

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF ILLINOIS

DARLA GREEN and MICHAEL GREEN,)	
)	
Plaintiffs,)	
)	
vs.)	CIVIL NO. 08-472-GPM
)	
GOODYEAR DUNLOP TIRES NORTH)	
AMERICA, LTD.,)	
)	
Defendant/Counterclaim Plaintiff,)	
)	
vs.)	
)	
MICHAEL GREEN,)	
)	
Counterclaim Defendant.)	

MEMORANDUM AND ORDER

MURPHY, District Judge:

I. INTRODUCTION

This case arises out of an accident involving an allegedly defective tire manufactured by Defendant/Counterclaim Plaintiff Goodyear Dunlop Tires North America, Ltd. (“Goodyear”). On July 27, 2007, while Plaintiff/Counterclaim Defendant Michael Green was driving a motorcycle on Interstate 70 in Missouri, with Plaintiff Darla Green, Mr. Green’s wife, riding on the motorcycle as a passenger, the motorcycle’s rear tire, which was manufactured by Goodyear, blew out, causing a crash in which both Mr. and Mrs. Green suffered personal injuries. Mr. and Mrs. Green assert claims against Goodyear for strict products liability and negligence based on a design defect and a manufacturing defect in the Goodyear tire with which their motorcycle was equipped at the time of the accident. Currently this matter is before the Court on a motion by Goodyear to exclude

the testimony of Gary Derian, an expert witness retained by Mr. and Mrs. Green (Doc. 93), regarding a manufacturing defect in the Goodyear tire at issue in this case and on a motion by Mrs. Green to exclude the testimony of Goodyear's experts David R. Thom and Thomas A. Gennarelli (Doc. 98). The motions have been fully briefed, and the Court rules as follows.

II. ANALYSIS

In federal court the admissibility of expert testimony in evidence is governed, of course, by the Federal Rules of Evidence, which provide:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Fed. R. Evid. 702. Rule 702 obligates courts to act as gatekeepers with respect to expert testimony concerning scientific, technical, or other specialized knowledge. *See Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 589 (1993). In evaluating the admissibility of evidence under Rule 702, a court must determine whether (1) the proposed witness would testify to valid specialized knowledge and (2) the expert's testimony will assist the trier of fact. *See Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 151-52 (1999); *Ammons v. Aramark Unif. Servs., Inc.*, 368 F.3d 809, 816 (7th Cir. 2004). The first prong of this test requires the court to determine whether the expert is qualified in the relevant field and whether the methodology underlying the expert's conclusions is reliable. *See Daubert*, 509 U.S. at 592; *Smith v. Ford Motor Co.*, 215 F.3d 713, 718 (7th Cir. 2000). This calls upon the trial court to assess whether the proffered testimony is both relevant and reliable. *See Kumho Tire*, 526 U.S. at 152; *Jenkins v. Bartlett*, 487 F.3d 482, 489 (7th Cir. 2007).

In assessing an expert's methodology, a court should consider: (1) whether the proffered conclusion lends itself to verification by the scientific method through testing; (2) whether it has been subjected to peer review; (3) whether it has been evaluated in light of the potential rate of error of the scientific technique; and (4) whether it is consistent with the generally accepted method for gathering the relevant scientific evidence. *See Cummins v. Lyle Indus.*, 93 F.3d 362, 368 (7th Cir. 1996) (citing *Deimer v. Cincinnati Sub-Zero Prods., Inc.*, 58 F.3d 341, 344 (7th Cir. 1995)). However, these factors may not always be pertinent in assessing the reliability of expert testimony, for the *Daubert* inquiry is a flexible one, and an expert's testimony need not satisfy each of the factors to be admissible. *See Daubert*, 509 U.S. at 592-94; *Chapman v. Maytag Corp.*, 297 F.3d 682, 687 (7th Cir. 2002). Finally, it perhaps is worth noting the critical distinction between a jury trial and a bench trial with respect to the Rule 702 inquiry:

Where the gatekeeper and the factfinder are one and the same – that is, the judge – the need to make [evidentiary] decisions prior to hearing the testimony is lessened. That is not to say that the scientific reliability requirement is lessened in such situations; the point is only that the court can hear the evidence and make its reliability determination during, rather than in advance of, trial. Thus, where the factfinder and the gatekeeper are the same, the court does not err in admitting the evidence subject to the ability later to exclude it or disregard it if it turns out not to meet the standard of reliability established by Rule 702.

In re Salem, 465 F.3d 767, 777 (7th Cir. 2006) (citation omitted). Here, although this case will be bench-tried, the Court believes it is proper to address the parties' *Daubert* challenges to one another's witnesses before trial, to ensure that valuable trial time is not taken up with resolving threshold challenges to the admissibility of expert testimony. Accordingly, with the foregoing standard in mind, the Court turns to the matter of the parties' *Daubert* motions with respect to the expert testimony of Derian, Thom, and Gennarelli.

A. Testimony of Gary Derian Concerning a Manufacturing Defect

Gary Derian is a mechanical engineer who, as already has been noted, has been retained as an expert witness by Mrs. Green. Goodyear has filed a motion challenging Derian's opinions regarding the existence of a manufacturing defect in the Goodyear tire at issue in this case. Goodyear contends that Derian, though qualified as an engineer, lacks experience in the particular field of motorcycle tires. Also, Goodyear raises challenges to Derian's calculations of the load that the Goodyear tire at issue in this case was carrying when the accident giving rise to the case occurred, Derian's calculations of the inflation of the tire at the time of the accident, and the method by which Derian reached his conclusion that the tire blowout was caused by an adhesion problem in the tire – in other words, a manufacturing defect – rather than by overloading and underinflation of the tire. The Court will address each of Goodyear's objections to Derian's opinions regarding the issue of a manufacturing defect in turn.¹

With respect to Derian's qualifications to address the issue of a manufacturing defect in a motorcycle tire, the record discloses that Derian has extensive experience in the field of tire design and analysis. Regardless of whether or not Derian's experience extends beyond car and truck tires to motorcycle tires, Derian has testified that there is no meaningful difference between the way automobile tires and truck tires are made and the way motorcycle tires are made and, in any event, *Daubert* does not require an expert to have experience with particular products, so long as the expert

1. Goodyear also has challenged certain opinions offered by Derian regarding a design defect in the Goodyear tire at issue in this case and a possible failure to warn by Goodyear. Because it appears that the admissibility of these opinions is contingent upon the resolution in a sister federal court of a motion to quash a subpoena directed by Mrs. Green to the Harley-Davidson Motor Company, the Court does not address the issue of the admissibility of Derian's opinions about a design defect or a failure to warn at this time.

is testifying within the general area of his or her expertise. “The notion that *Daubert* . . . requires particular credentials for an expert witness is radically unsound Anyone with relevant expertise enabling him to offer responsible opinion testimony helpful to judge or jury may qualify as an expert witness.” *Tuf Racing Prods., Inc. v. American Suzuki Motor Corp.*, 223 F.3d 585, 591 (7th Cir. 2000). *See also Latham v. Edelbrock Corp.*, Civil No. 07-713-GPM, 2009 WL 3156554, at *1 (S.D. Ill. Sept. 26, 2009) (citing *Stagl v. Delta Air Lines, Inc.*, 117 F.3d 76, 81-82 (2d Cir. 1997)) (“[A]n expert is not precluded from testifying merely because he or she does not possess experience tailored to the precise product or process that is the subject matter of a case, provided that the expert is testifying within the general area of his or her expertise[.]”). In light of Derian’s extensive experience as a tire engineer, he is qualified to offer expert opinions about motorcycle tires.

Concerning Goodyear’s challenge to Derian’s calculations of the load on the rear tire of Mr. and Mrs. Green’s motorcycle at the time of the accident giving rise to this case, the gist of this objection is that Derian’s calculations are flawed because Derian did not use the correct weight of Mr. and Mrs. Green in making the calculations. This is a challenge not to Derian’s methodology but to the credibility, rather than the admissibility, of his evidence. Of course, if the factual underpinnings of Derian’s expert opinions are weak, that is an occasion not for exclusion of Derian’s opinions but for “[v]igorous cross-examination . . . [and] presentation of contrary evidence” at trial. *Daubert*, 509 U.S. at 596. *See also Walker v. Soo Line R.R. Co.*, 208 F.3d 581, 586 (7th Cir. 2000) (citing *Daubert*, 509 U.S. at 596) (“[T]he factual underpinnings of expert testimony may be subject to counter-attack.”). *Accord United States v. Lauder*, 409 F.3d 1254, 1264 (10th Cir. 2005) (“*Daubert* generally does not . . . regulate the underlying facts or data that an expert relies on when

forming her opinion.”); *Bonner v. ISP Techs., Inc.*, 259 F.3d 924, 929 (8th Cir. 2001) (“As a general rule, the factual basis of an expert opinion goes to the credibility of the testimony, not the admissibility, and it is up to the opposing party to examine the factual basis for the opinion in cross-examination.”). For the same reason that the Court rejects Goodyear’s challenge to the admissibility of Derian’s rear tire load calculations, the Court likewise rejects Goodyear’s challenge to the admissibility of Derian’s calculations of the inflation pressure of the tire at issue in this case at the time of the accident giving rise to the case. Goodyear contends that Derian’s calculations are flawed because Derian failed to use correct temperatures (which can affect the rate of tire deflation) in making the calculations. If so, this is an issue that goes to the weight, not the admissibility, of Derian’s opinions concerning inflation pressure.

Finally, concerning the basis for Derian’s opinion that the tire blowout at issue in this case was caused by a manufacturing defect in the rear tire of Mr. and Mrs. Green’s motorcycle, the Court again finds Goodyear’s argument for exclusion of this opinion to be unpersuasive. It appears that, upon conducting a visual and tactile investigation of the motorcycle’s rear tire, Derian concluded that the condition of the tire was consistent with a situation in which, due to poor adhesion during manufacturing, carcass cords in the tire separated from the skim rubber in the tire, causing the tire to rupture and deflate suddenly. It appears to the Court that Derian’s opinion is based appropriately on an examination of the physical evidence before him in light of his extensive experience as a tire engineer. Although Goodyear argues that *Kumho Tire* rejects Derian’s methodology, the Court does not agree. In *Kumho Tire* the Court acknowledged that “as a general matter, tire abuse may often be identified by qualified experts through visual or tactile inspection of the tire” and that “[t]ire engineers rely on visual examination and process of elimination to analyze experimental test

tires.” 526 U.S. at 156. What the *Kumho Tire* Court objected to was an expert’s so-called two-factor test, which was based on the theory that in the absence of at least two of four specific, physical symptoms indicating tire abuse, a tire failure was caused by a defect, a theory that the Court found to be neither widely accepted among tire engineers nor supported by testing. *See id.* at 154, 156-57. In this case, by contrast, Derian is not offering the results of his visual and tactile examination of the rear tire of Mr. and Mrs. Green’s motorcycle in support of a controversial theory about why the tire blew out. In fact, it appears that, consistent with the *Kumho Tire* Court’s observation concerning the widespread use of visual and tactile examination by tire engineers to identify tire defects, the opinions of Goodyear’s experts are based on exactly the same sort of investigation performed by Derian. The Court concludes that Derian’s opinions regarding a manufacturing defect in the rear tire of Mr. and Mrs. Green’s motorcycle at the time of the accident giving rise to this case are admissible under Rule 702.

B. Testimony of David Thom and Thomas Gennarelli

As already has been noted, Mrs. Green has moved to exclude at trial the evidence of both David Thom, an expert on motorcycle helmet safety retained by Goodyear, and Thomas Gennarelli, a neurosurgeon retained by Goodyear as an expert witness. Thom, who has extensive qualifications in his field, has been retained to offer evidence about the adequacy of the safety headgear that Mrs. Green was wearing at the time of the accident giving rise to this case. It appears from the record that at the time of Mrs. Green’s accident, she was wearing a so-called “novelty” helmet, rather than a motorcycle helmet approved by the United States Department of Transportation (“DOT”). It further appears that, in the course of the accident, Mrs. Green was thrown from the motorcycle on which she was riding and struck the ground head-first (in fact, there is some suggestion in the record

that she may have struck the ground head-first more than once), and suffered a traumatic brain injury as a result of the accident. It is Thom's opinion that, had Mrs. Green been wearing a DOT-approved helmet at the time of the accident, she would have enjoyed a much higher degree of protection from a head injury than she did wearing a non-DOT-approved novelty helmet. Gennarelli, who, like Thom, is well qualified in his field, has been retained to testify, based in part on Thom's calculations of the velocity at which Mrs. Green's head hit the ground, about the difference between the head injury Mrs. Green suffered and the injury she would have suffered had she been wearing a DOT-approved helmet. Mrs. Green challenges the admissibility of Thom's opinions and argues that, to the extent Gennarelli's opinions are based on Thom's, Gennarelli's opinions are inadmissible as well.

It appears that Thom, in formulating his opinions, conducted a so-called static drop test in which he determined the velocity at which Darla Green's head hit the ground in the accident giving rise to this case by dropping DOT-approved helmets and novelty helmets from a height equivalent to that from which Mrs. Green fell during the accident. Thom concluded from these tests that the forces acting on Mrs. Green's head when she struck the ground head-first wearing a novelty helmet were exponentially greater than they would have been had she been wearing a DOT-approved helmet. The kind of test that Thom performed is substantially identical to the method used by the DOT to test motorcycle helmets. For example, Federal Motor Vehicle Safety Standard ("FMVSS") 218, promulgated by the DOT, prescribes performance standards for motorcycle helmets with which manufacturers of such helmets must comply. *See generally* 49 C.F.R. § 571.218. Under FMVSS 218, helmet performance is measured by, among other things, an "impact attenuation test," in which a helmet, mounted on a "headform" containing instrumentation,

is repeatedly dropped onto a hard surface under controlled conditions. *Id.*, S7.1. A helmet fails the impact attenuation test if the instrumentation registers any of the following: (1) more than four hundred g's of acceleration; (2) acceleration of more than two hundred g's for more than two milliseconds; and (3) acceleration of more than one hundred and fifty g's for more than four milliseconds. *See id.*, S5.1. A helmet's performance in an impact attenuation test is related to how well it protects against head injury. *See id.*, S2.

Mrs. Green's counsel raises a number of objections to Thom's test, all of which are variations on a single theme, namely, that the test does not reproduce the conditions under which the crash giving rise to this case occurred and in fact that it is impossible for any test to reproduce those conditions. For example, Mrs. Green's counsel points out that Thom's testing measures only linear acceleration and vertical velocity on helmets, and does not account for factors like the forward velocity of a body ejected from a moving vehicle, the angular velocity of a body traveling through the air, and the rotational acceleration of a head hitting the ground, perhaps more than once. Also, the test does not account for conditions where a helmet strikes a compliant surface, like the shoulder of a highway, rather than a non-compliant surface, such as the pavement of a highway. In the Court's view, the results of Thom's test are some evidence of the velocity with which Mrs. Green's head hit the ground during the accident giving rise to this case and therefore may be helpful to the trier of fact. Mrs. Green's counsel will have every opportunity to challenge the test, and the merits and demerits of the test doubtless will be fully aired in the course of the trial. Because the Court finds that Thom's opinions are admissible under Rule 702, Gennarelli's opinions are admissible as well. Mrs. Green's motion to exclude the opinion testimony of Thom and Gennarelli will be denied.

III. CONCLUSION

Goodyear's motion to exclude the testimony of Mrs. Green's expert Gary Derian regarding a manufacturing defect in the Goodyear tire at issue in this case (Doc. 93) and Mrs. Green's motion to exclude the testimony of Goodyear's experts David Thom and Thomas Gennarelli (Doc. 98) are **DENIED**.

IT IS SO ORDERED.

DATED: March 2, 2010

/s/ G. Patrick Murphy
G. PATRICK MURPHY
United States District Judge