

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

SUSAN WHITE, as Personal Representative
for the Estate of KAYLA WHITE, deceased,
and CODY CAMPBELL, as Personal
Representative of the Estate of BRAEDIN
CAMPBELL, deceased,

Case No. 2:17-cv-12320

Hon. DAVID M. LAWSON

Plaintiffs,

v.

FCA US, LLC,
a foreign limited liability company, and
CLARENCE HEATH, individually,

Defendants.

Courtney E. Morgan, Jr. (P29137)
Brian T. Keck (P77668)
LAW OFFICES OF COURTNEY
MORGAN PLLC
Attorneys for Plaintiffs
3200 Greenfield, Ste. 355
Dearborn, MI 48120
(313) 395-2568/(313) 395-3933 fax
cmorgan@courtneymorganlaw.com
bkeck@courtneymorganlaw.com

James P. Feeney (P13335)
Clay A. Guise (P59055)
DYKEMA GOSSETT PLLC
Attorneys for Defendant FCA US, LLC
39577 Woodward Ave., Ste. 300
Bloomfield Hills, MI 48304
(248) 203-0841/(248) 203-0763 fax
jfeeney@dykema.com
cguise@dykema.com

Gerald E. Thurswell (P21448)
THE THURSWELL LAW FIRM PLLC
Attorney for Plaintiffs
1000 Town Ctr, Ste 500
Southfield, MI 48075-1221
(248) 354-2222
jthurswell@thurswell.com

Bryce A. Rucker (P79455)
DYKEMA GOSSETT PLLC
Attorneys for Defendant FCA US, LLC
400 Renaissance Center
Detroit, MI 48243
(313) 568-6502
brucker@dykema.com

John L. Weston (P55042)
SECRET WARDLE
Attorney for Defendant Heath
2600 Troy Center Dr., P.O. Box 5025
Troy, MI 48007-5025
(248) 851-9500/(248) 251-1808 fax
jweston@secrestwardle.com

Perry W. Miles IV (Va. Bar 43031)
Derek H. Swanson (Va. Bar 73463)
McGUIRE WOODS LLP
Gateway Plaza
800 East Canal Street
Richmond, VA 23219-3916
(804) 775-1081/(804) 698-2258 fax
pmiles@mcguirewoods.com
dswanson@mcguirewoods.com

**PLAINTIFFS' RESPONSE TO DEFENDANT FCA US LLC'S
MOTION TO EXCLUDE TESTIMONY OF FREDERICK ARNDT
REGARDING ALTERNATIVE DESIGN**

NOW COME Plaintiffs SUSAN WHITE, Personal Representative for the Estate of KAYLA WHITE, deceased, and CODY CAMPBELL, Personal Representative of the Estate of BRAEDIN CAMPBELL, deceased, and for their response to Defendant's motion to exclude the testimony of Plaintiffs' expert witness Frederick Arndt regarding alternative design and state as follows:

Defendant FCA US LLC ("FCA") attempts to exclude the opinion of Plaintiffs' expert Frederick Arndt that the: "A properly located and protected midship fuel tank location for the Jeep Liberty as recognized by FCA/Chrysler engineers would have survived the subject collision without damage and fuel leakage and hence, no burn injury to the driver Kayla White and her child." **See Exhibit 1, Arndt Report.** The attempted exclusion of Mr. Arndt is based on three different grounds: (1) failure to show the alternative design is technically feasible; (2) failure to show the alternative design would impair the usefulness or

desirability of the KJ Liberty; and (3) whether the alternative design would create an equal or greater risk of harm to others. Notably, all three bases of Defendant's motion are subject matters which Mr. Arndt was strangely not asked to testify during his discovery deposition in this case.

The attempted exclusion of Mr. Arndt regarding his alternative design must fail for several reasons:

- Plaintiffs' crash test completed in this case shows that a properly protected fuel tank, without any other design alterations to the Jeep Liberty (KJ), will protect the fuel tank from failure even at collision speeds in excess of those present on November 11, 2014. **See Exhibit 2 - Report of P. Sheridan.**
- Crash test of 1995 Ford Explorer struck at 70 mph with a midship fuel tank shows that a midship fuel tank can survive similar crash speeds to those present in this case. **See Exhibit 3 - Report re Explorer 70 mph Test.**
- Movement of the fuel tank from the aft-of-axle location to the midship location, along with protection, for safety in rear-impact underride collisions is recognized by FCA (Chrysler). **See Exhibit 4, Baker Memo; Exhibit 5, Chrysler Fuel System Guidelines; Exhibit 6, Dodge Advertisements.**

- Chrysler already designed the Jeep vehicles, beginning in the early-1990s (ten years prior to the 2003 Jeep Liberty operated by decedent Kayla White), to include a mid-ship placed fuel tank but decided to place the fuel tank in the rear simply because that is what was done in the past and to improve the performance of Jeeps in aggressive off-road situations. **See Exhibit 7, Dep of B. Bruni.**
- In early 2001 (well before the manufacture of Kayla White's Jeep Liberty) Chrysler executives made the decision to move the fuel tank for the Jeep Grand Cherokee from the aft-of-axle location to the mid-ship location and did so. **See Exhibit 8, Dep of T. Cowing.**
- Both the MY 2005 Jeep Grand Cherokee (WK) and the MY 2008 Jeep Liberty (KK) have a mid-ship placed fuel tank that is protected by a robust metal guard, thus Defendant FCA cannot credibly argue that it was not feasible. **See Exhibit 8 at p. 80-81; See Exhibit 9 - Photo of KK Midship Fuel tank.**
- All three of Defendants' mechanical engineers propose the novel theory that the unprotected Jeep Liberty (KJ) aft-of-axle fuel tank *did not puncture* during the collision involved in the instant matter despite the fact that it was impacted by a 2002 Cadillac Seville (also referred to as a Cadillac STS) travelling at approximately 68 mph. **See**

Exhibit 10 – Expert Report of J. Ridenour at p. 6. Consequently, if true, then if this same fuel tank (which according to Defendants experts didn't even puncture in the instant collision) had been properly protected with metal guarding, and placed in the recognized safer position of mid-ship, it is more likely than not that the fuel tank would have survived.

WHEREFORE, Plaintiffs SUSAN WHITE, Personal Representative for the Estate of KAYLA WHITE, deceased, and CODY CAMPBELL, Personal Representative of the Estate of BRAEDIN CAMPBELL, deceased, request that this Court deny Defendant FCA US LLC's motion to exclude testimony of Frederick Arndt regarding alternative design in its entirety.

Respectfully submitted,

LAW OFFICES OF COURTNEY MORGAN
PLLC

BY: /s/ Courtney E. Morgan, Jr.
COURTNEY E. MORGAN, JR. (P29137)
BRIAN T. KECK (P77668)
Attorneys for Plaintiffs
3200 Greenfield, Suite 355
Dearborn, MI 48120-1802
(313) 395-2568

DATED: July 29, 2019

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LAW OFFICES OF COURTNEY
MORGAN PLLC
Attorneys for Plaintiffs
3200 Greenfield, Ste. 355
Dearborn, MI 48120
(313) 395-2568/(313) 395-3933 fax
cmorgan@courtneymorganlaw.com
bkeck@courtneymorganlaw.com

Gerald E. Thurswell (P21448)
THE THURSWELL LAW FIRM PLLC
Attorney for Plaintiffs
1000 Town Ctr, Ste 500
Southfield, MI 48075-1221
(248) 354-2222
jthurswell@thurswell.com

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James P. Feeney (P13335)
Clay A. Guise (P59055)
DYKEMA GOSSETT PLLC
Attorneys for Defendant FCA US, LLC
39577 Woodward Ave., Ste. 300
Bloomfield Hills, MI 48304
(248) 203-0841/(248) 203-0763 fax
jfeeney@dykema.com
cguise@dykema.com

Bryce A. Rucker (P79455)
DYKEMA GOSSETT PLLC
Attorneys for Defendant FCA US, LLC
400 Renaissance Center
Detroit, MI 48243
(313) 568-6502
brucker@dykema.com

John L. Weston (P55042)
SECRET WARDLE
Attorney for Defendant Heath
2600 Troy Center Dr., P.O. Box 5025
Troy, MI 48007-5025
(248) 851-9500/(248) 251-1808 fax
jweston@secrestwardle.com

Perry W. Miles IV (Va. Bar 43031)
Derek H. Swanson (Va. Bar 73463)
McGUIRE WOODS LLP
Gateway Plaza
800 East Canal Street
Richmond, VA 23219-3916
[\(804\) 775-1081](tel:(804)775-1081)/[\(804\) 698-2258](tel:(804)698-2258) fax
pmiles@mcguirewoods.com
dswanson@mcguirewoods.com

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QUESTION PRESENTED

Whether Plaintiffs' expert Frederick Arndt may testify regarding the alternative design for the Jeep Liberty (KJ) to include an appropriately protected mid-ship fuel tank given that (1) it is the same design identified by the NHTSA in asking for the recall of the Jeep Liberty (KJ); (2) it is consistent with the results from Plaintiffs' crash test; (3) it is consistent with the industry standard at the time of the manufacture of the 2003 Jeep Liberty (KJ) whereby the Jeep Liberty (KJ) was an outlier in that it did not have a midship fuel tank; (4) it is consistent with the fact that Chrysler itself was able to move the fuel tank for Jeeps to the midship location in at least 1993, but reversed course in 1997 due to attempts to accommodate aggressive off-road usage; (5) it is consistent with the fact that Chrysler moved the fuel tank for Jeeps to the midship location in 2001 for the Jeep Grand Cherokee (WK) and protected the tank; (6) it is consistent with other Chrysler offerings such as those advertised by Dodge no later than 1985 promoting the safety aspects associated with a midship placed fuel tank; (7) it is consistent with the midship placed fuel tank for the Jeep Liberty (KK) beginning in 2007; and, (8) it is consistent with vehicle-to-vehicle crash testing of a midship placed fuel tank struck at 70 mph wherein the fuel tank survived without fuel leakage.

Plaintiffs' Answer: **Yes.**

TABLE OF AUTHORITIES

Cases

Barnes v. Medtronic, PLC,

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**BRIEF IN RESPONSE TO DEFENDANT FCA US LLC’S MOTION TO
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NOW COME Plaintiffs SUSAN WHITE, Personal Representative for the Estate of KAYLA WHITE, deceased, and CODY CAMPBELL, Personal Representative of the Estate of BRAEDIN CAMPBELL, deceased, and for their response to Defendant’s motion to exclude the testimony of Plaintiffs’ expert witness Frederick Arndt regarding alternative design state as follows:

STATEMENT OF MATERIAL FACTS

This is a product liability action (pursuant to Mich. Comp. Laws 600.2946(2), 600.2946a(3) and 600.2949a), an implied warranty action, and a negligent recall action against Defendant FCA US LLC (hereinafter referred to as “FCA”), along with a negligence action against Defendant Clarence Heath. See **Doc #20**.

Collision on November 11, 2014

On November 11, 2014, at approximately 4:30 P.M., Kayla White was on her way to work, driving Northbound on M-10 near Telegraph Road in the City of Southfield in her red 2003 Jeep Liberty (KJ). See **Doc #20, at ¶82**. The Liberty (KJ) is not equipped with a rear bumper. Instead, it is equipped with a hollow plastic fascia attached to the rear sill of the vehicle. The fascia obscures the view of

the vehicle's plastic fuel tank and does not provide meaningful impact protection to the tank. The tank itself protrudes approximately (11) eleven inches below the lower edge of the rear sill. Id at ¶84. At approximately 4:38 P.M. on that day, Kayla White had stopped her vehicle because of traffic congestion on M-10's right hand lane exiting onto northbound Telegraph Road. Id at ¶85. At the same time and place, Defendant Heath was operating a 2002 Cadillac STS. Id at ¶88. Heath failed to stop in time and struck Kayla White's 2003 Jeep Liberty (KJ) from the rear. Id at ¶89.

Just prior to impact, Heath engaged his brakes, which caused the front of his Cadillac STS to decrease in height. Id at ¶91. Given the resulting nosedive, Heath's vehicle struck the rear-placed low hanging plastic fuel tank of Kayla White's 2003 Jeep Liberty (KJ), due to the fact that the front of the Cadillac underrode the rear sill of the Liberty. This impact caused a catastrophic failure of the Liberty fuel tank, rapidly releasing its contents (gasoline), which caught fire. Id at ¶92.

Kayla's 2003 Jeep Liberty (KJ) rolled over onto the driver's side, making escape far more difficult and time consuming. Id at ¶93. Neither Kayla, nor Braedin, received any discernible injuries from the initial impact or any non-fire mechanism of injury, including the roll-over. Id at ¶94. The gasoline fed fire would not have occurred, had the tank not failed. Id at ¶95. Given that the Jeep Liberty (KJ) was rolled onto its driver side, Kayla and Braedin, her eight-and-a-half-

month-old baby boy, were trapped in the burning vehicle with the flames moving from the rear to the front of the vehicle. Id at ¶96. For several minutes, during which the fuel-fed fire grew ever larger, consuming more and more vehicle contents, Kayla attempted to extricate herself and her baby boy from the burning vehicle through the passenger side door above her. Eventually the flames engulfed Kayla and her baby, causing their deaths. Id at ¶97. The autopsy established that Kayla was conscious for several minutes as she was literally burned alive inside the 2003 Jeep Liberty (KJ), and her baby boy, Braedin Campbell, was conscious for several more minutes after Kayla White succumbed to the flames. Id at ¶100.

Vulnerability of Jeep Liberty (KJ) Fuel Tank To Puncture in Rear-Underride Collisions

I. Unprotected Aft-of-axle Fuel Tank Jeep Liberty (KJ) Location

The primary question in this case as to Defendant FCA is whether the Jeep Liberty (KJ) was defective in the placement of an unprotected fuel tank aft-of-axle making it susceptible to puncture in rear-end underride impacts. The evidence about that question is clear and irrefutable. The fuel tank hangs down like a big melon waiting to be split without any guarding to provide even the most minimal amount of protection from a rear underride impact. See below:

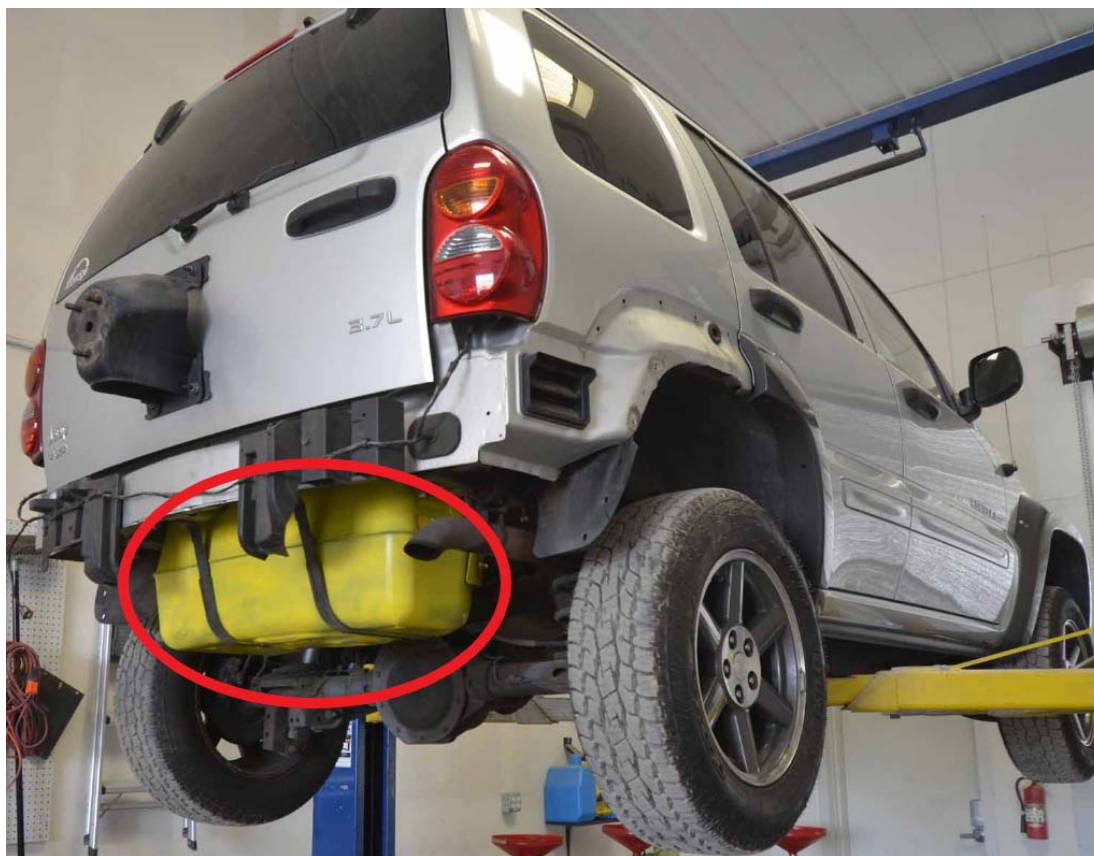


Figure 1 – Exhibit 11 - Photograph of Jeep Liberty (KJ) with plastic non-structural fascia removed – Fuel tank painted yellow

Moreover, it is known that during the collision on November 11, 2014 the Cadillac Seville struck Kayla White’s 2003 Jeep Liberty (KJ) in the rear at approximately 68 mph [See Exhibit 12, J. Olson Report at p. 19] and in the process of braking, the front of the Cadillac engaged in what is commonly referred to as a nosedive resulting in an underride rear impact. Chrysler’s former chief testing engineer Judson Estes has testified that the aft-of-axle unprotected fuel tank “is vulnerable to rear impact”. See Exhibit 13, Deposition of J. Estes at p. 421. While, Mr. Estes testimony was provided with respect the Jeep Grand Cherokee, both vehicles share the significant design characteristic of an unprotected aft-of-axle fuel tank and if

anything, the Jeep Liberty (KJ) more so. The reason for this vulnerability is that there is no structure protecting the vast majority of the Jeep Liberty (KJ) fuel tank in rear impact collisions, as **Figure 1** aptly demonstrates. Consequently, the Jeep Liberty (KJ) fuel tank is on its own when impacted in a rear underride.

This is best depicted by the below diagram:

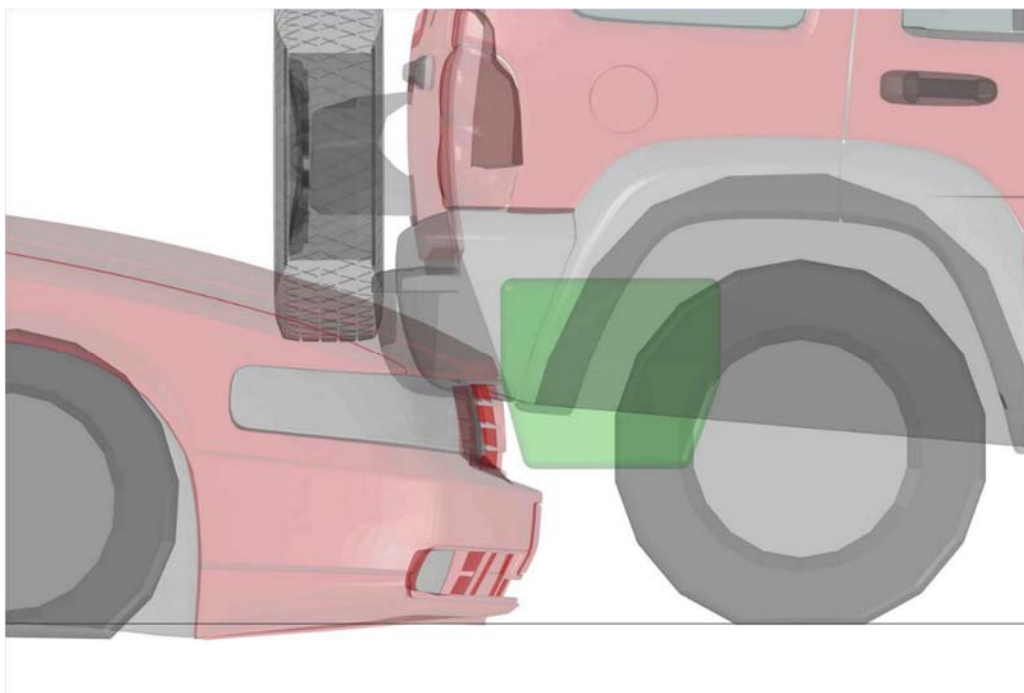


Figure 2 – Exhibit 14 - Depiction of point of underride impact between Cadillac and Jeep Liberty (KJ) – Fuel tank in green

As is evident from Figure 2, the leading edge of the Cadillac hood makes contact first with the lowest part of the Liberty spare tire affixed to the rear of the vehicle and continues a longitudinal and downward path (underride) during the collision sequence. This contact peels the Cadillac hood back, exposing the engine compartment, full of ignition sources. The next object the Cadillac strikes is a non-structural plastic fascia (located just below the spare tire), and then contacts and

underrides the Liberty rear cross member (depicted in **Figure 1**). Immediately beneath and inboard of that crossmember is the fuel tank which the underriding Cadillac next contacts both directly and longitudinally at well over 60 mph.

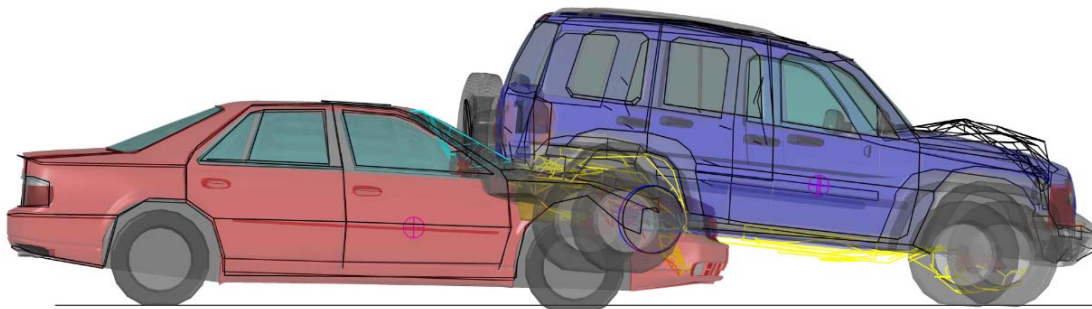


Figure 3 – Exhibit 15 - Point of maximum engagement between Cadillac and Jeep Liberty (KJ)

Simply put, given its location and lack of protection, the Jeep Liberty (KJ) fuel tank is unable to withstand the collision forces which deform and puncture it from the colliding Cadillac Seville resulting in the fuel fed fire which took the life of Kayla White and her unborn child, Braedin Cambpell.

II. Chrysler Institutional Knowledge regarding the need for movement and/or protection of aft-axle fuel tanks

The vulnerability of fuel tanks located behind rear axles in rear impacts became well known following a series of fiery crashes involving the Ford Pinto and the Mercury Bobcat. In June 1978, Ford Motor Company issued formal recall notices for the Ford Pinto and Mercury Bobcat after NHTSA found that the Pinto

and Bobcat had been involved in 38 rear end impacts causing 27 deaths and 24 injuries, as a result of post-collision fires. The noted defect on the Ford Pinto and Mercury Bobcat was that the fuel tank was installed aft of the rear axle, such that the fuel tank was subject to failure in foreseeably survivable rear impact collisions. Following the well-publicized tragedy of the Ford Pinto and Mercury Bobcat, manufacturers increasingly adopted designs in which fuel tanks were located in less vulnerable locations than behind the rear axle, such as the mid-ship location.

At least as early as August 24, 1978, and in response to the Pinto debacle, Chrysler acknowledged the safety benefits of placing the fuel tank in front of the rear axle, i.e. midship. On that date, a Chrysler internal memorandum stated with respect to the midship fuel tank location:

“This location provides the protection of all the structure behind the rear wheels – as well as the rear wheels themselves – to protect the tank from being damaged in a collision.” [See **Exhibit 4 - Baker memo**]

Moreover, the Chrysler memo noted that with respect to trucks, there was a concern regarding the rear fuel tank location given the height mismatch between trucks and passenger cars, which concern was expected to grow as the truck (including SUV) market grew. The concern was that hard-braking passenger cars striking the rear of a truck would underwrite any vehicle structure, and directly impact low hanging full tanks, a situation similar to, but worse than, the Pinto. The document also recommended that where rear placement is all that is feasible,

impact deflecting structures be added to protect rear placed tanks in underride rear impacts.

Moreover, Defendant FCA (then Chrysler) itself created a document entitled “Fuel Supply System Design Guidelines” which presented the aft-of-axle fuel tank as an impermissible design location, and the midship location as permissible. **See Exhibit 5.** In that document Defendant FCA states in pertinent part: “The tank should be located in a manner that avoids known impact areas and provides isolation from the passenger compartment”. Id at 1.A.2. In other words, the fuel tank was located in the very area not permitted by Chrysler’s own internal standards.

Similarly, Chrysler has long advertised the benefits of placing fuel tanks in the midship location and did so for all of its vehicles as of 2003 except for the Jeep lineup. In other words, all other Chrysler offerings had midship placed fuel tanks, except for the Jeep. Indeed, as early as 1985 Dodge advertised the safe midship fuel tank location for all of their Dodge vehicles stating that “the fuel tank is located under the car beneath the rear seat – where it’s forward of the rear suspension and between the bodyside rails-giving it protection in the event the car is subjected rear or side impacts...” **See Exhibit 6, 1985 Dodge Engineering.** This is of course nearly twenty years prior to the manufacture of Kayla White’s 2003 Jeep Liberty (KJ).

III. Location and design of the Jeep Fuel Tanks

FCA's own engineers recognize that the midship location of the fuel tank is safer in rear-impact collisions. **Exhibit 16, Dep of D. Bernier at p. 110-111.** Indeed, beginning in 1993 (nearly ten years prior to the manufacture of the Jeep Liberty operated by Kayla White) the Jeep Grand Cherokee (WJ) was originally chosen and designed to have a mid-ship mounted fuel tank. **See Exhibit 7 at p. 27-28.** The Jeep Grand Cherokee (WJ) was due to be introduced during model year 1999. **Id. at p. 60.** Nevertheless, in an attempt to design the vehicle to accommodate aggressive off-road usage, the fuel tank placement was moved from the mid-ship mounted location to the aft-of-axle location. **Id. at p. 58-62.** Thus, the mid-ship placement for the Jeep fuel tank was feasible for Jeep vehicles as early as 1993, some ten years prior to the manufacture of Kayla White's Jeep Liberty, yet the fuel tank placement was moved to the aft-of-axle location to accommodate aggressive off-road driving infrequently undertaken by a handful of Jeep users.

Moreover, before Kayla White's Jeep Liberty was manufactured, in 2001 Chrysler/FCA decided again to move the aft-of-axle fuel tank to the midship location for the 2005 model year ("MY") Jeep Grand Cherokee. Thomas Cowing was a senior engineer for Chrysler (then DaimlerChrysler) for the MY 2005 Jeep Grand Cherokee (WK) introduced in mid-2004. The Jeep Grand Cherokee (WK), was originally designed with an aft-of-axle fuel tank. However, in 2001 or 2002,

Mr. Cowing and his boss met with Wolfgang Bernhard (one of the Chief Officers at DaimlerChrysler). Bernhard instructed Cowing to move the fuel tank for the Jeep Grand Cherokee (WK) to the midship location. **See Exhibit 8 at p. 63-67.** Even though it was late in the development stage for a vehicle, Mr. Cowing testified that it was “manageable” to be able to move the packaging of the fuel tank to the mid-ship location. **Id. at p. 67.** Nevertheless, it took only three to four weeks to move the fuel tank for the Jeep Grand Cherokee (WK) to the midship location. **Id. at p. 70.** To accomplish the movement of the tank, Chrysler changed the shape of the tank, protected the tank with a shield, reduced the capacity from 24 gallons to 21 gallons, and raised the Jeep floor by 1 inch. **Id. at p. 71-72.** Notably, 21 gallons is nearly three gallons more than the capacity for the 2003 Jeep Liberty (KJ).

Stated succinctly, (1) Jeep vehicles were originally designed to have midship placed fuel tanks as early as 1993 and the fuel tank location was only moved to the aft-of-axle location to accommodate infrequent aggressive off-road usage; and, (2) Mr. Cowing and his team at DaimlerChrysler (i.e. the Defendant in this case) were able to accomplish in three to four weeks exactly what Plaintiffs’ expert Frederick Arndt has identified as the appropriate alternative design for the Jeep Liberty, i.e. a protected midship fuel tank. It defies logic to now claim that Plaintiffs expert lacks

sufficient factual basis for his opinion, when Defendant FCA (Chrysler) did that very thing in a mere three to four weeks in 2001.

Furthermore, the Jeep Liberty (KJ)'s successor model, the Jeep Liberty (KK) included a midship fuel tank location. Notably, the Jeep Liberty (KK) was offered for sale in 2007, with the midship placed fuel tank, in an effort to be able to pass the upgraded fuel system testing identified in FMVSS 301 which began for model year vehicles 2008. Again, FCA cannot credibly claim that this was not a feasible alternative design when FCA accomplished the task of moving the fuel tank to the midship location on the Jeep Liberty (KK), the Jeep Grand Cherokee (WK). Indeed, by 2010 all Jeep offerings had midship mounted fuel tanks, while retaining their allegedly required aggressive off-road functionality.

IV. 1995 Ford Explorer – midship fuel tank test

On August 5, 2010 the National Crash Analysis Center conducted a rear-impact underride test whereby a 1995 Ford Explorer with a midship placed fuel tank was struck at approximately 70 mph by a 2003 Ford Taurus. **See Exhibit 3; Exhibit 17, Dep of J. Olson at p. 80:20-81:21.** Despite being struck at speeds greater than those present in the instant case, the midship placed fuel tank in the 1995 Ford Explorer survived the impact and did not leak. **Id.**

Q. Okay. So that fuel tank survived without spillage in the 70-mile-an-hour impact, the Ford Explorer being struck by a Ford Taurus?

A. **It did, yes. [Ex. 17, Dep of. J. Olson at p. 81:18-21]**

Thus, supporting not only the feasibility of a midship fuel tank but also supporting Mr. Arndt's proposition that locating a protected fuel tank in the midship location would have avoided the incident that occurred in our case.

V. Recall of Jeep Liberty KJ

Beginning in 2010 the National Highway and Traffic Safety Administration's ("NHTSA") Office of Defects Investigation ("ODI") began an investigation into whether a safety defect existed with respect to the unprotected aft-of-axle Jeep fuel tank. Ultimately, NHTSA's ODI determined that a safety defect existed and requested that FCA (then Chrysler Group) engage in a recall of certain Jeep vehicles including the Jeep Liberty (KJ) due to the unprotected aft-of-axle fuel tank. **See Exhibit 18 – 6-3-13 NHTSA Ltr.** Much of NHTSA's request includes a lengthy history of the safety concerns associated with the aft-of-axle fuel tank location and the institutional knowledge regarding the safety issues inherent with that location. *Id.* Defendant FCA (then Chrysler Group) ultimately agreed to a voluntary recall of the Jeep Liberty (KJ) in June of 2013 and without any testing proposed to address the defect by adding a trailer hitch allegedly to better manage crash forces in low speed rear impacts only. FCA has since defined low speed as 40 mph, or less.

VI. Plaintiffs' Crash Test with protected aft-of-axle fuel tank

Plaintiffs did complete a crash test to determine the feasibility of adequately protecting the rear-placed fuel tank on the Jeep Liberty (KJ) in a rear-impact underride crash at speeds well-in excess of those present in the instant collision. Plaintiffs', through their expert Paul V. Sheridan, a former Program Manager for Jeep and Dodge Truck Engineering at Chrysler Corporation, conducted a crash test using a 2003 Jeep Liberty (the same model as Kayla White's vehicle) and a 2002 Cadillac Seville SLS (the same model as Defendant Clarence Heath's vehicle) at 73.84 mph (almost 6 mph greater than the collision at issue). **See Exhibit 2 at p. 2 of Test Report.** In this test, the Jeep Liberty's fuel tank was encapsulated with a protective device created using an aftermarket skid plate further fabricated using steel plates with a thickness of 3/16" (hereinafter referred to as "FTEP" – Fuel Tank Encapsulation Prototype). **Id.** The FTEP was mounted to the rear of the Jeep Liberty encapsulating the fuel tank. The total time taken to complete this modification was a matter of hours using readily available fabrication technology far less sophisticated than that available to FCA in 2003. The FTEP followed the design considerations noted in Chrysler's internal memorandum from 1978. **See Exhibit 4.** Despite being struck at speeds well in excess of those present in the collision involving Kayla White on November 11, 2014, the fuel tank was not punctured, and no measurable amount of fluid leaked from the protected Liberty fuel tank. **See Exhibit 2 at p. 3 of Test Report.** As such, if the fuel tank can be

adequately protected in the aft-of-axle location from collision speeds well in excess of those present in the incident collision, then it logically follows that both adequately protecting the fuel tank along with locating the fuel tank in the safer mid-ship location, is a feasible alternative design that would result in the Jeep Liberty fuel tank to survive without damage or fuel leakage.

Frederick Arndt's Report

In connection with this suit, Plaintiffs have retained mechanical engineer Frederick Arndt as an expert witness. Mr. Arndt has a Bachelor of Science degree in mechanical engineering with an aeronautical option obtained in 1959, along with several advanced courses from USC Los Angeles in physics and mathematics. **See Exhibit 1 at p. 2.** Mr. Arndt worked in the aerospace industry at Douglas aircraft Corporation from 1959 to 1961 and at TRW systems group from 1961 to 1968. *Id.* Mr. Arndt was part of the lunar module descent engine (LMDE) design and development team for the Apollo moon landing program. *Id.* Following his work in the aerospace field he worked at Dynamic Science (1968 to 1974), a Research and Development Company working on a broad range of aircraft crashworthy/survivability issues, including detailed crashworthy analysis of motor vehicles including fuel system crash performance in both frontal and rear end collisions. *Id.* After his employment with Dynamic Science he started to work as a consultant on motor vehicle accidents. *Id.* at p. 2-3. Mr. Arndt has been active as a

forensic consultant for 40+ years with a specialty in post collision motor vehicle fires involving automobiles, light trucks, heavy trucks, motorcycles, and to a lesser extent aircraft and has investigated and analyzed hundreds of motor vehicle accidents followed by post collision fire. *Id.* at p. 2-3. These have included the Ford Motor Company Pinto, the General Motors C/K pickup truck and Fiat Chrysler of America vehicles. *Id.* at p. 3. All of Mr. Arndt's conclusion and opinions are based upon the scientific process as well as his education, engineering training, extensive testing experience including vehicle crash testing, vehicle crash research, work related vehicle crash research, vehicle accident reconstruction experience, and practical experience as a testifying forensic expert and 40+ years of motor vehicle post collision fire reconstruction and field experience. **See Exhibit 1 at p. 4.**

Arndt's opinions pertinent to this responsive motion are as follows:

5. FCA/Chrysler was actively changing its product lines, as consistent with the industry practice, involving automobiles, light trucks, vans and some SUVs to mid ship fuel tank locations that offered superior crash protection,

6. The Fuel System on the Jeep Liberty was placed in a known direct impact crush and load path region, known as crush zone, of the vehicle, a condition known to FCA/Chrysler,

...

13. A properly located and protected midship fuel tank location for the Jeep Liberty as recognized by FCA/Chrysler engineers would have survived the subject collision without damage and fuel leakage and hence, no burn injury to the driver Kayla White and her child. [**Id at 21-22.**]

Moreover, Mr. Arndt at the time of his deposition produced his entire file which was used to formulate his opinions. That file included all of the material identified above in sections II - VI. Plaintiffs can produce a complete copy of Mr. Arndt's flashdrive for review if necessary. However, the flashdrive contains 16.6 GB of data, which Plaintiffs recognize would be incredibly burdensome on the record.

LEGAL STANDARD

Rule 702 of the Federal Rules of Evidence states:

“[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.

Rule 702(a)'s focus on scientific knowledge dictates that the expert's testimony must be the product of the scientific method such that the evidence being admitted is reliable. Several factors may be considered in making this assessment, including:

- (1) whether the theory or technique in question can be and has been tested;
- (2) whether it has been subjected to peer review and publication;
- (3) its known or potential error rate;

- (4) the existence and maintenance of standards controlling its operation; and
- (5) whether it has attracted widespread acceptance within a relevant scientific community.

See Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993).

ANALYSIS

Defendant asks that Arndt's following opinion be excluded:

13. A properly located and protected midship fuel tank location for the Jeep Liberty as recognized by FCA/Chrysler engineers would have survived the subject collision without damage and fuel leakage and hence, no burn injury to the driver Kayla White and her child. [Exhibit 1 at p. 21-22.]

Contrary, to Defendant's assertion, Arndt is not solely relying on his *ipse dixit* or asking the Court to take his word for it. Instead, as is identified above, there is a substantial amount of evidence to support Arndt's opinion that such a design was a practical and technically feasible alternative production practice, all of which was relied upon by Mr. Arndt in coming to his opinion, including, but not limited to:

- Chrysler's internal memorandum from 1978 (a quarter of a century prior to Kayla White's Jeep Liberty) identifying the midship fuel tank location as superior in safety. **See Exhibit 4, Baker Memo.**
- Since at least 1985 Chrysler has advertised the benefits of placing fuel tanks in the midship location and has done so for all of its vehicles as of 2003 except for the Jeep lineup. **See Exhibit 6, 1985 Dodge Engineering.**
- As early as 1990 NHTSA published a study showing that the federal rear impact safety standard (FMVSS 301) had no impact in reducing the rate of fires. **See Exhibit 19, NHTSA 1990 Study re FMVSS 301.**

- As early as 1993 (nearly ten years prior to the manufacture of the Jeep Liberty operated by Kayla White) Jeep vehicles were being designed with a mid-ship mounted fuel tank. **See Exhibit 7, Dep of R. Bruni at p. 27-28.**
- In 2001 the fuel tank for the upcoming MY 2005 Jeep Grand Cherokee (WK) was moved from the aft-of-axle location to midship, along with protection. This design change took only three to four weeks to accomplish. **See Exhibit 8 at p. 63-70.** This midship placed fuel tank Jeep was offered for sale beginning in 2004.
- The Jeep Liberty (KJ) successor model, the Jeep Liberty (KK) was designed and manufactured with a midship fuel tank beginning in 2007.
- 1995 Ford Explorer crash test conducted by the National Crash Analysis Center showing that a midship fuel tank struck at 70 mph by a 2003 Ford Taurus with underride will survive and not leak fuel. **See Exhibit 3.**
- Plaintiffs' crash test showing that a properly protected fuel tank, without any other design alterations to the Jeep Liberty (KJ), will protect even an aft-of-axle fuel tank from failure at collision speeds in excess of those present on November 11, 2014. **See Exhibit 2 - Report of P. Sheridan.**
- NHTSA itself recognized the safety associated with the midship fuel tank location and specifically criticized FCA for its failure to design the Jeep vehicles with midship fuel tank locations in requesting that FCA recall the Jeep Liberty (KJ) due to a safety defect associated with the design and location of the fuel tank. **See Exhibit 18 - NHTSA Request for Recall 6-3-13.**

Given the significant amount of evidence to support his expert opinion regarding the alternative design for the 2003 Jeep Liberty (KJ) fuel tank location and placement, along with Mr. Arndt's experience, training, and education, the opinions regarding the alternative design are admissible pursuant to Fed. R. Evid. 702 and *Daubert*.

It is admitted that the appropriate statute is MCL 600.2946(2) which provides in pertinent part:

(2) ... a practical and technically feasible alternative production practice was available that would have prevented the harm without significantly impairing the usefulness or desirability of the product to users and without creating equal or greater risk of harm to others. An alternative production practice is practical and feasible only if the technical, medical, or scientific knowledge relating to production of the product, at the time the specific unit of the product left the control of the manufacturer or seller, was developed, available, and capable of use in the production of the product and was economically feasible for use by the manufacturer. Technical, medical, or scientific knowledge is not economically feasible for use by the manufacturer if use of that knowledge in production of the product would significantly compromise the product's usefulness or desirability.

Here, Arndt has so identified an alternative production practice. One that has been known and used as a safer design since the 1970s, was incorporated in a significant amount of Chrysler offerings by the mid-1980s, was used by the majority of Chrysler's competitor SUVs in the 1990s, was attempted by Chrysler in the early 1990s, was used as the design for the Jeep Grand Cherokee (WK) as of 2001, and was the design of the Jeep Liberty (KK) as of 2007. Nevertheless, despite this overwhelming body of evidence, FCA argues that Mr. Arndt lacks sufficient facts and/or data to opine that a midship protected fuel tank was a feasible design.

FCA relies first on the case of *Gawenda v. Werner Co.*, 932 F. Supp. 183 (1997). In *Gawenda*, a ladder's rear rails were twisted and bent resulting in the plaintiff falling off an aluminum ladder. *Gawenda*, 932 F. Supp. at 185-186. The

plaintiff brought a product liability claim under the theories of negligence and breach of implied warranty. *Id.* at 186. In making his claim, the plaintiff had an expert testify that the ladder was negligently designed, as the rails were not rigid enough to support the plaintiff's 210 pounds. *Id.* However, the expert witness's testimony alone was not deemed to be enough and the defendant received summary judgement. *Id.* at 189. The court stated the many failures of plaintiff's expert as follows:

Plaintiff's expert opines that the rear rails should have been designed to meet standards set forth in the Aluminum Association Specifications Manual. He renders this opinion despite his admissions that: (1) these standards apply to aluminum used in bridges and buildings but have not been applied to stepladders; (2) stepladders are evaluated under ANSI and Underwriters Laboratory standards and Defendant's stepladder was approved under both those standards; (3) it is necessary to know the type or grade of aluminum used in a product to correctly apply the Aluminum Association standards he advocates, yet he did not know the type of aluminum used in Defendant's stepladder (Dep. at 91-92, 128); (4) he had not developed an alternative design of the stepladder using these Aluminum Association standards and had done no testing to determine the feasibility of any alternative design using the Aluminum Association Specifications Manual (Dep at 166).

Moreover, Plaintiff's expert could not identify a single ladder manufacturer that used the Aluminum Association standards he advocated, or one that had an aluminum stepladder with more rigid rear rails than that manufactured by Defendant Werner (Dep at 137). Accordingly, he was unable to present evidence that he had tested other stepladder designs to ascertain whether they provided safer, feasible, alternatives to Defendant's allegedly defective design. [*Id.* at p. 11-12]

Given these many deficits, the court determined that the plaintiff failed to submit sufficient evidence for a reasonable jury to show that there was a safer alternative ladder design at the time the product was manufactured. That is not the case here.

The feasible alternative design identified by Mr. Arndt, i.e. a protected midship fuel tank is well-established in the following ways: (1) is the same design identified by the NHTSA in asking for the recall of the Jeep Liberty (KJ); (2) is consistent with the results from Plaintiffs' crash test using the FTEP; (3) is consistent with the industry standard at the time of the manufacture of the 2003 Jeep Liberty (KJ) whereby the Jeep Liberty (KJ) was an outlier in that it did not have a midship fuel tank; (4) is consistent with the fact that Chrysler itself was able to move the fuel tank for Jeeps to the midship location in at least 1993, but reversed course in 1997 due to attempts to accommodate aggressive off-road usage; (5) is consistent with the fact that Chrysler moved the fuel tank for Jeeps to the midship location in 2001 for the Jeep Grand Cherokee (WK); (6) is consistent with other Chrysler offerings such as those advertised by Dodge no later than 1985 promoting the safety aspects associated with a midship placed fuel tank; (7) is consistent with the midship placed fuel tank for the Jeep Liberty (KK) beginning in 2007; and, (8) is consistent with vehicle-to-vehicle crash testing of a midship placed fuel tank struck at 70 mph wherein the fuel tank survived without fuel

leakage. Consequently, the evidence is overwhelming that a protected midship fuel tank is a feasible alternative design.

Similarly, Defendant relies on the unpublished opinion of *Valente v. Oak Leaf Outdoors, Inc.*, 2015 U.S. Dist. LEXIS 95820 (E.D. Mich. July 23, 2015). In *Valente*, the plaintiff used the defendant's climbing sticks to access a hunting tree stand he was going to hunt from when his ring got caught on a step and was ripped off. *Id.* at 5. The plaintiff's expert offered an alternative design wherein the tread was ground off, slip-resistant coating adhered, and the plaintiff was able to show that designs with flat surfaces and no corners exist. *Id.* at 20-21. The court agreed that the plaintiff had at least met its burden of showing that there was a reasonable alternative design. *Id.* at 21. However, the court found that the plaintiff failed to set forth sufficient evidence that the design was practicable and that it would have reduced the risk of harm. *Id.* at 23, 25. The expert admitted that no one on the market tested the alternative design, he could not identify any other climbing stick in the industry that used such a design (*Id.* at 23), and even using the alternative design the plaintiff was still able to catch a ring on the end of the step. *Id.* at 26.

Defendant uses *Valente* to argue that Mr. Arndt was required to show that the fuel tank for the Jeep Liberty (KJ) must have been able to be moved to the midship location in the existing KJ Liberty platform while maintaining the same fuel capacity and that this failure is determinative. This is not so. As is noted

above, the midship placed fuel tank, along with protection, is a feasible alternative design. It is a design that was used in the vast majority of SUVs being manufactured in 2003, while the Jeep vehicles were outliers, as was identified by NHTSA unlike in *Valente*. Indeed, of the one hundred and twenty-six (126) vehicles identified by Defendant FCA's expert Paul Taylor as having been manufactured for model year 2003 only nine (9) vehicles were manufactured with aft-of-axle fuel tanks. **See Exhibit 20 - Midship v Aft Axle Spreadsheet.** Of the nine (9) vehicles manufactured in 2003 with aft-of-axle fuel tanks, three (3) were Jeep vehicles (Jeep Liberty, Jeep Grand Cherokee and Jeep Wrangler), i.e. 1/3rd of the total population of aft-axle fuel tank vehicles were Jeeps. Moreover, in 2003 the Jeep vehicles were the only Chrysler offerings with aft-of-axle fuel tanks, all others were midship. Consequently, it is absurd to argue that somehow 117 other vehicles of the same model year were able to package their fuel tanks in the midship location, including all other vehicles offered by Chrysler, with adequate fuel tank capacities, but Jeep was not. Indeed, as was identified by FCA engineer Thomas Cowing, it only took his team three to four weeks in 2001 to successfully move the fuel tank for the Jeep Grand Cherokee (WK) from the aft-axle location to the midship location along with guarding of the tank, while only reducing the fuel tank capacity by two gallons. **See Exhibit 8 at p. 70.** Moreover, the Jeep Grand

Cherokee (WK) fuel tank was not only placed midship but also protected by a skid plate, the very same feasible alternative design identified by Mr. Arndt.

Defendants also cite to the unpublished opinion in *Barnes v. Medtronic, PLC*, 2019 U.S. Dist. LEXIS 50193 (E.D. Mich. 2019) for the proposition that failing to provide an alternative design and instead proposing “alternative products” is insufficient, where the plaintiff’s expert opined that all polyester hernia meshes are unacceptable and was unable to identify any different design of the mesh implant in question. Instead plaintiff’s expert recommended a surgical procedure to correct the problem, biological mesh or a polypropylene mesh. Moreover, it should be noted at the outset that if the Court were to accept the Defendant’s requested interpretation of alternative design, then almost all product liability cases would be barred.

However the product liability statute controls here and states only:

...An alternative production practice is practical and feasible only if the technical, medical, or scientific knowledge relating to production of the product, at the time the specific unit of the product left the control of the manufacturer or seller, was developed, available, and capable of use in the production of the product and was economically feasible for use by the manufacturer. [MCL 600.2946(2)]

Thus, the statute does NOT limit a Plaintiff to the design choices made by the product manufacturer. Rather, a Plaintiff may rely on any technical knowledge available at the time the product left the control of the manufacturer, as long as it was economically feasible. Inasmuch as Cowing and the other FCA employees,

were able to develop a feasible protected mid-ship fuel tank with greater fuel tank capacity than the KJ Liberty, in 2001, this fact alone is sufficient data to rely on, let alone the fact that Ford was able to do it with the Explorer in the mid-1990s, while Defendant continues to harp on the notion that aggressive off-roading was an essential part of its design, the actual evidence to support his notion is lacking, and what Defendant has cited is wholly subjective and without objective support. The fact of the matter is ANY vehicle can become “stuck” off road, and any off-road user has ultimate control whether they wish to risk getting stuck or should simply take another route. In short, the flimsiness of this unsupported position is readily apparent.

Notably, as is identified in the *Barnes* case, Michigan Courts has not addressed when a proposed alternative is a different product rather than a feasible alternative production practice. As an example, while Plaintiffs would concede that if the alternative design was that Jeep should have designed a helicopter, as opposed to simply locating the fuel tank in the midship location along with protection, then it would be a wholly new product. But where here, the changes identified by Plaintiffs could have been accomplished in three to four weeks, as was testified to by Defendant’s own employee, there can be no contest that Plaintiffs have identified an alternative design, NOT an alternative product.

CONCLUSION

For the foregoing reasons, Plaintiffs SUSAN WHITE, Personal Representative for the Estate of KAYLA WHITE, deceased, and CODY CAMPBELL, Personal Representative of the Estate of BRAEDIN CAMPBELL, deceased, respectfully request that this Court deny Defendant FCA US LLC's motion to exclude testimony of Frederick Arndt regarding alternative design in its entirety.

RESPECTFULLY SUBMITTED,

LAW OFFICES OF COURTNEY MORGAN PLLC

BY: /s/ Courtney E. Morgan. Jr.
Courtney E. Morgan. (P29137)
Brian T. Keck (P77668)
Attorneys for Plaintiffs
3200 Greenfield, Suite 355
Dearborn, MI 48120-1802
(313) 395-2568
cmorgan@courtneymorganlaw.com
bkeck@courtneymorganlaw.com

DATED: July 29, 2019

APPENDIX TO BRIEF

Exhibit 1 – Arndt Report

Exhibit 2 – Report of P. Sheridan

Exhibit 3 – Report re Explorer 70 Mph Test

Exhibit 4 – Baker Memo

Exhibit 5 – Chrysler Fuel System Guidelines

Exhibit 6 – 1985 Dodge Engineering

Exhibit 7 – Dep of R. Bruni

Exhibit 8 – Dep of T. Cowing

Exhibit 9 – KK Midship Fuel Tank

Exhibit 10 – Expert Report of J. Ridenour

Exhibit 11 – Photograph of Jeep Liberty (KJ) with plastic non-structural fascia removed- Fuel tank painted yellow

Exhibit 12 – J. Olson Report

Exhibit 13 – Deposition of J. Estes

Exhibit 14 – Depiction of point of underride impact between Cadillac and Jeep Liberty (KJ) – Fuel tank in green

Exhibit 15 – Point of Maximum engagement between Cadillac and Jeep Liberty (KJ)

Exhibit 16 – Dep of D. Bernier

Exhibit 17 – Dep of J. Olson

Exhibit 18 – NHTSA ltr dated 6-3-13

Exhibit 19 – NHTSA 1990 Study re FMVSS 301

Exhibit 20 – Midship v Aft Axle

CERTIFICATE OF SERVICE

I hereby certify that on July 29, 2019, I electronically filed the foregoing paper with the Clerk of the Court using the ECF system which will send electronic notification of said filing to:

James P. Feeney (P13335)
Clay A. Guise (P59055)
DYKEMA GOSSETT PLLC
Attorneys for Defendant FCA US, LLC
jfeeney@dykema.com
cguise@dykema.com

Bryce A. Rucker (P79455)
DYKEMA GOSSETT PLLC
Attorneys for Defendant FCA US, LLC
brucker@dykema.com

Perry W. Miles IV (Va. Bar 43031)
Derek H. Swanson (Va. Bar 73463)
McGUIRE WOODS LLP
Attorneys for Defendant FCA US, LLC
pmiles@mcguirewoods.com
dswanson@mcguirewoods.com

John L. Weston (P55042)
SECRET WARDLE
Attorney for Defendant Heath
jweston@secrestwardle.com

Gerald E. Thurswell (P21448)
THE THURSWELL LAW FIRM
PLLC
Attorney for Plaintiffs
jthurswell@thurswell.com

I further certify that I have mailed by U.S. mail the paper to the following non-ECF participants: None

RESPECTFULLY SUBMITTED,

LAW OFFICES OF COURTNEY MORGAN PLLC

BY: /s/ Courtney E. Morgan, Jr.
Courtney E. Morgan. (P29137)
Brian T. Keck (P77668)
Attorneys for Plaintiffs
3200 Greenfield, Suite 355

Dearborn, MI 48120-1802
(313) 395-2568
cmorgan@courtneymorganlaw.com
bbeck@courtneymorganlaw.com

DATED: July 29, 2019