

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF NEW MEXICO

ANDRES RIVERA, as parent and next  
friend of A.R., a minor,

Plaintiff,

v.

Civ. No. 13-00397 KG/KBM

VOLVO CARS OF NORTH AMERICA, LLC,  
a Delaware Corporation; ROE CORPORATIONS  
I-X, inclusive; and JOHN DOES I-X, inclusive,

Defendants.

MEMORANDUM OPINION AND ORDER

On April 1, 2015, Plaintiff filed a Motion to Strike Defendant's Expert James Salmon, Ph.D., PE (Motion to Strike). (Doc. 238). On April 20, 2015, Defendant Volvo Cars of North America, L.L.C. (Defendant VCNA), filed a response. (Doc. 269). On May 7, 2015, Plaintiff filed a reply. (Doc. 280). Having reviewed the Motion to Strike, the accompanying briefs, and the evidence of record, the Court grants, in part, the Motion to Strike for the following reasons.

*I. Background*

*A. Notice of Removal (Doc. 1) and Plaintiff's Second Amended Complaint (Doc. 192)*

This federal diversity personal injury lawsuit arises out of child entrapment in a 2001 Volvo S60 four-door sedan automatic power window that occurred in Santa Fe, New Mexico, on September 27, 2010. (Doc. 1-1) at 2. Plaintiff's Second Amended Complaint alleges Defendant VCNA is liable in product liability negligence and strict products liability based on the subject window switch's defective manufacturing, design, and Defendant VCNA's failure-to-warn. (Doc. 192) at 2. Plaintiff further contends A.R., Plaintiff's minor child, suffered a severe anoxic brain injury as a result of the entrapment and will require lifelong medical care and assistance

with daily living. (Doc. 251) at 3. Plaintiff seeks compensatory and punitive damages. (Doc. 192) at 3.

*B. Dr. James Salmon's Expert Report*

Defendant VCNA intends to introduce the testimony of Dr. James Salmon (Dr. Salmon) as an automotive product design expert. (Doc. 102) at 3. Defendant VCNA timely disclosed Dr. Salmon and his expert report as required under Fed. R. Civ. P. 26.<sup>1</sup> *See id.* In his expert report, Dr. Salmon first summarizes his examinations, studies and tests of the subject vehicle and an exemplar vehicle, and the facts of the case. (Doc. 269-3) at 1–2. Next, Dr. Salmon discusses the window system design of the subject vehicle. *Id.* at 2–6. Dr. Salmon then addresses the history of Federal Motor Vehicle Safety Standards (FMVSS) 118, and the implications to the automatic reversal system. *Id.* at 6–8. Dr. Salmon also discusses his findings and tests of the subject vehicle's window switch. *Id.* at 8–13. Next, Dr. Salmon discusses a survey of model year 2001 vehicle window systems. *Id.* at 13–17. Dr. Salmon then states his findings from a surrogate study. *Id.* at 17. Finally, Dr. Salmon lists his fifteen conclusions. *Id.* at 18–21.

Dr. Salmon intends to testify that the subject vehicle's window switch is "reasonably safe and presents an extremely remote risk of injury." *Id.* at 20. Dr. Salmon further anticipates testifying that Defendant VCNA acted with reasonable care in the design of the switch. *Id.* at 20–21. Finally, Dr. Salmon also expects to testify that the subject switch complies with government and industry standards and is reasonably safe and, therefore, is not defective. *Id.* at 21.

*II. Expert Testimony Standard*

Fed. R. Evid. 702 governs the admissibility of expert witness testimony and provides that,

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<sup>1</sup> Dr. Salmon attached to his expert report a list of the materials and documents he reviewed and relied upon for his opinions. (Doc. 269-3) at 22–23. Dr. Salmon also attached his *curriculum vitae*. *Id.* at 24–29.

[a] witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

The proponent of the expert bears the burden of satisfying Rule 702 and establishing the admissibility of the testimony, which in this case falls on Plaintiff. *United States v. Baines*, 573 F.3d 979, 985 (10th Cir. 2009).

Rule 702 imposes upon the Court a “gatekeeping” function with regard to the admissibility of expert opinions. *Kumho Tire Co. Ltd. v. Carmichael*, 526 U.S. 137, 147 (1999) (citing *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589 (1993)). The objective of the gatekeeping obligation is to “ensure the reliability and relevancy of expert testimony . . . to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.” *Id.*

The gatekeeping function involves a two-step analysis. *Milne v. USA Cycling Inc.*, 575 F.3d 1120, 1134 (10th Cir. 2009). First, the Court must determine whether the witness may be qualified as an expert. To qualify as an expert, the witness must possess such “knowledge, skill, experience, training, or education” in the particular field so that it appears that his or her opinion rests on a substantial foundation and tends to aid the trier of fact in its search for the truth. *LifeWise Master Funding v. Telebank*, 374 F.3d 917, 928 (10th Cir. 2004). “Rule 702 thus dictates a common-sense inquiry of whether a juror would be able to understand the evidence without specialized knowledge concerning the subject.” *United States v. McDonald*, 933 F.2d

1519, 1522 (10th Cir. 1991).

Second, the Court must determine “whether the witness’ opinions are ‘reliable’ under the principles set forth” in *Daubert* and *Kumho Tire. Ralston v. Smith & Nephew Richards, Inc.*, 275 F.3d 965, 969 (10th Cir. 2001). In *Daubert*, the Supreme Court identified five factors that may or may not be pertinent in assessing reliability: (1) the theory or technique in question can be and has been tested; (2) it has been subjected to peer review and publication; (3) it has a known or potential error rate; (4) the existence and maintenance of standards controlling its operation; and (5) whether it has attracted widespread acceptance within a relevant scientific community. 509 U.S. at 593–94. When assessing the reliability of a proposed expert’s testimony, the Court may consider the *Daubert* factors to the extent relevant, which will depend on the nature of the issue, the expert’s particular expertise, and the subject of his testimony. *Kumho Tire*, 526 U.S. at 150–51.

Rule 702 further requires that expert testimony is relevant. One aspect of relevance is that the opinions have a sufficient factual basis and a reliable application of the methodology to the facts. *Daubert*, 509 U.S. at 591. A sufficient factual basis does not necessarily require the facts or data upon which an expert bases his or her opinion to be independently admissible, so long as they are of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject. Fed. R. Evid. 703.

The Court should liberally admit expert testimony and has broad discretion in deciding whether to admit or exclude expert testimony. See *United States v. Gomez*, 67 F.3d 1515, 1526 (10th Cir. 1995) (describing rule 702 as “liberal standard”); *Werth v. Makita Elec. Works, Ltd.*, 950 F.2d 643, 647 (10th Cir.1991) (noting trial court's decision will not be overturned “unless it is manifestly erroneous or an abuse of discretion”).

*III. Discussion*

Plaintiff now moves the Court to strike ten opinions from Dr. Salmon's expert report. Plaintiff first argues that Dr. Salmon's opinions (5–11) are inadmissible because they are based on an unreliable field study. (Doc. 238) at 2–3. Next, Plaintiff contends Dr. Salmon's opinions (13-15), regarding Defendant VCNA's negligence, are inadmissible because the opinions are based on the field study and Dr. Salmon failed to review any evidence pertaining to Defendant VCNA's conduct. *Id.* at 3–4. Finally, Plaintiff asserts Dr. Salmon's methodology is flawed because he cannot ascertain the subject switch's risk of injury and he did not apply the industry standard design Failure Mode and Effects Analysis (FMEA). *Id.* at 8-9. The Court determines it has sufficient evidence to evaluate Dr. Salmon's testimony without a hearing. *See Goebel v. Denver & Rio Grande W. R.R. Co.*, 215 F.3d 1083, 1087 (10th Cir. 2000); *see also Dodge v. Cotter Corp.*, 328 F.3d 1212, 1228 (10th Cir. 2003) (“[A] district court has discretion to limit the information upon which it will decide the *Daubert* issue.”).

*A. Whether Dr. Salmon's survey of model year 2001 vehicle window systems is reliable and relevant*

Plaintiff claims Dr. Salmon's survey methodology is unreliable because (1) Dr. Salmon utilized a “convenience sample;” (2) he misrepresents vertical switch mount orientation; and (3) the sample does not relate to the facts of the case.

*i. Whether Dr. Salmon utilized a “convenience sample”*

Plaintiff asserts Dr. Salmon's field study utilized a “convenience sample” to make the subject vehicle appear as if its features were “mainstream” in 2001, when the subject vehicle was manufactured. More particularly, Plaintiff contends Dr. Salmon selected vehicles for the study without any scientific basis.

The record demonstrates that Dr. Salmon conducted the survey “to determine what types

of switch designs existed and what technology was utilized for the 2001 model year.” (Doc. 269-3) at 13–14. Dr. Salmon selected the vehicles to represent base and luxury products sold by manufacturers based in Germany, Japan, Korea, and North America. *Id.* at 14; (Doc. 238-3) at 10 (Dr. Salmon depo. at 156–57). Dr. Salmon testified that test vehicles were not selected based on market share, but what was available within 75 miles of his geographical location. *Id.* (Dr. Salmon depo. at 156). Further, the survey was conducted in response to Plaintiff’s automotive design expert’s “State of the Art” and “State of Industry” opinions; specifically, that Defendant VCNA could have designed out the alleged defect had it incorporated one of seven alternative designs. *Id.* at 14. As a result of the sample test, Dr. Salmon made the following conclusions:

5. The horizontal mounting orientation of the window switch on the 2001 Volvo S60 rather than vertical, was common to 92% of the vehicles surveyed for the 2001 model year . . .
6. The window switch on the 2001 Volvo S60 incorporated a recessed switch design common to 58% of the vehicles surveyed for the 2001 model year. . . .
7. The function of the window child lock switch with respect to the windows that are disabled by the switch on the 2001 Volvo S60 was common to 36% of all the vehicles surveyed for the 2001 model year and common to 100% of the vehicle surveyed that were sold by European based manufacturers. . . .
8. The function of the 2001 Volvo S60 window obstacle detection system, specifically, operating in the window auto up mode and not in the manual mode was common to 77% of the vehicles surveyed for the 2001 model year. . . .
9. The placement of the window switches on the door rather than on the center console panel or dash of the 2001 Volvo S60, was common to 96% of the vehicles surveyed for the 2001 model year. . . .
10. The window switch on the 2001 Volvo S60 incorporated a push/pull switch design common to 50% of the vehicles surveyed for the 2001 model year. . . .
11. Similar to 54% of the switch designs surveyed by Caulfield Engineering the 2001 Volvo S60 allowed window up activation with the 40 mm rigid ball. . . .

*Id.* at 19–20.

Based on the foregoing, the Court finds that Dr. Salmon did not utilize a “convenience sample.” Although Dr. Salmon’s sample is not proportional to manufacturer market share in 2001, Dr. Salmon testified that the sampling was limited due to geographic availability. The Court also finds Dr. Salmon’s tailoring of the sample based on his geographical location was not made in bad faith or based on bias. Moreover, to the extent Plaintiff disputes Dr. Salmon’s sample or conclusions, those issues may be brought out in cross-examination or with contrary evidence should counsel determine to do so. *See Daubert*, 509 U.S. at 596 (“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.”). Nonetheless, the jury could infer from Dr. Salmon’s opinions, as stated above, that the field sample represents national market estimates for the 2001, model year. Defense counsel, therefore, shall ensure Dr. Salmon’s testimony does not insinuate a national percentage to the jury.

*ii. Whether Dr. Salmon’s analysis misrepresents the safety switches mounted at particular angles*

Plaintiff argues Dr. Salmon’s methodology is flawed because it focuses on “vertical mount orientation” rather than “proximity vertical mount orientation.” (Doc. 238) at 6. Plaintiff claims that this error resulted in Dr. Salmon misclassifying the Mercedes Benz S500 as not having a vertical mount safety feature, when in fact the sample vehicle has a proximity vertical safety feature.

The Court finds Plaintiff’s perceived weakness in Dr. Salmon’s analysis of the sample vehicle’s mount orientation goes to the weight of Dr. Salmon’s testimony, not its admissibility. *See Gomez v. Martin Marietta Corp.*, 50 F.3d 1511, 1519 (10th Cir. 1995) (“[T]he weaknesses in the data upon which [the] expert relied go to the weight the jury should [give the expert’s]

opinion, they do not render [the expert's] testimony too speculative as a matter of law.”). Hence, Plaintiff may raise during cross-examination or with contradicting evidence any flaws that may exist in Dr. Salmon's analysis of the Mercedes Benz S500's switch mount orientation. *See United States v. McCluskey*, 954 F. Supp. 2d 1224, 1251 (D.N.M. 2013) (“ . . . *Daubert* requires that factual determinations and flaws in application of generally reliable methodology are to be handled by cross-examination at trial and presentation of contrary evidence.”).

*iii. Whether the sample relates to the facts of the case*

Plaintiff contends Dr. Salmon's field study is not sufficiently related to the facts of this case for two reasons. First, the subject vehicle's window switch failed the 40-millimeter ball test, but Dr. Salmon's sample includes twelve cars that pass the test. Second, the sample includes a two-door sport coupe. Plaintiff concludes, without authority, “that it would be far less likely that a toddler would be riding in a two-door sport coupe, and thus the decision making process within the manufacturer concerning child protective devices would be quite different . . . .” (Doc. 238) at 7.

As noted earlier, disputes regarding the field study's samples go to the weight of Dr. Salmon's opinions, not its admissibility. *See supra* Part III.A.i. Likewise, any purported weaknesses in Dr. Salmon's connection between his opinions regarding a two-car coupe and the facts in this case go towards the weight of his opinion. *See Compton v. Subaru of Am., Inc.*, 82 F.3d 1513, 1518 (10th Cir. 1996) (stating that if there is logical basis for expert's opinion, weaknesses in underpinnings of opinion go to weight and not admissibility), *overruled on other grounds by Kumho Tire Co.*, 526 U.S. at 147.

Accordingly, the Court denies Plaintiff's request to strike Dr. Salmon's field study and opinions (5–11).

*B. Whether Dr. Salmon may opine on Defendant VCNA's alleged negligence*

The gravamen of Plaintiff's objection to Dr. Salmon's negligence opinions is that Dr. Salmon failed to consider Volvo's conduct. Plaintiff's Motion to Strike does not specify whether Dr. Salmon failed to review Defendant VCNA's or VCC's conduct.

As an initial matter, Dr. Salmon opines that "Volvo was not negligent in the design of the window system or the window system switches for the 2001 Volvo S60. In the design of the 2001 S60, Volvo exercised ordinary care to avoid risk of injury in events that are reasonably foreseeable." (Doc. 269-3) at 20 (opinion 14). The Court finds that the first sentence of Dr. Salmon's opinion is a legal conclusion drawn by application of the law to the facts of this case, and will not be permitted. *See Christiansen v. City of Tulsa*, 332 F.3d 1270, 1283 (10th Cir. 2003) ("Generally, an expert may not state his or her opinion as to legal standards nor may he or she state legal conclusions drawn by applying the law to the facts.") (internal quotation and citation omitted).

Next, Dr. Salmon's expert report evidences that in forming his negligence opinions he reviewed the subject switch's design, tested the design, considered VCC's design and specification documents, and relied upon VCC's corporate representative's deposition testimony. (Doc. 269-3) at 2-6, 8-13, 17, 22-23. The expert report also demonstrates that Dr. Salmon took into consideration FMVSS 118, that VCC foresaw the possibility of inadvertent window actuation, and under those circumstances "Volvo exercised ordinary care to avoid risk of injury in events that are reasonably foreseeable." *Id.* at 6-7, 20, 23; *see also* (Doc. 238-3) at 14 (Dr. Salmon depo. at 191-93).

"Fed. R. Evid. 704(a) allows an expert witness to testify in the form of an opinion or inference even if that opinion or inference embraces an ultimate issue to be determined by the

trier of fact.” *Phillips v. Calhoun*, 956 F.2d 949, 952 (10th Cir. 1992) (citing *A.E. ex rel. Evans v. Independent Sch. Dist. No. 25*, 936 F.2d 472, 476 (10th Cir. 1991)). Consequently, the Court finds Dr. Salmon’s review of the aforementioned materials sufficient to opine on whether Defendant VCNA exercised ordinary care.

Therefore, the Court grants, in part, Plaintiff’s Motion to Strike Dr. Salmon’s opinions (13–15), in that the Court will strike the first sentence of opinion (14).

*C. Whether Dr. Salmon’s methodology is flawed with respect to the subject switch’s risk of injury and design FMEA*

Plaintiff first contends that Dr. Salmon’s methodology is flawed because he cannot opine on the remoteness of the subject switch’s risk of injury compared to other window switches.

An expert opinion must be based on facts that enable the expert “to express a reasonably accurate conclusion as opposed to conjecture or speculation [but] absolute certainty is not required.” *Kieffer v. Weston Land, Inc.*, 90 F.3d 1496, 1499 (10th Cir. 1996) (citation omitted); *see also Robinson v. Missouri Pac. R.R. Co.*, 16 F.3d 1083, 1089–90 (10th Cir. 1994) (when expert’s opinion had some basis in fact, jury could determine whether testimony was helpful).

In this matter, Dr. Salmon’s expert report considers and explains whether the subject switch’s risk of injury was foreseeable in accord with New Mexico law. For instance, as stated earlier, Dr. Salmon reviewed the subject switch’s design, conducted numerous tests, and considered VCC’s knowledge regarding the possibility of inadvertent actuation. *See supra* Part III.B. Based on his analysis, Dr. Salmon concludes that the subject switch is “reasonably safe,” “presents an extremely remote risk of injury,” and “Volvo exercised ordinary care to avoid risk of injury in events that are reasonably foreseeable.” (Doc. 269-3) at 20. Dr. Salmon is not required to opine with absolute certainty as to the likelihood of the risk of injury associated with the subject switch. Moreover, Dr. Salmon’s testimony is relevant to assist the trier of fact in

determining if the subject switch is defective under New Mexico law. *See* UJI 13-1407 NMRA 2005 (product is defective if it presents “unreasonable risk of injury which a reasonably prudent person having full knowledge of the risk would find unacceptable”); *see also* UJI 13-1406 NMRA 2009. The Court finds that Dr. Salmon’s inability to testify regarding the exact degree of the risk of injury goes only to the weight of his opinions, and has no bearing on admissibility. *See Subaru of Am., Inc.*, 82 F.3d at 1518 (stating that if there is logical basis for expert’s opinion, weaknesses in underpinnings of opinion go to weight and not admissibility).

Finally, Plaintiff asserts Dr. Salmon’s methodology is flawed because he did not analyze the subject switch under the industry standard design FMEA. Plaintiff cites a booklet written by Ford in support of the assertion that design FMEA is the industry standard. *See* (Doc. 238-8). The Ford booklet, however, does not state that design FMEA is the industry standard. Rather, the booklet provides direction on how and why a company would complete a design FMEA. The absence of authority notwithstanding, Dr. Salmon’s failure to conduct a design FMEA has no bearing on the admissibility of his opinions. *See Daubert*, 509 U.S. at 596 (“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.”); *see also* (Doc. 307) at 9 (internal citation omitted).

Accordingly, the Court will not strike Dr. Salmon’s opinions (13 and 15). In addition, the Court will not strike Dr. Salmon’s opinion that “[i]n the design of the 2001 S60, Volvo exercised ordinary care to avoid risk of injury in events that are reasonably foreseeable.” (Doc. 269-3) at 20 (opinion 14).

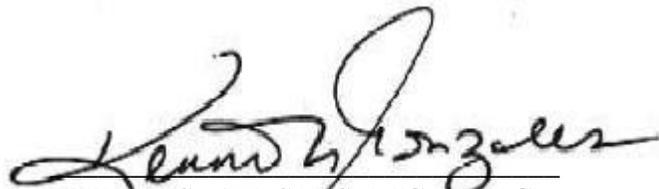
#### *IV. Conclusion*

The Court finds Defendant VCNA has shown that Dr. Salmon’s opinions are the product

of sufficiently reliable data and methodology, and are based on facts which sufficiently satisfy Rule 702's reliability requirements. To the extent Plaintiff disputes Dr. Salmon's opinions, those issues are a matter of credibility and weight that may be brought out in cross-examination or with contrary evidence and resolved by the jury. The Court, however, concludes that Dr. Salmon's opinion that "Volvo was not negligent" pertains to the ultimate legal question before the jury and, thus, is impermissible.

IT IS, THEREFORE, ORDERED that Plaintiff's Motion to Strike Defendant's Expert James Salmon, Ph.D., PE (Doc. 238) is granted, in part, in that the following portion of opinion (14) is excluded from Dr. Salmon's expert report and trial testimony:

"Volvo was not negligent in the design of the window system or the window system switches for the 2011 Volvo S60."



UNITED STATES DISTRICT JUDGE