IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CLOUD FARM ASSOCIATES, L.P.,	:	
	:	
Plaintiff,	:	
	:	
v.	:	C.A. No. 10-502-LPS
	:	
VOLKSWAGEN GROUP OF AMERICA, INC. and ZF SACHS AG,	:	
	:	
Defendants.	:	

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MEMORANDUM OPINION

August 10, 2015
Wilmington, Delaware

STARK, U.S. District Judge:

On June 9, 2010, Plaintiff Cloud Farm Associates, L.P. ("Cloud Farm" or "Plaintiff") filed suit against Volkswagen Group of America, Inc. ("Volkswagen") and ZF Sachs AG ("ZF Sachs") (collectively, "Defendants") alleging infringement of U.S. Patent Nos. 5,437,354 (the "'354 patent") and 5,529,153 (the "'153 patent"). (D.I. 1)

The parties completed claim construction briefing for the '354 and '153 patents on March 2, 2012 (*see* D.I. 115) and submitted technology tutorials (D.I. 136, 138). The Court conducted a hearing on May 29, 2012 (*see* D.I. 155) and construed disputed claim terms of the '354 and '153 patents in its claim construction Order of July 27, 2012 (D.I. 164).

On July 31, 2012, pursuant to the Court's Order (D.I. 162), Cloud Farm filed its Third Amended Complaint (D.I. 165), adding infringement allegations with respect to U.S. Patent Nos. 5,971,115 (the "'115 patent") and 5,979,616 (the "'616 patent") (collectively, with the '354 and '153 patents, the "patents-in-suit").[1] The parties completed briefing on claim construction for the '115 and '616 patents on June 13, 2013 (*see* D.I. 255) and submitted technology tutorials (D.I. 274, 275, 276).

In light of the parties' agreement, the Court ordered the case stayed before construing terms in the '115 and '616 patents (*see* D.I. 284), and all of the patents-in-suit underwent reexamination proceedings in the U.S. Patent and Trademark Office (D.I. 290). The stay was lifted on December 9, 2014 (D.I. 306), and the Court ordered supplemental claim construction briefing for all of the patents-in-suit in light of the reexaminations, "which may have created

[1] Plaintiff asserts the '354, '153, and '115 patents against both defendants. Plaintiff asserts the '616 patent against Volkswagen only.

additional, pertinent prosecution history" (D.I. 309). The parties completed supplemental briefing on March 30, 2015. (*See* D.I. 311) The Court held a hearing on April 22, 2015 for all pending claim construction disputes. (*See* D.I. 339 ("Tr."))

The patents-in-suit generally relate to "a technology for suppressing vehicular rolling motion, i.e., the tendency of the vehicle to tilt when the vehicle turns a corner or is driven around a sharp curve." ('153 patent at 1:16-19; '354 patent at 1:10-13) The '115 patent discloses an improved design of the technology which divides the single unit disclosed in the '153 and '354 patents into a shock absorbing component and a tilt controlling component. (*See* '115 patent at Fig. 1) The '616 patent is directed to various means, i.e., sensors and the like, for detecting when the tilt-controlling technology should be activated. (*See* '616 patent at 3:31-5:32)

I. LEGAL STANDARDS

The ultimate question of the proper construction of a patent is a question of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837 (2015) (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388-91 (1996)). "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). "[T]here is no magic formula or catechism for conducting claim construction." *Id.* at 1324. Instead, the court is free to attach the appropriate weight to appropriate sources "in light of the statutes and policies that inform patent law." *Id.*

"[T]he words of a claim are generally given their ordinary and customary meaning . . . [which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application."

Id. at 1312-13 (internal citations and quotation marks omitted). "[T]he ordinary meaning of a claim term is its meaning to the ordinary artisan after reading the entire patent." *Id.* at 1321 (internal quotation marks omitted). The patent 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).

While "the claims themselves provide substantial guidance as to the meaning of particular claim terms," the context of the surrounding words of the claim also must be considered. *Phillips*, 415 F.3d at 1314. Furthermore, "[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment . . . [b]ecause claim terms are normally used consistently throughout the patent . . . ." *Id.* (internal citation omitted).

It is likewise true that "[d]ifferences among claims can also be a useful guide . . . . For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Id.* at 1314-15 (internal citation omitted). This "presumption is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim." *SunRace Roots Enter. Co., Ltd. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003).

It is also possible that "the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs." *Phillips*, 415 F.3d at 1316. It bears emphasis that "[e]ven when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope

using words or expressions of manifest exclusion or restriction." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (internal quotation marks omitted), *aff'd*, 481 F.3d 1371 (Fed. Cir. 2007).

In addition to the specification, a court "should also consider the patent's prosecution history, if it is in evidence." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996). The prosecution history, which is "intrinsic evidence," "consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent." *Phillips*, 415 F.3d at 1317. "[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id.*

In some cases, "the district court will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period." *Teva*, 135 S. Ct. at 841. Extrinsic evidence "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Markman*, 52 F.3d at 980. For instance, technical dictionaries can assist the court in determining the meaning of a term to those of skill in the relevant art because such dictionaries "endeavor to collect the accepted meanings of terms used in various fields of science and technology." *Phillips*, 415 F.3d at 1318. In addition, expert testimony can be useful "to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to

establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field." *Id.* Nonetheless, courts must not lose sight of the fact that "expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence." *Id.* Overall, while extrinsic evidence "may be useful" to the court, it is "less reliable" than intrinsic evidence, and its consideration "is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence." *Id.* at 1318-19. Where the intrinsic record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper. *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing *Vitronics*, 90 F.3d at 1583).

Finally, "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that "a claim interpretation that would exclude the inventor's device is rarely the correct interpretation." *Osram GmbH v. Int'l Trade Comm'n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (quoting *Modine Mfg. Co. v. U.S. Int'l Trade Comm'n*, 75 F.3d 1545, 1550 (Fed. Cir. 1996)).

II. CONSTRUCTION OF DISPUTED TERMS

For certain terms, the parties either agree upon a construction or agree that no construction is required. The Court will only construe terms that are disputed by the parties. *See MBO Laboratories, Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1331 (Fed. Cir. 2007) ("[W]e are reviewing only certain disputed terms . . . and lack the power to construe other terms not disputed by the parties."); *see also O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., Ltd.*,

521 F.3d 1351, 1362-63 (Fed. Cir. 2008) ("[W]hen the parties present a fundamental dispute regarding the scope of a claim term, it is the court's duty to resolve it," but "district courts are not (and should not be) required to construe every limitation present in a patent's asserted claims.").

Moreover, because the patents-in-suit are all related and share identical portions of their specifications, the Court will not construe *de novo* any terms that the Court already construed in its prior claim construction Order (D.I. 164), with the exception of terms for which the parties have presented new constructions based on new evidence or arguments. *See In re Rambus Inc.*, 694 F.3d 42, 48 (Fed. Cir. 2012) ("[U]nless otherwise compelled . . . the same claim term in the same patent ***or related patents*** carries the same construed meaning.") (emphasis added).

In addition, the Court declines to formally construe the terms "prevent . . . tilting" and "tilting . . . is prevented" in claim 1 of the '115 patent and claim 1 of the '616 patent, respectively. These terms are discussed in the parties' supplemental claim construction briefing, and Volkswagen asks the Court to construe them in light of new prosecution history from the reexamination proceedings. (D.I. 321 at 7-8; D.I. 327 at 5-6) Although these terms are not ***identical*** to similar terms construed in the Court's prior claim construction Order, the Court determines that these terms do not require separate construction. (*See* D.I. 164 at 2; *see also IpLearn, LLC v. Kenexa Corp.*, 2013 WL 5730610, at *2 (D. Del. Oct. 22, 2013) ("[T]here is no ambiguity which would require the Court to further construe this term."))

"remotely mounted"[2]

Cloud Farm "located some measurable distance away from the first chamber"

[2] This term appears in claim 1 of the '115 patent.

Volkswagen "mounted at a distance as a separate structural element"
ZF Sachs "A second chamber that is mounted on the vehicle, spaced apart from, and not in physical contact with, said first chamber" (construing "a second chamber . . . remotely mounted from said first chamber")
Court "mounted at a distance"

This term relates to the "first and second chambers" recited in claim 1 of the '115 patent. The parties dispute (1) how far away the first and second chambers must be spaced apart and (2) whether the first and second chambers must be separate structural elements. (*See, e.g.*, Tr. at 13, 45) The Court concludes that the plain and ordinary meaning of "remotely mounted," in light of the intrinsic evidence, requires that the first and second chambers be "mounted at a distance." The Court agrees with Volkswagen that the plain and ordinary meaning of the words "at a distance" implies "a comparatively great distance." (*See* Tr. at 45)

While the term "remotely mounted" is clearly related to the relative ***distance*** between the locations where the chambers are ***mounted***, the term is ***not*** clearly related to whether the two chambers are ***separate*** "structural elements." Because the Court does not believe that a separateness limitation is necessarily embedded in the plain and ordinary meaning of the words "remotely mounted," and because none of the intrinsic evidence shows a clear intent to require a separateness limitation, the Court declines to include the "as a separate structural element" language in its construction of this term. *See Liebel-Flarsheim Co.*, 358 F.3d at 906.

In their briefing, Volkswagen and ZF Sachs point to the "flexible hose" used to connect openings in the first and second chambers and argue that this is evidence of separateness. However, the flexible hose limitation only requires that the ***openings***, not the chambers

themselves, be separate. Moreover, the connection using a flexible hose could be interpreted as evidence that the first and second chambers are ***not*** "separate" in an absolute sense, since the hose physically links the two chambers such that, even if they were previously separate, they could be viewed as a single structural element when connected. As such, the "structural element" language may confuse a jury.

In addition, it is unclear, and therefore potentially confusing to a jury, whether bolting the first and second chambers to the same structural element or allowing them to touch in ***any*** way would mean that the chambers are no longer separate structural elements. (*See* Tr. 13) In addition, the phrase "not in physical contact with," proposed by ZF Sachs, may confuse a jury and is not necessarily embedded in the "remotely mounted" limitation, because it is unclear whether the chambers would be "in physical contact" when connected via the flexible hose.

Volkswagen points to part of the specification that recites "two separate but communicating units" as evidence that the first and second chambers must be separate structural elements. ('115 patent at 5:34-35) But "patent coverage is not necessarily limited to inventions that look like the ones in the figures. . . . To hold otherwise would be to import limitations onto the claim from the specification, which is fraught with danger." *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1333 (Fed. Cir. 2007) (internal quotation marks omitted). Moreover, other parts of the specification show that the two chambers need ***not*** be completely separate. (*See, e.g.*, '115 patent at 3:56-61) (describing first and second chambers that are "mounted remotely from, ***but in direct communication***" with each other)

In light of the above, the Court will construe the disputed phrase according to Volkswagen's proposed construction but without the "as a separate structural element" language.

"a second chamber . . . remotely mounted from said first chamber"[3]

Cloud Farm "located some measurable distance away from the first chamber" (construing "remotely mounted")
Volkswagen "mounted at a distance as a separate structural element" (construing "remotely mounted")
ZF Sachs "A second chamber that is mounted on the vehicle, spaced apart from, and not in physical contact with, said first chamber"
Court Previously construed as "mounted at a distance" (construing "remotely mounted")

The Court finds it redundant and unnecessary to construe the term "remotely mounted" again in its entire context. *See IpLearn*, 2013 WL 5730610, at *2. The other language that ZF Sachs asks the Court to construe is unambiguous in light of its plain and ordinary meaning. A district court is not obligated to construe terms with ordinary meanings. *See, e.g.*, *Biotec Biologische Naturverpackungen GmbH & Co. KG v. Biocorp, Inc.*, 249 F.3d 1341, 1349 (Fed. Cir. 2001) (finding no error in non-construction of "melting"); *Mentor H/S, Inc. v. Med. Device Alliance, Inc.*, 244 F.3d 1365, 1380 (Fed. Cir. 2001) (finding no error in Court's refusal to construe "irrigating" and "frictional heat"). Therefore, the Court will decline to construe this claim language.

"bottom end"[4]

Cloud Farm "the lowest part, as measured along the fluid flow path"

[3] This term appears in claim 1 of the '115 patent.

[4] This term appears in claim 1 of the '115 patent.

Volkswagen "lowest part"
ZF Sachs "lowest part"
Court "lowest part"

The parties agree that "bottom end" must be construed to include the words "lowest part," but Cloud Farm asks the Court to add the phrase "as measured along the fluid flow path." Cloud Farm argues that the fluid flow path "is the context in which the claimed invention is presented, because fluid flow is what matters in the claimed invention." (*See* D.I. 264 at 6) The Federal Circuit, however, has "rejected a claim construction process based on the 'essence' of an invention." *Ormco Corp. v. Align Tech., Inc.*, 498 F.3d 1307, 1322 (Fed. Cir. 2007) (quoting *Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1345 (Fed. Cir. 2002) ("It is well settled that there is no legally recognizable or protected essential element, gist, or heart of the invention . . . .") (internal quotation marks omitted)).

Cloud Farm further cites Figs. 2 and 3 in the '115 patent as purportedly showing an opening at the "lowest part" of one of the chambers and suggests that one could simply turn the chamber sideways and avoid infringement. (D.I. 264 at 6-7) As Volkswagen points out, however, the figures cited by Cloud Farm support ***Defendants'*** construction to at least the same extent as they support Cloud Farm's construction (since the figures show an opening at a point that qualifies as the "lowest part" in an absolute sense ***and*** as measured along the fluid flow path). (D.I. 265 at 9) The Court will adopt Defendants' construction, which comports with the plain and ordinary meaning of the claim language and is supported by the specification of the '115 patent.

"means for communicating between the openings in said first and second chambers"[5]

Cloud Farm Function: "provide a flow path for fluid to move between the first and second chambers" Structure: "flexible high pressure hose, or an equivalent thereof"
Volkswagen Function: "communicating between the openings in said first and second chambers" Structure: "flexible high pressure hose, or an equivalent thereof"
ZF Sachs Function: "connecting the openings in the first and second chambers" Structure: "flexible high pressure hose, and equivalents thereof"
Court Function: "communicating between the openings in said first and second chambers" Structure: "flexible high pressure hose, or an equivalent thereof"

The parties agree that this term should be construed pursuant to 35 U.S.C. § 112, ¶ 6.[6] The parties also agree upon the structure for this means-plus-function limitation. The parties disagree, however, about the corresponding function.

Cloud Farm proposes a construction that is broader than the claim language. As Volkswagen argues, "Cloud Farm's construction ignores that the fluid communication must be 'between the ***openings*** in said first and second chamber,' which is distinctly narrower than Cloud Farm's construction . . . ." (D.I. 273 at 6) The Court agrees with this analysis and will reject Cloud Farm's proposal.

ZF Sachs proposes a construction based on quoted language from the specification. (D.I. 272 at 4) ("According to the specification, '[a] flexible high pressure hose 22 is connected at the

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[5] This term appears in claim 1 of the '115 patent.

[6] The parties agree as to the applicability of 35 U.S.C. § 112, ¶ 6 for all of the disputed means-plus-function terms in the patents-in-suit.

opening in the top surface of the chamber of the shock unit 15 and extends to the openings in the bottom surface of the chamber of the tilt-control unit 21.'") (quoting '115 patent at 5:57-60) However, as discussed in *Liebel-Flarsheim Co.*, 358 F.3d at 906, claims should not be construed as limited by an embodiment from the specification "unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction."

Volkswagen's definition of the term's function adopts the exact claim language of the disputed term. The Court agrees with Volkswagen that the word "communicating" in the disputed claim language is unambiguous and properly identifies the function. Therefore, the Court will adopt Volkswagen's construction.

"lockplate"[7]

Cloud Farm "a plate affixed to the side of the chamber"
Volkswagen "plate immovable within said chamber"
ZF Sachs "A lockplate fixedly mounted to the walls of the second chamber such that there is no relative movement between said lockplate and said walls" (construing "a lockplate mounted within and attached to the walls of said second chamber")
Court "plate immovable within said chamber"

Cloud Farm cites no evidence other than "[p]lain meaning" for its construction. (D.I. 253 at 13) Volkswagen cites claim language (e.g., "attached to the walls of said second chamber") and portions of the specification to support its construction. (*Id.* at 13-14) For example,

[7] This term appears in claims 1 and 4 of the '115 patent.

Volkswagen points out that claim 1 contains language suggesting that, when the "sealing means" seals the opening in the lockplate, "further movement of said piston in said first chamber and further tilting of said body of said vehicle" is prevented. (*See* D.I. 265 at 11) (citing '115 patent at 9:25-33) Volkswagen further argues that the specification requires that the lockplate's opening be sealable in order to prevent any further flow of hydraulic fluid (and in order to halt additional tilting). (*See id.*) (citing '115 patent at 7:5-12) Allowing the lockplate to be movable, Volkswagen argues, would not allow the invention to operate as claimed. (*See id.*) "[A] claim interpretation that would exclude the inventor's device is rarely the correct interpretation." *Osram*, 505 F.3d at 1358. Hence, the Court agrees with Volkswagen.

"a lockplate mounted within and attached to the walls of said second chamber"[8]

Cloud Farm "a plate affixed to the side of the chamber" (construing "lockplate")
Volkswagen "plate immovable within said chamber" (construing "lockplate")
ZF Sachs "A lockplate fixedly mounted to the walls of the second chamber such that there is no relative movement between said lockplate and said walls"
Court Previously construed as a "plate immovable within said chamber" (construing "lockplate")

For the same reasons given above with respect to the term "a second chamber . . . remotely mounted from said first chamber," the Court finds it unnecessary to construe the term "lockplate" again.

[8] This term appears in claim 1 of the '115 patent.

"sealing means"[9]

Cloud Farm Previously construed (*see* D.I. 163 at 14): Function: "sealing" Structure: "seal or shut-off valve and equivalents thereof"
Volkswagen **'115, '354, and '153 patents:** Function: "sealing" Structure: The specification does not describe structure performing the claimed function. **'616 patent:** Function: "sealing" Structure: "a plate covering openings or an equivalent of the foregoing structure"
ZF Sachs Previously construed (*see* D.I. 163 at 14): Function: "sealing" Structure: "seal or shut-off valve and equivalents thereof"
Court **'354, and '153 patents** Previously construed (*see* D.I. 163 at 14): Function: "sealing" Structure: "seal or shut-off valve and equivalents thereof" **'115 patent** Function: "sealing" Structure: "seal, as shown and described in Figs. 2 and 3 and accompanying text in the specification, or equivalents" **'616 patent** Function: "sealing" Structure: "seal, sealing means, plate, or sealing plate, as shown and described in Figs. 2, 2A, 2B, 2C, and 2D and accompanying text in the specification, or equivalents"

The parties agree as to the function of this means-plus-function term. Volkswagen has not presented any new arguments or facts as to why the Court should change its construction of

[9] This term appears in claim 1 of the '115 patent; claim 1 of the '616 patent; claim 1 of the '153 patent; and claims 1, 8, and 16 of the '354 patent.

this term's structure for the '354 or '153 patents. (*See* D.I. 163 at 13-14) (construing term in '354 and '153 patents as having function of "sealing" and structure of "seal or shut-off valve and equivalents thereof") Thus, the Court will not revisit its prior construction of this term for the '354 and '153 patents.

The '115 and '616 patents contain disclosures of the structure associated with this term that are different from the structure disclosed in the '354 and '153 patents. "Sealing means" are disclosed in Figs. 2 and 3 and accompanying text in the specification of the '115 patent and in Figs. 2, 2A, 2B, 2C, and 2D and accompanying text in the specification of the '616 patent, all of which are similar to the "sealing means" disclosed in Fig. 2 of the '354 patent (which the Court found sufficient to disclose a structure corresponding to this term). The Court will construe the corresponding structures in the '115 and '616 patents as they are disclosed in their respective specifications. *See Ta Instruments, Inc. v. Perkin-Elmer Corp.*, 250 F.3d 756 (Fed. Cir. 2000) (construing means-plus-function term's structure as corresponding to embodiments shown in figures from patent's specification).

"means for sensing the tilting movement"[10]

Cloud Farm Previously construed (*see* D.I. 163 at 15-16): Function: "sensing tilting movement of the vehicle" Structure: "a tube in the shape of a wide shallow U and mounted crosswise of the vehicle, with (1) two sets of electrical contacts at the opposite ends of the tube to be engaged by mercury, and (a) a pool of mercury within the tube, or (b) two balls of mercury, each within a glass envelope at each end of the U-shaped tube; or (2) two crimped portions to the left and right of the center of the tube which are each parts of two electrical circuits, and a ball bearing free to roll within the tube, which can complete the electrical circuit at one of the crimped portions, or an equivalent of any of the foregoing structures"

[10] This term appears in claim 1 of the '115 patent.

Volkswagen Function: "sensing sideways tilting of the vehicle body toward the vehicle axle, excluding the sensing of lateral acceleration exerted on the vehicle body" Structure: "mercury switches in a tube in the shape of a wide shallow U and mounted crosswise of the vehicle, or an equivalent of the foregoing structure, but excluding lateral acceleration sensors for monitoring lateral acceleration exerted on the vehicle body"
ZF Sachs Previously construed (*see* D.I. 163 at 15-16): Function: "sensing tilting movement of the vehicle" Structure: "a tube in the shape of a wide shallow U and mounted crosswise of the vehicle, with (1) two sets of electrical contacts at the opposite ends of the tube to be engaged by mercury, and (a) a pool of mercury within the tube, or (b) two balls of mercury, each within a glass envelope at each end of the U-shaped tube; or (2) two crimped portions to the left and right of the center of the tube which are each parts of two electrical circuits, and a ball bearing free to roll within the tube, which can complete the electrical circuit at one of the crimped portions, or an equivalent of any of the foregoing structures"
Court Function: "sensing tilting movement of the vehicle" Structure: "a sensing unit, including a mercury switch, mounted crosswise of the vehicle, or equivalent"

Cloud Farm and ZF Sachs ask the Court to adopt the same construction of this means-plus-function term that was adopted in the Court's first claim construction Order. (*See* D.I. 164 at 2-3) Volkswagen advocates a different construction, arguing that the '115 patent's specification is materially different from the specifications of the '354 and '153 patents. (*See* D.I. 265 at 28-29) The Court agrees that the '115 patent's specification is materially different with regard to this disputed term. While the '115 patent discloses "means shown in my previous patents, e.g., a mercury switch or the like . . ." ('115 patent at 7:37-38), "material incorporated by reference cannot provide the corresponding structure necessary to satisfy the definiteness requirement for a means-plus-function clause," *Default Proof Credit Card Sys., Inc. v. Home Depot USA., Inc.*, 412 F.3d 1291, 1301 (Fed. Cir. 2005). Thus, the Court will not rely on disclosures incorporated by reference from the other patents as support for this term.

The '115 patent includes other disclosures of the structure associated with this term, however. (*See* '115 patent at Fig. 1, 5:44-47, 7:1-2, 7:37-38) (disclosing "a mercury switch" as part of "sensing unit") In particular, the '115 patent discloses a "sensing unit" with a "mercury switch" that is mounted crosswise of the vehicle. (*See* '115 patent at Fig. 1, 5:44-47, 7:1-2, 7:37-38) In light of this disclosure, the Court will construe the structure associated with this term as "a sensing unit, including a mercury switch, mounted crosswise of the vehicle, or equivalent." (*See id.*)

Volkswagen proposes language that further defines the corresponding structure as "excluding lateral acceleration sensors for monitoring lateral acceleration exerted on the vehicle body." This language was rejected by the Court for the '153 and '354 patents in its first claim construction Opinion. (*See* D.I. 163 at 16-17) Volkswagen provides no new arguments or evidence as to why the Court should include this language in its construction of the structure of this term for the '115 patent. For the reasons stated in the Court's prior claim construction Opinion, this language is rejected. *See In re Rambus Inc.*, 694 F.3d at 48.

Regarding the corresponding function, Volkswagen asks the Court to reconsider the Court's previous construction but provides no new arguments or evidence in support. (*See* D.I. 163 at 15) (construing function as "sensing tilting movement of the vehicle") Unlike the corresponding structure, the term's function appears to be the same as the function disclosed in the '354 and '153 patents. (*Compare* '115 patent at Fig. 1 *with* '354 patent at Fig. 1) (showing diagrammatically similar "means for sensing") Because the function is similarly disclosed in the claims and specifications of the '115, '354, and '153 patents, and in light of the plain and ordinary meaning of this term, the Court will adopt the same function as it did for the '354 and

'153 patents.

"a fixed plate within said chamber"[11]

Cloud Farm "a plate fixed within the chamber"
Volkswagen "plate disposed and immovable within said chamber, separate from the piston"
Court "a plate fixed and immovable within the chamber, distinct from the piston"

"a plate within said chamber having a substantially central opening separating said fluid within the chamber into a lower portion and an upper portion"[12]

Cloud Farm Previously construed (*see* D.I. 163 at 11): "a plate disposed in the chamber having a substantially central opening in the plate, the plate separates said fluid within the chamber into a lower portion and an upper portion"
Volkswagen "a plate disposed in the chamber, ***separate from the piston,*** having a substantially central opening in the plate, the plate separates said fluid within the chamber into a lower portion and an upper portion" (emphasis added to show proposed amendment to the Court's earlier construction; *see* D.I. 163 at ¶ 7)
Court "a plate disposed in the chamber, distinct from the piston, having a substantially central opening in the plate, the plate separates said fluid within the chamber into a lower portion and an upper portion"

"a plate within said chamber having at least one opening separating the fluid within the chamber into two portions"[13]

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[11] This term appears in claim 1 of the '616 patent.

[12] This term appears in claim 1 of the '354 patent.

[13] This term appears in claim 8 of the '354 patent and claim 1 of the '153 patent.

Cloud Farm Previously construed (*see* D.I. 163 at 12): "a plate disposed in the chamber with at least one opening in the plate, through which fluid may pass from one portion of the chamber to the other"
Volkswagen "a plate disposed in the chamber, ***separate from the piston,*** with at least one opening in the plate, through which fluid may pass from one portion of the chamber to the other" (emphasis added to show proposed amendment to the Court's previous construction; *see* D.I. 163 at ¶ 8)
Court "a plate disposed in the chamber, distinct from the piston, with at least one opening in the plate, through which fluid may pass from one portion of the chamber to the other"

"means within said chamber to separate said fluid within the chamber into two portions"[14]

Cloud Farm Previously construed (*see* D.I. 163 at 13): "a plate within said chamber, and equivalents thereof"
Volkswagen "a plate within said chamber, ***separate from the piston,*** and equivalents thereof" (emphasis added to show proposed amendment to the Court's previous construction; *see* D.I. 163 at ¶ 9)
Court "a plate within said chamber, distinct from the piston, and equivalents thereof"

Volkswagen argues that the "piston" and "plate" elements claimed in the '153, '354, and '616 patents must be "separate" and cites the reexamination history of the '153 patent as support for this argument. (*See* D.I. 321 at 10-11) Specifically, Volkswagen argues that Cloud Farm narrowed the scope of the claims when it stated that "claim 1 [of the '153 patent] positively recites ***two distinct elements***: 'a movable piston at one end of said chamber' and 'a plate within said chamber.'" (*See id.*) (emphasis added) The Court agrees that Cloud Farm gave up claim scope for all three of the '153, '354, and '616 patents by clarifying that the piston and plate

[14] This term appears in claim 16 of the '354 patent.

elements are distinct as claimed in the '153 patent. *See In re Rambus Inc.*, 694 F.3d at 48.

However, the Court disagrees with Volkswagen's characterization of the claim scope given up by Cloud Farm. Cloud Farm stated that the plate and piston must be "distinct" from one another, not separate. The plain and ordinary meaning of the word "separate" is not the same as "distinct." For example, Cloud Farm argued, in support of this proposition: "A hip bone and a leg bone are 'two distinct elements,' but they are not 'separate.' They are in contact." (D.I. 327 at 8) The Court agrees. As such, the Court rejects Volkswagen's proposed construction and will adopt the exact word ("distinct") which was used by Cloud Farm during reexamination of the '153 patent.

"sensing means within said steering column to sense rotation of said steering wheel and a pre-set minimum speed of said vehicle, such that when rotation of said steering wheel is below about 20 degrees or beyond about 160 degrees, at or above said pre-set minimum speed, said sensing means will send a signal to said sealing means"[15]

Cloud Farm
Function: "detecting rotation of the steering column and an input corresponding to vehicle speed, and sending an electrical current to the sealing means at a point when steering wheel rotation is at or below 20 degrees from a point measured along a horizontal chord"
Structure: "a copper protrusion located on the steering column, arranged to touch and form an electrical connection with two copper protrusions located on the inside of the housing of the steering column at a predetermined steering angle, or optical, Hall-effect, magnetic reed, inductive, or capacitive sensors, or equivalents thereof, and a computer or microprocessor that combines the steering angle signal with a signal corresponding to the speed of the vehicle"

[15] This term appears in claim 1 of the '616 patent.

Volkswagen Function: "sensing rotation of said steering wheel and a pre-set minimum speed of said vehicle, such that said sensing means will send a signal to said sealing means when rotation of said steering wheel is below about 20 degrees or beyond about 160 degrees, at or above said pre-set minimum speed (whereby the pre-set minimum speed is greater than a very low speed associated with parking maneuvers)" Structure: The specification does not describe structure performing the claimed function
Court Function: "sensing rotation of said steering wheel and a pre-set minimum speed of said vehicle, such that said sensing means will send a signal to said sealing means when rotation of said steering wheel is below about 20 degrees or beyond about 160 degrees, at or above said pre-set minimum speed" Structure: The specification does not describe structure performing the claimed function

The Court agrees with most of Volkswagen's proposed construction for the function of this means-plus-function term. The Court disagrees, however, with the following language proposed by Volkswagen: "whereby the pre-set minimum speed is greater than a very low speed associated with parking maneuvers." Volkswagen argues that Cloud Farm disclaimed this functionality during prosecution. (*See* D.I. 265 at 17-18) Inspection of the prosecution history cited by Volkswagen reveals that Cloud Farm was merely describing a preferred embodiment and was not distinguishing any prior art or describing a limitation of claim 1 of the '616 patent. (*See id.*) Therefore, the Court will not include this language in its construction.

The Court agrees with Volkswagen that a person of ordinary skill in the art would be unable to recognize, in the specification of the '616 patent, any structure associated with the function of "sensing . . . a pre-set minimum speed of said vehicle." The only structure cited by Cloud Farm as implementing this function is "a computer or microprocessor that combines the steering angle signal with a signal corresponding to the speed of the vehicle." (D.I. 271 at 8) However, Cloud Farm does not point to any structure capable of generating the "signal

corresponding to the speed of the vehicle," and the rest of Cloud Farm's recited structure has nothing to do with ***sensing vehicle speed***, which is what the claimed function requires.

In light of the above, claim 1 of the '616 patent fails to disclose any structure capable of sensing vehicle speed. *See Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1312 (Fed. Cir. 2012) ("[A] means-plus-function clause is indefinite if a person of ordinary skill in the art would be unable to recognize the structure in the specification and associate it with the corresponding function in the claim.").

"means for controlling the suspension system"[16]

Cloud Farm Function: "altering suspension damping" Structure: "dampers containing internal valving controlled via a solenoid to prevent or moderate the flow of fluid, and equivalents thereof"
Volkswagen Function: "controlling the suspension system" Structure: The specification does not describe structure performing the claimed function
Court Function: "controlling the suspension system" Structure: The specification does not describe structure performing the claimed function

The Court agrees with Volkswagen that the plain and ordinary meaning of the function associated with this term is "controlling the suspension system." The specification of the '616 patent refers to control of a vehicle's entire suspension system in multiple places. (*See, e.g.*, '616 patent at 1:28, 3:62-67, 4:4-6, 12:49-52) Thus, it would be improper to change the claimed function to "altering" of "suspension damping." The word "altering" is materially different from "controlling," as the latter implies an ability to dictate how the entire suspension system operates

[16] This term appears in claim 5 of the '616 patent.

whereas the former requires only influencing the suspension system.

In addition, "suspension damping" is not the same as "suspension" in the context of the '616 patent, which discloses aspects of suspension aside from suspension damping, including, for example, "mechanical, electrical, pneumatic, or fluidic means" used in "shock or suspension systems." ('616 patent at 6:3-7) Cloud Farm has been unable to point to any part of the specification as evidence that merely "altering" one part of the "suspension damping" is what claim 5 means by "controlling the suspension system." (*See* Tr. at 18-19)

Cloud Farm conceded at the hearing that the '616 patent does not disclose a structure for controlling the ***entire*** suspension of a vehicle. (*See* Tr. at 19) The Court is unable to locate such a structure in the specification. "[S]tructure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history ***clearly links*** or associates that structure to the function recited in the claim." *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir. 1997) (emphasis added). Therefore, because the function for this term is "controlling the suspension system," the Court concludes that claim 5 of the '616 patent fails to disclose a structure that corresponds to the claimed function. *See Noah Sys.*, 675 F.3d at 1312.

"means for continuously sensing angular or steering movement"[17]

Cloud Farm
Function: "detecting on a continuous basis the angular movement of the vehicle or the vehicle's steering wheel"
Structure: "optical, Hall-effect, magnetic reed, inductive, or capacitive sensors, or equivalents thereof"

[17] This term appears in claim 5 of the '616 patent.

Volkswagen Function: "sensing the turning angle of the wheels, or the angle of rotation of the steering wheel, without interruption (excluding checking the steering wheel position periodically, such as, for example, in cycles of 20 milliseconds)" Structure: "(1) A wheel angle sensor containing a spring-loaded sensors placed at the front and back of the front axle, which can travel inward but not outward, and activators on the wheel hub, whereby at a certain turning angle, (i) loss of contact between a sensor and an activator will occur and thereby activate the sensor, or (ii) contact between a sensor and activator and sufficient compression of the spring-loaded sensor will occur and thereby activate the sensor; (2) a wheel angle sensor containing Hall-effect, magnetic reed, or inductive sensors; (3) a steering wheel angle sensor containing two copper protrusions located horizontally on the steering column, adapted to touch, and therefore connect electrically, two copper protrusions located on the inside of the housing of the steering column; or (4) a steering wheel angle sensor containing optical, Hall-effect, magnetic reed, inductive, or capacitive sensors; or an equivalent of any of the foregoing structures"
Court Function: "sensing the turning angle of the wheels, or the angle of rotation of the steering wheel, without interruption (excluding checking the steering wheel position periodically, such as, for example, in cycles of 20 milliseconds)" Structure: "(1) A wheel angle sensor containing spring-loaded sensors placed at the front and back of the front axle, which can travel inward but not outward, and activators on the wheel hub, whereby at a certain turning angle, (i) loss of contact between a sensor and an activator will occur and thereby activate the sensor, or (ii) contact between a sensor and activator and sufficient compression of the spring-loaded sensor will occur and thereby activate the sensor; (2) a wheel angle sensor containing Hall-effect, magnetic reed, or inductive sensors; (3) a steering wheel angle sensor containing two copper protrusions located horizontally on the steering column, adapted to touch, and therefore connect electrically, two copper protrusions located on the inside of the housing of the steering column; or (4) a steering wheel angle sensor containing optical, Hall-effect, magnetic reed, inductive, or capacitive sensors; or an equivalent of any of the foregoing structures"

Cloud Farm states that the parties are in agreement regarding Volkswagen's proposed construction of the function of this means-plus-function term, with the exception of the "exclusion" in parentheses in Volkswagen's proposed construction. (D.I. 271 at 9) The Court agrees with Volkswagen that the parenthetical exclusion is proper, because it clarifies that certain claim scope was given up during prosecution of the '616 patent. (*See* D.I. 265 at 23) Specifically, the Court finds that Cloud Farm gave up coverage of functionality recited in the

Sugasawa reference, which covered checking steering wheel position periodically. (*See id.* at Ex. B-18)

The Court finds that Volkswagen's proposed structure accurately enumerates the various embodiments of this term that are recited in the specification. (*See* '616 patent at 4:44-48, 4:58-5:8, 5:24-32, 12:39-52, 12:59-13:10) By contrast, Cloud Farm's proposed construction fails to recite the copper protrusions or spring-loaded sensors recited in the specification. Therefore, the Court will adopt Volkswagen's proposed construction of this term, with the minor change of pluralizing "sensors" in place of "a spring-loaded sensors [sic]" to reflect the disclosures in Figs. 5-7 and accompanying text showing multiple spring-loaded wheel sensors (and to comport with recital of sensors "at the front and back of the front axle" in the Court's construction).

"means for activating said means for controlling said suspension system at a pre-set angle of movement of said vehicle depending upon the speed of the vehicle in accordance with the Table set forth below:

TABLE

Vehicle Speed (miles/hour)	Turning Angle to Activate Suspension System Control (degrees)
120	1
100	2
80	3
60	6
40	7–8
20	9–10
10	13–15

[redacted]

to convert the normally fast rate of movement of the body toward said axle to a slower rate of movement of said body toward said axle."[18]

[18] This term appears in claim 5 of the '616 patent.

Cloud Farm Function: "sending to the suspension-controlling means an electrical signal or current at a vehicle steering angle and road speed as described in the table" Structure: "a microprocessor and electrical circuit, or equivalents thereof"
Volkswagen Function: "activating said means for controlling said suspension system at a vehicle wheel turning angle of • 1 degree if the vehicle speed is 120 miles per hour, • 2 degrees if the vehicle speed is 100 miles per hour, • 3 degrees if the vehicle speed is 80 miles per hour, • 6 degrees if the vehicle speed is 60 miles per hour, • 7-8 degrees if the vehicle speed is 40 miles per hour, • 9-10 degrees if the vehicle speed is 20 miles per hour, and • 13-15 degrees, if the vehicle speed is 10 miles per hour, to convert the normally fast rate of movement of the body toward said axle to a slower rate of movement of said body toward said axle, whereby the rate of movement of the body toward the axle becomes a constant" Structure: The specification does not describe structure performing the claimed function
Court Function: "activating said means for controlling said suspension system at a vehicle wheel turning angle of • 1 degree if the vehicle speed is 120 miles per hour, • 2 degrees if the vehicle speed is 100 miles per hour, • 3 degrees if the vehicle speed is 80 miles per hour, • 6 degrees if the vehicle speed is 60 miles per hour, • 7-8 degrees if the vehicle speed is 40 miles per hour, • 9-10 degrees if the vehicle speed is 20 miles per hour, and • 13-15 degrees, if the vehicle speed is 10 miles per hour, to convert the normally fast rate of movement of the body toward said axle to a slower rate of movement of said body toward said axle" Structure: The specification does not describe structure performing the claimed function

The Court agrees with Volkswagen that this term's function is directed to activating the means for controlling the suspension at certain ***wheel*** turning angles, as clarified during reexamination of the '616 patent. (*See* D.I. 321 Ex. B-57 at VWGOA 31182) (Cloud Farm's September 9, 2014 Interview Summary) Cloud Farm does not appear to dispute this point. (*See*

D.I. 327 at 10) ("The table in claim 5, unlike Yokoya, provides correlations between ***turning (tire)*** angle and velocity.") (emphasis in original) The Court also agrees with Volkswagen that "sending . . . an electrical signal or current" to the suspension-controlling means is not the same as "activating" the suspension-controlling means. (*See* Tr. at 32-33) ("Activating captures the concept that the system is inactive until certain angles and speeds are reached. And once that happens, the system is activated, and that is perfectly captured by the claim term the claim uses.")

The Court disagrees, however, with Volkswagen's inclusion of the following language in its proposed construction for the function of this term: "whereby the rate of movement of the body toward the axle becomes a constant." The Court finds that Cloud Farm did not clearly disclaim functionality such that this additional language is required. As the prosecution history cited by Cloud Farm shows, Cloud Farm argued that the "piston velocity" is eventually confined to a relatively narrow range but does not necessarily become "constant." (*See* D.I. 327 at 16-17)

Other than the "whereby . . ." language, however, the Court agrees with Volkswagen's construction of the term's function, including direct quotation of the cited table in the function's construction and the other language reciting (mostly verbatim) language from the claim.

Regarding the claimed structure, the Court agrees with Volkswagen that the specification of the '616 patent fails to disclose a structure corresponding to the claimed function. In particular, the Court finds that the '616 patent discloses nothing, other than a "microprocessor," that could implement the claimed function of this term. As held in *Aristocrat Technologies Australia Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008), "[i]n cases involving a computer-implemented invention in which the inventor has invoked means-plus-function claiming, [the Federal Circuit] has consistently required that the structure

disclosed in the specification be more than simply a general purpose computer or microprocessor." Cloud Farm has pointed only to a general purpose microprocessor, and the Court can find nothing else in the specification that would carry out this term's function. Thus, claim 5 of the '616 patent fails to recite a structure that corresponds to the claimed function. *See Noah Sys.*, 675 F.3d at 1312.

III. CONCLUSION

The Court construes the disputed terms as explained above. An appropriate Order follows.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CLOUD FARM ASSOCIATES, L.P.,	:	
	:	
Plaintiff,	:	
	:	
v.	:	C.A. No. 10-502-LPS
	:	
VOLKSWAGEN GROUP OF AMERICA, INC. and ZF SACHS AG,	:	
	:	
Defendants.	:	

ORDER

At Wilmington, this **10th** day of **August, 2015**:

For the reasons set forth in the Memorandum Opinion issued this date,

IT IS HEREBY ORDERED that the disputed claim terms of U.S. Patent Nos. 5,437,354 (the "'354 patent"), 5,529,153 (the "'153 patent"), 5,971,115 (the "'115 patent"), and 5,979,616 (the "'616 patent") are construed follows:

Claim Term	Court's Construction
remotely mounted ['115 patent, claim 1]	"mounted at a distance"
a second chamber . . . remotely mounted from said first chamber ['115 patent, claim 1]	Previously construed as "mounted at a distance" (construing "remotely mounted")
bottom end ['115 patent, claim 1]	"lowest part"
means for communicating between the openings in said first and second chambers ['115 patent, claim 1]	Function: "communicating between the openings in said first and second chambers" Structure: "flexible high pressure hose, or an equivalent thereof"
lockplate ['115 patent, claims 1, 4]	"plate immovable within said chamber"
a lockplate mounted within and attached to the walls of said second chamber ['115 patent, claim 1]	Previously construed as a "plate immovable within said chamber" (construing "lockplate")

sealing means ['115 patent, claim 1; '616 patent, claim 1; '354 patent, claims 1, 8, 16; '153 patent, claim 1]	**'354, and '153 patents** Previously construed (*see* D.I. 163 at 14): Function: "sealing" Structure: "seal or shut-off valve and equivalents thereof" **'115 patent** Function: "sealing" Structure: "seal, as shown and described in Figs. 2 and 3 and accompanying text in the specification, or equivalents" **'616 patent** Function: "sealing" Structure: "seal, sealing means, plate, or sealing plate, as shown and described in Figs. 2, 2A, 2B, 2C, and 2D and accompanying text in the specification, or equivalents"
means for sensing the tilting movement ['115 patent, claim 1]	Function: "sensing tilting movement of the vehicle" Structure: "a sensing unit, including a mercury switch, mounted crosswise of the vehicle, or equivalent"
a fixed plate within said chamber ['616 patent, claim 1]	"a plate fixed and immovable within the chamber, distinct from the piston"
a plate within said chamber having a substantially central opening separating said fluid within the chamber into a lower portion and an upper portion ['354 patent, claim 1]	"a plate disposed in the chamber, distinct from the piston, having a substantially central opening in the plate, the plate separates said fluid within the chamber into a lower portion and an upper portion"
a plate within said chamber having at least one opening separating the fluid within the chamber into two portions ['354 patent, claim 8; '153 patent, claim 1]	"a plate disposed in the chamber, distinct from the piston, with at least one opening in the plate, through which fluid may pass from one portion of the chamber to the other"

means within said chamber to separate said fluid within the chamber into two portions ['354 patent, claim 16]	"a plate within said chamber, distinct from the piston, and equivalents thereof"
sensing means within said steering column to sense rotation of said steering wheel and a pre-set minimum speed of said vehicle, such that when rotation of said steering wheel is below about 20 degrees or beyond about 160 degrees, at or above said pre-set minimum speed, said sensing means will send a signal to said sealing means ['616 patent, claim 1]	Function: "sensing rotation of said steering wheel and a pre-set minimum speed of said vehicle, such that said sensing means will send a signal to said sealing means when rotation of said steering wheel is below about 20 degrees or beyond about 160 degrees, at or above said pre-set minimum speed" Structure: The specification does not describe structure performing the claimed function
means for controlling the suspension system ['616 patent, claim 5]	Function: "controlling the suspension system" Structure: The specification does not describe structure performing the claimed function

means for continuously sensing angular or steering movement ['616 patent, claim 5]	Function: "sensing the turning angle of the wheels, or the angle of rotation of the steering wheel, without interruption (excluding checking the steering wheel position periodically, such as, for example, in cycles of 20 milliseconds)" Structure: "(1) A wheel angle sensor containing spring-loaded sensors placed at the front and back of the front axle, which can travel inward but not outward, and activators on the wheel hub, whereby at a certain turning angle, (i) loss of contact between a sensor and an activator will occur and thereby activate the sensor, or (ii) contact between a sensor and activator and sufficient compression of the spring-loaded sensor will occur and thereby activate the sensor; (2) a wheel angle sensor containing Hall-effect, magnetic reed, or inductive sensors; (3) a steering wheel angle sensor containing two copper protrusions located horizontally on the steering column, adapted to touch, and therefore connect electrically, two copper protrusions located on the inside of the housing of the steering column; or (4) a steering wheel angle sensor containing optical, Hall-effect, magnetic reed, inductive, or capacitive sensors; or an equivalent of any of the foregoing structures"

means for activating said means for controlling said suspension system at a pre-set angle of movement of said vehicle depending upon the speed of the vehicle in accordance with the Table set forth below: TABLE Vehicle Speed (miles/hour) / Turning Angle to Activate Suspension System Control (degrees) 120 / 1 100 / 2 80 / 3 60 / 6 40 / 7–8 20 / 9–10 10 / 13–15 **to convert the normally fast rate of movement of the body toward said axle to a slower rate of movement of said body toward said axle** ['616 patent, claim 5]	Function: "activating said means for controlling said suspension system at a vehicle wheel turning angle of • 1 degree if the vehicle speed is 120 miles per hour, • 2 degrees if the vehicle speed is 100 miles per hour, • 3 degrees if the vehicle speed is 80 miles per hour, • 6 degrees if the vehicle speed is 60 miles per hour, • 7-8 degrees if the vehicle speed is 40 miles per hour, • 9-10 degrees if the vehicle speed is 20 miles per hour, and • 13-15 degrees, if the vehicle speed is 10 miles per hour, to convert the normally fast rate of movement of the body toward said axle to a slower rate of movement of said body toward said axle" Structure: The specification does not describe structure performing the claimed function

HON. LEONARD P. STARK
UNITED STATES DISTRICT JUDGE