NOT FOR CITATION

IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

AMERICAN HONDA MOTOR CO., INC.,

Plaintiff/Counter-Defendant,

v.

THE COAST DISTRIBUTION SYSTEM, INC.,

Defendant/Counter-Claimant.
_____/

No. C 06-04752 JSW

CLAIM CONSTRUCTION ORDER

INTRODUCTION

Plaintiff, American Honda Motor Co., Inc. ("Honda"), filed this suit in which it alleges that Defendant, The Coast Distribution System, Inc. ("Coast"), infringes U.S. Patent Nos. 5,706,769 ("the '769 Patent"), 6,439,215 ("the '215 Patent"), 6,250,273 ("the '273 Patent"), 5,857,441 ("the '441 Patent"), and 6,378,468 ("the '468 Patent").

On October 16, 2007, pursuant to *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996), the Court held a claim construction hearing to construe disputed claim terms from the patents-in-suit. Having carefully considered the parties' papers, having heard the parties' arguments, and having considered the relevant legal authorities, the Court construes the disputed terms and phrases as set forth in the remainder of this Order.

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ANALYSIS

A. Legal Standard.

"It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004). The interpretation of the scope and meaning of disputed terms in patent claims is a question of law and exclusively within the province of a court to decide. *Markman*, 517 U.S. at 372. The inquiry into the meaning of the claim terms is "an objective one." *Innova/Pure Water*, 381 F.3d at 1116. As a result, when a court construes disputed terms, it "looks to those sources available to the public that show what a person of skill in the art would have understood the disputed claim language to mean." *Id*. In most cases, a court's analysis will focus on three sources: the claims, the specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). However, on occasion, it is appropriate to rely on extrinsic evidence regarding the relevant scientific principles, the meaning of technical terms, and the state of the art at the time at the time the patent issued. *Id.* at 979-81.

The starting point of the claim construction analysis is an examination of the specific claim language. A court's "claim construction analysis must begin and remain centered on the claim language itself, for that is the language that the patentee has chosen to particularly point out and distinctly claim the subject matter which the patentee regards as his invention." *Innova/Pure Water*, 381 F.3d at 1116 (internal quotations and citations omitted). In the absence of an express intent to impart a novel meaning to a term, an inventor's chosen language is given its ordinary meaning. *York Prods., Inc. v. Cent. Tractor Farm & Family Center*, 99 F.3d 1568, 1572 (Fed. Cir. 1996). Thus, "[c]laim language generally carries the ordinary meaning of the words in their normal usage in the field of the invention." *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1367 (Fed. Cir. 2003); *see also Renishaw v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998) (recognizing that "the claims define the scope of the right to exclude; the claim construction inquiry, therefore, begins and ends in all cases with the actual

words of the claim"). A court's final construction, therefore, must accord with the words chosen by the patentee to mete out the boundaries of the claimed invention.

The claims do not stand alone. Rather, "they are part of 'a fully integrated written instrument.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc) (quoting *Markman*, 52 F.3d at 978). The written description, the drawings, and, if included in the record, the prosecution history, each provide context and clarification regarding the intended meaning of the claim terms. *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1324-25 (Fed. Cir. 2002). The specification "may act as a sort of dictionary, which explains the invention and may define terms used in the claims." *Markman*, 52 F.3d at 979. The specification also can indicate whether the patentee intended to limit the scope of a claim, despite the use of seemingly broad claim language. *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001) (when the specification "makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question").

Intent to limit the claims can be demonstrated in a number of ways. For example, if the patentee "acted as his own lexicographer" and clearly and precisely "set forth a definition of the disputed claim term in either the specification or prosecution history," a court will defer to that definition. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002). In order to so limit the claims, "the patent applicant [must] set out the different meaning in the specification in a manner sufficient to give one of ordinary skill in the art notice of the change from ordinary meaning." *Innova/Pure Water*, 381 F.3d at 1117. In addition, a court will adopt an alternative meaning of a term "if the intrinsic evidence shows that the patentee distinguished that term from prior art on the basis of a particular embodiment, expressly disclaimed subject matter, or described a particular embodiment as important to the invention." *CCS Fitness*, 288 F.3d at 1367. Likewise, the specification may be used to resolve ambiguity "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex*, 299 F.3d at 1325.

Limitations from the specification (such as from the preferred embodiment) may not be read into the claims, absent the inventor's express intention to the contrary. *Id*. at 1326; *see also CCS Fitness*, 288 F.3d at 1366 ("[A] patentee need not 'describe in the specification every conceivable and possible future embodiment of his invention.'") (quoting *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1344 (Fed. Cir. 2001)). To protect against this result, a court's focus should remain on understanding how a person of ordinary skill in the art would understand the claim terms. *Phillips*, 415 F.3d at 1323.

If the analysis of the intrinsic evidence fails to resolve any ambiguity in the claim language, a court then may turn to extrinsic evidence, such as expert declarations and testimony from the inventors. *Intel Corp*. *v*. *VIA Techs*., *Inc*., 319 F.3d 1357, 1367 (Fed. Cir. 2003) ("When an analysis of *intrinsic* evidence resolves any ambiguity in a disputed claim term, it is improper to rely on extrinsic evidence to contradict the meaning so ascertained.") (emphasis in original). When considering extrinsic evidence, a court should take care not to use it to vary or contradict the claim terms. Rather, extrinsic evidence is relied upon more appropriately to assist in determining the meaning or scope of technical terms in the claims. *Vitronics Corp. v. Conceptronic*, *Inc.*, 90 F.3d 1576, 1583-84 (Fed. Cir. 1996).

Dictionaries also may play a role in the determination of the ordinary and customary meaning of a claim term. In *Phillips*, the Federal Circuit reiterated that "[d]ictionaries or comparable sources are often useful to assist in understanding the commonly understood meanings of words...." *Phillips*, 415 F.3d at 1322. The *Phillips* court, however, also admonished that district courts should be careful not to allow dictionary definitions to supplant the inventor's understanding of the claimed subject matter. "The main problem with elevating the dictionary to ... prominence is that it focuses the inquiry on the abstract meaning of the words rather than on the meaning of claim terms within in the context of the patent." *Id*. at 1321. Accordingly, dictionaries necessarily must play a role subordinate to the intrinsic evidence.

In addition, a court has the discretion to rely upon prior art, whether or not cited in the specification or the file history, but only when the meaning of the disputed terms cannot be

ascertained from a careful reading of the public record. *Vitronics*, 90 F.3d at 1584. Referring to prior art may make it unnecessary to rely upon expert testimony, because prior art may be indicative of what those skilled in the art generally understood certain terms to mean. *Id.*

B. Claim Construction for the '769 Patent.

1. Background of the Invention.

The '769 Patent is directed to an improvement in an overhead cam ("OHC") engine, specifically "a novel OHC engine which can be produced inexpensively and in which the engine, particularly the engine head, can be reduced in size," because of the unique arrangement of the various engine components. ('769 Patent, Abstract, 1:7-9.) According to the specification, prior art OHC engines typically "include[] a cam shaft disposed on a cylinder head, intake and exhaust cam followers which contact a cam face of a single valve operating cam provided on the cam shaft, so that intake and exhaust valves are driven by the cam followers." (*Id.* at 1:15-19.) According to the inventor, the problem with such a design is that "the valve operating system including the valve operating cam is disposed above the combustion chamber, and the intake and exhaust valves are disposed in a V-shaped arrangement," which increases the size of the engine head as well as the cost. (*Id.* at 1:24-29.)

In order to solve this problem, the inventor of the '769 Patent arranged the engine components in a manner, which he claims reduces the width of the engine head, making the OHC engine more compact and less expensive. (*Id.* at 2:19-39.) As part of this unique arrangement, intake and exhaust valves and intake and exhaust cam followers are symmetrically disposed on opposite sides of a single valve operating cam, which is disposed on a cylinder head. "Thus, the intake and exhaust valves and the intake and exhaust cam followers can be collectively positioned in a compact manner to surround the single valve operating cam, with no portions projecting outwardly, and the valve operating cam is disposed on the cylinder head." (*See generally id.* at 1:38-2:14.) In a second feature of the invention, the "valve operating cam is disposed in a clearance defined between the intake and exhaust valves and a timing follower pulley of the timing transmitting mechanism." (*Id.* at 2:28-31.)

Independent Claim 1 of the '769 Patent provides:

> An overhead cam (OHC) engine comprising:
>
> (a) a cylinder block;
>
> (b) a cylinder head mounted on said cylinder block;
>
> (c) a crankshaft for reciprocating a piston in a cylinder in said cylinder block;
>
> (d) a cam shaft mounted in said cylinder head;
>
> (e) a valve operating cam mounted on said cam shaft and *rotatably therewith*;
>
> (f) at least one intake and at least one exhaust valve mounted in said cylinder head;
>
> (g) at least one intake and at least one exhaust cam follower operatively coupling said intake valve and said exhaust valve respectively to said valve operating cam; wherein
>
> (h) the center axis of said cam shaft intersects the axis of said cylinder;
>
> (i) said intake and exhaust valves are positioned parallel to each other symmetrically disposed on opposite sides of said cam shaft axis, and perpendicular thereto; and
>
> (j) *said intake and exhaust cam followers are symmetrically disposed on opposite sides of said cam shaft axis, wherein said intake and exhaust cam followers each have two arm portions, one arm portion of each said intake and exhaust cam followers extending towards each other and contacting said intake and exhaust valve respectively, and the other arm portions of said intake and exhaust cam followers respectively extending towards each other, said other arm portions contacting the cam surface of said valve operating cam.*

(*Id.* at 6:17-45 (disputed terms emphasized).)

2. The Disputed Claim Terms.

a. "rotatably therewith"

The parties dispute whether the term "rotatably therewith" should be construed to encompass a cam that rotates independently of the cam shaft *and* a cam that rotates together with the cam shaft. Thus, Honda proposes that the term be construed to mean "supported by the cam shaft and turns on or with the cam shaft," while Coast argues that the term should mean "fixed to the cam shaft to rotate with the cam shaft."

The Court begins with the claim language. Coast argues that the term should be construed to mean that the valve operating cam is "fixed" to the cam shaft. This construction is

based, in part, on the fact that the valve operating cam is "mounted" on the cam shaft. In general, "claim terms are presumed to be used consistently throughout the patent, such that the usage of a term in one claim can often illuminate the meaning of the same term in other claims." *Research Plastics, Inc. v. Federal Packaging Corp.*, 421 F.3d 1290, 1296 (Fed. Cir. 2005) (citing *Phillips*, 415 F.3d at 1313-14). The term "mounted" is used in other several other elements of Claim 1, and the inventors use of the term in those claim elements does not suggest that the inventors intended the term to mean "fixed," in the sense that one component is immutably fixed to another component of the engine. Accordingly, the Court rejects Coast's proposed construction to the extent it includes this limitation.

"Claim language generally carries the ordinary meaning of the words in their normal usage *in the field of the invention*." *Invitrogen Corp.*, 327 F.3d at 1367 (emphasis added). Neither party suggests that the term "therewith" has any particular meaning in the field of single, cylinder four-stroke engines. Rather, in support of its position that the term "therewith" can mean "with" or "on," Honda relies on dictionary definitions of the word, which include both "with that" and "thereupon, forthwith." (Declaration of Behrooz Shariati ("Shariati Decl."), Exs. H, I.). The latter definitions are noted to be "archaic" and also refer to a temporal, rather than spatial, relationship. Because the Court finds that the claim language does not clearly illuminate the meaning of this term, the Court looks to the specification for guidance.

The patent specification discloses two preferred embodiments. Honda argues that a person of ordinary skill in the art would understand "therewith" to encompass both embodiments. In the first preferred embodiment, "a single valve operating cam is rotatably carried *on* the cam shaft." ('769 Patent at 3:63-66 (emphasis added).) In the second preferred embodiment, the "valve operating cam **36** and the cam shaft **35** may be formed integrally with each other and in this case, the cam shaft **35** is rotatably carried in the cylinder head **2**." (*Id.* at 4:11-13.) Honda asserts that the first preferred embodiment discloses that the valve operating cam is mounted on the cam shaft in such a fashion as to permit "the cam to rotate or turn on the cam shaft, relative to the cam shaft," and in the second preferred embodiment the cam and the cam shaft are one moving piece, such that they rotate with one another. In general, a court

should not interpret a term to exclude a preferred embodiment. *See, e.g., Primos Inc. v. Hunters Specialties, Inc.*, 451 F.3d 841, 848 (Fed. Cir. 2006); *Vitronics*, 90 F.3d at 1583. In both of the preferred embodiments, the cam and the cam shaft are positioned so that they are able to move together, whether that is because the cam is "on" the cam shaft or because they have been formed into one piece. The specification, therefore, demonstrates that the claim term "therewith" can be construed broadly to permit the cam to turn on the cam shaft.

Coast argues that, although the specification discloses two embodiments, the inventor chose to claim the second preferred embodiment and, therefore, dedicated the first preferred embodiment to the public. In support of this argument, Coast relies on *Johnson & Johnston Assoc's, Inc. v. R.E. Serv. Co.*, 285 F.3d 1046 (Fed. Cir. 2002), in which the court applied the "disclosure-dedication" rule to determine whether the district court erred in denying a motion for summary judgment based upon the doctrine of equivalents. Coast's argument, however, depends upon the conclusion that the term "therewith" must be limited to mean "with" rather than "on or with." For the reasons set forth above, the Court rejects this limiting construction and, therefore, concludes that the "disclosure-dedication" rule would not operate to preclude Honda from claiming both preferred embodiments.

Accordingly, the Court construes the term "rotatably therewith" to mean: **"supported by the cam shaft and turns on or with the cam shaft."**

b. "cam followers are symmetrically disposed on opposite sides of said cam shaft axis, wherein said intake and exhaust cam followers each have two arm portions, one arm portion of each said intake and exhaust cam followers extending towards each other and contacting said intake and exhaust valve respectively, and the other arm portions of said intake and exhaust cam followers respectively extending towards each other, said other arm portions contacting the cam surface of said valve operating cam"[1]

The above quoted phrases constitute element (j) of Claim 1 ("element (j)"). The parties' disputes center around the meaning of the term "symmetrically disposed," as it is used in the

[1] The parties break down element (j) into four discrete disputed phrases, and in doing so have violated the Court's Order Re Joint Claim Construction Statement, issued July 11, 2007, which required the parties to submit no more than ten terms for construction. However, in light of the time that this matter has been pending, the Court will construe each disputed phrase in element (j) of claim 1, as requested.

first phrase of element (j), and to the manner in which the cam followers are arranged, *i.e.* the last three phrases of element (j). The Court shall address the parties' arguments in turn.

Honda argues that the term "symmetrically disposed" should be construed to refer only to the placement of the cam followers, and Coast argues that it also should include a reference to the shape of the cam followers. The Court begins with the language of the claims, which reads "cam followers are symmetrically disposed on opposite sides of said cam shaft axis." ('769 Patent, at 6:37-38.) The term "symmetrically" modifies the term "disposed" and refers to the fact that the cam followers are located on "opposite sides" of the cam shaft axis, *i.e.* to the placement of the cam followers. Honda's position also is supported by the fact that the inventors used the term "symmetrically disposed" in element (i) to describe the placement of intake and exhaust valves.

However, the term "symmetrical" means, *inter alia*, "having, involving or exhibiting symmetry," which in turn means, *inter alia*, "the property of being symmetrical ... correspondence in *size*, *shape*, and relative position of parts on opposite sides of a dividing line or median plane or about a center or axis." *See Webster's Ninth New Collegiate Dictionary* at 1196 (1987) (emphasis added). Because the term "symmetry" encompasses both placement and size, the Court looks to the specification to determine if the inventor gave a different meaning to the term "symmetrically."

The inventor states that "[t]he intake and exhaust cam followers **43** and **44** are disposed symmetrically on opposite sides of the valve operating cam **36** *and* formed into substantially the same bifurcated shape." ('769 Patent at 4:22-25 (emphasis added).) Coast argues that this reference, and the patent figures, demonstrate that the term "symmetrically disposed" should be construed to include a limitation that the cam followers are "the same general size and shape." However, the inventor clearly distinguished between the situation where two objects are symmetrically disposed to one another and a situation where two objects have symmetrical (*i.e.* substantially similar) shapes. Moreover, in the Summary of the Invention, the inventor states that "[a]ccording to a first feature of the invention, the center of the cam shaft is disposed on the cylinder axis, and the intake and exhaust valves of the intake and exhaust cam followers are

symmetrically disposed." (*Id.* at 1:66-2:2.) The inventor describes the placement of those elements, rather than their shape or size. (*Id.* at 2:2-14.) These facts also support Honda's position that "symmetrically disposed" should not be construed to refer to the size or shape of the cam followers.

With respect to the arrangement of the cam followers, the parties dispute whether these phrases should be construed to include a reference to an "intermediate portion" of the "arm portions." Honda argues that this term is not used in Claim 1, whereas it is used in dependent Claim 2. In general, "the presence of a dependent claim that adds a particular limitation raises a presumption that the limitation in question is not found in the independent claim." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004). The presumption of claim differentiation "is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim." *SunRace Roots Enter. Co. v. SRAM Crop.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003). The Court concludes that presumption does not apply in this case, because the term "intermediate portion" is not the only meaningful difference between independent claim 1 and dependent claim 2. Rather, as Honda itself states, what distinguishes claim 2 from claim 1 is that the cam followers are supported on the cylinder head, rather than on the cam follower shafts.

In addition, although the claim language does not specifically refer to an "intermediate portion," the claim does state that each cam follower has two arm portions. ('769 Patent at 6:38-39.) The claim, however, is silent as to whether the "arm portions" are part of one unitary component or are two separate components that are joined together. Looking to the specification for guidance, the inventor's description of the cam followers suggests that they are a unitary component with an "intermediate portion" located between the two arm portions. (*Id.* at 4:17-23, 5:29:32.) Similarly, the figures disclose a unitary component. (*See, e.g., id.* Figs. 2, 4.) Accordingly, the Court adopts Coast's proposed construction to the extent it incorporates the term "intermediate portion."

Apart from the "intermediate portion" dispute, the parties do not ascribe any special meaning to the terms in the remainder of these phrases and do not suggest any special construction is necessary to illuminate the scope of the claim language. Further, their proposed constructions are substantially similar. The Court concludes that the latter three phrases of element (j) do not require construction beyond the inclusion of the phrase "intermediate portion." *See, e.g., O2 Micro Int'l Ltd. v. Beyond Innovation Technology Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008.)

Accordingly, the Court construes element (j) to mean: **"cam followers arranged correspondingly on opposite sides of the cam shaft axis, the cam followers have two arm portions that extend from an intermediate portion, and one arm portion of each intake and exhaust cam follower extend towards each other and contact the intake and exhaust valves, respectively, and the other arm portions of each intake and exhaust cam follower extend towards each other and contact the cam surface of the valve operating cam."**

C. Claim Construction of the '215 Patent.

1. Background of the Invention.

The '215 Patent is directed to an improvement in a breather structure in a four-cycle engine that can prevent the lubricating oil from entering the intake system when the engine body is tilted downward, while avoiding any increase in the overall engine dimensions. ('215 Patent at 1:6-16, 51-58.) According to the inventors, the invention is an improvement over prior art, because prior art breather structures cannot operate effectively when the engine bodies are tilted downward. (*Id.* at 1:29-49.)

Claim 1 of the '215 Patent provides:

> A breather structure in a four-cycle engine for a *work machine* in which a crankcase of an engine body rotatably supports a crankshaft linked to the *work machine*, lubricating oil is stored in a crank chamber formed inside the crankcase, and an intake system is connected to a cylinder head of the engine body, the axis of a cylinder bore of the engine body being almost vertical when the *work machine* is being used, the breather structure including:
>
> a first breather chamber;
>
> a first through passage for providing communication between the first breather chamber and the crank chamber;

> *a second breather chamber placed in the vicinity of the intake system on the side approximately opposite to the first breather chamber relative to the axis of the cylinder bore;*
>
> a second through passage for providing communication between the second breather chamber and the crank chamber; and
>
> a communicating passage for providing communication between the first and second breather chambers,
>
> wherein the first breather chamber, the first through passage, the second breather chamber, the second through passage and the communicating passage are *provided in the engine body* so that the first and second through passage communicate with the lower parts of the first and second breather chambers that are positioned above the oil surface inside the crank chamber when the *work machine* is being used and the communicating passage opening into the upper part of the second breather chamber,
>
> wherein a guide pipe that communicates with the upper part of the second breather chamber when the *work machine* is being used is connected to the intake system,
>
> wherein the second through passage is formed so that an open end of the second through passage inside the crank chamber is positioned above the oil surface inside the crank chamber regardless of the attitude of the engine body when the engine body is tilted downward so that the axis of the cylinder bore becomes almost horizontal, and
>
> wherein the route from the first through passage to the communicating passage via the first breather chamber is shaped so as to prevent the lubricating oil inside the crank chamber from entering the communicating passage when the engine body is tilted downward so that the communicating passage is positioned beneath the axis of the cylinder bore.

(*Id.* at 9:20-10:31 (disputed terms emphasized).)

2. The Disputed Claim Terms.

a. "work machine"

Honda asserts that the term "work machine" should be construed to mean "a device for transferring mechanical energy from a four-cycle engine," and Coast argues that it should be construed to mean "a machine that produces mechanical motion as its primary output, and the orientation of which varies from when it is in use to when it is not in use."[2] The preamble of Claim 1 provides for "[a] breather structure for a four-cycle engine in a work machine in which a crankcase of an engine body rotatably supports a crankshaft linked to the work machine."

[2] The Court refers to the issue of "mechanical energy" versus "mechanical motion," as the "mechanical limitation." The Court refers to the latter part of Coast's proposed construction as the "orientation limitation."

('215 Patent at 9:20-22.) Claim 1 also requires "the axis of a cylinder bore of the engine body being almost vertical when the work machine is being used." (*Id.* at 9:25-27; *see also id.* at 10:9-10, 10:14-15 (referencing "when the work machine is being used").) The parties do not suggest that the term "work machine," is a term of art in the field of the invention, and they focus primarily on the specification to support their proposed constructions. Although the claim language provides guidance on Coast's proposed "orientation limitation," it does not clearly define a work machine. Accordingly, the Court looks to the specification for guidance.

The '215 Patent is directed, in general, to an improvement in a breather structure in four-cycle engines for work machines, and the inventors explain that trimmers, grass cutters or rammers are examples of such "work machines." ('215 Patent at 1:6-16.) In their description of the preferred embodiment, the inventors use a rammer as an exemplary "work machine." (*Id.* at 3:51-52 (describing an "engine body **11** of a four-cycle engine E for driving a rammer **10**, which is a work machine").) However, the inventors also note that "[t]he application of the present invention is not limited to the rammer **10** and the present invention can be put into practice widely in any field relating to a work machine that is connected to the crankshaft **14** so that the axis of the cylinder bore **16** becomes almost vertical when the machine is used." (*Id.* at 9:13-18.) These examples of work machines demonstrate that a work machine is a device driven by a four-cycle engine, *i.e.* it is powered by the engine.

The claim language does not require that the work machine produce "mechanical motion." Although the examples of work machines in the specification may, in fact, do so, the inventors clearly stated that the application of the invention was not limited to those machines. (*Id.* at 9:13-18.) Rather, the inventors stated that the invention could be put to use in a "work machine that is connected to the crankshaft ... so that the axis of the cylinder bore ... becomes almost vertical when the machine is used." (*Id.*) There is nothing in this language that supports Coast's position that the "work machine" produce mechanical motion. Accordingly, the Court rejects this aspect of Coast's proposed construction.

The Court, however, agrees with Coast's proposed construction regarding the "orientation limitation." It is true that the claims refer only to instances when the work

machine is being used, rather than when it is not in use. However, as set forth in the specification, "an object of the present invention [was] to provide a breather structure in a four-cycle engine that can prevent the lubricating oil from entering the intake system when the engine body is tilted downward." ('215 Patent at 1:53-57.) The inventors describe the prior art in connection with the fact that "the attitude of a work machine such as a trimmer, a grass cutter or a rammer varies from when it is operating to when it is not operating," and state that "the oil surface inside the crank chamber also varies from when it [the work machine] is operating to when it is not operating." (*Id.* at 1:18-22.)

Because of the variation in attitude and oil surface, it is necessary "to arrange the breather structure for guiding breather gas from the crank chamber into an intake system so that the lubricating oil is prevented from entering the intake system when it [the work machine] is not operating." (*Id.* at 1:22-25.) The inventors note that in work machines such as grass cutters or rammers, "the engine body may be tilted thereby making the cylinder bore almost horizontal when the machine is not being used." (*Id.* at 1:40-42.) The prior art breather structures, however, were not able to address "a state where the engine body is tilted downward." (*Id.* at 1:45-48.)

In addition to the above cited references, there are other references in the specification to the fact that the cylinder bore is horizontal when the work machine is not in use and is vertical when the work machine is in use. (*See, e.g., id.* at 1:15-16, 1:66-2:1, 2:26-27, 2:44-52, 3:57-59, 7:11-13.) The inventors also state that when the engine body is titled downward, the axis of the cylinder bore becomes horizontal, which suggests that when the engine body is titled downward, the work machine is not in use. (*See, e.g., id.* at 7:11-13, 8:36-44.) Finally, although the inventors state that the application of the invention is not limited to a rammer, they do state that the invention can be put into practice in any field "relating to a work machine that is connected to the crankshaft ... *so that the axis of the cylinder bore ... becomes almost vertical when the machine is used.*" (*Id.* at 9:13-18 (emphasis added). As Coast notes, the inventors' choice to use word "becomes" suggests that they recognized that the work machine has a different orientation prior to its use. All of these references in the specification give

meaning to the term "work machine" and demonstrate that although a work machine may not be limited the specific types of work machines referenced therein, the work machine of the claims is a work machine that varies in orientation when it is in use to when it is not in use.

Accordingly, the Court construes the term "work machine" to mean: **"a device for transferring mechanical energy from a four-cycle engine, the orientation of which varies from when it is in use to when it is not in use."**

b. "a second breather chamber placed in the vicinity of the intake system on the side approximately opposite to the first breather chamber relative to the axis of the cylinder bore"

Honda argues that this phrase should be construed as "a second volume for breather gas situated near the intake system on the side approximately across the axis of the cylinder bore from the first volume for breather gas." Coast argues that the phrase should be construed to mean "a second enclosed space that collects breather gas from the crank chamber to facilitate separation of oil from breather gas is situated near the intake system and is on the side of the engine body opposite, relative to the axis of the cylinder bore, a first enclosed space that collects breather gas from the crank chamber to facilitate separation of oil from breather gas." Although the parties have presented the entire phrase to the Court for construction, it is evident from their proposed constructions that they dispute the meaning of the term "breather chamber," as well as the meaning of the term "on the side approximately opposite."

With respect to the "breather chamber" dispute, Honda argues that Coast's proposed construction improperly includes a functional limitation. In general, "[a]n invention claimed in purely structural terms generally resists functional limitation." *Toro Co. v. White Consolidated Indus., Inc.*, 266 F.3d 1367, 1371 (Fed. Cir. 2001). Relying on *Toro*, Coast responds that including the function of the breather chamber is proper, because the function of the breather chamber is inherent in its structure. In *Toro*, the Federal Circuit construed a disputed claim term to require "a unitary cover and ring." *Id.* As part of the claim construction process, the court relied on the fact that the specification stated that an advantage of the invention was that the "unitary cover and ring design" could restrict the size of an air inlet "without having the operator manually insert or remove a replaceable ring," *i.e.* an automatic placement function.

Id. The court, however, did not utilize that function in its construction of the term, because the function was inherent to the structure. Simply put, the "automatic placement" function was embraced within the construction of the term, because the ring was permanently attached to the cover in a unitary design, *i.e.* it did not need to be inserted or removed. *Id.*

In this case, the disputed phrase is couched in structural terms. Although Honda suggests that the term should be construed to mean a "volume," the Court finds that Coast's proposed construction of an "enclosed space" more accurately reflects the plain meaning of the term "chamber." *See, e.g., Webster's* at 225 ("a natural or artificial enclosed space or cavity"). Although, the inventors describe the function of the breather chamber throughout the specification, a review of the detailed description of the preferred embodiment demonstrates that there are numerous components within the breather chamber, such as labyrinth walls, that help to facilitate the separation of oil from breather gas. The functional limitation Coast seeks to add to the construction of the term "breather chamber" is not necessarily inherent to its structure, and Coast's reliance on *Toro* is inapposite. To the extent there is any function inherent in the structure of the breather chamber, the Court concludes Honda's view of that function is more apt, *i.e.* the chamber is an enclosure for breather gas.

The parties also dispute the meaning of "on the side." The claim language states that the "second breather chamber is placed in the vicinity of the intake system on the side approximately opposite to the first breather chamber relative to the axis bore." Coast argues that the claim language is ambiguous because there is no antecedent basis for "the side," leaving one to "wonder, 'the side of what?'" (Opp. Br. at 13:10-11.) The Court finds the claim language to be ambiguous and looks to the specification for guidance.

The specification states that the "engine block **25** of the engine body **11** includes a first breather chamber **64**, a first through passage **65**, a second breather chamber **66**, a second through passage **67**, and a communicating passage **68**[.]" ('215 Patent at 5:17-20.) Referring to Figures 3 and 4 of the '215 Patent, the inventors state that the "first breather chamber ... is placed at a position that is approximately 180 degrees away from the position corresponding to the ... intake system **39** along the circumferential direction of the ... cylinder bore **16**. ... The

second breather chamber is placed in the vicinity of the intake system **39** on the side approximately opposite to the first breather chamber **64** relative to the axis of the cylinder bore **16**." (*Id.* at 5:22-31.) Referring back to the figures, the two breather chambers are located on opposite sides of the engine body. These specification references and the figures, therefore, illuminate the meaning of the term "on the side," as it is used in the claims, and the Court adopts this aspect of Coast's proposed construction.

Accordingly, the Court construes the term "a second breather chamber placed in the vicinity of the intake system on the side approximately opposite to the first breather chamber relative to the axis of the cylinder bore" to mean: **"a second enclosed space for breather gas situated near the intake system on the side of the engine body approximately across the axis of the cylinder bore from the first enclosed space for breather gas."**

c. "provided in the engine body"

Claim 1 provides that "the first breather chamber, the first through passage, the second breather chamber, the second through passage and the communicating passage are *provided in the engine body*." ('215 Patent at 10:3-6.) Honda argues that the disputed term means "furnished with at least one component forming a structural framework for an engine," whereas Coast argues that the term should mean "contained within the combination of a crankcase, a cylinder barrel and a cylinder head." Although the parties proffer different meanings for the term "provided in," the focus of the dispute is over what constitutes an "engine body."

Honda argues that the term "engine body" needs no special construction and that it should be construed to mean "the structural framework for an engine." Honda also argues that Coast's proposed construction "may encompass crankcase portions that do not provide a structural framework for the engine and would not be considered by one of ordinary skill in the art to be part of an 'engine body.'" (*See* Shariati Decl., Ex. F (Declaration of Dr. Elliott L. Stern, ¶¶ 57-58).) Notwithstanding Dr. Stern's opinion, the inventors acted as their own lexicographer and "set forth a definition of the disputed claim term in ... the specification." *CSS Fitness*, 288 F.3d at 1366. Specifically, in the detailed description of the preferred

embodiment, the inventors stated that "an engine body ... has a crankcase **15**, a cylinder barrel **17** and a cylinder head **20.**" ('215 Patent at 3:51-53.) Further, the use of the term "provided" in the claim language implies location.

Accordingly, the Court construes the term "provided in the engine body" to mean: **"contained within the combination of a crankcase, a cylinder barrel and a cylinder head."**

D. Claim Construction of the '273 Patent.

1. Background of the Invention.

The '273 Patent is directed to an improvement in a four-cycle engine. According to the specification the improvement consists of the fact that "the distance between ... first and second bearing portions is reduced without being interfered with by the valve operating mechanism." According to the inventors, this enhances the durability of the crankshaft and allows the engine to be assembled with ease, because "the valve operating mechanism can be assembled to the crankshaft after coupling ... first and second case halves to each other." ('273 Patent at 1:46-53.)

Independent Claim 1 of the '273 Patent provides:

> A 4-cycle engine comprising an engine body which is comprised of a crankcase including first and second bearing portions for supporting opposite ends of a crankshaft, and a head-integral type cylinder barrel having a cylinder bore in which a piston is received, wherein
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> said crankcase is comprised of *first and second case halves which are coupled to each other at a parting plane extending to obliquely intersect an axis of said first and second bearing portions*, said cylinder barrel and the first bearing portion being *integrally molded* on said first case half to form an engine block, said second bearing portion being *integrally molded on* said second case half, and a *side cover is coupled to an outer side surface of said engine block* on a side of the engine block opposite from said *parting plane*, so as to define a valve operating chamber for accommodation and support of a valve operating mechanism between said *side cover* and said outer side surface.

(*Id.* at 6:36-53 (disputed terms emphasized).)

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2. The Disputed Claim Terms.

a. "first and second case halves which are coupled to each other at a parting plane extending to obliquely intersect an axis of said first and second bearing portions"

Honda argues that this phrase should be construed as "two crankcase portions connected together at a separation surface that crosses, at a slant, an axis for the supports for opposite ends of a crankshaft, the axis for the supports being a line coincident with the axis of rotation of the crankshaft." Coast argues that the phrase should be construed as "first and second parts of the crankcase are coupled together at a seam that defines a plane that is neither parallel nor perpendicular to the center axis of first and second portions for accommodating bearings, each portions completely encircling the entire periphery of one end of a crankshaft." As an alternative, Coast argues that the phrase should be construed as "two crankcase portions connected together at a planar separation surface that crosses, at a slant, the axis of rotation of the crankshaft."

The parties' dispute centers primarily around the proper construction of the term "parting plane." Honda argues that the plain meaning of term "parting plane," to one of ordinary skill in the art, is a "separation surface." (Shariati Decl., Ex. F ("Stern Decl., ¶ 64).) Honda further argues that, because the parting plane is the point at which the first and second crankcases are coupled to one another, this separation surface need not limited to a flat surface. The Court begins with the claim language. Although the term "plane" implies a flat or level surface, *see, e.g., Webster's* at 899, in the context of the claim, it is clear that the "plane" claimed relates to the point where the two crank cases are coupled to one another.

Coast argues that, because the claim also requires that the parting plane "obliquely intersect[s] an axis of said first and second bearing portions," the term plane must be construed to mean a level or flat surface. Otherwise, according to Coast, "it would be impossible to determine at which angle it intersects an axis of the bearing portions." (Opp. Br. at 16.) However, as Coast itself argues, the term "obliquely," implies that the parting plane intersect the axis "as slant."

Accordingly, the Court construes the term "first and second case halves which are coupled to each other at a parting plane extending to obliquely intersect an axis of said first and second bearing portion" to mean: **"two crankcase portions connected together at a separation surface that crosses, at a slant, an axis for the supports for opposite ends of a crankshaft, the axis for the supports being a line coincident with the axis of rotation of the crankshaft."**

b. "integrally molded on"

Honda argues that this term should be construed to mean "formed together," and Coast argues that the term should be construed to mean "the engine block includes the cylinder barrel and a portion completely encircling the entire periphery of one end of a crankshaft, cast as a single piece."

The Court begins with the claim language, which suggests that the first bearing portion is molded on to the first case half as a unit, which lends support for Honda's proposed construction. *See, e.g., Webster's* at 628 (defining integral as "formed as a unit with another part"). However, in the specification, the inventors also clearly distinguish between the terms "integrally molded" and "formed integrally." (*Compare* '273 Patent at 1:64-66, 3:5-9 *with id.* at 4:13, 4:24-25, 5:23-25, 5:41-43.) Thus, the specification demonstrates that the inventors gave the term "integrally molded" a meaning different from the term "formed integrally." Although the parties do not cite to the prosecution history, the record also demonstrates that the inventors initially used the term "formed by molding" in the claim, but amended the claim language to "integrally molded." (*See* Shariati Decl., Ex. M at 2.) Again, this prosecution history demonstrates that the term "molded" means something different from the word "formed."

Accordingly, the Court construes the term "integrally molded on" to mean: **"formed together by molding."**

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c. "a side cover is coupled to an outer side surface of said engine block"

Honda argues that this term should be construed to mean "a cover that is removably attached to a generally exterior side surface of the engine block," and Coast argues that it should be construed to mean "a cover that is removably attached to an exterior surface of the engine block, defining a plane that is generally aligned with the long axis of the cylinder head, and is not a head cover." As an alternative, Coast suggests that the term be construed to mean "a cover that is removably attached to a generally exterior side surface of the engine block, and is not a head cover."

Honda argues that the claim language does not support Coast's proposed construction., to the extent it includes the language "defining a plane that is generally aligned with the long axis of the cylinder head." Coast argues that this language is necessary because Coast's construction "leaves room for ambiguity about which 'side' is the 'side surface of the engine block.'" (Opp. Br. at 20:18-10.) However, the claim states that the side cover is "coupled to an outer side surface of said engine block on a side of the engine block opposite from said parting plane." ('273 Patent at 6:48-50.) Thus, there is no ambiguity in the claim as to the location of the side surface of the engine block. Accordingly, the Court rejects this aspect of Coast's proposed construction.

The claim language also is broad enough to include a "head cover." Coast argues, however, that the inventors specifically disclaimed a broad interpretation of the claim term in order to distinguish over prior art. On August 17, 2000, the Examiner rejected proposed Claim 1 on the basis that it was anticipated by Japanese Patent No. 177441 ("JP '441"). According to the Examiner, that reference "shows a valve cover at 2 that is deemed to be at a 'side' of the engine and opposite the oblique plane. The claim must set forth more detail of the relationship between the valve drive elements, the cover, and the engine block to overcome the art of record." (Shariati Decl., Ex. L at 2.)

In response to this Office Action, the inventors amended the relevant portion of the claim to read "a side cover is coupled to an outer side surface of said engine block [which is]

on a side of the engine block opposite from said parting plane, so as to define a valve operating chamber for accommodation and support of a valve operating mechanism between said side cover and said outer side surface." (*Id.*, Ex. M at 2.) The inventors also explained that they had amended Claim 1 "to clarify that the side cover serves to support the valve operating mechanism in cooperation with the outer side surface of the engine block on the side opposite from the parting plane." (*Id.* at 3.)

The inventors then distinguished the prior art reference and state that "element 2 of JP '441," which the Examiner referred to as a valve cover, "is a cylinder head." (*Id.*) The inventors note that "[t]he applied reference teaches that engine body E is formed of a cylinder block 1, a cylinder head 2 and a crankcase half 3 which are integrally molded. ... In the applied reference the valve operating mechanism T is disposed inside the engine body E and, more specifically, within the cylinder head 2. No *separate* side cover is used. The valve operating mechanism T is located on the *same* side as the parting plane, which is further away relative to the claimed invention." (*Id.* at 3-4 (emphasis added).) Finally, the inventors argue that "the side cover as recited in Claim 1 is not taught or suggested in the cited reference." (*Id.* at 4.) Thus, the inventors distinguished their invention from JP '441, because that reference did not include a "separate" side cover and because its valve operating mechanism was not located on the opposite side of the parting plane.

The Court finds that no clear disclaimer exists in this case. The inventors discuss JP '441 in the specification. In describing the invention taught by that patent, they note that it is difficult to reduce the distance between the first and second bearing portions, because the valve operating mechanism poses an obstacle due to its location. ('273 Patent at 1:28-33.) The inventors also state that in order to assemble the engine, "a portion of the valve operating mechanism is obliged to be temporarily attached to the crankshaft before coupling the first and second case halves to each other." (*Id.* at 1:36-39.) The inventors then note that their invention attempts to solve these problems by placing the valve operating mechanism in a space between the side cover and the outer side surface of the engine block, which is formed of a first case half, a cylinder barrel and a cylinder head. (*Id.* at 1:44-2:4, 2:65-67.) This

arrangement also allows for the valve operating mechanism to be assembled when the side cover has been removed. (*Id.* at 17-20.) There is nothing in the specification that would exclude a side cover from including a head cover. In addition, the prosecution history suggests that the inventors distinguished their invention from the prior art because their invention used a "separate" side cover. Again, nothing in that statement lends support to Coast's argument that this "separate" side cover could not include a head cover.

Accordingly, the Court construes the term "a side cover is coupled to an outer side surface of said engine block" to mean: **" a cover that is removably attached to a generally exterior side surface of the engine block."**

E. Claim Construction of the '441 Patent.

1. Background of the Invention.

The '441 Patent is directed to "a valve mechanism lubricator adapted for use in a splash lubrication of a timing gear in an engine in which a crank shaft supported by a crank case is coupled via the timing gear to a valve cam shaft supported by a cylinder head." ('441 Patent at 1:6-10). According to the inventors, prior art lubricators used an oil dipper to splash lubricating oil. A problem associated with such prior art lubricators is that "the oil splashed by the oil dipper formed on [a] connecting rod may not be supplied sufficiently to a timing gear because the connecting rod of the engine and the timing gear are generally spaced significantly apart from each other[.]" (*Id.* at 1:17-21.) The invention of the '441 Patent attempts to solve this problem by providing "a valve mechanism lubricator for an engine [that] is simple in structure [and] capable of effective splash lubrication of a timing gear." (*Id.* at 1:26-28.)

Independent Claim 1 of the '441 Patent provides:

> In an engine having a valve mechanism including at least one valve, and a crank shaft supported by a crank case is coupled via a timing gear to a valve cam shaft supported by a cylinder head, a valve mechanism lubricator for such an engine, comprising:
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> a lower portion of the crank case defining an oil storage chamber; an impeller driven by the crank shaft to splash lubricating oil stored in the oil storage chamber disposed adjacent the timing gear; and *guide walls formed along the inside wall of the crank case and operative to guide the oil splashed by the impeller to the timing gear.*

(*Id.* at 4:54-65 (disputed terms emphasized).)

2. The Disputed Claim Terms.

a. "guide walls formed along the inside wall of the crank case and operative to guide the oil splashed by the impeller to the timing gear"

Honda argues that this phrase should mean "surfaces operative to direct oil splashed by a rotating member to the timing gear and shaped in association with the interior surface of the crank case, the rotating member having radial portions projecting from its outer periphery." Coast argues that the term should mean "walls formed on the interior surface of the crank case to guide oil toward the timing gear, the walls extending at least as far as a rotating member having portions for moving oil."[3] The Court begins with the claim language, which states that the guide walls are "formed along the inside wall of the crank case and operative to guide the oil splashed by the impeller to the timing gear." The claim language therefore speaks both to the where the guide walls are located, along the inside wall of the crank case, and what their function is, to guide oil splashed by the impeller to the timing gear.

Honda argues that Coast's proposed construction includes the extraneous requirement that the guide walls must extend at least as far the impeller. The Court concurs with Honda. The claim language makes clear that the "guide walls" exist to "guide the oil splashed by the impeller to the timing gear." Although the guide walls must fulfill their function of splashing oil, there is nothing in the claims to suggest that they must extend in an particular direction to do so. ('441 Patent at 4:64-65.) Further, in the specification, the inventors note that in one embodiment, the guide walls enclose "the upper portion of the rotation path of the impeller blades **25*a*** of the impeller **25** [and] the rising path of the belt **14** from the driving pulley $\mathbf{13}_1$ to th valve gear chamber **10**." (*Id.* at 3:9-13.) However, in an example of another embodiment, in a vertical type engine, the guide wall "encloses the path of a belt **14** moved toward a driven pulley $\mathbf{13}_2$ from a driving pulley $\mathbf{13}_1$ through a valve gear chamber 10," and in this embodiment

[3] Although the parties have presented this entire phrase for construction, the true dispute is over two discrete terms within the phrase "guide walls" and "impeller," in violation of the Court's Order to present ten terms for construction. For the reasons set forth in note 1, *supra*, the Court shall construe the phrase as presented.

the guide wall is adjacent to the impeller. (*Id.* at 4:23-39.) Similarly, in Figure 2 two guide walls are depicted, whereas in figure 4 only 1 guide wall is depicted and that guide wall does not "extend" all the way to the impeller. (*Compare id.* Fig. 2 *with* Fig. 4.) Accordingly, the Court reject's Coast's proposed construction to the extent it require that the guide wall "extend at least as far as" the rotating member.

Honda also urges the Court to adopt a construction of the term "impeller" that would require "radial portions extending from its outer periphery." An "impeller" is defined as "one that impels" or "a blade of a rotor." *Webster's* at 603. Honda's proposal is not supported by the claim language. Indeed, in dependent claim 2, the inventors further define the impeller as "defined by a speed-regulating centrifugal governor ... having a rotary disc provided with a plurality of impeller blades projected from an outer peripheral face thereof." ('441 Patent at 4:67-5:3.) This language is drawn from a portion of the specification, in which the inventors did describe the impeller blades as "radial" in nature. (*Id.* at 2:60-62.)

Accordingly, the Court construes the term "guide walls" to mean: **"walls formed on the interior surface of the crank case to guide oil toward the timing gear."**

F. Claim Construction of the '468 Patent.

The parties now agree on the construction of the one term of the '468 Patent that was presented for construction. Accordingly, by the agreement of the parties, the Court construes the term "said head cover being fixed to an inside of said carrying handle" to mean: **"a detachable lid for the cylinder head being held to an interior portion of said carrying handle."**

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CONCLUSION

Based on the analysis set forth above, the Court adopts the foregoing constructions of the disputed terms and phrases. The parties are ordered to submit a further joint case management report pursuant to Patent Standing Order ¶ 13 by no later than May 15, 2009.

IT IS SO ORDERED.

Dated: April 14, 2009

JEFFREY S. WHITE
UNITED STATES DISTRICT JUDGE