

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

TENNECO AUTOMOTIVE)
OPERATING COMPANY INC.,)
)
Plaintiff,)
)
v.) Civ. No. 03-1030-SLR
) (Consolidated)
)
VISTEON CORPORATION,)
)
)
Defendant.)

George Pazuniak, Esquire, James Michael Olsen, Esquire and Francis DiGiovanni, Esquire of Connolly Bove Lodge & Hutz, L.L.P., Wilmington, Delaware. Counsel for Plaintiff. Of Counsel: Gary H. Nunes, Esquire, D. Scott Sudderth, Esquire, Barry S. Goldsmith, Esquire, John F. Morrow, Jr., Esquire of Womble Carlyle Sandridge & Rice, L.L.P., Tysons Corner, Virginia.

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AMENDED MEMORANDUM OPINION*

Dated: June 30, 2005
Wilmington, Delaware


ROBINSON, Chief Judge

I. INTRODUCTION

On November 10, 2003, plaintiff Tenneco Automotive Operating Company filed the present action against defendant Visteon Corporation, alleging infringement of U.S. Patent Nos. 4,969,264 ("the '264 patent") and 5,118,476 ("the '476 patent") (collectively "the patents in suit"). Fact discovery closed on January 6, 2005 (D.I. 111 at ¶ 1), and expert discovery closed on January 28, 2005 (D.I. 13 at ¶ 2(c); D.I. 134 at ¶ a). After hearing oral argument and reviewing the papers submitted in connection with the parties' proposed claim construction, the court has issued a claim construction order. Presently before the court is defendant's motion for summary judgment of non-infringement. (D.I. 173) For the reasons set forth below, the court grants in part and denies in part defendant's motion.

II. BACKGROUND

A. The Patents in Suit

The '264 patent claims processes for making catalytic converters. Generally speaking, these processes consist of the following steps: (1) wrapping a support mat around the mid-section of a cylindrical catalyst substrate to form a preassembly; (2) inserting the preassembly into a cylindrical, hollow, metal tube (the "tubular body")¹ so as to be spaced from

¹ The '264 and '476 patents use "tubular" and "cylindrical" interchangeably. '264 patent, col. 1, ll. 25-26, ll. 65-67; col. 3, ll. 14-16; col. 4, ll. 42-44, 54-56; '476 patent, col. 1, ll.

the tubular body; and (3) reducing the diameter of the central portion of the tubular body. In addition, the end portions of the tubular body can be formed into gas flow end bushings² of a generally hemispherical shape. Plaintiff alleges defendant infringes claims 1-3, 8, and 10-13 of the '264 patent. (D.I. 81)

The '476 patent shares the same written description as the '264 patent. Unlike the '264 patent, however, the '476 patent claims catalytic converters. Generally speaking, these converters include: (1) a tubular body; (2) a reduced diameter central portion of the body;³ (3) a catalyst substrate; and (4) a support mat. In addition, the converter can have spherically-shaped end portions and integral or attached gas flow end bushings. Plaintiff alleges defendant infringes claims 1-2, 5-9, 11, 13, 18, and 22 of the '476 patent. (D.I. 81)

B. The Accused Processes and Products

Plaintiff alleges eight of defendant's catalytic converters infringe the '476 patent. (D.I. 174, ex. D at 1-3) Generally, these accused devices consist of a tubular body, a catalyst substrate, a support mat, and a seal. (D.I. 174 at 4) The

27-29; col. 1 l. 68 - col. 2, l. 1; col. 3, ll. 16-18; col. 4, 44-46, 56-58.

² Gas flow end bushings are used to connect the converter to the rest of the exhaust system. '264 patent, col. 2, ll. 18-21.

³ Claims 1-8 and 22 also include a pair of enlarged diameter cylindrical end portions. Claims 1-8, 22, '476 patent, col. 6, l. 28 - col. 7, l. 9; col. 8, ll. 24-39.

accused catalytic converters are manufactured on thirteen production lines:

Production Lines	Products
Line 39	VN127
Line 50	U152
Lines 54, 58	VN127, U222/228, U204, C170 Underbody (PZEV)
Lines 204-206, 208	P221 and 2005 MEGA
Lines 70, 71, 72	C170 Light-off and D219/258/333
Line 207	C170 Underbody
Line 63	C170 Light-off (PZEV)

(Id. at 5-11) Defendant's "swage-spinform" process⁴ manufactures catalytic converters by: (1) forming a preassembly by wrapping a fibrous or wire mesh mat around a catalyst substrate and wrapping a seal around the substrate on one or both ends of the mat (id., ex. E at ¶ 2); (2) inserting the preassembly into a tubular body (id.); (3) placing the tubular body into a swaging machine, which reduces the diameter of the tubular body along its entire length (id., ex. G at 62-64; ex. H at 19-20, 35); and (4) forming end cones on the tubular body using a spinforming process (id., ex. H at 20-22). Defendant's "swaging and welded-on end cones" process⁵ is identical to its swage-spinform process except that

⁴ Production lines 39, 50, 54, 58, 204, 205, 206, and 208 manufacture catalytic converters by the swage-spinform process. (D.I. 174 at 5, ex. E at ¶ 2)

⁵ Production lines 70, 71, and 72 manufacture catalytic converters by the swaging and welded-on end cones process. (D.I.

end cones are welded onto the reduced diameter tubular body instead of being spinformed. (Id., ex. H at 24, 68; ex. J at 37, 100-108) Defendant's "spin-shrink" process⁶ is identical to the swage-spinform process except that the diameter of the tubular body is reduced by spinning the tubular body at a rapid rate and pushing a shaping tool against the tubular body. (Id., ex. E at ¶ 4) Finally, defendant's production line 63 manufactures catalytic converters by: (1) purchasing a shell with a reduced diameter central section; (2) placing two substrates, each wrapped in a support mat and two seals, in opposite ends of the tubular body; (3) reducing the diameter of the ends of the tubular body; and (4) welding end cones to the ends of the tubular body. (Id., ex. E at ¶ 5)

III. STANDARD OF REVIEW

A court shall grant summary judgment only if "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56[©]. The moving party bears the burden of proving that no genuine issue of material fact exists. See Matsushita Elec.

174 at 8)

⁶ Production line 207 manufactures catalytic converters by the spin-shrink process. (D.I. 174 at 8)

Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 586 n.10 (1986). "Facts that could alter the outcome are 'material,' and disputes are 'genuine' if evidence exists from which a rational person could conclude that the position of the person with the burden of proof on the disputed issue is correct." Horowitz v. Fed. Kemper Life Assurance Co., 57 F.3d 300, 302 n.1 (3d Cir. 1995) (internal citations omitted). If the moving party has demonstrated an absence of material fact, the nonmoving party then "must come forward with 'specific facts showing that there is a genuine issue for trial.'" Matsushita, 475 U.S. at 587 (quoting Fed. R. Civ. P. 56(e)). The court will "view the underlying facts and all reasonable inferences therefrom in the light most favorable to the party opposing the motion." Pa. Coal Ass'n v. Babbitt, 63 F.3d 231, 236 (3d Cir. 1995). The mere existence of some evidence in support of the nonmoving party, however, will not be sufficient for denial of a motion for summary judgment; there must be enough evidence to enable a jury reasonably to find for the nonmoving party on that issue. See Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 249 (1986). If the nonmoving party fails to make a sufficient showing on an essential element of its case with respect to which it has the burden of proof, the moving party is entitled to judgment as a matter of law. See Celotex Corp. v. Catrett, 477 U.S. 317, 322 (1986).

IV. DISCUSSION

A. Infringement

A patent is infringed when a person "without authority makes, uses or sells any patented invention, within the United States . . . during the term of the patent." 35 U.S.C. § 271(a). A court should employ a two-step analysis in making an infringement determination. Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995). First, the court must construe the asserted claims to ascertain their meaning and scope. Id. Construction of the claims is a question of law subject to de novo review. See Cybor Corp. v. FAS Techs., 138 F.3d 1448, 1454 (Fed. Cir. 1998). The trier of fact must then compare the properly construed claims with the accused infringing product. Markman, 52 F.3d at 976. This second step is a question of fact. See Bai v. L & L Wings, Inc., 160 F.3d 1350, 1353 (Fed. Cir. 1998). Literal infringement occurs where each limitation of at least one claim of the patent is found exactly in the alleged infringer's product. Panduit Corp. v. Dennison Mfg. Co., 836 F.2d 1329, 1330 n.1 (Fed. Cir. 1987).

For there to be infringement under the doctrine of equivalents, the accused product or process must embody every limitation of a claim, either literally or by an equivalent. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 41 (1997). An element is equivalent if the differences between the

element and the claim limitation are "insubstantial." Zelinski v. Brunswick Corp., 185 F.3d 1311, 1316 (Fed. Cir. 1999). One test used to determine "insubstantiality" is whether the element performs substantially the same function in substantially the same way to obtain substantially the same result as the claim limitation. Graver Tank, 339 U.S. at 608. This test is commonly referred to as the "function-way-result" test. The mere showing that an accused device is equivalent overall to the claimed invention is insufficient to establish infringement under the doctrine of equivalents.

The doctrine of equivalents is limited by the doctrine of prosecution history estoppel. In Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 535 U.S. 722 (2002), the Supreme Court stated:

Prosecution history estoppel ensures that the doctrine of equivalents remains tied to its underlying purpose. Where the original application once embraced the purported equivalent but the patentee narrowed his claims to obtain the patent or to protect its validity, the patentee cannot assert that he lacked the words to describe the subject matter in question. The doctrine of equivalents is premised on language's inability to capture the essence of innovation, but a prior application describing the precise element at issue undercuts that premise. In that instance the prosecution history has established that the inventor turned his attention to the subject matter in question, knew the words for both the broader and narrower claim, and affirmatively chose the latter.

Id. at 734-735. In other words, the prosecution history of a

patent, as the public record of the patent proceedings, serves the important function of identifying the boundaries of the patentee's property rights. Once a patentee has narrowed the scope of a patent claim as a condition of receiving a patent, the patentee may not recapture the subject matter surrendered. In order for prosecution history estoppel to apply, however, there must be a deliberate and express surrender of subject matter. See Southwall Tech., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1580 (Fed. Cir. 1995).

Once a court has determined that prosecution history estoppel applies, it must determine the scope of the estoppel. See id. at 1580. This requires an objective examination into the reason for and nature of the surrendered subject matter. Id.; see also Augustine Med., Inc. v. Gaymar Indus., Inc., 181 F.3d 1291, 1299 (Fed. Cir. 1999). If one of ordinary skill in the art would consider the accused product to be surrendered subject matter, then the doctrine of equivalents cannot be used to claim infringement by the accused product; i.e., prosecution history estoppel necessarily applies. Augustine Med., 181 F.3d at 1298. In addition, a "patentee may not assert coverage of a 'trivial' variation of the distinguished prior art feature as an equivalent." Id. at 1299 (quoting Litton Sys., Inc. v. Honeywell, Inc., 140 F.3d 1449, 1454 (Fed. Cir. 1998)).

The patent owner has the burden of proving literal

infringement and/or infringement under the doctrine of equivalents by a preponderance of the evidence. SmithKline Diagnostics, Inc. v. Helena Lab. Corp., 859 F.2d 878, 889 (Fed. Cir. 1988). On a motion for summary judgment of non-infringement, the movant "has the initial responsibility of identifying the legal basis of its motion, and of pointing to those portions of the record that it believes demonstrate the absence of a genuine issue of material fact." Novartis Corp. v. Ben Venue Labs., Inc., 271 F.3d 1043, 1046 (Fed. Cir. 2001); see also Intellicall, Inc. v. Phonometrics, 952 F.2d 1384, 1389 (Fed. Cir. 1992). The movant may meet this burden by showing: (1) evidence that would preclude a finding of infringement; or (2) the evidence on file fails to establish a genuine issue of material fact essential to the patentee's case. Novartis, 271 F.3d at 1046. However, once "the movant has made this showing, the burden shifts to the non-movant to designate specific facts showing that there is a genuine issue for trial." Id. at 1046; see also Intellicall, 952 F.2d at 1389.

B. Claim 1 of the '264 Patent

- 1. "Inserting the preassembly into a tubular body of metal so as to be in centered, spaced, relation to the interior wall of said body"**

Claim 1 of the '264 patent includes the limitation "inserting the preassembly into a tubular body of metal so as to be in centered, spaced, relation to the interior wall of said

body". Based on the claim language and its ordinary meaning, the specification, and the prosecution history, the court construed this limitation to mean "introducing or placing the preassembly into the tubular body so that the preassembly is not in contact with the interior wall of the body." (D.I. 242*)

Defendant produced evidence that its preassemblies are not inserted with a space between the preassembly and the interior tubular body wall. (D.I. 174, ex. C at 12, ex. D at app. B at 1, ex. E at ¶¶ 2-3, ex. L at 36-39, ex. M at 260-61) Plaintiff failed to produce any evidence that the accused processes insert preassemblies in spaced relation to the interior wall of the tubular body.⁷ (D.I. 194 at 15) Consequently, the evidence of record demonstrates that defendant's inserted preassemblies are not spaced from the tubular body and, therefore, do not meet this limitation, either literally or under the doctrine of equivalents.⁸

⁷ The expert report of William J. Brady does not present any evidence or create a reasonable inference that defendant inserts preassemblies in spaced relation to the interior wall of the tubular body. (D.I. 174, ex. L)

⁸ Defendant moved for summary judgment of non-infringement under the doctrine of equivalents for all of the limitations at issue. (D.I. 174 at 17, 19, 21, 26, 29, 32, 36) In addition to addressing literal infringement, for every limitation at issue, defendant either presented evidence that would preclude infringement under the doctrine of equivalents or showed that the evidence of record does not establish a genuine issue of material fact of infringement under the doctrine of equivalents. (Id.) Plaintiff has not addressed, either by argument or the identification of evidence, infringement under the doctrine of

2. "Reduced diameter annular ring"

Claim 1 of the '264 patent also includes the limitation "reduced diameter annular ring". Based on the claim language and its ordinary meaning, and the specification, the court construed this limitation to mean "the wall of the metal body is radially deformed into a smaller diameter portion that is adjacent to at least one larger diameter portion." (D.I. 242*)

Defendant produced evidence that none of the accused processes, with the exception of lines 63⁹ and 204-208,¹⁰ deform tubular bodies into a reduced diameter annular ring. (D.I. 174, ex. C at 13, ex. D at app. B at 1, ex. G at 62, ex. H at 19-20,

equivalents for any limitation at issue. (D.I. 194 at 39) Consequently, the court grants defendant's motion for summary judgment of non-infringement under the doctrine of equivalents for claims 1 and 8 of the '264 patent and claims 1, 11, and 22 of the '476 patent.

⁹ Line 63 uses tubular bodies which come with a reduced diameter central section. "[A] party cannot avoid liability for infringement by having someone else perform one or more steps of a patented process for them". E.I. DuPont De Nemours & Co. v. Monsanto Co., 903 F. Supp. 680, 735 (D. Del. 1995).

¹⁰ Defendant does not claim a lack of genuine issue of material fact regarding non-infringement of lines 204-208. (D.I. 174 at 18) It does argue that when lines 204, 205, 206, and 208 produce P221 converters without internal cones, there is no genuine issue of material fact that the converters do not infringe because the tubular body is reduced in diameter along its entire length. (Id.) Plaintiff failed to produce evidence that lines 204, 205, 206, and 208 form reduced diameter annular rings when manufacturing P221 converters, either literally or under the doctrine of equivalents. Novartis, 271 F.3d at 1046. The court grants defendant's motion for summary judgment of non-infringement by lines 204, 205, 206, and 208 when manufacturing P221 converters without internal cones.

35, ex. L at 39-40, ex. M at 260-61; D.I. 205, ex. S at 305) Plaintiff failed to produce any evidence that the accused processes form a reduced diameter annular ring in tubular bodies. (D.I. 194 at 16) Consequently, the evidence of record demonstrates that lines 39, 50, 54, 58, 70, 71, and 72 do not form a reduced diameter annular ring in tubular bodies and, therefore, do not meet this limitation.

3. **"Said deforming step substantially simultaneously applying uniform inward radial pressure on said mat"**

Finally, claim 1 of the '264 patent includes the limitation "said deforming step substantially simultaneously applying uniform inward radial pressure on said mat". Based on the claim language and its ordinary meaning, and the specification, the court construed this limitation to mean "unvarying inward radial pressure is applied to the mat at essentially the same time the tubular body is deformed." (D.I. 242*)

Defendant concedes that, "when the shaping tool [of line 207] is positioned at a point on the tubular body, the tool substantially simultaneously applies pressure on the point of the mat beneath the tool." (D.I. 205 at 9) In addition, plaintiff produced evidence that the process of line 207 applies pressure to the mat at essentially the same time the tubular body is deformed. (D.I. 174, ex. L at 39-40) Therefore, defendant has failed to meet its burden of proof as to this limitation.

C. Claim 8 of the '264 Patent

1. "Said end portion is formed into a generally hemispherical shape"

Claim 8 of the '264 patent includes the limitation "said end portion is formed into a generally hemispherical shape". Based on the claim language and its ordinary meaning, and the specification, the court construed this limitation to mean "the tubular body ends are formed, for the most part, by spherical segments." (D.I. 242*)

Defendant produced evidence that lines 39, 50, 54, 58, 204, 205, 206, 207, or 208 do not deform tubular bodies to create generally hemispherical end portions. (D.I. 174, ex. C at 20, 23) Plaintiff produced evidence that these lines do deform tubular bodies into generally hemispherical end portions. (Id., ex. A at A-4, A-5, A-6, A-14, ex. L at 43-44) The court concludes there is a genuine issue of material fact as to whether this limitation is met by the above identified lines.

2. "Said tube is reduced generally simultaneously uniformly radially inward to reduce the tube in diameter"

Claim 8 of the '264 patent also includes the limitation "said tube is reduced generally simultaneously uniformly radially inward to reduce the tube in diameter". Based on the claim language and its ordinary meaning, and the specification, the court construed this limitation to mean "reducing pressure is applied at substantially the same time to the entire portion of

the tube that is to be reduced." (D.I. 242*)

Defendant produced evidence that line 207 did not apply pressure at substantially the same time to the entire portion of the tubular body that was to be reduced. (D.I. 174, ex. C at 14; ex. E at ¶ 4) Plaintiff produced evidence that the process of line 207 substantially simultaneously applies reducing pressure to the entire portion of the tubular body that is to be reduced. (Id., ex. L at 39-40) The court concludes there is a genuine issue of material fact as to whether this limitation is met by line 207.

D. Claims 1, 11, and 22 of the '476 Patent

- 1. "Said support mat and central reduced diameter portion serve as the sole support means for the substrate"**

Claims 1, 11 and 22 of the '476 patent contain the limitation "said support mat and central reduced diameter portion serve as the sole support means for the substrate". Based on the claim language and its ordinary meaning, the specification, and the prosecution history, the court construed these limitations to mean "the central reduced diameter portion and the mat are the only structures that hold the substrate in place in the cylindrical body." (D.I. 242*)

Defendant produced evidence that all of the accused catalytic converters, except for the 2005 MEGA, have one or more seals, in addition to a fibrous or wire mesh mat, that exert

pressure on the substrate. (D.I. 174, ex. C at apps. A-C,¹¹ ex. L at 49-52, ex. R at 50-51, 76-77, 135-36) Defendant also produced evidence that these seals provide a holding force on the substrate. (Id., ex. C at 28-29, ex. H at 35, 87-88, ex. J at 111-112, ex. N at 103, ex. O at 24-27, ex. P at 15) Plaintiff produced evidence refuting defendant's evidence, thus suggesting that the seals in defendant's converters do not provide holding force. (D.I. 157, ex. 12 at 50-51, 62-63; D.I. 174, ex. L at 49, 53, ex. M at 65, ex. O at 24-26; D.I. 194, ex. 2 at 54, 111-12, 113, ex. 8 at 90-91, ex. 17 at 112-13) The court concludes there is a genuine issue of material fact as to whether this limitation of claims 1, 11, and 22 of the '476 patent is met.

2. "Enlarged diameter end portions" and "reduced diameter central portion"

Claim 1 of the '476 patent contains the limitation "an elongated cylindrical body having a pair of enlarged diameter cylindrical end portions". Claim 22 of the '476 patent contains the limitation "an elongated tubular body having enlarged diameter end portions". Based on the claim language, and the

¹¹ The court finds that defendant's canning pressure and hot vibration tests are admissible under Fed. R. Civ. P. 403. While plaintiff identifies several potential flaws in defendant's testing procedure (D.I. 194 at 20-29), defendant's tests remain highly probative of whether the seals provide holding force or shock absorbency. The court perceives no threat of unfair prejudice. Furthermore, as plaintiff established, defendant's tests do not have an aura of infallibility. Consequently, any prejudicial impact created by the tests would not substantially outweigh the probative value of these tests. Fed. R. Evid. 403.

specification, the court construed each of these limitations to mean "a portion of each end of the elongated body has a larger diameter than the portion of the body containing the middle point of the body." (D.I. 242*)

Claim 1 of the '476 patent also contains the limitation "a reduced diameter cylindrical central portion". Claim 22 of the '476 patent contains the limitation "a reduced diameter central wall portion". Based on the claim language and its ordinary meaning, and the specification, the court construed each of these limitations to mean "the portion of the tubular body that includes the middle point has a smaller diameter than adjacent portions of the tube." (D.I. 242*)

Defendant produced evidence that, with the exception of the C170 Light-off (PZEV) and the C170 Underbody catalytic converters, none of its converters have a reduced diameter central portion or larger diameter end portions of the tubular body. (D.I. 174 at 31, 35, ex. C at 26, 27, 33-34) Plaintiff failed to produce any evidence that the accused catalytic converters have a reduced diameter central portion or enlarged diameter end portions. (D.I. 194 at 31-32) Consequently, the evidence of record demonstrates that defendant's catalytic converters, with the exception of the C170 Light-off (PZEV) and the C170 Underbody catalytic converters, do not have a reduced diameter central portion or enlarged diameter end portions as

these limitations are construed in claims 1 and 22 of the '476 patent and, therefore, do not meet these limitations.

E. Claim 11 of the '476 Patent

1. "A reduced diameter central portion"

Claim 11 of the '476 patent contains the limitation "a reduced diameter central portion". However, based on the claim language and its ordinary meaning, and the specification, the court construed this limitation to mean "a portion of the tubular body, including the middle point of the tubular body, which has a smaller diameter than an adjacent portion of the tubular body." (D.I. 242*)

Defendant's evidence shows that, with the exception of the C170 Light-off (PZEV) and the C170 Underbody catalytic converters, none of its converters have "a reduced diameter central portion" as that limitation is construed in claim 11 of the '476 patent. (D.I. 174, ex. C at 27, 33-34) Plaintiff failed to produce any evidence that the accused catalytic converters have a reduced diameter central portion. (D.I. 194 at 31) Consequently, the evidence of record demonstrates that defendant's catalytic converters, with the exception of the C170 Light-off (PZEV) and the C170 Underbody catalytic converters, do not have a reduced diameter central portion as this limitation is construed in claim 11 of the '476 patent and, therefore, do not meet this limitation.

F. Wire Mesh

The parties agree that catalytic converters using a wire mesh mat in place of a fibrous mat do not infringe either of the patents in suit. (D.I. 174 at 36; D.I. 194 at 32-33; D.I. 205 at 6) However, the parties dispute which VN127 catalytic converters use fibrous or wire mesh mats. (D.I. 174, ex. M at 134; D.I. 194, ex. 4 at 89-90, ex. 8 at 52-54) The court concludes that there is a genuine issue of material fact as to which VN127 catalytic converters utilize wire mesh mats.

G. Alleged Discovery Abuse

Defendant provided plaintiff with sufficient information and sufficient notice of defendant's "spaced relation" and "substantially simultaneously" constructions and of evidence suggesting that defendant's accused products do not possess either of these limitations. (D.I. 88, ex. C; D.I. 174, ex. H at 62-63, ex. J at 104-05; D.I. 205, ex. U at 61, 119-123, ex. V at 31-32, ex. W at 37-38, ex. X at 77-78, 123-24, ex. Y at 12, ex. Z at 65) Plaintiff modified its claim construction to address this information, indicating it was aware of the significance of the information. (D.I. 174, ex. L at 39-40, app. C at 2 n.4) Furthermore, plaintiff had an opportunity to observe defendant's funnels when it toured defendant's production plant on two separate days. (Id., ex. L at 13) Finally, defendant's failure to amend a prior response to discovery to reflect the canning

pressure and hot vibration tests did not harm plaintiff. Defendant produced these documents on January 6, 2005, the last day of fact discovery. (D.I. 111, ¶ 1; D.I. 194 at 37) Upon plaintiff's request, defendant produced documents related to the tests. (D.I. 194 at 37; D.I. 205 at 17) These documents were produced on January 20, 2005, prior to plaintiff's deposition of Brian Williamson and defendant's engineers involved in the tests. (D.I. 194 at 37-38, exs. 27-28; D.I. 205 at 17) The court finds that defendant did not engage in discovery abuse.

V. CONCLUSION

For the reasons stated, defendant's motion for summary judgment of non-infringement (D.I. 173) is granted in part and denied in part. An appropriate order shall issue.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

TENNECO AUTOMOTIVE)
OPERATING COMPANY INC.,)
)
Plaintiff,)
)
v.) Civ. No. 03-1030-SLR
) (Consolidated)
)
VISTEON CORPORATION,)
)
)
Defendant.)

AMENDED ORDER*

At Wilmington this 30th day* of June, 2005,
consistent with the memorandum opinion issued this same date;

IT IS ORDERED that defendant's motion for summary
judgment of non-infringement (D.I. 173) is granted in part and
denied in part as follows:

1. As to claim 1 of the '264 patent, granted.
2. As to claim 8 of the '264 patent, denied.
3. As to claims 1, 11, and 22 of the '476 patent,
granted for all of defendant's catalytic converters except the
C170 Light-off (PZEV) and the C170 Underbody catalytic
converters.
4. As to defendant's VN127 catalytic converters not
infringing the patents in suit, denied.


United States District Judge