# EA02-025

TEXAS INSTRUMENTS, INC.'S

9/10/03

REQUEST NO. 7

BOX 10

PART A – I

PART G

you're referring to.

Q. Just some testing on these switches.

A. In what time frame, development, recently?

Q. Did they do some development testing?

A. I assume -- We provided switches to Ford during the development of the part and I would assume they did testing of those switches on vehicles.

Q. After the cars started catching fire, did Ford do some testing?

A. Yes.

Q. Did you know that Ford was claiming in some of their testing that -- that there was contamination in the electrical field -- field of the TI pressure switch that was caused by a perforated Kapton seal? Did you know that?

A. Can -- Can you repeat that?

Q. Have you ever heard that before, that Ford was claiming that the Kapton seal had been perforated or damaged in the manufacturing process and they showed this with some testing they did?

A. No, I was not aware of that.

Q. You weren't aware that Ford was claiming that when that Kapton seal was perforated because of a manufacturing defect caused during the crimping

process, that some corrosion begins to form in the electrical components? You weren't aware of that either?

A. I -- I have not heard anything from Ford where they say, during the crimping process the Kapton seal was compromised so that fluid could flow through the Kapton seal to the switching parts.

(Exhibit No. 6 marked.)

Q. So you haven't seen Exhibit 6 then or any of the testing that resulted in Exhibit 6 that Ford has conducted?

A. I don't know if I've seen this exact one. I've seen variations on this. This does not say that the Kapton seal is perforated during the crimp process.

Q. Okay. But it does say that it's perforated?

A. Yes.

Q. Can you think of any other way that the Kapton seal, the teflon coated Kapton seal for the pressure switches on the '92, '93 Panthers, could be perforated other than -- other than during the manufacturing process?

A. Sure.

Q. How?

A. When the Kapton wears out.
Q. How would that happen?
A. The end of the life of the switch after cycling. Excessive cycles, eventually the Kapton will wear out and be perforated.
Q. All right. In other words, the switch has exceeded it's -- the cycle specifications provided to TI by Ford?
A. Yes.
Q. The Kapton wears out and becomes perforated?
A. Yes.
Q. And that's Ford's responsibility?
A. It's Ford's --
MR. MANSKE: Objection, form.
A. It's Ford's responsibility to define the specifications and make sure those specifications are accurate for what the part will see in the application.
Q. Okay. Now, this may sound silly to you, but when these switches are being manufactured, you're not standing over there watching each one come off the assembly line, are you?
A. No, I'm not.
Q. Is anyone?

A. There are -- There are people on the production line.

Q. Okay. When the -- When the TI pressure switches that are the subject of the recall for the '92, '93 Panthers are coming through the TI assembly line, they're being produced, is there anyone that sits there and looks at every single switch during the crimping process?

A. There are -- There are people there running that piece of equipment. I wouldn't think they're looking at every switch during the crimping process.

Q. How -- Of the switches coming through there, how many are actually looked at during the crimping process to make sure that the Kapton's not damaged? Of those going through that process, how many are actually examined?

A. We do -- That's what we call SPC measurements, Statistical Process Control. We grab a sample of switches from each lot and make measurements on those switches to guarantee that the process is operating correctly.

Q. What's the sampling rate for the TI pressure switches in the '92, '93 Panthers that are the subject of the Ford recall?

A. I think it's about five pieces per ~~hour~~ hour which is roughly equivalent to 2000 pieces
Q. Five pieces per lot. How many are in a lot?
A. ~~Four thousand~~ Two-thousand pieces.
Q. All right. Five in 4,000 go through what's called the SBC sampling process, right?
A. SPC, Statistical Process Control.
Q. Who arrives at that sampling rate of five in 4,000?
A. TI Determines that sampling rate. Ford reviews our process and accepts our -- our control ~~process~~ plan which lists what our sampling rates are.
Q. Okay. And then, so what happens when these five out of 4,000 are pulled off the production line?
A. We make measurements to make sure that the switches, what we're measuring are -- are within Statistical Process Control.
Q. Has that been produced?
A. We don't --

*MS. ALVAREZ:* Objection, form.

A. We don't have any of the SPC data from back to that time frame. We've looked and it doesn't exist.
Q. Okay. Where did it go?

A. I assume it was discarded.

Q. What did it show? What did this discarded SPC data show with regards to the five out of 4,000 switches that were pulled from the assembly line during the time period that TI pressure switches used on '92, '93 Panthers were produced? What did that data show?

A. I would suspect it shows that the process was operating fine.

Q. And you know -- How do you know that?

A. Because I know how TI works. And if there's a problem, if the part goes out of Statistical Process Control, we stop the line, fix the problem. Limits are set up inboard of the specifications to make sure that we will catch a problem before it could be produced out of specification.

Q. Okay. So what does the data show?

A. I haven't seen the data.

Q. Anyone at TI know what the SPC sampling rate measurement showed with regards to the TI pressures switches that were manufactured and used on '92, '93 Panthers?

A. I don't know.

Q. Okay. These other switches that we talked

about, Nissan and GM, Ford, Chrysler, Volvo and others, what sampling rate did they use when they're being made?

A. I don't know the exact sampling rates on each one.

Q. Is the sampling rate the same for all TI pressure switches?

A. I don't know if it's all the same or not.

Q. Does anyone examine the Kapton seal in the SPC control -- Statistical Process Control measurements that are taken to determine if the Kapton has been damaged in the manufacturing process?

A. We're not measuring the Kapton in that process.

MR. JOLLY: Objection, nonresponsive.

Q. Does anyone examine the Kapton in the SPC process for the TI pressure switches that were used on the '92, '93 Panthers to determine if the Kapton was damaged in the manufacturing process?

A. The process is set up to make sure that the process does not damage Kapton. I don't know of anyone -- the specifics or of anyone reviewing Kapton, looking at Kapton for damage. SPC is taken at several different points on the production line.

I don't want to mislead ~~you~~ -- I think that that's the only point where it's taken. And there are several other tests on the production line to make sure the part is meeting its intended specification.

*MR. JOLLY:* Objection, nonresponsive.

Q. In any of the SPC procedures that are used in the production line for the TI switches that are used on the '92, '93 Panthers, when five out of 4,000 switches are pulled, at anywhere in the production line, does anyone look at the switches to determine if the Kapton was damaged in the manufacturing process?

A. I don't know.

Q. Same question for any other switches.

A. I don't know.

Q. Well, how has the manufacturing process changed there?

*MS. ALVAREZ:* Objection, form.

A. Changed where?

Q. For this particular switch involving the '92, '93 Panther.

*MS. ALVAREZ:* Objection, form.

A. Changed when?

Q. Ever.

A. The initial launch of the pressure

switches, we used the crimped -- crimped head off of the hand line and later switched to a crimping process on what we call the AMI machine, which is a more automated line.

Q. I guess the crimped head process is manual?

A. The -- The manual aspect of it really is the load of the parts. The -- The crimp die coming down and actually crimping the part is automatic, push a button to actuate.

Q. What's AMI mean?

A. I think it's the name of the company that made the -- the basic machine.

Q. What's the name of that company?

A. I think it's AMI. I -- I don't know the details around that. I'm not sure.

Q. Where are they?

A. I don't know.

Q. Has TI communicated with AMI with regards to the manufacturing of a TI pressure switch in any regard where it might've been alleged or there was a concern that their machine was damaging Kapton in any way?

A. I'm not aware of anything. Also, I'm not sure how much of that machine is -- is made by AMI.

Q. Or anyone else, AMI or anyone else associated with AMI?

A. TI has not contacted anyone and we feel that our crimping process is in control and TI was producing switches there that -- that operated properly.

Q. Has anyone from AMI or associated with AMI in any way come out to TI and looked at the machine to determine if it was damaging Kapton during the manufacturing process?

A. Ever or --

Q. Yeah.

A. Not that I'm aware of.

Q. With regards to the Ford '92, '93 Panthers?

A. I don't know.

Q. With regards to any other car or switch used on any other car?

A. I don't know.

Q. And so the automated process using this AMI machine is more productive?

A. It's more automated. You can produce more switches off that equipment, yes.

Q. How many more?

A. I don't know exactly.

Q. Were the Ford -- '92, '93 Ford Panthers that are the subject of the Ford recall, which process did they use to crimp the Kapton, the crimped head process or the AMI?

A. Both.

Q. For the '92 and the '93?

A. The -- In -- When we launched production, we launched using the -- the hand line for crimping and then we switched to the automated line. Both of those time periods are covered in the time of the recall.

Q. Okay. Why?

A. I don't know why. Ford decided the timing of the recall.

Q. Does TI agree with -- with Ford --

*MS. ALVAREZ:* Objection, form.

Q. -- that the Kapton is damaged in the manufacturing process because of a change in the crimping process?

A. No, TI does not.

*MS. ALVAREZ:* Objection, form.

Q. What does Ford say about that?

*MS. ALVAREZ:* Objection, form.

A. What does Ford say about what?

Q. The manufacturing process damaging the

Kapton.

A. Ford has expressed concerns that during the manufacturing -- manufacturing process we had done something to the -- to the Kapton that may have reduced its cycle life.

Q. Did it?

*MS. ALVAREZ:* Objection, form.

A. Did it what?

Q. Did it reduce the cycle life?

A. No. I believe that the switches all met specification and nothing during the crimping process affected the cycle life.

Q. Did not affect the cycle life?

A. Right.

Q. Going from manual crimping process to automated did not affect the cycle life of the switch?

A. I don't believe it did, no.

Q. Did -- When the manufacturing process was changed, did TI inform Ford that it was changed?

A. TI -- TI informed Ford that we had successfully passed qualification testing that showed the automated process met specification and we requested to Ford that we be allowed to make the change and that change was made after Ford gave us

approval for the change.

Q. Did anyone at Ford oppose that approval?

A. Not that I'm aware of.

Q. Did anyone at TI?

A. Not that I'm aware of.

Q. Why did TI inform Ford of a manufacturing process change?

A. We were required to -- to have any changes approved by Ford on the manufacturing line.

Q. What -- What requirement, a contract or something?

A. Contract. And we were also what's called Ford Q1 Certified. So we're signing up to Ford quality requirements and that's one of their requirements.

Q. Did TI request a variance?

A. What do you mean by variance?

Q. You know, variance in any regard when -- with regards to this change in the manufacturing process.

A. When we changed from the hand line to the automated line?

Q. Yeah. Other than just changing a variance in the specifications, for example.

A. No, not that I'm aware of.

Q. A variance in any regards -- Was -- Was there a request for a variance in any regard other than changing the manufacturing process from a manual to an automated?

A. Not that I'm aware.

Q. Is there a contract? Has that been produced?

A. I don't know.

Q. How big is this contract?

A. I -- I don't know the details on the contract.

Q. Who at TI is responsible for making sure that if the manufacturing process is going to be changed that it's done in -- to conform with the contract that TI has with Ford?

A. Our Quality Engineering Department.

Q. Who's in charge of that?

A. Andy McGuirk's the Quality Manager.

Q. Do you know about that process?

A. Which process?

Q. Andy McGuirk's responsibility to make sure that the manufacturing process is in compliance with a contract that TI has with Ford to produce the pressure switches for the '92, '93 Panthers, do you know about that?

A. I don't understand the question. Can you rephrase it?

Q. Well, did you get involved in it?

A. In 1992, 1993?

Q. Yeah.

A. No.

Q. Can you talk about that subject?

*MS. ALVAREZ:* Objection, form.

A. Which subject?

Q. The communications that went back and forth between Ford and TI to make sure that the manufacturing process was in compliance with the contract.

A. I have not seen any contract. I've seen some of the documents that went between TI and Ford about what manufacturing process we're going to use and testing we did to qualify the part.

Q. Spell McGuirk, please.

A. M-c-G-u-i-r-k.

Q. Where is he?

A. He works at Texas Instruments.

Q. Where?

A. In Attleboro, Massachusetts.

Q. How many people are under him?

A. I don't know the exact number.

Q. So you haven't looked at the contract?
A. I have not.
Q. Do you know if TI complied with the contract when the manufacturing process was changed if you haven't looked at it?
A. I know how TI operates and I know that TI would comply with our requirements to our customers.
Q. But without looking it, I guess you wouldn't know?
A. No. I'm confident that TI complied because that's the way we do business.
Q. Okay. Do you see on Exhibit 6, Item No. 2? Read that out loud.
A. Switch components and cup corrode with aid of electric field and contamination.
Q. Is that true?
*MS. ALVAREZ:* Objection, form.
A. If the right contamination is in the switch cavity, corrosion can occur.
Q. Okay. Could that cause a fire?
A. Based on the lab experiments we talked about earlier, we were able to show that with saltwater in the switch cavity and enough power applied, that the plastic on the base on the switch can ignite.

Q. Okay. I think, when you were describing that test earlier you explained to us that -- that the way that the circuit is completed is because the saltwater's on the outside of the switch, right?

A. No. Saltwater is on the inside of the switch cavity and that completes the circuit.

Q. Right. The saltwater's inside the electric components because you drilled some holes in the seal -- in the electrical plug-on seal and then the --

A. And we -- And we -- I'm sorry. We injected the saltwater into the part.

Q. And then the saltwater completes the circuit because it's on the outside of the metal part of the switch, right?

A. It's outside of the component, inside the switch.

Q. Right.

A. Inside the switch cavity.

Q. It doesn't go through the Kapton though?

A. It does not, no.

Q. Right. But in Exhibit 6 it looks like somebody's talking about the circuit being completed internally as opposed to on the outside of the swit n, right?

A. Can -- Can you repeat that?

Q. Well, it looks like this diagram, this scenario diagram marked Exhibit 6, seems to describe completing the circuit internally as opposed to externally like you did in your testing on Exhibits 3 and 4.

A. It talks about the corrosion occurring in this area (Indicating), which is the same area we created corrosion during our testing inside the switch cavity.

Q. Right. And then the circuit's completed internally after that corrosion occurs, correct?

A. And if there's a conductive enough fluid during the corrosion process.

Q. Right. The testing that you did though, it's my understanding that the circuit is completed and if there's saltwater on the outside of the switch.

A. No. No, that's not correct. The testing we did of the saltwater was internal to the switch here.

Q. Okay. So you're not just blasting saltwater all over the outside of this switch --

A. No.

Q. -- you're just keeping it isolated to the

inside of the electrical component?

A. We were injecting saltwater into the -- the base of the switch, into the electrical components.

Q. Okay. So the circuit was completed internally?

A. Internally, correct.

Q. Just like the scenario on Exhibit 6?

A. Yes.

Q. Okay. But the scenario on Exhibit 6 does not include exposure to saltwater under pressure to the electrical components, does it?

A. Yes, it does. It discusses contamination entering also through the connector seal demonstrated by this arrow (Indicating).

Q. Oh, okay. So the contamination, through whatever source, could come in through the electrical component -- the electrical connector?

A. Yes.

Q. And it could also come through the Kapton contamination under a different scenario other than No. 6, the contamination could -- could penetrate the Kapton if it were perforated and cause corrosion, correct?

A. If the Kapton was perforate -- perforated,

a fluid could come through into the -- to the switch area and if that fluid was conductive, could drive corrosion into the components in the presence of power being applied.

Q. And in scenar -- in the scenario marked Exhibit No. 6, the only way to really get a contaminant into the switch through the electrical connector is if the electrical connector seals failed for some reason?

A. Either fails or not present, the connector isn't fully engaged during the assembly process, many of those types of issues.

Q. Whose -- Who designed the connector?

A. Ford or a Ford supplier. I don't know exactly who.

*MR. JOLLY:* Did you want to take a lunch break?

*MS. ALVAREZ:* Whenever. To eat yourself? Are y'all ready?

*MR. JOLLY:* He needs to change the tape. I'm not ready for a lunch break, but that's okay.

*THE WITNESS:* That's okay with me.

*MR. JOLLY:* Okay.

*THE VIDEOGRAPHER:* Going off the

record. The time now is 12:14.

(Lunch recess had.)

THE VIDEOGRAPHER: We are back on the record. The time now is 1:20, Video Tape No. 2.

Q. When was the testing in Exhibits 3 and 4 preformed?

A. Probably February, March time frame, 1999.

Q. 1999. Okay. Was that the first time -- What did you call this type of testing?

A. We were trying to create ignition in the pressure switch.

Q. Okay. So what type of testing are we calling this?

A. I don't know if there's a specific name. We refer to it as -- here in this document (Indicating), called a laboratory model of accelerated plastic based ignition.

Q. Let me see that. You're -- You're reading off Page 2 of Exhibit 2, aren't you?

A. Yes.

Q. And I'm going to highlight what you just read, a laboratory model of accelerated plastic based ignition of the switch resulting from fluid in the switch cavity coupled with application of constant power as designed in the speed control

circuit, right?

A. Yes.

Q. All right. So basically it's a laboratory model of accelerated plastic base ignition of the switch under some testing criteria?

A. Some certain -- certain test conditions.

Q. And that was the first time that Texas Instruments -- 1999?

A. 1999.

Q. -- did this type of testing on the subject pressure switches?

A. We did testing for weeks, months, trying to see if in the lab we could create ignition. This was not the first time we ran the test and -- and got ignition. Testing was going on for a month or two at that point, trying to -- to recreate the ignition.

Q. So for a period of a month or two in the time frame, 1999, this was the first time that Texas Instruments did this type of laboratory model of accelerated plastic based ignition of the switch under the test criteria described?

A. Yes. As far as I know, yes.

Q. Okay. Why was that the first time that TI did that type of testing?

A. It was the first time we had -- had gotten any evidence as far as -- of what the system configuration was. We needed that information in order to run the test and Ford had asked us to try and run the test to see if we could recreate ignition.

Q. Why didn't Texas Instruments perform some type of testing like this laboratory model of accelerated plastic based ignition of the switch testing under criteria that you've described during the development stage before this switch was installed in those '92, '93 Panthers?

A. TI did not have the system knowledge to run this type testing to know how to hook the -- the switch up in testing.

Q. And the reason that TI did didn't have that system knowledge, because they didn't ask?

A. Ford develops the system and they -- they're developing all the system testing that they need to do. The way the process works, they give us a specification, we design to that specification, we provide them prototypes, we provide data that says the parts meet specification, we provide them data which says: What could go wrong in the switch? So they can take that information and compare it with

all the other components in the system to make sure if any issues do come up, there won't be a problem in the system.

Q. Well, to answer my question then, isn't it true that TI could simply ask for this information during the development stage? Couldn't TI do that?

A. I don't know whether TI asked for the information or not.

Q. That's not my question. Couldn't Texas Instruments just simply ask for this information in the development stage?

A. TI could ask for it. I don't know whether T -- anyone at TI did ask for it or not.

Q. You don't --

A. I don't know whether Ford had all the system information ~~to find~~ defined at that point.

Q. So you don't know if TI asked, you don't know if they didn't ask?

A. That's correct.

Q. All right. And, of course, it -- would it be fair to say that if TI did ask for this information that could've been used for this testing that's depicted on Exhibits 3 and 4, would it be fair to say that Ford would've probably given the information to TI necessary to conduct the test

appropriately?

A. Don't know.

MS. ALVAREZ: Objection to form.

A. I don't know if Ford would've been able to give the information or not.

Q. Well, if the information was available and Ford had it, would it be fair to say that Ford would fork over the information if TI asked for it?

MS. ALVAREZ: Objection, form.

A. Which -- Which information are you referring to?

Q. The information necessary to create a simulation of the circuit that the switch is going to be placed in.

A. I don't know whether Ford would've provided that information or not.

Q. I mean, you're not saying that Ford would refuse to give TI vital information necessary to properly test the switch in a circuit similar to the circuit that is going to be used in the car; you're not saying that, are you?

A. I'm not saying Ford would refuse to provide information. I don't know whether they would provide it or not. What I am saying is, Ford has -- takes the responsibility to make sure that

the switch is going to operate properly in the system environment.

Q. Right. But then after TI gets sued and these cars start catching on fire, TI then chooses to do this test after the fact, correct?

A. TI was --

MS. ALVAREZ: Objection, form.

A. TI was not being sued when these -- when these tests were being run.

Q. Has Ford asked TI for indemnity at the time that these tests were run?

A. Ford had not, no.

Q. Had Ford asked TI or insinuated that Ford might ask TI for indemnity when these tests were run?

A. Not that --

MS. ALVAREZ: Objection, form.

A. -- I'm aware of. I don't know of any time during these tests that Ford asked for indemnity.

Q. Well, I mean, you know -- you know that's coming down the road, don't you? You know Ford's going to probably ask for indemnity if it's an -- a serious expense to Ford when these tests were run; isn't that true?

A. No, I don't know. I don't know what

Ford's going to ask TI for.

Q. So TI doesn't have the foggiest idea whether a car company might ask them for indemnity when it's alleged that a TI component is causing big problems with that OEM's vehicles?

*MS. ALVAREZ:* Objection, form.

A. That's not what I'm saying. What I'm saying is, we were working with Ford engineering to try and understand what might be happening on the Town Car vehicles and that was the types of discussions that we had.

Q. Well, who knows the most about this switch, Ford or Texas Instruments?

A. Texas Instruments.

Q. All right. And the person that knows the most about the circuitry is Ford, right?

A. Ford or some of their sub-suppliers.

Q. Okay. And so the only way for TI to learn what Ford knows or it's -- or it's sub-suppliers know about the circuitry is for TI to either ask of Ford to voluntarily give that information to TI, correct?

A. Yes.

Q. And to your knowledge, TI never asked for the circuitry information during the development

stage of the switch?

A. TI asked for all specifications required of TI to go design that switch. Ford provided those specifications to TI.

*MR. JOLLY:* Objection, nonresponsive.

Q. To your knowledge, did TI ever request of Ford the circuitry specifications for the switch during the development stages of this switch?

A. TI asked -- Again, all I can answer is, TI asked for what specifications were required to design the switch and that was used in the application and TI -- and Ford provided those specifications for TI.

*MR. JOLLY:* Objection, nonresponsive.

Q. The circuitry information, did TI ever ask for it in the development stage of the switch?

A. I don't know what -- the details of what questions were asked and what weren't. I know that TI asked for all the specifications required to design the switch.

Q. Should TI know the circuitry specifications for a switch -- for a circuit that is going to incorporate a TI pressure switch in the development stage of the pressure switch?

A. It's impossible for TI to know all the

details around everything of how that circuit -- how that switch may interact in the circuit. But meantime, standards -- the switch, even when it's manufactured, we don't even supply it direct to Ford. That switch was -- was supplied to Highlight Industry, who then mounts the switch and supplies it to Ford. There's many different suppliers and sub-suppliers involved in that whole vehicle and Ford integrates those suppliers' components together to make sure they operate correctly in the system.

*MR. JOLLY:* Okay. Objection, nonresponsive.

Q. Should TI ask for -- And it is Ford that's going to provide the specifications; not Highlight, right?

A. That's correct.

Q. All right. Should TI ask Ford for the amperage and current specifications of a circuit that TI knows one of its switches is going to be placed during the development stages of the switch?

A. TI should ask Ford for all the information required to design the switch.

Q. Specifically current and voltage, amperage, should TI ask for that information in the development stage?

A. It's important to understand in the environment what loads might be on the switch.

Q. Loads include current, amperage, volts, right?

A. What relates to the operation of the switch. Whatever of those loads require the operation of that switch, it's important to understand that.

Q. The reason I have to keep asking the question over is because you didn't answer it. My question was: Does --

*MS. ALVAREZ:* Objection, sidebar.

Q. -- loads include current, amperage and volts?

A. Those would typically include voltage and they include current.

Q. Amperage?

A. Amperage is current. It's a unit of measure of current.

Q. Okay. The resistors between the fuse and the switch, should Texas Instruments ask Ford for the specifications of the resistors, if any, between the fuse and the switch for the circuitry in which a TI pressure switch is going to be placed during the development stages of the switch?

A. TI doesn't have the expertise to interpret all that information and -- and know what information that's important or not.

Q. TI doesn't have the expertise to interpret --

A. All the specifications --

Q. -- a circuit --

A. -- all those (sic.) around the full system, TI doesn't have the system understanding and the system expertise.

Q. There's no one at TI that knows -- understands the circuit that's involved in the pressure switch that we're here talking about?

*MS. ALVAREZ:* Objection, form.

A. What I'm saying is that TI doesn't have the system knowledge and the system expertise to understand all the specifications and all the different components that are being used in the system that Ford is integrating together.

Q. Did TI understand its tests that it did here on Exhibits 3 and 4 and the circuitry that was used to conduct the tests in 3 and 4?

A. Yes.

Q. Okay. All right. So at the time that this testing was done in 3 or 4 -- depicted on

Photos 3 and 4, TI understood the circuit; but during the development stage of the switch, TI could not understand the circuitry. And so what I would like to know is, what happened from the time period of the date that the switch was developed until this testing in 1999 that you photographed here on 3 or 4?

A. T --

*MS. ALVAREZ:* Objection, form.

A. TI understood the circuitry in this test. That's what I've responded -- That's what I've answered to.

Q. Okay. So nothing happened in that time period?

*MS. ALVAREZ:* Objection, form.

A. Ford provided TI more information about how -- how the circuitry is configured in the system.

Q. And you've told us what that was. Tell us again.

A. That the switch was powered continuously and that there was no current limiting feature between the fuse and the switch and that the fuse in the -- in the system was a 15-amp fuse. And that's -- that's all I can remember at this point.

Q. And that information that was conveyed to TI, is that information that TI should've asked for from Ford during the development stage of the switch?

A. Ford needs to make sure that the system is designed and the system architecture will work. They -- They have responsibility to have an understanding of all that system. TI doesn't have the understanding of the system to interpret what all that information may mean.

Q. Don't you think it would be more productive and you would have less chance of things like this happening if TI knew the circuitry and understood the circuitry in the development stage of the switch and Ford understood the switch when they were designing the circuit?

*MS. ALVAREZ:* Objection, form.

Q. Don't you think that would be more productive, sir?

*MS. ALVAREZ:* Objection, form.

A. TI explains to Ford how the switch works so that Ford can approve the design and so that Ford can take into account any issues that may occur in the switch in their system development and system design.

Q. Don't you think that would be more productive?

MS. ALVAREZ: Objection, form.

A. What would be more productive?

Q. If TI knew the circuitry and understood it during the development stage of the switch.

A. It's not possible for TI to understand everything related on the vehicle that -- that comes together in that system. Ford is the system integrators, they have that system expertise. TI does not have that system expertise.

Q. Okay. If TI had the information that it had when it did these tests that you photographed in Exhibits 3 and 4, could TI have done something different with the switch so that these fires wouldn't happen if the fires are being caused by the switch?

A. Can you repreat (sic.) -- repeat the question?

Q. What would TI have done differently if TI had known what it knew after it did the tests that you photographed here in Exhibits 3 and 4 if it had that information at the time of the development of the switch?

A. Based on the results of this test TI

recommended to Ford that the current be limited that enters the switch.

Q. Okay. So it sounds like TI now understands the circuitry and what needs to be done to it?

*MS. ALVAREZ:* Objection, form.

A. That's not what I'm saying. I'm saying, as based on this lab experiment TI was able to demonstrate under certain conditions switch ignition could occur based on information Ford provided to TI and TI made recommendations to -- the way to prevent this from happening, based on laboratory experiments, was to limit the current.

Q. Okay. What could be done different to the switch, not the circuitry, the switch? What could TI do to the switch?

A. I'm not sure what could be done differently to the switch to make sure that this lab experiment did not result in what happened.

Q. Well, couldn't TI design the switch so that it could handle a load equivalent to the load of the circuit? Couldn't TI do that?

A. It wasn't a matter in this experiment of the TI switch not handling the load. It was a matter of the corrosion that occurred inside the

switch, causing a resistive heating element --

Q. Aren't --

A. -- to form.

Q. Aren't there electrical components that don't corrode, like the components that are used in this switch that could be used, that could be changed?

A. All of the different -- different materials can corrode in certain environments.

Q. Aren't there some materials that wouldn't?

A. I don't know all the details around that. I'd have to spend some time researching that.

Q. You've never heard of some platings that are available for these electrical components? Ever heard of that?

A. Sure. There are platings available.

Q. Name one.

A. There's gold plating, silver plating.

Q. All right. So that could've been done, right?

*MS. ALVAREZ:* Objection, form.

A. Could've been done.

Q. To change the switch, you could -- you could coat the electrical components with different materials to prevent the corrosion from causing the

short, correct?

A. It -- That not -- would not have necessarily eliminated this from happening.

Q. It might have though, right?

A. I don't know.

Q. Well, it may have, based on a reasonable engineering probability, the reason that those coatings are available is to prevent corrosion --

A. Yeah.

Q. -- highly corrosive environments where switches might be used, correct?

A. There are many reasons why those coating may be available.

Q. Is that one of the reasons?

A. Typically, it's for contact wear.

Q. Is that one of the reasons though, corrosion prevention?

A. No. Typically, it's for contact wear in switches.

Q. Is that also an additional reason, contact wear, corrosion prevention?

A. In switches, the primary reason would be for contact wear.

Q. That wasn't my question, was it? Additional reason other than contact wear to prevent

corrosion, coatings are used for that reason, aren't they?

A. At times coating can be used to prevent corrosion, yes.

Q. Okay. That could've been done, right?

*MS. ALVAREZ:* Objection, form.

Q. I mean, if TI had been provided this information, TI could've made some changes to the switch which could include coatings which could prevent corrosion?

A. And there were coat --

*MS. ALVAREZ:* Objection, form.

A. There were coatings and platings in the switch that -- that do prevent corrosion.

Q. Different coatings that would've prevented this type of corrosion, that could've been done if Ford had informed TI of -- of the circuitry, correct?

*MS. ALVAREZ:* Objection, form.

A. Can you repeat the question?

Q. Well, if Ford had told TI about the circuitry, possible corrosion, exposure to corrosive materials, the amperage, the voltage, TI could've used other coatings other than the coatings that were used to prevent corrosion?

*MS. ALVAREZ:* Objection, form.

Q. Or to mitigate corrosion, correct?

A. But, in fact, T -- Ford told TI that the mating connector would be sealed and no fluid would be passed into the device --

Q. That wasn't my question --

A. -- the mating connector.

Q. Wasn't my question. Do you want me to ask it again?

A. Yes.

Q. TI could've used a different coating i the switch on the electrical components which could mitigate corrosion, correct --

*MS. ALVAREZ:* Objection, form.

Q. -- if TI had been made aware of the circuitry?

A. I don't know. I don't know how to answer that.

Q. Doesn't TI make satellites? They make satellites, don't they?

A. I'm not aware of TI making satellites.

Q. Telephones, calculators, computer chips, microprocessors, right?

A. I know TI makes calculators. I know they make some chips.

Q. What else? I mean, chips and switches that are exposed to highly corrosive environments, TI makes?

A. I don't know.

Q. You don't know?

A. I don't know.

Q. Do y'all have anyone on the group involved in the design of this switch who had some kind of working knowledge of what types of electrical components should be used for switches that might be exposed to a corrosive environment?

A. We've had people in the group designing switches for years, with millions of switches out in the field working properly.

Q. That wasn't my question. Someone in the group involved with the design of the switch who's familiar with how to stop corrosion in a pressure switch or prevent it or mitigate it?

A. The design of the switch was included with different platings to make sure that during the Ford specified testing the switch would not corrode and would operate properly.

Q. Okay. That wasn't my question. My question is: I would like to have a name of someone who would be -- Since you're not -- familiar with

what platings might stop corrosion. Was there anyone in the group involved in the design of this switch who -- who was; and if so, can you tell us who that person was?

A. I'm not saying I'm not familiar with any platings that don't prevent corrosion. As I said, many of the components in the switch are plated to prevent corrosion.

Q. Okay.

A. There's a salt spray specification that the switch meets and it's plated to make sure it meets that specification.

Q. Who in the group involved in designing this switch had expertise in that field?

A. Had expertise in which field?

Q. Preventing corrosion with the electrical components in the switch. I need a name.

A. I don't know.

Q. Ford isn't doing business with TI anymore; is it? Ford's not buying pressure switches from TI anymore; is it?

A. Ford does buy pressure switches from TI.

Q. Is Ford buying speed control deactivation switches from TI as of today's date?

A. Yes.

Q. So for what vehicles is TI supplying pressure switches to Ford?

A. F Series, Windstar. There's others. I'm not sure exactly which ones are -- are in production now.

Q. Okay. Is TI still Q1 Certified?

A. Yes.

Q. Has Ford indicated that the Q1 Certification might be withdrawn or subject to recision?

A. Not that I'm aware of.

Q. So that -- So that people who aren't engineers can understand, can you translate what cycle specification means?

A. Sure. The cycle life specification requires that we apply a pressure cycle to the part. In this case, and the Ford specification requires, we go from zero psi to 1450 psi and then back down to zero psi and that would be one pressure cycle.

Q. Okay. And so the pressure cycles that Ford's required of this pressure switch used in the '92, '93 Lincolns, how did that compare to other cycles re -- or cycle requirements of other car companies?

A. For brake pressure switches or --

Q. Yeah. High, low, the same?

A. There's only one other -- Other than Ford brake pressure switches, there's only one other Ford -- I'm sorry. There's only one other TI brake pressure switch that's in production and that's for the ITT Teves (sic.) system. And all of the systems that I talked about before, that pressure cycle specification is written differently than the Ford specification. That specification total cycle system is for one million cycles. But the pressure range and temperature range of those cycles is different and varies during the test.

Q. What vehicle is that switch for?

A. That's for Volvo. I'm not sure which platform at Volvo.

Q. Okay. So Volvo asks for pressure switches that can handle a million cycles and Ford asks for pressure switches that can handle how many cycles?

A. The --

*MS. KENNAMER:* Objection, form.

A. The -- The spec I referred to was an ITT spec and it was for a million cycles, but did not match the Ford spec. It was different in terms of pressure range and in terms of temperature.

Q. Yeah. But pressure and temperature and

all that, that's system specific; isn't it?

A. Including cycle --

Q. Yeah.

A. -- number of cycles.

Q. But, you know, so that the average person knows what you're talking about when you say a cycle, you're talking about every time someone hits their brakes, basically, aren't you?

A. No. I'm talking about how a cycle is defined in the specification. Ford's specification that's defined is zero to 1450 psi and back down to zero psi.

Q. Okay. Can you translate that to a practical use?

A. I cannot.

Q. The switch is now on a car, someone's driving down the road and here -- there's a stop sign and they hit their brakes. And so is that one cycle, two cycles, a thousand?

A. I don't know.

Q. You don't have any idea how many cycles that is when someone hits their brakes one time when we're talking about a TI pressure switch?

A. I would expect that the disk would snap one time, so the contacts would open once. But I

don't know whether that one activity -- how that correlates to one pressure cycle from zero to 1450 psi back to zero.

Q. Well, let's just -- The thing moves once inside the switch, right?

*MS. ALVAREZ:* Objection, form.

Q. It moves once, right?

A. In what conditions?

Q. When you hit the brakes.

A. If you achieve the actuation pressure of the disk in the switches when you step on the brake the disk will snap and that allows the switch contacts to open.

Q. Don't you imagine that when a car company tells you what their cycle specifications are that they're probably taking into account just a normal stop for each cycle?

*MS. ALVAREZ:* Objection, form.

A. I don't know how -- the details around how the car companies calculate their specifications based on application use.

Q. Okay. So then, how many years is this switch supposed to last on a -- on a '92, '93 Panther, based on the specifications that were used when TI designed it?

A. The switch is supposed to last for 500,000 cycles from zero to 1450 psi and back to zero.

Q. Do you know? I mean, can you just say, "I don't know" if you don't know, so that we don't have to do this over and over and over again? I'm not, you know, trying to get personal with you. Okay? But if you don't know, you could just say that.

*MR. JOLLY:* Objection, nonresponsive.

*MS. ALVAREZ:* Objection, form.

Q. We can be here all day, any way you want to do it.

*MS. ALVAREZ:* Ob --

Q. Okay?

*MS. ALVAREZ:* Objection, form.

Q. Do you know how many miles that translates to, the cycle specification rate, once the switch is made, it's manufactured and it's put on a '92, '93 Panther, how many miles?

A. I do not know how that cycle effect translates to miles.

Q. Thank you. All right. You don't know if it's 50,000 miles, you don't know if it's 60,000 miles or a hundred thousand miles? You don't know?

A. I don't know.

Q. No one at TI knows that? The people that

know that are the people at Ford?

A. That's correct.

Q. That could be affected by any number of things when it comes to the specifics of the system which are signed by Ford for its other component suppliers, right?

A. That's correct.

Q. Okay. You said that some of the electrical components in the switch were plated to prevent corrosion --

A. Yes.

Q. -- remember?

A. Yes.

Q. Which electrical components specifically are plated with silver, the --

A. The contact.

Q. The terminal contact?

A. I believe it's the contact.

Q. Anything else in there, like the stationary terminal, the spring, the rivet, the moveable terminal, are any of those silver plated to prevent corrosion? And let's -- let's ask it this way: Are they plated with anything to prevent corrosion?

A. I don't think the terminals or the spring

arm are plated.

Q. Is there anything about the other parts of the electrical components inside the switch other than the contact terminal, whether by virtue of what it's plated with or made with, which because of that design specification is done that way to prevent corrosion?

A. The cup is plated, hex port's plated.

Q. The electrical components inside the terminal specifically?

A. I don't know what you mean by, inside the terminal.

Q. Well, the spring is made out of brass. That's not going to corrode under saltwater; is it?

A. The spring is made out of copper.

Q. Oh, it is? Okay. Ford thinks it's made out of brass. Did you know that?

*MS. ALVAREZ:* Objection, form.

A. My understanding is that Ford knows the spring is made out of copper. We've told Ford that.

Q. All right. What's the stationary terminal made out of?

A. Brass.

Q. What's the moveable terminal made out of?

A. Brass.

Q. So what's corroding when you put the saltwater in there?
A. The spring arm, copper spring arm.
Q. How is that corroding?
A. Electrolytic corrosion.
Q. Okay. So it's not made of brass. It's made out of copper. Saltwater or something corrosive can cause the copper to corrode?
A. Yes.
Q. What could you make it out of so that that didn't corrode like that?
A. I'd have to spend some time thinking about that.
Q. Could you silver plate it like they do the terminal points? I mean, you can silver plate copper, can't you?
A. Yes. I don't know whether that would stop any corrosion or not.
Q. It'd sure slow it down, wouldn't it?
A. I don't know. I'd have to run some tests to try and understand that.
Q. You don't know if silver plating copper can slow the corrosion of copper down?
A. Depends on which test conditions and I'd have a to do some work to understand that.

Q. Well, the contact terminals are copper -- silver plated copper, aren't they?

A. I know it's silver plated. I'm not sure if it's silver plated copper.

Q. And the reason --

A. I don't remember off the top of my head.

Q. The reason it's silver plated is, like we said, to prevent corrosion --

A. No.

Q. -- because the contacts wear?

A. It's to prevent contact wear.

Q. All right.

A. So that oxid -- oxidizing -- oxidation doesn't build up on a nonconductive surface, which would make the switch act -- open even when the contacts are in contact.

Q. The -- The electrical terminal that's silver plated is part of the spring that's made out of copper that corrodes; isn't it, it's all the same part?

A. I think it's a part riveted to the -- to the spring arm.

Q. Okay. So what y'all were doing then is, you silver plate the contact before you install it on the copper spring, right?

A. I'm not positive.
Q. Something like that though, right?
MS. ALVAREZ: Objection, form.
A. I believe the contact is silver plated before attached to the spring.
Q. It would be pretty hard to silver plate something after it's attached to something else metal. I guess you could do it, but it seems like it'd probably be easier to do it first.
A. You can solder it to the plate.
Q. Right. Or you could just do both of them at the same time after they're put together, right?
A. There are many different ways you could set up the plate.
Q. That's one of the ways, isn't it?
A. (No response.)
Q. That's a question.
A. You can plate components after they're assembled, yes, that's true.
Q. The other vehicles that you inspected that belong to my clients that have caught on fire, of the five that you've looked at, we've talked about Gonzalez. How much time did you spend looking at the other four cars?
A. It varied.

Q. From what to what?
A. Somewhere between 15 minutes, 45 -- to 45 minutes.
Q. Were each of those inspections video taped also?
A. I believe there was a video camera there. I don't remember if it was at every one.
Q. Why did you look at those other four cars after you looked at Mrs. Gonzalez's car and couldn't determine what caused the fire?
A. I wanted to understand what type of fire damage there was on the vehicle and to take a look at the switch on each vehicle.
Q. Did you go to the houses that these -- in which these cars were parked that burnt down and look at those homes to see happened with those people's homes?
A. No, I did not.
Q. Why not? Does TI not care about the homes that have burnt down in this case -- in these cases that we have?
A. Of course --
*MS. ALVAREZ:* Objection, form.
A. Of course, TI cares about -- about any homes that might've burnt down.

Q. So why not go look at the homes too? I mean, you're looking at the car and you can't tell us what started the fire. Why not go look at the house so you can better understand what happened here?

A. I wanted to look at the switches on the vehicle and look at the damage of the fire in the vehicles.

Q. Why not go look at the homes too?

A. The homes would not have given me any information in terms of what -- what the switch looked like or how much fire damage there was on the vehicle.

Q. And were the switches on the other vehicles?

A. The switches were on the other vehicles.

Q. Did you look at them?

A. Yes, I did.

Q. Did those switches cause those fires?

A. I don't know.

Q. Who at TI knows the answer to that question?

A. No one at TI knows the answer to that question.

Q. There's no one at TI who can say that

these TI switches on the cars that you've inspected that belong to my clients did not cause those fires?

MS. ALVAREZ: Objection, form.

A. Can you repeat the question?

Q. Let's ask it both ways. Is there anyone at TI who can say that the five cars that you looked at that -- four out of the five that did have TI pressure switches, is there anyone at TI who can say that those switches did cause the fire?

A. There's no one at TI can say why those vehicles went on fire.

Q. Okay. So, in other words, there's no one at TI who can say -- for example, if Richard Clark says those switches caused the fires, is there anyone at TI is who's going to come in and say what Richard Clark says is not true?

MS. ALVAREZ: Objection, form.

A. TI -- No one at TI knows what caused those fires.

Q. So, in other words, TI has no evidence to contradict what Richard Clark says with regards to the origin of the fires --

MS. ALVAREZ: Objection, form.

Q. -- for the vehicles that you've inspected?

MS. ALVAREZ: Objection, form.

A. TI has a lot of evidence that switches met specification. TI does not know what caused any vehicle fires.

*MR. JOLLY:* Okay. Objection, nonresponsive.

Q. Is there anyone at TI who has any facts which could be used to contradict what Richard Clark says with regards to the origin of the fires for the five vehicles that you've inspected that belong to my clients?

A. I --

*MS. ALVAREZ:* Objection, form.

A. I don't know the details of what Richard Clark has said.

Q. So there's no one at TI with any facts to contradict anything that Richard Clark may say about what caused the fires for the five cars that you looked at that belong to my clients?

*MS. ALVAREZ:* Objection, form.

A. All I can say is that no one at TI knows the cause of those vehicle fires for your clients. I can't answer it any other way.

Q. Well, if that's true, then isn't it also true that nobody at TI can say that the switches did not cause the fires?

MS. ALVAREZ: Objection, form.

A. We know that the switches met the specifications provided to us by Ford.

MR. JOLLY: Objection, nonresponsive.

Q. Can you identify anybody at TI or any documents at TI which would establish that the TI pressure switches that were on the five cars that you looked at did not cause the fires?

A. Can you repeat that question?

Q. Is there any -- Can you identify any person at TI or any document at TI that would establish that the TI pressure switches on the five cars that you inspected did not cause those fires?

A. The only documents I know was a Ford document based on Ford -- experts hired by Ford that stated the fire on the [redacted] vehicle started in the air compressor of the suspension leveling system.

Q. On which -- On which car?

A. On the [redacted] vehicle.

Q. What Ford document is that?

A. It was, you know, in a lot of different documents that was found as -- as part of the discovery.

Q. Okay. That's not a TI document?

A. That is not a TI document.

Q. So the answer to my question is no, you don't know the name of anyone at TI, you don't know of any TI documents would've -- which would establish that the five fires involving the five cars that you looked at were not caused by the TI pressure switch?

*MS. ALVAREZ:* Objection, form.

A. There's no one at TI or any TI documents that define why those vehicles caught on fire.

Q. Or that the TI pressure switch did not cause the fire?

*MS. ALVAREZ:* Objection, form.

A. There are documents at TI that demonstrate that the TI pressure switch met specifications provided to us by Ford. I can't answer the question any other way.

*MR. JOLLY:* Objection, nonresponsive.

Q. All right. Let's just limit it to you. Are you going come into court and say that you know those switches on my clients' five cars that you inspected did not cause the fires?

A. I know that those switches met specification.

*MR. JOLLY:* Objection, nonresponsive.

Q. Are you going to come to trial and say that?

A. Say what?

Q. What I just said. Do you want me to repeat it again? Are you going to come to trial or at any time between now and trial and say that the five TI pressure switches on my clients' cars that you inspected did not cause their fires?

MS. ALVAREZ: Objection, form.

A. All I can say is that I don't know what caused those fires and that I know those switches met specification.

Q. All right. So you're not going to come into trial and say that the switches did not cause the fires because you don't know?

MS. ALVAREZ: Objection, form.

A. All I can say is, I don't know why those vehicles had fires and that I know the switches met specification.

Q. Okay. If I can't get a straight answer out of you, I'm going to have to ask the judge to order you to answer that question. So I mean --

MS. ALVAREZ: Objection to the form.

Q. -- and I'm not going anywhere. Okay? I live in Houston, this is my hometown and I frankly

like it here. So --

MS. ALVAREZ: Objection, form.

Q. -- I know you live in Boston, but --

MS. ALVAREZ: Objection --

Q. -- I'm not going anywhere until you answer my question --

MS. ALVAREZ: Objection, form.

Q. -- someday, somehow. Okay?

MS. ALVAREZ: We'll continue it until tomorrow if you ask --

Q. I'm going to ask it again, but I'm giving you fair warning --

MS. ALVAREZ: Objection, form.

Q. -- that if you don't answer it this time, I'm going to get the judge involved. Okay?

MS. ALVAREZ: Objection, form.

Q. Are you at any point in time from now until trial ever going to say that the TI pressure switches involving my clients' five cars that you inspected did not cause those fires?

MS. ALVAREZ: Objection, form.

A. I don't know what evidence may be presented from now forward on -- on what caused those vehicle fires. All I can say is what I know today, that the switches met specification and I

don't know what caused the vehicle fires.

Q. I gave you your chance. Same question: Anyone else at TI other than you?

*MS. ALVAREZ:* Objection, form.

A. Can you repeat the question?

Q. Anybody at else TI other than you -- Since you won't tell us the answer to the question with regards to you --

*MS. ALVAREZ:* Objection, form.

Q. -- anyone else at TI who you anticipate at any time between now and trial who will come into court and say that the TI pressure switches on the cars that you inspected did not cause those fires?

*MS. ALVAREZ:* Objection, form.

A. I don't know of anyone at TI today that knows what caused those vehicle fires.

Q. Okay. How -- How much money did TI spend inspecting [redacted] car? How much did it cost for you and however many people went with you to go down there or fly down there, spend the night down there and inspect that -- inspect that first car?

A. I don't know how much it cost.

Q. $50,000 or less?

A. Probably less.

Q. Less than $25,000?
A. I don't know. I don't know how much it cost.
Q. How do you get paid?
A. How do I get paid?
Q. Yeah.
A. I get a paycheck from TI.
Q. And you -- Are you on salary or did you get paid some extra money to go down there and look at those cars?
A. I get paid on salary.
Q. Okay. So is it part of your job to go around looking at cars? I mean, what is your job at TI?
A. I'm an engineering manager at TI.
Q. All right. Does your job as engineering manager include going around looking at cars that have caught on fire?
A. I'm responsible for our pressure switch design, our pressure transducer design groups. I work with Ford on the issue related to the Town Car fires. Based on those reasons I was the -- the person to go look at the vehicles.
Q. So you didn't get paid any extra money to go down there?

A. No, I did not.
Q. What is your annual salary?
MS. ALVAREZ: Objection, form.
A. About a hundred-thousand dollars a year.
Q. Do you get some of that TI stock along with that?
MS. ALVAREZ: Objection, form.
Q. I mean, you own -- you own part of the company, don't you?
A. I own some TI stock, yes --
Q. How much?
A. -- that's correct.
I don't know exactly how much.
Q. More than 10,000 shares?
A. No.
Q. Five-thousand?
A. No.
Q. I mean, how many options to buy TI -- TI stock do you have? Have you got some of that, options?
A. Some options.
Q. How many?
A. A few thousand.
Q. Okay. Does your wife work there?
A. Work where?

Q. At TI.

MS. ALVAREZ: Objection, form.

A. My wife does not work at TI.

Q. So you have a financial interest in this company, don't you? Yeah?

A. I benefit from the success of TI.

Q. You have a financial interest in TI?

A. I'm employed by TI, TI pays me, yes.

Q. Well, I mean, you're an owner. You have a financial -- When you have a financial --

MS. ALVAREZ: Objection, form.

Q. -- interest you're an owner --

MS. ALVAREZ: Objection, form.

Q. -- don't you think?

A. I own stock in TI.

Q. Why -- Why can't you just admit that you have a financial interest in TI?

MS. ALVAREZ: Objection, form.

A. I'm trying to answer your question and say I own stock in TI.

Q. All right. Are you an officer or a director?

A. I'm not sure what you mean by those terms.

Q. Are you an officer or director of Texas Instruments?

A. No.
Q. Vice president, nothing like that?
A. No.
Q. Have you been in meetings with officers and directors regarding this issue?
A. A meeting with the vice president of -- of TI regarding this issue.
Q. What's that person's name?
A. Martha Sullivan.
Q. All right. What does she say?
MS. ALVAREZ: Object -- I object to that to the extent that it involves the litigation, it would be listed as privileged communication for this litigation and to the extent that it's in connection with the litigation, I would instruct him not to answer.
Q. What does she say that's not privileged? Is she a lawyer?
A. She's not a lawyer.
Q. She's an engineer that's worked her way up, became an officer, right?
A. Essentially, yes.
Q. So I mean, y'all talked about the technical aspects of the switch, didn't you?
A. No. She -- The only -- We had one meeting

with -- with Martha Sullivan and her direction to us was to make sure that our top priority is to support Ford in any way necessary to understand what might be causing fires on Town Cars in order to protect the public.

Q. How did she communicate that information?

A. We sat in a meeting with her.

Q. Did she write any memos?

A. She communicated verbally.

Q. Has she written any memos?

A. Not that I'm aware of.

*MS. ALVAREZ:* Objection, form.

Q. Have you written any memos to her or anyone in your group written any memos to her or any other officer at TI?

*MS. ALVAREZ:* Objection, form.

A. Specific to this issue, I think Martha has been copied on some of the correspondence related to this issue.

Q. Would that be indicated on the memo, that she was copied; that an officer at TI was being copied with some memos?

A. Her name would be on the memo.

Q. Okay. Or would she be getting like blind carbon copied, that sort of thing?

A. No. Any memo, her name would be on the memo.

Q. Okay. What memo do you recall that she was copied with?

A. I don't remember any specific memos.

Q. Any other officers --

*MS. ALVAREZ:* Objection, form.

Q. -- that were in the meeting other than Martha --

A. Martha Sullivan was the only --

Q. -- Sullivan?

A. Sullivan was the only vice president in the meeting.

Q. And then who was with you and Martha Sullivan?

A. Andy McGuirk was in the meeting, Brian Dague.

Q. Spell Brian's last name.

A. D-a-g-u-e.

Q. Have you mentioned him earlier?

A. I believe I have.

Q. And you and who else?

A. I think, John Pechonis was at the meeting and there were -- there were probably others. I'm not sure exactly.

Q. Spell John's last name.

A. P-e-c-h-o-n-i-s.
Q. And you pronounce that how?
A. Pechonis.
Q. You haven't mentioned him yet, have you?
A. I don't remember mentioning his name.
Q. What involvement did he have in this issue?
A. At the time he was the operations manager for our pressure switch business.
Q. So what's his job?
A. At the time of -- in his work?
Q. I mean, do you understand what it is that he does? What does he do?
A. He manages the -- the pressure switch business and manages the manufacturing and manufacturing engineering aspects of the pressure switch business.
Q. Why is it that you know more about the manufacturing aspects of this switch than John Pechonis?
MS. ALVAREZ: Objection, form.
A. I didn't say I know more about the manufacturing aspects of the switch than John Pechonis.
Q. All right. So he knows more -- He's the

person with the most knowledge about the manuring (sic.) -- manufacturing aspects of the TI speed control deactivation switch used on the '92, '93 Lincolns?

A. I don't know if he has the most knowledge. There may be other people in the manufacturing organization that have more knowledge on the manufacturing process.

Q. Well, does John Pechonis have more knowledge about the manur -- manufacturing process than you?

A. Yes.

Q. And then there's even people who have more knowledge than he does. Who are those people?

MS. ALVAREZ: Objection, form.

Q. Or who may? Who are those people?

A. There -- There may be other people who have more knowledge about the manufacture of the Ford de -- deactivation pressure switch.

Q. And who?

A. Steve Proia.

Q. Spell that last name.

A. P-r-o-i-a. Bob Gildea, G-i-l-d-e-a.

Q. Why do you think -- Anybody else?

A. There may be nobody else that comes to

mind.

Q. Okay. Why do you think that Steve Proia and Bob Gildea have more knowledge about the manufacturing process of this switch than John Pachonis?

*MS. ALVAREZ:* Objection, form.

*MR. JOLLY:* Why -- What's -- What's objectionable about that?

*MS. ALVAREZ:* Well, he said they may, not that they do. And your question was: Why do you think they do have more knowledge?

Q. Okay. Why do you think they may?

A. Because they are -- they are working the day-to-day issues on the manufacturing line.

Q. How so? What do you mean, day to day? They're the ones out there on the line?

A. Making sure the line is operating properly.

Q. What do they say about this crimping of the Kapton seal that Ford has accused TI of?

A. You'll have to --

*MS. ALVAREZ:* Objection, form.

A. My conversation with Steve and Bob, they feel that the crimp process is operating properly.

Q. Uh-huh. So John, Steve and Bob all agree

with you when it comes to the crimping process not damaging the Kapton seal?

A. Yes.

Q. Is there anyone there that doesn't agree with you, Steve, Bob or John?

A. Not that I'm aware.

Q. Who's Jim Watt?

A. Jim Watt is a quality engineer.

Q. All right. What's his job?

A. His job is to work any of the quality issues on the pressure switch line. He handles communication to our customers in terms of change requests, things like that.

Q. Who is Sally Epstein?

A. She's a paralegal in Dallas.

Q. Why is her name at the top of this Exhibit 2, like it's her letterhead or something?

A. She helped collect documents for the discovery and I would imagine that we send electronic files that she printed out. And since she printed it, it printed her name on top.

Q. Who does she work for?

A. I don't know.

Q. She's a lawyer in Dallas?

A. She works in Dallas.

Q. You don't know the name of the law firm, you don't know her address?
A. She works for Texas Instruments.
Q. Is she an in-house lawyer?
*MS. ALVAREZ:* Objection, form.
*MR. JOLLY:* Is she an in-house lawyer, objection, form?
*MS. ALVAREZ:* I think he said paralegal, not lawyer.
Q. She a lawyer?
A. I think she's a paralegal.
Q. Oh, okay. And what's the name of the law firm she works for?
A. She works for Texas Instruments. She's a employee of Texas Instruments.
Q. Okay. So TI has some offices in Dallas and she's up there at one of the TI addresses?
A. Yes.
Q. Who else gathered together documents who's involved with the in-house legal people there at TI other than Sally Epstein?
A. The legal people that helped gather documents?
Q. Yeah.
A. All our communication came from Sally.

Q. Okay. Did you go meet with her?
A. I have met her.
Q. Did you look over documents with her?
A. I did not.
Q. Did she mention to you that there's a number of documents that TI is not going to produce because they're privileged?
*MS. ALVAREZ:* Objection to form to the extent that it does call for any attorney-client information, I would instruct him not to answer.
Q. Privileged, have y'all talked about not producing any particular documents because they're privileged, without getting into why they're privileged or what the documents say?
*MS. ALVAREZ:* And again, to the extent that it does call for any attorney-client privileged information, I would instruct him not to answer. She has been identified as a paralegal.
*MR. JOLLY:* Well, if this guy was involved in making those calls, he can answer whether or not he was involved in those discussions. That's a simple question. It's not privileged.
Q. Go ahead.
*MS. ALVAREZ:* Will you repeat your

question?

Q. Do you remember the question?

A. No. Can you repeat it?

Q. All right. Did you and Sally Epstein specifically discuss not producing any number of documents because they were supposedly attorney-client privileged?

*MS. ALVAREZ:* Again, to the extent that question calls for attorney-client privileged information, I would instruct him not to answer.

Q. Go ahead.

A. I have not discussed with anyone what documents would be produced or not produced.

Q. No one's mentioned to you these documents, whether it's a lawyer or anybody, these documents shouldn't be produced for any reason?

*MS. ALVAREZ:* Again, to the extent that it calls for any attorney-client privileged information, I would instruct him not to answer.

Q. Has anyone said that to you?

*MS. ALVAREZ:* Other than his -- the attorneys for Texas Instruments, you can answer that question.

A. No.

Q. No one at TI has said, Let's not produce

these documents, other than someone --

*MS. ALVAREZ:* Other --

Q. -- someone who's not a lawyer has never said that?

*MS. ALVAREZ:* Other than attorney-client privileged information -- other than your TI lawyers, the question can be answered.

A. Nobody has said not to produce a document.

Q. Have you ever said that?

A. I have not.

Q. I understand, during our break that it turns out that the photos marked 3 and 4, there was -- those were actually done in color, weren't they?

A. I don't know if those -- those were done in color or not.

Q. Well, also the testing was video taped, right?

A. Some of the tests we did was video taped. I don't know whether this exact experiment was video taped or not.

Q. Well, but none of those video tapes have been produced, right?

A. I'm not sure exactly what has been produced or not produced.

Q. Okay. Well, they haven't been. Do you know if I'm mistaken if I tell you there's been no videos of this type of testing produced?

A. I don't know if you're mistaken.

Q. Are they going to be produced if they haven't been?

A. Any videos that we have will be provided to our attorneys.

Q. Okay. So how long ago did that happen where the videos of testing was produced where it was given to lawyers?

A. I don't -- I don't know whether those were given to the lawyers or not. I know we're continuing our document searches and I know we're continuing to send information.

Q. Why wasn't the video of this testing produced?

*MS. ALVAREZ:* Objection, form.

A. As I said before, we're continuing to collect documents to try and produce every document that's relevant to provide those documents.

Q. How long has TI been involved in this -- in the speed control deactivation switch business?

A. We've been providing speed deactivation control switches to Ford since late 1991.

Q. All right. And how did TI get involved in that business? Did TI start that business from scratch or did TI buy somebody, buy some other company?

A. TI developed it's own pressure switches.

Q. Okay. Why did TI do it that way, get into the business that TI hadn't been in for what, 20 years? Why did TI do that?

A. TI --

*MS. ALVAREZ:* Objection, form.

A. TI has been making pressure switches since early 1980s.

Q. Okay. Why did TI get into the speed control deactivation switch business?

A. Ford presented us with a pressure switch need. TI felt they could provide a switch that met the Ford specifications.

Q. Okay. So since 1982 they've -- they've -- TI has been making pressure switches for -- for what?

A. The air conditioning pressure switches, power steering pressure switches, brake pressure switches, transmission pressure switches.

Q. And since 1982 with regards to all those pressure switches, has TI had any problem at all

with any of those switches when it comes to corrosion in the electrical side of the switch?

A. There have been switches that have come back to TI that had corrosion inside the -- the switch with the water coming in through the connector.

Q. Which switch?

A. One of the Ford switches.

Q. Which Ford switch?

A. One that was -- is mounted on the Econoline vehicle.

Q. Nissan, Chrysler?

A. Not that I'm aware of.

Q. G.M., Volvo, no water getting in the electrical side of those -- any of those switches since --

A. On --

Q. -- 1982?

A. On Volvo there was an issue with water getting into the -- the switch.

Q. Okay. Is that the same Volvo problem you told us about -- about earlier involving the five or six switches that TI didn't get a chance to look at or is this something else?

A. It's something else. This was an air

conditioning switch.

Q. All right. Tell me about that.

A. I don't know much of the details around it. I know that water was flowing down a wire harness and that wire harness was connected to the switch and flowing into the switch through the wire harness.

Q. Okay. Because of the orientation of the switch, it was collecting water in the electrical side of it as water ran down a wire into the electrical side?

A. It was running down the inside of the wire between the wire and the insulation.

Q. Okay.

A. And then even into the switch.

Q. And then corrosion was occurring in that Volvo switch too?

A. I don't know the details of what was happening because of the water.

Q. What Volvo year make and model did that occur on?

A. I don't know.

Q. How many?

A. I don't know.

Q. What year?

A. I don't know.
Q. What was the remedy?
A. Volvo made changes in their wire harness and we put epoxy in the inside of the switch base.
Q. What year was that, '80s, '90s?
A. It would've been in the '90s. I'm not sure which year in the '90s.
Q. Early '90, mid '90, late '90s?
A. Probably mid '90s.
Q. Okay. Is that same type of epoxy that you mentioned, is that used on the Panther deactivation switch for the '92, '93 models?
A. No, it's not.
Q. Why not?
A. The epoxy was a specific request from Volvo on that switch.
Q. All right. So here you've got years of experience with water getting into the electrical side of the switch before the switch is developed for Ford. Would that be fair to say?
A. No, that's not what I'm saying at all. The -- The discussion I said on the Volvo switch happened after the development with Ford. And I wouldn't say there's -- there's many switches where we've had these problems. We have hundreds of

millions of switches out there and these are a few switches that we're talking about.

Q. Okay. So TI's aware of this problem with water in the electrical side of the switch prior to the fires involving my clients' cars.

*MS. ALVAREZ:* Objection, form.

Q. Is that fair?

*MS. ALVAREZ:* Objection, form.

A. What problem are you referring to?

Q. Water getting in the electrical side of the switch.

A. There have been switches returned to TI that did have water that had gotten into the switch through the mating connector.

Q. Prior to my clients' cars catching fire?

A. Yes.

Q. And the cure for that with the Volvo was to fill the electrical side of the switch up with some type of epoxy to displace the water, I gather?

A. No. The cure -- The cure was for Volvo to change their -- their wire harness so the water would not drip down the wire harness. And they also requested that we put epoxy in the switch --

Q. Okay.

A. -- to seal that cavity.

Q. Okay. So epoxy -- Seal the wire and then put epoxy in the electrical side of the switch to seal the cavity, right?

A. Yes.

Q. Which prevents corrosion. If you can keep the water out, it prevents corrosion, correct?

A. The terminals are still exposed. You can still corrode the terminals.

Q. All right. Well, the purpose of putting the epoxy is to minimize the chances that water gets into the electrical side of the switch and causes corrosion, correct?

A. Minimize the chance that water gets into the electrical side of the switch and damages the switch.

Q. Correct?

A. Yes.

Q. To prevent the possibility of corrosion?

A. I don't know specifically in that case whether it was corrosion that was occurring.

Q. Okay. And the reason that TI didn't use that epoxy system inside the electrical side of the speed control deactivation switch used on the '92, '93 Panthers is because Ford didn't ask for it?

*MS. ALVAREZ:* Objection, form.

A. Ford did not require the -- the base to be sealed. Ford provided that seal with the mating connector.

Q. Okay. So Ford sent the specifications to TI and Ford said, Don't seal the base?

A. That's not what I'm saying.

Q. All right. Ford sent the specifications to TI and TI said, Ford, Do you want us to seal the base? And Ford said No?

A. No. What I'm saying is, Ford said, The electrical seal to that base will be provided by the mating connector.

Q. Ford sent the specifications to TI and didn't say anything about sealing the base and TI didn't say anything to Ford about sealing the base, right?

A. TI reviewed our design with Ford and Ford approved our design. Sealing of the base would be accomplished by the mating connector made into the base.

Q. Ford didn't say anything about sealing the base, TI didn't say anything about sealing the base --

*MS. ALVAREZ:* Objection, form.

Q. -- made pursuant to Ford's specifications,

and of story?

*MS. ALVAREZ:* Objection, form.

Q. That's how it went down; isn't it?

*MS. ALVAREZ:* Objection, form.

A. That's not what I'm saying.

Q. Well, what about what I just said is not accurate?

A. What I'm saying occurred is, the seal to the base was provided by the mating connector that Ford mated to the switch.

Q. Did Ford say, Don't seal the base with epoxy?

A. I don't know what Ford said.

Q. Did TI say to Ford, Seal the base with epoxy?

A. I don't know if TI said any -- any words like that.

Q. Did TI say to Ford, Don't seal the base with epoxy?

A. TI reviewed the design of the switch with Ford and that design of the switch showed that the base was -- would be sealed by the mating connector and applied to the base.

*MR. JOLLY:* Objection, nonresponsive.

Q. Did TI tell Ford, Don't seal the base with

Epoxy, yes or no?

A. I don't know.

Q. And if you don't know, then the answer's no --

*MS. ALVAREZ:* Objection, form?

Q. -- isn't it?

A. No. The answer is, I don't know.

Q. Can you give us one document or the name of one single person who told Ford, Don't seal the base with epoxy?

*MS. ALVAREZ:* Objection, form.

A. I don't -- I don't know of any document that says -- to TI that says, Don't seal the base with epoxy.

Q. Can you give us the name of one person at TI who told Ford, Don't seal the base with epoxy?

A. I -- I know that the seal to the -- to the base would be provided by the mating connector.

*MR. JOLLY:* Objection, nonresponsive.

Q. Can you identify anybody at TI who told Ford, Don't seal the base with epoxy?

A. I cannot identify anyone at TI that said, Don't seal the base with epoxy.

Q. Why is there a Bates number missing from the documents that have been pro -- produced to me?

MS. ALVAREZ: Objection, form.

A. Can you repeat that?

Q. Who Bates stamped the documents that were produced to me? Who stamped the -- page numbered them --

A. I don't know.

Q. -- with this little thing called a Bates stamp? Who did that?

A. I don't know.

Q. Did Sally Epstein do that?

A. I don't know.

Q. Are they in chronological order?

A. I don't know.

Q. I thought you're supposed to be the corporate rep most knowledgeable about the documents to the subject matter. How come you don't know those answers?

MS. ALVAREZ: Objection, form.

A. I'm the corporate rep most re -- most knowledgeable about the full breadth of questions on the Deposition Notice.

Q. How come you don't know when the documents were Bates stamped?

A. I did not do the stamping of the documents.

Q. How come you don't know when they were Bates stamped or why one of the pages is missing?

*MS. ALVAREZ:* Objection, form.

Q. Who knows the answer to that question?

*MS. ALVAREZ:* Objection, form.

A. Our lawyers are responsible for getting the documentation to you.

Q. So I need to go dep -- take the deposition of one of the TI lawyers to get an answer to that question?

*MS. ALVAREZ:* Objection, form.

A. That's not what I'm saying.

Q. All right. Well, who do I need to talk to to find out why there's a Bates stamp number missing from the documents produced to me?

A. I --

*MS. ALVAREZ:* Objection, form.

A. I don't know who the --

Q. Well, you know what it looks like? It looks like the documents were Bates stamped and then someone pulled the documents out of the box. Do you understand what I'm saying?

*MS. ALVAREZ:* Objection, form.

A. No, I'm not sure I understand what you're saying.

Q. Do you know if that happened? Do you know if someone pulled the documents out of the box after they were Bates stamped?

A. I do not know whether any documents were pulled out or not pulled out.

Q. Have you heard anyone say that?

A. Anyone say what?

Q. Have you looked at the documents produced to me?

A. I've seen some of the documents produced to you.

Q. Have you noticed that there are Bates stamped numbered pages missing?

A. I have not seen any pages missing.

Q. Has anyone discussed with you that those documents were pulled after they were stamped?

A. Nobody has discussed with me anything related to stamping documents and removing documents.

Q. Do you -- Do you know anything about diagnosing a speed control deactivation switch to determine if it's going to fail or cause a fire after it's in place and in service on a car?

A. Can you repeat the question?

Q. Well, can you look at -- Let's just back

up a wave, a couple of years and here's all my clients' cars lined up here in a row, all nine of them and they haven't caught fire yet. Can TI raise the hood on those cars, look at the speed control deactivation switches or diagnosis them in any way and say, This switch is going to fail and it's going to cause a fire?

A. I'm not aware of any switches that cause fires. And depending on -- There -- There's nothing that can be done, looking at the -- just looking at the switch to determine when end of life will be reached for that switch.

Q. Any -- Any way to diagnose it with any kind of electrical diagnostic equipment to make that call?

A. You can diagnose with electrical equipment if there's fluid in the switch cavity.

Q. What would you do?

A. Measure the resistance between [redacted] terminal and the ground.

Q. How would a mechanic know to do that or know how to do that or know when to do that?

*MS. ALVAREZ:* Objection, form.

A. TI does not define what the mechanics look at when someone brings their car to the dealership.

Q. Well, let's just say you're going to train the mechanic. What would you tell them to do?

A. I don't have expertise in that area in order to train a mechanic.

Q. What would you look at when you raised the hoods? What would you do?

*MS. ALVAREZ:* Objection, form.

A. Do what?

Q. You're the mechanic now. What would you do? You said -- You said, check the switch?

A. If I --

*MS. ALVAREZ:* Objection, form.

A. If I wanted to understand if there was fluid in the switch cavity, I would measure the resistance between the terminal of the switch and the hex port of the switch.

Q. And how would you do that?

A. With an ohm meter.

Q. An ohm meter, o-h-m?

A. Yes.

Q. And that measures what, resistance?

A. Resistance.

Q. So the ohm meter would tell you what, if there's a short?

A. It would tell me what the resistance was.

Q. And so, if there was little resistance, it means there's a short; and if there's a lot of resistance, then that's good; isn't it?

A. The way the part is designed is that it would have an -- an open -- it would be very high resistance. If -- If that didn't -- the resistance is lower, that would indicate that there may be fluid inside the switch cavity.

Q. So, in other words, if there's lower resistance, then the circuit is shorting out inside the switch?

A. If there's low resistance, then there's a resistive path from the terminal to the hex port ground of the switch.

Q. Because it's shorting internally for some reason?

A. From it's resistive path.

Q. Which means that there's a short, right? I mean, a short is -- just means that the current is going somewhere it's not supposed to; isn't that what that means?

A. A short generally means a very low resistive connection.

Q. Which means you're making a circuit?

A. There can be fluid in there that has a

higher resistance than I would call a short.

Q. So that means you're making a circuit, right?

A. There's a resistance from the terminal to the hex port. That's what it would mean if you measured resistance that is a resistive path, current can flow to the terminal, correct.

Q. Well, the switch isn't designed to operate that way; is it?

A. Not -- The switch is not intended to operate with fluid in the switch cavity.

Q. That's not my question. My question is: Is the switch designed so that it shorts out and causes a fire?

A. The switch is not designed to short out or cause a fire.

Q. So there's not supposed to be current across from the -- on of the electrical components to the hex head, right?

A. There's not supposed to be current flowing from the terminal to the hex port, yes.

Q. And whose responsibility is it then to make sure that repair technicians at authorized Ford dealers know what you've just described when it comes to analyzing whether or not a TI speed control

deactivation switch has got an internal problem? Is that my clients' responsibility or is that someone else's responsibility?

A. It's Ford's responsibility to define how the service technician would service the -- the vehicle.

Q. Is that my clients' responsibility?

A. It's Ford's responsibility to define how the service technician will service the vehicle.

Q. So that's not my clients' responsibility; is it?

A. Its Ford's responsibility to define how the technician services the vehicle.

Q. Which means that it's not my clients' responsibility, correct?

A. It's not your clients' responsibility to define how to service the vehicle --

Q. And then how --

A. -- ~~not~~ by the dealer technician.

Q. All right. And then, so how's Ford supposed to know how to test this TI switch? How's Ford supposed to learn that so that they can tell the technicians?

A. Ford -- TI shows Ford the design of the switch, how the switch operates. Ford's

specifications define how the switch should operate. And with that information Ford can -- can show the technicians how to service the vehicle.

Q. Okay. So after these switches are designed pursuant to Ford's specifications, they're designed, manufactured and then sold to Ford and they go out and they're put on '92, '93 Panthers, right?

A. Actually, in this case, sold to ~~Highlight~~ Highlight Industry first; but eventually, on the Ford vehicle.

Q. And after that point in time TI doesn't get involved with what's happening with the switches out in the field unless Ford comes back with a complaint?

A. If there are any issue -- issues, Ford would bring it to -- to TI. And if parts come back to Ford as an issue, they would return it to TI. TI would analyze those switches and send a report back to Ford.

Q. Okay. Once we're at that point in the stage where the switches are being produced and they're coming off the assembly line and Highlight and Ford are putting on these '92, '93 Panthers, TI has no responsibility when it comes to determining if the switch is meeting the specifications criteria

of the switch?

A. TI is responsible to make sure the switch -- that all switches delivered meets the specification.

Q. I mean, after the fact, TI doesn't go out in the real world and get cars and test them and see if the switch is meeting the specifications criteria?

A. There are examples of times TI has gone out and got switches that were out in the field in order to see how the switches were performing and -- and what they looked like.

Q. What cars did TI do that on?

A. There were some G.M. vehicles where we took power steering pressure switches off of. There were some Ford vehicles where we took Ford brake switches off of and recently during this investigation went back and took TI switches off of Panther platform vehicles to see how the switch was performing.

Q. And were -- were those switches tested?

A. Yes.

Q. Has that been produced?

*MS. ALVAREZ:* Objection, form.

A. I'm not sure exactly which documents were

produced. I know that --

Q. What testing was done on the Panthers that were picked off the streets?

A. We tested the switches. We did not test the vehicles.

Q. And what was done?

A. The switches were tested for calibration and cut open to look inside.

Q. Anything else?

A. Nothing I can remember at this time.

Q. Did anyone bother to pick up an ohms gauge and test the switch the way that you said it ought to be tested before y'all cut it open?

A. Yes. Yes, ~~that was done~~ on parts received from the recall but not on those parts retained

Q. So something else was done?

A. Yes, on the parts received from the recall

Q. Were those measurements recorded, the measurements taken off the ohms gauge?

A. Yes.

Q. Ohms gauge, ohms meter?

A. Ohms meter.

Q. And how were those measurements recorded?

A. On a data sheet.

Q. Has that been produced?

A. I don't know.

Q. What did it show?
A. The switches were operating fine.
Q. So there was -- Of all the Panthers that were taken off the road, how many were taken off?
A. I don't remember exactly. Ten switches, 12 switches, somewhere around there. All of those switches were operating normally.
Q. What does normally mean when it comes to the ohms meter reading?
A. Very average --
Q. What did --
A. -- from terminal to case.
Q. What is the measurement?
A. Essentially, overload, mega-ohms.
Q. Excuse me?
A. Essentially, overload, mega-ohms.
Q. Well, but when you're looking at the meter, there's numbers that correspond with the meter. What number?
A. The -- The meter will say, O.L., overload, for very high resistance.
Q. Okay. And then what would you expect for the meter to read for a switch that did not meet specification?
A. Don't know of any switches that didn't

meet specification.

Q. No. You're -- You're now telling the mechanic, even though it's not TI's responsibility, when you're looking at the ohms meter, here's the reading that means it's good; here's the reading that means it's bad. What's the bad reading number? I need a number.

*MS. ALVAREZ:* Objection, form.

A. Depending on the conductivity, the fluid in the switch would affect what resistance you would measure.

Q. What would that be?

A. It would vary, depending on the conductivity of the fluid.

Q. So how is the mechanic supposed to know if you can't tell them the number?

*MS. ALVAREZ:* Objection, form.

A. What I said before was that as a -- as a guideline, looking at resistance from terminal to case, could be an indication of fluid in the switch cavity.

Q. Okay. But the ohms meter has measurements, it has a scale and it gives you numbers, doesn't it?

A. Yes. It could be tens of ohms, hundreds

of ohms, thousands of ohms, hundred thousands of ohms, depending on the conductivity of the fluid.

Q. Well, so give me a number.

A. I can't give you a number because it would depend on the conductivity of the fluid that was inside the switch.

Q. Then how are you going to figure that out, take it apart? I mean, why not just go ahead and just take it off and just throw it away just in case, if there's no way to tell unless you take the switch off and take it apart?

A. Tell what?

Q. What the conductivity -- conductivity of the fluid inside the switch is.

A. Well, when you measure the resistance you'll understand how -- how conductive that fluid is --

Q. So --

A. -- based on the resistance measurement.

Q. So what's my measurement going to tell me?

A. It'll tell you the conductivity of the fluid.

Q. All right. What's it going to tell me with regards to the conductivity of the fluid?

A. All it's going to tell you is the

resistance between the terminal and the case. Different fluids in that condition will have different resistances.

Q. All right. So what could get in there, brake fluid, water, saltwater?

A. Yes.

Q. All right. So what's the range going to be, depending on the conductivity of those four fluids that could possibly get in the switch --

A. Brake fluid would probably in the hundreds, hundred thousand, three-hundred, five-hundred thousand ohms -- well, five-hundred thousand ohms; in that range, hundreds of thousands of ohms. Saltwater would be -- would be lower, depending on the concentration of salt.

Q. Okay.

A. Could be in the hundreds.

Q. So the instructions to the mechanic are anything from 100 -- a hundred -- several hundred ohms to as much as 500,000 ohms; throw the switch away?

A. That's not what I'm saying. I'm not defining instructions to a mechanic. You asked me before how would you know if fluid was in the -- in the switch and I said, by one way, to measure

resistance from the terminal to the case.

Q. Who's supposed to know what that measurement's going to be to make the decision to throw the switch away, TI, the mechanic or Ford?

A. I don't know if mechanics are making those measurements or not.

Q. That's not what I asked; is it? Who's supposed to know what the number is, TI, Ford or the mechanic when it comes to the decision when you're measuring the switch with the ohms meters and you want to decide whether or not it's a possible fire hazard --

*MS. ALVAREZ:* Objection, form.

Q. -- TI, the mechanic or Ford? Pick one or more.

A. I'm not --

*MS. ALVAREZ:* Objection, form.

A. I'm not saying that because there's fluid in there, you have a fire hazard, just because of fluid in the switch.

Q. Okay. It's no good, we need to throw it away, who's responsible to determine the number on the ohms meter; TI, the mechanic or Ford?

A. What I'm saying is, as a diagnostic tool at TI, when we receive switches, that's a

measurement we would take. We measure the ~~time~~ resistance ~~needed~~ to try and understand what might be wrong with the switch.

Q. The switch is out in the field now, it's on a car, it's been cycled; you don't know how many times because Ford didn't tell you that; now someone's measuring it with an ohms meter. Who's going to pick the number in order to make the decision to throw the switch away; TI, the mechanic or Ford?

A. You're talking about a hypothetical situation.

Q. Yes, sir.

A. I don't know who's measuring the switch or what the reason is for measuring the switch.

Q. They're measuring it. Who cares. They're measuring and they're trying to just make sure these cars don't burn people's homes down, maybe --

*MS. ALVAREZ:* Objection, form.

Q. -- maybe someone thought of that and decides to measure it with an ohms meter. Who's going to pick the ohms meter number --

*MS. ALVAREZ:* Objection --

Q. -- TI, the mechanic or Ford?

*MS. ALVAREZ:* Objection, form.

A. Can you repeat the question?
Q. Who's responsible for determining the ohms meter measurement for the decision with regards to the -- the -- if a TI speed control deactivation switch failing or doesn't meet specifications; TI, the mechanic or Ford?
A. Hypothetically speaking, if a dealership, somebody was making that measurement -- Okay -- Ford would be providing to that person the information on whether to remove the switch or not.
Q. Not TI, not the mechanic; Ford?
A. Ford would be making -- be providing the information.
Q. Now, how would Ford know that? How would Ford know what that measurement's supposed to be?
A. I don't know. They'd use their system understanding to determine how the component operated in their system to make a judgment decision.
Is it possible to take a few-minute break
Q. Sure.
*THE VIDEOGRAPHER:* Going off the record. The time is now 2:42.
(Recess had.)
*THE VIDEOGRAPHER:* We are on the

record. The time now is the 3:02. This is video tape No. 3.

*MS. ALVAREZ:* For the record, we're discussing the continuation of this depo at whatever time we end today. We have offered to go today through close -- close to 5:00 o'clock and pick up tomorrow morning, 8:30 or 9:00 o'clock tomorrow morning and continue until the deposition is concluded.

It is understanding from the discussions off the record that for the most part everybody else is opposed to continuing tomorrow.

*MR. JOLLY:* Well, just so that we understand one another, when these -- when this deposition was at the point when it was being scheduled initially, TI wrote a bunch of self-serving letters to me claiming that this would be the only deposition that ever occurred of a TI corporate representative.

Now here we are, it's 3:00 -- five after 3:00 and TI has just now handed us another stack of documents which is approximately a half of an inch thick and it turns out that there's a video tape that we haven't received, color photographs of his testing, documents related to Nissan, G.M. and Volvo and other

speed control deactivation switches that are relevant to this case.

We're not going to continue this deposition into the weekend without the -- having had ample opportunity to have full and complete discovery responses, production responses and the opportunity to review that information without having to set here and look at it through the deposition.

I think it's obvious why it was done this way, but I don't say that on the record. So what I'm going to do here in a little bit is, I'm going to say that I am through with this witness at the present time. I'm not going to pass the witness and we will reschedule the deposition at a date and time convenient to everyone after we've had a chance to look at all the documents which haven't been produced. So we're not agreeing to go forward through Saturday, plus it's the Christmas holidays and I've got plans. But that's low priority compared to the other reasons stated.

*MS. ALVAREZ:* The only thing that I'll add to that is if -- if part of the problem is the document production, that there was a document production request that wasn't timely, so I don't believe that that's a relevant valid reason.

I understand the family and the holiday

obligations that you're talking about. But as far as the document production, I'd make that statement.

*MR. JOLLY:* What document production that is not timely?

*MS. ALVAREZ:* I understand, the duces tecum that was sent less than 30 days prior to today's deposition.

*MR. JOLLY:* We'll just bring that up with the Judge.

*MR. GRANDSTAFF:* And my -- This is Joel Grandstaff. I'm an attorney for Intervenor Prudential and Southern Farm Bureau. And our position in this also, we agree that the Plaintiff (sic.) should not be continued tomorrow, it should be reset for a date that's convenient for everybody here. It is the holiday season. I do have plans with my family that would make tomorrow impossible and I think there are probably other people here that also have similar problems. I certainly would make myself available at another time that is convenient for everybody else and continue this deposition.

*MR. KHOSHBIN:* Shane Khoshbin on behalf of Farmers, Intervenor. I will not be

available tomorrow. I apologize for it being inconvenient, but I am going to have questions and I am going to want to take a look at the documents that have not been produced as of yet to date. I have probably sent out at least two letters requesting copies of documents that were produced by Ford at any time, much less the documents that already haven't been produced, and TI. And I will be -- make myself available on another date convenient to this witness. And my guess is that there are going to be some other witnesses with more knowledge concerning certain topics that we're going to want to examine. And I think it's very reasonable to not continue on a Saturday, especially the weekend before the Christmas holidays and to go ahead and just reschedule it for a date that's convenient for everyone.

*MR. MANSKE:* Jeff Manske on behalf of Ford Motor Company. Ford also objects to going forward on Saturday on a non-business day for the reasons previously articulated by counsel.

*MR. SCHIRRMEISTER:* Andrew Schirrmeister, DuPont's lawyer. I'll decline as well, happy to reschedule at a time convenient for the witness and the parties.

MR. SOLOMON: Dean Solomon here on behalf of Travelers, Intervenor on the -- in one of these Houston cases. We also would join in and object to the Saturday deposition -- or the continuance of the deposition on this Saturday as well.

MR. FORBES: I think I'm the last one. Ross Forbes, Intervenor representing Allstate in one of the Houston cases. And we'll just join in this objection not to go forward tomorrow.

MS. ALVAREZ: Sounds like it's unanimous on that side. I guess we can circulate, after -- after today, circulate dates when we get to that point when it's convenient to [redacted] and the parties, only at this time we're ready to continue.

MR. SCHIRRMEISTER: How are the ski conditions in the white mountains?

MS. ALVAREZ: It's not your turn to ask questions yet.

MR. JOLLY: He says there's no snow yet, it's just flurries.

MR. SCHIRRMEISTER: Down in Massachusetts.

THE WITNESS: Oh, well, I don't know

what's up in the mountains. I'm not a big skier myself.

*MS. KENNAMER:* Andrew will want to know that before he agrees to any rescheduling date.

*MR. SCHIRMEISTER:* I've never even been to Massachusetts.

*THE VIDEOGRAPHER:* Do you wish to go off the record now?

*MR. JOLLY:* Is the video going?

*THE VIDEOGRAPHER:* Yes, it is.

*MR. JOLLY:* Oh, okay. No. Let's go.

Q. So when it comes to the maintenance criteria for the subject speed control deactivation switches that are used on the '92, '93 Panthers, that's Ford's responsibility?

A. I'm not sure if you've understood the full discussion I've said on -- on the different responsibilities. TI is providing one switch that goes into a very complicated system. The system includes the -- the electrical architecture, it includes master cylinders, brake pedals, other switches, other circuits, paths; a complicated system that Ford has responsibility for defining how that system operates and what the specifications are for the individual components. Ford -- Ford

specified to TI specification for the pressure switch and as part of that specification TI guaranteed performance of the switch to that specification.

Q. Okay. So that's Ford's responsibility when it comes to the maintenance --

A. Ford --

Q. -- personnel?

A. Ford defines any maintenance that's required on the vehicles.

Q. Okay. The documents that -- that the TI lawyer just handed to us, are -- are these the documents that relate to the testing of the switches on the vehicles that TI went out and got off the streets?

A. Can I see what's in that document package?

Q. You don't know?

A. I don't know everything that's in there.

(Exhibit No. 7 marked.)

A. There's nothing in this doc -- in this documentation package that discusses the analysis TI did on pressure switches that we retrieved from the field at the beginning of our investigation.

Q. Okay. So what is Exhibit 7?

A. It's a combination of a number of

documents. A lot of the documents are different data supplied to TI by Ford based on parts returned in the recall and notes from phone conversations that I had with Steve Reimers at Ford.

Q. Looks like that most of the documents in Exhibit 7 are dated back to September, '99 or in that time frame?

A. September, '99 through -- through -- through December of '99.

Q. When's the first time you saw that material?

A. Saw which material? Saw everything --

Q. Exhibit 7.

A. -- there? Different times. A lot of it is my notes. Okay. Some of it are -- a document I had seen when it was written, as in the writing. Some of the documents in the back, this is the first time I'm seeing it.

Q. So -- So why are we getting this today in the middle of your deposition today? Why didn't we get this months ago?

A. I don't know.

Q. Do you think that's fair?

MS. ALVAREZ: Objection, form.

A. Some of the documents, I know, were just

found.

Q. Okay. How -- How -- Of the five cars that you inspected --

A. I'd --

Q. -- that belong to my -- Pardon me?

A. I'd like to go back just to clarify one thing. This -- This document right here (Indicating) is switches that TI received back from the field that were recall switches, but not provided to -- to TI from Ford, but where TI did go to dealers and receive these switches. So these were switches gathered out in the field. I just want to make sure I'm answering for you.

Q. What's that page number?

A. TI 00011112C.

Q. How did that work, where TI's out at Ford dealers gathering switches?

A. The -- At the beginning of the recall the Ford dealers were scrapping the switches. TI went to some local dealers and asked them, instead of scrapping the switches, would they be able to provide them back to TI.

Q. What local dealers?

A. Couple of local dealers in -- in the Attleboro area in Massachusetts and one dealer in

New London in Connecticut.

Q. Do you think that's a fair sampling of where the problem switches are?

A. I don't know if it's a fair sampling or TI wanted to understand what some of the switches looked like that were coming back from the recall.

Q. And do you know that that's not a fair sampling, in fact?

A. I know that most of the vehicle fires occurred in the south of the U.S.

Q. Right. So do you think that was fair, because all the vehicle fires, or at least 95 percent of them are occurring in the south, do you think that's fair, that TI would go to Massachusetts dealers and take a sampling from Massachusetts Ford dealers' switches taken off Panthers as a result of the recall and then test those switches and -- and then say, See, the switches are fine, there's nothing wrong with them? You think that's fair?

*MS. ALVAREZ:* Objection, form.

A. TI had requested to Ford to get all parts back from the recall so we could have a representative sample. TI tried to get some parts back itself from the recall.

Q. Did TI try to get any switches from any Ford dealers in the states where all the fires are happening, like Florida and Texas?

A. Yes.

Q. What dealers did TI go to and ask for switches in Florida and Texas? Give me the names of the dealers that TI did this with like TI did at the Massachusetts dealers.

A. TI did not go to any dealers that I'm aware of in Dallas -- Florida -- or Texas, Florida.

Q. You've got offices in Dallas, right? Right?

A. Yes.

Q. And there's a big factory over here on Highway 59 south in Houston and TI doesn't go to one dealer in Texas and ask for a switch, right?

A. I'm not aware of any -- TI going to any dealers in Texas. We did talk to Ford and request to look at switches, came back from all different regions of the country.

Q. So the answer to my question is, TI did not go to one single dealer in Texas and ask for switches, correct?

A. Not that I'm aware of.

Q. Of the five cars that you inspected that

belong to my clients, how many cycles had those speed control deactivation switches experienced prior to the fire involving those vehicles?

A. I do not know.

Q. Does that matter?

*MS. ALVAREZ:* Objection, form.

A. Does what matter?

Q. Does it matter how many cycles the switches had experienced in the five cars that you examined that were owned by my clients?

A. Does it matter for what?

Q. Well, let's ask it this way: Does TI take any responsibility for a speed control deactivation switch that's on one of my clients' cars if that switch fails after a cycle specification limit has been exceeded out in the real world?

A. All TI did was guarantee that the switches manufactured by TI met the specifications provided to TI by Ford.

Q. And those specifications for the cycles is what number, 500,000?

A. Ford's specification, 500,000 cycles from zero to 1450 psi and back to zero.

Q. And you don't know -- no one at TI knows, for that matter -- how old a car has to be or how

many miles it has to have on it before it hits 500,000 cycles --

A. That's correct.

Q. -- on the switch?

Does TI care?

A. Yes.

Q. All right. Explain that to me.

*MS. ALVAREZ:* Objection, form.

A. Explain --

Q. Explain to me why TI makes a switch that they do not guarantee after it hits 500,000 cycles.

*MS. ALVAREZ:* Objection, form.

A. TI guarantees a switch to meet 500,000 cycles based on the Ford specification. Ford has the full system understanding and documents in the specification of what they feel is the life of -- of the switch that's required to last for the full life of the vehicle.

Q. Okay. So those switches may very well not have exceeded those 500,000 cycles, for all you know?

A. I don't know how many cycles are on those switches.

Q. All right. So let's just say they don't. Does TI guarantee my clients that if those switches

caused those fires, that it's TI's responsibility, if the cycles are under 500,00 for any one of those five cars you inspected?

*MS. ALVAREZ:* Objection, form.

A. I don't know the details of what caused fires on those vehicles.

Q. No. No. That's not my question. My question is: If those switches caused the fires and if they cycled less than 500,000 cycles, is it TI's responsibility if that's the case?

*MS. ALVAREZ:* Objection, form.

A. There are other factors involved that may have contributed to the fire, if there was a fire on that vehicle related to the pressure switch.

Q. All right. So -- So, in other words, TI might not honor it's word or guarantee when it comes to the 500,000 cycles because maybe something else was involved if the switches caused the fire?

*MS. ALVAREZ:* Objection, form.

A. That's not what I'm saying.

Q. What is the other -- What are the other maybes? What are they? Tell me what they are.

*MS. ALVAREZ:* Objection, form.

Q. You said, the other factors. What are they?

A. All right. Let's go back to the discussion on the lab testing on switches. We could only get switches to ignite when saltwater was injected through the base and high power was applied to the switch.

Q. Okay.

A. So some of those factors, based on our lab tests, would need to be present.

Q. Okay. Which is -- just so happens, that's something that every car experiences with this switch, living in the gulf coast?

*MS. ALVAREZ:* Objection, form.

A. I don't know what those cars experience.

Q. Well, up there in Massachusetts, don't they throw salt on the road when it -- the road's iced over?

A. Yes, they do.

Q. And isn't it foreseeable, sir, that these switches are going to be exposed to saltwater sometime during the life cycle of the vehicle?

A. The external switch, I would expect to be exposed to saltwater sometime during the life of the vehicle.

Q. All right. That's foreseeable; isn't it?

A. For the external switch to be exposed,

yes.

Q. And when you say, external switch, what you're talking about is is assuming that the electrical connector seal maintains its integrity?

A. Yes.

Q. Okay. So if it did and the switches caused fires and they haven't exceeded the 500,000 cycle specification, is TI going to honor its guarantee?

MS. ALVAREZ: Objection, form.

A. TI guarantees its switches will meet the specification provided by Ford.

Q. So the answer is yes, TI would honor its guarantee if that's the case?

MS. ALVAREZ: Objection, form.

A. I'm not sure what specific guarantee you're saying.

Q. Whatever the one is you just said. I don't know. You tell me. What is the guarantee?

A. That TI manufactured switches will meet Ford's specification.

Q. Okay. So does the guarantee include that they'll replace the switch or at least pay for a new switch?

A. I don't know the details in the contract

around what -- TI's guarantee if there is any defective switches.

Q. All right. Does the guarantee include the cost to replace the switch?

A. I don't know the details.

Q. Does the guarantee include the downtime that my clients don't have the use of their car?

A. I don't know.

Q. How about the losses caused by a fire? If the switch causes a fire, does the guarantee include that?

A. I don't know.

Q. Loss of family heirlooms that are not replaceable, does the guarantee cover that?

A. I don't know the details of any guarantee contract with Ford.

Q. Who at TI can answer those questions and tell the jury in these cases, Here's what our guarantee is and we're going to make it good and here's what our guarantee covers, since you can't say who at TI can?

*MS. ALVAREZ:* Objection, form.

A. What TI can what?

Q. Can tell us what the guarantee is and what it's going to cover.

A. I'm not sure.
Q. Have you ever owned a Lincoln?
A. I have not.
Q. What kind of car do you own?
A. I own a Honda CRV.
Q. That's a utility vehicle?
A. It's a sport utility vehicle.
Q. Year model?
A. Excuse me?
*MS. ALVAREZ:* Objection, form.
Q. Year -- What's the year model?
A. Of the car I own?
Q. Yeah.
A. It's a 1997 Honda CRV.
Q. How many miles do you have on it?
*MS. ALVAREZ:* Objection, form.
*MR. JOLLY:* How many miles do you have on it?
*MS. ALVAREZ:* Yes. That's irrelevant, the miles.
*MR. JOLLY:* Just wait. You'll see.
*MS. ALVAREZ:* I'm making my objection.
*MR. JOLLY:* Okay.
Q. How many miles are on it?

*MS. ALVAREZ:* Objection, form.

A. I have approximately 33,000 miles on my Honda CRV.

Q. All right. What do you do to maintain that car to keep it clean?

*MS. ALVAREZ:* Objection, form.

A. You mean, to -- What do you mean, to keep it clean?

Q. Do you wash it?

A. Sometimes.

Q. Do you have it washed?

A. No. I wash it sometime.

Q. Do you take it in to the dealer like you're supposed to?

*MS. ALVAREZ:* Objection, form.

A. The dealer doesn't require that I bring the car in. The dealer recommends certain maintenance.

Q. Have you ever washed the motor?

A. No, I have not.

Q. Do you think there's anything wrong with anyone washing the motor, take it to car wash, lift the hood and spray the dust off at the car wash, anything wrong with that?

A. I don't know if there's anything wrong

with that or not.

Q. Would that void the TI guarantee, if someone were just interested in keeping their motor area tidy?

*MS. ALVAREZ:* Objection, form.

A. TI does not guarantee the integrity of the mating connector seal to the switch.

Q. If -- If it's something else that fails because some water gets into the switch, that's TI's responsibility? For example, let's just say that maybe the jury thinks y'all should've put epoxy in the electrical component to fill the void, would TI guarantee the switch even if someone just happened to wash their motor at a car wash?

*MS. ALVAREZ:* Objection, form.

A. TI guarantees that the switch meets Ford's specifications. There are Ford specifications for -- for washes and dunks and salt spray requirements that TI runs and tests and passes. Ford understands the system and how people may apply different water sprays to their vehicle and defines specifications to make sure that the components that are applied on that vehicle will meet those sprays.

Q. Okay. So it's foreseeable then to both Ford and TI that the engine compartment area where

the speed control deactivation switch is mounted might be subject to salt spray and soaps and cleaners?

A. That's not what I said. I said Ford provides the specifications that define different sprays and dunk tests that T -- TI tests its switch to to make sure that switch can survive that environment.

Q. Okay. My question --

*MR. JOLLY:* Objection, nonresponsive.

Q. My question was: Is it foreseeable to TI that the speed control deactivation switches used on the '92, '93 Panthers would be subject to a simple car wash by the vehicle's owner?

A. I don't know what the assumptions Ford put into their definition and specifications of what owners would do with their vehicles.

Q. That's not what I asked. I said, was it foreseeable to TI?

A. Was it foreseeable to TI that what?

Q. That someone might wash their engine compartment at the car wash.

A. It's possible people could do anything.

Q. So that's foreseeable; isn't it?

A. I -- I don't know.