IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MARYLAND BALTIMORE DIVISION

PAICE LLC and THE ABELL FOUNDATION, INC.,

Plaintiffs,

v.

C. A. No. WDQ-12-499

HYUNDAI MOTOR COMPANY, HYUNDAI MOTOR AMERICA, KIA MOTORS CORPORATION, and KIA MOTORS AMERICA, INC.

Defendants.

PLAINTIFFS PAICE LLC AND THE ABELL FOUNDATION, INC.'S OPENING CLAIM CONSTRUCTION BRIEF

TABLE OF CONTENTS

Page

I.	INTE	RODUCTION 1				
	А.	The Parties 1				
	В,	Procedural Background2				
	C.	Technology Background				
II.	THE	ASSERTED PAICE PATENTS				
III.	LEG	AL STANDARDS OF CLAIM INTERPRETATION				
IV.	PRO	POSED INTERPRETATION OF DISPUTED CLAIM TERMS				
	Α.	"road load," "RL" 10				
	в.	"setpoint," "SP"				
	C.	"wherein SP is a setpoint expressed as a predetermined percentage of MTO" (e.g.,				
	°672	°672 patent, claim 16)				
	D.	"road load (RL) and said setpoint SP, both expressed as percentages of the				
	maximum torque output of the engine when normally-aspirated (MTO)" (e.g., '347,					
	clain	ns 1, 7)				
	E.	"a second setpoint (SP2), wherein the SP2 is a larger percentage of the MTO than				
	the S	SP" (e.g., '634 patent, claims 39, 80)				
	F.	"operating said internal combustion engine to provide torque to the hybrid vehicle				
	when	n the torque required to operate the hybrid vehicle is between a setpoint SP and a				
	maximum torque output (MTO) of the engine" (e.g., '097 patent, claims 1, 11)					
	G.	"max torque output (MTO) of said engine" (e.g., '347, claim 23) 19				
	н.	"the state of charge of the battery is below a predetermined level" (e.g., '347,				
	claim 31)					
	1.	"a rapid increase in the torque to be applied to the wheels of the vehicle as desired				
	by the operator is detected" (e.g., '347 patent, claim 10) 22					
	J.	"wherein a rate of change of torque output of said engine is limited to a threshold				
	valu	e" (e.g., '388 patent, claim 1)				

TABLE OF CONTENTS (cont'd)

Page	
K. "motor(s)"	К.
L. "substantially less than the maximum torque output (MTO) of said engine" (e.g.,	L.
'347 patent, claim 13)	'347
M. "a setpoint (SP) above which said engine torque is efficiently produced" (e.g.,	М.
'347 patent, claim 1; '634 patent, claim 1)	'347
N. "wherein the torque produced by said engine when operated at said setpoint (SP)	N.
is substantially less than the maximum torque output (MTO) of said engine" (e.g., '347	is sul
patent, claims 1, 23; '634 patent, claim 1)	pater
CONCLUSION	CON

v.

TABLE OF AUTHORITIES

Cases	
3M Innovative Properties Co. v. Tredegar Corp.,	
725 F.3d 1315 (Fed. Cir. 2013)	21
ActiveVideo Networks, Inc. v. Verizon Comm'n, Inc.,	
694 F.3d 1312 (Fed. Cir. 2012)	9
Adv. Cardiovascular Sys. v. Medtronic, Inc.,	
265 F.3d 1294 (Fed. Cir. 2001)	7
Biotec Biologische Naturverpackungen GmbH & Co. KG v. Biocorp, Inc.,	
249 F.3d 1341 (Fed. Cir. 2001)	8
Classen Immunotherapies, Inc. v. Biogen Idec,	
CIV. WDQ-04-2607, 2013 WL 4587522 (D. Md. Aug. 27, 2013)	. 8, 9
Comark Comme 'ns, Inc. v. Harris Corp.,	
156 F.3d 1182 (Fed. Cir. 1998)	7
Datamize, LLC v. Plumtree Software, Inc.,	
417 F.3d 1342 (Fed. Cir. 2005)	7, 29
Dow Chemical Co. v. United States,	
226 F.3d 1334 (Fed.Cir.2000)	7, 27
Enzo Biochem, Inc. v. Applera Corp.,	
599 F.3d 1325 (Fed. Cir. 2010)	21
Exxon Research & Eng'g Co. v. United States,	
265 F.3d 1371 (Fed. Cir. 2001)	22
Finjan, Inc. v. Secure Computing Corp.,	
626 F.3d 1197 (Fed. Cir. 2010)	9
Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.,	
381 F.3d 1111 (Fed. Cir. 2004)	6, 7
Jonsson v. Stanley Works,	
903 F.2d 812 (Fed.Cir.1990)	10

TABLE OF AUTHORITIES (cont'd)

Page(s
Multiform Desiccants, Inc. v. Medzam, Ltd.,
133 F.3d 1473 (Fed. Cir. 1998)
O2 Micro International Ltd. v. Beyond Innovation Technology Co.,
521 F.3d 1351 (Fed.Cir.2008)
O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.,
467 F.3d 1355 (Fed. Cir. 2006)
Ormco Corp. v. Align Tech., Inc.,
498 F.3d 1307 (Fed. Cir. 2007)
Paice LLC v. Toyota Motor Corp., et al.,
No. 2:04-CV-211-DF, Dkt. No. 91 (E.D. Tex. Sep. 28, 2005)
Paice LLC v. Toyota Motor Corp., et al.,
No. 2:07-CV-180-DF, Dkt. No. 63 (E.D. Tex. Dec. 5, 2008) 13, 1
Phillips v. AWH Corp.,
415 F.3d 1303 (Fed. Cir. 2005)
SanDisk Corp. v. Memorex Prods., Inc.,
415 F.3d 1278 (Fed.Cir.2005)
SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.,
242 F.3d 1337 (Fed. Cir. 2001)
St. Clair Intellectual Prop. Consultants, Inc. v. Canon Inc.,
412 F. App'x 270 (Fed. Cir. 2011)
Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.,
537 F.3d 1357 (Fed. Cir. 2008)
StemCells, Inc. v. Neuralstem, Inc.,
08:06-CV-1877-AW, 2011 WL 3565246 (D. Md. Aug. 12, 2011)
Suffolk Techs. LLC, v. Google Inc. et al.,
2013 WL 1700938 (E.D. Va. April 18, 2013)
U.S. Surgical Corp. v. Ethicon, Inc.,
103 F.3d 1554 (Fed. Cir. 1997)

TABLE OF AUTHORITIES (cont'd)

Page(s)

itronics Corp. v. Conceptronic,
90 F.3d 1576 (Fed. Cir. 1996)
ang Lab., Inc. v. Am. Online, Inc.,
197 F.3d 1377 (Fed.Cir.1999)
ellman, Inc. v. Eastman Chem. Co.,
642 F.3d 1355 (Fed. Cir. 2011)

Plaintiffs Paice LLC ("Paice") and the Abell Foundation, Inc., ("Abell") hereby submit their brief on the proper construction of certain disputed terms in:

- U.S. Patent No. 6,209,672 (the "672 patent," attached hereto as Exhibit 1);
- U.S. Patent No. 7,104,347 (the "'347 patent" attached hereto as Exhibit 2);
- U.S. Patent No. 7,237,634 (the "'634 patent" attached hereto as Exhibit 3);
- U.S. Patent No. 7,559,388 (the "388 patent" attached hereto as Exhibit 4); and
- U.S. Patent No. 8,214,097 (the "'097 patent" attached hereto as Exhibit 5).¹

For the reasons that follow, Plaintiffs respectfully request that this Court adopt their proposed claim constructions in their entirety.

I. INTRODUCTION

A. The Parties

Since 1992, Paice has been engaged in developing innovative hybrid electric vehicle technology to promote better fuel efficiency, lower emissions, and superior driving performance. As a result of its inventive endeavors, Paice has a number of patents directed to hybrid vehicle technology. Shortly after Paice was established, it was enrolled and accepted into the University of Maryland's incubator program, which was created to connect promising start-up companies with the local business and technical community.

Abell is a non-profit charitable organization dedicated to fighting urban poverty and enhancing the quality of life in Maryland. Over the past 60 years, Abell has contributed more than \$225 million to support worthwhile causes across Maryland. It traditionally focuses on caring for the underserved through education, healthcare, and human services initiatives. In addition, Abell is dedicated to promoting national social objectives, such as increasing energy

¹ On June 7, 2013, Plaintiffs filed a motion for leave to amend the complaint to add the '097 patent.

Case 1:12-cv-00499-WDQ Document 78 Filed 11/14/13 Page 8 of 37

efficiency and producing alternative energy, and invests in companies with innovative technologies in these areas. Abell's charitable model is unique in that it occasionally invests in promising local companies — including those focused on environmental issues — with the goal of reinvesting any earnings back into the communities it serves. In 1998, Abell was introduced to Paice through the University of Maryland's incubator program. Recognizing the future promise and benefits of Paice's technology, Abell has invested millions of dollars in support of Paice's innovative technology. As a result of Abell's investment and involvement with Paice, Abell is also an equity owner of Paice.

Defendants Hyundai Motor Company, Hyundai Motor America, Kia Motors Corporation, and Kia Motors America, Inc. are in the business of manufacturing, marketing, and selling automobiles worldwide, including hybrid electric vehicles within the United States, such as the Hyundai Sonata Hybrid and the Kia Optima Hybrid.

B. Procedural Background

Plaintiffs instituted this action for patent infringement against Defendants on February 16, 2012 and filed an amended complaint on June 13, 2012. (ECF Nos. 1 & 27). Hyundai answered on April 11, 2013 and asserted counterclaims of non-infringement and invalidity. (ECF No. 34). On June 7, 2013, Plaintiffs filed a motion for leave to amend the complaint to allege infringement of the '097 patent.² The Court entered a Scheduling Order on June 13, 2013 (ECF No. 53) which, among other things, limited the number of proposed claim terms for construction to 15, and required the parties to file a Joint Claim Construction statement by October 15, 2013.

² Although the Court has not yet ruled on the motion to amend, the parties have proceeded under the assumption that the '097 patent is a part of the case (*e.g.* Plaintiffs' infringement contentions and Defendants' invalidity contentions both address the '097 patent).

C. Technology Background

Hybrid electric vehicles are powered by both a traditional internal combustion engine (ICE) and at least one electric motor. In hybrid electric vehicles, the wheels are driven using torque supplied by the ICE, electric motor, or a combination of the two. By contrast, in a conventional automobile, the wheels are driven using torque supplied only by the ICE. Hybrid electric vehicles have become increasingly attractive alternatives to conventional automobiles and straight electric vehicles because they combine the advantages from each and minimize their shortcomings. Hybrid electric vehicles provide the potential for maximum fuel efficiency, lower emissions, and increased drivability in a wide range of vehicles, without limiting travel distance and performance based on the electric motor alone. Because hybrid electric vehicles are equipped with more than one source of torque, a microprocessor is typically employed to control the various components of the hybrid system and determine the source of torque in a given driving condition.

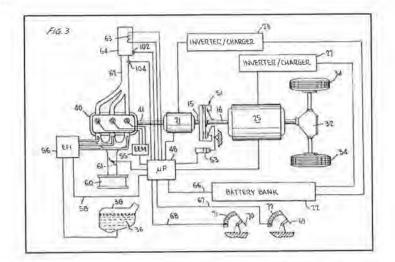
II. THE ASSERTED PAICE PATENTS

Paice and Abell are co-owners by assignment of each of the asserted patents. As discussed in further detail below, each of these patents is directed to various aspects of hybrid electric vehicle technology, including novel designs and control systems for hybrid electric vehicles.

The '672 patent, entitled "Hybrid Vehicle," issued on April 3, 2001 from an application with a priority date of September 14, 1998. The '672 patent discloses an embodiment of a hybrid electric vehicle, with an internal combustion engine and two motors. One or both of the motors may be used to recharge the battery. Additionally, a microprocessor is employed to select different operating modes based on the vehicle's instantaneous torque requirements, the state of charge of the battery bank, and other variables. '672 patent, col. 28:4-19.

3

An embodiment of the hybrid vehicle disclosed in the '672 patent is shown in Figure 3, reproduced below:



As shown, a traction motor 25 is connected to the road wheels 34 through a differential 32. A starter motor 21 is connected to the internal combustion engine 40. The motors 21 and 25 are functional as either motors or generators, depending on the operation of the corresponding inverter/charger units 23 and 27, which connect the motors to the battery bank 22. *See* '672 patent, col. 19:19-30.

These components are controlled by a microprocessor 48 or any controller capable of examining input parameters and signals and controlling the mode of operation of the vehicle. '672 patent, col. 18:65-col. 19:12. For example, control of engine 40 is accomplished by way of control signals provided by the microprocessor to the electronic fuel injection (EFI) unit 56 and electronic engine management (EEM) unit 55. Control of (1) starting of the engine 40; (2) use of motors 21 and 25 to provide propulsive torque; or (3) use of motors as generators to provide regenerative recharging of battery bank 22, is accomplished through control signals provided by the microprocessor to the inverter/charger units 23 and 27. '672 patent, col. 21:26-50; col. 22:40-56.

The hybrid vehicle may be operated in a number of modes based on the vehicle's instantaneous torque requirements, the engine's maximum torque output, the state of charge of the battery, and other operating parameters. In an embodiment of the '672 patent, the microprocessor causes the vehicle to operate in various operating modes pursuant to its control strategy.

For example, in mode I, the hybrid vehicle is operated as an electric car, with the traction motor providing all torque to propel the vehicle. '672 patent, col. 28:50-55; Fig. 8(a). As the vehicle continues to be propelled in electric only mode, the state of charge of the battery may become depleted, and need to be recharged. In this case, the hybrid vehicle may transition to mode II to recharge the battery, in which the vehicle operates as in mode I, with the addition of the engine running the starter/generator motor to provide electrical energy to operate the traction motor and recharge the battery. '672 patent, col. 28:58-col. 29:5; Fig. 8(b). When the internal combustion engine can operate in its fuel efficient range, the hybrid vehicle operates in mode IV, with the engine providing torque to propel the vehicle. '672 patent, col. 29:6-22; Fig. 8(c). If the vehicle requires additional torque, such as for acceleration or hill-climbing, the vehicle may enter mode V, where the traction motor provides additional torque to propel the vehicle beyond that provided by engine 40. '672 patent, col. 29:23-30; Fig. 8(d).

The '672 patent also discloses other various features relating to hybrid electric vehicles, including, for example, a novel way to control a hybrid vehicle by controlling the rate of change of torque of an engine such that the combustion of fuel within the engine occurs substantially at a stoichiometric fuel/air ratio. '672 patent, col. 32:17-37; Fig. 7(a). This limits the undesirable emission of unburned fuel and improves the fuel economy of the vehicle. *Id.*

5

The other asserted patents—the '347,'634,'388, and'097 patents—claim priority to two provisional applications dated March 1, 1999, and September 14, 1998 and issued from a common parent, U.S. Patent No. 6,554,088, which is a continuation-in-part of the '672 patent. Because the asserted claims of the other patents do not involve any new matter, the disclosure of the '672 patent is also applicable to the '347,'634,'388, and'097 patents.

III. LEGAL STANDARDS OF CLAIM INTERPRETATION

The Federal Circuit's en banc opinion in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005), sets forth the bedrock principles of claim construction.

First, and importantly, "the claim construction analysis must begin and remain centered on the claim language itself" because a "bedrock principle" of patent law is 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, 1115–16 (Fed. Cir. 2004). Accordingly, a court must "look to the words themselves . . . to define the scope of the patented invention." *Vitronics Corp. v. Conceptronic*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). And the "words of a claim are generally given their ordinary and customary meaning." *Phillips*, 415 F.3d at 1312 (internal quotation marks omitted).

The "ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of invention, i.e., as of the effective filing date of the patent application." *Id.* at 1313. A person of ordinary skill in the art "is deemed to read the words used in the patent documents with an understanding of their meaning in the field, and to have knowledge of any special meaning and usage in the field." *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998). In the event the ordinary meaning of a claim is not apparent, then a court—just as would a person of ordinary skill in the art skill in the art—may look to "the words of the claims themselves, the remainder of the

6

Case 1:12-cv-00499-WDQ Document 78 Filed 11/14/13 Page 13 of 37

specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." *Innova/Pure Water*, 381 F.3d at 1116. In general, courts engaging in claim construction follow a hierarchy of evidence: (i) claim language, (ii) other intrinsic evidence—*i.e.*, the specification, the remainder of the patent, and the prosecution history, and (iii) extrinsic evidence—*i.e.*, evidence that is external to the patent and prosecution history, such as expert testimony, dictionaries, or treatises. *See Adv. Cardiovascular Sys. v. Medtronic, Inc.*, 265 F.3d 1294, 1304 (Fed. Cir. 2001). The claim construction effort should focus on the intrinsic evidence, and only if that evidence does not yield the answer, should a court proceed to extrinsic evidence. *Vitronics*, 90 F.3d at 1583.

Additionally, under the doctrine of claim differentiation, the difference between words or phrases used in separate claims give rise to a presumption that those words or phrases have different meanings. *Comark Comme'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) ("There is presumed to be a difference in meaning and scope when different words or phrases are used in separate claims. To the extent that the absence of such difference in meaning and scope would make a claim superfluous, the doctrine of claim differentiation states the presumption that the difference between claims is significant.").

The Federal Circuit has recognized that the specification is "the single best guide to the meaning of a disputed term" and is often "dispositive." *Phillips*, 415 F.3d at 1315. Yet courts must be cautious in using the specification to avoid limiting the scope of the claims by importing limitations of such embodiments into the scope of the claims. A patentee is entitled to claim his or her invention broadly and is not limited to a preferred embodiment disclosed in the specification. *See Dow Chemical Co. v. United States*, 226 F.3d 1334, 1341–42 (Fed.Cir.2000). Courts have noted that "to read 'a limitation from the written description into the claims' is a

7

Case 1:12-cv-00499-WDQ Document 78 Filed 11/14/13 Page 14 of 37

'cardinal sin' of patent claim construction." Suffolk Techs. LLC, v. Google Inc. et al., 2013 WL 1700938 at *4 (E.D. Va. April 18, 2013) (quoting SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1340–41 (Fed. Cir. 2001)).

Moreover, district courts are not required to construe every limitation present in a patent's asserted claims. *See, e.g., Biotec Biologische Naturverpackungen GmbH & Co. KG v. Biocorp, Inc.*, 249 F.3d 1341, 1349 (Fed. Cir. 2001) (application of the claim term was the proper disputed issue, not construction); *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (claim construction "is not an obligatory exercise in redundancy"); *Classen Immunotherapies, Inc. v. Biogen Idec*, CIV. WDQ-04-2607, 2013 WL 4587522, at *2 (D. Md. Aug. 27, 2013).

"Claim 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." *U.S. Surgical*, 103 F.3d at 1568. When the patent claim term is clear and can be properly applied by a jury then a redundant construction is unnecessary. *Id.* at 1567 ("We doubt that Markman requires the trial judge to instruct as to an undisputed 'claim construction' for every term, by simply parroting the words of the claim..."). "For instance, terms that are 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 or prosecution history." *Classen Immunotherapies*, 2013 WL 4587522 at *2 (internal quotations and citations omitted).

The Federal Circuit has held that district courts can resolve a dispute over claim construction by concluding that the terms have plain meanings that do not require additional

8

construction. See, e.g., ActiveVideo Networks, Inc. v. Verizon Comm'n, Inc., 694 F.3d 1312, 1326 (Fed. Cir. 2012) ("The district court did not err in concluding that these terms have plain meanings that do not require additional construction. ActiveVideo's proposed construction erroneously reads limitations into the claims and the district court properly rejected that construction and resolved the dispute between the parties."); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) (finding that district court had not violated principles of *O2 Micro International Ltd. v. Beyond Innovation Technology Co.*, 521 F.3d 1351 (Fed.Cir.2008) by rejecting Defendant's construction and adopting "plain and ordinary meaning" for a disputed claim term); *Classen Immunotherapies*, 2013 WL 4587522 at *15 (court relying on plain and ordinary meaning and not adopting a construction because term itself is clear).

IV. PROPOSED INTERPRETATION OF DISPUTED CLAIM TERMS

As noted above, each of the asserted patents shares a common disclosure. Although the '634, '347, '097, and '388 patents contain additional disclosures compared to the '672 patent, none of the new matter is the subject of any of the asserted claims in this case. Therefore, because the asserted claims each involve the same matter as that disclosed in their common portions of the specification, the terms discussed below should be given the same construction for all asserted claims in all asserted patents in which they appear.³ *See, e.g., St. Clair Intellectual Prop. Consultants, Inc. v. Canon Inc.*, 412 F. App'x 270, 275 (Fed. Cir. 2011) (construing claim terms from different patents with same meaning where patents shared same specification and used similar or identical terms); *Ormco Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1314 (Fed. Cir. 2007) (prosecution history from related familial patents relevant because

³ For purposes of clarity and ease of reference, Plaintiffs refer primarily to the '672 patent; similar and/or identical disclosures that are relied on may be found in the common portion of the specifications for each of the asserted patents.

Case 1:12-cv-00499-WDQ Document 78 Filed 11/14/13 Page 16 of 37

patents share the same subject matter); Wang Lab., Inc. v. Am. Online, Inc., 197 F.3d 1377, 1384 (Fed.Cir.1999) (same); Jonsson v. Stanley Works, 903 F.2d 812, 818 (Fed.Cir.1990) (same); StemCells, Inc. v. Neuralstem, Inc., 08:06-CV-1877-AW, 2011 WL 3565246, at *16 (D. Md. Aug. 12, 2011) (same).

As set forth in the Joint Claim Construction statement dated October 15, 2013, Plaintiffs have identified two claim terms that they believe require construction—"road load" and "setpoint." Defendants have identified 12 additional claim terms that allegedly require construction. Plaintiffs respectfully submit that the Court need not construe all identified terms because i) many of the terms are clear and should be given their plain and ordinary meaning; and ii) Defendants are impermissibly using the claim construction process to rewrite claim limitations that do not require construction, as well as improperly asserting invalidity arguments that Defendants failed to timely raise in their invalidity contentions. Plaintiffs' proposed construction for each of the disputed terms is discussed in further detail below.

A. "road load," "RL"

Plaintiffs' Construction	Defendants' Construction
"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."

The term "road load" or "RL" can be found in asserted claims of each of the asserted patents. *See e.g.* '672 patent at claim 15; '634 patent at claim 16; '347 patent at claim 7; '097 patent at claim 8; '388 patent at claim 1. For example, claim 15 of the '672 patent recites:

15. A method for controlling the operation of a hybrid vehicle operable in a plurality of differing modes, comprising the steps of:

providing a hybrid vehicle comprising an internal combustion engine for providing torque up to a maximum torque output (MTO), said engine being controllably coupled to road wheels of said vehicle by a clutch, a

traction motor being coupled to road wheels of said vehicle, a starting motor coupled to said engine, both said motors being operable as generators, a battery bank for providing electrical energy to and accepting energy from said motors, and a controller for controlling operation of said engine, clutch, and first and second motors, and controlling flow of electrical energy between said motors and said battery bank,

and operating said controller to control selection of the operational mode of said vehicle between a low-speed mode I, a cruising mode IV, and an acceleration mode V, 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*).

The phrase "road load" is expressly defined in, for example, claim 15 of the '672 patent, and that definition must control. '672 patent, claim 15. Additionally, the phrases "road load" and the abbreviation "RL" are further defined in the specification and file history consistently with the definition provided by claim 15. For example, the specification teaches that the instantaneous torque required to propel the vehicle is compared to the engine's maximum torque output to determine whether to run the engine to propel the vehicle: "[w]hile operating at low speeds, e.g., *when the vehicle's torque requirements ("road load" or "RL")* are less than 30% of the engine's maximum torque output ("MTO"), engine 40 is run only as needed to charge battery bank 22." '672 patent, col. 28:58-61 (emphasis added). During prosecution of U.S. Patent 6,554,088,⁴ the applicant further explained that:

"Road load' as used herein is simply that amount of torque that must be supplied to the vehicle wheels in order to carry out the operator's current command. Note that 'road load' as thus defined can be positive, as during highway cruising, 'highly' positive, as during acceleration or hillclimbing, negative, as during hill descent, and 'heavily' negative, as during braking."

⁴ The '634, '347, '097, and '388 patents descend from their common parent, U.S. Patent No. 6,554,088, which is a continuation-in-part of the '672 patent.

U.S. Patent 6,554,088 File History, Nov. 28, 2002, Third Supplemental Information Disclosure Statement at 2.

Although both the specification and the claims refer alternatively to "road load" and "instantaneous road load," these terms should be construed in the same fashion for at least two reasons. First, the term "road load" is, by definition, an instantaneous quantity, *i.e.*, the instantaneous torque requirement. Thus, the phrase "instantaneous road load" is partially redundant. Second, the patent specification supports the conclusion that the patentee considered the terms "instantaneous" as surplusage; "road load" is defined as both the vehicle's torque requirements and the vehicle's instantaneous torque requirements. *Compare* '672 patent, col. 28:58-61 *with* col. 31:14-17.

There appears to be no dispute between the parties that "road load" can be positive or negative. *See* '672 patent, col. 29:50-55. The remainder of Defendants' construction however offers little in the way of clarification, and is inconsistent with the meaning of the phrase defined by the claims themselves. While the claims, specification, and file history make clear that "road load" is the "instantaneous" torque required for propulsion of the vehicle, Defendants impermissibly limit "road load" to the torque "actually required to propel the vehicle on the road to maintain a given speed." Defendants' proposed construction is erroneous and overly narrow. For example, the specification of the asserted patents discloses that the instantaneous torque required for propulsion of the vehicle may be responsive to the driver's demand for a given speed, but must also account for other factors such as whether the vehicle is travelling up or down a hill. *See e.g.* '672 patent, col. 31:27-30.

Finally, Plaintiffs note that their proposed construction is consistent with two prior court decisions construing this term. See Paice LLC v. Toyota Motor Corp., et al.,

12

No. 2:04-CV-211-DF, Dkt. No. 91 (E.D. Tex. Sep. 28, 2005); Paice LLC v. Toyota Motor Corp., et al., No. 2:07-CV-180-DF, Dkt. No. 63 (E.D. Tex. Dec. 5, 2008).

B. "setpoint," "SP"

Plaintiffs' Construction	Defendants' Construction
"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 term "setpoint" or "SP" can be found in asserted claims in the '672, '634, '347, and

'097 patents. See e.g. '672 patent at claim 16; '634 patent at claim 1; '347 patent at claim 1;

'097 patent at claim 1. For example, claim 33 of the '634 patent is:

33. A method for controlling a hybrid vehicle, comprising:

determining instantaneous road load (RL) required to propel the hybrid vehicle responsive to an operator command;

operating at least one electric motor to propel the hybrid vehicle when the RL required to do so is less than a *setpoint (SP)*;

operating an internal combustion engine of the hybrid vehicle to propel the hybrid vehicle when the RL required to do so is between the *SP* and a maximum torque output (MTO) of the engine, wherein the engine is operable to efficiently produce torque above the *SP*, and wherein the *SP* is substantially less than the MTO;

operating both the at least one electric motor and the engine to propel the hybrid vehicle when the torque RL required to do so is more than the MTO; and

monitoring patterns of vehicle operation over time and varying the SP accordingly.

The terms "setpoint" and "SP" are expressly defined in the claims of the asserted patents.

See e.g. '634 patent at claim 33. For example, the claims demonstrate the use of the term

"setpoint" to indicate the transition point between modes of operation. Claim 33 of the '634

patent indicates that the vehicle is controlled by "operating at least one electric motor to propel the hybrid vehicle when the RL required to do so is *less than a setpoint (SP)*." '634 patent, col. 60:62-64 (emphasis added). Claim 1 of the '097 patent states that the vehicle is controlled by "operating said internal combustion engine to provide torque to the hybrid vehicle when the torque required to operate the hybrid vehicle is *between a setpoint SP and a maximum torque output (MTO) of the engine*, wherein the engine is operable to efficiently produce torque above SP, and wherein SP is substantially less than MTO." '097 patent, col. 57:1-7 (emphasis added). The claims also demonstrate that "setpoint" is a potentially variable value. For example, claim 33 of the '634 patent states that the vehicle is controlled by "monitoring patterns of vehicle operation over time and varying the SP accordingly." '634 patent, col. 61:7-8 (emphasis added). The terms "setpoint" and the symbol "SP" are further clarified in the patents' specification. For example, the specification makes clear that the control system calculates a number of sensed variables, such as "road load," the current torque output of the engine, and the state of charge of the battery, and compares those calculated values against the "setpoint" to determine the mode of operation:

"the microprocessor tests sense and calculated values for system variable, such as the vehicle's instantaneous torque requirement, i.e., the "road load" RL, the engine's instantaneous torque output ITO, both being expressed as a percentage of the engine's maximum torque output MTO, and the state of charge of the battery bank BSC, expressed as a percentage of its full charge, against setpoints, and uses the results of the comparisons to control the mode of vehicle operation."

'672 patent, col. 32:62-col. 33:4.

The specification also discloses that the "value of a setpoint (for example) may vary somewhat in response to recent history, or in response to monitored variables" and that "the values given above for various numerical quantities may vary somewhat without departing from the invention." *See* '672 patent, col. 33:5-18. Other examples of the "setpoint" varying include:

varying the "setpoint" "in response to a repetitive driving pattern" such as the route driven by the driver each day ('672 patent, col. 33:28-49); varying the "setpoint" based "on the mode of operation in effect when the road load equals a given setpoint SP," e.g. varying the "setpoint" for the transition between mode I and mode IV when the "road load" is fluctuating around the "setpoint" ('672 patent, col. 33:50- col. 34:26); and varying the "setpoint" based on the battery state of charge, *i.e.* in order to run the engine when the state of charge is low ('672 patent at col. 34:27-38).

Finally, Plaintiffs note that their construction is consistent with a prior court decision construing this term. *See Paice LLC v. Toyota Motor Corp., et al.*, No. 2:07-CV-180-DF, Dkt. No. 63 (E.D. Tex. Dec. 5, 2008).

C. "wherein SP is a setpoint expressed as a predetermined percentage of MTO" (e.g., '672 patent, claim 16)

Plaintiffs' Construction	Defendants' Construction
Term does not require separate construction by the Court, other than the term "setpoint"	"wherein SP is expressed as a percentage of the engine's maximum torque output determined in advance."

This phrase is controlled by its plain and ordinary meaning and does not require construction by the Court beyond construing the term "setpoint," which Plaintiffs address in Section IV.B *supra*.

Defendants' proposed construction is not helpful to the Court or jury. Instead of construing a disputed claim term, Defendants merely parrot back claim language and substitute different language for common words such as "predetermined" that do not require additional construction or explanation. Such substitution does little to assist the Court or the jury in understanding a term that is already clear. *See e.g. U.S. Surgical*, 103 F.3d at 1567 ("We doubt

that Markman requires the trial judge to instruct as to an undisputed 'claim construction' for

every term, by simply parroting the words of the claim "). In fact, Defendants' proposed

construction is confusing because it is unclear what the additional phase "determined in

advance" is modifying.

Plaintiffs reserve the right to address in their reply brief any arguments Defendants make regarding why this claim limitation should be construed beyond its plain and ordinary meaning.

D. "road load (RL) and said setpoint SP, both expressed as percentages of the maximum torque output of the engine when normally-aspirated (MTO)" (e.g., '347, claims 1, 7)

Plaintiffs' Construction	Defendants' Construction
Term does not require separate construction by the Court, other than the term "setpoint"	"road load (RL) and said setpoint SP, both expressed as a fixed percentage of the engine's maximum torque output when normally aspirated"

This phrase is controlled by its plain and ordinary meaning and does not require construction by the Court beyond construing the terms "road load" and "setpoint," which Plaintiffs address in Sections IV.A & B *supra*.

Again, instead of construing a disputed claim term, Defendants parrot back the claim language and impermissibly read in an additional limitation, *i.e.*, that RL and SP are "fixed" percentages. Defendants' proposed construction contradicts the intrinsic evidence of the asserted patents. As described above, "road load" is a measurement of the instantaneous torque requirements of the vehicle. *See supra* Section IV.A. Thus, "road load" will necessarily vary depending on the instantaneous situation of the vehicle and cannot be "fixed." *See e.g.* '672 patent at col. 38:41-54; Fig. 7(a). Similarly, the asserted patents' claims and specification are clear that the "setpoint" may be variable, and is therefore not "fixed." *See supra* Section IV.B. Plaintiffs reserve the right to address in their reply brief any arguments Defendants make

regarding why this claim term should be construed beyond its ordinary meaning.

E. "a second setpoint (SP2), wherein the SP2 is a larger percentage of the MTO than the SP" (e.g., '634 patent, claims 39, 80)

Plaintiffs' Construction	Defendants' Construction
Term does not require separate construction by the Court, other than the term "setpoint"	"a second torque value that is a larger percentage of the engine's maximum torque output than the first torque value."

This phrase is controlled by its plain and ordinary meaning and does not require

construction by the Court beyond construing the term "setpoint," which Plaintiffs address in

Section IV.B supra.

Plaintiffs reserve the right to address in their reply brief any arguments Defendants make

regarding why this claim term should be construed beyond its ordinary meaning.

F. "operating said internal combustion engine to provide torque to the hybrid vehicle when the torque required to operate the hybrid vehicle is between a setpoint SP and a maximum torque output (MTO) of the engine" (e.g., '097 patent, claims 1, 11)

Plaintiffs' Construction	Defendants' Construction
Term does not require separate construction by the Court, other than the term "setpoint."	"propelling the vehicle with the engine when the torque required to propel the vehicle is between a torque value that is a fixed percentage of the engine's maximum torque output and the maximum torque output of the engine."

This phrase is controlled by its plain and ordinary meaning and does not require

construction by the Court beyond construing the term "setpoint," which Plaintiffs address in

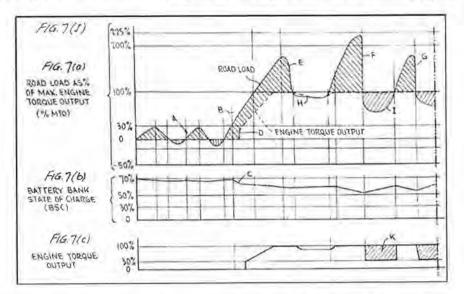
Section IV.B supra.

Instead of construing a disputed term, Defendants' construction impermissibly reads

additional limitations into the claims, such as "propelling the vehicle" and "fixed."

With respect to "propelling the vehicle," the claim language is clear and should control. Claim 1 of the '097 patent states that the vehicle is controlled by "operating said internal combustion engine to provide torque to the hybrid vehicle when the torque required to operate the hybrid vehicle is between a setpoint SP and a maximum torque output (MTO) of the engine." '097 patent, col. 57:1-4 (claim 1) (emphasis added); see also col. 58:11-14 (claim 11). Operating the vehicle is broader than propelling the vehicle, and may include, for example, charging the battery. Defendants' proposed construction contradicts the language of the dependent claims. For example, dependent claim 8 of the '097 patent states that the method of claim 1 further comprising the step of "operating the engine to charge the battery . . . and torque produced by the engine in excess of RL is used to drive the at least one electric motor to charge the battery." '097 patent, col. 57:42-52 (dependent claim 8); see also col. 58:48-57 (dependent claim 18). The specification also makes clear that the engine may provide torque not only to propel the vehicle, but also to charge the battery. For example, the specification describes that when the vehicle's instantaneous torque requirement (i.e. the "road load") is less than the torque currently being produced by the engine, the excess torque is used to charge the battery: "During mode IV operation, if the engine's instantaneous torque output exceeds the vehicle's torque requirement, but the battery is relatively fully charged, as at point H, the engine's torque output is reduced to match the road load; when MTO exceeds the road load, and BSC falls below a predetermined level (see FIG. 7(b)), as at I and J, the excess torque available from engine 40 is used to charge the batteries, as indicated at K and L (FIG. 7(c))." '672 patent, col. 30:63-66; Figs 7(a)-(c).

18



This operation is illustrated at point "I" in Fig. 7 of the '672 patent (highlighting added):

With respect to the "fixed" limitation, as set out above, the claims and specification make clear that the setpoint may be variable. *See supra* Section IV.B.

Plaintiffs reserve the right to address in their reply brief any arguments Defendants make

regarding why this claim term should be construed beyond its ordinary meaning.

G. "max torque output (MTO) of said engine" (e.g., '347, claim 23)

Plaintiffs' Construction	Defendants' Construction
Term does not require construction by the	"the maximum amount of torque that the
Court.	engine can physically produce"

This phrase is controlled by its plain and ordinary meaning and does not require construction by the Court. Again, instead of construing a disputed claim term, Defendants parrot back the claim language and impermissibly read in an additional limitation, *i.e.*, "that the engine can physically produce." Nothing in the claims or specification supports Defendants' additional requirement that the "max torque output (MTO)" must equal the maximum amount of torque that the engine can physically produce. Defendants' proposed construction contradicts the intrinsic evidence. For example, the specification states that "[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 at col. 15:10-14; *see also* '672 patent at col. 20:6-10 ("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").

Plaintiffs reserve the right to address in their reply brief any arguments Defendants make regarding why this claim term should be construed beyond its ordinary meaning.

H.	"the state of charge of the battery is below a predetermined level" (e.g.,
	'347, claim 31)	

Plaintiffs' Construction	Defendants' Construction
Term does not require construction by the Court.	This term is indefinite for failure to comply with the public notice function regarding the boundaries of the claimed invention.

This phrase is controlled by its plain and ordinary meaning and does not require construction by the Court. Defendants' argument that this term is indefinite was not disclosed in Defendants' invalidity contentions, as required by the Scheduling Order, and Defendants are therefore barred from making this argument. *See* ECF No. 53, Scheduling Order, ¶ I.C.3.d; *see also O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.*, 467 F.3d 1355, 1369 (Fed. Cir. 2006) (upholding district court decision to exclude evidence for failure to comply with the disclosure deadlines required by local patent rules and the case management order); *SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1292 (Fed.Cir.2005) (finding no abuse of discretion where district court excluded evidence pertaining to theories of claim construction and infringement not disclosed as required by the local patent rules and the court's scheduling order).

Further, this phrase is not "insolubly ambiguous" as required by Federal Circuit case law. See Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347 (Fed. Cir. 2005) (holding that "[o]nly claims not amenable to construction or insolubly ambiguous are indefinite.") (internal quotations and citations omitted); see also 3M Innovative Properties Co. v. Tredegar Corp., 725 F.3d 1315, 1333 (Fed. Cir. 2013) ("In order to be indefinite, reasonable efforts at claim construction must result in a definition that does not provide sufficient particularity or clarity to inform a skilled artisan of the bounds of the claim"); Wellman, Inc. v. Eastman Chem. Co., 642 F.3d 1355, 1367 (Fed. Cir. 2011) cert. denied, 132 S. Ct. 1541, 182 L. Ed. 2d 162 (U.S. 2012) (holding that "an inventor need not explain every detail because a patent is read by those of skill in the art") (internal citations omitted); Enzo Biochem, Inc. v. Applera Corp., 599 F.3d 1325, 1332 (Fed. Cir. 2010) (finding claim terms not indefinite and noting that "[w]hen a word of degree is used, the court must determine whether the patent provides some standard for measuring that degree.") (internal quotations and citations omitted); Star Scientific, Inc. v. R.J. Reynolds Tobacco Co., 537 F.3d 1357, 1371 (Fed. Cir. 2008) (citing to Exxon Research & Eng'g Co. v. United States, 265 F.3d 1371, 1375 (Fed. Cir. 2001) ("A claim term is not indefinite just because it poses a difficult issue of claim construction")).

Defendants have not set forth any arguments why they believe the phrase is insolubly ambiguous. Contrary to Defendants' assertions, the phrase "the state of charge of the battery is below a predetermined level" is amenable to construction and should be given its plain and ordinary meaning. The specification also provides an example of a predetermined level:

> "[n]ormally the batteries are maintained at least 30% of full charge. Preferably, the batteries are not charged to more than 70-80% of their full charge; if a number of series-connected batteries were all charged to 100% of their nominal full charge, some would likely be overcharged due to manufacturing variation, local temperature variation and the like, which would significantly shorten their service life."

'672 patent, col. 29:42-49.

Plaintiffs reserve the right to address in their reply brief any arguments Defendants make regarding why this claim term should be construed beyond its ordinary meaning.

I. "a rapid increase in the torque to be applied to the wheels of the vehicle as desired by the operator is detected" (e.g., '347 patent, claim 10)

Plaintiffs' Construction	Defendants' Construction
Term does not require construction by the Court.	This term is indefinite for failure to comply with the public notice function regarding the boundaries of the claimed invention.

This phrase is controlled by its plain and ordinary meaning and does not require construction by the Court. Defendants' argument that this term is indefinite was not disclosed in Defendants' invalidity contentions, as required by the Scheduling Order, and Defendants are therefore barred from making this argument. *See* ECF No. 53, Scheduling Order, ¶ I.C.3.d; *see also O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.*, 467 F.3d 1355, 1369 (Fed. Cir. 2006) (upholding district court decision to exclude evidence for failure to comply with the disclosure deadlines required by local patent rules and the case management order); *SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1292 (Fed.Cir.2005) (finding no abuse of discretion where district court excluded evidence pertaining to theories of claim construction and infringement not disclosed as required by the local patent rules and the court's scheduling order).

Further, this phrase is not "insolubly ambiguous" as required by Federal Circuit case law. See supra at 21. Nor have Defendants set forth any arguments why they believe the phrase is insolubly ambiguous. Contrary to Defendants' assertions, this phrase is amenable to construction and should be given its plain and ordinary meaning. For example, the specification teaches that "if during low-speed operation the operator depresses the accelerator pedal rapidly, this can be treated as an indication that full power will shortly be required, and the enginestarting operation begun before the road load reaches any particular setpoint SP." '672 patent,

col. 33:54-59.

Plaintiffs reserve the right to address in their reply brief any arguments Defendants make regarding why this claim term should be construed beyond its ordinary meaning.

J. "wherein a rate of change of torque output of said engine is limited to a threshold value" (e.g., '388 patent, claim 1)

Plaintiffs' Construction	Defendants' Construction
Term does not require construction by the Court.	This term is indefinite for failure to comply with the public notice function regarding the boundaries of the claimed invention.

This phrase is controlled by its plain and ordinary meaning and does not require construction by the Court. Defendants' argument that this term is indefinite was not disclosed in Defendants' invalidity contentions, as required by the Scheduling Order, and Defendants are therefore barred from making this argument. *See* ECF No. 53, Scheduling Order, ¶ I.C.3.d; *see also O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.*, 467 F.3d 1355, 1369 (Fed. Cir. 2006) (upholding district court decision to exclude evidence for failure to comply with the disclosure deadlines required by local patent rules and the case management order); *SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1292 (Fed.Cir.2005) (finding no abuse of discretion where district court excluded evidence pertaining to theories of claim construction and infringement not disclosed as required by the local patent rules and the court's scheduling order).

Further, this phrase is not "insolubly ambiguous" as required by Federal Circuit case law. *See supra* at 21. Nor have Defendants set forth any arguments why they believe the phrase is insolubly ambiguous. Contrary to Defendants' assertions, this phrase is amenable to construction and should be given its plain and ordinary meaning. For example, the specification teaches that "[t]he rate of change of the engine's torque output is limited, e.g., to 2% or less per revolution, as indicated by noting that the dashed line in FIG. 7(a), indicating the instantaneous

engine output torque, lags the solid line indicating the vehicle's instantaneous torque

requirement." '672 patent, col. 32:17-21; Fig. 7(a).

Plaintiffs reserve the right to address in their reply brief any arguments Defendants make regarding why this claim term should be construed beyond its ordinary meaning.

K. "motor(s)"

Plaintiffs' Construction	Defendants' Construction
Term does not require construction by the Court.	"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."

Defendants argue that their proposed definition should be used to construe the following claim limitations: "a traction motor...a starting motor" (e.g., "672, Cl. 15, 18); "first and second motors" (e.g., "672, Cl. 15); "first electric motor...a second electric motor" (e.g., "347, Cl. 1, 7, 8, 9; "634, Cl. 1, 16, 18, 45, 101, 134, 161); "motor(s)" (e.g., "347, Cl. 1, 7, 20, 25, 27, 28, 39); "first motor" (e.g., "347, Cl. 8, 31, 38; "634, Cl. 17, 45); "second electric motor" (e.g., "347, Cl. 7, 28, 31, 38; "634, Cl. 45); "one or more electric motors" (e.g., "347, Cl. 23); "one electric motor" (e.g., "347, Cl. 23; "634, Cl. 33, 36, 37, 41, 43, 45, 53, 80, 93, 94, 97, 99, 101, 110, 114, 132, 134, 173, 215, 228, 229, 231, 233, 240, 241, 254, 255, 257, 259, 266, 267, 280, 281, 283, 285, 291; "097, Cl. 1, 5, 6, 8, 11, 15, 16, 18, 21, 25, 30, 35); "the first or the second electric motors" (e.g., "634, Cl. 29); "a first alternating current (AC) electric motor...a second AC electric motor" (e.g., "388. Cl. 1, 19, 36, 67); "electric motor" ("097, Cl. 26).

Contrary to Defendants' assertions, these terms are clear and controlled by their plain and ordinary meaning and thus, do not require construction by the Court. "Motor" is a commonly

understood term by one of ordinary skill in the art and needs no special construction by the Court.

As an initial matter, Defendants' proposed construction is nonsensical and contradicts the plain claim language. For example, in many of the claims identified above by Defendants, the claims recite one electric motor and do not even recite a second motor. *See, e.g.*, '347 patent, Cl. 23; '634 patent, Cl. 33, 36, 37, 41, 43, 45, 53, 80, 93, 94, 97, 99, 101, 110, 114, 132, 134, 173, 215, 228, 229, 231, 233, 240, 241, 254, 255, 257, 259, 266, 267, 280, 281, 283, 285, 291; '097 patent, Cl. 1, 5, 6, 8, 11, 15, 16, 18, 21, 25, 26, 30, 35.

Even in instances where the claims recite two motors, there is no support for Defendants' argument that the term "motor" must be given a special definition. Defendants' proposed construction does not even make sense, and it is unclear whether they are arguing that their proposed construction applies to the first motor or the second motor. Nor is it clear what Defendants are relying on in support of their flawed construction. Instead of construing a disputed claim term, Defendants are impermissibly seeking to import additional limitations into the claims.

Plaintiffs reserve the right to address in their reply brief any arguments Defendants make regarding why this claim term should be construed beyond its ordinary meaning.

L.	"substantially less than the maximum torque output (MTO) of said engine"
	(e.g., '347 patent, claim 13)

Plaintiffs' Construction	Defendants' Construction
Term does not require construction by the Court,	Indefinite or "a torque value that is less than or equal to 50% of the engine's maximum torque output"

This phrase is controlled by its plain and ordinary meaning and does not require construction by the Court. Defendants' argument that this term is indefinite was not disclosed in

Defendants' invalidity contentions, as required by the Scheduling Order, and Defendants are therefore barred from making this argument. *See* ECF No. 53, Scheduling Order, ¶ I.C.3.d; *see also O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.,* 467 F.3d 1355, 1369 (Fed. Cir. 2006) (upholding district court decision to exclude evidence for failure to comply with the disclosure deadlines required by local patent rules and the case management order); *SanDisk Corp. v. Memorex Prods., Inc.,* 415 F.3d 1278, 1292 (Fed.Cir.2005) (finding no abuse of discretion where district court excluded evidence pertaining to theories of claim construction and infringement not disclosed as required by the local patent rules and the court's scheduling order).

Additionally, this phrase is not "insolubly ambiguous" as required by Federal Circuit case law. *See supra* at 21. Nor have Defendants set forth any arguments why they believe the phrase is insolubly ambiguous. Contrary to Defendants' assertions, this phrase is amenable to construction and should be given its plain and ordinary meaning. Indeed, the fact that Defendants have offered a construction shows that this term is amenable to construction, though given the clarity of the term, construction is unnecessary. *See Datamize, LLC*, 417 F.3d at 1347.

Further, Defendants' construction again impermissibly attempts to read embodiments from the specification into the claims. *See Dow Chemical, 226 F.3d at 1341-42*. Defendants' construction is at odds with the plain language of dependent claim 15 of the '634 patent, which recites the hybrid vehicle of claim 1⁵ "wherein the SP is *less than approximately 70% of the MTO* of the engine when normally-aspirated." '634 patent, col. 59:12-14 (emphasis added). Similarly, claim 13 recites the hybrid vehicle of claim 1 "wherein the SP is *at least*

⁵ Claim 1 of the '634 patent contains the disputed phrase, stating that "the torque produced by the engine when operated at the SP is substantially less than the maximum torque output (MTO) of the engine." *See* '634 patent at col. 58:25-27.

Case 1:12-cv-00499-WDQ Document 78 Filed 11/14/13 Page 33 of 37

approximately 20% of the MTO of the engine when normally-aspirated." '634 patent at col. 59:6-8 (emphasis added).

Moreover, the specification makes clear that the "substantially less" limitation is broader than the "50%" limitation Defendants propose to read into the claim. For example, the specification states that the SP may be changed to account for daily driving patterns, such as driving in suburban traffic conditions: "[i]t is within the skill of the art to program a microprocessor to record and analyze such daily patterns, and to adapt the control strategy accordingly. For example, in response to recognition of a regular pattern as above, the transition point might be adjusted to 60% of MTO." '672 patent, col. 33:40-45. Similarly, while the specification teaches that in one embodiment the engine may operate efficiently between 30% and 100% of its MTO, "the 30% figure, as well as similar figures mentioned herein, may vary without departure from the scope of the invention." '672 patent at col. 31:35-37.

Plaintiffs reserve the right to address in their reply brief any arguments Defendants make regarding why this claim term should be construed beyond its ordinary meaning.

M. "a setpoint (SP) above which said engine torque is efficiently produced" (e.g., '347 patent, claim 1; '634 patent, claim 1)⁶

Plaintiffs' Construction	Defendants' Construction
Term does not require construction by the Court.	Indefinite or "engine torque is produced when the torque output is at least 30% of the engine's maximum torque output"

This phrase is controlled by its plain and ordinary meaning and does not require

construction by the Court beyond construing the term "setpoint," which Plaintiffs address in

⁶ Defendants propose to construe this term along with "wherein the engine is operable to efficiently produce torque above the SP" (e.g., '634 patent, claims 215, 267) and "engine is operable to efficiently produce torque above SP" (e.g., '097 patent, claims 1, 11) with the same definition.

Case 1:12-cv-00499-WDQ Document 78 Filed 11/14/13 Page 34 of 37

Section IV,B *supra*. Defendants' argument that this term is indefinite was not disclosed in Defendants' invalidity contentions, as required by the Scheduling Order, and Defendants are therefore barred from making this argument. *See* ECF No. 53, Scheduling Order, ¶ I.C.3.d; *see also O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.*, 467 F.3d 1355, 1369 (Fed. Cir. 2006) (upholding district court decision to exclude evidence for failure to comply with the disclosure deadlines required by local patent rules and the case management order); *SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1292 (Fed.Cir.2005) (finding no abuse of discretion where district court excluded evidence pertaining to theories of claim construction and infringement not disclosed as required by the local patent rules and the court's scheduling order).

Additionally, this phrase is not "insolubly ambiguous" as required by Federal Circuit case law. *See supra* at 21. Nor have Defendants set forth any arguments why they believe the phrase is insolubly ambiguous. Contrary to Defendants' assertions, this phrase is amenable to construction and should be given its plain and ordinary meaning. The fact that Defendants have offered a construction shows that this term is at least amenable to construction, though given the clarity of the term, construction is unnecessary. *See Datamize*, *LLC*, 417 F.3d at 1347.

For the same reasons stated in Section IV.L *supra*, Defendants' proposed construction impermissibly reads an embodiment, *i.e.* "30%," from the specification into the claims.

Plaintiffs reserve the right to address in their reply brief any arguments Defendants make regarding why this claim term should be construed beyond its ordinary meaning.

28

N. "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" (e.g., '347 patent, claims 1, 23; '634 patent, claim 1)⁷

Plaintiffs' Construction	Defendants' Construction
Term does not require construction by the Court.	Indefinite or "a torque value that is less than or equal to 50% of the engine's maximum torque output"

This phrase is controlled by its plain and ordinary meaning and does not require construction by the Court beyond construing the term "setpoint," which Plaintiffs address in Section IV.B *supra*. Defendants' argument that this term is indefinite was not disclosed in Defendants' invalidity contentions, as required by the Scheduling Order, and Defendants are therefore barred from making this argument. *See* ECF No. 53, Scheduling Order, ¶ I.C.3.d; *see also O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.*, 467 F.3d 1355, 1369 (Fed. Cir. 2006) (upholding district court decision to exclude evidence for failure to comply with the disclosure deadlines required by local patent rules and the case management order); *SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1292 (Fed.Cir.2005) (finding no abuse of discretion where district court excluded evidence pertaining to theories of claim construction and infringement not disclosed as required by the local patent rules and the court's scheduling order).

Additionally, this phrase is not "insolubly ambiguous" as required by Federal Circuit case law. *See supra* at 21. Nor have Defendants set forth any arguments why they believe the phrase is insolubly ambiguous. Contrary to Defendants' assertions, this phrase is amenable to construction and should be given its plain and ordinary meaning. The fact that Defendants have offered a construction shows that this term is at least amenable to construction, though given the clarity of the term, construction is unnecessary. *See Datamize, LLC*, 417 F.3d at 1347.

⁷ Defendants also propose to construe "wherein the SP is substantially less than the MTO" (e.g., '634 patent, claims 215, 267) and "wherein SP is substantially less than MTO," with the same construction (e.g., '097 patent, claims 1, 11).

For the same reasons stated in Sections IV.L & M *supra*, Defendants' proposed construction impermissibly reads an embodiment, *i.e.* "50%," from the specification into the claims.

Plaintiffs reserve the right to address in their reply brief any arguments Defendants make regarding why this claim term should be construed beyond its ordinary meaning.

V. CONCLUSION

For the foregoing reasons, Plaintiffs respectfully request that their proposed constructions above be adopted in their entirety.

November 14, 2013

Respectfully submitted,

/s/ James P. Ulwick

James P. Ulwick (MD Bar No. 00536) Jean Lewis (MD Bar No. 27562) Stephanie Shea (MD Bar No. 28987) KRAMON & GRAHAM, P.A. One South Street, Suite 2600 Baltimore, MD 21202 Telephone: 410-752-6030 Facsimile: 410-539-1269 Email: julwick@kg-law.com Email: jlewis@kg-law.com

Ruffin B. Cordell (pro hac vice) Linda Liu Kordziel (MD Bar No. 15212) Ahmed J. Davis (MD Bar No. 17812) W. Peter Guarneri (pro hac vice) FISH & RICHARDSON P.C. 1425 K Street, N.W., 11th Floor Washington, DC 20005 Telephone: 202-783-5070 Facsimile: 202-783-2331 Email: cordell@fr.com Email: kordziel@fr.com Email: davis@fr.com

Counsel for Plaintiffs PAICE LLC and THE ABELL FOUNDATION, INC.