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6 **IN THE UNITED STATES DISTRICT COURT**  
7 **FOR THE DISTRICT OF ARIZONA**  
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9 Philadelphia Indemnity Insurance Company,  
10 et al.,

11 Plaintiffs,

12 v.

13 BMW of North America LLC, et al.,

14 Defendants.

No. CV-13-01228-PHX-JZB

**ORDER**

15 Pending before the Court are Defendant BMW of North America, LLC's Motion  
16 to Exclude Testimony of Willie Nelson (Doc. 92), Motion to Exclude Testimony of  
17 George Hogge (Doc. 91), and Motion for Summary Judgment (Doc. 93). For the reasons  
18 below, the Court will deny Defendant's Motion to Exclude Testimony of Mr. Nelson,  
19 grant in part and deny in part Defendant's Motion to Exclude Testimony of Mr. Hogge,  
20 grant Defendant's Motion for Summary Judgment as to Plaintiffs' negligence claim, and  
21 deny Defendant's Motion as to Plaintiffs' strict products liability claim.<sup>1</sup>

22 **I. Background**

23 This case arises from a fire that occurred in Plaintiff Michelle Brown's garage in

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25 <sup>1</sup> None of the parties requested oral argument. Further, because the parties submitted  
26 memoranda discussing the law and evidence in support of their positions and oral  
27 argument would not have aided the Court's decisional process, the Court did not hold  
28 oral argument on Defendant's Motion for Summary Judgment. *See, e.g., Partridge v. Reich*, 141 F.3d 920, 926 (9th Cir. 1998); *Lake at Las Vegas Investors Group, Inc. v. Pacific. Dev. Malibu Corp.*, 933 F.2d 724, 729 (9th Cir. 1991). The Court likewise finds that it has "an adequate record before it to make its ruling" without holding a *Daubert* evidentiary hearing. *In re Hanford Nuclear Reservation Litig.*, 292 F.3d 1124, 1138-39 (9th Cir. 2002).

1 Gilbert, Arizona. Ms. Brown, her insurer Liberty Mutual Fire Insurance Company, and  
2 her condominium association's insurer Philadelphia Indemnity Insurance Company assert  
3 claims against Defendant for strict products liability and negligence. (Doc. 66.) More  
4 specifically, Plaintiffs assert that a defect in the Mini Cooper parked in Ms. Brown's  
5 garage, and Defendant's negligence, caused the fire. (*Id.*)

6 **a. The Fire**

7 On September 13, 2012, a fire began in the garage of Ms. Brown's home. (Doc.  
8 92-1, Ex. A at 2-3).<sup>2</sup> Her son, Terrance Harris, was the only one home at the time of the  
9 fire. (*Id.* at 31.) According to the Gilbert Fire Department Report, Mr. Harris stated that  
10 he awoke from a nap to a "loud 'thud,'" went down stairs, opened the interior door to the  
11 garage, and saw dense, white smoke. (*Id.* at 33.) He then opened the automatic garage  
12 door with a remote opener and called 911. (*Id.*) Mr. Harris stated that after he walked  
13 around the outside of the house to see what was on fire in the garage, "he heard an  
14 explosion and witnessed heavy smoke and active flame rolling out from underneath the  
15 front, driver's side of the vehicle parked in the garage."<sup>3</sup> (*Id.*)

16 Mr. Harris also told the Fire Department that there was nothing plugged into the  
17 electrical outlets in the garage. (*Id.*) Mr. Harris further stated that his mother parks the  
18 Mini Cooper over a rug that had started to deteriorate, and it's possible the carpet came in  
19 contact with the bottom of the car. (*Id.*) Mr. Harris reported that the only issues with the  
20 vehicle are that it occasionally would not start right away and the headlight had flickered  
21 during a rainstorm. (*Id.*) Mr. Harris also stated that there had been no other repairs to the  
22 car, "just routine maintenance."

23 "Based on the heat damage and the burn patterns in the garage," the Gilbert Fire  
24 Department eliminated the water heater as "the possible source of the fire." (*Id.* at 32.)

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26 <sup>2</sup> For consistency and ease of reference, the Court's citations to page numbers throughout  
27 this Order refer to CM/ECF page numbers.

28 <sup>3</sup> 911 records indicate that Mr. Harris reported "foam padding on [the] floor is on fire,"  
subsequently heard a "popping from inside [the] garage," and stated that the vehicle in  
the garage "has already caught fire." (*Id.* at 4.)

1 Further, “[b]ased on the fire burn patter[n]s and fire movement in the garage, the area of  
2 origin was determined to be by the front driver’s side of the Mini Cooper.” (*Id.*) The  
3 Fire Department ultimately concluded the following:

4 After eliminating all other ignition sources in the area of origin, I found two  
5 possibilities of the cause [of] this fire: First, an electrical or mechanical  
6 malfunction inside the engine compartment of the Mini Cooper. Second,  
7 when Terrence pulled the car into the garage; it is possible that the carpet  
8 came in contact with the Mini Cooper[’]s exhaust or engine, causing the  
9 carpet to smolder before igniting.

8 (*Id.*)

9 Ms. Brown reported several items lost in the fire, including a 32-inch television  
10 next to a work bench in the southwest corner of the garage, a Ryobi cordless drill, two  
11 Ryobi chargers, one of which she believed was plugged in at the time of the fire, a 21-  
12 inch computer monitor, two vacuum cleaners, a circular saw, and extension cords. (Doc.  
13 92-1, Ex. E at 57-66.) The workbench in the southwest corner also suffered damage  
14 from the fire.

15 On September 19, 2013, Thomas Kane, an investigator retained by Liberty  
16 Mutual, issued a Report regarding his preliminary findings. (Doc. 92-2, Ex. H at 11.)  
17 Mr. Kane stated that he followed the scientific method as set forth in the NFPA 921:  
18 Guide for Fire and Explosion Investigations (NFPA 921), a publication issued by the  
19 National Fire Protection Association. (*Id.*) Based on his personal inspection of the fire  
20 scene, Mr. Kane stated that although the water softener and garage door opener were  
21 plugged in at the time of the fire, “[t]here were no signs of unusual electrical activity at  
22 these outlets and switches. Burn patterns and fire damage indicate that the fire moved  
23 towards these items as opposed to coming from them.” (*Id.* at 12.) Additionally, Mr.  
24 Kane noted that:

25 [E]xamination of the 2006 Mini Cooper showed no obvious signs of body  
26 damage and showed heavy burn and oxidation patterns on the left front  
27 quadrant of the hood and left front fender. The left front tire also sustained  
28 the heaviest fire damage of all four tires. Upon opening the hood, I  
observed the heaviest fire damage in the front left quadrant of the engine  
compartment. This area contained the battery, fuse panel, and a xenon  
headlight. The observed fire damage in the location of major electrical  
components suggests that this fire may have been caused by an electrical

1           problem in this area.

2       (*Id.*)

3           Before issuing his Report, Mr. Kane also spoke with Ms. Brown and Mr. Harris.  
4       (*Id.*) Ms. Brown stated that she is the original owner of the house and car and she  
5       provided Mr. Kane with the maintenance and repair history of the car, which includes a  
6       new battery, cooling system maintenance, power steering system repairs, and regular oil  
7       changes. (*Id.*) Mr. Harris provided a description of the events on the day of the fire,  
8       including his observation that after he opened the exterior garage door, he “saw flames  
9       coming from underneath the left front fender and engine compartment.” (*Id.*)

10           Based on his observations and his discussions with Ms. Brown and Mr. Harris,  
11       Mr. Kane concluded that “it appears that there was an electrical failure in the engine  
12       compartment of the insured’s 2006 Mini Cooper. Further evaluation by an electrical  
13       engineer is needed to analyze the electrical system in the vehicle.” (*Id.* at 13.)

14           On October 17, 2012, Mr. Kane and Principal Electrical Engineer George Hogge  
15       conducted a joint examination of the scene. Mr. Hogge testified and included in his  
16       Report that he and Mr. Kane completed a “layered excavation” of the garage. (Doc. 91-  
17       2, Ex. E at 8; Doc. 92-2, Ex. F. at 3-4.) Mr. Hogge also took photographs of the scene  
18       during their excavation and examination that day. (Doc. 91-2, Ex. E at 2.)

19                       **b. Mr. Nelson’s Report**

20           On July 7, 2014, one of Plaintiffs’ disclosed experts, Fire Investigator Mr. Nelson  
21       (employed by the same company as Mr. Kane), issued a Report regarding the origin and  
22       cause of the fire. (Doc. 92-2, Ex. P at 38-37.) Prior to issuing his Report, Mr. Nelson  
23       reviewed or examined: (1) Mr. Kane’s Report, including photographs Mr. Kane took of  
24       the scene; (2) the Gilbert Fire Department Report; (3) deposition testimony of Ms. Brown  
25       and Mr. Harris; (4) Mr. Hogge’s scene photographs; (5) observations by Mr. Hogge; (6)  
26       the Mini Cooper; and (7) reference materials, including the NFPA 921 and Mini Cooper  
27       recall information. (Doc. 92-2 at 39.) Based on his review of the evidence, Mr. Nelson  
28       concluded the following:

1 Based on the evaluation of the available data, my education,  
2 training, and experience, and utilizing the recognized  
3 investigation methods, including the Scientific Method as  
4 defined in *NFPA 921*, the area of fire origin was determined  
5 to be low, on the driver side of the engine compartment, near  
6 the bulkhead.

7 The analyses of the available data, including the evaluation of  
8 all reasonable ignition sources, the probable ignition scenario  
9 was an electrical event involving the main battery cable  
10 igniting ordinary combustibles in this area. The fire spread  
11 up and out from this area through the vehicle and  
12 subsequently spread to the garage contents and structure.

13 Refer to Electrical Engineer George Hogge's report for a  
14 more detailed analysis of the likely mechanism of failure that  
15 led to this fire event.

16 (*Id.* at 47.) In his analysis, Mr. Nelson specifically excluded other possible ignition  
17 sources of the fire, including ignition by the catalytic converter and a failure of the power  
18 steering hose. (*Id.* at 45-46.)

### 19 **c. Mr. Hogge's Report**

20 Plaintiffs also disclosed Mr. Hogge, an Electrical Engineer, as an expert. Mr.  
21 Hogge examined: (1) the fire scene and Ms. Brown's home; (2) statements made by Ms.  
22 Brown and Mr. Harris; (3) the deposition testimony of Mark Yeldham of BMW; (4)  
23 Technical Service Bulletins from BMW for certain Mini Coopers; (5) Invoices from  
24 Tempe Mini for work done to the Mini Cooper; and (6) wiring diagrams supplied by  
25 BMW. (Doc. 91-3, Ex. L at 2-5.) Mr. Hogge also relied on Mr. Nelson's finding  
26 regarding the cause and origin of the fire. (*Id.* at 4.)

27 Ms. Brown reported to Mr. Hogge that she was "a stickler" for keeping up to date  
28 on the maintenance of her car, and with the exception of a friend who replaced the battery  
six months prior, Ms. Brown only used dealerships for any work on the car. (*Id.* at 4-5.)  
Ms. Brown also reported that steering the vehicle had become difficult a number of times,  
and the dealership subsequently replaced the power steering hose, which it found to be  
leaking. (*Id.* at 5.)

During his electrical examination of Ms. Brown's home, Mr. Hogge noted that  
there was arcing found on the circuits associated with all of the tripped circuit breakers in

1 the vicinity of the west wall of the garage near the front of the car. (*Id.* at 6.) Mr. Hogge  
2 opined that the arcing found “was consistent with arcing through char, which is always a  
3 result of fire attack.” (*Id.*) Mr. Hogge also collected and examined all of the receptacles  
4 and switches within the garage walls, and he found that the damage on the water heater  
5 and related receptacle was consistent with an external fire attack. (*Id.*) Mr. Hogge did  
6 not find evidence of any items being plugged into a power source in the garage other than  
7 the small, low voltage transformer for the water softener. (*Id.*)

8 Mr. Hogge also examined the Mini Cooper, including x-rays of the Engine  
9 Management System computer and the fuse/relay center, which he found did not yield  
10 any evidence of internal heating or anomalous electrical activity within the components.  
11 (*Id.* at 7.) Mr. Hogge states that an x-ray of the fuse/relay center was not conclusive  
12 because the area was too complex for a useful image. (*Id.* at 7.) Upon examination, the  
13 wiring harnesses that were accessible within the engine compartment were examined and  
14 no evidence of arcing was found on those accessible conductors. (*Id.*) Many of the  
15 wiring harnesses were embedded into melted and hardened debris, which was located at  
16 the same place in the car where BMW, in a service bulletin, indicated chafing had caused  
17 “various electrical problems.” (*Id.*) Mr. Hogge also x-rayed a melted mass, which  
18 contained the radiator and AC condenser, and he did not find evidence of any internal  
19 heating or other electrical anomaly. (*Id.* at 8.)

20 Mr. Hogge’s examination found the battery “basically undamaged.” (*Id.*) He  
21 noted that the large gauge positive battery cable that extended to the front of the vehicle  
22 and along the left frame rail was dangling from the bottom of the vehicle. He also stated  
23 that the cable previously had been routed such that it extended upwards along the front of  
24 the left fender just behind the front tire and into the engine compartment. (*Id.*)  
25 According to Mr. Hogge, “the only anomalous electrical activity found during the  
26 examination was arcing on the main battery cable as it extended upward into the engine  
27 compartment along the front of the fender well just behind the left front tire.” (*Id.* at 11.)  
28 Citing to NFPA 921, Mr. Hogge concluded that the “arcing found on the main battery

1 cable clearly would have created sufficient heat to ignite the plastic encasement that it  
2 had been routed within.” (*Id.*)

3 Mr. Hogge also examined an exemplar Mini Cooper,<sup>4</sup> and found that mounting  
4 tabs for the plastic encasement of the cable were no longer under the securement nut,  
5 which he opined would allow for movement and chafing of the battery cable at the  
6 location where the arcing event was observed in the subject Mini Cooper. (*Id.* at 7.)  
7 Additionally, during his examination of Ms. Brown’s Mini Cooper, Mr. Hogge found  
8 little fire-related damage to the power cable conductors at the power steering pump,  
9 which he opined “would serve to eliminate a fire from below the engine.” (*Id.* at 11.)

10 Mr. Hogge states in his Report that he followed the Scientific Method in NFPA  
11 921 and examined each possible cause of the fire within the area of origin as defined by  
12 Mr. Nelson. (*Id.*) Mr. Hogge excluded the building electrical systems and any  
13 appliances or fixtures within the garage area as possible causes of the fire. (*Id.*) Mr.  
14 Hogge further determined that the “competent ignition causes within the area of origin as  
15 defined within the left side engine compartment include electrical and mechanical  
16 components of the vehicle.” (*Id.* at 11.) In addition to an insulation failure of the battery  
17 cable, Mr. Hogge considered the catalytic converter igniting the liquid or fumes from the  
18 power steering fluid as a possible cause of the fire. (*Id.* at 11-12.) Mr. Hogge was able to  
19 exclude the possibility that the fire developed from below the vehicle based on the  
20 amount of damage to conductors and a lack of arcing. (*Id.* at 12.) Mr. Hogge ultimately  
21 concluded the following:

22 Utilizing the Scientific Method, all of the possible causes of  
23 the fire in the area of origin as defined by Willie Nelson CFI  
24 were evaluated and many were eliminated. Of those that  
were not eliminated, the most likely cause of this fire is

25 <sup>4</sup> There appears to be confusion as to whether the exemplar vehicle Mr. Hogge evaluated  
26 was a 2005 or 2006 Mini Cooper, and whether there are any substantive, relevant  
27 differences between the two models. (Doc. 91 at 6; Doc. 96-6, Ex. F ¶ 9.) Plaintiffs  
28 submitted a Declaration from Mr. Hogge with their Response stating that “there are no  
substantial design differences between a 2005 Mini Cooper and a 2006 Mini Cooper” that  
would impact Mr. Hogge’s analysis or conclusions. (Doc. 96-6, Ex. F ¶ 9.) In response,  
Defendant does not identify for the Court any relevant differences between the designs of  
the two models.

1 chafing of positive conductors that resulted in arcing and  
2 ignition of the thermoplastic insulation and components in the  
3 vicinity. The fact that the engine wiring harness and also  
4 apparently the main battery cable are not sufficiently secured  
5 to prevent chafing and insulation failure would be considered  
6 design defects.

7 (*Id.* at 13.)

## 8 **II. Defendant's Motions to Exclude**

9 Defendant moves to exclude the testimony of both Mr. Nelson and Mr. Hogge on  
10 the basis that their opinions are inadmissible under Rule 702 of the Federal Rules of  
11 Evidence. (Docs. 91, 92.) Plaintiff contends that both experts meet the qualification and  
12 reliability requirements of Rule 702 and, therefore, the Court should not exclude their  
13 testimony. For the reasons below, the Court finds that testimony by Mr. Nelson is  
14 admissible under Rule 702. However, the Court will exclude Mr. Hogge's testimony that  
15 a failure to secure the wiring harness and battery cable are design defects, and those  
16 defects were present in Ms. Brown's Mini Cooper, because those opinions are not  
17 reliable. The Court will allow Mr. Hogge to testify regarding his other conclusions.

### 18 **a. Rule 702 of the Federal Rules of Evidence**

19 Rule 702 of the Federal Rules of Evidence provides the following:

20 A witness who is qualified as an expert by knowledge, skill,  
21 experience, training, or education may testify in the form of  
22 an opinion or otherwise if:

23 (a) the expert's scientific, technical, or other specialized  
24 knowledge will help the trier of fact to understand the  
25 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.

26 Under Rule 702, the trial court acts as a gatekeeper and ensures that the proffered  
27 scientific testimony meets certain standards of both relevance and reliability before it is  
28 admitted. *Daubert v. Merrell Dow Pharm., Inc.* ("*Daubert I*"), 509 U.S. 579, 590,



1 (1993). The party proffering expert testimony has the burden of showing the  
2 admissibility of the testimony by a preponderance of the evidence. *Daubert I*, 509 U.S.  
3 at 592 n.10. “[J]udges are entitled to broad discretion when discharging their  
4 gatekeeping function” related to the admission of expert testimony. *United States v.*  
5 *Hankey*, 203 F.3d 1160, 1168 (9th Cir. 2000) (citing *Kumho Tire Co. v. Carmichael*, 526  
6 U.S. 137, 150-53, (1999)). The court considers four factors to determine if expert  
7 testimony will assist the trier of fact: “(i) whether the expert is qualified; (ii) whether the  
8 subject matter of the testimony is proper for the jury’s consideration; (iii) whether the  
9 testimony conforms to a generally accepted explanatory theory; and (iv) whether the  
10 probative value of the testimony outweighs its prejudicial effect.” *Scott v. Ross*, 140 F.3d  
11 1275, 1285-86 (9th Cir. 1998).

12 Because the Rule “contemplates a *broad conception* of expert qualifications,” only  
13 a “*minimal foundation* of knowledge, skill, and experience” is required. *Hangerter v.*  
14 *Provident Life & Accident Ins. CO.*, 373 F.3d 998, 1015-16 (9th Cir. 2004) (emphasis in  
15 original) (quoting *Thomas v. Newton Int’l Enters.*, 42 F.3d 1266, 1269 (9th Cir. 1994)).  
16 A “lack of particularized expertise goes to the weight of [the] testimony, not its  
17 admissibility.” *United States v. Garcia*, 7 F.3d 885, 890 (9th Cir. 1993) (citing *United*  
18 *States v. Little*, 753 F.2d 1420, 1445 (9th Cir. 1984.)); *Daubert II.*, 43 F.3d at 1315.

19 The trial court must also ensure that the proffered expert testimony is reliable.  
20 Generally, to satisfy Rule 702’s reliability requirement, “the party presenting the expert  
21 must show that the expert’s findings are based on sound science, and this will require  
22 some objective, independent validation of the expert’s methodology.” *Daubert II*, 43  
23 F.3d at 1316. Toward this end, the Supreme Court in *Daubert I* set forth the following  
24 factors for the trial court to consider when assessing the reliability of proffered expert  
25 testimony: (1) whether the expert’s method, theory, or technique is generally accepted  
26 within the relevant scientific community; (2) whether the method, theory, or technique  
27 can be (and has been) tested; (3) whether the method, theory, or technique has been  
28 subjected to peer review and publication; and (4) the known or potential rate of error of

1 the method, theory, or technique. *Daubert I*, 509 U.S. at 593-94.

2 An expert opinion is reliable if it is based on proper methods and procedures rather  
3 than “subjective belief or unsupported speculation.” *Id.* at 590. The test for reliability  
4 “‘is not the correctness of the expert’s conclusions but the soundness of his  
5 methodology.’” *Stilwell v. Smith & Nephew, Inc.*, 482 F.3d 1187, 1192 (9th Cir. 2007)  
6 (quoting *Daubert v. Merrell Dow Pharm., Inc.* (“*Daubert II*”), 43 F.3d 1311, 1318 (9th  
7 Cir. 1995)). Alternative or opposing opinions or tests do not “preclude the admission of  
8 the expert’s testimony—they go to the *weight*, not the admissibility.” *Kennedy v.*  
9 *Collagen Corp.*, 161 F.3d 1226, 1231 (9th Cir. 1998). Furthermore, “[d]isputes as to  
10 the strength of [an expert’s] credentials, faults in his use of [a particular] methodology, or  
11 lack of textual authority for his opinion, go to the weight, not the admissibility, of his  
12 testimony.” *Id.* (quoting *McCulloch v. H.B. Fuller Co.*, 61 F.3d 1038, 1044 (2d Cir.  
13 1995)). In engaging in this analysis, the trial court should be mindful that:

14 The inquiry envisioned by Rule 702 is . . . a flexible one. Its  
15 overarching subject is the scientific validity and thus the  
16 evidentiary relevance and reliability – of the principles that  
17 underlie a proposed submission. The focus, of course, must  
be solely on principles and methodology, not on the  
conclusions that they generate.

18 *Id.* at 594–95 (footnotes omitted).

19 Importantly, “‘the trial court’s role as gatekeeper is not intended to serve as a  
20 replacement for the adversary system.’” Fed. R. Evid. 702 advisory committee’s note on  
21 2000 amendments (quoting *United States v. 14.38 Acres of Land Situated in Leflore*  
22 *County, Miss.*, 80 F.3d 1074, 1078 (5th Cir. 1996)). “‘Vigorous cross-examination,  
23 presentation of contrary evidence, and careful instruction on the burden of proof are the  
24 traditional and appropriate means of attacking shaky but admissible evidence.’” *Id.*  
25 (citing *Daubert I*, 509 U.S. at 595).

26 **b. NFPA 921**

27 Both of Plaintiffs’ experts assert that they complied with the standards set forth in  
28 NFPA 921. The parties agree that NFPA 921 delineates a recognized and reliable

1 method of determining the origin and cause of the fire. (See Docs. 91, 92, 95, 96);  
2 *Fireman's Fund Ins. Co. v. Canon U.S.A., Inc.*, 394 F.3d 1054, 1057-58 (8th Cir. 2005).  
3 Therefore, Mr. Nelson's and Mr. Hogge's testimony is reliable to the extent they  
4 complied with NFPA 921 in forming their opinions.

5 The NFPA sets forth the scientific method that must be used in fire investigations,  
6 which includes developing a hypothesis and testing the hypothesis before reaching a final  
7 conclusion. (Doc. 95-3, Ex. C at 3.) More specifically, NFPA 921 provides the  
8 following:

9 **4.3.5\* Develop a Hypothesis (Inductive Reasoning).** Based  
10 on the data analysis, the investigator produces a hypothesis,  
11 or hypotheses, to explain the phenomena, whether it be the  
12 nature of the fire patterns, fire spread, identification of the  
13 origin, the ignition sequence, the fire cause, or the cause of  
14 damage or responsibilities for the fire or explosions incident.  
15 This process is referred to as inductive reasoning. These  
16 hypotheses should be based solely on the empirical data that  
17 the investigator has collected through observation and then  
18 developed into explanations for the event, which are based  
19 upon the investigator's knowledge, training, experience, and  
20 expertise.

21 **4.3.6\* Test the Hypothesis (Deductive Reasoning).** The  
22 investigator does not have a valid or reliable conclusion  
23 unless the hypothesis can stand the test of careful and serious  
24 challenge. Testing of the hypothesis is done by the principle  
25 of deductive reasoning, in which the investigator compares  
26 the hypothesis to all known facts as well as the body of  
27 scientific knowledge associated with the phenomena relevant  
28 to the specific incident. A hypothesis can be tested physically  
by conducting experiments, analytically by applying accepted  
scientific principles, or by referring to scientific research. . . .  
The testing process needs to be continued until all feasible  
hypotheses have been tested and one is determined to be  
uniquely consistent with the facts and with the principles of  
science. If no hypothesis can withstand an examination by  
deductive reasoning, the issue should be considered  
undetermined.

**4.3.6.1\*** Any hypothesis that is incapable of being tested  
either physically or analytically, is an invalid hypothesis. A  
hypothesis developed based on the absence of data is an  
example of a hypothesis that is incapable of being tested. The  
inability to refute a hypothesis does not mean that the  
hypothesis is true.

. . . .

**4.5.1** The investigator should know the level of certainty that

1 is required for providing expert opinions. Two levels of  
2 certainty commonly used are probable and possible:

3 (1) Probable. This level of certainty corresponds to being  
4 more likely true than not. At this level of certainty, the  
likelihood of the hypothesis being true is greater than 50  
percent.

5 (2) Possible. At this level of certainty, the hypothesis can be  
6 demonstrated to be feasible but cannot be declared probable.  
7 If two or more hypotheses are equally likely, then the level of  
certainty must be "possible."

8 **4.5.2** If the level of certainty of an opinion is merely  
"suspected," the opinion does not qualify as an expert  
9 opinion. If the level of certainty is only "possible," the  
opinion should be specifically expressed as "possible." Only  
10 when the level of certainty is considered "probable" should an  
opinion be expressed with reasonable certainty.

11 . . . .

12 **19.6 Testing the Cause Hypothesis.** Each of the alternate  
13 hypotheses that were developed must then be tested using the  
Scientific Method. If one remaining hypothesis is tested  
14 using the "scientific method" and is determined to be  
probable, then the cause of the fire is identified.

15 (Doc. 95-3, Ex. C at 2-4; Doc. 92-1, Ex. C at 50.)

16 With regard to the basic method of fire investigations under NFPA 921:

17 **4.4.3.2** The actual investigation may include different steps  
18 and procedures, which will be determined by the purpose of  
the assignment. These steps and procedures are described in  
19 detail elsewhere in the document. A fire or explosion  
investigation may include all or some of the following tasks:  
20 a scene inspection or review of previous scene documentation  
done by others; scene documentation through photography  
21 and diagramming; evidence recognition, documentation, and  
preservation; witness interviews; review and analysis of the  
22 investigations of others; and identification and collection of  
data from other appropriate sources.

23 **4.4.3.3** In any incident scene investigation, it is necessary for  
24 at least one individual/organization to conduct an examination  
of the incident scene for the purpose of data collection and  
25 documentation. While it is preferable that all subsequent  
investigators have the opportunity to conduct an independent  
26 examination of the incident scene, in practice, not every scene  
is available at the time of the assignment. The use of  
27 previously collected data from a properly documented scene  
can be used successfully in an analysis of the incident to  
28 reach valid conclusions through the appropriate use of the  
scientific method. Thus, the reliance on previously collected  
data and scene documentation should not be inherently

1 considered a limitation in the ability to successfully  
2 investigate the incident.

3 (Doc. 95-3, Ex. C at 3-4.)

4 **c. Defendant's Motion to Exclude Testimony of Mr. Nelson**

5 Defendant argues that Mr. Nelson's opinions are not reliable because: (1) he  
6 "examined evidence from an altered and incompletely preserved fire scene"; (2) he did  
7 not test and rule out credible alternate causation theories as required by NFPA 921; and  
8 (3) his criticism of Defendant's expert's burn pattern analysis is not supported by any  
9 scientific analysis. (Doc. 91 at 8-10.) As detailed below, the Court disagrees.

10 **i. Excavation of the Fire Site**

11 Defendant first argues, citing to NFPA 921 § 18.3.2.3.2 regarding layered  
12 excavations, that the excavation by Mr. Kane and Mr. Hogge was not properly  
13 documented and, therefore, Mr. Nelson improperly relied on the data collected by Mr.  
14 Kane and Mr. Hogge in forming his opinions. (Doc. 97 at 3-5.) NFPA 921 § 18.3.2.3.2  
15 provides that "[d]ebris removal should be performed in a planned and systematic fashion.  
16 This means that debris should be removed in layers, with adequate documentation as the  
17 process continues. . . . Each layer should be examined for significant artifacts as the  
18 debris is being removed." Defendant has not provided the Court with any authority as to  
19 type and amount of documentation NFPA 921 requires. However, Defendant asserts that  
20 "[n]otwithstanding Mr. Hogge's insistence that he and Mr. Kane performed a full layered  
21 excavation of the fire scene 'mostly after the vehicle had been removed,' . . . there are no  
22 photographs or other documentation suggesting that this actually occurred." (*Id.*)  
23 Further, Defendant contends, photographs date stamped between 12:50 P.M. and 1:02  
24 P.M. do not show that excavation occurred, but "rather show undifferentiated piles of  
25 debris." (*Id.* at 8-9.)

26 Plaintiffs contend that Mr. Kane and Mr. Hogge took photographs of items  
27 relevant to the investigation that they removed and, "[w]hile other electrical items were  
28 recovered, such as batteries and a Ryobi cordless drill, none of those items were

1 potentially plugged in, or otherwise energized” and, therefore, neither Mr. Kane nor Mr.  
2 Hogge found them to be “plausible ignition source[s]” and did not remove them. (Doc.  
3 95 at 10.) Plaintiffs also cite to a photograph showing Mr. Kane digging debris out of the  
4 garage with the shovel, and argue that there is no requirement under NFPA 921 that every  
5 item of debris removed during the excavation process be separately photographed and  
6 documented. (Doc. 95 at 14, 95-7, Ex. G.) Finally, Plaintiffs cite to NFPA 921 §  
7 12.3.5.6, which provides that “movement of physical evidence or alteration of the scene  
8 should not be considered spoliation of evidence. Physical evidence may need to be  
9 moved prior to the discovery of the cause of the fire.” (Doc. 95 at 15-16.)

10 Here, there is no dispute that Mr. Hogge took several photographs of the fire  
11 scene, depicting the scene before and after the car was removed, as well as specific areas  
12 of debris. (Doc. 92-2, Ex. M at 29-32.) Mr. Hogge also testified that all of the items  
13 removed from the scene were documented. (Doc. 91-3, Ex. L at 4.) Defendant does not  
14 appear to dispute this assertion, but rather complains that Mr. Kane and Mr. Hogge failed  
15 to take enough photographs depicting Mr. Kane and Mr. Hogge digging through the  
16 scene. The Court does not find this argument persuasive. There is evidence that Mr.  
17 Kane and Mr. Hogge documented their inspection and excavation of the scene, and those  
18 photographs were available to and reviewed by Mr. Nelson in forming his opinions.  
19 Pursuant to NFPA 921 § 4.4.3.2:

20 [a] fire or explosion investigation may include . . . review of  
21 previous scene documentation done by others; scene  
22 documentation through photography preservation; witness  
23 interviews; review and analysis of the investigation of others;  
and identification and collection of data from other  
appropriate sources.

24 Therefore, the Court does not find that Mr. Nelson’s opinions are unreliable because they  
25 were formed after review of Mr. Kane’s and Mr. Hogge’s photographs of the scene.

26 Importantly, even if Mr. Kane and Mr. Hogge failed to “adequately document” the  
27 actual excavation, Mr. Nelson examined the Mini Cooper at length once it was removed  
28 from the garage and, based on the burn patterns, oxidation, and damage to the car,

1 independently determined that the area of origin of the fire was near the driver side  
2 engine compartment. (Doc. 92-2, Ex, P at 40.) Likewise, Mr. Nelson reviewed the Fire  
3 Department’s Report, which detailed burn patterns, initial scene inspection, fire  
4 movement, resulting damage, and witness statements. (*Id.* at 39.)

5 The Court also does not find Defendant’s argument regarding Mr. Kane’s and Mr.  
6 Hogge’s failure to remove certain items from the scene—including a Ryobi drill and the  
7 cordless drill charger, and some debris near the wall—sufficient to exclude Mr. Nelson’s  
8 opinions. In support of this argument, Defendant cites to deposition testimony from Ms.  
9 Brown that she lost a 32-inch television set, a 21-inch computer monitor, and two  
10 bicycles. Defendant contends that Ms. Brown testified the television was near the  
11 workbench, which Defendant asserts is a possible cause of the fire. (Doc. 92 at 9.)

12 As stated in his Report, Mr. Kane determined the area of origin of the fire to be the  
13 left front quadrant of the Mini Cooper in the garage, based on “heavy burn and oxidation  
14 patterns” in that area. (Doc. 92-2, Ex. H at 12.) Further, he found burn patterns indicate  
15 that the flames moved towards the southwest corner, not from that area towards the car.  
16 (*Id.*) The Gilbert Fire Department and Mr. Nelson came to the same conclusion based on  
17 a similar analysis. Although Defendant contends that the items not collected were  
18 “potential ignition sources in the area,” Mr. Hogge testified that these items were not  
19 collected because they were outside the area of origin and not possibly plugged into  
20 power sources. (Doc. 96-7, Ex. G at 6.) Defendant fails to cite to any authority that  
21 proper excavation includes collecting items outside the area of origin. It is not for the  
22 Court to determine at this juncture which expert’s conclusions regarding the area of  
23 origin are entitled to more weight—such a determination is for the fact-finder at trial.

24 Finally, Defendant contends that large portions of debris were moved from the  
25 southwest to the southeast corner of the garage before the joint scene examination and  
26 excavation occurred and, therefore, Mr. Nelson’s reliance on the data collected by Mr.  
27 Kane and Mr. Hogge was improper. (Doc. 92 at 9.) To support this contention,  
28 Defendant cites to two photographs inserted in its Motion on pages 5 and 6. While the

1 pictures appear to demonstrate that some debris (and portions of the garage door) were  
2 moved between the time the two photos were taken, pursuant to NFPA 921 § 12.3.5.6,  
3 movement of debris, alone, is insufficient to establish that the scene was improperly  
4 altered. *See* NFPA 921 § 12.3.5.6. Accordingly, the Court does not find that Mr.  
5 Nelson’s opinions are unreliable because he reviewed data collected by Mr. Kane and  
6 Mr. Hogge.

7 **ii. Mr. Nelson sufficiently ruled out credible alternate causation**  
8 **theories as required by NFPA 921.**

9 Defendant also argues that Mr. Nelson failed to comply with NFPA 921 because:  
10 (1) physical evidence cannot support Mr. Nelson’s determination to rule out a fire cause  
11 in the southwest corner of the garage; (2) Mr. Nelson improperly relied on the opinions of  
12 the Gilbert Fire Department, Mr. Kane, and Mr. Hogge; and (3) Mr. Nelson improperly  
13 relied on burn patterns, witness testimony, fire dynamics, and arc mapping to rule out the  
14 origin of the fire being in the southwest corner of the garage. (Doc. 92 at 10-16.) As  
15 detailed below, each of these arguments goes to the weight, not the admissibility, of Mr.  
16 Nelson’s opinions.

17 **1. Physical Evidence**

18 Defendant argues that Mr. Nelson improperly failed to consider “electrical items”  
19 from the southwest corner of the garage, including the Ryobi drill and charger, for which  
20 recalls had been issued regarding fire hazards. (Doc. 92 at 10.) Defendant contends this  
21 area was near the area of origin and Mr. Nelson cannot justify excluding electrical items  
22 in the southwest corner as “credible alternate fire sources” because the items were not  
23 preserved. (*Id.* at 10-11.) Defendant also argues that because debris was moved, Mr.  
24 Nelson could not rule out the southwest corner as the area of origin of the fire. (*Id.* at  
25 11.) In support of this argument, Defendant cites to NFPA 921 § 18.3.1.7, which  
26 provides that post-fire alterations “may impact the investigator’s interpretation of the  
27 physical evidence,” and the investigator should attempt to contact the individual who  
28 altered the scene. (*Id.*)

Defendant’s argument, again, goes to the weight, not the admissibility, of Mr.



1 Nelson's opinions. As detailed above, Mr. Nelson determined the area of origin was the  
2 front left quadrant of the car, and not the southwest corner of the garage based on all of  
3 the data he reviewed, including photographs of the scene, his examination of the car,  
4 witness statements, and previous reports by the Fire Department and Mr. Kane. Mr.  
5 Nelson further testified that he reviewed with Mr. Hogge his observations and the scene.  
6 (Docs. 95-8, Ex. H at 7, 95-9, Ex. I at 3.) NFPA 921 § 18.3.1.7 does not prohibit the  
7 methodology that Mr. Nelson used in determining the area of origin of the fire.

## 8 **2. Reliance on Previous Reports and Opinions**

9 Defendant also argues that Mr. Nelson improperly relied on/adopted the Gilbert  
10 Fire Department's, Mr. Kane's, and Mr. Hogge's determinations that the fire started in  
11 the Mini Cooper. (Doc. 92 at 11-13.) Defendant asserts that each of the determinations  
12 is flawed because there is no evidence that proper excavation occurred and not all of the  
13 electrical items in the garage were collected. As stated above, pursuant to NFPA 921 §§  
14 4.4.3.2 and 4.4.3.3, Mr. Nelson may properly review and rely on scene data collected by  
15 others in forming his conclusions. Further, in addition to reviewing the previous reports,  
16 Mr. Nelson also personally examined the car to determine the area of origin of the fire.  
17 (See Docs. 92-2, Ex. P at 40; Doc. 95-9, Ex. I at 4.)

18 Defendant argues that Mr. Nelson's opinions ruling out other potential causes of  
19 the fire are invalid because he "took no part in identifying or ruling out any evidence that  
20 was not preserved or documented. . . . To the extent that anyone else decided to rule out  
21 any potential fire cause, but did not document the evidence or analysis, Mr. Nelson can  
22 form no separate opinions about it." (Doc. 92 at 12.) As is already addressed above, Mr.  
23 Nelson did not only evaluate or rely on the reports of others in forming his opinion that  
24 the fire started in the Mini Cooper. Mr. Nelson ruled out the power steering hose and  
25 ignition by the catalytic converter underneath the car as possible causes of the fire based  
26 in part on his observations of the car and his review of witness statements and  
27 photographs of the scene. The Court does not find this methodology unreliable.

28

1 **3. Burn Patterns**

2 Defendant next argues that Mr. Nelson’s opinions are unreliable because he does  
3 not support his conclusion stated in his rebuttal Report that burn patterns indicate the fire  
4 started in the driver side engine compartment. (Doc. 92 at 13.) However, in his rebuttal  
5 Report, Mr. Nelson states his opinion that the area of origin was not near or on the  
6 workbench based on oxidation and fire patterns in the car and witness statements. (Doc.  
7 92-3, Ex. R at 13-14.) Mr. Nelson specifically analyzed the data with citations to NFPA  
8 921 sections and provided a picture with notations to show the pattern of fire damage he  
9 believes supports his conclusions. (*Id.*; Doc. 92-2, Ex. P at 38-46.) Additionally, Mr.  
10 Nelson’s rebuttal cited to NFPA 921 § 18.1.1 regarding the four areas of information  
11 from which an investigator determines the area of origin: (1) witness information; (2) fire  
12 patterns; (3) arc mapping; (4) and fire dynamics, with descriptions of the information he  
13 reviewed and analyzed as it applies to this case. (Doc. 92-3, Ex. R at 19.)

14 In spite of this analysis, Defendant argues that Mr. Nelson’s opinions are not  
15 reliable because he did not evaluate the burn patterns on the southwest corner of the  
16 garage, including the workbench, which Defendant asserts is a “highly significant burn  
17 pattern.” (Doc. 92 at 13.) However, again, Mr. Nelson reviewed photographs of the  
18 scene and other data, including the car itself, in concluding that the fire originated within  
19 the car. Defendant’s argument that the area of origin was at a different location goes to  
20 the weight of the evidence and is for the jury to evaluate. It is not an appropriate basis on  
21 which to preclude Mr. Nelson’s testimony.

22 Defendant’s argument that Mr. Nelson has no basis to testify regarding burn  
23 patterns on the Mini Cooper’s engine compartment is likewise without merit. (Doc. 92 at  
24 17.) Defendant argues that the only basis for Mr. Nelson’s “conclusions is his beliefs  
25 about how the plastic components of the Mini Cooper would react in a fire,” and Mr.  
26 Nelson’s opinions are not reliable because he did not conduct burn tests on a Mini  
27 Cooper or a similar vehicle. (*Id.*) As detailed above, Mr. Nelson based his analysis on  
28 several different sources of data and adequately tested his theory that the fire began in the

1 engine compartment of the Mini Cooper. In his rebuttal Report, Mr. Nelson provided an  
2 analysis of how the specific components of the Mini Cooper engine compartment would  
3 be impacted by the fire. (Doc. 92-3, Ex. R at 13-16.) Given his extensive experience as a  
4 Fire Investigator, which Defendant does not dispute, Mr. Nelson may opine on these  
5 subjects without having conducted burn tests on a Mini Cooper. *See Kennedy*, 161 F.3d  
6 at 1231. (Alternative or opposing opinions or tests do not “preclude the admission of the  
7 expert’s testimony—they go to the *weight*, not the admissibility.”)

#### 8 **4. Witness Testimony**

9 Defendant also argues that Mr. Nelson improperly relied on statements by Mr.  
10 Harris regarding the location of the fire, because (1) NFPA 921 § 18.3.3.15 requires fire  
11 investigators to rely on more than just witness statements, and (2) Mr. Harris’ statements  
12 during his deposition are “not consistent with” statements Mr. Harris made during his 911  
13 call. (Doc. 92 at 13-14.) The Court does not find Defendant’s arguments persuasive.  
14 First, as discussed at length above, Mr. Nelson reviewed and evaluated other data in  
15 addition to witness statements in forming his opinions regarding the cause and origin of  
16 the fire. Second, Defendant claims that Mr. Harris’ statement during his deposition that  
17 he first observed flames coming from the car is inconsistent with statements he made  
18 during the 911 call, records of which indicate that Mr. Harris first mentioned that the  
19 foam flooring in the garage was on fire and then later said the car was “already” on fire.  
20 (Doc. 92 at 14.) The Court does not find these statements necessarily inconsistent.  
21 Further, Mr. Nelson’s Report considered and eliminated the possibility that the fire  
22 originated underneath the car. (*See Doc. 92-2, Ex. P at 44-45.*) Therefore, Mr. Nelson’s  
23 reliance on Mr. Harris’ statements does not render his opinions unreliable.

#### 24 **5. Fire Dynamics and Arc Mapping**

25 Defendant next argues that Mr. Nelson’s reliance on “fire dynamics” to support  
26 his opinions regarding the cause and origin of the fire was improper because Mr. Nelson  
27 based his conclusion exclusively on Mr. Harris’ testimony. (Doc. 92 at 15.) To support  
28 this argument, Defendant cites to Mr. Nelson’s rebuttal Report, which explains his

1 opinion that Defendant's theory regarding the origin of the fire is not plausible based on  
2 Mr. Harris' statements. However, Mr. Nelson took into consideration the statements by  
3 Mr. Harris that Defendant identifies in its Motion by considering whether the fire began  
4 underneath the vehicle. (See Doc. 92-2, Ex. P at 44-45; Doc. 92-3, Ex. R at 15-16.)  
5 Defendant appears to disagree with how Mr. Harris' statements should be interpreted,  
6 which is a question for the jury. Further, Mr. Nelson also relied on other data to support  
7 his conclusion regarding the origin and cause of the fire. (*Id.*; Doc. 92-3, Ex. R at 15-16.)  
8 Therefore, the Court will not exclude Mr. Nelson's testimony because he reviewed and  
9 analyzed fire dynamics in forming his opinions.

10 Finally, Defendant contends that Mr. Nelson cannot rely on arc mapping to rule  
11 out the southwest corner as a possible origin of the fire because "the existence of an arc  
12 does not prove that a fire started in any one location." (Doc. 92 at 16.) However,  
13 Defendant fails to cite to any authority in the NFPA 921 that prohibits the use of arc  
14 mapping to exclude possible alternate causes and origins of the fire. Further, as detailed  
15 above, Mr. Nelson relied on several other forms of data and analysis to support his  
16 conclusions regarding the cause and origin of the fire. Accordingly, Defendant's  
17 argument is without merit.

#### 18 **d. Defendant's Motion to Exclude Testimony of Mr. Hogge**

19 Defendant moves to exclude testimony by Mr. Hogge that the most likely cause of  
20 the fire is a design defect allowing chafing of the battery cable in the Mini Cooper. (Doc.  
21 91 at 5-6.) More specifically, Defendant argues that Mr. Hogge's opinions should be  
22 excluded because: (1) Mr. Nelson's opinions regarding the origin of the fire, on which  
23 Mr. Hogge relies, are unreliable; (2) Mr. Hogge is not qualified to testify regarding  
24 vehicle battery cable design; and (3) Mr. Hogge's methodology in ruling out other fire  
25 causes is unreliable. As detailed below, the Court will exclude portions of Mr. Hogge's  
26 testimony. (*Id.* at 7-17.)

#### 27 **i. Mr. Hogge's Qualifications**

28 Defendant argues that the Court should exclude Mr. Hogge's testimony because he

1 does not have experience in vehicle design or with Mini Coopers with similar battery  
2 cable designs sufficient to testify regarding design defects, particularly those related to  
3 chafing. (Doc. 91 at 10-11.) In support, Defendant cites to *Allstate Ins. v. Ford Motor*  
4 *Co.*, No. CV-08-2276-PHX-NVW, 2010 WL 1654145 \*4 (D. Ariz. 2010), and Mr.  
5 Hogge's deposition testimony that he had not previously seen similar chafing in a Mini  
6 Cooper or in a vehicle with a battery cable that was secured in the same way as the one in  
7 the at-issue Mini Cooper. (*Id.*)

8 Plaintiffs contend that Mr. Hogge has "substantial experience investigating vehicle  
9 fires and has significant knowledge with respect to the systems of passenger vehicles"  
10 and, therefore, is sufficiently qualified to opine regarding defects in the battery system of  
11 the Mini Cooper. (Doc. 96 at 13.) In support, Plaintiffs provide a Declaration from Mr.  
12 Hogge avering that he has "extensive experience with the fundamentals of the Mini  
13 Cooper's power battery and power systems." (Doc. 96-6, Ex. F ¶ 7.) Additionally, Mr.  
14 Hogge obtained a Bachelor of Science in Electrical Engineering, and has been a  
15 Journeyman Electrician since 1979. (*Id.* ¶ 4.) He is a Certified Professional Electrical  
16 Engineer and has investigated over 2,000 fires. (*Id.* ¶ 5.) Mr. Hogge testified that he has  
17 observed other cases where chafing against the metal underbody caused fires in trucks  
18 and farm equipment. (96-7, Ex. G at 3.)

19 There is no dispute that Mr. Hogge has extensive experience with electrical fires,  
20 and more specifically with electrical fires in vehicles. Rather, the parties dispute whether  
21 Mr. Hogge's lack of specific experience with Mini Cooper battery cables renders him  
22 unqualified to testify regarding his opinions in this case. The Court finds that Mr. Hogge  
23 is qualified to testify that an insulation failure due to chafing in the battery cable caused  
24 the fire. However, Mr. Hogge's "lack of experience and expertise with respect to the  
25 design and manufacture" of the battery cable and wiring harnesses "raises serious doubt  
26 as to whether he is qualified to testify" that the mechanisms used to secure the wiring  
27 harness and main battery cable are defectively designed. *See Allstate*, 2010 WL  
28 1654145 \*4 ("[Mr. Hogge's] lack of experience and expertise with respect to the design

1 and manufacture of an ABS control module raises serious doubt as to whether he is  
2 qualified to testify that the ABS control module was defective.”). However, regardless,  
3 as detailed below, because Mr. Hogge failed to sufficiently test his hypothesis that the  
4 chafing was caused by a defect in the way in which the battery cable and/or wiring  
5 harnesses were designed, the Court will exclude that portion of Mr. Hogge’s testimony.

6 **ii. Reliability of Mr. Hogge’s Opinions**

7 Defendant first argues that Mr. Hogge’s testimony should be excluded because  
8 Mr. Nelson’s opinions, on which Mr. Hogge relied, are unreliable. For the reasons  
9 above, the Court finds that Mr. Nelson’s opinions regarding the origin and cause of the  
10 fire are admissible. Therefore, the Court will not exclude Mr. Hogge’s testimony because  
11 he reviewed and relied on Mr. Nelson’s analysis in reaching his own opinions.  
12 Defendant also reiterates its argument that there is not sufficient evidence that a proper  
13 scene excavation occurred. The Court rejected this argument above and, therefore, it will  
14 not exclude Mr. Hogge’s opinions as unreliable on this basis.

15 Defendant next argues that Mr. Hogge’s opinions regarding the cause of the fire  
16 are not reliable because Mr. Hogge does not have sufficient evidence that a design defect  
17 caused the fire, and he has not adequately tested his hypothesis and ruled out other  
18 possible causes of the fire. (Doc. 91 at 11-17.) In his Report, Mr. Hogge first opines that  
19 the building electrical systems and appliances or fixtures within the garage area are  
20 eliminated as possible causes of the fire. (Doc. 91-3, Ex. L at 11.) Mr. Hogge conducted  
21 an electrical examination and excavation of the scene and was able to test this hypothesis.  
22 Therefore, the Court finds that this opinion is reliable. Mr. Hogge further concluded that  
23 “the competent ignition causes within the area of origin as defined within the left side  
24 engine compartment include electrical and mechanical components of the vehicle.” (*Id.*)  
25 The Court will likewise permit Mr. Hogge to testify regarding this conclusion.

26 Mr. Hogge also opined that the fire did not develop from below the engine based  
27 on the amount of damage and location of arcing he observed during his examination. (*Id.*  
28 at 11-12.) Defendant asserts that this opinion is not reliable because Mr. Hogge

1 “misapplied the science of arc mapping.” (Doc. 91 at 12.) However, Mr. Hogge details  
2 in his Report his analysis of the location of the damage and arc and, therefore, was able to  
3 test this hypothesis. (Doc. 91-3, Ex. L at 11-12.) NFPA 921 allows for the use of arc  
4 mapping as a tool to determine the cause of the fire. (See Doc. 91-3, Ex. M at 17-18;  
5 Doc. 96-3, Ex. C at 5.) Defendant’s challenge to Mr. Hogge’s interpretation of the arcing  
6 he observed goes to the weight, not the admissibility, of his testimony.

7 Further, the Court finds that Mr. Hogge may testify that “the most likely cause of  
8 this fire is chafing of positive conductors that resulted in arcing and ignition of the  
9 thermoplastic insulation and components in the vicinity.” (Doc. 91-3, Ex. L at 13.) In  
10 accordance with NFPA 921, Mr. Hogge formulated hypotheses for the cause of the fire,  
11 including chafing of the cable, and surface heat from the catalytic converter igniting the  
12 liquid or fumes from the power steering fluid. (*Id.* at 12.) Mr. Hogge then tested these  
13 hypotheses based on the data he had collected, including witness statements, examination  
14 of the Mini Cooper, and examination of an exemplar Mini Cooper. Based on the amount  
15 and location of damage and arcing on the Mini Cooper, Mr. Hogge determined that  
16 chafing is the most likely cause of the fire. See NFPA 921 § 4.3.6. Defendant challenges  
17 Mr. Hogge’s methodology because the exemplar Mini Cooper was a 2005 edition, the  
18 Service Bulletin on which Mr. Hogge in part relied relates to improper routing and not  
19 securing the battery cable, and although Mr. Hogge has seen cases of chafing in vehicles,  
20 he testified that he has never seen chafing cause a fire in a Mini Cooper. However, as  
21 detailed above, the Court finds that Mr. Hogge sufficiently tested his hypothesis  
22 regarding the cause of the fire in accordance with NFPA 921. Defendant’s arguments go  
23 to the weight, not the admissibility, of Mr. Hogge’s opinion.

24 Finally, Defendant argues Mr. Hogge’s opinion that “[t]he fact that the engine  
25 wiring harness and also apparently the main battery cable are not sufficiently secured to  
26 prevent chafing and insulation failure would be considered design defects” is unreliable  
27 and should be excluded. (Doc. 91 at 11.) The Court agrees. Notwithstanding Mr.  
28 Hogge’s lack of expertise in the design of battery cables and engine harnesses, Mr.

1 Hogge’s opinion is merely an untested hypothesis. His evaluation of the exemplar  
2 vehicle and the arcing found on the cable, although producing evidence consistent with  
3 his hypothesis, are an insufficient basis upon which to conclude with reasonable certainty  
4 that the battery cable and engine harnesses on 2006 Mini Coopers were defectively  
5 designed. Further, there is no dispute that the subject Mini Cooper’s battery cable  
6 insulation was destroyed in the fire and, therefore, could not be examined. Although Mr.  
7 Hogge has sufficiently tested and may testify regarding his conclusion that chafing of  
8 positive conductors caused the fire, he cannot opine that the chafing was caused by a  
9 defect in the way in which the battery cable and/or wiring harnesses are secured.

### 10 **III. Motion for Summary Judgment**

11 Defendant asserts that summary judgment in its favor is appropriate because: (1)  
12 Plaintiffs’ experts’ opinions are inadmissible; (2) there is no evidence that the alleged  
13 defect was the proximate cause of the fire; and (3) additionally, Plaintiffs have not  
14 disclosed any evidence in support of their negligence claim. (Doc. 93.) Below, the Court  
15 addresses these arguments

#### 16 **a. Summary Judgment Standard**

17 Summary judgment is appropriate if the evidence, viewed in the light most  
18 favorable to the nonmoving party, shows “that there is no genuine dispute as to any  
19 material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P.  
20 56(a). Summary judgment is also appropriate against a party who “fails to make a  
21 showing sufficient to establish the existence of an element essential to that party’s case,  
22 and on which that party will bear the burden of proof at trial.” *Celotex Corp. v. Catrett*,  
23 477 U.S. 317, 322 (1986). A party seeking summary judgment “bears the initial  
24 responsibility of informing the district court of the basis for its motion, and identifying  
25 those portions of [the record] which it believes demonstrate the absence of a genuine  
26 issue of material fact.” *Id.* at 323. Only disputes over facts that might affect the outcome  
27 of the suit will preclude the entry of summary judgment, and the disputed evidence must  
28 be “such that a reasonable jury could return a verdict for the nonmoving party.”



1 *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986).

2 **b. Strict Products Liability Claim**

3 **i. Legal Standard**

4 To establish a *prima facie* case of strict products liability under Arizona law,  
5 Plaintiffs must demonstrate the following: (1) that the product had an unreasonably  
6 dangerous defect; (2) the defect existed at the time the product left Defendant's control;  
7 and (3) the defect was the proximate cause of the plaintiff's injuries. *Gosewisch v. Am.*  
8 *Honda Motor Co.*, 737 P.2d 376, 379 (Ariz. 1987). Arizona courts have adopted two  
9 alternate tests to establish the existence of an unreasonably dangerous design defect—the  
10 consumer expectations test and the risk/benefit test. *See Dart v. Wiebe Mfg. Inc.*, 709  
11 P.2d 876, 879 (Ariz. 1985).

12 The consumer expectations test provides for strict liability when a product “fails to  
13 perform as safely as an ordinary consumer would expect.” *Dart*, 709 P.2d at 877. The  
14 risk/benefit test allows for strict liability “if, in light of the relevant factors . . . , the  
15 benefits of the challenged design do not outweigh the risk of danger inherent in such  
16 design.”<sup>5</sup> *Id.* at 879 (quoting *Barker v. Lull Engineering Co.*, 573 P.2d 443, 446 (Cal.  
17 1978)).

18 The consumer expectation test works well in manufacturing defect cases  
19 because consumers have developed safety expectations from using properly  
20 manufactured products of the same general design. In design defect cases,  
21 however, the consumer expectation test has limited utility as “the consumer  
22 would not know what to expect, because he would have no idea how safe  
23 the product could be made.” Consequently, when application of the  
24 consumer expectation test is unfeasible or uncertain in design defect cases,  
25 courts additionally or alternatively employ the risk/benefit analysis to  
26 determine whether a design is defective and unreasonably dangerous. *Dart*,  
27 147 Ariz. at 245, 247, 709 P.2d at 879, 881.

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24 <sup>5</sup> The Arizona Supreme Court in *Dart* approved of the following non-exhaustive list of  
25 factors: “(1) the usefulness and desirability of the product, (2) the availability of other  
26 and safer products to meet the same need, (3) the likelihood of injury and its probable  
27 seriousness, (4) the obviousness of the danger, (5) common knowledge and normal public  
28 expectation of the danger (particularly for established products), (6) the avoidability of  
injury by care in use of the product (including the effect of instructions or warnings), and  
(7) the ability to eliminate the danger without seriously impairing the usefulness of the  
product or making it unduly expensive.” *Dart*, 709 P.2d at 879-80.

1 *Golonka v. GMC*, 65 P.3d 956, 962 (Ariz. Ct. App. 2003) (citations omitted). *See also*  
2 *Brethauer v. GMC*, 211 P.3d 1176, 1183 (Ariz. Ct. App. 2009) (quoting *Dart*, 709 P.2d at  
3 878) (“while the consumer expectation test may sometimes work well in design defect  
4 cases, it provides no resolution for those cases in which ‘the consumer would not know  
5 what to expect, because he would have no idea how safe the product could be made.’”).

6 Plaintiffs assert that the consumer expectation test should apply in this case to  
7 establish a design defect because the average juror has substantial experience with  
8 automobiles, and no ordinary and reasonable consumer would expect an automobile to  
9 catch on fire when it is parked in a garage and the engine is not running. (Doc. 99 at 10.)  
10 Defendant asserts that the risk/benefit test is the proper test because the subject matter is  
11 “beyond the average juror’s knowledge and experience.” (Doc. 93 at 3.) As detailed  
12 below, the Court finds that Defendant is not entitled to summary judgment on Plaintiffs’  
13 strict liability claim under either test.

14 **ii. Plaintiffs have sufficient evidence to preclude summary**  
15 **judgment on their strict products liability claim.**

16 Defendant argues that it is entitled to summary judgment on Plaintiffs’ strict  
17 liability claim if the Court excludes the testimony of one or both of Plaintiffs’ experts.  
18 (Doc. 93 at 4-5.) Defendant further claims that even if the Court allows Plaintiffs’  
19 experts to testify, it is entitled to summary judgment on Plaintiffs’ strict liability claim  
20 because Plaintiffs have no evidence to show that the fire was caused by a defect that  
21 existed at the time the Mini Cooper left Defendant’s control. (Doc. 93 at 5.) Defendant  
22 further contends that Plaintiffs cannot rely on circumstantial evidence to establish their  
23 claim because there must be some evidence of the defect other than the fire itself and,  
24 here, there is no such evidence. (*Id.* at 6-7.)

25 The Court finds that Plaintiffs have sufficient evidence to defeat summary  
26 judgment on their strict liability claim. Arizona courts have allowed plaintiffs to rely on  
27 circumstantial evidence to establish a defect that existed at the time the product left the  
28 defendant’s control caused the injuries. *See Reader v. Gen. Motors Corp.*, 483 P.2d  
1388, 1393-94 (Ariz. 1971); *Dietz v. Waller*, 685 P.2d 744, 747-48 (Ariz. 1984)

1 (“Plaintiffs, we have held, must be permitted to rely upon circumstantial evidence alone  
2 in strict liability cases, because it is unrealistic to expect them to otherwise be able to  
3 prove that a particular product was sold in a defective condition.”). However, Arizona  
4 courts limit reliance on such evidence to situations where the product is unavailable or  
5 otherwise incapable of inspection. *Dietz*, 685 P.2d at 747-48; *Rocky Mountain Fire &*  
6 *Cas. Co. v. Biddulph Oldsmobile*, 640 P.2d 851 (Ariz. 1982). Here, although the vehicle  
7 was available for inspection, there is no dispute that the at-issue insulation was destroyed  
8 in the fire. Accordingly, Plaintiffs may rely on circumstantial evidence to establish their  
9 claim.

10 To prevail on their claim, Plaintiffs must produce sufficient circumstantial  
11 evidence to permit “an inference that the accident was caused by a defect.” *Dietz*, 685  
12 P.2d at 748. In so doing, Plaintiffs are not required to “eliminate with certainty all other  
13 possible causes of an accident . . .” 685 P.2d at 748. Rather, Plaintiffs must only  
14 “present evidence sufficient to allow the trier of fact to reasonably infer that it was more  
15 probable than not that the product was defective.” *Id.*

16 Here, assuming, in Plaintiffs’ favor, that the fire originated from the left engine  
17 compartment and “the most likely cause of th[e] fire is chafing of positive conductors that  
18 resulted in arcing and ignition of the thermoplastic insulation and components in the  
19 vicinity,” the Court finds that Plaintiffs have produced sufficient evidence to permit a  
20 reasonable inference that the fire was caused by a design defect. Notably, Mr. Hogge (1)  
21 eliminated several different causes of the fire within the area of origin, and (2) observed a  
22 significant arcing event on the battery cable in the area where the cable stretched over the  
23 frame of the vehicle.

24 Further, there is sufficient circumstantial evidence to reach a jury on whether the  
25 defect existed when the vehicle left Defendant’s control. Although the subject vehicle  
26 was several years old at the time of the fire, witness testimony and other evidence  
27 indicate that there has not been any service or repairs on the battery cable or accidents  
28 that may cause damage to the cable. A reasonable juror, relying on the evidence

1 discussed above, could find that a defect caused the fire, and that the defect existed when  
2 the vehicle left Defendant's factory. Accordingly, the Court will deny Defendant's  
3 Motion for Summary Judgment as to Plaintiffs' strict liability claim. *See Allstate*, 2010  
4 U.S. Dist. LEXIS 48485 at \*48-53 (denying defendant's motion for summary judgment  
5 when plaintiffs presented expert testimony regarding the area of origin and that certain  
6 anomalies and damage are consistent with pre-fire electrical activity and localized  
7 heating, even though Plaintiffs were unable to eliminate with certainty all other potential  
8 causes of the fire or to identify the specific defect in the ABS control module).

9 **c. Summary judgment in Defendant's favor on Plaintiffs' negligence**  
10 **claim is appropriate.**

11 In order to succeed on a negligent design claim, "a plaintiff must prove that the  
12 manufacturer acted unreasonably at the time of design or manufacture in light of the  
13 foreseeable risk of injury from use of the product." *Golonka*, 65 P.3d at 962. "[T]he  
14 central focus of inquiry in strict liability design cases is whether the *product* was  
15 unreasonably dangerous, while the focus in negligent design cases is whether the  
16 manufacturer's *conduct* was unreasonable in light of the foreseeable risk of injury." *Id.* at  
17 963. In analyzing negligent design cases, courts use the risk/benefit analysis factors to  
18 "assess the reasonableness of the manufacturer's choice of design in light of the  
19 knowledge available at the time of the design or manufacture." *Id.*

20 Defendant argues that it is entitled to summary judgment on the negligence claim  
21 because Plaintiffs have not disclosed any evidence regarding the design process of the  
22 2006 Mini Cooper or the process of designing battery cables or their insulation. (Doc. 93  
23 at 7.) The Court agrees. In their Response to Defendant's Motion for Summary  
24 Judgment, Plaintiffs assert that they "cite a multitude of evidence including the BMW  
25 Technical services bulletin (Ex. A) and the opinions of George Hogge (Ex. B; C) to  
26 demonstrate that the ultimate result of Defendant's design was a defective product."  
27 (Doc. 99 at 14.) However, in evaluating a negligence claim, evidence of defect is not  
28 sufficient; there must be evidence of unreasonable conduct on the part of Defendant.  
There is no evidence in the record before the Court from which a juror could conclude

1 that Defendant “failed to take reasonable precautions in designing a safe product or  
2 otherwise failed to act unreasonably at the time of design or manufacture in light of the  
3 foreseeable risk of injury from use of the product.” *Golonka*, 65 P.3d at 962. Thus,  
4 summary judgment in Defendant’s favor on Plaintiffs’ negligence claim is appropriate.

5 Accordingly,

6 **IT IS ORDERED** that Defendant’s Motion to Exclude Testimony of Willie  
7 Nelson (Doc. 92) is denied.

8 **IT IS FURTHER ORDERED** that Defendant’s Motion to Exclude Testimony of  
9 George Hogge (Doc. 91) is granted in part and denied in part.

10 **IT IS FURTHER ORDERED** that Defendant’s Motion for Summary Judgment  
11 (Doc. 93) is granted as to Plaintiffs’ negligence claim and denied as to Plaintiffs’ strict  
12 products liability claim. The Court will set a Final Pretrial Conference by separate order.

13 Dated this 29th day of September, 2015.

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17 Honorable John Z. Boyle  
18 United States Magistrate Judge  
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