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SUPERIOR COURT OF NEW JERSEY
LAW DIVISION - MORRIS COUNTY
DOCKET NUMBER MRS-L-3575-08

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THOMAS KLINE, as	:	
Administrator Ad	:	
Prosequendum of the	:	DEPOSITION UPON
heirs at law of	:	ORAL EXAMINATION
SUSAN MORRIS KLINE,	:	OF
(deceased), as	:	
Administrator of the	:	NEIL HANNEMANN
Estate of SUSAN	:	
MORRIS KLINE, and	:	
THOMAS KLINE,	:	
individually,	:	
	:	
Plaintiffs,	:	
	:	
v.	:	
	:	
VICTORIA	:	
MORGAN-ALCALA,	:	
CARLOS ALCALA,	:	
NATALIE RAWLS,	:	
DAIMLER CHRYSLER	:	
CORPORATION a/k/a	:	
CHRYSLER	:	
CORPORATION, LOMAN	:	
AUTO GROUP, BUTLER	:	
CHRYSLER JEEP, INC.,	:	
JOHN DOES A through	:	
Z, (names being	:	
fictitious), ABC	:	
CORPORATIONS, 1	:	
through 100, (names	:	
being fictitious),	:	
	:	
Defendants.	:	
-----	:	

COPY

2

1 TRANSCRIPT of the deposition of
 2 NEIL HANNEMANN, taken by and before REGINA A.
 3 CRITCHLEY, a Certified Court Reporter and
 4 Notary Public of the State of New Jersey, at
 5 the offices of GRIECO, OATES & DeFILIPPO, LLC,
 6 414 Eagle Rock Avenue, West Orange, New Jersey,
 7 on Friday, June 29, 2012, commencing at 10:15
 8 a.m.
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 20 Personal Attorney of Kline
 21 Robert Banta
 22
 23
 24
 25

5

1 NEIL HANNEMANN,
 2 With offices at 1496 Brandon Road, Santa
 3 Ynez, California, 93460, having been
 4 first duly sworn, testified as follows:
 5 DIRECT-EXAMINATION
 6 BY MR. STOCKWELL:
 7 Q Good morning, Mr. Hannemann. My
 8 name is Matthew Stockwell. I'm an attorney and
 9 I represent Loman Auto Group. I'm here for
 10 your deposition today. Just a couple of
 11 instructions.
 12 If you don't understand a question
 13 that I ask you, just tell me you don't so that
 14 I can rephrase it or ask it again. The reason
 15 for that is if you answer a question here
 16 today, everybody here is going to assume that
 17 you understood it, you heard it, and you
 18 answered it to the best of your ability.
 19 Try not to talk over me and I'll
 20 try not to talk over you, so we make it easy
 21 for the court reporter. And that's it.
 22 Even though we're in an informal
 23 setting, it's counsel's office, the testimony
 24 you give here today will have the same force
 25 and effect as if we were in court before a

6

1 judge and jury.
 2 Do you understand those
 3 instructions?
 4 A Yes, I do.
 5 Q When was the last time you gave a
 6 deposition?
 7 A A deposition? A few months ago.
 8 Let's say -- I'll just get out my list here.
 9 Q Oh, you do have a list with you?
 10 A Yeah, I do have a list.
 11 Q Okay. Great.
 12 A I'll just -- last deposition was
 13 January 25th --
 14 Q Okay.
 15 A -- of this year.
 16 Q Is that a list of --
 17 MS. DeFILIPPO: Before you give it
 18 to him, can I see what...
 19 MR. STOCKWELL: All right. We'll
 20 mark this as -- just mark this as D-1. If I
 21 type out your last name, it's going to make it
 22 harder for her the whole day.
 23 (Exhibit D-1, List of
 24 Trial/Deposition Testimony, is marked for
 25 identification.)

7

1 Q And Mr. Hannemann, what we've
 2 marked as Exhibit D-1 is what you've just
 3 provided to me, which appears to be a list of
 4 deposition or trial testimony that you've given
 5 in the last four years.
 6 A That's correct.
 7 Q Okay. Do you keep copies of the
 8 transcripts for these testimonies?
 9 A Not --
 10 MS. DeFILIPPO: Transcript -- wait
 11 a minute. Are you talking about transcripts of
 12 the trials? Because on that list are trials.
 13 MR. STOCKWELL: Yeah.
 14 Q No. I mean transcripts of your
 15 trial testimony or your deposition testimony.
 16 A I don't think I've ever gotten a
 17 trial transcript.
 18 Q Okay.
 19 A Even when I've asked about it,
 20 it's -- sometimes it's not even requested by
 21 the attorneys. So I don't think I have any
 22 trial transcripts.
 23 And the depositions, I have some
 24 electronically. I may have all of them, but I
 25 don't keep them as a matter of course.

8

1 Q Okay. As a general statement, is
 2 it improper to locate a fuel tank behind the
 3 rear axle in a passenger vehicle?
 4 A As a general statement, no.
 5 Q Okay. I don't see any Chrysler
 6 cases on this list. Have you been involved in
 7 any Chrysler litigation cases at all in your
 8 career?
 9 A Yes, there are Chrysler cases on
 10 that list.
 11 Q Oh, there are? Oh, DCC?
 12 A Yes.
 13 Q All right. Dick vs. DCC. Do you
 14 know what vehicle was involved in that case?
 15 A That was a minivan. And there's a
 16 Winn vs. -- well, Chrysler or maybe DCCA.
 17 Q It says "Magna."
 18 A Oh. That's correct. That case
 19 became Magna as a supplier. Originally,
 20 Chrysler was involved early on in that case.
 21 Q Okay. Is that a vehicle case?
 22 A Yes, it was.
 23 Q What was the vehicle involved?
 24 A That was a Chrysler Sebring.
 25 Q Okay. And what was the allegation

9

1 in that case?
 2 A It was a post-collision fuel-fed
 3 fire, rear-end collision.
 4 Q And you testified for the plaintiff
 5 in that case?
 6 A Yes, I did.
 7 Q And what was the sum and substance
 8 of your opinion as to the Chrysler Sebring?
 9 A My opinion in that case was the --
 10 that particular Sebring had been supplied with
 11 a steel fuel tank, and that was a kind of a
 12 change in direction for Chrysler. Chrysler,
 13 for years, had been the leader in plastic tanks
 14 and had many, many plastic tanks in their
 15 vehicles.
 16 But in this particular situation,
 17 they used a steel tank. And it was -- my basic
 18 allegation was that the steel tank was
 19 basically a copy of the plastic tank, and that
 20 was a defective design because it just -- you
 21 can't necessarily go plastic to steel and copy
 22 a design; although, you could go steel to
 23 plastic. So that was the basic allegation.
 24 Q Okay. Was it the design of the
 25 tank that you asserted an opinion or the

10	<p>1 material or both?</p> <p>2 A I would say the design, and design</p> <p>3 of a tank includes material selection.</p> <p>4 Q Sure. Where in the vehicle was</p> <p>5 that tank located?</p> <p>6 A That tank was forward of the rear</p> <p>7 axle.</p> <p>8 Q Okay. Did you issue a report in</p> <p>9 that case?</p> <p>10 A Yes, I did.</p> <p>11 Q And you gave a deposition, I see,</p> <p>12 on January 25th of 2012?</p> <p>13 A That's correct.</p> <p>14 Q Okay. Is that case still going on?</p> <p>15 A That case has settled.</p> <p>16 Q Okay. And I see the attorney is</p> <p>17 Ben Hogan?</p> <p>18 A Yes, it is.</p> <p>19 Q That's the plaintiff's attorney?</p> <p>20 A That's correct.</p> <p>21 Q Do you know who represented</p> <p>22 Chrysler in that case; if you remember?</p> <p>23 A Yeah, not right offhand, I don't.</p> <p>24 Q Okay. What was the allegation in</p> <p>25 the Dick vs. Daimler Chrysler case?</p>	12
11	<p>1 A That was a power steering fire.</p> <p>2 Under the hood, engine compartment.</p> <p>3 Q What was the sum and substance of</p> <p>4 your opinion in that case?</p> <p>5 A My opinion was power steering line</p> <p>6 failed, causing a power steering leak, which</p> <p>7 then resulted in a fire.</p> <p>8 Q Okay. All right. We may come back</p> <p>9 to this a little later.</p> <p>10 In any of these cases on this list,</p> <p>11 did you ever represent the vehicle</p> <p>12 manufacturer?</p> <p>13 A On that list, no.</p> <p>14 Q All right. Have you ever</p> <p>15 represented a vehicle manufacturer in</p> <p>16 litigation?</p> <p>17 A No, I have -- not in product</p> <p>18 liability litigation, no.</p> <p>19 Q All right. In any sort of -- any</p> <p>20 form of litigation, have you represented a</p> <p>21 manufacturer?</p> <p>22 A If you consider Lockheed a</p> <p>23 manufacturer, I've -- I was defending them in a</p> <p>24 government bid protest, but it's completely</p> <p>25 different than product liability.</p>	13
10	<p>1 Q Sure.</p> <p>2 MR. GILL: Can I object to form?</p> <p>3 When you say "represent," you mean appear as an</p> <p>4 expert on behalf of? As opposed to --</p> <p>5 MR. STOCKWELL: Thank you for that,</p> <p>6 Jim.</p> <p>7 Q If I changed those questions to</p> <p>8 "appeared as an expert in," would your answers</p> <p>9 still be the same?</p> <p>10 A I actually didn't appear in the</p> <p>11 Lockheed case.</p> <p>12 Q Okay.</p> <p>13 A So I guess maybe technically I</p> <p>14 wouldn't say that would be accurate.</p> <p>15 Q Let me ask you a new question.</p> <p>16 Throughout your career, have you</p> <p>17 ever been offered as an expert witness on</p> <p>18 behalf of a manufacturer?</p> <p>19 A No. Well, let me -- let me take</p> <p>20 that back. When I worked for a manufacturer, I</p> <p>21 was, I guess, a PMK on one Viper case. So as a</p> <p>22 manufacturer's employee, I was.</p> <p>23 Q Okay. I see you received your</p> <p>24 bachelor's degree from General Motors</p> <p>25 Institute?</p>	11
11	<p>1 A That's correct.</p> <p>2 Q What is the automotive option</p> <p>3 curriculum?</p> <p>4 A The curriculum at GMI at the time,</p> <p>5 under their mechanical engineering curriculum,</p> <p>6 they had six options, so specialities, and</p> <p>7 automotive was one of those.</p> <p>8 Q Okay. Do you know what other</p> <p>9 curriculum options there were?</p> <p>10 A I believe it was -- they had a --</p> <p>11 one with electrical focus, one with a materials</p> <p>12 focus, process, manufacturing. That's not six,</p> <p>13 but I -- I'm not going to recall them all.</p> <p>14 It's a long time ago.</p> <p>15 Q That's okay. We won't hold you to</p> <p>16 it.</p> <p>17 MS. DeFILIPPO: Could you read back</p> <p>18 that answer?</p> <p>19 (Answer read.)</p> <p>20 Q All right. Let me ask you this: I</p> <p>21 have a CV that was contained within your</p> <p>22 August 3rd, 2011, report. Has that CV changed</p> <p>23 at all? Is that the most recent CV? I mean, I</p> <p>24 can let you look at it, too.</p> <p>25 A Yeah. Does it start with "FACT"?</p>	10

14	<p>1 Q Yes.</p> <p>2 A Yes, that's -- that hasn't changed.</p> <p>3 Q Okay. And I see that you worked</p> <p>4 for Chrysler starting in 1982?</p> <p>5 A That's correct.</p> <p>6 Q Can you tell me a little bit about</p> <p>7 what you did at Chrysler starting in 1982?</p> <p>8 A When I started at Chrysler, I was</p> <p>9 at a small facility in California called the</p> <p>10 Chrysler Shelby Performance Center. And we did</p> <p>11 a lot of what I would call feasibility studies,</p> <p>12 various projects that were power train, chassis</p> <p>13 drive train-related.</p> <p>14 Then that moved into what I would</p> <p>15 call niche vehicle manufacturing, where we took</p> <p>16 Chrysler vehicles, disassembled them, modified</p> <p>17 them, reassembled them, and sold them as</p> <p>18 Shelby-branded vehicles. And that was the main</p> <p>19 thrust of that. That led up to about 1989.</p> <p>20 Want me to just keep going through</p> <p>21 some of the history or do you want to --</p> <p>22 Q Yeah. If you wouldn't mind, that</p> <p>23 would be great.</p> <p>24 A The -- in '89 I went -- moved back</p> <p>25 to Detroit and worked on the Viper team in the</p>	16
15	<p>1 Detroit area through about '94. And after, in</p> <p>2 '94, I took on the responsibility to run</p> <p>3 Chrysler's racing program for Vipers, which was</p> <p>4 international road racing with a focus on</p> <p>5 Le Mans. I did that through '97.</p> <p>6 And the next couple of years I was</p> <p>7 in vehicle development for the small car</p> <p>8 platform.</p> <p>9 And then I was in chassis design</p> <p>10 and also did some advanced vehicle design with</p> <p>11 small car platforms.</p> <p>12 Then I moved into the aero-thermal</p> <p>13 lab and was a supervisor there for some period</p> <p>14 of time, a year or two. Concurrently with</p> <p>15 that, I was also program managing some of the</p> <p>16 Dodge NASCAR efforts.</p> <p>17 And then I ended up leaving</p> <p>18 Chrysler in about '99, I think.</p> <p>19 Q All right. So from approximately</p> <p>20 1982 to 1999, it was continuous employment at</p> <p>21 Chrysler?</p> <p>22 A Yes, it was.</p> <p>23 Q Okay. And then after that, where</p> <p>24 did you go?</p> <p>25 A Then I went to a small company back</p>	17
	<p>1 in California called Saleen, S-a-l-e-e-n.</p> <p>2 Q What did you do at Saleen?</p> <p>3 A I was originally the chief engineer</p> <p>4 at Saleen and later became the vice-president</p> <p>5 of engineering.</p> <p>6 Q What kind of vehicles did you work</p> <p>7 on at Saleen?</p> <p>8 A Saleen was in -- their main</p> <p>9 business was modifying Mustangs and reselling</p> <p>10 them as Saleen vehicles. Very similar to the</p> <p>11 Shelby-type work from the '80s that I did for</p> <p>12 Chrysler.</p> <p>13 And Saleen also had a ground up</p> <p>14 vehicle that they were designing and</p> <p>15 manufacturing. It was called the Saleen S7,</p> <p>16 which wasn't based on any type of vehicle, but</p> <p>17 it was a complete ground up design.</p> <p>18 Q Okay. All right. How long did you</p> <p>19 stay at Saleen?</p> <p>20 A I was at Saleen for two years,</p> <p>21 approximately.</p> <p>22 Q Okay. Did you have the same title</p> <p>23 at Chrysler from 1982 to 1999, or did it</p> <p>24 change?</p> <p>25 A It changed a few times.</p>	

18	<p>1 MR. STOCKWELL: His time at 2 Chrysler, '82 to '89. 3 A In the '82 to '89 time frame, no, I 4 really didn't have anybody reporting to me. 5 Q Okay. From 1982 to 1989, in your 6 work as a product development engineer, did 7 that in any way involve fuel systems? 8 A At that time, I would say the fuel 9 system work was more peripheral. If we 10 designed -- for example, we designed a 16-valve 11 cylinder head, so the installation of that 12 cylinder head required changes to the fuel 13 system. So I would have done the design work 14 for those fuel system changes. And I would -- 15 and those were more on a prototype basis, not a 16 production design. 17 Q Okay. And then from 1989 to 2000, 18 it says, "NASCAR Winston Cup program manager" 19 and then "Viper GTS-R program manager." 20 Did you have any other titles -- 21 oh, wait. There were a lot of titles during 22 that time. 23 MS. DeFILIPPO: A copy of his 24 report -- 25 MR. STOCKWELL: Okay.</p>	20
19	<p>1 MS. DeFILIPPO: -- of his CV. 2 MR. STOCKWELL: Okay. Good. 3 MS. DeFILIPPO: He's been answering 4 these questions without having the copy in 5 front of him. 6 THE WITNESS: You know what? I've 7 got it pretty well memorized. 8 MS. DeFILIPPO: You did pretty -- 9 yeah. 10 THE WITNESS: Yeah. I've -- 11 MR. STOCKWELL: Is that the one 12 that I'm looking at, the one with "FACT" on it? 13 MS. DeFILIPPO: Yeah. It's the 14 only one that we have. 15 MR. STOCKWELL: That's a different 16 one. 17 THE WITNESS: This one is a 18 slightly earlier one, but I don't think any of 19 the basic content changed. 20 MS. DeFILIPPO: Then I don't have 21 it, either. 22 MR. STOCKWELL: It was an exhibit 23 to your August 12th, 2011, letter. 24 MS. DeFILIPPO: August 12th? 25 MR. STOCKWELL: Yeah, the</p>	21
	<p>1 supplemental report had a CV. 2 MS. DeFILIPPO: Okay. But -- I 3 think it's the same thing. 4 MR. STOCKWELL: It might be. It's 5 fine. 6 MS. DeFILIPPO: Yeah. I think it's 7 the same one. It just happened to come with 8 the report. 9 MR. STOCKWELL: Right. 10 BY MR. STOCKWELL: 11 Q All right. So from 1989 to 2000, 12 it looks like you still had a title of product 13 development engineer -- 14 A That's correct. 15 Q -- on the Viper platform? 16 A Yes. 17 Q Who did you work for during that 18 phase? 19 A It could have been -- two people. 20 One was Pete Gladysz, G-l-a-d-y-s-z. You would 21 have never got that. And Herb Helbige, 22 H-e-l-b-i-g-e. 23 Q Okay. Was anybody reporting to you 24 during that time? 25 A At that time I was still pretty</p>	

22	<p>1 fuel system and so the testing was mostly 2 in gathering data on the different performance 3 levels of the two types of fuel systems. 4 Q Okay. At Saleen, from October, 5 2000, to January, 2002, who did you report to? 6 A I reported initially to Don 7 Cuzzerea, C-u-z-z-e-r-e-a, I think. 8 Q The whole time or just part of the 9 time? 10 A No. Probably maybe the first year, 11 and then I was reporting directly to Steve 12 Saleen. 13 Q Anybody reporting to you during 14 that time frame? 15 A Yes. There were a few people 16 reporting to me at that time. 17 Q Was there anybody that you can 18 recall as you sit here today? 19 A It would have been John, John 20 Spruill, S-p-r-u-i-l-l, and Rob Simon, 21 S-i-m-o-n. 22 Q Did you work on the fuel system at 23 Saleen? 24 A Part of my responsibility was the 25 overall design of the fuel system for the</p>	24	<p>1 frame rail, the Mustang? 2 A Not -- it is currently, and I don't 3 know when they made that transition. I know 4 up until 2004 it was not. So at some point, 5 2005 or later, but I really couldn't put a 6 specific date to that. 7 Q Okay. So I see after Saleen you 8 went to Ford Motor Company, January, 2002, to 9 February, 2004? 10 A That's correct. 11 Q And you were a chief engineer? 12 A Yes. 13 Q And I see the description here, but 14 can you explain to me what you did as a chief 15 engineer at Ford during that time frame? 16 A Well, basically I was responsible 17 for the new Ford GT. And that included, you 18 know, vehicle concept, budget, timing, putting 19 together the team, the concept of how the 20 development program would work. Really all -- 21 all aspects, both technical and program. 22 Q Who did you report to at Ford Motor 23 Company as chief engineer? 24 A I was reporting to John Coletti, 25 who was the -- I believe his title was director</p>
23	<p>1 Saleen S7. And we -- and then -- peripheral 2 work with the fuel system on the Mustang-based 3 vehicles, which was really limited to some 4 rerouting of fuel lines in the engine 5 compartment based on some changes we made. 6 Q Okay. How were the fuel lines 7 rerouted? 8 A Part of the modifications that we 9 made to these cars were they add super 10 chargers, and that required a little different 11 routing of the fuel hoses. 12 And we actually created one issue 13 where we had the factory fuel hose, we ended up 14 relocating the EGR valve, and it ended up too 15 close to the factory fuel hose, so we had to 16 reroute it to avoid a temperature issue. 17 Q In the time frame that you were at 18 Saleen, October, 2000, and January, 2002, did 19 the Mustang have the fuel filler hose routed 20 through the frame rail or somewhere else? 21 A It was not routed through the frame 22 rail -- 23 Q Okay. 24 A -- at that time. 25 Q Was it ever routed through the</p>	25	<p>1 of special vehicle teams, SV team. 2 Q Okay. Did you know who he reported 3 to at Ford? 4 A He reported to -- it did change in 5 the time we were there. It was -- some other 6 good names. Zevelkink. I think his first name 7 was Mike. I could be wrong. 8 Q Okay. Zevelkink. If I try and 9 spell that, I would say Z-e-v-e-l-k-i-n-k? Is 10 that roughly accurate? 11 A You know -- you know that may be 12 accurate. 13 Q All right. What was his title? 14 A I probably don't really recall -- 15 Q Okay. 16 A -- his title. 17 Q And did you have anybody reporting 18 to you during that time frame at Ford? 19 A I really limited it to three direct 20 reports, but the -- this team of 140 people 21 was, you know, all reported in through those 22 three people, so... 23 Q Okay. Was there a department that 24 you worked at at Ford? 25 A We were under the umbrella of the</p>

26	<p>1 special vehicle team. SVT.</p> <p>2 Q And this was just Ford GT, or did</p> <p>3 you work on any other Ford vehicles?</p> <p>4 A Strictly Ford GT.</p> <p>5 Q Okay. And were you involved in the</p> <p>6 fuel system of the Ford GT?</p> <p>7 A Yeah. I actually architected the</p> <p>8 fuel system, came up with the concept, the</p> <p>9 general packaging. And then as the team</p> <p>10 developed, there were other engineers that took</p> <p>11 over more detailed aspects of the fuel system</p> <p>12 design.</p> <p>13 Q Okay. When you say -- and I don't</p> <p>14 want to put words into your mouth -- but</p> <p>15 architect of the fuel system?</p> <p>16 A Correct.</p> <p>17 Q What decisions did you specifically</p> <p>18 make with respect to the fuel system?</p> <p>19 A The -- well, the location of the</p> <p>20 fuel tank, the material of the fuel tank, and I</p> <p>21 had some general concepts as far as fuel pump</p> <p>22 module, returnless fuel system, and the routing</p> <p>23 of the fuel filler hose. Those things as</p> <p>24 concepts.</p> <p>25 Q What material was the tank in that</p>	28
27	<p>1 vehicle?</p> <p>2 A It was a plastic tank.</p> <p>3 Q Okay. And where was that tank</p> <p>4 located?</p> <p>5 A It was right in the center of the</p> <p>6 vehicle. So two people are sitting in the</p> <p>7 vehicle. There's a center tunnel, which is</p> <p>8 quite large, and the tank ran -- it was a long,</p> <p>9 thin tank that ran inside that tunnel. And at</p> <p>10 the front, we called it a hammerhead design</p> <p>11 because the front sort of bulged out to get the</p> <p>12 capacity that we needed.</p> <p>13 Q Okay. So would the tank be located</p> <p>14 under the driver's right elbow underneath?</p> <p>15 A Correct.</p> <p>16 Q At that time, January, 2002, to</p> <p>17 February, 2004, were there other Ford vehicles,</p> <p>18 if you know, that were manufactured with the</p> <p>19 fuel tanks located behind the rear axle?</p> <p>20 MS. DeFILIPPO: Can you read that</p> <p>21 question back? I missed it.</p> <p>22 (Question read.)</p> <p>23 MS. DeFILIPPO: Other than -- wait</p> <p>24 a minute. I object to the form.</p> <p>25 MR. STOCKWELL: What's wrong with</p>	29
	<p>1 the form?</p> <p>2 MS. DeFILIPPO: You said were there</p> <p>3 other vehicles --</p> <p>4 MR. STOCKWELL: Other Ford</p> <p>5 vehicles.</p> <p>6 MS. DeFILIPPO: -- with the fuel</p> <p>7 tank --</p> <p>8 MR. STOCKWELL: Let me --</p> <p>9 MS. DeFILIPPO: -- behind the axle?</p> <p>10 MR. STOCKWELL: Let me --</p> <p>11 MS. DeFILIPPO: We haven't</p> <p>12 discussed any vehicles.</p> <p>13 MR. STOCKWELL: Well, he's</p> <p>14 discussing the GT.</p> <p>15 MS. DeFILIPPO: Ford vehicles.</p> <p>16 MR. STOCKWELL: He's discussing the</p> <p>17 GT. But I'll --</p> <p>18 MS. DeFILIPPO: But the GT isn't --</p> <p>19 he didn't testify the GT was -- had the tank</p> <p>20 behind the axle.</p> <p>21 MR. STOCKWELL: I agree with you.</p> <p>22 Let me rephrase the --</p> <p>23 MS. DeFILIPPO: So I object to the</p> <p>24 form.</p> <p>25 MR. STOCKWELL: So let me rephrase</p>	
	<p>1 the question.</p> <p>2 BY MR. STOCKWELL:</p> <p>3 Q Were there vehicles that Ford</p> <p>4 produced during that time frame, January, 2002,</p> <p>5 to February, 2004, that had fuel tanks located</p> <p>6 behind the rear axle?</p> <p>7 A At least one that I know of.</p> <p>8 Q What is that one that you know of?</p> <p>9 A That was the Mustang.</p> <p>10 Q Okay. All right. So you left</p> <p>11 Ford, I think in February, 2004, and you went</p> <p>12 to McLaren?</p> <p>13 A Yes, I did.</p> <p>14 Q Did the Crown Victoria, from</p> <p>15 January, 2002, to February, 2004, have a tank</p> <p>16 located behind the rear axle; if you know?</p> <p>17 A I believe it did.</p> <p>18 Q Okay. So it would have been the</p> <p>19 Mustang and the Crown Victoria?</p> <p>20 A Those two. I think you asked were</p> <p>21 there some vehicles I knew of, not every</p> <p>22 vehicle that I knew of --</p> <p>23 Q Okay.</p> <p>24 A -- at Ford. And then there may</p> <p>25 have been others. I just --</p>	

30	<p>1 Q Well, that's fair.</p> <p>2 A -- the Mustang --</p> <p>3 Q If you know.</p> <p>4 McLaren, what did you do at</p> <p>5 McLaren?</p> <p>6 A My job title was executive director</p> <p>7 of engineering.</p> <p>8 Q What does that mean?</p> <p>9 A Well, I was responsible for all the</p> <p>10 engineering and technical aspects of the</p> <p>11 McLaren products, which at that time were a</p> <p>12 Mercedes-branded vehicle that was in</p> <p>13 production, and a new McLaren-branded vehicle,</p> <p>14 which has actually just this year recently</p> <p>15 reached production.</p> <p>16 Q Okay. Is that the same vehicle</p> <p>17 that you were working on while you were there?</p> <p>18 A Yes, it was.</p> <p>19 Q Were you involved in the fuel tank</p> <p>20 or the fuel system of the vehicle?</p> <p>21 A The new vehicle, which -- the name</p> <p>22 currently is the McLaren MP4-12C. I was</p> <p>23 involved in the fuel system design of that</p> <p>24 vehicle.</p> <p>25 On the Mercedes McLaren SLR, the</p>	32	<p>1 A That was a startup company that was</p> <p>2 focused on -- not -- the original design was a</p> <p>3 three-wheel vehicle. The focus was really on</p> <p>4 efficiency. And we looked at alternatives:</p> <p>5 gas, hybrid, electric, alternative fuels. But</p> <p>6 the main initial product that they're known for</p> <p>7 is an electric three-wheel vehicle.</p> <p>8 Q Okay. All right. What did you do</p> <p>9 there?</p> <p>10 A I had the job title senior</p> <p>11 vice-president of manufacturing and program</p> <p>12 management.</p> <p>13 Q What does that mean? What did you</p> <p>14 do?</p> <p>15 A Well, I did a variety of things</p> <p>16 when I was there within that job title, which</p> <p>17 ranged from being the design or lease engineer</p> <p>18 for a number of components and systems; and at</p> <p>19 one point pretty much running the company, on</p> <p>20 the other hand.</p> <p>21 So I had -- it was a small</p> <p>22 start-up, innovative company that two</p> <p>23 co-founders were really -- you know, innovative</p> <p>24 thinkers. They had actually no paradigms about</p> <p>25 how the auto companies worked. They -- they</p>
31	<p>1 vehicle was pretty much designed when I got</p> <p>2 there. And I think my only involvement was at</p> <p>3 least one quality issue, where we had a</p> <p>4 supplier issue related to the fuel tanks. We</p> <p>5 had to come to the root cause of that problem</p> <p>6 and get that corrected.</p> <p>7 Q Okay. Why did you leave McLaren in</p> <p>8 January, 2007?</p> <p>9 A I had a three-year contract that</p> <p>10 expired, and at that time it appeared the</p> <p>11 project was on hold. I was skeptical of if it</p> <p>12 would ever actually get going again. So that's</p> <p>13 why I made the decision to leave and get --</p> <p>14 ultimately, they got the program going again.</p> <p>15 So I may have regretted leaving, because it's</p> <p>16 a -- it's a pretty good car that they finally</p> <p>17 got in production after about a nine-year</p> <p>18 cycle, so...</p> <p>19 Q Okay.</p> <p>20 A It took them a long time, but Ron</p> <p>21 Dennis is a very tenacious person and he did</p> <p>22 get it done, so my hat's off to them.</p> <p>23 Q Okay. And what --</p> <p>24 (Discussion held off the record.)</p> <p>25 Q What is Terra Motors?</p>	33	<p>1 actually didn't mind me doing product</p> <p>2 litigation work, which, you know, the old-style</p> <p>3 car companies, you know, it's -- you're</p> <p>4 plaintiffs or defense, and that's that.</p> <p>5 These guys thought I was learning a</p> <p>6 tremendous amount of things by seeing cars in</p> <p>7 the real world, so they thought that was a</p> <p>8 benefit. So it was a pretty interesting</p> <p>9 wide-ranging job.</p> <p>10 Probably the only thing I</p> <p>11 absolutely did not do there was any work on a</p> <p>12 fuel system.</p> <p>13 Q Okay.</p> <p>14 A With the electric vehicles, there</p> <p>15 just was no fuel system.</p> <p>16 Q Right.</p> <p>17 A So we had a lot of different</p> <p>18 challenges to solve. I did -- I was releasing</p> <p>19 seats and seat belts and wheels and tires and,</p> <p>20 you know, just a real variety of systems.</p> <p>21 Q All right. Why did you leave</p> <p>22 Chrysler in 2000?</p> <p>23 A You know, at one point I had a list</p> <p>24 of ten reasons. I probably don't recall any of</p> <p>25 them at this point. It was a tough decision</p>

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1 after 18, 19 years at a, you know, pretty good
 2 company, but I just -- what I had decided,
 3 probably a few years before I left Chrysler,
 4 was I got tired of trying to develop what I
 5 thought were, you know, inadequate designs into
 6 good cars. I realized you can't develop bad
 7 design into good cars.
 8 So I shifted into design to try to
 9 design the systems better up-front, and was
 10 enjoying that. And, you know, using a lot of
 11 simulation technology to get good designs
 12 up-front.
 13 And then I realized really it was
 14 management that was making decisions that
 15 affected design, and so, you know, thought I
 16 needed to get more into management, and just
 17 found that difficult at Chrysler. I'd spent so
 18 much time as a technical guy.
 19 And, you know, there's kind of two
 20 career paths, you know, at Chrysler -- with a
 21 lot of companies, it was a technical career
 22 path. And it was hard to hop over across to
 23 the management career path.
 24 So I decided to leave Chrysler to
 25 get more on that management career path,

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1 actually changed companies to, you know,
 2 achieve my goals of, you know, being able to
 3 have more control of the total vehicle design
 4 from a management aspect.
 5 Q Okay. Did you ever work on the
 6 Jeep Grand Cherokee during your time at
 7 Chrysler?
 8 A No, I did not.
 9 Q And why did you leave Ford in 2004?
 10 A To actually take the job at
 11 McLaren. They came recruiting me. And it was
 12 just a -- too good of an opportunity to pass
 13 up.
 14 Q Okay. And since February of 2007,
 15 you've been a self-employed automotive
 16 consultant?
 17 A That's correct. With the -- the
 18 Aptera job overlapped that a little bit.
 19 Q Okay.
 20 A So I continued to consult
 21 throughout the Aptera job, but that -- Aptera
 22 was -- you know, I got a W2. I was more of an
 23 employee than a consultant for them.
 24 Q Okay. Did you form a company in
 25 February, 2007, or did you work for someone

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1 else?
 2 A No. At that point I was working
 3 strictly independently, just independent
 4 consultant.
 5 In January of 2011, I formed a
 6 partnership with two other people and that's
 7 the FACT.
 8 Q All right. FACT stands for
 9 Forensics Automotive Consulting Team?
 10 A Correct.
 11 Q And there are three partners, you
 12 said?
 13 A Yes, there are.
 14 Q And you're one. Who are the other
 15 two?
 16 A A gentleman named Richard Hille and
 17 a lady named Paula Re, which is R-e.
 18 Q Okay.
 19 A And Hille has an E on the end of
 20 it.
 21 Q How many employees does FACT have?
 22 A There's no employees, just the
 23 three partners.
 24 Q Okay. During the time you worked
 25 at Chrysler, did you know a man by the name of

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1 Paul Sheridan?
 2 A You know, at the time I was there I
 3 actually did not know Paul. And I didn't even
 4 hear his name until the -- you know,
 5 controversy of his leaving.
 6 Q Okay.
 7 A Which was kind of a public thing.
 8 It was in the newspapers, so...
 9 Q Okay. Have you ever met him?
 10 A I have since met Paul, yes.
 11 Q When was the first time you met
 12 him?
 13 A I believe it was actually
 14 inspecting the Morris-Kline vehicle.
 15 Q Okay.
 16 A Which would have been 2009.
 17 Q Okay. During the years that you
 18 worked at Chrysler, were you aware that the
 19 Jeep Grand Cherokee that was produced from '93,
 20 at least up until the time you left Chrysler,
 21 had a fuel tank that was located behind the
 22 rear axle?
 23 A Yeah. I'd say I was somewhat aware
 24 of that fact. It's nothing I had studied,
 25 though.

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1 Q Okay. Are you aware of anybody at
 2 Chrysler during your time up until you left, of
 3 course, in 2000 expressing any concerns about
 4 the design of that fuel system?
 5 A In -- probably '98, '99 time frame,
 6 I was designing a -- working on an advanced
 7 design of an SUV for Chrysler, a compact SUV,
 8 more of a RAV4, CR-V competitor, which that
 9 vehicle never -- it became a production
 10 vehicle, but I was doing a lot of the advanced
 11 design.
 12 I sat in on the fuel systems tech
 13 club meetings and also was involved in a lot of
 14 discussions of the new 301, the high-speed
 15 impact. And in those meetings there was, you
 16 know, significant discussion about, you know,
 17 rear tanks versus mid-mounted tanks and the
 18 issues, you know, concerns of how to certify
 19 those vehicles.
 20 Q Certify them under the new 301
 21 test?
 22 A Correct.
 23 Q Okay. Who was present at those
 24 meetings?
 25 A You'd have to probably dig out

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1 meeting minutes to figure out that.
 2 Q Are those things you have, those
 3 meeting minutes?
 4 A No, no. That's not -- no. You
 5 don't -- you leave a company like Chrysler, you
 6 don't take stuff like that. So I don't have
 7 anything. I think Karen Wagner was the chair
 8 of at least one of those tech clubs at the
 9 time.
 10 Q Okay. Were there any concerns
 11 expressed, aside from the need to comply with
 12 the new 301 standard?
 13 MS. DeFILIPPO: Wait a minute.
 14 Objection to form.
 15 A Well, the biggest -- sure.
 16 There's -- you know, there's lots of issues.
 17 There's, you know, pluses and minuses of all
 18 types of designs. And probably the biggest
 19 issue I raised, and verbally -- I was a good
 20 soldier. I didn't write memos about things.
 21 Well, I actually -- I wrote a memo about a fire
 22 once, and that almost got me fired. So I
 23 learned not to do that, in '93. Or no, maybe
 24 '91.
 25 But my concern was with the

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1 mid-mounted tanks, was putting poles in the
 2 Ford access fuel pump modules. I was totally
 3 against putting floors -- holes in the floor.
 4 And my alternative was let's design
 5 better fuel pumps so we don't have to provide
 6 access to replace fuel pumps.
 7 Q Okay.
 8 A So that was my biggest concern as a
 9 downside to a mid-mounted tank.
 10 But as far as, you know, structure,
 11 relocation, the 301 test, it was pretty obvious
 12 that's where the tanks needed to go.
 13 Q Okay. The memo you said that
 14 almost got you fired, who did you send that
 15 memo to?
 16 A It was probably -- at that time it
 17 would have been either Pete Gladysz or Herb
 18 Helbige, and may have copied Roy Sjoberg, who
 19 had been the chief engineer on the Viper
 20 program.
 21 Q What did that memo consist of?
 22 A Well, it was about really the
 23 braking system. Fire related to the braking
 24 system.
 25 Q Of the Viper?

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1 A Yes.
 2 Q Did you ever either write a memo or
 3 verbally complain to anybody at Chrysler about
 4 the Jeep Grand Cherokee during your time at
 5 Chrysler?
 6 A No.
 7 Q Are you currently a member of any
 8 trade organizations?
 9 A The Society of Automotive
 10 Engineers. That's more a technical
 11 organization than a trade organization, I
 12 guess.
 13 Q Okay. Any training in fire
 14 prevention?
 15 A No official training, no.
 16 Q On the job?
 17 A Yeah. You have a lot of on-the-job
 18 experience. When you say "fire prevention,"
 19 you're talking like the NFPA-type
 20 organizations?
 21 Q Right. Yeah.
 22 A Yeah. They -- a lot of that stuff
 23 is, you know, industrial, home, fires, they
 24 have a -- one chapter in their book about
 25 automotive fires. Most of their classes don't

42	<p>1 even cover the automotive stuff. They do --</p> <p>2 there are some rare classes that talk about</p> <p>3 automotive fires, but they happen so</p> <p>4 occasionally it's hard to schedule those in.</p> <p>5 Q Do they offer a vehicle fire</p> <p>6 certification?</p> <p>7 A I don't believe that NFPA does.</p> <p>8 Q Okay.</p> <p>9 A I'm just not sure.</p> <p>10 Q Okay. How about any training in</p> <p>11 fire investigation as opposed to fire</p> <p>12 prevention?</p> <p>13 A No training, no.</p> <p>14 Q Have you taken any classes in those</p> <p>15 fields? That being fire prevention or fire</p> <p>16 investigation?</p> <p>17 A No classes.</p> <p>18 Q Forensics Automotive Consulting</p> <p>19 Team. Do they do work other than litigation?</p> <p>20 A No. That partnership is pretty</p> <p>21 much strictly related to litigation work.</p> <p>22 Q Is it all on behalf of plaintiffs,</p> <p>23 aside from, of course, the government bid that</p> <p>24 you spoke about?</p> <p>25 A Well, no. The government bid is</p>	44	<p>1 management and design.</p> <p>2 Q Okay. Design of vehicles?</p> <p>3 A Design of vehicles, systems, and</p> <p>4 then also development. Testing of vehicles and</p> <p>5 systems. In some cases, strictly testing.</p> <p>6 I've been hired at times strictly as a test</p> <p>7 driver.</p> <p>8 Q Okay. What about design of fuel</p> <p>9 systems for these niche companies? Do you do</p> <p>10 that as well?</p> <p>11 A In at least one case, yes.</p> <p>12 Q Can you tell me what manufacturer</p> <p>13 and vehicle that is?</p> <p>14 A No. I actually don't disclose any</p> <p>15 of my other clients since Tatoni & Brooks</p> <p>16 (phonetic) sent a deposition to some of my</p> <p>17 outside clients, which I thought was</p> <p>18 extraordinarily unethical. I just decided not</p> <p>19 to disclose any of that, so...</p> <p>20 Q Okay. Fair enough.</p> <p>21 A Figure it out for yourself. And</p> <p>22 some are actually confidential. I do have</p> <p>23 confidentiality agreements with some of those</p> <p>24 manufacturers.</p> <p>25 Q Sure. I can appreciate that.</p>
43	<p>1 not a FACT -- I'm not exclusive to FACT.</p> <p>2 Q Oh, okay.</p> <p>3 A FACT is a partnership I'm part of.</p> <p>4 I do other work that's outside of FACT.</p> <p>5 Q So --</p> <p>6 A Right now, I would -- you know,</p> <p>7 through 2007, litigation work's been, you know,</p> <p>8 I would say a quarter to half of my time, as</p> <p>9 far as what I do -- you know, all the work that</p> <p>10 I do.</p> <p>11 And I would say FACT, since 2001,</p> <p>12 has been, you know, you know, about maybe half</p> <p>13 my time at the most. The other work I do</p> <p>14 is outside of FACT.</p> <p>15 Q Okay. What do you do outside of</p> <p>16 FACT?</p> <p>17 A The -- well, I do coaching of race</p> <p>18 car drivers. Consulting with the race teams.</p> <p>19 And I do consulting work for vehicle</p> <p>20 manufacturers that are, I would say, you know,</p> <p>21 niche or boutique-type manufacturers; not the</p> <p>22 big three or anything like that.</p> <p>23 Q Okay. What kind of consulting work</p> <p>24 do you do for these niche manufacturers?</p> <p>25 A It's a combination of program</p>	45	<p>1 Does all your litigation work go</p> <p>2 through FACT?</p> <p>3 A No.</p> <p>4 Q Okay. Do you have outside cases on</p> <p>5 the -- that you handle -- withdrawn.</p> <p>6 The list of deposition and trial</p> <p>7 testimony you've given me here, have you done</p> <p>8 that through all these cases through FACT?</p> <p>9 A No. Some of those predate FACT.</p> <p>10 Q Okay.</p> <p>11 A And since FACT has formed -- let's</p> <p>12 see. Yes. Since FACT has formed, they have</p> <p>13 not all been FACT cases.</p> <p>14 Q What's the determining factor as to</p> <p>15 whether a case will be through FACT or through</p> <p>16 you alone?</p> <p>17 A You know, a number of things. At</p> <p>18 least a couple different criteria.</p> <p>19 Q What are those criteria?</p> <p>20 A Probably something I wouldn't --</p> <p>21 that's a business practice I'm not gonna</p> <p>22 disclose.</p> <p>23 Q Okay. Do you have a corporation</p> <p>24 set up for these cases that you do on your own?</p> <p>25 A No.</p>

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1 Q If I called you up today and I said
 2 I need a -- somebody to represent my client in
 3 a case against Mercedes-Benz, would it
 4 automatically go through FACT, automatically go
 5 through you, or something else?
 6 A I guess it would -- it would not
 7 automatically go through anything.
 8 Q Okay. And the litigation work that
 9 FACT does, is that all on behalf of plaintiffs?
 10 A No. There's one -- no, I take it
 11 back. Because that's not FACT. Yeah.
 12 Actually, I think right now all the FACT cases
 13 are plaintiff cases.
 14 Q Has FACT ever represented a
 15 manufacturer, to your knowledge, in a product
 16 liability automobile case?
 17 A No. We've had discussions with
 18 some -- not mainstream manufacturers, but we
 19 haven't had any cases like that.
 20 Q Okay. Does FACT advertise the
 21 settlements or verdicts that it's been involved
 22 in?
 23 A Not all of them. I think there's a
 24 few that are listed on our website.
 25 Q Okay. And you personally, with

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1 regard to litigation, since 2007, have you ever
 2 represented a manufacturer in a products
 3 liability case?
 4 MR. GILL: Again, with the
 5 stipulation, "representing."
 6 Q Yeah. Instead of "representing," I
 7 mean have you been an expert on behalf of a
 8 manufacturer?
 9 MS. DeFILIPPO: Other than what
 10 he's testified to?
 11 MR. STOCKWELL: Right.
 12 A Not -- no, I have not. And I've
 13 only done -- I have done one defense case, but
 14 it was defense of a dealership, not a
 15 manufacturer.
 16 Q What dealership did you defend?
 17 A Well, it's Tuttle-Click Ford in
 18 Riverside, California.
 19 Q I'm sorry. Title?
 20 A Tuttle.
 21 Q Tuttle.
 22 A T-u-t-t-l-e. Click.
 23 Q Click?
 24 A Yes.
 25 Q Ford?

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1 A Correct.
 2 Q Was Ford involved in that case as
 3 well? The manufacturer?
 4 A Yeah, I believe it's still ongoing
 5 and Ford is the manufacturer.
 6 Q Okay. What is the allegation in
 7 that case?
 8 A Well, it was a -- well, the
 9 allegation against the dealership was a
 10 maintenance allegation. And I'm not sure if
 11 they have other claims of crashworthiness or
 12 not, because I just haven't looked at that part
 13 of the case.
 14 Q You were there to address the
 15 maintenance claims only?
 16 A Correct.
 17 Q What was the allegation about the
 18 maintenance?
 19 A The, you know, maintenance of the
 20 steering system, as far as lubrication and --
 21 there were allegations, also, of let's see, it
 22 would have been -- in the CV joints, but I
 23 think that actually was more of a Ford design
 24 issue. But we did inspect it. I was involved
 25 in the inspection of those components, but I --

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1 Q Were you there to address what the
 2 dealer should or should not have done when the
 3 vehicle was brought in for service?
 4 A Yes, I was.
 5 Q Okay. Did you give a report in
 6 that case?
 7 A No, I've not.
 8 Q Okay. Who are the attorneys in
 9 that case for the -- that you were hired by?
 10 A Tharpe & Howell.
 11 Q I'm sorry? Could you say that
 12 again?
 13 A Tharpe & Howell.
 14 Q Are you able to spell that?
 15 A Yeah. T-h-o-r-p-e, [sic], Howell,
 16 H-o-w-e-l-l.
 17 Q And that case is in what state?
 18 A California.
 19 Q Do you know the names of the
 20 plaintiffs' attorneys?
 21 A Yes. It's Jason Bisner.
 22 Q Bisner?
 23 A Yeah. I think it's B-i-s-n-e-r.
 24 Q And you haven't given a deposition
 25 in that case either, I assume?

50	<p>1 A No.</p> <p>2 MS. DeFILIPPO: Did you say that</p> <p>3 case was pending?</p> <p>4 THE WITNESS: Yes.</p> <p>5 MR. STOCKWELL: He did.</p> <p>6 Q I have two reports from you. One</p> <p>7 is dated August 3rd, 2011, and the other is</p> <p>8 dated December 4th, 2009. Do you have those</p> <p>9 reports with you?</p> <p>10 A I do, and I probably have one more.</p> <p>11 Q You've issued another report?</p> <p>12 A There was a September 9th, 2010,</p> <p>13 report. It's like I'm doing one a year.</p> <p>14 Q September 9th, 2010? Was that --</p> <p>15 let's go off the record.</p> <p>16 (Discussion held off the record.)</p> <p>17 MR. STOCKWELL: It's a good time to</p> <p>18 take a break anyway. Five minutes. And then</p> <p>19 just let me know what you guys want to do.</p> <p>20 (Recess taken.)</p> <p>21 Q All right. So Mr. Hannemann, we've</p> <p>22 established that there are two reports. The</p> <p>23 December 4th, 2009, that you essentially are</p> <p>24 relying on, and August 3rd, 2011; is that</p> <p>25 accurate?</p>	52	<p>1 the two reports, meaning December 4th and</p> <p>2 August 3rd, contain all your opinions and</p> <p>3 conclusions in the Kline case?</p> <p>4 A Yes, they do.</p> <p>5 Q Okay. Other than what's in your</p> <p>6 reports, did you obtain information from any</p> <p>7 other sources?</p> <p>8 A Yes. I got information from -- the</p> <p>9 Center For Auto Safety website had a lot of</p> <p>10 information. And I've got, you know, reference</p> <p>11 documents. Some general reference documents.</p> <p>12 I've got some things from other cases that I've</p> <p>13 had with General Motors, maybe. So I do have</p> <p>14 other things, other than the Chrysler</p> <p>15 discovery.</p> <p>16 Q Okay. Did you bring your complete</p> <p>17 file here today?</p> <p>18 A Yes, I did.</p> <p>19 Q Has anything been taken out of that</p> <p>20 file?</p> <p>21 A No.</p> <p>22 Q Okay. By you or anyone else?</p> <p>23 A No.</p> <p>24 Q Okay. Did you speak to any other</p> <p>25 experts before issuing your reports? Either of</p>
51	<p>1 A Well, that's accurate, and I would</p> <p>2 say the August 3rd, 2011, contains everything</p> <p>3 in the earlier report.</p> <p>4 Q I gotcha.</p> <p>5 A So I wouldn't -- I would say just</p> <p>6 the one report's sufficient to work with.</p> <p>7 Q Okay. All right. And I may</p> <p>8 actually start with the December 4th report</p> <p>9 just because that's the way I mapped this out.</p> <p>10 A Sure.</p> <p>11 Q But do the reports or -- I'll just</p> <p>12 say the reports. Do the reports contain all</p> <p>13 the facts that you relied upon in this case in</p> <p>14 forming your opinions?</p> <p>15 A For the most part. There -- I may</p> <p>16 have come across things since I wrote the</p> <p>17 report, reviewing more of the Chrysler</p> <p>18 discovery material.</p> <p>19 Q Okay. And you haven't issued any</p> <p>20 supplemental reports to date?</p> <p>21 A No. I would say that none --</p> <p>22 nothing I've done has changed any of my</p> <p>23 opinions. It's just I may have discovered more</p> <p>24 basis for the opinions.</p> <p>25 Q Okay. So your reports contain --</p>	53	<p>1 the reports?</p> <p>2 A I've spoken with both Don Phillips</p> <p>3 and Paul Sheridan. We were all three at the</p> <p>4 inspection. I'm not sure we discussed</p> <p>5 specifically the opinions or reports, though.</p> <p>6 Q Okay. Do you rely on any of the</p> <p>7 opinions of any other experts in reaching your</p> <p>8 opinions or conclusions?</p> <p>9 MS. DeFILIPPO: I'll object to the</p> <p>10 form of that.</p> <p>11 (Brief phone interruption.)</p> <p>12 MR. STOCKWELL: We'll take a break.</p> <p>13 (Brief recess taken.)</p> <p>14 MS. DeFILIPPO: I'm sorry.</p> <p>15 MR. STOCKWELL: That's okay.</p> <p>16 I'm sorry. Where were we?</p> <p>17 (Question read:</p> <p>18 "Q Okay. Do you rely on any of the</p> <p>19 opinions of any other experts in reaching your</p> <p>20 opinions or conclusions?")</p> <p>21 A Generally, no. In Paul Sheridan's</p> <p>22 case, I think a lot of -- he has a lot of stuff</p> <p>23 that I'd say supplemental to mine. He's got</p> <p>24 things that are -- well, he's got a wide range</p> <p>25 of things. Some may be not even pertinent to</p>

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1 the case, but just about how Chrysler operates
 2 and some very good background information on
 3 car companies and decisions. Nothing I'm
 4 relying on.
 5 And in Don's Phillip's report,
 6 typically I rely on the reconstruction, but I
 7 think both the defense reconstructions and
 8 Don's, I -- I have the opinion that they're a
 9 bit overstated on the speed of the Jeep.
 10 Q Okay.
 11 A So I haven't really relied on
 12 those. And potentially, that's -- you always
 13 ask about future work. You know, I may do some
 14 analysis of the reconstruction myself, just
 15 to see if -- you know, again, it's more my --
 16 just my experience tells me that the speeds are
 17 off, but I haven't done any real analysis to
 18 prove that.
 19 Q Do you have any accident
 20 reconstruction training?
 21 A I have not actually -- you know,
 22 there's like a one-week class that is taught at
 23 Northwestern University that I have not
 24 attended. And that teaches some -- that's
 25 really intended for people like police officers

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1 who, you know, can learn some of the basic
 2 formulas and techniques for reconstructing
 3 accidents.
 4 In my case I would probably work
 5 more from the -- just the theory and physics.
 6 And with my engineering background and my
 7 vehicle dynamics background, I, you know, would
 8 feel pretty comfortable doing
 9 reconstruction-type work.
 10 Q Okay. Have you done any analysis
 11 of the defense reports as it pertains to
 12 speeds? Have you done any specific analysis?
 13 A Well, I have reviewed -- basically
 14 what I did with the Kineticorp ones, I reviewed
 15 a number of the other tests that have been
 16 produced here. I reviewed the Karco tests and
 17 the Federal Highway Administration tests, and
 18 used them as -- just as, you know,
 19 substantially similar tests, and compared the
 20 Delta Vs off of those tests to the Kineticorp
 21 tests, which, you know, kind of backed up my
 22 opinion that the Delta Vs were a little off,
 23 because those have, you know, in some cases
 24 substantially lower Delta Vs.
 25 Q Which has substantially lower Delta

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1 Vs?
 2 A Well, the 70-mile-an-hour -- the
 3 70, 75-mile-an-hour tests, Taurus into the
 4 Explorer, and the Delta V of the Explorer ended
 5 up being 32 miles an hour, which is quite a bit
 6 lower than the -- I think, Durisek and
 7 Kineticorp were in the 36 to 40 range.
 8 In the 50-miles-an-hour Federal
 9 Highway Test, it uses the Cherokee and had a
 10 Delta V of 23, which is, you know, quite a bit
 11 lower again. Obviously, the lower speed of the
 12 striking vehicle, the Delta Vs go a bit lower.
 13 And the -- I believe the Karco
 14 test, 50 miles an hour to the Jeep, was 20 --
 15 25, I think. So those are all enough lower
 16 that in that 50- to 70-mile-an-hour range, it
 17 makes me a bit skeptical of the
 18 reconstructions.
 19 Q Okay. So your scepticism is based
 20 on the Delta Vs that you had learned from the
 21 Karco and the FHA tests?
 22 A Well, yeah. And that's where I
 23 went first investigating it. My first
 24 impression is it just -- it just didn't seem
 25 right from just a kind of subjective feel and

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1 looking at the pictures of the vehicle damage.
 2 And the Toyota -- the Toyota is --
 3 is -- you know, the damage to the Toyota,
 4 whereas the Sienna damage is, you know, mostly
 5 to the hood and the area above the frame rail.
 6 You see in the pictures that the frame rails
 7 are, you know, virtually untouched, and so
 8 really not -- the really good part of the crash
 9 structure on that Toyota wasn't engaged.
 10 So if somebody had taken the --
 11 these reconstructions use these Neptune
 12 coefficients, and those are based on frontal
 13 tests, where you have full engagement, and
 14 they're not appropriate in this case.
 15 I've had access to a
 16 13-mile-an-hour test with a Sienna, which was a
 17 sim -- it was a rear-end collision against a
 18 Ford Probe. And this is run by an accident
 19 reconstruction group, for purposes of gathering
 20 data for reconstructions.
 21 And the -- you know, the
 22 13-mile-an-hour test they did has, you know,
 23 some similarities to the Toyota in that it
 24 missed the main structure, and, you know, one
 25 side of the vehicle looks similar to the

58	<p>1 Sienna.</p> <p>2 And those are just, again, my</p> <p>3 judgments and subjective feels. I haven't done</p> <p>4 any real calculations or analysis.</p> <p>5 Q Okay. All right. Have you done</p> <p>6 anything else other than what you've told me as</p> <p>7 you sit here today in assessing the speed of</p> <p>8 the Toyota Sienna?</p> <p>9 MS. DeFILIPPO: Objection to form.</p> <p>10 A The Sienna itself -- yeah, it was</p> <p>11 just really comparing the damage profiles --</p> <p>12 Q Okay.</p> <p>13 A -- of that. I did -- if I pursue</p> <p>14 this, this avenue for something that Angel</p> <p>15 wants me to look at further, I would probably</p> <p>16 go to some of the NHTSA barrier tests to</p> <p>17 compare the damages there and, you know,</p> <p>18 progress that analysis. But I think that's</p> <p>19 about all I've done with the Toyota.</p> <p>20 Q Have you assessed the crush damage</p> <p>21 between the front end of the Jeep and the rear</p> <p>22 of the Subaru?</p> <p>23 A No, I really didn't look at that</p> <p>24 impact.</p> <p>25 Q All right. How many times have you</p>	60	<p>1 yourself out as? What kind of area of</p> <p>2 expertise?</p> <p>3 A Well, I really -- I cover a wide</p> <p>4 range of areas. And, you know, rather than --</p> <p>5 I've -- I've, you know, listed a lot, and there</p> <p>6 was some documents that -- where I listed a</p> <p>7 number of expertises, but that -- those were</p> <p>8 things that I apply to litigation.</p> <p>9 But it turns -- seems like every</p> <p>10 time something new comes up -- even fires.</p> <p>11 When I first started doing this, fires wasn't</p> <p>12 really on my list. I talked to a few</p> <p>13 attorneys. They talked about my background.</p> <p>14 And they says, Oh, yeah, you're -- you've got</p> <p>15 good experience.</p> <p>16 So I've taken these things as</p> <p>17 they -- as they come up. You know, I was gonna</p> <p>18 say earlier, I probably wouldn't go and</p> <p>19 critique software. I wrote software in high</p> <p>20 school. But, you know, I've -- that's pretty</p> <p>21 old and I -- I wouldn't hold myself up as a</p> <p>22 software engineer. But most any other system</p> <p>23 on the vehicle I feel like I've got some good</p> <p>24 qualifications for.</p> <p>25 Q Okay. Have you ever been offered</p>
59	<p>1 inspected the Kline Jeep Grand Cherokee?</p> <p>2 A One time.</p> <p>3 Q Have you had an opportunity to take</p> <p>4 a look at the Sienna?</p> <p>5 A No.</p> <p>6 Q Have you had an opportunity to look</p> <p>7 at the Subaru that was involved in the</p> <p>8 accident?</p> <p>9 A No, I don't think anybody has,</p> <p>10 actually.</p> <p>11 Q Now, I think my original question</p> <p>12 was, did these reports contain all your</p> <p>13 opinions and conclusions in this case? And I</p> <p>14 think that's where we went off on the speeds.</p> <p>15 Is there anything else that's not</p> <p>16 in these reports in terms of your opinions and</p> <p>17 conclusions?</p> <p>18 A No. The speeds. I mean, if I were</p> <p>19 to do any rebuttals and things, it's not in the</p> <p>20 report. But I think as far as my opinions,</p> <p>21 this -- this is pretty good.</p> <p>22 Q Have you ever been disqualified</p> <p>23 from testifying as an expert in any court?</p> <p>24 A No, I have not.</p> <p>25 Q What kind of expertise do you hold</p>	61	<p>1 as an expert in the field of accident</p> <p>2 reconstruction?</p> <p>3 A I've never even attempted to do</p> <p>4 that. There's just -- there's a lot of people</p> <p>5 out there that do reconstruction. And they've</p> <p>6 got the equipment to do it. I actually found</p> <p>7 that I don't like standing on a road with cars</p> <p>8 whizzing by trying to taking measurements, so</p> <p>9 I've just chosen not to do that.</p> <p>10 Q Right.</p> <p>11 A That's -- but am I qualified to do</p> <p>12 it? Yeah, I think I'd be qualified.</p> <p>13 Q Okay. Have you ever testified in</p> <p>14 any court about closing or impact speeds of</p> <p>15 vehicles?</p> <p>16 A Probably -- probably rely mostly on</p> <p>17 other reconstructions for that. I --</p> <p>18 Q Have you ever -- oh, I'm sorry.</p> <p>19 A And there may have been -- I think</p> <p>20 in some dynamics cases I've opined about speeds</p> <p>21 of maneuvers. I'm not sure.</p> <p>22 Actually, there was some</p> <p>23 reconstruction backup for that. So I'd say</p> <p>24 most cases there's already been a</p> <p>25 reconstruction done that I would rely on.</p>

62	<p>1 Q All right. Have you ever testified 2 in a court or in a deposition about the cause 3 and origin of a fire? 4 A Typically that's something I have 5 not taken on. Same thing. There's a lot of 6 really good cause-and-origin people out there. 7 You know, I think taking the week class from 8 some organization -- there's a Lee Cole. He's 9 got a really good book on fire cause and 10 origin, runs a class. But they run it like 11 once every two years. 12 Q Okay. 13 A So I think, you know, if I were to 14 take that kind of class, I would probably have 15 qualification to do it. But I've just, you 16 know, chosen not to do it. And there's plenty 17 of really good people out there that do that 18 type of stuff. 19 Q All right. Did anybody at FACT or 20 anywhere else, for that matter, assist you in 21 this case? 22 A You know, most of the -- a lot of 23 the work I did was prior to FACT. And I'm 24 trying to think if in the August -- well, so, 25 yes.</p>	64	<p>1 Whether it's ARC -- I mean, whether it's FACT 2 or on your own? 3 A A real rough guess? 4 Q Yeah. It doesn't have to be -- 5 A About 40, maybe right now. 6 Q Okay. 7 A Sometimes they settle and I don't 8 even know it, so... 9 Q Right. We hear that complaint all 10 the time. 11 A Until a year later -- 12 Q Yeah. 13 A -- a year later, we say, "Haven't 14 heard from you in a year." "Oh, we settled 15 that six months ago." So that's a rough guess. 16 Q All right. I think, other than the 17 Sebring and maybe any other testimony you gave 18 earlier today, have you given -- have you 19 written a report or given any testimony 20 concerning the design of a fuel system in any 21 vehicle other than what we've already talked 22 about today? 23 MS. DeFILIPPO: Wait a minute. I'm 24 going to have to object to form, because that's 25 very compound.</p>
63	<p>1 The Toyota Sienna tests I referred 2 to, that's run at ARC, that was -- I think 3 they're called the Accident Reconstruction 4 something. It's a group. 5 My partner, Richard Hille, is a 6 member of that, and he attended those tests. 7 He's the one that supplied that information to 8 me for this case. So that -- that came from 9 him. Other than that, I think -- I don't think 10 any -- other than the administrative partner, 11 Paula, helping to, you know, organize the file 12 and things, there hasn't been any other work -- 13 Q Okay. 14 A -- done by FACT. 15 Q Were there any documents generated 16 from that ARC Sienna test that you -- your 17 partner talked to you about? 18 A Not that I have. He supplied me 19 the pictures, some verbalization of the test 20 parameters, and -- I had realized I actually 21 would probably like to look at the vehicle and 22 see if there's a report, so that's -- that 23 potentially is future work. 24 Q Okay. How many cases are you 25 currently working on? Litigation cases?</p>	65	<p>1 MR. STOCKWELL: Yeah. 2 Q You know, I just don't remember 3 exactly what you spoke about earlier in the 4 deposition. I know you mentioned the Sebring 5 was a case involving the design of the fuel 6 system. Were there any other ones? 7 A Yeah. 8 MS. DeFILIPPO: Wait. Wait. I 9 have to object to the form, though. What are 10 you seeking? Are you seeking his testimony 11 or -- the question that was compound, it asked 12 for many things. 13 MR. STOCKWELL: Yeah. 14 Q What I mean is, any case that you 15 worked on, a litigation case? 16 MS. DeFILIPPO: Did he work on any 17 cases? 18 MR. STOCKWELL: Yes. Involving the 19 design of the fuel system of any vehicle. 20 Q Do you understand that? 21 A Yeah, I understand it -- 22 MS. DeFILIPPO: And -- 23 A -- and I'll go through the ones on 24 this list. 25 Q Sure.</p>

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1 A And they're -- and I'll have to go
 2 to memory. And I can tell you ones where I may
 3 be disclosed in.
 4 Q Sure.
 5 A And I don't think I have to tell
 6 you the ones I've looked at, maybe they're
 7 not --
 8 Q Well, if you've written a report,
 9 I'd liked to know about it.
 10 A Okay. So Runner vs Toyota was a
 11 fire case. And I had an opinion there on the
 12 fuel system, specifically the location of the
 13 fuel filter.
 14 Howard/Doyal vs. GM is a -- okay.
 15 That's -- you said fuel system, though. And
 16 that's a fire case not related to fuel system.
 17 We talked about documented reports.
 18 MR. BANTA: Dick?
 19 THE WITNESS: Pardon me? Yeah, we
 20 talked about that already, though. He asked
 21 other than what we talked about, so...
 22 MR. STOCKWELL: Yeah.
 23 A So we already mentioned Dick and
 24 Winn. And let's see. Reports -- fires other
 25 than these. I don't -- I can't think of

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1 anything right offhand.
 2 Q Okay. Have you offered any
 3 opinions in any cases concerning a fuel tank
 4 placed behind the rear axle, other than this
 5 case, of course?
 6 A No, I have not.
 7 Q Have you offered any opinions
 8 critical of a fuel tank located over or forward
 9 of the rear axle?
 10 A And this would be -- there was a
 11 case with a Chrysler 300, and I don't recall if
 12 I -- I don't think I wrote a report on that
 13 case. But there was a fuel system issue of a
 14 tank forward of the rear axle that related to
 15 the fuel filler.
 16 Q What was the issue with the fuel
 17 filler?
 18 A It was -- you know, maybe -- maybe
 19 it wasn't the fuel. I'm trying to remember --
 20 it may have been -- it was the location of the
 21 fuel filler. It was susceptible to damage from
 22 a broken wheel.
 23 MS. DeFILIPPO: What was the car
 24 model that you said?
 25 THE WITNESS: That was a Chrysler

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1 300.
 2 A And I -- I may not even be
 3 disclosed in that case, so you may not find --
 4 it may have settled. I'm not sure how -- how
 5 far that case got.
 6 Q Are you able to tell me the
 7 circumstances surrounding the accident in the
 8 Dick case? What happened?
 9 A The Dick case, a car was being
 10 driven in -- in Colorado up over some grades.
 11 And my opinion is that the power steering hose
 12 failed and it released power steering fluid,
 13 which was then ignited when the vehicle slowed
 14 down.
 15 I believe that Timber Dick realized
 16 he had a problem, was trying to -- trying to
 17 pull off in kind of a -- scary area. I didn't
 18 like being out there at the scene, either.
 19 That was -- and, you know, when he got down,
 20 slowed down to a certain speed, a fire erupted
 21 in the car.
 22 Q Did the fuel tank catch on fire in
 23 that case?
 24 A Well, ultimately, but it was
 25 strictly a result of the fire that started

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1 elsewhere. I mean, the vehicle -- it was
 2 comprehensive burning. I mean, here's the
 3 thing. Bear tumbled down a 200-foot -- it was
 4 almost a cliff. It was a -- something you
 5 couldn't walk up. You know, it was -- it was
 6 a -- the aftermath was a pretty horrible scene.
 7 It ended up -- it was comprehensively burned,
 8 but I had no criticisms of the fuel system in
 9 that vehicle.
 10 Q Okay. Are you aware of any
 11 evidence in this case that the fuel filler hose
 12 separated from the fuel tank in the Kline
 13 vehicle?
 14 A The state of the vehicle, the --
 15 it's difficult to determine. And I would -- it
 16 could be determined. I'd have to reinspect the
 17 vehicle. When I first looked at it, I -- I
 18 couldn't even find the hole in the frame rail
 19 that the fuel filler goes through. I think if
 20 you could locate that and determine where the
 21 tank would have ended up, you know, you could
 22 determine that.
 23 I do believe that it came off, and
 24 my basis for that is more the test results.
 25 There's a Chrysler test where that particular

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1 thing occurred. The FHWA test had the fuel
 2 filler hose torn off. And then the -- well,
 3 even in the accident, Peter Moody's testimony
 4 that the fire was immediate. You know, when
 5 the fuel filler hose comes off like that, you
 6 get an immediately forceful release of fuel.
 7 So my basis for those is more the testing and
 8 the design and what can happen.
 9 But as far as your question on the
 10 actual car itself, I haven't actually -- you
 11 know, there's just not enough information, I
 12 think, there to determine conclusively what
 13 happened.
 14 Q Okay. Have you seen any
 15 photographs of the hole in the frame rail in
 16 the Kline Jeep?
 17 A I don't believe I have.
 18 Q Why weren't you able to see it at
 19 your inspection?
 20 A Well, the -- we didn't raise the
 21 vehicle up. We -- I think just the crush of
 22 the vehicle made it difficult to get to. And I
 23 believe I looked at the vehicle, you know,
 24 weeks after I was retained. And it was -- as I
 25 recall, it was more of a general inspection

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1 rather than a focused inspection.
 2 I think with what I've learned
 3 looking at, you know, crash tests and a lot of
 4 information about the case, seeing different
 5 designs, you know, could I go back and find it
 6 now? Maybe. Maybe I could. It might not be
 7 that it's -- it may be that it's just where you
 8 can't see it. But I guess I'd like to take
 9 another look.
 10 Q Okay.
 11 A If I...
 12 Q What is your definition of a
 13 vehicle defect?
 14 A Well, I guess that's a pretty
 15 broad-reaching thing, and I haven't really
 16 thought much about defining a defect. But it's
 17 a -- you know, a general sense, something that
 18 would cause somebody, you know, harm, injury,
 19 or death in a vehicle.
 20 You could also have defects that
 21 don't do that. You could have a defect that's
 22 just a customer satisfaction issue. The rattle
 23 or a squeak or some kind of characteristic of
 24 the vehicle, too.
 25 Q Okay. Do you have a definition of

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1 the word "crashworthy"?
 2 A Well, I can -- I have an
 3 understanding of what I think the word means.
 4 Q Okay. What's that understanding?
 5 A That the -- that's more with the
 6 defects. Earlier I said it's something that
 7 would cause somebody, you know, harm or injury
 8 in a vehicle crash.
 9 Q Okay. What does a manufacturer
 10 have to do to prove out a defect before the
 11 vehicle is put into production?
 12 A Well, you cannot -- well, trying to
 13 prove you have defects, I think you prove you
 14 have lack of defects.
 15 Q That's what I meant. Prove out the
 16 defects. Sorry.
 17 A Prove out. Oh, so like rule out a
 18 defect?
 19 Q Yes.
 20 A Okay. Well, there's a number of
 21 stages. I mean, obviously, you can -- you need
 22 to pass all the legislative rules. But beyond
 23 that, all the auto companies develop what I
 24 call just historical databases and testing, so
 25 through history, you know, cars have had

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1 problems, they've devised tests to prevent
 2 those problems.
 3 So a lot of the tests -- testing
 4 and, you know, the durability testing for all
 5 the manufacturers is historically based. It's
 6 over certain types of roads, certain types of
 7 miles, and, you know, those things contain the
 8 defects. And there's always new things that
 9 come up and new tests that get devised.
 10 You know, you could probably look
 11 through the test libraries at each of the auto
 12 companies and find out, you know, this test was
 13 to prevent these types of failures.
 14 I've always said there's no such
 15 thing as a perfect car. You can't identify --
 16 there's just no way to test for every defect.
 17 So you have to -- you know, there's a
 18 reasonable amount of testing that needs to be
 19 done and could be done.
 20 There's a lot of thought and
 21 judgment that has to go into these types of
 22 things. But, you know, when you identify a
 23 failure or defect on any of these tests, it's
 24 something that you really need to go address.
 25 Q What is the reasonable amount of

74	<p>1 testing that has to be done that you just</p> <p>2 referenced?</p> <p>3 A Well, every manufacturer has their</p> <p>4 own -- you know, their own library of tests.</p> <p>5 And they've developed over the years, and you</p> <p>6 know, some may actually be redundant because</p> <p>7 there's some tests that you just always pass,</p> <p>8 but it's -- it's more of a check the box,</p> <p>9 because, you know, we've had issues like this</p> <p>10 in the past.</p> <p>11 Working with some of these new</p> <p>12 electric car manufacturers, we've had to put a</p> <p>13 lot of thought into the types of testing --</p> <p>14 (Brief phone interruption.)</p> <p>15 MS. DeFILIPPO: I'm sorry. Can we</p> <p>16 take a break?</p> <p>17 MR. STOCKWELL: Absolutely. When</p> <p>18 we come back, she'll read the question and how</p> <p>19 far you got.</p> <p>20 THE WITNESS: Okay. Yeah.</p> <p>21 (Recess taken.)</p> <p>22 (Record read.)</p> <p>23 A -- that might apply strictly to an</p> <p>24 electric car. So new tests -- and they develop</p> <p>25 new tests all the time.</p>	76	<p>1 improves. A lot of the 208 testing, as they've</p> <p>2 changed the regulations, the amount of tests</p> <p>3 you might want to run has mushroomed into a</p> <p>4 really large number of tests, and manufacturers</p> <p>5 are actually substituting some simulations for</p> <p>6 tests.</p> <p>7 And as the simulation technology</p> <p>8 improves -- and provided you've done a really</p> <p>9 good validation of the simulation, so it's a --</p> <p>10 it has to be a blend of testing and simulation.</p> <p>11 You can actually use some simulations instead</p> <p>12 of tests.</p> <p>13 The main thing is you have to</p> <p>14 certify that the vehicle is -- is safe from</p> <p>15 fuel leaks for 301. And the testing, there's</p> <p>16 the minimum testing, and then any other things</p> <p>17 you might want to do to insure you don't create</p> <p>18 any leaks.</p> <p>19 Q Okay. All right. If we could take</p> <p>20 a look at your December 4th, 2009, preliminary</p> <p>21 report.</p> <p>22 And if you look at page -- well, I</p> <p>23 don't have page numbers, but, one, two -- the</p> <p>24 third page, and there's Section 6. It says</p> <p>25 "Background."</p>
75	<p>1 Q Okay. And you talked about</p> <p>2 legislative testing. Do you mean FMVSS, or are</p> <p>3 you referring to something else?</p> <p>4 A Yes, yes. FMVSS tests.</p> <p>5 Q Tell me about how a vehicle passes</p> <p>6 the requirements of FMVSS 301. What does a</p> <p>7 vehicle have to do?</p> <p>8 A Well, it's actually a number of</p> <p>9 tests: Frontal, side, rear-end taps. And then</p> <p>10 there's -- those all have an aspect where you</p> <p>11 have to roll the vehicle on a test fixture to</p> <p>12 look for leaks.</p> <p>13 Typically, those are combined with</p> <p>14 other types of tests. There's not a specific</p> <p>15 single 301 test. But typically on your -- for</p> <p>16 example, your 208 frontal crash tests, it's the</p> <p>17 same actual impact, so you can use that test,</p> <p>18 roll the vehicle, and certify your 301</p> <p>19 compliance. So a lot of these tests are</p> <p>20 integrated into other tests.</p> <p>21 Q Okay. When does a vehicle have to</p> <p>22 be re-certified? How many certification tests</p> <p>23 have to be done?</p> <p>24 A Well, it's all -- it's judgment.</p> <p>25 And it changes all the time as technology</p>	77	<p>1 A Yes.</p> <p>2 Q And if you look toward the bottom</p> <p>3 of that paragraph, there's a sentence that</p> <p>4 reads the following: "The door of the Jeep</p> <p>5 that Susan Morris Kline apparently tried to use</p> <p>6 for egress was jammed shut."</p> <p>7 A Yes.</p> <p>8 Q How do you know that Mrs. Kline</p> <p>9 attempted to use the driver's side door for</p> <p>10 egress?</p> <p>11 A I was actually --</p> <p>12 MS. DeFILIPPO: Hold on.</p> <p>13 Objection. You didn't lay any foundation about</p> <p>14 what door, and then your second question had to</p> <p>15 do with -- you slid in the driver door.</p> <p>16 MR. STOCKWELL: That's fair.</p> <p>17 MS. DeFILIPPO: Are you talking</p> <p>18 about the driver door now, or are you talking</p> <p>19 about the door of the Jeep that she apparently</p> <p>20 tried to use was jammed?</p> <p>21 BY MR. STOCKWELL:</p> <p>22 Q Which door are you saying was</p> <p>23 jammed shut?</p> <p>24 A Yeah. In this -- the report's not</p> <p>25 specific enough, but the door I'm referring to</p>

78	<p>1 in that sentence is the passenger's side door.</p> <p>2 Q Okay. How do you know that she</p> <p>3 tried to use the passenger's side door for</p> <p>4 egress?</p> <p>5 A Her body was found on the</p> <p>6 passenger's side of the vehicle.</p> <p>7 Q All right.</p> <p>8 A That, combined with the fact that</p> <p>9 there was a pretty massive opening in the</p> <p>10 structure of the vehicle on the left side, gave</p> <p>11 me the opinion that she was trying to -- she</p> <p>12 moved to the right to try to escape the fire</p> <p>13 that immediately came in the vehicle on her</p> <p>14 left side.</p> <p>15 Q Okay. Any facts, other than that,</p> <p>16 you relied upon?</p> <p>17 A I think those are most of the</p> <p>18 facts.</p> <p>19 Q Most or all of the facts?</p> <p>20 A Well, if she's on the right side,</p> <p>21 and the fact that there was an easy access for</p> <p>22 fire on the left side, would -- were the two</p> <p>23 main things that led me to that opinion.</p> <p>24 Q Were you able to rule out the</p> <p>25 possibility that she was thrown to the</p>	80	<p>1 feel that it's likely there was contact with</p> <p>2 the tire. And if you have a vehicle --</p> <p>3 following a vehicle that hits a tire, it tends</p> <p>4 to drive that into the vehicle downwards, not</p> <p>5 upwards. So if there were vehicle-to-tire</p> <p>6 contact, you know, the vehicle would tend to</p> <p>7 get compressed, not raised up.</p> <p>8 Q How many total impacts were there</p> <p>9 in this accident?</p> <p>10 A My opinion is there was the initial</p> <p>11 impact of the two vehicles. We talked about --</p> <p>12 actually, I did an analysis. I looked at</p> <p>13 separation, and my opinion is the vehicle</p> <p>14 separated. The FHWA tests have separation</p> <p>15 times of 200 milliseconds to 150 milliseconds,</p> <p>16 which if you -- is a matter of feet.</p> <p>17 And in the Chrysler tests, which</p> <p>18 were granted a lower speed, but the separation</p> <p>19 occurs within six to ten feet. And</p> <p>20 the KinetiCorp guys say that it's -- it's</p> <p>21 30 feet to the Subaru.</p> <p>22 So my opinion is the vehicles</p> <p>23 actually were separated by a fairly large</p> <p>24 distance, and then the Jeep hit the Subaru and</p> <p>25 was then struck again by the Toyota. So that</p>
79	<p>1 passenger's side seat as a result of the crash?</p> <p>2 A Yeah. I did -- I did read that</p> <p>3 report and it -- yeah, it didn't make complete</p> <p>4 sense to me. It -- first of all, it assumes</p> <p>5 that she didn't have her seat belt on. And it</p> <p>6 just -- in general, my subjective feel for the</p> <p>7 dynamics would make it difficult for her to</p> <p>8 have been thrown over there.</p> <p>9 Q What about the dynamics would have</p> <p>10 made it difficult for her to be thrown to the</p> <p>11 passenger's seat?</p> <p>12 A Well, I don't agree with the</p> <p>13 25-degree roll that happened. And yeah, it's</p> <p>14 just -- typically, it's very difficult to have</p> <p>15 a passenger thrown across a seat like that.</p> <p>16 Q Why don't you agree with the</p> <p>17 25-degree roll?</p> <p>18 A Well, because when a -- and this</p> <p>19 is -- there's a number of conflicts in the</p> <p>20 defense reconstruction. They talk about the</p> <p>21 vehicle lifting, but they also talk about wheel</p> <p>22 gouges into the road, so that's kind of a</p> <p>23 conflict.</p> <p>24 If you have a vehicle contacting --</p> <p>25 the way the structure deformed on the Jeep, I</p>	81	<p>1 would be three separate impacts.</p> <p>2 Q Okay. What happened to the Jeep</p> <p>3 after the third impact?</p> <p>4 A I think the third impact is the one</p> <p>5 that spun it a 180.</p> <p>6 Q Okay. Is there anything that you</p> <p>7 learned, either through your vehicle inspection</p> <p>8 or your investigation of this case, that leads</p> <p>9 you to believe that Ms. Kline was wearing her</p> <p>10 seat belt?</p> <p>11 A Historically, she was a seat belt</p> <p>12 user. I forget if I read that in some</p> <p>13 statement. Maybe from her husband?</p> <p>14 Q Okay.</p> <p>15 A But I got the impression that she</p> <p>16 was historically a seat belt user and that's --</p> <p>17 really with the fire damage, that's about all</p> <p>18 that you can go by.</p> <p>19 Q Okay. So there was no physical</p> <p>20 evidence that she had her seat belt on?</p> <p>21 A None that I could find.</p> <p>22 Q All right.</p> <p>23 A None that I think anybody could</p> <p>24 find.</p> <p>25 Q Okay. Do you have any</p>

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1 biomechanical engineering training?
 2 A No, I don't.
 3 Q Moving further down Paragraph 8,
 4 "Analysis and Discussion." The first full
 5 sentence, what do you mean by "poor location"?
 6 A Well, as I've answered earlier,
 7 the -- you know, generally there's nothing
 8 wrong with the fuel tank in the rear, but it's
 9 not my first choice. I think I would always
 10 try to mount a tank forward of the rear axle.
 11 If you were mounting a tank rear of the rear
 12 axle, there's a number of things you need to
 13 insure, that the vehicle has good structure to
 14 protect the tank.
 15 Q Okay. And that's where you say
 16 sufficient protection, right?
 17 MS. DeFILIPPO: Objection to form.
 18 Q That's what you're talking about?
 19 A Yes, that's what I'm talking about,
 20 yes.
 21 Q Okay. What sufficient protection
 22 do you mean with regard to this Jeep?
 23 A Well, in this Jeep, you know, a
 24 couple things. One, the structure of the rear
 25 frame rails doesn't absorb energy in a --

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1 really a proper manner to protect the tank.
 2 And there's no localized protection. The fact
 3 that the tank -- the tank could be exposed to
 4 an impact, that it should have some -- some
 5 local protection, such as a skid plate as we
 6 talked about in this case.
 7 MR. STOCKWELL: Let me stop you for
 8 a second. I want to talk with Bob before he
 9 goes. Let's take a five-minute break.
 10 (Recess taken.)
 11 (Mr. Banta leaves.)
 12 BY MR. STOCKWELL:
 13 Q All right. In either of your
 14 reports, did you address the structure of the
 15 rear frame rail?
 16 A I think in the vein that the hitch
 17 or that -- what we've called that "Estes" or
 18 blocker bracket, and improves the structure of
 19 the rear rail. And I may have implied that
 20 rather than stated it, though.
 21 Q The blocker bracket, that was
 22 installed on '97 Jeep Grand Cherokees, correct?
 23 A Yeah, I think that's correct.
 24 MS. DeFILIPPO: Wait a minute.
 25 What are you calling a blocker bracket? Are

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1 you mixing up a blocker bracket and reinforcing
 2 bracket? Because they're two things.
 3 MR. STOCKWELL: I may be mixing
 4 them up.
 5 MS. DeFILIPPO: Okay. So why don't
 6 we -- so my objection is to form and clarity.
 7 MR. STOCKWELL: Okay.
 8 BY MR. STOCKWELL:
 9 Q Why don't we back up for a second.
 10 Structure of frame rails. You're talking about
 11 Estes's testimony, I assume?
 12 A Well, as far as the bracket that
 13 we've been calling the Estes bracket.
 14 Q Okay. What is the Estes bracket?
 15 A Well, it's basically just the left
 16 side portion of a trailer hitch.
 17 Q Okay.
 18 A So it's one component of the
 19 trailer hitch. And when it's bolted to the
 20 bottom of a frame rail, it helps to stabilize
 21 and add a lot of structure to that rail.
 22 Q All right. And the Estes bracket,
 23 what vehicles was that bracket installed on?
 24 A That was '97 and later.
 25 Q Okay. Have you done any scientific

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1 analysis of the structure of the '96 Jeep Grand
 2 Cherokee frame rails?
 3 A I have not done any structural
 4 analysis. I've just done comparative analysis
 5 of the rail itself versus the rail with the
 6 trailer hitch or bracket attached to it.
 7 Q All right. And tell me about the
 8 differences. What have you observed?
 9 A The -- when you bolt on the bracket
 10 or the hitch, it -- across that span, the frame
 11 rail doesn't bend. It stays straight and
 12 more stable.
 13 Without the bracket, the frame rail
 14 can bend and it can bend like -- like it
 15 typically bends upwards. So the bending moment
 16 is not providing you, you know, good protection
 17 to the tank. And it also -- the main point is
 18 the -- when that rail bends up, it takes the
 19 fuel filler with it and you have a lot of
 20 relative motion between the fuel filler and the
 21 tank.
 22 And that's one of the things in
 23 Chrysler's design criteria, I think in Jimmy
 24 Fishback's report, that you have to be
 25 cognizant of relative motion between the tank

86	<p>1 and the structure. And without the bracket or 2 the hitch, there's a lot of relative motion. 3 Q Where along the left rear frame 4 rail was the Kline -- where was it bent in the 5 Kline Jeep? 6 A Well, it was bent at a number of 7 places, and it was hard to get at to actually 8 determine where it was bent. But it was, I'd 9 say, more -- it was bent upwards near the front 10 and downwards near the back, so more like a 11 Z-shaped bend. 12 Q Where in the back? 13 A Well, the back part's hard to see 14 just because the rest of the car is crushed 15 around it. 16 Q Can you tell me how far away it was 17 bent downward from the hole where the fuel 18 filler hose passed through? 19 A No. Not as I sit here right now, I 20 can't. 21 Q Did you take any photographs at 22 your inspection? 23 A Yes, I did. 24 Q Did you take any videos? 25 A No.</p>	88	<p>1 Q If I am, you could tell me. But do 2 you understand my question? 3 A I do. And I think it's a little 4 bit mischaracterized. 5 Q Okay. 6 A Because you -- if you have a 7 trailer hitch, then the Estes bracket is 8 redundant. 9 Q Okay. 10 A So having a bracket or the hitch 11 fulfills one function, and having a skid plate 12 provides additional protection for any 13 localized impact. 14 And I would prefer the hitch rather 15 than the bracket because the bracket is kind of 16 just the minimum you want on that one side 17 frame rail to help stabilize it. If you have 18 the trailer hitch, it's a much more massive 19 device and it actually connects both frame 20 rails. So that gives you even more stability 21 by sharing the load across the vehicle. 22 Q Okay. If the Kline vehicle was 23 equipped with a trailer hitch and a skid plate, 24 would you find that vehicle to be crashworthy, 25 in your opinion?</p>
87	<p>1 Q All right. So as far as protection 2 goes, you've mentioned the skid plate, you've 3 mentioned the Estes bracket. Is there anything 4 else? 5 A Well, the trailer hitch would also 6 have improved the situation. We were talking 7 just protection and not -- not all the 8 alternative designs? 9 Q Right now I'm talking about 10 protection for the design of the fuel tank in 11 the Kline Jeep Grand Cherokee. 12 So I think you've said the location 13 itself is not necessarily a problem. It needs 14 the protection of the Estes bracket, the skid 15 plate, and the trailer hitch? 16 MS. DeFILIPPO: Wait. Objection to 17 form. I don't believe that's what he's saying. 18 MR. STOCKWELL: Well, let him 19 answer the question. I'm not -- 20 MS. DeFILIPPO: Well, I'm not 21 telling him what to say. I'm objecting to form 22 because you mischaracterized what he said. 23 MR. STOCKWELL: I don't think I 24 am. 25 BY MR. STOCKWELL:</p>	89	<p>1 A I feel that it would have performed 2 a lot better; although, when you're talking 3 crashworthy, that goes beyond the protection we 4 were talking about. So we were talking 5 protection. 6 If you move to crashworthy, I would 7 still have liked to have seen the fuel filler 8 routing that Chrysler went to for the '99 9 through 2004 vehicles. 10 And that change was -- that change 11 was made in '99 to the fuel filler routing, and 12 you know, caused a substantial reduction in the 13 incident rate of fires in rear impact 14 collisions. 15 So I think that's really good 16 historical evidence that that design change was 17 a good improvement. I don't think it was 18 enough. 19 So that rear-mounted tank, I think, 20 should have rerouted fuel filler, it should 21 have a bracket or hitch, and it should have a 22 skid plate. 23 It's just -- I can't say the 24 relative contributions of each of those. Does 25 one of them fix the problem, half the problem,</p>

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1 or three-quarters of it? It's hard to say.
 2 But they all -- they all have a definite
 3 improvement. You put them all together and
 4 there's a lot of synergy.
 5 Q Okay. If Chrysler made the Kline
 6 vehicle with the filler hose under the frame
 7 rail and installed a trailer hitch and a skid
 8 plate, would you have a problem with them
 9 putting that vehicle on the road?
 10 MS. DeFILIPPO: Wait a minute. Are
 11 you asking him whether he'd still have a
 12 problem with the location of the tank?
 13 MR. STOCKWELL: The vehicle itself
 14 and everything.
 15 MS. DeFILIPPO: Wait.
 16 Q Do you understand the question
 17 or --
 18 MS. DeFILIPPO: I have an objection
 19 to the form.
 20 Q -- not?
 21 A Yeah.
 22 MS. DeFILIPPO: If you're focusing
 23 on those fixes, then I'm okay with the form.
 24 I'm trying not to say anything.
 25 MR. STOCKWELL: Yeah, that's what

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1 I'm focusing on.
 2 MS. DeFILIPPO: But if you're
 3 saying that then his opinion wouldn't have
 4 anything to do with the location of the tank,
 5 then I have a problem with the form.
 6 MR. STOCKWELL: Well, just listen
 7 carefully to my question.
 8 BY MR. STOCKWELL:
 9 Q If the Kline vehicle, the fuel --
 10 I'll change the question -- the fuel filler
 11 hose was not routed through the frame rail, but
 12 it was installed, the fuel tank, there was a
 13 trailer hitch and there was a skid plate
 14 installed on the Kline vehicle, would you have
 15 a problem with Chrysler putting that vehicle on
 16 the road?
 17 A I mean, I would still like to see
 18 the routing changed and perhaps even the fuel
 19 filler having more of a section of steel with
 20 it than rubber. It's mostly a rubber hose.
 21 And that's kind of -- that's my
 22 kitchen sink approach, that those are all
 23 things that I feel contribute greatly to
 24 improving the safety.
 25 If you left one of those off, would

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1 it still be quite as good? I just -- I can't
 2 answer that, so... I think that's -- I would
 3 like to see a skid plate, hitch or bracket, and
 4 rerouting of the hose, too.
 5 Q Okay. And if it had those things,
 6 would you write a report saying that it was
 7 defectively designed?
 8 A Well, if there were some type of
 9 crash where it should have performed well and
 10 didn't, then, you know, it would depend on, you
 11 know, analyzing that.
 12 Q So it's crash dependent whether a
 13 vehicle's defectively designed?
 14 A Well, in certain cases, if you have
 15 a type of crash where a car should have
 16 performed well and it didn't, then I guess you
 17 would say it's crash dependent.
 18 Q Okay. And you said you looked at
 19 the Center For Auto Safety's website. Do you
 20 know what kind of recall the Center For Auto
 21 Safety is asking the government for on this
 22 Jeep Grand Cherokee?
 23 A Yeah, they're asking for a recall.
 24 I'm not sure I recall specifically which
 25 components.

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1 Q Are they asking them to take all
 2 two million vehicles off the road, or are they
 3 asking for something else?
 4 A I think they asked for a recall,
 5 but I don't recall reading what their specific
 6 recommendation was or if they even had one.
 7 Q Did you look at Clarence Ditlow's
 8 deposition transcript?
 9 A No, I have not.
 10 Q Did you know he was deposed in this
 11 case?
 12 A Yes, I did.
 13 Q Do you have a copy of the
 14 transcript?
 15 A No, I don't. I think that was just
 16 a recent deposition.
 17 Q Yeah, it was.
 18 A Yeah.
 19 Q It wasn't too long ago.
 20 MS. DeFILIPPO: Are these mine?
 21 Yours?
 22 THE WITNESS: That one's yours.
 23 (Discussion held off the record.)
 24 Q And on the bottom of that page,
 25 again, in the section "fuel tank" -- are you

94	<p>1 still there? All the way at the bottom?</p> <p>2 MS. DeFILIPPO: Where are you now?</p> <p>3 MR. STOCKWELL: I'm sorry.</p> <p>4 Section 8. "Analysis and discussion."</p> <p>5 A Yes.</p> <p>6 Q It says -- you're there?</p> <p>7 A Yeah.</p> <p>8 Q It says, "The fuel tank was in a</p> <p>9 poor location, did not have sufficient</p> <p>10 protection from this foreseeable type of</p> <p>11 impact."</p> <p>12 What about this impact was</p> <p>13 foreseeable?</p> <p>14 MS. DeFILIPPO: I'm sorry. What</p> <p>15 about this what?</p> <p>16 MR. STOCKWELL: Impact was</p> <p>17 foreseeable.</p> <p>18 A Well, let's see. It's one pretty</p> <p>19 basic --</p> <p>20 MS. DeFILIPPO: Objection to the</p> <p>21 form, but you can answer it.</p> <p>22 A It's a pretty basic impact, getting</p> <p>23 rear ended.</p> <p>24 Q Okay. Is the speed foreseeable,</p> <p>25 too?</p>	96	<p>1 Q Right.</p> <p>2 A -- as your speed. So the vehicle</p> <p>3 going 100 miles an hour --</p> <p>4 Q Right.</p> <p>5 A -- hitting something going some</p> <p>6 other speed.</p> <p>7 Q Right.</p> <p>8 MS. DeFILIPPO: At the time of the</p> <p>9 impact, 100 miles an hour, is that what you</p> <p>10 were --</p> <p>11 THE WITNESS: Yes.</p> <p>12 Q What about 80? Is that</p> <p>13 foreseeable?</p> <p>14 A Well, I guess, you know, all those</p> <p>15 are foreseeable, but maybe they're not all, you</p> <p>16 know, reasonable.</p> <p>17 Q What do you mean "reasonable"?</p> <p>18 A Well, at some -- you know, at some</p> <p>19 point, the impact speed is going to cause some</p> <p>20 other type of injury for the occupant. So</p> <p>21 really, rather than the speeds -- and, you</p> <p>22 know, I could see where we're going. We're</p> <p>23 going to get into, you know, this speed.</p> <p>24 But to me, it's not necessarily the</p> <p>25 speeds. You have -- you have the impact mode,</p>
95	<p>1 A I believe it is. It's a freeway</p> <p>2 speed. I mean, there's some -- yeah. I think</p> <p>3 it's foreseeable.</p> <p>4 Q Would a 100-mile-an-hour rear-end</p> <p>5 impact be foreseeable?</p> <p>6 A I think at 100, you're probably</p> <p>7 exceeding the range of foreseeable.</p> <p>8 Q All right. What about a</p> <p>9 90-mile-an-hour rear-end impact? Would that be</p> <p>10 foreseeable?</p> <p>11 A I'd probably say probably not.</p> <p>12 Q How about 80?</p> <p>13 MS. DeFILIPPO: Are we talking</p> <p>14 about closing speeds or vehicle traveling</p> <p>15 speeds?</p> <p>16 MR. STOCKWELL: Impact speed.</p> <p>17 MS. DeFILIPPO: So closing speed.</p> <p>18 You're talking about closing speed? The speed</p> <p>19 that one vehicle hits another --</p> <p>20 MR. STOCKWELL: Yes.</p> <p>21 MS. DeFILIPPO: -- at the time of</p> <p>22 impact?</p> <p>23 MR. STOCKWELL: Yes.</p> <p>24 A I was assuming the speed of the</p> <p>25 striking vehicle --</p>	97	<p>1 which is a straight rear impact.</p> <p>2 My judgment is that you have to</p> <p>3 look at the injuries of the person in the car</p> <p>4 that -- I mean, assuming we're talking about a</p> <p>5 fire. So the person in the car had suffered</p> <p>6 some type of serious orthopedic injury, then</p> <p>7 the fire should not -- should not have caused</p> <p>8 their injury or death.</p> <p>9 So if it was a car that actually</p> <p>10 can be hit at 100 miles an hour and the</p> <p>11 occupants are fine, then a fire's a problem.</p> <p>12 Q Okay. I just want to make sure I'm</p> <p>13 clear, though. When you say "foreseeable type</p> <p>14 of impact," you're talking about a rear-end</p> <p>15 collision, in general?</p> <p>16 A Correct.</p> <p>17 Q All right. Is a rear-end collision</p> <p>18 at 70 miles an hour capable of causing death to</p> <p>19 the occupant of the vehicle?</p> <p>20 A Typically, if a car -- car -- no, I</p> <p>21 would say you should survive a 70-mile-an-hour</p> <p>22 impact.</p> <p>23 Q Is a 70-mile-an-hour impact capable</p> <p>24 of causing severe injury to the occupant?</p> <p>25 A If it does, then I would suspect</p>

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1 there was some other defect in the vehicle.
 2 Q Okay. So then a 70-mile-per-hour
 3 rear-end impact should not cause severe injury
 4 to the occupants; is that what you're saying?
 5 A That's my belief. And also, in
 6 this case, I think that was the case. I don't
 7 think that Mrs. Morris Kline had any orthopedic
 8 injuries that would have caused her death.
 9 Q No, I get that that's your
 10 position, but I want to be clear.
 11 Are you saying that, in general, a
 12 70-mile-an-hour rear-end impact should not
 13 cause severe injuries to any of the occupants?
 14 MS. DeFILIPPO: Wait a minute. He
 15 didn't say that.
 16 Q Well, I'll ask you, then.
 17 MS. DeFILIPPO: No. Wait a minute.
 18 He already asked -- you were asking --
 19 MR. STOCKWELL: He can testify for
 20 himself.
 21 MS. DeFILIPPO: Wait. You asked
 22 and he answered. He said without another
 23 defect.
 24 MR. STOCKWELL: Okay.
 25 MS. DeFILIPPO: That's what he

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1 said.
 2 Q But you qualified your answer, so I
 3 just want to make sure you're clear.
 4 MS. DeFILIPPO: Well, you didn't
 5 change the question, is what I'm saying.
 6 MR. STOCKWELL: I'm changing the
 7 question right now.
 8 MS. DeFILIPPO: Okay.
 9 MR. STOCKWELL: I'm going to change
 10 the question right now.
 11 BY MR. STOCKWELL:
 12 Q In a 70-mile-an-hour rear-end
 13 impact, is it your testimony that the occupants
 14 of that vehicle should not sustain a severe
 15 injury?
 16 MS. DeFILIPPO: In any
 17 70-mile-an-hour impact?
 18 MR. STOCKWELL: In any
 19 70-mile-an-hour rear impact.
 20 MS. DeFILIPPO: Regardless of
 21 defect?
 22 MR. STOCKWELL: I'm not talking
 23 about defects. I'm saying in general.
 24 MS. DeFILIPPO: Well, but he's
 25 answered that it -- without a defect. That's

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1 what his answer --
 2 MR. STOCKWELL: Well, let him
 3 answer it.
 4 MS. DeFILIPPO: Well, but he did.
 5 MR. STOCKWELL: No.
 6 MS. DeFILIPPO: The record will
 7 reflect that he did.
 8 MR. STOCKWELL: Well, let me --
 9 MS. DeFILIPPO: So then I'm
 10 objecting to this. Asked and answered.
 11 MR. STOCKWELL: Object and let him
 12 answer the question, please.
 13 MS. DeFILIPPO: Go ahead.
 14 A I think, like I said, if there are
 15 no other defects that may be causing an injury,
 16 then it's likely that you could survive a
 17 70-mile-an-hour impact. It may not be in every
 18 car or every combination of vehicles.
 19 I think, you know, a Hyundai Accent
 20 getting rear ended by a Dodge 4500 truck that's
 21 going 70 miles an hour, you know, that may not
 22 be survivable in the Hyundai for orthopedic
 23 reasons.
 24 Q Okay. All right. If I look
 25 through the flyers right now, do you think I

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1 could find cases where there was a
 2 30-mile-an-hour rear-end impact and an occupant
 3 either suffered a severe life-threatening
 4 injury and/or died?
 5 A I believe you could, yes.
 6 Q And if I researched accident
 7 statistics, I could probably find
 8 75-mile-an-hour rear-end collisions where the
 9 occupant walked away?
 10 A I think it's possible you could,
 11 yes.
 12 Q I want to make sure I understand,
 13 on the next page, Subsection 2, "Vehicle
 14 Structure."
 15 MR. GILL: Matt, are you still on
 16 the first preliminary report?
 17 MR. STOCKWELL: I'm still on his
 18 first report, yeah.
 19 MR. GILL: Okay. Thank you.
 20 Q Just let me know when you're done
 21 reading that section.
 22 A Okay.
 23 Q I want to make sure that I'm
 24 understanding. Are you saying that the opening
 25 in the floor pan was a design or manufacturing

102	<p>1 defect?</p> <p>2 A Yes.</p> <p>3 Q Why do you say that?</p> <p>4 MS. DeFILIPPO: Wait a minute. Was</p> <p>5 your question the design or? What was your</p> <p>6 question?</p> <p>7 MR. STOCKWELL: Yeah. The design</p> <p>8 or.</p> <p>9 MS. DeFILIPPO: "Or"?</p> <p>10 MR. STOCKWELL: Yeah.</p> <p>11 MS. DeFILIPPO: I thought you said</p> <p>12 "designer."</p> <p>13 MR. STOCKWELL: Sorry.</p> <p>14 MS. DeFILIPPO: I didn't --</p> <p>15 MR. STOCKWELL: Yeah. I said it</p> <p>16 quickly.</p> <p>17 BY MR. STOCKWELL:</p> <p>18 Q Which one or both?</p> <p>19 A You know, I didn't look at it close</p> <p>20 enough to know which one. You know, if there</p> <p>21 were some missing spot welds, then it would be</p> <p>22 a manufacturing defect, or it possibly could</p> <p>23 be, but I didn't actually count the welds. But</p> <p>24 it's, you know, either a design or</p> <p>25 manufacturing defect.</p>	104	<p>1 Structure," did you find any physical evidence</p> <p>2 in the vehicle that the fire was more severe</p> <p>3 closer to the driver's side door?</p> <p>4 A I think since the vehicle was</p> <p>5 pretty much totally consumed, that -- and it's</p> <p>6 not part of my analysis that I was doing.</p> <p>7 That's more of a cause-and-origin-type thing.</p> <p>8 So I didn't see any of that and I -- I'm not</p> <p>9 sure I read that in anybody's report or not.</p> <p>10 Q The only reason I'm asking you is</p> <p>11 because there's a line in here that says, "This</p> <p>12 makes sense as the fire was likely more severe</p> <p>13 close to the left door due to the massive</p> <p>14 opening in the structure in this area allowing</p> <p>15 fire through."</p> <p>16 A Yeah. And it's just -- if you have</p> <p>17 a great big hole near an area where there was a</p> <p>18 fuel leak and you're going to have a fire get</p> <p>19 in, and if you hadn't had the hole, the fire</p> <p>20 wouldn't get in. It's just kind of a general</p> <p>21 statement, not taking a lot of analysis.</p> <p>22 Q Were any of the windows broken as a</p> <p>23 result of the impact on the Jeep Grand</p> <p>24 Cherokee?</p> <p>25 A Well, they're broken now. I'm not</p>
103	<p>1 Q You're just not sure which one?</p> <p>2 A I didn't analyze it close enough to</p> <p>3 determine that.</p> <p>4 Q What caused the opening in the</p> <p>5 floor pan?</p> <p>6 A Well, the poor structural</p> <p>7 performance of the vehicle. I think the way</p> <p>8 the frame rails failed and the load went into</p> <p>9 the vehicle, that it just caused an overload</p> <p>10 situation that failed the welds and opened up</p> <p>11 the hole.</p> <p>12 MR. STOCKWELL: Could you repeat</p> <p>13 that answer to me, Regina?</p> <p>14 (Answer read.)</p> <p>15 Q Do you know if the welds failed?</p> <p>16 A Well, the failure was at the weld.</p> <p>17 It appears that parent material pulled, so it's</p> <p>18 not a weld defect, but the failure is at the</p> <p>19 weld locations.</p> <p>20 Q Okay. But it's not necessarily a</p> <p>21 weld failure?</p> <p>22 A No. I don't believe it's a weld</p> <p>23 failure.</p> <p>24 Q All right. And turning back to</p> <p>25 this paragraph again, Paragraph 2, "Vehicle</p>	105	<p>1 sure if they were broken at the time. I think</p> <p>2 they probably weren't, or Susan might have been</p> <p>3 able to get out through a window, so...</p> <p>4 Q Do you know if the rear windshield</p> <p>5 was shattered as a result of the accident?</p> <p>6 A I'd say the rear lift gate -- it's</p> <p>7 likely it was shattered.</p> <p>8 Q Okay. Do you have any reason to</p> <p>9 believe that Susan Kline was conscious after</p> <p>10 the impact?</p> <p>11 A I believe she was. I don't think</p> <p>12 the impact was as severe as the reconstructions</p> <p>13 are leading everybody to believe.</p> <p>14 She didn't have any real orthopedic</p> <p>15 injuries that would have indicated that she was</p> <p>16 unconscious.</p> <p>17 Q How do you know she didn't have a</p> <p>18 concussion?</p> <p>19 A Well, I'm -- there were no -- no --</p> <p>20 I don't believe there were any skull injuries</p> <p>21 that she had.</p> <p>22 Q Why do you say that?</p> <p>23 A I -- it may have been something I</p> <p>24 read in the medical records.</p> <p>25 Q Do you think that she -- there</p>

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1 needs to be a fracture to the skull in order to
 2 have a concussion?
 3 A Probably not.
 4 Q Do you have any --
 5 (Discussion held off the record.)
 6 MR. STOCKWELL: Could you just go
 7 back to -- read me back the answer he gave me
 8 when I asked him if he has any reason to
 9 believe that she was conscious after impact.
 10 MS. DeFILIPPO: Boy, I missed that
 11 whole question.
 12 (Record read:
 13 "Q Okay. Do you have any reason to
 14 believe that Susan Kline was conscious after
 15 the impact?
 16 "A I believe she was. I don't think
 17 the impact was as severe as the reconstructions
 18 are leading everybody to believe. .
 19 She didn't have any real orthopedic
 20 injuries that would have indicated that she was
 21 unconscious.")
 22 BY MR. STOCKWELL:
 23 Q Have you taken any steps to assess
 24 the magnitude of any forces that were imparted
 25 on her body as a result of the accident?

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1 MS. DeFILIPPO: Magnitude of
 2 forces?
 3 MR. STOCKWELL: Yeah.
 4 MS. DeFILIPPO: Imparted on the
 5 body?
 6 MR. STOCKWELL: I can take out
 7 "magnitude."
 8 MS. DeFILIPPO: I don't know what
 9 you mean by that.
 10 BY MR. STOCKWELL:
 11 Q Have you taken any steps to assess
 12 the forces that were exerted on the body as a
 13 result of the accident?
 14 MS. DeFILIPPO: I don't --
 15 Q -- if any?
 16 MS. DeFILIPPO: Could you repeat
 17 that?
 18 Q Have you taken any steps to assess
 19 the forces imparted upon Ms. Kline's body as a
 20 result of the impact, if any?
 21 A What I've done is looked at the
 22 reconstructions, and I've got a feeling that
 23 the Delta Vs are overstated. I think perhaps
 24 the Delta Vs were more in the 20- to
 25 25-miles-an-hour range. And the rear-end

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1 collision in that of range is a, you know,
 2 walk-away-type accident. It's typical not
 3 something that would cause an injury.
 4 And also the fact that the other
 5 vehicles in the injury -- the occupants, were
 6 fine. I think maybe Morgan-Alcala had some
 7 burns, but orthopedically they were fine. And
 8 so, in a general sense, they were subjected to
 9 similar types of loads and they were fine,
 10 though.
 11 So, yeah, those are my reasons for
 12 thinking that she should not have really had
 13 any injuries or unconsciousness.
 14 Q Okay. Let me go to the next
 15 paragraph, "Rear Underrun." If you could, just
 16 read through that real quick and let me know
 17 when you're done.
 18 A Okay.
 19 Q So you acknowledge here that the
 20 vehicle was designed with off-road
 21 considerations as primary factors which
 22 resulted in a relatively high-mounted bumper.
 23 Is there anything wrong with the
 24 high-mounted bumper?
 25 A Not in itself, provided you've got

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1 enough protection for the fuel tank.
 2 Q Are there -- does FMVSS have
 3 requirements for bumper heights?
 4 A Yes, they do.
 5 Q Did this vehicle comply with those
 6 bumper height requirements?
 7 A I'm just assuming it did. I didn't
 8 actually go measure it, but it's a --
 9 Q Okay.
 10 A -- pretty basic thing that I'm
 11 assuming the Chrysler guys got right.
 12 Q And you talk about egress in the
 13 next paragraph.
 14 A Correct.
 15 Q And you note that the passenger
 16 door was jammed shut. And again, your
 17 statement there, that she would have had a
 18 chance to exit the vehicle away from the fire
 19 if the door was not jammed, that's based again
 20 on your assumption that she was conscious after
 21 impact?
 22 A That's correct.
 23 Q In the next section, "Impact
 24 Severity," what is your source for the
 25 statement? And I'm going to read it. "It is

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1 recognized and accepted that the impact" -- "on
 2 impact of a magnitude to cause a fire, should
 3 also be severe enough to cause life-threatening
 4 orthopedic injuries."
 5 A That's really a GM philosophy.
 6 General Motors operated that way from back in
 7 the '70s, I believe. And they're the only ones
 8 who really stated that publicly. But I think
 9 it's a, you know, kind of an underlying design
 10 philosophy overall for vehicles.
 11 Q You didn't work for GM, did you?
 12 A Yes, I did. When I went to General
 13 Motors Institute, that -- part of that was
 14 working as an engineer --
 15 Q Okay.
 16 A -- in a co-op program.
 17 Q Were there any publications that
 18 you're aware of at the time you were at General
 19 Motors that stated that as a design principle?
 20 A Well, I wasn't -- not when I was at
 21 General Motors, but I came across a document
 22 later which was a presentation from General
 23 Motors, a guy named Ron Elwell, and I've got
 24 that presentation here.
 25 And then this is also -- GM

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1 stipulated in court, in a different fire case,
 2 that that's their philosophy.
 3 Q All right. Has any government,
 4 rule-making body adopted that standard?
 5 A I don't believe so.
 6 Q Can you tell me a car that meets
 7 that standard?
 8 A I'd say quite a few cars meet that
 9 standard.
 10 Q Like what?
 11 A Well, I haven't seen every car in
 12 every crash situation, so... In fact, most of
 13 them that I look at are cars that don't meet
 14 that. And I'm sure there's plenty that do.
 15 And I would suspect most GM cars
 16 do, since they have it as a, you know, written
 17 goal that they have within their company.
 18 Q So would you be surprised, then, to
 19 find a GM -- an accident involving a GM vehicle
 20 where the occupant did not suffer significant
 21 orthopedic injuries but still died because of a
 22 fire?
 23 MS. DeFILIPPO: Resay that again?
 24 I didn't hear.
 25 (Question read.)

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1 A It would surprise me, and I think
 2 it can still happen because there's no such
 3 thing as a perfect car. But I think that GM --
 4 it's possible they may have lower rates of
 5 fires in severe accidents.
 6 Q Are orthopedic injuries the leading
 7 cause of fatalities in automobiles?
 8 MS. DeFILIPPO: If you know.
 9 Q Yeah, if you know. Every question
 10 I ask you here is if you know.
 11 A I -- I haven't studied the
 12 statistics on that, so I -- I don't know.
 13 MS. DeFILIPPO: Can we stop for a
 14 second?
 15 MR. STOCKWELL: Absolutely.
 16 (Discussion held off the record.)
 17 MR. STOCKWELL: I'm ready if you
 18 guys are.
 19 MS. DeFILIPPO: Go ahead.
 20 B MR. STOCKWELL:
 21 Q Looking further down in Number 6,
 22 the Daimler-Chrysler crash test program
 23 strategy?
 24 A Yes.
 25 Q Are you aware of how much fuel

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1 leakage Chrysler will permit in their 301
 2 tests?
 3 A Well, their internal goal is 0,
 4 even though the 301 standard allows an ounce of
 5 fuel under certain conditions. So Chrysler --
 6 as far as a leakage amount standpoint, they are
 7 more strict than the government standard.
 8 Q How much does the 301 or how much
 9 did the 301 test -- how much fuel did the 301
 10 test permit to leak in the early to mid '90s?
 11 A I would refer back to the standard.
 12 I think it's one ounce per minute during the
 13 rollover test. It's -- but I think --
 14 Q And that's enough to cause a fire,
 15 right?
 16 A Yes, it is.
 17 Q Is there any written material in
 18 the industry published standards, authoritative
 19 treatises, that state the FMVSS testing should
 20 be conducted for the worst-case scenario?
 21 MS. DeFILIPPO: Is there any --
 22 A I'm not sure I understand that
 23 question.
 24 MS. DeFILIPPO: Yeah, I didn't --
 25 I'm objecting to form on that, also.

<p style="text-align: right;">114</p> <p>1 Q Okay.</p> <p>2 A Oh, sorry. You're referring to my</p> <p>3 terminology.</p> <p>4 Q Yeah, where you say -- I'll read it</p> <p>5 to you to be fair.</p> <p>6 A Yeah.</p> <p>7 Q "For example, Ford runs a side</p> <p>8 impact test with the moving barrier aligned</p> <p>9 with the fuel filler to provide a worst-case</p> <p>10 scenario."</p> <p>11 Is there any government standard</p> <p>12 that requires that?</p> <p>13 A No. That's a Ford internal test</p> <p>14 where they -- they chose to do that to go above</p> <p>15 and beyond. I believe at some point that was a</p> <p>16 proposed update to 301 pretty early, back in</p> <p>17 the '80s, that they were -- wanted to run a</p> <p>18 side impact like this.</p> <p>19 Q Uh-huh.</p> <p>20 A It didn't become part of the</p> <p>21 standard, but Ford adopted it as -- as their</p> <p>22 own internal test.</p> <p>23 Q Okay. How long after the Pinto</p> <p>24 recall did they adopt this test?</p> <p>25 A I -- that, I don't know. I know we</p>	<p style="text-align: right;">116</p> <p>1 that report, at the top, where you say, "I have</p> <p>2 not had the opportunity to review the</p> <p>3 configuration used for FMVSS-301 certification</p> <p>4 testing or if all options were tested."</p> <p>5 MS. DeFILIPPO: I'm sorry. Where</p> <p>6 are you reading?</p> <p>7 MR. STOCKWELL: It's at the top of</p> <p>8 the last page of the original report.</p> <p>9 A Can you read it again? I'm not</p> <p>10 sure I read it that way.</p> <p>11 MS. DeFILIPPO: Yeah, I don't think</p> <p>12 you read -- yeah, I don't think you read what</p> <p>13 you just said, but go ahead. Read it again.</p> <p>14 MR. STOCKWELL: Let me read it</p> <p>15 again, and tell me if I'm -- am I looking at</p> <p>16 the same thing as you are?</p> <p>17 MS. DeFILIPPO: Well, that's why we</p> <p>18 want you to read it again --</p> <p>19 MR. STOCKWELL: Okay.</p> <p>20 MS. DeFILIPPO: -- because we're on</p> <p>21 a different page.</p> <p>22 MR. STOCKWELL: "Since</p> <p>23 discovery --"</p> <p>24 MS. DeFILIPPO: No, we're</p> <p>25 definitely on a different page.</p>
<p style="text-align: right;">115</p> <p>1 ran that when I was at Ford on the GT, but I</p> <p>2 don't -- I don't know when they adopted it.</p> <p>3 Q Do Ford or GM have the zero leakage</p> <p>4 requirement that Chrysler does in 301 testing?</p> <p>5 A I'm not sure if they do or not.</p> <p>6 Q Does any other manufacturer have</p> <p>7 the zero leakage requirement that Chrysler</p> <p>8 does, to your knowledge?</p> <p>9 A I haven't studied what every</p> <p>10 manufacturer does, so I -- I couldn't say.</p> <p>11 Q Okay. Were you involved in 301</p> <p>12 testing at either Ford or GM?</p> <p>13 A I was involved at Ford and</p> <p>14 Chrysler, not GM.</p> <p>15 Q All right. And do you know, from</p> <p>16 your time at Ford, whether they had that zero</p> <p>17 leakage policy?</p> <p>18 A I don't recall if that was the</p> <p>19 criteria. I would have held it up as -- as my</p> <p>20 program criteria.</p> <p>21 In other words, if we had any leaks</p> <p>22 at all, I would have investigated it. But I</p> <p>23 don't recall if Ford had that as a strict</p> <p>24 standard internally or not.</p> <p>25 Q Okay. Looking on the last page of</p>	<p style="text-align: right;">117</p> <p>1 THE WITNESS: No, no. He's -- he's</p> <p>2 two sentences.</p> <p>3 MS. DeFILIPPO: Oh, you're going a</p> <p>4 couple sentences down. All right. Go ahead.</p> <p>5 MR. STOCKWELL: Yeah.</p> <p>6 MS. DeFILIPPO: All right.</p> <p>7 BY MR. STOCKWELL:</p> <p>8 Q "Since discovery is not complete in</p> <p>9 this matter, I have not had the opportunity to</p> <p>10 review the configuration used for FMVSS 301</p> <p>11 certification testing or if all options were</p> <p>12 tested."</p> <p>13 Do you know if FMVSS requires all</p> <p>14 iterations of a vehicle to be tested?</p> <p>15 MS. DeFILIPPO: But -- wait a</p> <p>16 minute. Are you -- I don't know why -- I'm</p> <p>17 objecting to the form because --</p> <p>18 MR. STOCKWELL: Okay.</p> <p>19 MS. DeFILIPPO: -- I think the</p> <p>20 context in which you just read this has to do</p> <p>21 with Chrysler. But I -- you can ask him. I</p> <p>22 just -- I don't want to testify, but you -- you</p> <p>23 read the sentence and then you asked a</p> <p>24 question, I didn't see it --</p> <p>25 MR. STOCKWELL: Yeah. Well, I'm</p>

118	<p>1 looking at the last part, "or if all options 2 were tested." 3 Q Does FMVSS require all options to 4 be tested? 5 A I don't know what he's asking. 6 But this -- the context of this 7 sentence was I hadn't looked at any Chrysler 8 crash tests, so they were -- they were dis -- 9 they were produced after this report. But 10 the -- so that's the discovery part of the 11 comment. 12 But yeah, FMVSS does not address 13 how a vehicle should be equipped for these 14 tests. 15 Q Okay. Well, they do -- in some 16 aspect, doesn't FMVSS require that the tires on 17 a test vehicle be pressurized to that 18 recommended by the manufacturer? 19 A Yeah, but I would call that more of 20 a test protocol -- 21 Q Okay. 22 A -- just a test procedure protocol. 23 Not a definition of the configuration. I do 24 believe that FMVSS 301 would -- they intend 25 that all vehicle configurations should pass.</p>	120	<p>1 random. 2 Q Okay. And if you know, if NHTSA 3 selects a vehicle that they want to test after 4 certification, do they tell the manufacturer 5 what build and options are in that vehicle or 6 does the manufacturer just ship what vehicle it 7 wants or something else? 8 MS. DeFILIPPO: Yeah. 9 A Don't -- 10 MS. DeFILIPPO: Object. 11 A I don't really know. 12 Q Okay. That's fair. 13 What have you done at -- you say 14 below that, "Alternative Design. A much better 15 alternative design for a fuel tank location 16 would have been to use the same as a 1992 17 Explorer." 18 What have you done to reach your 19 conclusion that the fuel tank location in the 20 '92 Explorer is a safer design than that of the 21 Jeep Grand Cherokee? 22 A I've just inspected Explorers, and 23 the tank they use is -- it's more of my 24 engineering judgment that it's in a safer 25 location. It's forward of the axle. It's --</p>
119	<p>1 They don't -- they have a thing that says, 2 well, if your non-air-conditioned car doesn't 3 pass, that's okay because you don't build many. 4 Their implication is everything should pass. 5 Now, it's not practical to test every 6 configuration. 7 But, for example, if the government 8 tested a vehicle and it happened to be one 9 that, say, a manufacturer hadn't tested and 10 there was a failure, there would be some 11 expectation to go back and correct that 12 situation. 13 Q And NHTSA does -- do they do random 14 testing of vehicles to -- as their way of 15 checking on FMVSS 301 compliance? 16 A They do testing. I won't call it 17 random. I think it's -- it's targeted or 18 specific. They have certain things they look 19 at. And I think they look at the higher volume 20 vehicles, cars, that are a lot -- sold a lot of 21 that are -- you know, they have a lot of 22 exposure. 23 And then they have other things 24 they're interested in. So it's -- I'd say it's 25 a specific targeted selection and not just</p>	121	<p>1 it's as in-board as you can reasonably make it 2 and not hanging too low in the vehicle. So 3 it's a -- it's just based on my engineering 4 judgment. 5 MS. DeFILIPPO: And can I just make 6 a suggestion about form? You're talking about 7 your engineering opinion? 8 THE WITNESS: Yeah. And based on 9 my -- the experience. 10 MS. DeFILIPPO: We're talking about 11 opinion here -- 12 THE WITNESS: Yes, it's my opinion 13 as a -- 14 MS. DeFILIPPO: -- as you're 15 sitting here. You're not making judgments. I 16 just want to be semantically correct. 17 MR. STOCKWELL: That's fine. 18 MS. DeFILIPPO: You're not making 19 judgments as you're sitting here. You're 20 testifying regarding opinions -- 21 THE WITNESS: Yes. 22 MS. DeFILIPPO: -- just so you know 23 about. 24 A And the Explorer is an example of a 25 tank that's in a better location. There's</p>

122	<p>1 probably other vehicles that have tanks that</p> <p>2 are in similar locations.</p> <p>3 BY MR. STOCKWELL:</p> <p>4 Q Okay. And have you done anything,</p> <p>5 other than what you've testified to, to make</p> <p>6 your assessment? Is there anything other than</p> <p>7 your engineering opinion?</p> <p>8 A Well, there's also the -- it was</p> <p>9 even subsequent -- at the time of this report,</p> <p>10 no. But subsequently, there have been the</p> <p>11 tests that have been run by the Federal Highway</p> <p>12 Administration where they rear impacted</p> <p>13 Explorers at 70, 75 miles an hour, and</p> <p>14 they performed fine.</p> <p>15 Q Okay. We'll get to that in a</p> <p>16 minute.</p> <p>17 Anything else since this report?</p> <p>18 A For this specifically, no.</p> <p>19 Q No?</p> <p>20 Were you at the FHA tests for the</p> <p>21 Ford Explorer?</p> <p>22 A No, I was not.</p> <p>23 Q But you've received and you've</p> <p>24 looked at the reports that were generated as a</p> <p>25 result of those tests?</p>	124	<p>1 A I guess I -- I guess I didn't have</p> <p>2 prior knowledge of the FHWA test.</p> <p>3 Q Okay.</p> <p>4 A It's the Karco tests I'm speaking</p> <p>5 of. Thanks for clarifying that.</p> <p>6 Q No problem.</p> <p>7 Have you done anything to determine</p> <p>8 whether a skid plate would have protected the</p> <p>9 fuel tank in this accident? The Kline</p> <p>10 accident?</p> <p>11 MS. DeFILIPPO: Objection to form.</p> <p>12 A I've not done any testing or</p> <p>13 analysis.</p> <p>14 Q Okay. Can you state to a</p> <p>15 reasonable degree of certainty that the skid</p> <p>16 plate would have protected the fuel tank in</p> <p>17 this accident?</p> <p>18 A I can state that the skid plate</p> <p>19 would provide protection.</p> <p>20 Q Okay.</p> <p>21 A Whether it would have prevented</p> <p>22 this accident, in and of itself, without other</p> <p>23 fixes on the vehicle, I can't say that or not.</p> <p>24 Q Can you say to a degree of</p> <p>25 certainty whether the skid plate and a trailer</p>
123	<p>1 A I've seen the information. I was</p> <p>2 aware that the tests were being run,</p> <p>3 and actually made a request to be there, but</p> <p>4 they -- there was a -- they didn't want any</p> <p>5 plaintiff's experts to be at the test, just to</p> <p>6 make them -- I guess I'm not sure why. But</p> <p>7 just to have them more of a generic standard</p> <p>8 test.</p> <p>9 Q Who did you submit your request to</p> <p>10 to be there?</p> <p>11 A Well, through -- well, either Angel</p> <p>12 or Paul to Clarence, I believe I talked -- I'm</p> <p>13 not sure who I talked to.</p> <p>14 Q Okay.</p> <p>15 A Actually, I think Paul Sheridan</p> <p>16 invited me, is actually what happened. Paul</p> <p>17 invited me to the test, and Mr. Ditlow said no.</p> <p>18 It's just too many people.</p> <p>19 Q All right. Now, let me just make</p> <p>20 sure we're talking about the same thing.</p> <p>21 There were the FHA tests, and then</p> <p>22 there were the Karco tests?</p> <p>23 A Yeah. And actually, I'm -- it's</p> <p>24 the Karco tests I'm talking about.</p> <p>25 Q Okay.</p>	125	<p>1 hitch, combined with an Estes bracket, would</p> <p>2 have prevented a breach of the fuel system in</p> <p>3 this accident?</p> <p>4 A I would say in this accident, with</p> <p>5 the fuel filler still going through the frame</p> <p>6 rail, I would -- I would think -- it's</p> <p>7 possible. I mean, the bracket does provide</p> <p>8 stability, and I think it's possible. I</p> <p>9 can't say for sure whether it would have.</p> <p>10 Q Okay. And because you can't say</p> <p>11 you're sure, you haven't done any scientific</p> <p>12 testing to prove or disprove that statement,</p> <p>13 right?</p> <p>14 MS. DeFILIPPO: When you say, "You</p> <p>15 haven't done any scientific testing," you're</p> <p>16 saying he personally, but you're excluding all</p> <p>17 the tests he testified to already? I mean...</p> <p>18 MR. STOCKWELL: Well, we're talking</p> <p>19 about a different thing.</p> <p>20 A Yeah. None of those tests cover</p> <p>21 these fixes, though.</p> <p>22 Q Right. That's what I'm talking</p> <p>23 about.</p> <p>24 A You know, there -- and a lot of the</p> <p>25 tests, and you can combine all the information</p>

126	<p>1 and make deductions, but there hasn't been a</p> <p>2 specific test that shows this -- you know, an</p> <p>3 actual, this-is-what-happened test. I don't</p> <p>4 believe that's occurred.</p> <p>5 Q All right. Why don't we jump to</p> <p>6 your next report? And I know the way I'm doing</p> <p>7 this is a little odd, but I've reviewed your</p> <p>8 first report, then I made notes. And then when</p> <p>9 I got your next report --</p> <p>10 A Okay.</p> <p>11 Q -- I made notes. So I'm going to</p> <p>12 go back to the egress section, which is on</p> <p>13 Page 4.</p> <p>14 And you say, "It is important that</p> <p>15 occupant egress is maintained in all crash</p> <p>16 situations. In this case the passenger door</p> <p>17 was jammed shut. Had it not been jammed, Susan</p> <p>18 would have been able to exit the vehicle away</p> <p>19 from the fire."</p> <p>20 Is it a surprise to you that the</p> <p>21 passenger's door was jammed shut?</p> <p>22 MS. DeFILIPPO: Wait a minute.</p> <p>23 Object to the form. What about surprise has</p> <p>24 anything to do with the law? What --</p> <p>25 MR. STOCKWELL: Well, I don't have</p>	128	<p>1 A Yes.</p> <p>2 Q And you make reference that the</p> <p>3 trailer hitch made contact with the fuel tank?</p> <p>4 A Correct.</p> <p>5 Q Does that mean that the test did</p> <p>6 not pass?</p> <p>7 A No, it did not.</p> <p>8 Q The test did not pass?</p> <p>9 A No. I --</p> <p>10 Q Or the test did pass?</p> <p>11 A The test did pass.</p> <p>12 Q Okay. And you're commenting on the</p> <p>13 fact that the trailer hitch...</p> <p>14 A I just noted contact.</p> <p>15 Q Okay.</p> <p>16 A It was noted in the test report.</p> <p>17 It doesn't -- you know, because of the criteria</p> <p>18 of 301, it doesn't denote it as a failure. I</p> <p>19 did note here that Bob Banta, in his prior</p> <p>20 deposition, states that would have been a</p> <p>21 concern for him.</p> <p>22 Q Right.</p> <p>23 A In other words, he -- I'm assuming</p> <p>24 if he were the chief engineer of the vehicle,</p> <p>25 he would have thought, Gee, I don't like that.</p>
127	<p>1 to ask him just about the law.</p> <p>2 MS. DeFILIPPO: I'm objecting to</p> <p>3 your use of the term "surprise." I'm objecting</p> <p>4 to the form and --</p> <p>5 MR. STOCKWELL: That's fine.</p> <p>6 MS. DeFILIPPO: -- your use of the</p> <p>7 term "surprise."</p> <p>8 BY MR. STOCKWELL:</p> <p>9 Q Do you understand the question?</p> <p>10 You made the statement, so I'm asking you.</p> <p>11 MS. DeFILIPPO: Wait. You want to</p> <p>12 know if he's surprised?</p> <p>13 MR. STOCKWELL: Yeah.</p> <p>14 MS. DeFILIPPO: Were you surprised?</p> <p>15 Q Does it surprise you that the</p> <p>16 passenger's door was jammed shut in this</p> <p>17 accident?</p> <p>18 A No. It was just a fact that I</p> <p>19 noted.</p> <p>20 Q Okay. That's all that I wanted to</p> <p>21 understand.</p> <p>22 FMVSS certification tests, which</p> <p>23 are at the bottom of Page 4, Paragraph 7.</p> <p>24 A Yeah.</p> <p>25 Q You talk about Test 4472?</p>	129	<p>1 Let's try to fix that. But that's a subjective</p> <p>2 thing, not a legislative thing.</p> <p>3 Q Okay. We agree, though, that the</p> <p>4 Kline vehicle didn't have a trailer hitch</p> <p>5 equipped, right?</p> <p>6 A That's correct.</p> <p>7 Q You talk about Test 4561. Tell me</p> <p>8 why the fact that the prop shaft was one inch</p> <p>9 short makes a difference in this crash test.</p> <p>10 A Well, the fuel tank actually, you</p> <p>11 know, gets compressed between the rear bumper</p> <p>12 and the rear axle. So it's in the load path,</p> <p>13 getting depressed.</p> <p>14 And a shorter prop shaft would</p> <p>15 allow the rear axle to move forward further and</p> <p>16 therefore, it would relieve some of the</p> <p>17 compression on the tank.</p> <p>18 Q How much further would it move?</p> <p>19 A Well, you would think an inch if it</p> <p>20 was an inch short.</p> <p>21 Q The prop shaft was still connected</p> <p>22 to the transmission, right?</p> <p>23 A Yes, it was.</p> <p>24 Q Have you looked at the photographs</p> <p>25 of that crash test?</p>

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1 A Yes, I have.
 2 Q And the other part of the prop
 3 shaft was connected to what? The axle?
 4 A Rear axle, yes.
 5 Q Is there anything else in the
 6 vehicle that supports the rear axle?
 7 A Yeah, there's --
 8 MS. DeFILIPPO: Anything -- wait a
 9 minute. Anything else other than what?
 10 MR. STOCKWELL: Than the prop
 11 shaft.
 12 A Yeah.
 13 MS. DeFILIPPO: What --
 14 MR. GILL: That assumes --
 15 MR. STOCKWELL: Yeah, you're right.
 16 I'll ask the question again. Fine.
 17 BY MR. STOCKWELL:
 18 Q Does the prop shaft support the
 19 rear axle?
 20 A It does not support the rear axle.
 21 Q Oh, okay. What does support the
 22 rear axle?
 23 A The control arms.
 24 MS. DeFILIPPO: Can I suggest as an
 25 instruction that -- I understand you're trying

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1 to answer what you think the question he is
 2 asking you, but you have to answer the full --
 3 if the full question doesn't make sense. Do
 4 you understand what I'm saying?
 5 If he says to you, "What else?"
 6 That's like saying, "When did you stop beating
 7 your wife?"
 8 If the prop shaft doesn't support
 9 whatever he wants it to support and you answer
 10 the latter part of the question, it's the
 11 same -- it's the same thing.
 12 THE WITNESS: Yeah. Okay.
 13 MS. DeFILIPPO: Right? I'm only
 14 indicating as an instruction, if a portion of
 15 the question isn't right, you can't really
 16 answer the full question, even though you think
 17 that's what the questioner is saying.
 18 BY MR. STOCKWELL:
 19 Q I think what you meant to say --
 20 and correct me if I'm wrong -- is the prop
 21 shaft provides resistance to the rear axle?
 22 A Well, you want me to give a
 23 complete answer then?
 24 Q Yeah.
 25 A I'll describe the whole -- I'll

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1 describe the whole thing.
 2 Q As you can see, I have no technical
 3 background.
 4 A The rear axle is supported by
 5 control arms or links, as they may be called,
 6 and those provide the -- control the axle for
 7 its purpose of suspension and drive.
 8 Those arms have rubber bushings in them, so
 9 they have a fair amount of freedom to move.
 10 The prop shaft isn't supporting the
 11 axle, but at the point -- at some point of
 12 forward axle movement, the prop shaft would
 13 stop or limit the axle movement. And --
 14 whereas the control arms, with their rubber
 15 bushings, allow more movement than the prop
 16 shaft.
 17 So if the prop shaft's shorter, the
 18 rear axle could move further, even given the
 19 constraints of the rubber bushings of the
 20 control arms.
 21 MR. STOCKWELL: Can you mark this?
 22 (Exhibit D-2, Photograph, is marked
 23 for identification.)
 24 Q Let me show you what's been marked
 25 as Exhibit D-2. And just take a look and let

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1 me know when you're done looking at the
 2 photograph.
 3 A Sure.
 4 Q Do you know what that picture is?
 5 A Yeah. This is the post-crash
 6 picture of the 4561 test.
 7 Q Okay. Can you circle for me, using
 8 my pen or your pen, where the prop shaft
 9 connects with the rear axle?
 10 A (Witness indicates.)
 11 Q Okay. And can you show me where
 12 the control arms are that you were referencing
 13 before?
 14 A (Witness indicates.)
 15 Q All right. So you've circled one
 16 on the left and one on the right?
 17 A Yeah. And I believe there's two
 18 upper ones that are a little harder to see.
 19 Q Okay. And you've circled those on
 20 the left and the right side as well?
 21 A Correct.
 22 Q Okay. All right. Thanks.
 23 THE WITNESS: You want this back?
 24 MR. STOCKWELL: Yeah, I'm done with
 25 this.

134	<p>1 (Discussion held off the record.)</p> <p>2 Q What is your understanding as to</p> <p>3 what a validation test is?</p> <p>4 A A validation test is to confirm the</p> <p>5 design.</p> <p>6 Q To what?</p> <p>7 A Confirm the design performs as</p> <p>8 intended.</p> <p>9 Q And Chrysler did validation tests?</p> <p>10 A Yes, they did.</p> <p>11 Q If the validation tests fails,</p> <p>12 what, if anything, is the manufacturer supposed</p> <p>13 to do?</p> <p>14 A Supposed to do from whose aspect?</p> <p>15 Q From the manufacturer's</p> <p>16 perspective.</p> <p>17 MS. DeFILIPPO: From an engineering</p> <p>18 point of view, right?</p> <p>19 A Okay. It depends on if --</p> <p>20 MS. DeFILIPPO: I mean, you're not</p> <p>21 asking him for government standards now.</p> <p>22 MR. STOCKWELL: True. Yeah, yeah.</p> <p>23 MS. DeFILIPPO: You're asking</p> <p>24 engineering standards.</p> <p>25 A Yeah. I guess it depends on if</p>	136	<p>1 to whether the presence or absence of a false</p> <p>2 spare tire in the rear of the Kline vehicle</p> <p>3 would have made a difference in this accident?</p> <p>4 A As far as specific analysis, no.</p> <p>5 What I did was review all the Chrysler crash</p> <p>6 tests just to -- anyone that had a passing</p> <p>7 result had a full-size spare. I believe there</p> <p>8 was a -- there was only one test identified</p> <p>9 that had a compact spare, which was -- did not</p> <p>10 pass the test.</p> <p>11 And then in some early testing,</p> <p>12 they had comments about spare tire brackets</p> <p>13 having separated or failed. And there seemed</p> <p>14 to be some indication they did design changes</p> <p>15 to make sure that didn't happen. And so</p> <p>16 that's -- it's just an indication where the</p> <p>17 spare tire is an integral part of the load path</p> <p>18 of this test.</p> <p>19 Q Did you look at any of the videos</p> <p>20 to determine whether the presence of a full</p> <p>21 spare tire played any role in connection with</p> <p>22 the VC tests?</p> <p>23 A You know, looking at the videos,</p> <p>24 it's pretty apparent to me that the full-size</p> <p>25 spare is -- is pretty important in the</p>
135	<p>1 it's a manufacturer like Mercedes or a</p> <p>2 manufacturer like Kia. They might do different</p> <p>3 things.</p> <p>4 Q Sure. Would you expect that the</p> <p>5 manufacturer would take steps to fix whatever</p> <p>6 the problem was that caused the test to fail?</p> <p>7 A Yeah. Validation tests, or even</p> <p>8 development tests, if you have failures, they</p> <p>9 should be addressed.</p> <p>10 Q Okay. But FMVSS doesn't say that</p> <p>11 that vehicle has to be taken off the road or</p> <p>12 recalled, do they?</p> <p>13 A Well, likely, validation tests, the</p> <p>14 vehicle may not even be on the road at that</p> <p>15 point.</p> <p>16 Q Okay. In other words, they may use</p> <p>17 prototype parts, right, in a validation test?</p> <p>18 MS. DeFILIPPO: Objection to form.</p> <p>19 A Validation tests may have prototype</p> <p>20 parts, yes.</p> <p>21 Q And they may retrofit vehicles?</p> <p>22 A Vehicles can be retrofitted, sure.</p> <p>23 And again, that may vary from manufacturer to</p> <p>24 manufacturer on their policies for that.</p> <p>25 Q Okay. Did you do any analysis as</p>	137	<p>1 performance of this vehicle in this -- in that</p> <p>2 test.</p> <p>3 Q How so?</p> <p>4 A What it's doing is taking some of</p> <p>5 the load off of that lower frame rail, which is</p> <p>6 the one that the fuel filler goes through. And</p> <p>7 doing that provides more stability to that</p> <p>8 lower rail --</p> <p>9 Q Okay.</p> <p>10 A -- and gives it a chance to perform</p> <p>11 better.</p> <p>12 Q And you were able to determine that</p> <p>13 from watching the videos of the crash tests?</p> <p>14 MS. DeFILIPPO: Wait a minute.</p> <p>15 Objection to form. Are you limiting him to</p> <p>16 just that?</p> <p>17 MR. STOCKWELL: No.</p> <p>18 MS. DeFILIPPO: The videos?</p> <p>19 MR. STOCKWELL: No.</p> <p>20 MS. DeFILIPPO: You're just saying</p> <p>21 as one of the things?</p> <p>22 MR. STOCKWELL: Yeah.</p> <p>23 MS. DeFILIPPO: Okay.</p> <p>24 MR. STOCKWELL: Yeah.</p> <p>25 BY MR. STOCKWELL:</p>

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1 Q Were you able to -- strike that.
 2 Let's start again.
 3 MR. STOCKWELL: Read back the last
 4 question I asked him.
 5 MS. DeFILIPPO: Well, read back the
 6 question and the answer, and then ask him the
 7 next question.
 8 MR. STOCKWELL: Yeah.
 9 (Record read.)
 10 Q Were you able to determine that, in
 11 part, by watching the crash tests?
 12 A Yes, I was. And the crash tests --
 13 in -- you can't see the spare in all of the
 14 tests, but in the ones where they had video
 15 that you could see the spare, it's pretty clear
 16 that it's -- it's engaged in the load path and
 17 being loaded.
 18 Q In what direction did the spare
 19 tire, the full spare tire, move in the crash
 20 tests?
 21 A Well, it's in a longitudinal
 22 direction.
 23 Q Okay. Does that mean up or down?
 24 A Fore and aft.
 25 Q I'm sorry?

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1 A Fore and aft. There may be some
 2 kind of residual up and down, but the load is
 3 in a fore and aft manner.
 4 Q Okay. I don't understand your
 5 Section 12 on Page 6, "Fuel system changes to
 6 the Jeep Grand Cherokee from '94 to '95 model
 7 year."
 8 Could you please read it and
 9 explain to me what you mean?
 10 A Limited change to the fuel system
 11 and returnless system -- return system has a
 12 fuel line going from the tank up to the -- up
 13 to the engine, and then a line from the engine
 14 back to the tank. So fuel flows in a circle,
 15 so excess fuel is returned to the tank, okay?
 16 There's issues with that, because a lot of
 17 times the return fuel is hot and you get hot
 18 vapors in the tank and it creates issues.
 19 And in the early '90s, returnless
 20 systems became popular and they were enabled by
 21 a type of return -- a type of fuel pressure
 22 regulator that could operate without bypassing
 23 fuel.
 24 Q Okay.
 25 A Okay? So it kind of deadheads. So

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1 you just need the one line. So you've got one
 2 line to a different type of fuel pressure
 3 regulator, and so there's no hot fuel being
 4 returned to the tank. So it helps emissions.
 5 It helps engine performance. It's -- it also
 6 saves costs because there's a -- not an extra
 7 line. And so that's -- that's how the system
 8 operates.
 9 Now, Chrysler made this change at
 10 this time, and they -- they did not recertify
 11 the vehicle for this fuel system.
 12 Now, in Michael Teets' deposition,
 13 I think he stated that it's something that they
 14 should have recertified for, but he also said
 15 he wasn't part of the meetings where a decision
 16 was made to -- to not recertify.
 17 The fact that they made judgment
 18 that removing one line would not have affected
 19 the performance enough, and it's -- it's -- I
 20 think we discussed earlier, you know, does the
 21 government require every configuration of
 22 everything tested? Not necessarily. So
 23 Chrysler chose not to retest based based on
 24 this change.
 25 Q Okay.

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1 A Does that answer your question?
 2 Q Yeah, it does.
 3 And do you know if the returnless
 4 fuel system or the changes that are required to
 5 be made to the fuel tank assembly had anything
 6 to do with the Kline accident?
 7 A Well, you know, I'm not sure. I --
 8 I didn't have that in this report. But, you
 9 know, since reviewing -- looking at this --
 10 because they also had a -- another change for
 11 '97.
 12 Now, they kept the returnless
 13 system, but I believe that they changed
 14 suppliers. And they claim they added that
 15 Estes bracket because of problems they had with
 16 that returnless system, that they had leaks
 17 and -- you know, you can see the tests where
 18 they had the leaks with that returnless system.
 19 It does make me wonder if the prior
 20 supplier system would have had those same leaks
 21 and they just didn't discover that. So it's
 22 something I'd actually like to look into. I
 23 probably can't, because one thing in the
 24 discovery documents where there was a whole
 25 folder of engineering changes, it's just blank,

142	<p>1 so we didn't -- I don't know. Maybe if it's</p> <p>2 yours that's blank or mine, so...</p> <p>3 MS. DeFILIPPO: Nobody's been able</p> <p>4 to get to that yet.</p> <p>5 A So I really need to see, you know,</p> <p>6 the engineering changes.</p> <p>7 So I guess since I wrote the report</p> <p>8 and have noticed that they have all these</p> <p>9 issues with them -- and it's probably in Teets'</p> <p>10 or Zyluk's depos. It wasn't until I read those</p> <p>11 that I realized that maybe those problems</p> <p>12 existed in '96, so...</p> <p>13 Q Okay.</p> <p>14 A Which would mean that their</p> <p>15 decision to not test was a wrong one.</p> <p>16 Q Okay.</p> <p>17 A Those problems existed. But you'd</p> <p>18 have to look at the difference in the two</p> <p>19 suppliers' systems. They're both returnless,</p> <p>20 but they could be -- could be different so...</p> <p>21 Q Okay.</p> <p>22 A There could be something there. I</p> <p>23 just don't know at this time.</p> <p>24 (Discussion held off the record.)</p> <p>25 (Lunch recess taken at 1:44 p.m.)</p>	144	<p>1 the test.</p> <p>2 Q Do you know what they did to check</p> <p>3 the fuel system of that Explorer post-crash?</p> <p>4 A I'm not sure if they rolled it over</p> <p>5 or not.</p> <p>6 Q Are you looking --</p> <p>7 A I'm looking at the tests and in the</p> <p>8 70 --</p> <p>9 MS. DeFILIPPO: No. Let me just</p> <p>10 say, for the record, we all know this. In the</p> <p>11 test -- this is what happened at Ditlow's. The</p> <p>12 test cover page both say 70, but it's not true.</p> <p>13 It's a typo. When you ask for Freedom of</p> <p>14 Information Act from the federal government,</p> <p>15 they send you a cover page that both say 70,</p> <p>16 but inside, if you look, one was 70 and one was</p> <p>17 75. This is the 75.</p> <p>18 THE WITNESS: Yeah.</p> <p>19 MR. STOCKWELL: Okay.</p> <p>20 MS. DeFILIPPO: So that's what's</p> <p>21 confusing when you hand the test results --</p> <p>22 MR. STOCKWELL: That's right. I</p> <p>23 remember that.</p> <p>24 MS. DeFILIPPO: And that happened</p> <p>25 in the Ditlow deposition, so I don't want...</p>
143	<p>1</p> <p>2 (Deposition continues at 2:08 p.m.)</p> <p>3 (Record read.)</p> <p>4 BY MR. STOCKWELL:</p> <p>5 Q All right. Number 14 on Page 6,</p> <p>6 the Ford Explorer one at 70 miles an hour.</p> <p>7 That was -- you weren't there for the FHA test,</p> <p>8 right?</p> <p>9 A No, I was not.</p> <p>10 Q Are you saying that because there</p> <p>11 was one crash test at 70 miles an hour, that</p> <p>12 the Explorer is capable of sustaining a</p> <p>13 rear-end impact at 70 miles an hour without any</p> <p>14 leakage?</p> <p>15 A It did in this test.</p> <p>16 Q All right. Are you saying, based</p> <p>17 on this one test you're basing your opinion on?</p> <p>18 A It was my assessment of this test</p> <p>19 that the Explorer sustained the impact in this</p> <p>20 test without leaking.</p> <p>21 Q Was the purpose of the test to</p> <p>22 assess the fuel system of the Ford Explorer?</p> <p>23 A No. The test actually was part of</p> <p>24 a program they were doing, I believe, to look</p> <p>25 at door entrapment, was the stated purpose of</p>	145	<p>1 A Okay. So in the 75-mile-an-hour</p> <p>2 test, they had the fuel tank 75% full of water.</p> <p>3 So in the -- it's likely they would have seen</p> <p>4 the effects of any apparent leak; however, I</p> <p>5 don't believe they rolled it over.</p> <p>6 And then the 70-mile-an-hour test</p> <p>7 may not have even had anything in the fuel</p> <p>8 tank. So that's actually not fair to say this</p> <p>9 test would have had the conclusion it wouldn't</p> <p>10 leak.</p> <p>11 So it's just one of these two tests</p> <p>12 that we can agree to leakage information out</p> <p>13 of.</p> <p>14 Q Does the test at all, the one that</p> <p>15 had the water in the tank, at all reference</p> <p>16 fuel leakage? Whether there was or wasn't fuel</p> <p>17 leakage?</p> <p>18 A Let's see.</p> <p>19 MS. DeFILIPPO: You can't look at</p> <p>20 the top.</p> <p>21 THE WITNESS: I was looking at the</p> <p>22 dates.</p> <p>23 MS. DeFILIPPO: Oh, okay.</p> <p>24 There's video on these tests, also,</p> <p>25 I'm sure.</p>

146	<p>1 A Yeah. It may be -- it may not 2 reference it, so my only assessment may have 3 been not seeing any visual leaks during the 4 actual test videos. 5 Yes, I would say my assessment 6 was based on the test videos. 7 Q All right. And in Paragraph 15, 8 you said -- Number 15, you talk about the 9 Taurus into the Jeep Grand Cherokee. 10 MS. DeFILIPPO: What page are you 11 on? 12 MR. STOCKWELL: Six. 13 MS. DeFILIPPO: Page 6. 14 Q You talk about the check valve a 15 little bit at the bottom of that paragraph? 16 A What about the check valve? 17 Q I'm just asking, you talk about the 18 check valve? 19 A Yes. 20 Q Okay. Since we don't necessarily 21 know in the Kline vehicle whether the fuel 22 filler hose separated from the tank, we don't 23 know if the check valve had anything to do with 24 the accident or had anything to do with the 25 fire in this case, do we?</p>	148	<p>1 in my reference document they would have had 2 access to. 3 Q What I'm getting at, though, is 4 there something at Ford that addressed this 5 specific issue? Some Ford document you have? 6 A No, no. This is just published 7 information. SAE papers, that type of thing. 8 Q And are all the publications you 9 reference on page -- Pages 9, 10, and 11 of 10 your report? 11 A These are some papers that they 12 would have had access to. 13 MS. DeFILIPPO: Eight, also. 14 MR. STOCKWELL: Correct. 15 Q Do you have copies of all of these 16 studies in your file? 17 A Yes, I do. 18 Q Are they here today? 19 A They're on a disk. 20 Q Is that disk here? 21 A Yes. 22 Q Great. Can you make a copy of that 23 disk and give it to Angel, Ms. DeFilippo, for 24 me? 25 A Yes.</p>
147	<p>1 A Well, I think since there's a 2 number of tests where we had this type of 3 failure, it's likely that kind of failure 4 happened in the Morris-Kline, and it appears 5 the failure mode of the check valve doesn't 6 stay with the tank. 7 Q But we don't have any physical 8 evidence that that's what happened in this 9 case, do we? 10 A Well, it's all burnt up. So, yeah, 11 there's no way anybody can determine one way or 12 the other where that check valve was. 13 Q All right. On Page 7 now. You 14 state, "Chrysler Jeep had access to all the 15 available data, studies and information on the 16 vehicle design at the same time as Ford, and 17 they could have made a better design decision 18 for safe fuel tank location." 19 What data, studies and information 20 are you referring to? 21 A Well, there's some internal 22 Chrysler documents where they state a desire to 23 go to mid-mounted tanks. And just -- I didn't 24 accumulate any of this, but there's -- it's in 25 my -- in any of the technical papers I've got</p>	149	<p>1 Q Thank you. 2 I was also provided with a CD of 3 materials that I assume you gave to 4 Ms. DeFilippo. On that disk was some materials 5 related to an Orlando Jeep Grand Cherokee 6 accident. Do you know what I'm referring to? 7 A That's recent. I think it's the 8 recent accident that was -- was it maybe 9 from -- I know the Center of Auto Safety had 10 some similar incidents -- 11 Q Okay. 12 A -- on theirs, so I don't know if it 13 was that type information or there was a 14 recent -- I believe it was a recent Orlando 15 accident. 16 Q I think it was a -- yeah. 17 A Yeah. 18 Q Yeah. A recent Orlando accident. 19 Did you do any vehicle inspections 20 in relation to that accident? 21 A Not that one. And I've -- you 22 know, not -- it's been difficult to go out and 23 inspect these vehicles. I've -- some of the -- 24 there's a few of them that Center For Auto 25 Safety has info on and good pictures of. But I</p>

150	<p>1 would say the vast majority are just -- they're 2 not accessible for inspection. 3 Q Okay. Have you done any other 4 vehicle inspections other than the one you did 5 of the Kline vehicle? 6 MS. DeFILIPPO: What are you 7 referring to? 8 MR. STOCKWELL: Jeep Grand 9 Cherokees. 10 MS. DeFILIPPO: Oh. 11 Q Sorry. 12 A I've done lots. 13 No, I haven't. 14 Q Would you agree when crash testing 15 vehicle to vehicle, as was on done at Karco, 16 the tires should be set to the pressure 17 recommended by the manufacturer? 18 A As a general practice, I think 19 that's a good thing to do. But there's so many 20 other variables between crash testing and the 21 real world that if there's some other 22 variables -- you could be trying to simulate a 23 condition where a vehicle -- one vehicle is 24 braking, so the attitude differences could be 25 different. And, you know, in crash tests</p>	152	<p>1 the form. 2 MR. STOCKWELL: "Are you aware of," 3 is that? 4 MS. DeFILIPPO: "Through his 5 investigation in this -- " what are you looking 6 for? 7 MR. STOCKWELL: You know what? 8 I'll take that out. You're right. 9 BY MR. STOCKWELL: 10 Q Are you aware of any other Jeep 11 Grand Cherokee accidents where the Jeep Grand 12 Cherokee was struck in the rear and then struck 13 a vehicle in front of it? 14 A Well, I haven't done a 15 comprehensive look for other types of accidents 16 like this. I'm -- there's a couple that I can 17 recall, and I don't believe they had any 18 secondary impacts. But I've really only looked 19 at a few. 20 Q Would those accidents be contained 21 somewhere in your file? 22 A Yes, they would be. 23 Q Okay. 24 (Discussion held off the record.) 25 Q Have you had any conversations with</p>
151	<p>1 they're always run with the cars not at 2 operating temperature, a lot of times. New 3 cars, not the Karco ones, but old cars, but the 4 manufacturers do new cars. 5 So, you know, there's -- even 6 though a crash test, you try to be consistent 7 and control all the variables, tire pressure 8 being one of them, there's just so many other 9 variables that happen in the real world that 10 you're not, you know, capturing the universe of 11 possible foreseeable crashes. 12 Q Have you come across, through your 13 investigation in this case, any accident, any 14 other accident, that is, involving a Jeep Grand 15 Cherokee where the Jeep Grand Cherokee was 16 struck in the rear and then struck another 17 vehicle in front of it? 18 MS. DeFILIPPO: Can you read that 19 back, please? 20 (Question read.) 21 MS. DeFILIPPO: I just missed the 22 first couple of lines. 23 THE REPORTER: Okay. Sure. 24 (Question read.) 25 MS. DeFILIPPO: I have to object to</p>	153	<p>1 Carl Nash about this accident or the defect 2 petition into the Jeep Grand Cherokee? 3 A Neither of those, no. 4 Q Okay. Have you had any 5 conversations with Ditlow, Clarence Ditlow, 6 about the Kline case? 7 A No, I haven't. 8 Q Any conversations with Clarence 9 Ditlow about the defect petition? 10 A No. 11 Q Do you know what passenger vehicles 12 are currently still being manufactured with the 13 fuel tank located behind the rear axle? 14 MS. DeFILIPPO: Are you confining 15 that to SUVs? 16 MR. STOCKWELL: Cars, SUVs and 17 light trucks. 18 MS. DeFILIPPO: And light trucks? 19 MR. STOCKWELL: Yeah. 20 A No. I would be surprised. Here's 21 why I would be surprised. If anything that's 22 certified to the new 301 standard, so any 23 currently produced vehicle, 2011 or later, that 24 would have a fuel tank rear of the axle, with 25 the possible exception -- I -- vehicles over</p>

154	<p>1 10,000 pounds may not have to comply with the</p> <p>2 new 301, so something over 10,000 pounds,</p> <p>3 maybe, wouldn't surprise me. But anything less</p> <p>4 than 10,000 pounds, I would be surprised.</p> <p>5 The work we did at Chrysler in the</p> <p>6 late '90s, you know, the amount of effort that</p> <p>7 would go in to protect a rear-mounted tank just</p> <p>8 wasn't worth the effort.</p> <p>9 At some point it's just, Let's just</p> <p>10 put it forward of the axle, and then we've got</p> <p>11 a much better car and we can meet those</p> <p>12 standards.</p> <p>13 So is it possible? Sure. But</p> <p>14 would it -- the vehicle would look like a tank</p> <p>15 from the back.</p> <p>16 Q And when you talk about the effort</p> <p>17 to protect the tank, you're talking about in</p> <p>18 connection with the new 301 test?</p> <p>19 A The new 301. The effort to --</p> <p>20 yeah, design, develop, and manufacture.</p> <p>21 Q Okay. The new 301 test, is that --</p> <p>22 that's an offset?</p> <p>23 A Offset test and also -- the</p> <p>24 strike -- the moving barrier has a deformable</p> <p>25 front end on it, rather than the older one,</p>	156	<p>1 that had a rear tank. And I -- possibly some</p> <p>2 SUVs also did.</p> <p>3 Q All right. Would you agree with</p> <p>4 the statement that the dealer should never</p> <p>5 modify the structure of an automobile unless</p> <p>6 directed to do so by the manufacturer?</p> <p>7 MS. DeFILIPPO: Objection to the</p> <p>8 form of that question.</p> <p>9 A Well, in the context of --</p> <p>10 MS. DeFILIPPO: I mean, don't --</p> <p>11 A -- modify, if -- if adding</p> <p>12 equipment or accessories, I don't consider</p> <p>13 modifications. So if a dealer puts a trailer</p> <p>14 hitch on, that should be fine. If you're</p> <p>15 adding something -- and you said without a TSB.</p> <p>16 So is that what you said?</p> <p>17 Q Right. Yeah.</p> <p>18 A Yeah. So a trailer hitch would be</p> <p>19 fine to add. A skid plate, you know, would be</p> <p>20 fine to add. Do -- modifications might be to</p> <p>21 repair a weld nut that failed, but again, there</p> <p>22 would be a process that the dealer would</p> <p>23 define. So I would say adding accessories</p> <p>24 would be fine to do.</p> <p>25 Q All right. Now let's change that</p>
155	<p>1 which is just a flat front end, flat, usually,</p> <p>2 front end.</p> <p>3 Q What's the speed at which it drives</p> <p>4 into the vehicle?</p> <p>5 A It hits at 50 miles an hour instead</p> <p>6 of 30.</p> <p>7 Q In 1996, do you know what passenger</p> <p>8 vehicles -- and when I say that, I mean cars or</p> <p>9 SUVs or light trucks -- were being manufactured</p> <p>10 with the fuel tank located behind the rear</p> <p>11 axle?</p> <p>12 A I'm sure there were, you know,</p> <p>13 probably a number of rear drive vehicles.</p> <p>14 Probably most front drive vehicles had it</p> <p>15 forward of the axle.</p> <p>16 Q I mean, rear of the axle.</p> <p>17 A Rear -- yeah. Specifically, I</p> <p>18 mean, I'm sure there were some. I don't have a</p> <p>19 list --</p> <p>20 Q Okay.</p> <p>21 A -- of specifics.</p> <p>22 Q Any off the top of your head that</p> <p>23 you recall as you sit here today?</p> <p>24 A Well, I -- we talked earlier about</p> <p>25 the Mustang and the Crown Vic. Two Fords</p>	157	<p>1 in connection with a recall or a TSB. In that</p> <p>2 situation, would you expect a manufacturer -- a</p> <p>3 dealer to make a repair -- strike that.</p> <p>4 Let me just ask you this: You're</p> <p>5 aware in 2002 there was a recall to Jeep Grand</p> <p>6 Cherokees that were built in 2002 to add a</p> <p>7 blocker bracket. Are you aware of that?</p> <p>8 A 2002?</p> <p>9 MS. DeFILIPPO: The 810.</p> <p>10 Q The 810.</p> <p>11 A 810. Yes. I am, yes.</p> <p>12 Q Okay. Do you think it would be</p> <p>13 appropriate for a dealership to take that</p> <p>14 recall and then determine that that bracket</p> <p>15 should be installed on a '96 Jeep Grand</p> <p>16 Cherokee?</p> <p>17 A Well, the dealer should perform the</p> <p>18 recall as it's stated. I don't recall if it</p> <p>19 extended to '96s or not.</p> <p>20 Q I want you to assume hypothetically</p> <p>21 the recall only applied to 2002 Jeep Grand</p> <p>22 Cherokees. Should it apply that recall to a</p> <p>23 '96 Jeep Grand Cherokee?</p> <p>24 MS. DeFILIPPO: Should? Wait,</p> <p>25 wait, wait. I'm objecting to the form. I</p>

158	<p>1 don't know what you're talking about, "should." 2 Should what? 3 MR. STOCKWELL: Should the 4 dealer -- 5 MS. DeFILIPPO: Should the 6 manufacturer have -- 7 MR. STOCKWELL: No, no, no. 8 MS. DeFILIPPO: -- have extended 9 it? 10 MR. STOCKWELL: No, no. 11 MS. DeFILIPPO: What's the 12 question? 13 BY MR. STOCKWELL: 14 Q I want you to assume that the 15 recall applied -- the express language of the 16 recall applied to 2002 Jeep Grand Cherokee 17 vehicles. Should a dealer then take that 18 recall and apply it to a 1996 Jeep Grand 19 Cherokee? 20 A I wouldn't expect them to, no. 21 Q Who's responsible for insuring that 22 a vehicle is designed safely? Is it a 23 manufacturer, is it a dealer, or is it a 24 combination? 25 A It would mostly be on the</p>	160	<p>1 bracket? 2 A That would be redundant if you had 3 the trailer hitch. 4 Q Okay. It was one or the other? 5 A Yeah. 6 Q Okay. I got you. 7 MR. SACCO: You asked him that one. 8 (Discussion held off the record.) 9 Q Does NHTSA require testing that 10 assesses underide? 11 A I don't believe the 301 standard 12 addresses that as a specific language. 13 Q I'm almost done here, 14 Mr. Hannemann, but I want to go back to a few 15 things in the beginning of your August 3rd 16 report. 17 A Okay. 18 MS. DeFILIPPO: The beginning? Did 19 you say the beginning? 20 MR. STOCKWELL: Yeah, beginning. 21 Q And I'm looking for where you talk 22 about the couple of recalls that you were 23 involved in. Okay. Yeah. On Page 2, 24 Paragraph 3C. Oh, I'm sorry. Paragraph D, 25 "Saleen."</p>
159	<p>1 manufacturer. 2 Q Is there any part of that that 3 would fall on the dealer? 4 A The design of the vehicle? No. 5 Q Anywhere in your reports do you 6 address the conduct of Loman Auto Group? 7 A I don't address it, no. 8 Q Do you know anyone who owns or has 9 owned a '93 to 2004 Jeep Grand Cherokee? 10 A '93 to '94? 11 Q 2004. 12 A Oh, 2004. Yes. 13 Q How many, can you give me a rough 14 estimate? 15 A I'm -- I'm just thinking of one in 16 particular, I guess. 17 Q Who's that? 18 A It's the technician at a company I 19 used to work for, and I made sure he had a 20 trailer hitch on the vehicle and told him not 21 to take it off. 22 Q Did he have a skid plate, too? 23 A I don't believe he had a skid 24 plate, just a trailer hitch. 25 Q Do you know if he had the Estes</p>	161	<p>1 "I investigated numerous fire 2 issues while I was the chief engineer at 3 Saleen, Inc. The resolution of these 4 investigations resulted in my ordering two 5 voluntary product recalls." 6 Now, I looked for those recalls on 7 NHTSA's website, and I couldn't find them. Do 8 you know why? 9 A Well, just one of them was a NHTSA. 10 The other one was not a NHTSA -- 11 Q Okay. 12 A -- recall. The one that was a 13 NHTSA recall was a result of an electrical fire 14 due to modifications we've made to the Mustang. 15 Q Okay. 16 A The second recall was actually -- I 17 call it a "containment recall" because we 18 actually realized we could capture all the 19 vehicles before they got to customers' hands. 20 Q Okay. 21 A And that was an issue with the fuel 22 line. The -- I believe we talked about it 23 earlier, the EGR too close to the fuel line. 24 But we contained all those, so that actually 25 didn't become a NHTSA recall.</p>

162	<p>1 Q Okay.</p> <p>2 A There was another -- and those were</p> <p>3 just the fire ones.</p> <p>4 There was also a wheel recall at</p> <p>5 Saleen, also. So you might -- the Saleen, you</p> <p>6 should -- you should come up with two recalls.</p> <p>7 One for the electrical fire, one for wheels.</p> <p>8 Q And what was the issue with the</p> <p>9 wheels?</p> <p>10 A It turned out that the supplier</p> <p>11 had -- they had the wrong temperature on their</p> <p>12 heat treat oven for about a week. And once</p> <p>13 they traced that down, they were able to give</p> <p>14 us the serial numbers of the wheels. And then</p> <p>15 we recalled a wider range of vehicles because</p> <p>16 we didn't sequence the wheels. Basically, the</p> <p>17 wheels would fail rather easily because the</p> <p>18 heat treat was incorrect.</p> <p>19 Q Okay. The electrical fire issue,</p> <p>20 when did you have notice of a first occurrence</p> <p>21 of that issue?</p> <p>22 A Well, in both, at the wheel and the</p> <p>23 electrical fire, the first occurrence was</p> <p>24 enough for us to start an investigation as to</p> <p>25 what was going on. And I think that with --</p>	164	<p>1 Q Okay. What kind of crash testing</p> <p>2 was performed at Saleen?</p> <p>3 A Depends on which vehicle. On the</p> <p>4 Mustangs we typically didn't do anything that</p> <p>5 would cause us to have to do a crash test. On</p> <p>6 the S7 we ran a number of crash tests. That</p> <p>7 was done after I left. But there was a crash</p> <p>8 test program for that vehicle, since that was a</p> <p>9 ground-up unique design.</p> <p>10 Q Okay. Have you looked at the death</p> <p>11 rates involving Saleen vehicles?</p> <p>12 MS. DeFILIPPO: Wait a minute.</p> <p>13 What are you referring to?</p> <p>14 Q Have you looked at any statistics</p> <p>15 concerning deaths in Saleen vehicles?</p> <p>16 MS. DeFILIPPO: From any source?</p> <p>17 MR. STOCKWELL: Any source, yeah.</p> <p>18 A No. The only source would have</p> <p>19 been -- you know, would have been our own, you</p> <p>20 know, customer hotline. And actually, the time</p> <p>21 I was there, I'm not sure I recalled getting</p> <p>22 reports of any -- any deaths.</p> <p>23 Q Okay. All right. Your Ford GT</p> <p>24 section, which is at "B," top of Page 2, Number</p> <p>25 B.</p>
163	<p>1 actually, in both cases, during our own</p> <p>2 internal investigation, we -- in both cases we</p> <p>3 had a second occurrence before we got to a</p> <p>4 recall. But in both those cases, there</p> <p>5 were two problems before we got them recalled.</p> <p>6 Q Okay. How much time with regard to</p> <p>7 the electrical fire -- how much time passed in</p> <p>8 between the first occurrence and when you</p> <p>9 notified NHTSA?</p> <p>10 A Probably a period of weeks. Six or</p> <p>11 eight weeks, I would say.</p> <p>12 Q How many vehicles were affected?</p> <p>13 A Probably, I think, 30 to 50.</p> <p>14 Pretty small number.</p> <p>15 Q And what was the repair, if any?</p> <p>16 A The repair was a -- we changed the</p> <p>17 wiring harness and added -- one wire was</p> <p>18 up-gauged.</p> <p>19 Q What does that last word mean?</p> <p>20 A Okay. We went to a larger gauge --</p> <p>21 Q Oh.</p> <p>22 A -- electrical wire.</p> <p>23 Q Okay.</p> <p>24 A There was just too much current</p> <p>25 going through the wire as we had it spec'd.</p>	165	<p>1 A Sure.</p> <p>2 Q And it says, "In this role, I</p> <p>3 defined the design concept and the packaging</p> <p>4 strategy for the fuel tank."</p> <p>5 What do you mean by "design</p> <p>6 concept"?</p> <p>7 A That we were going to use a plastic</p> <p>8 tank and the basic configuration of the tank.</p> <p>9 Q Was that just your decision or was</p> <p>10 it -- did it involve other people as well?</p> <p>11 A I think in this case it was pretty</p> <p>12 much my decision.</p> <p>13 Q Okay.</p> <p>14 A And with, then, concurrence of a</p> <p>15 few other people.</p> <p>16 Q Why was a plastic tank used?</p> <p>17 A Because the shape that we wanted</p> <p>18 the tank to fit into would have been difficult</p> <p>19 to make in steel; although, we did -- we did</p> <p>20 consider steel and aluminum, both, as</p> <p>21 alternatives, but chose the plastic tank.</p> <p>22 We could have formed it in</p> <p>23 aluminum, and there was a piece cost versus</p> <p>24 tooling costs trade-off that we considered. We</p> <p>25 then made the decision to go with the plastic</p>

166	<p>1 tanks.</p> <p>2 Q Did Ford have to, for lack of a</p> <p>3 better term, sign off on what was being done at</p> <p>4 Saleen? Did it have to pass through Ford's</p> <p>5 hands at all?</p> <p>6 A Absolutely not.</p> <p>7 Q Okay.</p> <p>8 A Saleen was pretty separate. They</p> <p>9 bought vehicles from Ford. When it got to</p> <p>10 warranty issues, we did have a line of</p> <p>11 communication with Ford and a discussion of if</p> <p>12 an issue was a Ford issue or something we'd</p> <p>13 created.</p> <p>14 And they were pretty clear, you</p> <p>15 know. If our supercharger blew up an engine,</p> <p>16 then we handled it. But if it was, you know,</p> <p>17 the seat broke, we did nothing to the seat,</p> <p>18 Ford would handle it. So it's just a</p> <p>19 communication but no -- no official</p> <p>20 connections.</p> <p>21 Q And what do you mean by "packaging</p> <p>22 strategy for the fuel tank"?</p> <p>23 A Just the location in the vehicle.</p> <p>24 Q Okay. When you say you defined the</p> <p>25 design concept and packaging strategy for the</p>	168	<p>1 generated with regard to protecting the fuel</p> <p>2 tank in impacts for the GT?</p> <p>3 MS. DeFILIPPO: Is there any?</p> <p>4 MR. STOCKWELL: Documentation.</p> <p>5 MS. DeFILIPPO: Documentation in</p> <p>6 where? At Ford?</p> <p>7 MR. STOCKWELL: Yeah.</p> <p>8 Q While you were at Ford working on</p> <p>9 the GT?</p> <p>10 A There may be some internal</p> <p>11 documents. There were six SAE papers written</p> <p>12 on the GT. I don't recall if those SAE papers</p> <p>13 may have contained anything.</p> <p>14 And what led to this original</p> <p>15 discussion is we did pay a lot of attention to</p> <p>16 the heritage of the vehicle. So we had an</p> <p>17 original Ford GT from the '60s, and we looked</p> <p>18 at that.</p> <p>19 And that particular car had, you</p> <p>20 know, something we would consider quite</p> <p>21 dangerous today for gas tanks. It had two</p> <p>22 sidesaddle tanks that were actually in the very</p> <p>23 outboard of the car. And we just -- we</p> <p>24 realized we wouldn't do that, so we knew we had</p> <p>25 to deviate. And that -- the original car with</p>
167	<p>1 GT, was there anybody, for lack of a better</p> <p>2 phrase, above you that had to review the</p> <p>3 decision?</p> <p>4 A There were, I would say, three --</p> <p>5 three people involved in some of the decisions,</p> <p>6 not all of them.</p> <p>7 Q Okay.</p> <p>8 A John Coletti; Chris Theodore, who</p> <p>9 was vice-president of engineering; and Jay</p> <p>10 Mays, who was vice-president of styling and</p> <p>11 design.</p> <p>12 And Jay wasn't involved in all the</p> <p>13 decisions. He was involved in interior design</p> <p>14 with seats, selection of the body panel</p> <p>15 materials. Jay was probably involved in 20 or</p> <p>16 30%.</p> <p>17 Chris was involved in -- maybe 50%</p> <p>18 of them.</p> <p>19 And John Coletti was aware of</p> <p>20 probably every decision, and he was most</p> <p>21 involved in the power train decisions.</p> <p>22 Q Okay. And it also says here,</p> <p>23 "Primary consideration was given to protection</p> <p>24 of the fuel tank in impacts."</p> <p>25 Was there any written material</p>	169	<p>1 the tanks outboard, the occupants were moved</p> <p>2 inboard and there was not much of a tunnel.</p> <p>3 So we completely reversed that and</p> <p>4 put in a big tunnel tank, which moved the</p> <p>5 occupants apart. And our consideration then</p> <p>6 was given to the occupants because they're now</p> <p>7 closer to the outside than the original car,</p> <p>8 with all of the gas tanks moved inboard. So</p> <p>9 the, you know, total packaging decision</p> <p>10 was considered.</p> <p>11 Q Okay. And you talk about -- you</p> <p>12 said, "I also defined the concept for the fuel</p> <p>13 hose and filler pipe routing."</p> <p>14 Can you explain that to me, please?</p> <p>15 A Yeah. The design chief, a guy name</p> <p>16 Camilo Pardo, he -- there were a lot of design</p> <p>17 characteristics they wanted to have on the</p> <p>18 vehicle. And one of them was they wanted to</p> <p>19 have two fuel fillers. The original car had a</p> <p>20 fuel filler for each side for each tank.</p> <p>21 And I didn't want two fuel fillers,</p> <p>22 so I -- I said we'll use one of the fillers.</p> <p>23 And we conceptualized how to get to that</p> <p>24 filler.</p> <p>25 And then we left the other door,</p>

170	<p>1 but it actually -- you open it up, and it's a</p> <p>2 charge port for your battery, I believe is what</p> <p>3 ended up there.</p> <p>4 Q Okay.</p> <p>5 A So we didn't want to make it a</p> <p>6 total fake thing. We wanted to give it some</p> <p>7 kind of function --</p> <p>8 Q Okay.</p> <p>9 A -- but they wanted the -- to have</p> <p>10 the characteristics of the car having both of</p> <p>11 those, so... And again, there was -- it was a</p> <p>12 compromise. You know, the design guys wanted</p> <p>13 something and we wanted something different and</p> <p>14 the final result was a compromise, although,</p> <p>15 the filler location was acceptable. It was</p> <p>16 inboard enough. It was in a good location, so</p> <p>17 it was easy to agree to that.</p> <p>18 Q Okay. And how was the filler hose</p> <p>19 routed to the tank on the GT when you were</p> <p>20 there?</p> <p>21 A Well, the filler is mounted on the</p> <p>22 front fender on -- on the top surface. So kind</p> <p>23 of you visualize it at the base of the</p> <p>24 windshield.</p> <p>25 Q Yup.</p>	172	<p>1 other than any of the attorneys here, in</p> <p>2 preparation for your deposition?</p> <p>3 A Not specifically for the</p> <p>4 deposition, no.</p> <p>5 Q Did you discuss the Kline case with</p> <p>6 anybody before the deposition? Within a day</p> <p>7 before the deposition, other than the</p> <p>8 attorneys?</p> <p>9 A Well, I ran into Paul Sheridan at</p> <p>10 breakfast yesterday, so I think we probably</p> <p>11 discussed the case in general terms.</p> <p>12 Q Okay. Anything specifically you</p> <p>13 recall him saying?</p> <p>14 A No. I think it was more that he</p> <p>15 was going to sit in on the dep with Banta. And</p> <p>16 he was upset that his deposition kept getting</p> <p>17 delayed, and things like that.</p> <p>18 MR. SACCO: Only he would be upset</p> <p>19 by that.</p> <p>20 Q All right. How did it come to be</p> <p>21 that you met him at breakfast?</p> <p>22 A It was a chance -- I went down to</p> <p>23 get breakfast, and he was already there in</p> <p>24 the restaurant.</p> <p>25 Q Are you staying at the same hotel</p>
171	<p>1 A And then we'd come out from the</p> <p>2 bottom of that, take an immediate turn to get</p> <p>3 out of the tire packaging envelope, and then at</p> <p>4 that point you're only a foot and a half away</p> <p>5 from the front of the fuel tank. So it goes</p> <p>6 directly into the fuel tank from there.</p> <p>7 Q Okay. On Page 2, 3A, when you talk</p> <p>8 about the Viper and being involved in the</p> <p>9 development of improvements to resolve three</p> <p>10 different issues that related to fires, did any</p> <p>11 of those issues have to do with the fuel tank?</p> <p>12 A No.</p> <p>13 Q All right. And the under hood fire</p> <p>14 occurrence, that didn't involve the fuel tank?</p> <p>15 A No, it did not.</p> <p>16 Q Did you look at any documents to</p> <p>17 prepare for the deposition today?</p> <p>18 A Just what's in my file.</p> <p>19 Q Everything that's on the table?</p> <p>20 A Correct. And probably there's some</p> <p>21 things here too, so...</p> <p>22 Q Could I characterize that as an</p> <p>23 electronic file?</p> <p>24 A Yes.</p> <p>25 Q Okay. Did you speak to anybody,</p>	173	<p>1 as Mr. Sheridan?</p> <p>2 A Yeah. And actually, he -- he just</p> <p>3 raved about this hotel.</p> <p>4 Q He was raving about it yesterday</p> <p>5 too.</p> <p>6 A Yeah. And --</p> <p>7 MS. DeFILIPPO: And you don't think</p> <p>8 it's anything, right?</p> <p>9 A And now I'm going on record</p> <p>10 thinking it was nothing special.</p> <p>11 Q You know what? I'm going to put</p> <p>12 that off because he's going to read it.</p> <p>13 It's a nice hotel, Mr. Sheridan.</p> <p>14 A That's okay. No, that's okay.</p> <p>15 I'll tell Paul myself.</p> <p>16 MS. DeFILIPPO: You better tell him</p> <p>17 yourself.</p> <p>18 MR. STOCKWELL: Give him a heads-up</p> <p>19 before the transcripts goes out.</p> <p>20 MR. SACCO: That's funny.</p> <p>21 MR. STOCKWELL: All right.</p> <p>22 Mr. Hannemann, those are my questions. Thank</p> <p>23 you.</p> <p>24 MS. DeFILIPPO: I have a couple</p> <p>25 follow-ups just for clarity, I think. Just to</p>

174	<p>1 clear a couple things up.</p> <p>2 CROSS-EXAMINATION</p> <p>3 BY MS. DeFILIPPO:</p> <p>4 Q When you were talking about</p> <p>5 locating tanks in the center of the vehicle,</p> <p>6 you were not referring to inside the vehicle,</p> <p>7 were you, at any time?</p> <p>8 A No, absolutely not.</p> <p>9 Q Okay. You meant center of the</p> <p>10 vehicle, outside of the passenger compartment?</p> <p>11 A Correct.</p> <p>12 Q You had mentioned earlier about</p> <p>13 consulting for niche manufacturers, not the big</p> <p>14 three. You used that term "not the big three,"</p> <p>15 right?</p> <p>16 A Correct.</p> <p>17 Q Who are the big three?</p> <p>18 A Well, maybe I should say the</p> <p>19 American three these days, but Chrysler, Ford,</p> <p>20 and GM. I think that's been touted as the big</p> <p>21 three, so... But -- and when I say "big</p> <p>22 three," I probably mean any major automotive</p> <p>23 manufacturer, so, you know, Toyota, Nissan,</p> <p>24 Honda.</p> <p>25 Q But the big American three that you</p>	176	<p>1 stipulation, with another case I'm working on,</p> <p>2 prior case at GM that was provided to me by the</p> <p>3 attorney in that case.</p> <p>4 And then the document that it's</p> <p>5 based on was a document that was part of a</p> <p>6 library of files that I have access to at a</p> <p>7 company that was formerly Syson-Hille.</p> <p>8 Q Do you have that document with you?</p> <p>9 A Yes.</p> <p>10 Q I think you had it a minute ago.</p> <p>11 And I'm not sure if you read this</p> <p>12 into the record, and I just want to make sure</p> <p>13 you read it completely. Could you just read</p> <p>14 the first sentence of the document?</p> <p>15 A This?</p> <p>16 Q Right.</p> <p>17 A "The recommended level of fuel</p> <p>18 system performance is given for front, side,</p> <p>19 and rear impacts, and rollover, premised on the</p> <p>20 concept that occupants involved in collisions</p> <p>21 which produce occupant impact forces below the</p> <p>22 threshold level of fatality, should be free</p> <p>23 from the hazard of post-collision fuel fires."</p> <p>24 Q And do you have the stipulation</p> <p>25 that you say was based on this particular</p>
175	<p>1 were referring to earlier in your deposition</p> <p>2 was Chrysler, Ford, and GM, correct?</p> <p>3 A Correct.</p> <p>4 Q You worked for Ford?</p> <p>5 A Yes, I did.</p> <p>6 Q You worked for Chrysler?</p> <p>7 A Yes, I did.</p> <p>8 Q Did you work for GM?</p> <p>9 A Yes, I did.</p> <p>10 Q You worked for all three?</p> <p>11 A I covered them all.</p> <p>12 Q At some point did you become aware</p> <p>13 of GM's stipulation regarding a standard</p> <p>14 whereby people should be able to survive</p> <p>15 crashes of -- and their determination of when</p> <p>16 you survive a crash from the standpoint of</p> <p>17 trauma versus a standpoint of fire?</p> <p>18 A Yes, I have.</p> <p>19 MR. STOCKWELL: Just note my</p> <p>20 objection to form.</p> <p>21 Q Okay. Was the stipulation</p> <p>22 something you became aware of in addition -- I</p> <p>23 think you had a document where you had some GM</p> <p>24 principle in the document about that?</p> <p>25 A Yes, I do. I -- I was aware of the</p>	177	<p>1 concept of GM?</p> <p>2 A Yes, I do. But I believe it's not</p> <p>3 here --</p> <p>4 Q Okay.</p> <p>5 A -- so I won't be able to read it.</p> <p>6 Q Okay. But we're going to produce</p> <p>7 this, correct?</p> <p>8 A Correct.</p> <p>9 Q So we can move on.</p> <p>10 You were asked earlier to define</p> <p>11 "crashworthiness." Do you have or did you</p> <p>12 receive or obtain or ask for any New Jersey</p> <p>13 definition of crashworthiness?</p> <p>14 A Yeah. When I was asked the</p> <p>15 question, I was thinking more of a definition</p> <p>16 in my own words.</p> <p>17 Q But --</p> <p>18 A But I was provided just the New</p> <p>19 Jersey definition of crashworthiness.</p> <p>20 Q And do you believe that the Susan</p> <p>21 Kline vehicle, at the time of the collision in</p> <p>22 February of 2007, was crashworthy?</p> <p>23 A No, it was not.</p> <p>24 MR. STOCKWELL: Objection to the</p> <p>25 form.</p>

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1 Q And you don't believe it was
 2 crashworthy, as you just said. Can you state
 3 the reasons it was not crashworthy?
 4 MR. STOCKWELL: Same objection.
 5 A Well, based on the New Jersey
 6 definition. And it talks about crashworthiness
 7 is defined as the ability of a motor vehicle to
 8 protect its passengers from enhanced injuries
 9 after a collision.
 10 Q And from -- I'm sorry if you didn't
 11 finish.
 12 A Yeah. And the Kline vehicle did
 13 not do that.
 14 Q From a purely engineering
 15 standpoint, and based on your knowledge,
 16 experience, your studies, your reviews of the
 17 crash tests of Chrysler, and your reviews of
 18 the crash tests of -- that were done by Center
 19 For Auto Safety and the federal government, are
 20 you able to indicate from an engineering point
 21 of view, whether the Kline vehicle, in February
 22 of 2007, was a crashworthy vehicle?
 23 MR. STOCKWELL: Objection to the
 24 form.
 25 A Yeah, I kind of got lost a little

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1 there.
 2 Q Okay. Well, we'll repeat that.
 3 (Question read:
 4 "Q From a purely engineering
 5 standpoint, and based on your knowledge,
 6 experience, your studies, your reviews of the
 7 crash tests of Chrysler, and your reviews of
 8 the crash tests of -- that were done by Center
 9 For Auto Safety and the federal government, are
 10 you able to indicate from an engineering point
 11 of view, whether the Kline vehicle, in February
 12 of 2007, was a crashworthy vehicle?")
 13 MR. STOCKWELL: Same objection.
 14 A Yeah. Based on that, I don't
 15 believe it was a crashworthy vehicle.
 16 Q And are you able to state
 17 whether -- your opinion as to whether the
 18 vehicle was crashworthy based on all of the
 19 things that we've discussed at the time it left
 20 the hands of the manufacturer?
 21 MR. STOCKWELL: Objection to the
 22 form.
 23 Q Which was in 1996 --
 24 A Yes, I believe --
 25 Q -- or the following --

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1 A -- all those conditions that made
 2 it non-crashworthy, existed at the time it left
 3 Chrysler's hands.
 4 Q Now, you indicated that when you
 5 first accepted the assignment that -- on Page 2
 6 of your report, you indicated you were
 7 requested to determine if there was a product
 8 defect related to the '96 Jeep Grand Cherokee
 9 that caused the fire which resulted in Susan
 10 Kline's death, correct?
 11 A Yes.
 12 Q That's your statement?
 13 A Yes, it was.
 14 Q And in the end of your report, you
 15 summarize by indicating that the conclusions --
 16 are those conclusions where you'll enumerate
 17 the defects that you found?
 18 A Yes, it is.
 19 Q And Conclusion A, you say that,
 20 "Had the Chrysler designed the 1996 Jeep Grand
 21 Cherokee with the fuel tank in a safe location,
 22 it is likely Susan Morris-Kline would not have
 23 died from a fire in this case."
 24 Does that set forth your defect
 25 which you've expressed previously about tank

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1 location?
 2 MR. STOCKWELL: Object to the form.
 3 A Yes. In the '96 Jeep Grand
 4 Cherokee, the tank location is a defect.
 5 Q And does that, in your opinion,
 6 make the vehicle a vehicle which is not safe?
 7 MR. STOCKWELL: Objection to form.
 8 A Yes, that's correct.
 9 Q Now, in the other cars which you
 10 were asked about, and I believe that was in '96
 11 you said there was a Mustang and Crown Victoria
 12 that you were aware of with a tank which was
 13 also behind the axle. Those two you
 14 enumerated, correct?
 15 A Yes.
 16 Q Both of them were cars and not
 17 SUVs; is that accurate?
 18 A That's correct. And they also -- I
 19 don't believe either one of them had a fuel
 20 line, fuel filler routed through the rail and
 21 likely had sufficient structure to protect the
 22 tank to the standards at the time.
 23 Q Now, in a situation like the
 24 accident that we're talking about, did we have
 25 underwrite?

182	<p>1 MR. STOCKWELL: Objection to the --</p> <p>2 A Yes, we did.</p> <p>3 Q So could you explain in the Susan</p> <p>4 Kline accident what you mean by "underride"?</p> <p>5 A Well, I define underride as when</p> <p>6 the striking vehicle's main structure is not</p> <p>7 engaged with the main structure of the vehicle</p> <p>8 that strikes.</p> <p>9 And you can see from the pictures</p> <p>10 of the Morgan-Alcala Toyota, there's only minor</p> <p>11 damage to the front bumper and the initial</p> <p>12 front crash structure, and there doesn't appear</p> <p>13 to be any damage to the main frame rails. That</p> <p>14 indicates that part of the vehicle going under</p> <p>15 the bumper.</p> <p>16 And the structure above those frame</p> <p>17 rails is very soft and doesn't allow a lot of</p> <p>18 energy absorption, which also would allow the</p> <p>19 vehicle to penetrate underneath the other</p> <p>20 vehicle.</p> <p>21 Q Was the bumper height of the Susan</p> <p>22 Kline vehicle higher than the passenger -- or</p> <p>23 the minivan, let's say, the Toyota?</p> <p>24 MR. STOCKWELL: Objection to the</p> <p>25 form. The what of the Toyota?</p>	184	<p>1 considerations, which would have raised the</p> <p>2 bumper height probably close to the maximum</p> <p>3 allowed by regulations.</p> <p>4 Q And the two examples that you gave</p> <p>5 of cars with rear tanks outside -- on the back</p> <p>6 of the axle, they were cars. Were they lower</p> <p>7 to the road, let's say, than the Jeep in terms</p> <p>8 of bumper height?</p> <p>9 A Yeah, both of those would have been</p> <p>10 lower.</p> <p>11 Q Now, the tank in the Susan Kline</p> <p>12 vehicle, I think you indicated, was not</p> <p>13 protected by a skid plate, correct?</p> <p>14 MR. STOCKWELL: Objection to the</p> <p>15 form.</p> <p>16 A A skid plate, or actually any other</p> <p>17 device that might have helped protect it during</p> <p>18 an underride.</p> <p>19 Q Do you believe it was an</p> <p>20 unprotected tank?</p> <p>21 A Yes, I do.</p> <p>22 Q Do you know whether or not the tank</p> <p>23 hung below -- any portion of the tank hung</p> <p>24 below the bumper of the Jeep?</p> <p>25 A Yes, it did.</p>
183	<p>1 MS. DeFILIPPO: The front of the</p> <p>2 Toyota.</p> <p>3 MR. STOCKWELL: Front bumper?</p> <p>4 MS. DeFILIPPO: Let me --</p> <p>5 MR. STOCKWELL: Sorry.</p> <p>6 MS. DeFILIPPO: Let me rephrase the</p> <p>7 question.</p> <p>8 BY MS. DeFILIPPO:</p> <p>9 Q Was the bumper height of the Jeep,</p> <p>10 the Susan Kline Jeep, higher than the bullet</p> <p>11 vehicle in this case, which was the Toyota</p> <p>12 Sienna?</p> <p>13 MR. STOCKWELL: Objection to the</p> <p>14 form.</p> <p>15 A Yes, it was.</p> <p>16 Q Do you recognize the term,</p> <p>17 "mismatched bumper heights"?</p> <p>18 A Yes, I do.</p> <p>19 Q Okay. Now, the Crown Victoria and</p> <p>20 the Mustang, would they have bumpers at the</p> <p>21 height of the -- for instance, of a SUV like</p> <p>22 the Jeep?</p> <p>23 A Typically not. They would have had</p> <p>24 probably lower bumpers. As I said before, the</p> <p>25 Cherokee was designed for off-road</p>	185	<p>1 Q Was that the design of the Jeep</p> <p>2 Grand Cherokee in 1996, that a portion of that</p> <p>3 tank would hang below the bumper?</p> <p>4 A That was how it was designed.</p> <p>5 Q Would you consider a Susan Kline</p> <p>6 vehicle to be a base or basic vehicle?</p> <p>7 A After everything I've seen, it</p> <p>8 appeared to have, you know, no real options,</p> <p>9 specifically no options in the area of concern</p> <p>10 of the gas tank.</p> <p>11 Q Did it have any rear structural</p> <p>12 options?</p> <p>13 A No, it did not.</p> <p>14 Q So in a base vehicle like the Susan</p> <p>15 Kline vehicle, with the unprotected tank</p> <p>16 hanging below the bumper, in an underride</p> <p>17 situation, is it likely that the tank would be</p> <p>18 struck directly --</p> <p>19 MR. STOCKWELL: Objection to the</p> <p>20 form.</p> <p>21 Q -- by the bullet vehicle?</p> <p>22 A Yes, it is.</p> <p>23 Q Do you believe that that's what</p> <p>24 happened in the Susan Kline accident?</p> <p>25 MR. STOCKWELL: Objection to form.</p>

186	<p>1 A Yeah, I'm -- there's pretty good 2 evidence that the Toyota underrode the Jeep 3 and would have struck the tank. 4 Q In the crash tests that you looked 5 at, did you look at all of the crash tests 6 provided by Chrysler? 7 A I believe I looked at all of the 8 rear impact, yes. 9 Q And were there 29? 10 A Yes. 11 Q And in the crash tests that you 12 looked at, both those and the ones that were 13 provided by Chrysler, was there -- did you 14 formulate an opinion as to whether or not the 15 Jeep Grand Cherokee had passed 301? 16 MR. STOCKWELL: Objection to the 17 form. 18 Q In 1990 -- the first iteration, the 19 ZJ. 20 A Yeah. The only -- my opinion, the 21 only passing test was one which included a 22 trailer hitch and a full-size spare. The tests 23 that they put on their compliance report, which 24 had no trailer hitch but also a full-size 25 spare, was not built properly for the test. It</p>	188	<p>1 Now, it could also be -- in this 2 case, just supply all vehicles with a full-size 3 spare. And then you don't need to pass a test 4 with a compact spare. 5 Q If that were the only issue that 6 was causing a failure to comply, correct? 7 A Correct. I just used that as an 8 example. 9 Q Okay. Can you tell me, after your 10 review of the 29 tests that you did of -- that 11 Chrysler supplied, whether or not a basic Susan 12 Kline vehicle ever passed the 301 testing? 13 A No, there was never -- 14 MR. STOCKWELL: Objection. 15 A -- a test run in that configuration 16 that passed. 17 Q Do you believe that a manufacturer, 18 a prudent manufacturer practicing prudent 19 engineering based on the principles of 20 engineering and your knowledge and experience 21 and training in this area, is required to pass 22 a basic vehicle before they can certify 23 compliance to our government -- 24 MR. STOCKWELL: Objection. 25 Q -- of passing a government</p>
187	<p>1 was noted in the test report that the drive 2 shaft was too short, as we talked about 3 earlier. 4 And neither of these vehicles were 5 in the base condition. The fact that they had 6 trailer hitches on one of them and full-size 7 spare on the other means they weren't in the 8 base condition. 9 And also, you know, there's -- of 10 course, you can't test every condition. But I 11 believe that Chrysler had prior knowledge that 12 they could not pass the test with the compact 13 spare. In the case where you have, you know, 14 prior knowledge of that, you can't ignore it 15 and just test with options. 16 Q Can you formulate a judgment to 17 ignore a test when you know you have a failure 18 and then just test with an option -- 19 MR. STOCKWELL: Objection. 20 Q -- for a passing test for purposes 21 of compliance? 22 A Once you have knowledge of a test 23 that would fail, you do need to address the 24 condition, if that's a condition you desire to 25 build cars in.</p>	189	<p>1 regulatory test? 2 MR. STOCKWELL: Objection to the 3 form. 4 A Actually, technically, all 5 configurations you sell should pass. 6 If you have knowledge that your 7 base vehicle does not pass, then I think it's 8 irresponsible to sell a vehicle equipped that 9 way. 10 Q And should you have knowledge that 11 your base vehicle passes before moving on to 12 vehicles with options for purposes of 13 compliance testing? 14 A That's typically how I would do it. 15 And even in the Chrysler deposition, I believe 16 Michael Teets had the same philosophy. You 17 test your base vehicle and then you add 18 optional equipment, and it should continue to 19 pass. But the premise is the base vehicle 20 should pass, also. 21 Q You had mentioned earlier some -- 22 you had some testimony about the filler hose 23 pulling from the tank and you had indicated -- 24 and correct me if I'm wrong -- I think you said 25 that based on the facts that you read about the</p>

190	<p>1 fire happening as soon as the impact occurred, 2 that was one of the factors that led you to 3 believe the hose probably did pull out of this 4 tank, correct? 5 MR. STOCKWELL: Objection to the 6 form. 7 Q Is that what you said or -- 8 A That's correct. 9 Q Okay. Even if the hose did not 10 pull out in this case for some reason, was 11 there another defect in this vehicle which 12 would, in your opinion, have caused a fire in a 13 rear-end collision? 14 MR. STOCKWELL: Objection to the 15 form. 16 A In this accident? 17 Q Yes. In this accident, in this 18 case, in the 1996 basic vehicle. 19 A Yeah, had the filler hose -- and 20 that is my most likely candidate. But had that 21 not occurred, it's just as likely that the tank 22 would have been ruptured just due to contact 23 with the Toyota. 24 Q When you reviewed the testing, was 25 there ever any testing with a skid plate or</p>	192	<p>1 also had a full-size spare. 2 Q Okay. Was there a skid plate test 3 in the 29 tests that did not pass? 4 A Not that I know of. 5 Q Okay. So that's the 301, 6 30-mile-an-hour, non-deformable barrier test, 7 correct? 8 A Correct. 9 Q Okay. Now, referring to the other 10 tests that you looked at, which were the Center 11 For Auto Safety tests, did you review any tests 12 that had a skid plate that you can recall? 13 A No, I don't recall if those 14 vehicles had skid plates or not. 15 Q In those -- in the 50-mile-an-hour 16 Karco tests, was that a passing test? 50 miles 17 an hour? 18 A No, it was not. 19 Q And the 40-mile-an-hour Karco test, 20 was that a passing test? 21 A I'm not sure I reviewed that test. 22 We talked about it earlier and I... 23 Q Have you reviewed it -- 24 A I'm not sure. 25 Q -- since writing your report?</p>
191	<p>1 with a trailer hitch where the -- let's just 2 talk skid plate -- with a skid plate where the 3 tank was protected but there was still a 4 leakage in the test? 5 MR. STOCKWELL: Objection to the 6 form. 7 A Actually, the two tests that I know 8 had skid plates both passed. 9 Now, when we talked earlier that I 10 reviewed all the tests, some of the tests 11 didn't have photos, some didn't have a report, 12 some didn't have video, some didn't describe 13 all the equipment. So I was able to identify 14 whether a vehicle had a skid plate or not in 15 only about half the tests. So I can't say for 16 certainty that every time a skid plate was on 17 that it passed. But the two that I know had 18 skid plates both passed the test. 19 Q So when the tank was protected in 20 the 29 tests provided by Chrysler, that vehicle 21 passed the test with the skid plate protection, 22 correct? 23 MR. STOCKWELL: Objection to the 24 form. 25 A Yes. Skid plates and both of those</p>	193	<p>1 While you're looking for that -- 2 A I think I got -- actually, I 3 think -- 4 MS. DeFILIPPO: I'm just going take 5 a quick bathroom break. 6 THE WITNESS: Me, too. 7 (Recess taken.) 8 (Question read.) 9 A I'm reviewing it now. 10 Q But Mr. Hannemann, you had that 11 test before writing your final report in 12 August. That's the test of June 7th, 2010? 13 A Yes, I did. 14 Q And now having found it in your 15 voluminous file, can you tell me whether the 16 test, the 40-mile-an-hour Karco test, was a 17 passing test? 18 A No, it was not. It had an 19 immediate leak as a result of the impact. 20 Q And was the leak from the fuel 21 filler hoses pulling out or something else? 22 A I'm not sure that the Karco 23 tests -- if they specified. 24 Q Well, if you reviewed the video and 25 it was specific enough, you would be able to</p>

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1 answer that question; is that a fair statement?
 2 A Yes, I could.
 3 Q Okay. And if you were there,
 4 anybody who was there would be able to answer
 5 that statement, also, correct?
 6 A That's correct. I do recall from
 7 the 50-mile-an-hour test, that the pictures
 8 provided to me did not show the specific
 9 leakage area.
 10 Q On the 50-mile-an-hour test?
 11 A 50.
 12 Q Okay.
 13 A The 40, if, depending on how -- on
 14 how good the pictures are, I would be able to
 15 identify it.
 16 Q Hypothetically, based on your
 17 knowledge and your review of everything in this
 18 case and your experience, your training, are
 19 you able to indicate in a rear-end collision of
 20 a base vehicle like the Susan Kline vehicle,
 21 whether the vehicle was defective and indicate
 22 the defects that you found in that particular
 23 vehicle?
 24 MR. STOCKWELL: Objection to the
 25 form.

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1 A Yes, I believe it's defective and I
 2 could identify a number of separate defects.
 3 And I'm not sure that it requires all those
 4 defects to even consider the vehicle defective.
 5 Q Okay. Well, would any one of the
 6 defects which you are about to identify and I'm
 7 going to ask you about, cause the vehicle to be
 8 unfit, unsuitable, and unsafe for a consumer
 9 like Susan Kline?
 10 MR. STOCKWELL: Objection to the
 11 form.
 12 A I guess I'd have to look -- you'd
 13 have to go through it case by case.
 14 Q Well, I'm only --
 15 A If you'd like me to --
 16 Q Yes, go ahead. Why don't you
 17 enumerate the defects, and we'll do it that
 18 way.
 19 A Yeah. Well, in the absence of
 20 fixing anything else, moving the tank
 21 forward -- the fuel tank forward of the axle,
 22 would have improved the vehicle and removed
 23 that defect.
 24 The defect of the fuel filler hose
 25 going to the frame rail also requires the

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1 structure of the vehicle to be improved for
 2 that defect to be removed. So both of those go
 3 together.
 4 It's likely that just a skid plate
 5 would have been sufficient to prevent this
 6 accident -- or this injury and death. And it's
 7 possible that a trailer hitch may have, also,
 8 by itself, have prevented the death.
 9 MS. DeFILIPPO: All right. I think
 10 that's all I have. Thank you.
 11 MR. STOCKWELL: I've got some
 12 follow-up.
 13 REDIRECT-EXAMINATION
 14 BY MR. STOCKWELL:
 15 Q The stipulation that Ms. DeFilippo
 16 asked you about that General Motors made, was
 17 that stipulation, to your knowledge,
 18 incorporated into any General Motors procedures
 19 or practices?
 20 A Well, the stipulation was, to me,
 21 confirmation of the policy that they had in
 22 place.
 23 Q What policy was in place before
 24 that in writing that you're aware of?
 25 A The -- I'm not sure it had a title

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1 on it.
 2 MS. DeFILIPPO: It's the last one.
 3 A That was the abstracts, I believe.
 4 Well, it's from an abstract of -- it's a
 5 presentation on fuel system integrity. So I
 6 would say it's General Motors' policy on fuel
 7 system integrity.
 8 Q Do you know of any other
 9 manufacturer -- well, strike that.
 10 MR. STOCKWELL: Can we mark that as
 11 an exhibit?
 12 (Exhibit D-3, Abstracts, is marked
 13 for identification.)
 14 MS. DeFILIPPO: What's the thing
 15 called? I mean, what's the marking rather?
 16 THE REPORTER: D-3.
 17 MS. DeFILIPPO: D-3? What was D-2
 18 and D-1?
 19 MR. STOCKWELL: D-2 was a
 20 photograph, D-1 was his trial deposition list.
 21 MS. DeFILIPPO: That was your
 22 photo? So you have to --
 23 THE WITNESS: 4561.
 24 MS. DeFILIPPO: We're going to need
 25 to make a copy of that. Why don't you leave it

198	<p>1 with me?</p> <p>2 MR. STOCKWELL: You know what? I</p> <p>3 can leave it with the court reporter, too.</p> <p>4 MS. DeFILIPPO: Yeah, well --</p> <p>5 but --</p> <p>6 MR. STOCKWELL: If you want. But</p> <p>7 you can make copies if you want.</p> <p>8 MS. DeFILIPPO: Yeah. There's only</p> <p>9 three.</p> <p>10 MR. STOCKWELL: Okay.</p> <p>11 MS. DeFILIPPO: I'll make the</p> <p>12 copies.</p> <p>13 MR. STOCKWELL: All right. I may</p> <p>14 have a few more exhibits, though.</p> <p>15 MS. DeFILIPPO: What was D-1 now?</p> <p>16 MR. STOCKWELL: The trial and</p> <p>17 deposition list.</p> <p>18 MS. DeFILIPPO: Okay.</p> <p>19 MR. STOCKWELL: It's a spreadsheet.</p> <p>20 MS. DeFILIPPO: Okay.</p> <p>21 BY MR. STOCKWELL:</p> <p>22 Q Are you aware of any other</p> <p>23 automobile manufacturer that has adopted the</p> <p>24 statement in the GM stipulation?</p> <p>25 A I -- I don't have knowledge of</p>	200	<p>1 A Well, it's -- the -- with the skid</p> <p>2 plate, it's likely that it would have been. I</p> <p>3 guess I would rank them in order: Skid plate,</p> <p>4 trailer hitch, Estes bracket, as far as</p> <p>5 improving its level of crashworthiness. I</p> <p>6 mean, it definitely would have improved</p> <p>7 crashworthiness.</p> <p>8 Q Would it have been crashworthy?</p> <p>9 A Without having -- knowing if that</p> <p>10 type of vehicle can resist a fire at levels</p> <p>11 below somebody, you know, who was fatally</p> <p>12 injured, it's hard to tell.</p> <p>13 Q Okay. Hypothetically, if Chrysler</p> <p>14 said we're going to take all the '93 to 2004</p> <p>15 Jeep Grand Cherokees and we're going to fit</p> <p>16 them with a trailer hitch and a skid plate,</p> <p>17 would that recall be acceptable to you?</p> <p>18 A Yes.</p> <p>19 MS. DeFILIPPO: Are you talking</p> <p>20 about in a recall situation? A recall</p> <p>21 scenario?</p> <p>22 MR. STOCKWELL: Yeah.</p> <p>23 MS. DeFILIPPO: Yeah. Okay.</p> <p>24 A Okay. Based on the information I</p> <p>25 have, hypothetically, if I had my chief</p>
199	<p>1 every policy of every manufacturer, so that's</p> <p>2 really hard to answer that question.</p> <p>3 Q Okay. The answer would be no,</p> <p>4 you're not aware?</p> <p>5 A Yeah, I'm not aware.</p> <p>6 Q Has the government adopted that</p> <p>7 stipulation?</p> <p>8 A You know, the government 301</p> <p>9 regulation is more on preventing leaks and</p> <p>10 fires, but I don't believe it's tied into</p> <p>11 injuries, so no.</p> <p>12 Q Has any trade organization adopted</p> <p>13 that stipulation?</p> <p>14 A You mean, by "trade organizations"</p> <p>15 like SAE or something like that?</p> <p>16 Q SAE, any -- yeah.</p> <p>17 A I don't believe so.</p> <p>18 Q I want to make sure I'm clear about</p> <p>19 something with the Kline Jeep Grand Cherokee.</p> <p>20 When the Kline Jeep Grand Cherokee came off the</p> <p>21 assembly line and was delivered to Loman Auto</p> <p>22 Group, hypothetically, if that Kline Jeep Grand</p> <p>23 Cherokee had either a trailer hitch or an Estes</p> <p>24 bracket and a skid plate, would that vehicle</p> <p>25 have been crashworthy?</p>	201	<p>1 engineer hat on, I probably would accept that,</p> <p>2 yes.</p> <p>3 Q Have you ever seen a skid plate</p> <p>4 marketed as a device to prevent the fuel tank</p> <p>5 from impact by another vehicle?</p> <p>6 A Typically, skid plates are marketed</p> <p>7 as protection from off-road environments. In</p> <p>8 the case of the Grand Cherokee, since it has a</p> <p>9 structural issue with its frame rail, it gives</p> <p>10 it that added benefit.</p> <p>11 Q When you say "structural issue with</p> <p>12 the frame rail," what are you referring to?</p> <p>13 A Well, the frame rail, particularly</p> <p>14 on the left side that has the routing of the</p> <p>15 fuel filler tube through the frame rail, any</p> <p>16 relative motion of that rail relative to the</p> <p>17 fuel tank is going to cause a serious issue.</p> <p>18 So the stability, structurally, of that rail is</p> <p>19 critical. And the more you can do to stabilize</p> <p>20 that, the better off this vehicle will be.</p> <p>21 Q And I thought we agreed, but I just</p> <p>22 want to make sure we're clear, are you able to</p> <p>23 state to a reasonable degree of certainty</p> <p>24 whether the skid plate would have prevented a</p> <p>25 fire in this particular crash?</p>

202	<p>1 A I think it's likely that it would 2 have. 3 Q Based on what? 4 A All the information I've looked at. 5 The testing, the -- you know, what -- you know, 6 the fact that that does improve the vehicle. 7 Q Is that it? 8 A I think that's it, yeah. 9 Q Okay. And by the way, is it 10 possible for a trailer hitch to be pushed 11 forward into a fuel tank and pierce the fuel 12 tank? 13 A I think it is possible. I think in 14 Banta's depositions, he's more concerned about 15 trailer hitches that can actually -- or maybe 16 it was Owen Viergutz who's worried more about 17 trailer hitches causing a problem, so that can 18 happen. 19 In this case the benefit of the 20 trailer hitch helping the frame rail, you know, 21 outweighs the possibility that it might intrude 22 on the gas tank. 23 Q And you talked about the VC testing 24 and the fact that Chrysler used full spare 25 tires in those tests. Do you know whether they</p>	204	<p>1 Q Do you know if Chrysler undertook 2 any investigation following the failure of the 3 tests with the compact spare? 4 A I think, you know, if we had all 5 the change requests, I might be able to 6 determine that. 7 (Discussion held off the record.) 8 Q Okay. So you're not sure as you 9 sit here today? 10 A Yeah, I'm not sure if they made -- 11 what was the question? Did they determine that 12 was the cause of the failures? 13 Q Played a role. 14 A Played a role? Yeah, I'm -- I'm 15 pretty sure they did, because they were 16 actually strengthening the brackets that held 17 it into the vehicle. 18 MS. DeFILIPPO: That held the 19 spare? 20 A Held the spare in. And they 21 continued to run with full-size spares. And 22 yeah, I think that they had knowledge that that 23 was a problem. 24 Q Okay. Is there any written 25 standard requirement or authoritative text that</p>
203	<p>1 determined whether the full spare tire played a 2 role in the passing or the failing of the test? 3 A Excuse me? 4 Q Do you know whether Chrysler 5 determined whether the presence of a full spare 6 tire played a role in the passing or failing of 7 those tests? 8 MS. DeFILIPPO: Can you read the 9 whole question so I have it, because I don't 10 have it. 11 (Question read.) 12 MS. DeFILIPPO: Object to that 13 question, the form of that question. 14 What does that mean, if "Chrysler 15 determined"? 16 BY MR. STOCKWELL: 17 Q Do you know what that means, or do 18 you need me to rephrase it? 19 MS. DeFILIPPO: Well -- 20 A Well, I didn't see any statements 21 in the test reports that identified the compact 22 spare as a result of the failure. There were 23 tests with compact spares that failed, so based 24 on that, Chrysler should have known there was 25 an issue.</p>	205	<p>1 you're aware of that requires a base vehicle to 2 pass a 301 compliance test? 3 A It's -- part of the 301 is every 4 vehicle that's sold needs to comply with 301. 5 That doesn't mean that every vehicle sold -- 6 configuration sold needs to be tested, but it 7 needs to pass. 8 And what we've got here is Chrysler 9 has tests of configurations that don't pass. 10 And they haven't addressed those. 11 Q Which configuration are you 12 referring to? 13 A Well -- 14 MS. DeFILIPPO: I saw it. You put 15 it -- 16 A There it is. 17 Well, there was never a passing 18 test with a compact spare. That's probably the 19 one configuration that they never passed. And 20 then they -- it wasn't until '96 that they had 21 a passing test without a trailer hitch. 22 So those are two configurations 23 that didn't pass. 24 Oh, what was your -- I guess, what 25 was the question again?</p>

206	<p>1 MR. STOCKWELL: Could you read back</p> <p>2 the question for me? because I forgot it.</p> <p>3 (Discussion held off the record.)</p> <p>4 (Question read:</p> <p>5 "Q Which configuration are you</p> <p>6 referring to?")</p> <p>7 A Yeah. So any configuration with a</p> <p>8 compact spare and then up until '96, there was</p> <p>9 nothing that passed without a trailer hitch.</p> <p>10 Q And you're looking at not only</p> <p>11 developmental tests, but also validation tests?</p> <p>12 A Correct.</p> <p>13 Q And can you show me which tests</p> <p>14 were -- had a compact spare?</p> <p>15 A The only one I know for sure that</p> <p>16 had a compact spare was 5046.</p> <p>17 Q And that was February 1st of '94?</p> <p>18 A Correct.</p> <p>19 MS. DeFILIPPO: Can I see this for</p> <p>20 a second?</p> <p>21 MR. STOCKWELL: Mark this as the</p> <p>22 next exhibit.</p> <p>23 (Exhibit D-4, Safety Test, Vehicle</p> <p>24 Crash Test Letter, is marked for</p> <p>25 identification.)</p>	208	<p>1 won't leak statically.</p> <p>2 Q I don't know what that means. Can</p> <p>3 you explain that a little better to me?</p> <p>4 A Well, I mean, fuel leakage, because</p> <p>5 there's a hole or some type of thing, is one --</p> <p>6 one issue. And the other one is a leak due to</p> <p>7 something that requires pressure to push the</p> <p>8 fuel out. So they do a pressure check on the</p> <p>9 fuel system after the test.</p> <p>10 MS. DeFILIPPO: Was there a prop</p> <p>11 shaft on that? On that vehicle?</p> <p>12 THE WITNESS: Well, yeah. And</p> <p>13 this -- yeah. This wasn't even -- it's odd</p> <p>14 that they ran a few tests where they didn't</p> <p>15 even have prop shafts in the vehicles, so...</p> <p>16 MS. DeFILIPPO: So this didn't have</p> <p>17 a prop shaft at all, this car, and it was</p> <p>18 tested?</p> <p>19 THE WITNESS: Yeah.</p> <p>20 MS. DeFILIPPO: Well, if you have</p> <p>21 the whole tests --</p> <p>22 THE WITNESS: And see, this is what</p> <p>23 I would -- this is really more like a system</p> <p>24 level test. They modified it to represent the</p> <p>25 '95 returnless fuel system.</p>
207	<p>1 Q I'm going to show you what's been</p> <p>2 marked as Exhibit D-4. Just take a look</p> <p>3 through it and let me know when you're ready.</p> <p>4 MS. DeFILIPPO: Which one's that?</p> <p>5 THE WITNESS: Just the summary of</p> <p>6 5046.</p> <p>7 MR. STOCKWELL: Here you go. The</p> <p>8 first page.</p> <p>9 MS. DeFILIPPO: Do you have the</p> <p>10 rest of this?</p> <p>11 MR. STOCKWELL: I could. I might.</p> <p>12 Do you need to look at the rest of it?</p> <p>13 MS. DeFILIPPO: Well...</p> <p>14 A No. And this test is a failure</p> <p>15 because Chrysler also -- their own standard is</p> <p>16 to -- fuel systems should hold pressure. And</p> <p>17 during this test, there was no fuel leakage</p> <p>18 during or post-impact, but the system dropped</p> <p>19 pressure.</p> <p>20 Q What does that mean, "the system</p> <p>21 dropped pressure"?</p> <p>22 A When you pressurize a system, it's</p> <p>23 not -- even though it doesn't leak, it actually</p> <p>24 doesn't hold pressure. So if you -- if you had</p> <p>25 pressure in the fuel system, it would leak. It</p>	209	<p>1 Now, in -- I think in Michael</p> <p>2 Teets' deposition, he stated they never tested</p> <p>3 the '95 returnless fuel system. So that's --</p> <p>4 I'm a bit confused because he's stated they</p> <p>5 never tested it.</p> <p>6 So basically, I wouldn't even</p> <p>7 consider this a valid test for giving an</p> <p>8 indication of total vehicle performance. They</p> <p>9 were probably just looking at some aspect of a</p> <p>10 part that they put on the vehicle.</p> <p>11 Q The failure of the fuel system</p> <p>12 pressure check, can that cause a fire?</p> <p>13 A I suppose it could.</p> <p>14 Q Okay. But at least as far as fuel</p> <p>15 leakage that we're talking about, which is what</p> <p>16 301 speaks to, there was no fuel leakage in</p> <p>17 this test?</p> <p>18 A Yeah, no leakage. And again,</p> <p>19 because of the build of that car, I wouldn't</p> <p>20 really consider it a valid test.</p> <p>21 Q When you say "build," you're</p> <p>22 talking about the absence of a prop shaft?</p> <p>23 A Correct.</p> <p>24 Q Let's talk about -- did I mark --</p> <p>25 MR. STOCKWELL: Let's keep this</p>

210	<p>1 separate, so I don't mix up exhibits again. 2 Let's mark this as D-5. 3 (Exhibit D-5, Chrysler Motors 4 Safety Test 5199, Vehicle Crast Test Request, 5 is marked for identification.) 6 MS. DeFILIPPO: Give me the number 7 so I can -- 8 MR. STOCKWELL: Oh, the sticker 9 number? 10 MS. DeFILIPPO: No, the test 11 number. 12 MR. STOCKWELL: Oh, the test 13 number? 5199. 14 MS. DeFILIPPO: 5199? 15 MR. STOCKWELL: Yeah. 16 THE WITNESS: It's -- 17 MS. DeFILIPPO: This -- you have a 18 funny piece of paper in there. 19 MR. STOCKWELL: Yeah. That's the 20 way it's in the thing. See if you can read the 21 rest of it. 22 MS. DeFILIPPO: That's the way it's 23 in from Chrysler? 24 MR. STOCKWELL: Yeah. 25 MS. DeFILIPPO: Does this test,</p>	212	<p>1 questions -- and there's no question pending, 2 but if you need the full 5199 test production, 3 just you can indicate that. 4 THE WITNESS: Well, yeah, because 5 in my review of the test, I had this one marked 6 as a failed test. I'm just trying to -- from 7 this info, it's not obvious. 8 MR. STOCKWELL: Maybe I have it in 9 my -- 10 MS. DeFILIPPO: Well, it might be 11 on this page. Why don't you check? 12 THE WITNESS: It is the same thing 13 where it didn't hold the pressure check. 14 BY MR. STOCKWELL: 15 Q And that's your reason for calling 16 it a failed test? 17 A Yes. 18 MS. DeFILIPPO: It is a failed 19 test, right? 20 MR. STOCKWELL: Chrysler has it 21 listed as a passed test, that's why I'm 22 wondering. 23 MS. DeFILIPPO: They do? 24 MR. STOCKWELL: Yeah. 25 MS. DeFILIPPO: Where do they have</p>
211	<p>1 5199, have a video and pictures and all that? 2 MR. STOCKWELL: Uh-huh. 3 MS. DeFILIPPO: Do you have them? 4 Obviously, you don't have the video, but where 5 are the still pictures on them? 6 MR. STOCKWELL: Only if they're 7 there would I have them. 8 MS. DeFILIPPO: Sheila -- 9 MR. STOCKWELL: Oh, wait. Wait, 10 wait, wait, wait. 11 MS. DeFILIPPO: Sheila testified -- 12 MR. STOCKWELL: 5199? 13 MS. DeFILIPPO: Yeah. Sheila 14 testified on the record that if there are no 15 pictures, they don't -- that Chrysler never did 16 them. But if there -- 17 MR. STOCKWELL: I'm pretty sure 18 there were pictures. 19 MS. DeFILIPPO: -- are pictures, 20 she would have had them. 21 MR. STOCKWELL: I probably didn't 22 print them out, but they're there. If you need 23 to look at them. 24 MS. DeFILIPPO: If you need them or 25 any other part of this to answer any</p>	213	<p>1 it listed as a passed test? 2 MR. STOCKWELL: In whatever Sheila 3 sent to us. 4 MS. DeFILIPPO: Really? I have to 5 tell you, I have it listed as a fail, also, in 6 what she sent to me. So if you can show me 7 that, I'd be interested. 8 BY MR. STOCKWELL: 9 Q Regardless, though, you have it as 10 a failed test because of the fuel pressure 11 issue, right? 12 A Correct. 13 Q All right. But there was no gas 14 leakage in that test? 15 A Not in the rollover, no. 16 Q How about in the direct impact? 17 A Doesn't appear to be. 18 Q Was there a full prop shaft in that 19 test? 20 A That one, I believe so. I think it 21 had a full-size spare and it had a Canadian 22 bumper. I'm not sure how much different that 23 is. 24 Q The Canadian bumper? 25 A Yeah.</p>

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1 Q Any reason to believe it's
2 manufactured any differently than the American
3 bumper?
4 A Yeah. I think at that time Canada
5 actually still had a stricter bumper
6 requirement, so it may have had a -- it may not
7 have been an appropriate car to use for U.S.
8 certification.
9 Q Okay.
10 MS. DeFILIPPO: How many pages did
11 you give him?
12 Q You said, "certification." Is that
13 a certification test?
14 A No.
15 Q What kind of test is that?
16 A I'm not sure they called it -- it
17 might be -- that's a development test.
18 Q One last issue. Ms. DeFilippo
19 asked you again about the fuel filler hose.
20 And I just want to make sure we're clear.
21 Your basis for saying that it's a
22 possibility that the fuel filler hose separated
23 from the Kline fuel tank is based on a witness
24 statement and a police report that said the
25 fire was immediate?

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1 A Yes.
2 Q Is there anything else? Any
3 physical evidence, other than that, that you're
4 relying on?
5 A There's -- well, yeah. The other
6 things I'm relying on are the fact that after
7 Chrysler rerouted the hose, the death rate
8 dropped on the WJ -- the subsequent vehicle.
9 So that shows getting that fuel filler hose out
10 of the frame rail improved the situation.
11 And then two tests, there's a
12 Chrysler test where there was an immediate
13 leak. And the FHWA test, there was an
14 immediate leak.
15 And the Karco, I'm not sure I --
16 maybe that one, but the pictures weren't clear
17 to me if the leak was immediate.
18 Q Okay.
19 A Definitely the FHWA had it, just an
20 immediate fuel leak.
21 Q Okay. Anything about this specific
22 accident, though?
23 A On this one?
24 Q Physical evidence on this vehicle.
25 A No. It's just too hard to tell. I

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1 don't think anybody could tell on that one.
2 Q And you probably want to see a
3 photograph of the hole in the frame rail to see
4 if it's deformed or not, right?
5 A I mean, if it's deformed beyond
6 where the hose could fit in, that would be an
7 indication, yeah. And just -- some kind of
8 measurement on where the tank ends up versus
9 where the frame rail hole ends up.
10 MR. STOCKWELL: Thank you.
11 MS. DeFILIPPO: Are you done?
12 MR. STOCKWELL: I'm done. Sorry.
13 RE-CROSS-EXAMINATION
14 BY MS. DeFILIPPO:
15 Q Mr. Hannemann, if a frame rail
16 hole, the hole in the frame rail on the left
17 side where the filler hose and the fuel hose go
18 through, is slightly or not closed or deformed,
19 in a -- hypothetically, in a situation where
20 you have a rear-end hit, can the hose and
21 the -- both the filler hose and the vent hose
22 for the fuel tank still be pulled out?
23 A Sure.
24 Q And the --
25 A The holes --

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1 Q How does that happen? Just
2 explain.
3 A Well, that would be due to the
4 relative motion. So -- and I was asked about
5 the hole being deformed, that would be a for
6 sure indication. But if the hole's not
7 deformed, it's then up to the relative motion
8 between the tank and the rail. And that could
9 easily still disconnect the hose from the tank.
10 Q So let's assume for a minute that
11 the rail is bent, whether it's bent up, down,
12 Z-form, however it's bent, if the frame rail is
13 bent, would that be an indication that the hose
14 is pulled from the tank --
15 MR. STOCKWELL: Objection to the
16 form.
17 Q -- in a rear-end hit scenario?
18 A Yeah. My impression looking at the
19 vehicle, there's enough deformation there that
20 there's -- it's extremely unlikely that the
21 tank and rail moved together in that whole
22 motion.
23 And there's not much latitude for
24 deformation. You need -- the relative motion
25 has to be very small, as opposed to something

218	<p>1 we talked about earlier in the deposition, the</p> <p>2 2012 Mustang, which has a hose going to the</p> <p>3 rail.</p> <p>4 But the Mustang is different. The</p> <p>5 hose takes 90-degree and it travels a long</p> <p>6 path. And it's got a rubber section that would</p> <p>7 allow a lot more deformation.</p> <p>8 But the Jeep's pretty well</p> <p>9 connected and just small amounts of deformation</p> <p>10 and difference would take the hose off.</p> <p>11 Q And that Mustang you're talking</p> <p>12 about is the one, you testified earlier, is</p> <p>13 currently being made with that?</p> <p>14 A Correct. I was asked a question</p> <p>15 about other cars with a hole in the rail. And</p> <p>16 the new Mustang does have that, but it has a</p> <p>17 lot of other design features that mean it's</p> <p>18 probably okay, certainly a lot better than the</p> <p>19 Cherokee. It's probably not defective, but</p> <p>20 there's so many other things around that design</p> <p>21 to make it work. And I still would consider it</p> <p>22 a poor design practice, but, you know, it may</p> <p>23 or may not be a defect.</p> <p>24 Q With respect to this test 5199 that</p> <p>25 we've marked D-5, or at least a portion of the</p>	220	<p>1 failure, is there a requirement to -- can</p> <p>2 you -- let me ask you -- strike that.</p> <p>3 Once you test a vehicle with a</p> <p>4 certain configuration and you get a failure,</p> <p>5 should -- can you still make the vehicle with</p> <p>6 that configuration without making some change?</p> <p>7 A I think it's irresponsible to do</p> <p>8 that. Can somebody do it? Sure.</p> <p>9 Q Well, I mean, is it prudent</p> <p>10 engineering practice?</p> <p>11 A No.</p> <p>12 Q Is it within engineering standard</p> <p>13 to do such a thing?</p> <p>14 A It's -- I'm not -- the term</p> <p>15 "standard" I wouldn't necessarily --</p> <p>16 Q Standard, prudent engineering</p> <p>17 practice?</p> <p>18 A Standard practice. Once you're</p> <p>19 aware of an issue, you have a responsibility to</p> <p>20 address it or accept the risks. There's no</p> <p>21 such thing as a perfect car. You have to</p> <p>22 recognize and accept the risk.</p> <p>23 Q If, hypothetically, the Susan Kline</p> <p>24 fuel tank was moved to the mid-ship location,</p> <p>25 center of the car location, and you removed the</p>
219	<p>1 test results which were provided by Chrysler</p> <p>2 Corporation, there's a section that says</p> <p>3 "mechanical required," or "r-e-q." And then</p> <p>4 underneath it says "Add," a-d-d." It says,</p> <p>5 "Remove trailer hitch and fuel tank skid plate,</p> <p>6 and then, "Add," "install full-size spare</p> <p>7 tire."</p> <p>8 Did you see that --</p> <p>9 A Yes, I did.</p> <p>10 Q -- on this particular test?</p> <p>11 A Yes.</p> <p>12 Q What does that refer to?</p> <p>13 A What that means is this particular</p> <p>14 vehicle they were going to test, so mechanical</p> <p>15 req -- r-e-q is requisition. And somebody</p> <p>16 wanted to take off the trailer hitch and skid</p> <p>17 plate that this vehicle was likely equipped</p> <p>18 with.</p> <p>19 But then they wanted to take out</p> <p>20 the compact spare and put a full-size spare in.</p> <p>21 So it's just getting the car in the</p> <p>22 configuration that they wanted to test it in.</p> <p>23 Q Can you tell me your opinion with</p> <p>24 respect to once you test with a certain</p> <p>25 configuration and you recognize that there's a</p>	221	<p>1 defect, which you have defined as the tank</p> <p>2 being located behind the axle, do you need then</p> <p>3 in that scenario to fix the structure with a</p> <p>4 skid plate or a trailer hitch?</p> <p>5 A I would think the structure would</p> <p>6 probably be sufficient as it is.</p> <p>7 MS. DeFILIPPO: I have nothing</p> <p>8 else.</p> <p>9 FURTHER REDIRECT-EXAMINATION</p> <p>10 BY MR. STOCKWELL:</p> <p>11 Q You haven't done any testing or any</p> <p>12 scientific analysis to determine whether there</p> <p>13 would have been a fire in this accident if</p> <p>14 Ms. Kline's fuel tank was located mid-ship, do</p> <p>15 you?</p> <p>16 A No, I've not done any testing.</p> <p>17 MR. STOCKWELL: Thank you.</p> <p>18 MS. DeFILIPPO: Just one more</p> <p>19 question.</p> <p>20 FURTHER RECROSS-EXAMINATION</p> <p>21 BY MS. DeFILIPPO:</p> <p>22 Q From your inspection of the</p> <p>23 vehicle, the Susan Kline vehicle on the day</p> <p>24 that you inspected it, was there damage to the</p> <p>25 midsection where the tank could have been</p>

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1 located?
 2 MR. STOCKWELL: Objection to the
 3 form.
 4 Q Ahead of the axle instead of behind
 5 the axle?
 6 A Well, the -- you know, the axle
 7 did intrude into that area. So your earlier
 8 question about the structure, it may have been
 9 necessary to improve the structure enough so
 10 the rear axle would not intrude into that area.
 11 So I -- certainly, it's a lot
 12 easier, structurally, if the tank's mid-ship,
 13 but the Cherokee might still have taken some
 14 kind of structural modification.
 15 MS. DeFILIPPO: Thank you.
 16 MR. STOCKWELL: Thanks for your
 17 time, Mr. Hannemann. Appreciate it.
 18 THE WITNESS: You're welcome.
 19 MR. STOCKWELL: It was a pleasure.
 20 Very informative.
 21
 22 (Exhibits D-1 through D-5 are attached
 23 hereto.)
 24
 25 (The proceedings are concluded at 3:57 p.m.)

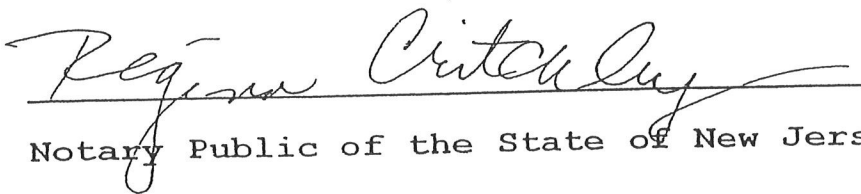
223

1 CERTIFICATE
 2
 3 I CERTIFY that the foregoing is a
 4 true and accurate transcript of the testimony
 5 and proceedings as reported stenographically by
 6 and before me at the time and place
 7 aforementioned.
 8 I FURTHER CERTIFY that I am neither
 9 attorney for nor counsel of any of the parties;
 10 parties of any of the attorneys in this action;
 11 and that I am not financially interested in the
 12 action.
 13
 14
 15 _____
 16 REGINA A. CRITCHLEY, C.C.R.
 17 Notary Public of the State of New Jersey
 18 Certificate No. XI1046
 19
 20
 21
 22
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 25

C E R T I F I C A T E

I, REGINA A. CRITCHLEY, hereby certify that the foregoing is a true and accurate transcript of the testimony and proceedings as reported stenographically by and before me at the time, place and on the date hereinbefore set forth.

I do ~~further~~ certify that I ~~am~~ neither a relative nor employee nor attorney or counsel of any of the parties in this action, and that I am neither a relative nor employee of such attorney or counsel, and that I am not interested in the action.



Notary Public of the State of New Jersey

Certificate No. XI1046

This transcript was prepared in accordance with N.J.A.C. 13:43-5.9