IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF IDAHO

55 BRAKE, LLC, Plaintiff, vs. AUDI OF NORTH AMERICA, INC.; BMW OF NORTH AMERICA, LLC; FORD MOTOR COMPANY; HYUNDAI MOTOR AMERICA; LAND ROVER NORTH AMERICA, INC.; MERCEDES-BENZ USA, LLC; VOLKSWAGEN GROUP OF AMERICA, INC.; and VOLVO CARS OF NORTH AMERICA, INC., Defendants.	MEMORANDUM DECISION AND ORDER ON CLAIM CONSTRUCTION Case No. CV-08-177-S-BLW

This matter is before the Court for claim construction. The parties seek construction of the following terms: (1) management mechanism; (2) sensor; (3) the controller . . . in response to signals from the plurality of sensors . . . to actuate the management mechanism; (4) a condition that is unsafe for vehicle movement; and (5) uninterrupted, for a predetermined minimum

duration of time. The Court held a *Markman*[1] hearing on June 25, 2009. Having considered the written materials and the arguments of counsel, the Court will rule as follows.

I. BACKGROUND

This Order concerns the construction of claims contained in U.S. Patent No. 6,450,587 (the "'587 Patent"). The '587 Patent is entitled "Vehicle Brake Safety System Apparatus and Methods" and was issued on September 17, 2002. The patented system was invented by G. David MacGregor, Noble Hamilton, and Dale Maslonka and was later assigned to 55 Brake.

The '587 Patent is directed towards a brake control system that detects potentially unsafe conditions and then enhances safety by automatically applying or maintaining the brake on a vehicle. The patented control system is essentially made up of three components: a management mechanism; a controller; and sensors. The management mechanism applies the brakes, the controller acts as the "brain" of the system, and the sensors sense conditions in or around the vehicle that are potentially unsafe and provide that information to the controller. The controller processes the signals from these sensors to decide whether or not to cause the management mechanism to apply the brakes.

II. CLAIM CONSTRUCTION STANDARD

Claim constructions is a matter exclusively within the province of the court.[2] Claim terms are generally given their ordinary and accustomed meaning as understood by one of

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[1]*Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996).

[2]*Id.* at 970-71.

ordinary skill in the art.[3] "In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words. In such circumstances, general purpose dictionaries may be helpful."[4] A patentee may choose, however, "to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history."[5] "Thus, second, it is always necessary to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning."[6] "Third, the court may also consider the prosecution history of the patent, if in evidence."[7]

III. DISCUSSION

A. MANAGEMENT MECHANISM

Defendants seek construction of the term "management mechanism." Defendants argue that this term should be construed applying means-plus-function under 35 U.S.C. § 112, ¶ 6. Plaintiff agrees that this term requires definition, but argues that § 112, ¶ 6 is inapplicable here.

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[3] *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

[4] *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc).

[5] *Vitronics Corp.*, 90 F.3d at 1582.

[6] *Id.*

[7] *Id.*

Instead, Plaintiff argues that the term "management mechanism" should be defined as "a device or set of devices that actuate the brake." The Court must first determine if § 112, ¶ 6 applies.

35 U.S.C. § 112, ¶ 6 provides:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

This section "allows patent applicants to claim an element of a combination functionally, without reciting structures for performing those functions."[8] "To invoke this statute, the alleged means-plus-function claim element must not recite a definite structure which performs the described function."[9]

When a claim does not recite a "means," there is a rebuttable presumption that it is not a means-plus-function limitation.[10] That presumption can be overcome, however, if "the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function."[11] "The generic terms 'mechanism,' 'means,' 'element,' and 'device,' typically do not connote sufficiently definite structure."[12] However, "[c]laim language that further defines a generic term like 'mechanism' can sometimes add

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[8]*Envirco Corp. v. Clestra Cleanroom, Inc.*, 209 F.3d 1360, 1364 (Fed. Cir. 2000).

[9]*Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531 (Fed. Cir. 1996).

[10]*See DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1023 (Fed. Cir. 2006).

[11]*CCS Fitness, Inc. v. Burnswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002).

[12]*MIT v. Abacus Software*, 462 F.3d 1344, 1354 (Fed. Cir. 2006) ("The term 'mechanism' standing alone connotes no more structure than the term 'means.'").

sufficient structure to avoid 112 ¶ 6."[13] But where such modifying language "is not defined in the specification and has no dictionary definition, and there is no suggestion that it has a generally understood meaning in the art," then the term will not be held to "connote sufficient structure to a person of ordinary skill in the art to avoid 112 ¶ 6 treatment."[14]

On a number of occasions the Federal Circuit has addressed whether § 112, ¶ 6 applies to terms which contain the word "mechanism." In *Greenberg v. Ethicon Endo-Surgery, Inc.*,[15] the court addressed the term "detent mechanism." The court reversed the district court's holding that the claim limitation "detent mechanism" was a means-plus-function limitation. The court found that "the noun 'detent' denotes a type of device with a generally understood meaning in the mechanical arts, even though the definitions are expressed in functional terms."[16] The court examined a number of definitions of "detent, which connoted adequate structure that was reasonably well understood in the art."[17] Because of this, the court concluded that § 112, ¶ 6 did not apply.

By contrast, in *MIT v. Abacus Software*, the court found that the term "colorant selection mechanism" did not connote sufficient structure to avoid the application of § 112, ¶ 6. The court stated that generic terms, such as "'mechanism,' 'means,' 'element,' and 'device,' typically do

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[13] *Id.*

[14] *Id.*

[15] 91 F.3d 1580 (Fed. Cir. 1996).

[16] *Id.* at 1583.

[17] *Id.*

not connote sufficiently definite structure."[18] The court specifically stated that "[t]he term 'mechanism' standing alone connotes no more structure than the term 'means.'"[19] Though the court noted that "[c]laim language that further defines a generic term like 'mechanism' can sometimes add sufficient structure to avoid 112 ¶ 6," the court found that the term "colorant selection" was not defined in the specification and did not have a generally understood meaning in the art.[20] Thus, the court found "that 'colorant selection mechanism' does not connote sufficient structure to a person of ordinary skill in the art to avoid 112 ¶ 6 treatment."[21]

Two recent Federal Circuit cases have reached conclusions similar to the one reached in *MIT*. In *Welker Bearing Co. v. PHD, Inc.*,[22] the court held that the term "mechanism for moving said finger" was subject to means-plus-function treatment. The court found that the "mechanism for moving said finger" language included even less structural context than the "colorant selection mechanism" at issue in *MIT*.

> No adjective endows the claimed "mechanism" with a physical or structural component. Further, claim 1 provides no structural context for determining the characteristics of the "mechanism" other than to describe its function. Thus, the unadorned term "mechanism" is "simply a nonce word or a verbal construct that is not recognized as the name of structure and is simply a substitute for the term 'means for.' " Unlike the "detent mechanism" in *Greenberg* which had a known structural meaning, one of skill in the art would have no recourse but to turn to

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[18] *MIT*, 462 F.3d at 1354.

[19] *Id.*

[20] *Id.*

[21] *Id.*

[22] 550 F.3d 1090 (Fed. Cir. 2008).

> the '254 patent's specification to derive a structural connotation for the generically claimed "mechanism for moving said finger . . . ."[23]

Similarly, in *Aspex Eyewear, Inc. v. Altair Eyewear, Inc.*,[24] an unpublished opinion, the Federal Circuit found that the term "retaining mechanisms" was a means-plus-function limitation under § 112, ¶ 6. The court found the case more analogous to *MIT* than *Greenberg*. In that case, mechanism was a generic term and its modifier—retaining—was "also quite broad."[25] Further, there was "no indication in the record that 'retaining mechanism' connotes definite structure to a person of ordinary skill in the art"[26] Therefore, the court concluded that "retaining mechanism" was a means-plus-function limitation.

The term here—management mechanism—is more similar to the terms in *MIT*, *Welker*, and *Aspex*, than it is to the term in *Greenberg*. As noted, generic terms like "mechanism" typically do not connote sufficiently definite structure. However, claim language that further defines a generic term like "mechanism" can sometimes add sufficient structure to avoid 112 ¶ 6. Here, the term mechanism is accompanied by a modifying term: management. Like the term "retaining" in *Aspex*, the term "management" is exceedingly broad and does little to contribute to the structure of the term. Unlike *Greenberg*, there is no evidence that the term "management" is

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[23]*Id*. at 1096 (quoting *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1360 (Fed. Cir. 2004)).

[24]288 Fed. Appx. 597 (Fed. Cir. 2008) (unpublished opinion).

[25]*Id*. at 703.

[26]*Id*. at 704.

known to those of ordinary skill in the art and Plaintiff has conceded as much.[27] Further, there is no dictionary definition of "management mechanism."

Plaintiff cites the Court to a number of cases where certain terms were found not to be a means-plus-function limitation.[28] However, each of these cases involved claims which contained terms that connoted sufficient structure (such as baffle and perforation) which are simply not present here. The term "management" does nothing to add structure. Therefore, the Court finds that "management mechanism" is a means-plus-function limitation.

As § 112, ¶ 6 applies, the next step is to identify the claimed function.[29]

> The court must construe the function of a means-plus-function limitation to include the limitations contained in the claim language, and only those limitations. It is improper to narrow the scope of the function beyond the claim language. It is equally improper to broaden the scope of the claimed function by ignoring clear limitations in the claim language. Ordinary principles of claim construction govern interpretation of the claim language used to describe the function.[30]

Defendants argue that the function of the "management mechanism" is "to apply the brake mechanism" or "to apply vehicle brakes." Plaintiff argues that the function is "to actuate

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[27]At oral argument, Plaintiff conceded that the term "management mechanism" was not known to those of ordinary skill in the art.

[28]*See Envirco Corp.*, 209 F.3d at 1365 (holding that "second baffle means" connoted sufficient structure to avoid § 112, ¶ 6); *Cole*, 102 F.3d at 531 (finding that "perforation means" was not a means-plus-function element); *Level 3 Communs., LLC v. Limelight Networks, Inc.*, 589 F.Supp. 2d 664, 683 (E.D. Va. 2008) (finding that "repeater selector mechanism" connoted sufficient structure to avoid application of § 112, ¶ 6).

[29]*See Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*, 296 F.3d 1106, 1113 (Fed. Cir. 2002).

[30]*Id*. (citations omitted).

the brake." The specification states that "[t]he invented control system comprises a 'management mechanism' for applying a brake."[31] The claims state: "a management mechanism adapted to apply the brake mechanism to inhibit vehicle movement"[32] and "a management mechanism that applies the vehicle brakes."[33] Based on the claim language, the Court finds that the function is "to apply the brake mechanism" or "to apply the vehicle brakes."

After identifying the claimed function, the Court must then determine what structure, if any, disclosed in the specification corresponds to the claimed function.[34] The corresponding structure includes the structure in the specification that corresponds to that claim element and equivalent structures.[35]

Defendants propose the following structures:

1. in air brake systems, a solenoid valve;

2. in hydraulic brake systems,

    i. a live gas or liquid piston, spring, or mechanical screw operatively connected to the hydraulic master cylinder; or

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[31]Patent 6,450,587 col. 4, ll. 37-38.

[32]*Id*. col. 23, ll.44-45, 63-64.

[33]*Id*. col. 24, ll. 34-35.

[34]*Cardiac Pacemakers, Inc.*, 296 F.3d at 1113.

[35]*Micro Chem. Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

ii. a linear stroke electric solenoid with hydraulic reservoir and cylinder, a short stroke solenoid, or a spring loaded hydraulic piston between the master cylinder and the brake mechanism; and

3. in mechanical brake systems, a device that moves a lever to pivot at a pivot point to pull a brake cable or mechanical linkage to apply the brake mechanism at the back wheels or the driveline.

Plaintiff argues that Defendants' proposed structures are too narrow and requests that all structures disclosed in the specification be included.[36] Defendant responds that Plaintiff's proposed construction includes functional, not structural, elements and should therefore be rejected.

The means-plus-function limitation must include each of the structures in the specification.[37] Each of the structures that Plaintiff argues for are clearly within the specification. Defendants seek to include some of the structures mentioned in the specification, but not all of them. This is not permissible. Further, Defendants argues that the structures proposed by Plaintiff are functional, not structural. The Federal Circuit has held that "[a]ll one needs to do in order to obtain the benefit of that claiming device is to recite some structure corresponding to the means in the specification, as the statute states, so that one can readily

[36]Plaintiff has set out those structures which it believes are appropriate in Docket No. 66, Ex. B, at B-1 to B-4.

[37]*See Serrano v. Telular Corp.*, 111 F.3d 1578, 1583 (Fed. Cir. 1997) ("A means-plus-function claim encompasses all structure in the specification corresponding to that element and equivalent structures.").

ascertain what the claim means and comply with the particularity requirement of ¶ 2."[38] "[T]his is not a high bar."[39] Plaintiff has met that requirement here.

For the reasons stated above, "management mechanism" is subject to § 112, ¶ 6. The claimed function is "to apply the break mechanism" or "to apply the vehicle brakes." The corresponding structures are those set out by Plaintiff.[40]

B. SENSOR

Defendants seek construction of the term "sensor." Defendants argue that this term should be construed as "any sensor or switch at a station that is actuated by conditions at the station to signal the controller." Plaintiff argues that this term should be given its ordinary meaning.

Defendants correctly point out that the term sensor is specifically defined in the patent specification. The specification states: "For simplicity hereafter *and in the claims*, the term "sensor" may be used to indicate any sensor or switch at a "station" that is actuated by conditions at the station to signal the controller."[41]

As noted, a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in

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[38]*Atmel Corp. v. Information Storage Devices, Inc.*, 198 F.3d 1374, 1382 (Fed. Cir. 1999).

[39]*Biomedino, LLC v. Waters Tech. Corp.*, 490 F.3d 946, 950 (Fed. Cir. 2007).

[40]*See* Docket No. 66, Ex. B, at B-1 to B-4.

[41]Patent 6,450,587 col. 5, ll. 58-61 (emphasis added).

the patent specification.[42] "The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication."[43] In this case, the term "sensor" has been defined in the specification. Thus, the Court will construe that term in accordance with the patent specification as "any sensor or switch at a station that is actuated by conditions at the station to signal the controller."

C. THE CONTROLLER . . . IN RESPONSE TO SIGNALS FROM THE PLURALITY OF SENSORS . . . TO ACTUATE THE MANAGEMENT MECHANISM

Defendants seek construction of the term "the controller . . . in response to signals from the plurality of sensors . . . to actuate the management mechanism." Defendants contend that the Court should construe the term to mean "the controller receives signals from two or more sensors and actuates the management mechanism based on the signals from at least two sensors."[44] Plaintiff argues that the term should be given its ordinary meaning.

The Court finds that this term requires construction and that Plaintiff has raised no legitimate argument to Defendants' proposed construction. Therefore, the Court will adopt Defendants' construction of this term.

D. A CONDITION THAT IS UNSAFE FOR VEHICLE MOVEMENT

Defendants seek construction of the term "a condition that is unsafe for vehicle movement." Defendants contend that the Court should construe the term to mean that "an unsafe

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[42]*Vitronics Corp.*, 90 F.3d at 1582.

[43]*Id.*

[44]Defendants had originally included the term "signal values" but removed the term "values" based on Plaintiff's objection to that term.

condition exists when the service/application brake is not actuated and (1) the driver leaves the vehicle, or (2) the driver is in the car and behind the wheel, but some aspect of the vehicle or driver make vehicle movement unsafe." Plaintiff contends that this term should be given its ordinary meaning.

There is no "ordinary meaning" of what constitutes a dangerous condition. Thus, Plaintiff's argument must be rejected. However, the construction that Defendants propose is flawed. The construction that Defendants seek would limit the term beyond the limitations included in the specification. While the specification includes those examples suggested by Defendants, the claim is not limited to these examples.

The specification provides:

> Examples of potentially dangerous conditions where movement of a vehicle may be unsafe *include but are not limited to the following*:
>
> A driver leaves a vehicle, or is otherwise not in a position to safely operate the vehicle and fails to properly set the parking brake.
>
> A driver attempts to put a vehicle in motion when people are attempting to enter or leaving the vehicle.
>
> A driver attempts to put a vehicle in motion with a door open, wheel chair ramp in use, luggage compartment unlatched, or other equipment similarly not in a safe operating mode.
>
> A driver puts a vehicle in motion when an object is in close proximity creating the potential for a collision. Examples include a driver failing to notice a pedestrian stepping in front of a bus or a child playing behind a parked car.
>
> A driver's ability to recognize the existence of an unsafe condition is impaired. Examples include radio noise masking the warning whistle of a train at a railroad crossing, a driver who is intoxicated, or a passenger who has not fastened safety restraints.
>
> A vehicle that is approaching too close to an object, such as a truck backing up to a loading platform.
>
> A vehicle with equipment that has failed or is not within acceptable safety ranges, such as loss of tire or oil pressure.

An unauthorized driver is attempting to move or steal the vehicle.[45]

Under the specification, these are examples of potential conditions that are unsafe for vehicle movement, but the specification leaves open the possibility that there may be other things which create a condition that is unsafe for vehicle movement. Therefore, Defendants' construction will be rejected. However, the Court will construe this term as including, but not being limited to, those unsafe conditions listed in the specification and will instruct the jury accordingly.

E. UNINTERRUPTED, FOR A PREDETERMINED MINIMUM DURATION OF TIME

Defendants seek construction of the term "uninterrupted, for a predetermined minimum duration of time." Defendants have proposed the following construction "the same signal must be continuously present, without interruption, for at least a specified period of time."[46] Plaintiff argues that the term should be given its ordinary meaning. In the alternative, Plaintiff proposes that the following construction: "the presence of a signal continuously for at least a specified period of time" or "uninterrupted for at least a specified period of time."

The issue the Court must decide is whether the signal that is uninterrupted, for a predetermined minimum duration of time is any signal, as proposed by Plaintiff, or whether it must be the same signal, as argued by Defendants.[47]

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[45]Patent 6,450,587 col. 2, ll. 34-63 (emphasis added).

[46]Defendants had originally included the term "signal value" but removed the term "value" based on Plaintiff's objection to that term. Additionally, Defendants have added the phrase "at least" in order to address Plaintiff's objection.

[47]With its alternative construction of "uninterrupted for at least a specified period of time" Plaintiff appears to concede that the signal must be present without interruption.

The claim states: "the controller compromises a signal validation circuit that validates signals from the sensors for acceptance by the controller *only if the signals arrive at the controller, uninterrupted, for a predetermined minimum duration of time*."[48] Under the terms of the claim, the signal validation circuit validates signals from the sensors for acceptance by the controller. In order to be validated, the signals must arrive at the controller "uninterrupted, for a predetermined minimum duration of time." The Court finds that this language requires that the same signal—as opposed to any signal—arrive at the controller "uninterrupted, for a predetermined minimum duration of time." This finding is supported by the specification[49] and the prosecution history.[50]

Therefore, the Court will construe "uninterrupted, for a predetermined minimum duration of time" as "the same signal must be continuously present, without interruption, for at least a specified period of time."

IV. CONCLUSION

Based on the above, the Court finds that "management mechanism" is subject to § 112, ¶ 6, that the claimed function is "to apply the break mechanism" or "to apply the vehicle brakes," and the structures corresponding to the claimed function are those advocated by Plaintiff. The Court construes "sensor" in accordance with the claim specification as "any sensor or switch at a "station" that is actuated by conditions at the station to signal the controller." The Court

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[48]Patent 6,450,587 col. 23, ll. 55-60 (emphasis added).

[49]*Id*. col. 6, ll. 15-23; *id*. col. 14, ll. 66-15:3; *id*. col. 16, ll. 53-56; *id*. col. 17, ll. 9-12.

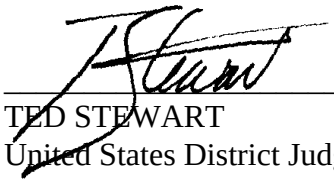
[50]Docket No. 69, Ex. 10, at 14.

construes the term "the controller . . . in response to signals from the plurality of sensors . . . to actuate the management mechanism" as "the controller receives signals from two or more sensors and actuates the management mechanism based on the signals from at least two sensors." The Court will define "a condition that is unsafe for vehicle movement" in accordance with the nonexclusive list of examples set out in the specification, as set forth above. Finally, the Court will define "uninterrupted, for a predetermined minimum duration of time" as "the same signal must be continuously present, without interruption, for at least a specified period of time."

SO ORDERED.

DATED July 8, 2009.

BY THE COURT:



TED STEWART
United States District Judge