in performance as
6 between the engine in Exhibit 19 and the comparable
7 Power GX engine?

8 MR. NOWAKOWSKI: Objection.

9 THE WITNESS: Correct.

10 BY MS. FERRERA:

11 Q. And just for the record, you understand that Exhibit
12 19 is a photograph of a Kohler Command Pro 6 engine?

13 A. Yes.

14 Q. You're not aware of any differences in the
15 manufacturing cost for the engine depicted in Exhibit
16 18 and the comparable Power GX engine, right?

17 A. I do not know the specific manufacturing costs of
18 either engine.

19 Q. So you're not aware of any differences in the
20 manufacturing costs between those two engines?

21 A. Correct.

22 Q. And you're not aware of any reason why the engine
23 shown in Exhibit 18 would be at a competitive
24 disadvantage to the comparable Power GX engine,
25 correct?

1 MR. NOWAKOWSKI: Objection.

2 THE WITNESS: First, I believe you meant
3 Exhibit 19, and correct.

4 BY MS. FERRERA:

5 Q. All right. Let me ask it again so the record is
6 clear. You're not aware of any reason why the engine
7 shown in Exhibit 19 would be at a competitive
8 disadvantage to the comparable Power GX engine,
9 correct?

10 MR. NOWAKOWSKI: Objection.

11 THE WITNESS: Correct, I do not know
12 specific instances of that.

13 BY MS. FERRERA:

14 Q. Could you turn to Applicant's Exhibit 20. Do you
15 recognize that as a photograph of a Kawasaki FE250
16 engine?

17 A. Presuming that the first part of the what would
18 appear to be Kawasaki is Kawasaki, then yes.

19 Q. You don't remember having seen this engine prior to
20 this case, correct?

21 A. Correct.

22 Q. You would agree that the overall appearance of the
23 engine in Exhibit 20 is different from the appearance
24 of the engine shown in Applicant's Exhibit 6, the
25 trademark application?

1 MR. NOWAKOWSKI: Objection.

2 THE WITNESS: There are some specific
3 differences to the application between this picture
4 and the trademark application although it still
5 retains an overall cubic design.

6 BY MS. FERRERA:

7 Q. But would you agree that the overall appearance of
8 the engine in Applicant's Exhibit 20 is different
9 from the appearance of the GX engine as shown in the
10 trademark application?

11 MR. NOWAKOWSKI: Objection.

12 THE WITNESS: Yes.

13 BY MS. FERRERA:

14 Q. Even though the major components on the engine in
15 Exhibit 20 are in the same location as on the engine
16 in Honda's trademark application?

17 A. No, I would not agree with that. Exhibit 20 appears
18 to have a panel air filter in the -- as opposed to a
19 high mount air filter.

20 Q. You would agree that the fuel tank is on the upper
21 right of the engine in Exhibit 20?

22 A. It is on the top part of the engine although it
23 easily spreads onto the left side of the engine.

24 Q. You're not aware of any performance differences
25 between the engine shown in Exhibit 20 and the

1 comparable Power GX engine?

2 MR. NOWAKOWSKI: Objection.

3 THE WITNESS: No, I'm not aware of any
4 specific performance differences.

5 BY MS. FERRERA:

6 Q. And you're not aware of any differences in the
7 relative costs to manufacture the engine shown in
8 Exhibit 20 and the comparable Power GX engine?

9 MR. NOWAKOWSKI: Objection.

10 THE WITNESS: Again, I'm not aware of the
11 exact cost to manufacture the engine, so I'm not
12 aware of any specific differences.

13 BY MS. FERRERA:

14 Q. And to be clear, you're not aware of any differences
15 in the relative cost to manufacture the engine in
16 Exhibit 20 and the comparable Power GX engine,
17 correct?

18 MR. NOWAKOWSKI: Objection.

19 THE WITNESS: I do not have any personal
20 knowledge on the individual companies' cost, so I
21 cannot judge their relative costs.

22 BY MS. FERRERA:

23 Q. Then would you turn to Applicant's Exhibit 21. And
24 do you understand that that's a photograph of a
25 Briggs and Stratton Intek 900 engine?

1 A. Yes.

2 Q. And you don't remember having seen that engine prior
3 to this case either, correct?

4 A. Correct.

5 Q. You're not aware of any difference in the performance
6 of the engine shown in Exhibit 21 and the comparable
7 Power GX engine?

8 MR. NOWAKOWSKI: Objection.

9 THE WITNESS: I do not know any specific
10 differences.

11 BY MS. FERRERA:

12 Q. And you're not aware of any differences in the
13 relative costs to manufacture the engine in Exhibit
14 21 and the comparable Power GX engine?

15 MR. NOWAKOWSKI: Objection.

16 THE WITNESS: Correct.

17 BY MS. FERRERA:

18 Q. Would you turn to Applicant's Exhibit 22. And do you
19 understand that that's a photograph of a Subaru EX 35
20 engine?

21 A. Yes.

22 Q. And you don't remember having seen that engine prior
23 to this case either?

24 A. Correct.

25 Q. You're not aware of any evidence that the engine

1 shown in Exhibit 22 differs in terms of its
2 performance from the comparable Power GX engine?

3 MR. NOWAKOWSKI: Objection.

4 THE WITNESS: Correct.

5 BY MS. FERRERA:

6 Q. And you're not aware of any evidence that the engine
7 depicted in Exhibit 22 differs in terms of its
8 manufacturing cost from the comparable Power GX
9 engine?

10 MR. NOWAKOWSKI: Objection.

11 THE WITNESS: Correct.

12 BY MS. FERRERA:

13 Q. And you don't have any evidence that the engine in
14 Applicant's Exhibit 22 is at a competitive
15 disadvantage to the comparable Power GX engine?

16 MR. NOWAKOWSKI: Objection.

17 THE WITNESS: It would be at a competitive
18 disadvantage for markets that were requiring a high
19 mount air filter. But if it was competing against
20 one that was requiring a panel mount air filter, it
21 would ^{not} -- I do not know of any of the disadvantages.

22 BY MS. FERRERA:

23 Q. So with the exception of the fact that this engine
24 has -- the engine in Exhibit 22 has a panel air
25 cleaner cover, you don't have any reason to believe

1 that that engine is at a competitive disadvantage to
2 the comparable power GX engine, correct?

3 MR. NOWAKOWSKI: Objection.

4 THE WITNESS: I don't have any direct
5 knowledge of it being at a competitive disadvantage.

6 BY MS. FERRERA:

7 Q. Would you turn to Applicant's Exhibit 23. Do you
8 recognize that as a photograph of a Subaru EX 17
9 engine?

10 A. Yes.

11 Q. You don't recall having seen that engine prior to
12 this case?

13 A. Correct.

14 Q. And you're not aware of any performance differences
15 between the engine in Exhibit 23 and the comparable
16 Power GX engine?

17 MR. NOWAKOWSKI: Objection.

18 THE WITNESS: Correct.

19 BY MS. FERRERA:

20 Q. You're not aware of any differences in the cost to
21 manufacture the engine in Exhibit 22 versus the
22 comparable Power GX engine?

23 MR. NOWAKOWSKI: Objection.

24 THE WITNESS: Correct.

25 BY MS. FERRERA:

1 Q. If you turn to Exhibit 24. That's a photograph of a
2 Vanguard 9 horsepower engine, do you see that?

3 A. Yes.

4 Q. And you don't remember having seen that engine prior
5 to this case?

6 A. Correct.

7 Q. You're not specifically aware of any differences in
8 performance between the engine in Exhibit 24 and the
9 comparable Power GX engine, correct?

10 MR. NOWAKOWSKI: Objection.

11 THE WITNESS: Correct.

12 BY MS. FERRERA:

13 Q. And you haven't seen any data showing any differences
14 in manufacturing costs between the engine in Exhibit
15 24 and the comparable Power GX engine?

16 MR. NOWAKOWSKI: Objection.

17 THE WITNESS: Correct, I have not seen any
18 data on the manufacturing costs.

19 BY MS. FERRERA:

20 Q. So you don't know if there is any difference in
21 manufacturing costs between the engine in Exhibit 24
22 and the comparable Power GX engine?

23 MR. NOWAKOWSKI: Objection.

24 THE WITNESS: Correct.

25 BY MS. FERRERA:

1 Q. Now, would you turn to Applicant's Exhibit 25. And
2 that's just looking at the top picture on that page,
3 that's a photograph of a Kawasaki FE170 engine, do
4 you see that?

5 A. Yes.

6 Q. And you don't remember having seen that engine prior
7 to this case?

8 A. Correct.

9 Q. And you're not aware of any differences in
10 performance between the engine shown at the top of
11 Exhibit 25 and the comparable Power GX engine?

12 MR. NOWAKOWSKI: Objection.

13 THE WITNESS: Correct.

14 BY MS. FERRERA:

15 Q. And you're not aware of any differences in
16 manufacturing costs between the engine shown at the
17 top on Exhibit 25 and the comparable Power GX engine?

18 MR. NOWAKOWSKI: Objection.

19 THE WITNESS: Correct, I have not seen the
20 manufacturing cost data on that.

21 BY MS. FERRERA:

22 Q. You're not aware of any reasons why the engine in
23 Exhibit 25 would be at a competitive disadvantage to
24 the comparable Power GX engine?

25 MR. NOWAKOWSKI: Objection.

1 THE WITNESS: Correct.

2 BY MS. FERRERA:

3 Q. Now, if you turn to Exhibit 26, you understand that's
4 a picture of a Subaru SP170 engine?

5 A. Yes.

6 Q. And that's not an engine that you've seen prior to
7 this case, correct?

8 A. Correct.

9 Q. And you're not aware of any differences in
10 performance between the engine in Exhibit 26 and the
11 comparable Power GX engine?

12 MR. NOWAKOWSKI: Objection.

13 THE WITNESS: Correct.

14 BY MS. FERRERA:

15 Q. And you're not aware of any differences in the costs
16 to manufacture the engine in Exhibit 26 versus the
17 comparable Power GX engine?

18 MR. NOWAKOWSKI: Objection.

19 THE WITNESS: Correct.

20 BY MS. FERRERA:

21 Q. You're not aware of any reasons why the engine in
22 Exhibit 26 would be at a competitive disadvantage to
23 the comparable Power GX engine?

24 MR. NOWAKOWSKI: Objection.

25 THE WITNESS: Correct.

1 BY MS. FERRERA:

2 Q. And then would you turn to Exhibit 27. That's a
3 picture of a Briggs 750 engine, do you see that?

4 A. Yes.

5 Q. You haven't seen this engine prior to this case?

6 A. Correct.

7 Q. And you're not aware of any differences in
8 performance between the engine in Exhibit 27 and the
9 comparable Power GX engine, correct?

10 MR. NOWAKOWSKI: Objection.

11 THE WITNESS: Correct.

12 BY MS. FERRERA:

13 Q. You don't know whether the engine in Exhibit 27 is
14 more or less expensive to manufacture than the
15 comparable Power GX engine?

16 MR. NOWAKOWSKI: Objection.

17 THE WITNESS: Correct.

18 BY MS. FERRERA:

19 Q. And you're not aware of any evidence that the engine
20 in Exhibit 27 is at a competitive disadvantage to the
21 comparable Power GX engine?

22 MR. NOWAKOWSKI: Objection.

23 THE WITNESS: Correct.

24 BY MS. FERRERA:

25 Q. If you turn to Exhibit 28, do you understand that

1 that's a Predator 346 cc engine?

2 A. Yes.

3 Q. And as far as you know, you hadn't seen that engine
4 prior to this case, correct?

5 A. Correct.

6 Q. You're not aware of any difference in performance
7 between the engine in Exhibit 28 and the comparable
8 Power GX engine?

9 MR. NOWAKOWSKI: Objection.

10 THE WITNESS: Correct.

11 BY MS. FERRERA:

12 Q. And you're not aware of any differences in
13 manufacturing costs between the engine in Exhibit 28
14 and the comparable Power GX engine, correct?

15 MR. NOWAKOWSKI: Objection.

16 THE WITNESS: Correct.

17 BY MS. FERRERA:

18 Q. You're not aware of any reason why the engine in
19 Exhibit 28 would be at a competitive disadvantage to
20 the comparable Power GX engine?

21 MR. NOWAKOWSKI: Objection.

22 THE WITNESS: Correct.

23 BY MS. FERRERA:

24 Q. Then if you turn to Exhibit 29, that's a Champion 338
25 cc engine, do you see that?

1 A. Yes.

2 Q. And as far as you know, you hadn't seen that engine
3 prior to this case, correct?

4 A. Correct.

5 Q. You're not aware of any differences in performance
6 between the engine in Exhibit 29 and the comparable
7 Power GX engine?

8 MR. NOWAKOWSKI: Objection.

9 THE WITNESS: Correct.

10 BY MS. FERRERA:

11 Q. You're not aware of any differences in manufacturing
12 costs between the engine in Exhibit 29 and the
13 comparable Power GX engine?

14 MR. NOWAKOWSKI: Objection.

15 THE WITNESS: Correct.

16 BY MS. FERRERA:

17 Q. And you're not aware of any evidence that the engine
18 in Exhibit 29 is at a competitive disadvantage to the
19 comparable Power GX engine?

20 MR. NOWAKOWSKI: Objection.

21 THE WITNESS: Correct.

22 BY MS. FERRERA:

23 Q. And then if you turn to Exhibit 30, do you see that's
24 a Lifan -- picture of a Lifan 190F engine?

25 A. Yes.

1 Q. You hadn't seen that engine prior to this case?

2 A. Correct.

3 Q. You're not aware of any differences in performance
4 between the engine in Exhibit 30 and the comparable
5 Power GX engine, right?

6 MR. NOWAKOWSKI: Objection.

7 THE WITNESS: Correct.

8 BY MS. FERRERA:

9 Q. You're not aware of any differences in manufacturing
10 costs between the engine in Exhibit 30 and the
11 comparable Power GX engine?

12 MR. NOWAKOWSKI: Objection.

13 THE WITNESS: Correct.

14 BY MS. FERRERA:

15 Q. And you're not aware of any evidence that the engine
16 shown in Exhibit 30 is at a competitive disadvantage
17 to the comparable Power GX engine?

18 MR. NOWAKOWSKI: Objection.

19 THE WITNESS: Correct.

20 BY MS. FERRERA:

21 Q. And then if you look at Exhibit 31, that's a picture
22 of a Kawasaki FJ180 engine, correct?

23 A. I think the label on that is FJ180. It's a little
24 blurry, but I think so, yes.

25 Q. You haven't seen that engine prior to this case?

1 A. Correct.

2 Q. You'd agree that the overall appearance of the engine
3 in Exhibit 31 differs from the overall appearance of
4 the engine in -- on Honda's trademark application?

5 MR. NOWAKOWSKI: Objection.

6 THE WITNESS: I can't tell because this is
7 a -- not a direct frontal view of the engine. It
8 has the same general configuration and relative
9 position of the components to the trademark
10 application, but I can't tell because you're looking
11 at a two dimensional view versus a three dimensional
12 view here.

13 BY MS. FERRERA:

14 Q. You're not aware of any differences in performance
15 between the engine in Exhibit 31 and the comparable
16 Power GX engine?

17 MR. NOWAKOWSKI: Objection.

18 THE WITNESS: Correct.

19 BY MS. FERRERA:

20 Q. And you're not aware of any manufacturing cost
21 differences between the engine in Exhibit 31 and the
22 comparable Power GX engine?

23 MR. NOWAKOWSKI: Objection.

24 THE WITNESS: Correct.

25 BY MS. FERRERA:

1 Q. You're not aware of any evidence that the engine in
2 Exhibit 31 is at a competitive disadvantage to the
3 comparable Power GX engine?

4 MR. NOWAKOWSKI: Objection.

5 THE WITNESS: Correct.

6 BY MS. FERRERA:

7 Q. And then if you turn lastly to Exhibit 32, that's a
8 photograph of an All-Power 208 cc engine, do you see
9 that?

10 A. Yes.

11 Q. You hadn't seen that engine prior to this case,
12 correct?

13 A. Correct.

14 Q. You're not aware of any performance differences
15 between the engine in Exhibit 32 and the comparable
16 Power GX engine?

17 MR. NOWAKOWSKI: Objection.

18 THE WITNESS: Correct.

19 BY MS. FERRERA:

20 Q. You're not aware of any manufacturing cost
21 differences between the engine in Exhibit 32 and the
22 comparable Power GX engine?

23 MR. NOWAKOWSKI: Objection.

24 THE WITNESS: Correct.

25 BY MS. FERRERA:

1 Q. And you're not aware of any evidence that the engine
2 in Exhibit 32 is at a competitive disadvantage to the
3 comparable Power GX engine?

4 MR. NOWAKOWSKI: Objection.

5 THE WITNESS: Correct.

6 BY MS. FERRERA:

7 Q. Now, Professor Reisel, the engines that we've just
8 been looking at in Exhibits 17 and then 19 to 32 are
9 all horizontal shaft utility engines, correct?

10 A. They would appear to be, yes.

11 Q. And you would agree that all of the engines shown in
12 Applicant's Exhibit 17 and 19 to 32 would be suitable
13 counterparts for similar power Honda GX engine?

14 MR. NOWAKOWSKI: Objection.

15 THE WITNESS: With the clear exception of
16 whether or not the OEM who is going to use this
17 engine wants a high mount versus a side panel air
18 cleaner. But other than that exception, they
19 generally could be used for similar applications.

20 BY MS. FERRERA:

21 Q. And you'd agree that all of the engines shown in
22 Exhibit 17 and 19 to 32 are compact?

23 A. Yes.

24 Q. Professor Reisel, I'm going to ask this to be marked
25 as Applicant's Exhibit 33.

1 (Applicant's Exhibit 33 marked.)

2 BY MS. FERRERA:

3 Q. And I'll represent that Exhibit 33 is a version of
4 the picture from the trademark application that we've
5 labeled with A, B, C and D for ease of reference.

6 And you understand the component D in Exhibit 33 is
7 the fan cover?

8 A. Yes.

9 Q. You've never designed a fan cover for any engine,
10 have you?

11 A. No.

12 Q. And you've never provided any input into the design
13 of a fan cover for an engine, correct?

14 A. I do not recall doing so although it's possible that
15 one of the student projects or more than one of the
16 student projects over the years at ME432 involved
17 that, but I don't recall that specifically.

18 Q. And prior to this litigation you never analyzed the
19 relative cost between different fan covers, right?

20 A. Correct.

21 Q. Now, it's your opinion that the slant on the lower
22 left side of the fan cover in Applicant's Exhibit 33
23 is functional, correct?

24 A. Correct.

25 Q. You agree that the angle of the slant on component D

1 does not need to be the same as the one that's used
2 on the Honda GX engine, right?

3 A. The exact specific angle does not need to necessarily
4 be the same, and it may be also a small function of
5 the shape and size, especially the size of the engine
6 as to what that exact angle will be. But it is going
7 to -- it should be in that direction, and the shape
8 that is taken by the trademark application is
9 functional or the angle taken by that is functional.

10 Q. Well, you'd agree that -- am I correct that it's your
11 position that it's necessary to have an angle or a
12 slant on that portion of the fan cover, correct?

13 A. It is my opinion that it is necessary to have an
14 angle that is going to be at least very close to the
15 angle shown in the trademark application.

16 Q. But you'd agree it doesn't need to be the same, exact
17 same angle as is shown in the trademark application,
18 correct?

19 A. It does not need to be the exact angle, but it does
20 need to be -- it should be close to it from a
21 performance competitive standpoint.

22 Q. You haven't seen any data comparing -- Strike that.

23 You haven't seen any data showing what the
24 optimal angle of the slant on a fan cover for a
25 horizontal shaft utility engine is, correct?

1 A. That is correct because that also would vary a bit on
2 the exact size and configuration of the engine.

3 Q. And you haven't seen any data showing that the slant
4 of the fan cover on the GX engine is optimal for that
5 size engine, correct?

6 A. Correct.

7 Q. You haven't seen any data comparing the performance
8 of the fan cover on the GX engine to the performance
9 of any other fan covers on horizontal shaft utility
10 engines?

11 A. Correct.

12 Q. Now, looking at either Applicant's Exhibit 6 or
13 Exhibit 33, you'd agree that the top and left sides
14 of the fan cover in that drawing are straight?

15 A. Yes, other than the very corners which are rounded.

16 Q. Right. And it's not competitively necessary for the
17 top and left sides of the fan cover to be straight,
18 correct?

19 A. It is my opinion that that is not necessary.

20 Q. And you're not aware of any functional purpose served
21 by having the top and left sides of the fan cover be
22 straight, correct?

23 A. Correct. Yeah, correct.

24 Q. And you mentioned actually the corners. You'd agree
25 that the corner -- the top left corner is

1 approximately a 90 degree angle, correct?

2 A. Yes, it's a rounded out 90 degree angle.

3 Q. And you haven't offered any opinion that that corner,
4 the shape of that corner, is functional, correct?

5 A. Correct.

6 Q. Now, if you look at the bottom of the fan cover in
7 either Exhibit 33 or Applicant's Exhibit 6, you'd
8 agree that that's flattened, flattened off?

9 A. Yes.

10 Q. In your opinion the ideal shape for the bottom of the
11 fan cover is actually rounded, correct?

12 A. Correct. An ideal shape for the acceleration of the
13 air would be rounded. An ideal shape for actually
14 placing it and mounting it on another object would be
15 flat. So it depends on which aspect of ideal you're
16 considering there. As engineers, you have to make
17 balances between features at times and don't always
18 get the absolute ideal that covers everything.

19 Q. From an air flow perspective, the ideal shape is
20 rounded, not flat, correct?

21 A. Correct.

22 Q. And when the engine is mounted, what's actually
23 mounted is a plate that's on the bottom of the
24 engine, correct, on the cylinder block?

25 A. Correct.

1 Q. The bottom of the fan cover may not actually even be
2 touching the ground or the mounting surface, correct?

3 A. Depending on the engine and the application, it may
4 not be touching the bottom, the bottom of that plate
5 at least.

6 Q. Would you turn in the pictures to Applicant's Exhibit
7 21. And that's the Briggs Intek 900 engine, do you
8 see that?

9 A. Yes.

10 Q. You would agree that the fan cover on this engine has
11 a different appearance than the fan cover in
12 Applicant's Exhibit 6?

13 A. Yes.

14 Q. And if you turn to Exhibit 22, that's the Subaru EX
15 35?

16 A. Yes.

17 Q. And you agree that the fan cover in that engine
18 differs in appearance from the fan cover in
19 Applicant's Exhibit 6?

20 A. As best as I can tell from this angled view, it --
21 there are certainly differences between it, yes.

22 Q. And then if you look at Applicant's Exhibit 23, you
23 agree that the fan cover in that engine differs in
24 appearance from the fan cover in Applicant's Exhibit
25 6?

1 A. In particular in regards to it not having a straight
2 top and straight left side, yes.

3 Q. And then if you look at Applicant's Exhibit 25, you
4 agree that the fan cover on that engine differs in
5 appearance from the fan cover in Applicant's Exhibit
6 6?

7 A. With the -- it would appear to be different although
8 with the side mounted air cleaner covering up some of
9 the left side of the engine there, it's a little bit
10 difficult to tell, but it would appear to be
11 different.

12 Q. And if you look at Applicant's Exhibit 26, you'd
13 agree that the fan cover on that engine differs in
14 appearance from the fan cover in Applicant's Exhibit
15 6?

16 A. With the angle that this picture is taken at, I'm not
17 comfortable making that statement, no.

18 Q. Let's look at your deposition. If you turn to page
19 181. If you look at line 15, you see you were asked
20 the question:

21 "Would you agree that the fan cover in
22 Exhibit 205 differs in appearance from the fan cover
23 in Exhibit 3?"

24 A. Um-hum.

25 Q. Do you see that that corresponds to the deposition

1 exhibit sticker number on Exhibit 26?

2 A. Yes.

3 Q. And your answer at your deposition was:

4 "Yes."

5 Do you see that, line 18?

6 A. Yes.

7 Q. So at least as of your deposition, you believed that
8 the fan cover in Applicant's Exhibit 26 differed in
9 appearance from the fan cover in Exhibit 6?

10 A. Yes. My initial reaction would be that they
11 differed. But sitting here looking at it today, I'm
12 not as comfortable making that statement.

13 Q. Your initial reaction was that they differed in
14 appearance, correct?

15 A. Yes.

16 Q. Would you turn to Applicant's Exhibit 29. And you
17 agree that the fan cover in -- on that engine differs
18 in appearance from the fan cover in Exhibit 6?

19 A. Yes.

20 Q. If you turn to Exhibit 31, you agree that the fan
21 cover on that engine differs in appearance from the
22 fan cover in Exhibit 6?

23 A. Yes.

24 Q. So it's fair to say, is it not, Professor Reisel,
25 that there are a variety of styling options for the

1 fan cover on a horizontal shaft utility engine?

2 MR. NOWAKOWSKI: Objection.

3 THE WITNESS: There are differences that
4 can be made with this fan cover, and many of these
5 fan covers appear to be generally more rounded on
6 the top and the side as opposed to being the
7 straight edges as presented in the trademark. But
8 they also all are leading towards an angled
9 direction of the air flow.

10 BY MS. FERRERA:

11 Q. You can have a slanted cover but with differences in
12 other aspects of the appearance of the fan cover,
13 correct?

14 A. Correct.

15 Q. Now, if you look at Exhibit 33 again which is the
16 labeled drawing from the trademark application. And
17 looking at the top right side of the engine, the
18 component labeled B, do you see that?

19 A. Yes.

20 Q. That's the fuel tank, correct?

21 A. Yes.

22 Q. And you've never designed a fuel tank for any engine,
23 have you?

24 A. No.

25 Q. You don't specifically recall having provided any

1 input into the appearance of a fuel tank for an
2 engine, correct?

3 A. Not into the appearance. Again, I seem to recall
4 having provided some functional input for people
5 designing that as part of their ME432 class, but not
6 the external appearance.

7 Q. And prior to this litigation you never analyzed the
8 relative cost between different fuel tanks, right?

9 A. Correct.

10 Q. Now, it's your opinion that the fuel tank on a
11 horizontal shaft engine needs to be above the fan
12 cover and on the right side of the engine?

13 A. Yes.

14 Q. If you look at Exhibit 20 in your pile there, it's
15 the -- that's the Kawasaki FE250?

16 A. Yes.

17 Q. I think you pointed this out earlier actually, that
18 on this engine the fuel tank runs across the entire
19 front of the engine?

20 A. Yes.

21 Q. It's not limited to the right side of the engine,
22 correct?

23 A. Correct.

24 Q. And then if you look at Exhibit 24, that's the
25 Vanguard 9 horsepower engine?

1 A. Yes.

2 Q. And you'd agree that on this engine also the fuel
3 tank runs across the entire front of the engine?

4 A. Yes.

5 Q. So would you agree that there are horizontal shaft
6 utility engines on which the fuel tank is not located
7 on the right side of the engine, correct?

8 MR. NOWAKOWSKI: Objection.

9 THE WITNESS: Well, actually, I'd also
10 like to get back to my previous answer where you
11 said the entire top of the engine. These both do
12 appear to be cut off before reaching the left edge
13 of the engine. So it isn't the entire engine, it is
14 the right and the center and part of the left side
15 of the engine.

16 Getting back to this -- to your question
17 here that they do not have to be only over the right
18 side of the engine, although you will notice that
19 they are over the right side of the engine and not
20 exclusively over some other portion of the engine.
21 And both of these configurations can allow for a
22 larger fuel volume which, if that is the demand of
23 the OEM, would be a design choice that you would
24 have to make to extend out that fuel tank further to
25 the left. Although as I pointed out, it isn't over

1 the entire engine.

2 BY MS. FERRERA:

3 Q. But you agree that the fuel tank doesn't have to be
4 only over the right side of the engine?

5 MR. HERRING: Object to form.

6 THE WITNESS: It can be over parts of the
7 other engine -- the right half of the engine, so
8 yes.

9 BY MS. FERRERA:

10 Q. And you said that the fuel tanks in Exhibits 20 and
11 24, for example, would allow for a larger volume of
12 fuel?

13 A. For Exhibit 24 I would say yes because we had a three
14 dimensional view there, and so we can see how far it
15 projects backwards. For Exhibit 20 we can't see how
16 far that projects backwards, so I don't know if that
17 would contain more fuel.

18 Q. So, for Exhibit 24 to the extent it allows for a
19 larger volume of fuel, that could be a performance
20 benefit, correct?

21 MR. HERRING: Object to form.

22 THE WITNESS: That would depend on the
23 application. So if you were looking at having an
24 electrical generator that you would be most
25 concerned about having it be able to run for a very

1 long period of time potentially, then that would be
2 a potential benefit.

3 BY MS. FERRERA:

4 Q. So certain applications having a larger fuel tank
5 that is not limited to the right side of the engine
6 could be a performance benefit, correct?

7 MR. HERRING: Object to form.

8 THE WITNESS: Yes.

9 BY MS. FERRERA:

10 Q. Now, during your direct testimony you talked about
11 the necessity for having a seam on a fuel tank, do
12 you recall that?

13 A. Yes.

14 Q. And if you look at Applicant's Exhibit 6, do you see
15 that the seam is horizontal and slightly below center
16 of the fuel tank?

17 A. Yes.

18 Q. You didn't offer any opinions as to -- Strike that.

19 You didn't offer any opinion that the
20 location of the seam on the GX engine fuel tank is
21 functional, correct?

22 A. Correct.

23 Q. Now, you'd agree -- Strike that.

24 Your opinion is that it's necessary to have
25 a rectangular fuel tank, correct?

1 MR. NOWAKOWSKI: Objection.

2 THE WITNESS: It is my opinion that it is
3 necessary -- that it serves a strong functional
4 benefit to having a rectangular fuel tank.

5 BY MS. FERRERA:

6 Q. You would agree that rectangular fuel tanks can have
7 different proportions, correct?

8 A. Correct.

9 Q. It could be short and wide and still be rectangular?

10 A. Correct.

11 Q. Could be long and tall and still be rectangular,
12 correct?

13 A. Correct.

14 Q. You'd agree that it's possible to have a fuel tank
15 that is rectangular in shape and yet differs in
16 appearance from the fuel tank on Applicant's Exhibit
17 6?

18 A. With regards to the proportion of the length versus
19 the width, yes.

20 Q. And --

21 A. Or the height, whichever dimension you want to look
22 at that as.

23 Q. Right. And if you looked at Applicant's Exhibit 17,
24 that's the Kohler Command Pro 7 engine, do you see
25 that?

1 A. Yes.

2 Q. And you'd agree that the fuel tank on that engine
3 differs in appearance from the fuel tank in
4 Applicant's Exhibit 6?

5 A. Yes.

6 Q. But it's still rectangular in shape in your view,
7 correct?

8 A. It's overall shape is predominantly rectangular.

9 Q. And then if you turn to Applicant's Exhibit 20,
10 that's the Kawasaki FE250 engine.

11 A. Yes.

12 Q. And you agree that the fuel tank on that engine
13 differs in appearance from the fuel tank on
14 Applicant's Exhibit 6?

15 MR. NOWAKOWSKI: Objection.

16 THE WITNESS: If we remove the fuel tank
17 from the rest of the engine, I would say there are
18 trivial differences in their appearance between the
19 two.

20 BY MS. FERRERA:

21 Q. Well, in the context of the rest of the engine, you
22 agree that it's different in appearance from the fuel
23 tank in Applicant's Exhibit 6, correct?

24 MR. NOWAKOWSKI: Objection.

25 THE WITNESS: Yes.

1 BY MS. FERRERA:

2 Q. And you agree that the fuel tank in Exhibit 20 is
3 rectangular in appearance, correct?

4 A. Yes.

5 Q. And then if you look at Applicant's Exhibit 21, it's
6 the Briggs and Stratton Intek 900 engine.

7 A. Yes.

8 Q. Do you agree that the fuel tank on that engine
9 differs in appearance from the fuel tank in
10 Applicant's Exhibit 6?

11 MR. NOWAKOWSKI: Objection.

12 THE WITNESS: Yes.

13 BY MS. FERRERA:

14 Q. And you consider the fuel tank in Exhibit 21 to be
15 rectangular also, right?

16 A. Yes.

17 Q. And then if you look at Exhibit 22, that's the Subaru
18 EX 35. You agree that the fuel tank on that engine
19 differs in appearance from the fuel tank in
20 Applicant's Exhibit 6?

21 MR. NOWAKOWSKI: Same objection.

22 THE WITNESS: As best as I can tell from
23 this angle, there would be more of a recessed top to
24 this although it's not perfectly clear. But other
25 than -- and there may be an extension on the bottom

1 right. But other than that, it's very similar in
2 appearance.

3 BY MS. FERRERA:

4 Q. You indicated that there is an indentation on the top
5 of the fuel tank and a portion that extends down in
6 the lower right corner, right?

7 A. Those I pointed out -- I'm not sure about that
8 indentation with the quality and the angle of this
9 picture. It appears that there is from this angle,
10 but I would be more confident about that extension on
11 the right side.

12 Q. And actually if you look at the bottom edge of the
13 fuel tank in Exhibit 22, it actually appears to be
14 stepped, correct, starting from the left corner?

15 A. I guess so, yes.

16 Q. And that's different from the fuel tank in
17 Applicant's Exhibit 6, right?

18 A. Yes.

19 Q. And you'd consider the fuel tank in Exhibit 22 to be
20 roughly rectangular, correct?

21 A. Yes.

22 Q. Now, if you turn to Exhibit 23, that's the Subaru EX
23 17 engine, you'd agree that that engine differs in
24 appearance from the fuel tank in Applicant's Exhibit
25 6?

1 MR. NOWAKOWSKI: Objection.

2 THE WITNESS: I would agree with that
3 inasmuch as it has that slight extension on the
4 right-hand side, the bottom of the right-hand side.

5 BY MS. FERRERA:

6 Q. And you consider the fuel tank in Exhibit 23 to be
7 roughly rectangular, correct?

8 A. Yes.

9 Q. And then if you look at Applicant's Exhibit 24, you'd
10 consider that to be different in appearance from the
11 fuel tank in Applicant's Exhibit 6?

12 MR. NOWAKOWSKI: Objection.

13 THE WITNESS: Yes.

14 BY MS. FERRERA:

15 Q. And you consider the fuel tank in Exhibit 24 to be
16 roughly rectangular?

17 THE WITNESS: I would consider that to be
18 roughly rectangular.

19 BY MS. FERRERA:

20 Q. And maybe we can speed this up a little bit. If you
21 look at the Applicant's Exhibits 26, 27, 29, and 30
22 and 31, do you have all of those?

23 A. Okay.

24 Q. You would agree that the fuel tanks in all of those
25 engines differ in appearance from the fuel tank on

1 Applicant's Exhibit 6?

2 MR. NOWAKOWSKI: Objection.

3 THE WITNESS: I would say that their
4 specific or exact form does appear to be different
5 in appearance.

6 BY MS. FERRERA:

7 Q. And in your view the fuel tanks on all of those
8 exhibits, again, 26, 27, 29, 30 and 31 are all
9 rectangular in shape, correct?

10 A. Yes.

11 Q. So Professor Reisel, it's fair to say that there are
12 a variety of styling options available for a
13 rectangular fuel tank, correct?

14 MR. NOWAKOWSKI: Objection.

15 THE WITNESS: I would say that it appears
16 to be that there are different styling options
17 although they're retaining basically having a seam
18 in all of them, manufactured in two parts and taking
19 a roughly rectangular shape.

20 BY MS. FERRERA:

21 Q. So you'd agree that it's -- there are a variety of
22 styling options available for a roughly rectangular
23 fuel tank with a seam, correct?

24 MR. NOWAKOWSKI: Objection, asked and
25 answered.

1 THE WITNESS: Correct.

2 BY MS. FERRERA:

3 Q. If you turn --

4 MS. FERRERA: Maybe we can just take a
5 short break.

6 (Lunch recess taken.)

7 BY MS. FERRERA:

8 Q. Good afternoon, Professor Reisel. Before the lunch
9 break we were talking about the fuel tank in
10 Applicant's Exhibit 6.

11 A. Yes.

12 Q. And during your direct testimony you had talked about
13 the fact that having bevelling on the fuel tank makes
14 it easier to manufacture; is that correct?

15 A. Yes.

16 Q. But you didn't offer any opinion as to the particular
17 angle or shape of the bevelling on the fuel tank in
18 Applicant's Exhibit 6, correct?

19 A. Correct.

20 Q. And you agree that the particular angle or shape of
21 the bevelling is not functional?

22 A. Correct.

23 Q. Looking at Exhibit 33, the component that's labeled
24 A, that's the air cleaner cover?

25 A. Yes.

1 Q. And you have not designed any air cleaner covers for
2 an engine, correct?

3 A. Correct.

4 Q. And you've never provided input into the design of an
5 air cleaner cover for an engine?

6 A. I would agree that that's correct, I don't recall any
7 students doing a project where they were redesigning
8 an air cover cleaner.

9 Q. And you haven't analyzed the relative cost of
10 different air cleaner covers, correct?

11 A. Correct.

12 Q. Now, I believe you testified earlier that in your
13 view the air cleaner and the air cleaner cover on --
14 Strike that.

15 I believe you testified earlier that in
16 your view the location of the air cleaner cover on
17 Applicant's Exhibit 6 is functional; is that correct?

18 A. Correct.

19 Q. And you're referring to its placement on the top left
20 side of the engine; is that correct?

21 A. Correct.

22 Q. Now, you are aware that there are horizontal shaft
23 utility engines that have the air cleaner and air
24 cleaner cover lower down immediately to the left of
25 the fan cover?

1 A. Correct.

2 Q. And those are what are called panel air cleaners?

3 A. Correct.

4 Q. It's your opinion that those panel air cleaners are
5 less desirable than the top mounted air cleaners, at
6 least for some applications, correct?

7 A. Yes, for some applications that would require or
8 request a top mount air cleaner. Those are less
9 desirable.

10 Q. You haven't seen any sales data regarding the sales
11 of engines with top mounted air cleaner covers versus
12 panel air cleaners, correct?

13 A. Correct.

14 Q. And so you don't know in fact which type of air
15 cleaner or air cleaner cover OEMs prefer?

16 A. I do not know which one any particular OEM prefers,
17 correct.

18 Q. And in general you don't know which type OEMs prefer?

19 MR. HERRING: Object to form.

20 THE WITNESS: Correct.

21 BY MS. FERRERA:

22 Q. I believe you testified earlier that the advantage of
23 a top mounted air cleaner cover is that it reduces
24 the potential for debris to enter the air cleaner?

25 A. It will lower the amount of dust that is going to be

1 able to -- that is going to reach the air cleaner
2 before being pulled out just by the natural gravity
3 that surrounds the engine.

4 Q. And in terms of performance differences, that's the
5 only difference that you identified during your
6 testimony on direct; is that true?

7 A. With regards to the high mount versus side mount --

8 Q. Right.

9 A. -- air cleaner, I believe that's correct.

10 Q. You haven't seen any data showing that debris is a
11 bigger problem with panel air cleaners versus high
12 mounted air cleaners?

13 A. Correct.

14 Q. And you haven't seen any data comparing the
15 performance of panel air cleaners with high mounted
16 air cleaners?

17 A. Correct.

18 Q. You've never spoken with any engine designers who
19 told you that panel air cleaners are less desirable
20 than high mounted air cleaners?

21 A. I have spoken with engineers who have indicated that
22 OEMs in many cases desire to have a high mount air
23 cleaner as opposed to a side mount air cleaner.

24 Q. Those are your conversations with the Briggs and
25 Kohler engineers earlier in this case?

1 A. Correct.

2 Q. That's the only time you've had that discussion with
3 an engine designer, correct?

4 A. Correct.

5 Q. And you haven't spoken with any OEMs about whether
6 panel air cleaners or top mounted air cleaners are
7 preferable, correct?

8 A. Correct.

9 Q. And you would agree that there are some applications
10 where a panel air cleaner cover is preferable to a
11 high mounted air cleaner?

12 A. Correct.

13 Q. And there are some applications whether either a
14 panel air cleaner or a high mounted air cleaner would
15 be appropriate, correct?

16 A. I do not know.

17 Q. You just don't know one way or the other?

18 A. Correct.

19 Q. Now, you testified earlier that in your opinion the
20 cubic shape of the air cleaner cover in Applicant's
21 Exhibit 6 is functional, correct?

22 A. Correct.

23 Q. You didn't give any opinion as to the left and right
24 sides of the air cleaner cover in Applicant's Exhibit
25 6, correct?

1 A. I did not at this time, correct.

2 Q. And you didn't give any opinion about the shape or
3 the angle of the bevelling on the air cleaner cover
4 in Applicant's Exhibit 6?

5 A. Correct.

6 Q. And you agree that there is a belt-like area on the
7 lower portion of the air cleaner cover in Exhibit 6?

8 A. Yes.

9 Q. And you didn't talk about that during your direct
10 testimony either, correct?

11 A. Correct.

12 Q. But you'd agree that that feature is not functional?

13 A. Correct.

14 Q. Now, in terms of the cubic shape of the air cleaner
15 cover, it's your opinion that that shape is necessary
16 to accommodate the filter and permit adequate room
17 for air flow; is that correct?

18 A. It's my opinion that that coupled with potentially a
19 rounded, larger base rounded air cover cleaner would
20 be necessary, yes.

21 Q. And to be clear, when you say that a cubic shape is
22 necessary, you mean a rectangular shape, correct?

23 A. I'm referring -- by a cubic shape, I'm referring to a
24 rectangular shape, a rectangular front and box-like
25 structure as opposed to a rounded box-like structure.

1 Q. But you don't mean square, you just mean rectangular?

2 A. Correct.

3 Q. If you turn to Applicant's Exhibit 17, do you see the
4 air cleaner cover in that exhibit?

5 A. Yes.

6 Q. You would agree that it differs in appearance than
7 the air cleaner cover in Applicant's Exhibit 6?

8 MR. NOWAKOWSKI: Objection.

9 THE WITNESS: Yes.

10 BY MS. FERRERA:

11 Q. But you would still consider it rectangular in shape;
12 is that correct?

13 A. For the air cleaner cover itself by looking at it, I
14 would say that that would take a rectangular shape,
15 yes.

16 Q. And if you look at Applicant's Exhibit 20, you agree
17 that the air cleaner cover on the engine in Exhibit
18 20 differs in appearance than the air cleaner cover
19 in Applicant's Exhibit 6?

20 MR. NOWAKOWSKI: Objection.

21 THE WITNESS: Yes, as it's a side mount
22 air cleaner or panel air cover cleaner.

23 BY MS. FERRERA:

24 Q. You consider that to be also rectangular, correct?

25 A. Roughly rectangular in shape, yes.

1 Q. And if you look at Exhibit 21. Do you agree that the
2 air cleaner cover on the engine in Exhibit 21 has a
3 different appearance from the air cleaner cover in
4 Exhibit 6?

5 MR. NOWAKOWSKI: Objection.

6 THE WITNESS: Yes, because it's a
7 different type of air cover cleaner and a different
8 type of air filter. It has a different appearance,
9 yes.

10 BY MS. FERRERA:

11 Q. You consider that to be rectangular also, correct?

12 A. Yes.

13 Q. And if you look at Exhibit 22, you agree the air
14 cleaner cover on that engine differs in appearance
15 from the air cleaner cover in Exhibit 6?

16 MR. NOWAKOWSKI: Objection.

17 THE WITNESS: Yes, inasmuch as it's a side
18 mount panel air cleaner, it differs in appearance.

19 BY MS. FERRERA:

20 Q. And that's also rectangular in your view, correct?

21 A. Yes.

22 Q. And if you look at Exhibit 23, you agree the air
23 cleaner cover on the engine in Exhibit 23 differs in
24 appearance from the air cleaner cover in Exhibit 6?

25 MR. NOWAKOWSKI: Objection.

1 THE WITNESS: In exhibit -- yes, Exhibit
2 23 it has a more rounded top especially towards the
3 left side of that, yes.

4 BY MS. FERRERA:

5 Q. So it differs in appearance?

6 A. So it differs in appearance, yes.

7 Q. And you consider that to be rectangular in shape
8 also, correct?

9 A. I consider that essentially rectangular in shape.

10 Q. And then if you look at Exhibit 24, you agree that
11 the air cleaner cover on the engine in Exhibit 24
12 differs in appearance from the air cleaner cover in
13 Exhibit 6?

14 MR. NOWAKOWSKI: Objection.

15 THE WITNESS: With the larger fuel tank in
16 there, it's a little bit harder to point out exactly
17 the air cover cleaner. But yes, it does have a
18 different appearance.

19 BY MS. FERRERA:

20 Q. And you consider that to be rectangular also,
21 correct?

22 A. Essentially, yes.

23 Q. And then if you look at Exhibit 25, do you agree that
24 the air cleaner cover in Exhibit 25 differs in
25 appearance from the air cleaner cover in Exhibit 6?

1 MR. NOWAKOWSKI: Objection.

2 THE WITNESS: Yes, again, it's a side
3 mounted panel air cleaner, so it differs in
4 appearance.

5 BY MS. FERRERA:

6 Q. And you consider that to be rectangular also?

7 A. Essentially, yes.

8 Q. And then if you look at Exhibit 26, you agree that
9 the air cleaner cover shown in that exhibit differs
10 in appearance from the air cleaner cover in Exhibit
11 6?

12 MR. NOWAKOWSKI: Objection.

13 THE WITNESS: Yes.

14 BY MS. FERRERA:

15 Q. And you consider that to be rectangular also,
16 correct?

17 A. Again, it's got a little bit more rounding on the
18 left side of it, but it's essentially rectangular in
19 shape.

20 Q. And then if you look at Exhibit 28, do you agree that
21 the air cleaner cover on the engine in Exhibit 28
22 differs in appearance from the air cleaner cover in
23 Exhibit 6?

24 MR. NOWAKOWSKI: Objection.

25 THE WITNESS: Yes.

1 BY MS. FERRERA:

2 Q. And do you consider that one to be rectangular?

3 A. Yes.

4 Q. And then if you look at Exhibit 29, that's the
5 Champion engine, correct?

6 A. Yes.

7 Q. Do you agree that the air cleaner cover in Exhibit 29
8 differs in appearance from the air cleaner cover in
9 Exhibit 6?

10 MR. NOWAKOWSKI: Objection.

11 THE WITNESS: Well, other than having a
12 little bit of a different attachment mechanism and a
13 little bit less bevelling, it's extremely similar to
14 the Exhibit 30 -- Exhibit 6 air cover cleaner.

15 BY MS. FERRERA:

16 Q. Do you agree that the bevelling on the air cleaner
17 cover in Exhibit 29 differs in appearance from the
18 bevelling in Exhibit 6?

19 A. Yes.

20 Q. And you consider the air cleaner cover in Exhibit 29
21 to be boxy or rectangular in appearance, correct?

22 A. Yes.

23 Q. And then if you look at Exhibit 30, you consider the
24 air cleaner cover on the engine in Exhibit 30 to
25 differ in appearance from the air cleaner cover in

1 Exhibit 6?

2 MR. NOWAKOWSKI: Objection.

3 THE WITNESS: Yes.

4 BY MS. FERRERA:

5 Q. But you would consider the air cleaner cover in
6 Exhibit 30 to be rectangular also, correct?

7 A. It's primary shape is rectangular, yes.

8 Q. And then if you look at Exhibit 32, do you agree the
9 air cleaner cover on that engine differs in
10 appearance from the air cleaner cover in Exhibit 6?

11 MR. NOWAKOWSKI: Objection.

12 THE WITNESS: Yes.

13 BY MS. FERRERA:

14 Q. And you consider that one to be rectangular also,
15 correct?

16 A. Yes.

17 Q. So you would agree, would you not, Professor Reisel,
18 that there are a variety of styling options available
19 for a rectangular air cleaner cover?

20 MR. NOWAKOWSKI: Objection.

21 THE WITNESS: I would agree that for high
22 mount air cover cleaners there are a variety of
23 options on some of the superficial details of it,
24 but the functionality is still dictating that it be
25 a rectangular shape.

1 BY MS. FERRERA:

2 Q. And my question was you would agree that there are a
3 variety of styling options available for a
4 rectangular high mounted air cleaner cover, correct?

5 MR. NOWAKOWSKI: Objection, asked and
6 answered.

7 THE WITNESS: Yes.

8 BY MS. FERRERA:

9 Q. Now, if you turn back to Exhibit 33. And do you see
10 the component labeled C?

11 A. Yes.

12 Q. That's the carburetor cover, correct?

13 A. I'm assuming that it's pointing to that and not just
14 the particular nut and bolt at the corner there, so
15 yes.

16 Q. And outside the context of this case, you've never
17 designed a carburetor cover; is that correct?

18 A. Yes.

19 Q. You've never given any input into the design of a
20 carburetor cover?

21 A. Correct.

22 Q. And you've never analyzed the relative cost
23 differences between alternative carburetor covers?

24 A. Correct.

25 Q. Now, am I correct that it's your opinion that the

1 recessed portion of the carburetor cover on the -- as
2 shown on Applicant's Exhibit 6 is functional?

3 A. Yes, it serves a functional purpose.

4 Q. If you look at Applicant's Exhibit 17, do you see
5 where the controls are located in Exhibit 17?

6 A. Not particularly clearly.

7 Q. We'll come back to that one. If you can turn to
8 Exhibit 19. Do you agree that the area of the
9 carburetor cover where the controls are located in
10 Exhibit 19 differs in appearance from what's shown in
11 Exhibit 6?

12 MR. NOWAKOWSKI: Objection.

13 THE WITNESS: Yes.

14 BY MS. FERRERA:

15 Q. And if you look at Exhibit 24, you'll agree that the
16 area of the carburetor cover where the controls are
17 located on this engine differs in appearance from
18 Exhibit 6?

19 A. Yes.

20 Q. And if you look at Exhibit 26, you'd agree that the
21 area of the carburetor cover where the controls are
22 located in Exhibit 26 differs in appearance from
23 Exhibit 6?

24 MR. NOWAKOWSKI: Objection.

25 THE WITNESS: It's a little bit more

1 difficult to tell with the angled view on Exhibit
2 26, but it probably is not the same.

3 BY MS. FERRERA:

4 Q. And if you look at Exhibit 27, you agree that the
5 area where the controls are located on the carburetor
6 cover in Exhibit 27 differs from Exhibit 6?

7 MR. NOWAKOWSKI: Objection.

8 THE WITNESS: There do appear to be a
9 number of similarities there, but there are some
10 differences as well. So yes, it does differ in
11 appearance.

12 BY MS. FERRERA:

13 Q. And then if you look at Exhibit 28, you would agree
14 that the area where the controls are located on the
15 carburetor cover differs from Exhibit 6?

16 MR. NOWAKOWSKI: Objection.

17 THE WITNESS: There may be some slight
18 differences there, a little bit of a change at the
19 bottom, but they are, again, very similar.

20 BY MS. FERRERA:

21 Q. If you look at Exhibit 29, do you agree that the area
22 of the carburetor cover where the controls are
23 located in Exhibit 29 differs in appearance from
24 Exhibit 6?

25 MR. NOWAKOWSKI: Objection.

1 THE WITNESS: The area where the control
2 levers are located is not particularly clear in my
3 picture here. So I don't want to render an opinion
4 on that.

5 BY MS. FERRERA:

6 Q. And then if you look at Exhibit 31, the area where
7 the controls are located in Exhibit 31 differs in
8 appearance from Exhibit 6?

9 MR. NOWAKOWSKI: Objection.

10 THE WITNESS: There appear to be some
11 differences, although with the pixilation on the
12 image, it isn't perfectly clear what that looks like
13 in Exhibit 31.

14 BY MS. FERRERA:

15 Q. Then if you look at Exhibit 32, do you agree that the
16 area where the controls are located on that engine
17 differs from Exhibit 6?

18 MR. NOWAKOWSKI: Objection.

19 THE WITNESS: There do appear to be some
20 differences of a fairly small nature, again, yes.

21 BY MS. FERRERA:

22 Q. Now, you'd agree, Professor Reisel, then, that there
23 are a variety of styling options available for the
24 portion of the carburetor cover on a horizontal shaft
25 engine where the controls are located?

1 MR. NOWAKOWSKI: Objection.

2 THE WITNESS: I would agree that there is
3 some leeway in the size of the recessed areas as to
4 where those levers would be located, so there could
5 be some styling differences, yes.

6 BY MS. FERRERA:

7 Q. And there could be differences in the shape of the
8 recessed area?

9 MR. NOWAKOWSKI: Objection.

10 THE WITNESS: Without being able to see
11 the image or the engines in person, the shape I'm a
12 little less certain of here.

13 BY MS. FERRERA:

14 Q. And in fact in some of the engines, the area where
15 the controls are located is not a recessed area, it's
16 just a cut-out in the carburetor cover, correct?

17 A. I can't tell that from the pictures.

18 Q. Well, if you look at Exhibit 32, do you agree that
19 that's just a cut-out?

20 MR. HERRING: Object to the form.

21 THE WITNESS: I, again, cannot tell
22 whether that's a cut-out or whether there is a
23 recessed area. At the top of that it looks to be a
24 recessed area. Towards the bottom it may be a
25 cut-out, it may be a recessed area.

1 BY MS. FERRERA:

2 Q. This is Opposers' Exhibit 10. That's the same engine
3 that's in Applicant's Exhibit 32, correct?

4 A. Correct.

5 Q. And based on that, you would agree that the area
6 where the controls are located is a cut-out?

7 A. I cannot tell if it's a cut-out or whether it's been
8 a piece of material that has been put over the
9 recessed area behind there. So I cannot tell what's
10 behind that frontal piece towards the bottom of the
11 carburetor cover.

12 Q. In some cases, Professor Reisel -- Strike that.

13 Would you agree that in cases where an
14 engine uses a panel air cleaner cover rather than a
15 high mounted air cleaner cover, it may not even be
16 necessary to have a separate carburetor cover?

17 A. Correct.

18 Q. And in those cases the air cleaner cover may also
19 function as the carburetor cover, correct?

20 A. Or at least the front part of the carburetor, yes.

21 Q. Now, in looking at Applicant's Exhibit 33 or Exhibit
22 6, either one, you'd agree that the carburetor cover
23 in that engine has four horizontal ribs on it?

24 A. Yes.

25 Q. And you're not aware of any evidence that those

1 horizontal ribs serve a functional purpose, correct?

2 A. I am not definitively aware that they serve a
3 functional purpose. I have in past -- the past
4 deposition expressed that that may aid in cooling the
5 carburetor cover which could help performance, but it
6 would be a very small impact. So I would say that
7 that generally would be a nonfunctional aspect.

8 Q. And you haven't seen any evidence in this case that
9 the ribs on the GX engine as shown in Applicant's
10 Exhibit 6 serve a functional purpose, right?

11 A. I have not seen evidence of that, correct.

12 Q. And you didn't offer any testimony that the vertical
13 left side of the carburetor cover on Applicant's
14 Exhibit 6 is functional, correct?

15 MR. HERRING: Object to form.

16 THE WITNESS: Correct.

17 BY MS. FERRERA:

18 Q. You didn't offer any testimony with respect to the
19 flat bottom portion of the carburetor cover on
20 Applicant's Exhibit 6?

21 A. Correct.

22 Q. You didn't offer any testimony with respect to the
23 lower left corner of the carburetor cover that's at a
24 90 degree angle, correct?

25 A. Correct.

1 MR. NOWAKOWSKI: I'm going to register an
2 objection to that question.

3 BY MS. FERRERA:

4 Q. You would agree that is a 90 degree angle, the lower
5 left corner of the carburetor cover?

6 A. As viewed it's essentially a 90 degree angle, yes.

7 Q. And you have no opinions with respect to the
8 functionality of that angle, correct?

9 A. Correct.

10 Q. I think you testified earlier that if the controls on
11 the -- on the GX engine are not recessed, they would
12 interfere with the movement of the -- could interfere
13 with the movement of the rewind during starting of
14 the engine; is that correct?

15 A. I did say that they could, yes.

16 Q. But you understand that the recoil cover shown in
17 Applicant's Exhibit 6 has the potential to be
18 rotated?

19 A. Yes, as I said in my testimony, yes.

20 Q. And you're not aware of any evidence that consumers
21 in fact prefer the location of the -- Strike that.

22 You also gave the opinion on direct that
23 having the controls on the left side of the engine
24 was functional, correct?

25 A. Correct.

1 Q. And if you would look at the Applicant's Exhibit 20,
2 you'd agree that the controls on that engine are in a
3 different location than in Applicant's Exhibit 6?

4 A. Yes.

5 MR. HERRING: Object to form.

6 BY MS. FERRERA:

7 Q. And if you look at Applicant's Exhibit 21, you agree
8 that the controls on that engine are in a different
9 location than on Applicant's Exhibit 6?

10 A. Yes.

11 Q. And if we look at Applicant's Exhibit 24, the
12 controls on that engine are in a different location
13 than on Applicant's Exhibit 6, correct?

14 A. At least some of them are, yes.

15 Q. And then if you look at Applicant's Exhibit 25, you
16 would agree that the controls on that engine are in a
17 different location than on Applicant's Exhibit 6?

18 A. Seeing I'm not sure where the controls are on this
19 one, yes.

20 Q. So you would agree that there are a variety of
21 styling options available for the location of the
22 controls on a horizontal shaft engine, correct?

23 MR. HERRING: Object to form.

24 THE WITNESS: I would agree with that,
25 especially because on these exhibits that were asked

1 about you have a side panel or a panel air cleaner
2 mounted on the side which would be where the
3 carburetor control levers are in Exhibit 33, and,
4 therefore, they can't be in that location.

5 BY MS. FERRERA:

6 Q. Well, in Exhibit 24 you don't know that that's a side
7 mounted air cleaner cover, correct?

8 A. I guess, correct, because the different shape of the
9 fuel tank and knowing exactly where some of the
10 components are fitting in there, we do not know
11 exactly which one that is, that's correct.

12 Q. I just want to go back for a moment, you testified I
13 believe that one reason why you believe the controls
14 need to be recessed is because that reduces the
15 potential for them breaking; is that correct?

16 A. Correct.

17 Q. You're not aware of any evidence that on engines on
18 which the controls are not recessed that they're more
19 prone to breaking, are you?

20 MR. NOWAKOWSKI: Objection.

21 THE WITNESS: I am not aware. I'm instead
22 using engineering analysis principles to come to
23 that conclusion.

24 BY MS. FERRERA:

25 Q. You haven't seen any data though comparing the extent

1 to which controls that are recessed versus not
2 recessed are subject to breakage, right?

3 A. Correct.

4 Q. Professor Reisel, you understand that another aspect
5 of the trademark that Honda has applied for is the
6 complimentary angles and bevelling of certain
7 components?

8 MR. HERRING: Object to form.

9 THE WITNESS: Correct.

10 BY MS. FERRERA:

11 Q. And you understand that according to Mr. Fujita, the
12 Honda styling designers designed the air cleaner
13 cover and the fuel tank to have similar bevelling,
14 correct?

15 MR. NOWAKOWSKI: Objection.

16 THE WITNESS: I understand that that was
17 his testimony at his deposition, yes.

18 BY MS. FERRERA:

19 Q. And you've got no basis to disagree with that, right?

20 A. Correct.

21 Q. You understand that he also testified that the Honda
22 styling designers wanted the air cleaner cover and
23 the fuel tank to have sharper angles on the outside
24 edges than on the inside?

25 MR. HERRING: Object to form.

1 THE WITNESS: Correct.

2 BY MS. FERRERA:

3 Q. And he also testified that the Honda styling
4 designers wanted similar vertical lines on the
5 portions of the air cleaner cover and the fuel tank
6 that are closest to one another?

7 MR. HERRING: Objection.

8 THE WITNESS: I believe that's what he
9 said, yes.

10 BY MS. FERRERA:

11 Q. And you agree that the similar bevelling on the air
12 cleaner cover and the fuel tank serves no functional
13 purpose?

14 MR. HERRING: Objection.

15 THE WITNESS: Correct.

16 BY MS. FERRERA:

17 Q. There is no functional reason to have similar
18 vertical lines on the right side of the air cleaner
19 cover and the left side of the fuel tank?

20 A. The right side of the air cleaner and the left side
21 of the fuel tank, correct. Yeah, I mean you're,
22 again, trying to minimize the -- you're trying to
23 maximize the size of the volume of the fuel tank so
24 you are going to have lines that are going to be
25 close to vertical in there as best you can to try to

1 maximize the volume. But that would be a fairly
2 small impact, but it's functionality.

3 Q. So you would agree that there is no functional reason
4 to have similar vertical lines for the right vertical
5 line of the air cleaner cover and the left vertical
6 line of the fuel tank, correct?

7 MR. HERRING: Objection.

8 MR. NOWAKOWSKI: Objection.

9 THE WITNESS: I guess I'm confused by
10 "similar vertical." Something is vertical or it's
11 not. And as I look at Exhibit 33, the angles of
12 those lines -- the fuel tank line on the left side
13 clearly is angled whereas the air cleaner cover is
14 much closer to being a vertical line. So I guess
15 I'm a little confused about referring to that as
16 similar.

17 BY MS. FERRERA:

18 Q. You do not see a functional reason to have the inside
19 edges of the fuel tank and the air cleaner cover
20 lining up and being on the same plane, correct?

21 MR. NOWAKOWSKI: Objection.

22 THE WITNESS: Would you be referring to
23 parallel planes there?

24 BY MS. FERRERA:

25 Q. Yes.

1 A. Okay. Again, you would like to get those to be close
2 so that you can maximize out your fuel tank volume by
3 minimizing the distance between those two components
4 which would have a functional component, but that
5 shouldn't be making a dramatic change in the size of
6 the fuel tank.

7 Q. Let's look at your deposition. If you turn to page
8 121 line 3, you were asked the question:

9 "And you're not aware of any functional
10 reason to have similar vertical lines for the right
11 vertical line of the air cleaner cover and the left
12 vertical line of the fuel tank, correct?"

13 And your answer was:

14 "To have them lining up and being on the
15 same plane, I do not see a functional reason for
16 that. Having a line in general, yes, but they do not
17 have to be lining up."

18 Is that --

19 MR. HERRING: For the record, there was an
20 objection to that question.

21 BY MS. FERRERA:

22 Q. You answered the question that you were asked on May
23 21st, 2015, correct?

24 A. Correct.

25 Q. And that was the answer that you gave?

1 A. That was the answer that I gave. And I am
2 essentially giving the same answer. I'm saying is
3 that there may be a small, rather minor, functional
4 reason for having that fuel tank line more vertical.
5 But I'm not saying it is a major functional reason.

6 Q. Well, you previously said you do not see a functional
7 reason, correct?

8 MR. HERRING: He said having a line in
9 general, yes, but they do not have to be lining up.

10 BY MS. FERRERA:

11 Q. Well, it has to have an edge, right? It doesn't have
12 to be the shape that it is on Applicant's Exhibit 6.

13 A. Correct.

14 Q. Now, you understand from Mr. Fujita's testimony that
15 the Honda styling designers also intended for the top
16 right side of the fuel tank and the lower left side
17 of the fan cover to have similar angles, correct?

18 MR. HERRING: Objection.

19 THE WITNESS: The top right side of the
20 fuel tank and which side --

21 BY MS. FERRERA:

22 Q. The lower left side of the fan cover.

23 A. Lower left, okay, fan cover, okay. Correct.

24 Q. And there is no functional reason why the top right
25 side of the fuel tank and the lower left side of the

1 fan cover would need to have similar angles, correct?

2 A. Correct.

3 Q. You also understand from Mr. Fujita's testimony that
4 the Honda styling designers intended for the angle of
5 the lower left side of the fan cover to continue
6 unobstructed to the left edge of the carburetor
7 cover, correct?

8 A. Correct.

9 MR. HERRING: Objection to that last
10 question.

11 BY MS. FERRERA:

12 Q. And there is no functional reason why the angle on
13 the lower left side of the fan cover has to line up
14 with the carburetor cover, right?

15 A. As I've discussed, there is a functional reason for
16 the lower left side of the fan cover to be pointed up
17 in that direction. It does not need to functionally
18 line up precisely with the carburetor cover. That
19 would be more of a function of the design of the
20 carburetor cover than the specific angle of the fan
21 cover, lower left of the fan cover.

22 Q. So the angle or slant of the lower -- on the lower
23 left side of the fan cover does not need to line up
24 with the angle of the carburetor cover?

25 MR. NOWAKOWSKI: Objection.

1 THE WITNESS: Correct.

2 BY MS. FERRERA:

3 Q. Professor Reisel, you testified earlier about the
4 overall cubic design of Honda's claimed trademark, do
5 you recall that?

6 A. Yes.

7 Q. Am I correct that your understanding of the geometric
8 definition of a cube is an object that has six flat
9 surfaces of equal size meeting at 90 degree angles?

10 A. Correct.

11 Q. In the context of this case, your interpretation of
12 cubic design is that the overall engine should have
13 approximately flat surfaces meeting at roughly 90
14 degrees, correct?

15 A. That the engine itself would be fitting most closely
16 in that type of a geometric shape, yes.

17 Q. And then you also believe that it means that the
18 individual components should have approximately flat
19 surfaces meeting roughly 90 degrees, right?

20 A. Correct.

21 Q. Based on your interpretation of cubic design in this
22 case, the engine does not have to have sides of equal
23 size, correct?

24 MR. NOWAKOWSKI: Objection,
25 mischaracterizes his direct testimony.

1 THE WITNESS: I look at this and the size
2 of the top and -- or the bottom and the left and
3 right do not necessarily need to be the same, but I
4 would expect the top and the bottom to be the same
5 and the left and the right to be the same.

6 BY MS. FERRERA:

7 Q. But you agree it doesn't -- based on your
8 interpretation of cubic design in this case, the
9 engine does not have to be square when viewed from
10 the front, it merely needs to be rectangular,
11 correct?

12 MR. NOWAKOWSKI: Objection.

13 THE WITNESS: Correct. It is going to be
14 a rectangle that is reasonably approaching a
15 square-ish shape. When you're talking with the
16 engineering design, you're looking here at not
17 necessarily a specific exact square, but -- it may
18 be rectangular, but it's going to be roughly the
19 same height and width.

20 BY MS. FERRERA:

21 Q. Your interpretation of cubic design in this case, it
22 doesn't have to have the left and right side be of an
23 equal size as the top and bottom, correct?

24 MR. NOWAKOWSKI: Objection. He's now
25 answered this question three times.

1 THE WITNESS: Correct.

2 BY MS. FERRERA:

3 Q. So an engine could meet your definition of cubic in
4 the context of this case and be slightly more tall
5 than it is wide?

6 MR. NOWAKOWSKI: Objection.

7 THE WITNESS: Correct.

8 MR. NOWAKOWSKI: Mischaracterizes his
9 direct testimony.

10 BY MS. FERRERA:

11 Q. And it could meet your definition of cubic design in
12 this case and be more wide than it is tall, right?

13 MR. NOWAKOWSKI: Same objection.

14 THE WITNESS: Correct, as long as they are
15 reasonably close in same dimensions, yes.

16 BY MS. FERRERA:

17 Q. Now, it's also your opinion that the outside surfaces
18 of the engine should be approximately flat; is that
19 correct?

20 A. Yes.

21 Q. And that's because in your view it facilitates
22 fitting the engine into OEM applications?

23 A. Yes.

24 Q. Let's look at Exhibit 21. You'd agree on this engine
25 the top surface of the engine is not approximately

1 flat?

2 A. The top surface consists of a few flat sections, but
3 it is not one straight flat section across there, and
4 it is also a panel air filter mounted on the side.

5 Q. And so on this engine the fuel tank and the muffler
6 and the air cleaner cover are all a different height,
7 right?

8 A. Correct.

9 Q. And then if you look at Exhibit 31, you'd agree that
10 on this engine the fuel tank and the air cleaner
11 cover -- Strike that.

12 You'd agree that on this engine the top
13 surfaces of the fuel tank and the air cleaner cover
14 are on different planes?

15 MR. NOWAKOWSKI: Objection.

16 THE WITNESS: I would agree that they are
17 a slightly different plane, but I would also say
18 that that top surface is essentially flat.

19 BY MS. FERRERA:

20 Q. You would agree that the fuel tank and the air
21 cleaner cover on this engine are not on the same
22 plane?

23 MR. NOWAKOWSKI: Objection.

24 THE WITNESS: They are on a minimally
25 different plane, yes.

1 BY MS. FERRERA:

2 Q. And if you look at Exhibit 32, you'd agree that the
3 top surfaces of the fuel tank and the air cleaner
4 cover on this engine also are on different planes?

5 MR. NOWAKOWSKI: Objection.

6 THE WITNESS: No.

7 BY MS. FERRERA:

8 Q. They're not?

9 A. I would not agree with that.

10 Q. In your view -- you believe these are on the same
11 plane?

12 A. I would say that from this picture I cannot tell if
13 they are on the same plane or not.

14 Q. You just can't tell one way or the other?

15 A. Correct. This picture appears to be taken from a
16 slightly top view as opposed to straight on.

17 MS. FERRERA: I'm asking the reporter to
18 mark Applicant's Trial Exhibit 34.

19 (Applicant's Exhibits 34-35 marked.)

20 BY MS. FERRERA:

21 Q. Professor Reisel, if you take a look at Applicant's
22 Exhibit 34, do you recognize that piece of equipment
23 to be a tiller?

24 A. Yes.

25 Q. And it's got a Honda GX engine mounted on it?

1 MR. HERRING: Object to form.

2 THE WITNESS: It has a Honda or an engine
3 with a Honda marked fuel tank and fan cover on that,
4 yes.

5 BY MS. FERRERA:

6 Q. If you look at Exhibit 35, do you recognize that to
7 be a pressure washer?

8 A. Yes.

9 Q. And it also has a Honda engine mounted on it?

10 MR. HERRING: Object to the word "also."

11 MS. FERRERA: He just admitted that the
12 other one had a Honda engine.

13 THE WITNESS: I cannot tell what type of
14 engine is mounted on this.

15 BY MS. FERRERA:

16 Q. You agree it's a Honda engine, correct?

17 A. No. I cannot make out any labeling on the engine to
18 indicate that.

19 Q. Okay. In either -- regardless of that, you agree
20 that the engines mounted on Exhibits 34 and 35 are
21 horizontal shaft utility engines, correct?

22 A. Yes.

23 Q. If you look at Exhibit 34, you'd agree there is no
24 surface on top of the application in that picture
25 that would restrict the height of either the fuel

1 tank or the air cleaner cover?

2 A. There is no top surface that would restrict that,
3 yes.

4 Q. And there is no top surface that would require the
5 fuel tank and the air cleaner cover to have the same
6 height, right?

7 A. For this application, no.

8 Q. And if you look at Exhibit 35, you understand that to
9 be a pressure washer?

10 A. Yes.

11 Q. And you'd agree that the application in Exhibit 35
12 also doesn't have any top surface that restricts the
13 height of the fuel tank or the air cleaner cover?

14 A. Within some margin. There is no solid surface, but
15 the way the pressure washer is designed, it would
16 appear that the controls that are attached to the
17 handle are not elevated that far above the engine, so
18 you would not want to make that a dramatically taller
19 engine that would restrict that. But it certainly
20 could be up a little bit.

21 Q. And you would agree that the air cleaner cover on the
22 fuel tank in exhibit -- on the engine in Exhibit 35
23 could be at somewhat different heights?

24 MR. HERRING: Object to form.

25 THE WITNESS: Yes.

1 BY MS. FERRERA:

2 Q. You're not aware of any specific application where
3 having the air cleaner cover and fuel tank at
4 different heights would prevent the engine from
5 fitting into the envelope, correct?

6 A. Correct.

7 Q. Now, if you look at Exhibits 34 and 35 again, you'd
8 agree that on the right side of the equipment there
9 is also room for the fuel tank to protrude out from
10 the cylinder block?

11 MR. NOWAKOWSKI: Objection.

12 MR. HERRING: What do you mean by right
13 side?

14 MS. FERRERA: Looking at -- let me just
15 ask the question again.

16 BY MS. FERRERA:

17 Q. Professor Reisel, looking at Exhibit 34 and looking
18 at the equipment from the front, do you agree that on
19 the right side there is room for the fuel tank to
20 protrude out from the cylinder block?

21 MR. NOWAKOWSKI: Objection.

22 THE WITNESS: By the front, I assume you
23 mean where the starter handle is.

24 BY MS. FERRERA:

25 Q. Correct.

1 A. I cannot tell how close the metal enclosure structure
2 there is to the fuel tank, so there may not be any
3 room for that fuel tank to protrude outwards. There
4 may be, there may not be. I can't tell from this
5 picture.

6 Q. You just can't say one way or the other?

7 A. Correct.

8 Q. If you look at Exhibit 35, you'd agree that on that
9 piece of equipment, the pressure washer, there is
10 room for the fuel tank to protrude out on the right
11 side?

12 A. I would agree provided that it does not interfere
13 with the storage of the pressure washer nozzle on
14 that device. So there should be room for it to
15 protrude, a little bit. Again, wouldn't have it
16 protrude a long distance out from there.

17 Q. And you're not aware of any specific applications
18 where having the fuel tank protrude out to some
19 extent from the cylinder block would prevent the
20 engine from fitting into the application, correct?

21 A. Correct.

22 Q. And looking at Exhibits 34 and 35 again, you'd agree
23 that there is nothing on the left side of either of
24 the applications that would prevent the air cleaner
25 cover from protruding out beyond the cylinder block?

1 MR. HERRING: Objection, photos speak for
2 themselves.

3 THE WITNESS: And on Exhibit 34 I don't --
4 because we can't see behind the mount engine in this
5 picture, so that would be to the left side of the
6 engine, I don't know how close that handle is coming
7 to the engine, so I can't make a judgment as to
8 whether or not that's restricting the protrusion of
9 the air cover cleaner. 35 there would seem to be
10 nothing that would prevent it from protruding out
11 slightly.

12 BY MS. FERRERA:

13 Q. And you agree that you're not aware of any specific
14 application where having the air cleaner cover
15 protrude out from the left side would cause problems
16 in terms of it fitting into the application?

17 A. It's possible that the application here in Exhibit 34
18 it may not allow that to happen, but other than that,
19 no.

20 Q. And you just don't know one way or the other with
21 respect to Exhibit 34, correct?

22 A. Correct.

23 Q. If you turn to Exhibit 23, you'd agree that on the
24 left side the air cleaner cover protrudes out
25 slightly beyond the carburetor cover on this engine?

1 A. It would appear that it protrudes a minimal amount
2 from the carburetor cover.

3 Q. And if you look at Exhibit 25 I believe it is, 24,
4 you'd agree that the air cleaner cover on this engine
5 protrudes out somewhat from the carburetor cover?

6 A. I would agree that that is not a completely flat
7 surface from top to bottom, yes.

8 Q. And if you look at Exhibit 30, do you agree that the
9 air cleaner cover on that engine protrudes out on the
10 left side beyond the carburetor cover?

11 A. Yes.

12 Q. And then if you look at Exhibit 20, looking at the
13 right side now, you'd agree that the fuel tank on the
14 engine in Exhibit 20 protrudes out beyond the
15 cylinder block?

16 MR. HERRING: Objection, picture doesn't
17 appear to be head-on.

18 THE WITNESS: Yes, it would appear to be
19 protruding out by maybe a half an inch.

20 BY MS. FERRERA:

21 Q. So Professor Reisel, you would agree that it's
22 possible to have a horizontal shaft utility engine
23 that's cubic in design and still have options
24 available in terms of styling, correct?

25 MR. NOWAKOWSKI: Objection.

1 THE WITNESS: They would have options on
2 whether or not there is an exactly flat surface
3 there, yes.

4 BY MS. FERRERA:

5 Q. And you'd agree that it's possible to have a
6 horizontal shaft utility engine that's cubic in
7 design and have it look different than the engine in
8 Applicant's Exhibit 6?

9 MR. NOWAKOWSKI: Objection.

10 THE WITNESS: Yes.

11 BY MS. FERRERA:

12 Q. And you'd agree that it's possible to have a
13 horizontal shaft utility engine with rectangular
14 components and still have options in terms of styling
15 of each of those components?

16 MR. NOWAKOWSKI: Objection.

17 THE WITNESS: Yes.

18 BY MS. FERRERA:

19 Q. And it's -- you'd agree it's possible to have a
20 horizontal shaft utility engine with rectangular
21 components and have those components look different
22 from the components in Applicant's Exhibit 6?

23 MR. NOWAKOWSKI: Objection.

24 THE WITNESS: Yes.

25 BY MS. FERRERA:

1 Q. Now, during your direct testimony you testified about
2 a US utility patent, do you recall that?

3 A. Yes.

4 Q. And that was the 389 patent, correct?

5 A. I believe so, yes.

6 Q. Now, you're not named as an inventor on any patents,
7 Professor Reisel?

8 A. No.

9 Q. And I think you testified earlier that you've had no
10 experience prior to this case in reading or
11 interpreting patents, right?

12 A. Correct.

13 Q. And you've not been involved in helping to prepare or
14 prosecute any patents?

15 A. Correct.

16 Q. And before you wrote your -- or when you wrote your
17 expert reports in this case, you didn't have any
18 specific understanding of the role of claims in a
19 utility patent, correct?

20 A. Correct.

21 Q. And you still don't have that understanding today,
22 correct?

23 A. Correct.

24 Q. When you wrote your report in this case, you didn't
25 have an understanding of the role of figures in a

1 utility patent?

2 A. Correct.

3 Q. And you still don't have that understanding, correct?

4 A. Correct.

5 Q. So let's look at the 389 patent. It was previously
6 marked I believe as Deposition Exhibit 215. I'm not
7 entering it into evidence, so I'm not going to remark
8 it here. This deposition Exhibit 215 is the 389
9 patent that you testified about earlier.

10 A. Yes.

11 Q. And in your view this patent supports your opinion
12 that the overall cubic design of the engine in
13 Honda's trademark application is functional, correct?

14 A. Yes.

15 Q. Now, if you turn to column 1 in the patent and you
16 see the subheading field of invention under
17 background of the invention.

18 A. Yes.

19 Q. And you see under that it says the present invention
20 relates to a general purpose engine having a
21 cannister to absorb fuel vapor that has evaporated
22 within a fuel tank wherein fuel vapor desorbs from
23 the cannister is guided to an intake system in
24 communication with an engine main body.

25 Do you see that?

1 A. Yes.

2 Q. And you understand that language to be describing
3 generally the subject matter of the invention claimed
4 in this patent, correct?

5 MR. NOWAKOWSKI: Objection, calls for a
6 legal conclusion and lack of foundation.

7 THE WITNESS: Yes.

8 BY MS. FERRERA:

9 Q. Well, Professor Reisel, you read this patent during
10 your work on this case, right?

11 A. Correct.

12 Q. And you relied on this patent in forming your
13 opinions on this case, correct?

14 A. Correct.

15 Q. And you understood, you thought you understood what
16 the patent described when you formed your opinions in
17 this case, right?

18 A. Correct.

19 Q. And you'd agree that the system that's described in
20 the paragraph that we just read relates to the
21 internal components of the engine?

22 MR. HERRING: Object to form,
23 mischaracterizes the document.

24 THE WITNESS: It would be referring to the
25 internal components in the fuel tank.

1 BY MS. FERRERA:

2 Q. The components that are being described in that
3 paragraph are not visible from the -- when you're
4 looking at the engine from the outside, correct?

5 A. Correct. And that wasn't what I was pulling from
6 this document either.

7 Q. Fair enough. Well, let's look at column 1 of the
8 patent starting around line 15, and you see it says
9 there: General purpose engine usually needs to be
10 compact so that a work machine that includes the
11 general purpose engine does not become large.

12 Do you see that?

13 A. Yes.

14 Q. And that's the language that you were referring to in
15 this patent, correct?

16 A. Yes.

17 Q. You don't understand that statement to require that
18 the engine look like a Honda GX engine, correct?

19 MR. NOWAKOWSKI: Objection, lack of
20 foundation, calls for a legal conclusion. You can
21 answer subject to that.

22 THE WITNESS: My understanding of that
23 from my use of that was then that the engine has to
24 be compact. And as I explained earlier, the most
25 efficient form to get a compact engine was going to

1 be this overall cubic design.

2 BY MS. FERRERA:

3 Q. You do not understand the statement in column 1
4 starting on line 15 to require that the engine look
5 like the engine shown in Applicant's Exhibit 6,
6 correct?

7 MR. NOWAKOWSKI: Same objection. Go
8 ahead.

9 THE WITNESS: Correct.

10 BY MS. FERRERA:

11 Q. And there is no reference in the 389 patent to a
12 quote, cubic design, right?

13 A. Correct, which I never claimed there was.

14 Q. And you agree there is no such reference, right?

15 A. Correct.

16 Q. And none of the claims in the 389 patent relate to
17 the appearance of the engine from the front, correct?

18 MR. HERRING: Objection, calls for a legal
19 conclusion, lacks foundation.

20 THE WITNESS: My understanding would be
21 correct.

22 BY MS. FERRERA:

23 Q. You also testified in your direct testimony about a
24 Japanese patent document, do you recall that?

25 A. Yes.

1 Q. And that document was a utility model publication; is
2 that correct?

3 A. Correct.

4 Q. Prior to this case you had never seen any Japanese
5 patent documents, right?

6 A. Correct.

7 Q. You had no experience reading or interpreting
8 Japanese patent documents?

9 A. Correct.

10 Q. Even if they were translated?

11 A. Correct.

12 Q. And you have no familiarity with the process for
13 obtaining a Japanese utility model publication?

14 A. Correct.

15 Q. You don't know what the requirements are for
16 obtaining a Japanese utility model publication?

17 A. Correct.

18 Q. And you don't know how those requirements compare to
19 the requirements for a US utility patent, correct?

20 A. Correct.

21 Q. Now, I'm going to show you what was marked as
22 Deposition Exhibit 218. I'm not entering it in
23 evidence. That's the Japanese utility model
24 publication S6322344 that you talked about during
25 your direct testimony, correct?

1 A. Correct.

2 Q. You don't know whether this Japanese utility model
3 publication has been reviewed by any patent office,
4 right?

5 A. Correct.

6 Q. And you don't know if it's been approved or issued,
7 right?

8 A. Correct.

9 MR. NOWAKOWSKI: I'm going to object,
10 enter a late objection to that based on the face of
11 the document. But he's answered.

12 BY MS. FERRERA:

13 Q. And I think it was your testimony earlier that this
14 document S6322344 supports your opinion that the
15 overall cubic design is functional?

16 A. Yes.

17 Q. And again, this Japanese patent document doesn't say
18 anything about a cubic design, right?

19 A. Not in those words.

20 MR. HERRING: Are you talking about the
21 translation?

22 MS. FERRERA: Correct.

23 BY MS. FERRERA:

24 Q. The word cubic doesn't appear anywhere in the
25 translation of this Japanese patent, utility patent

1 publication, right?

2 A. I believe not.

3 Q. And you'd agree that this Japanese patent document
4 does not describe the appearance of the engine from
5 the front?

6 MR. HERRING: Objection.

7 MR. NOWAKOWSKI: I'm also going to object.

8 THE WITNESS: I would say it does not have
9 a picture of the engine from the front. Some of the
10 claims in there are describing it, what it's
11 essentially going to be looking like.

12 BY MS. FERRARA:

13 Q. Other than the location of the components, you would
14 agree that this document, S6322344, does not describe
15 the appearance of the engine from the front, correct?

16 MR. NOWAKOWSKI: Objection.

17 MR. HERRING: Mischaracterizes the
18 document.

19 THE WITNESS: Correct.

20 BY MS. FERRERA:

21 Q. And so other than the location of the components,
22 you'd agree that there is nothing in this Japanese
23 patent document that requires an engine to look like
24 what's shown in Applicant's Exhibit 6, right?

25 MR. NOWAKOWSKI: Objection, I'm going to

1 object on foundation grounds and calls for a legal
2 conclusion and to the form. But you can answer.

3 THE WITNESS: Well, the drawing showing
4 the back of the engine for the fuel tank does show
5 that it has a rib associated with it, and so it
6 would be a logical conclusion that that rib would
7 have to be around in the front as well. So that at
8 least would be shown in this document.

9 BY MS. FERRERA:

10 Q. Other than the position of the components, you'd
11 agree that there is nothing in this Japanese patent
12 document S6322344 that requires an engine to look
13 like the engine shown in Applicant's Exhibit 6,
14 correct?

15 MR. NOWAKOWSKI: Same objections as to the
16 prior question.

17 THE WITNESS: And I would again say that
18 other than the positions and the presence of that
19 rib, that would be correct.

20 BY MS. FERRERA:

21 Q. Let's look at your deposition testimony. If you look
22 at page 247, line 15, you were asked:

23 "And so other than the position of the
24 components, would you agree that there is nothing in
25 Exhibit 218 that requires an engine to look like the

1 engine shown in Exhibit 3?"

2 Do you see that?

3 A. Yes.

4 Q. And Exhibit 218 is the same Japanese patent document
5 that we're looking at, correct?

6 A. Yes.

7 Q. And the answer that you gave was:

8 "I would agree with that with the
9 stipulation that the location of the components
10 really influences the frontal view of it."

11 Do you see that?

12 A. Yes.

13 MR. HERRING: And there were objections to
14 the form of that question as well.

15 BY MS. FERRERA:

16 Q. And you understood the question when you answered it,
17 Professor Reisel?

18 A. Yes. And as I was looking at it in more detail, I
19 see that that rib is also shown. So I am
20 supplementing that upon further investigation of
21 this.

22 Q. That was the question you were asked, and that was
23 the answer you gave at your deposition in May, 2015,
24 right?

25 A. Correct.

1 Q. You'd agree this Japanese patent document does not
2 require the individual components of the engine to
3 look the same as those in Applicant's Exhibit 6,
4 correct?

5 MR. NOWAKOWSKI: Objection, calls for a
6 legal conclusion, lack of foundation and to the form
7 of the question. You may answer subject to that.

8 THE WITNESS: As far as my understanding,
9 yes.

10 (Applicant's Exhibit 36 marked.)

11 BY MS. FERRERA:

12 Q. So Professor Reisel, you should have now in front of
13 you Exhibit 36 which is a slightly better photograph
14 of the Kohler Command Pro 7 engine that is also
15 marked as Applicant's Exhibit 17. Do you see that?

16 A. Yes.

17 Q. And looking at the area where the controls are
18 located in Applicant's Exhibit 36, do you agree that
19 that area of the carburetor cover differs in
20 appearance from what's shown in Applicant's Exhibit
21 6?

22 MR. NOWAKOWSKI: Objection.

23 THE WITNESS: There are -- I mean there is
24 a few labeling differences, the shape of the lever,
25 levers may be a little bit different. But -- and

1 there is a lot of similarity between the cover in
2 Exhibit 36 and in Exhibit 6.

3 BY MS. FERRERA:

4 Q. The recessed area where the controls are located
5 differs in appearance from the recessed area in
6 Applicant's Exhibit 6, right?

7 MR. NOWAKOWSKI: Objection.

8 THE WITNESS: I guess there is a little
9 bit of a difference, yes.

10 BY MS. FERRERA:

11 Q. Okay. You talked on your direct testimony about a
12 utility patent. I'd like to talk to you about design
13 patents instead. You're aware that an individual or
14 a company may seek to protect the design of a product
15 through a design patent, correct?

16 A. Yes.

17 Q. And you understand that if a company is awarded a
18 design patent, that they can prevent others from
19 using the patent design, correct?

20 MR. NOWAKOWSKI: Objection, foundation.
21 Actually, that calls for a legal conclusion, too, so
22 I'll object on that basis.

23 THE WITNESS: Yes.

24 BY MS. FERRERA:

25 Q. You're aware, are you not, that various companies

1 have sought and obtained design patents relating to
2 horizontal shaft utility engines?

3 A. Yes.

4 Q. But in preparing -- in forming your opinions in this
5 case, you did not look at any design patents relating
6 to horizontal shaft utility engines, right?

7 A. I would say correct. As a nonlegal person, I may not
8 have differentiated between design and utility
9 patents as much as lawyers would, so I will
10 presumably say that I did not do design patents.

11 Q. Well, let's look at your Exhibit 24 -- Opposers'
12 Exhibit 24. And that's the list of documents that
13 you reviewed in forming your opinions in this case,
14 correct?

15 A. Correct.

16 Q. And you don't see any design patents listed on there,
17 correct, as far as you know?

18 A. As far as I know, correct. Again, not being a legal
19 person who has dealt with design versus utility
20 patents, and it wouldn't necessarily be what jumps
21 out at me.

22 Q. And the attorneys for Briggs and Kohler didn't
23 provide you, to the best of your knowledge, any
24 design patents to consider in forming your opinions
25 in this case?

1 A. Correct.

2 Q. Let's look at what I'm going to ask to be marked as
3 Applicant's Exhibit 37.

4 (Applicant's Exhibit 37 marked.)

5 BY MS. FERRERA:

6 Q. Professor Reisel, looking at Applicant's Trial
7 Exhibit 37, do you see that this is a United States
8 patent having the number Des. 309,458?

9 A. Yes.

10 Q. And do you understand that the designation Des.
11 indicates that it's a design patent?

12 A. That's what I was about to guess, but I was not
13 technically aware of that until now.

14 Q. Okay. And do you see that the title of the patent is
15 internal combustion engine?

16 A. Yes.

17 Q. And the assignee of the patent is Briggs and Stratton
18 Corporation?

19 A. Yes.

20 Q. One of the companies that retained you to provide
21 expert testimony in this case, right?

22 A. Yes.

23 Q. And do you see that under where it says filed it
24 indicates that this was filed on April 18th, 1988?

25 A. Yes.

1 Q. And then at the top right side it says date of
2 patent, July 24th, 1990, do you see that?

3 A. Yes.

4 Q. You've never seen this document before, correct?

5 A. Not to my recollection.

6 Q. And do you agree that the drawing on the front page
7 of Applicant's Exhibit 37 depicts a general purpose
8 utility engine?

9 A. It would appear to. It doesn't have the -- any
10 reference on the size there, so it could have been
11 some larger engine, then I would have considered
12 that. I presume, considering what Briggs and
13 Stratton typically makes, I'll say yes.

14 Q. And you'd agree that the engine depicted in
15 Applicant's Exhibit 37 is a horizontal shaft utility
16 engine?

17 A. Yes.

18 Q. And do you see in the right column on the front page
19 there is a heading "claim?"

20 A. Yes.

21 Q. And under that it says: The ornamental design for an
22 internal combustion engine as shown.

23 Do you see that?

24 A. Yes.

25 Q. And if you turn to -- Strike that.

1 And beneath that there is a heading
2 description, and then there is six figures that are
3 listed, do you see that?

4 A. Yes.

5 Q. And if you turn to figure 1, that's the front view of
6 the horizontal shaft utility engine that's depicted
7 on the cover, correct?

8 A. Yes.

9 Q. So do you understand that Briggs and Stratton was
10 claiming the front view of the engine as shown in
11 figure 1 as the ornamental design?

12 MR. NOWAKOWSKI: Objection.

13 MR. HERRING: Objection, the document
14 speaks for itself, lack of foundation, calls for a
15 legal conclusion, outside the scope of direct
16 examination.

17 BY MS. FERRERA:

18 Q. You can answer.

19 A. I guess so. I'm not a legal expert and haven't dealt
20 with design patents, so I guess that's what it's
21 doing.

22 Q. And none of the attorneys in this case explained to
23 you the significance of a design patent with respect
24 to a trademark, correct?

25 MR. HERRING: Objection.

1 THE WITNESS: Not that I recall.

2 BY MS. FERRERA:

3 Q. Let's look at --

4 (Applicant's Exhibit 38 marked.)

5 BY MS. FERRERA:

6 Q. Professor Reisel, you have now Applicant's Exhibit 38
7 which says United States Design Patent, patent number
8 US D595,737S, do you see that?

9 A. Yes.

10 Q. You understand this is another United States design
11 patent?

12 A. I'm going to guess that they changed the numbering
13 from the Des. to a D, so yes.

14 Q. And it says United States Design Patent?

15 A. Well, that would help, too, yeah.

16 Q. And if you look at the title of the patent, it's
17 engine.

18 A. Yes.

19 Q. And assignee is Briggs and Stratton Corporation,
20 right?

21 A. Yes.

22 Q. And this patent was filed on April 4th, 2008, do you
23 see that?

24 A. Yes.

25 Q. And it issued on July 7th, 2009, do you see that?

1 A. Yes.

2 Q. And you didn't see this document before today either,
3 correct?

4 A. Not that I recall.

5 Q. And if you look at the claim in the right column, it
6 says: We claim the ornamental design for an engine
7 as shown and described.

8 Do you see that?

9 A. Yes.

10 Q. And then there is a description and there is seven
11 figures listed?

12 A. Yes.

13 Q. And figure 2 that's listed is the front view of the
14 engine, do you see that?

15 A. Yes.

16 Q. And that, again, is a horizontal shaft utility
17 engine, right?

18 A. Again, it's a horizontal shaft engine. Presumably
19 it's a utility sized engine.

20 Q. And you didn't consider this document in forming your
21 opinions in this case, right?

22 A. No.

23 (Applicant's Exhibit 39 marked.)

24 BY MR. NOWAKOWSKI:

25 Q. Professor Reisel, I've handed you Applicant's Exhibit

1 39.

2 A. Yes.

3 Q. And you see that this is United States Design Patent
4 No. D605,611S?

5 A. Yes.

6 Q. And the title of this patent is also engine?

7 A. Yes.

8 Q. And the assignee is Kohler Company, correct?

9 A. Yes.

10 Q. And Kohler is the other party that retained you to
11 provide expert testimony in this case, correct?

12 A. Yes.

13 Q. And if you look down to the filing date, it was filed
14 on October 21st, 2008?

15 A. Yes.

16 Q. And at the top right it says that it was issued on
17 December 8th, 2009?

18 A. Yes.

19 Q. You've never seen this document before either,
20 correct?

21 A. Correct.

22 Q. And if you look at the claim, it says: The
23 ornamental design for an engine that's shown as
24 described?

25 A. Yes.

1 Q. And then under description there is six figures
2 shown?

3 A. Yes.

4 Q. And if you turn to figure 2, that's the front view of
5 a horizontal shaft utility engine, correct?

6 A. Again, it's a horizontal shaft engine, front view of
7 that presumably utility sized, yes.

8 Q. And you didn't consider that document in forming your
9 opinions in this case?

10 A. No.

11 (Applicant's Exhibit 40 marked.)

12 BY MS. FERRERA:

13 Q. Professor Reisel, you have now in front of you United
14 States Patent, and then it says patent number Des.
15 282,071, do you see that?

16 A. Yes.

17 Q. Do you understand this is another United States
18 design patent?

19 A. Yes.

20 Q. And the title of this one is internal combustion
21 engine?

22 A. Yes.

23 Q. The assignee is Honda Giken Kogyo Kabushiki Kaisha,
24 do you understand that?

25 A. Yes.

1 Q. Do you understand that's Honda Motor Company?

2 A. Yes.

3 Q. And this patent was filed on March 25th, 1983?

4 A. Yes.

5 Q. And it was issued on January 7th, 1986, do you see
6 that?

7 A. Yes.

8 Q. And do you recall from Mr. Fujita's testimony that
9 the GX engine was designed -- was first designed
10 around 1983?

11 A. Yes, I recall it being in the early 1980s.

12 Q. You haven't seen this document before, right?

13 A. Not that I can recall.

14 Q. And if you look under claim, do you see it says: The
15 ornamental design for an internal combustion engine
16 as shown?

17 A. Yes.

18 Q. And then under the description there are seven
19 figures listed?

20 A. Yes.

21 Q. And if you turn to figure -- actually, just looking
22 at the picture of the engine on the cover, do you
23 agree that that's -- do you understand that that's a
24 picture of the Honda GX engine?

25 MR. NOWAKOWSKI: Objection to form and

1 foundation, calls for a legal conclusion.

2 THE WITNESS: It appears to resemble,
3 closely resemble, the GX engine.

4 BY MS. FERRERA:

5 Q. And if you look at figure 2, that's a front view of
6 the engine, correct?

7 MR. NOWAKOWSKI: Same objections.

8 THE WITNESS: Yes.

9 BY MS. FERRERA:

10 Q. And it's almost identical to the drawing in
11 Applicant's Exhibit 6, correct?

12 MR. NOWAKOWSKI: I'm going to -- I object
13 to that, mischaracterizes the -- both the drawing
14 and the patent.

15 MR. HERRING: Documents speak for
16 themselves.

17 THE WITNESS: There are similarities
18 between the drawings. Exhibit 40 has an additional
19 feature in the middle on the right-hand side. There
20 is some changes as well to the fan shape cover it
21 would appear. So I mean -- and the rib of the fuel
22 tank does not match up to the belt on the air
23 cleaner cover either. So there are similarities,
24 but there are also differences between the two.

25 BY MS. FERRERA:

1 Q. And you never considered Applicant's Exhibit 40 in
2 forming your opinion that Honda's applied for mark is
3 functional, correct?

4 A. Correct.

5 MS. FERRERA: Why don't we take a break.

6 (Recess taken.)

7 MS. FERRERA: Professor Reisel, I have no
8 other questions at this time. Thank you.

9 REDIRECT EXAMINATION

10 BY MR. NOWAKOWSKI:

11 Q. I have a couple of questions. Do you have
12 exhibits -- Applicant Exhibits 34 and 35 in front of
13 you?

14 A. Yes.

15 Q. Do you recall some questions that Honda's counsel
16 asked you regarding Exhibit 34 and 35 regarding
17 whether there was any impediment from moving the gas
18 tank out to the right or the air cleaner cover out to
19 the left?

20 A. Yes.

21 Q. If -- with regard to the engine shown in Exhibits 34
22 and 35, if you were to move the gas tank out to the
23 right, in your opinion would that -- could that
24 require additional cantilever support?

25 A. Yes. If that were to be moved substantially so more

1 than perhaps a half inch or an inch further to the
2 right, you would want to be providing additional
3 support to help stabilize that component.

4 Q. Why is that?

5 A. Because that's going to move the center of gravity
6 over. And as it -- the further and further it moves
7 out, the more torque it's going to put onto the
8 engine. And that torque is going to have to be
9 counterbalanced by a cantilevered support.

10 Q. When you talk about torque, would that essentially
11 cause the engine to vibrate?

12 A. There would likely be additional vibrations. It's
13 doubtful that it would be enough weight in that fuel
14 tank to cause the engine itself to tip over. But
15 potentially if it was pushed out far enough, that
16 would have to be considered as well.

17 Q. And that cantilevered support would require
18 additional cost or expense in your opinion?

19 A. Yes.

20 Q. And would that be true with moving the air cleaner
21 cover out to the left as well?

22 A. It would be true. It would be -- you would have a
23 little bit more leeway with that as the air cover
24 cleaner is lighter, so it wouldn't need to be as
25 supported as quickly. But it would also be a factor

1 there.

2 MR. NOWAKOWSKI: That's all I've got.

3 Thanks.

4 REXCROSS-EXAMINATION

5 BY MS. FERRERA:

6 Q. Professor Reisel, I have a couple of quick follow-up
7 questions. You agree that it would be possible to
8 move the fuel tank out slightly to the right in
9 Exhibits 34 and 35, correct?

10 A. Yes.

11 Q. And in fact you agree that you could move the fuel
12 tank to the right by as much as an inch or two inches
13 without requiring any additional support, correct?

14 A. Two inches I would be a little bit concerned with.
15 But an inch I would be comfortable with, yes. And
16 that also would depend on the actual model and the
17 size of the engine in the first place as to how soon
18 that would have to be considered. For a smaller
19 engine you would have less leeway to move it out
20 before it would start being an issue.

21 Q. So you would agree that you could move it out at
22 least a half inch to an inch, correct?

23 A. Correct.

24 Q. And then if it's a bigger engine, you might be able
25 to move it out even more than that, correct?

1 A. If it was at the top-end size of the utility engines,
2 that might be possible to move out an additional half
3 inch or inch.

4 Q. And so similarly, you could move the air cleaner
5 cover out at least a half inch to an inch without
6 requiring additional support, correct?

7 A. Correct.

8 Q. And maybe even more than that since it's lighter?

9 A. Correct. Although, again, with a smaller engine I
10 would be a little bit more concerned if you had a
11 larger air cover cleaner on there. But yes.

12 MS. FERRERA: No further questions.

13 MR. NOWAKOWSKI: That's it.

14 (At 2:40 p.m., the deposition concluded.)

15 * * *

16

17

18

19

20

21

22

23

24

25

ATTORNEYS EYES ONLY – CORRECTED COPY-LITT

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I declare under penalty of perjury under the laws that the foregoing is true
and correct.

Executed on September 29, 2015,
at _____.

John Reisel
John Reisel, Ph.D.

&	1980s 175:11	101:14 111:17	3
& 1:3	1983 175:3,10	112:13,19 122:13	3 102:23 140:8
0	1986 175:5	23 3:5,6,21 10:17,20	164:1
02109 2:12	1988 168:24	66:1 74:22 86:7,15	30 4:10 74:23 92:23
1	1989 7:5	101:22 112:22	93:4,10,16 113:21
1 156:15 158:7	1990 169:2	113:6 122:22,23	114:8 125:14,23,24
159:3 170:5,11	1990s 72:18	123:2 152:23	126:6 153:8
1/29/2017 181:25	1991 7:7	23rd 181:21	300 2:7
10 3:4 18:8 132:2	1994 7:9 9:20,21	24 3:7,23 23:2,5	309,458 4:23 168:8
101 2:3	1998 74:7	25:20 28:5,6 33:7,8	31 4:12 74:24 93:21
11 14:20 21:20	2	34:1 62:25 63:4	94:3,15,21 95:2
12 17:8 74:12,18	2 75:7 172:13 174:4	87:1,8,15,21 105:24	103:20 113:22
76:6,9,10	176:5	107:11,13,18 113:9	114:8 130:6,7,13
121 140:8	20 3:15 74:13,19	113:15 123:10,11	146:9
13 17:9	76:6 81:14,23 82:8	128:15 135:11	32 4:14 78:21 95:7
14 14:11 67:8 69:1	82:15,17,21,25 83:8	136:6 153:3 167:11	95:15,21 96:2,8,12
147 4:17,19	83:16 105:14	167:12	96:22 126:8 130:15
15 65:25 102:19	107:10,15 110:9	247 163:22	131:18 132:3 147:2
158:8 159:4 163:22	111:2 121:16,18	24th 169:2	33 2:7 4:16 96:25
16 1:14 181:12	135:1 153:12,14	25 3:9,25 11:25 35:9	97:1,3,6,22 99:13
165 4:21	20,000 18:9	35:12,13,17,24 36:2	100:7 104:15
168 4:23	200 6:20	36:21 88:1,11,17,23	115:23 127:9
17 78:15,21,24	2007 33:14	102:3 123:23,24	132:21 136:3
79:11,18 86:8 96:8	2008 171:22 173:14	135:15 153:3	139:11
96:12,22 109:23	2009 171:25 173:17	255-4440 2:8	338 4:7 91:24
112:23 121:3 128:4	2011 78:9	25th 175:3	34 4:18 147:18,22
128:5 165:15	2012 22:17 78:9	26 4:2 89:3,10,16,22	148:20,23 150:7,17
171 4:25	2015 1:14 65:8	102:12 103:1,8	151:22 152:3,17,21
172 5:2	66:14 140:23	113:21 114:8 124:8	177:12,16,21 179:9
174 5:4	164:23 181:12,21	128:20,22 129:2	34-35 147:19
177 2:23	205 102:22	27 4:4 90:2,8,13,20	346 4:5 91:1
179 2:24	208 4:13 95:8	113:21 114:8 129:4	35 3:8 4:20 84:19
18 80:16,23 103:5	21 3:17 9:24 83:23	129:6	101:15 111:18
181 102:19	84:6,14 101:7 111:5	270,000 74:10	148:6,20 149:8,11
18th 168:24	111:14 122:1,2	28 4:6 90:25 91:7,13	149:22 150:7 151:8
19 3:13 67:8 78:16	135:7 145:24	91:19 124:20,21	151:22 152:9
78:21 80:1,2,6,12	215 156:6,8	129:13	177:12,16,22 179:9
81:3,7 96:8,12,22	218 160:22 163:25	282,071 5:5 174:15	36 4:22 165:10,13
128:8,10	164:4	29 4:8 91:24 92:6,12	165:18 166:2
19-32 78:18	21st 65:8 66:14	92:18 103:16	37 4:24 168:3,4,7
1900 1:13 181:11	67:19 140:23	113:21 114:8 125:4	169:7,15
190f 4:9 92:24	173:14	125:7,17,20 129:21	38 5:1 171:4,6
	22 3:19 84:18 85:1,7	129:23	389 155:4 156:5,8
	85:14,24 86:21	2:40 1:15 180:14	159:11,16
		181:13	

39 5:3 172:23 173:1	162:24 163:13	49:6 50:15 56:18,19	advantage 117:22
4	165:3,21 166:2,6	62:3 107:25 118:1	advice 15:18
40 5:5 174:11	176:11	131:10 179:24	advise 14:13
176:18 177:1	60 2:12	absolute 100:18	advising 10:8
415 2:4	608 2:8	absorb 156:21	affect 31:19 47:9
432 12:24 13:7,8,13	617 2:13	academia 72:7	affixed 181:20
13:24 14:9,13	63 2:22	academic 71:3	afternoon 115:8
4th 171:22	7	accelerated 37:16	ago 21:7
5	7 4:21 79:1 109:24	acceleration 100:12	agree 81:22 82:7,17
50 18:6,7	165:14	acceptable 47:23	82:20 94:2 96:11,21
526-6208 2:13	7086389 33:16	access 41:4,17,18,20	97:25 98:10,16
53701-1379 2:8	7415 6:9	accessories 42:19,20	99:13,24 100:8
543-8700 2:4	750 4:4 90:3	accessory 27:21	101:10,17,23 102:4
555 1:13 181:10	78 3:12	accidentally 49:10	102:13,21 103:17
6	78924545 1:8	accommodate	103:20 106:2,5
6 2:21 3:12 6:17	79 3:14,16,18,20,22	120:16	107:3 108:23 109:6
26:3 27:7 29:15	3:24 4:1,3,5,7,9,11	accomplish 46:14	109:14 110:2,12,22
30:19 31:19 32:17	4:13	55:23	111:2,8,18 112:23
33:22 35:6 36:5	7th 26:19 171:25	accomplished 21:11	113:2,24 114:21
37:6 38:11,21 39:20	175:5	account 74:18 76:5	115:20 116:6 119:9
49:22 51:22 52:23	8	accounts 74:12	120:6,12 121:6,16
53:3 54:14,23 55:5	80 22:15	accumulate 51:16	122:1,13,22 123:10
55:10 58:3 62:13	8th 173:17	achieve 19:17 30:7,8	123:23 124:8,20
76:25 80:12 81:24	9	action 181:18	125:7,16 126:8,17
99:12 100:7 101:12	9 3:22 87:2 105:25	activities 9:25 10:12	126:21 127:2 128:8
101:19,25 102:6,15	90 28:25 100:1,2	76:1	128:15,20 129:4,13
103:9,18,22 108:14	133:24 134:4,6	actual 179:16	129:21 130:15,22
109:17 110:4,14,23	143:9,13,19	added 16:3 37:23	131:2,18 132:5,13
111:10,20 112:17	900 3:17 83:25	addition 10:15 13:3	132:22 134:4 135:2
112:25 113:11	101:7 111:6	14:12 21:3 27:20	135:7,16,20,24
114:1 115:10,18	91200146 1:6	32:1,9 35:15 42:18	138:11 139:3 144:7
116:17 119:21,25	91200832 1:5	43:2,5 47:21 52:15	145:24 146:9,12,16
120:4,7 121:7,19	94105 2:3	additional 50:19,19	146:20 147:2,9
122:4,15,24 123:13	97 4:15	50:20 60:2 65:2	148:16,19,23
123:25 124:11,23	9:00 1:15 181:12	75:15 176:18	149:11,21 150:8,18
125:9,14,18 126:1	a	177:24 178:2,12,18	151:8,12,22 152:13
126:10 128:2,11,18	a.m. 1:15 181:12	179:13 180:2,6	152:23 153:4,6,8,13
128:23 129:6,15,24	aaron 2:15	additions 11:3	153:21 154:5,12,19
130:8,17 132:22	ability 27:1 31:12	address 6:8 20:13	157:19 159:14
133:10,14,20	52:17 60:19 65:14	68:6	162:3,14,22 163:11
134:17 135:3,9,13	able 24:21 25:14	adequate 51:3	163:24 164:8 165:1
135:17 141:12	30:5,24 31:9,24	120:16	165:18 169:6,14
154:8,22 159:5	32:3,25 40:17 45:8	adequately 13:2	175:23 179:7,11,21
		admitted 148:11	ahead 41:22 159:8

<p>aid 133:4</p> <p>air 26:15,19 27:22 33:1 37:13,13,15 38:5,5,15,23,25 39:3,10,14,24 42:21 42:25 43:18 44:2,5 44:16,22,22,23,25 45:1,2,5,11,15,16,16 45:20,24 46:7,9,12 46:14,15,15,21,23 46:25 47:4,7,11,16 47:16,18,22 48:3,5 48:8,10,15,18,23 49:6,8,12,15 50:8 50:12,14,16 51:12 51:14,14,15 57:23 58:2,5,11,12,16,18 58:18,23,23 59:1,4 59:5,5,7,8,9,12,14 59:16,16,23 60:5,7 60:7,8,19,19,22,23 60:25 61:2,13,19,19 62:1,6 82:18,19 85:19,20,24 96:17 100:13,19 102:8 104:9 115:24 116:1 116:5,8,10,13,13,16 116:23,23 117:2,4,5 117:8,11,12,14,15 117:23,24 118:1,9 118:11,12,15,16,19 118:20,22,23 119:6 119:6,10,11,14,14 119:20,24 120:3,7 120:14,17,19 121:4 121:7,13,17,18,22 121:22 122:2,3,7,8 122:13,15,18,22,24 123:11,12,17,24,25 124:3,9,10,21,22 125:7,8,14,16,20,24 125:25 126:5,9,10 126:19,22 127:4 132:14,15,18 136:1 136:7 137:12,22</p>	<p>138:5,11,18,20 139:5,13,19 140:11 146:4,6,10,13,20 147:3 149:1,5,13,21 150:3 151:24 152:9 152:14,24 153:4,9 176:22 177:18 178:20,23 180:4,11</p> <p>allow 106:21 107:11 152:18</p> <p>allows 41:3 54:2 107:18</p> <p>alternative 16:7,9 16:14,17,20 17:1,4 17:11,18,21 18:24 19:12,20 20:8,18,24 41:15 70:2,19,24 71:7 72:16 73:17 127:23</p> <p>alternatives 16:12</p> <p>amount 32:10 44:13 44:14,22 47:2 50:15 56:3 59:4 75:25 117:25 153:1</p> <p>analyses 64:22,25</p> <p>analysis 8:17,21 15:7,22,25 22:23 66:4 136:22</p> <p>analyzed 71:23 97:18 105:7 116:9 127:22</p> <p>angle 39:9 54:4 97:25 98:3,6,9,11 98:14,15,17,19,24 100:1,2 102:16 111:23 112:8,9 115:17,20 120:3 133:24 134:4,6,8 142:4,12,20,22,24</p> <p>angled 101:20 104:8 129:1 139:13</p> <p>angles 28:25 137:6 137:23 139:11 141:17 142:1 143:9</p>	<p>answer 15:19 64:4 66:9,13 67:14,19 72:3 103:3 106:10 140:13,25 141:1,2 158:21 163:2 164:7 164:23 165:7 170:18</p> <p>answered 65:13 114:25 127:6 140:22 144:25 161:11 164:16</p> <p>answers 65:20,23</p> <p>anybody 49:9</p> <p>appeal 1:2</p> <p>appear 61:8 62:2 81:18 96:10 102:7 102:10 104:5 106:12 114:4 129:8 130:10,19 149:16 153:1,17,18 161:24 169:9 176:21</p> <p>appearance 27:16 27:17 36:12 61:14 61:25 68:7,12,13,15 68:19,21,24 69:2,6 70:20,22 71:19,24 73:7 79:20 81:22,23 82:7,9 94:2,3 101:11,18,24 102:5 102:14,22 103:9,14 103:18,21 104:12 105:1,3,6 109:16 110:3,13,18,22 111:3,9,19 112:2,24 113:10,25 114:5 121:6,18 122:3,8,14 122:18,24 123:5,6 123:12,18,25 124:4 124:10,22 125:8,17 125:21,25 126:10 128:10,17,22 129:11,23 130:8 159:17 162:4,15 165:20 166:5</p>	<p>appeared 2:5,9,14</p> <p>appearing 36:16</p> <p>appears 23:9 82:17 112:9,13 114:15 147:15 176:2</p> <p>applicability 64:13</p> <p>applicable 20:19</p> <p>applicant 1:8 2:14 6:17 27:7 29:15 30:19 31:18 32:16 33:22 35:6 36:4 37:5 38:11,21 39:20 49:22 52:22 53:3 54:23 55:10 58:3 177:12</p> <p>applicant's 3:11,12 3:14,16,18,20,22,24 4:1,3,5,7,9,11,13,15 4:17,19,21,23,25 55:4 62:13 76:24 78:15,16,18,21,24 81:14,24 82:8 83:23 84:18 85:14 86:7 88:1 96:12,25 97:1 97:22 99:12 100:7 101:6,12,19,22,24 102:3,5,12,14 103:8 103:16 108:14 109:16,23 110:4,9 110:14,23 111:5,10 111:20 112:17,24 113:9,11,21 114:1 115:10,18 116:17 119:20,24 120:4 121:3,7,16,19 128:2 128:4 132:3,21 133:9,13,20 134:17 135:1,3,7,9,11,13,15 135:17 141:12 147:18,19,21 154:8 154:22 159:5 162:24 163:13 165:3,10,15,18,20 166:6 168:3,4,6 169:7,15 171:4,6</p>
---	--	--	--

<p>172:23,25 174:11 176:11 177:1</p> <p>applicants 5:2,4</p> <p>application 1:7 11:13 22:8 25:9 32:16,22 34:4,4,11 36:4 40:3 43:14,15 48:16,17 53:18 55:16 58:14 60:25 61:9 62:15,16 77:1 81:25 82:3,4,10,16 94:4,10 97:4 98:8 98:15,17 101:3 104:16 107:23 148:24 149:7,11 150:2 151:20 152:14,16,17 156:13</p> <p>applications 25:3 30:25 31:14 41:16 41:19 58:9 73:10 96:19 108:4 117:6,7 119:9,13 145:22 151:17,24</p> <p>applied 6:16 20:11 20:11 137:5 177:2</p> <p>apply 8:21 9:5 20:16</p> <p>applying 25:12</p> <p>approaching 144:14</p> <p>appropriate 52:10 119:15</p> <p>approved 161:6</p> <p>approximately 36:8 76:9,10 100:1 143:13,18 145:18 145:25</p> <p>april 168:24 171:22</p> <p>area 10:14 26:16 32:4,5 49:19,25 51:2 53:2,4 55:4,7 57:21 58:15 59:2 120:6 128:8,16,21 129:5,14,21 130:1,6 130:16 131:8,14,15 131:23,24,25 132:5</p>	<p>132:9 165:17,19 166:4,5</p> <p>areas 8:25 131:3</p> <p>arose 71:6</p> <p>asked 6:15 28:20 66:1,13 67:9,18 102:19 114:24 127:5 135:25 140:8 140:22 163:22 164:22 177:16</p> <p>asking 147:17</p> <p>aspect 38:22 39:18 40:1 43:20,25 47:21 49:11,18 100:15 133:7 137:4</p> <p>aspects 14:25 18:1,3 19:9 22:24 36:19,22 40:12 44:1 48:14 104:12</p> <p>assemble 32:7</p> <p>assessing 44:19,20</p> <p>assigned 12:23</p> <p>assignee 168:17 171:19 173:8 174:23</p> <p>assist 15:6 37:12</p> <p>assistance 73:1</p> <p>assistant 9:20</p> <p>associate 9:22 10:2 16:7 17:3,17 19:19 20:7,17 41:14 70:2</p> <p>associated 16:24 75:6 163:5</p> <p>assume 150:22</p> <p>assuming 127:13</p> <p>asterisk 75:23,24</p> <p>atmosphere 44:25 45:2,13,19</p> <p>atmospheric 45:18 46:6,9</p> <p>attached 5:9 34:7 149:16</p> <p>attachment 125:12</p> <p>attempting 19:16</p>	<p>attention 70:21 77:14</p> <p>attorney 2:15 5:11 181:15,16</p> <p>attorneys 167:22 170:22</p> <p>august 9:18,21</p> <p>automatically 45:12</p> <p>automobile 16:16</p> <p>automotive 16:15</p> <p>available 13:10 22:22 35:19,20 56:2 114:12,22 126:18 127:3 130:23 135:21 153:24</p> <p>awarded 166:17</p> <p>aware 41:15 79:9 80:5,14,19,22 81:6 82:24 83:3,6,10,12 83:14 84:5,12,25 85:6 86:14,20 87:7 88:9,15,22 89:9,15 89:21 90:7,19 91:6 91:12,18 92:5,11,17 93:3,9,15 94:14,20 95:1,14,20 96:1 99:20 116:22 132:25 133:2 134:20 136:17,21 140:9 150:2 151:17 152:13 166:13,25 168:13</p> <p>awhile 18:16</p>	<p>background 6:24 156:17</p> <p>backwards 107:15 107:16</p> <p>balances 100:17</p> <p>barely 63:17</p> <p>barrier 49:8</p> <p>base 120:19</p> <p>based 12:16 25:25 29:11 41:12 50:11 62:19 132:5 143:21 144:7 161:10</p> <p>basically 27:17 45:19 59:14 61:10 114:17</p> <p>basis 18:25 40:11 137:19 166:22</p> <p>beginning 8:5</p> <p>behalf 2:5,9,14</p> <p>believe 14:11 18:21 24:15 36:25 43:25 49:18 55:7 57:21 62:14 64:18 74:22 79:17 81:2 85:25 116:12,15 117:22 118:9 136:13,13 138:8 143:17 147:10 153:3 155:5 156:6 162:2</p> <p>believed 103:7</p> <p>belt 120:6 176:22</p> <p>beneath 170:1</p> <p>benefit 107:20 108:2 108:6 109:4</p> <p>benefits 33:15</p> <p>best 29:8 30:7 58:17 65:13 101:20 111:22 138:25 167:23</p> <p>better 24:22 165:13</p> <p>bevelling 57:13 115:13,17,21 120:3 125:13,16,18 137:6 137:13 138:11</p>
			<p>b</p> <p>b 3:1 6:10 97:5 104:18</p> <p>bachelor 7:4</p> <p>back 22:10 49:13 50:4 53:20 65:4 66:14 67:19 72:18 78:9 106:10,16 127:9 128:7 136:12 163:4</p>

<p>beyond 151:25 152:25 153:10,14</p> <p>bigger 118:11 179:24</p> <p>bimonthly 19:3 21:3</p> <p>bit 9:10,11 22:10 57:14,15 73:13 99:1 102:9 113:20 123:16 124:17 125:12,13 128:25 129:18 149:20 151:15 165:25 166:9 178:23 179:14 180:10</p> <p>blob 46:8</p> <p>block 100:24 150:10 150:20 151:19,25 153:15</p> <p>blocked 48:19</p> <p>blurry 93:24</p> <p>board 1:2</p> <p>body 156:24</p> <p>bolt 127:14</p> <p>boston 2:12</p> <p>bottom 28:24 39:3,5 39:6,11,14 56:13 74:24 100:6,10,23 101:1,4,4 111:25 112:12 113:4 129:19 131:24 132:10 133:19 144:2,4,23 153:7</p> <p>bottoms 28:24</p> <p>bought 18:17</p> <p>box 27:20,24 29:7 32:7 36:11 55:25 57:19 60:15,15,17 61:6,14,23 120:24 120:25</p> <p>boxy 125:21</p> <p>break 49:25 50:7 52:17 115:5,9 177:5</p> <p>breakage 137:2</p> <p>breaking 53:14 136:15,19</p>	<p>brief 34:5</p> <p>briggs 1:3 2:5 3:16 4:3 6:12 18:11 22:22 23:24 24:7,16 25:18 29:23 76:12 78:5 83:25 90:3 101:7 111:6 118:24 167:22 168:17 169:12 170:9 171:19</p> <p>bring 45:5 59:3</p> <p>bringing 10:7</p> <p>broad 7:11 8:25 69:9</p> <p>brought 37:16 38:6 39:4 44:16 75:3</p> <p>brushing 49:10 53:13</p> <p>build 52:13 58:22</p> <p>built 71:1</p> <p>burn 49:11</p> <p>businesses 18:18</p> <hr/> <p style="text-align: center;">c</p> <hr/> <p>c 2:1 6:1 97:5 127:10 181:1,1</p> <p>california 2:3</p> <p>call 13:8 44:20</p> <p>called 6:2 17:15 117:2</p> <p>calls 157:5 158:20 159:18 163:1 165:5 166:21 170:14 176:1</p> <p>cannister 156:21,23</p> <p>cantilever 177:24</p> <p>cantilevered 178:9 178:17</p> <p>capacity 70:15</p> <p>carburetor 26:16 33:3 39:11,15 40:15 40:17,19,20,21,25 41:24 43:18 46:16 49:19 50:6,23 51:1 51:6,8,10,13,19</p>	<p>52:3,5,8,11,21,25 54:16,18,22 55:3 127:12,17,20,23 128:1,9,16,21 129:5 129:15,22 130:24 131:16 132:11,16 132:19,20,22 133:5 133:13,19,23 134:5 136:3 142:6,14,18 142:20,24 152:25 153:2,5,10 165:19</p> <p>career 12:23</p> <p>carrie 2:11</p> <p>carrie.seares 2:14</p> <p>carry 9:16 50:20</p> <p>case 44:10 46:2 65:6 71:23 77:2,11,16,18 78:6 79:7 81:20 84:3,23 86:12 87:5 88:7 89:7 90:5 91:4 92:3 93:1,25 95:11 118:25 127:16 133:8 143:11,22 144:8,21 145:4,12 155:10,17,24 157:10,13,17 160:4 167:5,13,25 168:21 170:22 172:21 173:11 174:9</p> <p>cases 32:23 118:22 132:12,13,18</p> <p>catalytic 18:15</p> <p>category 75:21 76:2 76:8</p> <p>cause 60:3 152:15 178:11,14</p> <p>cc 4:5,7,13 91:1,25 95:8</p> <p>center 16:7,9 17:4 17:12,17,21 18:5,23 19:11,20 20:7,18 70:2,18,23 71:7 72:15 73:17 106:14 108:15 178:5</p>	<p>certain 20:13 32:20 59:19 108:4 131:12 137:6</p> <p>certainly 69:3,9 101:21 149:19</p> <p>certification 8:3,10</p> <p>certifications 7:23</p> <p>certify 181:6,9,14</p> <p>champion 4:7 91:24 125:5</p> <p>chance 65:16</p> <p>change 52:9 129:18 140:5</p> <p>changed 171:12</p> <p>changes 11:3 65:19 65:22 176:20</p> <p>changing 33:1,2 53:14</p> <p>check 75:20,21</p> <p>choice 106:23</p> <p>choices 24:12,25</p> <p>chosen 16:19</p> <p>circle 58:20,21</p> <p>circular 58:17</p> <p>claim 34:16 169:19 172:5,6 173:22 175:14</p> <p>claimed 26:7 35:1 143:4 157:3 159:13</p> <p>claiming 170:10</p> <p>claims 155:18 159:16 162:10</p> <p>clarification 62:24</p> <p>class 13:13,24 14:10 15:11 17:3 64:12 68:22,23 105:5</p> <p>classes 13:14</p> <p>clean 59:14</p> <p>cleaner 26:15,20 27:22 39:10 42:21 42:25 43:18 44:2,6 46:15,21,23 47:7,17 48:5,8,11,15,18,24 49:6,8,12,15 50:9 50:12,14 57:23 58:2</p>
---	---	--	---

58:5,11,12,16,18,24 59:1,5,6,8,9,12,14 60:7,8,8,12,19,22 61:1,3,11,13,19,19 62:1,6 85:25 96:18 102:8 115:24 116:1 116:5,8,10,13,13,16 116:23,24 117:8,11 117:15,15,23,24 118:1,9,23,23 119:10,11,14,14,20 119:24 120:3,7,14 120:19 121:4,7,13 121:17,18,22,22 122:2,3,7,14,15,18 122:23,24 123:11 123:12,17,24,25 124:3,9,10,21,22 125:7,8,14,16,20,24 125:25 126:5,9,10 126:19 127:4 132:14,15,18 136:1 136:7 137:12,22 138:5,12,18,20 139:5,13,19 140:11 146:6,10,13,21 147:3 149:1,5,13,21 150:3 151:24 152:9 152:14,24 153:4,9 176:23 177:18 178:20,24 180:4,11 cleaners 117:2,4,5 117:12 118:11,12 118:15,16,19,20 119:6,6 126:22 clear 81:6 83:14 96:15 111:24 120:21 130:2,12 clearly 48:19 128:6 139:13 clog 48:3 close 46:16,22 51:19 52:3,5,21 54:15 98:14,20 138:25 140:1 145:15 151:1	152:6 closely 25:16 28:20 143:15 176:3 closer 139:14 closest 138:6 column 156:15 158:7 159:3 169:18 172:5 combustion 9:5 12:25 13:19 14:5,10 37:20 38:1 63:23 64:3 66:21,23 67:1 67:6 68:9,23 168:15 169:22 174:20 175:15 come 22:10 28:4 33:9 56:15 128:7 136:22 comes 55:17 comfortable 102:17 103:12 179:15 coming 60:5 152:6 command 3:12 4:21 78:25 80:12 109:24 165:14 commencing 181:12 commission 181:25 common 53:19 communication 156:24 compact 29:25 30:17 31:8 32:1,23 33:15,17 34:6,24 35:3 42:19 96:22 158:10,24,25 companies 18:10,10 19:1,4,7,16 24:1,3 72:13 83:20 166:25 168:20 company 1:4 2:9,16 16:18 18:12,15,22 72:9 166:14,17 173:8 175:1 comparable 79:14 80:6,16,24 81:8	83:1,8,16 84:6,14 85:2,8,15 86:2,15 86:22 87:9,15,22 88:11,17,24 89:11 89:17,23 90:9,15,21 91:7,14,20 92:6,13 92:19 93:4,11,17 94:15,22 95:3,15,22 96:3 compare 44:21 160:18 comparing 98:22 99:7 118:14 136:25 comparison 44:23 competing 26:9,10 85:19 competitive 17:25 27:3,5 29:17 32:17 41:9 55:20 58:7 79:18 80:23 81:7 85:14,17 86:1,5 88:23 89:22 90:20 91:19 92:18 93:16 95:2 96:2 98:21 competitively 55:17 99:16 competitiveness 26:9 40:10 62:17 competitors 35:7 complete 21:15 completed 65:17 completely 153:6 completing 66:16 68:2 complex 52:9 complimentary 137:6 component 10:10 19:24 29:14 72:22 72:24 73:3 75:6 97:6,25 104:18 115:23 127:10 140:4 178:3 components 15:6,24 27:21 29:6 30:13	36:9 59:25 68:10,18 68:18 71:1 75:5 82:14 94:9 136:10 137:7 140:3 143:18 154:14,15,21,21,22 157:21,25 158:2 162:13,21 163:10 163:24 164:9 165:2 concerned 107:25 179:14 180:10 concerns 62:14 concluded 36:7 180:14 concluding 181:12 conclusion 136:23 157:6 158:20 159:19 163:2,6 165:6 166:21 170:15 176:1 conduct 65:1 70:6 conducted 13:4,4 14:16 22:23 26:2 62:21 71:7 conducting 10:15 15:17 conference 21:4,5 21:14 confident 112:10 configuration 36:9 53:19 57:2 94:8 99:2 configurations 106:21 confused 139:9,15 confusion 43:10 conjunction 73:20 connection 20:24 23:13,22,25 24:17 25:10 33:20 35:4 61:16 63:1,8 71:24 connor 29:21 33:12 consequence 55:18 consider 111:14 112:19 113:6,10,15 113:17 121:11,24
--	---	--	---

122:11 123:7,9,20 124:6,15 125:2,20 125:23 126:5,14 167:24 172:20 174:8 considered 40:13 75:17 169:11 177:1 178:16 179:18 considering 14:3 27:1 29:1 100:16 169:12 consistent 28:13 36:13 consists 10:4 146:2 consortium 17:16 17:19,22 18:5,17,21 18:25 19:13,21 20:9 21:2,10 73:14,15,16 73:20,22 74:1,5,18 76:5,14,17,21 constant 49:1 constantly 37:23 construction 31:25 34:16 59:18 consulting 72:12,16 consumers 38:19 134:20 contain 75:25 107:17 contained 36:8 containing 43:18 context 20:17 63:20 64:21 66:3 68:22 71:23 110:21 127:16 143:11 145:4 continue 41:22 52:2 60:10 142:5 continuing 8:1,4,9 74:23 contributions 18:8 control 26:17 49:19 51:2 52:4,7,10,11 52:12,15,21 53:4,21 53:23 54:18,19,21	55:3 130:1 136:3 controls 33:2 50:6 50:23 51:6 54:12,15 128:5,9,16,21 129:5 129:14,22 130:7,16 130:25 131:15 132:6 134:10,23 135:2,8,12,16,18,22 136:13,18 137:1 149:16 165:17 166:4 convenience 78:13 convenient 54:1,4,6 conversations 118:24 convert 16:19 converter 18:15 cooler 42:6 cooling 37:13,18 38:3,5,6,16,17 39:14,24 133:4 corner 99:25,25 100:3,4 112:6,14 127:14 133:23 134:5 corners 99:15,24 corporation 1:3 168:18 171:19 correct 8:12 23:18 34:16 52:24 55:10 63:2,19,21 64:1,10 64:16 65:11,14,23 65:24 66:20,25 67:16,22,23 68:1,7 68:25 69:16,22 70:13,17,20 71:20 71:21 72:1,4,13,18 72:20,21,23 73:5,8 73:9,11,12,16 74:6 74:14,19 76:6,20 77:25 78:3,7,8 79:3 79:5,8,20 80:3,4,9 80:21,25 81:3,9,11 81:20,21 83:17 84:3 84:4,16,24 85:4,11	86:2,13,18,24 87:6 87:9,11,17,24 88:8 88:13,19 89:1,7,8 89:13,19,25 90:6,9 90:11,17,23 91:4,5 91:10,14,16,22 92:3 92:4,9,15,21 93:2,7 93:13,19,22 94:1,18 94:24 95:5,12,13,18 95:24 96:5,9 97:13 97:20,23,24 98:10 98:12,18,25 99:1,5 99:6,11,18,22,23,23 100:1,4,5,11,12,20 100:21,24,25 101:2 103:14 104:13,14 104:20 105:2,9,22 105:23 106:7 107:20 108:6,21,22 108:25 109:7,8,10 109:12,13 110:7,23 111:3 112:14,20 113:7 114:9,13,23 115:1,14,18,19,22 116:2,3,6,10,11,17 116:18,20,21 117:1 117:3,6,12,13,17,20 118:9,13,17 119:1,3 119:4,7,8,12,15,18 119:21,22,25 120:1 120:5,10,11,13,17 120:22 121:2,12,24 122:11,20 123:8,21 124:16 125:5,21 126:6,15 127:4,12 127:17,21,24,25 131:16 132:3,4,17 132:19 133:1,11,14 133:16,21,24,25 134:8,9,14,24,25 135:13,22 136:7,8 136:11,15,16 137:3 137:9,14,20 138:1 138:15,21 139:6,20 140:12,23,24 141:7	141:13,17,23 142:1 142:2,7,8 143:1,7 143:10,14,20,23 144:11,13,23 145:1 145:7,14,19 146:8 147:15 148:16,21 150:5,6,25 151:7,20 151:21 152:21,22 153:24 155:4,12,15 155:19,20,22,23 156:2,3,4,13 157:4 157:11,13,14,18 158:4,5,15,18 159:6 159:9,13,15,17,21 160:2,3,6,9,11,14,17 160:19,20,25 161:1 161:5,8,22 162:15 162:19 163:14,19 164:5,25 165:4 166:15,19 167:7,14 167:15,17,18 168:1 169:4 170:7,24 172:3 173:8,11,20 173:21 174:5 176:6 176:11 177:3,4 179:9,13,22,23,25 180:6,7,9 corresponds 102:25 cost 15:23,25 16:4,4 16:23 26:8 27:4 29:17 31:2,19,24 32:14 40:23 50:11 50:20 52:7 54:10,13 54:20 56:25 60:13 61:12 62:17 64:22 64:25 66:4 69:24 80:15 83:11,15,20 85:8 86:20 88:20 94:20 95:20 97:19 105:8 116:9 127:22 178:18 costs 31:15 52:19 69:22,25 80:17,20 83:7,21 84:13 87:14 87:18,21 88:16
---	--	--	---

89:15 91:13 92:12 93:10 counsel 63:13 76:25 177:15 181:15,16 counterbalanced 178:9 counterparts 96:13 county 181:3 couple 24:8 177:11 179:6 coupled 120:18 course 12:25 13:3,6 13:7,9 14:12 15:13 15:14,22 18:23 20:4 20:6 23:16 63:22 64:11,18,21 65:1,2 66:3 68:9 69:4,7 courses 10:6 64:15 67:24 68:6,14,17 cover 26:12,14,17 26:20 37:3,4,7,12 37:15 38:4,9,10,13 38:22 39:2,10,19,22 40:1,4,8,16 41:2,25 42:5,22,25 43:17,19 43:22 46:21 49:9,12 49:15,19 50:6,23 51:1 54:22 57:23 58:2,5 60:7,8 61:3 61:11,19,20,24 62:1 62:6 85:25 97:7,9 97:13,22 98:12,24 99:4,8,14,17,21 100:6,11 101:1,10 101:11,17,18,23,24 102:4,5,13,14,21,22 103:8,9,17,18,21,22 104:1,4,11,12 105:12 115:24 116:5,8,13,16,24,25 117:15,23 119:10 119:20,24 120:3,7 120:15,19 121:4,7 121:13,17,18,22 122:2,3,7,14,15,23	122:24 123:11,12 123:17,24,25 124:9 124:10,21,22 125:7 125:8,14,17,20,24 125:25 126:5,9,10 126:19,22 127:4,12 127:17,20 128:1,9 128:16,21 129:6,15 129:22 130:24 131:16 132:11,14 132:15,16,18,19,22 133:5,13,19,23 134:5,16 136:7 137:13,22 138:5,12 138:19 139:5,13,19 140:11 141:17,22 141:23 142:1,5,7,13 142:14,16,18,20,21 142:21,23,24 146:6 146:11,13,21 147:4 148:3 149:1,5,13,21 150:3 151:25 152:9 152:14,24,25 153:2 153:4,5,9,10 165:19 166:1 170:7 175:22 176:20,23 177:18 178:21,23 180:5,11 covered 36:24,25 49:14 59:6 60:6,13 62:10,14 64:12,25 65:3 covering 59:9 102:8 covers 43:24 97:19 99:9 100:18 104:5 116:1,10 117:11 127:23 crank 12:4,8 created 46:4 credit 13:10 cross 2:22 63:14 cube 28:17,19,21 143:8 cubic 26:12,19 27:8 27:10,12 28:3,13,14 29:1,10,14,16 30:8	30:9,11,15,18,23 31:9,17,21 32:15,19 32:20 33:4,10,13,15 33:21 35:5 36:3,11 36:23 57:18,23 58:1 58:4 61:19,23 62:6 82:5 119:20 120:14 120:21,23 143:4,12 143:21 144:8,21 145:3,11 153:23 154:6 156:12 159:1 159:12 161:15,18 161:24 current 8:8 10:24 11:1 16:10 currently 75:13,14 curriculum 3:4 10:23,24 16:6 curves 57:12 customer 53:8 cut 31:14,24 32:9 52:18 106:12 131:16,19,22,25 132:6,7 cutler 2:10 cv 74:21,22 75:18,20 76:4 cycle 8:6 cylinder 11:22 12:10,12,13,14 38:8 38:23 39:1,8,8 40:16 42:9 44:23,24 45:1 46:5,7,18 49:1 51:18,25 58:13 60:1 60:2,5,18 61:6 100:24 150:10,20 151:19,25 153:15 cylindrical 58:19 59:5 60:12,16,22 61:5,18,23 62:1	d595,737s 5:1 171:8 d605,611s 5:3 173:4 damage 59:25 data 87:13,18 88:20 98:22,23 99:3,7 117:10 118:10,14 136:25 date 10:24 169:1 173:13 davidson 18:11 day 181:21 dealt 167:19 170:19 debris 39:23 48:1 59:8 60:6 117:24 118:10 december 173:17 decrease 48:12 52:6 define 11:18,20,20 definition 8:16 26:23 143:8 145:3 145:11 definitively 133:2 degree 7:5 28:25 100:1,2 133:24 134:4,6 143:9 degrees 143:14,19 deliver 50:16 delivered 5:11 demand 58:10 106:22 demands 29:25 36:18 department 12:24 depend 107:22 179:16 depending 19:2 32:21 37:22 58:10 60:17 101:3 depends 100:15 depicted 77:8 79:10 80:15 85:7 169:14 170:6 depicts 169:7 deposition 1:11 10:25 28:8 29:21
		d	
		d 2:18 6:1,10 97:5,6 97:25 171:13	

<p>33:12,14 63:4,7 65:5,5,11,16,25 67:7 74:15 102:18 102:25 103:3,7 133:4 137:17 140:7 156:6,8 160:22 163:21 164:23 180:14 181:6,9</p> <p>deposits 60:2</p> <p>depth 62:3 69:13</p> <p>des 4:23 5:4 168:8 168:10 171:13 174:14</p> <p>describe 8:14,24 9:12,25 11:10 21:6 21:7 22:18 162:4,14</p> <p>described 10:12 52:1 157:16,19 158:2 172:7 173:24</p> <p>describing 35:2 157:2 162:10</p> <p>description 3:2 26:7 34:22 170:2 172:10 174:1 175:18</p> <p>design 4:25 5:2 8:17 8:21 9:2 12:18,22 15:14,15,16,21,23 16:1 19:9,24 24:12 26:12 27:8,10,12,20 27:25 28:3,11,13,14 28:17 29:2,7,10,14 29:16 30:1,9,11 30:16,18,23 31:9,12 31:18,21 32:1,15,19 32:20 33:4,10,13,15 33:21 34:6 35:3,5 36:3,23 37:9 38:14 46:11 54:8 57:17,19 64:8,11,12,14 65:1 67:21,24 82:5 97:12 106:23 116:4 127:19 142:19 143:4,12,21 144:8 144:16,21 145:11 153:23 154:7</p>	<p>156:12 159:1,12 161:15,18 166:12 166:14,15,18,19 167:1,5,8,10,16,19 167:24 168:11 169:21 170:11,20 170:23 171:7,10,14 172:6 173:3,23 174:18 175:15</p> <p>designated 75:24</p> <p>designation 168:10</p> <p>designed 11:22 16:11 19:1 36:17 38:4,14 70:24,25 71:1 72:9,20,22,24 73:3,10 75:9 97:9 104:22 116:1 127:17 137:12 149:15 175:9,9</p> <p>designer 119:3</p> <p>designers 13:25 118:18 137:12,22 138:4 141:15 142:4</p> <p>designing 68:15,17 105:5</p> <p>designs 15:19 25:1 30:17</p> <p>desirable 47:22 53:8 56:8 117:5,9 118:19</p> <p>desire 13:18 118:22</p> <p>desired 47:2,23 51:18 56:16</p> <p>desorbs 156:22</p> <p>destroying 59:9</p> <p>detail 26:21 164:18</p> <p>details 20:13 69:23 126:23</p> <p>determined 44:16</p> <p>develop 10:9 15:20 22:25 44:12 64:22 75:9</p> <p>developing 16:17 31:8</p> <p>development 29:22 31:15</p>	<p>develops 44:12</p> <p>device 30:3,11 45:22 151:14</p> <p>devices 8:18,22 45:21</p> <p>diagram 38:20</p> <p>dictating 126:24</p> <p>die 56:15,20 57:10 57:15</p> <p>differ 113:25 125:25 129:10</p> <p>differed 103:8,11,13</p> <p>difference 80:5 84:5 87:20 91:6 118:5 166:9</p> <p>differences 79:9,14 80:14,19 82:3,24 83:4,6,12,14 84:10 84:12 86:14,20 87:7 87:13 88:9,15 89:9 89:15 90:7 91:12 92:5,11 93:3,9 94:14,21 95:14,21 101:21 104:3,11 110:18 118:4 127:23 129:10,18 130:11,20 131:5,7 165:24 176:24</p> <p>different 18:9 22:24 25:3 30:25 45:21 66:5 78:11 81:23 82:8 97:19 101:11 102:7,11 105:8 109:7 110:22 112:16 113:10 114:4,16 116:10 122:3,7,7,8 123:18 125:12 135:3,8,12 135:17 136:8 146:6 146:14,17,25 147:4 149:23 150:4 154:7 154:21 165:25</p> <p>differentiated 167:8</p> <p>differs 85:1,7 94:3 101:18,23 102:4,13</p>	<p>102:22 103:17,21 109:15 110:3,13 111:9,19 112:23 121:6,18 122:14,18 122:23 123:5,6,12 123:24 124:3,9,22 125:8,17 126:9 128:10,17,22 129:6 129:15,23 130:7,17 165:19 166:5</p> <p>difficult 32:24 102:10 129:1</p> <p>dimension 109:21</p> <p>dimensional 27:14 28:16 29:3 61:7,15 61:18,22 94:11,11 107:14</p> <p>dimensions 145:15</p> <p>direct 2:21 6:5 38:5 38:14 54:3 59:7 86:4 94:7 108:10 115:12 118:6 120:9 134:22 143:25 145:9 155:1 159:23 160:25 166:11 170:15</p> <p>directed 37:18</p> <p>directing 38:23,25 39:7,13</p> <p>direction 37:13 98:7 104:9 142:17 181:8</p> <p>directions 58:23</p> <p>directly 26:8 41:5 54:25 71:16 181:17</p> <p>director 16:7 17:3 19:19 20:18 41:14 70:2</p> <p>directorship 20:7</p> <p>directs 39:10</p> <p>disadvantage 79:19 80:24 81:8 85:15,18 86:1,5 88:23 89:22 90:20 91:19 92:18 93:16 95:2 96:2</p>
---	--	---	--

<p>disadvantages 85:21</p> <p>disagree 137:19</p> <p>discuss 68:8 69:13</p> <p>discussed 20:16 33:14 68:14 69:6,10 69:15,25 142:15</p> <p>discussing 68:10,12</p> <p>discussion 34:5 68:24 69:2,19 74:15 119:2</p> <p>discussions 19:8,16 29:23</p> <p>dissertation 7:12</p> <p>distance 140:3 151:16</p> <p>doc 9:14 67:10 68:2</p> <p>doctoral 7:10,11 66:17,25 67:5,22</p> <p>document 77:4 157:23 158:6 159:24 160:1 161:11,14,17 162:3 162:14,18,23 163:8 163:12 164:4 165:1 169:4 170:13 172:2 172:20 173:19 174:8 175:12</p> <p>documents 3:6 23:9 25:20 76:25 160:5,8 167:12 176:15</p> <p>doing 17:14 60:14 97:14 116:7 170:21</p> <p>dollars 75:7</p> <p>dorr 2:10</p> <p>doubtful 178:13</p> <p>dramatic 140:5</p> <p>dramatically 149:18</p> <p>draw 36:1 60:19,22</p> <p>drawing 4:15 25:11 25:22 47:24 77:5,9 99:14 104:16 163:3 169:6 176:10,13</p> <p>drawings 176:18</p>	<p>dripping 42:13</p> <p>drop 46:25</p> <p>droplets 51:13,15,16</p> <p>drops 46:1</p> <p>dudek 1:12 2:6 181:10</p> <p>duly 6:3</p> <p>durability 51:3 52:5 52:6,20 53:6,7</p> <p>durable 54:7</p> <p>dust 48:1 59:15,17 59:23,24 60:5 117:25</p> <p>dusty 59:22</p> <p>dynamics 19:23</p> <p style="text-align: center;">e</p> <p>e 2:1,1,18 3:1 6:1,1,9 6:9 181:1,1</p> <p>earlier 63:17 70:1 73:13 76:12 105:17 116:12,15 117:22 118:25 119:19 134:10 143:3 155:9 156:9 158:24 161:13</p> <p>early 78:9 175:11</p> <p>ease 97:5</p> <p>easier 32:2,7 57:14 57:15 115:14</p> <p>easiest 57:10</p> <p>easily 30:2,5,10 32:21 33:1,2,4 56:19 82:23</p> <p>east 1:13 2:7 181:11</p> <p>easy 41:3 52:16</p> <p>economics 9:3 19:25</p> <p>edge 39:11 106:12 112:12 141:11 142:6</p> <p>edges 28:23 55:25 57:13 104:7 137:24 139:19</p> <p>education 8:1,5,9,19 9:10 10:16 12:16,20</p>	<p>25:25 62:19 63:18 63:21 64:1,6,9,17 64:24 66:6 72:1 75:4,5,19,24,25</p> <p>educational 6:24</p> <p>effect 32:17 54:13 54:23</p> <p>effective 31:2 60:14 61:12,12</p> <p>effects 17:1</p> <p>efficiency 44:21 45:7,8,10</p> <p>efficient 48:7,10 57:1 158:25</p> <p>efficiently 29:5 30:12 56:1</p> <p>either 19:3 31:19 56:20 58:20 60:14 61:4 63:20,25 64:5 64:10 80:18 84:3,23 99:12 100:7 119:13 120:10 132:22 148:19,25 151:23 158:6 172:2 173:19 176:23</p> <p>elective 13:9</p> <p>electrical 107:24</p> <p>element 37:8,9 39:25 40:6 43:9 46:23 48:5 58:7 60:8,12,19</p> <p>elements 26:7,11 27:13 30:8 32:24 43:3 45:5 62:12 64:12</p> <p>elevated 149:17</p> <p>eligible 18:19</p> <p>emissions 16:23 71:12,16</p> <p>employee 28:9 181:15,16</p> <p>enable 31:22 32:20</p> <p>enclosure 151:1</p> <p>energy 73:14</p>	<p>engage 10:1</p> <p>engagement 22:13</p> <p>engine 3:13,14,17 3:18,20,22,24 4:1,4 4:5,7,9,11,14,18,22 11:4,7,10,11,14,16 11:19,21,22 12:3,4 12:7,9,18,22 13:19 14:5,6 15:16,24 16:2 17:3,16,19,20 17:22,23 18:9,10,24 19:12,21 20:9 21:2 22:4 25:10 26:9,14 26:16 27:3,15 28:17 29:18,22,25,25 30:21 31:1,2,8,12 31:13,19 32:2,11,18 33:1,3,17,19 34:23 37:14,18,19,22,24 37:24 38:6,7,15,17 38:24 40:4,8,9,16 40:23 41:1,3,5,6,7 41:17 42:2,6,7,8,10 42:12,14,16,17,23 43:1,4,22 44:3,7,8 44:11,12,14,14,15 44:17 45:6,9,13,17 46:2,4,18,20,22,24 47:3,7,8,10,12,13,17 47:20,23,25 48:2,5 48:9,11,13,16,18,21 48:21 49:5,16 50:11 50:13,15 51:4,7,18 51:25 53:8,10 54:14 54:24 55:1,17,21,22 56:2,4,5,9 58:7 59:13,24,25 60:2,4 62:17 64:8,11,14 66:23 67:2,2,3,24 68:10,15,20,24 69:3 69:6 71:1,18,24 72:20,22,25 73:4,6 73:8,11,15,16,19,22 74:1,5,18 76:5,13 76:16 77:8,9,12,16</p>
---	--	---	--

77:19,21 78:2 79:1 79:3,6,10,10,14,18 79:19 80:2,6,7,12 80:15,16,18,22,24 81:6,8,16,19,23,24 82:8,9,14,15,21,22 82:23,25 83:1,7,8 83:11,15,16,25 84:2 84:6,7,13,14,20,22 84:25 85:2,6,9,13 85:15,23,24 86:1,2 86:9,11,15,16,21,22 87:2,4,8,9,14,15,21 87:22 88:3,6,10,11 88:16,17,22,24 89:4 89:6,10,11,16,17,21 89:23 90:3,5,8,9,13 90:15,19,21 91:1,3 91:7,8,13,14,18,20 91:25 92:2,6,7,12 92:13,17,19,24 93:1 93:4,5,10,11,15,17 93:22,25 94:2,4,7 94:15,16,21,22 95:1 95:3,8,11,15,16,21 95:22 96:1,3,13,17 97:9,13 98:2,5,25 99:2,4,5,8 100:22 100:24 101:3,7,10 101:17,23 102:4,9 102:13 103:17,21 104:1,17,22 105:2 105:11,12,18,19,21 105:25 106:2,3,7,11 106:13,13,15,18,19 106:20 107:1,4,7,7 108:5,20 109:24 110:2,10,12,17,21 111:6,8,18 112:23 112:23 116:2,5,20 118:3,18 119:3 121:17 122:2,14,23 123:11 124:21 125:5,24 126:9 128:17 130:16,25	132:2,14,23 133:9 134:11,14,23 135:2 135:8,12,16,22 143:12,15,22 144:9 145:3,18,22,24,25 146:5,10,12,21 147:4,25 148:2,9,12 148:14,16,17 149:17,19,22 150:4 151:20 152:4,6,7,25 153:4,9,14,22 154:6 154:7,13,20 156:12 156:20,24 157:21 158:4,9,11,18,18,23 158:25 159:4,5,17 162:4,9,15,23 163:4 163:12,13,25 164:1 165:2,14 168:15 169:8,11,14,16,22 170:6,10 171:17 172:6,14,17,18,19 173:6,23 174:5,6,21 175:9,15,22,24 176:3,6 177:21 178:8,11,14 179:17 179:19,24 180:9 engine's 37:10 engineer 7:24 8:12 engineering 7:5,7,8 7:21 8:2,10,15,17 8:19,21 9:3,4 10:14 10:15 12:24 13:8,13 13:23,24 14:9,12 19:22,25 20:6,15 22:4 25:2,4,8,12 75:25 136:22 144:16 engineers 14:4 19:6 22:22 24:3,6,8,16 24:21 25:18 29:23 100:16 118:21,25 engines 3:8 9:6 12:6 12:14,25 13:5,25 14:1,7,10,17,18,19 15:2,3,4,5,6,24	16:25 17:2,5 18:3 19:1,9,10 20:17,19 21:14 22:8 24:10 25:22,23 26:10 32:4 32:6 35:6,14,16,20 35:24 36:2,6,10,15 36:16 38:2 41:16 54:2 59:19 61:17,17 61:21 63:20,23,24 63:25 64:3,5,13 66:19,22,24 67:4,6 67:11,22 68:7,9 69:17,20,22,24 70:7 70:10,12,16,20,24 70:25 71:2,4,9,13 71:18,20 72:10,17 73:18 80:20 96:7,9 96:11,21 99:10 106:6 113:25 116:23 117:11 131:11,14 136:17 148:20,21 167:2,6 180:1 entail 14:23,25 enter 46:7 117:24 161:10 entering 17:9 156:7 160:22 entire 28:16 29:8 68:20 70:25 71:1 105:18 106:3,11,13 107:1 envelope 31:6,7 55:22 150:5 environment 59:18 59:22 equal 143:9,22 144:23 equally 20:18 equipment 25:10 59:20 147:22 150:8 150:18 151:9 era 17:10 especially 98:5 123:2 135:25	essence 49:14 essentially 7:20 39:10 49:7 123:9,22 124:7,18 134:6 141:2 146:18 162:11 178:10 estimate 22:12 evaporated 156:21 event 76:2 eventually 38:1,2 evidence 84:25 85:6 85:13 90:19 92:17 93:15 95:1 96:1 132:25 133:8,11 134:20 136:17 156:7 160:23 ex 84:19 86:8 101:14 111:18 112:22 ex17 3:20 ex35 3:18 exact 83:11 98:3,6 98:16,19 99:2 114:4 144:17 exactly 123:16 136:9,11 154:2 examination 2:21 2:22,23,24 6:5 63:14 170:16 177:9 179:4 examine 25:8 examined 6:4 example 13:12 19:9 41:18 43:13 45:23 47:6,8 75:6 107:11 exception 85:23 96:15,18 exclusively 106:20 exhaust 12:10 49:2 exhibit 3:5,7,9,13,15 3:17,19,21,23,25 4:2,4,6,8,10,12,14 4:16,18,20,22,24 5:1,3,5 6:17 10:17 10:20 23:2,5 25:20 26:3 27:7 28:5,6
---	---	---	--

29:15 30:19 31:18 32:17 33:7,8,22 34:1 35:6,9,12,13 35:17,24 36:2,5,21 37:5 38:11,21 39:20 51:22 52:22 53:3 54:13,14,23 55:4,5 55:10 58:3 62:13,24 63:4 74:22 76:24 78:15,16,21,24 79:11,18 80:1,2,6 80:11,15,23 81:3,7 81:14,23,24 82:8,15 82:17,21,25 83:8,16 83:23 84:6,13,18 85:1,7,14,24 86:7 86:15,21 87:1,8,14 87:21 88:1,11,17,23 89:3,10,16,22 90:2 90:8,13,20,25 91:7 91:13,19,24 92:6,12 92:18,23 93:4,10,16 93:21 94:3,15,21 95:2,7,15,21 96:2 96:12,22,25 97:1,3 97:6,22 99:12,13 100:7,7 101:6,12,14 101:19,22,24 102:3 102:5,12,14,22,23 103:1,1,8,9,16,18,20 103:22 104:15 105:14,24 107:13 107:15,18 108:14 109:16,23 110:4,9 110:14,23 111:2,5 111:10,14,17,20 112:13,17,19,22,24 113:6,9,11,15 114:1 115:10,18,23 116:17 119:21,24 120:4,7 121:3,4,7 121:16,17,19 122:1 122:2,4,13,15,22,23 122:24 123:1,1,10 123:11,13,23,24,25	124:8,9,10,20,21,23 125:4,7,9,14,14,17 125:18,20,23,24 126:1,6,8,10 127:9 128:2,4,5,8,10,11,15 128:18,20,22,23 129:1,4,6,6,13,15,21 129:23,24 130:6,7,8 130:13,15,17 131:18 132:2,3,21 132:21 133:10,14 133:20 134:17 135:1,3,7,9,11,13,15 135:17 136:3,6 139:11 141:12 145:24 146:9 147:2 147:18,22 148:6,23 149:8,11,22,22 150:17 151:8 152:3 152:17,21,23 153:3 153:8,12,14 154:8 154:22 156:6,8 159:5 160:22 162:24 163:13,25 164:1,4 165:3,10,13 165:15,18,20 166:2 166:2,6 167:11,12 168:3,4,7 169:7,15 171:4,6 172:23,25 174:11 176:11,18 177:1,16 exhibits 5:9 63:9 78:18 96:8 107:10 113:21 114:8 135:25 147:19 148:20 150:7 151:22 177:12,12 177:21 179:9 existence 17:13 exit 12:5 exiting 12:8 expect 58:10 144:4 expectation 57:19 expense 178:18	expensive 52:13 57:1,10 58:21 90:14 experience 12:17,21 25:25 41:14 45:15 45:21,22 47:1 62:19 63:18 155:10 160:7 experienced 10:13 experiences 45:25 experiencing 46:12 expert 6:12,15 23:10 34:12 55:7 79:7 155:17 168:21 170:19 173:11 expertise 25:25 62:20 expires 181:25 explain 7:2 12:20 14:15 29:19 40:11 55:19 explained 158:24 170:22 explanation 60:11 explicit 68:8 exposed 44:24 46:8 53:21 express 50:25 62:5 expressed 62:13 133:4 extend 106:24 extends 112:5 extension 111:25 112:10 113:3 extent 107:18 136:25 151:19 external 10:7 38:5 68:7,15,19,20,24 69:6 70:19,22 71:19 71:24 73:7 79:20 105:6 extremely 125:13	faces 60:1 facilitates 145:21 facility 16:11 facing 43:13 fact 28:15 78:1 85:23 115:13 117:14 131:14 134:21 179:11 factor 178:25 factors 15:23 fail 38:2,17,18 fair 13:23 52:2 71:22 79:17 103:24 114:11 158:7 fairly 130:20 139:1 fall 51:12,17 familiarity 160:12 fan 26:12,14 37:3,4 37:7,12,15 38:4,9 38:10,13,22 39:2,19 39:22,25 40:4,7,16 41:2,25 42:5 43:17 43:22 97:7,9,13,19 97:22 98:12,24 99:4 99:8,9,14,17,21 100:6,11 101:1,10 101:11,17,18,23,24 102:4,5,13,14,21,22 103:8,9,17,18,20,22 104:1,4,5,12 105:11 116:25 141:17,22 141:23 142:1,5,13 142:16,20,21,23 148:3 176:20 far 49:4 77:15 91:3 92:2 107:14,16 149:17 165:8 167:17,18 178:15 fashion 36:17 37:17 40:15 42:19 51:18 53:15 fast 37:22 fe170 3:24 88:3 fe250 3:14 81:15 105:15 110:10
		f	
		f 181:1 face 27:15 46:21 161:10	

feature 55:16 56:9 120:12 176:19 features 27:7 100:17 fed 40:14 fee 6:19 feed 40:18 feeding 40:24 ferrara 162:12 ferrera 2:11,22,24 9:7 13:16 14:2 19:14 20:1,20 22:6 30:22 39:12 47:14 49:23 63:15 69:14 72:5 76:11 78:13,19 79:16,23 80:10 81:4 81:13 82:6,13 83:5 83:13,22 84:11,17 85:5,12,22 86:6,19 86:25 87:12,19,25 88:14,21 89:2,14,20 90:1,12,18,24 91:11 91:17,23 92:10,16 92:22 93:8,14,20 94:13,19,25 95:6,19 95:25 96:6,20 97:2 104:10 107:2,9 108:3,9 109:5 110:20 111:1,13 112:3 113:5,14,19 114:6,20 115:2,4,7 117:21 121:10,23 122:10,19 123:4,19 124:5,14 125:1,15 126:4,13 127:1,8 128:14 129:3,12,20 130:5,14,21 131:6 131:13 132:1 133:17 134:3 135:6 136:5,24 137:10,18 138:2,10,16 139:17 139:24 140:21 141:10,21 142:11 143:2 144:6,20 145:2,10,16 146:19 147:1,7,17,20 148:5	148:11,15 150:1,14 150:16,24 152:12 153:20 154:4,11,18 154:25 157:8 158:1 159:2,10,22 161:12 161:22,23 162:20 163:9,20 164:15 165:11 166:3,10,24 168:5 170:17 171:2 171:5 174:12 176:4 176:9,25 177:5,7 179:5 180:12 fewer 31:23 field 8:14 10:10 13:19,21 14:5 25:8 156:16 fifth 26:16 figure 34:10 43:14 170:5,11 172:13 174:4 175:21 176:5 figures 34:7,9 155:25 170:2 172:11 174:1 175:19 filed 77:2 168:23,24 171:22 173:13 175:3 filing 173:13 fill 44:23 filling 32:12 filter 33:1 45:23 47:22,25 48:3 82:18 82:19 85:19,20 120:16 122:8 146:4 final 62:24 financial 6:21 financially 181:17 find 35:18,24 41:6 finishing 17:10 first 6:3 10:1 13:6 26:11 27:8,13 31:23 40:5,14 42:4 50:24 51:8 52:19 53:24 57:16 60:20 81:2,17 175:9 179:17	fit 29:6,8 30:2,5 31:5,7,13 32:4,5 55:22 fits 28:25 57:18 fitting 136:10 143:15 145:22 150:5 151:20 152:16 five 7:16 74:7 fj180 4:11 93:22,23 flames 7:14 flat 28:23,23 30:10 53:12 55:25 56:1 58:25 100:15,20 133:19 143:8,13,18 145:18 146:1,2,3,18 153:6 154:2 flattened 100:8,8 fleet 16:18 fleets 16:17 flow 39:24 45:12 47:4 100:19 104:9 120:17 flowing 46:12 59:15 flows 45:20 fluid 9:1 19:23 45:20 flying 53:20 focal 69:3 focus 16:15 17:4 focused 18:2 70:9 70:21 focusing 71:15 follow 179:6 follows 6:4 footprint 59:1 forgot 50:7 form 61:15 72:2 75:20,21 76:7 79:12 79:21 107:5,21 108:7 114:4 117:19 131:20 133:15 135:5,23 137:8,25 148:1 149:24 157:22 158:25	163:2 164:14 165:6 175:25 formal 16:5 formally 17:8 formed 26:2 46:5 157:16 forming 157:12 167:4,13,24 172:20 174:8 177:2 foundation 75:8 157:6 158:20 159:19 163:1 165:6 166:20 170:14 176:1 four 8:7 132:23 fourth 26:14 fox 6:10 francisco 2:3 free 60:5 frequently 19:6 56:5 friction 45:21,23,25 front 23:6 48:18,23 49:12 53:12 61:25 62:2 78:20 105:19 106:3 120:24 132:20 144:10 150:18,22 159:17 162:5,9,15 163:7 165:12 169:6,18 170:5,10 172:13 174:4,6,13 176:5 177:12 frontal 27:14 61:7 94:7 132:10 164:10 fuel 17:11 26:13,18 26:19 27:21 32:25 40:3,7,13,14,15,18 40:19,20,22,25,25 41:4,7,20,23 42:4,6 42:12,13,21 43:5,6 43:7,21 44:6,13,15 51:11,12,13 55:8,9 55:14,15,21,25 56:3 56:4,5,8,11,14,16 57:5 71:17 82:20
--	---	---	--

<p>104:20,22 105:1,8 105:10,18 106:2,6 106:22,24 107:3,10 107:12,17,19 108:4 108:11,16,20,25 109:4,6,14,16 110:2 110:3,12,13,16,22 111:2,8,9,14,18,19 112:5,13,16,19,24 113:6,11,15,24,25 114:7,13,23 115:9 115:13,17 123:15 136:9 137:13,23 138:5,12,19,21,23 139:6,12,19 140:2,6 140:12 141:4,16,20 141:25 146:5,10,13 146:20 147:3 148:3 148:25 149:5,13,22 150:3,9,19 151:2,3 151:10,18 153:13 156:21,22,22 157:25 163:4 176:21 178:13 179:8,11</p> <p>fuels 16:8,9,12,14 16:17,20 17:1,4,18 17:21 18:24 19:12 19:20 20:8,18,24 41:15 70:3,19,24 71:8 72:16 73:17</p> <p>fujita 28:8 33:14 137:11</p> <p>fujita's 141:14 142:3 175:8</p> <p>full 6:8 9:23,24 10:2</p> <p>function 98:4 132:19 142:19</p> <p>functional 29:17 33:15 37:8,9 39:21 40:1 42:24 54:8 55:17 58:6 97:23 98:9,9 99:20 100:4 105:4 108:21 109:3 115:21 116:17</p>	<p>119:21 120:12 128:2,3 133:1,3,10 133:14 134:24 138:12,17 139:3,18 140:4,9,15 141:3,5 141:6,24 142:12,15 156:13 161:15 177:3</p> <p>functionality 23:1 26:8,23,25 39:19 40:9 43:3 44:1,8 51:4 62:11,17 126:24 134:8 139:2</p> <p>functionally 142:17</p> <p>fundamentally 61:2</p> <p>funded 18:6 73:19 73:24</p> <p>funding 10:7 17:12 17:20 73:23 74:3,4 74:13,17,20,25 75:4 75:17,19 76:3,10</p> <p>further 47:25 51:10 51:21 52:8 59:11 63:12 106:24 164:20 178:1,6,6 180:12 181:9,14</p> <p>future 13:25</p> <hr/> <p>g</p> <hr/> <p>g 6:1</p> <p>gain 24:8</p> <p>gained 12:17</p> <p>gas 4:20 177:17,22</p> <p>gases 49:2,2</p> <p>general 8:16,20 9:4 9:5 11:6,10,16,18 11:20 19:22 20:5,15 21:6,7 22:3,18 24:4 25:4,12 33:17,18 34:6,23 36:8,15,17 44:11 94:8 117:18 140:16 141:9 156:20 158:9,11 169:7</p>	<p>generally 7:1 9:25 11:21,24 14:18 18:2 18:8 20:10 21:9,10 33:4 35:2 36:11 57:8,9,17 59:4,12 60:18 96:19 104:5 133:7 157:3</p> <p>generate 45:8 47:2</p> <p>generated 38:1</p> <p>generating 15:7</p> <p>generation 14:4</p> <p>generator 107:24</p> <p>geometric 143:7,16</p> <p>geometrical 28:19</p> <p>george 1:16 181:4 181:24</p> <p>getting 47:11 59:8 106:16</p> <p>giken 1:7 174:23</p> <p>give 6:24 27:15 45:6 47:1 52:17 56:3 60:18 119:23 120:2</p> <p>given 65:5 127:19</p> <p>gives 31:11 53:6</p> <p>giving 12:12 141:2</p> <p>go 15:23 26:21 31:25 41:22 45:2 51:21 59:11 136:12 159:7</p> <p>goes 44:14,15,22 46:13</p> <p>going 8:6 22:10 27:25 29:4,7 30:9 30:12,24 32:2,2,3,9 32:12,14 37:15,16 37:16,19 39:1,2,5,7 39:13 41:8,19 42:22 44:11,15,21 45:21 46:3,5,7 48:25 49:23 50:20 51:23 51:24 53:12,22 54:8 56:11,12 57:8,9,17 58:12,18,21,22,25 59:4,21 60:18 61:3 61:4,8,11,13 62:2</p>	<p>69:12 74:1 78:11 96:16,24 98:6,14 117:25 118:1 134:1 138:24,24 144:13 144:18 156:7 158:25 160:21 161:9 162:7,11,25 168:2 171:12 176:12 178:5,7,8</p> <p>good 6:7 49:24 63:16,16 115:8</p> <p>graduate 7:15 13:10 13:11 14:14,21 21:21 63:21 64:1,5 64:9,15,17,24</p> <p>graduated 9:17</p> <p>graduation 9:13,14</p> <p>grant 75:8</p> <p>grants 74:7,10,18,24 75:19,24 76:3,4</p> <p>gravity 40:18,24 118:2 178:5</p> <p>great 50:22 69:13</p> <p>greater 51:11</p> <p>ground 47:25 48:1 101:2</p> <p>grounds 163:1</p> <p>guess 112:15 136:8 139:9,14 166:8 168:12 170:19,20 171:12</p> <p>guided 156:23</p> <p>gx 4:17 11:14 29:22 77:9,12,15,18,20 78:2 79:10,14,19 80:7,16,24 81:8 82:9 83:1,8,16 84:7 84:14 85:2,8,15 86:2,16,22 87:9,15 87:22 88:11,17,24 89:11,17,23 90:9,15 90:21 91:8,14,20 92:7,13,19 93:5,11 93:17 94:16,22 95:3 95:16,22 96:3,13</p>
--	--	--	--

98:2 99:4,8 108:20 133:9 134:11 147:25 158:18 175:9,24 176:3 gx200 4:19	helping 155:13 hereunto 181:19 herring 2:2 69:8 107:5,21 108:7 117:19 131:20 133:15 135:5,23 137:8,25 138:7,14 139:7 140:19 141:8 141:18 142:9 148:1 148:10 149:24 150:12 152:1 153:16 157:22 159:18 161:20 162:6,17 164:13 170:13,25 176:15 hidden 51:23 hide 49:7 high 6:25 7:20 45:6 45:7 58:11 82:19 85:18 96:17 118:7 118:11,15,20,22 119:11,14 126:21 127:4 132:15 higher 14:6 47:1 hired 34:15 hirschboeck 1:12 2:6 181:10 history 9:12,12 hold 55:21 honda 1:7 2:14 4:17 4:19 6:16 11:14 27:9 28:9,9 29:1,14 29:21 30:19 31:18 32:16 33:10,21 34:11 35:5,7 36:4 37:2,5,8 38:12,13 39:20 40:2,6 43:23 44:1 48:16,17 49:16 49:21 50:11,24 52:24 53:2 54:13,22 55:9 57:6,22 58:2,6 62:7,12 63:13 76:19 76:21 77:2,6,9,12 77:15,18,20 78:2 79:10 96:13 98:2	137:5,12,21 138:3 141:15 142:4 147:25 148:2,3,9,12 148:16 158:18 174:23 175:1,24 honda's 27:11 28:2 28:12 29:9,21 82:16 94:4 143:4 156:13 177:2,15 hopefully 13:15 52:20 horizontal 11:6 12:2 12:4,5,6,8 20:19 69:17,19 70:16 79:3 96:9 98:25 99:9 104:1 105:11 106:5 108:15 116:22 130:24 132:23 133:1 135:22 148:21 153:22 154:6,13,20 167:2,6 169:15 170:6 172:16,18 174:5,6 horsepower 11:25 12:1 87:2 105:25 hot 37:19 49:1,2,2,3 49:10 60:3 hottest 37:14 38:7 38:15,24 42:10,13 hour 6:20 49:24 hours 22:15 72:17 hum 102:24 hundreds 37:21	illustrated 58:5,13 image 130:12 131:11 immediate 58:20 immediately 116:24 impact 16:13 26:8 50:10 71:17 133:6 139:2 impacting 54:25 impediment 177:17 implement 52:13 important 24:15,24 34:19,20 improve 75:10 inasmuch 113:3 122:17 inch 153:19 178:1,1 179:12,15,22,22 180:3,3,5,5 inches 179:12,14 include 7:17 15:22 15:25 16:3 included 9:1 23:17 34:5 63:8 includes 33:18 158:10 including 13:25 29:20 increase 16:12 40:22 52:5,20 53:5 53:7 indentation 112:4,8 indicate 148:18 indicated 112:4 118:21 indicates 168:11,24 indicating 35:19 indirectly 181:17 individual 16:1 27:21 58:11 68:17 68:18 69:11 73:5 83:20 143:18 165:2 166:13 induction 46:15
h			
h 3:1 hale 2:10 half 49:24 73:22 107:7 153:19 178:1 179:22 180:2,5 hand 54:5 113:4,4 176:19 181:19 handed 23:4 172:25 handle 53:17 54:6 149:17 150:23 152:6 happen 37:15 152:18 happened 46:8 happens 31:6 harder 123:16 harley 18:11 head 12:11,15 38:8 38:23 39:1,8 42:9 46:18 49:1 51:25 58:13 153:17 headed 39:4,5 heading 169:19 170:1 heard 55:2 77:11,13 77:15 hearing 77:17 heat 9:1 19:23 37:23 heavier 51:15 height 109:21 144:19 146:6 148:25 149:6,13 heights 149:23 150:4 held 72:6 help 17:24 59:7 133:5 171:15 178:3			
		i	
		ideal 100:10,12,13 100:15,18,19 identical 176:10 identified 6:17 62:25 118:5 identify 10:22 23:8 35:13 igniting 42:14 ignoring 75:3,4	

inferences 25:11,22 36:1 influences 164:10 information 23:21 24:9 25:17,19,20 63:1 infringes 62:16 ingested 46:3 initial 52:7 103:10 103:13 initially 28:15 input 15:18 54:17 72:25 73:6 97:12 105:1,4 116:4 127:19 inside 55:21 137:24 139:18 instance 16:19 instances 81:12 instantly 38:18 instituted 8:4 intake 12:10 46:3,9 46:15,17,19 47:16 48:23 50:17 51:9,11 51:19,21 52:4 156:23	interpreting 155:11 160:7 interrupt 39:25 41:11 interventions 75:10 interviewed 23:24 interviews 25:17 26:1 62:21 invention 156:16,17 156:19 157:3 inventor 155:6 investigate 25:15 investigation 164:20 involve 8:18 21:8 22:3 involved 14:17 18:6 21:18,22 28:1 66:21 97:16 155:13 involving 13:5 71:9 ip 2:15 ish 27:16 29:5,6 144:15 issue 179:20 issued 161:6 171:25 173:16 175:5 item 34:25	july 1:14 169:2 171:25 181:12,21 jumps 167:20 k kabushiki 1:7 174:23 kaisha 1:7 174:23 kawasaki 3:14,24 4:11 81:15,18,18 88:3 93:22 105:15 110:10 keep 18:13 49:4 59:7 60:4 ken 2:7 kind 66:4 knocked 53:22 know 11:16 21:6 59:16 76:22 77:15 79:13,22 80:17 81:11 84:9 85:21 87:20 90:13 91:3 92:2 107:16 117:14 117:16,18 119:16 119:17 136:6,10 152:6,20 160:15,18 161:2,6 167:17,18 knowakowski 2:9 knowing 136:9 knowledge 10:9 12:17,22 76:19 79:25 83:20 86:5 167:23 knowledgeable 28:10 known 77:20,22 kogyo 1:7 174:23 kohler 1:4 2:9,16 3:12 4:21 6:12 18:11 22:23 23:25 24:7,16 25:18 29:24 76:16 78:25 80:12 109:24 118:25 165:14 167:22 173:8,10	l l 1:16 6:9,10 181:4 181:24 label 93:23 labeled 97:5 104:16 104:18 115:23 127:10 labeling 148:17 165:24 laboratory 9:15 lack 157:6 158:19 165:6 170:14 lacks 159:19 laminar 7:14 language 157:2 158:14 large 33:19 56:7,8 59:8 60:6 158:11 larger 14:7 31:5,7 43:7 58:25 106:22 107:11,19 108:4 120:19 123:15 169:11 180:11 lastly 95:7 late 78:9 161:10 lawnmower 14:18 17:2 70:10 71:13 73:18 lawyers 167:9 lead 60:1 leading 104:8 leads 42:11 leakage 56:23 learn 8:20 13:2 24:11 learned 8:25 20:13 leaves 43:4 lectured 69:17,21,23 led 12:21 leeway 131:3 178:23 179:19 left 18:20 26:15 39:1 39:3,6 42:8,16 43:1 43:12,17 44:2,6
intek 3:17 83:25 101:7 111:6 intended 27:2 141:15 142:4 interact 18:25 19:6 interest 6:21 interested 17:11 181:17 interfere 53:24 134:12,12 151:12 interfering 43:6 internal 9:5 12:25 13:18 14:5,10 63:22 64:2 66:23 68:9,23 157:21,25 168:15 169:22 174:20 175:15 interpretation 28:2 143:11,21 144:8,21	j january 175:5 japanese 33:22 159:24 160:4,8,13 160:16,23 161:2,17 161:25 162:3,22 163:11 164:4 165:1 job 9:11,12,17,18 10:4,13 jobs 10:11 13:14,15 13:18 john 1:11 2:20 6:2,9 joined 18:21 journal 75:12,14 journals 13:1 judge 83:21 judgment 152:7	knowing 136:9 knowledge 10:9 12:17,22 76:19 79:25 83:20 86:5 167:23 knowledgeable 28:10 known 77:20,22 kogyo 1:7 174:23 kohler 1:4 2:9,16 3:12 4:21 6:12 18:11 22:23 23:25 24:7,16 25:18 29:24 76:16 78:25 80:12 109:24 118:25 165:14 167:22 173:8,10	lawnmower 14:18 17:2 70:10 71:13 73:18 lawyers 167:9 lead 60:1 leading 104:8 leads 42:11 leakage 56:23 learn 8:20 13:2 24:11 learned 8:25 20:13 leaves 43:4 lectured 69:17,21,23 led 12:21 leeway 131:3 178:23 179:19 left 18:20 26:15 39:1 39:3,6 42:8,16 43:1 43:12,17 44:2,6

46:20,22,24 47:7 48:8,15 49:16 50:12 50:14 51:24 52:1,25 82:23 97:22 99:13 99:17,21,25 102:2,9 106:12,14,25 112:14 116:19,24 119:23 123:3 124:18 133:13,23 134:5,23 138:19,20 139:5,12 140:11 141:16,22,23,25 142:5,6,13,16,21,23 144:2,5,22 151:23 152:5,15,24 153:10 177:19 178:21 legal 24:4 157:6 158:20 159:18 163:1 165:6 166:21 167:18 170:15,19 176:1 length 109:18 level 13:6,9 14:6,7 18:9 lever 52:10 53:14,15 53:23 54:18 165:24 levers 26:17 49:20 51:3 52:4,7,21 53:4 53:9,22 54:7,22 55:3 130:2 131:4 136:3 165:25 licensing 7:23 lifan 4:9 92:24,24 light 11:23 lighter 32:13 178:24 180:8 likelihood 51:11 limited 105:21 108:5 line 39:2,15 66:1 67:8 102:19 103:5 139:5,6,12,14 140:8 140:11,12,16 141:4 141:8 142:13,18,23 158:8 159:4 163:22	lines 28:1 57:9,11,18 138:4,18,24 139:4 139:12 140:10 lining 139:20 140:14 140:17 141:9 list 3:6 62:25 75:18 167:12 listed 34:1 75:21 76:3,9 167:16 170:3 172:11,13 175:19 listing 23:9,20 74:20 lists 63:4 litigation 97:18 105:7 little 9:10,11 22:10 57:14,15 73:13 93:23 102:9 113:20 123:16 124:17 125:12,13 128:25 129:18 131:12 139:15 149:20 151:15 165:25 166:8 178:23 179:14 180:10 llp 2:10 located 1:13 12:10 12:14 46:19 51:24 106:6 128:5,9,17,22 129:5,14,23 130:2,7 130:16,25 131:4,15 132:6 165:18 166:4 location 12:15 43:5 80:3 82:15 108:20 116:16 134:21 135:3,9,12,17,21 136:4 162:13,21 164:9 locations 52:17 logical 163:6 lombardy 6:9 long 7:15 15:14 16:10 17:6 21:7 108:1 109:11 145:14 151:16	longer 18:19 47:4,18 51:16 52:12,15 look 27:13,18,23 29:3 31:4 33:22 35:12 38:20 45:14 46:20 48:17 61:5 65:4 67:7,8 69:12 74:21,21 78:24 93:21 100:6 101:22 102:3,12,18,19 104:15 105:14,24 108:14 109:21 111:5,17 112:12 113:9,21 121:16 122:1,13,22 123:10 123:23 124:8,20 125:4,23 126:8 128:4,15,20 129:4 129:13,21 130:6,15 131:18 135:1,7,11 135:15 139:11 140:7 144:1 145:24 146:9 147:2,21 148:6,23 149:8 150:7 151:8 153:3,8 153:12 154:7,21 156:5 158:7,18 159:4 162:23 163:12,21,21,25 165:3 167:5,11 168:2 171:3,16 172:5 173:13,22 175:14 176:5 looked 15:1 28:16 35:23 109:23 looking 15:2 16:16 18:14 27:15 34:24 35:2 44:18 61:19,22 70:22 88:2 94:10 96:8 99:12 103:11 104:17 107:23 115:23 121:13 132:21 144:16 150:14,17,17 151:22 153:12	158:4 162:11 164:5 164:18 165:17 168:6 175:21 looks 27:19,23 130:12 131:23 lost 32:12 lot 28:1 33:6 166:1 lots 57:12 lower 39:1 47:12 97:21 112:6 116:24 117:25 120:7 133:23 134:4 141:16,22,23,25 142:5,13,16,21,22 142:22 lunch 115:6,8
m			
m 6:10 181:13 machine 19:24 33:18 64:12 158:10 madison 2:8 18:3 main 2:7 156:24 maintain 8:9 32:24 45:6 52:18 maintaining 45:7 maintenance 32:18 32:20 48:4 major 82:14 141:5 making 21:13,13 24:12 54:7,17 56:18 102:17 103:12 140:5 malfunctioning 60:4 manner 27:3 manufacture 31:20 58:22 83:7,11,15 84:13 86:21 89:16 90:14 115:14 manufactured 30:3 56:11,12 72:10 114:18 manufacturer 31:1 31:2,12 73:7			

<p>manufacturers 17:24,25</p> <p>manufacturing 8:18 8:22 31:15,21 55:18 56:10,24 64:18,23 66:5 69:21,24 80:15 80:17,20 85:8 87:14 87:18,21 88:16,20 91:13 92:11 93:9 94:20 95:20</p> <p>march 175:3</p> <p>margin 149:14</p> <p>marine 18:12</p> <p>mark 77:6 78:14,16 147:18 177:2</p> <p>marked 10:17,19 23:2,5 35:9,11 78:15,18 96:24 97:1 147:19 148:3 156:6 160:21 165:10,15 168:2,4 171:4 172:23 174:11</p> <p>market 13:15 15:23 19:10 36:14,18 58:7 58:9,9</p> <p>marketing 31:20</p> <p>marketplace 16:13 17:25 19:17 24:10 24:13,22 29:24 35:7 40:10</p> <p>markets 16:14 85:18</p> <p>mass 44:21</p> <p>massachusetts 2:12</p> <p>masters 7:6,17 14:22</p> <p>match 176:22</p> <p>mate 30:2 42:18 57:2</p> <p>mated 30:10 31:10 56:13,21</p> <p>material 13:2 19:24 31:24 52:19 132:8</p> <p>materials 22:20 23:17,20 26:1 28:5</p>	<p>31:22,23 33:6 37:24 54:16,19 62:20</p> <p>mating 56:22</p> <p>matter 6:13,19 22:11,13,20 23:22 24:18 40:17 62:22 63:8 157:3</p> <p>matters 19:10</p> <p>maximize 138:23 139:1 140:2</p> <p>maximum 56:3 58:16</p> <p>me 15:9,10,13 15:22 68:22 97:16 105:5</p> <p>mean 35:18 120:22 121:1,1 138:21 150:12,23 165:23 176:21</p> <p>means 60:14 143:17</p> <p>meant 81:2</p> <p>measurement 7:12</p> <p>measurements 15:5</p> <p>mechanical 7:4,6,8 8:12,14,16,19,20 9:2,4 10:14 12:24 13:8,13,23,24 14:9 14:12 19:22 20:5,15 22:4,4 25:2,4,8 66:5</p> <p>mechanics 9:2 19:24</p> <p>mechanism 17:20 52:9,12,15 54:20 125:12</p> <p>mechanisms 15:8</p> <p>meet 24:13,23 27:2 27:25 30:13 36:17 145:3,11</p> <p>meeting 24:21 28:25 54:8 55:25 78:5 143:9,13,19</p> <p>meetings 19:4 21:2 24:5</p> <p>member 18:16 76:13,16,19,21</p>	<p>mention 57:7</p> <p>mentioned 14:13 33:12 99:24</p> <p>mercury 18:11</p> <p>merely 144:10</p> <p>merit 181:4</p> <p>met 22:22 24:3,8</p> <p>metal 56:14,15 151:1</p> <p>method 41:7</p> <p>metric 44:19</p> <p>mic 63:12</p> <p>middle 176:19</p> <p>million 75:7</p> <p>milwaukee 1:13 9:19 68:4 181:3,11 181:20</p> <p>mind 33:9</p> <p>minimal 153:1</p> <p>minimally 146:24</p> <p>minimize 46:11 51:20 138:22</p> <p>minimizing 140:3</p> <p>minimum 12:13 58:16</p> <p>minor 141:3</p> <p>minute 37:22</p> <p>mischaracterizes 143:25 145:8 157:23 162:17 176:13</p> <p>mittell 2:15</p> <p>model 33:23 34:4,7 160:1,13,16,23 161:2 179:16</p> <p>modeling 7:13</p> <p>modification 15:16</p> <p>modifications 21:13</p> <p>modifying 15:6</p> <p>mold 56:20 57:11</p> <p>molded 56:17</p> <p>moment 136:12</p> <p>money 32:10</p> <p>month 21:11</p>	<p>monthly 19:3 21:3</p> <p>months 9:14 21:12</p> <p>morning 6:7 36:24 62:19 63:16,16</p> <p>motor 175:1</p> <p>mount 58:11 82:19 85:19,20 96:17 117:8 118:7,7,22,23 121:21 122:18 126:22 152:4</p> <p>mounted 53:11 100:22,23 102:8 117:5,11,23 118:12 118:15,20 119:6,11 119:14 124:3 127:4 132:15 136:2,7 146:4 147:25 148:9 148:14,20</p> <p>mounting 100:14 101:2</p> <p>move 37:1 47:6 48:7 48:10 49:25 50:22 177:22 178:5 179:8 179:11,19,21,25 180:2,4</p> <p>moved 18:18 177:25</p> <p>movement 134:12 134:13</p> <p>moves 178:6</p> <p>moving 8:18,22 12:12 46:5 177:17 178:20</p> <p>muffler 42:22,25 48:22,23,25 49:3,6 49:7,10,13 146:5</p> <p>multiple 31:13</p> <hr/> <p style="text-align: center;">n</p> <hr/> <p>n 2:1,18 6:1</p> <p>name 6:8 18:13,14 18:14</p> <p>named 155:6</p> <p>national 75:8</p> <p>natural 118:2</p>
---	---	---	---

<p>nature 29:5,7 32:6 36:11 130:20</p> <p>near 51:6</p> <p>necessarily 68:13,19 71:16 98:3 144:3,17 167:20</p> <p>necessary 7:2 8:8 29:17 30:13 40:8 44:7 52:19 54:19 55:16 58:5,6 98:11 98:13 99:16,19 108:24 109:3 120:15,20,22 132:16</p> <p>necessity 108:11</p> <p>need 32:10 33:13 34:5 38:2,19 40:20 40:25 44:10 50:16 98:1,3,16,19,20 136:14 142:1,17,23 144:3 178:24</p> <p>needed 54:16</p> <p>needing 35:3</p> <p>needs 33:17 34:23 37:18 38:16 39:23 40:14 56:5 59:6 60:13 105:11 144:10 158:9</p> <p>never 18:12 34:15 69:2,17,21 70:19,21 72:6,9,20,22 73:3,6 73:10 76:19,21 77:11 97:9,12,18 104:22 105:7 116:4 118:18 127:16,19 127:22 159:13 160:4 169:4 173:19 177:1</p> <p>new 10:9,9 16:2</p> <p>nine 7:20</p> <p>nitric 7:13</p> <p>nonfunctional 133:7</p> <p>nonlegal 167:7</p> <p>nope 43:24</p>	<p>north 6:9</p> <p>notary 181:5,24</p> <p>note 16:6 75:23</p> <p>notice 75:22 106:18</p> <p>nowakowski 2:7,21 2:23 5:12 6:6 9:9 10:18 13:22 14:8 19:18 20:3,22 22:9 23:3 31:16 35:10 39:17 48:6 50:1,3 63:11 72:2 76:7 79:12,21 80:8 81:1 81:10 82:1,11 83:2 83:9,18 84:8,15 85:3,10,16 86:3,17 86:23 87:10,16,23 88:12,18,25 89:12 89:18,24 90:10,16 90:22 91:9,15,21 92:8,14,20 93:6,12 93:18 94:5,17,23 95:4,17,23 96:4,14 104:2 106:8 109:1 110:15,24 111:11 111:21 113:1,12 114:2,14,24 121:8 121:20 122:5,16,25 123:14 124:1,12,24 125:10 126:2,11,20 127:5 128:12,24 129:7,16,25 130:9 130:18 131:1,9 134:1 136:20 137:15 139:8,21 142:25 143:24 144:12,24 145:6,8 145:13 146:15,23 147:5 150:11,21 153:25 154:9,16,23 157:5 158:19 159:7 161:9 162:7,16,25 163:15 165:5,22 166:7,20 170:12 172:24 175:25 176:7,12 177:10</p>	<p>179:2 180:13</p> <p>nozzle 151:13</p> <p>number 3:2 4:25 40:12 63:4 71:3 78:11 103:1 129:9 168:8 171:7 174:14</p> <p>numbering 171:12</p> <p>nut 127:14</p> <hr/> <p style="text-align: center;">o</p> <hr/> <p>o 6:1,10</p> <p>oath 6:3 65:10</p> <p>object 25:14,15,15 28:22 29:3 31:5,6,7 48:20 52:11 100:14 107:5,21 108:7 117:19 131:20 133:15 135:5,23 137:8,25 143:8 148:1,10 149:24 157:22 161:9 162:7 163:1 166:22 176:12</p> <p>objection 9:7 13:16 14:2 19:14 20:1,20 22:6 30:22 39:12 47:14 69:8 72:2 76:7 79:12,21 80:8 81:1,10 82:1,11 83:2,9,18 84:8,15 85:3,10,16 86:3,17 86:23 87:10,16,23 88:12,18,25 89:12 89:18,24 90:10,16 90:22 91:9,15,21 92:8,14,20 93:6,12 93:18 94:5,17,23 95:4,17,23 96:4,14 104:2 106:8 109:1 110:15,24 111:11 111:21 113:1,12 114:2,14,24 121:8 121:20 122:5,16,25 123:14 124:1,12,24 125:10 126:2,11,20 127:5 128:12,24 129:7,16,25 130:9 130:18 131:1,9 134:1 136:20 137:15 139:8,21 142:25 143:24 144:12,24 145:6,8 145:13 146:15,23 147:5 150:11,21 153:25 154:9,16,23 157:5 158:19 159:7 161:9 162:7,16,25 163:15 165:5,22 166:7,20 170:12 172:24 175:25 176:7,12 177:10</p>	<p>127:5 128:12,24 129:7,16,25 130:9 130:18 131:1,9 134:2 136:20 137:15 138:7,14 139:7,8,21 140:20 141:18 142:9,25 143:24 144:12,24 145:6,13 146:15,23 147:5 150:11,21 152:1 153:16,25 154:9,16,23 157:5 158:19 159:7,18 161:10 162:6,16,25 165:5,22 166:7,20 170:12,13,25 175:25</p> <p>objections 163:15 164:13 176:7</p> <p>observe 25:15</p> <p>obtained 23:21 25:19 167:1</p> <p>obtaining 160:13,16</p> <p>obviously 60:6</p> <p>occasion 78:3,4</p> <p>october 173:14</p> <p>oem 30:4 96:16 106:23 117:16 145:22</p> <p>oems 30:4,17 47:23 117:15,18 118:22 119:5</p> <p>offer 108:18,19 115:16 133:12,18 133:22</p> <p>offered 100:3</p> <p>office 1:1 161:3 181:20</p> <p>offices 181:10</p> <p>okay 7:4 37:1 41:22 50:22 60:10 76:24 80:1 113:23 140:1 141:23,23 148:19 166:11 168:14</p>
--	--	--	---

<p>omc 18:16,17 once 78:14 ones 33:25 open 41:17,20 45:13 opened 45:2 operate 11:22 operates 37:20 operating 15:4 37:23 45:14 operation 33:3 56:6 67:2 operations 32:21 operator 41:9 49:7 55:1 operator's 56:7 operators 49:5 opinion 22:25 26:6 26:24 29:13,16 30:18 31:17 32:15 33:7,9,20 34:19,20 34:21 36:3,7,14,19 36:22 37:1,4,7 38:22 39:18 40:2,5 40:11 43:21,24,25 44:3,5 47:9,15 48:14 49:18,21 50:10,25 51:1,5 53:1 54:10,21,25 55:12,13,19 58:1,4 60:11 97:21 98:13 99:19 100:3,10 105:10 108:19,24 109:2 115:16 117:4 119:19,23 120:2,15 120:18 127:25 130:3 134:22 145:17 156:11 161:14 177:2,23 178:18 opinions 22:13 24:17 25:11,22 26:2 26:5,21 27:6 29:11 35:4,22 49:14 50:5 50:23 55:2 57:4 61:16 62:5,10,15,18</p>	<p>63:2 108:18 134:7 157:13,16 167:4,13 167:24 172:21 174:9 opportunity 70:6 opposed 41:5,17 42:1,16 51:6 57:12 58:24 60:7,8 61:23 82:18 104:6 118:23 120:25 147:16 opposer 10:20 23:5 28:5 opposers 1:5 2:5,9 3:3,4,6,8 6:11 23:2 35:9 74:22 132:2 167:11 opposition 1:4,6 6:13,22 11:5 22:14 23:13 29:11 optimal 98:24 99:4 options 66:5 103:25 114:12,16,22 126:18,23 127:3 130:23 135:21 153:23 154:1,14 order 27:24 29:5 30:7 32:12 40:24 46:14 51:3 58:15 59:3,6 organization 74:8 76:20 organize 17:23 orientation 54:6 original 5:9,9,11 30:3 ornamental 169:21 170:11 172:6 173:23 175:15 outcome 6:21 outside 59:21 71:22 72:6,15 127:16 137:23 145:17 158:4 170:15 outwards 151:3</p>	<p>oval 58:17,20 60:21 overall 26:12 27:8,9 27:12 28:3,13,14,20 29:1,10,13,16 30:8 30:9,11,15,18,23 31:9,17,19,21 32:1 32:15,19,19 33:4,10 33:20 35:3,5 36:3 36:11,23 57:18 76:10 81:22 82:5,7 94:2,3 110:8 143:4 143:12 156:12 159:1 161:15 overhead 11:6 12:2 12:9 overseen 13:4 oxide 7:13</p> <p style="text-align: center;">p</p> <p>p 2:1,1 6:1 181:13 p.m. 1:15 180:14 page 2:19 3:2 38:20 43:15 65:25 67:8 74:23,24 77:4 88:2 102:18 140:7 163:22 169:6,18 paid 6:20 pallet 32:8 panel 82:18 85:20 85:24 96:17 117:2,4 117:12 118:11,15 118:19 119:6,10,14 121:22 122:18 124:3 132:14 136:1 136:1 146:4 paragraph 157:20 158:3 parallel 139:23 parameter 44:19 parent 1:5 part 8:19 15:1,11,13 15:17 16:2,4 17:16 17:17 21:17 23:10 38:7,11,15,24,25 42:10,14 43:17</p>	<p>48:20 53:2 56:12,13 57:2,14 66:6,20,24 67:1,2,4,25 68:8 69:7 70:18,23 71:14 81:17 82:22 105:5 106:14 132:20 participating 76:22 particular 16:18 17:2 20:14 22:11 24:25 25:9,9,23 31:11 33:8 34:18,25 67:3 102:1 115:16 115:20 117:16 127:14 particularly 11:2 66:22 77:13 128:6 130:2 parties 181:15 parts 8:18,22 37:14 56:12,13,18,19,21 56:22 57:2 107:6 114:18 party 173:10 pass 47:18 passageway 51:17 passageways 46:11 46:24 47:4,18 50:19 passes 45:24 51:14 passing 45:23 49:2 58:19 patent 1:1 4:23,25 5:2,4 33:16 155:2,4 155:19 156:1,5,9,11 156:15 157:4,9,12 157:16 158:8,15 159:11,16,24 160:5 160:8,19 161:3,17 161:25,25 162:3,23 163:11 164:4 165:1 166:12,15,18,19 168:8,11,14,17 169:2 170:23 171:7 171:7,11,14,16,22 173:3,6 174:14,14 174:18 175:3</p>
--	---	---	--

<p>176:14 patented 34:25 35:1 patents 33:23 34:13 34:16,18 155:6,11 155:14 166:13 167:1,5,9,10,16,20 167:24 170:20 pay 77:13 people 11:9 17:10 23:24 28:10 105:4 percent 18:6,7 74:12 74:19 76:6,9,10 perfect 27:17 28:18 perfectly 111:24 130:12 perform 60:3 66:4 67:3 performance 15:2 16:22 27:4 37:10,10 44:7 47:10,20 48:12 51:4 61:12 79:9 80:5 82:24 83:4 84:5 85:2 86:14 87:8 88:10 89:10 90:8 91:6 92:5 93:3 94:14 95:14 98:21 99:7,8 107:19 108:6 118:4,15 133:5 performed 32:21 performing 10:5 15:5 47:13 period 108:1 permanent 9:18 permit 120:16 person 77:19,21,21 78:2 131:11 167:7 167:19 personal 83:19 181:8 personally 72:24 73:3 perspective 43:12 61:23 100:19 ph.d. 7:8,17 66:16</p>	<p>photograph 3:12,14 3:16,18,20,22,24 4:1,3,5,7,9,11,13,17 4:19,21 78:25 80:12 81:15 83:24 84:19 86:8 87:1 88:3 95:8 165:13 photographs 78:11 photos 152:1 pi 75:7 picked 48:2 pickering 2:10 picture 39:5 43:13 43:19 82:3 88:2 89:4 90:3 92:24 93:21 97:4 102:16 112:9 130:3 147:12 147:15 148:24 151:5 152:5 153:16 162:9 175:22,24 pictured 35:24 pictures 3:8 35:14 35:15,19 101:6 131:17 piece 132:8,10 147:22 151:9 pieces 24:8 59:19 pile 105:14 pipng 50:16,19 piston 12:11 46:4 60:1 pixilation 130:11 place 21:16 31:23 37:20 51:10 52:19 53:25 57:16 60:20 179:17 placed 44:13 placement 40:13 116:19 placing 41:1,2 50:14 51:13 54:15 100:14 plane 12:5,8 139:20 140:15 146:17,22 146:25 147:11,13</p>	<p>planes 139:23 146:14 147:4 plastic 56:16,17 plate 100:23 101:4 please 6:7 7:3 8:14 10:22 12:20 14:15 23:8 29:19 35:12 41:22 44:3 49:20 50:25 52:2 55:19 60:10 78:17 point 6:10 12:11 17:9 22:15 69:3 123:16 pointed 105:17 106:25 112:7 142:16 pointing 127:13 polaris 18:21 pollutant 7:13 pollution 15:3,5,7 16:23 18:2 portion 75:16 98:12 106:20 112:5 120:7 128:1 130:24 133:19 portions 138:5 position 26:13,15 40:3,7 43:21 44:2,5 47:16 49:15 50:8,12 52:7,10 53:14,18 54:1,12,21 72:6 94:9 98:11 163:10 163:23 positioned 42:9,23 43:7 50:18 58:12 positioning 48:15 50:17 51:2 positions 163:18 possibility 51:20 69:11 possible 25:16 30:13 46:16,17,22 49:4 54:15 55:21 56:8 97:14 109:14 152:17 153:22</p>	<p>154:5,12,19 179:7 180:2 possibly 20:11 post 7:20 9:14 66:17 66:25 67:5,10,22 68:2 potential 22:25 42:11 52:6 53:6,13 108:2 117:24 134:17 136:15 potentially 37:21 39:24 42:14 47:3 51:17 52:16 53:22 59:23 108:1 120:18 178:15 power 4:13 11:25 44:12,12 45:9 47:1 47:2 48:12 80:7,16 80:24 81:8 83:1,8 83:16 84:7,14 85:2 85:8,15 86:2,16,22 87:9,15,22 88:11,17 88:24 89:11,17,23 90:9,15,21 91:8,14 91:20 92:7,13,19 93:5,11,17 94:16,22 95:3,8,16,22 96:3 96:13 powershot 4:19 practice 25:7 preceding 181:6 precisely 142:18 predator 4:5 91:1 predominantly 110:8 prefer 48:4 117:15 117:18 134:21 preferable 33:5 119:7,10 prefers 117:16 preparation 23:16 33:7 prepare 155:13 prepared 23:12</p>
---	---	--	--

<p>preparing 14:4 167:4</p> <p>presence 26:18 163:18</p> <p>present 2:15 24:5 39:23 46:19 156:19</p> <p>presentations 20:23 21:1,4,5,8,9,15 71:4</p> <p>presented 25:3 28:8 28:9 34:10,11 104:7</p> <p>presenting 21:10</p> <p>press 57:15</p> <p>pressing 56:15</p> <p>pressure 4:20 45:14 45:18,20,25 46:6,6 46:9,13,25 47:19 59:20 148:7 149:9 149:15 151:9,13</p> <p>presumably 172:18 174:7</p> <p>presume 169:12</p> <p>presuming 81:17</p> <p>presumably 167:10</p> <p>prevent 150:4 151:19,24 152:10 166:18</p> <p>preventing 49:9</p> <p>previous 106:10</p> <p>previously 6:17 75:4 141:6 156:5</p> <p>primarily 10:4 17:5 28:7 70:10,12 75:9</p> <p>primary 16:15 17:19 39:21,22 126:7</p> <p>principles 8:20,24 9:4 19:22 20:6,15 22:3 25:4,12 136:22</p> <p>prior 77:11,16,18 79:6 80:3 81:19 84:2,22 86:11 87:4 88:6 89:6 90:5 91:4 92:3 93:1,25 95:11 97:18 105:7 155:10 160:4 163:16</p>	<p>pro 3:12 4:21 79:1 80:12 109:24 165:14</p> <p>probably 69:24 129:2</p> <p>problem 118:11</p> <p>problems 42:11 152:15</p> <p>proceeding 6:22</p> <p>process 24:24 31:22 38:1 55:18 56:10 75:13,15 160:12</p> <p>processes 64:19</p> <p>produced 16:1</p> <p>producing 75:15</p> <p>product 27:1 28:11 31:25 56:25 166:14</p> <p>products 11:23 20:12,14 64:23 66:6</p> <p>professional 7:24 8:2,9 21:4,14 63:18 72:6</p> <p>professor 6:7,11,19 9:20,23,23 10:1,2,3 10:19 11:4 12:16 22:11,19 23:4,12 25:2 26:22 34:12 35:11 36:13 41:11 41:13 43:10,20 47:6 50:4,22 51:21 63:11 63:17 67:7 71:22 72:7 76:2 78:20 96:7,24 103:24 114:11 115:8 126:17 130:22 132:12 137:4 143:3 147:21 150:17 153:21 155:7 157:9 164:17 165:12 168:6 171:6 172:25 174:13 177:7 179:6</p> <p>program 7:15,17,19 20:25 21:18 66:17 66:20,25 67:5,10,22 67:25</p>	<p>progress 21:12</p> <p>project 15:14 16:5 21:16,22 23:11 71:14 116:7</p> <p>projection 27:14</p> <p>projects 10:8 13:5 14:14,17,21,22,23 14:25 15:11,18 17:8 19:5 21:25 75:5 97:15,16 107:15,16</p> <p>promoted 9:22</p> <p>prone 136:19</p> <p>proportion 109:18</p> <p>proportions 109:7</p> <p>propose 15:15</p> <p>proposed 22:24</p> <p>proposing 16:2</p> <p>prosecute 155:14</p> <p>protect 166:14</p> <p>protective 49:8</p> <p>protrude 150:9,20 151:3,10,15,16,18 152:15</p> <p>protrudes 152:24 153:1,5,9,14</p> <p>protruding 53:10,21 151:25 152:10 153:19</p> <p>protrusion 152:8</p> <p>provide 6:8,25 44:3 49:20 51:3 167:23 168:20 173:11</p> <p>provided 22:21 72:25 73:6 76:25 97:12 104:25 105:4 116:4 151:12</p> <p>providing 15:18 178:2</p> <p>public 181:5,24</p> <p>publication 160:1 160:13,16,24 161:3 162:1</p> <p>publications 71:3,6 71:9 75:13,14</p>	<p>publicly 22:21</p> <p>pull 53:24 54:2,3,6 58:23,24 76:24 80:1</p> <p>pulled 53:20 118:2</p> <p>pulling 54:3,4 158:5</p> <p>pump 40:20,22</p> <p>purchase 35:21</p> <p>purdue 7:7,8 9:15</p> <p>purpose 9:5 11:6,10 11:16,18,20 16:12 27:2 33:17,18 34:23 36:15 37:12 39:21 54:9 59:12,14 99:20 128:3 133:1,3,10 138:13 156:20 158:9,11 169:7</p> <p>pushed 178:15</p> <p>put 30:13 36:20,21 40:19 42:7,20,25 46:14,21,23 48:23 50:19 56:4 68:10,20 78:11 132:8 178:7</p> <p>putting 40:15 41:8 42:4,6,15 49:5</p>
q			
		<p>quality 27:4 112:8</p> <p>quarterly 19:3 21:3</p> <p>question 15:9 17:7 36:20 41:25 50:8,9 62:9,24 64:4 66:2 66:13 67:9,10,18 102:20 106:16 127:2 134:2 140:8 140:20,22 142:10 144:25 150:15 163:16 164:14,16 164:22 165:7</p> <p>questions 7:2 15:20 63:12 65:13 177:8 177:11,15 179:7 180:12</p> <p>quick 179:6</p> <p>quickly 48:3 59:10 178:25</p>	

quite 74:23 quote 159:12	recess 50:2 115:6 177:6	reduced 181:7 reduces 117:23 136:14	register 77:6 134:1 registered 7:24 181:4
r	recessed 53:2,4,9 111:23 128:1 131:3 131:8,15,23,24,25 132:9 134:11 136:14,18 137:1,2 166:4,5	reducing 54:16,18 54:20 reduction 46:13 47:11 reed 2:2 reedsmith.com 2:4 refer 38:9 68:11 reference 17:15 97:5 159:11,14 169:10 references 33:8 referred 37:8 referring 29:3 35:1 38:10 39:16 43:16 75:2 116:19 120:23 120:23 139:15,22 157:24 158:14 refers 57:22 refine 20:4 refined 20:12 refuel 32:25 refueled 56:6 refueling 41:3,10 42:12 regard 20:5 22:12 36:20 39:18 40:2,5 44:4 49:21 50:24 55:12 57:6 62:21 177:21 regarding 6:16 14:10 22:14 25:11 25:22 26:2 27:6 33:10,20 34:16 35:4 36:3,14,23 37:2 43:21,25 48:14 49:15 50:5,8,23 55:3 64:18 66:19 67:4,11 73:7 117:10 177:16,16 regardless 148:19 regards 67:6 102:1 109:18 118:7	regular 18:25 25:7 reisel 1:11 2:20 6:2 6:7,9,11,19 10:19 11:4 12:16 22:11,19 23:4,12 26:22 34:12 35:11 36:13 41:12 43:10,20 50:4,22 63:11,17 67:8 71:22 72:7 76:2 78:20 96:7,24 103:24 114:11 115:8 126:17 130:22 132:12 137:4 143:3 147:21 150:17 153:21 155:7 157:9 164:17 165:12 168:6 171:6 172:25 174:13 177:7 179:6 relate 159:16 related 49:18 55:8 57:21 71:12 relates 156:20 157:20 relating 62:6 71:4 72:17 167:1,5 relative 36:9 69:25 83:7,15,21 84:13 94:8 97:19 105:8 116:9 127:22 181:14,16 relevant 19:11 30:20 34:2 36:2 relied 157:12 rely 25:21 remark 156:7 remember 18:13 69:5,15 79:5 80:2 81:19 84:2,22 87:4 88:6 remove 57:14 110:16
reach 41:6 51:17 118:1 reaching 12:12 106:12 reaction 103:10,13 read 157:9,20 readily 22:21 31:13 reading 155:10 160:7 realize 50:7 really 17:13 30:16 164:10 reason 39:22 42:4 42:15 51:5 79:17 80:22 81:6 85:25 91:18 136:13 138:17 139:3,18 140:10,15 141:4,5,7 141:24 142:12,15 reasonably 144:14 145:15 reasoning 24:12 reasons 41:23 42:2 42:24 43:2 88:22 89:21 recall 34:9 65:5 69:16 77:17 78:2,4 86:11 97:14,17 104:25 105:3 108:12 116:6 143:5 155:2 159:24 171:1 172:4 175:8,11,13 177:15 receded 26:16 49:19 51:2 55:4 receive 38:16 received 7:4,6 25:17 63:1 74:7 75:7 76:4	recoil 134:16 recollection 71:10 72:19 77:23 169:5 recommendations 21:24 22:2 73:1 record 43:11 50:4 80:11 81:5 140:19 recorded 181:7 recross 2:24 179:4 rectangle 61:8 62:2 144:14 rectangular 26:17 27:24 55:8,13,14,24 60:15 61:4,14 108:25 109:4,6,9,11 109:15 110:6,8 111:3,15 112:20 113:7,16,18 114:9 114:13,19,22 120:22,24,24 121:1 121:11,14,24,25 122:11,20 123:7,9 123:20 124:6,15,18 125:2,21 126:6,7,14 126:19,25 127:4 144:10,18 154:13 154:20 redesigning 116:7 redirect 2:23 177:9 reduce 46:24 47:19 47:19 50:15 53:13		

<p>removed 56:19 render 6:12,15 22:14 24:17 130:3 rendered 62:18 rendering 25:21 renewal 8:6 replacement 38:19 report 155:24 reported 1:16 reporter 6:8 7:1 147:17 181:5 reporting 21:15 reports 23:12,17 155:17 represent 97:3 representatives 24:5 request 117:8 require 40:21 52:8 58:10,25 117:7 149:4 158:17 159:4 165:2 177:24 178:17 required 15:10 30:16,17 requirement 16:5 requirements 8:1,5 24:10,14 36:14 160:15,18,19 requires 51:1 162:23 163:12,25 requiring 85:18,20 179:13 180:6 research 10:5,6,8,16 13:4 14:16 17:11 21:16 64:2 66:19,21 66:22,24 67:1,3,4 67:11 70:6,15 71:25 73:19 74:13,17,20 74:24 75:5,14,17,19 76:1,3 researchers 10:9 resemble 28:21 176:2,3 respect 29:13 35:16 37:4 53:1 57:4 58:1</p>	<p>62:11 133:18,22 134:7 152:21 170:23 responsibility 21:23 rest 41:1,2 110:17 110:21 restrict 148:25 149:2,19 restricting 152:8 restricts 149:12 result 8:2 27:25 30:9 30:15 46:1 47:12 56:22 57:9,17 60:3 79:19 resulted 75:12 results 21:12 retained 6:11 78:6 79:6 168:20 173:10 retaining 114:17 retains 82:5 retention 62:22 75:10 revealed 29:20 review 25:19 28:4 34:19 35:6,15 36:1 65:16 reviewed 3:6 22:20 23:10,18,21 26:1 33:6 34:8 35:14 62:20 63:1,8 161:3 167:13 rewind 53:16 134:13 rewinds 53:23 rib 26:18 55:9,14 56:23 57:5 163:5,6 163:19 164:19 176:21 ribs 132:23 133:1,9 right 22:15 23:14 24:6 26:13 38:25 39:3,6 40:4,8 42:5 42:15 43:4,11,16,22 47:8,17 48:8,11 50:18 54:5 57:24</p>	<p>63:5 64:15,19,24 66:14,17 67:5,19 68:14,16 69:7 70:3 70:10,16 71:4,8 73:4,21 74:10,11 75:3,19 77:19 80:16 81:5 82:21 93:5 97:19 98:2 99:16 104:17 105:8,12,21 106:7,14,17,19 107:4,7 108:5 109:23 111:15 112:1,6,6,11,17 113:4,4 118:8 119:23 133:10 137:2,19 138:18,20 139:4 140:10 141:11,16,19,24 142:14 143:19 144:3,5,22 145:12 146:7 149:6 150:8 150:12,19 151:10 153:13 155:11 157:10,17 159:12 159:14 160:5 161:4 161:7,18 162:1,24 164:24 166:6 167:6 168:21 169:1,18 171:20 172:5,17,21 173:16 175:12 176:19 177:18,23 178:2 179:8,12 risk 42:13 rmr 1:16 road 6:10 role 70:1,5 155:18 155:25 room 120:16 150:9 150:19 151:3,10,14 rotated 134:18 roughly 28:17,22 55:13,25 60:24 112:20 113:7,16,18 114:19,22 121:25 143:13,19 144:18</p>	<p>rounded 61:5 62:4 99:15 100:2,11,13 100:20 104:5 120:19,19,25 123:2 rounding 124:17 run 17:12 42:12 107:25 runs 105:18 106:3</p> <p style="text-align: center;">s</p> <p>s 2:1 3:1 6:1,9 s.c. 1:12 2:6 181:10 s63-32344 34:2 s6322344 160:24 161:14 162:14 163:12 safety 42:15 43:2 49:11 54:24 55:1 sales 117:10,10 san 2:3 saying 18:13 75:23 141:2,5 says 156:19 158:8 168:23 169:1,21 171:7,14 172:6 173:16,22 174:14 175:14 school 6:25 7:20 science 7:6 19:25 75:8 scope 170:15 seal 181:20 seam 108:11,15,20 114:17,23 seares 2:11 second 2:3 26:12 41:11 section 42:7 74:24 146:3 sections 146:2 see 25:14 27:24 53:16,19 61:16 62:3 66:1,7,11 67:12 74:21,25 78:22 87:2 88:4 90:3 91:25</p>
---	---	--	--

92:23 95:8 101:8 102:19,25 103:5 104:18 107:14,15 108:14 109:24 121:3 127:9 128:4 131:10 139:18 140:15 141:6 152:4 156:16,19,25 158:8 158:12 164:2,11,19 165:15 167:16 168:7,14,23 169:2 169:18,23 170:3 171:8,23,25 172:2,8 172:14 173:3 174:15 175:5,14 seeing 77:20 135:18 seek 25:21 166:14 seeking 77:6 seen 10:20 77:18,21 77:24 78:2 79:5 80:2 81:19 84:2,22 86:11 87:4,13,17 88:6,19 89:6 90:5 91:3 92:2 93:1,25 95:11 98:22,23 99:3 99:7 117:10 118:10 118:14 133:8,11 136:25 160:4 169:4 173:19 175:12 semester 10:6 15:13 senior 2:15 13:9 65:1 sense 69:9 separate 132:16 serial 1:7 serve 133:1,2,10 served 99:20 serves 109:3 128:3 138:12 service 10:10 set 15:13 17:22 41:25 68:13 181:19 seth 2:2 seven 17:14 26:6 172:10 175:18	shaft 11:6 12:2,4,5,6 12:7,8 14:19 20:16 20:19 69:17,20 70:12,16 71:13 73:18 79:3 96:9 98:25 99:9 104:1 105:11 106:5 116:22 130:24 135:22 148:21 153:22 154:6,13,20 167:2,6 169:15 170:6 172:16,18 174:5,6 shape 11:24 26:17 26:19 28:17,20 55:8 55:14 56:16,17 57:5 57:8,16,23 58:2,4 58:18,19 61:4,5 62:6 98:5,7 100:4 100:10,12,13,19 109:15 110:6,8 114:9,19 115:17,20 119:20 120:2,14,15 120:21,22,23,24 121:11,14,25 123:7 123:9 124:19 126:7 126:25 131:7,11 136:8 141:12 143:16 144:15 165:24 176:20 shaped 59:5 60:21 60:22 sharing 43:8 sharper 137:23 sherring 2:4 shift 22:10 ship 32:3,14 shipping 32:4,5,8,11 short 109:9 115:5 shortly 78:6 show 10:19 35:11 160:21 163:4 showing 87:13 98:23 99:3 118:10 163:3	shown 26:3 27:7 29:14 30:18 31:18 32:15 33:6,21 35:5 35:16 36:2,4 37:5 38:10,13 39:19 49:22 50:11 51:22 52:22,24,25 53:3,5 53:18 54:12,14,22 55:4,9,15 58:2 60:24 61:9 62:12 79:18 80:23 81:7,24 82:9,25 83:7 84:6 85:1 88:10,16 93:16 96:11,21 98:15,17 124:9 128:2,10 133:9 134:16 159:5 162:24 163:8,13 164:1,19 165:20 169:22 170:10 172:7 173:23 174:2 175:16 177:21 side 26:14,15 36:21 40:4,8 41:6,7,17 42:5,8,16,16 43:1,4 43:12,12,16,17,22 44:2,6 46:20,22,24 47:7,8,17 48:8,8,11 48:15 49:16 50:12 50:14 51:24 52:1,25 82:23 96:17 97:22 102:2,8,9 104:6,17 105:12,21 106:7,14 106:18,19 107:4 108:5 112:11 113:4 113:4 116:20 118:7 118:23 121:21 122:17 123:3 124:2 124:18 133:13 134:23 136:1,2,6 138:18,19,20,20 139:12 141:16,16 141:19,20,22,25,25 142:5,13,16,23 144:22 146:4 150:8 150:13,19 151:11	151:23 152:5,15,24 153:10,13 169:1 176:19 sides 28:23,24 56:1 99:13,17,21 119:24 143:22 signature 181:23 significance 170:23 significant 11:2 75:25 significantly 40:23 similar 19:10 34:10 96:13,19 112:1 125:13 129:19 137:13 138:4,11,17 139:4,10,16 140:10 141:17 142:1 similarities 129:9 176:17,23 similarity 166:1 similarly 180:4 simple 8:16 simplicity 52:18 simply 50:9 site 59:18 sitting 69:5 78:1 103:11 situation 59:21 69:11 six 17:14 26:17 143:8 170:2 174:1 size 14:7 30:1 31:11 32:5 58:16 60:17,24 79:15 98:5,5 99:2,5 131:3 138:23 140:5 143:9,23 144:1,23 169:10 179:17 180:1 sized 172:19 174:7 sizes 31:10 skills 20:5,10 slant 39:2,7,9 97:21 97:25 98:12,24 99:3 142:22
---	---	--	--

<p>slanted 26:12 37:3,4 37:7 38:14 39:2,15 39:19 104:11</p> <p>slight 113:3 129:17</p> <p>slightly 45:18,19 108:15 145:4 146:17 147:16 152:11,25 165:13 179:8</p> <p>small 9:5 11:21,24 16:25 17:2,5,16,19 17:20,21,23 18:9,10 18:24 19:1,9,10,12 19:21 20:9 21:2 30:4,12 36:14 59:15 70:6 73:14,15,16,19 73:22 74:1,5,18 76:5,13,16 98:4 130:20 133:6 139:2 141:3</p> <p>smaller 31:5,7 32:3 32:4,6 47:3 179:18 180:9</p> <p>smith 2:2</p> <p>sold 19:1</p> <p>sole 73:5</p> <p>solely 72:24 73:5</p> <p>solid 149:14</p> <p>somebody 27:18</p> <p>someplace 51:6</p> <p>somewhat 149:23 153:5</p> <p>soon 179:17</p> <p>sorry 67:21</p> <p>sort 15:17,22 34:15 38:2</p> <p>sorts 18:1</p> <p>sought 167:1</p> <p>sounds 74:11</p> <p>sources 29:20</p> <p>sp170 4:1 89:4</p> <p>space 29:8 30:12 43:1,8</p> <p>speak 24:6,15 152:1 176:15</p>	<p>speaks 170:14</p> <p>special 14:14 15:11</p> <p>specialized 12:17,21</p> <p>specific 7:2 22:8 49:20 63:22 64:11 69:19 77:23 79:13 79:25 80:17 81:12 82:2 83:4,12 84:9 98:3 114:4 142:20 144:17 150:2 151:17 152:13 155:18</p> <p>specifically 6:15 12:7 31:11 63:24 64:14 87:7 97:17 104:25</p> <p>speed 113:20</p> <p>spend 32:10</p> <p>spent 9:14 22:12</p> <p>spillage 42:11</p> <p>spiral 37:17,17</p> <p>split 74:2</p> <p>spoken 118:18,21 119:5</p> <p>spots 60:3</p> <p>spread 60:23</p> <p>spreading 58:24</p> <p>spreads 82:23</p> <p>spring 11:1</p> <p>square 27:16,17,19 29:4,5,6 121:1 144:9,15,17</p> <p>ss 181:2</p> <p>st 1:16 181:4,24</p> <p>stabilize 178:3</p> <p>standpoint 15:3 27:4,5 29:18 41:9 43:3 48:4 55:20,24 56:7,24,25 61:18 98:21</p> <p>start 51:16 53:24 59:25 179:20</p> <p>started 9:18,21 17:12 66:16</p>	<p>starter 53:17,21 150:23</p> <p>starting 22:17 27:8 54:2 74:23 112:14 134:13 158:8 159:4</p> <p>state 2:12 7:24 8:4 17:22,24 18:7,18 40:5 73:20,23,25 181:2,5,24</p> <p>stated 33:16</p> <p>statement 102:17 103:12 158:17 159:3</p> <p>statements 34:22</p> <p>states 1:1 4:23,25 5:2,4 35:21 168:7 171:7,10,14 173:3 174:14,17</p> <p>status 16:10</p> <p>stay 17:25</p> <p>step 75:8</p> <p>stepped 112:14</p> <p>steven 33:12</p> <p>sticker 103:1</p> <p>stipulation 164:9</p> <p>stop 12:11</p> <p>stopped 56:6</p> <p>storage 151:13</p> <p>story 16:10</p> <p>stoughton 18:15</p> <p>straight 28:1,22,23 28:23 29:4 57:9,11 57:18 99:14,17,22 102:1,2 104:7 146:3 147:16</p> <p>stratton 1:3 2:5 3:16 4:3 6:12 18:11 22:23 23:25 24:7,16 25:18 29:24 76:13 78:5 83:25 111:6 168:17 169:13 170:9 171:19</p> <p>stream 49:1 51:12 51:15</p>	<p>street 1:13 2:3,7,12 181:11</p> <p>strike 98:22 108:18 108:23 116:14 132:12 134:21 146:11 169:25</p> <p>strong 109:3</p> <p>structure 57:20 60:15,15,16,17 61:6 61:7 120:25,25 151:1</p> <p>student 7:22 9:11 97:15,16</p> <p>students 10:8 13:3 13:11,12,17 14:14 14:20,21,24 15:4,9 15:10,14,16,25 19:4 21:18,20,21,24 73:1 75:11 116:7</p> <p>studied 70:19</p> <p>studies 16:21</p> <p>study 7:20 15:7 16:13 21:17 63:19 63:24,25 64:4,8,11 64:14,22 66:4 75:10</p> <p>studying 14:25 17:1 18:1,3 36:6 71:14</p> <p>styling 103:25 114:12,16,22 126:18 127:3 130:23 131:5 135:21 137:12,22 138:3 141:15 142:4 153:24 154:14</p> <p>subaru 3:18,20 4:1 84:19 86:8 89:4 101:14 111:17 112:22</p> <p>subheading 156:16</p> <p>subject 7:10,11,11 11:5 137:2 157:3 158:21 165:7</p> <p>subsequent 47:16</p> <p>subsequently 46:17 76:23</p>
--	---	---	--

substance 65:22	systems 9:2 30:6	139:6,12,19 140:2,6	136:12 137:21
substantially 177:25	t	140:12 141:4,16,20	138:3 143:3 155:1,9
succeed 13:19	t 3:1 181:1,1	141:25 146:5,10,13	156:9 159:23
successfully 27:2	take 8:8 13:14 25:2	146:20 147:3 148:3	testimony 6:13,16
sucked 48:2	29:2,7 35:12 49:24	149:1,5,13,22 150:3	55:7 57:21 108:10
sufficient 59:3	61:13 63:7 115:4	150:9,19 151:2,3,10	115:12 118:6
suitable 96:12	121:14 147:21	151:18 153:13	120:10 133:12,18
suite 1:13 2:7	177:5	156:22 157:25	133:22 134:19
181:11	taken 1:12 13:10	163:4 176:22	137:17 141:14
summer 9:16	21:16 43:2 50:2	177:18,22 178:14	142:3 143:25 145:9
superficial 126:23	98:8,9 102:16 115:6	179:8,12	155:1 159:23
supervise 21:23	147:15 177:6	tanks 56:11 105:8	160:25 161:13
supervision 22:2	181:10	107:10 109:6	163:21 166:11
supplementing	talk 9:11 27:6 34:15	113:24 114:7	168:21 173:11
164:20	50:5 120:9 166:12	taught 14:9,11	175:8
supplier 32:11	178:10	20:10	text 34:21
support 33:13	talked 9:10 24:2	teach 12:24 13:2,12	textbooks 13:1
177:24 178:3,9,17	70:1 71:19 73:13	67:21,24 68:6	thank 55:2 177:8
179:13 180:6	108:10 115:12	teaching 10:4,5,6	thanks 179:3
supported 73:25	160:24 166:11	13:25 68:3 69:1	thermal 19:23
178:25	talking 115:9	technical 13:9	thermodynamics
supporting 17:11	144:15 161:20	technically 168:13	9:1
33:9	tall 109:11 145:4,12	technology 18:1	theses 14:22
supports 156:11	taller 149:18	tell 16:8 24:1 26:23	thesis 7:10
161:14	tank 26:13,18,19	35:12 37:3 38:21	thing 57:7
supposed 10:7	27:22 40:3,7,13,15	94:6,10 101:20	things 32:23
sure 50:1 112:7	40:19,25 41:4,23	102:10 111:22	think 28:21 44:11
135:18	42:5,6,21 43:5,6,7	129:1 131:17,21	57:22 63:16 68:22
surface 53:12 58:15	43:21 44:6 55:8,9	132:7,9 147:12,14	70:9 73:13 76:12
59:2 101:2 145:25	55:14,15,25 56:8,14	148:13 151:1,4	93:23,24 105:17
146:2,18 148:24	56:17,23 57:5 82:20	temperatures 37:25	134:10 155:9
149:2,4,12,14 153:7	104:20,22 105:1,10	term 26:23,24 27:9	161:13
154:2	105:18 106:3,6,24	27:11 28:3,12 29:9	third 26:13 48:20
surfaces 30:10	107:3 108:4,11,16	43:11	thought 24:23,24
143:9,13,19 145:17	108:20,25 109:4,14	terms 21:6,7 22:18	32:13 157:15
146:13 147:3	109:16 110:2,3,12	32:11,25 33:1,2	thousands 37:21
surround 60:16	110:13,16,23 111:2	41:9 44:18 74:17	three 8:6 14:21
surrounding 59:16	111:8,9,14,18,19	85:1,7 118:4 120:14	21:21 28:16 29:2
surrounds 45:16,17	112:5,13,16,19,24	152:16 153:24	61:18,22 94:11
118:3	113:6,11,15,25	154:14	107:13 144:25
swirling 39:4	114:13,23 115:9,13	testified 6:4 19:23	tiller 4:17 147:23
sworn 6:3	115:17 123:15	22:5 25:13 63:17	time 11:9,9 19:2,8,8
system 30:14 31:22	136:9 137:13,23	65:4 76:12 116:12	21:7 22:12 25:4,5
52:14 156:23	138:5,12,19,21,23	116:15 117:22	35:21 46:1,2 49:3
157:19		119:19 134:10	60:4 64:8,23 65:10

<p>72:13,13 78:1 79:6 108:1 119:2 120:1 177:8</p> <p>timeframe 19:3</p> <p>times 14:11 16:3 37:21 44:18 59:22 69:1 100:17 144:25</p> <p>tip 178:14</p> <p>title 168:14 171:16 173:6 174:20</p> <p>today 22:5 69:5,15 72:1 78:1 103:11 155:21 172:2</p> <p>told 118:19</p> <p>tolerate 38:19</p> <p>top 28:23,23 39:3 41:5,8,17,20,21 42:2,23 43:4 47:22 48:5,21 56:2,12 82:22 88:2,10,17 99:13,17,21,25 102:2 104:6,17 106:11 111:23 112:4 116:19 117:5 117:8,11,23 119:6 123:2 131:23 141:15,19,24 144:2 144:4,23 145:25 146:2,12,18 147:3 147:16 148:24 149:2,4,12 153:7 169:1 173:16 180:1</p> <p>topical 8:25</p> <p>topics 22:10</p> <p>tops 28:24</p> <p>torque 178:7,8,10</p> <p>total 7:16</p> <p>totaled 74:10</p> <p>touching 101:2,4</p> <p>trademark 1:1,2 6:13,16 11:13 22:24 26:7 27:7 29:14 30:20 31:18 32:16 33:11,21 34:11 35:5 36:4 37:2,5,9 38:12</p>	<p>38:13 39:20 40:2,6 43:13,14,15,23 44:1 48:16,17 49:16,21 50:11,24 51:22 52:22,24 53:2,3,5 53:18 54:23 55:9,15 57:6,22 58:3,6,14 60:25 61:9 62:7,12 62:12,15,16 77:2 81:25 82:4,10,16 94:4,9 97:4 98:8,15 98:17 104:7,16 137:5 143:4 156:13 170:24</p> <p>trademarks 26:3</p> <p>train 32:13</p> <p>training 12:16,20</p> <p>transcript 5:9,11 65:17,19 66:1</p> <p>transcripts 63:5,7,9</p> <p>transfer 9:1 19:23</p> <p>translated 160:10</p> <p>translation 161:21 161:25</p> <p>transmit 52:9 54:17</p> <p>trial 1:2 78:15,16 147:18 168:6</p> <p>tricky 17:7</p> <p>trivial 110:18</p> <p>truck 16:16</p> <p>true 118:6 178:20 178:22</p> <p>truthfully 65:13</p> <p>try 32:23 138:25</p> <p>trying 24:13,23 42:18 45:4,5 52:11 55:22 138:22,22</p> <p>turn 63:12 65:25 67:8 77:4 81:14 83:23 84:18 86:7 87:1 88:1 89:3 90:2 90:25 91:24 92:23 95:7 101:6,14 102:18 103:16,20 110:9 112:22 115:3</p>	<p>121:3 127:9 128:7 140:7 152:23 156:15 169:25 170:5 174:4 175:21</p> <p>two 10:6 11:21 21:11,17 24:4 27:14 41:23 42:2 56:12,13 56:18,19,20 57:2,2 60:13 61:7,15 72:17 75:12,16 80:20 94:11 110:19 114:18 140:3 176:24 179:12,14</p> <p>type 25:20 29:24 46:10 61:11,13 71:17 117:14,18 122:7,8 143:16 148:13</p> <p>types 21:8 41:16</p> <p>typically 13:6 14:23 25:21 169:13</p> <p style="text-align: center;">u</p> <p>um 102:24</p> <p>undergraduate 7:19 14:13,20 21:21 63:21,25 64:6,9,15 64:17,24 71:25</p> <p>understand 11:4,9 11:13 24:9,11,24 28:14 44:10 77:1,5 77:8 80:11 83:24 84:19 89:3 90:25 97:6 134:16 137:4 137:11,16,21 141:14 142:3 149:8 157:2 158:17 159:3 166:17 168:10 170:9 171:10 174:17,24 175:1,23</p> <p>understanding 24:22 27:9,11 28:2 28:4,7,12 29:9,10 143:7 155:18,21,25 156:3 158:22</p>	<p>159:20 165:8</p> <p>understood 157:15 157:15 164:16</p> <p>undesirable 53:15</p> <p>united 1:1 4:23,25 5:2,4 35:21 168:7 171:7,10,14 173:3 174:13,17</p> <p>university 7:5,7,9 9:16,19 68:3 70:3</p> <p>unobstructed 142:6</p> <p>updates 21:10</p> <p>upper 82:20</p> <p>upward 54:2,3</p> <p>upwards 54:3</p> <p>use 16:12,13,17 19:21 27:2,11 28:3 28:12 29:8,9 31:22 31:24 40:18,21 56:1 61:21 73:3,10 96:16 158:23</p> <p>uses 16:16 27:9 132:14</p> <p>usually 10:5 33:17 37:21 45:17 158:9</p> <p>utility 11:10,16,18 11:21 12:5 13:5 14:1,6,19 17:3 20:19 22:8 25:23 33:23,23 34:4,7 36:15 41:16 59:10 59:12 61:17 70:6,12 73:11 96:9 98:25 99:9 104:1 106:6 116:23 148:21 153:22 154:6,13,20 155:2,19 156:1 160:1,13,16,19,23 161:2,25 166:12 167:2,6,8,19 169:8 169:15 170:6 172:16,19 174:5,7 180:1</p> <p>utilizing 30:12</p>
--	---	---	--

uw 18:2	129:1 145:21	we've 36:25 41:23	91:10,16,22 92:9,15
uwm 10:3,13 13:7	147:10,16 156:11	49:23 51:25 69:24	92:21 93:7,13,19
v	164:10 170:5,10	96:7 97:4	94:6,18,24 95:5,18
vacuum 46:4	172:13 174:4,6	website 29:22	95:24 96:5,15 104:3
valve 11:6 12:2,9	176:5	websites 35:19,23	106:9 107:6,22
41:7 46:3,9,17,19	viewed 61:14 134:6	weight 11:23 32:14	108:8 109:2 110:16
50:17 51:9,11,19,22	144:9	40:22 178:13	110:25 111:12,22
52:4	viewing 36:6	wells 1:13 181:11	113:2,13,17 114:3
valves 12:10,13	villanova 7:5	went 35:23	114:15 115:1
vanguard 3:22 87:2	vinita 2:11	whdlaw.com 2:9	117:20 121:9,21
105:25	vinita.ferrera 2:13	whereof 181:19	122:6,17 123:1,15
vans 16:19	visible 158:3	whichever 109:21	124:2,13,25 125:11
vapor 156:21,22	vitae 3:4 10:23,24	whyte 1:12 2:6	126:3,12,21 127:7
variety 11:23 20:12	16:6	181:10	128:13,25 129:8,17
31:10 103:25	volume 12:13 45:1,1	wide 20:11 109:9	130:1,10,19 131:2
114:12,21 126:18	56:2 58:17 106:22	145:5,12	131:10,21 133:16
126:22 127:3	107:11,19 138:23	width 60:25 61:3	135:24 136:21
130:23 135:20	139:1 140:2	109:19 144:19	137:9,16 138:1,8,15
various 16:14 23:9	volumetric 44:20	wilmer 2:10	139:9,22 141:19
29:6 42:19,20	45:7,8,10 55:23	wilmerhale.com	143:1 144:1,13
166:25	vs 1:6	2:13,14	145:1,7,14 146:16
vary 99:1	w	wisconsin 1:13 2:8	146:24 147:6 148:2
vehicles 16:20,22	walking 49:9	6:10 7:25 8:4 9:19	148:13 149:25
versatile 31:1	walls 45:22,24,25	17:16,19,21,23 18:7	150:22 152:3
versatility 30:20	60:1	18:24 19:12,21 20:8	153:18 154:1,10,17
version 97:3	want 30:4,5 46:10	68:3 70:3 73:14,19	154:24 157:7,24
versus 86:21 89:16	46:11,14,21,23 51:8	73:21,22,23,25 74:1	158:22 159:9,20
94:11 96:17 109:18	51:18 52:3,4,20	74:4,17 76:5,13,16	162:8,19 163:3,17
117:11 118:7,11	55:20,24 59:4 60:23	181:2,6,11,20,24	165:8,23 166:8,23
137:1 167:19	75:21 109:21 130:3	wish 15:15,20	171:1 176:2,8,17
vertical 12:6 14:19	136:12 149:18	withdraw 15:9	181:19
20:16 70:12 71:13	178:2	36:20 54:10 62:9	wondering 45:11
73:18 133:12 138:4	wanted 24:9,11	withstand 37:25	word 148:10 161:24
138:18,25 139:4,4,5	137:22 138:4	witness 2:19 6:2 9:8	words 161:19
139:10,10,14	wants 96:17	13:17 14:3 19:15	work 15:11 16:25
140:10,11,12 141:4	washer 4:20 59:20	20:2,21 22:7 23:10	17:20 18:23 19:11
vibrate 178:11	148:7 149:9,15	30:23 39:13 47:15	19:19 20:8,17,24
vibrations 9:2	151:9,13	69:9 72:4 76:8	21:5 22:16,20 23:11
178:12	way 26:25 29:1 30:7	79:13,22 80:9 81:2	23:13,22,25 33:18
vicky 1:16 181:4,24	31:4 35:18 38:4	81:11 82:2,12 83:3	41:12 59:17 70:18
view 20:4 61:7,8	41:25 56:10 59:11	83:10,19 84:9,16	70:23 71:6,10 72:15
94:7,11,12 101:20	60:13 119:17	85:4,11,17 86:4,18	73:17 157:10
107:14 110:6 114:7	147:14 149:15	86:24 87:11,17,24	158:10
116:13,16 122:20	151:6 152:20	88:13,19 89:1,13,19	worked 72:9
		89:25 90:11,17,23	

[working - years]

working 9:15 13:20 14:5,20,21 17:5,8 18:20 19:5,20 21:25 41:14 works 25:7 writing 14:22 181:7 wrote 155:16,16,24
x
x 2:18 3:1
y
y 6:10 yeah 99:23 138:21 171:15 year 11:1 18:9 21:17 67:19 years 7:16,20 8:7 9:24 14:16,19 17:9 17:14 20:23 21:17 21:19 22:16 41:13 74:13,19 76:6 97:16



EXHIBIT
Applicant
19
7-16-15
Reisel

EXHIBIT DC
91200932 (Parent)
Applicant 198
Reisel 5/2/15

Briggs & Stratton Corp. and
Kohler Co. v. Honda

AHGX0101287



Briggs & Stratton Corp. and
Kohler Co. v. Honda

EXHIBIT DC
91200832 (Parent)
Applicant 199
Reisel 5/21/15

EXHIBIT
91200832 (Parent)
Applicant 20
Reisel 7/16/15

4/4/12 2:34 PM



Briggs & Stratton Corp. and
Kohler Co. v. Honda

EXHIBIT
91200832 (Parent)
Applicant 21
Reisel 7/16/15

EXHIBIT DC
91200832 (Parent)
Applicant 200
Reisel 5/21/15



EXHIBIT DC
91200832 (Parent)
Applicant 201
Reisel 5/2/15

EXHIBIT
91200832 (Parent)
Applicant 22
Reisel 7/16/15

Briggs & Stratton Corp. and Kohler Co.
v. Honda

Applicant's Trial Exhibit No. 23

CONFIDENTIAL

ATTORNEYS' EYES ONLY

EXHIBIT

FILED UNDER SEAL

PigIronParts.com



Briggs & Stratton Corp. and
Kohler Co. v. Honda

EXHIBIT 0c
91200832 (Parent)
Applicant 203
Reisel 5/21/15
FENGLID 800-851-6889

EXHIBIT
91200832 (Parent)
Applicant 24
Reisel 7/16/15
tabbles

AHGX0101295

Applicant's Trial Exhibit No. 25

CONFIDENTIAL

ATTORNEYS' EYES ONLY

EXHIBIT

FILED UNDER SEAL



Briggs & Stratton Corp. and
Kohler Co. v. Honda

EXHIBIT DE
91200832 (Parent)
Applicant 205
Reisel 5/16/15

EXHIBIT
91200832 (Parent)
Applicant 24
Reisel 7/16/15



750 Series Utility Engine | Briggs & S...

www.briggsandstratton.com - 400 x 403 - Search by image
Utility Engine - 750 Series - Briggs and Stratton

Visit page View image

Related images



EXHIBIT
91200832 (Parent)
Applicant 27
Reisel 7/16/15

EXHIBIT DC
91200832 (Parent)
Applicant 206
Reisel 5/21/15



300 x 300 - amazon.com



Replacement Harbor Freight engine ...

www.lawnmowerforum.com - 1200 - 1200 - Search by image
The Predator 346cc QHV Horizontal Shaft Gas Engine 11HP
Certified for California

[Visit page](#) [View image](#)

Related images



[View more](#)

EXHIBIT
91200832 (Parent)
Applicant 28
Reisel 9/16/15

EXHIBIT DC
91200832 (Parent)
Applicant 207
Reisel 5/21/15



Search by Keyword or Model #



- FOR WORK
- FOR HOME
- FOR PLAY
- ALL PRODUCTS
- SALES & SERVICE
- WHY CHAMPION?
- SHOP

Home / Engines / Champion Series 196cc OHV Engine



Model #61151

CHAMPION SERIES 338CC OHV ENGINE

1 Year Limited Warranty

- Key switch electric start
- Easy pull recoil start
- Low oil shut-off

AVAILABLE AT THESE RETAILERS



FEATURES

PRODUCT SPECS

LITERATURE & DOWNLOADS

OVERVIEW

Briggs & Stratton Corp. and Kohler Co. v. Honda

The Champion 61151 gasoline powered, electric start, horizontal replacement engine provides reliable power for your small engine applications. The unit features an electric start 338cc

EXHIBIT
9120832 (Parent)
Applicant 29
Reisel 7/16/15

EXHIBIT DC
91200332 (Parent)
Applicant 209
Reisel 5/21/15

Lifan LF190F-BDQ 15 HP
420cc 4-Stroke OHV...



EXHIBIT
9120832 (Parent)
Applicant 30
Reisel 7/16/15

EXHIBIT DC
9120832 (Parent)
Applicant 208
Reisel 5/2/15



Briggs & Stratton Corp. and
Kohler Co. v. Honda

EXHIBIT
9120832 (Parent)
Applicant 31
Reisel 7/16/15

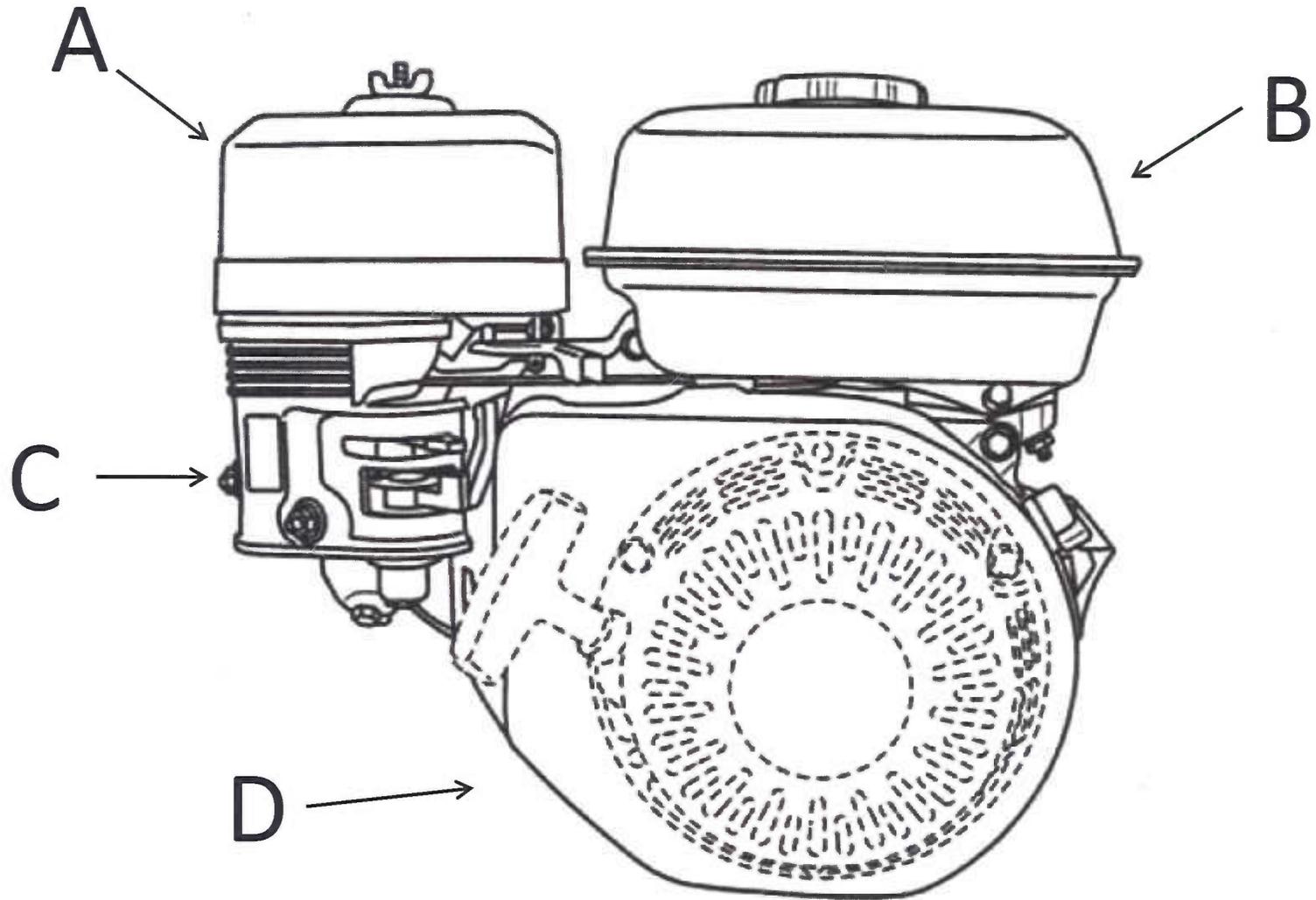
EXHIBIT DC
91200832 (Parent)
Applicant 210
Reisel 5/21/15



Briggs & Stratton Corp. and Kohler Co. v. Honda

EXHIBIT
9120832 (Parent)
Applicant 32
Reisel 7/14/15

EXHIBIT DC
9120832 (Parent)
Applicant 211
Reisel 5/21/15



Briggs & Stratton Corp. and Kohler Co. v. Honda

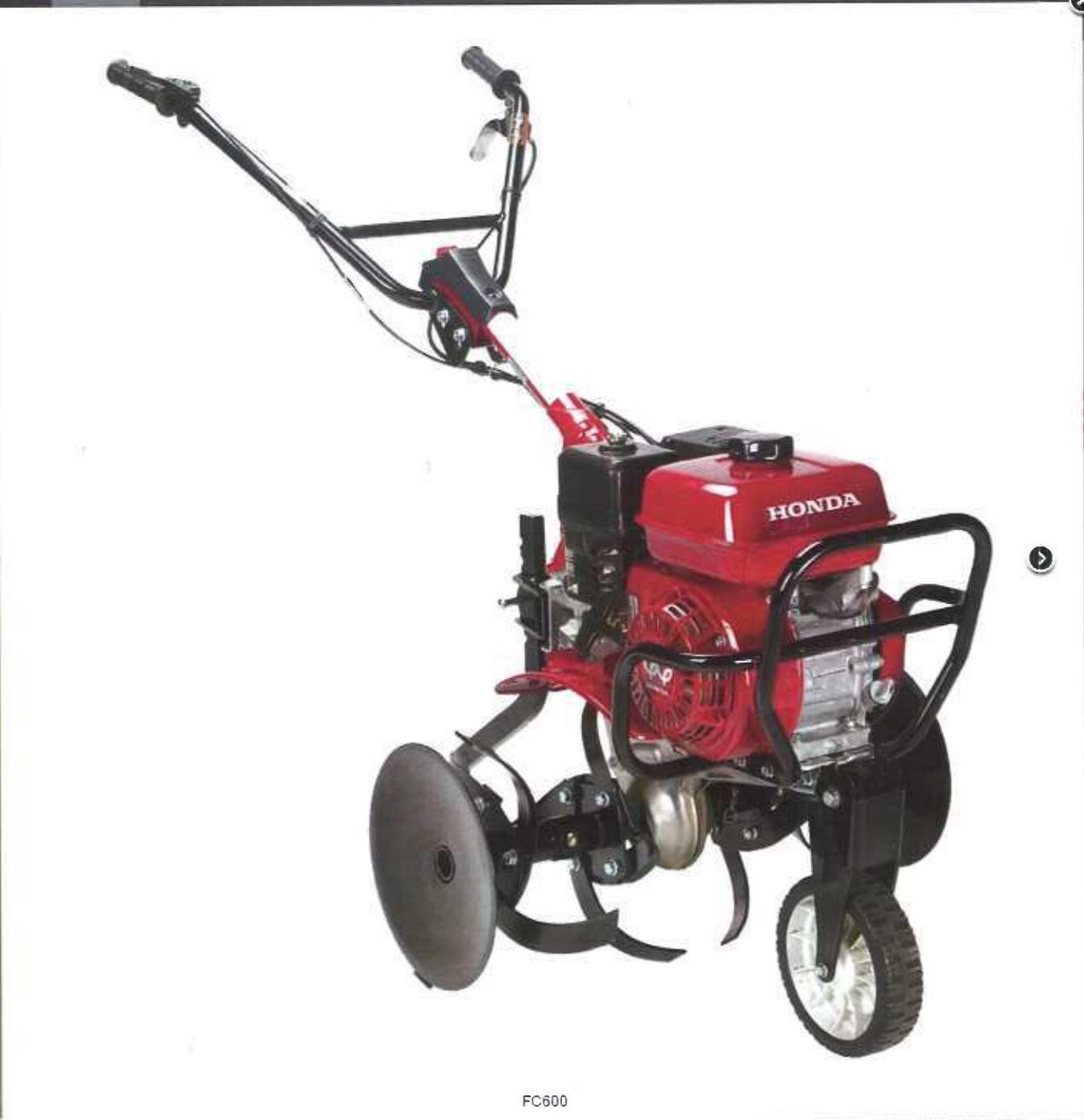
EXHIBIT
9120832 (Parent)
Applicant 33
Reiser 7/16/15

HONDA
Power
Equipme

Search

Find a Dealer

- Why Che
- Choosin
- Tilling T
- Fuel Rec
- Tiller Vid
- Support
- Accesso
- Dealer L
- Financi
- Special
- About U
- Brochur
- News
- Shows a



FC600

EXHIBIT
 9120832 (Parent)
 Applicant 34
 Reisc 7/16/15

PRO SITE

More saving. More doing.

Your State: South Bay/Boston #2679
Use Current Location or find store

Local Ad | Store Finder | Credit Center | Specials & Offers

Simpson Model # PS3228
Honda GX200 PowerShot 3200-PSI 2.8-GPM Gas Pressure Washer



Click Image to Zoom

Briggs & Stratton Corp. and Kohler Co. v. Honda

RELATED ITEMS | PRODUCT OVERVIEW | SPECIFICATIONS | RECOMMENDED ITEMS | CUSTOMER REVIEWS | SHIPPING & DELIVERY

MORE IN THIS COLLECTION FROM SIMPSON (2)

EXHIBIT
9120832 (Parent)
Applicant 35
Reset 7/16/15

Feedback

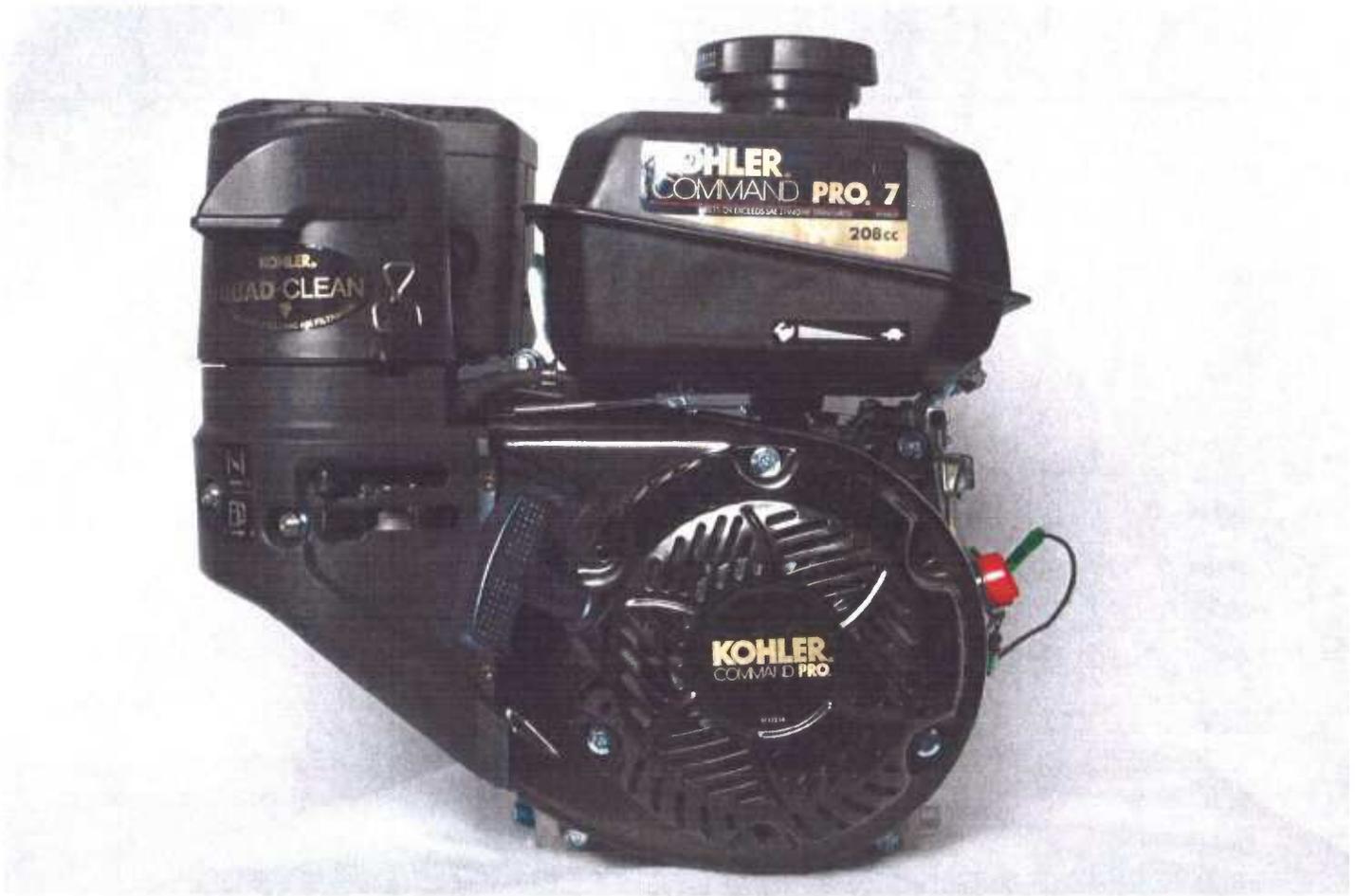


EXHIBIT
9120832 (Parent)
Applicant 36
Reisel 7/16/15

Briggs & Stratton Corp. and
Kohler Co. v. Honda

AHGX0102056

[54] INTERNAL COMBUSTION ENGINE

4,429,668 2/1984 Nakagawa et al. 123/56 R X

[75] Inventors: Gary S. Johnson, Racine; Thomas J. Green, West Bend, both of Wis.

OTHER PUBLICATIONS

Implement & Tractor, 2/21/79, p. 37, Kawasaki Engine Advertisement.

[73] Assignee: Briggs & Stratton Corporation, Wauwatosa, Wis.

Primary Examiner—Wallace R. Burke
Assistant Examiner—Brian N. Vinson
Attorney, Agent, or Firm—Andrus, Scales, Starke & Sawall

[**] Term: 14 Years

[21] Appl. No.: 182,743

[57] CLAIM

The ornamental design for an internal combustion engine, as shown.

[22] Filed: Apr. 18, 1988

[52] U.S. Cl. D15/1

[58] Field of Search D15/1, 3; 123/22, 50 R, 123/50 A, 50 B, 51 R, 51 A, 51 B, 52 R, 56 R, 56 A, 56 B, 65 R, 311

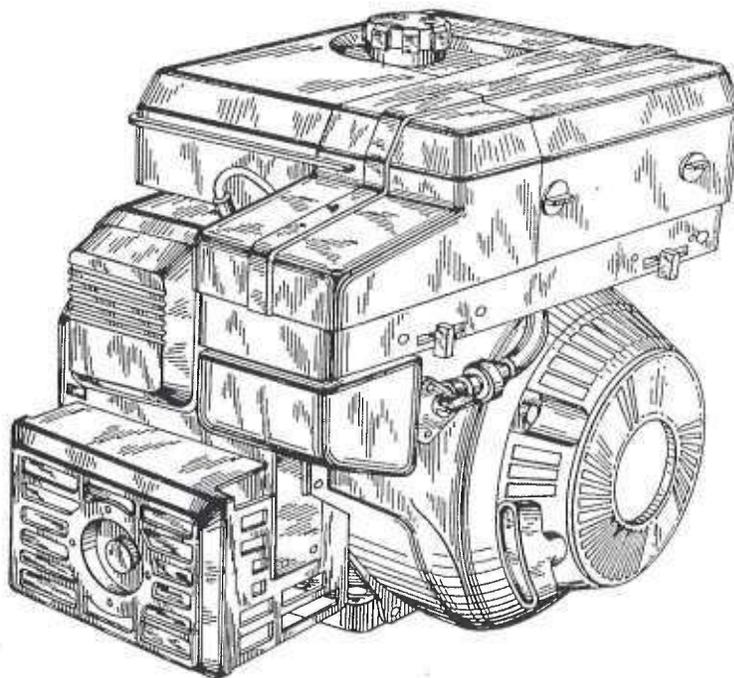
DESCRIPTION

FIG. 1 is a front elevational view of an internal combustion engine showing our new design; FIG. 2 is a rear elevational view thereof; FIG. 3 is a top plan view thereof; FIG. 4 is a left side elevational view thereof; FIG. 5 is a right side elevational view thereof; and FIG. 6 is a perspective view thereof.

[56] References Cited

U.S. PATENT DOCUMENTS

D. 247,177	2/1978	Stevens	.....	D15/1
D. 282,071	1/1986	Nakamura	.....	D15/1
D. 284,862	7/1986	Iida	.....	D15/1
D. 294,832	3/1988	Itou et al.	.....	D15/1



Briggs & Stratton Corp. and Kohler Co. v. Honda

EXHIBIT
 9120832 (Parent)
 Applicant 37
 Reistl 7/16/15

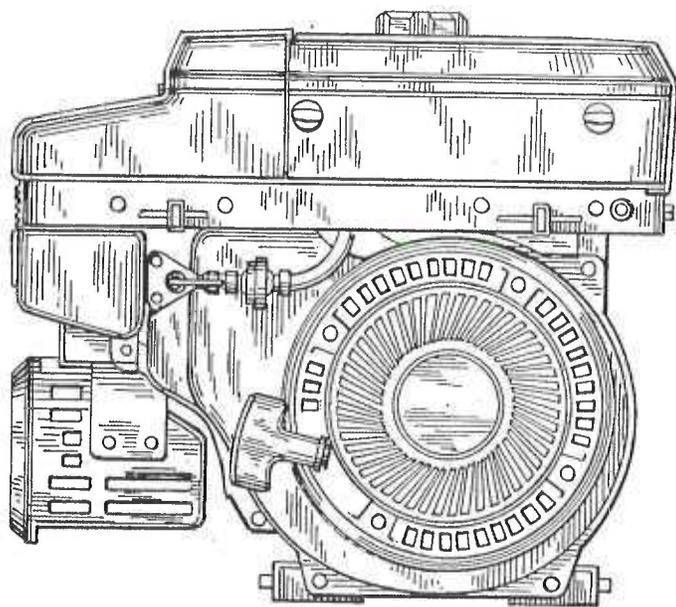


FIG. 1.

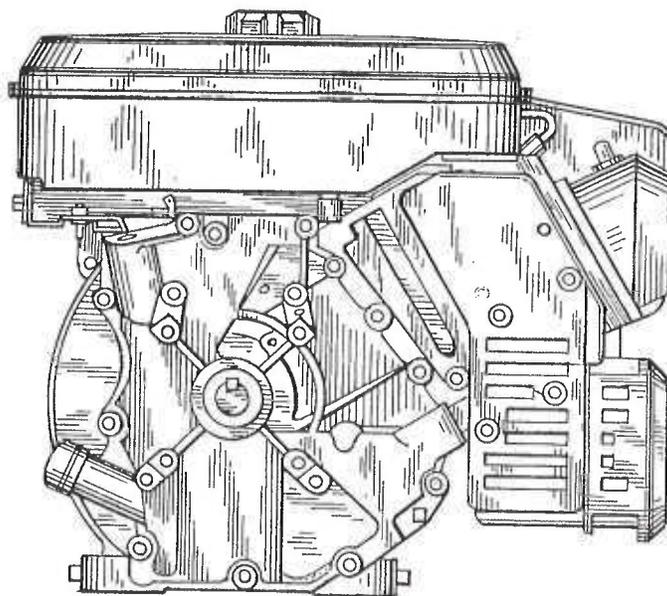


FIG. 2

FIG. 3

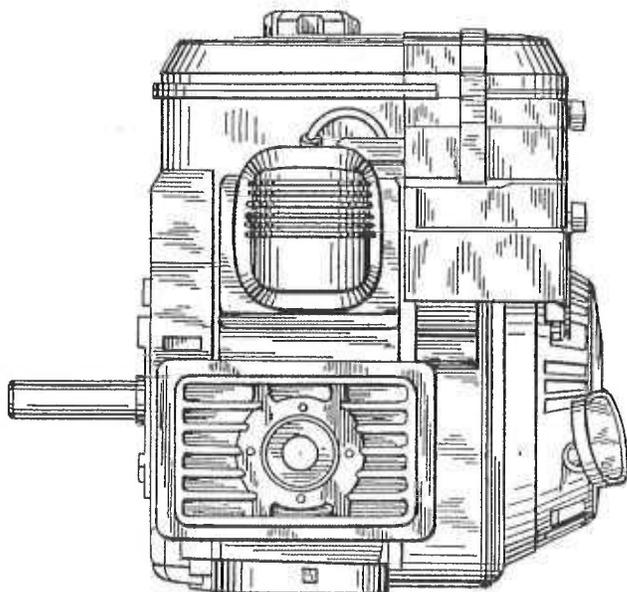
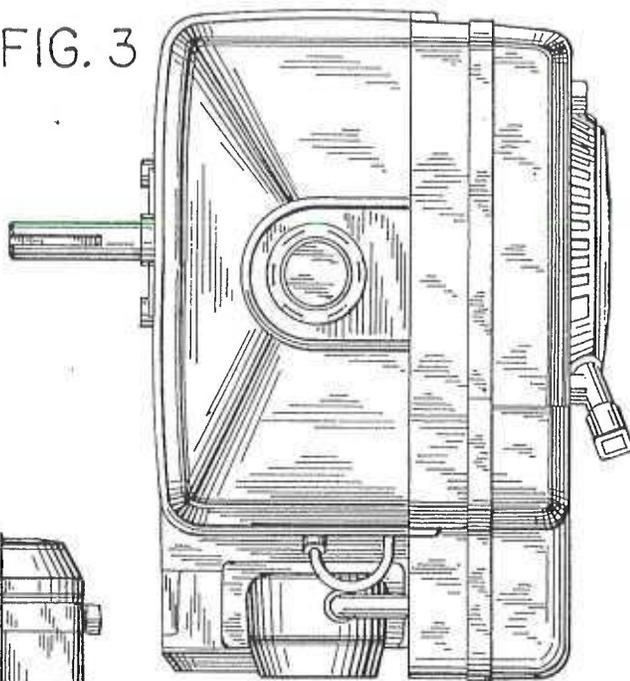
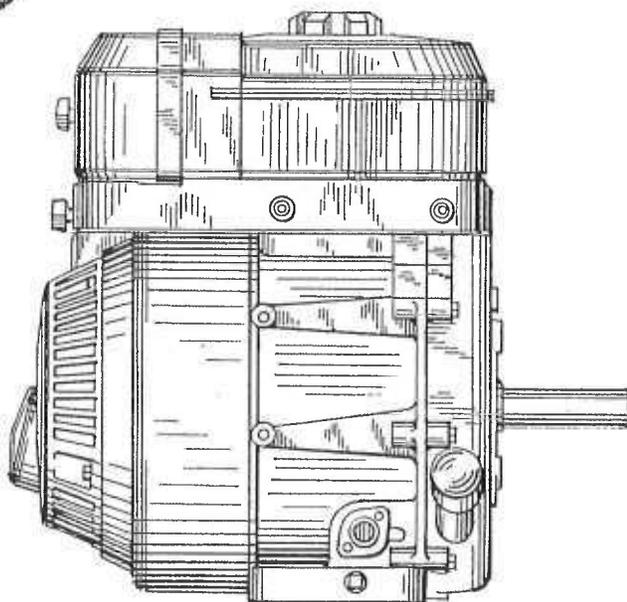


FIG. 4

FIG. 5



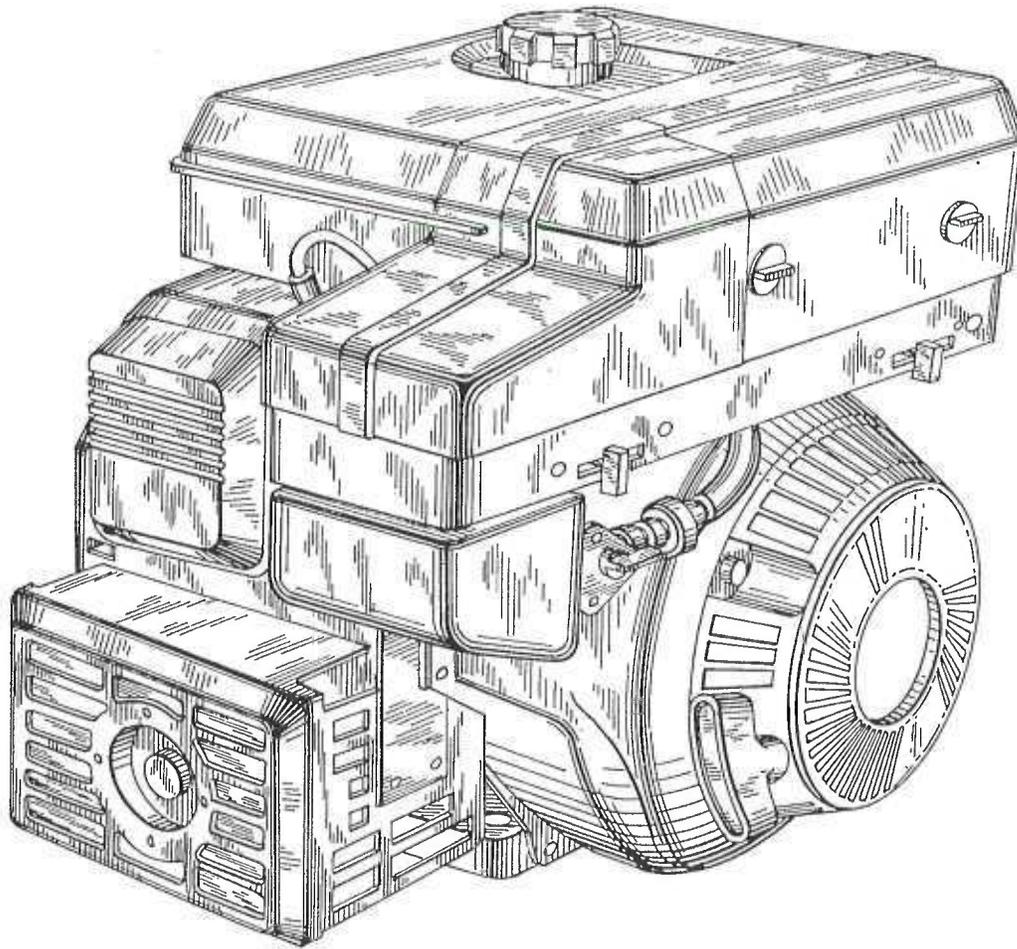


FIG. 6



US00D595737S

(12) **United States Design Patent**
Neeley et al.

(10) **Patent No.:** **US D595,737 S**
(45) **Date of Patent:** **** Jul. 7, 2009**

(54) **ENGINE**

D521,528 S * 5/2006 Kamijo et al. D15/1

(75) Inventors: **Brian D. Neeley**, West Bend, WI (US);
Bart Mayer, Fond du Lac, WI (US)

* cited by examiner

(73) Assignee: **Briggs & Stratton Corporation**,
Wauwatosa, WI (US)

Primary Examiner—Lisa P Lichtenstein
(74) *Attorney, Agent, or Firm*—Michael Best & Friedrich
LLP

(**) Term: **14 Years**

(57) **CLAIM**

(21) Appl. No.: **29/306,238**

We claim the ornamental design for an engine, as shown and described.

(22) Filed: **Apr. 4, 2008**

DESCRIPTION

(51) **LOC (9) CL.** **15-01**

FIG. 1 is a perspective view of an engine embodying the invention;

(52) **U.S. CL.** **D15/1**

FIG. 2 is a front view of the engine of FIG. 1;

(58) **Field of Classification Search** D15/1,

FIG. 3 is a first side view of the engine of FIG. 1;

D15/3, 5, 17; 123/50 A, 50 B, 50 R, 198 E,
123/306, 308, 667, 41.7, 70 R

FIG. 4 is a second side view opposite the first side view of the engine of FIG. 1;

See application file for complete search history.

FIG. 5 is a top view of the engine cover of FIG. 1;

(56) **References Cited**

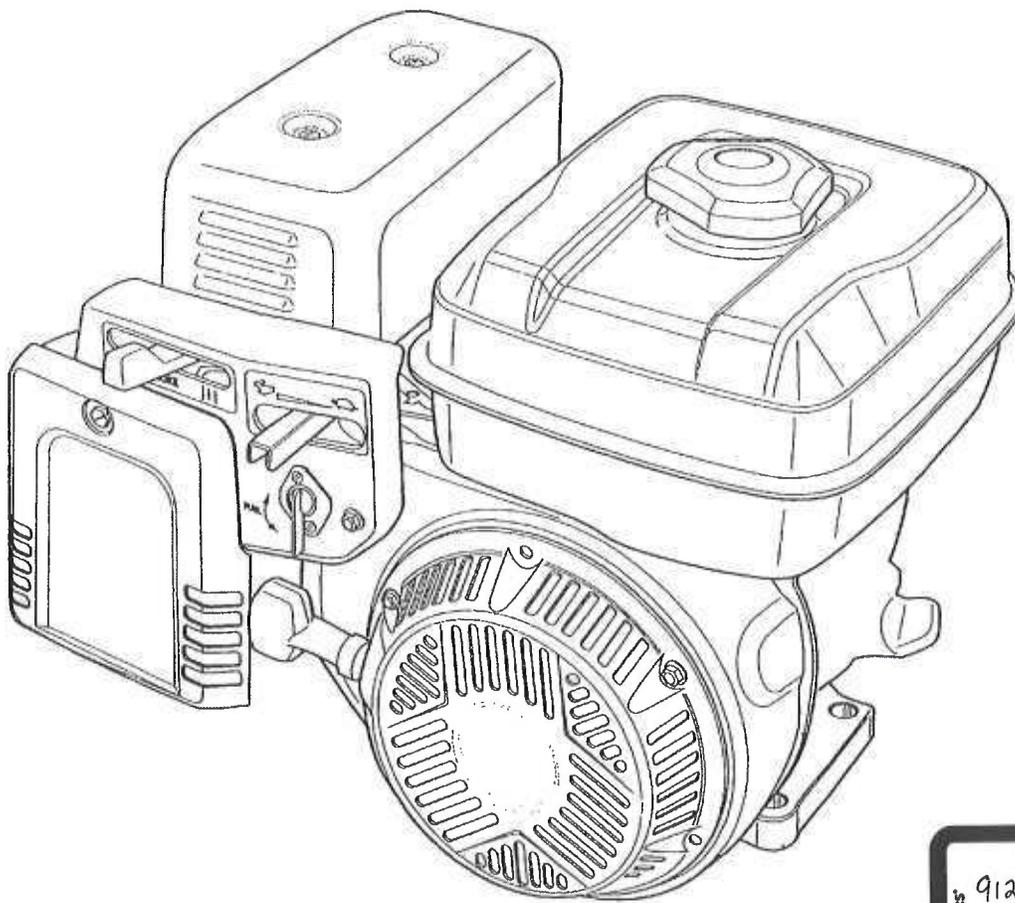
FIG. 6 is a bottom view of the engine cover of FIG. 1; and,

U.S. PATENT DOCUMENTS

FIG. 7 is a rear view of the engine cover of FIG. 1.

- D324,221 S * 2/1992 Kiyooka et al. D15/1
- D398,010 S * 9/1998 Yoshida et al. D15/1
- D515,589 S * 2/2006 Lin et al. D15/1

1 Claim, 7 Drawing Sheets



**Briggs & Stratton Corp. and
Kohler Co. v. Honda**

EXHIBIT
9120832 (Parent)
Applicant 38
Reisel 7/16/15

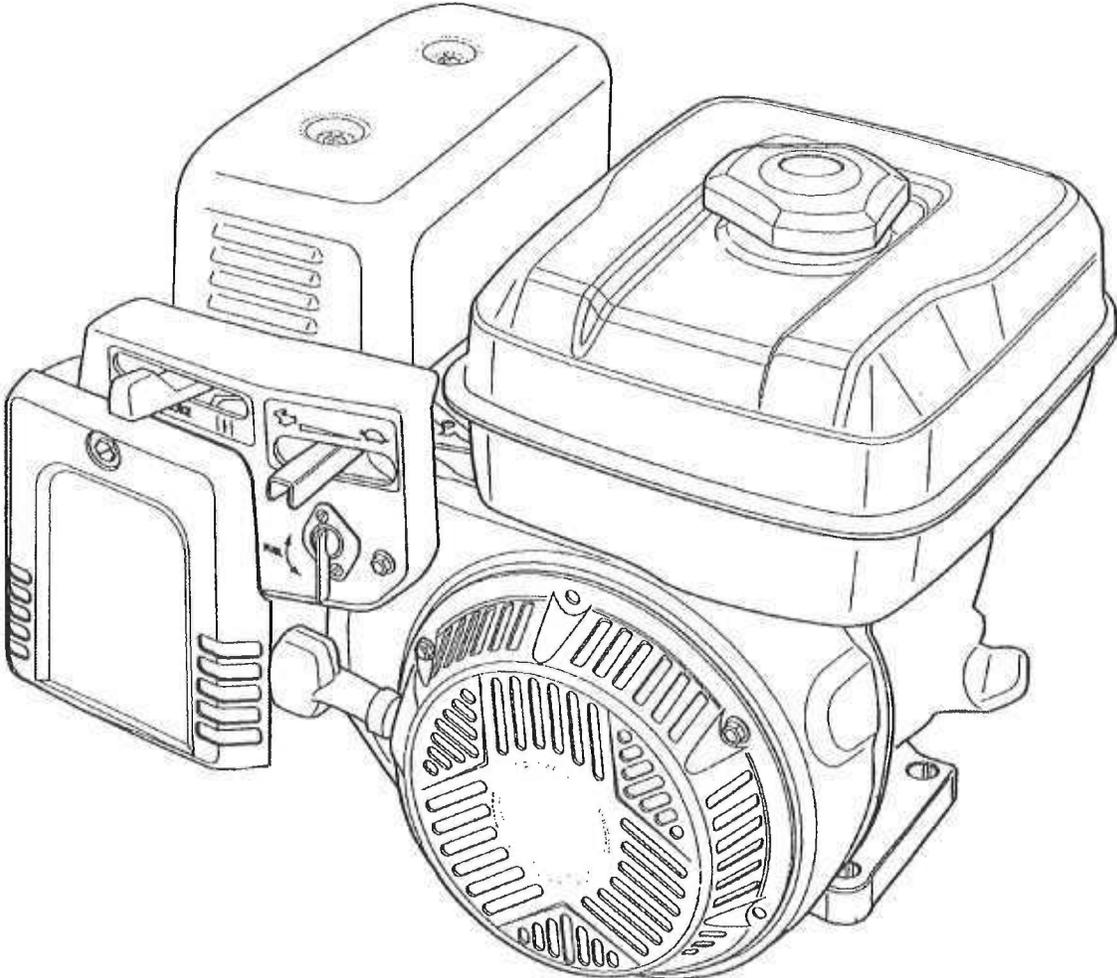


Fig. 1

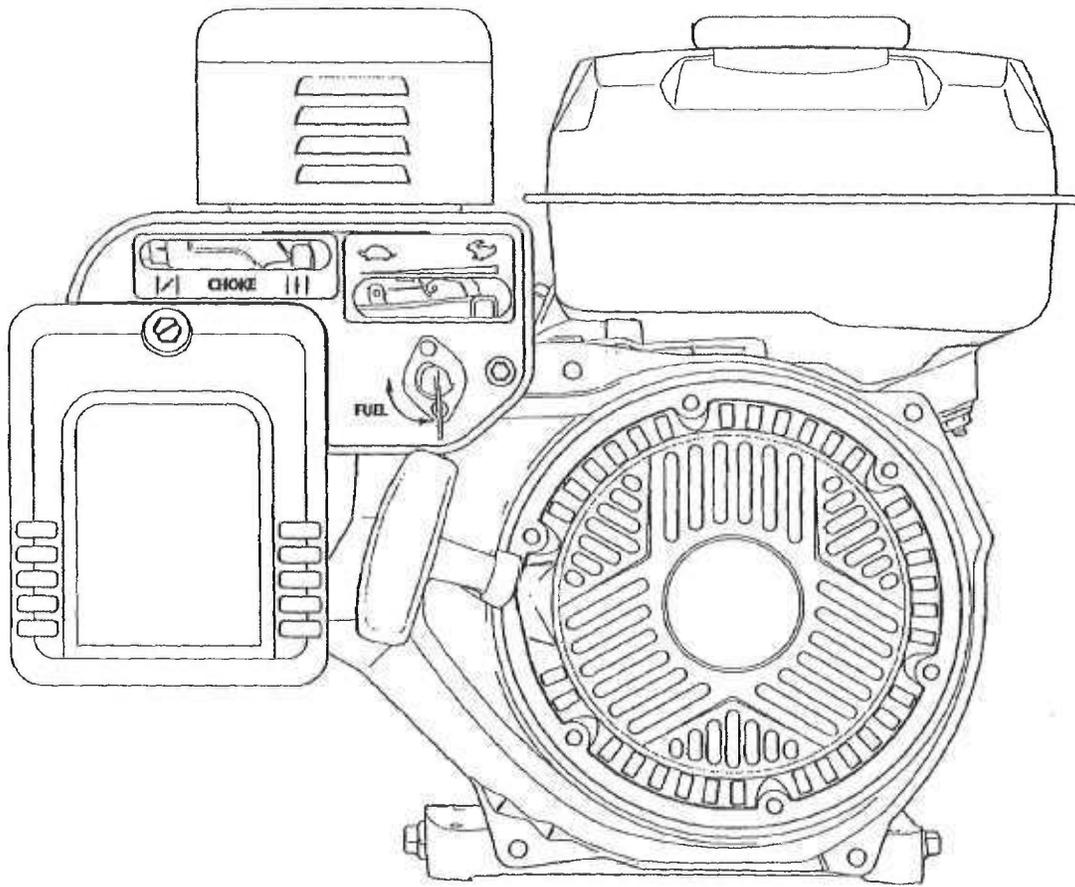


Fig. 2

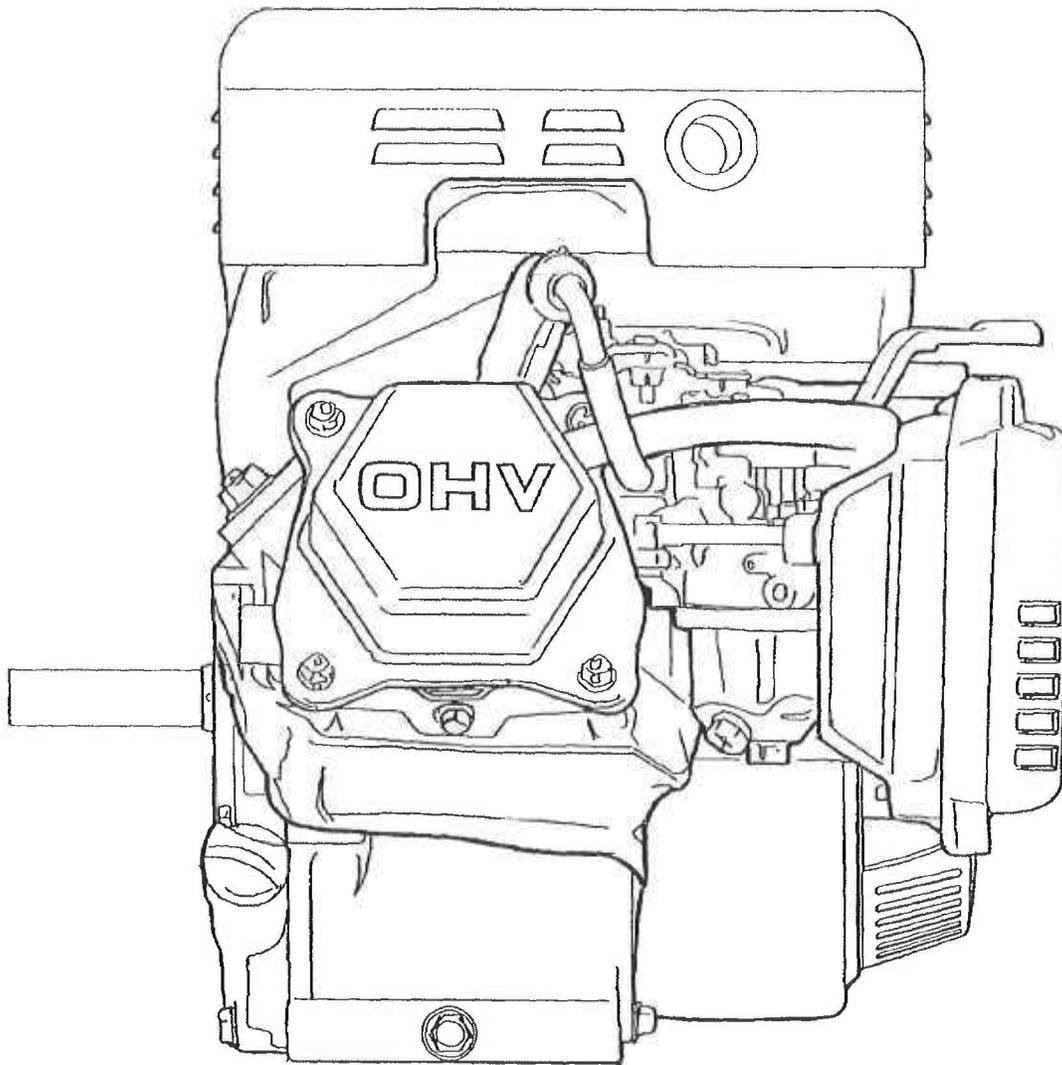


Fig. 3

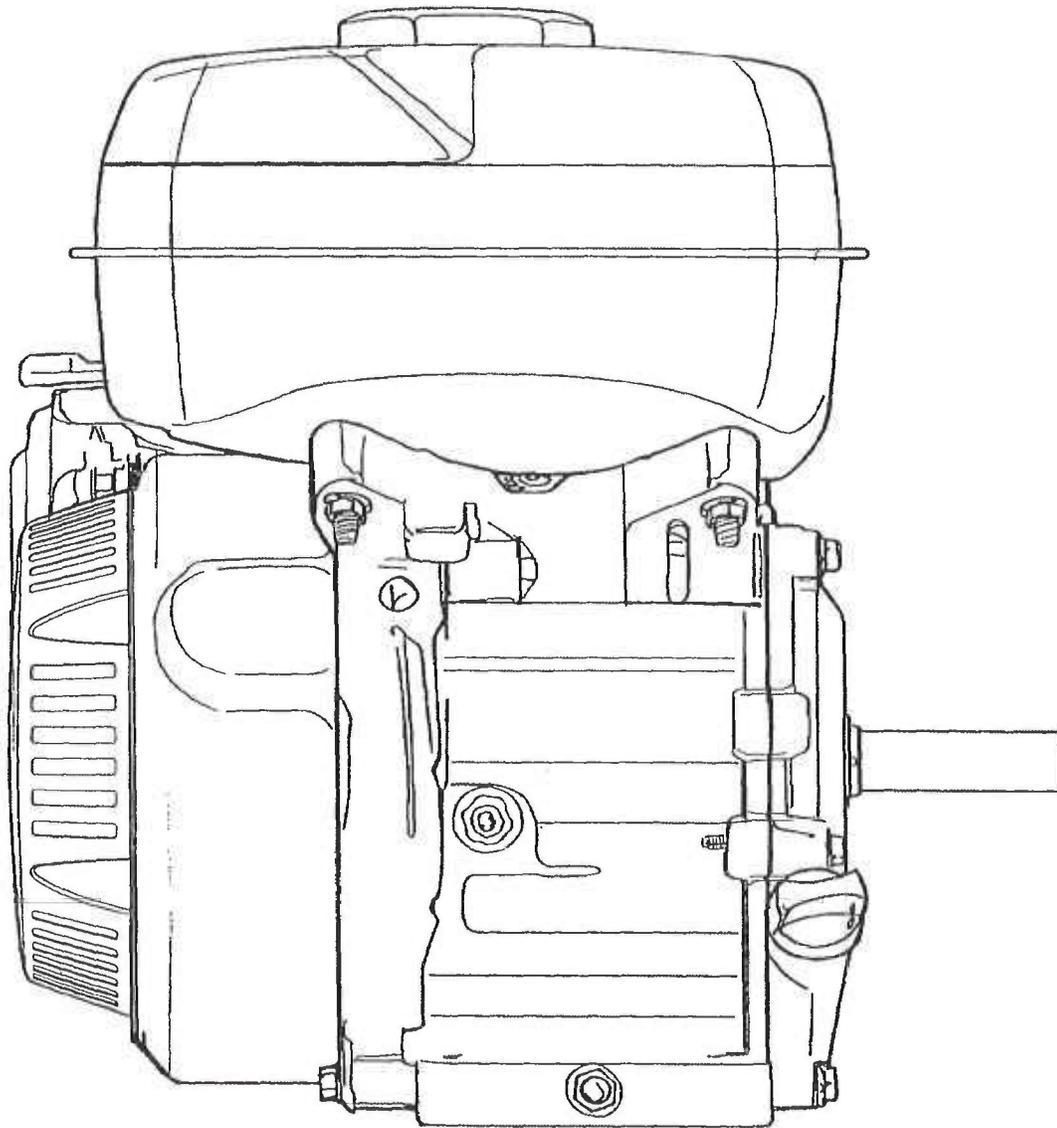


Fig. 4

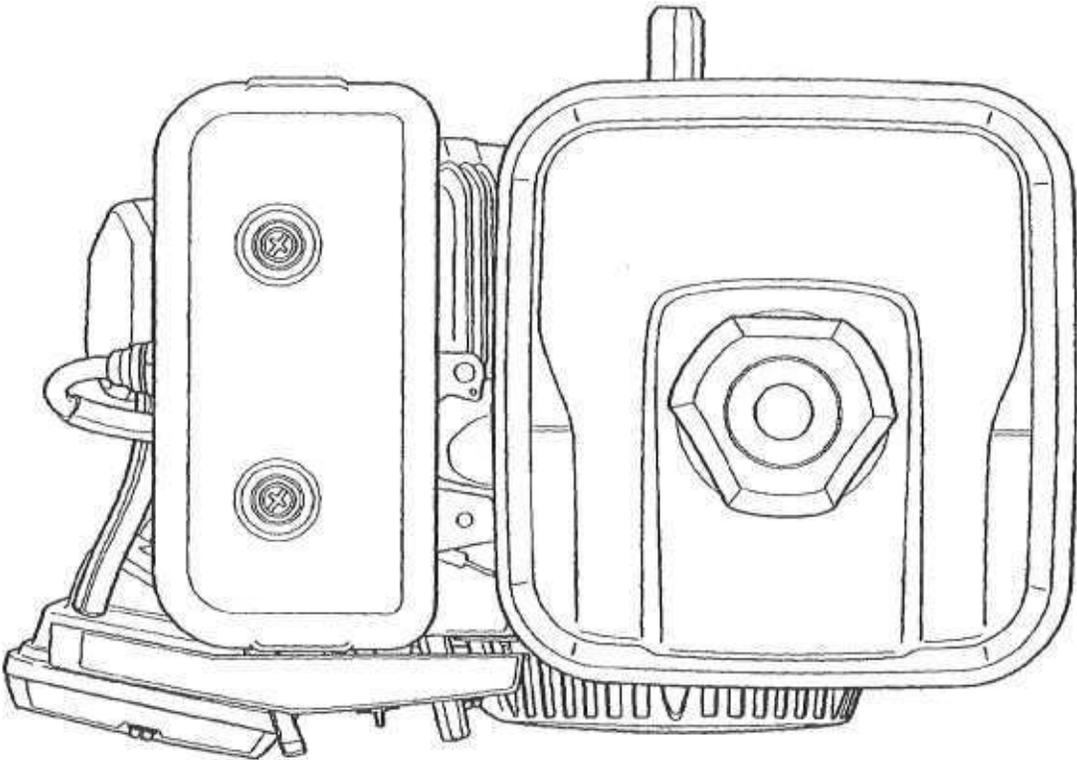


Fig. 5

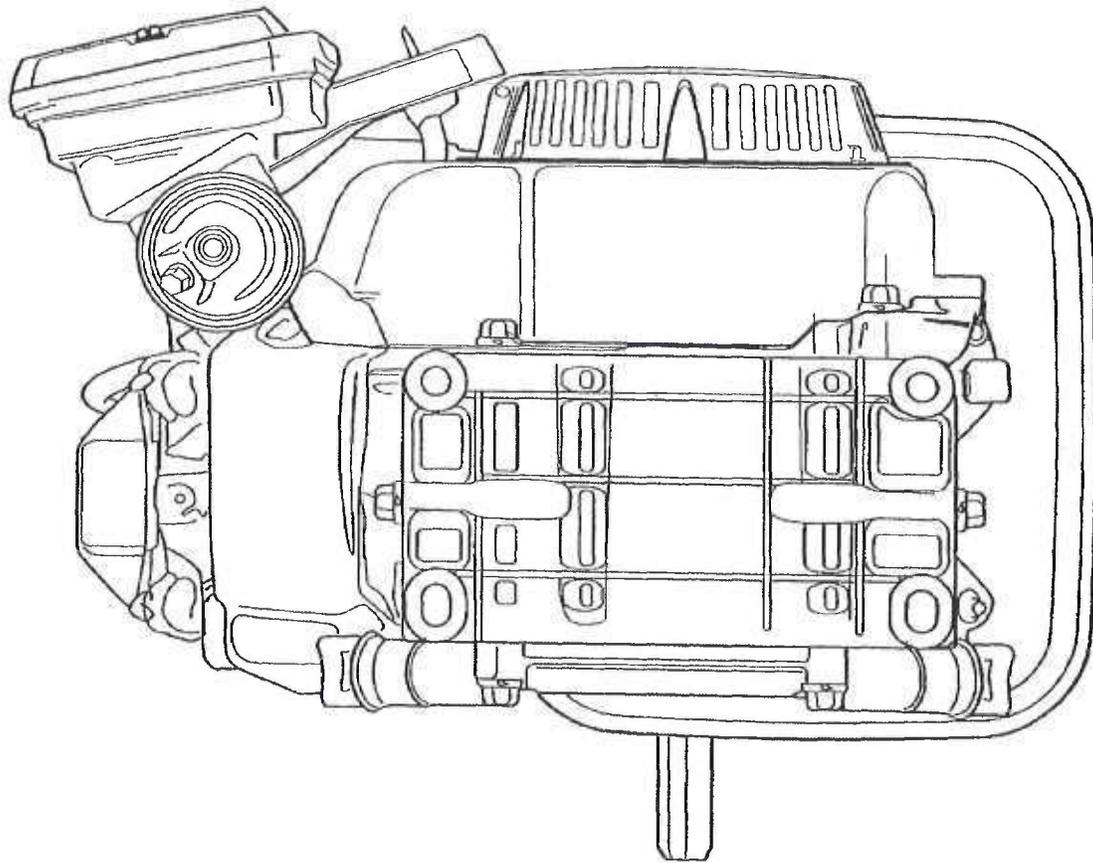


Fig. 6

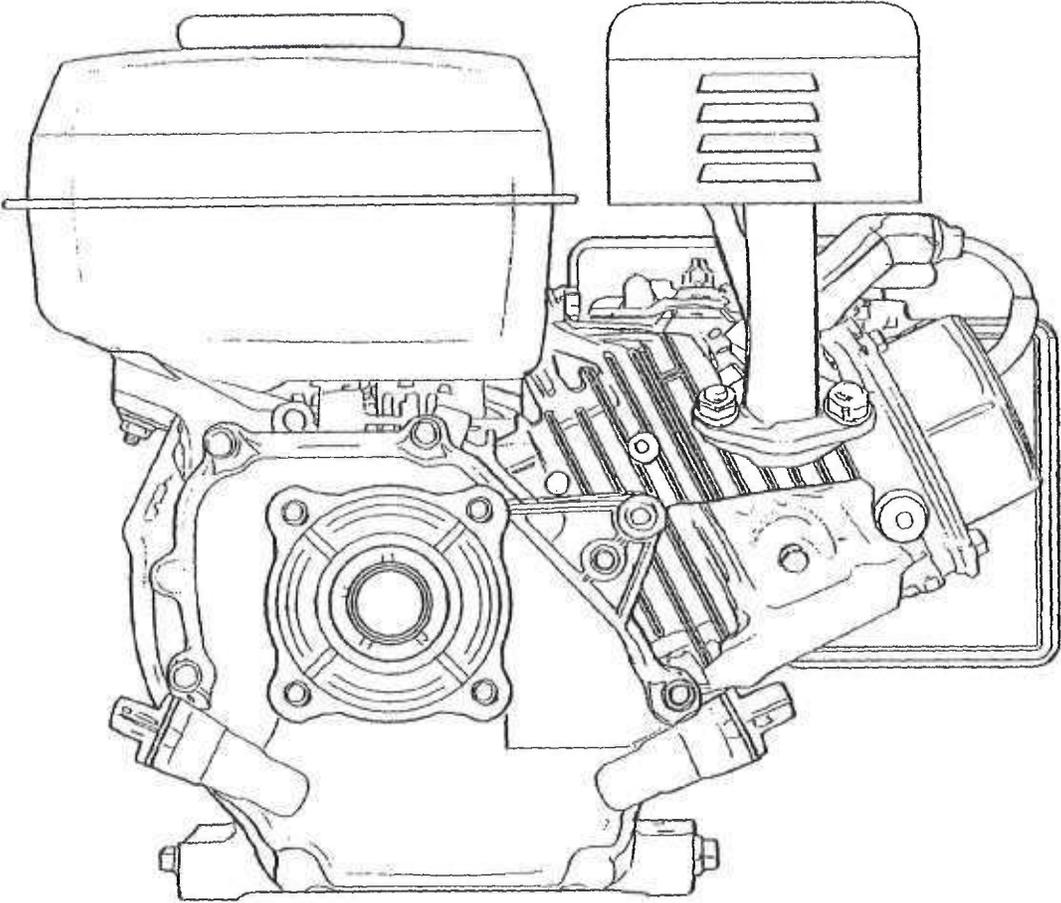


Fig. 7



US00D605661S

(12) **United States Design Patent**
Koehl

(10) **Patent No.:** **US D605,661 S**
(45) **Date of Patent:** **** Dec. 8, 2009**

(54) **ENGINE**

(75) **Inventor:** **Richard R. Koehl**, Sheboygan Falls, WI (US)

(73) **Assignee:** **Kohler Co.**, Kohler, WI (US)

(**) **Term:** **14 Years**

(21) **Appl. No.:** **29/326,622**

(22) **Filed:** **Oct. 21, 2008**

(51) **LOC (9) Cl.** **15-01**

(52) **U.S. Cl.** **D15/1**

(58) **Field of Classification Search** D15/1,
D15/3, 5, 17; 123/50 A, 50 B, 50 R, 198 E,
123/70 R, 41.7, 306, 308, 667

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D282,071 S *	1/1986	Nakamura	.....	D15/1
D309,612 S *	7/1990	Nakagawa	.....	D15/1
D515,589 S *	2/2006	Lin et al.	.....	D15/1
D516,580 S *	3/2006	Li	.....	D15/1
D529,046 S *	9/2006	Maeda et al.	.....	D15/1
D552,128 S *	10/2007	Li	.....	D15/1
D561,784 S *	2/2008	Yin et al.	.....	D15/1
D570,877 S *	6/2008	Glass et al.	.....	D15/1
D579,026 S *	10/2008	Busschaert	.....	D15/1
D583,829 S *	12/2008	Fan	.....	D15/1

OTHER PUBLICATIONS

Commercial Engine Product Literature; Internet Screen Shots from commercial websites and Google; the screen shots are dated Mar. 3, 2009; 28 pages.

Consumer Engine Product Literature; Internet Screen Shots from consumer websites and Google; the screen shots are dated Mar. 03, 2009; 16 pages

Chart listing types and pictures of various commercial engines; 2 pages; Mar. 2, 2009* [Note: *This date is provided because it is believed that at least some of the pictures contained in this document were obtained from the Internet on or around Mar. 2, 2009].

* cited by examiner

Primary Examiner—Ian Simmons

Assistant Examiner—Wan Laymon

(74) *Attorney, Agent, or Firm*—Whyte Hirschboeck Dudek SC

(57) **CLAIM**

The ornamental design for an engine, as shown and described.

DESCRIPTION

FIG. 1 is a front perspective view of an engine showing my new design;

FIG. 2 is a front view thereof;

FIG. 3 is a left side view thereof;

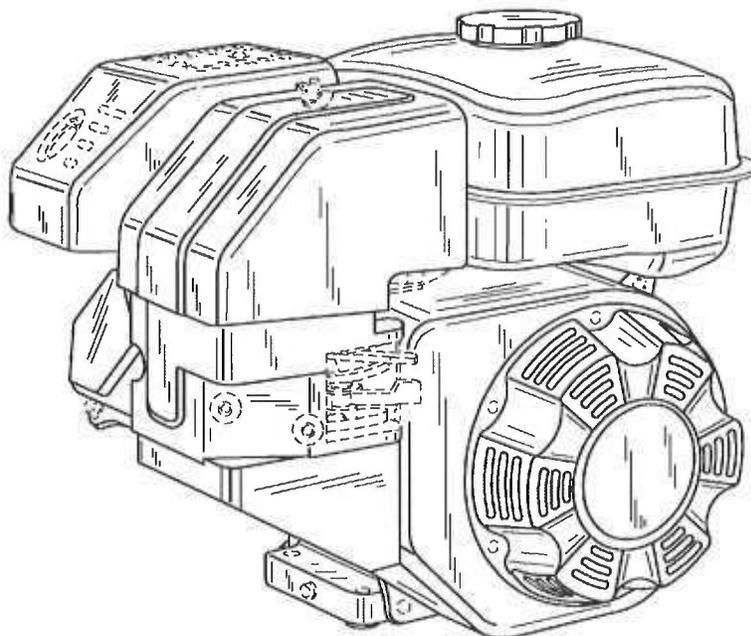
FIG. 4 is a rear view thereof;

FIG. 5 is a right side view thereof; and,

FIG. 6 is a top view thereof.

The broken lines shown in the figures are for illustrative environmental purposes only and form no part of the claimed design.

1 Claim, 6 Drawing Sheets



**Briggs & Stratton Corp. and
Kohler Co. v. Honda**



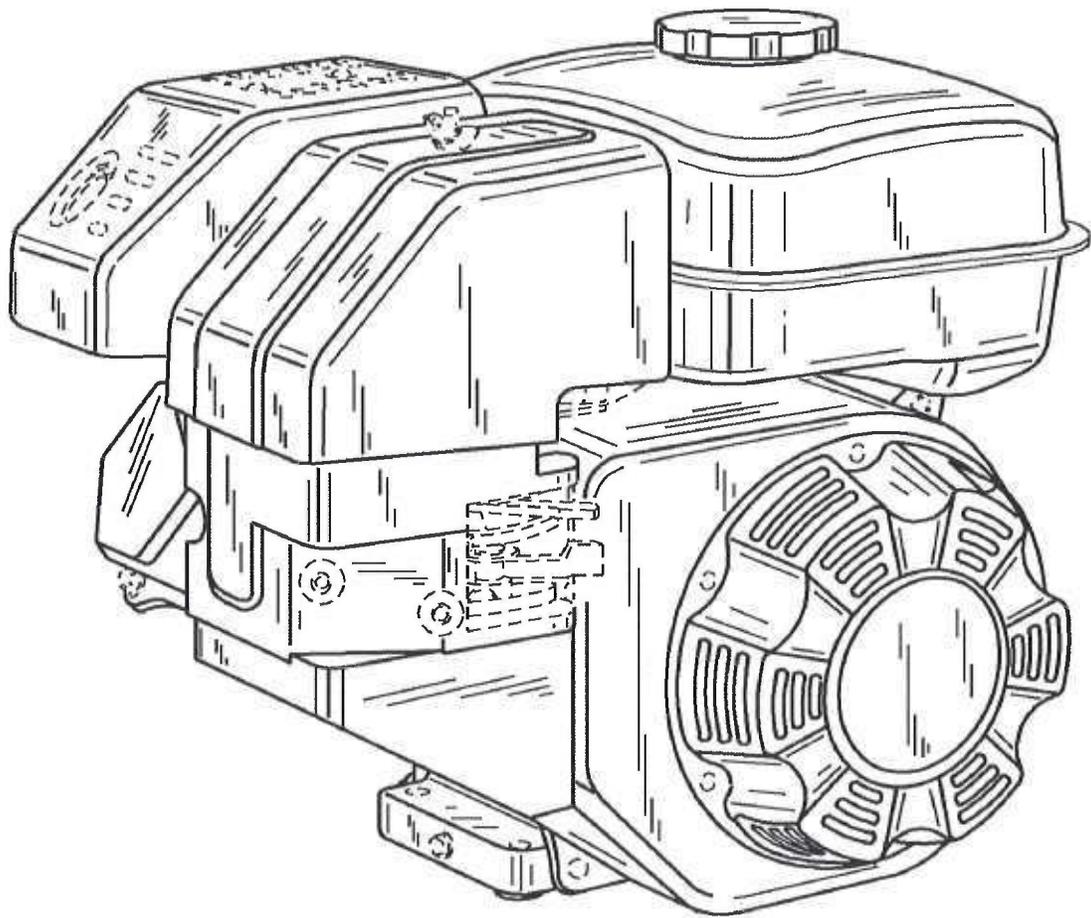


FIG. 1

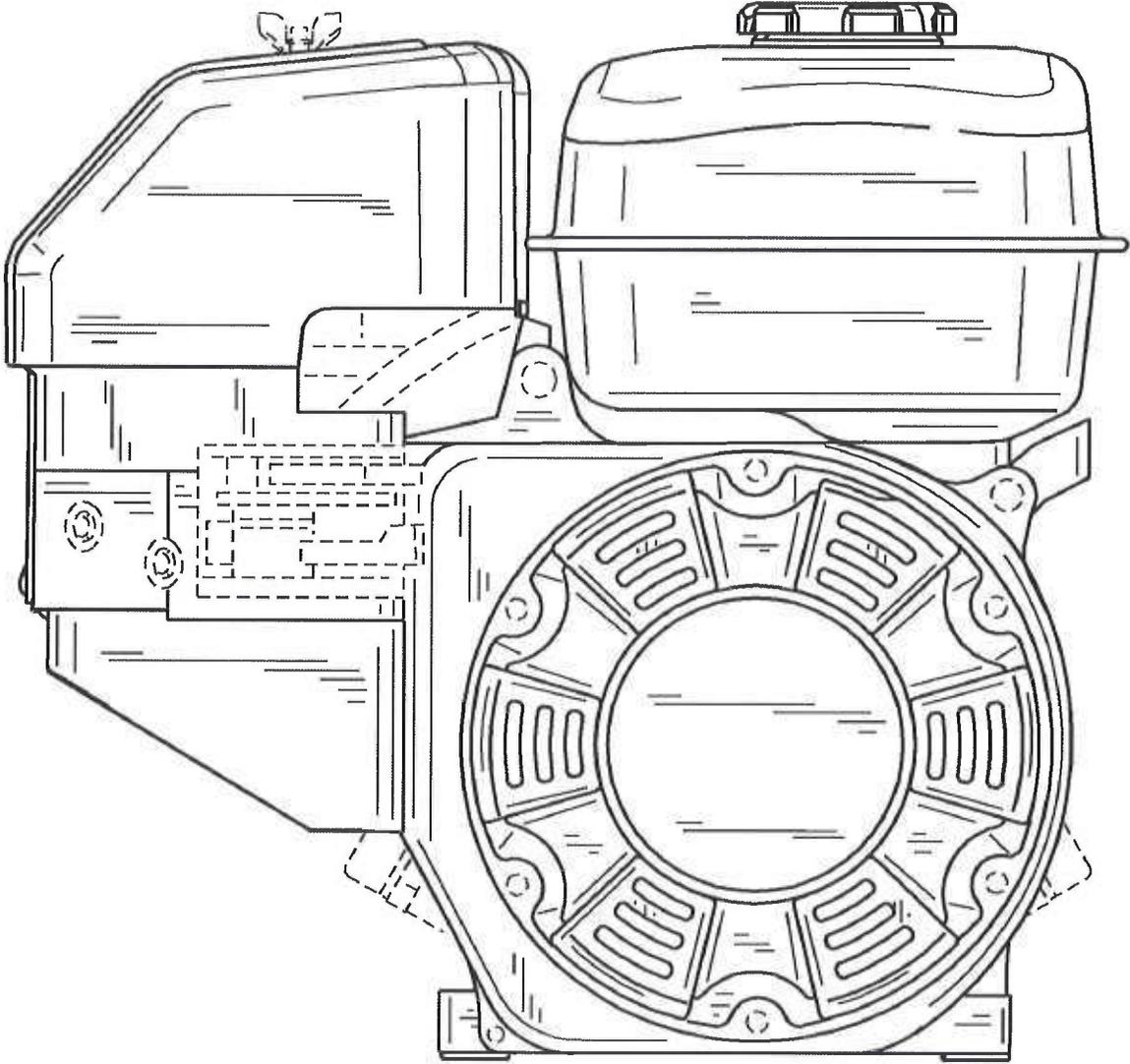


FIG. 2

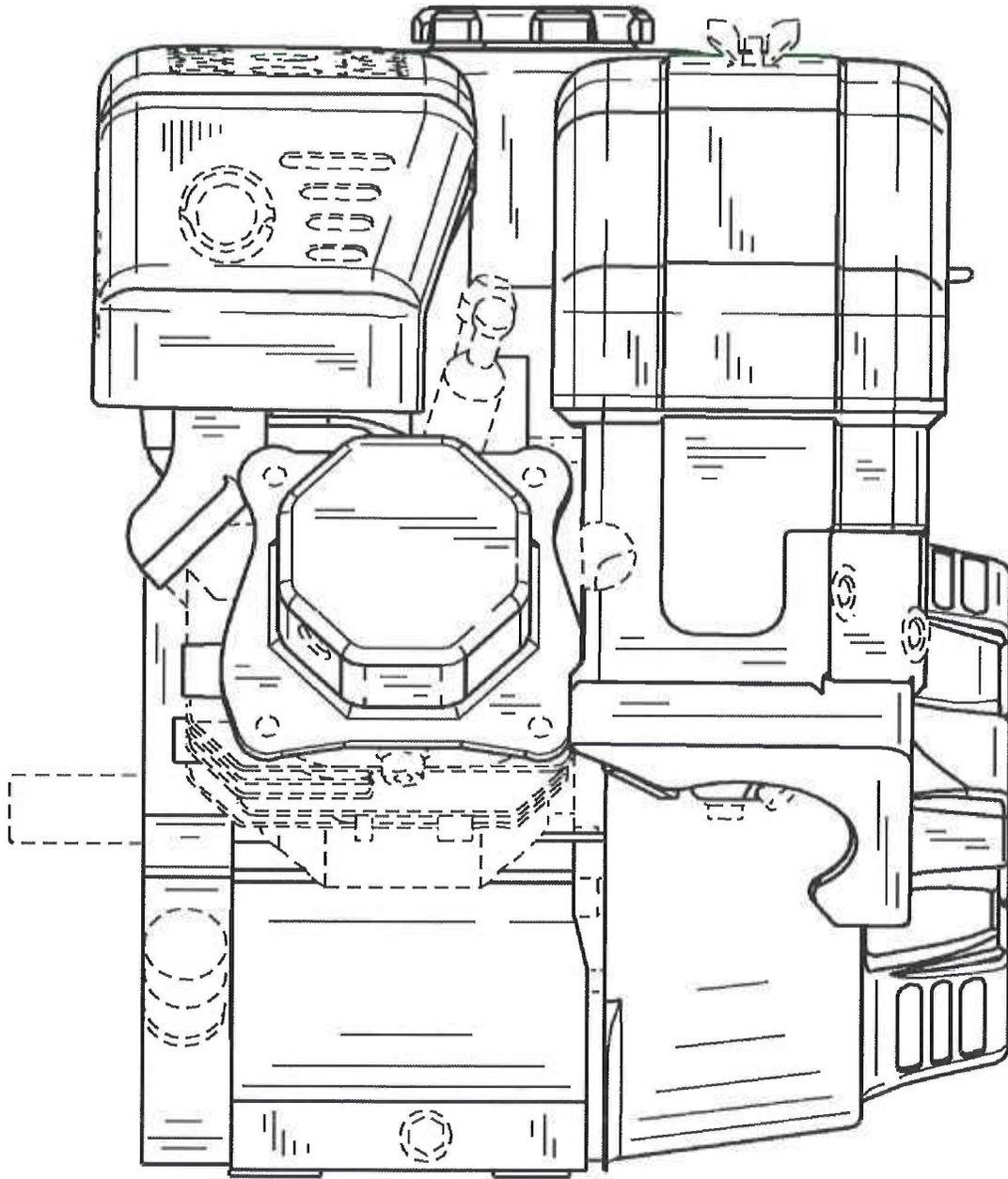


FIG. 3

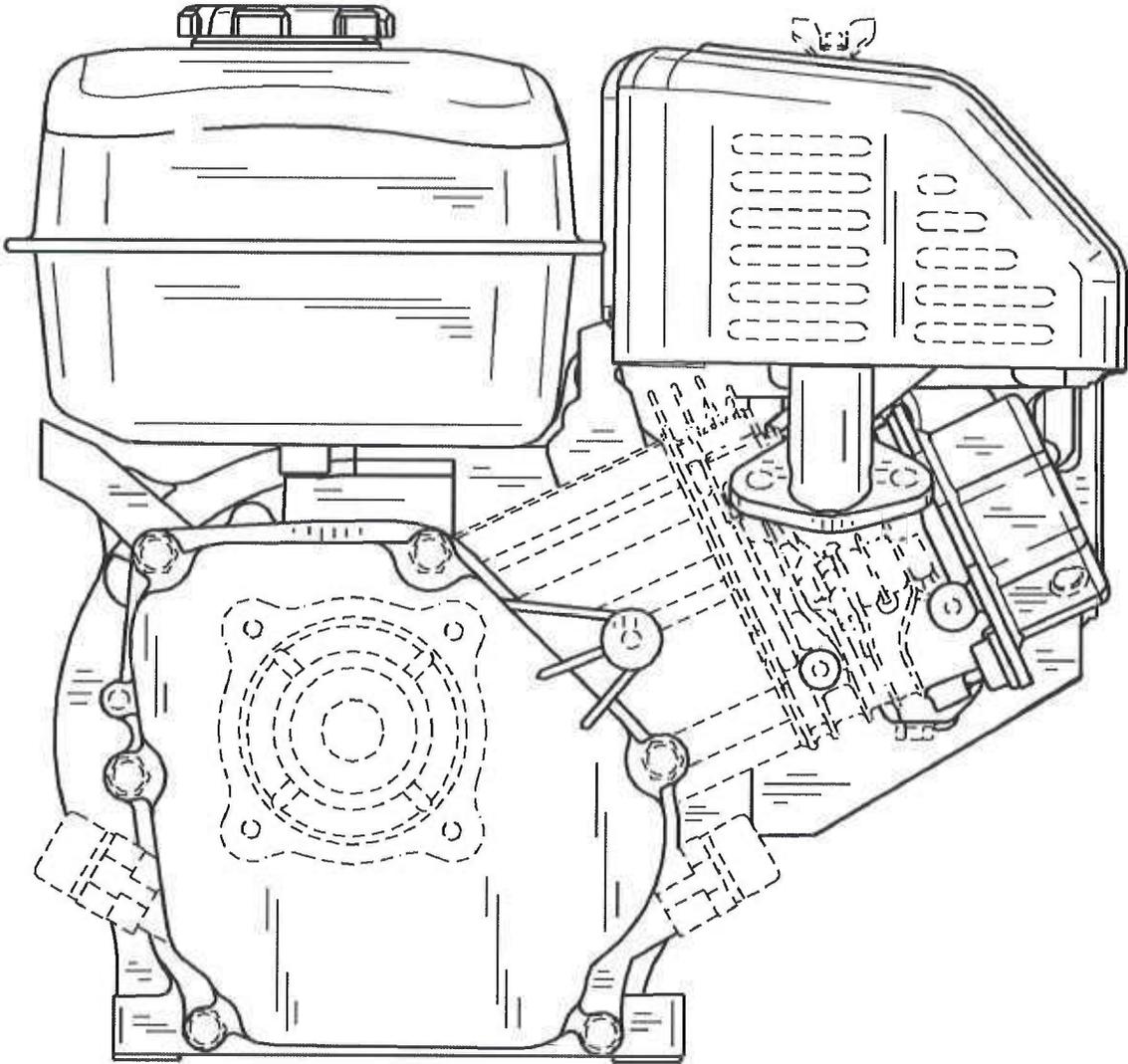


FIG. 4

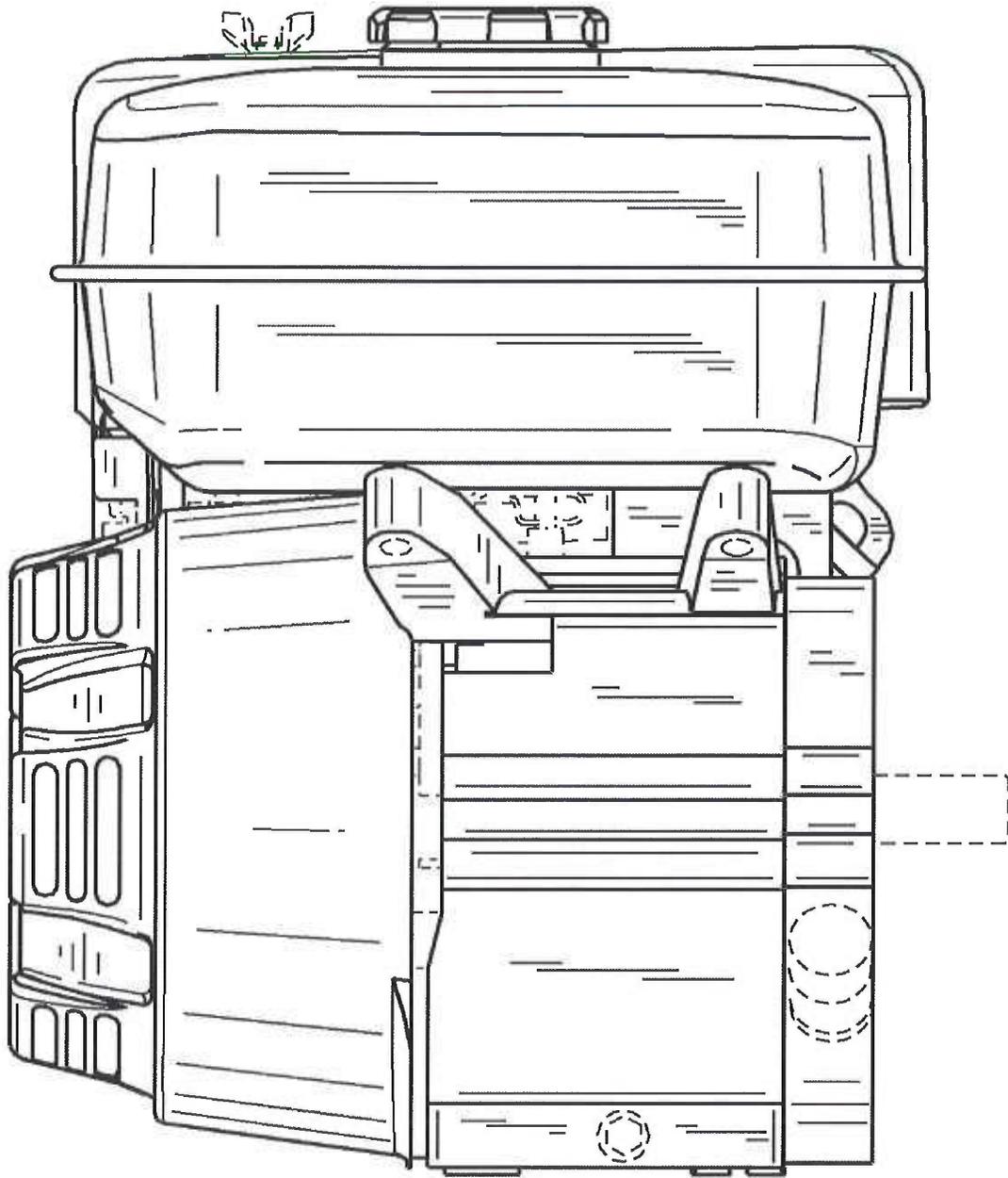


FIG. 5

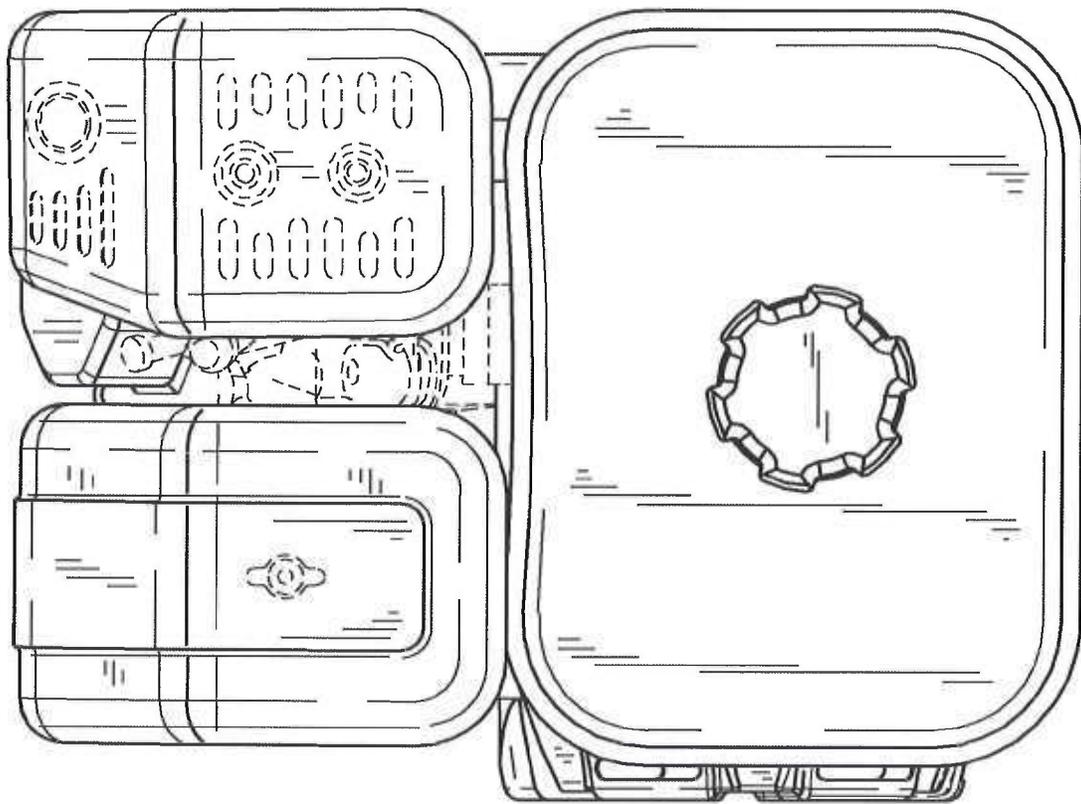


FIG. 6

[54] INTERNAL COMBUSTION ENGINE

[75] Inventor: Tetsuo Nakamura, Saitama, Japan

[73] Assignee: Honda Giken Kogyo Kabushiki Kaisha, Tokyo, Japan

[**] Term: 14 Years

[21] Appl. No.: 478,941

[22] Filed: Mar. 25, 1983

[30] Foreign Application Priority Data

Oct. 20, 1982 [JP] Japan 57-47691
[52] U.S. Cl. D15/1
[58] Field of Search D15/1; 123/56 B, 56 BC,
123/56 BA, 41.66, 41.67, 41.7, 195 G, 195 B,
195 R, 198 E

[56] References Cited

U.S. PATENT DOCUMENTS

D. 247,177 2/1978 Stevens D15/1
D. 257,844 1/1981 Stevens D15/1
D. 276,160 10/1984 Tuggle et al. D15/1

OTHER PUBLICATIONS

Implement & Tractor, 2-21-79, p. 37, Kawasaki Engine.

Implement & Tractor, 3-21-79, p. 11, Kawasaki Engine.

Primary Examiner—Wallace R. Burke

Assistant Examiner—Lynn Wilder

Attorney, Agent, or Firm—Sughrue, Mion, Zinn, Macpeak & Seas

[57] CLAIM

The ornamental design for an internal combustion engine, as shown.

DESCRIPTION

FIG. 1 is a front, top and left side perspective view of an internal combustion engine showing my new design; FIG. 2 is a left side elevational view thereof; FIG. 3 is a front elevational view thereof; FIG. 4 is a rear elevational view thereof; FIG. 5 is a top plan view thereof; FIG. 6 is a right side elevational view thereof; and FIG. 7 is a bottom plan view thereof.

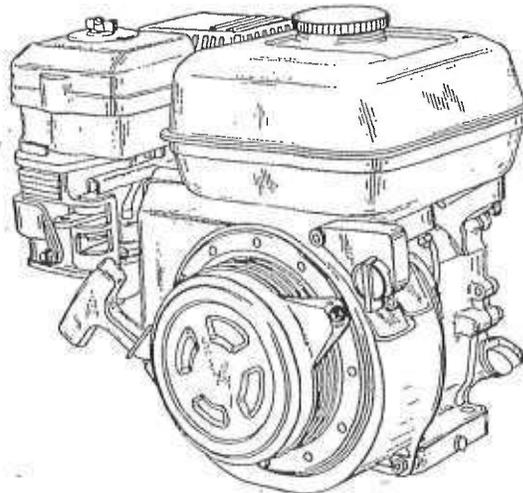


EXHIBIT
9120832 (Parent)
tabbies
Applicant 40
Reisel 7/16/15

Hoag
EXHIBIT NO. 526
8-23-07
Karla Baez

Briggs & Stratton Corp. and
Kohler Co. v. Honda

FIG. 1

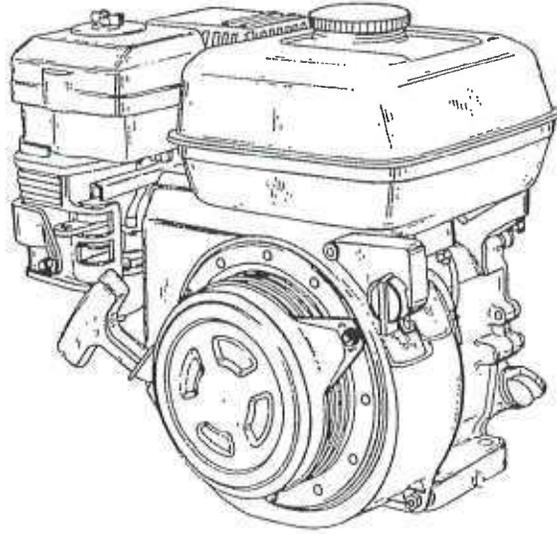


FIG. 2

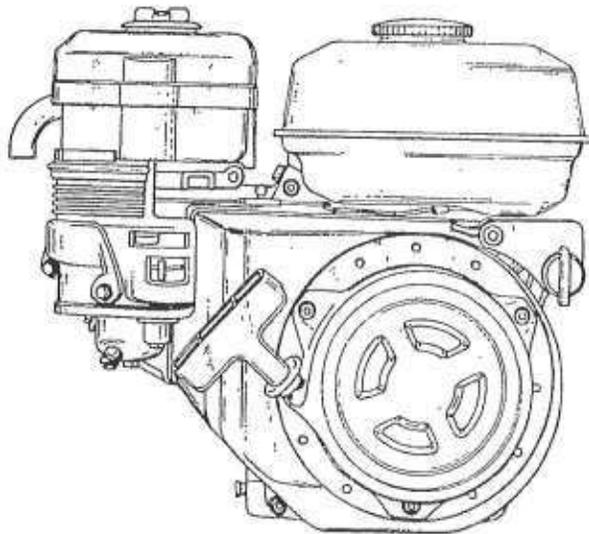


FIG. 3

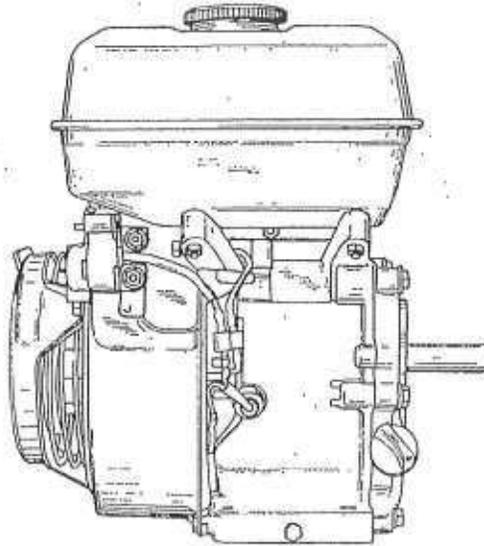


FIG. 4

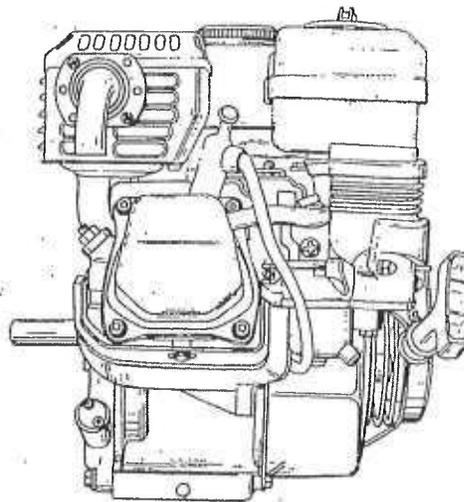


FIG. 5

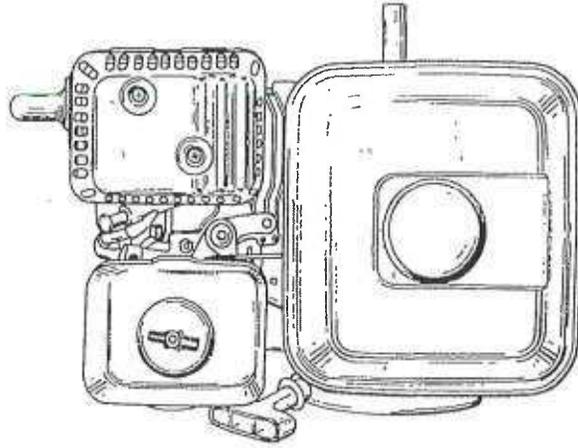


FIG. 6

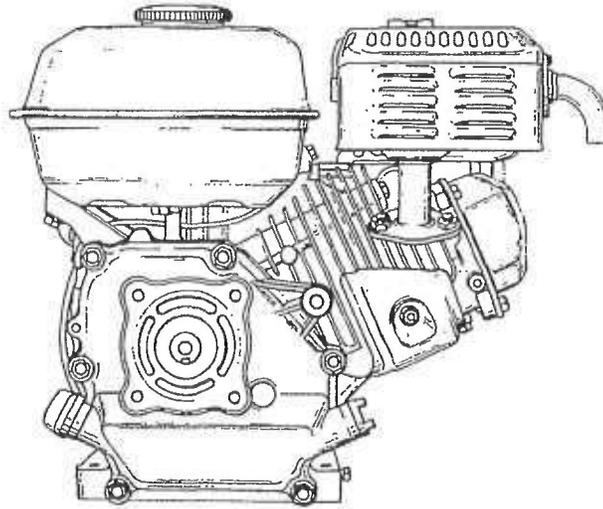
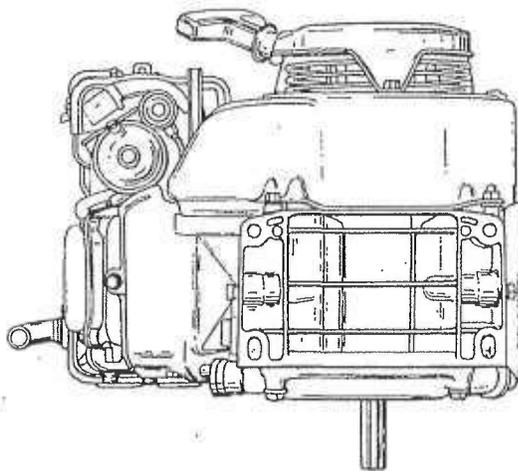


FIG. 7



John R. Reisel

Education: Bachelor of Mechanical Engineering

Minor: Mathematics

Villanova University, Villanova, PA - 1989

M.S. - Mechanical Engineering

Purdue University, West Lafayette, IN - 1991

Thesis Title: *Laser-saturated fluorescence measurements of nitric oxide in atmospheric-pressure flames.*

Ph.D. - Mechanical Engineering

Purdue University, West Lafayette, IN - 1994

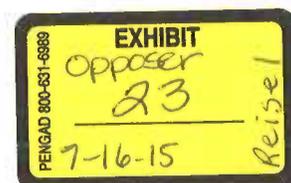
Dissertation Title: *Laser-induced fluorescence measurements and modeling of nitric oxide in high-pressure premixed flames.*

Graduate Advisor: Prof. Normand M. Laurendeau

Fields of Study: Combustion, thermodynamics, fluid mechanics, optics

Work Experience:

- August 2014 – Present Professor
Mechanical Engineering Department
College of Engineering and Applied Science
University of Wisconsin-Milwaukee
- June 2001 – August 2014 Associate Professor
Mechanical Engineering Department
College of Engineering and Applied Science
University of Wisconsin-Milwaukee
- August, 1994-June 2001 Assistant Professor
Mechanical Engineering Department
College of Engineering and Applied Science
University of Wisconsin-Milwaukee
- September 1995-Present Associate Director, Center for Alternative Fuels
University of Wisconsin-Milwaukee
College of Engineering and Applied Science



May-August, 1994 Post-Doctoral Research Associate
Purdue University
School of Mechanical Engineering

August, 1989 - May, 1994 Graduate Research Assistant
Purdue University
School of Mechanical Engineering

Professional Societies: American Society for Engineering Education
American Society of Mechanical Engineers
The Combustion Institute
Society of Automotive Engineers

Professional Registration: Professional Engineer
State of Wisconsin

Honors and Awards:

- 2010 ASEE-New Engineering Educators Division Best Paper Award – 2nd place
- 2010 CEAS – Top 10 Research Expenditures 2009-10 (award only given in 2009 and 2010)
- 2005 UWM Distinguished Undergraduate Teaching Award
- 2000 UWM-CEAS Outstanding Teaching Award
- 1998 SAE Ralph R. Teetor Educational Award
- Purdue University's nominee for 1995 CGS/UMI Dissertation Award in Mathematical / Physical Sciences / Engineering
- 1989 GE Foundation Graduate Fellowship
- 1989 Dean's Award for Academic Excellence (Villanova University)

Research Interests:

- Engineering education (impacts of undergraduate research participation, impacts of early-career interventions; innovations in educational delivery)
- Internal-combustion engines (particularly air pollution minimization)
- Renewable energy (particularly ethanol production, implementation of renewable energy systems in existing facilities, and water current processes)
- Energy efficiency of industrial processes
- Sustainable water treatment processes
- Laser diagnostics of combustion processes
- Combustion chemical kinetics

Laboratory Facilities:

Energy Conversion Efficiency Lab – co-Director
UWM Center for Alternative Fuels – Associate Director
UWM Industrial Assessment Center – co-Director

COURSES TAUGHT

Undergraduate:

ME 301	Basic Engineering Thermodynamics
ME 302	Applied Engineering Thermodynamics
ME 321	Basic Heat Transfer
ME 390	Design Projects
ME 402	Thermo-Fluids Engineering
ME 432	Internal-Combustion Engines
ME 434	Air-Conditioning System Design
ME 435	Powerplant Theory and Design
ME 490	Topics in Mechanical Engineering: Applied Optics in Engineering (ME451)
ME 490	Topics in Mechanical Engineering: Aerodynamics
ME 490	Topics in Mechanical Engineering: Energy: Sources, Uses, and Economics
ME 699	Independent Study
EAS 497	Study Abroad

Graduate:

ME 702 Advanced Engineering Thermodynamics
ME 703 Principles of Combustion
ME 999 Advanced Independent Study

COURSE EVALUATIONS

Below are the overall average teacher evaluation ratings, from the student evaluations of the classes. These are listed by semester and course. The scale used is 1 - 5, with 5.0 being the best rating.

Fall 2014:	ME 301: 4.36	ME 402: 4.69
Spring 2014:	ME 402: 4.82	ME 435: 4.66
Fall 2013:	ME 402: 4.79	ME 432: 4.67
Spring 2013:	ME 402: 4.58	ME 490: 4.61
Fall 2012:	ME 402: 4.79	ME 435: 4.75
Spring 2012:	ME 402: 4.58	ME 432: 4.72
Fall 2011:	ME 301: 4.72	ME 301: 4.44
Spring 2011:	ME 402: 4.38	ME 435: 4.50
Fall 2010:	ME 402: 4.52	ME 432: 4.50
Spring 2010:	ME 301: 4.51	ME 402: 4.43
Fall 2009:	ME 435: 4.48	ME 702: 4.64
Spring 2009:	ME 402: 4.15	ME 432: 3.90
Spring 2008:	ME 402: 4.70	ME 435: 4.54
Fall 2007:	ME 432: 4.25	ME 702: 4.64
Spring 2007:	ME 301: 4.53	ME 402: 4.44
Fall 2006:	ME 301: 4.36	ME 435: 4.57
Spring 2006:	ME 402: 4.78	ME 432: 4.58
Fall 2005:	ME 301: 4.47	ME 434: 4.70
Spring 2005:	ME 402: 4.59	ME 435: 4.83
Fall 2004:	ME 301: 4.71	ME 432: 4.39
Spring 2004:	ME 402: 4.21	ME 703: 4.77
Fall 2003:	ME 301: 4.42	ME 435: 4.53
Spring 2003:	ME 301: 4.46	ME 432: 4.11
Fall 2002:	ME 301: 4.59	ME 435: 4.44
Spring 2002:	ME 432: 3.97	ME 703: 4.93
Fall 2001:	ME 301: 4.28	ME 435: 4.29
Spring 2001:	ME 301: 4.40	ME 490: 4.37
Fall 2000:	ME 302: 4.56	ME 432: 4.12
Spring 2000:	ME 301: 4.51	ME 703: 4.58
Fall 1999:	ME 301: 4.41	ME 435: 4.12
Spring 1999:	ME 301: 4.63	ME 432: 4.47
Fall 1998:	ME 435: 4.50	
Spring 1998:	ME 302: 4.27	ME 432: 4.05
Fall 1997:	ME 301: 4.60	ME 302: 4.45
Spring 1997:	ME 302: 4.34	ME 435: 4.46
Fall 1996:	ME 301: 4.24	ME 432: 3.76
Summer 1996:	ME 301: 4.55	
Spring 1996:	ME 301: 3.52	ME 490: 3.95

Fall 1995: ME 302: 4.41 ME 702: 4.15
Spring 1995: ME 301: 4.45
Fall 1994: ME 321: 3.87

Ph.D. DISSERTATIONS DIRECTED:

Arash Kialashaki, Ph.D. Dissertation: *Evaluation and Forecast of Energy Consumption in Different Sectors of the United States Using Artificial Neural Networks*. Mechanical Engineering Department, University of Wisconsin-Milwaukee, December 2014.

Marissa R. Jablonski, Ph.D. Dissertation: *Sustainable Decolorization of Reactive and Acid Dye Wastewater Using Photo-Fenton Oxidation both with and without Biodegradation: Laboratory and Field Studies*. Civil and Environmental Engineering Department, University of Wisconsin-Milwaukee, May 2015.

M.S. THESES DIRECTED:

Damon F. Bresenham, M.S. Thesis: *An Assessment of Proposed Spindt Method Expansions for Use with Highly Oxygenated Fuels in Small Utility Engine Emissions Testing Applications*. Mechanical Engineering Department, University of Wisconsin-Milwaukee, August 1998.

Kenneth B. Jordan, M.S. Thesis: *Comparison of Detailed Chemical Kinetics Mechanisms for Modeling Nitric Oxide Formation in Premixed Ethane Flames*. Mechanical Engineering Department, University of Wisconsin-Milwaukee, December 2000.

Diego Caceres, M.S. Thesis: *Exhaust Emissions Deterioration over the Life Cycle of Small Utility Engines*. Mechanical Engineering Department, University of Wisconsin-Milwaukee, April 2001.

Mikhail Kremer, M.S. Thesis: *Theoretical Study of the Effect of Atmospheric Conditions on Air Compressor Performance*. Mechanical Engineering Department, University of Wisconsin-Milwaukee, April 2001. (co-directed with Dr. K.J. Renken)

David M. Leckman, M.S. Thesis: *Synthetic Lubricant Type and Atmospheric Conditions Affecting Power Consumption Measurements of a Rotary Screw Air Compressor*. Mechanical Engineering Department, University of Wisconsin-Milwaukee, May 2004 (co-directed with Dr. K.J. Renken)

Thomas J. Walczak, M.S. Thesis: *Induction Water Injection of a Spark Ignition Internal Combustion Outboard Marine Engine*. Mechanical Engineering Department, University of Wisconsin-Milwaukee, December 2005.

Nicholas J. Doll, M.S. Thesis: *Effects of Aging on Catalysts on Emissions for Small Engines*. Mechanical Engineering Department, University of Wisconsin-Milwaukee, August 2006.

Santha K. Ravi, M.S. Thesis: *Investigation of the Effects of Inlet Flow Velocity on the Forces Experienced by a Small Engine Catalytic Converter Using Computational Fluid Dynamics*. Mechanical Engineering Department, University of Wisconsin-Milwaukee, December 2008.

Sourabh Kumar, M.S. Thesis: *Modeling of Energy Usage for the Production of Corn Ethanol Using Wind and Solar Energy*. Mechanical Engineering Department, University of Wisconsin-Milwaukee, May, 2009.

Elizabeth A. Ehrke, M.S. Thesis: *Modeling Energy Production of Solar Thermal Systems and Wind Turbines for Installation at Corn Ethanol Plants*. Mechanical Engineering Department, University of Wisconsin-Milwaukee, December 2012.

Will R. Didier, M.S. Thesis: *Development and Validation of a Mathematical Model for Predicting the Performance of Rotary Hammer Drills*. Mechanical Engineering Department, University of Wisconsin-Milwaukee, May 2013.

M.S. NON-THESIS OPTION STUDENTS ADVISED

Nachiketh Chandran. Mechanical Engineering Department, University of Wisconsin-Milwaukee, May 2011

Arash Kialashaki. Mechanical Engineering Department, University of Wisconsin-Milwaukee, December 2011

BOOKS PUBLISHED

1. J.R. Reisel (2015). *Principles of Engineering Thermodynamics*. Cengage Learning, Boston, MA. ISBN: 978-1-285-05647-0.
2. J.R. Reisel (2010). *Passing the Students' Test: Simple Techniques for Becoming a Good Engineering or Science Teacher*. ISBN: 978-1-453-89417-0. Publisher: CreateSpace.

REFEREED PUBLICATIONS:

1. J.R. Reisel, M. Jablonski, E. Munson, and H. Hosseini (2014). Peer-led Team Learning in Mathematics Courses for Freshman Engineering and Computer Science Students. *Journal of STEM Education*, **15(2)**: 7-15.

2. A. Kialashaki, and J.R. Reisel (2014). Development and Validation of Artificial Neural Network Models of the Energy Demand in the Industrial Sector of the United States. *Energy* **76**: 749-760.
3. A. Kialashaki and J.R. Reisel (2014). Forecasting United States' Energy Demand of Industrial Sector Using Artificial Neural Networks. *International Journal of Energy and Statistics* **2**: 207-226.
4. A. Kialashaki and J.R. Reisel (2014). Transport Energy Demand Modeling of the United States Using Artificial Neural Networks and Multiple Linear Regression, *ASME 12th Fuel Cell Science, Engineering, and Technology Conference*, Paper No. ES-FuelCell2014-6447, Boston, MA.
5. J.R. Reisel, M. Jablonski, A. Kialashaki, E. Munson, and H. Hosseini (2014). Analysis of the Impact of Participation in a Summer Bridge Program on Mathematics Course Performance by First-Semester Engineering Students *Proceedings of the 2014 American Society for Engineering Education Annual Conference & Exposition*. Paper No. 8492, Indianapolis, IN.
6. A. Kialashaki and J.R. Reisel (2013). Modeling of the Energy Demand of the Residential Sector in the United States Using Regression Models and Artificial Neural Networks. *Applied Energy* **108**: 271-280.
7. M.R. Jablonski, S. Shaligram, A. Qureshi, H. Purohit, J. Reisel, and R. El-Hajjar. (2013). Degradation Kinetics of Resorcinol by Enterobacter Cloacae Isolate. *African Journal of Microbiology Research* **7**: 3632-3640.
8. J.R. Reisel (2013). Analysis of the Impact of Testing Frequency on Student Performance in a Basic Thermodynamics Course. *Proceedings of the 2013 American Society for Engineering Education Annual Conference & Exposition*. Paper No. 5686, Atlanta, GA.
9. J.R. Reisel, M. Jablonski, and E. Munson (2013). A Study of the Impact of Peer-Led Team Learning on the First-Year Math Course Performance of Engineering Students. *Proceedings of the 2013 American Society for Engineering Education Annual Conference & Exposition*. Paper No. 5685, Atlanta, GA.
10. E. Ehrke and J.R. Reisel (2013). Modeling the Feasibility of Using Solar Thermal Systems for Meeting the Heating Requirements at Corn Ethanol Production Facilities. *Int. J. of Green Energy* (submitted for publication).
11. A. Kialashaki and J.R. Reisel (2013). Analysis of Electricity Production from Renewable Resources in the United States: Lessons from Leading States. *Renewable & Sustainable Energy Reviews* (submitted for publication).

12. J.R. Reisel (2012). Incorporating Public Policy Creation and Analysis Activities into a Mechanical Engineering Curriculum. *Proceedings of the ASME 2012 International Mechanical Engineering Conference & Exposition*, Paper No. IMECE2012-86371, Houston, TX.
13. J.R.Reisel, M. Jablonski, H. Hosseini, and E. Munson (2012). Assessment of factors impacting success for incoming college engineering students in a summer bridge program. *Int. J. of Mathematical Education in Science & Technology*, **43**: 421-433.
14. J.R. Reisel, M. Jablonski, L. Rineck, E. Munson, and H. Hosseini (2012). Analysis of Math Course Placement Improvement and Sustainability Achieved Through a Summer Bridge Program. *Proceedings of the 2012 American Society for Engineering Education Annual Conference & Exposition*. Paper No. AC 2012-2984, San Antonio, TX.
15. J.R. Reisel, M. Jablonski, E. Munson, and H. Hosseini (2012). Analysis of the Impact of Formal Peer-Led Study Groups on First-Year Student Math Performance. *Proceedings of the 2012 American Society for Engineering Education Annual Conference & Exposition*. Paper No. AC 2012-2983, San Antonio, TX .
16. M. Jablonski and J.R. Reisel (2012). Sustainable International Development as a Process. *Proceedings of the 2012 American Society for Engineering Education Annual Conference & Exposition*. Paper No. AC 2012-4985, San Antonio, TX.
17. E. Mohseni-Languri, H. Taherian, K. Hooman, and J.R. Reisel (2011). Enhanced Double-Pass solar Air Heater with and without Porous Medium. *Int. J. of Green Energy* **8**: 643-654
18. J.R. Reisel, L. Rineck, M. Jablonski, E. Munson, and H. Hosseini (2011). Evaluation of the Impacts of Math Course Placement Improvement Achieved Through a Summer Bridge Program. *Proceedings of the 2011 American Society for Engineering Education Annual Conference & Exposition*, Paper No. AC 2011-51, Session M548.
19. M. Jablonski, J.R. Reisel, H. Hosseini, E. Munson, and L. Rineck (2011). Initial Evaluation of the Impacts of Math Study Groups on First-Year Student Course Success. *Proceedings of the 2011 American Society for Engineering Education Annual Conference & Exposition*, Paper No. AC 2011-243, Session M354.
20. S. Kumar and J.R. Reisel (2011). *Modeling of Energy Usage for the Refining of Ethanol from Corn*. *Int. J. of Sustainable Energy* **30**: 98-109.
21. J.R. Reisel (2010). Gaining the Respect of Your Students: Fundamental Tips for New Engineering Teachers. *Proceedings of the 2010 American Society for*

- Engineering Education Annual Conference & Exposition*, Paper No. AC 2010-230, Session 2475, 11 pages.
22. J.R. Reisel, M. Jablonski, H. Hosseini, and E. Munson (2010). Evaluation of Factors Affecting the Success of Improving Math Course Placement for Incoming Freshmen in a Summer Bridge Program. *Proceedings of the 2010 American Society for Engineering Education Annual Conference & Exposition*, Paper No. AC 2010-231, Session 1376, 9 pages.
 23. M. Jablonski, C. Papadopoulos, and J.R. Reisel (2009). Building Trust During International Development Work: A Case Study of a Recent EWB Project. *Proceedings of the 2009 American Society for Engineering Education Annual Conference & Exposition*, Paper No. AC2009-1089, Session 1360, 6 pages.
 24. E. Mohseni-Languri, H. Taherian, R. Masoodi, and J.R. Reisel (2009). An Energy and Exergy Study of a Solar Thermal Air Collector. *Thermal Science* **13**: 205-216.
 25. J.R. Reisel (2008). The Use of Undergraduate Students in a Long-Term Air Pollution Reduction Project. *Proceedings of the 2008 American Society for Engineering Education Annual Conference & Exposition*, Paper No. AC2008-204, Session 3451, 14 pages.
 26. C. Papadopoulos and J.R. Reisel (2008). Do Students in Summer Bridge Programs Successfully Improve Math Placement and Persist? A Meta-Analysis. *Proceedings of the 2008 American Society for Engineering Education Annual Conference & Exposition*, Paper No. AC2008-1623, Session 1565, 7 pages.
 27. N.J. Doll and J.R. Reisel (2007). Catalyst Deterioration over the Lifetime of Small Utility Engines. *J. Air & Waste Man. Assoc.* **57**:1223-1233.
 28. J.R. Reisel (2007). The Development of Energy Policies by Undergraduate Engineering Students. *Proceedings of the 2007 American Society for Engineering Education Annual Conference & Exposition*, Paper No. AC2007-484, Session 1344, 13 pages.
 29. J.R. Reisel and K.J. Renken (2006). Development of Experimental Apparatuses to be Used in Two Sequential Thermal Science Courses. *Proceedings of the 2006 American Society for Engineering Education Annual Conference & Exposition*, Paper No. AC2006-328, Session 3133, 11 pages.
 30. J.R. Reisel, A. Schmitt, and Z. Ouradnik (2003). Investigation of the source of increased hydrocarbon emissions over the life cycle of small utility engines. 2003 Small Engine Technology Conference. Paper No. *SAE 2003-32-0022*.

31. J.R. Reisel, K.J. Renken and B.A. Price (2003). Two senior capstone design projects on the potential energy savings at the Pettit National Ice Center. *Proceedings of the 2003 American Society for Engineering Education Annual Conference & Exposition*, Session 2433, 13 pages.
32. D. Caceres, J.R. Reisel, A. Sklyarov, and A. Poehlman (2003). Exhaust emission deterioration and combustion chamber deposit composition over the life cycle of small utility engines. *ASME J. Eng. Gas Turbines and Power*. **125**, 358-364.
33. J.R. Reisel (2000). Effects of mass flow rate and initial temperature on predictions of NO and OH from detailed chemical kinetics models. *Combust. Sci. and Tech.* **160**, 47-63.
34. J.R. Reisel and K.J. Renken (2000). Establishment of an air compressor experimentation facility via undergraduate student projects, *2000 Annual Conference Proceedings: The 2000 American Society for Engineering Education Annual Conference*. Session 2333, 18 pages.
35. J.R. Reisel, T.A. Kellner, and K.F. Neusen (2000). Speciated hydrocarbon emissions in small utility engines. *J. Air & Waste Man. Assoc.* **50**, 522-528.
36. J.R. Reisel (2000). Modeling of nitric oxide formation in high-pressure premixed laminar ethane flames. *Combust. Flame* **120**, 233-241.
37. D.F. Bresenham and J.R. Reisel (1999) The effect of high ethanol blends on emissions from small utility engines, 1999 Small Engine Technology Conference Paper No. *SAE 1999-01-3345*.
38. W.P. Partridge, Jr., J.R. Reisel, and N.M. Laurendeau (1999). Laser-saturated fluorescence measurements of nitric oxide in an inverse diffusion flame. *Combust. Flame* **116**, 282-290.
39. D.F. Bresenham, J.R. Reisel, and K.F. Neusen (1998). Spindt air-fuel ratio method generalization for oxygenated fuels. *SAE Paper No. 982054*. Also appeared in *SAE 1998 Transactions – Journal of Engines*.
40. D.F. Bresenham, J.R. Reisel, and K.F. Neusen (1998). The effects of oxygenate addition on emissions reduction in small utility engines. *Clean Power Sources and Fuels - 31st International Symposium on Automotive Technology and Automation*, pp. 345-363.
41. J.R. Reisel (1998). Trends of NO formation in low-temperature hydrocarbon flames. *Combust. Flame* **112**, 275-277.

42. J.R. Reisel, C.D. Carter, and N.M. Laurendeau (1997). Measurements and modeling of OH and NO in premixed C₂H₆/O₂/N₂ flames at atmospheric pressure. *Energy & Fuels* **11**, 1092-1100.
43. T.K. Kim, B.J. Alder, J.R. Reisel, and N.M. Laurendeau (1996). Exhaust and in-situ measurements of nitric oxide for laminar partially premixed C₂H₆-air flames: effect of premixing level at constant burner tube flowrate. *Energy & Fuels*, **10**, 1060-1066.
44. M.S. Klassen, D.D. Thomsen, J.R. Reisel, and N.M. Laurendeau (1996). Laser-induced fluorescence measurements of nitric oxide formation in high-pressure premixed methane flames. *Combust. Sci. and Tech.* **110-111**, 229-247.
45. J.R. Reisel, C.D. Carter, and N.M. Laurendeau (1996). Evaluation of chemical kinetics predictions for NO and OH in atmospheric-pressure C₂H₆/O₂/N₂ flames. *Transport Phenomena in Combustion*. S.H. Chan, ed. Taylor & Francis, Washington, D.C., pp. 317-328.
46. J.R. Reisel and N.M. Laurendeau (1995). Quantitative LIF measurements and modeling of nitric oxide in high-pressure C₂H₄/O₂/N₂ flames. *Combust. Flame* **101**, 141-152.
47. J.R. Reisel, W.P. Partridge Jr., and N.M. Laurendeau (1995). Transportability of a laser-induced fluorescence calibration for NO at high pressure. *J. Quant. Spectrosc. Radiat. Transfer* **53**, 165-178.
48. J.R. Reisel and N.M. Laurendeau (1994). Quantitative LIF measurements of nitric oxide in laminar high-temperature flames. *Energy & Fuels* **8**, 1115-1122.
49. J.R. Reisel and N.M. Laurendeau (1994). Laser-induced fluorescence measurements and modeling of nitric oxide formation in high-pressure flames. *Combust. Sci. and Tech.* **98**, 137-160.
50. J.R. Reisel, C.D. Carter, N.M. Laurendeau, and M.C. Drake (1993). Laser-saturated fluorescence measurements of nitric oxide in laminar, flat, C₂H₆/O₂/N₂ flames at atmospheric pressure. *Combust. Sci. and Tech.* **91**, 271-295.
51. J.R. Reisel, C.D. Carter, and N.M. Laurendeau (1993). Laser-induced fluorescence measurements of nitric oxide in laminar C₂H₆/O₂/N₂ flames at high pressure. *Combust. Flame* **92**, 485-489.
52. J.R. Reisel, C.D. Carter, and N.M. Laurendeau (1992). Einstein coefficients for rotational lines of the (0,0) band of the NO A²Σ⁺-X²Π system. *J. Quant. Spectrosc. Radiat. Transfer* **47**, 43-54.

CONFERENCE PRESENTATIONS:

Papers:

1. A. Kialashaki and J.R. Reisel (2013). Renewable Energy Development for Electricity Production: Federal and State Policies. Paper presented at the 2013 Western Energy Policy Research Conference, Portland, OR.
2. M. Jablonski and J.R. Reisel (2013). The importance of Native In-country Coordinators for Predictive Awareness of Cultural and Design Details for International Sustainable Engineering Projects. *Proceedings of the 2013 ASCE World Environmental & Water Resources Congress*. Paper No. 707, Cincinnati, OH.
3. A. Kialashaki and J.R. Reisel (2012). Modeling of the Energy Demand of the Residential Sector in the United States. Paper presented at the 2012 Western Energy Policy Research Conference, Boise, ID.
4. A. Kialashaki and J.R. Reisel (2012). Transport Energy Demand Modeling of The United States Using Artificial Neural Network. Paper presented at the Green Energy Sustainability Summit, Milwaukee, WI.
5. J.R. Reisel (2009). Incorporating consideration of contemporary issues and societal impacts into traditional engineering courses. Paper presented at the ASEE-North Midwest Section Conference 2009, Milwaukee, WI.
6. J.R. Reisel, J.W. Dujmovic, T.D. Schisel, and A.C. Schmitt (2003). Determination of the relative importance of oil-introduction mechanisms on the hydrocarbon emissions from small utility engines. Paper presented at the Central States Section / The Combustion Institute 2003 technical meeting, Chicago, IL.
7. J.R. Reisel, J.W. Dujmovic, and J.T. Krajewski (2002). Effects of engine modifications on the pollutant emissions from small utility engines. Paper presented at the Central States Section / The Combustion Institute 2002 technical meeting, Knoxville, TN.
8. K.B. Jordan and J.R. Reisel (2001). Evaluation of GRI-MECH v. 3.0 for predicting NO and OH concentrations in laminar, premixed, C₂H₆/O₂/N₂ flames. Paper presented at the 2nd Joint Meeting of the U.S. Sections of the Combustion Institute, Oakland, CA.
9. D. Caceres, J.R. Reisel, and A. Sklyarov (2001). Analysis of combustion chamber deposit formation in small, air-cooled, utility engines. Paper presented

at the 2nd Joint Meeting of the U.S. Sections of the Combustion Institute, Oakland, CA

10. D. Caceres, J.R. Reisel, and A. Poehlman (2000). The deterioration of the exhaust emissions over the life cycle of small utility engines. Paper presented at the Central States Section / The Combustion Institute 2000 technical meeting, Indianapolis, IN. pp. 193-198.
11. J.R. Reisel (2000). Effects of initial condition variations on the modeling of flat laminar flames. Paper presented at the Central States Section / The Combustion Institute 2000 technical meeting, Indianapolis, IN. pp. 415-420.
12. D.F. Bresenham and J.R. Reisel (1998). High ethanol fuel blends effect on emissions from small utility engines. Paper presented at the BioEnergy '98 conference, Madison, WI. pp. 819-828.
13. J.R. Reisel (1998). Modeling of nitric oxide formation in ethane flames. Paper presented at the Central States Section / The Combustion Institute 1998 technical meeting, Lexington, KY. pp. 309-314.
14. J.R. Reisel, T.A. Kellner, and K.F. Neusen (1997). Speciated hydrocarbon emissions in small utility engines. Paper presented at the Central States Section / The Combustion Institute 1997 technical meeting, Point Clear, AL. pp. 242-247.
15. J.R. Reisel (1996). Experimental correlations of NO formation in low-temperature hydrocarbon flames. Paper presented at the Central States Section / The Combustion Institute 1996 technical meeting, St. Louis, MO. pp. 74-79.
16. J.R. Reisel and N.M. Laurendeau (1994). Quantitative LIF measurements of nitric oxide in laminar, high-temperature $C_2H_6/O_2/N_2$ flames. Paper presented at the Central States Section / The Combustion Institute 1994 technical meeting, Madison, WI. pp. 219-224.
17. J.R. Reisel and N.M. Laurendeau (1993). Laser-induced fluorescence measurements and modeling of NO formation in premixed $C_2H_6/O_2/N_2$ flames at high pressure. Paper presented at the Joint Central-Eastern States Sections / The Combustion Institute Spring 1993 technical meeting, New Orleans, LA. pp. 122-126.
18. J.R. Reisel, C.D. Carter, and N.M. Laurendeau (1992). Laser-induced fluorescence measurements of nitric oxide in premixed $C_2H_6/O_2/N_2$ flames from 1 to 9 atm. Paper presented at the Central States Section / The Combustion Institute Spring 1992 technical meeting, Columbus, OH. pp. 306-311.
19. J.R. Reisel, C.D. Carter, and N.M. Laurendeau (1991). Laser-saturated fluorescence measurements of nitric oxide in atmospheric $C_2H_6/O_2/N_2$ flames.

Paper presented at the Central States Section / The Combustion Institute Spring 1991 technical meeting, Nashville, TN. pp. 157-162.

Posters:

1. A. Kialashaki and J.R. Reisel (2014). Effects of Federal and State Policies on Production of Electricity from Renewable Sources. Poster presented at the 2014 Sustainability Summit and Exposition, Milwaukee, WI.
2. J.R. Reisel, T.K. Kim, B.J. Alder, and N.M. Laurendeau (1995). Measurements of nitric oxide concentrations in partially-premixed flames. Poster presented at the Joint Central States-Western States-Mexican National Sections / The Combustion Institute 1995 technical meeting, San Antonio, TX.
3. J.R. Reisel and N.M. Laurendeau (1994). LIF measurements of nitric oxide in laminar, high-temperature $C_2H_6/O_2/N_2$ flames. Poster presented at the 25th International Symposium on Combustion, Irvine, CA.
4. J.R. Reisel and N.M. Laurendeau (1993). Laser-induced fluorescence measurements of nitric oxide in laminar high-pressure flames. Poster presented at the 1993 Gordon Conference on Laser Diagnostics in Combustion, Plymouth, NH.
5. J.R. Reisel, C.D. Carter, and N.M. Laurendeau (1991). Laser-induced fluorescence measurements of nitric oxide in premixed $C_2H_6/O_2/N_2$ flames from 1 to 9 atm. Poster presented at the 1991 Gordon Conference on Laser Diagnostics in Combustion, Plymouth, NH.

TECHNICAL REPORTS

1. S.Q Zaman and J.R. Reisel (2004). Application of Catalytic Converters in Small Four Stroke Gasoline Engines. UW-Milwaukee Center for Alternative Fuels - Wisconsin Small Engine Consortium.
2. D. Caceres and J.R. Reisel (1999). Life cycle emissions deterioration emissions tests results: Final Report - Part 1. UW-Milwaukee Center for Alternative Fuels - Wisconsin Small Engine Consortium.
3. J.R. Reisel, T.A. Kellner, D.M. Rose, and K.F. Neusen (1997). Speciated hydrocarbon emissions from small utility engines. UW-Milwaukee Center for Alternative Fuels - Wisconsin Small Engine Consortium.

4. J.R. Reisel and N.M. Laurendeau (1994). Laser-induced fluorescence measurements and modeling of nitric oxide in high-pressure premixed flames. NASA Contractor Report 195404.

UNDERGRADUATE RESEARCH PROJECTS DIRECTED:

Providing research opportunities for undergraduate students introduces the students to ideas and practices which are often not available in the typical undergraduate curriculum. Being involved with a research project often spurs the students towards greater heights. At UW-Milwaukee, Dr. Reisel has supervised many undergraduate research projects. A select listing of some of those projects is given below.

1. *Development of the Combustion Diagnostics Laboratory*
Mr. Paul Honkanen (1996)
2. *Development of an Air Compressor Energy Efficiency Laboratory* (with K. Renken)
Mr. Michael Jarmuskiewicz (1997)
3. *Air Compressor Lubricant Viscosity Measurements* (with K. Renken)
Mr. Mac Milleur (1997-1999)
4. *Air Compressor Energy Efficiency Measurements* (with K. Renken)
Mr. Kevin Mueller (1998)
5. *Thermal Imaging of Operating Air Compressors: Effects of Lubricant Variation*
(with K. Renken)
Mr. Justin Seipel (1998-1999)
6. *Life Cycle Emissions Testing of Small Utility Engines*
Mr. Diego Caceres (1998-1999)
7. *Evaluation of Oil Introduction Mechanisms on Increasing Hydrocarbon Emissions from Small Utility Engines*
Mr. Timothy Carlson (2000-2001)
Mr. Timothy Bunkelman (2000-2002)
8. *Hydrocarbon Emissions Deterioration in Small Utility Engines*
Mr. Jason Krajewski (2001-2002)
9. *Pollutant Emissions Changes with Modifications to Small Utility Engines*
Mr. Jeffrey Dujmovic (2001-2002).
10. *Oil Introduction Source Evaluations in Small Utility Engines*
Mr. Travis Schisel (2002)
Mr. Austin Schmitt (2002-2003)
Mr. Zack Ouradnik (2003-2004)

11. *A Review of the Application of Catalytic Converters to Small Utility Engines*
Mr. Samih Zaman (2004)
12. *Analysis of Catalytic Converter Deterioration in Small Utility Engines*
Mr. Daniel Janssen (2006-2007)
Mr. Kevin Rammer (2006-2007)
13. *Lab Measurements of the Effect of Intake Air Humidity Level on Air Compressor Performance* (with K. Renken)
Mr. Zach Jensen (2008-2009)
14. *Investigation of the Impact of Relative Humidity on the Performance of Industrial Air Compressors* (with K. Renken)
Mr. Jordan Fischer (2009-2010)
15. *Further Investigation of the Impact of Relative Humidity on the Performance of Industrial Air Compressors* (with K. Renken)
Mr. Milam Smith (2010-12)

UNDERGRADUATE EDUCATION DEVELOPMENT PROJECTS DIRECTED

Dr. Reisel is heavily involved with the development of new instructional laboratories in the Mechanical Engineering Department at UWM. These laboratories are being developed along with Dr. Kevin J. Renken. These labs are being developed with the assistance of undergraduate students, whom the faculty are supervising. Some of the projects for which Dr. Reisel has been primarily responsible, along with the students supervised are listed below.

ME 301: Experiment 1-Liquid Vapor Transition: Boiling of Water
Ms. Colleen Bell,
Ms. Christina Wisler (2001-02).

ME 301: Experiment: First Law Analysis Involving a Heat Exchanger
Mr. Austin Schmitt
Mr. Todd Murray (2002-03).

ME 301: Experiment: Coefficient of Performance of a Refrigerator
Mr. Zack Ouradnik (2003-04).

ME 301: Experiment: Entropy Generation in a Lighting Fixture
Mr. Erik Bauer
Mr. Chad Housner (2005).

RESEARCH GRANTS / FUNDING

1. J.R. Reisel and C.M. Walker, Research Initiation Grant: Defining Success for Undergraduate Research Experiences by Non-Elite Engineering Students. National Science Foundation, **\$149,995**, (2013-2015).
2. J.R. Reisel, Support for Undergraduate Researcher in Thermal Engineering Technology Lab – 2012-13 Academic Year. University of Wisconsin-Milwaukee, College of Engineering and Applied Science (Undergraduate Research Assistantship Program). **\$2,000**, (2012-13).
3. C. Yuan, E. Wornoyoh, B. Church, J.R. Reisel, and P. Rohatgi, Establishing an Industrial Assessment Center at the University of Wisconsin-Milwaukee. U.S. Department of Energy, **\$1,500,152 (+ \$1,115,000 cost share)**, (2011-2016).
4. J.R. Reisel, Support for Undergraduate Researcher in Thermal Engineering Technology Lab – 2011-12 Academic Year. University of Wisconsin-Milwaukee, College of Engineering and Applied Science (Undergraduate Research Assistantship Program). **\$2,000** (2011-12).
5. J.R. Reisel, Support for Undergraduate Researcher in Thermal Engineering Technology Lab – Summer 2011. University of Wisconsin-Milwaukee, College of Engineering and Applied Science (Undergraduate Research Assistantship Program). **\$2,100** (2011).
6. J.R. Reisel, Support for Undergraduate Researcher in Thermal Engineering Technology Lab. University of Wisconsin-Milwaukee, College of Engineering and Applied Science (Undergraduate Research Assistantship Program). **\$3,000** (2010-11).
7. J. Koch, S. Goldsborough, and J.R. Reisel. *Design of Cost-Competitive, Fuel-Flexible, Low-NOx Burners with a Range of Firing Rates*. Southeastern Wisconsin Energy Technology Research Consortium (SWETRC), **\$85,000** (2009-2010)
8. J.R. Reisel, *Investigation of the Impact of Relative Humidity on the Performance of Industrial Air Compressors*. University of Wisconsin-Milwaukee, College of Engineering and Applied Science (Undergraduate Research Assistantship Program). **\$3,000** (2009-2010).
9. J.R. Reisel, *Lab Measurements of the Effect of Intake Air Humidity Level on Air Compressor Performance*. UWM Office of Undergraduate Research. **\$2,000** (2008-2009).

10. J.R. Reisel, *Analysis of Factors Affecting the Deterioration of Catalysts in Small Utility Engines*. Wisconsin Small Engine Consortium. **\$60,000** (2006-2007).
11. J.R. Reisel, *Reduction of the Deterioration of Small Engine Exhaust Emissions Over the Life Cycle of Small Utility Engines*. Wisconsin Small Engine Consortium. **\$60,000** (2004-2006).
12. J.R. Reisel, *Reduction of the Deterioration of Small Engine Exhaust Emissions over the Life Cycle of the Engines*. Wisconsin Small Engine Consortium. **\$37,500** (2002-2003).
13. J.R. Reisel and K.J. Renken, *A Feasibility Study of Potential Energy Savings at the Pettit National Ice Center*. Department of Administration, State of Wisconsin. **\$50,000** (2001-2002).
14. J.R. Reisel, *Reduction of Oil Introduction into Small Engine Cylinders to Improve Engine Emissions over the Life Cycle of the Engines*. Wisconsin Small Engine Consortium. **\$55,668**. (2000-2001).
15. J.R. Reisel, *Effects on Exhaust Emissions of Oil Introduction into the Engine Cylinder over the Life Cycle of Small Utility Engines*. Wisconsin Small Engine Consortium. **\$56,038**. (1998-2000).
16. J.R. Reisel, *A Study of Pollutant Formation in Ethanol and Propane Flames*, University of Wisconsin Graduate School. **\$6,070** (course release time). (1997-1998).
17. J.R. Reisel and K.J. Renken, *Utilization of Synthetic Lubricant Technology to Enhance the Performance of Wisconsin Air Compressors*. University of Wisconsin System (\$42,718) and Wenninger Compressor Co. (\$53,000). **\$95,718**. (1997-1998).
18. J.R. Reisel, *Measurement and Modeling of Major Species Concentrations in Atmospheric-Pressure Flames*. University of Wisconsin-Milwaukee Graduate School. **\$9,844**. (1995-1996).

RESEARCH EQUIPMENT / SUPPLY DONATIONS

19. J.R. Reisel, Cochrane Compressor Corp., Milwaukee, WI: two donations of 5 gal. of Synoil 825 Synthetic Air Compressor Lubricant, Jan. 1998, Oct. 1999. Amount: **\$300**.

EDUCATION GRANTS / EQUIPMENT / FUNDING

Note: The education grants designated with an asterisk also contain a significant amount of engineering education research activities.

20. D.C. Yu, R.S. Amano, T.-C. Jen, V. Nanduri, and J.R. Reisel. *Master Curriculum Development for Energy Auditors, Commissioning Agents, and Energy Engineers*. U.S. Department of Energy through Milwaukee Area Technical College. \$201,102 (2010-2012).
21. J.R. Reisel, E.V. Munson, E.A. Beimborn, G.W. Hanson, H.S. Hosseini. *Fostering Opportunities for Tomorrow's Engineers (FORTE)*. National Science Foundation \$1,989,483 (2008-2015).*
22. H.S. Hosseini, J.R. Reisel, G.W. Hanson, E.V. Munson. *Educating Tomorrow's Engineers and Computer Scientists (E-TECS)*. National Science Foundation, \$599,764, (2008-2014).
23. K.J. Renken and J.R. Reisel. *Design and Implementation of a Multimode Heat Transfer Experiment for Use in Two Sequential Thermal Science Courses*. ASHRAE, \$5,000, (2004-05).
24. K.J. Renken and J.R. Reisel. *Vertical Integration of a Refrigerator Experiment Between Two Thermal Science Courses*. ASHRAE, \$5,000, (2003-2004).
25. K.J. Renken, J.R. Reisel, T.J. Posnanski, and B.A. Price. *Establishment of a Collaborative Thermal Engineering Technology Laboratory by UWM Mechanical Engineering Faculty and Undergraduate Students*. National Science Foundation \$150,000 (+ \$224,159 UWM Match). (2002-2004). *
26. J.R. Reisel and K.J. Renken. *Design and Fabrication of an Interactive Heat Exchanger Experiment for Two Thermal Science Courses*. ASHRAE, \$5,000 (2002-2003).
27. J.R. Reisel, Ariens Company, Brillion, WI: Donation of 3 engines, Aug. 2001. Amount: \$3,446 (2001).
28. J.R. Reisel and K.J. Renken. *Development of an Air Compressor Experimentation Facility for Engineering Undergraduates*. ASHRAE. \$5,000, (2000-2001).

UNIVERSITY SERVICE:

University Committee (2013-)

Parliamentarian, UWM Zilber School of Public Health (2014 -)

Rules Committee (2012-14), **Chair** (2013-14).

Affirmative Action in Faculty Employment Committee (2013-)

Center for Community-Based Learning, Leadership, and Research Faculty Advisory Council (2013 -)

Columbia-St. Mary's Planning Committee (Special committee of the Senate) (2010)

Economic Benefits Committee (2009)

Faculty Rights and Responsibilities Committee (2008-2011)

Codification Committee (2007- 2008, 2011-13)

Faculty Senate (2006- 2008, 2011-)
President Pro Tem (2013-14)

Extension Policy Committee (2004-2007) **Chair** (2005-06)

Faculty Appeals and Grievances Committee (2002-2003) **Chair**

Undergraduate Student Academic Misconduct Committee (2000 - 2008)

Graduate School Scholastic Appeals Committee (2000 - 2003)

Member, APCC Review Committee for the School of Business Administration (2003)

Athletic Board (2000-01)

Academic Program and Curriculum Committee (1996, 1997-98, 2010-2012)

Member of Special Program Array Review Committee (1998)

Chair, APCC subcommittee for review of Linguistics Program (1998)

Admissions and Records Policy Committee (1996-1999, 2009-2010)

COLLEGE OF ENGINEERING AND APPLIED SCIENCE SERVICE:

Secretary of the CEAS Faculty (2002 -)

CEAS Academic Planning Committee (2010 - 2013) **Chair** (2010-11)

Faculty Advisor to Engineers Without Borders Student Organization (2007-)
CEAS Curriculum Committee (1999-2000, 2004-2008, 2009-2010) **Chair** (2007-2008)
CEAS Scholastic Appeals Committee (2007-2011)
CEAS Nominations Committee (2001-03, 2011-13)
CEAS Awards and Recognition Committee (2010-12)
Faculty Advisor to SAE Student Organization (1997-)

MECHANICAL ENGINEERING DEPARTMENT SERVICE:

ABET Accreditation Coordinator (2005-2009)
Undergraduate Program Coordinator (2004-2008)
Undergraduate Student Advisor (2003-)
Executive Committee Recording Secretary (2001-2005)
Department Recording Secretary (1995-98)
Coordinator of UWM/Sundstrand/SAE Scholarship (1995-)

PROFESSIONAL SERVICE:

ABET Mechanical Engineering Program Evaluator (from ASME) (2012 -)
Internal Advisory Board, Carroll University NSF-STEP grant (2012 -)

Professional Society Leadership Positions:

Division Chair, ASEE – Engineering and Public Policy Division (2011 -)
Vice Chair for Conference Program, ASEE- Engineering and Public Policy Division
(2007 - 2011)
Vice Chair for Administration, ASEE-Engineering and Public Policy Division (2006-2007)

Conference Sessions Chaired:

- "Engineering and Public Policy II", Engineering and Public Policy Division / ASEE, 2013 ASEE Annual Conference, Atlanta, GA, June 2013
- "Public Policy in Engineering Education", Engineering and Public Policy Division / ASEE, 2011 ASEE Annual Conference, Vancouver, BC, June 2011
- "Engineering Educators in Government: Panel Session", Engineering and Public Policy Division / ASEE, 2011 ASEE Annual Conference, Vancouver, BC, June 2011
- "Aspects of Public Policy in Engineering Education", Engineering and Public Policy Division / ASEE, 2010 ASEE Annual Conference, Louisville, KY, June 2010.
- "Teaching Engineering and Public Policy", Engineering and Public Policy Division / ASEE, 2008 ASEE Annual Conference, Pittsburgh, PA, June 2008.
- "Combustion Chemistry", Central States Section / The Combustion Institute 2000 technical meeting, Indianapolis, IN, April 2000.
- "NO_x Formation and Reduction", Central States Section / The Combustion Institute 1998 technical meeting, Lexington, KY, June 1998.

Reviewer of Manuscripts:

International Journal of Mathematical Education in Science and Technology

International Journal for Service Learning in Engineering

International Journal of Green Energy

Energy Efficiency

ASEE Annual Conference papers (2007-2014)

SAE Transactions Selection Committee.

30th International Symposium on Combustion (2004).

29th International Symposium on Combustion (2002).

National Heat Transfer Conference (1995-2000)

28th International Symposium on Combustion (2000)

ASME/IGTI Turbo Expo (1998-2008).

Journal of Energy Engineering

ASME Journal of Energy Resources Technology

ASME Journal of Engineering for Gas Turbines and Power

27th International Symposium on Combustion (1998)

ASME 1996 Winter Annual Meeting

ASME 1995 Winter Annual Meeting

International Symposium on Transport Phenomena - 8 conference (1995)

Have also served on NSF and NASA review panels

Book Reviews Prepared:

Experimental Heat Transfer, Fluid Mechanics and Thermodynamics 1993, eds. M.D. Kelleher, R.K. Shah, K.R. Sreenivasan, and Y. Joshi. Appeared in *Experimental Thermal and Fluid Science*, **11**, 414 (1995)

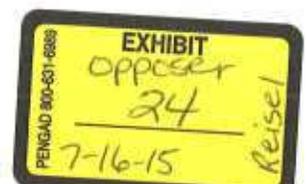
Other:

Judge for UWM Rube Goldberg Machine Design Contest for High School students (1998 - 2005) (Lead Judge 2000-2004)

Participated in Purdue University Student Chapter of ASEE panel discussion on Being a Young Engineering Faculty Member. 9/20/95

- Honda's trademark application serial no. 78924545.
- Letter of protest concerning the '545 Application.
- Declarations of Kevin Hoag and James Mieritz filed by Honda.
- The Trademark Office's February 5, 2010 office action.
- Notices of Opposition filed by Briggs and Kohler, and Honda's Answers.
- U.S. Patent Nos. 4,813,385; 6,362,533; 6,489,690; 6,331,740; 6,941,919; 61525,430; 7,086,389.
- Japanese Patents Nos. S57-30407; S63-35160; S62-33961; S59-40536; S63-3234; 57-170212 (abstract).
- Images of engines manufactured by companies other than Honda.
- Interviews of engineers from Briggs and Kohler.
- Letters dated January 19, 2007 and April 6, 2007 from the Stetina law firm to Attorney Matuschak of the Wilmer Cutler law firm.
- Transcript from the deposition of Kevin Hoag on August 23, 2007.
- Transcript from the deposition of James Mieritz on August 28, 2007.
- Transcript from the deposition of Motohiro Fujita on August 15, 2007, along with Exhibit 512 from the same.
- Transcript for the deposition of Steven Connor on August 9-10, 2012.
- Transcript of December 10, 2014 Deposition of Motohiro Fujita.
- Transcript of December 12, 2014 Deposition of Motohiro Fujita
- Transcript of March 26, 2014 Deposition of Peter Hotz
- Transcript of March 19, 2014 Deposition of Cameron Litt
- Transcript of March 28, 2014 Deposition of Manual Rumao
- Transcript of May 29, 2014 Deposition of Yukio Sugimoto
- Transcript of March 27, 2014 Deposition of Jeff Whitmore
- November 21, 2012 Rebuttal Report from Mr. James Mieritz
- Japanese Patent Application S57-170212
- Japanese Utility Model Application H03-13535

Briggs & Stratton Corp. and
Kohler Co. v. Honda



- Japanese Utility Model Application S58-156124
- Japanese Utility Model Application S59-40536
- Japanese Utility Model Application S59-62263
- Japanese Utility Model Application S62-18699
- Japanese Utility Model Application S62-31640
- Japanese Utility Model Application S62-33961 (Japanese language version)
- Japanese Patent Application S62-126264
- Japanese Utility Model Application S63-27046
- Japanese Utility Model Application S63-32344 (Japanese language version)
- Japanese Patent Application S63-46266
- Additional Third-Party Engines



Honda GX160



Subaru SP170



Kohler SH265



Briggs and Stratton 550 Series



Briggs 750



Kohler Command Pro

Briggs & Stratton Corp. and
Kohler Co. v. Honda

EXHIBIT
Opposer
25
7-16-15
Reisel
PENNSA 800-631-9889



Predator 346cc



Lifan 420cc



Champion Model #61151 (338cc)



Kawasaki FJ180



Generac
212CC OHV Engine



V Power Equipment
212cc Hemi Head High Performance
Engine (60363)



V Power Equipment
212CC 7HP



Jiangdong JF120



Jiangdong JF240



Lifan
LF168F-2



Blue Max 6783



All-Power APE7006V