EA02-025
FORD 10/27/03
APPENDIX N
BOOK 33 OF 61
PART 5 OF 6

362-625-4 1292

I'm sorry. Meeting would consolidate AVT-RESE

position per role that brake pressure switch plays
in regards to possible root cause for the Town Car
under hood fires. Did I read that right?

- A. That appears to be what's written.
- Q. And was there, in fact, a meeting that was held either February 3rd or Pebruary 4th to consolidate AVT-EESE position for the role that the brake pressure switch would play in regards to a possible root cause?
 - I don't recall that.
- Q. Okay. Do you have recollection one way or the other whether such a meeting occurred?
 - A. No. I don't.

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- Q. At this point in time, February 3rd, 1999, was it the AVT-EESE position that the brake pressure switch was a likely candidate of the cause of these fires?
- A. I believe that AVT-RESE's position for the brake pressure switch was that the -- it was a possible cause of these fires based on the NHTSA inquiry.
- Q. Okay. Can you tell me anything further that you recall about any meeting to consolidate the position on the brake pressure switch held on or about February 3rd or 4th?

So far, is that correct?

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Attlaboro.

Wait a minute.

MR. FEENEY:

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Time

That is an

Q. Okay. You don't dispute that?

1 accurate depiction of what was discussed, correct?

A. That's correct.

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- Q. Okay. How would rewiring the brake switch to an ignition feed be a possible containment?

 Explain that to me.
 - A. Given a brake switch that we now know had brake fluid leaking into it that would cause a fire, running the wire to through the ignition switch would remove the period of time from when the switch could catch fire to -- of when the vehicle was off to only when the vehicle was running.
 - Q. Okay. And that was one of the possible containments that was discussed at this meeting held on February 5th?
 - A. Correct.
 - Q. Okay. It was confirmed by the cruise control -- I'm sorry. Let me continue. It was confirmed by the cruise control group that there is no necessity to have the brake switch "hot" (12 volts) at all times. Did he report that correctly?
 - A. I'm not sure that he did.
 - Q. Okay. Well, Paul Stokes was the individual at the meeting, correct?
 - A. That's correct.
- Q. You don't have any notes of the meeting,

2 A. No, I do not,

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- 3 Q. Okay. Everything I've read so far has 4 been accurate, hasn't it, Mr. Porter?
 - A. Everything you have read so far has been accurate as far as speculation of what Ford might do if the NHTSA said we had to do something to the brake pressure switch. At that point in time we did not know what the brake pressure switch situation was.
 - Q. Are you finished?
- 12 | A. Yes.
 - Q. Is it your sworn testimony that at this meeting Ford's Cruise Control Group indicated something other than Mr. Douglas has written -- Mr. Sharpe has written in this E-Mail?
 - A. It is my sworn testimony that the cruise -- Speed Control Group was consistent in their concerns of any effort that would take the brake -- brake deactivation switch out of the circuit that was the same as the brake on/off switch.
 - Q. Was it confirmed by Mr. Stokes at this meeting that there's no necessity to have the brake switch hot, 12 volts at all times?

1	MR. FEENEY: Asked and answered.
2	Q. Did he say that at the meeting, sir?
3	MR. FEENEY: Asked and answered.
4	A. I don't know.
5	Q. You don't have a recollection one way or
6	the other, do you, Mr. Porter?
7	A. No, I do not.
8	Q. You would defer to these notes, wouldn't
9	you, Mr. Porter?
10	MR. FEENEY: Objection. That's
11	not The notes don't even quote anything. Object
12	to form.
13	MR. MAYER: And he's answered the
14	question.
15	MR. FEENRY: And he's answered the
16	question. Three times he's answered this question.
17	Q. You would defer to these notes, wouldn't
18	you, Mr. Porter?
19.	A. No, sir.
20	Q. Why not?
21	A. These don't identify who said anything.
22	Q. Well, do you have any basis to dispute
23	that Ford's Cruise Control Group tested stated at
24	this meeting there was no necessity to have the
25	brake switch hot at all times on this date at this

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meeting?

both Options 1 and 2 under consideration?

A. I don't know if they were. Given our previous discussion, the -- the second option doesn't sound like it was under consideration. I can tell you at this point in time that if it was considered, it was ruled out because that would've meant a massive wiring to the Town Car system to take care of the problem, the brake pressure switches that were burning. Again, going to the service people would have to be involved in putting that into place, leaving open a lot of opportunity for mistakes and problems with our customers.

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- Q. Mr. Sharpe's reporting on February 5th that the options were under discussion at this time. I understand you didn't go that way. But I'm asking you, is it accurate, were those options under discussion on February the 5th, 1999?
- A. Again, I don't know about the -- that other option because it's not consistent with other messages that go we got from the speed control people.
- Q. Who is John McInerny? Do you see the next sentence, it ways: Although there is high attention on the brake switch, John McInerny stated that other components must be investigated as well. Now, he was at the meeting, was he not?

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Q.

Then it say, Database search of all model

year '92 and '93 Town Car fires with brake switch identified shows 32 incidents, right?

A. That's correct.

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- Q. So that tells -- There's a -- There's a hundred incidents for '92, '93 Lincoln Town Car fires that have not been categorized yet. Would that be a fair statement?
- A. What says is that there were 32 incidences that specifically called out the brake pressure switch. The other -- the other incidents may not have specifically called out the brake pressure switch, but may not have called out any other thing either.
- Q. Okay. And then it says, NHTSA has requested Ford to investigate and respond to the following components: Brake pressure switch; 42 way connector (beneath the brake fluid fill reservoir). Would you that schematic that we've marked as an exhibit and show us --

MR. MAYER: Somebody have a highlighter?

- Q. -- where that component is?
 MR. MAYER: Thank you.
- Q. It's in one of your exhibits?
- A. Right there (Indicating).

I see it. 42 way connector, it says, o. (beneath the brake fluid fill reservoir). I don't know where that is exactly. Α. ο. All right. How about the REC controller wire harness? Our investigation was focused on the brake

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- pressure switch. Somebody else was looking at that. I'm not sure where that is exactly.
- I'm just asking you if you know where it Q. is located in the vehicle on the exhibit that you have in front of you.
- Based on the description in this sheet I A. can't find it, no.
- Okay. How about the relay pack, contains three relays, (Ac Cut off, EEC, fuel pump) and the EEC diode), where is that?
 - I can't identify this on that sheet.
- Do you know where the location of any of those other components are, Mr. Porter?
- A. . No, sir. I don't.
 - Now, its says, Ford is now investigating ο. to verify if other fires, similar in nature, have occurred on other vehicle lines that use this switch. Focus is on model year '92, '93 Crown Vic, Grand Marquis as they have identical systems. Did

1 Mr. Sharpe report that correctly, there was a focus at this time on those vehicle lines since they have 2 3 identical systems? That is correct. 4 And there is information on the number of 5 ο. 6 Lincoln Town Car fires above -- We talked about a 132 incidents. Did you get similar information on 7 . 8 the Crown Vic, Grand Marquis --9 Α. I'm not --٥. -- at this meeting? 10 I don't believe there was. 11 12 Ford is requesting an on site T.I. representative familiar with the specific brake 13 switch application. Was that accurate? Did that 14 request get made at the meeting? 15 It -- We did make a request. If it was at 15 17 that meeting, I'm not sure. And Texas Instruments sent Aziz Rahman? 18 Q. That's correct. 19. Do you know how soon after this request 20 21 was made Mr. Rahman went to Ford? I believe there was about a week. 22 Okay. And did you -- Is he listed on your

Yes. he is.

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team?

A.

Did you attend it? .

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Q.

Those tests showed that, you know, one

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A.

Not at that time.

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A.

1	Q. Is the next test that Ford did the one
2	that was produced to us and has been marketed as
3	Exhibit 17
4	A. Yes, the one that was showing that,
5	despite T.i.'s previous statements that brake fluid
6	wouldn't cause a fire in the switch, that we were
7	able to make that happen.
8	MR. MAYER: Object, nonresponsive.
9	Q. Okay. Now, is there anything about
10	Mr. Sharpe's detail of the meeting other than that
11	we've talked about that you think is inaccurate?
12	A. I wouldn't be able to say one way or
13	another.
14	Q. Okay. That last document was dated
15	February the 5th.
16	(Exhibit No. 25 marked.)
17	Q. Let me hand you what's been marked as
18	Exhibit 25. This is a fax to you from Steve
19,	Beringhause, who is here today at the deposition; is
20	he not?
21	A. Yes, sir.
22	Q. Okay. This fax is dated February the 8th
23	1999. Do you see that on the fax cover sheet?

Okay. Did you receive this?

Yes, I do.

A.

Q.

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A. I believe that I did.

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- Q. Was this the first time you had worked
 with Mr. Beringhause or had you spoken to him before
 this point?
- A. I don't know if we had spoken prior this or -- to this or not.
- O. Okay. Well, let's take a look at the letter. It's the next page. It's dated February 8th, 1999. Fred, as we discussed over the phone Friday, per your request we looked at the possibility of adding a fuse in line with the pressure switch. Did you talk with him on the phone Priday, as reported in this letter?
 - A. Yes.
 - Q. Did you request that T.I. look into the possibilities of adding a fuse in line with the pressure switch?
 - A. I dop't believe we did.
 - Q. Okay. Did -- Does Mr. Beringhause just have it wrong here?
- 21 A. No. I believe that they looked into it 22 themselves.
 - Q. Okay. It was not a Ford request?
 - A. I'm not sure that it was.
 - Q. Do you know one way or the other,

Mr.	Porter?

this?

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- A. I don't recall it being a Ford request.
- Q. Okay. We think a more appropriate
 solution might be, use a relay circuit, schematic
 attached. And is there a schematic attached to
- 7 A. Yes, there is.
 - Q. Okay. Did Mr. Beringhause talk with you about why he thought it was more appropriate to use a relay circuits as opposed to an in-line fuse?
 - A. Yes, he did.
 - Q. Okay. Our understanding of the application is that the brake pressure switch is a failsafe component to shut off the cruise control if the standard brake light switch fails. Is that correct --
 - A. That's --
 - Q. -- his understanding correct?
 - A. That's Correct.
 - Q. All right. By -- The brake switch, therefore, only needs to be powered when the cruise control is on. Is that correct?
 - A. That's correct.
- Q. By placing a normally open relay in the cruise

control is activated, the switch will only be powered when it needs to be, when the cruise control is enabled. Is that correct?

A. That's correct.

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- Q. Okay. If you are correct that the high current draw is the source of ignition, a relay would be a better solution than an in-line fuse because the relay prevents the high current situation from happening rather than reacting once it does occur. Did I read that right?
 - That's what it says.
- Q. Okay. Did you tell Mr. Beringhause that you believed in February of 1990 -- I'm sorry -- February 8th of 19 -- Let me start again. Did you tell Mr. Beringhause in February of 1999 that you believed the high current draw was the source of ignition?
- A. I believe, what I told Mr. Beringhause in 1999, that failed switches with brake fluid inside them were the cause of the fires and that current provided to that was -- was the ignition source. We also know that the trend data from other vehicles shows that that design did not have a problem in our other vehicles lines or in later model years of the 19 -- of the Town Car, Crown Vic and Grand Marquis.

Do you admit telling him in this time

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- Q. If you are correct that a high current draw is the source of ignition, a relay would be a better solution than an in-line fuse because the relay prevents the high current situation from happening rather than reacting once it does occur.

 Do you agree with that?
 - A. A relay would be better than an in-line fuse, correct.
 - Q. Okay. If you have questions, give me a call; and it lists his phone number. And attached to it is a schematic that he sent to you that explains the relay that he's talking about; is that correct?
- 14 A. I believe so, yes.

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- . Q. What did you do when you got this
 information? Did you assign it to one of your team
 members to review?
 - A. We had -- I believe we took it into the team to review.
- 20 . Q. All right. Was --
- 21 A. I don't know that it was a individual.
- 22 Q. All right.
- A. I think there were various people that had their input into it. One of one of big concerns with this, again, as I stated before, is to put this

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1	into the Town Cars in the '92, '93 time frame would
2 .	Fequire service people to cut into the wiring
3	harnesses, there could be mistakes in cutting those
4	wiring harnesses, hooking into the wrong parts.
5	There would be the possibility of packaging it in a
6	dangerous position; and on further review, of the
7	relay becoming the part that ignites.
8	Q. Did you sent this schematic to anyone in
9	Ford or Visteon's Cruise Control Group?
10	A. I didn't send it to them. Mr. Kohl was
11	would've come to one of the meetings and reviewed it
12	alac.
13	Q. And that's Fred Kohl?
14	A. That's correct.
15	Q. Do you have a specific recollection of
16	whether Mr. Kohl and you discussed this proposal?
17	A. Mr. Kohl was a member or part of the
18	group that discussed it and in finally determining
19	that it was not a good idea.
20	Q. So you do have a recollection of
71	discussing it with Mr. Kohl?
22	A. Yes.
2 3	Q. Okay
2 A -	(Erhibit No. 25 marked)

Exhibit 26.

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Q.

Aziz Rahman to a series of people, including Robert

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other of what transpired at the tech meeting --

- 1 I believe --A. 2 ο. -- without notes? 3 I -- I believe that we reviewed what was 4 in the version of the 8 -- 14-D at that time. 5 Ann O'Neill, who is that? ٥. 6 It says that she's the Quality Director Α. 7 for Luxury VC. 8 And did you deal with her when you were 9 working on your investigation? 10 She was in -- in the meeting, the 11 management meetings. Was the way it worked, that from time to 12 13 time there were these technical review meetings and you would come to the meeting and present the 14 findings of your group? 15 16 Ford people would go to that meeting. A. 17 Okay. And -- And Were you asked to report 18 periodically to a -- to a technical review meeting? 19 A. Yes. 20 Okay. There's some references on your 0. 21 calendar, I think, Tech raview meeting. Did other 22 people besides you from your team go and -- and
 - Yes. A.

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Okay. Who would that have been? Q.

report to the Tech Review Committee?

- 1 Joe Neme. Α. 2 Okay. Q. 3 Tom Masters. A. Ο. All right. Here. I've got the list of 5 that. Bill Abramczyk may have been there. 6 Α. 7 And the -- the -- the members of the 0. 8 Technical Review Committee, how are they selected? 9 Do you know? I'm not sure how that's done. 10 Okay. Are they typically officers at 11 ο. 12 Ford, they're higher up? 13 A. I don't know what the positions would be 14 exactly. And it says, Next tech review every 15 - 0. Thursday. And during this time period, do you 16 17 recall if there was a technical review meeting every Thursday? 18 I recall that were having a weekly tech 19 review and that Thursday was probably the day. 20 21 And Mr. Rahman has written, Implies core Q.
 - team prep meeting every Wednesday. And is that --The core team, is that the reference to the team you've identified here on Exhibit 227
 - Yes. A.

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to invite people from T.I.?

,ı	Α.	We discussed that.
2	Q.	Who did you discuss that with?
3	A.	I believe I discussed it with Joe Neme.
4	Q.	And were you in favor of it or against it?
5	A.	i was neutral.
.6	Q.	Okay. What did Mr. Neme say?
7	A.	He was neutral also.
8	Q.	Who else discussed it
9	λ.	We
10	Q.	besides you two?
11	A.	We took it to the meeting and discussed it
12	there.	
13	o.	All right. And what was the discussion at
14	the meeting?	
15	A.	The consensus was not to invite.
16	Q.	Why?
17	A.	I don't know. Other than
18	Q.	Did you object? I'm sorry. Go ahead.
19.	A.	Other Other than it was really not
20	something	that T.I. needed to be involved with.
21	Q.	Why?
22	A.	Because this was Ford's business, not
23	Texas Inst	ruments'.
24	Q.	Did you object to that decision?
25	A.	No, I did not.

- Q. Did anyone?
- 2 A. No, sir.

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- 3 Q. Unanimous?
 - A. I believe so.
 - Q. Okay. So Mr. Aziz would be recalling events that occurred at the core team meeting; is that right?
 - Or what he heard in the hallway.
 - Q. Okay. There's a very urgent need to recreate ignition in the lab. That coming back -- They kept coming back to this again and again. Did that occur at a core team meeting held on or about February 11th, 1999?
 - A. I -- I believe that we did want to be able to show if a brake pressure switch could ignite. At that period of time Texas Instrument was skeptical that brake pressure switches could ignite at all, even though we had the Reddick switch in hand that we knew had burned. We were asking them to look at what would be involved in causing the brake pressure switch to ignite. Speculation and -- and brainstorming had concluded that certainly if a contamination had gotten inside the brake pressure switch, that that could happen. As we showed -- Or as was he discussed previously, we are finding that

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1	a brake fluid could cause corrosion of the parts
2	which would result in possibly metal materials
3	forming inside.
4	Q. By the way, I forgot to ask you: That
5	test that was done at Ford to determine whether
6	brake fluid was corrosive, that test that was
7	stopped after a week, did you send the results of
8	that test to Texas Instruments?
9	A. No, we did not. We reported it in the
10	team meetings.
11	Q. You say that Texas Instruments was
12	skeptical that a switch could burn. Who at Texas
13	Instruments are you attributing those sentiments to?
14	A. Charlie Douglas, for one.
15	Q. Anybody else?
16	A. I don't recall who was in attendance of
2.7	the meetings in in December and early January.

- So that's referring to -- to the reaction ٥. of T.I. people in December and early January?
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- T.I. people were skeptical and the person Q. that you've identified is Mr. Douglas --
 - A, Correct.
- -- right? And he said to you, I don't believe the switch could burn or words to that

effect?

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- A. Yes.
- Q. And you replied, I assume that somebody had seen it burning in Memphis?
 - A. Yes,
 - Q. And what was his response?
- 7 A. There was no responses.
 - Q. Is that what you draw your in conclusion that he was skeptical about; the ability of the switch the catch on a fire?
 - A. Other people from T.I -- And don't remember their names -- reiterated that same thought.
 - Q. You can't recall any of the names of those people here today in this deposition?
 - A. Not specifically.
 - Q. All right. They kept -- There was considerable concern that the field data set is not complete and Joe Neme has been tapped to get a clearer picture of events breakdown. Is Mr. Rahman reporting that correctly? Was there a concern at the core team meeting and was Joe Neme asked to go get a clearer picture?
 - A. We were trying to get more information as we could.

- ļ Q. Okay. There was strong feelings that --2 got to do more. Is that an accurate reporting of the -- your concern and the team's concern at the 3 time? The investigation was not going quickly 5 enough, correct. Okay. Fred's statement, 'That T.I. 7 Engineering is resident here" elicited as a "Good" 8 response. First, did you make such a statement? 9 Yes, I did. 10 A. Okay. Did it elicit a good response? 11 Q. 12 I believe it did. And that -- And with that line --13 Yes, sir. 14 Q.--- Okay -- What he -- What he's reporting 15 16 on is what he heard that happened at the technical design review, this is not firsthand knowledge that 17 he's reporting on. 18 Okay. All right. So you made the 19 statement: T.I. Engineering is resident here in the 20 21 Technical Review Committee?
 - A. And they said "Good."
- 23 O. Okay. And somebody told him that and 24 that's why he's reporting that back to his

25 | management?

1	A. That's right.
2	Q. Okay. I met with Fred on February 12th in
3	the morning to capture his thoughts on following
4	up on follow up actions. Did you meet with
5	Mr. Rahman on February 12th in the morning?
6	A. I probably did.
7	Q. Do you have any notes of that meeting?
a	A. No, I den't.
9	Q. Do you have a specific recollection of
10	what occurred at that meeting?
11	A. No, I don't.
12	Q. Would you defer to Mr. Rahman and his
13	notes?
1.4	A. I may.
15	Q. Okay. I met with Fred to capture his
16	thoughts on follow up actions. Needing 'raft" of
17	experiments to accelerate Captain (sic.) Kapton
18	wear. Was that one of your concerns?
19	A. Our concern was that we knew that brake
20	fluid had gotten through the Kapton layer and we
21	needed to understand what what that how that
22	could happen.
2 3	O. All right.
24	3 It did not make same as the Mountile

switch that had somewhere in the order of 50- to

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     60,000 miles that it was going to leak brake fluid
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     prematurely, given the tests that these switches
3
     were purported to have passed.
               The references to "raft", what -- what
     does -- does that mean a lot of tests?
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               I think that's his word.
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          Α.
               Okay. Is that the way you understand it?
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          ο.
               That's the way I would read it, but it's
          A.
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     his --
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          Q.
               Okay.
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          A.
               -- thought. .
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          Q.
               All right. And did you at the core
     meeting say, we need -- we need more experiments to
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     accelerate Kapton wear?
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               Yes.
          Α.
               Okay. Need to design and execute a DOE.
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     What is DOE?
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               I believe the initials DOE stand for
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          A.
     Design Of Experiments.
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               With temperature, moisture, disk energy,
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     contaminants (soap, detergent) number of Kapton
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     layers, etcetera as factors. Did he report that
22
     correctly?
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          A. Yes, he did.
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               Okay. I will close with Bryan on this.
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          Q.
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1 Is that -- This design and execute, was that something you wanted Texas Instruments to do? 2 3 A. Yes, it is. 4. We need a plan with timing next Wednesday. Q. 5 Is that the deadline you asked him to work under? 6 A. I believe we were asking it for the next 7 core team meeting. Okay. And did he provide it? 8 ο. 9 No, he did not. Α. 10 Did he give you an explanation on why it 11 wasn't being provided? I believe that what he answered was that 12 13 T.I. thought it was too complex of an experiment. 14 Q. For their technical capability? No. Just that they didn't want to do it. 15 Α. 16 He told you that at the next core team Q. 17 meeting, as best as you can recall? 18 A. As best as I can recalling. 19 Q. Did he say anything else? 20 A. No. 21 Did you then try to finds someone else to Q. 22 do this test? 23 There was nobody else that we had that A. could do this test. 24 25 ο. Why is that?

1	A. Because it's a unique switch that's
2	provided by T.I. Other people don't have the
3	equipment to do these kinds of tests. We relied on
4	T.I. to do the specification testings and to report
5	on that information to us.
6	Q. Well, this is talking about something
7	different. This is saying, we need to design and
8	execute some experiments to examine moisture, disk
9	energy, contaminants, number of Kapton layers as
10	factors. And my question is: Did you ask anyone
11	else either at Ford or-Hi-Stat or any other company
12	to do those tests?
13	A. Again, T.I. would be the only people that
14	would have the equipment that would be able to run

A. Again, T.I. would be the only people that would have the equipment that would be able to run those kinds of tests and the knowledge to be able to draw those conclusions.

MR. MAYER: Object, responsive.

Q. The answer's, you --

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MR. FEENEY: I object to your objection.

Q. You didn't answer --

MR. FEENEY: It is responsive. You just don't like the fact that it was T.I.'s responsibility, do you?

Q. You did not ask anyone else to go and run

1	the tests that you have outlined here, did you, sir?
2	A. We asked T.I. to run them and T.I. did
3	asked or said they wouldn't do it and there was
4	nobody else to ask.
5	Q. Okay. Did you investigate what other
6	companies may be possible, can institute testing?
7	A. I know
8	MR. FEENEY: A T.I. switch you're
9	talking about here?
10	MR. MAYER: No. He's talking about
11	Kapton layers.
12	MR. FEENEY: Okay. Okay.
13	Go ahead, Mr. Porter.
14	Q. Just, did you investigate any other
15	companies? You say there were none.
16	A. Azis Azis is talking about Kapton
17	layers and the various components. What we were
18	looking for was a comprehensive test of the com
19	of of the brake pressure switch and all the
20	variables that might be involved with that.
21	Q. Well, was this was this testing
22	something that Ford had designed?
23	A. No. sir. We were under an investigation
24	for fires, under hood fires of Town Care. We were

trying to understand why the brake pressure switches

- could even be considered to be an under hood Town
 Car problem and we were looking at what mechanisms
 that might produce. We would ve have hoped that
 Texas Instrument would be understanding of how to -and interested in knowing that also.
 - Q. All right. And your testimony is that you asked for a raft of experiments to be done to accelerate Kapton wear, but Texas Instruments said that the experiments that you asked for were too complex and they could not do it?
 - A. That's correct.
 - Q. And at that point the matter ended?
- 13 (A. Yes.

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- Q. Looks like we may need two to three times

 life. We will need to establish a real application

 requirement for ten-year, 150,000 miles, 500% is not

 enough. What solutions can T.I. evaluate and put

 into place in two months. Did he report that

 correctly?
 - A. Yes.
 - O. No potential solution should be eliminated for cost reasons. Did he report that correctly?
 - A. That's correct.
 - Q. Having the switch hot at all times is not a good practice and Ford will be internally working

on a solution for this. Did he report that correctly?

A. Yes. Again, I was frustrated at the -what was going on. And without understanding what
our different options were and that, in fact, these
switch was -- switches were failing pre -prematurely in the vehicle, causing fires, you know,
I said that that was not a good idea. Of course,
our design practice was that with expectation that
the switches would live the life of the vehicle.

- O. Why did you say it wasn't a good idea, Mr. Porter?
- A. Secause I was frustrated. You know, under -- under the -- under the pressure again of the investigation, we were looking at, what can we do quickly. That was one of the thoughts that had been brought out previously, we talked about in Mr. Beringhause's memo me. It was something that was on the front of my mind that would be an interesting way of doing it. But at the end of the day it was the brake pressure switches themselves that were having the failure mode.
 - Q. Didn't you say --

THE COURT REPORTER: Can we go off
the record, please --

MR. MAYER:

Okay.

A. No, I do not.

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- ο. -- to look at Kapton? Would you defer to 3 him on that?
- Ä. I'd defer to the Central Lab people on 5 that.
 - All right. Is there any reason you have Q. to believe that he did not have that meeting?
- 8 I have no reason to believe it one way or the other.
 - Q. Okay. And did you ask for him to work with Ford Central Lab people to look at Kapton?
 - A. I believe, as a -- as a part of the investigation. I don't know that I asked him specifically to go talk to the Central Lab people. That may have been something that he took on on his own.
 - Did you ask Mr. Aziz Rahman to do anythingο. that he did not do while he was resident at Ford?
 - I -- I don't know that he didn't do them. I know that there were several questions that -that had been raised over time that he was not necessarily able to answer himself, that may not have been answered.
 - Do you have any criticism of him as an Q. engineer and what he did at the Ford facility during

this time period?

Technologies?

- A. Again, we said that that was probably who that was before.
- O. And this references a meeting held at 1:00

 o'clock at Central Laboratories' small conference

 room and you're listed as one of the attendees: is

 that right?
 - A. I'm not sure what that list is at the top.
- Q. Okay. Do you have any recollection,

 Mr. Porter, of attending a meeting on or about

 February 12th with representatives of United

 Technologies?
- 12 A. Right now I don't recall that, no.
- Q. Okay. There are two names given of individuals from United Technologies, a Dan Kulkarni. Do you know Mr. Kulkarni?
 - A. I may have met him, but I wouldn't know him today.
 - Q. And Dick Ratke, R-a -- R-a-t-k-e, do you know him?
- 20 A. Same answer.

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- Q. When's the last time you spoke to either one of those individuals, if ever?
- 23 A. If I ever spoke to them and if I was at this meeting, this is probably it.
 - Q. Okay. Do you have any reason to doubt

1	that you were in attendance at this meeting?
2	A. I'm not sure what this meeting is exactly.
3	Q. The reference is, Connector F2AB 14A464
4	ADA. Is that a Ford part number?
5	A. It appears to be a Ford part number.
6	Q. Do you know if that is the connector that
7	was placed on the brake pressure switch in the '92,
8	'93 Lincoln Town Cars?
9	A. I'd have to defer to the Ford
10	documentation.
11	Q. Do you recall how this meeting got set up?
L 2	A. No, I do not. I don't really recall this
13	meating.
14	Q. Do you have any reason to doubt that the
15	subject agenda that's listed here was, in fact, the
16	agenda that was used at the meeting?
17	A. No, I don't.
18	Q. Do you know who prepared this document?
19	A. No, I do not.
20	Q. This was a document that was produced by
21	Ford and there's some If you look under File,
22	right under No. 8 it says, File/14a464/nrl. Is
23	that Is that initials?
24	A. I don't know.
25	Q. Do you know what Mr. Norm LaPointe's

initials are?

- A. No, I do not.
- Q. Is that a format that you're familiar
 with, that little -- I call it header, but whatever,
 you know.
 - A. That looks like a normal Microsoft file description.
 - Q. Okay. At the -- One of the agenda items was: Obtain and discuss FMEA. Did you obtain an FMEA from United Technologies during your investigation into the under hood fires in '92, '93 Lincolns?
 - A. At this point I don't recall whether we did that. Mr. LaPointe was leading that part of the investigation with United Technologies.
 - Q. What -- What would be the purpose of obtaining such a document from United Technologies Mr. Porter?
 - A. To understand what kind of failure modes they would've identified in the component.
 - O. Now, I can tell you, I have not seen that produced in the material that Ford produced in this case and I don't purport to know ever single document. Have you seen it in the last -- I don't know -- year-and-a-half?

- A. I guess I -- I don't know that I have seen it in the last year-and-a-half.
 - Q. Do you recall ever seeing it?

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- A. I don't recall having seen it or not either way.
 - Q. There is an Item No. 4 on the agenda:

 Discuss sealing details and the history of the above

 connector. Do you know what sealing details are?
- A. I don't know what that is exactly. What that question sounds to me like, very similar questions we were asking Texas Instrument as to what kind of changes may have occurred to the component during the time frame. That -- That was one of the questions that we were asking in general everybody.
 - O. Okay. Do you recall receiving any written material from United Technologies about the history of their -- of their connector?
 - A. Again, I don't recall receiving anything.

 I think they would've sent that to Norm LaPointe.
- Q. Now, look at the second page and tell me if you recognize the handwriting on this document.
 - A. No, I do not.
 - Q. It's not yours?
 - A. It's definitely not mine.
 - Q. Is it the handwriting of anyone at Ford on

1 your team that you can recognize? I -- I don't recognize other people's 3 handwriting. There's a -- a first item: Will silicon ο. sponge pass moisture? Do you recall that being a 5 topic of discussion when you were in charge of the Ford investigation? That specific description, I don't recall В that topic of discussion. 9 No. 2: Both seals are sub -- I guess it's 10 ο. some abbreviation -- CONT or COST, red in gray. Do 11 you know what that refers to? 12 No. I do not. 13 A. Do you know what -- Do you know whether 14 Q. there were two seals involved in the connectors in 15 the '92, '93 Lincoln Town Car? 16 I don't know if there were or not. 17 18 And then: Housing is UTA molded. That means United Technologies, correct? 19 Again, that seems to be what we've been 20 A. 21 agreeing on. And was UTA the sole supplier for the 22 connectors for the '92 '93 Lincoln Town Car? 23 I don't know that for sure. 24

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Do you have any reason to believe it's

1	not?
2	A. I have no reason to believe one way or the
3	other.
4	Q. A gray seal No. 5: Gray seal,
s .	lubricated for X-time, do you know what that refers
6	to?
7	A. No, I do not.
a	(Exhibit No. 29 marked.)
9	Q. Let me hand you Exhibit 29 which appears
10	to be an E-Mail from Deepak Goel. Is that how you
11	pronounce it?
12	A. Deepak Goel.
13	Q. Deepak Goel to you, this one dated
14	February the 12th, 1999. Am I correct that, at
15	least, from the header, that's what that is?
16	A. Yes.
17	Q. Who is Jack Paskus? He's referred to down
18	there about halfway down the page.
19,	· A. He's He's a person in Ford's
20	management.
21	Q. What role did he have in the
22	investigation?
2·3	A. He was in some of the management meetings.
24	Q. Do you know what his role was in the
25	management meetings?

- A. No, I do not recall that.
- 3 an E-Mail from Sam Cole to Deepak Goel says: I just

The previous sentence which appears to be

- 4 left the tech review for the Town Car NHTSA
- 5 investigation. This is viewed as a serious issue
- and Ford is late in responding to NHTSA's viewpoint.
- 7 Were you told, Mr. Porter, during your investigation
- 8 that NHTSA considered Ford late in responding to its
- 9 inquiries?

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- 10 A. Not other than this memo.
- 11 Q. This -- This is the time that you became
 12 aware of it?
- 13 A. Yes, I guess.
- Q. And there's also a reference to Rob

 English down about three paragraphs from the bottom.

 I have asked Rob English to take the lead on looking

 at the connector to determine if there are any

 potential leakage path to ground. Did that happen?

 Did Mr. English take that portion of the
- 20 investigation?

- A. You'd have to ask him.
- 22 Q. Do you know yourself?
- 23 A. I believe the -- the -- I believe that his 24 response was that, no, there was not a leakage path
- 25 through the connector by itself.

- Q. Did he -- Did he take over that job from you, looking at the connector? Was that part of your group and then it was farmed out to someone else? That's what I'm asking.
 - A. He was -- No, it would not be farmed out as to somebody else. He just had contacts with -- with the wiring group.
 - Q. Okay. And then it says: Fred has the lead on internal switch investigation. That's you, fred Porter. Am I right?
 - A. That's correct.

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- Q. And then it says: Tom has the lead on the overall systems look. That is Tom Donovan?
- A. No. I believe that they would be referring to Tom Masters.
- Q. Okay. And I guess what I'm asking is, was Mr. Kohl superior to you so that he had authority over this investigation, was able to instruct Rob English to take a portion and -- and Tom Masters to take a portion?
 - A. He was in a different part of the company.
- Q. But did he have the authority to do that, I guess, is what I'm asking?
- 24 A. In -- In something like this, anybody who
 25 has an idea has the authority to try and make things

- happen so as to bring a conclusion to the investigation as quickly as possible.
 - Q. Okay. And you said you didn't -- you weren't really sure whether Rob English took the lead at looking at the connector. Did Mr. Masters take the lead on overall systems?
 - lead on the overall systems is looking at the other three components on the NHTSA, plus other components under hood on the left-hand side of the vehicle that are powered at all times that could've been a result of the fires that the NHTSA was asking about.
 - Q. Okay. And to your knowledge, did he do
- 15 A. Yes, he did.

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- Q. Did he involve any of your team members in that work?
- A. Joe Kafadi would've been working with him on that.
 - Q. Okay. Anybody else from your team?
 - A. No.
- Q. Okay. Attached to this exhibit is a Work Plan - Brake Pressure Switch? Do you see that?
 - A. Yes.
- Q. The next page? Is that something that

Ford created?

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- A. I believe that it is.
- O. Okay. Do you know who on your team
 Would've been the scribe on this?
 - A. No, I'm not sure who it was.
 - O. Okay. The next page is Steve Reimers. It says: Root Cause Investigation Tests. But if you look at the bottom left, it's to Steve Reimers.
 - A. That's correct.
 - Q. Is that consistent with your understanding, that this was material put together by Steve Reimers?
 - A. These pages would be, yes.
- 14 ο. Now, as of this date there are some things 15 that T.I.'s -- looks like, being asked to do on this 16 Work Plan. Page 2 of 7, if you look at that, 17 there's a -- What is the difference in the base 18 materials that look different? T.I., by, then 19 there's a note: Completes. But there's no date in 20 Is that something that you recall your 21 people asking Texas Instruments to look into?
 - A. I believe so.
 - Q. Okay. And the material call-outs for '92, '93, again, something you asked T.I. to look into?
 - A. Yes.

Q. Ckay, Now I'm going down the page.

Analysis of the Memphis parts (crease marks in the diaphragm). What does that refer to?

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- A. That's asking T.I. what could result in causing the crease marks that were found in the Memphis part, the crease marks that -- that the cracks that allowed the brake fluid to come through, to understands if T.I. understood what could cause those -- those cracks; if there was anything that was part of there process that would be a cause for that.
- Q. All right. And there's a date in there, 2-18-99. Do you know if T.I. responded to the inquiry to them?
 - A. I don't believe they responded them.
 - Q. Did they respond at some point in time?
- A. Eventually Mr. Beringhause responded over a telephone call. He said that they weren't aware of how they could create those creases in the manufacturing process.
- Q. And the other items on this list assigned to T.I., were they completed by T.I. at some point in time?
 - A. I'd have to review each one of them.
 - Q. There are some that -- that don't have

Okay. And was that done timely?

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Q.

the Automatic Deactivation as a current design

control for 66 different potential cause/mechanical failures.

A. I didn't see that personally, no.

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- Q. Was the -- the speed control, Visteon's speed control FMEA, shared with Texas Instruments?
 - A. I don't know if it was or not.
- Q. If I wanted to find that out, who should I ask at Ford? That would be Mr. Kohl?
- A. I think that would probably be somebody at Texas Instrument that would be able to say that for sure.
- Q. Would you defer to Texas Instruments on whether or not they were provided that by Ford?
- A. I -- In fact, I'm not sure whether that would be something that would be provided to Texas Instruments since they were a component supplier.
- Q. Why wouldn't you provide that to Texas Instruments as a component supplier? Is it proprietary?
 - A. It would be considered proprietary.
- Q. And Ford policy prohibited sharing that with Texas Instruments, did it not?
- A. I'm not sure that Ford policy prohibits sharing that information. But information that's proprietary is considered before it's handed over to

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1 .	anybody.
2	Q. All right. It's typically not done.
3	Am Am I correct about that?
4	A. It's typically not done.
5	Q. And you don't know of any reason why that
6	would've been parted from in this case, do you?
7	A. That's correct.
8	Q. Now, there's another task on the next page
9	about one-third way down. It says: Do all Ford
10	applications have switch connected to hot at all
11	times? And this is again assigned to AVT EESE. And
12	was this completed timely?
13	A. Yes, it was.
14	Q. Okay. And do you recall what the response
15	was, what the answer was?
16	A. The answer is yes.
17	Q. And who at on your group did the actual
16	investigation of that?
19	A. That probably would've been Mr. Masters'
20	group.
21	Q. Now, if you look at the bottom there's
22	a a question on the same page: Why is this
23	switch connected to hot at all times? That's
24	assigned to Visteon. Am I right?

That's correct.

1 ٥. Okay. And it's been completed. 2 respond: Because the SDS. Now, what is (sic.) SDS 3 stand for? System Design Specifications. A. And what is that document? 5 ٥. It's a documents that says what 6 А. specifications the system must be designed to. 8 Q. Have you seen that documents? Did you see 9 it during your investigation? No. I did not. 10 A. 11 Have you ever seen it? o. I don't believe that I have. 12 A. 13 Do you know whether it was provided to ٥. 14 Texas Instrumente? I don't know that it was. 15 Is this something that would be considered 16 proprietary? 17 No, it would not be. 18 Do you know, in preparing for the 19 deposition, have you seen a copy of it? 20 21 No, I have not. A. MR. MAYER: Mr. Feeney, I don't 22 believe that's been produced to us. So that would 23 be another documents I would request and we'll send 24

you a letter requesting that.

- 2 And who is responsible for preparing the SDS for the '91, '92 Panther platform? Who would be responsible for preparing that document?
- A. It would've been -- I'm not sure who that would be for the -- for that time period.
 - Q. It would've been Ford though, because there was no Visteon at that time?
 - A. That's correct.

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- 9 Q. Do you know whether it would've been in
 10 Chassis or would it have been Electrical or would it
 11 be Brakes?
 - A. I don't know where that would be necessarily, no.
 - Q. And if you turn the page, it says: SDS (C-0068) states: The stop lamp switch and redundant deactivator switch must be on the same fused circuit. Is that a reference to a portion of the sps?
- 19 A. Yes, it is.
 - Q. Okay. Did you see that portion of the SDS in your investigation?
- A. No, I did not. I believe what Visteon was telling us when they reported back on these facts.

 24 like we tried to believe all of our other team
- 25 members.

	_ ο. Ok			
	eays: Is'it			
	an immediate	. What does	s jumper out	the
4	switch mean?		•	

- A. I'm not exactly sure as far as the terminology there. But I believe the idea was to unplug the switch from the circuit and put a wire across the terminals of the connector so that the switch would be out of the circuit.
- Q. All right. And Visteon responds: That's not possible and the cite the SDS that prohibits that?
 - A. That's correct.
- Q. Then it says underneath that: Elimination of this feature requires the concurrence of the OGC.

 Is that Ford's Office of General Counsel?
- A. That's correct.

- Q. Do you know why that required?
- A. Because this is a safety issue that we would be dealing with. Eliminating the redundant switch would open up an FMEA issue that had previously been defined as critical to customer safety and taking that switch out would then open ourselves up to customer safety issues.
 - Q. Did -- Did your team's consideration of

jumpering out the switch go to the Office of General

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- 1 Α. Works on brake systems.
- 2 All right. And what was his involvement Q. in the investigation? 3
 - He was a resource to understand information about the brake system.
- 6 0. In particular, he was asked to calculate 7 what pressures would be at various parts of the brake line, correct? 8
 - Yes, he was. Α.

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- Okay. And he was a specialist at Ford who ٥. 11 Ford felt had the technical knowledge to assist the 12 team in that inquiry, correct?
- That's what we thought, yes. 13
 - Okay. Did you later learn that he did not have that technical expertise?
- A. I'm not sure that his expertise really is in fluid dynamics and what the pressures are going through a -- through a line. 18
 - Why do you say that? ٥.
 - Α. Because that's not what his degree is in.
- Did you know that at the time you asked 21 him or somebody on your team asked him to assist? 22
 - No, I did not. A.
- Have you had somebody else from Ford's 24 ο. Brake Department look at the same things you asked 25

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1	Mr. Joyce to look at to see if he was correct?
2	A. No, we did not.
3	Q. Do you know sitting here today whether the
4	information contained in this exhibits is, in fact,
5	correct?
6	A. I believe what's contained is Mr. Joyce's
7	speculation.
В	Q. And have you had any technical training in
9	brake or brake systems?
LO	A. No, sir.
.1	O. Has Mr. Joyce?
. 2	A. Mr. Joyce has had some experience with
.3	brake systems.
4	Q. Okay. What is it about the information in
.5	here that you believe is Well, let me withdraw.
L6 '	Have you told Mr. Joyce you don't believe the
7	information contained in this exhibits is accurate?
.8	A. Mr. Joyce has told me that this is
L 9 ,	information that he had gathered from various
20	sources and that that in that there isn't any
1	real data that bake (sic.) that backs this up.
12	Q. Okay. So this would be discussion as
₹3	opposed to data, like we talked about yesterday?

That's correct.

ask someone from Pord to go and gather some data on this issue?

- A. No, we did not.
- Q. Why not?

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- A. Because we subsequently learned that brake fluid did break into the brake pressure switch and that that could cause fires.
- Q. Has Ford concluded that pressures in it's ABS and traction control system have no effect whatsoever on the wear of the Kapton in the switch?
- A. It's our understanding that that's the case based on the trend data from other Town Cars through -- through other years and other vehicle lines that also use the ABS system along with traction control.
- Q. Is that based entirely on the trend data that we talked about yesterday?
- A. Yes, air.
- Q. Has Ford done any testing to substantiate that, to your knowledge?
 - A. The trend data speaks for itself.
- Q. So the answers is: Ford's done no brake testing or no analysis to substantiate its belief that the ABS pressures and traction control pressures have any effect on the life of the Kapton?

The analysis of the trend data says that

What is it about the analysis of the trend

those things do not have an effect on the life of

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the Kapton.

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data that tells you that?

A. Yes, they are.

- O. Is your belief that the ABS and traction control pressures have nothing to do with life of the Kapton based on anything other than the trend data, as we've discussed here today?
- A. I believe that the ABS and traction control effects are contained within the life as specified in the part for the -- in the specification.
 - Q. Explain that to me, if you would.
- A. I'm saying that the specification of 500,000 cycles at 1450-psi at a range temperature of 135 degrees C is substantially enough for ABS and traction control.
 - Q. What --
- A. That is what was also part of the system that was tested on the Crown Vic, Grand Marquis from which that data was concluded that brought up 252,000 miles as the life on that -- for that test.
- Q. You anticipated my next question. I was going to ask you: What tests did Ford run to substantiate that? And I understand it, it's the Crown Vic study that you and I have talked about before?
 - A. Yes.

- Okay. And that study is dated when?
- 2 A. 1992.
- Q. Are you aware of any other studies on that topic?
- 5 A. No.

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- Q. All right. And the information that you were provided by Mr. Joyce, what did you do with it?
 - A. I reviewed it.
 - Q. You discussed it with him?
- A. Discussed it with him.
- 11 Q. And you -- you found out that he wasn't -
 12 he wasn't all that confident in it; is that --
- A. I found out that there were issues with it that -- that we -- that -- that were, again, not based necessarily on data; but what -- what his -- this thoughts were.
 - Q. Okay. Is the -- Is traction control and -- Well, let's do them one at a time. Is traction control standard in the Crown Vic?
 - A. I don't recall that at this moment.
- Q. Is traction control standard in the Lincoln Town Car?
 - A. At the very moment --
 - Q. No. I mean, in the '91, '92.
 - A. I understand. And right now I'm drawing a

Did I

-- which is where I think it is.

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Q.

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1	read the correctly?
2	A. I need to catch up with your here. I'm
3	sorry. Which paragraph were we on?
4	Q. It's one, two, three, four paragraphs. It
5	begins with a: Since I'm not sure.
6	A. Okay.
7	Q. See? And his last sentence says: The
8	worst case for the switch would be would be to b
9	connected between the HCU
. 0	A. Uh-huh.
1	Q and the prop valve, which is where I
. 2	think it is. Okay?
.3	A. Okay.
4	Q. Did you discuss that with Mr. Joyce?
. 5	A. Not before he wrote this.
. 6	Q. I know. But afterwards, did you discuss
L 7	it with him?
.8	A. I mentioned that it was not between those
L9 .	two locations.
20	Q. Okay. Where is it?
21	A. It's on the other side of the prop valve
2	from there.
3	Q. And so you determined that the analysis
4	that he had done here was not really relevant?

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A.

Correct.

- O. Does he give you the pressures at nodes and states on the other side of the proportional valve that would relate to where the brake pressure switch is connected?
 - A. No, he did not.
 - Q. Did you ask him to do that?
- A. Yes.

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- Q. And did he provide that to you?
- A. He was unable to do that.
 - Q. Why was he unable to do it?
- A. Because again, this wasn't based on data.

 This was based on -- on knowledge he had collected and, therefore, the specific vehicle would not be applicable to what his decisions -- or what his knowledge would be.
 - Q. And did you ask him to see if he could collect that data through testing?
- A. No, we did not.
- 19 Q. And why not?
- 20 A. Because he doesn't have vehicles available
 21 to him to do that.
 - Q. Well, you had vehicles available to you, did you not, sir?
 - A. We had a vehicle that we had.
 - Q. Well, I thought we read earlier that the

1 marching orders for Ford were to spare no cost. And
2 we --

A. Cost was not an issue.

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- Q. So are you telling us you only had one vehicle to look at for this entire investigation?
- A. No. We only had one vehicle that we needed to look -- to use for this investigation.
- Q. The reality is, you made a decision it wasn't really that relevant and you didn't ask anybody to do the test, right?

MR. FEENEY: Argumentative.

- Q. You can answer.
- A. This -- This was not really test information. Again, this was gathering background to see if we could see understand what it was that was happening in the system that may have resulted in brake pressure switches ultimately leaking and starting fires.
- Q. So the answer to my question was: It really wasn't that relevant to you, so you didn't ask him to go out and create a test to measure the pressures at the various nodes and states where the break pressure switch was connected. Am I right about that?
 - A. It is not -- was not relevant to us,

especially in light of the trend data which shows that the Town -- the Town Car, Crown Victoria do not have the problem in subsequent years.

MR. MAYER: Object, nonresponsive.

Q. Did you ask anyone to do the test, Mr. Porter?

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- A. I believe I answered your question.
- Q. And the answer is no, correct; you didn't think it was necessary?
- A. I did not think it was in necessary which shows that subsequent vehicles using the same ABS and traction control systems did not have a problem.
- Q. When you learned that Mr. Joyce's information here was more of a discussion as opposed to data, did you ask anyone else at Ford whether in the entire Ford Motor Company somebody had gone out and measured ABS and traction control pressures throughout a brake system to determine what those pressures were?
 - A. It was not necessary.
- Q. The answer is: You never asked anyone, correct?
- A. We did not ask anybody because it was not relevant on the trend data that we have collected.
 - Q. Well, you're not a brake expert. You've

- already admitted that. Why do you believe it wasn't necessary, Mr. Porter?
 - A. Because 1994 Town Cars do not have a problem with brake pressures switches catching fire.
 - Q. Now, how did Mr. Joyce get the initial request? Who is the one that asked him to look up this information that he provided?
 - A. I believe Steve Reimers did.

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- 9 Q. And did you tell Mr. Reimers that you did
 10 not believe the information you received from
 11 Mr. Joyce was, in fact; reliable information?
- 12 A. I don't know what my discussion was with 13 Mr. Reimers on that.
 - Q. Do you recall one way or the other?
 - A. I don't recall one way or the other.
 - Q. Did you provide any of this information in there exhibit to Texas Instruments?
 - A. I don't know whether we gave this to Texas
 Instruments or not.
 - Q. Would you defer to Texas Instruments whether you provided this to them?
- A. Certainly, if they came up with a copy of it.
- Q. During the entire investigation that you were in charge of, are you aware of any information

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other than this exhibit that discusses what the
 2
     pressures are at various places in the brake system?
3
               There is a document that shows what the
 4
     brake pressures were measured on the Town Car that
     we had.
 5
               All right.
          Q.
               And that was measured at the brake
 7
          Α.
     pressure switch.
 B
               And when was that done?
 9
          Q.
               That was done sometime in 1999.
10
          A.
               And where -- where was that done, at Ford?
          ο.
11
               It was done in Dearborn.
12
          A.
               One of the Ford laboratories did that?
13
          a.
               I think it was done on a test track.
14
          A .
               Okay. And did you ask that that be done?
15
          Q.
               Yes, we did.
16
               And was there a formal report issued that
17
     detailed what the pressures were at the brake
18
     pressure switch?
19
               There were charts that were presented,
20
21
     yes.
               And did you provide that information to in
22
23
     Mr. Joyce?
               I believe we slowed Mr. Joyce that
24
     information.
25
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- 1 And what did the inform -- what did the 0. 2 test reveal? 3 Α. The test revealed that various braking 4 pressures, braking characteristics, that the S pressures that were being experienced at the brake 6 pressure switch were well within those that were identified in the specification. 7 8 Anything else? ο. 9 Α. No. 10 Ο. And did you provide that test to Texas 11 Instruments? 12 I believe those charts were provided to Α. 13 Texas Instrument. 14 .0. Did you provide them or somebody on your team did? 15 16 I believe Stave provided those -- Steve A. 17 Reimers provided those to Texas Instrument. 18 What is that last number, Mr. Porter? 19 30. A. 20 (Exhibit No. 31 marked.) 21
 - Q. Let me hand you what's been marked as Exhibit 31 and ask you if you've seen this document before? This appears to be an E-Mail that you printed out on March 4th, 1999. Am I right?
 - A. That would be correct.

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1	Q. Okay. Do you recall receiving this
2	E-Mail?
3	A. Not at the time, but certainly reviewing
4	it here, yes.
5	Q. Do you have any reason to doubt the report
6	that Mr. LaRouche is making concerning this
7	investigation?
8	A. No, we did not.
9	Q. And am I correct, these were switches that
LO	somebody asked him to cut open and analyze?
11	A. Yes.
12	Q. Do you know where those switches came
13	from?
14	A. I believe these switches may have come
15	frem junk yards.
16	Q. But you mentioned earlier today where you
17	knew there were some junk yard switches that were
18	examined?
L9 _.	. A. Correct.
20	Q. And do you know what parts they were?
21	A. I believe these would've been Town Car
22	parts.
23	Q. Okay. Was there an actual report that was
24	issued other than this on the dissection?
25	A. I don't recall if there was or not.

O. Have you seen one?

A. I don't remember seeing a report.

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- Q. And in these -- on these three switches, am I correct that Mr. LaRouche determined that there was corrosion in the switches, but none of the switches showed evidence of diaphragm leakage on the test sample?
 - A. That's correct.
- Q. Okay. Now, when he says: None of these switches showed evidence of diaphragm leakage on the test stand, do you know what he's referring to there, what the test stand is?
- A. I believe there was a piece of equipment that Texas Instrument loaned us that was used for doing leak tests that Texas Instrument had designed.
- Q. And was Mr. LaRouche somebody that was on your team?
 - A. He was. Did I put him there?
 - Q. I don't think you put him on that --
- A. Yes. He's the first one after Texas
 Instruments there.
- Q. Yeah. Okay. And his specialty is Metallurgy Section?
- A. He's in the Metallurgy Section at Central Labs.

Which part of that?

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À.

1	Q. I just FTP 27 test files.
2	A. I believe FTP is a computer term for
3.	transferring files to people.
4	Q. Okay. And then MPG, is that Michigan
5	Proving Grounds?
6	A. I believe that's Michigan Proving Grounds,
7	yes.
8	Q. What is the perform the low mu testing
9	on Tuesday morning?
10	A. That is, perform brake testing on a low mu
11	surface.
12	Q. What is a low mu surface?
13	A. That's a surface that you would find in
14	a when you're braking on ice or water that would
15	cause an ABS event.
16	Q. Okay. Is this something that you asked
17	the Michigan Proving Ground people to work on?
18	A. Well, I asked Steve Reimers to work on it.
19	Q. And was the purpose? What were you asking
20	him to try to figure out?
21	A. To generate the charts that we've
22	previously discussed.
23	Q. The ABS The pressures that the switch
24	ran in the ABS event?

That's correct.

25

A.

- Q. Okay. And so this fellow, John Morris at the Michigan Proving Ground, was he the one that actually did the work?
 - I don't know if he is or not.
- Q. Okay. There's a reference in here to a brake cleaning fluid, that they should be checked to see if it can harm a brake pressure switch. Why did you want that done?
- A. Again, during the investigation we were going through, what are all the possibilities of what -- what could cause a problem. We didn't know what problems that there might've been with the switch and we were looking at all the different aspects of what we could think of that might've had an effect on the Kapton life.
- Q. Okay. And what did you think brake cleaning fluid -- What -- What was your -- I guess, theory?
- A. We had no specific theory, just that we knew that that was something that could be bought in the aftermarket.
- Q. There's a reference at the bottom of the first paragraph to an oxylate source, o-x-y-l-a-t-e source. Do you see that?
 - A. Yes.

Do you have any recollection of it today? Q.

Not really, no. λ.

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1 Q. Okay. You -- You're -- It's based on what 2 you're reading? 3 That's correct. Α. Q. Okay. And do you know exactly what the -how the -- how the mu testing was set up? 5 6 Α. No, I do not. 7 ο. Mr. Reimers would be best person to ask about that? 8 9 A. Mr. Morris may be the best person to ask about that. 10 11 (Exhibit No. 33 marked.) 12 Q. Okay. Let me hand you what's been marked as Exhibit 33 which appears to be a Summary document 13 created on or about the 8th of March, 1999. 14 15 getting the date from the bottom of the document. 16 Do you see that? 17 A. Yea. Okay. And it indicates that the Summary 18 was prepared by somebody name J. Kafadi and I think 19 20 you've listed him as somebody on your team; is that 21 correct? 22 That's correct. A. This document is part of the trend data 23 o. that you were talking about earlier in the 24

25

deposition?

1	Α.	This document would be a some summary
2	of the ear	cly trend analysis that was being done.
3	Q.	Okay. And there are notes, handwritten
4	notes, on	this in the upper right. Is that your
5	handwriti	ng, Mr. Porter?
6	λ.	It could be.
7	٥.	Does it look like your handwriting?
Ø	A.	It looks like it.
9	Ω.	And these are notes that you were writing
10	in a meet	lng?
11	A.	That's correct.
12	Q.	Okay. And I guess Mr. Kafadi was bringing
13	уои воше с	of the trend data and you were asking him
14	questions	about it?
15	` A.	Correct.
16	o.	And one of two You had two questions
17	that are w	written on the page: One, do all these
18	havė spec	d control?
19	А.	That's correct.
20	·Q.	Why did you want to know that?
21	A.	We wanted to know if they had speed
22	control a	nd, therefore, was the brake pressure

And what response did you get back from

switch one of the candidates for the cause of a

23

24

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fire.

1 him on the data contained on Exhibit 33?

- A. I -- I recall -- Or I don't recall

 specifically, but I think the answer from the

 results are that -- that we did the recall on these

 parts is that yes, they did.
 - Q. Okay. Am I correct, what you wanted to know from him was, of the 46 reports that are listed here, for example, how many of these vehicles had speed control on them?
 - A. Correct.

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- Q. Okay. And do you recall being told they all did or you -- you don't have a recollection?
 - A. I don't have a recollection.
- Q. Okay. And then I assume those same questions would be -- that -- that same question would be questions asked about some of the other data. He says that 30 vehicles reported engine unknown and he gives -- he does a breakdown. Same question: You wanted to know whether those had speed control?
- A. We probably wouldn't do it in that format.

 It was probably a more generic question of --
 - Q. Okay.
- A. -- do you know how many of these pieces
 have speed control?

be a reason to help rule out the speed control

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1
     switch as being part of the problem.
                                             I'm not sure
     why I asked about air suspension other than
 2
     remembering the experience from the 1987 -- or at
 3
     the 1984 vehicles and just making sure that that was
 5
     not part of the cause.
               Okay. And as I recall, what you said is
 6
     Mr. Kafadi, you believe, at some point in time got
 7
     back to you on air suspension and indicated that
 8
     most of the vehicles involved did not have it?
 9
10
          Α.
               Correct.
11
               But they were '92, '93 Lincoln Town Cars,
12
     were they not?
13
               No.
                    These are Crown Vic, Grand Marquis.
               Okay. And it's -- it's not on the Crown
14
          ο.
15
     Vic?
16
               It's an option.
          A.
17
               Is it on the Lincoln Town Cars?
          ٥.
18
              Yes, it is.
          Α.
19
               So one difference between the Crown Vics
20
     and Grand Marquis and the Lincolns are, the Crown
21
     Vice don't have air suspension and the Lincolns do?
22
               That's true.
          Α.
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- Q. In the 1992, '93 Panther platform?
- A. Correct.

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(Exhibit NO. 34 marked.)

- A. "Fixed" means that in the presence of a faulty brake pressure switch, a fire will be eliminated.
 - Q. Okay. And improved means --
 - A. That in the -- in the presence of a faulty brake switch, the fire may not -- or be less chance of a fire, but may not been totally eliminated.
 - Q. And were you satisfied that the information contained on Exhibit 34 was accurate?
- 10 A. Given the information we had at the time,
 11 yes.
 - Q. And did you revise Exhibit 34 at some point in time that you're aware of?
 - A. No, we did not.
 - _Q. Did --

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- A. It was not necessary. Again, we did finally come to the conclusion that the brake pressure switches were causing the fire and this was not needed to back up that inform -- that information. This was just looking at a variety of -- of potential actions that we could take and comparing them against what we had been led to believe were the potential causes for -- for the fires.
 - Q. I -- I thought you told me this was a

document that assumed the brake pressure switch was 1 2 failing and there were either an improvement or a fix that was going to be assigned to it, correct? 3 That's true. 4 Α. Okay. So this documents assumes that the 5 a. brake pressure switch is failing; it's not something 6 you learned later. When you created this document 7 you knew the brake pressure switch or thought the brake pressure wimp was already failing; these are 9 ways to protect from that? 10 That's correct. 11 A. 12 Okay. If the brake pressure switch is not Α. 13 meeting the life --14 ο. Right. 15 -- expectation, then this would be 16 17 something that you could do. Okay. This is something similar that you 18 ο. would do in a D-FMEA, right? 19. 20 No, I don't think so. A. How is it different? 21 This is something that you would do in a 22 Α. 8-D or 14-D problem investigation. 23

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ο.

would for a D-FMEA?

How -- How is that different than what you

ı	A. A D-FMEA takes items assigns severity
2	to those items, assigns a probability to those
3	ttems, assigns a potential for detecting what those
4	problems are and helps to balance or weigh what
5	those issues are for the design overall and guides
6	the engineers as to what they need to do to fix it.
7	Q. Aren't you also supposed to look at
8	potential solutions to those problems that arise?
9	A. No. You're supposed to come up with
10	solutions to those problems that arise.
11	Q. And evaluate them?
1,2	A. You're supposed to implement them.
13	Q. And so how is this different? Isn't
14	this Don't you have solutions here on the top
15	that are either going to be fixes or improvements if
16	they're implemented? Isn't that what this chart is?
L 7	A. This is the results what the results
L 8	would be if those things were implemented, but this
L9 _.	is not an FMEA.
20	Q. Okay. I I know. I didn't say it was.
1	I said, isn't it like an FMEA?
32	A. It's not like an FMEA either.
23	O. Okay.
₹4	(Exhibit No. 35 marked.)

Let me hand you what's been marked as

25

Q.

1 Exhibit 35. This appears to be an E-Mail from Z someone named Shaun McCarthy to you and others at Ford dated March 15th, 1999; is that right? 3 A. No. 5. Ο. Okay. 6 A. This is E-Mail from Shaun McCarthy, I 7 think, probably to himself. Okay. Forwarding note to -- And then --8 . Or forwarding note from. Did you receive a copy of 9 this? Let's --10 11 Ä. I received a copy of the lower portion. 12 All right. My question is: What is SIT? Q. What is that? 13 That's probably the initials for 14 Α. 15 Structured Inventive Thinking. 0. What is that? 16 That's a methodology for brainstorming 17 A. 18 ideas. Is that a division at Ford or a group at 19 20 Ford? 21 A. No. Q. Okay. Are these people Ford employees? 22 They may be. 23 A. Okay. Did -- Was there a Structured 24 ٥. Inventive Thinking meeting that was held in 25

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would resolve all the requirements that we had for

the system.

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- Q. Well, you certainly had a bunch of fixes,
 because if the you look back at Exhibit 34, a few
 days before this March 15th, SIT meeting, you had
 identified at least one, two, three, four fixes; by
 your own records, correct, Mr. Porter?
 - A. We had identified those four ideas. Those were not necessarily feasible to be implemented in customer vehicles.
 - Q. But they would've fixed whatever problem you were faced with?
- A. If it was possible to do them, they may
 have fixed the problems.
 - Q. Now, did you ask for the Structured

 Inventive Thinking group to assist? Was that
 something you asked for or was that thrust upon you?
 - A. I asked for it.
 - C. Okay. And who did you go to to request that assistance?
 - A. I believe that it was -- I believe it was Craig Stephen.
- Q. And did -- Were there more than just one meeting?
- A. I believe there was really only one meeting.

1	A. Because we looked at this as a system
2	issue for the vehicle and not necessarily one
3	specifically for the brake pressure switch itself;
4	but what could we do overall with the vehicle
5	that that we could help in the event that we had
6	a defective brake pressure switch.
7	Q. And it was your feeling that Texas
8	Instruments didn't need to be involved in that type
9	of discussion?
10	A. That's correct. They had pretty much
11	expressed all of their ideas in the team meetings.
12	Q. What's was the last exhibit number?
13	A. 35.
14	(Exhibit No. 36 marked.)
15	. Q. Let me hand you what's been marked as
16	Exhibit 36, which looks like an E-Mail from you to
17	Andy McGuirk.
18	A. It looks like it's from Andy McGuirk to
19	Steve Beringhause, Bryan Dague, Russ Baumann.
20	Q. Yeah. It's for You're correct. It's
21	forwarding an E-Mail that you sent. Look down right
22	below the
23	A. Okay.
24	Q. Do you see that?
25	A. Yes.

1	Q. Do you recall sending Mr. McGuirk a E-Mail
2	entitled Brainstorming on or about March 12th, 1999?
3	A. This looks familiar, yes.
4	Q. Are these the ideas that were that came
5	out of the SIT group or is this something different?
6	A. I think some of the these ideas were what
7	came from the SIT group, yes.
8	Q. And you were sending them to Mr. McQuirk
9	and asking for his feedback on them?
10	A. Correct.
11	Q. Okay. And did he respond?
12	A. I don't know that he responded in in
13	in writing. In general, the response was that this
14	was not something they could do on this in the
15	things that were associated with the speed control
16	switch; they were things that they could not do.
17	Q. Did he specify which ones that were going
18	to be problems to be to implement?
19	. A. It was my understanding that they were all
20	going to be problems.
21	Q. Did you have any discussions with
22	Mr. McGuirk that you can recall here today
23	specifically about any of the suggestions that you
24	eent him?

A.

Again, just going down the list, the first

one says: Cup -- Or coat cup with plastic or nonconductive coating, like anodizing. I seem to recall that there was some discussion about that and that T.I. may have looked at that and said, no, they couldn't do that, and that Item No. 2, make the cup of nonconductive material, was kind of included in that first item's discussion. Add a plastic diaphragm between the cup transfer pin and the spring contact arm cavity, again, that was something they was said they could not do that. Place plastic insulator disk on the cup with a hole only for the transfer pin, they said that was the same problem as the previous parts -- or the previous suggestion. Replace the Kapton membrane with pure Teflon membranes, they said that the Kapton was the strength material behind -- behind the Teflon, so that wasn't practical. Replace the Kapton seal with the sliding piston seal, that was something that they could not implement in a short time period. Change the cup converter topology, again, that was something that they would not be able to do without changing their manufacturing line and incurring expense. Replace switch with a pressure transducer and semiconductors -- and a semiconductor switch, this was not something they could -- they could do a

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one-for-one replacement in their switch; it would require a change to the speed control module which would've extended the time period that a fix could be put into place. Dasign a thermal link in the power supply side of the switch that opens at elevated temperature, it -- it looked at that and there wasn't a good place to put where that thermal link would be. Reverse polarity on the switch contacts, that's one that it's not clear exactly what that would do since it still would have power Insulate the plastic coat spring, in the switch. except the contact area, that was something, again, that we were told would be something difficult to do. Goldplate the spring contacts, that was something they could do, but that was going to take time and it wasn't clear what that would result in either. Fill the air cap in the switch housing with potting material to seal connector opening, that was something where T.I. expected the switch to be able to breathe; and so that would restrict the -component from operating. Change the switch housing material for improved ignition parameters, that was something that was looked at. A variety of plastic materials were -- were brought, but even though they had varying parameters as far as what their burn

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characteristics were, at the end of the day they all lit with a match. Add another layer of the Kapton seal, T.I. didn't believe that they could contain that in the sandwich; that would change their -- their part configuration. Add a ground fault interrupter circuit to the switch, and again, that was going to be a long term time consuming project.

- Q. You left one off.
- A. Which one was that?
- O Q. Turn off power if ground path to case is detected.
 - A. Which one is that?
 - O. Sixteen?
 - A. Sixteen. That says: Add ground fault interrupter circuit to the switch. What it would do is turn off the power if the ground path to the case was detected. What that was going to require, in a complicated circuit that was going to take time and -- and we didn't have the time to be able to put something like that into effect. That would be several years to implement something like that.
 - Q. So it sounds to me like Texas Instruments, when they got this list of brainstorming ideas from you on March the 12th, did get back to you about each and every one of them and explain to you why

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- they either could not be implemented, didn't make 1 2 sense or would not comport with the requirements that Ford had for the switch? 3 A. And I would say that their --Is that right? Did they get back to you? 5 ο. Their investigation into that was about 6 Α. 7 as -- as -- as long as my reading through that list. What do you base that on? 8 ο. 9 Because I don't believe that all of those Α. 10 were as impossible as they proclaim that they are. 11 Q. Did you ask them in a follow-up meeting to go through each one in more detail with you? 12 That's -- That was discussed in one of the 13 Α. 14 team meetings where we went through those lists. 15 σ. Who did you discuss that with? I believe Andy McGuirk was at the meeting. 16 Α. 17 I believe there were people from T.I. on the 18 telephone line on the other end. Did you tall Mr. McGuirk that you wanted 19 Q. 20
 - more detail on the various brainstorms that had been sent?
 - No, as a matter of fact, because I was starting to feel like I was being sand -sandbagged.

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So the answer to my question is: You Q.

- 1 didn't ask -- If you felt that the information you the from Texas Instruments was inadequate, you never 2 3 asked them to sit down with you and go through in more detail why each one of the brainstorm ideas was 5 something that perhaps they could not implement? Well, the discussions that they had really Б surrounded that they were making the part this way 7 8
 - and any changes to that would be something that they really couldn't handle.
 - σ. Did you discuss that with others at T.I., like Mr. Beringhause? .
 - I think Mr. Beringhause may have been on Α. the phone line at the time.
 - Q. Have you asked for Texas Instruments since then to implement any of the suggestions that are contained on the brainstorming list?
 - No, we did not. Α.

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- Are they continuing to sell Ford brake pressure awitches?
 - Yes, they are. A.
 - And to your knowledge, has Ford changed the specifications to incorporate any of the ideas on brainstorming?
 - No, we have not. Α.
 - Is it because -- Well, after you heard ο.

from Texas Instruments, did you provide this
information to your purchasing group?

A. Which Information?

Q. The information contained on your

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brainstorming.

- A. This list? No, we did not. We didn't find that it was necessary, because again, the switches that we were receiving in 1994 and beyond on the Town Car were not experiencing the problem.
- Q. Do you recall if Mr. McGuirk responded to the list in writing at any time?
- 12 A. I don't recall that he responded in writing.

(Exhibit No. 37 marked.)

- Q. I'm looking at Exhibit 37. Exhibit 37 is a response from Mr. McGuirk to you dated March the
 - A. I stands corrected.
- Q. Okay. He did respond and he said, Fred and team really like the last one. It may be a very good solution as it deals with a method of depowering, which is near to our long-term input to Ford, turn off the power. This is done if a fault is detected. Did I read that right?
 - A. Well, that's what's written. But again,

- 1 this notes actually to me. This note is internal to 2 This -- This note talks to the T.I. people to 3 do that. And it's quite interesting that turning off the power to a defective switch is something 5 that T.I. would recommend because it takes the -the vision away from their part. 6 Q. Did you receive a response from 8 Mr. McGuirk? Again. I don't recall that. 9 Α. 10 Q. You don't recall one way of the other? I don't recall one way or another, but 11 A. 12 this clearly is not that response. Do you recall discussing with Mr. McGuirk 13 Q. the last item on the list: Add a ground fault 14 interrupter circuit to the switch circuit? 15 16 That was one of the things that we Α. identi -- that we the talk about. And as I said 17 before, when we looked at what it would take to add 18 a ground fault detection the to the circuit, it was 19 not the trivial matter that just coming up with the 20 idea would make it sound. 21 Q. And that is an item that would've had to 22
 - Q. And that is an item that would ve had to have been implemented by Ford?

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A. Not necessarily. That's an item that could've been implemented by Texas Instrument. I

like?

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- A. I'm not sure what type of engineer he is.
- 2 Q. Do you know if he's an electrical engineer?
 - A. I don't know that.
 - Q. Did you receive this E-Mail?
 - A. Looks like I did.
 - Q. And he writes: In reviewing the speed control switch issue, it occurs to me that the switch might be isolated (not grounded) to the proportional valve if we were to put an insulating spacer between the switch and valve in the form of a double threaded bushing. Did I read that correctly?
 - A. Yes.

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- Q. How old this help, if at all? Did you investigate this?
- A. In the event that there's a fault in the speed control system that causes a short to the case of the -- in the -- the speed control deactivation that was a short to the case of the -- of the switch, if that was not connected to ground and floating, then there wouldn't be on a current path for -- for heat to build up.
- Q. So if the switch failed, this was a way of preventing current so that you wouldn't have a fire?
 - A. That's correct.