

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO**

Civil Action No. 1:15-cv-00518-WJM-NYW

DANIEL PERTILE, an individual, and
GINGER PERTILE, an individual,

Plaintiffs,

v.

GENERAL MOTORS, LLC a Delaware limited liability company,
TRW VEHICLE SAFETY SYSTEMS, INC., a Delaware corporation,
KELSEY-HAYES COMPANY, a Delaware corporation,
JOHN DOE NOS. 1-25, and
JOHN DOE COMPANIES NOS. 1-25,

Defendants.

ORDER

Magistrate Judge Nina Y. Wang

This matter comes before the court on Plaintiffs’ Motion to Compel Production of General Motors LLC’s Finite Element Models for the GMT 900 Series (the “Motion to Compel FEA Models”) [#87, filed Sept. 1, 2015]. The matter was referred to this Magistrate Judge pursuant to the Order of Reference dated May 12, 2015 [#58] and the memorandum dated September 2, 2015 [#88]. The Parties submitted briefing on the Motion to Compel FEA Models, including an Opposition by Defendant General Motors LLC (“GM”)¹ [#96, filed Sept. 22, 2015] and a Reply filed by Plaintiffs Daniel and Ginger Pertile (“Plaintiffs” or “the Pertiles”) [#107,

¹ GM’s Opposition is styled as an “Opposition to Plaintiffs’ Motion to Compel and a Motion for Protective Order.” [#96]. A party may not make a motion in a response or reply to an original motion. D.C.COLO.LCivR 7.1(d). Therefore, this Order only addresses whether Plaintiffs are entitled to compel production of GM’s FEA Models at this juncture. It is not intended to act as a Protective Order absolutely barring production of FEA Models under any circumstances.

filed Oct. 9, 2015]. The court held oral argument on October 30, 2015, and took the Motion to Compel FEA Models under advisement. Having now fully considered the issue presented, this court DENIES the Motion to Compel FEA Models for the following reasons.

BACKGROUND

The Pertiles originally initiated this action in state court in the District Court for the City and County of Denver, Colorado on February 17, 2015. [#1-1]. The Pertiles allege that Plaintiff Daniel Pertile was catastrophically injured during a rollover accident in which he was the front seat passenger of a Chevrolet Silverado 2500 HD crew cab, VIN number 1GC1KVC9BF167901, that occurred on or about February 25, 2013. [#1-1 at ¶ 35]. As initially pled, Plaintiffs named a number of defendants that were purportedly involved in the design and manufacturer of a Chevrolet Silverado 2500 HD crew cab truck, its safety restraint system, and the electronic stability control system. [#1-1 at ¶¶ 39-41]. On March 12, 2015, one of those defendants, Delphi Automotive Systems, LLC, removed the action to this court. [#1].

On April 8, 2015, Plaintiffs filed an Amended Complaint, dismissing a number of Defendants (including Delphi Automotive Systems).² [#31]. By the time that the Scheduling Order was entered in this case on May 13, 2015, only five named entities remained as Defendants: GM, TRW Vehicle Safety Systems, Inc. (“TRW”), Kelsey-Hayes Company (“Kelsey-Hayes”), DPH Holdings Corporation and DPH-DAS, LLC (collectively “DPH”). DPH was subsequently dismissed [#69], leaving GM, TRW, Kelsey-Hayes, the John Doe Individuals and John Doe Companies as Defendants. The court entered a Protective Order, to which the Parties had stipulated, on July 6, 2015, and an Electronically Stored Information (“ESI”)

² The Parties also stipulated to the dismissal of a number of Defendants after filing the Amended Complaint. *See e.g.*, [#39, #40, #41, #42].

Protocol to facilitate discovery. [#81, #79]. The ESI Protocol reflected the Parties' disagreement as to whether GM would be required to produce ESI related to its finite element analysis. [#79 at 3]. Finite element analysis ("FEA") refers to "a computer modeling technology used to create a mathematical simulation of three dimensional, virtual representation of a vehicle, component or system subjected to prescribed load conditions." [#96 at 2]. It is used to simulate real-world behavior of physical objects. *See Cordis Corp. v. Medtronic Ave, Inc.*, 511 F.3d 1157, 1169-70 (Fed. Cir. 2008). It does not reflect actual real-world testing performed on the final design of the vehicle at issue.

The Parties proceeded with discovery, including the exchange of documents and ESI through Initial Disclosures. GM has produced ESI related to the design of the Chevrolet Silverado at issue, in the form of Computer Aided Design ("CAD") files. [#96-1 at ¶ 5]. On August 25, 2015, this court held a telephone discovery conference regarding Plaintiffs' request for GM's FEA Models. Specifically, Plaintiffs request production "in their original native format all finite element models depicting the roof and pillar structures of the subject vehicle design including but not limited to inputs, outputs, pre and post processing, and mesh files." [#87-1 at 1]. GM refused to produce its trade-secret FEA Models, on the grounds that the discovery sought by Plaintiffs was not reasonable or necessary, particularly in light of the other discovery provided by GM.

The court then asked the Parties to brief the issue, and include any evidentiary support for their positions. This instant Motion to Compel FEA Models, and the related briefing, followed.

APPLICABLE LAW

The recent amendment to Federal Rule of Civil Procedure 26(b)(1), effective December 1, 2015, reads "[u]nless otherwise limited by court order, the scope of discovery is as follows:

Parties may obtain discovery regarding any nonprivileged matter that is relevant to any party's claim or defense and proportional to the needs of the case, considering the importance of the issues at stake in the action, the amount in controversy, the parties' relative access to relevant information, the parties' resources, the importance of the discovery in resolving the issues, and whether the burden or expense of the proposed discovery outweighs its likely benefit.

Pursuant to 28 U.S.C. § 2074(a) and the Order of the Supreme Court dated April 29, 2015, the amendment shall govern all civil cases commenced after December 1, 2015 and "insofar as just and practicable, all proceedings then pending."³ Although this case was initiated prior to December 1, 2015, this court applies the principles of proportionality as discussed above because they are the same principles that would have applied through the former Rule 26(b)(2)(C)(iii). *See* Fed. R. Civ. P. 26(b)(1) advisory committee's note to 2015 amendment ("Most of what now appears in Rule 26(b)(2)(C)(iii) was first adopted in 1983.").

In this case, the threshold inquiry is whether, pursuant to Rule 26(b)(1), the FEA Models should be produced in native format, to support Plaintiffs' claims for product liability and negligence.⁴ GM asserts (and Plaintiffs do not contest) that it has already produced over 150,000 pages of discovery materials and data, including three-dimensional CAD drawings. [#96-1 at 5]. GM has also produced the engineering analysis reports and the evaluation reports resulting from the FEA Models. [*Id.* at ¶ 10]. Plaintiffs contend, however, that the production to date is insufficient because the FEA Models are necessary to reflect what GM knew when it designed and tested the roof. [#87 at 5]. Plaintiffs further contend that with the FEA Models, Plaintiffs could conduct their own simulations and would be able to understand what GM knew or could have known about the truck's design and testing. [*Id.*].

³ *See* [http://www.supremecourt.gov/orders/courtorders/frcv15\(update\)_1823.pdf](http://www.supremecourt.gov/orders/courtorders/frcv15(update)_1823.pdf).

⁴ Plaintiffs' Amended Complaint also includes claims for breach of warranties and a violation of the Colorado Consumer Protection Act, but Plaintiffs do not argue that the FEA Models are relevant to those causes of action. [#87].

ANALYSIS

I. Relevance

There is no dispute that the FEA Models do not necessarily reflect the Chevrolet Silverado 2500 HD crew cab, VIN number 1GC1KVC9BF167901, as manufactured that was subject to the roll-over accident at issue. [#96 at 8; #96-1 at ¶ 7]. The FEA Models allow GM engineers assess pre-production designs of vehicle systems, components or parts. [#96-1 at ¶ 8]. Therefore, the inputs for the FEA Models may reflect materials and their properties that vary in isolation or combination from the final product design, such as the composition of the material at issue, the thickness of a material, and the size of the component tested. *See e.g.*, [#107 at 3]. Plaintiffs' expert⁵ acknowledged these variations, but noted that the FEA Models could be updated to reflect a final design. [#107-1 at ¶ 15]. Based on the record before it, this court respectfully agrees that if there were no other considerations other whether the discovery at issue might yield helpful information, the FEA Models would likely be discoverable because "the inputs, outputs, pre and post processing, and mesh files" reflects information that was available to GM during the design process. However, "might yield helpful information" is not the applicable standard. Instead, this court must look at proportionality and, because of the sensitivity of the information at issue, necessity.

II. Proportionality and Necessity

Relevance has never been the only consideration under Rule 26—this court must also look at other factors to determine whether the requested discovery is proportional to Plaintiffs'

⁵ Plaintiffs introduce for the first time on Reply the affidavit of their expert, Dr. Andreas Vlahinos. [#107-1]. Arguably, such testimony is not properly before the court. *See Kerber v. Qwest Group Life Ins. Plan*, 727 F. Supp. 2d 1076, 1079 (D. Colo. 2010). Nevertheless, the court declines to strike Dr. Vlahinos' affidavit because it is focused on responding to the Declaration of Huizhen Lu, who was offered by GM to testify about the technical aspects and relevance of the FEA Models.

needs, including the importance of this information to the issues presented by the case, the relative access to information by the Parties, and whether the burden or expense of the discovery outweighs the benefit. Fed. R. Civ. P. 26(b)(1); *In re Cooper Tire & Rubber Co.*, 568 F.3d 1180, 1184 (10th Cir. 2009) (observing under the former Rule 26(b)(1), all discovery was subject to the limitations of Rule 26(b)(2)(iii) that considered proportionality). In considering these issues, the court notes that there is no dispute that these FEA Models are proprietary, trade secret information of GM. [#87 at 2; #96 at 3-4; #96-2 at 1]. Therefore, as the Parties recognize, while there is no absolute privilege with respect to the disclosure of trade secrets, if GM is able to prove harm associated with disclosure, then the burden shifts back to Plaintiffs to establish that the FEA Models are not only relevant, but necessary, to prove their case. *In re Cooper Tire & Rubber Co.*, 568 F.3d at 1184; *Centurion Indus., Inc. v. Stuerer*, 665 F.2d 323, 325-26 (10th Cir. 1981).

A. Potential Harm

The court first turns to whether GM has established any risk of potential harm by disclosing its FEA Models, because the outcome of that question will guide the court's assignment of burdens in this case. As noted above, if GM can prove harm associated with disclosure of the FEA Models, then the burden shifts to Plaintiffs to establish relevance and necessity. *See Centurion Indus.*, 665 F.2d at 325-26; *Digital Equip. Corp. v. Micro Tech., Inc.*, 142 F.R.D. 488, 491 (D. Colo. 1992). Courts have traditionally presumed that disclosure to a competitor is more harmful than to a non-competitor. *See R & D Bus. Corp. v. Xerox Corp.*, 152 F.R.D. 195, 197 (D. Colo. 1993). If however, GM does not prove potential harm, the burden rests with GM to demonstrate why relevant discovery should not be had. *See* Fed. R. Civ. P. 26(b)(1) Advisory Committee Notes to 2015 Amendment (observing that “the change [in the

Rule] does not place on the party seeking discovery the burden of addressing all proportionality considerations”); *Rezaq v. Nalley*, 264 F.R.D. 653, 656 (D. Colo. 2010) (citing *Simpson v. Univ. of Colorado*, 220 F.R.D. 354, 356 (D. Colo. 2004)) (“When the discovery sought appears to be relevant, the party resisting the discovery has the burden to establish the lack of relevancy by demonstrating that the requested discovery (1) does not come within the scope of relevant as defined under Rule 26(b)(1) or (2) is of such marginal relevant that the potential harm occasioned by the discovery would outweigh the ordinary presumption in favor of broad disclosure.”).

In this case, GM argues (albeit out of order) that it may suffer harm if its trade secrets are disclosed. [#96 at 14-19]. GM spends considerable time in its briefing, and offers supporting evidence in the form of Ms. Lu’s Declaration and other court orders that reflect breaches of confidentiality in other, unrelated cases, that it carefully limits access to its technical trade secrets (including FEA Models, according to Ms. Lu) both internally and externally; that no satisfactory solution exists when a protective order is violated; that there is no way to monitor compliance; and although not characterized as such, that Dr. Vlahinos will inevitably disclose GM’s trade secrets he derives from the FEA Models because he will be unable to compartmentalize his knowledge. [*Id.*]. Plaintiffs contend that there is no risk because the entered Protective Order has strict provisions, Plaintiffs and their expert are not competitors, Dr. Vlahinos has consulted for national security interests without issue, and the FEA Models at issue are at least ten years old, and accordingly, are outdated. [#87 at 11-12].

On balance, this court finds that GM has met its threshold burden of establishing that disclosure of the FEA Models “might” be harmful. *See Master Palletizer Sys., Inc. v. T.S. Ragsdale Co. Inc.*, 123 F.R.D. 351, 353 (D. Colo. 1988). It is undisputed that GM has dedicated

considerable resources to developing its FEA Models, and that the FEA Models themselves (as opposed to certain outputs from such models) are considered trade secrets. Plaintiffs have pointed to no instance where GM has publicly disclosed or otherwise provided without restriction, what Plaintiffs seek – unmonitored access and a copy of the electronic FEA Model upon which to run simulations. Plaintiffs appear to concede that public disclosure of the FEA Models would be unacceptable, but argue that there is no “risk of leak” of disclosure under the Protective Order. While it is true that GM and Plaintiffs are not competitors, Dr. Vlahinos indicates that he “is a principal at Advanced Engineering Services,” which provides engineering services to clients in the “automotive, aerospace, energy, VC and medical industries.” [#107-1 at ¶ 3]. The court also takes judicial notice of Advanced Engineering Services’ website, which indicates “[w]e use the state-of-the-art Explicit Dynamics finite element codes to evaluate the crashworthiness of road vehicles, aircraft, ships, and trains. Sophisticated crash simulation with airbags, seatbelts, and dummies improves automobile design and safety.” <http://www.aes.nu/1-3engrsvc.htm>. It is reasonable to conclude that while Dr. Vlahinos is not employed by a GM competitor, he may, in fact, currently or in the future, provide consulting services to GM’s competitors. And without finding or even suggesting that Dr. Vlahinos would violate the provisions of the Protective Order either intentionally or inevitably, nothing in the Protective Order prohibits any Plaintiffs’ expert from being or becoming engaged by an GM competitor, either currently or in the future. [#80]. For the purposes of this Motion, this court concludes that disclosure of GM’s FEA Models, even under the Protective Order, “might” be harmful – a finding that shifts the burden to Plaintiffs to establish that the disclosure of the Models is relevant and necessary. *See Digital Equip.*, 142 F.R.D. at 492 (holding that an expert cannot reasonably be expected to compartmentalize his knowledge even with the best intentions). The ultimate

determination as to whether Plaintiffs' articulated need for the trade secret FEA Models outweighs GM's claim of injury resulting from disclosure is within the court's sound discretion. *See Sears v. Nissan Motor Co. Ltd.*, 932 F.2d 975, 1991 WL 80741, at *1 (10th Cir. May 16, 1991).

B. Proportionality and Need

The court next turns to the overlapping issues of proportionality under Fed. R. Civ. P. 26(b)(1) and the need for the discovery pursuant to *Centurion*. Plaintiffs urge this court to compel discovery, on the theory that the FEA Models are important to understanding what the GM engineers knew when they were running computer simulations. [#107 at 2]. Indeed, as the court previously noted on the record, such knowledge would inform Plaintiffs' products liability and negligence claims presented in this action.

All Parties and this court acknowledge that the FEA Models could yield information that is relevant to this action. But the FEA Models themselves do not necessarily tell Plaintiffs what GM actually knew about the design of the roof structure. Instead, the input data reflects a body of information that GM engineers chose from to run computer simulations that do not reflect the final design of the vehicle at issue, or perhaps, even an interim design. Put another way, the input data is a menu of options from which engineers selected, but the data in and of itself does not reflect how GM combined the options for any given test; what simulations were ultimately run; what outputs were generated from the data selected; and what GM engineers, in fact, affirmatively considered at the time they were designing the Chevrolet Silverado 2500 HD crew cab at issue. And any output data generated now would only reflect what GM knew at the time of designing the vehicle at issue if Plaintiffs use the precise inputs that GM engineers selected, in the same combination. Ms. Lu testified, and Plaintiffs do not dispute, that the FEA Models at

issue do not store or capture design changes or design considerations. *Compare* [#96-1 at ¶ 9] *with* [#107-1]. An individual cannot determine from looking at the FEA Model what design stage the model represents; or what an unidentified engineer was considering in looking at any given output; or why a prior or subsequent simulation was run; or why or what adjustments were made from the output generated. Instead, concrete evidence of the outputs from the FEA Models – what GM, in fact, knew or should have known from the FEA Models – is captured in the form of engineering and other reports. [#96-1 at ¶ 10]. Those reports have been produced (and should be produced, if they have not), and other than argument, Plaintiffs have provided no specific factual basis to conclude that the reports which have already been produced in this case, along with the three-dimensional CAD drawing and other design documents that have also been produced by GM, are insufficient, even if “they only contain a small amount of information in a summary form.” [#107-1 at ¶ 13]. Without a factual basis to establish that the production to date is inadequate, Plaintiffs’ attempt to compel production of the FEA Models themselves is not proportional.

Even accepting that the FEA Models are relevant, this court concludes that Plaintiffs have not established that they are necessary in this action. As discussed above, GM has produced electronic CAD drawings of the final design of the truck from which Plaintiffs or their experts can determine the final structural characteristics of the vehicle at issue. Plaintiffs also have access to the exact vehicle at issue to use to depict any actual structural failure. In addition, while potentially subject to cross-examination, Plaintiffs’ expert can generate finite element analysis from the information already produced by Defendant and the type of alternate design

information that Plaintiffs seek to introduce.⁶ See [#96-1 at ¶ 26; #107-1 at ¶¶ 16-17]. Plaintiffs argue and Dr. Vlahinos testified that it would be slower and more expensive to build a finite element model than to use one already designed by GM. [#107 at 4; #107-1 at ¶ 16]. While the court is mindful that Fed. R. Civ. P. 1 requires the Parties and the court to proceed through this action in a just, speedy and inexpensive manner, this court cannot conclude that Plaintiffs' articulated desire to gain access to the FEA Model amounts to "need."

CONCLUSION

Based on the record before it, and in light of the production of documents and ESI already made by GM, this court cannot conclude, at this juncture, that access to the FEA Models themselves are so central to the claims in dispute that their discovery must be compelled. Accordingly, **IT IS ORDERED** that:

(1) Plaintiffs' Motion to Compel Production of General Motors, LLC's Finite Element Models for the GMT 900 Series [#87] is **DENIED**.

DATED: March 17, 2016

BY THE COURT:

s/ Nina Y. Wang
United States Magistrate Judge

⁶ While Plaintiffs and their expert do not dispute that the reports resulting from the FEA Models reflect outputs actually generated by GM, they nevertheless insist the engineering reports are insufficient, because Dr. Vlahinos testified that "with a finite element model, the simulation can be re-run to generate output data." [*Id.*]. But Plaintiffs and their expert have made no showing that this re-generation of output data would accurately reflect what GM engineers did (and then discarded).