

IN THE UNITED STATES DISTRICT COURT FOR
THE DISTRICT OF MARYLAND, NORTHERN DIVISION

PAICE LLC, et al.,

Plaintiffs,

v.

HYUNDAI MOTOR COMPANY, et al.,

Defendants.

CIVIL NO.: WDQ-12-0499

* * * * *

MEMORANDUM OPINION

Paice LLC ("Paice") and The Abell Foundation, Inc. ("Abell") (collectively, the "Plaintiffs") sued Hyundai Motor Company, Hyundai Motor America (together, "Hyundai"), and others¹ (collectively, the "Defendants") for patent infringement. Pending is the Defendants' motion to file first amended invalidity contentions, and claim construction. On January 14, 2014, the Court held a claim construction hearing. For the following reasons, the Defendants' motion to file first amended invalidity contentions will be denied, and the claim constructions adopted by the Court will govern this litigation.

¹ The other defendants are Kia Motors Corporation and Kia Motors America, Inc. (together, "Kia"). See ECF No. 52, Ex. 1 (hereinafter "2d Am. Compl.").

I. Background²

A. The Parties

Paice is a Delaware limited liability company with a place of business in Bonita Springs, Florida. 2d Am. Compl. ¶ 1. Since Paice was established in 1992 by Doctor Alex J. Severinsky, the company has developed "innovative hybrid electric technology" to promote fuel efficiency, lower emissions, and "superior driving performance." *Id.* According to Paice, its hybrid patents are "well known" in the automotive industry. *Id.* ¶ 30.³ Abell, a Maryland corporation, is a nonprofit charitable organization whose objectives include increasing energy efficiency and producing alternative energy. *Id.* ¶ 2. In 1998, Abell was introduced to Paice and has become an equity owner of the company. *Id.* Hyundai Motor Company and Kia Motors Corporation are Korean companies. *Id.* ¶¶ 3-4. Hyundai Motor America is a California subsidiary of Hyundai Motor Company, *id.* ¶ 5; Kia Motors America, Inc. is a California subsidiary of Kia Motors Corporation, *id.* ¶ 6. Hyundai and Kia are "related companies" and share information and technology. *Id.* ¶ 34.

² The facts are from the Plaintiffs' proposed second amended complaint.

³ For instance, in 2010, IP firm Griffith Hack published a study in which it found that Paice owns four of the world's 10 most dominant hybrid vehicle patents. 2d Am. Compl. ¶ 30.

B. The Patents in Suit

Paice and Abell are co-owners by assignment of the entire right, title, and interest in and to U.S. Patent Nos. 6,209,672 (the "'672 patent");⁴ 7,104,347 (the "'347 patent");⁵ 7,237,634 (the "'634 patent");⁶ 7,559,388 (the "'388 patent");⁷ and 8,214,097 (the "'097 patent").⁸ 2d Am. Compl. ¶¶ 11-16. The '347, '634, '388, and '097 patents issued from continuation-in-part applications relating to the '672 patent. *Id.* ¶ 16. The '672 patent is entitled "Hybrid Vehicle" and protects a "hybrid electric vehicle that is fully competitive with presently conventional vehicles as regards performance, operating convenience, and cost, while achieving substantially improved fuel economy and reduced pollutant emissions." '672 patent, Col. 1, ll.13-18.⁹

⁴ The '672 patent issued on April 3, 2001. Am. Compl. ¶ 14.

⁵ The '347 patent issued on September 12, 2006. *Id.* ¶ 12.

⁶ The '634 patent issued on July 3, 2007. *Id.* ¶ 11.

⁷ The '388 patent issued on July 14, 2009. *Id.* ¶ 13.

⁸ The '097 patent issued on July 3, 2012. *Id.* ¶ 15.

⁹ The '672 patent is attached to the first amended complaint at ECF No. 27-2.

C. Procedural History

On February 16, 2012, the Plaintiffs filed suit against the Defendants for directly, indirectly, and willfully infringing the '634, '347, and '388 patents, in violation of 35 U.S.C. § 271. ECF No. 1. On March 20, 2012, the parties stipulated to, and the Court approved, an extension of time to respond to the complaint. ECF Nos. 5, 8. On May 22, 2012, the Defendants timely moved to dismiss. ECF No. 14. On June 8, 2012, the Plaintiffs opposed the motion and moved for leave to file an amended complaint. ECF No. 24. On June 13, 2012, the Court denied the Defendants' motion to dismiss as moot and deemed the proposed amended complaint filed as of June 13, 2012. ECF No. 26. Also on June 13, the Plaintiffs filed the first amended complaint. ECF No. 27.¹⁰ On June 27, 2012, the Defendants moved

¹⁰ The amended complaint alleged eight causes of action:

- (1) Direct, indirect, and willful infringement of the '634 patent, against Hyundai (Count One)
- (2) Direct, indirect, and willful infringement of the '634 patent, against Kia (Count Two)
- (3) Direct, indirect, and willful infringement of the '347 patent, against Hyundai (Count Three);
- (4) Direct, indirect, and willful infringement of the '347 patent, against Kia (Count Four);
- (5) Direct, indirect, and willful infringement of the '388 patent, against Hyundai (Count Five);
- (6) Direct, indirect, and willful infringement of the '388 patent, against Kia (Count Six);
- (7) Direct, indirect, and willful infringement of the '672 patent, against Hyundai (Count Seven); and
- (8) Direct, indirect, and willful infringement of the '672 patent, against Kia (Count Eight).

to dismiss for failure to state a claim. ECF No. 29. On July 16, 2012, the Plaintiffs opposed the motion. ECF No. 30. On July 30, 2012, the Defendants replied. ECF No. 31. On March 27, 2013, the Court denied the Defendants' motion to dismiss. ECF Nos. 32, 33.

On April 10, 2013, the Defendants answered the amended complaint and asserted counterclaims for declaratory judgment of the invalidity and non-infringement of the patents. ECF No. 34 at 15-19. On May 6, 2013, the Plaintiffs answered the Defendants' counterclaims. ECF No. 38. On May 20, 2013, the Court entered a scheduling order pursuant to Local Rule 103.9. ECF No. 49. The order provided that any motion to amend the pleadings must be filed within 60 days. *Id.* at 1 ¶ 8. On May 28, 2013, the Court modified the scheduling order to limit the number of proposed terms for construction to 15, and to limit the number of asserted claims to 30 within 15 days of the claim construction ruling. ECF No. 50.

On June 7, 2013, the Plaintiffs moved for leave to file a second amended complaint adding the '097 patent to the case.

ECF No. 27 ¶¶ 36-90. The complaint sought judgments that Hyundai and Kia infringed the patents in suit; compensatory damages; pre- and post-judgment interest; attorney's fees; and a permanent injunction prohibiting further infringement (or, alternatively, determination of an ongoing royalty). *Id.* at 27-28.

ECF No. 52.¹¹ On June 13, 2013, the Court entered a scheduling order superseding the May 20, 2013 order. ECF No. 53. The new scheduling order stated that any motion to amend the pleadings must be filed within 60 days of the order. *Id.* at 1 ¶ 8. On June 24, 2013, the Defendants opposed the motion for leave to amend. ECF No. 56. On July 5, 2013, the parties submitted a joint discovery plan. ECF No. 58. On July 12, 2013, the Plaintiffs replied. ECF No. 62.

On October 15, 2013, the parties submitted a Joint Claim Construction statement. ECF No. 71. On November 5, 2013, the Defendants moved for leave to serve first amended invalidity contentions. ECF No. 74. On November 6, 2013, the case was referred to Magistrate Judge Susan K. Gauvey for discovery. ECF No. 76. On November 14, 2013, the Plaintiffs submitted their opening claim construction brief. ECF No. 78. On November 14, 2013, the Defendants filed their opening claim construction brief. ECF No. 79. On November 22, 2013, the Plaintiffs opposed the motion for leave to serve first amended invalidity contentions. ECF No. 83. On December 9, 2013, the Defendants

¹¹ The second amended complaint alleges two additional causes of action:

- (1) Direct, indirect, and willful infringement of the '097 patent, against Hyundai (Count Nine)
 - (2) Direct, indirect, and willful infringement of the '097 patent, against Kia (Count Ten).
- 2d Am. Compl. ¶¶ 93-104.

replied. ECF No. 84. On December 16, 2013, the Defendants filed their responsive claim construction brief. ECF No. 89.

On December 17, 2013, the Court granted leave to file a second amended complaint. ECF Nos. 92, 93. On January 3, 2014, the Plaintiffs answered the amended complaint and counterclaimed. ECF No. 97. On January 14, 2014, the Court held a claim construction hearing. ECF No. 106. On May 30, 2014, the Defendants moved for leave to serve second amended invalidity contentions. ECF No. 256. On June 16, 2014, the Plaintiffs opposed the motion for leave to serve second amended invalidity contentions. ECF No. 309. On July 3, 2014, the Defendants replied. ECF No. 353.

II. Analysis

A. Motion to File First Amended Invalidity Contentions

The Defendants move to amend their invalidity contentions to add an indefiniteness defense under 35 U.S.C. § 112 ¶ 2 for 5 claim terms. See ECF No. 75 at 1. Under Local Rule 804.6, a party may amend its invalidity contentions "upon written consent of all parties or, for good cause shown, upon leave of the Court." See Local Rule 804.6.

The parties have not identified, and the Court has not found, any cases applying Local Rule 804.6 in the context of amending invalidity contentions. Other district courts have similar local patent rules that require a showing of "good

cause" to amend invalidity contentions.¹² The Federal Circuit has addressed the application of a "good cause" standard found in local district court rules. See *O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.*, 467 F.3d 1355, 1363 (Fed. Cir. 2006) (addressing the application of the Northern District of California's local patent rules requiring a finding of "good cause" to amend contentions). The Federal Circuit held that the "good cause" standard requires a showing of diligence. See *O2 Micro Int'l*, 467 F.3d at 1366. The burden is on the moving party to establish diligence. *Id.* at 1366. Local patent rules are designed to "require the parties to crystallize their theories of the case early in the litigation so as to prevent the shifting sands approach to claim construction." *Id.* at 1364 (internal quotation marks and citations omitted). The patent rules "seek to balance the right to develop new information in discovery with the need for certainty as to legal theories." *Id.* at 1366.

¹² See, e.g., *Veolia Water Solutions & Techs. Support v. Siemens Indus., Inc.*, No. 5:11-CV-00296-FL, 2013 WL 2149209, at *2 (E.D.N.C. May 16, 2013) (local rule in Eastern District of North Carolina allows amendment upon a showing of good cause); *Nautilus Neurosciences, Inc. v. Wockhardt USA LLC*, No. 11-1997-ES-SCM, 2013 WL 7901901, at *2 (D.N.J. Jan. 23, 2013) (District of New Jersey local rule requiring a showing of good cause to amend invalidity contentions); *Fleming v. Escort, Inc.*, No. CV-09-105-S-BLW, 2011 WL 1542126, at *2 (D. Idaho April 21, 2011) (District of Idaho local rule requiring showing of good cause).

The Defendants argue that there is good cause here because they "attempted to resolve any potential issue regarding the validity of these claim terms through the claim construction meet and confer process." ECF No. 75 at 7. The Defendants assert that they raised the issue of indefiniteness "at the appropriate time" during the meet and confer process, but these amendments are required because the Plaintiffs did not participate meaningfully in the process. See ECF No. 75 at 3; ECF No. 84 at 4-7.

The Defendants have not demonstrated good cause to amend the invalidity contentions. The Defendants' request to amend is not the result of any newly discovered information. See *O2 Micro Int'l*, 467 F.3d at 1366 (requiring parties to amend their contentions promptly after discovering new information). The Defendants' assertions that the proposed amendments are the result of "continuing diligent analysis" of the asserted claims and "attempts to resolve the bounds of the allegedly indefinite claim term through the claim construction meet and confer process"¹³ do not establish that they were diligent in discovering the ambiguities. Cf. *Nautilus Neurosciences, Inc.*, 2013 WL 7901901, at *7 ("Diligence does not exist where Defendants uncover the basis of an invalidity defense during the

¹³ ECF No. 84 at 5.

claim construction process if they could have done so prior to filing their invalidity contentions."). The Defendants have not sufficiently explained why they were unable to discover the basis for the indefiniteness defense for these claim terms before filing their invalidity contentions. Because the Defendants have not demonstrated diligence, they have not made the required showing of good cause. Accordingly, the Defendants' motion to amend their invalidity contentions will be denied.

B. Claim Construction

1. Legal Standard

Claim construction is a question of law, to be determined by the Court. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 384 (1996). Specifically, "[c]laim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy."¹⁴ Therefore, "district courts are not . . . required to construe every limitation present in a patent's asserted claims." *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008). For instance, terms that are

¹⁴ *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997), cert. denied, 522 U.S. 950 (1997).

"commonplace" or that "a juror can easily use [] in her infringement fact-finding without further direction from the court" need not be construed because they "are neither unfamiliar to the jury, confusing to the jury, nor affected by the specification^[15] or prosecution history^[16]."¹⁷

"Although a claim is not to be construed in light of the accused device, it must inevitably be construed in the context of the accused device." *Pulse Med. Instruments, Inc. v. Drug Impairment Detection Servs., Inc.*, No. DKC 07-1388, 2009 WL 6898404, at *2 (D. Md. Mar. 20, 2009). "It is only after the claims have been construed without reference to the accused device that the claims, as so construed, are applied to the accused device to determine infringement." *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1118 (Fed. Cir. 1985) (*en banc*) (emphasis in original).

¹⁵ The "specification" is "[t]he part of a patent application describing how an invention is made and used, the best mode of operation of the claimed invention, and the inventor's claims." *Black's Law Dictionary* 1528 (9th ed. 2009).

¹⁶ Also termed the "file wrapper," the prosecution history is "[t]he complete record of proceedings in the [PTO] from the initial application to the issued patent or trademark; specif[ically], a patent or trademark-registration application together with all documentation, correspondence, and any other record of proceedings before the PTO concerning that application." *Id.* at 704.

¹⁷ *Bd. of Trs. of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 528 F. Supp. 2d 967, 976 (N.D. Cal. 2007).

"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." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (internal quotation marks omitted), *cert. denied*, 546 U.S. 1170 (2006). Thus, when construing a claim, a court should give its words their "ordinary and customary meaning" as would be understood by "a person of ordinary skill in the art in question at the time of the invention." *Id.* at 1313. "The claim should be read within the context of the entire patent, including the specification." *Pulse*, 2009 WL 6898404, at *2. The specification "is always highly relevant to the claim construction analysis. Usually it is dispositive; it is the single best guide to the meaning of a disputed term." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). "The specification functions as a dictionary to explain the claimed subject matter and define the terms used in the claims[, but] is to be used only to interpret words or phrases of a patent claim, not to add to, or detract from, the language of the claims." *C.M.L. s.r.l. v. Ineco Indus. Navarra de Equipos y Comercio, S.A.*, 177 F. Supp. 2d 442, 445 (D. Md. 2001) (internal citation omitted). "In some instances, the ordinary meaning of a claim as understood by a person of skill in the art will be readily apparent from the words themselves and in those situations, general language dictionaries may be of

assistance." *Pulse*, 2009 WL 6898404, at *2 (citing *Phillips*, 415 F.3d at 1314).

"In addition to consulting the specification . . . a court should also consider the patent's prosecution history, if it is in evidence." *Phillips*, 415 F.3d at 1317 (internal quotation marks omitted). "The prosecution history limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution." *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995), cert. denied, 516 U.S. 987 (1995). "Yet because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Phillips*, 415 F.3d at 1317. "In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence." *Vitronics*, 90 F.3d at 1583. Extrinsic evidence, including expert and inventor testimony, dictionaries, and learned treatises,

may be helpful to explain scientific principles, the meaning of technical terms, and terms of art that appear in the patent and prosecution history. Extrinsic evidence may demonstrate the state of the prior art at the time of the invention. It is useful to show what was then old, to distinguish what was

new, and to aid the court in the construction of the patent.

Markman, 52 F.3d 967, 980 (Fed. Cir. 1995) (internal quotation marks omitted), *aff'd*, 517 U.S. 370 (1996). "In sum, extrinsic evidence may be useful to the court, but it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence." *Phillips*, 415 F.3d at 1319.

2. Disputed Terms

The Court will address six disputed claim terms.¹⁸

¹⁸ The parties' Joint Claim Construction Statement identified 14 disputed terms for claim construction. ECF No. 71-1. The Defendants did not provide support in their briefs or at the hearing for their proposed constructions for terms 6 and 8 of the Joint Claim Construction Statement. The Court will consider these arguments waived and, because the Plaintiffs argue that the terms do not require construction, the Court will not construe these terms.

The Defendants indicated at the hearing that Terms 3, 4, and 5 of the Joint Claim Construction Statement were no longer in dispute. See Hr'g 157:1-6. Accordingly, the Court will not construe those terms.

The Defendants argued in their briefings that Terms 9 and 10 of the joint statement are indefinite. However, as discussed above, *supra* Part II.A., the Defendants failed to include these terms in their invalidity contentions. The Court will not address their invalidity for indefiniteness argument, and thus will not construe these terms. Similarly, the Court will not address the indefiniteness arguments for terms 12, 13, and 14, and instead address only the Defendants' alternative proposed constructions.

Terms 12 and 14 of the Joint Claim Construction Statement were briefed together; accordingly, the Court will address the terms as combined into one construction.

a. Term 1

<u>Claim Term</u>	<u>Plaintiffs' proposed construction</u>	<u>Defendants' proposed construction</u>
"road load (RL)" ¹⁹	"the instantaneous torque required for propulsion of the vehicle, which may be positive or negative in value."	"the amount of torque actually required to propel the vehicle on the road to maintain a given speed, which may be positive or negative in value."

i. Torque Required for Propulsion

The parties agree that "road load" is an instantaneous torque value and that value may be positive or negative. See Hr'g 109:19-110:51. The Plaintiffs argue that their construction tracks the definition of "road load" stated in the claims themselves. See ECF No. 78 at 16; Hr'g 94:25-95:15. For example, in the '672 patent, Claim 15 recites: "wherein torque to propel said vehicle is provided by said traction motor, said engine, and both, respectively, in response to monitoring the *instantaneous torque requirements required for propulsion of the vehicle (RL)*." '672 patent col.39:42-46 (emphasis added). This same definition is found in other patents.²⁰ The Plaintiffs argue that this construction is also consistent with the

¹⁹ Term 1 in the Joint Claim Construction Statement. ECF No. 71-1.

²⁰ For example, the '634 patent at Claim 80 states: "determining instantaneous road load (RL) required to propel the hybrid vehicle." '634 patent col. 65:11-14.

specification. See ECF No. 78 at 17. For example, the '672 patent specification states "the vehicle's instantaneous torque requirements or 'road load.'" '672 patent col. 28:5-7.

The Defendants argue that their proposed construction of "road load" clarifies that it does not include torque generated for purposes other than propelling the vehicle on the road, such as the torque required to charge the battery. ECF No. 79 at 18. The claim language and specification demonstrate that "road load" is the torque required to propel the vehicle, and that it does not include torque used for other purposes, such as the torque used to charge the battery. See '388 patent col. 59:51-52 ("operable to monitor road load and battery charging load") (emphasis added); '347 patent col. 14:13-17 ("Furutani's 'vehicle load' thus apparently includes the torque required to charge the battery, as distinguished from applicants' 'road load,' i.e., the torque required to propel the vehicle.")). However, the Plaintiffs' proposed construction similarly defines "road load" as "the instantaneous torque required for propulsion of the vehicle." The Defendants' use of the phrase "required to propel the vehicle on the road" does not provide any additional clarity that "road load" is limited to the torque necessary for propelling the vehicle rather than for other uses.

ii. Maintain Given Speed

The Plaintiffs contend that the Defendants' addition of the phrase "to maintain a given speed" is misleading because, while vehicle speed is one factor that goes into determining the amount of torque required to propel the vehicle, road load varies independent of vehicle speed. See ECF No. 90 at 10-11. At the hearing, the Defendants asserted that the phrase "to maintain a given speed" is used in the same way that the Plaintiffs use "instantaneous" in their proposed construction. See Hr'g 111:3-21 ("We're saying given pedal position, given road conditions, given those things at a point in time, what is the actual force required to propel the vehicle? That's all we mean by 'maintain a given speed.' They use the word 'instantaneous.' It's the same thing. There is no dispute there.") If the purpose of the phrase "to maintain a given speed" is to make it clear that "road load" is the torque necessary to propel the vehicle, it is an unnecessarily confusing addition.

iii. Torque Actually Required

Lastly, the parties dispute the Defendants' use of the phrase "actually required." The Defendants argue that this phrase is necessary to clarify that "road load" is the actual torque required to propel the vehicle rather than an estimate. See Hr'g 120:22-121:4 ("It is the Defendant[s'] position that

the claims require that 'road load' be the actual torque required to propel the vehicle at a given speed. It cannot be just some calculation based on estimate."). The Defendants argue that this definition excludes torque values output by "maps" based on metrics such as vehicle speed and accelerator position. ECF No. 79 at 24-25. For example, the Defendants point to the '347 patent distinguishing "road load" from "vehicle driving torque demand" in the Egami patent that is determined by "consulting a 'map', using 'the vehicle speed V, the accelerator life ACC, the brake state BRK, and the shift position SFT as the input parameters.'" '347 patent col.14:54-65. The Defendants assert that this demonstrates the road load is the actual torque output to the wheels to maintain a desired speed, and it is not a value determined by consulting a map using vehicle inputs such as speed or shift position. ECF No. 79 at 26.

The Plaintiffs contend that the term "actually required" does not appear anywhere in the claims or specifications, and it does not clarify the meaning of road load. ECF No. 19 at 12-13. The Plaintiffs argue that the Defendants' definition inappropriately conflates what "road load" *is* with the way "road load" *is derived*. See Hr'g 99:8-13.

The Defendants' addition of the phrase "actually required" does not clarify the meaning of "road load" for the jury. The

definition of the term found in the claim language itself is sufficiently clear and supported by the specification. See '672 patent col. 39:42-46; '634 patent col. 65:11-14; '672 patent col. 28:5-7. Accordingly, the Court will adopt the construction proposed by the Plaintiffs.

<u>Claim Term</u>	<u>Court's Construction</u>
"road load (RL)"	"the instantaneous torque required for propulsion of the vehicle, which may be positive or negative in value."

b. Term 2

<u>Claim Term</u>	<u>Plaintiffs' proposed construction</u>	<u>Defendants' proposed construction</u>
"setpoint," "SP" ²¹	"a definite, but potentially variable value at which a transition between operating modes may occur."	This term should be construed in context of the individual claims in which it appears.

The Plaintiffs' proposed construction of the term "setpoint" contains two parts: (1) it is a definite value that may vary under certain conditions; and (2) that the operating mode transition may occur at a "setpoint." See Hr'g 138:1-4. The Plaintiffs argue that the claim language demonstrates that the setpoint can be variable. See ECF No. 78 at 20. For example, Claim 33 of the '634 patent: "monitoring patterns of

²¹ Term 2 in the Joint Claim Construction Statement. ECF No. 71-1.

vehicle operation over time and varying the SP accordingly."

'634 patent, col.61:7-8. The Plaintiffs contend that the specification also describes varying the setpoint in response to various conditions, such as in the '672 patent: "It is also within the scope of the invention for the microprocessor to monitor the vehicle's operation over a period of days or weeks and reset this important setpoint in response to a repetitive driving pattern." '672 patent, col.33:28-31.

The Plaintiffs also argue that it is clear from the intrinsic evidence that a transition between operating modes may occur at a setpoint. See Hr'g 139:2-10. For example, in the '672 patent, "the microprocessor tests sensed and calculated values for system variables . . . against setpoints, and uses the results of the comparisons to control the mode of vehicle operation." '672 patent, col. 32:60-33:4. However, the Plaintiffs' proposed construction states that the transition "may occur" because the transition may be determined by other factors in addition to setpoint. See Hr'g 139:11-23. For example, Claim 80 of the '634 patent provides that transition occurs when road load is greater than the setpoint for a "predetermined time." See '634 patent, col. 65:26-30.

The Defendants argue that construing the term "setpoint" in a vacuum accomplishes nothing and may unnecessarily confuse the jury. See Hr'g 145:4-17; 147:13-17. The Defendants agree that

the setpoint may be variable and that transitions may occur at the setpoint. See Hr'g at 145:4-17. However, the Defendants contend that the term "setpoint" should be read in the context of the claims in which it appears, and construing the term in a vacuum is unnecessary.²² The Defendants assert that a definition stating that "setpoint" may be variable will cause confusion for claims in which setpoint is not variable. See Hr'g 146:12-24. For example, in Claim 16 of the '672 patent setpoint is a predetermined percentage of MTO; however, in Claim 19, the setpoint varies. See '672 patent, col. 39:49-51; 40:3-5. Similarly, the Defendants argue that the specific language of the claims makes it clear whether a setpoint causes a transition to occur or if additional conditions are necessary. See Hr'g 146:25-147:12. For example, in Claim 20, the transition occurs when road load is greater than the setpoint "for at least a predetermined time." '672 patent, col. 40:6-11. As a result,

²² In their briefings, the Defendants offered proposed constructions for three setpoint-related terms: (1) "wherein SP is a setpoint expressed as a predetermined percentage of MTO;" (2) "road load (RL) and said setpoint SP, both expressed as percentages of the maximum torque output of the engine when normally-aspirated (MTO);" and (3) "a second setpoint (SP2), wherein the SP2 is a larger percentage of the MTO than the SP." See ECF No. 79 at 38-41. The Plaintiffs argued that the terms did not require a separate construction. See ECF No. 90 at 27-29. However, at the hearing, the Defendants clarified that they were "perfectly happy to live with the claim language on the disputed terms," and that they were no longer arguing for further construction on the setpoint-related terms. See Hr'g 144:11-18. Accordingly, because these terms are no longer in dispute, the Court will not construe them.

the Defendants contend that construing the term in a vacuum will only cause confusion when the term is read in the context of the claim terms. See Hr'g 147:13-17.

The Plaintiffs' proposed construction of "setpoint" as "a definite, but potentially variable value at which a transition between operating modes may occur," is consistent with the language of the claims and the intrinsic evidence. See '634 patent, col. 61:7-8 (describing the setpoint as variable); '634 patent, col. 65:26-30 (stating that transition occurs when road load is greater than setpoint for a predetermined time). For example, the '672 patent specification describes the setpoint as follows:

[T]he transition from low-speed operation to highway cruising occurs when road load is equal to 30% of MTO. This setpoint, referred to in the appended claims as "SP", and sometimes hereinafter as the transition point (i.e., between operation in modes I and IV) is obviously arbitrary and can vary substantially, e.g., between 30-50% of MTO, within the scope of the invention.

'672 patent, col. 33:22-27. The Defendants correctly point out the "setpoint" is not always variable and it can be when the transition actually occurs, rather than "may occur", depending on the language of the claim. However, the jury will read the Court's construction of "setpoint" in the context of each claim term. The Plaintiffs' proposed construction provides the jury with some guidance on this crucial claim term, while allowing

them to determine its application in the context of an individual claim's language. Accordingly, the Court will adopt the Plaintiffs' proposed construction of the term "setpoint".

<u>Claim Term</u>	<u>Court's Construction</u>
"setpoint," "SP"	"a definite, but potentially variable value at which a transition between operating modes may occur."

c. Term 3

<u>Claim Term</u>	<u>Plaintiffs' proposed construction</u>	<u>Defendants' proposed construction</u>
"motor" ²³	Plain and ordinary meaning	"motor(s) that allow(s) a conventional multi-speed vehicle transmission to be eliminated by providing power equal to or greater than that of the internal combustion engine."

The Defendants' construction rests on the conclusion that the claims and specifications have two requirements for motors in the patents-in-suit: (1) that there is no need for a variable-speed transmission between the motors and the wheels; and (2) the combined output power of the motors must be equal to

²³ Term 11 in the Joint Claim Construction Statement. ECF No. 71-1.

or greater than the rated output power of the vehicle's internal combustion engine. See Hr'g 158:2-13.²⁴

The Defendants argue that, when read in the context of the specification, the claim language's use of the term "motor" is not the term's plain and ordinary meaning. See Hr'g 159:1-12; *Phillips*, 415 F.3d at 1313 (explaining that a person of ordinary skill in the art is deemed to read the claim term in the context of the entire patent). The Defendants assert that the proposed construction preserves the proper scope of the purported invention. ECF No. 89 at 24. "Where 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." *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001).

²⁴ In their claim construction briefs, the Defendants proposed a different construction for the term motor: "a motor that, when combined with a second electric motor, has a maximum output power equal to or greater than the maximum power output of the engine." ECF No. 79 at 27. Although the proposed construction is different, many of the Defendants' arguments in the briefing still apply. See Hr'g 157:1-6 ("The substance of what we're proposing, Your Honor, and the briefing all equally apply to the modifications we made, and so I'm not going to be presenting any argument that's not in the briefs that just simply recharacterize the substance of the construction to try and deal with it.").

Defendants argue that it is a feature of the invention that a variable-speed transmission is not necessary.²⁵ The Defendants assert that eliminating transmissions was an object of the invention of the '970 patent, which is now expired. See Hr'g 159:21-161:6 ("Such transmissions . . . are to be eliminated according to one object of the present invention."). The Defendants contend that this feature of the '970 patent invention was expressly carried forward by the '672 patent. See Hr'g 161:7-16. The '672 patent states:

The hybrid drive train shown in the '970 patent has many advantages with respect to the prior art, which are retained by the present invention. For example, the electric drive motor is selected to be of relatively high power, specifically, equal to or greater than that of the internal combustion engine, and to have high torque output characteristics at low speeds; *this allows the conventional multi-speed vehicle transmission to be eliminated.*

'670 patent, col. 11:5-12 (emphasis added). The Defendants argue that the patents' discussion of implementations uses sweeping language demonstrating that the elimination of a transmission is an object of the invention, rather than a preferred embodiment. See Hr'g 162:22-164:22. For example, in discussing the operation of the two motors, the '672 patent provides:

²⁵ Although the Defendants argued in their briefs that the patents excluded the use of a conventional multi-speed or variable ratio transmission, the Defendants made it clear at the hearing that they are arguing that it only must be capable of excluding a transmission. See Hr'g 169:15-25; ECF No. 79 at 30.

However, *in all cases*, the rotational speeds of the two motors and the engine are fixed with respect to one another, and to the speed of the road wheels; *no multi-speed transmissions between the motors and engine and the road wheels are required by the hybrid power train of the invention.*

'672 patent, col. 14:36-41 (emphasis added).

The Defendants also assert that the patents' discussion of prior art supports their argument that the elimination of a transmission is an object of the invention. See Hr'g 164:23-165:18. For example, in distinguishing the Hunt prior art, the

'347 patent states:

However, the Hunt vehicle does not meet the objects of the present invention, as discussed in detail below. Hunt's vehicle in each embodiment requires a conventional manual or automatic transmission. Moreover, the internal combustion engine is connected to the transfer case (wherein torque from the internal combustion engine and electric motor is combined) by a fluid coupling or torque converter of conventional construction. Such transmissions and fluid couplings or torque converters are very inefficient, are heavy, bulky, and costly, and are to be eliminated according to one object of the present invention, again as discussed in detail below.

'347 patent, col. 4:58-5:2 (internal citations omitted)

(emphasis added). The Defendants further argue that all the figures and embodiments discussed in the patents "imply or expressly disclose" this limitation. See Hr'g 166:8-10.

The Defendants argue that the second part of their proposed construction is also supported by the intrinsic evidence. For example, the '672 patent states that "[i]t is a further object

of the invention to provide a series-parallel hybrid electric vehicle comprising two electric motors together providing output power equal to at least 100 percent of the rated output power of the internal combustion engine." '672 patent, col. 11:59-63. The Defendants contend that, because it is an object of the invention for the motor to have this capability, it must be part of the construction of "motor." See Hr'g 172:17-21.

The Plaintiffs assert that the term "motor" should be construed as its plain and ordinary meaning. See Hr'g 151:13-24. The Plaintiffs contend that the Defendants' construction is circular because the definition itself contains the term "motor." ECF No. 90 at 17. The Plaintiffs argue that the Defendants' construction makes no sense used in a claim that recites two motors. See Hr'g 152:7-22. For example, Claim 15 of the '672 patent provides for a starting motor and a traction motor. '672 patent, col. 39:25-46. The Plaintiffs argue that the Defendants' construction would require the starting motor to be sized to provide "power equal to or greater than that of the internal combustion engine." See Hr'g 152:14-22.

The Plaintiffs also argue that the Defendants' construction improperly imports a discussion of an advantage of the invention into the claims. See Hr'g 152:23-153:10. The Plaintiffs assert that the Defendants' argument about transmissions has nothing to do with construing the term "motor," and that they are entirely

different components of the vehicle. ECF No. 90 at 17. The Plaintiffs contend that the claim language does not contain a discussion of engine size or its relationship to transmissions. See Hr'g 153:16-19. Additionally, the Plaintiffs point out that the patent language makes it clear that the use of a variable-ratio transmission is permitted. See '672 patent, col. 25:45-51 ("[I]t is within the scope of the invention, where not excluded by the appended claims, to also provide a variable-ratio transmission. However, this should not be necessary with respect to passenger cars, light trucks, and similar vehicles.").

To the extent that the Defendants argue that the patents exclude the use of a transmission, this argument fails based on the language of the claims.²⁶ For example, Claim 27 of the '634 patent calls for a variable-ratio transmission. See '634 patent, col. 60:27-29. The inclusion of a transmission in a dependent claim counsels that transmissions are not excluded from the independent claims. See *Acumed LLC v. Stryker Corp.*, 482 F.3d 800, 806 (Fed. Cir. 2007) ("[I]ndependent claims are presumed to have broader scope than their dependents"). Additionally, the patents specifically state that a variable-

²⁶ As discussed above, the Defendants appear to have modified their argument at the hearing such that they no longer contend that the patents require the elimination of a transmission. See Hr'g 169:15-25.

ratio transmission is "within the scope of the invention, where not excluded by the appended claims." See '672 patent, col. 25:46-50; '634 patent, col. 32:37-41.

Additionally, the Defendants' construction does not provide further clarification of the term "motor" for the jury. The Defendants' use of the word motor in their proposed definition highlights this issue. The construction does not make it clear whether each motor must have the individual power equal to that of the internal combustion engine, or if it must have enough power when combined with another motor.

In addition to these underlying ambiguities, the proposed construction primarily concerns the presence of a transmission, which is not necessary for the interpretation of the term "motor" or the determination of the scope of the claim term. Although a term must be read in the context of the specification,²⁷ the addition of an extraneous limitation from the specification is improper. See *Renishaw PLC v. Marpoos Societa' per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998). An extraneous limitation is "a limitation read into a claim from the specification wholly apart from any need to interpret what the patentee meant by particular words and phrases in the claim." *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1433 (Fed. Cir. 1988).

²⁷ *Phillips*, 415 F.3d at 1313.

Here, the plain and ordinary meaning of the term "motor" is consistent with the intrinsic evidence and does not require the motor to eliminate the use of a transmission or to provide as much power as an internal combustion engine. See, e.g. '672 patent, col. 25:45-51 (providing that the use of a transmission is in the scope of the invention). Those limitations imposed by the Defendants' construction are not needed to interpret what the patentee meant by "motor." This is not an instance when the specification reveals a "special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess," or an intentional disclaimer of the claim scope by the inventor. See *Phillips*, 415 F.3d 1316. Accordingly, the Court will adopt the plain and ordinary meaning of the term "motor," without the limitations proposed by the Defendants.

<u>Claim Term</u>	<u>Court's Construction</u>
"motor"	Plain and ordinary meaning

d. Term 4

<u>Claim Term</u>	<u>Plaintiffs' proposed construction</u>	<u>Defendants' proposed construction</u>
"max torque output (MTO) of said engine" ²⁸	Plain and ordinary meaning	"the maximum amount of torque that the engine can physically produce"

The Defendants argue that "maximum torque output" should be construed to mean the maximum amount the engine can produce. ECF No. 79 at 42. The Plaintiffs assert that the plain and ordinary meaning of the term is sufficient, and the term does not require construction by the Court. ECF No. 78 at 25. The Plaintiffs contend that the claims and specifications make it clear that the "maximum torque output" is the maximum level at which the engine efficiently produces torque, and not the maximum amount it can physically produce. ECF No. 90 at 30.

A determination that a term has the plain and ordinary meaning "may be inadequate when a term has more than one 'ordinary' meaning or when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute." *See O2 Micro Int'l Ltd.*, 521 F.3d at 1361. Here, the parties dispute whether the MTO is the maximum amount of torque the engine is capable of producing or the maximum amount of torque the engine can produce efficiently. *See* ECF No. 90 at 30; ECF No. 79 at 42. The plain

²⁸ Term 7 in the Joint Claim Construction Statement. ECF No. 71-1.

and ordinary meaning of the term "max torque output" does not resolve this dispute. Accordingly, the plain and ordinary meaning of MTO will not suffice. See *O2 Micro Int'l Ltd.*, 521 at 1361-62.

The Plaintiffs argue that MTO is the maximum level at which the engine efficiently produces torque, not the amount it can physically produce as proposed by the Defendants. ECF No. 90 at 30. The Plaintiffs cite the following language to support this definition: "A method of control of a hybrid vehicle, said vehicle comprising an internal combustion engine capable of efficiently producing torque at loads between a lower level SP and a maximum torque output MTO" '347 patent col. 60:22-25; and "[w]here the vehicle's torque requirements exceed the engine's maximum efficient torque output, e.g., during passing or hill-climbing, one or both of the electric motors are energized to provide additional torque." '672 patent col. 15:10-14.

The Plaintiffs argue that "one of skill in the art would reject Defendants' proposed construction as simply unsound: no engineer would design a vehicle so that the engine operates for even a short period of time at the absolute physical limit of torque output." ECF No. 90 at 31. The Plaintiffs assert that the Defendants' construction impermissibly reads in a limitation not found in the intrinsic evidence, and that it contradicts the

plain language of the claims. ECF No. 90 at 31. The language of the patents shows that 100% MTO is the top of the range of the engine's efficient torque output. For example, the '672 patent states that "[t]he engine's output torque is constrained to the range of efficient operation . . . this range is controlled to be between 30% and 100% of the engine's maximum torque output ("MTO")." '672 patent col. 31:30-34. The '672 patent similarly provides that "[t]he range of permissible engine torque output levels is constrained to the range in which the engine provides good fuel efficiency." '672 patent col. 30:56-59. Accordingly, 100% MTO corresponds with the maximum level of torque at which the engine operates efficiently.

It is possible that MTO could be both the maximum level of torque the engine can produce efficiently and the maximum level the engine can physically produce; however, this additional limitation is not found in the language of the claims or other intrinsic evidence. In support of their construction, the Defendants argue that the patents-in-suit are based on the assumption that "a gasoline or other internal combustion engine is most efficient when producing near its maximum output torque." ECF No. 79 at 42 (*quoting* '672 patent col. 2:46-50). The Defendants contend that there must be a "fixed, calculable value for this term," so that the Plaintiffs cannot "accuse any transition point as being based on 'max torque output (MTO).'"

ECF No. 89 at 26. The Defendants also argue that "it is clear that the [MTO] of an engine is constrained by its physical size." ECF No. 89 at 26. For example, the '672 patent states "[a]s in the '970 patent, engine 40 is sized so that its maximum torque is sufficient to drive the vehicle in a range of desired cruising speeds; this requirement ensures that the engine is operated at high efficiency during normal highway cruising." '672 patent col. 29:6-10. However, the maximum amount of torque an engine can produce efficiently would still be a calculable value that is constrained by the physical size of the engine.

Because the Defendants' definition of MTO as "the maximum amount of torque that the engine can physically produce" is not supported by the intrinsic evidence, the Court will not adopt the Defendants' construction. As discussed above, the Plaintiffs' proposed reliance on the plain and ordinary meaning of the term is also insufficient. Accordingly, the Court will adopt its own construction based on the Plaintiffs' argument that MTO represents the maximum level of torque the engine produces efficiently, as supported by the patent language.

<u>Claim Term</u>	<u>Court's Construction</u>
"max torque output (MTO) of said engine"	"the maximum amount of torque that the engine can produce efficiently"

e. Term 5

<u>Claim Term</u>	<u>Plaintiffs' proposed construction</u>	<u>Defendants' proposed construction</u>
<p>"wherein the torque produced by said engine when operated at said setpoint (SP) is substantially less than the maximum torque output (MTO) of said engine"; "wherein the SP is substantially less than the MTO"; "wherein SP is substantially less than MTO"; "substantially less than the maximum torque output (MTO) of said engine"²⁹</p>	<p>Plain and ordinary meaning</p>	<p>"a torque value that is less than or equal to 50% of the engine's maximum torque output"</p>

In support of the Defendants' proposed construction, they argue that the only guidance provided in the specification indicates that the setpoint that is "substantially less" than the MTO is typically at least 30 percent and normally not in excess of 50 percent, therefore the Court should apply an upper bound of 50 percent of MTO. See ECF No. 79 at 48; '634 patent, col. 40:41-49 ("the transition point . . . is obviously arbitrary and can vary substantially, e.g., between 30-50% of MTO, within the scope of the invention"). The Defendants assert

²⁹ The parties' briefings address terms 14 and 12 of the Joint Claim Construction statement together, and the Defendants proposed the same definition for the terms. Accordingly, the Court will construe the terms as one term.

that the Plaintiffs only criticize the Defendants' proposed constructions, and do not offer anything to clarify the scope of the claim. ECF No. 89 at 30.

The Plaintiffs argue that the Defendants' proposed construction is at odds with the plain language of the dependent claims. ECF No. 78 at 32. Claim 15, which is dependent on Claim 1 containing the disputed phrase, states "where the SP is less than approximately 70% of the MTO of the engine when normally-aspirated." '634 patent col. 59:12-14. Claim 13, also dependent of Claim 1, states: "wherein the SP is at least approximately 20% of the MTO of the engine when normally-aspirated." '634 patent col. 59:6-8. The Plaintiffs contend that the specification makes it clear that the "substantially less" limitation is broader than the "50%" that the Defendants propose. ECF No. 78 at 33; '672 patent col. 33:40-45; col. 31:35-37 (stating the engine may operate efficiently between 30 percent and 100 percent of MTO).

The Defendants' proposed construction impermissibly reads preferred embodiments into the claims. Although the specification provides an example that the transition point may vary substantially between 30 to 50 percent,³⁰ it is clear that the patentee does not intend to strictly limit the scope of the claims to that embodiment. See *Phillips*, 415 F.3d at 1323-34.

³⁰ See, e.g., '672 patent, col. 33:19-27.

The Defendants' proposed construction is also inconsistent with the claim language. Claim 15 of the '634 patent, a claim dependent on Claim 1 containing this term, allows a setpoint of less than 70 percent. See '634 patent, col. 59:12-14.

Accordingly, Claim 1 cannot have an upper limit of 50 percent MTO. See *Acumed LLC*, 482 F.3d at 806 ("[I]ndependent claims are presumed to have broader scope than their dependents").

A person of ordinary skill in the art would not confine the definition of this claim term to the 30 to 50 percent example stated in the specification. See *Phillips*, 415 F.3d at 1323.

Instead, the claim term can be understood when read in the context of the claim language; thus, the Court will adopt the plain and ordinary meaning of the term.

<u>Claim Term</u>	<u>Court's Construction</u>
<p>"wherein the torque produced by said engine when operated at said setpoint (SP) is substantially less than the maximum torque output (MTO) of said engine"; "wherein the SP is substantially less than the MTO"; "wherein SP is substantially less than MTO"; "substantially less than the maximum torque output (MTO) of said engine"</p>	<p>Plain and ordinary meaning</p>

f. Term 6

<u>Claim Term</u>	<u>Plaintiffs' proposed construction</u>	<u>Defendants' proposed construction</u>
"a setpoint (SP) above which said engine torque is efficiently produced"; "wherein the engine is operable to efficiently produce torque above the SP"; "engine is operable to efficiently produce torque above SP" ³¹	Plain and ordinary meaning	"engine torque is produced when the torque output is at least 30% of the engine's maximum torque output"

The Defendants argue that the intrinsic record does not provide guidance as to where or when the torque is "efficiently" produced. ECF No. 79 at 44. The Defendants point out that the specification states that at least 30 percent of MTO provides maximum efficiency. ECF No. 79 at 44; '672 patent col. 33:19-27. The Defendants assert that the only possible construction of this term "reflects the sole lower bound on setpoint disclosed in the patents" of 30 percent of MTO. *Id.*; '634 patent col. 13:22-35. The Defendants contend that the Plaintiffs only criticize their proposed construction and do not provide any guidance as to the bound of the term. ECF No. 89 at 29.

³¹ Term 13 in the Joint Claim Construction Statement. ECF No. 71-1.

The Plaintiffs argue that the Defendants' proposed construction impermissibly reads an embodiment, i.e. 30 percent, from the specification into the claims. ECF No. 78 at 34; see *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) ("[W]e have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment."). The Plaintiffs assert that the plain meaning of the term can be found by reading it in the context of the claim language. ECF No. 90 at 34. For example, Claim 1 of the '634 patent states: "a setpoint (SP) above which the torque produced by the engine is efficiently produced, and wherein the torque produced by the engine when operated at the SP is substantially less than the maximum torque output (MTO) of the engine." '634 patent col. 58:23-27. Additionally, the Plaintiffs contend that the Defendants' definition would conflict with dependent claim limitations with lower bounds for the setpoint than 30 percent of MTO. See '634 patent col. 59:6-8.

Similarly to Term 5 discussed above, *supra* Part II.B.2.e, the Defendants' proposed construction impermissibly reads a preferred embodiment into the claims and is inconsistent with the claim language. For example, dependent Claim 13 in the '634 patent states that setpoint is "at least approximately 20% of the MTO of the engine." '634 patent, col. 59:6-8. Accordingly,

Claim 1 cannot have a lower limit of 30 percent of MTO for the setpoint. See *Acumed LLC*, 482 F.3d at 806. An ordinary person skilled in the art would not read the claim terms as limited by the example stated in the specification. See *Phillips*, 415 F.3d at 1323. Because the claim term can be understood when read in the context of the claim language, the Court will adopt the plain and ordinary meaning.

<u>Claim Term</u>	<u>Court's Construction</u>
"a setpoint (SP) above which said engine torque is efficiently produced"; "wherein the engine is operable to efficiently produce torque above the SP"; "engine is operable to efficiently produce torque above SP"	Plain and ordinary meaning

III. Conclusion

The 6 terms as construed by the Court are as follows:

<u>Claim Term</u>	<u>Patent Claims</u>	<u>Court's Construction</u>
1: "road load (RL)"	See, e.g., '672 patent, claim 15; '634 patent, claim 15; '347 patent, claim 7; '097 patent, claim 8; '388 patent, claim 1	"the instantaneous torque required for propulsion of the vehicle, which may be positive or negative in value."
2: "setpoint," "SP"	See, e.g., '672 patent claim 16; '634 patent claim 1; '347 patent claim 1; '097 patent claim 1.	"a definite, but potentially variable value at which a transition between operating modes may occur."
3: "motor"	See, e.g., '347 patent, claims 1, 7, 8, 9, 20, 23, 25,	Plain and ordinary meaning

	31, 38.	
4: "max torque output (MTO) of said engine"	See, e.g., '347 patent, claim 23.	"the maximum amount of torque that the engine can produce efficiently"
5: "wherein the torque produced by said engine when operated at said setpoint (SP) is substantially less than the maximum torque output (MTO) of said engine"; "wherein the SP is substantially less than the MTO"; "wherein SP is substantially less than MTO"; "substantially less than the maximum torque output (MTO) of said engine"	See, e.g., '347 patent, claims 1, 23; '634 patent, claim 1.	Plain and ordinary meaning
6: "a setpoint (SP) above which said engine torque is efficiently produced"; "wherein the engine is operable to efficiently produce torque above the SP"; "engine is operable to efficiently produce torque above SP"	See, e.g., '347 patent, claim 1; '634 patent, claim 1.	Plain and ordinary meaning

Date

7/24/14

William D. Quarles, Jr.
United States District Judge