

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

ALPHA RESOURCES, INC.,)	
Plaintiff and Counter-Defendant,)	
)	No. 1:15-cv-1295
-v-)	
)	HONORABLE PAUL L. MALONEY
LECO CORPORATION,)	
Defendant and Counter-Plaintiff.)	
_____)	

**OPINION AND ORDER GRANTING ALPHA RESOURCES' MOTION FOR SUMMARY
JUDGMENT AND DENYING LECO CORPORATION'S MOTION FOR SUMMARY
JUDGMENT**

Leco Corporation owns a patent for a removable combustion tube used in a combustion furnace. (ECF No. 1-1 Patent No. '193 PageID 5-22.) The furnace burns inorganic, solid materials at very high temperatures, so that the gases produced can be analyzed. The materials are placed in a quartz combustion tube, which is locked into a base. The tube and the base are then raised and the tube goes into the furnace. Over time, the tubes need cleaning and replacement. The patent covers, among other things, the base assembly that allows the combustion tube to be held in place on the base.

Alpha Resources sells a replacement kit designed for replacing the tube. Leco threatened to sue Alpha Resources for indirect infringement. Alpha Resources filed this lawsuit seeking a declaratory judgment. Before the Court are cross motions for summary judgment. Alpha Resources filed its motion first. (ECF Nos. 11 and 12.) LECO Corporation then filed its cross motion for summary judgment. (ECF Nos. 17 and 18.)

The parties disagree whether using the replacement kit to replace the combustion tube constitutes a repair, which would not infringe on Leco's patent, or constitutes a reconstruction, which would infringe

on the patent. The Court finds that using Alpha Resources' kit to replace the combustion tube falls under the repair doctrine and does not result in infringement of Leco's patent.

I.

Summary judgment is appropriate only if the pleadings, depositions, answers to interrogatories and admissions, together with the affidavits, show there is no genuine issue of material fact and that the moving party is entitled to a judgment as a matter of law. Fed. R. Civ. P. 56(a) and (c); *Payne v. Novartis Pharms. Corp.*, 767 F.3d 526, 530 (6th Cir. 2014). The burden is on the moving party to show that no genuine issue of material fact exists, but that burden may be discharged by pointing out the absence of evidence to support the nonmoving party's case. Fed. R. Civ. P. 56(c)(1); *Holis v. Chestnut Bend Homeowners Ass'n*, 760 F.3d 531, 543 (6th Cir. 2014). The facts, and the inferences drawn from them, must be viewed in the light most favorable to the nonmoving party. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986) (quoting *Matsushita Elec. Indust. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986)). Once the moving party has carried its burden, the nonmoving party must set forth specific facts in the record showing there is a genuine issue for trial. *Matsushita*, 475 U.S. at 574; *Jakubowski v. Christ Hosp., Inc.*, 627 F.3d 195, 200 (6th Cir. 2010) ("After the moving party has met its burden, the burden shifts to the nonmoving party, who must present some 'specific facts showing that there is a genuine issue for trial.'") (quoting *Anderson*, 477 U.S. at 248). In resolving a motion for summary judgment, the court does not weigh the evidence and determine the truth of the matter; the court determines only if there exists a genuine issue for trial. *Tolan v. Cotton*, –U.S.–; 134 S.Ct. 1861, 1866 (2014) (quoting *Anderson*, 477 U.S. at 249). The question is "whether the evidence presents a sufficient disagreement to require submission to the jury or whether it is so one-sided that one party must prevail as a matter of law."

Anderson, 477 U.S. at 251-252.

II.

The repair doctrine is well established in patent law and application of the doctrine requires consideration of the unique facts presented in each case. In *Aro Manufacturing Company v. Convertible Top Replacement Company*, 365 U.S. 336 (1961), the United States Supreme Court considered the difference between a replacement and a repair for the purpose of patent infringement. The dispute involved replacement tops for convertible automobiles. The patent covered the combination of a flexible fabric, the supporting structures, and the means for sealing the fabric against the car and away from the elements. Although the supporting structures often lasted as long as the car itself, the fabric for the convertible top had a much shorter life and was ordinarily replaced after several years. Aro was a leading manufacturer of replacement fabric tops that were designed to be used on cars that had been fitted with the patented invention.

The Court held that the replacement fabric top did not infringe on the patent. The Court found that the manufacture and sale of the fabric top did not constitute direct infringement. The Court noted that the fabric was an unpatented element of a combination patent, which covered a combination of components. *Aro*, 365 U.S. at 339. Necessarily then, the manufacture and sale of the fabric was not a direct infringement. *Id.* at 340. And, if there is no direct infringement, then well-settled law holds that there can be no contributory infringement. *Id.* at 341.

The Court held that maintaining the use of the whole, by repairing spent, unpatented parts of the whole, does not constitute reconstruction of the whole. *Aro*, 365 U.S. at 346. The Court rejected an “essential,” “essence,” or “heart of the invention” test, which was proposed by the patent holder. *Id.* at

343-44. The Court reasoned that “if anything is settled in patent law, it is that the combination patent covers only the totality of the elements in the claim, and that no element, separately viewed, is within the grant.” *Id.* at 344. The Court explained that the license to use the patented combination included the right to preserve its fitness for use. *Id.* at 345-46 (citations omitted). Accordingly, the repair doctrine serves as a defense to a direct infringement claim for the owner of the device who is making the repairs. *Husky Injection Molding Sys., Ltd. v. R&D Tool Eng’g Co.*, 291 F.3d 780, 785 (Fed. Cir. 2002). The repair doctrine also serves as a defense to a contributory infringement or inducement of infringement claim for the manufacturer and seller of the replacement parts. *Surfco Hawaii v. Fin Control Sys. Pty, Ltd.*, 264 F.3d 1062, 1066 (Fed. Cir. 2001).

Following *Aro*, the Federal Circuit has attempted to provide some guidance for the repair doctrine. The repair doctrine broadly encompasses “any repair that is necessary for the ‘maintenance of the use of the whole of the patented combination through replacement of a spent, unpatented element.’” *Sage Prods., Inc. v. Devon Indus., Inc.*, 45 F.3d 1575, 1578 (Fed. Cir. 1995) (quoting *Aro*, 365 U.S. at 346); *see Aktiebolag v. E.J. Co.*, 121 F.3d 669, 672 (Fed. Cir. 1997) (“The Supreme Court has taken an expansive view of what constitutes permissible repair.”). “[T]he general rule is that ‘while the ownership of a patented article does not include the right to create a substantially new article, it does include the right to preserve the useful life of the original article.’” *Surfco*, 264 F.3d at 1065 (citation omitted).

The Federal Circuit has stated that “there is no bright-line test for determining whether a device has been permissibly repaired[.]” *Jazz Photo Corp. v. United States*, 439 F.3d 1344, 1354 (Fed. Cir. 2006); *but see Husky Injection Molding*, 291 F.3d at 785-86 (describing the holding in *Aro* as a bright-line test). The Federal Circuit has acknowledged that the repair or reconstruction question is frequently a difficult one

to answer in all but the extreme cases. *Husky Injection Molding*, 291 F.3d at 786. Using a patent for an automobile as an example, replacing the spark plugs is a repair while replacing everything except the spark plugs would be an impermissible reconstruction. *Id.* at 786-87. Inherent in the repair doctrine, the extent of the replacement must not be disproportionate to the overall value of the parts not replaced. *See Fuji Photo Film Co., Ltd. v. Int'l Trade Comm'n*, 474 F.3d 1281, 1296 (Fed. Cir. 2007); *Husky Injection Molding*, 291 F.3d at 786-87; *Jazz Photo Corp. v. Int'l Trade Comm'n*, 264 F.3d 1094, 1106 (Fed Cir. 2001).

When determining if a repair or a reconstruction occurred, courts may consider a number of factors, including the nature of the actions by the individual alleging repair, the nature of the device and how it is designed, whether any component of the device has a shorter useful life than other components, whether a market has developed for to manufacture or service a component of the device, and objective evidence of the intent of the patentee. *Aktiebolag*, 121 F.3d at 673. Repair, rather than reconstruction, typically occurs when individual, worn-out, replaceable parts are substituted. *Husky Injection Molding*, 291 F.3d at 787-88; *Bottom Line Mgmt., Inc. v. Pan Man, Inc.*, 228 F.3d 1352, 1355 (Fed. Cir. 2000) (refurbishing the upper cooking surface of a dual-sided cooking element was a repair not a reconstruction); *Porter v. Farmers Supply Servs., Inc.*, 790 F.2d 882, 885-86 (Fed. Cir. 1986) (holding that replacing relatively inexpensive harvester discs that wear out after a few weeks is a repair when the harvester itself was expected to last for years) (collecting cases). When the patentee markets a part of the device as single-use, replacing the single-use part constitutes repair and does not infringe on the patent. *Kendall Co. v. Progressive Med. Tech., Inc.*, 85 F.3d 1570, 1575 (Fed. Cir. 1996). The process by which a replacement part is substituted should not make a difference. *See Dana Corp. v. American Precision*

Co., Inc., 827 F.2d 755, 759-60 (Fed. Cir. 1987) (finding no distinction between custom rebuilding of individual worn-out clutches and an assembly line process of rebuilding worn-out clutches).

The repair doctrine also allows owners of the device to substitute replaceable parts, even when those parts have not yet worn out. *Surfco*, 264 F.3d at 1065 (sale of replacement fins for surfboards where the replacement fins were often substituted for the originals before the originals were spent). Prior to *Surfco*, there was Federal Circuit authority that suggested that the law was otherwise, that the repair doctrine only extended to the replacement of worn-out parts. First, in *Lummus Industries, Inc. v. D.M.&E. Corp.*, 862 F.2d 267 (Fed. Cir. 1988), the appellant challenged the jury instructions and the verdict form after an adverse verdict. In the instructions submitted to the jury, the trial court stated, that “the replacement of a component which is not worn out with an accessory component which is a material part of the invention constitutes patent infringement because it is a reconstruction of the patented machine.” *Id.* at 270. The Federal Circuit upheld the instructions and denied the appeal, although the issue presented to the court did not specifically address the whether a part could be replaced before it was worn out. Second, in *Everpure, Inc. v. Cuno, Inc.*, 875 F.2d 300 (Fed. Cir. 1989), the court considered replacement water filters. As constructed by the patentee, when the filter within a cartridge wore out, the entire cartridge had to be replaced, even though other parts of the cartridge had not yet worn out. Another company sold replacement cartridges which required the use of an adapter. The parts that comprised the adapter did not replace any worn-out part from Everpure’s cartridge. The majority concluded that no infringement occurred. The dissent concluded that adapter was “plainly in the category of reconstruction,” because there was no right replace unworn or unbroken parts of a patented structure. *Id.* at 305 (Newman, J. dissenting).

In contrast, when the patentee does not intend the part to be replaced, courts have found that the substitution of a single part can be a reconstruction. *See Aktiebolag*, 121 F.3d at 673. In *Aktiebolag*, the patented device was a drill with a unique carbide bit that had specially configured cutting edges. The drill tip was not separately patented. *Id.* at 670. The patentee did not manufacture or sell replacement drill tips. *Id.* at 672. Over time and use, the drill tips would need to be sharpened, which involved putting a new edge on the tip, and which was anticipated by the patentee. *Id.* at 671. At some point, the drill tip could not be sharpened because of chips or cracks. *Id.* Both parties agreed that once the tip was damaged and could not be sharpened, the drill had reached the end of its useful life. *Id.* E.J. Company would retip the drill by removing the damaged tip with a torch, welding a rectangular-shaped piece of carbide in its place, and then grinding the carbide through a series of steps to recreate the patented geometry of the drill tip. *Id.* at 671-72. The court considered multiple factors before concluding that the retipping process was a patent-infringing reconstruction, not a repair. *Id.* at 673-74.

III.

The Court begins by examining the patent itself. The abstract of the patent describes the invention and its purpose. Succinctly put, the invention is the assembly which both holds and easily releases the combustion tube from the combustion furnace.

A combustion tube mounting system releasably mounts a combustion tube to an aperture in the floor of a furnace housing. The combustion tube has a base assembly with a cam and can be manually or automatically unlocked by cam pins in the floor for selectively engaging the cam by lowering the combustion tube from the floor on the lower seal assembly and raised, it automatically aligns and engages the upper furnace housing seal and engages cams on the floor of the furnace housing which lock the combustion tube in place as it is introduced into the furnace.

(ECF No. 101 Patent No. '193 PageID.5.) The patent contains fifteen figures, and figures 3-5 illustrate

the combustion tube and its base assembly. (*Id.* PageID.8-9.) The patent contains twelve claims. (*Id.* PageID.21.) Four of the twelve claims, Claims 1, 4, 7, and 8, are independent claims, and each describes the claim as “a combustion furnace and combustion tube assembly.” Each of the four independent claims includes a description of a base assembly on the combustion tube. Claims 1, 4, and 7, perfunctorily describe the base assembly on the combustion tube as part of the releasable locking mechanism extending between the combustion tube and the furnace floor. (*Id.*) That mechanism includes “a cam secured near one end” of the combustion tube, which holds the tube to the floor and also allows the tube to be released. The dependent claims (Claims 2, 3, 5, and 6) address variations to the portion of the releasable locking mechanism that is affixed to the movable floor of the furnace.

In Claim 8, the patent provides more a detailed description of the portion of invention attached to the combustion tube. The invention is described as a “base assembly secured near one end” of the combustion tube. The base assembly “comprises a collar including a cam, an upper ring surrounding said combustion tube and threadably coupled to said collar and an annular seal positioned between said upper ring and collar.” (Patent No. ‘193 Col. 6 Lines 42-45 PageID.21.)

With the claims in mind, the Court turns to the contents of the replacement kit. The kit sold by Alpha Resources contains a disposable quartz combustion tube, two silicone rubber O-rings, a metal insert and a plastic clip. (ECF No. 12-1 Molter Dec. ¶2 PageID.117.) Leco sells replacement tubes and O-Rings. (*Id.* ¶5 PageID.118; ECF No. 12-1 LECO Catalog PageID.122-51.) The kit also contains a tool that assists with placing the O-rings on the tube. (Molter Dep. ¶2.) The tube and the O-rings included in Alpha Resources’ kits are a different size than Leco’s tube and O-rings. (ECF No. 16-1 Ford Dec. ¶¶2-5 PageID.178-79.) Alpha Resources asserts that the tubes might need to be replaced weekly or

monthly, while the O-rings might last as long as a year. (Molter Dec. ¶ 4 PageID.118.)

IV.

Both parties agree that there are no disputed material facts. Because both sides have moved for summary judgment, resolving the cross motions will also resolve the declaratory judgment claim in the complaint.

The totality of the circumstances weighs in favor of finding that replacing the combustion tube constitutes a repair, not a reconstruction, of the patented invention. The factors outlined in *Aktiebolag* are a useful starting point.

Alpha Resources actions are limited to the manufacturing of replacement parts and selling them as a kit. Alpha Resources is an alleged contributory or inducing infringer. Alpha Resources is not a direct infringer as it is not replacing any parts itself. Alpha Resources never receives the furnaces, the combustion tubes, or any of the base assembly parts from the purchasers of Leco products.

The device appears to be a combination patent. A fair summary of the invention is that it is a “mounting system” that provides easy access to a combustion tube. The tube has a base assembly attached to it that allows the tube to be locked into the floor, which is then raised into the furnace. When the floor is not raised into the furnace, the same base assembly that locks the tube in place, also releases the tube, so that the tube may be cleaned or replaced. The furnace will last much longer than the combustion tube. In the claims in this patent, neither the tube itself nor the O-ring is separately patented.

Based on the evidence in the record, a small market has emerged to manufacture the parts at issue. Leco sells replacement tubes and O-rings. Alpha Resources sells a replacement kit that includes a tube, O-rings, and an adapter so that the tube is usable by operators of the Leco furnace.

Leco intends that the combustion tubes and the O-rings be replaced. Leco sells replacement tubes and replacement O-rings. The very purpose of the patent is to solve the problem of the difficulty of replacing spent combustion tubes. Leco acknowledges that the combustion tubes and O-rings will wear out. As the furnace is designed, it will last longer than the combustion tubes. In the background statement in the patent, it states that combustion tubes “must be cleaned and eventually replaced to maintain the accuracy of sample results.” (Patent No. ‘193 PageID.19.) In the summary of the invention portion of the patent, it states that the operator “can easily unlock the combustion tube from the furnace and lower it for access and replacement.” (*Id.*) In the embodiment portion of the patent, it states that the combustion tube “can be a conventional quartz combustion tube available from Leco Corporation, Part No. 619-590-775 or its equivalent.” (*Id.* Col. 3 Lines 27-29 PageID.20) (emphasis added).

Proportionately, the parts in the replacement kit are of minimal value when compared to combustion furnace itself, and also to the value of the parts of the base assembly.

The difficulty in resolving this situation arises from the metal insert and plastic clip that are included in Alpha Resources’ repair kit. Because Alpha Resources’ combustion tube is smaller, the replacement O-rings must also be smaller. And because the tube is smaller, Alpha Resources must provide an adapter to make its tube fit in Leco’s base assembly that attaches to the combustion tube.

The extra parts in the replacement kit function in a manner similar to the adapter in *Everpure*. There, the Court concluded that the patented invention was a combination of otherwise unpatented parts. The invention consisted of two parts, a head and a removable cartridge which contained a filter. When the filter wore out, the cartridge could be detached from the head and replaced, while maintaining water pressure and without the loss of water. The alleged infringing product was a replacement cartridge that

included an adapter to attach the Everpure head to the other company's cartridge. Because the head remained fastened to the water source, the water pressure was maintained and no water was lost. The Court found that the changes in water flow from use of the adapter did not constitute reconstruction because the direction of the water flow was irrelevant to the combination patent. *Everpure*, 875 F.2d at 303-04. Leco has not explained how the alterations to the locking mechanism that result from the use of the additional pieces in the replacement kit are relevant to the patent such that a different result must occur. The adapter does not does not alter the invention. In this patent, the tube is not patented and the O-rings are not patented. The locking mechanism is not patented to fit a certain-sized tube. The adapter allows the patented locking mechanism to accept a different-sized tube, an unpatented part of a combination patent.

Alpha Resources' replacement kit is similar to a kit examined in *Surgical Laser Technologies, Incorporated v. Surgical Laser Products, Inc.*, No. 90-7965, 1992 WL 245892 (E.D. Pa. Sept. 16, 1992). In that case, SLT patented a two-piece disposable laser delivery system. The invention consisted of both the laser and a disposable flexible tube that delivered the laser to the site of the surgery. The patent was an improvement on past inventions because the delivery system was disposable, which reduced the risk of infections, among other things. Surgical Laser Products sold a replacement for the disposable flexible tube and an adapter to fit its replacement part to SLT's laser. The court concluded on summary judgment that the replacement part did not infringe on SLT's patent; replacing the disposable tubes and using the adapter constituted a repair. *Id.* at *4.

The invention here is similar. The invention is the combination of the locking mechanism on the floor of the furnace and the locking mechanism that is attached to the combustion tube. When combined, the

tube is firmly held in place so that the combustion furnace can be used properly. When not in use, the locking mechanism can release the tube for cleaning and replacement. Alpha Resources does not sell any replacement parts for the portion of the locking mechanism affixed to the floor of the furnace. In the replacement kit, Alpha Resources sells a new tube, two O-rings which are necessary for a seal, and an adapter so that its differently-sized tube and O-rings will fit the part of the locking mechanism that attaches to the tube. In making the repairs, the locking mechanism attached to the tube does not change. The tube is replaced. The O-rings are replaced. An adapter is added. The locking mechanism continues to work as it is intended and as was patented.

Leco's authority does not compel a different outcome. Leco argues that *Canon, Incorporated v. GCC International, Limited*, 263 F.App'x 57 (Fed. Cir. 2008) dealt with an analogous situation. Canon alleged that GCC was selling replacement toner cartridges that infringed one of Canon's patents. The *Canon* opinion is an appeal of a decision to issue a preliminary injunction, which included an "early claim construction" of the patent. *Id.* at 60. GCC asserted that Claim 58 of the patent included the entire printer or laser and the toner cartridge. The court disagreed and concluded that Claim 58 was for the toner cartridge alone and, therefore, found that Canon had a likelihood of success on the merits. *Id.* On appeal, the circuit court also concluded that Canon had a likelihood of success on the merits, although the circuit court made that conclusion for a slightly different reason. *Id.* at 61-62. Like the district court, the circuit court found that replacing the toner cartridge probably constituted a reconstruction. *Id.* at 62.

Canon is not analogous. Leco patented a mounting system, a locking mechanism for holding a tube in place and which allows the tube to be easily replaced. In this patent, Leco did not patent a tube or an O-ring. Alpha Resources does not sell a mounting system. Alpha Resources sells a replacement tube,

replacement O-rings, and an adapter that allows the replacements to work with Leco's patented invention.

Leco also relies on *American Cotton-Tie Co. v. Simmons*, 106 U.S. 89 (1882). In that case, the patented invention was a cotton-bale tie. Notably, each buckle that was put in the market was stamped with the words "licensed to use once only." *Id.* at 91. The cotton tie consisted of a buckle and a band that, once placed around a bale of cotton, remained there until it was cut. The tie was then thrown away as scrap metal. The alleged infringer would purchase the scrap bands and rivet pieces together to form a band of the appropriate length. The Supreme Court examined the claims in the relevant patents and concluded that

[w]hat the defendants did in piecing together the pieces of the old band was not a repair of the band or the tie, in any proper sense. The band was voluntarily severed by the consumer at the cotton-mill because the tie had performed its function of confining the bale of cotton in its transit from the plantation or the press to the mill. Its capacity for use as a tie was voluntarily destroyed. As it left the bale it could not be used again as a tie. As a tie the defendants reconstructed it, although they used the old buckle without repairing that.

Id. at 94. The repair kit has little in common with the cotton-bale tie. The patented invention is not a single-use item; the locking mechanism can be reused and the combustion tube user has not voluntarily destroyed the locking mechanism. Also, Alpha Resources is not repurposing spent and worn items.

Finally, Leco makes much of the fact that replacing a combustion tube using the replacement kit takes more steps than replacing the tube using a Leco replacement. But Leco points to no authority that an additional step in the repair process transforms an otherwise legal repair into a patent-infringing reconstruction.

V.

In this declaratory judgment action, the two sides filed cross motions for summary judgment. The issue raised in both motions is the same, whether the repair doctrine applies such that Alpha Resources has an affirmative defense to a contributory or inducement patent infringement claim. Having examined the patent claims and the totality of the circumstances surrounding the replacement kit, the Court concludes that the replacement kit does not infringe on Leco's Patent No. '193. Replacing the combustion tube using Alpha Resources' replacement kit falls squarely within the repair doctrine. Because there are no genuine issues of material fact, Alpha Resources' motion for summary judgment is granted and Leco's cross motion for summary judgment is denied.

ORDER

For the reasons provided in the accompanying Opinion, Alpha Resources' motion for summary judgment (ECF No. 11) is **GRANTED** and Leco Corporation's cross motion for summary judgment (ECF No. 17) is **DENIED. IT IS SO ORDERED.**

Date: June 16, 2016

/s/ Paul L. Maloney
Paul L. Maloney
United States District Judge