

TO BE PUBLISHED

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF IOWA
CENTRAL DIVISION

JASON MARTIN and AMBER
MARTIN,

Plaintiffs,

vs.

APEX TOOL GROUP, LLC,

Defendant.

No. C12-3019-LTS

ORDER

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INTRODUCTION

This case is before me on two motions filed by the defendant: (a) a motion to exclude the opinions of plaintiffs' liability expert (Doc. No. 21) and (b) a motion for summary judgment (Doc. No. 22). Both motions are resisted and have been thoroughly briefed. I heard oral arguments on July 24, 2013. David Taylor appeared for the plaintiffs and Kevin Reynolds appeared for the defendant. The motions are fully submitted.

PROCEDURAL HISTORY

Plaintiffs Jason Martin and Amber Martin filed this action in the Iowa District Court for Cerro Gordo County on February 2, 2012. In their petition, they allege that defendant Apex Tool Group, LLC (Apex), manufactures, distributes and sells the GearWrench brand of pry bars. They further allege that Martin¹ purchased a GearWrench pry bar from a NAPA Auto Store in Mason City, Iowa, on August 27, 2008, and that the product included a lifetime warranty. They contend that on February 5, 2010, while Martin was working at an auto repair facility, the pry bar failed when being used in a reasonably-foreseeable manner, causing personal injuries to Martin. They also contend that the NAPA Auto Store replaced the failed pry bar on February 9, 2010, pursuant to the terms of the lifetime warranty. Their petition states claims for strict liability, negligence and breach of warranty and alleges that the pry bar at issue suffered from manufacturing defects and design defects.

Apex removed the case to this court on March 15, 2012, invoking the court's diversity jurisdiction pursuant to 28 U.S.C. § 1332. Apex later filed an answer in which it denies liability and asserts various affirmative defenses including comparative fault, the impact of certain alleged contractual provisions and a state of the art defense.

¹ References to "Martin" in this order will be to plaintiff Jason Martin.

The parties then consented to trial, disposition and judgment by a United States Magistrate Judge pursuant to 28 U.S.C. § 636(c). The case was assigned to me by order (Doc. No. 7) entered June 18, 2012. Trial is set to begin October 21, 2013. On June 3, 2013, Apex filed its two pending motions. In its motion to exclude the opinions of plaintiffs' liability expert, Apex challenges the admissibility of certain opinions, especially a causation opinion, reached in this case by James Brusso, Ph.D. In its summary judgment motion, Apex contends that if Dr. Brusso's opinions are excluded, then entry of summary judgment necessarily must follow because plaintiffs cannot present a viable case at trial without expert testimony.

RELEVANT FACTS

These facts are not in dispute for purposes of Apex's pending motions:

The Pry Bar. As noted above, Martin purchased the pry bar in August 2008. The bar was both extendable and indexible. That means the handle could be adjusted for length and its pry tip (the pointed, working end of the tool) could be rotated to various angles with respect to that handle. The extendable handle was connected to the pry tip by an indexing gear.

The Accident. Martin testified that on February 5, 2010, he was working as a mechanic at Complete Auto Repair in Mason City. While performing work on a 1992 Plymouth Acclaim, he used the pry bar to remove the lower ball joint out of the steering knuckle. He was using his left arm to apply his body weight to the bar. The bar was fully extended. He states that the pry tip was in line with the pry bar handle and the direction of the force Martin was applying. In other words, according to Martin, he was not applying force in a perpendicular, or sideways, manner in relation to the direction of the pry tip. Martin testified that he knew he should not apply force in that manner. The pry bar snapped while Martin was applying force with his left arm. This caused him to fall and he incurred injuries to his left arm.

The Return. On February 9, 2010, the NAPA Auto Store in Mason City, Iowa, replaced the failed pry bar pursuant to a lifetime warranty. The return form indicates the NAPA employee found that the bar “failed integrity test.” Apex reimbursed the NAPA store for the replacement bar.

Dr. Brusso’s Opinions. Plaintiffs retained Dr. Brusso to evaluate the pry bar, determine its failure mode and provide an opinion concerning the root cause of its failure. He issued a report dated November 30, 2012 (filed herein as Doc. No. 21-2). His report describes various analyses, including a visual examination, hardness testing, chemical analysis, scanning electron microscopy and a metallographic examination. After some discussion of the results, Dr. Brusso stated the following opinions:

1. The failed hex extension bar is manufactured using AISI 6150 steel.
2. The failed hex bar has been heat treated to a high strength level by quenching and tempering. The hardness of the pry bar, 48.2 HRC, indicates an approximate tensile strength of 238,000 psi.
3. The hardness of the pry bar, although near the upper limit, meets the 50 HRC maximum hardness specified for pry bars in ASME B107.60-2004.
4. A pre-existing crack/defect was present in the hex extension bar prior to final heat treatment and assembly. Based on the results of this evaluation, this manufacturing defect is the cause of the present failure.
5. Design information for the pry bar was not available for review at the time of this report. Therefore, the adequacy of the design of the failed extendable, indexible pry bar could not be determined. Inadequate design could not be eliminated as a contributing cause of the failure.
6. The failed pry bar exhibits normal wear for a shop hand tool. There is no evidence of mechanical damage to the pry bar from mis-use or abuse. Therefore, mis-use and abuse can be ruled out as causes of the failure.

As indicated in opinion no. 4, while examining the pry bar Dr. Brusso found a flaw in the alloy steel at the location of the fracture. He determined that the flaw was about 0.11 inches in length and had a depth of 0.014 to 0.027 inches. He states that 0.027 inches is approximately ten percent of the bar's thickness at the area of the fracture and that "this is a very large defect for this product size." Dr. Brusso also states that the fracture originated at the location of the flaw, although there was an initiation point on the opposite side of the bar, as well. He indicates that the two points of origination failed within milliseconds of each other, with one area failing immediately upon the failure occurring at the other location.

Dr. Brusso did not perform any calculations or engineering analysis to determine what effect, if any, the flaw had on the strength of the pry bar. Doc. No. 21-3 (Brusso deposition) at 54. Nor did he perform any engineering analysis to determine the magnitude of the forces that were on the pry bar at the time it fractured. *Id.* at 51.

Apex's Expert Opinions. Apex has retained two liability experts: George Wandling, Ph.D., a mechanical engineer, and Larry Hanke, P.E., a metallurgical engineer. Mr. Hanke states that the flaw in the pry bar was not necessarily a "defect," as many manufactured products have physical flaws. He further states that engineering analysis is required to determine whether the flaw present on the pry bar in this case significantly affected its strength and its resistance to fracture.

Dr. Wandling is critical of Dr. Brusso's opinions, especially on the issue of causation. Dr. Wandling will testify that he has conducted testing which shows that the small flaw in the pry bar reduced its strength by only an insignificant amount and that this reduction in strength could not have caused the bar to fail. He also will testify that he has conducted testing with an exemplar pry bar after removing even more material than the amount that was missing from the pry bar at issue. According to that testing, even that altered pry bar met all applicable industry standards.

Dr. Wandling states that based on his testing, the pry bar's failure mode if excessive force is applied in the correct, downward manner is the shearing of the indexing gear teeth. In other words, he will testify that if Martin was using the bar in the proper manner, but then simply applied too much force, the bar would not have fractured as it did. Instead, the gear teeth would have sheared. By contrast, if too much force is applied in the improper, perpendicular (sideways) manner, the pry bar will fail at the location of the fracture in this case. It is Dr. Wandling's opinion that the pry bar failed because Martin misused it by applying an improper side load.

Dr. Wandling agrees with Dr. Brusso that the initiation point of the failure was at the preexisting flaw. Indeed, he testified that "this whole fracture initiated with the preexisting crack, and as soon as that preexisting crack fracture started at that point, the fracture started on [the other] half." Doc. No. 24-1 (Wandling deposition) at 113. He further clarified that, in his opinion, the preexisting crack was the first location at which a fracture initiated. *Id.*

ANALYSIS

I. The Motion To Exclude Dr. Brusso's Opinions

Apex's motion was initially directed at four of Dr. Brusso's opinions:

- a. that the small flaw constituted a manufacturing defect;
- b. that a manufacturing defect caused the accident;
- c. that the design for the pry bar was defective; and
- d. that a design defect caused the accident.

Doc. No. 21-1 at 5. However, plaintiffs have withdrawn their design-defect related claims. As such, the last two opinions are moot and only the first two remain at issue.

A. *The Daubert Analysis*

Federal Rule of Evidence 702 provides that expert testimony should be admitted if (a) it is based on sufficient facts, (b) it “is the product of reliable principles and methods,” and (c) “the expert has reliably applied the principles and methods to the facts of the case.” Fed. R. Evid. 702; *see also Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997).² In *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993), the Supreme Court explained that the trial court must perform a “gatekeeper” function pursuant to Rule 702 to ensure that only relevant and reliable expert testimony is admitted. 509 U.S. at 589. The Eighth Circuit Court of Appeals has explained the *Daubert* analysis as follows:

First, the trial court must make a “preliminary assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.” . . . The [*Daubert*] Court cautioned that the trial court must focus “on [the] principles and methodology, not on the conclusions that they generate.” . . . Second, the court must ensure that the proposed expert testimony is relevant and will serve to aid the trier of fact. . . . Expert testimony assists the trier of fact when it provides information beyond the common knowledge of the trier of fact. . . . The Court, in *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999), clarified that the district court’s gatekeeper function applies to all expert testimony, not just testimony based in science. *Id.* at 147, 526 U.S. 137, 119 S.Ct. 1167, 143 L.Ed.2d 238.

Kudabeck v. Kroger Co., 338 F.3d 856, 860 (8th Cir. 2003) [internal citations to *Daubert* omitted].

The “gatekeeper” role requires the trial court to “separate[] expert opinion evidence based on ‘good grounds’ from subjective speculation that masquerades as scientific knowledge.” *Glastetter v. Novartis Pharm. Corp.*, 252 F.3d 986, 989 (8th

² The admissibility of expert testimony in a diversity case is governed by federal law. *Unrein v. Timesavers, Inc.*, 394 F.3d 1008, 1011 (8th Cir. 2005); *McGuire v. Davidson Mfg. Corp.*, 238 F. Supp.2d 1096, 1099 (N.D. Iowa 2003).

Cir. 2001). Although a trial court has substantial latitude to determine whether offered expert testimony is reliable, it is important to note that Rule 702 reflects a liberalized approach to the admissibility of expert testimony. *See United States v. Reed & Sons P'ship*, 280 F.3d 1212, 1215 (8th Cir. 2002) (“Trial courts have substantial latitude to determine whether specific expert testimony is reliable, and they may consider some or all of the factors listed in *Daubert* ... when evaluating reliability.”); *In re Air Crash at Little Rock, Ark.*, 291 F.3d 503, 514 (8th Cir. 2002) (same); *Lauzon v. Senco Prods., Inc.*, 270 F.3d 681, 685–86 (8th Cir.2001) (“Rule 702 reflects an attempt to liberalize the rules governing the admission of expert testimony.”) (citing *Weisgram v. Marley Co.*, 169 F.3d 514, 523 (8th Cir. 1999)); *Arcoren v. United States*, 929 F.2d 1235, 1239 (8th Cir. 1991) (Rule 702 is a rule of admissibility rather than exclusion). “[D]oubts regarding whether an expert's testimony will be useful should generally be resolved in favor of admissibility.” *Miles v. Gen. Motors Corp.*, 262 F.3d 720, 724 (8th Cir. 2001) (citing *Clark v. Heidrick*, 150 F.3d 912, 915 (8th Cir. 1998)). Indeed, the Eighth Circuit has stated:

As the Supreme Court emphasized in *Daubert*, 509 U.S. at 595-96, 113 S.Ct. 2786, 125 L.Ed.2d 469, “Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.”

United States v. Vesey, 338 F.3d 913, 917 (8th Cir. 2003).

B. Admissibility of Dr. Brusso’s Opinions

Apex does not challenge Dr. Brusso’s qualifications as a metallurgist. That is, Apex does not contend that he is incapable of providing admissible opinions concerning the cause of the pry bar’s failure in this case. Instead, Apex contends that the opinions Dr. Brusso has provided are inadmissible because they are unreliable. They are

unreliable, according to Apex, because they are not based on any engineering analyses or mathematical calculations.

Plaintiffs disagree, contending that Dr. Brusso conducted a thorough analysis of the failed pry bar, including a visual examination, examination under a scanning electron microscope, hardness testing, chemical analysis and metallographic examination. While I have no doubt that Dr. Brusso undertook these tasks, the fact that a long list of tests and examinations occurred does not automatically render all subsequent opinions admissible. Instead, I must consider the stated grounds for each opinion.

Dr. Brusso's first opinion, that the small flaw in the metal was a manufacturing defect, is based on his findings (a) that the flaw was present prior to final heat treatment and assembly and (b) was not intended by the manufacturer. Neither finding is in serious dispute. All experts appear to agree that the flaw was present at the conclusion of the manufacturing process (*i.e.*, it did not occur later due to an event beyond Apex's control). No one contends that the flaw was an intended feature of the pry bar's design. While Apex challenges use of the word "defect" because there is allegedly no evidence that the flaw significantly affected the pry bar's strength or function, Dr. Brusso calculated the depth of the flaw to be approximately ten percent of the overall width of the bar. Dr. Brusso certainly can be cross-examined as to his use of the word "defect," but I cannot find that his opinion that the flaw was a manufacturing defect is so unreliable as to require exclusion under the *Daubert* standards.

Dr. Brusso's second opinion is a closer call. He intends to testify to an opinion that the flaw "is the cause of the present failure." However, the reasons he has offered in support of this opinion are not entirely clear. As best as I can tell, his opinion is based on (a) his detailed examination of the bar, which caused him to make the (now undisputed) finding that the fracture originated at the location of the flaw, (b) the size of the flaw, (c) the location of the flaw (which he states is at a critical area of the bar), (d) Martin's testimony concerning his use of the bar at the time of the incident and (e)

his finding that the bar shows no physical evidence of misuse. In effect, and to paraphrase, Dr. Brusso found that the pry bar should not have failed when used in the manner Martin has described and that the failure occurred at the precise location of a manufacturing flaw that Dr. Brusso deems to be significant.

As noted above, Dr. Brusso did not conduct testing to determine the impact of the flaw on the pry bar's strength. In other words, he conducted no engineering analysis or calculations to show that the bar would not have fractured but for the flaw. Apex contends that this omission is fatal to Dr. Brusso's opinion. It notes, by contrast, that Dr. Wandling has undertaken an engineering analysis to demonstrate that the flaw had such a minimal impact on the bar's strength that it could not have caused the fracture.

In response, plaintiffs point out that an expert's opinions need not rely only on laboratory-quality findings that can be replicated by other experts. The Supreme Court has stated that "no one denies that an expert might draw a conclusion from a set of observations based on extensive and specialized experience." *Kumho*, 525 U.S. at 156. The ultimate question is "whether this particular expert [has] sufficient specialized knowledge to assist the jurors 'in deciding the particular issues in the case.'" *Id.* (quoting 4 J. McLaughlin, *Weinstein's Federal Evidence* ¶ 702.05[1], p. 702-33 (2d ed.1998)).

Here, Dr. Brusso's credentials are not in doubt. Nor is there any evidence that his various tests and analyses are not regularly conducted or accepted in the field of metallurgy. Moreover, it was through his testing and examination that he discovered both (a) the presence of a pre-existing flaw in the alloy steel and (b) the fact that the fracture initiated at that location. These conclusions have been confirmed by Apex's experts. In short, this is not a case in which an expert simply eyeballed a product and announced an opinion supported by nothing but his or her impressive credentials. Dr. Brusso used recognized methods to make findings about this pry bar that the other

experts have confirmed. I find that his testimony is relevant and is likely to aid the jury.

This does not mean that his causation opinion is unassailable. Indeed, and as suggested above, I believe it is vulnerable to valid challenges. However, I hold that the causation opinion is, at worst, within the “shaky but admissible” category referenced by the Eighth Circuit. *See Vesey*, 338 F.3d at 917. Apex’s remedy is not exclusion, but instead cross-examination, the presentation of contrary evidence and careful instruction on the burden of proof. *Id.* As such, its motion to exclude Dr. Brusso’s opinions is **denied**.

II. The Motion for Summary Judgment

Apex’s motion for summary judgment is based on two propositions: (a) plaintiffs’ claims fail as a matter of law if they do not have admissible expert opinion evidence on the issue of causation and (b) plaintiffs have no such evidence. Because I have denied Apex’s motion to exclude Dr. Brusso’s opinion, the summary judgment motion must also be denied. However, I will briefly address the motion for summary judgment to explain why Apex would not be entitled to judgment as a matter of law even if Dr. Brusso’s opinions are excluded.

As noted above, Martin’s testimony suggests that he was using the pry bar in the proper and intended manner when it failed. For purposes of Apex’s motion for summary judgment, I must accept this testimony as true.³ As such, the question becomes whether expert opinion testimony is necessary to support a manufacturing defect claim when a pry bar breaks during normal, proper use.

³ Because my ruling as to Dr. Brusso’s opinions eliminates the need for an in-depth analysis of the motion for summary judgment, I am dispensing with the usual, boilerplate recitation of the applicable summary judgment standards. Suffice to say that for purposes of deciding a motion for summary judgment, I must view all of the evidence in a light most favorable to the plaintiffs, as the non-movants. *See, e.g., Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587-88 (1986).

Iowa courts have long recognized that expert opinion testimony is not always required in a products liability case. In 1973, the Iowa Supreme Court noted that proof of a product defect is “usually established by circumstantial evidence.” *Kleve v. Gen. Motors Corp.*, 210 N.W.2d 568, 571 (Iowa 1973). Eight years later, the Iowa Court of Appeals expanded on the issue as follows:

Initially, we note that Iowa law does not appear to require plaintiff to present expert testimony in all cases in order to prevail in a products liability action. In *Kleve v. General Motors Corp.*, 210 N.W.2d 568, 571 (Iowa 1973), the court stated: “Without question the burden was upon plaintiff to prove the Pontiac was defective when it left the seller's hands. Proof of such defect need not, however, necessarily rest upon direct evidence. It can be and is usually established by circumstantial evidence.” *See also* Iowa R.App.P. 14(f)(16) (“Direct and circumstantial evidence are equally probative.”) If an issue, however, is proven by circumstantial evidence, it (the evidence) must be sufficient to make the theory reasonably probable, and more probable than any other theory based on the evidence. *Osborn v. Massey-Ferguson, Inc.*, 290 N.W.2d 893, 901 (Iowa 1980). Whether expert testimony is required ultimately depends on whether it is a fact issue upon which the jury needs assistance to reach an intelligent or correct decision. *West v. Phillips*, 227 Iowa 612, 619, 288 N.W. 625, 628 (1939).

Wernimont v. Int’l Harvester Corp., 309 N.W.2d 137, 141 (Iowa Ct. App. 1981). The court ultimately held that the plaintiff’s design defect claim failed due to the lack of evidence that the design of the product (a truck tractor) caused unreasonable risk to the operator. *Id.* at 142.

In *Reed v. Chrysler Corp.*, 494 N.W.2d 224 (Iowa 1992), *overruled on other grounds by Jahn v. Hyundai Motor Co.*, 773 N.W.2d 550 (Iowa 2009),⁴ the Iowa Supreme Court quoted *Wernimont* approvingly in discussing the evidence necessary to support a crashworthiness (or enhanced injury) claim. 494 N.W.2d at 226-27. Among other things, the Court held that the plaintiff established a *prima facie* case “even in the

⁴ *Jahn* overruled *Reed* on the issue of how Iowa’s statutory comparative fault scheme applies to enhanced injury claims. In *Jahn*, the Court abandoned *Reed*’s holding in favor of the approach described in Section 16 of the Restatement (Third) of Torts: Products Liability.

absence of further expert testimony indicating whether an alternative safer design was practicable and feasible in terms of cost, economy of operation, maintenance requirements, and other safety factors.” *Id.* at 228. The Court held that those questions “were not so technologically sophisticated as to require expert testimony.” *Id.*

The ability to prove a product defect without expert testimony is recognized in Section 3 of the Restatement (Third) of Torts: Product Liability, which is entitled “Circumstantial Evidence Supporting Inference of Product Defect.” It states:

It may be inferred that the harm sustained by the plaintiff was caused by a product defect existing at the time of sale or distribution, without proof of a specific defect, when the incident that harmed the plaintiff:

- (a) was of a kind that ordinarily occurs as a result of product defect; and
- (b) was not, in the particular case, solely the result of causes other than product defect existing at the time of sale or distribution.

Restatement (Third) of Torts: Prod. Liab., § 3 (1998). While the Iowa Supreme Court has not yet had occasion to consider adopting Section 3, it adopted Sections 1 and 2 in *Wright v. Brooke Group, Ltd.*, 652 N.W.2d 159, 169 (Iowa 2002). And, as noted above, in 2009 the Court overruled its own precedent in favor of the enhanced injury principles set forth in Section 16. Section 3 is not in sharp contrast to existing Iowa law. I predict the Iowa Supreme Court, if asked, would adopt that section.

Whether analyzed under Section 3 or Iowa precedent, the issue is the same. If the jury accepts Martin’s testimony and finds that he was using the pry bar properly, is expert opinion testimony necessary to support a finding that the bar’s failure was caused by a manufacturing defect? I believe not. There is sufficient circumstantial evidence in this record to allow for such a finding without expert testimony. First, and consistent with Section 3, reasonable jurors could find that a fracture during use is the kind of

incident that “ordinarily occurs as the result of a product defect.” A pry bar is not a complex, high-tech product. Based on the record before me, there appear to be only two reasons why it would fracture during use: (a) defect or (b) improper use. Clearly, there is a disputed issue of material fact as to whether Martin was using the bar properly. If the jury finds that he was, it may reasonably conclude that the failure was caused by a defect.

Second, as plaintiffs point out, the retailer replaced the failed pry bar pursuant to a lifetime warranty, indicating that the bar “failed integrity test.” Apex then reimbursed the retailer for the replacement bar. I agree with Apex that this evidence may reflect customer service concerns rather than an admission that the product was defective. At the summary judgment stage, however, I must view this evidence most favorably to the plaintiffs. Evidence of the return, and of Apex’s reimbursement of the retailer, is circumstantial evidence supporting plaintiffs’ claim that the pry bar at issue was defective.

In short, even if I were to exclude Dr. Brusso’s causation opinion, the lack of expert opinion evidence would not compel entry of summary judgment in Apex’s favor. When the record is viewed in a light most favorable to plaintiffs, there is sufficient circumstantial evidence to support their claim that the accident at issue was caused by a manufacturing defect. Apex’s motion for summary judgment is **denied**.

CONCLUSION

Apex’s motion to exclude the opinions of plaintiffs’ liability expert (Doc. No. 21) and motion for summary judgment (Doc. No. 22) are both **denied**.

IT IS SO ORDERED.

DATED this 16th day of August, 2013.



**LEONARD T. STRAND
UNITED STATES MAGISTRATE JUDGE**