IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO
Judge William J. Martínez

Civil Action No. 15-cv-0518-WJM-NYW

DANIEL PERTILE, and
GINGER PERTILE,

Plaintiffs,

v.

GENERAL MOTORS, LLC, a Delaware limited liability company, and,
TRW VEHICLE SAFETY SYSTEMS, INC., a Delaware corporation,

Defendants.

DAUBERT ORDER REGARDING PLAINTIFFS' EXPERT STEPHEN SYSON

In this personal injury/product liability action pending under the Court's diversity jurisdiction, 28 U.S.C. § 1332(a), Plaintiffs Daniel and Ginger Pertile bring suit against Defendants General Motors, LLC ("GM") and TRW Vehicle Safety Systems, Inc. ("TRW"), for claims including strict liability, negligence, breach of warranty, violation of the Colorado Consumer Protection Act, Colo. Rev. Stat. §§ 6-1-101 *et seq.*, and loss of consortium. (See generally ECF No. 254.) Now before the Court are Defendant TRW's Motion to Exclude Stephen Syson's Seat Belt Opinions (ECF No. 199), and Defendant GM's Motion to Exclude the Testimony of Stephen R. Syson (ECF No. 200). For the reasons explained below, both motions are denied.

I. LEGAL STANDARD

A district court must act as a "gatekeeper" in admitting or excluding expert testimony. *Bitler v. A.O. Smith Corp.*, 400 F.3d 1227, 1232 (10th Cir. 2004). Admission

of expert testimony is governed by Rule 702, which provides:

> 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.

Fed. R. Evid. 702. The proponent of the expert testimony bears the burden of proving the foundational requirements of Rule 702 by a preponderance of the evidence. *United States v. Nacchio*, 555 F.3d 1234, 1241 (10th Cir. 2009).

An expert's proposed testimony also must be shown to be relevant and otherwise admissible. *See Adamscheck v. Am. Family Mut. Ins. Co.*, 818 F.3d 576, 588 n.7 (10th Cir. 2016). To be relevant, expert testimony must "logically advanc[e] a material aspect of the case" and be "sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute." *United States v. Garcia*, 635 F.3d 472, 476 (10th Cir. 2011) (brackets in original).

While an expert witness's testimony must assist the jury to be deemed admissible, Fed. R. Evid. 702(a), it may not usurp the jury's fact-finding function. *See Specht v. Jensen*, 853 F.2d 805, 808 (10th Cir. 1988). The line between what is helpful to the jury and what intrudes on the jury's role as the finder of fact is not always clear, but it is well-settled that "[a]n opinion is not objectionable just because it embraces an ultimate issue." Fed. R. Evid. 704.

The trial court's focus under Rule 702 is on the methodology employed by an

expert, not on his or her conclusions. *Bitler*, 400 F.3d at 1233. Ultimately, "the rejection of expert testimony is the exception rather than the rule." Fed. R. Evid. 702 advisory committee's note. "[T]he trial court's role as gatekeeper is not intended to serve as a replacement for the adversary system. . . . 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." *Id.* (quoting *Daubert v. Merrell Dow Pharm., Inc*., 509 U.S. 579, 595 (1993)).

II. BACKGROUND

Detailed background of this case has been set out in other orders and is not repeated here. In relevant summary, Plaintiff was the front seat passenger in a 2011 Chevrolet Silverado 2500HD crew cab pickup truck (the "Vehicle") during a single vehicle rollover on February 25, 2013 (the "Rollover," or the "Crash"). Plaintiffs proceed on products liability claims against both GM, which manufactured the Vehicle, and TRW, which manufactured its seatbelts.

Pursuant to Federal Rule of Civil Procedure 26(a)(2) and Federal Rule of Evidence 702, Plaintiffs disclosed Mr. Stephen Syson to testify as an "expert in the areas of vehicle structures and restraints systems, including but not limited to evaluation of designs, design alternatives, and defect." (ECF No.199-3 at 2.) In particular, Mr. Syson "is expected to testify about the safety performance of the roof structure, seat, and seat belt" of the Vehicle. (*Id.*)

Mr. Syson's written report disclosing his opinions is 31 pages long. (ECF No. 288-2.) The entire transcript of his deposition is also in the record and the Court has

reviewed these materials in some detail, but only briefly sets out a summary of his overall opinions below, then addressing the data and methods underlying those opinions to the extent challenged by Defendants under Rule 702.

Mr. Syson describes the nature of the Crash and opines that "rollover accidents" like this one "are highly foreseeable crashes for vehicles like the Silverado." (ECF No. 238-2 at 9.) He describes the steps he took in inspecting the Vehicle and measuring the deformation or damage to various components. (*Id.* at 10–11.) In addition to summarizing his qualifications and lengthy professional history in automobile safety, his report cites test results, published studies, and knowledge of industry practices and technologies as relevant to his opinions, which relate primarily to roof strength and seatbelt design.

A. Roof Strength

Mr. Syson opines, generally, that the Vehicle's roof should have been stronger. He states that "[t]he inherent weakness of the . . . [Vehicle's] roof structure is a result of a number of design defects." He lists what he sees as those defects, and suggests alternate designs. (*Id.* at 12.) He opines, for example: that "[t]he right B pillar buckled . . . due to a reduction in section stiffness"; that "[f]illing the pillar with high-density EA foam . . . would reduce the weakening effect of the stress concentration"; that "[t]he C pillar is constructed with . . . . relatively low strength materials"; and, that "[t]he negative effects of numerous small holes in the structure would be dramatically reduced by using of anti-buckling filler materials, or alternative assembly procedures, which would eliminate such holes." (*Id.* at 12.)

Mr. Syson also opines as to the consequences of such alleged design defects, including that "[a] weak roof structure permits a compromise of the 'survival space' or 'safety zone' around an occupant." (*Id.* at 13.) Given his review, he opines "GM should have designed out the danger by providing a roof structure or rollover protective system (ROPS) to keep the roof from collapsing." (*Id.* at 10.) He also states that "GM could have made the roof . . . strong enough to withstand this rollover accident while maintaining Mr. Pertile's survival space," and that "[i]f [the Vehicle's] roof structure had maintained [Mr. Pertile's] survival space he likely would have walked away with minor injuries. However, once his survival space was destroyed, his other safety restaints were rendered ineffective." (*Id.* at 14, 15.)

B. Seatbelt Opinions

Mr. Syson also opines that the "restraint system in the Silverado is not reasonably safe in that it failed its fundamental purpose to restrain the occupant and keep the occupant within the available survival space and away from internal components of the vehicle that could result in serious injury." (*Id.* at 23.) His opinion is that "during the rollover collision, [Mr. Pertile] was inadequately restrained, in part since slack was introduced into his seatbelt restraint due to crush and the system lacked a rollover sensor that would have deployed the pretensioner." (*Id.* at 7.) Given that Mr. Pertile's seat was partially reclined before the Crash, Mr. Syson also opines that "[t]echnologically and economically feasible and practical design alternatives existed . . . to reduce the hazard and risk of injury caused by a partially reclined seat." (*Id.* at 22–23.)

As with roof design, Mr. Syson also identifies certain alternative design features he believes were feasible and would have made the seatbelt safer, opining that "GM and TRW should have taken appropriate steps to incorporate known safety features," and that "[i]t was technologically and economically feasible for GM and TRW to incorporate features . . . that would have provided reasonable protection" in rollovers, and that "were available to GM and TRW." (*Id.* at 24, 26.) In particular, he states that "use of one or more of the following technological features" "would have kept Daniel Pertile in close proximity to the . . . seat cushion": (1) "rollover activated pretensioners"; (2) "[a] properly designed, cinching latch plate"; and/or (3) "a seat-integrated belt system" that would have significantly improved "rollover survivability." (*Id.* at 27, 29).

Finally, Mr. Syson opines that these "referenced safer alternative designs, in reasonable probability, would have prevented or significantly reduced the risk of the serious injuries to Mr. Pertile without substantially impairing the utility of [the] subject vehicle," and that "there is no question that Mr. Pertile would have survived this crash without such serious injuries had one or more of these technologies been incorporated." (*Id.* at 27.)

C. "Diving" Theory and Relationship Between Roof and Seatbelt Opinions

Mr. Syson's Report also addresses "the relationship between maintaining the survival space and providing effective restraint performance for rollovers," and "the relationship between poor performance of the roof structure and belt system and injury causation." (*Id.* at 24.) In particular, he raises and pre-emptively addresses a view he calls the "diving" theory, based on past positions taken by GM or other auto industry

defendants. Mr. Syson describes this view as generally holding "that neck loads occu[r] prior to vehicle roof crush," and/or that "in a rollover, the occupant falls downward into the interior of the roof," rather than being injured by roof crush or deformation as it occurs.

Mr. Syson gives reasons he thinks this theory is not well supported, and also responds to this anticipated position by opining that: "Occupant protection in rollover[s] involves a combination of a good roof supporting structure and an effective and safe restraint system. A vehicle . . . with a poor roof that allows deformation into the occupant survival space is not reasonably safe even if equipped with the best restraint system available. A vehicle designed with a safe supporting roof structure is not safe if the safety restraint system is not designed in such a way that it effectively ties the occupant to the seat thus keeping the occupant from striking or diving into parts of the vehicle that can be injurious." (ECF No. 238-2 at 9.)

III. ANALYSIS

TRW seeks to exclude Mr. Syson's testimony regarding alternative seatbelt designs, and GM seeks to exclude Mr. Syson's testimony in its entirety. (*See* ECF No. 199 at 12; ECF No. 200 at 1, 12.) Neither Defendant argues that Mr. Syson is not qualified to testify as an expert. The Court addresses in turn each of Defendants' specific arguments as to the data and methodologies supporting his opinions below.

A. Seat Belt Opinions

1. Connection Between Seatbelt Opinions and Roof Crush Opinions

Defendants emphasize deposition testimony in which Mr. Syson stated, "I really

think that this is a—a roof crush case more than a seat belt case. I . . . tend to agree with [Plaintiffs' biomechanics expert] Dr. [Mariusz] Z[iejewski, Ph.D.] that the—the deformation of the roof and the fact that it comes down on the right front passenger's shoulders is the loading mechanism, and then obviously Dr. Z[iejewski] has the appropriate explanation of how that causes the injury." (ECF No. 199-1 at 7.)

Defendants argue that given this testimony, Mr. Syson's opinions regarding alternative seatbelt designs and any alleged defect in the seatbelt should be viewed as irrelevant and inadmissible. They also cite to testimony in which Mr. Syson testified that he didn't know whether pretensioner(s) he recommends as an alternative design component "would make a lot of difference," assuming that shoulder-loading was the cause of Mr. Pertile's injuries, explaining, "I think the roof deformation is the key issue. . . . we'd have to do some more analysis to see how much force is applied and how much reduction in force you can get with a cinching latch plate. I don't know if it would be enough to . . . mitigate his injuries or not." (ECF No. 199-1 at 18.) In addition, Defendants cite to Dr. Ziejewski's conclusion that "a properly functioning seatbelt would have not been able to reduce the likelihood of injury, due to roof intrusion into the occupant area." (ECF No. 201-8 at 14.)

Given these views, Defendants argue that Mr. Syson "does not have a valid scientific or technical basis" for asserting the Vehicle's seatbelt was defective, and that there is no logical relationship between the facts as he acknowledges them and his opinion that his alternative seatbelt designs would have made the vehicle safer in any way that might have averted Mr. Pertile's injuries. (*See* ECF No. 199 at 6–7; ECF No. 200 at 8, 10–11.)

Plaintiffs respond that Mr. Syson's seatbelt-related opinions are offered in the alternative to his primary view that a weak roof caused Mr. Pertile's injuries, and in response to the position of GM and its experts that Mr. Pertile's injuries resulted at least in part because there was surplus webbing in his seatbelt, resulting in movement out of the seat (or "excursion"), rather than as a result of inward roof crush. (*See* ECF No. 238 at 5–6.)

The Court finds Plaintiffs' arguments are consistent with Mr. Syson's opinions and his stated reasons for them.[1] Plaintiffs identify anticipated opinions from GM's experts to the effect that surplus webbing or slack in the seatbelt caused Mr. Pertile's injuries, rather than roof crush (*see* ECF No. 240-9 at 11), that he "moved up into the area of the roof before there was significant deformation" (ECF No. 240-8 at 8), that the roof structure was properly designed and strong (ECF No. 240-10 at 5, 9), and that a stronger roof would not have provided additional protection (*id.* at 8).

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[1] For example, when asked at his deposition regarding his analysis of "how an all belts to seat design would have made any difference," he explained as follows:

> I think *it's only an issue since defense experts made it an issue*. I mean, I think if you look at what Dr. Z says, the injury really occurs in—because the roof deforms onto Mr. Pertile's shoulder, and if you accept that, then the safety belt really isn't a big issue. But if you—if you accept a hypothesis that Mr. Pertile dove into the roof with his shoulder as the defense biomechanic—that's a defense biomechanic's position—I don't see how you can do that with a properly designed safety belt. * * * I think the analysis is in the papers that I provided you. Various people have done rollover tests with all belts to seat, and all belts to seat work very well. And so as long as you maintain the roof structure integrity with an all belts to seat . . . all belts to seat do work well provided the roof structure stays up.

(ECF No. 238-9 at 163 (emphasis added).)

Given this record, the Court finds no logical error that renders Mr. Syson's opinions inadmissible. To the extent there is contradiction between Mr. Syson's alternate theories of defect, it is subject to cross-examination and goes to the weight of Mr. Syson's testimony, not its admissibility.[2]

TRW argues that to be admissible, Mr. Syson must eliminate alternative views of the cause of Mr. Pertile's injury, not opine as to both. (*See* ECF No. 262 at 6–7.) TRW cites *Taber v. Allied Waste Sys., Inc*., 642 F. App'x 801, 812 (10th Cir. 2016), where the district court permissibly excluded testimony of a causation expert because he failed to adequately rule out probable alternative causes of a workplace accident. *Taber* does not support excluding Mr. Syson's testimony here, however. As the Court views Mr. Syson's anticipated testimony, he opines that the roof was weak and deformed excessively, but that *even if* one were to accept Defendants' view that excessive

[2] In opposing Defendants' Motions, Plaintiffs submitted an affidavit from Mr. Syson which tends to support certain of Plaintiffs' arguments, and in which Mr. Syson responds to Defendants' arguments for excluding his testimony. (ECF Nos. 238-1 & 240-1.) TRW argues that the Court should strike ¶ 7.e of this affidavit under the sham affidavit doctrine. (*See* ECF No. 262 at 2–5.) That doctrine is ordinarily raised in the summary judgment context, where the rule is that the Court will not automatically exclude a witness's affidavit simply because it conflicts with earlier deposition testimony. *Burns v. Bd. of Cnty. Comm'rs of Jackson Cnty.*, 330 F.3d 1275, 1281–82 (10th Cir. 2003). However, the Court "will disregard a contrary affidavit . . . when it constitutes an attempt to create a sham fact issue," after considering several factors. *Id.* Considering the relevant factors, and given the record cited above, the Court does not view the present affidavit as an attempt to create a sham fact issue and sees no reason to strike it. Moreover, given that TRW itself requested an evidentiary hearing at which the Court would have heard testimony from Mr. Syson (*see* ECF No. 199 at 11–12), it can hardly object to consideration of what amounts to a written submission of testimony. *See Kumho Tire v. Carmichael,* 526 U.S. 137, 152 (1999) (trial court has considerable discretion in deciding how to undertake its gatekeeping role under *Daubert* and Rule 702). Any contradiction between the contents of Mr. Syson's affidavit and his report or prior testimony will be subject to cross-examination at trial and goes to the weight of his testimony, but the Court does not find any contradiction so fundamental that it renders his testimony inadmissible. In any event, the Court's analysis here does not rest on the contents of Mr. Syson's affidavit.

movement out of the seat before or during roof deformation caused Mr. Pertile's injuries, it was still a defect for the seatbelt system to permit such "excursion." The Court does not see these positions as logically inconsistent or incompatible in a manner that requires exclusion of Mr. Syson's testimony. Nor does *Taber* require Mr. Syson to eliminate these complementary theories of defect. Any tension or inconsistency between Mr. Syson's *causation* opinion related to roof strength and deformation and his *defect* opinions related to seatbelt design can be challenged on cross-examination. To the extent it exists, any such inconsistency bears on the weight of Mr. Syson's opinions without requiring their exclusion under Rule 702.

2. Failure to Test

Defendants argue that Mr. Syson's seatbelt opinions are inadmissible because he did not test his alternative seatbelt designs or ground them in analysis of the specific scenario of the Crash in this case. (*See* ECF No. 199 at 5–11; ECF No. 262 at 7–9; ECF No. 200 at 9–10.) Again, the Court finds this criticism goes to the weight of Mr. Syson's opinions, not admissibility.

In particular, TRW argues the Court should exclude Mr. Syson's seatbelt opinions for lack of "tests or calculations specific to [this] accident." (ECF No. 199 at 6 (quoting *Black v. M&W Gear Co.*, 269 F.3d 1220, 1237–38 (10th Cir. 2001)).) In *Black*, the district court permissibly excluded the testimony of an expert who opined that a certain rollover safety feature would not have prevented the plaintiff's injury (on a riding lawnmower) because the expert "had not conducted any tests or calculations to support his opinion," and "was not even aware" which particular type of equipment plaintiffs

claimed should have been installed. *Id.* at 1237. *Black* is not sufficiently analogous to warrant exclusion of Mr. Syson's opinions here, given his explained reasons for his opinions. Moreover, neither *Black* nor other authorities impose a general requirement for case-specific testing as a prerequisite to admissibility under Rule 702. *See Bitler*, 400 F.3d at 1236 ("testing is not necessary in all instances to establish reliability under *Daubert*").

Here, Mr. Syson's opinions regarding alternative seatbelt designs rest on his review of evidence showing there was slack in Mr. Pertile's seatbelt, his review of prior testing and industry research regarding the types of alternative design components he considered, his industry knowledge and reference showing such components exist and have been used in other vehicles, and a general review of their tested or expected effectiveness. (*See* ECF No. 238-2 at 24–25, 27–28.) Given these bases, the Court finds that prior testing and Mr. Syson's explained industry knowledge regarding the feasibility of these technologies supports admission of his testimony. More case-specific testing was not a requirement for admissibility under Rule 702 in this context.

Likewise, the fact that Mr. Syson estimated "close to three [inches]" of slack in the seatbelt, rather than offering a more precise calculation does not require exclusion of his opinion on this point. The same is true of the fact that he cannot definitively state how much slack was in the seatbelt *before* the Rollover, rather than developing during the Rollover, as the Vehicle deformed. (*See* ECF No. 199 at 9; ECF No. 200 at 8–9.) The implications of uncertainty on these points are best addressed through cross-examination, not by exclusion.

Finally, TRW relies on *Champagne Metals v. Ken-Mac Metals, Inc.*, 458 F.3d 1073 (10th Cir. 2006), to argue that Mr. Syson's testimony proposing use of dynamic locking latch plates is inadmissible because it is based on testing regarding cinching latch plates, which are different. (*See* ECF No. 199 at 8–9.) However, the record reflects—in the words of TRW's attorney—only that "the modern version of dynamic locking latch plate is somewhat different in operation and design from the cinching latch plate." (ECF No. 199-1 at 261.) The Court finds this comparison to a "somewhat different" latch place is unlike the facts of *Champagne Metals*. There, an economic expert opined regarding distributors' conduct in the "upstream" market in which they purchased aluminum in one form, but based his analysis on evidence related to the "downstream" market in which the distributors *sold* aluminum in a different form, and offered "no explanation at all" for treating the two markets as interchangeable. 458 F.3d at 1079. Here, Mr. Syson permissibly relied on testing related to an older implementation of a seatbelt latch plate, in order to opine regarding the impacts of a newer implementation of a comparable latch plate with a similar overall function. The impact of the differences between the two plates are subject to cross-examination, bearing on the weight of his opinions.

B. Roof Strength Opinions

1. Standard Regarding Strength-to-Weight Ratio

GM argues that although Mr. Syson opines the Vehicle was defective because of inadequate roof strength, his opinion is not supported by a defined standard or criteria that make his opinion admissible under Rule 702. GM cites deposition testimony in

which Mr. Syson answered that "the basic recommendations that [he has] made historically" has been for vehicles to have a roof strength-to-weight ratio ("STW") that exceeds three-to-one, as measured by the federally-defined FMVSS 216 test of roof strength. (*See* ECF No. 240-6 at 146–47.) That position is generally consistent with references in Mr. Syson's report, including statements that "it would be technically feasible and not cost prohibitive to achieve at least 3.5 times the weight of the vehicle in a FMVSS 216 test," and his that "[r]elatively simply changes" in the vehicle design in GM simulations "were used to strengthen the roof from around 1.6X to 2.72X," but these changes "were not implemented in production." (ECF No. 238-2 at 14.)

Although GM criticizes Mr. Syson for not defining the criteria supporting his STW criterion (*see* ECF No. 200 at 5), he testified that his expectation regarding roof strength is "to have a reasonable assessment based on the forces that you see in testing, and we know from the testing that's been done . . . that roofs generally see three to three and a half times the weight of the vehicle when they contact the ground in a typical rollover. And so that should be at least your minimum design criteria." (ECF No. 240-6 at 179–80.) Mr. Syson also identified other industry criteria, design alterations considered by GM, and STW ratios achieved by other vehicles as tending to support his opinions on this point. (*See, e.g.,* ECF No. 238-2 at 14; *id.* at 16 ("in order to receive a good roof strength rating from the Insurance institute for Highway Safety, the roof strength to weight ratio must exceed 4.0.").) Given these references, the Court finds that his opinion regarding desirable roof STW ratio is sufficiently supported to be admissible under Rule 702. To the extent GM seeks to criticize the basis for this opinion, or to argue another standard would be more appropriate, those points go to the

weight of Mr. Syson's opinions, not their admissibility.

In addition, GM argues that while articulating this general statement supporting a minimum STW ratio of 3.0., Mr. Syson does not himself adhere to that standard, and that his opinion therefore is "entirely subjective." (ECF No. 256 at 5–6.) GM cites testimony in which Mr. Syson declines to adopt a single STW ratio as the correct standard for a safe roof, instead opining that this "has to be determined by the manufacturer," as "a design goal . . . at something greater than three." (ECF No. 256 at 5–6.) He offers this statement in conjunction with opining that certain drop tests and rollover tests of roof strength should have been performed by GM to assure the performance of the Vehicle's roof. (*Id.*) Thus, rather than opining that a single STW requirement sets the appropriate standard or the threshold between safe or defective roof strength, he testified that "manufacturers are setting the criteria by looking at how their vehicles are performing in rollovers and seeing how to optimize that performance." (ECF No. 256 at 5–6.)

Mr. Syson's evasion of a definitively-stated STW standard likely raises a criticism appropriate for cross-examination. However, the Court finds he has established sufficient bases to offer his opinions pursuant to Rule 702, given his explanation that the appropriate design criteria should, while generally incorporating a STW ratio "greater than three," also be vehicle-specific and be reviewed in light of performance tests.

Moreover, GM does not identify any authority stating that as a prerequisite to admissibility a design expert must draw a bright-line numerical standard differentiating between reasonably safe and defective products. "[W]hether a product is unreasonably

dangerous is generally a question for the jury." *Bartholic v. Scripto-Tokai Corp.*, 140 F. Supp. 2d 1098, 1111 (D. Colo. 2000) (citing *Union Supply Co. v. Pust*, 583 P.2d 276, 279 (Colo. 1978)). This determination typically considers a variety of factors, rather than resting on bright-line tests or standards. *See Armentrout v. FMC Corp.*, 842 P.2d 175, 184 (Colo. 1992) (listing illustrative factors to be considered).

The Court agrees with the reasoning of these decisions, and as a consequence also declines to require a bright-line standard as a prerequisite for Mr. Syson's testimony regarding whether the Vehicle's roof was unreasonably dangerous. Absent contravening authority requiring exclusion, the Court instead follows the general rule that "rejection of expert testimony is the exception." *See* Fed. R. Evid. 702 advisory committee's note. At least in this context, criticisms of Mr. Syson for using a "subjective" standard bear on the weight of his opinions, not their admissibility.

2. Comparison to Next Generation Vehicle Series

GM also criticizes Mr. Syson's reliance on, and comparison to, the roof design and strength for the "next generation" of vehicles developed by GM, specifically the "K2" series pickups. Mr. Syson opines these designs "demonstrate essentially what [GM] could do or could have done in terms of strengthening the roof of the Pertile vehicle" (ECF No. 240-6 at 19), while GM argues this "was a new vehicle platform" and therefore does not provide a valid basis of comparison, especially given Mr. Syson's limited review of information regarding the newer series vehicles (*see* ECF No. 200 at 5; ECF No. 240-6 at 20).

The Court finds no methodological flaw in Mr. Syson's comparison of the older GMT900 Series to the newer K2 Series that is so serious such that it requires exclusion

of his testimony. Argument that the vehicles were too dissimilar for this comparison to persuasively show what GM "could have done" in the earlier designs is appropriate for cross-examination and bears on the weight of Mr. Syson's opinions, but not their admissibility.

3. Feasibility and Impact of Alternative Designs

GM also argues that Mr. Syson's roof strength and alternative design opinions should be excluded because he has not tested or proven his proposed alternatives were feasible given GM's production methods, and did not quantify what impact they would have had if installed. Instead, Mr. Syson deferred that analysis, in part, to another of Plaintiffs' experts, Dr. Andreas Vlahinos, Ph.D., who ran computer simulations of what impact Mr. Syson's proposed design alternatives would have on the Vehicle's roof strength. (*See* ECF No. 200 at 6.)

The Court again finds that these criticisms bear on the weight of Mr. Syson's opinions, not their admissibility. As set out in his report and deposition testimony, Mr. Syson opines that the kinds of alternative designs he considered were feasible as a general matter, based on testing in prototypes and implementations in other vehicles or by other manufacturers. (*See* ECF No. 240-6 at 183; ECF No. 238-2 at 14.) This is a sufficiently reliable ground to permit his general testimony regarding the potential utility of these alternative designs, or "design approach[es]" (*see* ECF No. 240-6 at 183–84), given that Mr. Syson does not opine more specifically regarding how these "approaches" could or should have been implemented, nor offer definitive opinions about what degree of strength they would have added. Attacks on the practical feasibility of these alternative design approaches, or on how costly or difficult they

would have been to implement within GM's manufacturing processes, therefore bear on the weight of Mr. Syson's opinions, not their admissibility.

Again, GM does not cite authority requiring a product defect expert to make a definitive or threshold showing that alternative designs could be implemented within specific confines of a defendant's existing manufacturing process. Mr. Syson's general bases for opining that such technologies were feasible within the industry is sufficient to make them admissible. Disputes as to the availability and costs of such alternatives ultimately bear on the question of whether a design defect was present. *See Armentrout*, 842 P.2d at 184 (factors to consider in defect determination include "availability" of a substitute product and manufacturer's "ability to eliminate the unsafe character of the product without . . . making it too expensive"). Accordingly, the Court finds that any dispute regarding the cost or feasibility of specifically implementing Mr. Syson's alternative design proposals bears on the weight of his opinions, and may tend to defeat Plaintiff's claims, but it does not make his testimony inadmissible under Rule 702.

Finally, GM points out that when Dr. Vlahinos simulated roof strength of a modified vehicle based on Mr. Syson's proposed alternative designs, his models achieved a STW ratio of less than 3.0, that is, less than the general "design goal" advocated by Mr. Syson. This too may undermine the probative value of Mr. Syson's alternative design proposals to show that GM should have used designs similar to his recommendation, or was unreasonable for not doing so, or that his alternative designs would have prevented Mr. Pertile's injuries. But since Mr. Syson does not offer specific opinions regarding exactly how strong an alternative roof would become based on his

alternative design proposals, Dr. Vlahinos's testing does not contradict his more general opinions. Thus, the results of Dr. Vlahinos's modeling do not reveal a methodological flaw in Dr. Syson's opinion that requires exclusion of his testimony in its entirety under Rule 702, as GM requests.

IV. CONCLUSION

For the reasons set out above, the Court ORDERS as follows:

1. Defendant TRW Vehicle Safety Systems Inc.'s Motion to Exclude Stephen Syson's Seat Belt Opinions (ECF No. 199) is DENIED;
2. Defendant General Motors LLC's Motion to Exclude the Testimony of Stephen R. Syson (ECF No. 200) is DENIED; and
3. Defendants' Requests for Oral Argument on these motions (*see* ECF No. 199 at 11; ECF No. 201-9) are DENIED.

Dated this 19th day of September, 2017.

BY THE COURT:

William J. Martínez
United States District Judge