

United States District Court,
N.D. Iowa, Eastern Division.

ENGINEERED PRODUCTS CO,
Plaintiff.

v.

DONALDSON COMPANY, INC,
Defendant.

No. C98-2106 MJM

March 27, 2001.

Owner of patent for air filter restriction gauge sued competitor for infringement. On cross-motions for summary judgment, the District Court, Melloy, J., held that: (1) fact issue existed as to whether plaintiff was equitably estopped from asserting infringement; (2) fact issue existed as to whether infringement claim was barred by laches; (3) fact issue existed as to whether patent was invalid under on-sale bar; (4) plaintiff failed to establish trade dress infringement claim; (5) plaintiff did not engage in false advertising; and (6) fact issue existed as to whether patent was infringed.

Motions granted in part and denied in part.

4,445,456. Construed.

Richard S. Fry, Shuttleworth & Ingersoll, Cedar Rapids, IA, Edward M. Laine, Craig J. Lervick, Bridget A. Sullivan, Oppenheimer, Wolff & Donnelly, Minneapolis, MN, for Plaintiff.

Robert J. Tansey, Jr., Annamarie A. Daley, Ken R. Hall, Robins, Kaplan, Miller, Ciresi, Minneapolis, MN, Stephen J. Holtman, Simmons, Perrine, Albright, Ellwood, Cedar Rapids, IA, for Defendant.

OPINION and ORDER

MELLOY, District Judge.

In this patent infringement action, the plaintiff, Engineered Products Company ("EPC"), asserts patent and trade dress claims against the defendant, Donaldson Company ("Donaldson"), arising from Donaldson's creation and sale of two air filter indicator devices-the Air Alert, sold from 1997 to 1999, and the NG Air Alert, sold from 1999 through the present. FN1 (Doc. no. 1). EPC claims that both devices infringe its patent, U.S. Patent Number 4,445,456 ("the '456 patent"). Donaldson concedes that the Air Alert infringed the '456 patent, but, as to that claim, asserts affirmative defenses of estoppel, waiver, laches, and patent invalidity. As to the newer device, the NG Air Alert, Donaldson disputes EPC's allegation of patent infringement, arguing that its device falls outside the scope of the patent, and, alternatively, asserting the

affirmative defense of patent invalidity.

FN1. This action originally involved allegations by EPC that Donaldson's products infringed two EPC patents: U.S. Patent No. 4,368,728 ("the '728 patent"), issued on January 25, 1983, and U.S. Patent No. 4,445,456 ("the '456 patent"), issued on May 1, 1984. At oral argument, both parties agreed to withdrawal with prejudice of any claims or defenses based on the '728 patent. Accordingly, Count I and II of EPC's Complaint, and Claim II of Donaldson's counterclaim, are dismissed, with prejudice, as are any other claims or defenses of either party to the extent they rely upon the '728 patent.

Currently before this Court are the parties' cross motions for summary judgment as to the following: 1) Donaldson's asserted equitable defenses of estoppel and laches; 2) the validity of EPC's patent; and 3) infringement of EPC's patent by Donaldson's original Air Alert and the NG Air Alert. (Doc. nos. 69 and 74). Also before the Court is Donaldson's motion for summary judgment on EPC's trade dress claim, (doc. no. 74), and EPC's motion for summary judgment on Donaldson's false advertising and unfair competition counterclaims based on alleged misrepresentations by EPC in publications and product demonstrations (doc. nos. 8 and 69). Both parties have filed opposition and reply briefs on the relevant issues. (Doc. nos. 80, 83, 89, 92, and 94). On September 21, 2000, a *Markman* hearing was conducted and oral arguments were heard on the summary judgment motions. (Doc. no. 106).

Part One of this opinion addresses those issues as to which construction of the patent claim is not essential, namely: equitable estoppel and laches; invalidity of the patent; trade dress violations; and false advertising and unfair competition. In Part Two, the Court construes the patent claim and addresses the cross-motions on infringement. *Summary Judgment Standard*

The standard for granting summary judgment is well-established. A motion for summary judgment may be granted only if, after examining all of the evidence in the light most favorable to the nonmoving party, the court finds that no genuine issues of material fact exist and that the moving party is entitled to judgment as a matter of law. *See Fed.R.Civ.P. 56(c); Montgomery v. John Deere & Co.*, 169 F.3d 556, 559 (1999); *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587, 106 S.Ct. 1348, 89 L.Ed.2d 538 (1986); *Celotex Corp. v. Catrett*, 477 U.S. 317, 327, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986). A fact is material if it might affect the outcome of the suit under the governing substantive law. *See Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986).

The party moving for summary judgment bears the "initial responsibility of informing the district court of the basis for its motion and identifying those portions of the record which show lack of genuine issue." *Celotex*, 477 U.S. at 323, 106 S.Ct. 2548. Once the moving party has carried its burden, the opponent must go beyond the pleadings and designate specific facts-by such methods as affidavits, depositions, answers to interrogatories, and admissions on file-that show that there is a genuine issue for trial. *See Fed.R.Civ.P. 56(e); Celotex*, 477 U.S. at 324, 106 S.Ct. 2548. The evidence of the nonmoving party is to be considered as true, and justifiable inferences arising from the evidence are to be drawn in his or her favor. *See Anderson*, 477 U.S. at 255, 106 S.Ct. 2505. If the evidence of the nonmoving party is "merely colorable," or is "not significantly probative," summary judgment may be granted. *Id.* at 249-50, 106 S.Ct. 2505. Thus, the nonmoving party does not have to provide direct proof that genuine issues of fact exist for trial; rather, the facts and circumstances that the nonmoving party relies upon must "attain the dignity of substantial evidence and must not be such as merely to create a suspicion." *Metge v. Baehler*, 762 F.2d 621, 625 (8th Cir.1985), *cert. denied*, 474 U.S. 1057, 106 S.Ct. 798, 88 L.Ed.2d 774 (1986). In essence, the evidence must be "such

that a reasonable jury could find a verdict for the nonmoving party." Anderson, 477 U.S. at 248, 106 S.Ct. 2505.

Where the litigants concurrently pursue summary judgment, each summary judgment motion must be evaluated independently to determine whether there exists a genuine dispute of material fact and whether the movant is entitled to judgment as a matter of law. *See, e.g., Wermager v. Cormorant Township Bd.*, 716 F.2d 1211, 1214 (8th Cir.1983) ("[T]he filing of cross motions for summary judgment does not necessarily indicate that there is no dispute as to a material fact, or have the effect of submitting the cause to a plenary decision on the merits."); *A. Brod, Inc. v. SK & I Co., L.L.C.*, 998 F.Supp. 314, 320 (S.D.N.Y.1998) (when faced with cross-motions, court must consider each motion independently of other, must in each instance view facts and draw all reasonable inferences in favor of nonmoving party, and is not required to grant summary judgment for either side); *see generally, 11 James Wm. Moore et al., Moore's Federal Practice* para. 56.10[6] (3d ed.1997). Thus, a cross-motion for summary judgment operates exactly like a single summary judgment motion. FN2

FN2. In reviewing the motions before it, the Court has considered the supplemental responses submitted by Donaldson in conjunction with its motion dated September 15, 2000. (Doc. nos. 102 and 103). Accordingly, Donaldson's motion to strike EPC's supplemental affidavit and accompanying exhibits is denied. Furthermore, the Court agrees with EPC that its submission of supplemental case law (doc. no. 117) did not constitute substantive argument and Donaldson's motion to strike that submission (doc. no. 118) is denied.

Background

EPC and Donaldson are the only domestic manufacturers of graduated or progressive air filter restriction indicators, FN3 and, therefore, the companies are generally aware of each other's products and position in the industry. The disputed facts will be discussed as relevant to the various claims, and this brief background section serves only to give a general context to the current action.

FN3. Throughout the briefs and record, the terms "indicator" and "gauge" are used interchangeably, as are the terms "progressive" and "graduated."

A. EPC's Filter Minder: a progressive air restriction indicator with lock-up feature

In the mid-1970s, Joseph Nelson, of Waterloo, Iowa, invented a device to indicate the level of restriction, *i.e.*, the amount of clogging, in the air filter of a combustion engine, and inform the vehicle operator how soon the air filter would need to be changed. Mr. Nelson sought to invent a device that would indicate the progressive levels of air restriction that occurred, rather than a gauge that merely indicated when it was time to change the filter, *i.e.*, a "go/no go" or "single position" gauge. In the late 1970s, Mr. Nelson added a "lock-up" feature to his graduated air restriction gauge, which would indicate the highest level of air restriction attained even after the engine is turned off. The lock-up feature locks the moving indicator part at a point corresponding to the level of air restriction that occurs while the engine is running. Thus, Mr. Nelson's invention allows the operator to see how much restriction is present in the air filter without having to operate the vehicle at the same time. Mr. Nelson named the product that incorporated his lock-up invention the "Filter Minder."

In November of 1977, Mr. Nelson and Ike Leighty incorporated EPC, which worked to further develop Mr.

Nelson's ideas and sell his inventions to original equipment manufacturers ("OEMs"), such as John Deere, CAT, Mack, International Harvester, etc. After four years, EPC was selling indicators to most of the OEMs in the United States. Mr. Nelson was issued U.S. Patent Number 4,445,446 ("the '456 patent") for his mechanical air restriction indicator with the lock-up feature on May 1, 1984.

Mr. Nelson died in 1984, and his wife retired from the company in 1987. In 1997, Mr. Leighty, over eighty years old, sold the assets of EPC and its name to a group of the employees and a private investment group. That sale was completed in February of 1998. EPC is still located in Waterloo, Iowa, and Mr. Nelson's Filter Minder remains the company's best-selling product.

B. Donaldson develops progressive air filter indicators with lock-up feature

In the late 1970s, Donaldson began manufacturing and selling a line of air restriction indicators, including a progressive indicator with a lock-up feature sold under the trade name "Informer." The Informer competed directly with, but was consistently outsold by, EPC's Filter Minder. EPC considered the Donaldson Informer indicator to be an inferior product and not a substantial threat to EPC in the marketplace.

In the mid-1990s, General Motors ("GM") decided to add a progressive air restriction indicator to its light truck platform (the "GMT-800 platform"), which includes large passenger vehicles typically with four-wheel drive, such as sport utility vehicles ("SUVs"). This platform was expected to become the largest platform in the history of the auto industry, and represented a unique opportunity to manufacturers of progressive air restriction indicators, such as Donaldson and EPC.

In 1995, concurrent with the industry's growing awareness of the significant opportunity with GM, key Donaldson personnel, including vice president Nick Priadka, had a lunch meeting with EPC's Mr. Leighty, during which Mr. Leighty was informed that Donaldson would be interested in purchasing EPC should Mr. Leighty ever decide to sell. Mr. Leighty informed Donaldson that he did not wish to sell EPC and suggested instead that Donaldson enter into a license with EPC for EPC's Filter Minder. There was apparently no follow-up by either party.

In April of 1996, as expected, GM published a request for quote (RFQ) for a progressive air restriction indicator for the GMT-800 platform. Donaldson responded to the RFQ by offering first a single-position indicator and then its Informer. Both were rejected.

At about this time, Mr. Priadka telephoned Mr. Leighty and informed him that Donaldson would be upgrading the Informer, presumably to better compete for the GMT-800 platform. The result of this upgrade was the Donaldson Air Alert, and based on the Air Alert design Donaldson was awarded the GMT-800 contract. The Air Alert was manufactured and sold from 1997 to 1999, at which time it was replaced by the Next Generation Air Alert. EPC filed the present suit on November 20, 1998.

PART ONE

I. Equitable Defenses

Donaldson does not dispute that its original Air Alert infringed EPC's '456 patent, but argues here that EPC is equitably estopped from enforcing that claim and, alternatively, that laches bars any claim for damages accrued prior to this suit. In support of this claim, Donaldson contends the following: (1) that EPC has known for years that Donaldson's Informer indicator infringes the '456 patent but never took any action

regarding that device; (2) that EPC knew that Donaldson would be investing substantial resources to upgrade its Informer indicator but never informed Donaldson that it would take action to enforce its '456 patent against any new or improved device; and (3) that in reliance on that misleading silence, Donaldson invested over \$500,000 in developing the Air Alert. and would suffer both economic and evidentiary prejudice were EPC allowed to pursue an infringement claim at this time.

In reply, EPC contends that there was no unreasonable delay in filing suit once it had concluded that the Air Alert infringed its '456 patent. EPC further asserts that it engaged in no conduct that would reasonably imply that it had abandoned its '456 patent rights, and that, moreover, Donaldson's decision to develop and manufacture the Air Alert in no part relied upon conduct by EPC. The parties have filed cross-motions for summary judgment on these defenses, and thus, guided by the standards discussed above, the Court will review each party's motion in turn.

A. Equitable Estoppel

[1] [2] Estoppel is cognizable under 35 U.S.C. s. 282 as an equitable defense to patent infringement claims. *See Aukerman v. R.L. Chaides Constr. Co.*, 960 F.2d 1020, 1028 (Fed.Cir.1992). As an equitable defense, estoppel is a matter committed to the sound discretion of the trial court, *see id.*, and "is not limited to a particular factual situation nor subject to resolution by hard and fast rules." *Id.* at 1041. Where established, it may bar all relief on a claim. *See id.*; *ABB Robotics, Inc. v. GMFanuc Robotics Corp.*, 52 F.3d 1062, 1063 (Fed.Cir.1995).

[3] There are three essential elements to an equitable estoppel claim:

1) The patentee, through misleading conduct, leads the alleged infringer to reasonably infer that the patentee does not intend to enforce its patent against the alleged infringer. "Conduct" may include specific statements, action, inaction, or silence where there was an obligation to speak.

2) The alleged infringer relies on that conduct.

3) Due to its reliance, the alleged infringer will be materially prejudiced if the patentee is allowed to proceed with its claim.

Aukerman, 960 F.2d at 1028; *Gasser Chair Co., Inc. v. Infanti Chair Mfg. Corp.*, 60 F.3d 770, 775 (Fed.Cir.1995).

[4] Even where the three elements are established, the trial court must, in exercising its discretion and deciding whether to allow the defense to bar the suit, take into consideration any other evidence and facts respecting the equities of the parties. *See Aukerman*, 960 F.2d at 1043. And where a determination is made at the summary judgment level, the burdens must be allocated correctly by the court. *See id.* at 1044. Here, Donaldson bears the burden of establishing every element of its asserted defense by a preponderance of the evidence, *see id.* at 1046, and thus EPC is entitled to summary judgment if Donaldson does not meet its burden on even one element.

The Court will first analyze the record pursuant to EPC's motion, and then, to the extent necessary, the Court will discuss Donaldson's cross-motion.

(1.) EPC's motion for summary judgment on equitable estoppel defense

[5] In reviewing EPC's motion for summary judgment, the Court must view all evidence and justifiable inferences therefrom in favor of Donaldson to determine whether there are no genuine issues of material fact and EPC is entitled to judgment as a matter of law. *See, e.g.*, *Montgomery*, 169 F.3d at 559. EPC does not bear the burden of persuasion at trial, and thus can show presumptive entitlement to summary judgment if it points to the absence of any factual support for an essential element of Donaldson's claim. *See Celotex*, 477 U.S. at 322-24, 106 S.Ct. 2548 (so holding); *Anderson*, 477 U.S. at 250-253, 106 S.Ct. 2505 (holding that court must consider burden of persuasion at trial in determining strength of material submitted with motion). If EPC makes this showing, Donaldson must then, to preclude summary judgment, introduce specific facts showing a need for trial. *See id.* Thus, EPC is entitled to summary judgment if, after allocating the burdens as above, Donaldson cannot raise at least a triable issue as to every element of its estoppel claim. The Court will address each element in turn.

a). Misleading conduct

To establish estoppel, Donaldson must first prove that EPC's misleading conduct led Donaldson to reasonably infer that EPC did not intend to enforce its '456 patent against Donaldson. *See Aukerman*, 960 F.2d at 1028. As noted above, "conduct" may include specific statements, action, inaction, or silence where there was an obligation to speak. *See id.* Where "a patentee's 'misleading conduct' is essentially misleading inaction ... [that] inaction must be combined with other facts respecting the relationship or contacts between the parties to give rise to the necessary inference that the claim against the defendant is abandoned." *Id.* at 1042 (citations omitted).

In the typical estoppel case, the patentee first informs the alleged infringer of its concerns and intention to enforce its patent rights against an accused device and then fails to follow through on those threats. *See Hottel Corp. v. Seaman Corp.*, 833 F.2d 1570, 1574 (Fed.Cir.1987) ("In the cases that have applied intentionally misleading silence in the patent infringement context, a patentee threatened immediate or vigorous enforcement of its patent right but then did nothing for an unreasonably long time."), *quoted in Meyers v. Asics Corp.*, 974 F.2d 1304, 1309 (Fed.Cir.1992). This inaction on the patentee's part can become "misleading conduct" if at some point it leads the alleged infringer to reasonably infer that the patentee has abandoned its previously expressed claim. *See id.* at 1308.

EPC filed the present suit on November 20, 1998, and it is undisputed that prior to that EPC had never approached Donaldson with concerns about the '456 patent and any Donaldson products, including the allegedly Ion standing infringement by Donaldson's Informer indicator.FN4 EPC argues that it is therefore entitled to summary judgment because a defendant relying on misleading silence to show estoppel must, at a minimum, show that the patentee gave the defendant notice of infringement and then delayed taking action for an unreasonably long time. *See, e.g.*, *Asics Corp.*, 974 F.2d 1304 (finding no basis for applying equitable estoppel on summary judgment because Meyers did not have any contact with Asics prior to filing suit); *Meyers v. Brooks Shoe, Inc.*, 912 F.2d 1459, 1464 (Fed.Cir.1990) (finding no misleading conduct where defendant could not show that patentee "threatened immediate or vigorous enforcement of his patents but then did nothing for an unreasonably long time") *see also*, *Hottel Corp.*, 833 F.2d at 1574 (listing cases and concluding, "In the cases which have applied intentionally misleading silence in the patent infringement context, a patentee threatened immediate or vigorous enforcement of its patent right but then did nothing for a long time."). Donaldson argues, however, that in light of the history between the parties and events that transpired prior to and during Donaldson's development of the Air Alert, EPC's silence and inaction can be deemed misleading conduct under *Aukerman*.

FN4. To date, EPC has brought no claims involving the Informer in this or any other action.

[6] This Court recently addressed this precise issue in another patent case and concluded that the absence of prior communication or threat by the patentee is not necessarily fatal to an estoppel claim. In that opinion, the Court explained:

Like [plaintiff], this Court has been unable to find any federal [circuit] cases where misleading conduct was established absent a prior communication by the patentee to the alleged infringer regarding potential enforcement. However, the federal circuit has not expressly held, and this Court is not prepared to say, that the absence of such prior communication is necessarily fatal to an estoppel claim. *Aukerman* and subsequent case law have emphasized that equitable estoppel "is not limited to a particular factual situation nor subject to resolution by simple or hard and fast rules." *Aukerman*, 960 F.2d at 1041; *accord*, *James River Corp. v. Hallmark Cards, Inc.*, 915 F.Supp. 968, 981 (E.D.Wis.1996) (rejecting narrow reading of misleading silence that would require prior express threat, the court found that "focus is properly on all the factors that may bear on what inferences [the alleged infringer] could reasonably draw from [the patentee's] silence"). Therefore, the Court finds that it is not dispositive that [plaintiff] never expressly communicated to [defendant] its infringement concerns about the ... patent and the [accused device]. Rather, the proper inquiry under *Aukerman* is whether [plaintiff's] inaction, combined with other facts respecting the relationship or contacts between the parties, gave rise to the necessary inference that the claim against [defendant] was abandoned. *See* *ABB Robotics*, 52 F.3d at 1064 ("[T]hat an immediate threat of force may be the most common scenario does not mean that it is the only set of facts which can support a finding of misleading silence."); *Scholle Corp. v. Blackhawk Molding Co., Inc.*, 133 F.3d 1469, 1472 (noting that "course of dealings" between patentee and alleged infringer may in some cases reasonably imply patent right abandonment absent a statement to the contrary). The quantity and quality of communications between the parties is one factor, albeit a significant one, to be considered in that analysis.

Order, *Cedarapids v. CMI*, No. 98-110 MJM (November 2, 2000).

Applying these principles, the Court notes the following undisputed facts: EPC and Donaldson are the only two domestic manufacturers of graduated indicators; EPC's first graduated indicator, the Filter Minder, for which it applied for and received the '456 patent, was developed and manufactured in the late 1970s and has been on the market ever since; Donaldson also introduced a graduated indicator, the Informer, in the late 1970s to the early '80s which, since then, has competed in the marketplace with EPC's Filter Minder; EPC's Filter Minder has consistently significantly outsold Donaldson's Informer; and both companies were aware of, and competing for, the new business opportunity presented by GM's decision to include graduated indicators in its light truck and SUV platform.

Viewing the evidence in the light most favorable to Donaldson, the nonmoving party, the Court finds the following facts also relevant: Nick Priadka, vice president of Donaldson, worked at EPC from 1980 to 1986 before moving to Donaldson where he has been ever since; the companies have a generally amicable relationship as evidenced by their occasional sharing of customer information and periodic visits between the companies' personnel at trade shows and industry events; in 1995, Mr. Priadka and other key Donaldson employees had an amicable, informal meeting with EPC founder, Ike Leighty, at which Donaldson indicated that it would be interested in purchasing EPC should Mr. Leighty ever decide to sell; and shortly thereafter, Mr. Priadka informed Mr. Leighty that Donaldson would be improving its Informer product.

[7] One could reasonably infer from these facts that both EPC and Donaldson were aware that Donaldson's long selling Informer infringed EPC's '456 patent. A jury could further find that EPC knew that Donaldson's upgrade was intended to make it more competitive with regard to the GM bid, and that to succeed Donaldson would have to improve (or arguably, "better-infringe") the already infringing Informer. A jury could then conclude that it was reasonable for Donaldson to infer that if EPC had never taken action to enforce its '456 patent against Donaldson's Informer, it would not now take action against a mere upgrade of that infringing product.FN5 Essentially, a jury could reasonably find that, at some point after Donaldson informed EPC about the planned enhancement of the Informer, EPC should have at least advised Donaldson that EPC would enforce its '456 patent against an infringing upgrade, and that its failure to do so constituted misleading conduct under *Aukerman*.

FN5. EPC argues that the Air Alert was not merely an upgrade of the Informer but rather an entirely new product which directly and independently infringes EPC's '456 patent, and thus EPC's inaction with regard to the poorly-made and poorly-performing Informer cannot reasonably imply that EPC would not enforce its patent against a new product. Even assuming that the end result was an entirely new product, this does not, at least at the summary judgment stage, affect the Court's decision on this element. Here, from Donaldson's perspective, EPC remained silent despite direct knowledge that Donaldson was upgrading the Informer. This is sufficient to support a reasonable inference that EPC would continue its longstanding position of not enforcing the '456 patent against the product which evolved from that process.

b). Substantial reliance

The second essential element of equitable estoppel requires Donaldson to show that it substantially relied on the misleading conduct of EPC in connection with taking some action. *See Aukerman*, 960 F.2d at 1042-43. Donaldson contends that decisions in the mid-1990s regarding the development, manufacture, and mass production of the Air Alert were made in substantial reliance on its reasonable inference that it would not be sued by EPC for patent infringement. EPC counters that no reasonable jury could conclude that Donaldson substantially relied on EPC's conduct. Rather, EPC contends, Donaldson never even considered EPC's patent when it decided to develop the Air Alert and Donaldson's actions were solely driven by its desire to capture the extraordinary new business opportunity represented by the GM light truck platform.

Initially, the Court notes some discord in the parties' briefs, and in the case law, as to what must be shown to establish the substantial reliance element. In *Aukerman*, the court explained this element as follows:

Reliance is not the same as prejudice or harm, although frequently confused. An infringer can build a plant being entirely unaware of the patent. As a result of infringement, the infringer may be unable to use the facility. Although harmed, the infringer could not show reliance on the patentee's conduct. To show reliance, the infringer must have had a relationship or communication with the plaintiff which lulls the infringer into a sense of security in going ahead with the plant.

Id. at 1042-43.

Although this oft-cited example clearly recognizes a causal element in distinguishing reliance from prejudice (the third element of equitable estoppel), it arguably suggests, as Donaldson asserts, that the infringer can demonstrate reliance in some cases by showing little more than already established under the

misleading conduct element, i.e., the facts supporting a finding of misleading conduct can also prove reliance. In contrast, EPC argues that only affirmative proof of actual reliance should be considered.

The Court agrees with EPC that reliance cannot be construed so broadly as to impermissibly conflate the reliance and misleading conduct elements. The federal circuit's opinion in *ABB Robotics*, 52 F.3d 1062, supports an analysis that falls somewhere between those proposed by the two parties. In *ABB Robotics*, the patentee argued that the trial court had improperly decided whether the alleged infringer *could* have relied on the patentee's silence instead of using the correct standard, whether the alleged infringer *actually* relied on the patentee's conduct. *See id.* at 1064. The appellate court rejected the patentee's position, finding it "clear that the trial court did not consider abstract theoretical possibilities, but rather, looked at the conduct of the parties and decided that the infringer had a relationship with the patentee that lulled the infringer into a sense of security that it would not be sued." *Id.*

[8] Thus, *ABB Robotics* clarifies that while the misleading conduct analysis looks mainly to the conduct of the patentee to determine what reasonable inferences flow from its actions, the reliance factor focuses on the conduct and communications of *both* parties in determining whether the infringer substantially relied on the patentee's conduct. Under *ABB Robotics*, it is clearly not enough for Donaldson to show that, given EPC's conduct, it would have been reasonable for Donaldson to be lulled into a sense of security. To demonstrate substantial reliance, as opposed to misleading conduct, Donaldson must do more-it must show that it was, in fact, so lulled.

In support of its position, EPC points to deposition testimony by at least five key Donaldson employees, each of whom clearly and affirmatively denied any consideration whatsoever of EPC or EPC's patents during the relevant time period. Among these deponents were: Nick Priadka, vice president of Donaldson; Stan Koehler, the "quarterback" of Donaldson's plan to pursue GM's light truck market; Richard Canepa, director of the New Business Unit, who had previously worked at EPC; and Val Peterson, director of the Automotive Business Unit and the person accountable for all major customers. Mr. Priadka's deposition is exemplary, and undisputably damaging. In that testimony, Mr. Priadka affirmatively attests that, prior to EPC filing suit, he was unaware of any analysis at Donaldson relating to the validity, scope or enforceability of EPC's patents and that, moreover, he had never been a party to any discussion about nor had he seen any documents pertaining to EPC's patents. EPC also submits internal strategic memoranda by Donaldson that link development of the Air Alert to the potential GM opportunity and which make no mention of any litigation risks regarding EPC's patents.

EPC has clearly met its burden as the summary judgment movant and were this evidence uncontested the Court would agree that no reasonable jury could find substantial reliance on Donaldson's part. Here, however, there is some evidence to support a different perspective. Thus, the Court will review that evidence to determine whether, granting all justifiable inferences in Donaldson's favor, a jury could reasonably find in favor of Donaldson on this element.

Although Donaldson does not dispute the evidence offered by EPC. Rather, it maintains that EPC's version of the facts is incomplete and far less conclusive than EPC represents. Donaldson contends that the evidence actually shows that, although the employees cited by EPC did not review or consider EPC's patents, it was simply because it was not the job of those employees to do so. Donaldson argues that EPC's evidence merely reflects that in a company the size of Donaldson it is not the job of design engineers and salespeople to consider patent infringement matters.FN6

FN6. In support of this argument, Donaldson points to the following illustrative evidence in the record: 1) Val Peterson's testimony, when asked whether he was aware of any analysis of EPC's patents by Donaldson prior to this lawsuit, that "I am aware that there were discussions between our applications engineering group and the appropriate individuals within Donaldson ... [namely, Richard] Carlson." (Peterson depo., p. 49); and 2) Larry Nepsund's testimony, in response to similar questioning, that "I'm not familiar with that end of it. That's not my area." (Nepsund depo., p. 114-18).

Moreover, Donaldson argues, additional testimony by Richard Carlson, a manager in Donaldson's intellectual property department, shows that during the relevant time period Donaldson did review the status of EPC's patents and consider the litigation threat posed by them. Specifically, Mr. Carlson testified regarding conclusions conveyed to Donaldson designer, Larry Nepsund, after Mr. Carlson had reviewed, in 1996 or '97, copies of EPC's '456 patent in relation to design work on the Air Alert. His testimony, in relevant part, is as follows:

Q. And again correct me if I misstate anything. You and Larry mentioned the Informer as a possible reason why these patents might be invalid?

A. Potentially, but it was more than that.

Q. What was "more than that"?

A. Well we looked at these patents and we kind of talked generally about what these patents were all about, and Larry had read the patents, I believe he told me that he had read them, and I looked at them and we were, Larry said well what do these patents mean? I said well we have to cite them as prior art to your calibration wheel patent, and we did note that they were older patents relative to the time we're talking about, this was about in 1996 or '97.... And that the subject matter of the patents was, of course, related to his restriction indicator work, which was also very much like that which was done earlier and resulted in the Informer.... And it occurred to us that, we did not dissect the claims in these patents, we kind of just glanced at them, we knew we had not been sued for patent infringement relative to the Informer. We knew that Larry's current development work was kind of a carry-on of the Informer, and didn't consider them much of a problem....

Carlson depo., p. 65, line 12 through p. 67, line 2.

According to Donaldson, this testimony shows that Donaldson, through its agent, reviewed the relevant EPC patent and recognized its similarity to the Informer. Mr. Carlson, as agent for Donaldson, then reasonably concluded that because EPC had never sued over the Informer, there was no threat regarding the Air Alert which was a "carry-on" of the Informer. Moreover, Donaldson contends, as manager of the intellectual property department it was Mr. Carlson's job-and not that of Mr. Priadka, Mr. Canepa and the others-to make determinations of this sort and that his determination in this case was bolstered by factors discussed above in connection with the misleading conduct element-the limited industry size, the periodic interaction among the companies' personnel, and the generally amicable relationship between the companies. Thus, Donaldson argues, Mr. Carlson's review, combined with reasonable inferences drawn from the conduct and relationship between the parties during this period, resulted, in fact, in Donaldson being lulled into a sense of security that EPC would not enforce its '456 patent against Donaldson.

[9] The Court concludes that, construing all evidence and justifiable inferences therefrom in Donaldson's favor, a jury could reasonably characterize the evidence as Donaldson proposes. In so concluding, the Court does not discount the potentially persuasive weight of EPC's evidence. Rather, the Court merely acknowledges that, where other evidence exists which, if believed by the jury, would support a contrary conclusion, a genuine issue of material fact exists which cannot be resolved at summary judgment.

c). Prejudice

[10] The final essential element of equitable estoppel requires Donaldson to show material prejudice resulting from Donaldson's reliance. *See Aukerman*, 960 F.2d at 1028. The prejudice may be a change of economic position or loss of evidence. *See id.* at 1043. Here, the Court finds that Donaldson has raised a triable issues as to material evidentiary prejudice. FN7 Mr. Nelson, the inventor of the Filter Minder and the '456 patent, died in 1984; his workroom, and any relevant papers that may have been stored there have long since been disassembled. Further, as the record demonstrates, memories of potentially key witnesses have faded over the twenty-plus years since EPC's graduated indicator was first developed. *See id.* at 1033 ("Evidentiary, or "defense" prejudice, may arise by reason of a defendant's inability to present a full and fair defense on the merits due to the loss of records, the death of a witness, or the unreliability of memories of long past events, thereby undermining the court's ability to judge the facts.").

FN7. Having so concluded, the Court makes no decision on Donaldson's showing of economic prejudice.

d). Equity considerations

Having found that Donaldson has met its burden of demonstrating triable issues as to each element of its estoppel defense, the Court will not address at length the equities considerations mandated by *Aukerman* except to note that such considerations further support resolution of the estoppel claim at trial rather than summary judgment. *See Aukerman*, 960 F.2d at 1043 (directing that trial court "must, even where the three elements of equitable estoppel are established, take into consideration any other evidence and facts respecting the equities of the parties in exercising its discretion and deciding whether to allow the defense of equitable estoppel to bar the suit.").

Donaldson bears the burden of demonstrating that it did not engage in egregious conduct which, under equity principles, would preclude a determination of estoppel. EPC contends that Donaldson's willful infringement of the '456 patent is the kind of egregious conduct which mandates summary judgment in EPC's favor. *See Gasser Chair Co.*, 60 F.3d at 775 (holding that willful infringement is one factor which may indicate a shift in the equities even where underlying elements established); *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 1428-29 (Fed.Cir.1988) (explaining test for willful infringement as whether, under all the circumstances, a reasonable person would prudently conduct himself with any confidence that a court might hold the patent invalid or not infringed) (citing *Central Soya Co. v. Geo A. Hormel Co.*, 723 F.2d 1573, 1577 (Fed.Cir.1983)).

EPC presents a colorable claim that, in developing the Air Alert, Donaldson willfully infringed EPC's patent. However, Donaldson does not concede this issue, and, if accepted as true, Mr. Carlson's testimony may persuade a jury that, under the unique facts of this case, Donaldson's less than extensive review of EPC's patent was sufficiently prudent. Therefore, because the record as it stands would permit, but not require, a conclusion of willful infringement by Donaldson, the Court concludes that equity considerations are not determinative in resolution of EPC's motion on estoppel.

The Court will now briefly address Donaldson's motion for summary judgment on the same issue.

(2.) *Donaldson's motion for summary judgment on equitable estoppel defense*

After thoroughly reviewing the record, the Court concludes that Donaldson's cross-motion on estoppel must similarly be denied. In evaluating Donaldson's motion, the Court must view all facts in favor of the nonmoving party, EPC, and, as the above discussion makes clear, such an analysis demonstrates genuine issues of material fact as to whether Donaldson can prove every element of its affirmative defense.

In brief, the record supports the following findings: both EPC and Donaldson were aware that the Informer infringed EPC's patent; both companies were aware that the Informer posed no threat in the marketplace to EPC's graduated indicator; and both companies knew that EPC was a much smaller company than Donaldson. From these facts, a jury could reasonably conclude that given the foreseeable costs involved in any patent action, EPC's inaction regarding a poorly-copied and non-competitive product did not reasonably imply that EPC would not take legal action were Donaldson to introduce an infringing product that posed a credible threat. Further, a jury could reasonably conclude that Richard Carlson's testimony was outweighed by other conflicting testimony and evidence suggesting that Donaldson did not substantially rely upon EPC's conduct or its patents when deciding to develop and manufacture the Air Alert. In sum, while the Court finds that Donaldson's characterization of the facts was permissible, it was far from undisputed and thus summary judgment in Donaldson's favor is unwarranted. *See Aukerman*, 960 F.2d at 1043-44 ("[O]n summary judgment, such an inference must be the *only* possible inference from the evidence." (emphasis in original)).

The Court will now turn to the parties' cross-motions as to Donaldson's asserted laches defense.

B. *Laches*

[11] [12] Unlike estoppel which may bar recovery altogether, laches bars recovery only of those damages arising prior to suit. *See Aukerman*, 960 F.2d at 1028; *Gasser Chair Co.*, 60 F.3d at 773. Laches may be defined as "the neglect or delay in bringing suit to remedy an alleged wrong, which taken together with lapse of time and other circumstances, causes prejudice to the adverse party and operates as an equitable bar." *Aukerman*, 960 F.2d at 1028-29. "Courts of equity ... will not assist one who has slept on his rights, and shows no excuse for his laches in asserting them." *Id.* (quoting *Lane & Bodley Co. v. Locke*, 150 U.S. 193, 201, 14 S.Ct. 78, 37 L.Ed. 1049 (1893)).

[13] To successfully invoke laches, a defendant must prove by a preponderance of the evidence: (1) that the plaintiff delayed filing suit an unreasonable and inexcusable length of time from the time the plaintiff knew or reasonably should have known of its claim against the defendant; and (2) that the delay resulted in material prejudice or injury to the defendant. *See Advanced Cardiovascular Sys., Inc. v. SciMed Life Sys., Inc.*, 988 F.2d 1157, 1161 (Fed.Cir.1993); *Aukerman*, 960 F.2d at 1028. On summary judgment, the burden of proof on an issue must be correctly allocated, *see Gossen Corp. v. Marley Mouldings, Inc.*, 977 F.Supp. 1346, 1350 (E.D.Wis.1997), and the moving party must also establish that there was no genuine issue of material fact as to either element. *See Gasser Chair Co.*, 60 F.3d at 773.

[14] No fixed period of time has been classified as "unreasonable" delay per se; rather, that determination rests on the circumstances of the particular case. *See Aukerman*, 960 F.2d at 1032. However, a rebuttable presumption of laches arises where a patentee delays bringing suit for more than six years after the date the

patentee knew or reasonably should have known of the alleged infringer's activity. *See id.* at 1035; *Hall v. Aqua Queen Mfg., Inc.*, 93 F.3d 1548, 1552-53 (Fed.Cir.1996). This presumption shifts to the patentee the burden of producing evidence which if believed would show that either the patentee's delay was reasonable or excusable under the circumstances or the defendant suffered neither economic nor evidentiary prejudice. *See Wanlass v. General Elec. Co.*, 148 F.3d 1334, 1337 (Fed.Cir.1998). Without the presumption, "the facts of unreasonable, inexcusable delay and prejudice must be proved and judged on the totality of the evidence presented." *Aukerman*, 960 F.2d at 1038.

The period of delay is calculated from the time the patentee has actual or constructive knowledge of the defendant's potentially infringing activities. *See Wanlass*, 148 F.3d at 1337-38 (quoting *Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, 114 F.3d 1547, 1559 (Fed.Cir.1997) ("[D]elay begins when the plaintiff knew, or in the exercise of reasonable diligence should have known, of the defendant's allegedly infringing activity.")). "The availability of delay based on constructive knowledge of the alleged infringer's activities imposes on patentees the duty to police their rights.... '[T]he plaintiff is chargeable with such knowledge as he might have obtained upon inquiry, provided the facts already known by him were such as to put upon a man of ordinary intelligence the duty of inquiry.'" *Wanlass*, 148 F.3d at 1338 (quoting *Johnston v. Standard Mining Co.*, 148 U.S. 360, 370, 13 S.Ct. 585, 37 L.Ed. 480 (1893), and citing *Advanced Cardiovascular Sys.*, 988 F.2d at 1162 ("Absent actual knowledge, the facts must support a duty of inquiry.")).

[15] Even if a defendant establishes the laches elements, the defense remains an equitable judgment of the trial court in light of all the circumstances. *See Aukerman*, 960 F.2d at 1036; *Gasser Chair Co.*, 60 F.3d at 773. "A court must look at all of the particular facts and circumstances of each case and weigh the equities of the parties. Where there is evidence of other factors which would make it inequitable to recognize the defense despite undue delay and prejudice, the defense may be denied." *Gasser Chair Co.*, 60 F.3d at 773 (quoting *Aukerman*, 960 F.2d at 1036).

In the present action, there are cross-motions before the Court, and where relevant the Court will discuss and construe disputed facts in favor of each party in turn.

(1.) *The parties' cross-motions on laches*

Donaldson argues that the Air Alert is merely an upgrade of the Informer and thus it is appropriate to measure the laches delay period from EPC's knowledge of infringement by the earlier device. Conversely, EPC contends that the Air Alert is a new product and therefore any conduct with regard to the Informer is irrelevant and cannot be "tacked on" for purposes of the laches inquiry. According to EPC, the relevant time period runs only from 1997 when EPC obtained and examined an Air Alert indicator. Thus, EPC contends, no presumption arises and the relatively brief delay in filing suit was neither unreasonable, inexplicable nor prejudicial.

a). Establishing the "delay" period

As the parties' positions make clear, Donaldson's laches defense turns predominantly on whether the delay period is measured from EPC's constructive knowledge of infringement by Donaldson's Informer.FN8 Thus, the critical inquiry is whether such "tacking on" is appropriate in this case or whether, as EPC asserts, Donaldson's development of the Air Alert triggered an independent laches period for that product. The federal circuit has not, in the laches context, prescribed the standard to be applied in determining whether an alleged infringer may "tack on" delay periods from prior infringing activity, FN9 but *Aukerman* makes clear that consideration of altered conduct is relevant. In reversing the trial court's grant of summary judgment to

the alleged infringer, the *Aukerman* court noted, *inter alia*:

FN8. Without tacking-on EPC's knowledge of the infringing Informer, the delay between manufacture of the Air Alert and this suit was at most two years. Although *Aukerman* states that "[t]he length of time which may be deemed unreasonable has no fixed boundaries," *id.* at 1032, the Court notes that Donaldson's arguments are premised solely on its theory that tacking-on is appropriate. Therefore, for purposes of these cross-motions only, the Court will assume that absent "tacking on" the Informer period, Donaldson would be unable to assert a viable laches defense.

FN9. Federal courts have phrased the applicable standard in various ways. *See MGA, Inc. v. Centri-Spray Corp.*, 699 F.Supp. 610, 614 (E.D.Mich.1987) (holding that plaintiff may proceed with infringement action against later-produced product so long as that product is "sufficiently dissimilar"); *Intertech v. Brown & Sharpe Mfg. Co., Inc.*, 708 F.Supp. 1423, 1435 (D.Del.1989) (stating that delays associated with periods of infringement by different machines do not tack "unless the nature of alleged infringement remains substantially constant," and reviewing products for "functional equivalence"); *Celotex Corp. v. Jacuzzi Whirlpool Bath, Inc.*, 211 U.S.P.Q. 232, 1980 WL 30304 (N.D.Ill.1980) (requiring that defendant establish that prior conduct was "the same or virtually the same" as the conduct later sued upon).

Similarly, we believe the court erred in resolving the issue of whether the defendant's infringing activities changed sufficiently to disrupt the laches period. It is not disputed that defendant's conduct changed during the laches time frame both by its manufacturing its own slip-forming device and by greatly increasing the amount of asymmetrical wall it poured. It could not be inferred against the patentee that these changed circumstances should have been known to the patentee or were immaterial to the determination of laches. *Aukerman*, 960 F.2d at 1039; *see also*, *Gasser Chair Co.*, 60 F.3d at 774 ("A court must consider any excuse for the delay offered by the plaintiff.").

Other courts have held that where the defendant alters the nature of its infringing activity, a new period of delay begins as to the altered conduct. *See MGA, Inc. v. Centri-Spray Corp.*, 639 F.Supp. 1238, 1244 (E.D.Mich.1986) (listing supporting citations, and concluding that the court cannot, at summary judgment stage, resolve disputed issue of material fact as to whether defendant so altered the infringing activity); *Jacuzzi Whirlpool Bath, Inc.*, 211 U.S.P.Q. at 232 (reversing district court conclusion that laches applies to the enforcement of a patent against the defendant generally rather than to particular instances of infringing conduct, and holding instead that defendant must establish that prior conduct was "the same or virtually the same" as the conduct later sued upon); *Spalding & Evenflo Cos., Inc. v. Acushnet Co.*, 718 F.Supp. 1023 (D.Mass.1989) (citing *MGA*, and finding two separate periods of infringement involving two separate infringing golf balls where patentee chose not to sue when defendant stopped infringing with first product but later sued within months after defendant introduced a new infringing product); *North American Philips Corp. v. Taito America Corp.*, 1997 WL 543111 (N.D.Ill.1997) (noting the "sparse" case law on this issue, but concluding that defendant had not met its burden of showing that the facts met the *Jacuzzi Whirlpool Bath* standard or that a lower standard should be applied).

Donaldson asserts that its Air Alert was merely an upgrade of its Informer indicator, and that under the case law it is proper to tack on the delay period attributable to the Informer because the modification did not change the nature of the infringing activity. The record supports constructive knowledge of the infringing nature of the Informer indicator dating back to 1980 when EPC requested the Patent and Trade Office ("PTO") to amend EPC's pending patent claim to specifically cover the Donaldson Informer indicator. Under

this construction of the facts, the delay in bringing suit would run 14 years, from 1984 when the '456 patent was issued, until 1998 when EPC filed this suit. *See* Aukerman, 960 F.2d at 1032 (delay period "does not begin prior to issuance of the patent"). The presumption would be established, and the burden would shift to EPC to produce sufficient evidence to put one of the underlying factors into genuine dispute.

EPC rejects in toto Donaldson's assertion that the Air Alert is merely a modification of the Informer. Rather, EPC argues, Donaldson's development and manufacture of the Air Alert substantially changed the infringing activity and EPC's inaction (or laches) regarding the Informer cannot be generalized to a substantially different activity.FN10 Therefore, EPC contends, the delay period commences only as of EPC's constructive or actual knowledge as to the infringing nature of the Air Alert. This would date back no further than 1997 when EPC was able to obtain an Air Alert indicator.FN11 Approximately one year later, after examining the Air Alert indicator and seeking legal counsel as to its infringing nature, EPC filed this suit. Thus, no presumption arises, and alternatively no unreasonable or inexcusable delay can be established.

FN10. In the alternative, EPC argues that it would be unfair to include the informer in the laches inquiry in this case because EPC has never "accused" the Informer of infringement. This argument must fail. Otherwise, as noted by the district court in *Intertech Licensing Corp.*, 708 F.Supp. at 1435, n. 27, a plaintiff guilty of laches could avoid the consequences of the defense "simply by narrowing its charge so as to complain only of infringement occurring within the 6 years immediately preceding commencement of the lawsuit."

FN11. Assuming that development of the Air Alert triggered a new and separate delay period, then EPC's constructive knowledge of that infringing activity could not pre-date the existence of the Air Alert itself. Therefore, although the evidence could support an inference that in 1995 or '96 EPC was aware of Donaldson's plan to upgrade the Informer, this fact alone would not shift EPC's constructive knowledge of infringement back to that date. *See* *R2 Medical Systems, Inc. v. Katecho, Inc.*, 931 F.Supp. 1397, 1410 (N.D.Ill.1996) (citing cases supporting proposition that patentee is generally not considered to have constructive knowledge of infringement until patentee was able to obtain a device, examine it and seek legal advice).

[16] The parties present diametrically opposed evidence and testimony in support of their positions, which must be accepted as true for purposes of the cross-motions.FN12 Thus, the Court concludes that where, as here, there is a material factual dispute as to whether the Informer and Air Alert designs are sufficiently similar as to warrant one rather than two delay periods, summary judgment in favor of either party is not appropriate at this time. *See, e.g.*, *MGA, Inc.*, 639 F.Supp. at 1244 (finding that dispute over similarity of subsequent infringing products precluded resolution of delay period and laches determination at summary judgment stage).

FN12. EPC asserts that Donaldson's failure to submit an expert report in rebuttal to EPC's expert opinion regarding the differences between the Informer and Air Alert indicators requires that summary judgment be granted to EPC. While it is true that Donaldson bears the burden of persuasion as to every issue regarding its affirmative defense, the Court has been unable to find, nor has EPC proposed, any case law which requires opposing expert opinions on this issue at the summary judgment stage. The Court is hesitant to infer such a rule and then apply it retroactively where, as here, the case has been fully submitted for summary judgment purposes. Thus, the Court concludes that Donaldson's lack of rebutting expert testimony is not

fatal to its efforts to preclude summary judgment against it on this issue.

II. Invalidity of EPC's '456 Patent

The parties have presented cross-motions for summary judgment on Donaldson's affirmative defense that EPC's '456 patent is invalid under the statutory "on-sale bar" rule. Under 35 U.S.C. s. 102(b), a patent is invalid if the claimed subject matter was "in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States." *See, e.g., Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 57 n. 1, 119 S.Ct. 304, 142 L.Ed.2d 261 (1998) (discussing statutory on-sale bar rule). However, "[t]he law has long recognized the distinction between inventions put to experimental use and products sold commercially," *id.* at 64, 119 S.Ct. 304, and the on-sale bar is not triggered by those activities which can reasonably be deemed experimental use. *See id.* Here, the patent application was filed on June 19, 1978, and therefore June 19, 1977 constitutes the critical date for purposes of the on-sale bar of 35 U.S.C. s. 102(b). At issue, then, is whether EPC activities prior to June 19, 1977 fall within the experimental use exception.

[17] A patent is presumed valid, and invalidity must be established with clear and convincing evidence by the challenging party. *See* 35 U.S.C. s. 282; *American Hoist & Derrick Co. v. Sowa & Sons*, 725 F.2d 1350, 1360 (Fed.Cir.), *cert. denied*, 469 U.S. 821, 105 S.Ct. 95, 83 L.Ed.2d 41 (1984); *Abbott Labs. v. Geneva Pharm.*, 182 F.3d 1315, 1318 (Fed.Cir.1999). To establish invalidity under 35 U.S.C. s. 102(b), Donaldson must prove that all of the claims of the patent were ready for patenting and were in use or on sale before the critical date. *See Pfaff*, 525 U.S. at 67, 119 S.Ct. 304 (discussing conditions for application of on-sale bar). One way by which a party can demonstrate that an invention was "ready for patenting" is "by proof of reduction to practice before the critical date." *Id.* When an actual embodiment of all of the elements of the claimed invention has been built, the invention has been reduced to practice. *See id.* at 57 n. 2, 119 S.Ct. 304 (quoting *Corona Cord Tire Co. v. Dovan Chemical Corp.*, 276 U.S. 358, 383, 48 S.Ct. 380, 72 L.Ed. 610 (1928) ("A machine is reduced to practice when it is assembled, adjusted and used. A manufacture is reduced to practice when it is completely manufactured.")); *RCA Corp. v. Data General Corp.*, 887 F.2d 1056, 1061 (Fed.Cir.1989) ("Experimental use, which means perfecting or completing an invention to the point of determining that it will work for its intended purpose, ends with an actual reduction to practice.") (citations omitted). Evidence such as memoranda, drawings, correspondence and testimony of witnesses may be used to establish that the embodiment was in fact the claimed invention. *See RCA Corp.*, 887 F.2d at 1060. If Donaldson can demonstrate that the '456 patent was reduced to practice, it must then prove that the prototype was in public use, on sale, or offered for sale prior to June 19, 1977.

The Court concludes that the parties' positions on this issue reflect a material factual dispute that cannot be resolved at summary judgment. Before elaborating on this decision, however, the Court must resolve a distinct but relevant dispute between the parties wherein Donaldson has moved this Court to strike an amended interrogatory response by EPC. (Doc. no. 97).

A. Donaldson's motion to strike EPC's amended interrogatory response

In early August, 1999, EPC responded to Donaldson's interrogatory regarding the dates of conception and reduction to practice of the invention embodied in the '456 patent. In its response, EPC admitted its belief that the '456 patent was reduced to practice prior to April 27, 1977.FN13 (*See* doc. no. 77, tab 28, at 3-4). EPC apparently based this response on a letter dated April 27, 1977, written by Ike Leighty wherein Mr. Leighty discusses a handmade prototype that he and Mr. Nelson gave to a Mack Trucks engineer. The amended interrogatory response was submitted in August 2000, after Donaldson's summary judgment

motion raised the issue of on-sale bar, and recharacterizes the April 1977 events as part of the testing period.FN14 (See doc. no. 98, exh. A, p. 3-4). In it, EPC avers that although conception of the invention embodied in the '456 patent proceeded April 27, 1977, the invention was not reduced to practice until late summer or fall of that year, "following testing that eventually confirmed that the invention would perform as intended." (Id.). EPC contends that its amended answer relies on no new facts and merely corrects a premature and incorrect characterization of the facts that were in evidence. Donaldson argues that EPC's amended answer is an unfair last-minute attempt to create a triable issue as to on-sale bar and contradicts deposition testimony of EPC's President, Peter Simer, wherein he averred that "the factual statements contained in [the interrogatory responses] are true and accurate."

FN13. The response reads in relevant part:

[EPC] states, based on its investigation to date, that the dates of conception and reduction to practice of the invention embodied in the '456 Patent precede April 27, 1977. In that regard, [EPC] knows that a handmade prototype of an air filter restriction indicating device with progressive lock features had been created prior to April 27, 1977.

FN14. The amended response reads in relevant part:

Subject to [the same objections as in original response], Engineered Products states that the date of conception of the invention embodied in the '456 patent occurred before April 27, 1977. *[EPC] is without knowledge as to the precise date the invention was reduced to practice, but it was following testing that eventually confirmed that the invention would perform as intended in the late summer or fall of 1977.* (emphasis added).

(Doc. no. 98, exh. A, p. 3-4).

Rule 36(b) of the Federal Rules of Civil Procedure directs that "the court may permit withdrawal or amendment [of an admission] when the presentation of the merits of the action will be subserved thereby and the party who obtained the admission fails to satisfy the court that withdrawal or amendment will prejudice that party in maintaining the action or defense on the merits." FN15 Fed.R.Civ.P. 36(b); *FDIC v. Prusia*, 18 F.3d 637, 640 (8th Cir.1994) (considering effect on litigation and prejudice to resisting party in determining whether to allow amendment of admissions). After reviewing the parties' numerous briefs on the issue, the Court concludes that Donaldson's motion to strike EPC's amended interrogatory answer number 4 should be denied. In so doing, the Court notes that EPC initially responded to the interrogatory in August, 1999, relatively early in the discovery process, and expressly based its response on its "investigation to date." (Exh. 1 to Sullivan aff., doc. no. 109). Potentially contradictory evidence—namely, the April, 1977 letter and Mr. Leighty's deposition testimony—was in the record as of December 1999 at the latest and thus Donaldson had notice of the factual dispute throughout the discovery period. The Court notes further that in March and April 2000, Donaldson served 297 Requests for Admission on EPC, none of which, according to EPC, raised, explicitly or implicitly, an issue regarding the reduction to practice date.

FN15. Donaldson argues that Rule 36(b) is not applicable in this instance, and that the analysis should instead be guided by this circuit's decision in *Camfield Tires, Inc. v. Michelin Tire Corp.*, 719 F.2d 1361 (8th Cir.1983). In *Camfield Tires*, the plaintiff, after receiving the defendant's summary judgment motion, filed an affidavit directly contradicting his prior deposition testimony. *See id.* The court held that an affidavit which contradicts earlier deposition testimony will not create a triable issue so as to preclude

summary judgment. *See id.* at 1366. Donaldson argues that under *Camfield Tires*, EPC cannot use the amended interrogatory to contradict Mr. Simer's deposition testimony affirming the accuracy of the original interrogatory response.

This Court disagrees that *Camfield Tires* applies in this case. In *Camfield Tires*, the court was careful to limit its holding, directing that courts examine such issues "with extreme care, and [that] only in circumstances ... where the conflicts between the deposition and affidavit raise only sham issues should summary judgment be granted." *Id.*; *Johnson v. Daggett, et al.*, 99 F.Supp.2d 1008, 1016 (E.D.Ark.2000) (noting that Eighth Circuit "was careful to limit its [*Camfield Tires*] holding," and refusing to extend rule to a distinguishable factual scenario). In fact, the court distinguished cases such as this one where the affidavit is neither inherently inconsistent with earlier testimony (here, the facts underlying the original interrogatory response) nor at odds with the general theory of defense presented by its proponent. *See id.* (discussing *Kennett-Murray Corp. v. Bone*, 622 F.2d 887, 894-95 (5th Cir.1980) wherein that court found triable issue when the "affidavit did not purport to raise a new matter, but rather to explain certain aspects of his deposition testimony"). Under the distinct facts of this case, Mr. Simer's cursory deposition response is not enough to make this a *Camfield Tires* case. Moreover, the fact that the "admission" in this case resulted from an interrogatory rather than a Request for Admission is a distinction without a difference, and this Court's analysis is properly guided by Rule 36(b).

[18] In light of these facts and the voluminous record in this case, EPC's failure to "catch" what it alleges was a premature and incorrect interrogatory response is neither unreasonable nor inexplicable. The inherently factual nature of the reduction to practice inquiry further supports this Court's conclusion that justice would not best be served by binding EPC to what could reasonably be deemed a premature mischaracterization of facts in evidence and known to both parties. *See Prusia*, 18 F.3d at 640 (directing courts to consider the effect upon the litigation and prejudice to the resisting party "rather than focusing on the moving party's excuses for erroneous admission"). Moreover, Donaldson has not shown that it will be unduly prejudiced by a ruling that will permit this issue to go to trial. *See id.* (finding abuse of discretion in refusing to allow amended admission where the plaintiff moved to amend prior to district court's hearing on summary judgment motion, and stating that "[a]lthough [defendant] may have difficulty finding evidence to establish [the facts represented in the original admissions], this difficulty derives from the inaccuracy of the admissions rather than the stage of the proceedings at which the [plaintiff] sought to amend its admissions").

Having resolved this preliminary matter, the Court will now explain its conclusion that neither party is entitled to summary judgment on the asserted invalidity defense.

B. On-sale bar: ready for patenting and put in public use

[19] Donaldson argues that the record shows by clear and convincing evidence that the on-sale bar conditions were met because the '456 patent had been reduced to practice and put into public use by, at the latest, April 1977, several months prior to the on-sale bar date of June 19, 1977. EPC refutes those allegations, asserting that the activity to which Donaldson is referring was for testing purposes only and thus falls within the experimental use exception to the rule. EPC contends that the invention was not reduced to practice until the completion of tests in August 1977 showing that the device worked as intended-that the device progressively locked up in use and sustained vibration.

At issue are the justifiable inferences to be drawn from an April, 27, 1977 letter by Ike Leighty

memorializing a visit by Mr. Leighty and Joe Nelson to Mack Trucks. During the visit, Mr. Leighty and Mr. Nelson presented and discussed their available line of gauges, none of which included the lock-up feature of the '456 patent. They also, however, apparently gave a handmade prototype of a progressive gauge indicator to Bill Baldwin of Mack Trucks' Vehicle Development division. In dispute is whether in so doing EPC triggered the on-sale bar clock and rendered the patent invalid.

The relevant portion of the letter, the last three paragraphs, reads as follows:

[para. 7] In the meantime, we hope you will be able to give the handmade prototype an accelerated test on a vehicle. As soon as it has proven itself, we would appreciate your mounting that same gauge directly on an engine so that it gets the ultimate vibration.

[para. 8] We are completing our own tests and expect to release for tooling within the next 30 to 60 days ... production 12 to 14 weeks after that.

[para. 9] We will keep in touch with you and in the meantime, if you discover anything in the tests that you think would be interesting to us, please let us know.

EPC contends that the letter clearly shows that the prototype was still in the experimental stage and so had not been reduced to practice. It cites the plain language of the letter as well as deposition testimony by Mr. Leighty, in which he testified that neither EPC nor Mr. Nelson had the resources to independently test the prototype. According to EPC, without such testing it would be impossible to know if the gauge's progressive lock-up mechanism actually worked as intended. Mr. Leighty testified that, in light of their lack of resources, it was EPC's hope that Mack Trucks would assist them in this testing process. Mr. Leighty further testified as to his belief that the prototype given to Mack Trucks did not embody all of the features that were later included in the '456 patent. And finally, Mr. Leighty testified that, despite the optimistic projections in the letter, it was not until August 1977 that the gauge had been sufficiently tested that it could be offered for sale. EPC contends that this latter date is the date at which the invention was reduced to practice and any events prior to August 1977, including the interaction and correspondence with Mack Trucks, were merely part of the experimental use phase.

The Court agrees that this is a reasonable characterization of the evidence, and as such is sufficient to warrant denial of Donaldson's motion for summary judgment. *See Pfaff*, 525 U.S. at 64, 119 S.Ct. 304 ("[A]n inventor who seeks to perfect his discovery may conduct extensive testing without losing his right to obtain a patent for his invention—even if such testing occurs in the public eye."). That being said, however, the Court disagrees with EPC's contention that the record as it stands necessitates summary judgment in its favor.

The precatory language used by Mr. Leighty reasonably suggests that while EPC would be interested in Mack Trucks' feedback regarding the prototype, EPC was in no way relying upon Mack Trucks as an integral part of any testing process. Mr. Leighty plainly says as much in paragraph 8. Viewed in that light, the request for Mack Trucks' testing assistance could be construed as a sales ploy, similar to a suggestion by an auto dealer that a valued or sought-after customer test drive a new car. The predominant purpose of the request is not to acquire information about the tested product, but rather to get the customer to try it in the expectation that he or she will then be inclined to purchase it. There is nothing in the letter to suggest that EPC was anything less than fully confident that the prototype would perform as intended. Mr. Leighty's deposition testimony to the contrary is not so compelling that it dispositively negates this interpretation. And

although this Court has ruled that EPC may amend its interrogatory response number 4 (*see infra*), Donaldson would be entitled at trial to use the original response-which arguably contradicts Mr. Leighty's deposition testimony-for impeachment purposes where appropriate.

As the moving party, without the burden of proof on the matter, EPC is entitled to summary judgment only if it can demonstrate that no reasonable jury could conclude that Donaldson had demonstrated by clear and convincing evidence that an embodiment of the '456 patent had been put into public use prior to June 19, 1977. As the above discussion makes clear, the Court is not convinced that EPC has met that burden when the evidence is viewed in the light most favorable to Donaldson. Accordingly, EPC's motion for summary judgment as to Donaldson's invalidity defense must be denied.

III. TRADE DRESS

Next before the Court is Donaldson's motion for summary judgment as to EPC's allegation that Donaldson infringed its unregistered trade dress by copying the colors and nonfunctional elements of EPC's Filter Minder in such a way that Donaldson's device creates a confusingly similar overall impression. (Complaint, Count V). "The trade dress of a product is the total image of a product, the overall impression created, not the individual features." *Woodsmith Pub. Co. v. Meredith Corp.*, 904 F.2d 1244, 1247 (8th Cir.1990), *quoted in* *Home Builders Assoc. of Greater St. Louis v. L & L Exhibition Mgmt., Inc.*, 226 F.3d 944, 947 (8th Cir.2000). "[T]rade dress refers to the tangible features of a product or its packaging that create a distinctive image." *Home Builders Association*, 226 F.3d at 947 (discussing *Woodsmith* quote). In its brief, EPC claims as protected trade dress the Filter Minder's "distinctive combination of unique elements that includes the profile of the device, the unique use of colors, the combination of clear and opaque parts, the thermometer bar, and word phrases." EPC Mem. (doc. no. 83), at 36.

EPC's trade dress infringement claim is premised on section 43(a) of the Lanham Act, 15 U.S.C. s. 1125(a), a remedial provision in the federal Trademark Act of 1946 which makes "certain types of unfair competition federal statutory torts," including trade dress infringement. *See Home Builders Association*, 226 F.3d at 947 (quoting *Inwood Laboratories, Inc. v. Ives Laboratories, Inc.*, 456 U.S. 844, 863, 102 S.Ct. 2182, 72 L.Ed.2d 606 (1982)); *Woodsmith*, 904 F.2d at 1247. The Lanham Act "provides for the registration of trademarks, which it defines in s. 45 to include 'any word, name, symbol, or device, or any combination thereof [used or intended to be used] to identify and distinguish [a producer's] goods ... from those manufactured or sold by others and to indicate the source of the goods' " *Wal-Mart Stores, Inc. v. Samara Bros., Inc.*, 529 U.S. 205, 120 S.Ct. 1339, 1342, 146 L.Ed.2d 182 (2000) (quoting 15 U.S.C. s. 1127). "In addition to protecting registered marks, the Lanham Act, in s. 43(a), gives a producer a cause of action for the use by any person of 'any work, term, name, symbol, or device, or any combination thereof ... which ... is likely to cause confusion ... as to the origin, sponsorship, or approval of his or her goods' " *Wal-Mart Stores*, 120 S.Ct. at 1342 (citing 15 U.S.C. s. 1125(a)). Protection under the Act extends equally to a product's "trade dress" which "constitutes a 'symbol' or 'device' for purposes of the relevant sections." *Wal-Mart Stores*, 120 S.Ct. at 1342. And a recently added subsection of s. 43(a) FN16 merely codified the well-settled rule that the "statute provides a remedy to persons whose *unregistered* trade dress is infringed or confusingly imitated by others." *Home Builders Association*, 226 F.3d at 947. In *Wal-Mart Stores*, the Supreme Court addressed the parameters of that rule:

FN16. In 1999, subsection 43(a)(3) was added to the Lanham Act to provide for "civil action[s] for trade dress infringement under this chapter for trade dress not registered under the principal register." 15 U.S.C.A. s. 1125(a)(3) (1999), *quoted in* *Wal-Mart Stores*, 120 S.Ct. at 1343.

The text of s. 43(a) provides little guidance as to the circumstances under which unregistered trade dress may be protected. It does require that a producer show that the allegedly infringing feature is not "functional," *see* s. 43(a)(3), and is likely to cause confusion with the product for which protection is sought, *see* s. 43(a)(1)(A), 15 U.S.C. s. 1125(a)(1)(A). Nothing in s. 43(a) explicitly requires a producer to show that its trade dress is distinctive, but courts have universally imposed that requirement, since without distinctiveness the trade dress would not "cause confusion ... as to the origin, sponsorship, or approval of [the] goods," as the section requires. Distinctiveness is, moreover, an explicit prerequisite for registration of trade dress under s. 2, and "the general principles qualifying a mark for registration under s. 2 of the Lanham Act are for the most part applicable in determining whether an unregistered mark is entitled to protection under s. 43(a)." *Two Pesos, Inc. v. Taco Cabana, Inc.*, 505 U.S. 763, 768, 112 S.Ct. 2753, 120 L.Ed.2d 615 (1992) (citations omitted).

[20] *Wal-Mart Stores*, 120 S.Ct. at 1343. Where damages are sought, as opposed to injunctive relief, the Eighth Circuit requires more than the "likelihood of confusion" standard cited in *Wal-Mart Stores*. *See Woodsmith*, 904 F.2d at 1247, n. 5 (citing *Co-Rect Prods., Inc. v. Marvy! Advertising Photography, Inc.*, 780 F.2d 1324, 1329-30 (8th Cir.1985)). Instead, proof of *actual confusion* must be demonstrated. *See id.*; *Conopco, Inc. v. May Dept. Stores Co.*, 46 F.3d 1556, 1563 (Fed.Cir.1994) ("In the Eighth Circuit, ... [t]o establish entitlement to monetary relief, a plaintiff must show actual confusion, while to establish entitlement to injunctive relief, it is sufficient if the plaintiff establishes likelihood of confusion.") (citations omitted).

[21] EPC seeks only monetary relief and thus its unregistered trade dress is protectable if it proves: (1) that its trade dress is distinctive, (2) that the allegedly infringing feature is non-functional, and (3) that the allegedly infringing feature caused actual confusion with the product for which protection is sought. *See Wal-Mart Stores*, 120 S.Ct. at 1343; *Woodsmith*, 904 F.2d at 1247, n. 5; *Co-Rect Products*, 780 F.2d at 1329-30. The failure to establish any one of these three elements is grounds for dismissal. *See Stuart Hall Co., Inc. v. Ampad Corp.*, 51 F.3d 780, 783 (8th Cir.1995). Accordingly, Donaldson is entitled to summary judgment unless the record, viewed in the light most favorable to EPC, demonstrates at least a genuine issue of material fact as to all three elements. While Donaldson challenges EPC's showing on each element, the Court finds the third element dispositive to resolution of this motion and thus will focus its discussion on EPC's failure to meet its burden to show actual confusion.

A. Actual confusion:

[22] As noted above, EPC seeks only damages in conjunction with its Lanham Act claim and thus, as an essential element of its claim, must demonstrate actual confusion in the marketplace between the Filter Minder and Donaldson's allegedly infringing product. *See Woodsmith*, 904 F.2d at 1247, n. 5; *Co-Rect Products*, 780 F.2d at 1329-30; *Conopco*, 46 F.3d at 1563. "The difficulty of proving actual confusion understandably is greater than that of proving likelihood of confusion." *Conopco*, 46 F.3d at 1563. "Actual confusion is normally proven 'through the use of direct evidence, i.e., testimony from members of the buying public, as well as through circumstantial evidence, e.g., consumer surveys or consumer reaction tests.'" *Id.* at 1564 (internal quotation omitted).

Donaldson contends that summary judgment is warranted because EPC has provided no admissible testimony from members of the buying public, nor has it conducted consumer surveys or reaction tests to support an inference of actual confusion. In response, EPC argues that proof of actual confusion is not

necessary where there is evidence of intentional copying of a product's trade dress. EPC contends that even a cursory side-by-side comparison of its Filter Minder and Donaldson's Air Alert products provides ample proof of intentional copying.

The Court, at this time, need not determine whether EPC's allegations of intentional copying are supported because, even if true, intentional copying does not replace the actual confusion element or relieve EPC of its burden of proving that element. In support of its argument to the contrary, EPC cites a 1975 district court opinion from the Eastern District of New York. *See* EPC Mem. (doc. no. 83), at 43 (citing *Scholl, Inc. v. Tops E.H.R. Corp.*, 185 U.S.P.Q. 754, 1975 WL 21150 (E.D.N.Y.1975)). While *Scholl* arguably supports EPC's argument, the Court has found no Eighth Circuit decisions to support such a proposition and there is strong case law negating any such inference.

The Federal Circuit in *Conopco* applied Eighth Circuit law FN17 and reversed a district court's award of monetary relief for trade dress infringement where the district court "erred in concluding that under Eighth Circuit law actual confusion could be presumed from defendants' intent to copy the overall package design." 46 F.3d at 1565. The trial court had based its conclusion on case law from other circuits in the absence of any Eighth Circuit authority on point. *See id.* The Federal Circuit conducted a "careful evaluation" of the material relied upon by the trial court and found that no such conclusion could be supported. *See id.* at 1564-65. Instead, those cases concerned false advertising claims, *see, e.g.*, *U-Haul Intern., Inc. v. Jartran, Inc.*, 601 F.Supp. 1140, 1149 (D.Ariz.1984) (applying rule that "[p]ublication of deliberately false comparative claims gives rise to a presumption of actual deception and reliance"), *aff'd*, 793 F.2d 1034, 1041 (9th Cir.1986), which under the Lanham Act which were deemed distinct from claims alleging false designation of origin. *See Conopco*, 46 F.3d at 1564-65 (discussing distinction between trade dress infringement and false advertising claims under the Act). In contrast, at issue in *Conopco* was a package design claim in which a retailer marketed a national brand product (Vaseline Intensive Care Lotion) as well as its own private label product. *See id.* at 1565. Although the retailer marked its product with its private logo, the overall package design of the national brand was copied to indicate the similarities between the products and invite the consumer to compare them. *See id.* In such a case, the Federal Circuit was "unwilling to attribute to the Eighth Circuit, absent clear precedent so requiring, a rule that would make such competition presumptively unlawful." *Id.* at 1565.

FN17. Because trade dress infringement issues "raise substantive legal issues over which [it] does not have exclusive subject matter jurisdiction," the Federal Circuit "defer[s] to the law of the regional circuit in which the district court sits" to resolve them. *See Conopco*, 46 F.3d at 1563 (applying Eighth Circuit law to trade dress infringement review).

This Court sees no significant distinction between this case and *Conopco*, and like the Federal Circuit has found nothing to suggest that the Eighth Circuit would embrace the presumption advocated by EPC. To that effect, the Court notes that the similarity between the owner's mark and the alleged infringer's mark is but one of at least six factors that a court must consider in determining whether a *likelihood* of confusion exists. *See, e.g.*, *Hubbard Feeds, Inc. v. Animal Feed Supplement, Inc.*, 182 F.3d 598, 602 (8th Cir.1999) (listing factors); *Co-Rect Products*, 780 F.2d at 1330 (same). It follows then that a determination of *actual confusion*, which imposes a greater burden on the plaintiff, *see, e.g.*, *Conopco*, 46 F.3d at 1563, would not, as a general rule, rest on mere copying alone. *Cf.* *Woodsmith*, 904 F.2d at 1249-50 (holding, in context of lesser "likelihood of confusion" standard, that "[v]isual inspection is permissible as an aid to a district court's determination of likelihood of confusion, but should not constitute the sole basis for the conclusions

made"). Intentional copying in itself cannot substitute for actual confusion because a product intentionally copied is not necessarily well-copied. *See* Hubbard Feeds, 182 F.3d at 603, (quoting Minnesota Mining & Mfg. Co. v. Rauh Rubber, Inc., 130 F.3d 1305, 1308 (8th Cir.1997) ("[C]onsumer confusion ... is the hallmark of any trademark infringement claim.") (internal quotation omitted)). In fact, as this Court reads the case law, EPC's proposed presumption, to some extent, gets the analysis backward. This is so because although intentional copying is not necessarily relevant evidence of actual confusion, evidence of actual confusion may very well support an inference of intentional copying.

Having so concluded, the Court must examine the record to determine whether EPC has raised a triable issue as to actual confusion. It is undisputed that EPC has conducted no customer surveys or reaction tests to show customer confusion with Donaldson's allegedly infringing products. (Donaldson Facts, doc. no. 84, at para. 93; EPC Facts, doc. no. 75, at para. 93). However, although "surveys are probably the most accurate evidence of actual confusion necessary for the award of damages," Woodsmith, 904 F.2d at 1249 (discussing survey evidence in context of "likelihood of confusion" analysis), the absence of survey evidence is not necessarily dispositive on the issue if other equally persuasive evidence is presented. For example, direct testimony of customers may be offered to demonstrate actual confusion, although, depending on the circumstances, it may not be conclusive of its existence. *See id.* (discussing evidence of actual confusion in context of lesser "likelihood of confusion" analysis, and concluding that "a court may find such evidence insufficient to establish the existence of a genuine issue of material fact regarding likelihood of confusion [if the defendant] produced sufficient evidence in response, providing reasonable explanation and serving to discount for ... isolated instances of confusion"). Here, EPC has offered no citations to the voluminous record to support its conclusory statement that "[b]oth deposition testimony and documents exist regarding several instances of confusion by EPC customers who believed the Air Alert was an EPC product." (EPC Mem., doc. no. 83, at 40, n. 14). EPC also states that "[d]uring discovery, [it] identified several instances when representatives of Ford, Siemens, and Mack were confused as to the source of the Donaldson device and thought that it was EPC's Filter Minder." (*Id.* at 40). Again, however, no citations to the record are included.

Rule 56 of the Federal Rules of Civil Procedure provides that:

When a motion for summary judgment is made and supported ..., an adverse party may not rest upon the mere allegations or denials of the adverse party's pleading, but the adverse party's response, by affidavits or as otherwise provided in this rule, *must set forth specific facts showing that there is a genuine issue for trial*. If the adverse party does not so respond, summary judgment, if appropriate, shall be entered against the adverse party.

Fed. R. Civ. Pro. 56(e) (emphasis added); *Lujan v. National Wildlife Federation*, 497 U.S. 871, 872, 110 S.Ct. 3177, 111 L.Ed.2d 695 (1990) (citing *Celotex*, 477 U.S. at 322, 106 S.Ct. 2548); *Bailey v. U.S. Postal Service*, 208 F.3d 652, 654 (8th Cir.2000). *See also* Local Rule 56.1(b) of the U.S. Dist. Ct. for the N. Dist. Iowa (resisting party, where relevant, should submit a "statement of additional material facts that the resisting party contends preclude summary judgment supported by references to those specific pages, paragraphs, or parts of the pleadings, depositions, answers to interrogatories, admissions, exhibits, and affidavits that support the statement"). The Court agrees with Donaldson that EPC's Rule 56(e) burden is not satisfied by the unsupported, conclusory statements included in its brief. Moreover, the Court, at this point, is quite familiar with the record in this case and, as it stands, whatever scant testimony there may be regarding confusion is insufficient to raise a genuine issue as to whether EPC can prove actual confusion, an essential element to its claim. *See Children's Factory, Inc. v. Binee's Toys, Inc.*, 160 F.3d 489, 495-96

(8th Cir.1998) (affirming district finding of no actual confusion where plaintiff "pointed to only a few incidents of confusion"); *Conopco*, 46 F.3d at 1563 (reversing district court's award of monetary relief where no survey evidence presented, district court erred in applying copying presumption, and there were only reasonably explained isolated incidents of actual confusion); *Woodsmith*, 904 F.2d at 1249-50 (affirming district court grant of summary judgment to defendant because no reasonable trier of fact could find likelihood of confusion where no survey evidence submitted and the plaintiff offered only "a few instances of actual confusion among subscribers" (seven letters from "confused" customers)). Accordingly, Donaldson is entitled to summary judgment as to EPC's trade dress infringement claim.

FALSE ADVERTISING

Finally, the Court addresses EPC's motion for summary judgment on Donaldson's counterclaims seeking damages and injunctive relief for alleged unfair competition and false advertising in violation of the Lanham Act, 15 U.S.C. s. 1125(a); the Minnesota Deceptive Trade Practices statute (MDTP) s. 325D.44; and the common law of unfair competition. (Claim III, IV and V of Def.'s Second Amended Answer and Counterclaim, doc. no. 100). EPC contends that summary judgment is warranted because (1) Donaldson cannot establish the elements of its false advertising counterclaim and (2) EPC is a successor company without liability for the alleged torts of the former owners. Because the Court agrees that Donaldson cannot establish the essential elements of its false advertising counterclaims, EPC is entitled to summary judgment on Claims III, IV and V of Donaldson's counterclaim and the Court need not address the parties' successor liability arguments.

[23] [24] As relevant to Donaldson's false advertising claim, the Lanham Act prohibits commercial advertising or promotion that misrepresents the nature, characteristics, qualities, or geographic origin of the advertiser's or another person's goods, services, or commercial activities.FN18 *See United Indus. Corp. v. Clorox Co.*, 140 F.3d 1175, 1179-80 (8th Cir.1998) (citing *Rhone-Poulenc Rorer Pharm., Inc. v. Marion Merrell Dow, Inc.*, 93 F.3d 511, 514 (8th Cir.1996) and 15 U.S.C. s. 1125(a)(1)(B)). The Eighth Circuit has held that to establish a claim under the false or deceptive advertising prong of the Lanham Act,FN19 a plaintiff must prove: (1) the defendant made a false statement of fact about its own or another's product that has the capacity to deceive; (2) the statement was made in connection with commercial advertising or promotion; (3) the statement is material, in that it is likely to influence the purchasing decision; (4) the defendant caused the false statement to enter interstate commerce; and (5) the [plaintiff has] been or [is] likely to be injured as a result of the false statement, either by direct diversion of sales from itself to the defendant or by a loss of goodwill associated with its products.FN20 *See Blue Dane Simmental Corp. v. American Simmental Assoc.*, 178 F.3d 1035, 1042 (8th Cir.1999) (citing *United Industries*, 140 F.3d at 1180); *see also* 15 U.S.C. s. 1125(a)(1)(B).

FN18. The cases cited by the parties, and those found by this Court, make no relevant distinctions between a false advertising analysis under the Lanham Act and one under Minnesota's deceptive trade practices law. *See, e.g.*, *Transclean Corp. v. Bridgewood Serv., Inc.*, 77 F.Supp.2d 1045, 1095 (D.Minn.1999) ("In 'evaluating any claims that are brought under both the State and Federal Statutes, the Court applies the same analysis.' ") (quoting *LensCrafters, Inc. v. Vision World, Inc.*, 943 F.Supp. 1481, 1487-88 (D.Minn.1996)); *Hillerich & Bradsby Co. v. Christian Bros., Inc.*, 943 F.Supp. 1136, 1140 (D.Minn.1996) ("In the context of trademark infringement, the Minnesota Deceptive Trade Practices Act creates claims that mirror those under the Lanham Act.") (citing *Woodroast Sys. v. Restaurants Unltd.*, 793 F.Supp. 906, 918 (D.Minn.1992)). Nor do the parties' briefs make an analytical distinction between the statutory and common law claims. Accordingly, this Court will presume that its Lanham Act analysis is equally dispositive as to the state and

common law claims.

FN19. False advertising claims under the Lanham Act usually do not fall within the exclusive jurisdiction of the Federal Circuit but are instead reviewed in accordance with the laws of the regional circuit within which the case arose. *See Continental Plastic Containers v. Owens Brockway Plastic Prods., Inc.*, 141 F.3d 1073, 1080 (Fed.Cir.1998) (discussing application of regional law to review of Lanham Act claims generally); *KeyStone Retaining Wall Sys., Inc. v. Westrock, Inc.*, 997 F.2d 1444, 1447 (Fed.Cir.1993) (holding that a "false advertising" claim under s. 43 of the Lanham Act must be reviewed under the law of the regional circuit).

FN20. "In addition, to recover money damages under the Act, a '[p]laintiff must prove both actual damages and a causal link between defendant's violation and those damages.'" *United Industries*, 140 F.3d at 1180 (quoting *Rhone-Poulenc*, 93 F.3d at 515). Although Donaldson requests both monetary and injunctive relief in its counterclaim, it neither discusses nor presents evidence regarding actual damages. The Court therefore presumes that Donaldson has abandoned its request for monetary relief in conjunction with its false advertising counterclaim. To that effect, EPC is entitled to summary judgment on the issue of monetary damages under the Lanham Act, and the remainder of the Court's discussion will address only the showing necessary for injunctive relief.

[25] "The false statement necessary to establish a Lanham Act violation generally falls into one of two categories: (1) commercial claims that are literally false as a factual matter; and (2) claims that may be literally true or ambiguous but which implicitly convey a false impression, are misleading in context, or likely to deceive customers." *United Industries*, 140 F.3d at 1180 (citations omitted). With regard to comparative advertising, the Eighth Circuit has recognized two types of potentially "factually-false" claims: "(1) bald assertions (e.g., 'My product is better than yours'); and (2) assertions supported by testing (e.g., 'Tests prove my product is better than yours')." *EFCO Corp. v. Symons Corp.*, 219 F.3d 734, 739 (8th Cir.2000) (quoting *Rhone-Poulenc*, 93 F.3d at 514). "A plaintiff must show that a bald assertion is actually false, whereas a 'tests prove' assertion is considered false if not substantiated by reliable testing." *EFCO Corp.*, 219 F.3d at 739-40. Mere "puffery" - defined as "exaggerated advertising, blustering, and boasting upon which no reasonable buyer would rely" - is not actionable under s. 43(a). *See Southland Sod Farms v. Stover Seed Co.*, 108 F.3d 1134, 1139 (9th Cir.1997), *quoted in United Industries*, 140 F.3d at 1180. Thus, vague or highly subjective representations of product superiority constitute nonactionable puffery, *see id.* (citations omitted), while "false descriptions of specific or absolute characteristics of a product and specific, measurable claims of product superiority based on product testing are not puffery and are actionable." *Id.* (citations omitted).

At issue in this case are two instances of alleged false advertising: an EPC print advertisement and an EPC product demonstration.FN21 In the former, a catalog advertisement for the Filter Minder, EPC invited readers to "[c]ompare current dial air restriction gauges with the Filter Minder." (Exh. A to Def.'s 1st Amended Answer and Counterclaim, doc. no. 32). The ad includes a grid with two columns, one entitled "Filter Minder" and the other generically capturing all other "dial gauges." (*Id.*). Among the grid's six comparative statements, Donaldson challenges the following as false and misleading:

FN21. Donaldson also cites a 1998 newspaper article in which EPC allegedly falsely and misleadingly

described Donaldson's product as an "inferior imitation." The six-sentence article at issue, entitled "Firm files patent infringement suit," appears alongside other brief articles on court-related matters and is merely a summary of the recently-filed lawsuit. There is nothing to suggest that the article is anything other than a legitimate news item and as such it is outside the protective scope of the Lanham Act and Minnesota's deceptive trade practices statute. *See United Industries*, 140 F.3d at 1179-80 ("In particular, the Act prohibits *commercial* advertising or promotion that misrepresents the nature, characteristics, qualities, or geographic origin of the advertiser's or another person's goods, services, or commercial activities.") (emphasis added) (citing *Rhone-Poulenc*, 93 F.3d at 514 and 15 U.S.C. s. 1125(a)(1)(B)); *Bolger v. Youngs Drug Prods. Corp.*, 463 U.S. 60, 66-67, 103 S.Ct. 2875, 77 L.Ed.2d 469 (1983) (listing factors governing whether speech is commercial, including whether the communication is an advertisement, whether it refers to a specific product or service, and whether the speaker has an economic motivation for the speech); *Porous Media Corp. v. Pall Corp.*, 201 F.3d 1058, 1059 (8th Cir.2000) (affirming summary judgment in favor of defendant on grounds that "press releases did not constitute 'commercial advertising or promotion' as required by the Lanham Act" nor did they constitute a "disparage[ment] [of] the goods, services, or business of another" under Minn.Stat. s. 325D.44).

(1) "Easy to read and understand (human engineered bar graph display):" Other dial gauges no, Filter Minder yes.

(2) "Vulnerable to shock error:" Other dial gauges yes, Filter Minder no "(Only Filter Minder meets military tank specs)."

(3) "Maintains highest restriction reading with engine shut down (dial returns to zero with engine shut down):" Other dial gauges no, Filter Minder yes.

(*Id.*).

[26] After a thorough review of the record, the Court concludes that Donaldson cannot premise its false advertising claim on the print advertisement. As to the first statement—that EPC's gauge is "easy to read and understand" while others' are not—the Court finds that it is mere puffery and not actionable. The statement is subjective, nonspecific and nonmeasurable and therefore cannot be deemed "false" or "likely to mislead" under the Act. *See Porous Media*, 173 F.3d at 1124 (finding that statement in mailer by defendant that its filters demonstrated "consistently lower pressure drops" was nonactionable puffery because it was merely a "statement of general superiority" and did not mention competitor by name); *United Industries*, 140 F.3d at 1180 ("Nonactionable puffery includes representations of product superiority that are vague or highly subjective.") (citing, *inter alia*, *Cook, Perkiss & Liehe, Inc. v. Northern California Collection Serv., Inc.*, 911 F.2d 242, 246 (9th Cir.1990) (advertising that merely states in general terms that one product is superior is not actionable)).

[27] As to the other two statements, the Court finds that Donaldson has failed to raise a genuine issue of material fact as to the statements' falsity or capacity to deceive. Donaldson's predominant argument is that EPC made the challenged claims without conducting any tests to substantiate them. *See Donaldson Resistance Brief*, doc. no. 80, at 28-29. This argument fails, however, because none of the challenged statements explicitly refers to supportive testing. Thus they are "bald assertions" for purposes of Lanham Act analysis and Donaldson must establish their falsity. *See United Industries*, 140 F.3d at 1175 ("When challenging a claim of superiority that does not make express reference to testing, a plaintiff must prove that the defendant's claim of superiority is actually false, not simply unproven or unsubstantiated."). Donaldson failed to offer any evidence of the inaccuracy or falsity of EPC's claimed comparative superiority regarding

restriction reading or vulnerability to shock. Nor has Donaldson shown that EPC's statement-"only Filter Minder meets military tank specs"-was literally false. Specifically, Donaldson has failed to refute the testimony of Ike Leighty and Ric Canepa regarding the existence of military tank specifications or EPC's conformity with those specifications, nor has Donaldson presented evidence that other gauges also met the specifications.FN22 Finally, Donaldson presented no evidence that the challenged statements, even though not literally false, would nevertheless have a tendency to deceive consumers. *See United Industries*, 140 F.3d at 1183 (holding that where literal falsity not proved, plaintiff bears burden of proving confusion among consumers due to specific product statements).

FN22. The Court rejects Donaldson's selective reading of Mr. Canepa's testimony. Although Mr. Canepa characterized the "military tanks specs" statement as "a little more hype than actuality," he admitted that there was a specification for military indicators, that EPC tested its Filter Minder against the military specification, and that EPC met the specification. That EPC interpreted the specification "very liberally" does not make its statement literally false. *Cf. Rhone-Poulenc*, 93 F.3d at 515 (addressing comparative advertising, e.g., "tests prove" mine is better statement, and stating that "[t]o ensure vigorous competition and to protect legitimate commercial speech, courts applying this standard should give advertisers a fair amount of leeway, at least in the absence of a clear intent to deceive or substantial consumer confusion").

[28] As further grounds for its false advertising claim, Donaldson cites allegedly misleading product demonstrations conducted by EPC in which an EPC sales representative would strike the Donaldson Informer and EPC Filter Minder against a flat surface.FN23 The purpose of the demonstration was to allegedly show that the Informer would "ratchet up" prematurely, thereby demonstrating the superior "reliability" and "shock load resistance" of the Filter Minder. EPC concedes that it did the side by side comparison on occasion, but asserts that it was a valid demonstration of the Filter Minder's superior shock and vibration resistance. Donaldson argues that the demonstration was false and misleading because EPC purported to "prove" to customers that the Informer, *when installed*, would be vulnerable to shock and vibration although no tests were ever done to determine whether the demonstration replicated the torque or shock load that would occur in an actual engine operating environment.

FN23. In another version of the demonstration, an EPC representative would vigorously shake or tap on the respective indicators.

Viewing the record most favorably to Donaldson, the Court finds that it has failed to raise a genuine issue of material fact as to whether the demonstrations were false or misleading. If construed as a bald assertion-my gauge is more shock resistant than your gauge-then Donaldson has failed to raise a genuine issue as to the falsity of that claim. If construed as a "tests prove" claim-tests prove that my gauge is more shock resistant than your gauge-then Donaldson has failed to raise a genuine issue as to the reliability of the demonstration to prove that claim. *See Rhone-Poulenc*, 93 F.3d at 515 ("To ensure vigorous competition and to protect legitimate commercial speech, courts applying this standard should give advertisers a fair amount of leeway, at least in the absence of a clear intent to deceive or substantial consumer confusion."), *quoted in United Industries*, 140 F.3d at 1183.

Donaldson argues that the demonstration was unreliable because it did not mimic the actual engine operating environment. This argument misses the mark, however, because there is nothing in the record to suggest that EPC ever represented its shaking, tapping, or slamming of the gauges as a perfect replication of an engine.

Nor is the Court persuaded that any observer would view the demonstration, as described in the record, as "scientific testing" for such a proposition. And finally, even if EPC was claiming that the demonstration proved that the Informer fails when installed, the Court is unconvinced that EPC's less than scientific methodology actually deceived or had a tendency to deceive a substantial segment of its audience. *See Blue Dane Simmental*, 178 F.3d at 1042 (listing essential elements of false advertising claim); *United Industries*, 140 F.3d at 1180; *see also* 15 U.S.C. s. 1125(a)(1)(B).

Because Donaldson has failed to raise a genuine issue of material fact as to the false or misleading nature of the print advertisement or the product demonstration, EPC is entitled to summary judgment on Donaldson's false advertising counterclaims.

PART TWO

INFRINGEMENT

[29] The Court next turns to the parties' cross-motions for summary judgment as to Donaldson's alleged infringement of EPC's '456 patent. An infringement analysis entails two steps: first, "determining the meaning and scope of the patent claims asserted to be infringed," and second, "comparing the properly construed claims to the device accused of infringing." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed.Cir.1995) (en banc), *aff'd*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996), *quoted in* *Dow Chem. Co. v. United States*, 226 F.3d 1334, 1338 (Fed.Cir.2000). In this part of the opinion, the Court will first construe the disputed claims under the rules laid down by the Federal Circuit in *Markman* and its progeny, and then review the accused device, Donaldson's NG Air Alert, to determine whether either party is entitled to summary judgment.

1. Background of the '456 Patent

The '456 patent was issued to Joseph Nelson on May 1, 1984, for an "air filter restriction indicating device." As summarized in the patent, the claimed invention relates to an air restriction indicating device for use in connection with an air filter for internal combustion engines which indicates and maintains a progressive and continuous showing of the degree of contamination of the air filter so that air filter servicing may be scheduled before the filter life is expended and before higher fuel consumption occurs.

'456 patent, "Summary of the Invention" ("Summary"), col. 3, lines 7-14.

In general, an air filter allows air into a vehicle's engine but restricts dirt which can ruin an engine. *See* Pl.'s Exh. 31, EPC product video. Up to a certain point, as the filter gets dirtier it becomes more efficient because the acquired dirt further blocks the holes in the air filter, thus allowing even fewer dirt particles to pass through and reach the engine. *See id.* Therefore, it is in the operator's best interest to use the filter until it has reached maximum efficiency-at which point it is filtering out 99.9 per cent of dirt. *See id.* After it reaches its maximum capacity, the air filter must be replaced but changing it prior to that decreases efficiency. *See id.*

Prior to Mr. Nelson's invention, existing air filter indicators indicated when an air filter was so dirty that it needed to be changed but did not give gradual fixed readings from a clean to a dirty filter condition. *See* '456 patent, "Background of the Invention" ("Background"), col. 1, lines 25-29. As a result, many operators unnecessarily cleaned or prematurely changed an air filter element rather than risk having a warning signal appear at a time when the filter could not promptly be inspected. *See id.*, lines 29-33. Such over-servicing

prevents the normal dust build-up from filtering out more dirt particles and decreases filter efficiency and life span. *See id.*, lines 33-39. The difficulty in ascertaining how much capacity is left in an air filter once the engine is turned off was another perceived problem. *See id.*, lines 51-54. Mr. Nelson opined that when the engine was stopped completely, existing gauges failed to indicate the true condition of the air filter under maximum load condition. *See id.*, lines 54-64. To make such an observation, the engine had to be restarted and preferably operated with a dynamometer to simulate maximum load conditions. *See id.*, line 65-col. 2, line 3. Such procedures took considerable time and expense and if not done frequently could result in the engine dangerously operating with an overloaded air filter. *See id.*, col. 2, lines 3-6.

Mr. Nelson's objective with the '456 patent was to address the above-discussed shortcomings in existing indicator technology. The claimed device gives a progressive reading from a clean air filter condition to a dirty filter condition and automatically locks into the highest of various indicating positions corresponding to the clogged air flow condition (that is, dirty filter condition) experienced during engine operation so that it may be read after shutdown and may also be monitored during engine operation. *See id.*, col. 2, lines 18-24. Thus, the operator will know when cleaning or replacement of an air filter is truly necessary because a visible indicating member will progressively track the life span of the filter. *See id.*, lines 31-45. After cleaning or replacement, the indicator can be manually reset for reuse.

The device works, in part, by the use of a flexible diaphragm positioned within a housing to create two chambers. *See EPC Facts*, doc. no. 79, at para. 49. The diaphragm moves according to the differential pressures created in the two chambers. *See id.* One side of the diaphragm is exposed to atmospheric pressure while the other side is exposed to a vacuum created by the air intake of the engine. *See id.* A visible indicating member moves with the diaphragm. *See id.* A spring also cooperates with the diaphragm and indicating member to urge it in one direction. *See id.* As the vacuum in the air filter increases, pressure on the diaphragm causes it and the indicating member to move-thus indicating filter clogging. *See id.* In order to provide a progressive indication of filter clogging, the invention includes a "lock up means" for locking the indicating member at various positions and holding the indicator in those positions. *See Donaldson Response Facts*, doc. no. 81, at para. 49. Additionally, a "means for selectively disengaging," (i.e., the "reset mechanism") is included to permit the diaphragm to return to its original position. *See id.* This allows the indicator to be reused throughout the life of the engine. *See id.*

The '456 patent contains one independent and seven dependent claims. Claim 1, the only independent claim, comprises eight elements and Donaldson has stipulated that its NG Air Alert includes the first six elements. At issue, then, are the remaining two elements of Claim 1. Those elements, with the disputed language in italics, read as follows:

1. An improved restriction indicating device for an air filter used with an internal combustion engine where the improved indicating device is in communication with the air flowing from the air filter to the air intake of the internal combustion engine, the improved indicating device comprising:

* * * * *

lock-up means for progressively locking the indicating member in the various positions which it attains within the first chamber as the diaphragm moves from its infold position to its outfold position and for maintaining the indicating member in its last such position even though there may thereafter be a subsequent decrease in the vacuum in the first chamber, the lock-up means including a tubular member carried by and movable with the central portion of the diaphragm, with the tubular member having a closed

end that is adjacent to the first end of the housing and having an open end that is adjacent to the second end of the housing that is in open communication with the second chamber; the lock-up means also including *an elongated locking member* having a first end and a second end, *the locking member being supported by the second end of the housing so as to permit movement of the first end of the locking member between a first position and a second position*; the first end of the locking member being disposed, when the first end of the locking member is in its first position, adjacent to the open end of the tubular member; *the second end of the locking member projecting from the second chamber through the opening in the second end of the housing*; *the first end of the locking member and the open end of the tubular member having interengagable notches thereon that are adapted to be engaged when the first end of the locking member is in its first position, with engagement between the notches permitting the diaphragm to move from its infold position to its outfold position but preventing the diaphragm from returning to its infold position*; and

means for selectively disengaging the interengagable notches so as to permit the diaphragm to return to its infold position when the vacuum in the first chamber is relatively low.

Claim 1, col. 6, line 38-col. 7, line 55.

2. Rules of Claim Construction

[30] A patent describes the exact scope of an invention so as to "secure to [the patentee] all to which he is entitled, [and] to apprise the public of what is still open to them." Markman, 517 U.S. at 373, 116 S.Ct. 1384 (citations omitted). Patents consist of two distinct elements: one or more "claims," which "particularly poin[t] out and distinctly clai[m] the subject matter which the applicant regards as his invention," *id.* (citing 35 U.S.C. s. 112), and the "specification," which should describe the invention "in such full, clear, concise and exact terms as to enable any person skilled in the art ... to make and use the same." *Id.* (citations omitted). The public record of the patent before the Patent and Trademark Office ("PTO"), on which the public is entitled to rely, also includes the prosecution history which is the written record of the submissions of the patentee and the comments of the PTO. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed.Cir.1996). Together the claims, specification, and prosecution history constitute the intrinsic evidence of the meaning of the claim terms, and are considered the most important sources for construing a patent. *See Doyle v. Crain Indus., Inc.*, 2000 WL 1608826, (Fed.Cir.2000); *Vitronics*, 90 F.3d at 1582. As explained by the Federal Circuit:

[31] [i]n most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence. In those cases where the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper. The claims, specification, and file history, rather than extrinsic evidence, constitute the public record of the patentee's claim, a record on which the public is entitled to rely. In other words, competitors are entitled to review the public record, apply the established rules of claim construction, ascertain the scope of the patentee's claimed invention and, thus, design around the claimed invention. Allowing the public record to be altered or changed by extrinsic evidence introduced at trial, such as expert testimony, would make this right meaningless.

Vitronics, 90 F.3d at 1583, *quoted in* *CAE Screenplates, Inc. v. Heinrich Fiedler GmbH & Co.*, 224 F.3d 1308, 1319 (Fed.Cir.2000); *see also* *Georgia-Pacific Corp. v. United States Gypsum Co.*, 195 F.3d 1322, 1332 (Fed.Cir.1999) ("[W]hen intrinsic evidence is unambiguous, it is improper for the court to rely on extrinsic evidence to contradict the meaning of the claims.") (citing *Pitney Bowes, Inc., v. Hewlett-Packard*

Co., 182 F.3d 1298, 1308-9 (Fed.Cir.1999)).

[32] Claim construction is a question of law for the court, *see* Markman, 517 U.S. at 372, 116 S.Ct. 1384, and the Federal Circuit has outlined procedural steps and rules to guide district courts in the task.

A) "*Standard*" claim construction

[33] [34] "Claim interpretation is the process of giving proper meaning to the claim language," Abtox, Inc. v. Exitron Corp., 122 F.3d 1019, 1023 (Fed.Cir.1997), and claim construction always starts with the language of the claim itself. *See* Vitronics Corp., 90 F.3d at 1583; *see also* Digital Biometrics, Inc. v. Identix, Inc., 149 F.3d 1335, 1344 (Fed.Cir.1998) ("The actual words of the claim are the controlling focus.") (*citing* Thermalloy, Inc. v. Aavid Eng'g, Inc., 121 F.3d 691, 693 (Fed.Cir.1997)); Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1248 (Fed.Cir.1998) (stating that claim construction "begins and ends in all cases with the actual words of the claim"). Absent the patentee's express intent to impart a novel meaning, terms in a claim are to be given their ordinary meaning as understood by one of ordinary skill in the art. *See* Optical Disc Corp. v. Del Mar Avionics, 208 F.3d 1324, 1334 (Fed.Cir.2000) (citing Kegel Co. v. AMF Bowling, Inc., 127 F.3d 1420, 1427 (Fed.Cir.1997) and Hoechst Celanese Corp. v. BP Chems. Ltd., 78 F.3d 1575, 1578 (Fed.Cir.1996) ("A technical term used in a patent document is interpreted as having the meaning that it would be given by persons experienced in the field of the invention, unless it is apparent from the patent and the prosecution history that the inventor used the term with a different meaning.")); *accord*, Doyle, 2000 WL 1608826 at *5; Markman, 52 F.3d at 986 ("The focus is on the objective test of what one of ordinary skill in the art at the time of the invention would have understood the term to mean."). "There is a 'heavy presumption in favor of the ordinary meaning of claim language.'" Kraft Foods, Inc. v. Int'l Trading Co., 203 F.3d 1362 (Fed.Cir.2000) (quoting Johnson Worldwide Assocs. v. Zebco Corp., 175 F.3d 985, 989 (Fed.Cir.1999)).

"For such ordinary meaning, [the court] turns, generally, to the dictionary definition of the term." FN24 Optical Disc Corp., 208 F.3d at 1335 (citing Vitronics, 90 F.3d at 1584 n. 6). This ordinary meaning provides the "default meaning," and the court must then consider the specification, and if in evidence the prosecution history, to determine whether the patentee provided a distinct definition for a term, or used any terms in a manner inconsistent with their ordinary meaning. *See, e.g.,* Hormone Research Found., Inc. v. Genentech, Inc., 904 F.2d 1558, 1563 (Fed.Cir.1990) ("It is a well-established axiom in patent law that a patentee is free to be his or her own lexicographer and thus may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings.") (citations omitted); Vitronics, 90 F.3d at 1582 ("[I]t is always necessary to review the specifications to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning.").

FN24. Although dictionaries are technically extrinsic evidence (and thus under Federal Circuit rules entitled to relatively little weight), the Federal Circuit has distinguished dictionaries and held that "[j]udges are free to consult such resources at any time ... and may also rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent document." Vitronics, 90 F.3d at 1584 n. 6. This rule rests on the premise that both the patentee and the public have equal access to such reference works, and therefore they can be appropriately used to assist in understanding the meaning and scope of the claim. *See id.*

[35] Although courts should look to the written descriptions in the specification to define a term already in a

claim limitation, *see* Markman, 52 F.3d at 979 (holding that claims "must be read in view of the specification, of which they are a part"), it is well-settled that courts cannot read a limitation into a claim from the written description:

[The Federal Circuit] has consistently adhered to the proposition that courts cannot alter what the patentee has chosen to claim as his invention, that limitations appearing in the specification will not be read into claims, and that interpreting what is meant by a word in a claim is not to be confused with adding an extraneous limitation appearing in the specification, which is improper.

Laitram Corp. v. NEC Corp., 163 F.3d 1342, 1348 (Fed.Cir.1998), *quoted in* Kemco Sales, Inc. v. Control Papers Co., Inc., 208 F.3d 1352, 1362 (Fed.Cir.2000); *accord*, KCJ Corp. v. Kinetic Concepts, Inc., 223 F.3d 1351, 1356 (Fed.Cir.2000) ("[A]lthough the specifications may well indicate that certain embodiments are preferred, particular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments.") (quoting Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc., 34 F.3d 1048, 1054 (Fed.Cir.1994)); Kraft Foods, 203 F.3d at 1366-67 ("Although the written description may aid in the proper construction of a claim term, limitations, examples, or embodiments appearing only there may not be read into the claim.") (citing Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1186-87 (Fed.Cir.1998)).

[36] The prosecution history may also assist in claim interpretation but "it too cannot 'enlarge, diminish, or vary' the limitations in the claims." Markman, 52 F.3d at 980 (internal quotations omitted). Only where the patentee clearly takes a position before the PTO such that a competitor would reasonably believe that the applicant had surrendered the relevant subject matter can the prosecution history be used to "limi[t] the interpretation of claims so as to exclude any interpretation that may have been disclaimed or disavowed during prosecution in order to obtain claim allowance." Standard Oil Co. v. American Cyanamid Co., 774 F.2d 448, 452 (Fed.Cir.1985), *quoted in* KCJ Corp., 223 F.3d at 1356; *see also* Cybor Corp. v. FAS Technologies, Inc., 138 F.3d 1448, 1457 (Fed.Cir.1998); Cole v. Kimberly-Clark Corporation, 102 F.3d 524, 531 (Fed.Cir.1996); York Prods., Inc. v. Central Tractor Farm & Family Ctr., 99 F.3d 1568, 1572 (Fed.Cir.1996).

[37] Finally, a court may consider evidence that is extrinsic to the public record of the patent but such evidence is entitled to very little weight. *See* Vitronics, 90 F.3d at 1584; Markman, 52 F.3d at 978-79 (premising rule on notice grounds: that public entitled to review public record, apply claim construction rules, ascertain scope of claimed invention, and then design around it). A court's reliance on expert testimony is generally limited to guidance in understanding the underlying technology of a claimed invention or the meaning of technical terms with which the court is unfamiliar. *See* Optical Disc Corp., 208 F.3d at 1334. As to the construction of disputed claim terms, expert testimony may be relied on only if "the patent documents, taken as a whole, are insufficient to enable the court to construe disputed claim terms. Such instances will rarely, if ever occur." Vitronics, 90 F.3d at 1585.

B) Means-plus-function construction

Under 35 U.S.C. s. 112, para. 6, FN25 "a patentee may define the structure for performing a particular function generically through the use of a means expression, provided that it discloses specific structure(s) corresponding to that means in the patent specification." Kemco Sales, 208 F.3d at 1360 (citations omitted); *see generally* Kudlacek v. DBC, Inc., 115 F.Supp.2d 996, 1024-26 (N.D.Iowa 2000) (and cases cited therein, including Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d 1360, 1364 (Fed.Cir.2000) (s. 112,

para. 6 "allows patent applicants to claim an element of a combination functionally, without reciting structures for performing those functions"); and *IMS Tech., Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1429-30 (Fed.Cir.2000) ("Limitations contemplated by s. 112, para. 6, often referred to as means-plus-function or step-plus-function limitations, recite a specified function to be performed rather than the structure, material, or acts for performing that function.")).

FN25. Section 112, para. 6 provides that:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without 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.

[38] [39] Where a patent claim states a means-plus-function element, the construction of the element is "limited to the structure corresponding to the claimed function as 'described in the specification and equivalents thereof.'" *Envirco Corp.*, 209 F.3d at 1365 (quoting s. 112, para. 6); *accord Atmel Corp. v. Information Storage Devices, Inc.*, 198 F.3d 1374, 1380-82 (Fed.Cir.1999) (holding that the structure supporting a means-plus-function limitation must be disclosed in the specification); *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042 (Fed.Cir.1993) (same). "Use of the term 'means' in a claim limitation creates a presumption that [s. 112, para. 6] has been invoked, but that presumption may be rebutted if the properly construed claim limitation itself recites sufficiently definite structure to perform the claimed function." *Kemco Sales*, 208 F.3d at 1361 (citing *Personalized Media Communications, LLC v. ITC*, 161 F.3d 696, 704 & nn. 9, 10 (Fed.Cir.1998)); *accord Envirco Corp.*, 209 F.3d at 1364. "After a court establishes that a means-plus-function limitation is at issue, it must then construe the function recited in that claim and determine what structures have been disclosed in the specification that correspond to the means for performing that function." *Kemco Sales*, 208 F.3d at 1361 (citing *Chiuminata Concrete Concepts, Inc. v. Cardinal Indus.*, 145 F.3d 1303, 1308 (Fed.Cir.1998)).

3. Construction of the '456 patent

A) The lock-up means:

The lock-up means is the part of the invention that locks the indicating member at each pre-determined level of air restriction and holds the indicator at that point even after the engine is turned off. The parties have several disputes concerning the proper construction of language within the lock-up means element, though both argue that the claim terms should be interpreted according to their plain and ordinary meaning.FN26

FN26. Unless specifically noted with regard to a particular term or phrase, neither party has offered the prosecution history in support of its proposed claim construction and thus that history has not been reviewed by the Court.

a. Elongated locking member

[40] The first dispute concerns the meaning of the claim's requirement that the lock-up means "also includ[e] an elongated locking member." Col. 7, line 32. Giving the terms their ordinary meaning, the Court agrees with EPC that a "member," defined generally, is a part or a piece, a "locking member" is a part or piece capable of being locked, and an "elongated locking member" is a locking member which is slender in

length relative to width. *See, e.g.*, Webster's New World Dictionary, 2d ed. (1970); The American Heritage Dictionary, New College Ed. (1976). A more difficult issue regarding this phrase, however, is whether the patentee's use of the word "member" in the singular form limits the scope of the claim to *one* elongated locking member consisting of a single piece as arguably reflected in the patent drawings. Donaldson insists that it does consist of only one piece, while EPC argues that the use of the singular form in this instance cannot be so limited and that the claim would encompass a locking member made up of multiple elongated pieces.

Nothing in the specification suggests to this Court that the patentee intended to give a novel meaning to the term, "member." Donaldson cites the patent drawings and numerous references throughout the specification in support of its position that "member"-under its ordinary meaning and as used by the patentee-refers to a single piece. There can be no dispute that in the patent drawings the locking member is drawn as a single piece. Further, in the "Description of the Preferred Embodiment" ("Description"), the patentee's description of "an elongated locking member [# 96] angled as shown at *its* upper end [# 106] and having notches [# 98] formed on *its* side" (emphasis added), and references to "*the* member" or "*said* member," appear to contemplate a single locking member. But, as repeatedly cautioned by the Federal Circuit, while the specification may inform the court as to the definition of a claim term, "particular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiment." *KCJ Corp.*, 223 F.3d at 1356 (citations omitted). To that effect, use of the word "member" does not necessarily define a component made of a single piece or exclude a component made up of multiple pieces. A recent opinion by a sister court in this district addressed a similar dispute and reached the same conclusion:

[T]he pertinent definition of member is "a constituent part of a whole," *see, e.g.*, Merriam Webster's Collegiate Dictionary (10th ed., 1995), and the synonym "part" is defined, *inter alia*, as "a constituent member of a machine or other apparatus." *See id.* Ordinary experience teaches that a constituent part or member of a machine or apparatus may itself consist of one or several components, depending, for example, on the intricacy of the "part" or "member" and the machine or apparatus to which it belongs.

Kudlacek, 115 F.Supp.2d at 1023.

This Court agrees that one skilled in the art of air filter indicator manufacturing would read "member" in claim 1's lock-up means element to encompass a piece or part of something else, regardless of whether that "member" is made of one or more components. Consequently, the Court finds that the lock-up means element of claim 1 encompasses a locking member, comprised of either a single piece or multiple pieces joined together, which is slender in length relative to width.

b. Support and movement

[41] The parties next dispute what it means for the locking member to be "supported by the second end of the housing so as to permit movement of the first end of the locking member between a first position and a second position." Col. 7, lines 33-37. More specifically, the parties dispute the meaning of the preposition "by" in this context. Donaldson argues that under the claim the locking member must be supported in a specific manner to permit a particular type of movement, i.e., that the locking member must be mounted to the housing to allow pivoting around a pivot point in the second end of the housing, as embodied by the flange in the preferred embodiment. EPC argues that the claim language cannot be so limited and that all that is required is that the locking member be supported in a manner that allows movement of its first end.

The word "support" means, *inter alia*: to carry or bear the weight of; to hold in position; to prevent from falling, slipping, or sinking; or, to hold up. *See, e.g.*, Webster's New World Dictionary, 2d ed. (1970); The American Heritage Dictionary, New College Ed. (1976). Under the claim limitation, that support is provided by the second end of the housing. Thus, the second end of the housing must hold the locking member in position, thereby preventing it from falling or slipping, in a manner that permits movement of the first end of the locking member between a first position and a second position. The claim language itself, then, is quite broad-that the support provided by the second end of the housing permit movement between a first and second position-and at issue is whether, as Donaldson contends, the specification or prosecution history mandate a more restrictive interpretation.

Applying standard claim construction rules, the Court is disinclined to restrict the claim language in the manner proposed by Donaldson to read additional limitations into the claim. As an initial matter, the Court notes that at the *Markman* Hearing in this case there was considerable disagreement between the parties as to the meaning of "pivot" as used in the specification. The Court need not resolve that dispute here, however, as there is nothing in the specification to indicate the patentee's intent to limit the meaning of "movement" to the particular pivoting movement selected for the preferred embodiment. The single reference to "pivoting" is found in the Description wherein, discussing the reset process, the patentee writes that "[t]his will cause the locking member [# 96] to pivot, about the flange [# 104], from its cocked, off-center position, shown in Figs. 3 and 4, to a vertical position where the notches [# 98] can no longer engage the notches [# 100]." Col. 6, lines 13-16. It is well-settled that limitations from the preferred embodiment may not be imported to more broadly-worded claim language unless there is a clear indication that the patentee was acting as his own lexicographer to impart a novel meaning to a term. *See e.g.*, *KCJ Corp.*, 223 F.3d at 1356. There is nothing to suggest that this is such a case and, accordingly, the Court will not take the drastic step of effectively limiting the definition of "movement" to "pivot." FN27 Consequently, the Court holds that the disputed language requires only that the second end of the housing holds the locking member in position, in a manner that allows for the first end of the locking member to move between a first and a second position.

FN27. Donaldson's references to the prosecution history to support its position are inapposite. The cited exchanges between Mr. Nelson and the PTO are not directed to the "support" limitation but rather to the shape of the locking member and its "operation in progressively changing and maintaining" its relative lockup position. That the version of the claim in the specification subsequently approved included more detail regarding the pivoting action in the resetting means does not mean that inclusion of such language was necessary to approval of the amended claims. In light of this ambiguity, the Court does not find that the prosecution history evinces the patentee's clear intent to surrender any device which did not include a pivoting mechanism. *See, e.g.*, *Standard Oil*, 774 F.2d at 452 (holding that prosecution history limits claim only when patentee clearly takes position before PTO such that competitor would reasonably believe the applicant had surrendered the relevant subject matter).

c. Interengagable notches

[42] The parties dispute the meaning of interengagable notches as recited in the claim. The lock-up means element describes "the first end of the locking member and the open end of the tubular member having interengagable notches thereon that are adapted to be engaged when the first end of the locking member is in its first position, with engagement between the notches permitting the diaphragm to move from its infold

position to its outfold position but preventing the diaphragm from returning to its infold position." Col. 7, 43-51. Then, when so desired, e.g., when the air filter is replaced, the resetting mechanism is activated so that the interengagable notches disengage and the diaphragm returns to its infold position. *See* col. 7, lines 52-55.

The Court sees nothing in the claim language itself or specification to suggest that the patentee used the words "interengagable" and "notches" in anything other than their ordinary meanings. Nowhere in the patent is either term specifically defined. Rather, the Description explains the placement of and engagement between the notches on the locking member and those on the inner wall of the guiding member. To that effect, the Description describes a locking member "having notches formed on its side" and "[c]orresponding complementary protruding ridges or notches" on an "inner adjacent wall portion of the guiding member." Col. 5, lines 8-12. The Description goes on to explain that the notches need be "so formed that relative upward movement of [the locking] member is permitted but it is locked against downward movement by interengagement of said notches [on the member and the guiding wall]." Col. 5, lines 12-16. Thus, the Description is wholly consistent with the claim language and the Court need only determine the ordinary meaning of "interengagable notches" to one skilled in the art of air filter manufacturing.

"Notch" is defined by Webster's as a "concave or V-shaped cut or indentation in an edge or across a surface." Webster's New World Dictionary, 2d ed. (1970); *accord*, The American Heritage Dictionary, New College Ed. (1976). "Engage" is defined as "to interlock with or mesh together." *Id.* Thus, interengagable notches would be complementary concave or V-shaped cuts or indentations on the locking member and tubular member which are capable of engaging or interlocking with one another. This Court adopts those definitions here, adding only that the notches must be so formed as to comply with the claim's requirement that interengagement of the notches permits progressive movement in one direction while preventing movement in the opposite direction (absent selective force through the resetting means).

d. Projection of the locking-member

[43] Finally, with regard to the lock-up means, the parties dispute the meaning of the claim's requirement that "the second end of the locking member project[s] from the second chamber through the opening in the second end of the housing." Col. 7, lines 40-45. "Project" means to jut out or protrude and an "opening" is an open place or part, a hole, or a gap. *See, e.g.*, Webster's New World Dictionary, 2d ed. (1970); The American Heritage Dictionary, New College Ed. (1976). There is nothing in the specification that suggests any intended meanings other than these ordinary ones. Thus, giving the claim language its ordinary meaning, the claim requires that the second end of the locking member protrude from the second chamber through an open place or gap in the second end of the housing.

B) The reset means:

[44] The final element in claim 1 is a "means for selectively disengaging the interengagable notches so as to permit the diaphragm to return to its infold position when the vacuum in the first chamber is relatively low." Col. 7, lines 52-55. The parties agree that this limitation is written in means-plus-function format. Thus the Court must determine the claimed function and identify the structure or structures which perform that function. The claim's scope is limited to that structure and its equivalents.

The plain language of the claim explicitly defines the function as to "selectively disengag[e] the interengagable notches so as to permit the diaphragm to return to its infold position when the vacuum in the first chamber is relatively low." *Id.* There are two paragraphs in the specification that discuss the structure

that performs the claimed function:

When it is desired to reset the indicator after cleaning or replacement of the air filter and after the member [# 96] has been locked up, as shown in Fig. 4, the thumb of the operator, as shown in Fig. 4, is pressed against the button [# 114] to move the member [# 96] from its off-center position to a vertical dotted line position by reason of the cooperation between the flange [# 104] and the bottom wall [# 42] and the enlarged hole [# 50], as shown in Fig. 4, to release the notches [# 96] and [# 100] and permit spring [# 80] to return the indicating assembly to its lower home position, as shown in Fig. 1

Col. 5, lines 50-62.

If it is desired to permit the diaphragm [# 54] to return to its infold position, as shown in Fig. 3, a person need only push the button [# 114], as shown in Fig. 4, against the bias of spring [# 116]. This will cause the locking member [# 96] to pivot, about the flange [# 104], from its cocked, off-center position, shown in Figs. 3 and 4, to a vertical position where the notches [# 98] can no longer engage the notches [# 100]. The bias of the spring [# 80] then readily returns the diaphragm [# 54] to its infold position shown in Fig. 3.

Col. 6, lines 9-18.

EPC argues that these paragraphs clearly indicate that the structure corresponding to the claimed function of disengaging the interengaged notches is the button, labeled # 114 in the patent drawings. Per EPC's argument, the button receives and transfers forces which overcome the reset button spring and move the locking member away from its engaged position so that the coiled compression spring can then push the diaphragm back to its infold position. Donaldson advocates a much more restrictive construction of the limitation, arguing that the corresponding structure must also include a "pivoting structure," embodied in the specification and drawings as the cooperation between the locking member and the flange labeled # 104 in the patent drawings.

In a recent opinion, the Federal Circuit discussed identification of corresponding structure in a means-plus-function element. *See Wenger Manufacturing, Inc. v. Coating Machinery Systems, Inc.*, 239 F.3d 1225 (Fed.Cir.2001). In that opinion, the Federal Circuit cautioned that "[u]nder s. 112, para. 6, a court may not import functional limitations that are not recited in the claim, or structural limitations from the written description that are unnecessary to perform the claimed function." *Id.* at 1233 (citing *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed.Cir.1999)). The *Wenger* court found that the district court had correctly identified "circulating air" as the recited function of the claim but rejected the district court's conclusion that the structure corresponding to that function required the ability to *recirculate* air. *See Wenger*, 239 F.3d at 1232-33. The *Wenger* court explained that "[b]y doing so, the [district] court improperly restricted the 'air circulation means' limitation to structure that was disclosed in the preferred embodiment, but was not necessary to perform the recited function of circulating air." *Id.* at 1233. *Wenger* teaches, then, that it is the claim language that defines the scope of the function to be performed and, correspondingly, the scope of the structure to be identified to perform that function. Here, the claim language makes no mention of "pivoting" and thus the issue is whether the function of selectively disengaging the interengagable notches is fully performed by the button, as asserted by EPC. If so, then the additional pivoting structure proposed by Donaldson-particularly the flange-is mere surplusage which, while present in the preferred embodiment, is not necessary to performing the function.

Applying *Wenger* and other Federal Circuit guidelines on means-plus-function construction, the Court

agrees with EPC that the structure for selectively disengaging the interengagable notches cannot be limited to that which performs a "pivoting function." The claim recites disengagement of interengagable notches on the locking and tubular members and the meaning of those components-locking member, tubular member, and interengagable notches-has already been construed. It follows that the Court cannot construe the "selectively disengaging" function in a manner that would indirectly narrow those previously defined terms. As this Court reads Donaldson's proposed interpretation, it would do just that by effectively limiting "locking member" and "notches" to a version which utilizes a pivoting movement in disengaging the notches on the locking and tubular members, as in the preferred embodiment. That embodiment, however, is merely one proposed actualization of the invention, and in another embodiment the locking member and interengagable notches could look quite different but still fall within the scope of the claim. The Court will not limit the legitimate breadth of that difference by requiring one particular disengagement method where the specification describes structure that can fully perform the function in a less restricted manner. Here, the Court agrees with EPC that that structure is the button which receives and transfers forces which overcome the reset button spring and move the locking member away from its engaged position so that the coiled compression spring can then push the diaphragm back to its infold position.

3. Infringement

Donaldson concedes that its original Air Alert literally infringes the '456 patent and thus EPC is entitled to partial summary judgment as to infringement by that device.FN28 With regard to its subsequent NG Air Alert device, however, Donaldson maintains its noninfringement defense and counterclaim. *See* Doc. no. 100, Second Amended Answer and Counterclaim, s.s. 74 and 82. Thus, the Court's review of the parties' cross-motions on infringement will concern only the NG Air Alert.

FN28. This does not, of course, preclude Donaldson's assertion that it cannot be held liable for that infringement under its alternative defenses of laches, estoppel and patent invalidity.

[45] To show literal infringement of a patent, a patentee must supply sufficient evidence to prove that the accused product or process meets every element or limitation of a claim. *See* KCJ Corp., 223 F.3d at 1358 ("Literal infringement of a claim occurs when every limitation recited in the claim appears in the accused device, i.e., when 'the properly construed claim reads on the accused device exactly.' ") (internal quotation omitted); *accord*, Rohm and Haas Co. v. Brotech Corp., 127 F.3d 1089, 1091 (Fed.Cir.1997). In contrast, "[i]nfringement under the doctrine of equivalents requires that the accused product contain each limitation of the claim *or its equivalent*." KCJ Corp., 223 F.3d at 1358 (citing Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 40, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997)). "An element in the accused product is equivalent to a claim limitation if the differences between the two are 'insubstantial' to one of ordinary skill in the art." KCJ Corp., 223 F.3d at 1358. Because the patent at issue involves a mechanical invention the Court will also apply the function-way-result test for additional guidance on the question of equivalence. *See* Dawn Equip. Co. v. Kentucky Farms, Inc., 140 F.3d 1009, 1016 (Fed.Cir.1998) (discussing Supreme Court's observation in Warner-Jenkinson Co. v. Hilton Davis Chemical Co., 520 U.S. 17, 39, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997), that this test "may be suitable for analyzing mechanical inventions"). "Under the function-way-result test, one considers whether the element of the accused device at issue performs substantially the same function, in substantially the same way, to achieve substantially the same result, as the limitation at issue in the claim." Dawn Equip. Co., 140 F.3d at 1016; *see also, e.g.*, Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1267 (Fed.Cir.1999) ("The 'insubstantial difference' analysis [in a means-plus-function claim] requires a determination of 'whether the 'way' the accused structure performs the claimed

function, and the 'result' of that performance, are substantially different from the 'way' the claimed function is performed by the 'corresponding structure ... described in the specification,' or its 'result.' "), *quoted in* Ishida Co., Ltd. v. Taylor, 221 F.3d 1310, 1317 (Fed.Cir.2000). "Whether the accused device contains each claim element exactly or its equivalent is a question of fact." KCJ Corp., 223 F.3d at 1351 (citation omitted). When infringement is addressed at the summary judgment stage, the standard for granting such a motion "sets a high hurdle which th[e] court does not lightly attempt to surmount." Vehicular Techs. Co. v. Titan Wheel Int'l, Inc., 212 F.3d 1377, 1381 (Fed.Cir.2000).

Because the parties have filed cross-motions for summary judgment on the issue of infringement, the Court's infringement analysis involves a number of separate steps. Applying the claims as construed above, the Court must determine whether either party has demonstrated an absence of genuine issue of fact and entitlement to summary judgment as to infringement by the NG Air Alert. EPC, as the patentee, bears the burden to establish that every element of the claim reads on the accused device, either literally or under the doctrine of equivalents. Summary judgment in favor of EPC is appropriate only if, after resolving reasonable inferences in favor of Donaldson, no reasonable jury could find for Donaldson on its noninfringement defense, i.e., the only conclusion which a reasonable jury could draw is that every element reads on the NG Air Alert either literally or equivalently. If Donaldson can raise a genuine issue of material fact as to even one element or limitation in the claim, summary judgment in favor of EPC would be inappropriate. In reviewing Donaldson's motion for summary judgment, the Court must examine the evidence and grant all reasonable inferences to EPC. Donaldson is entitled to summary judgment on its noninfringement defense if, with regard to *any* element in the claim, it can show that no reasonable jury could find that element in the NG Air Alert, either literally or equivalently. At issue are the last two elements of claim 1-the "lock-up means" and the "resetting mechanism." FN29 The Court will address EPC's motion first and then Donaldson's.

FN29. Donaldson has stipulated that the first six elements of claim 1 are found in the NG Air Alert.

A) *EPC's motion for summary judgment on infringement*

As noted above, EPC must prove that every element in the allegedly infringed claim reads on the accused device either literally or under the doctrine of equivalents. Because the Court concludes that Donaldson has raised a genuine issue of material fact as to at least one disputed element, EPC's summary judgment motion is denied.

The lock-up means element of claim 1 requires that the "the second end of the locking member project[] from the second chamber through the opening in the second end of the housing." Col. 7, lines 40-43. Giving the relevant terms their ordinary meaning, the Court held the phrase to mean that the second end of the locking member, as that term is defined above, protrudes from the second chamber through an open place or gap in the second end of the housing. At issue is the extent of the structure in the NG Air Alert that can reasonably be deemed the "locking member" in order to comply with the claim requirement that the member project from the second end of the housing. Citing drawings of the NG Air Alert included in Donaldson's expert report and testimony by Donaldson's expert, EPC contends that the locking member in the Donaldson device is comprised of the locking fingers, the locking member hub, the mounting disk and the spider. As depicted in Donaldson's drawings, the mounting disk and arguably a portion of the spiders are positioned below the opening in the second end of the housing, and thus, under EPC's "macro" interpretation of "locking member," the claim limitation is satisfied.

[46] After thoroughly reviewing the drawings and deposition testimony referenced by EPC, the Court concludes that a genuine issue of material fact remains as to whether the locking member in Donaldson's device projects from the second chamber through an opening in the second end of the housing. First of all, there is some ambiguity and inconsistency in Donaldson's drawings as to exactly what is labeled as the "locking member." The drawings are hand-labeled with hand-drawn arrows pointing to various aspects of the device and the Court is not persuaded that these informal labels are determinative, or even particularly enlightening, as to whether the "locking member" of the '456 patent as read on the NG Air Alert includes the mounting disk and spiders. The deposition testimony cited by EPC is similarly inconclusive. Secondly, the definition of "locking member" is not dispositive of the matter. As defined above, the "elongated locking member" of the claim is a part capable of being locked, which is comprised of either a single piece or multiple pieces joined together and which is slender in length relative to width. Analogizing to the Donaldson device, there is at least a viable argument that the "locking member" as it appears in the NG Air Alert consists only of the locking fingers and the locking member hub. Under this permissible interpretation, the locking member does not project from the second chamber but rather is positioned wholly within the second chamber and thus does not literally infringe the claim.

Further, cognizant that "[i]nfringement under the doctrine of equivalents requires an intensely factual inquiry," *Vehicular Techs. Corp.*, 212 F.3d at 1381 (citations omitted), the Court is not inclined to hold as a matter of law that no reasonable jury could find this distinction substantial. *See id.* ("[T]his court is well aware of the difficulty of granting summary judgment motions on issues requiring delicate balancing of many factual components.... This standard sets a high hurdle which this court does not lightly attempt to surmount.") (internal citations omitted).

EPC offers no additional analysis to advance its equivalence argument, conclusorily stating that "[b]ecause this claim limitation is met literally, it is also met equivalently." As discussed above, the Court does not agree that a jury must find literal infringement of this limitation and is similarly persuaded under an equivalents analysis. The purpose of the claim's limitation in this instance—that the locking member project from the second chamber—is to permit cooperation between the reset mechanism and the locking member during selective disengagement of the interengagable notches. *See id.* (explaining need in doctrine of equivalents analysis to consider the role of each limitation in the claimed invention). It is arguably true that extension of the mounting disk through the second end of the housing serves the same broad purpose. Making that conclusion as a matter of law, however, necessitates an aggregation of factual inferences in favor of EPC that the Court is not inclined to accept at the summary judgment stage, particularly where EPC bears the burden of proving infringement. Donaldson argues that its mounting disk and spiders play a much different and more complex role in the resetting means than does the locking member extension of the '456 patent and, in light of that argument, a jury could reasonably conclude that the structural and functional distinctions between the two remove the NG Air Alert from equivalence infringement as well. Accordingly, because Donaldson has raised a genuine issue of material fact as to whether EPC can prove infringement, either literally or under the doctrine of equivalents, EPC's summary judgment motion on this issue must be denied.FN30

FN30. Because EPC must prove that Donaldson's NG Air Alert meets every limitation in the claim, the Court's decision on the "projecting" limitation mandates denial of EPC's summary judgment motion as to infringement by that device and the Court will not address additional disputed claim limitations in conjunction with the motion.

B) *Donaldson's motion for summary judgment on noninfringement*

In contrast to EPC's motion which required discussion of only one limitation, Donaldson's motion requires this Court to decide whether EPC has raised at least a genuine issue as to the presence of each and every disputed limitation in the NG Air Alert, either literally or under the doctrine of equivalents. After thoroughly reviewing the record and granting all reasonable inferences in favor of EPC, the Court concludes that it has and that, accordingly, Donaldson is not entitled to summary judgment on its noninfringement defense. Because EPC can satisfy its burden by showing *either* literal or equivalents-doctrine infringement, this Court's discussion will focus on the evidence which would support, although not necessarily require, a jury finding of infringement under the latter.FN31

FN31. Because the Court concludes that EPC can meet its summary judgment burden applying an equivalents-doctrine analysis, the Court makes no determination on whether EPC could also prove literal infringement.

First, a jury could reasonably find that the lock-up means' "elongated locking member" is present in the NG Air Alert. Donaldson makes three alternative arguments in opposition to this conclusion: (1) that its device has three locking members rather than one; (2) that its locking member is not elongated due to the outward flexing fingers; and (3) that its locking member is not elongated due to the outward flexing fingers at one end and the mounting disk on the other. However, as this Court has construed the relevant terms, a jury could reasonably find those distinctions irrelevant or insubstantial. Under the Court's construction of "member," Donaldson's three locking fingers could be deemed equivalent to one locking member. Moreover, under even the most expansive interpretation of locking member in the NG Air Alert-including both the outward flexing fingers and the mounting disk-a jury could conclude that, as a whole, the member is nevertheless slender in length relative to width.

Second, a jury could reasonably find that the NG Air Alert includes a locking member "supported by the second end of the housing so as to permit movement of the first end of the locking member between a first position and a second position." As touched on above, a jury could reasonably decide that the locking member in Donaldson's device encompasses the hub and the mounting disk, and, if so, there seems no question that it is held in place by the second end of the housing. As this Court reads the briefs, however, Donaldson contends that any such support does not "permit movement of the first end of [the NG Air Alert's] locking member between a first position and a second position;" rather, Donaldson argues, the locking fingers are movable because of they are made of a thin, very flexible material and designed with separations between the fingers so as to facilitate movement. This argument fails, however, because under the Court's construction of this limitation the manner of support provided need not necessarily drive the movement of the first end of the locking member. Rather, the support must merely be such that movement of the first end of the locking member is "permitted" or allowed. Thus, a jury could reasonably find that the locking member in the NG Air Alert is held at the second end of the housing in a manner that allows the first end of the locking member-the locking edges on the locking fingers-to move from a first position (wedged against the ridges of the tubular member) to a second position (disengaged from the tubular member).

Third, under the doctrine of equivalents, a jury could reasonably find that the cooperation between the locking edges on the NG Air Alert's locking member and the complementary ridges on the tubular member

satisfy the claim's requirement that the locking and tubular members have "interengagable notches." As this Court defined those terms, the claim's "interengagable notches" requires complementary concave or V-shaped cuts or indentations on the locking member and tubular member which are capable of engaging or interlocking with one another and which are so formed that interengagement of the notches permits progressive movement in one direction while preventing movement in the opposite direction (absent selective force through the resetting means). Donaldson argues that its device contains no notches and that the mechanism by which its locking fingers are "locked" cannot be considered interengagement of notches. Rather, Donaldson contends, the edges of its locking fingers rest against ridges or shoulders in the tubular member. This Court found less than persuasive Donaldson's efforts at oral argument to define "notches" as mutually exclusive from "ridges" and "interengagement" as mutually exclusive from "resting." However, even if Donaldson's definitions are accepted, a jury could reasonably find the distinctions insubstantial under the doctrine of equivalents.

Fourth, a jury could reasonably conclude that the locking member projects from the second chamber through an opening in the second end of the housing. Donaldson argues that its locking member-consisting of the locking fingers and hub-is contained wholly within the second chamber. As defined by the Court, "member," as used in the claim, is not restricted to a component comprised of a singular piece but rather also encompasses a member comprised of multiple pieces. Thus, there is nothing in the Court's construction of "locking member" that would prohibit a jury's acceptance of EPC's argument that the locking member in the NG Air Alert includes the mounting disk and spiders as well. And if so construed, a jury could reasonably find that the member projects from the second chamber through the second end of the housing.

And finally, the Court concludes that applying the function-way-result test, a jury could reasonably find that the reset button in the NG Air Alert is equivalent to the reset means in the '456 patent. Donaldson argues that, in contrast to the reset mechanism in the '456 patent, its NG Air Alert employs two independent parts to disengage the locking fingers: the flexible fingers which wedge against the ridges of shoulders in the tube attached to the diaphragm, and the reset button which, when pushed, causes a set of reset legs to extend over the flexible fingers thereby bending and collapsing them away from the tube so that the diaphragm is free to return to its original position. As this Court has construed the means-plus-function element at issue, the button is the corresponding structure and a jury could reasonably find that the button on the NG Air Alert fully performs the function of "selectively disengaging" the interengagable notches. And even if, as Donaldson contends, the force transmitted by the button in the '456 patent is a lateral force as opposed to the downward force transmitted by the button in the NG Air Alert, a jury could reasonably find that distinction insubstantial under the doctrine of equivalents.

Accordingly, because EPC has raised a genuine issue of material fact as to the presence of each disputed claim limitation in the NG Air Alert, Donaldson's motion for summary judgment as to noninfringement by that device must be denied.

ORDER

Accordingly, it is ORDERED:

The parties' motions for summary judgment (doc. nos. 69 and 74) are GRANTED in part and DENIED in part, as follows:

Part One

1. EPC's motion for summary judgment as to Donaldson's equitable estoppel defense is DENIED. Donaldson's motion on that issue is also DENIED.

2. EPC's motion for summary judgment as to Donaldson's laches defense is DENIED. Donaldson's motion on that issue is also DENIED.

3. EPC's motion for summary judgment as to Donaldson's invalidity defense is DENIED. Donaldson's motion on that issue is also DENIED.

4. Donaldson's motion for summary judgment as to EPC's trade dress infringement claim under section 43(a) of the Lanham Act, 15 U.S.C. s. 1125, is GRANTED.

5. EPC's motion for summary judgment as to Donaldson's counterclaims III, IV and V alleging false advertising under the Lanham Act, the Minnesota Deceptive Trade Practices Act, and common law unfair competition, is GRANTED.

Part Two

1. EPC's motion for summary judgment with regard to infringement of the '456 patent by the original Air Alert is GRANTED.

2. EPC's motion for summary judgment with regard to infringement of the '456 patent by the NG Air Alert is DENIED.

3. Donaldson's motion for summary judgment with regard to noninfringement of the '456 patent by the NG Air Alert is DENIED.

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