

**EA02-025**

**FORD 10/27/03**

**APPENDIX N**

**BOOK 34 OF 61**

**PART 5 OF 6**

1 assembly plants.

2 Q. All right. Do you remember what date that  
3 is?

4 A. Off the top of my head, no, I don't.

5 Q. What assembly plant?

6 A. Our North Penn Electronics assembly plant  
7 in Pennsylvania.

8 Q. Do you have any other plans to come to the  
9 United States in the future?

10 A. You know, periodically throughout the year  
11 I come back three, four times, okay, but right now I  
12 can't predict what times those would be.

13 Q. Why did you agree to come here and be  
14 deposed today?

15 A. Why did I agree to come here? I guess the  
16 request was made.

17 Q. Who made the request?

18 A. The request came from Mr. Jeff Manske.

19 Q. All right. Why did you decide to honor  
20 that request?

21 A. Well, I guess my understanding was the  
22 choice was I come here to Michigan to do this  
23 deposition or they would come to Japan to take the  
24 deposition.

25 Q. So is it your understanding that you had

1 to give a deposition?

2 A. Yes, it was.

3 Q. All right. And where did you get that  
4 understanding from?

5 A. Well, I guess it was just my assumption  
6 from the conversations I had with Mr. Manske.

7 Q. So you got an assumption from those  
8 conversations that you were under a legal obligation  
9 to give a deposition?

10 A. I guess, you know, there was never the  
11 words that said that, but I guess it was my  
12 assumption.

13 Q. Have you talked to any other employees of  
14 Visteon about this deposition today?

15 A. Well, I think there is people in my office  
16 knew that that was the reason I was coming to the  
17 U.S.

18 Q. Did you talk to any other employees of  
19 Visteon about the substance of this deposition today  
20 and the issues that we are talking about here today?

21 A. I think there was some discussion that was  
22 related to my prior jobs on speed control.

23 Q. Okay. And who was that with?

24 A. Probably a couple of my supervisors that  
25 are my direct reports.

1 Q. Some of your supervisors today?

2 A. Correct.

3 Q. Okay. Who would those be?

4 A. One would have been a Mr. Chris Pond.

5 Q. And you talked to him about the -- well,  
6 go ahead and give me the others.

7 A. Geeze, who else? There's Milap Shah.

8 Q. Okay. Any others?

9 A. That was probably it.

10 Q. And what was the substance of those  
11 conversations?

12 A. You know, that I had been requested by  
13 Ford to give a deposition, you know, based upon the  
14 speed control system.

15 Q. You said that you discussed with him the  
16 substance of what we're talking about today.

17 Did you discuss with him what your  
18 testimony was going to be and about how this  
19 particular system worked?

20 A. No, I did not.

21 Q. All right. Have you ever discussed the  
22 substance of -- have you ever discussed --

23 VIDEO OPERATOR: Excuse me. This is  
24 the end of tape one of the videotape deposition of  
25 Gary Klingler.

1                   We are going off the record. The  
2                   time is 12:10 hours.

3                   (Recess taken at about 12:10 p.m.)

4                   (Proceedings reconvened at about 1:10  
5                   p.m.)

6                   VIDEO OPERATOR: We are back on the  
7                   record.

8                   This is tape two of the videotape  
9                   deposition of Gary Klingler. The time is 13:11  
10                  hours.

11                  Please continue.

12                  Q. (BY MR. CARTER) Good afternoon, Mr.  
13                  Klingler. We're back from lunch.

14                  Let's continue with the system  
15                  schematic for the speed control on the 1992 Panther  
16                  platform vehicles which is on the chart behind you  
17                  now.

18                  Let's suppose that the deactivation  
19                  switch is wired to the ignition feed.

20                  A. All right.

21                  Q. Okay. It's not wired through the brake  
22                  light fuse, it's wired through ignition feed.

23                  If the system was wired in that way  
24                  and the brake light fuse blew, what would be the  
25                  consequences to the driver?

1           A. Okay. His brake lights would not be  
2           functioning, okay. His I guess his speed control  
3           system would be operational.

4           Q. Okay. The speed control system would be  
5           operational; correct?

6           A. You would be able to set the speed with  
7           the speed control system.

8           Q. Now but you would still be able to  
9           deactivate the speed control system if you pressed  
10          hard enough?

11          A. That is correct.

12          Q. All right. Are there any other  
13          consequences which come to mind at this time of the  
14          brake light fuse blowing in that alternative  
15          schematic?

16          A. The concern would be if you tapped the  
17          brake, okay, that the system would not deactivate.

18          Q. Okay. Now let's suppose that the  
19          microcomputer failed.

20          A. Okay.

21          Q. And in this schematic right now as it  
22          stands what are the consequences of the speed  
23          control microcomputer failing, what are the  
24          consequences to the driver?

25          A. How would the microcomputer fail?



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

1           Q. Are you telling me that there's just no  
2           way the microcomputer can fail?

3           A. It could fail, but it could do different  
4           things when it failed.

5           Q. Okay. Let's suppose that something  
6           happened that just shut the microcomputer down.

7           A. Okay.

8           Q. All right. What would be the  
9           consequences -- well, would the speed control still  
10          be operational?

11          A. Well, it depends what condition was the  
12          speed control system in when the microprocessor  
13          failed.

14          Q. So if the speed control was on when the  
15          microcomputer failed would the speed control still  
16          be operational?

17          A. Possible. Again, it depends how the  
18          system failed.

19          Q. Okay. And if the speed control -- I mean  
20          if the microcomputer failed with the speed control  
21          off is it still possible that the system would be  
22          operational?

23          A. No, it would not.

24          Q. Okay. Let's suppose the microcomputer  
25          fails and the speed control is still operational.

1           A. Okay. By operational you mean what?

2           Q. That you can press the button and turn on  
3           the speed control. You're going 50 miles an hour  
4           down the highway.

5           A. Well, you couldn't do that if the  
6           microprocessor had failed.

7           Q. Well, how could you -- could you press the  
8           button as you're going down the highway at 50 miles  
9           an hour and set the speed control with the  
10          microprocessor having failed?

11          A. No, you could not.

12          Q. Okay. Now you just told me that the speed  
13          control still might be operational.

14          A. Okay. Yeah, the system -- say the speed  
15          control was controlling speed and during that period  
16          of time the microcomputer failed.

17          Q. Okay. But you could still turn off the  
18          speed control assuming that the deactivation switch  
19          is still working; correct?

20          A. If the deactivation switch was working,  
21          that is correct.

22          Q. Okay. But I see a problem here which is  
23          that you would have to press hard enough to do it;  
24          right?

25          A. For that occurrence, yes.

1                   Q. All right. Which so the consequences to  
2                   the driver of the brake light fuse blowing and the  
3                   microcomputer failing are similar in that you could  
4                   still deactivate the speed control assuming you  
5                   press hard enough; correct?

6                   A. That's correct.

7                   Q. All right. And wouldn't that be the same  
8                   as if the switch on the clutch -- the clutch solid  
9                   state switch, if that failed in a closed position,  
10                  all right.

11                  A. Can you repeat that?

12                  Q. Let's suppose the clutch solid state  
13                  switch failed in a closed position, all right.

14                  What would be the consequences of the  
15                  driver if that happened?

16                  A. The system would operate normally.

17                  Q. What if it failed in an open position?

18                  A. The system would be inoperational.

19                  Q. All right. So the failure there would be  
20                  if it was actually stuck open?

21                  A. Okay.

22                  Q. Is that right? Wouldn't it be a failure  
23                  if either it was stuck closed or if it was stuck  
24                  open?

25                  A. Correct.

1           Q. Okay. And what's its normal position, is  
2         it normally closed or normally open?

3           A. It is normally open.

4           Q. Okay. And if it failed stuck open, the  
5         system would be operational, the cruise control  
6         system would be operational?

7           A. If it failed stuck open the system would  
8         not be operational.

9           Q. Okay. And the consequence to that would  
10        be you couldn't even turn on your cruise control at  
11        all?

12          A. Correct.

13          Q. Okay. Now let's go back to our example of  
14        the cruise control still working and the  
15        microcomputer has failed.

16          A. All right.

17          Q. Why -- if that happens then what happens  
18        with the driver is the driver would have to step on  
19        the brake hard, at a harder level, a harder amount  
20        of pressure being applied than he would normally in  
21        order to deactivate the cruise control; correct?

22          A. Correct.

23          Q. All right. What did Ford have in place in  
24        order to prevent that problem from occurring so that  
25        if the microcomputer failed the driver would be able

1 to deactivate the cruise control only by tapping on  
2 the brake?

3 A. Okay. It's a different situation, right,  
4 and I think what you're trying to get at is, you  
5 know, why are we more concerned about a brake fuse  
6 blowing than a microprocessor failing, and the  
7 reason for that is reliability of microprocessors  
8 are very good. You know, they rarely fail, okay.  
9 where brake fuses blowing are something that happens  
10 very commonly and is something that we had, you  
11 know, experienced many times with the prior system.

12 So, you know, we were more concerned  
13 about making sure that we had, you know -- that the  
14 fail-safe mode for that was handled better, okay,  
15 than for the case of the microprocessor failing.

16 Q. Okay. You say you wanted that fail-safe  
17 mode to be handled better.

18 I mean isn't Ford's concern to handle  
19 every fail-safe mode in the best possible way?

20 A. Again, yes, it is, but --

21 Q. And if you don't handle it at all how is  
22 that handled in the best possible way?

23 A. No, the failure was handled. If you  
24 depress the brake hard enough, okay, the system  
25 would deactivate.



A RECORD OF EXCELLENCE

Troy 248-244-9700	Lansing 517-337-7337	Grand Rapids 616-456-6300
Dearborn 313-961-5560	Ann Arbor 734-769-7800	Kalamazoo 616-552-4438

1325-4  
6/22/92

1                   Q. And in fact that is exactly the way that a  
2                   brake light fuse failure could have been handled if  
3                   the deactivation switch was wired to the ignition  
4                   feed; correct?

5                   A. That is correct.

6                   Q. Okay.

7                   A. But something that is a little more  
8                   natural, okay, would be if the system would -- well,  
9                   if it didn't work at all, okay, you know, the  
10                  customer is expecting with just a tap that the  
11                  system will deactivate.

12                  Q. You say brake light fuse failures were  
13                  common on the -- are common; is that what you're  
14                  telling me?

15                  A. Maybe not common, but I say it's not  
16                  uncommon for a brake fuse to blow in a vehicle.  
17                  Again, you know, people connect trailers to their  
18                  vehicles. You know, they have to wire in the brake  
19                  lights to their vehicles.

20                  Sometimes the lights on a trailer  
21                  overload the circuits, blow the brake fuse. You  
22                  know, sometimes while wiring in the trailer, you  
23                  know, they'll short circuit the brake circuitry and  
24                  blow the fuse.

25                  Q. How does a driver know if the brake light



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7800	616-552-4438

1           fuse has failed?

2           A. They don't unless somebody tells them.

3           Q. Why didn't Ford design a system so the  
4           little light would come on underneath the car?

5           A. That's not my area of expertise.

6           Q. So that's not your responsibility?

7           A. That's not my responsibility.

8           Q. Who is the person at Ford who would have  
9           responsibility for the entire system?

10          A. I don't know.

11          Q. Is there a person at Ford who would have  
12         responsibility for the entire system?

13           MR. FEENEY: Which system are we  
14         talking about here? I object.

15           MR. CARTER: The cruise control, you  
16         know, the systems that involve the cruise control  
17         schematic.

18           MR. FEENEY: Well, wait a minute. So  
19         that's systems. So now we're talking about plural.

20           MR. CARTER: I object to coaching.  
21         Do you have an objection?

22           MR. FEENEY: Yeah, I do.

23           You've just changed now. We started  
24         with system. Now we're talking about systems. I  
25         object on the basis of foundation.

1                    You haven't laid any kind of  
2 foundation. The fact is I don't even know what  
3 you're talking about, what system or systems you're  
4 even talking about.

5                    MR. CARTER: I object strongly to the  
6 coaching.

7                    Q. (BY MR. CARTER) What person at Ford is  
8 responsible for the speed control system -- what  
9 person at Ford was responsible for the overall speed  
10 control system in the 1992, 1993 Panther platform  
11 vehicles?

12                  A. Okay. Again, by system?

13                  Q. What we see here on Exhibit 3, what person  
14 at Ford was responsible for the way that this was  
15 designed?

16                  A. Okay. For the configuration of the system  
17 or design of components?

18                  Q. All of those.

19                  A. There's no one person that's responsible  
20 for all of the pieces.

21                  Q. Is there anybody at Ford who would know  
22 how all of the pieces work and fit together?

23                  A. Okay. As far as system configuration at  
24 the point in time that system was designed it would  
25 have been probably my group that would have

1 knowledge of how the speed control system works.

2 Q. But you don't have knowledge of some of  
3 the other systems that come into play here; for  
4 example, the brake lights; correct?

5 MR. FEENEY: Objection. No  
6 foundation that the brake light is a system.

7 Q. (BY MR. CARTER) You can answer.

8 A. Okay. We would know how they -- how the  
9 speed control system would connect into them, but we  
10 would not be experts on brake light systems  
11 themselves.

12 Q. Is there any other -- now I know obviously  
13 the battery performs a lot of functions on Exhibit  
14 3, and I know that the brake light switch -- I know  
15 the brake lights, you know, perform the function of  
16 showing people behind the car whether the brakes are  
17 on. I know the brake light switch can deactivate  
18 the cruise control and can activate the brake  
19 lights.

20 Is that all accurate?

21 A. Yes, I believe so.

22 Q. Okay. Are there any other parts that are  
23 on Exhibit 3 that have a function that does not  
24 involve the speed control system?

25 A. Okay. What do you mean by does not



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

1 involve the speed control system?

2 Q. Well, for example, the brake lights have a  
3 function which is to show the driver behind you that  
4 you've stepped on the brakes which has -- it's a  
5 function and a role that is -- does not, you know,  
6 does not even necessarily pertain to the speed  
7 control system except for the fact if you step on  
8 the brakes you want somebody to see the lights;  
9 correct?

10 A. Okay.

11 Q. All right. Are there any other parts  
12 that perform that sort of dual function that's on  
13 that schematic?

14 A. Yeah, there are other parts in the system  
15 that aren't shown on that schematic that do, that  
16 are required for the speed control system.

17 Q. Okay. Well, are there any other parts  
18 that are shown on the schematic other than the  
19 battery, the brake light switch and the brake  
20 lights, do any of these other parts that are shown  
21 here perform a second function?

22 A. Throttle body, brake light fuse.

23 Q. Okay. Now let's talk about the brake  
24 light switch.

25 The brake light switch, if you --



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-5700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

1 explain for me how the brake light switch works in  
2 the speed control system; what does it do?

3 A. Okay. Well, the brake light switch, okay,  
4 when you depress the brake, okay, it applies voltage  
5 to the brake lights, okay, so the point that the  
6 speed control is connected, okay, goes from a ground  
7 signal to a battery voltage signal, okay, and the  
8 speed control system detects that.

9 Q. Okay. Now does the brake light switch  
10 have any other -- perform any other function other  
11 than what you've just described for me?

12 A. The brake switch is used by multiple  
13 systems in the vehicle.

14 Q. Why couldn't you have designed the speed  
15 control system and just take out the brake lights  
16 and just use the switch that only has the function  
17 of working in the speed control system?

18 A. I'm not sure what you mean.

19 Q. Well, you just told me that the brake  
20 light switch performs multiple functions; correct?

21 A. Correct.

22 Q. Why did you use the brake light switch in  
23 this schematic? Why didn't you just use a switch  
24 instead of one that has -- instead of one that has  
25 to be continuously powered in order to run the brake

1                   lights?

2                   A. You know, the switch is something that's  
3                   there already available. Why wouldn't I use it?

4                   Q. Well, let me ask you this:

5                   You testified that there's a federal  
6                   requirement that requires the brake lights to be  
7                   able to come on if you step on the brake, but the  
8                   engine is off; correct?

9                   A. Correct.

10                  Q. Okay. Now are there any other federal --  
11                  of all the things we're looking at here in the speed  
12                  control system schematic, are there any other parts  
13                  that are federally required to be operational when  
14                  the engine is off?

15                  A. Yeah, I don't believe so.

16                  Q. All right. So why did you design the  
17                  system with a switch that had to be continuously  
18                  powered?

19                  A. Why wouldn't I?

20                  Q. Well, you just told me I think this  
21                  morning that in order to have -- in order to have  
22                  heat you have to have power; correct?

23                  A. Correct.

24                  Q. All right. And so in order to have a --  
25                  in order to have heat you have to have power with

1                   the ignition off. I mean you also told me this  
2                   morning that you -- that the switch, that the  
3                   deactivation switch should not leak because brake  
4                   fluid could catch on fire; correct?

5                   A. Correct.

6                   Q. All right. So you knew that the -- you  
7                   knew that if the switch leaked, the brake fluid,  
8                   there was a potential of fire; correct?

9                   A. Potentially.

10                  Q. Yes.

11                  And you knew that power was  
12                  continuously available in the system; correct?

13                  A. Correct.

14                  Q. And you knew that there was a part in the  
15                  system that was powered with the ignition off;  
16                  correct?

17                  A. Correct.

18                  Q. But you didn't even consider using another  
19                  part to perform that switching function?

20                  A. I'm not sure what you're getting at.

21                  Q. I just asked you, you didn't consider  
22                  using a part other than the brake light switch in  
23                  order to perform the switching function of the  
24                  system; did you?

25                  A. Yeah, all speed control systems in the

1                   world today use the brake light switch as a primary  
2                   means to deactivate the speed control system.

3                   Q. Every one of them?

4                   A. Every one of them.

5                   Q. All right. Volvo?

6                   A. Volvo.

7                   Q. Mazda?

8                   A. Mazda.

9                   Q. Every single one of them?

10                  A. What I know.

11                  Q. So are you telling me every single speed  
12                  control system in the entire world is continuously  
13                  powered?

14                  A. If they use the brake light switch, all  
15                  brake light switches are continuously powered.

16                  Q. And by continuously powered we mean power  
17                  with the ignition off?

18                  A. Federal law applies to all manufacturers  
19                  of vehicles as far as I'm aware.

20                  Q. So your answer to the question of why did  
21                  you design the speed control system to use the brake  
22                  light switch to perform the switching function, your  
23                  answer is because everyone does it?

24                  MR. FEENEY: Objection. That's not  
25                  what he's testified to. He's already asked and

1                         answered --

2                         MR. CARTER: Well, if that's the case  
3                         then answer no.

4                         MR. FEENEY: Excuse me. You know,  
5                         let's get something straight.

6                         When I make an objection you just  
7                         stop and then you can chime in with whatever comment  
8                         you want to make, okay, but you let me finish the  
9                         objection.

10                        Can we get along on that basis?

11                        MR. CARTER: I will if you'll confine  
12                         yourself to objections.

13                        MR. FEENEY: My basis for my  
14                         objection is that he's already answered the question  
15                         probably no less than five times in the last 20  
16                         minutes. Asked and answered.

17                        Q. (BY MR. CARTER) Okay. You can answer.

18                        MR. FEENEY: And your answer given  
19                         was not his answer.

20                        Q. (BY MR. CARTER) Okay. You can answer.

21                        So is the answer no, that I did not  
22                         correctly summarize your testimony?

23                        A. Okay. Can you repeat the question?

24                        Q. Okay. The question is I'm asking you is  
25                         it your testimony that the reason that the speed

1 control system was designed with use of the brake  
2 light switch as the switch in this place here on the  
3 schematic I'm pointing to, is the reason you  
4 designed it that way is because every vehicle  
5 manufacturer does it that way?

6 A. No, that wasn't the reason.

7 The reason is we didn't see any issue  
8 and still don't see any issue why not to use that  
9 signal that's available in the vehicle.

10 Q. Well, are you aware of why we're here  
11 today?

12 A. Yes, I am.

13 Q. Okay. Did Ford do a failure modes and  
14 effects analysis surrounding the development of the  
15 speed control system and things that could go wrong  
16 with continuous power being applied throughout this  
17 system?

18 A. Again, you know, there's not continuous  
19 power provided throughout the system.

20 Q. Well, there's voltage continuously  
21 available; correct?

22 A. There's voltage available to the  
23 deactivator switch.

24 Q. In fact, there's -- yes, that's right.  
25 There's not voltage available for example to the

1 microcomputer; correct?

2 A. That is correct.

3 Q. Why not?

4 A. Because the microcomputer, okay, even  
5 electronically when you shut some of the components  
6 off, okay, that there's still some micro amp current  
7 draw through the system which can drain the battery  
8 if vehicles sit over long periods of time.

9 Q. Okay. Are there any other consequences  
10 that you're aware of if the microcomputer had been  
11 wired to voltage with the ignition off?

12 A. No.

13 Q. Why would it be bad to have current -- is  
14 the only reason that it's bad for the current to go  
15 through the microcomputer with the ignition off, is  
16 the only reason because it might drain the battery?

17 A. Oh, absolutely. You know, all electrical  
18 systems, each one draws micro amps of current, okay,  
19 but if your vehicle sits for long periods of time,  
20 weeks, that will drain your battery.

21 Q. So if you have a component part or a  
22 system that draws current with the ignition off,  
23 that's a bad thing because it drains the battery;  
24 correct?

25 A. That's correct.

1           Q. All right. Why did you not design or why  
2         was the speed control system not designed with a one  
3         amp fuse between the deactivation switch and the  
4         battery?

5           A. Okay. Because that same circuit also  
6         supplies the brake lights.

7           Q. Well, let's look at -- if you look at  
8         Exhibit 3, the wiring for the brake lights actually  
9         takes a -- I don't know how to best put this --  
10        takes a right-hand turn before it gets to the  
11        deactivation switch; right?

12          A. Okay.

13          Q. Is that right? I mean, correct me if I'm  
14        wrong.

15          A. Well, there's a connection point there.

16          Q. Yes. Right-hand turn is probably not the  
17        right way to put it, but I'm, you know, just looking  
18        at what the schematic has on it.

19           Why couldn't you put a fuse between  
20        the switch and that connection point?

21          A. Why would I want to?

22          Q. Did you consider it?

23          A. I had no reason to consider it.

24           Why would I want to consider putting  
25        the fuse there?

1           Q. Okay. Okay. So did you consider any type  
2           of current limiting device in the wiring that  
3           connects through to the deactivation switch?

4           A. Why would I want to consider a current  
5           limiting device in that circuit?

6           Q. So your answer is no?

7           A. I had no reason to consider it.

8           Q. Is this -- is the use of a 15 amp fuse in  
9           this system, is that a Ford requirement?

10          A. The use of a 15 amp fuse?

11          Q. Yes.

12          A. It would be specified by the person that's  
13           designing the entire circuitry for the vehicle.

14          Q. Who is that person?

15          A. You know, there's someplace in vehicle  
16           electrical system design.

17          Q. That's in another department or office?

18          A. It would be in another department.

19          Q. And the reason is because the brake  
20           light -- the reason that you didn't decide on the  
21           specification for how large that fuse was going to  
22           be is because that fuse also ties in with other  
23           systems; right?

24          A. I believe so.

25          Q. Okay. What other systems would that fuse

1 tie into?

2 A. Okay. Well, the brake lights, okay, and I  
3 know there are other systems in the vehicle that  
4 also use the brake signal as an input.

5 Q. Did you have discussions -- now again, and  
6 I'm sorry I'm forgetful, I don't really necessarily  
7 get everything written down, what division or group  
8 within Ford would have been responsible for  
9 specifying the size of that brake light fuse?

10 A. You know, there's a division within Ford  
11 or a group within Ford that's responsible for the  
12 electrical layout of the vehicle. I don't recall  
13 what the name of that group is off the top of my  
14 head.

15 Q. Did that group at the time that the speed  
16 control system was being designed, did that group  
17 have discussions with you around whether a 15 amp  
18 fuse is appropriate in the speed control system?

19 A. I don't recall that we did.

20 Q. Okay. Let's look at now briefly at  
21 exhibit -- I can't remember the exhibit number, but  
22 it's the setup that has the old style speed control  
23 system on it.

24 Did you put that together?

25 A. No, I did not.



A RECORD OF EXCELLENCE

Troy 248-244-9700	Lansing 517-337-7337	Grand Rapids 616-456-6300
Detroit 313-961-5560	Ann Arbor 734-769-7806	Kalamazoo 616-552-4438

8872  
67225-0  
EMR2023-0225-0

- 1 Q. Who put that together?  
2 A. There was another group within Ford  
3 someplace put it together for some reason. I don't  
4 know why.  
5 Q. You don't know why they put it together?  
6 A. No, I don't.  
7 Q. When is the first time you saw that?  
8 A. Yesterday.  
9 Q. All right. Did you -- do you know  
10 anything about what went behind putting that  
11 together?  
12 A. No, I do not.  
13 Q. Did you have anything to do with putting  
14 together the box and the throttle component to  
15 simulate the workings of the next generation speed  
16 control?  
17 A. No, I did not.  
18 Q. And the first time you saw that was  
19 yesterday?  
20 A. That is correct.  
21 Q. And do you know -- so you don't know how  
22 that, for example, you don't know how that box  
23 actually works to simulate the action of the  
24 deactivation switch; do you?  
25 A. Did I design it? I didn't design it, no.

1           Q. Okay. Did you testify this morning that  
2           the system could not tolerate any fluid into the  
3           electrical side of the deactivation switch?

4           A. That would be my assumption, yes.

5           Q. All right. And that would be any fluid no  
6           matter what it is; correct?

7           A. I would assume, you know, some fluids are  
8           more of a problem than other fluids, but, yeah, you  
9           wouldn't want any fluids in there.

10          Q. What about water, would you want water in  
11         there?

12          A. I probably would not want water in there.

13          Q. Why not?

14          A. Water could cause, potentially cause  
15         corrosion.

16          Q. If water inside the switch corroded the  
17         switch contacts, is it possible that the water with  
18         the corroded material in it could carry current?

19          A. I don't know that for a fact.

20          Q. Well, I guess my question is is it  
21         possible?

22          A. Anything is possible.

23          Q. What did Ford do to make sure that no  
24         fluid got into the electrical side of the switch?

25          A. I was not responsible for that, you know,

1                   the design of the switch. I was not responsible for  
2                   it.

3                   Q. Were you responsible -- well, did you  
4                   review the design of the switch, did you review the  
5                   specifications for the switch?

6                   A. I reviewed the specifications from the  
7                   electrical characteristic point of view and how they  
8                   would work electrically with the speed control  
9                   system.

10                  Q. So you did not review all  
11                  characteristics -- all aspects of the specification;  
12                  correct?

13                  A. That is correct.

14                  Q. Did someone else at Ford review the other  
15                  aspects of the specification?

16                  A. Oh, I'm sure they did.

17                  Q. But you don't know what was done by anyone  
18                  at Ford to make sure that no, for example, water got  
19                  in the electrical contacts in the switch?

20                  A. Yeah, I would not have been involved in  
21                  that portion of the design.

22                  Q. Were you satisfied at the time that the  
23                  speed control system was being designed that  
24                  adequate measures were taken in order to make sure  
25                  that no water would get into the electrical side of

1                   the switch?

2                   A. Again, I wasn't responsible for that  
3                   portion of the design.

4                   Q. Did Ford perform a -- did Ford put  
5                   together a system FMEA for this system?

6                   A. Yes, they did.

7                   Q. And was that put together before launch of  
8                   the '92 Town Cars?

9                   A. Oh, absolutely.

10                  Q. In fact, when did that document begin to  
11                  be put together?

12                  A. You know, FMEA start as soon as you start  
13                  developing the system.

14                  Q. And when was that?

15                  A. You know, I'm just guessing, some time in  
16                  the late '80s.

17                  Q. And I assume that that FMEA for the system  
18                  would have gone through a number of different drafts  
19                  and forms?

20                  A. Oh, absolutely. The goal of the FMEA is,  
21                  you know, to use it to improve the system as it  
22                  develops.

23                  Q. And who was responsible for the system  
24                  FMEA?

25                  A. The responsibility of the initial



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7357	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

1 development would have been within my group.

2 Q. Would your group have retained  
3 responsibility through launch of the Town Cars?

4 A. No, they would not.

5 Q. And where would that responsibility have  
6 gone to?

7 A. Okay. You know, my responsibility was for  
8 design of kind of the generic speed control system  
9 that would be applied to Ford cars and trucks, okay.

10 Then there were applications group  
11 that had final responsibility for the actual  
12 application of the speed control system on cars, and  
13 there was a different group that had responsibility  
14 for the application of the speed control system on  
15 trucks.

16 Q. Where, like physically located, where  
17 could I find the system FMEAs for this system that  
18 were prepared in 1988 and then went through a number  
19 of different drafts?

20 A. Where could you physically find them? I'm  
21 not sure.

22 Q. Have you ever looked for one?

23 A. For FMEA, you know, all systems engineers  
24 would have a copy of, you know, FMEAs. If you went  
25 for a current production vehicle or any current

1 program, you know, they would have a book that  
2 contained all documentation for that program.

3 Q. Would that include the documentation, what  
4 would actually be historical documentation, you  
5 know, '88, '89, '90, '91?

6 A. Maybe, maybe not. The records are only  
7 required to be maintained for so long, and when  
8 they're no longer required usually they're disposed  
9 of.

10 Q. If you'll pardon me just a second. I'm  
11 running out of ink, so I'm going to switch pens  
12 here.

13 How long is it that records are  
14 required to be maintained at Ford?

15 A. I'm not sure. It varies by the subject  
16 matter of the record.

17 Q. Do you know how long an FMEA is supposed  
18 to be retained for?

19 A. Right now I don't recall.

20 Q. But there comes a point at which an FMEA,  
21 if it is historical or archival, that it's  
22 discarded?

23 A. Yes.

24 Q. Now you said that your responsibility was  
25 for design of the system, and at some point the



A RECORD OF EXCELLENCE

Troy 248-244-9700	Lansing 517-337-7337	Grand Rapids 616-436-6300
Detroit 313-961-5560	Ann Arbor 734-769-7908	Kalamazoo 616-552-4438

1 applications group would have taken over primary  
2 responsibility for the system; is that accurate?

3 A. That is correct.

4 Q. Okay. And when would that changeover have  
5 occurred?

6 A. When you start focusing on a specific  
7 application of the system, okay, there would be  
8 another group that would have primary responsibility  
9 for that.

10 Q. Yes, and I guess my question is, and that  
11 other group would be light truck engineering or  
12 passenger car engineering; correct?

13 A. Well, it turned out for cars that that  
14 responsibility was within the electronic division.  
15 For truck at that time that responsibility was  
16 within truck engineering.

17 Q. Well, you worked for the electronic  
18 division; correct?

19 A. That is correct.

20 Q. All right. So did you maintain primary  
21 responsibility for the speed control system on  
22 passenger cars up through the time of launch?

23 A. No, I did not. There was another group  
24 within ELD.

25 Q. And who were the primary people

1 responsible within that group for the speed control  
2 system on the '92 Town Cars?

3 A. I'm trying to recall. The supervisor for  
4 that group I believe his name was Sam Rahaim.

5 Q. Okay. Was that Bruce Pease's group?

6 A. No.

7 Q. What was Bruce Pease's group's role?

8 A. I believe Bruce Pease was responsible for  
9 brake systems.

10 Q. Okay. Now did you -- and again I may not  
11 be remembering what your testimony was precisely.

12 Did you testify you don't remember  
13 what time period you handed off the -- or what time  
14 period the responsibility went to these other groups  
15 or do you remember?

16 A. Well, since the Town Car was the initial  
17 application for the speed control system, it was  
18 kind of a gradual handoff. You know, the production  
19 group had, you know, ultimate responsibility, but  
20 because it was a first application we still worked  
21 very closely with them.

22 Q. Okay. And so you continued to work  
23 closely on the speed control system up through the  
24 time of launch of the '92 Town Cars?

25 A. That is correct.

1                   Q. Okay. Now you testified that the system  
2                   could not tolerate any fluid on the electrical side  
3                   of the switch; is that correct?

4                   A. I would be concerned if there was fluid on  
5                   any set of electrical contacts.

6                   Q. Okay. What did Ford do to make sure that  
7                   the speed control system was fail-safe in case there  
8                   was fluid on the electrical contact side?

9                   A. Okay. Well, the documentation from TI  
10                  said that was not a concern.

11                  Q. So your testimony is TI just told you the  
12                  switch is not going to leak?

13                  A. Correct.

14                  Q. All right.

15                  A. They're the experts in design of the  
16                  switch.

17                  Q. Did Ford require the switch to be  
18                  hermetic?

19                  A. Again, I wasn't responsible for  
20                  specification of the mechanical properties of the  
21                  switch.

22                  Q. Who was?

23                  A. That would have been brake engineering.

24                  Q. Okay. Did you discuss with brake  
25                  engineering your concern that the switch not ever be

1 able to leak?

2 A. I think anybody involved with the switch  
3 knows you don't want fluid in a switch.

4 Q. Well, did you discuss -- did you consider,  
5 did you consider, though, any method to fail-safe  
6 the system in case a part failed and it leaked?

7 A. No, we did not.

8 Q. What is the end of life failure mode for  
9 the deactivation switch?

10 A. I don't know.

11 Again, I'm not responsible for the  
12 mechanical design of the switch.

13 Q. So you don't know what happens -- well, do  
14 you know what the impulse cycle life requirement was  
15 in the specification for the switch?

16 A. No, I don't, not off the top of my head.

17 Q. And you don't know what happens with the  
18 switch once it gets past that cycle life that is  
19 specified; correct?

20 A. No, I don't.

21 Q. That was someone else's within Ford  
22 responsibility?

23 A. That is correct.

24 Q. And you were confident that whoever was  
25 responsible for that was setting the proper

1 specification for the cycle life of the switch?

2 A. Again, it wasn't my responsibility.

3 Q. All right. And is it your impression that  
4 the specification requires the switch to last  
5 throughout the entire life of the car?

6 A. You would want the switch to last through  
7 the life of the car, yes.

8 Q. Okay. Do you know what stresses are put  
9 on the switch from the hydraulic side?

10 A. No, that again was not my area of  
11 responsibility.

12 Q. Do you know if the connector that  
13 connected the switch into the wiring harness was  
14 adequate to keep fluid out of the switch?

15 A. That wouldn't have been part of my design  
16 responsibility.

17 Q. How about actuation and release pressures  
18 on the switch, was that part of your responsibility?

19 A. Yes, because they affected the performance  
20 of the system.

21 Q. So anything that affected the performance  
22 of the system, would that be your responsibility?

23 A. That affected the performance of the speed  
24 control system, yes.

25 Q. All right. And so --

1           A. Mainly from electrical characteristics.

2           Q. All right. Well, wouldn't the cycle life  
3           requirement for the switch, wouldn't that affect the  
4           function of the speed control system?

5           A. Okay. Explain.

6           Q. Well, your testimony, and again tell me if  
7           I'm mis -- you know, phrasing it wrongly because I  
8           don't want to characterize it wrongly.

9                         Your testimony is that you're  
10          responsible for specifications on the switch that  
11          affect the function in the speed control system;  
12          correct.

13           A. Mm-hmm.

14           Q. And you have -- you need to answer yes or  
15          no I guess for the record because she's typing it  
16          in.

17           A. Yes.

18           Q. All right. Wouldn't the cycle life  
19          requirement be a specification that affects the  
20          function of the speed control system?

21           A. It's related, okay, but the switch is  
22          going to cycle many many times when the speed  
23          control system is not operational, okay, so, you  
24          know, there's requirements outside of the speed  
25          control system that would determine how many cycles

1           a switch would have to survive.

2           Q. All right. I understand that.

3           So I take it then that you're -- at  
4           the time of the design of the speed control system  
5           you counted on other groups within Ford to make sure  
6           that the other parts of the specification were  
7           appropriate to the application?

8           A. They are the experts in Ford Motor Company  
9           for that part of the system, not me. I'm the expert  
10          for speed control system.

11          Q. And so it would be unfair of me to hold  
12          you responsible for knowledge of those other parts  
13          of the application, correct?

14          A. For detail parts. Again, you know, the  
15          deactivator switch, I know about the electrical  
16          characteristics and how it relates to the speed  
17          control system.

18          Q. Okay. What were the design requirements,  
19          what were the objectives of next generation speed  
20          control?

21          A. Okay. Can you be a little more specific?

22          Q. When you set out or when your group set  
23          out to design next generation speed control what  
24          were you goals?

25          A. Oh. The first one was to improve the



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

1 performance of speed control systems. As we talked  
2 about previously, the current systems due to changes  
3 in engine technology, there was problems with  
4 availability of engine vacuum and the old system  
5 depended upon that engine vacuum for its power  
6 source, so, you know, the goal of the system was to  
7 design a speed control system that would be  
8 independent of engine vacuum.

9 Q. Any others?

10 A. The other goal was to improve the  
11 reliability of the system.

12 With the vacuum system, you know, as  
13 you can see on the display there's many components  
14 involved and valves and hoses, and with a lot of  
15 components, you know, that created some limitations  
16 into the reliability that you could achieve with the  
17 system.

18 So one of our other objectives was to  
19 make a drastic improvement in reliability of the  
20 system.

21 Q. Let's look again at the -- well, let me  
22 ask you, and I'll give you an opportunity to finish,  
23 were there any other goals or objectives that stand  
24 out in your mind?

25 A. I think those were probably the two



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

1 primary ones. You know, there's probably, you know,  
2 hundreds of other things you're trying to do.

3 Q. Okay. Now looking at the components  
4 within the speed control system, let's take the --  
5 let's take the microcomputer.

6 In what ways could the microcomputer  
7 fail, what could cause the microcomputer to fail?

8 A. There's, you know, within electronics,  
9 there's, you know, I guess numerous things that  
10 could fail in a microcomputer.

11 Q. You're probably not even aware of all of  
12 them; correct?

13 A. Probably.

14 Q. Because you didn't design the  
15 microcomputer in the system; did you?

16 A. Did we design the microprocessor?

17 Q. Yeah.

18 A. No, we did not.

19 Q. Okay. What ways could the stepper motor  
20 fail?

21 A. Stepper motor, you know, you can have  
22 coils get opened, shorted. You know, you could  
23 have, you know, bearings freeze up.

24 Q. What ways could the magnetic clutch fail?

25 A. Magnetic clutch, you could get open shorts



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

1           in the coil.

2           Q.   How could the clutch solid state switch,  
3           how could that fail?

4           A.   Clutch solid state switch, it could, you  
5           know, fail open.

6           Q.   At the time that you were -- or at the  
7           time that the speed control system was being  
8           designed did you go through the process of thinking  
9           about the ways that those varicus components could  
10          fail?

11          A.   All those components, yes.

12          Q.   All right.

13          A.   Absolutely.

14          Q.   And did you think about ways of making the  
15          system safe if when those components failed?

16          A.   Yes.

17          Q.   And did you think about making the system  
18          safe if the deactivation switch failed?

19          A.   For certain modes, yes.

20          Q.   But not for all of them?

21          A.   All the modes that we were aware of and  
22          thought that had any significant probability, yes.

23          Q.   All right. Are there any modes that you  
24          were not aware of and that you feel today had  
25          significant probability?



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-760-7808	616-552-4438

1           A. Can you repeat that question?

2           Q. Are there any failure modes that you're  
3           not aware of that would fit that definition that you  
4           just gave in your answer, any such failure modes?

5           A. Well, I guess if I'm not aware of them,  
6           no.

7           Q. So you're not saying that you're aware of  
8           any today that you weren't aware of then?

9           You're not aware of a failure mode  
10          today for the deactivation switch that you were not  
11          aware of at the time you were designing the speed  
12          control system; are you?

13          A. Well, I guess we're aware of today that,  
14          you know, the switches that TI designed had higher  
15          probability of leaking and creating a short.

16          Q. Well, you were aware though at the time  
17          that the speed control system was designed that for  
18          whatever reason, whether it's because of leakage  
19          through the hydraulic side or leakage through the  
20          connector it's possible for fluid to end up in the  
21          electrical side of the switch? You're aware of  
22          that; right?

23          A. That was a potential, yes.

24          Q. And so did you design the system to be  
25          fail-safe in case that occurred?



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7800	616-552-4438

1 A. You know, what we would look at is a  
2 failure mode and effects analysis for that switch,  
3 and we would look at things that were assessed as  
4 high risk items, and if you look at the failure mode  
5 analysis for the switch that was done by TI, that  
6 was not assessed as a high risk item.

7 Q. So if it's not assessed as a high risk  
8 item you just, what, you just put that in the  
9 drawer, forget about it?

10                   A.    Correct. You can't, you know, protect for  
11                   every single failure in the car, okay. So, you  
12                   know, there's some things, okay, that the  
13                   probability is, you know, one in a billion of ever  
14                   occurring, okay, that you just can't protect for it.

15 Q. Now again you did protect for the  
16 microcomputer failing; correct?

17 A. Correct.

18 Q. All right. I think you've told me  
19 earlier.

20 Why did you do that?

A. Why did we do that?

22 Q. Yeah.

23                   A. Because there was some probability, it  
24                   wasn't one in a billion, maybe it's a couple in a  
25                   million, that a microcomputer could fail.



**ESQUIRE**  
PUBLISHED MONTHLY

A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5360	734-762-7805	616-552-4438

1 Q. So at the time --

2 A. When we would have done an FMEA, it would  
3 have come out with a higher risk number.

4 Q. So you're telling me that at the time that  
5 the speed control system was designed you thought it  
6 was more likely that the microcomputer could fail  
7 than for the deactivation switch to get fluid on the  
8 electrical contact side of the assembly?

9 A. Well, TI told me what the probability  
10 would be of the switch failing. It was our  
11 assessment of what the microcomputer failure would  
12 be.

13 Q. Who manufactured the microcomputer?

14 A. The microcomputer is manufactured by I  
15 think Motorola.

16 Q. But Ford did an independent assessment of  
17 the probability of the microcomputer failing?

18 A. You know, those numbers are available from  
19 Motorola and are, you know, standardly available  
20 numbers for those type of components. They can  
21 project what their failure rates are.

22 Q. All right. But you're telling me that --  
23 did Ford rely on those numbers from Motorola in  
24 determining whether there was a chance of the  
25 microcomputer computer failing?



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7397	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7804	616-552-4438

1           A. Yes, they did.

2           Q. So you're telling me that Motorola  
3           assessed the likelihood of failure of the  
4           microcomputer as more probable than TI assessed the  
5           possibility of failure of the deactivation switch;  
6           are you telling me that?

7           A. From what I recall, yes.

8           Q. All right. And what was the likelihood  
9           assessed by Motorola for failure of the  
10          microcomputer?

11          A. You know, I haven't looked at, you know,  
12          that information in 10, 12 years. I couldn't recall  
13          a number.

14          Q. Well, you have looked at the TI FMEA  
15          recently; correct?

16          A. Yes, we just looked at that and it was  
17          assessed at, you know, the lowest probability of  
18          occurrence that you can assign something on the  
19          FMEA.

20          Q. So, but you're confident that the FMEA for  
21          the Motorola microcomputer was not assessed at the  
22          lowest level of occurrence?

23          A. Yeah, I still deal with electronics and,  
24          you know, I know what the reliability of those types  
25          of components are.

1                   Q. And is it your testimony that Ford has a  
2 policy of not providing a fail-safe system for  
3 failures that are given in component parts  
4 suppliers' FMEAs as being unlikely?

5                   A. Well, there's lots of systems in the car  
6 that you can't avoid doing that type of thing. You  
7 got a tire. How could you, you know, protect a  
8 tire? You know, there's components in a steering  
9 system that, you know, there is no way you can  
10 provide redundancies for.

11                  So what you have to do is just ensure  
12 that those components are ultra reliable.

13                  Q. Yes.

14                  So your testimony is that the  
15 deactivation switch is one of those components that  
16 just can't be made fail-safe?

17                  A. No, I didn't say that.

18                  Q. All right. Well, when I was asking a  
19 question about the deactivation switch and you  
20 answered by talking about tires, why did you do  
21 that?

22                  A. I said when you do do an FMEA analysis,  
23 okay, you know, for, you know -- if there's a low  
24 risk assessment number, okay, those aren't things  
25 that you would focus on in providing a redundancy

1 for it.

2 Q. Well, okay.

3 I understand you're saying that if  
4 there's a low risk assessment number you don't  
5 provide a -- you do not focus on providing a  
6 redundancy.

7 A. That's correct.

8 Q. Now but if there's a low risk assessment  
9 number do you focus on what the possible effects of  
10 the failure are?

11 I'm not asking now about providing  
12 redundancy. I'm just asking, you know, do you  
13 consider what the possibility effects of the failure  
14 are.

15 A. To the best of our ability, yes.

16 Q. And do you look for ways to prevent that  
17 failure from becoming a bigger problem?

18 A. Potentially. I guess I'm not sure what  
19 you're asking.

20 Q. I'm asking suppose a component parts  
21 supplier gives you an FMEA and it discloses a  
22 possibility of a problem, but it discloses the  
23 possibility as being a low number of a probability,  
24 it says, you know, there could be a problem, but  
25 it's unlikely.



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-357-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

1                   A. Well, yeah, the supplier not only tells me  
2                   the probability of the problem, but the supplier  
3                   also tells me what the severity of that problem is.

4                   Q. Well, okay.

5                   So since the supplier tells you what  
6                   the severity of the problem is, are you saying that  
7                   the people at Ford do not do any independent  
8                   analysis of effects to the system that the supplier  
9                   might not have perceived?

10                  A. I'm sure they do.

11                  Q. Okay.

12                  A. They would, you know -- yes, I would think  
13                  the group responsible for those systems, you know,  
14                  they're going to do a system FMEA on their  
15                  particular part of the system, and in that they  
16                  would look at the supplier's FMEA as part of that  
17                  system.

18                  Q. So if a supplier gives you an FMEA for a  
19                  component part of the speed control system that you  
20                  help design, and it gives a possible -- it gives a  
21                  possible failure mode and gives its probability and  
22                  its severity, and it's rated as a not probable but  
23                  possible, you know, not probable, and the supplier  
24                  does not perceive the failure mode to be severe,  
25                  what do you do with that information?

4           A. If the supplier is telling me there's no  
5 concerns, I guess we're less concerned. You know,  
6 we're looking at the supplier is going to be the one  
7 that's most knowledgeable on that part.

8                   Q. Yeah, but in fact you -- when we're  
9                   talking about going from the general to the  
10                  specific, when we're talking about leakage of the  
11                  speed control deactivation switch, you were aware,  
12                  weren't you, that that was a severe failure mode?

17 Q. Now I'm distinguishing between frequency  
18 and severity, okay.

19 Let's talk about severity. All  
20 right. It's unlikely to occur, but if it does what  
21 are the consequences?

22 You knew that even if the leakage  
23 into the deactivation switch was unlikely you knew  
24 that the consequences could be severe; correct?

A. I guess, you know, there was a potential



## A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7908	616-552-4438

1 for that.

2 Q. Okay. And we're always dealing with  
3 potentials, right, when we're looking at failure  
4 modes and effects analysis; I mean it's possible in  
5 some cars it could never occur?

6 A. I'm not sure what you mean.

7 Q. Well, I asked you the question of you  
8 perceived the failure mode of leakage into the  
9 switch to be of a high severity, and you answered  
10 potentially yes, and so I guess my only point is  
11 when doing a failure mode you're dealing with  
12 potentialities; correct?

13 A. Correct.

14 Q. Okay. How would a consumer or a driver  
15 know if the deactivation switch failed?

16 A. Okay. If the switch failed open the speed  
17 control system would be inoperative.

18 Q. Okay. What if the switch failed closed,  
19 how would the consumer know?

20 A. The consumer wouldn't know.

21 Q. What did Ford do when designing the speed  
22 control system to provide diagnostics to the  
23 consumer in case the switch failed, the deactivation  
24 switch failed to close?

25 A. I believe there's a diagnostic routine



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7357	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7800	616-552-4438

1           that looks at that if the brake light is not on,  
2           okay, that the deact switch should not have power to  
3           it.

4           Q.    Well, I understand, yeah.

5                         I'm asking about suppose that the  
6           fuse is not blown, okay, so that the brake light can  
7           still come on.

8           A.    Okay.

9           Q.    All right. And yet something happens in  
10          the switch and it fails closed, okay.

11                         How would the consumer know that?

12           A.    They would not know. Again, the objective  
13          in speed control is, you know, first of all to  
14          protect for as many single point failure modes as  
15          you can and then, you know, if you can, you know,  
16          easily protect for multiple point failure modes then  
17          you would try to protect for that.

18                         So, you know, just because if the  
19          deactivator switch, signal switch, failed close the  
20          system still operates fine and is still a safe  
21          system.

22           Q.    Did you consider when -- or did anyone at  
23          Ford consider that you're aware of when the speed  
24          control system was designed providing some sort of  
25          system diagnostic that the consumer would be aware



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5568	734-769-7808	616-552-4438

13834  
4  
9  
8  
2

1           of without having to take the vehicle into the shop  
2           in case the deactivation system failed close?

3           A. You know, we would look at trying to do as  
4           much diagnostics as we could on the system, but  
5           again, you know, the major goal was to make sure all  
6           single point failure modes get addressed.

7           Q. So the answer is no?

8           A. The answer is yes, we did look at doing  
9           diagnostics where we could on components in the  
10          system reasonably.

11          Q. Well, I guess my question is you did look  
12          at having some sort of diagnostic available to the  
13          consumer, again without them having to take the car  
14          to the shop, available to the consumer in case the  
15          deactivation switch failed to close?

16          A. You designed -- for speed control you need  
17          to design in diagnostic routine to help the service  
18          technician troubleshoot the parts, okay, if  
19          something goes wrong in the system, okay, and in  
20          that diagnostic routine, okay, you try to have the  
21          capability to detect as many parts as you possibly  
22          can, okay, without having to add significant  
23          complexity into the system.

24          Q. And by diagnostic routine, is that  
25          something that the consumer would see for example by



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7805	616-552-4438

1           a light in his car or is that something that you  
2           would have to go into the mechanic?

3           A. It would be something that the service  
4           technician would use to help him troubleshoot the  
5           system.

6           Q. So a consumer whose deactivation switch  
7           fails closed could drive for two, three, four years  
8           without realizing it?

9           A. And the system would be very fine and very  
10          safe that way.

11          Q. So it's your assessment that that would be  
12          safe?

13          A. The system is safe with the deactivator  
14          switch, contacts switch, shut, yes.

15          Q. Would it have been feasible to have some  
16          sort of diagnostic tool that would put a light on in  
17          the consumer's car in case the deactivation switch  
18          failed?

19          A. Is it technically feasible?

20          Q. Yes.

21          A. Yes.

22          Q. And would it have been technically  
23          feasible to put a one amp fuse between the  
24          deactivation switch and where you currently have on  
25          the schematic the brake light fuse?

1 A. Is it technically feasible to do that?

2 Q. Yes.

3 A. I guess if you want to, sure.

4 Q. And is it technically feasible to wire the  
5 deactivation switch to the ignition feed?

6 A. You can wire the switch anywhere you want,  
7 yes.

8 Q. All right. How about would it have been  
9 technically feasible to have put a relay between the  
10 deactivation switch and the brake light fuse in  
11 order so that the switch would not receive power  
12 when the ignition is off?

13 A. Technically if you wanted to do that,  
14 sure.

15 Q. Did your group consider doing any of those  
16 things that I listed off when the speed control  
17 system was being designed?

18 A. You have to go back again. Which ones in  
19 particular?

20 Q. Okay. Did your group consider putting in  
21 a relay between the deactivation switch and the  
22 brake light fuse?

23 A. At that time there was no reason to do  
24 that.

25 Q. All right. Did your group consider



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

1 putting a one amp fuse between the deactivation  
2 switch and where the brake light fuse is now listed?

3 A. Again, we saw no reason to do that one.

4 Q. Did your group wire the deactivation  
5 switch to the ignition feed?

6 A. We purposely did not do that. We  
7 purposely designed it the way it is.

8 Q. And the reason is because the brake light  
9 switch -- because the brake lights have to receive  
10 continuous power; correct?

11 A. The reason was is we wanted to be able to  
12 make the system inoperative if the brake light  
13 switch -- brake light fuse became blown.

14 Q. When did you conclude your work, meaning  
15 you personally, with next generation speed control?

16 A. I think it might have been in '92 calendar  
17 year some time.

18 Q. Do you remember what time during the 1992  
19 calendar year?

20 A. I don't recall.

21 Q. How long after launch of the '92 Town Car  
22 was that?

23 A. I think it was less than a year. I can't  
24 recall off the top of my head.

25 Q. Let's talk about the brake light bulbs.



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7997	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-3560	734-769-7800	616-552-4438

1                   There's bulbs in the brake lights;  
2                   correct? In fact, those are the brake lights?

3                   A. Correct.

4                   Q. What -- if the brake light bulb or bulbs  
5                   blow, will the stoplamp switch still shut off the  
6                   cruise?

7                   A. If the brake light bulbs blow, the speed  
8                   control is inoperative.

9                   Q. Let's look at Exhibit 6.

10                  Do you have it in front of you?

11                  Okay. Exhibit 6 is the Texas  
12                  Instruments document that we discussed -- that you  
13                  discussed with Mr. Feeney this morning; correct?

14                  A. Correct.

15                  Q. I would like you to also -- do you have an  
16                  eight and a half by 11 copy of Exhibit 3 in front of  
17                  you?

18                  A. Okay.

19                  Q. Exhibit 3 is the schematic that we've been  
20                  using of the speed control system, next generation  
21                  speed control, in the '92 Town Car; right?

22                  A. Correct.

23                  Q. Okay. I want to go through a comparison  
24                  of these two charts.

25                  Do you see a reference to the brake



A RECORD OF EXCELLENCE

Dwy	Lansing	Grand Rapids
248-244-9700	517-397-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7804	616-552-4438

13438  
6-925-9252

1 light switch in Exhibit 6?

2 A. No, I don't.

3 Q. Do you see a reference to the microcomputer in  
4 Exhibit 6?

5 A. Sort of, yeah.

6 Q. That's the computer, it just doesn't say  
7 micro?

8 A. Yes.

9 Q. Do you see a reference to the actuator in  
10 Exhibit 6?

11 A. Yes, I do.

12 Q. Okay. Which is the actuator?

13 A. I see electric motor and magnetic clutch.  
14 I guess that would sort of be an actuator.

15 Q. Okay. The sort of isn't exactly what you  
16 have on Exhibit 3.

17 Do you see the brake light fuse on  
18 Exhibit 6?

19 A. No, I don't.

20 Q. Do you see the brake lights on Exhibit 6?

21 A. No, I don't.

22 Q. Do you see the clutch solid state switch  
23 on Exhibit 6?

24 A. Sort of. I guess it would be inside the  
25 computer.

1                   Q. Exhibit 6 is a highly simplified  
2 schematic; isn't it?

3                   A. Of the system, yeah.

4                   Q. What documents did your group provide to  
5 Texas Instruments when development began on the  
6 speed control deactivation switch?

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

8                   Q. So if I asked is your answer that you  
9 don't recall any specific documents, but you  
10 probably provided documents, you just don't recall  
11 any specific ones?

12                  A. That's correct.

13                  Q. Okay. Was Texas Instruments given a  
14 system FMEA for the cruise control system?

15                  A. Technically you would not give a supplier  
16 a copy of the system FMEA.

17                  Q. Why not?

18                  A. You might show the supplier, but FMEAs are  
19 something that are usually, you know, confidential.

20                  Q. Why?

21                  A. Just proprietary.

22                  Q. You did a number of tests to determine the  
23 proper actuation or release pressure for the  
24 deactivation switch, correct?

25                  A. Correct.

1           Q. Did you provide the documents behind those  
2 tests to Texas Instruments?

3           A. I don't recall.

4           Q. Would they have also been proprietary or  
5 confidential?

6           A. The results of them, you know, I don't --  
7 you know, if we were trying to specify the pressures  
8 we wanted TI to design the switch, we would have to  
9 provide them those limits.

10          Q. I'm talking about the documents  
11 themselves, would those have been provided to Texas  
12 Instruments?

13          A. What documents?

14          Q. Did you produce documents in conjunction  
15 with those tests?

16          A. Of the testing we did to determine the  
17 limits?

18          Q. Did you write it down on paper?

19          A. Oh, for sure.

20          Q. Did you give those papers to Texas  
21 Instruments?

22          A. There would not have been a reason to, no.  
23 I doubt it.

24          Q. Did you take any notes and produce any  
25 documents in conjunction with your development of

1                   the speed control system?

2                   A. Many documents.

3                   Q. Did you provide all of them to Texas  
4                   Instruments?

5                   A. No, we did not.

6                   Q. Why not?

7                   A. Again, many of them would be proprietary  
8                   and confidential to the Ford Motor Company.

9                   Q. All right. Did you provide all documents  
10                  showing the electrical circuit details of the speed  
11                  control system, did you provide all of those to  
12                  Texas Instruments?

13                  A. All electrical documents to Texas  
14                  Instruments?

15                  Q. Yeah, that pertained to the speed control  
16                  system.

17                  A. I would not think so.

18                  Q. Why not?

19                  A. Huh?

20                  Q. Why not?

21                  A. Why not? You know, there probably  
22                  wouldn't have been a reason to. You know, what we  
23                  would have provided is, you know, documentation or  
24                  discussion of how their component was going to be  
25                  used in the system, but we wouldn't explain all



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-496-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7868	616-552-4438

1 other pieces of the system to TI. There would be no  
2 reason to do that.

3 MR. CARTER: Can I take a short  
4 bathroom break?

5 MR. MANSKE: Sure.

6 MR. FEENEY: No.

7 MR. CARTER: No?

8 VIDEO OPERATOR: We are going off the  
9 record. The time is 14:25 hours.

10 (Brief recess.)

11 VIDEO OPERATOR: We are back on the  
12 record. The time is 14:39 hours.

13 Please continue.

14 MR. CARTER: I pass the witness.

15 Thank you, Mr. Klingler.

16 EXAMINATION

17 BY MS. WEINER:

18 Q. Mr. Klingler, my name is Monique Weiner.  
19 I represent DuPont as I introduced myself earlier.

20 In response to some questions that  
21 Mr. Carter asked you, you said that you were not  
22 responsible for the specifications of the mechanical  
23 components of the deactivation switch that is  
24 included in the schematic identified as 3A that  
25 we've been talking about today; is that correct?

1 A. Correct.

2 Q. Okay. And with that as a background I  
3 would surmise then that you don't anything about how  
4 Kapton, which was a component of that deactivation  
5 switch, may have contributed to any failure mode of  
6 that switch?

7 A. No, I do not.

8                   Q. Okay. And I would assume then in your  
9 position that you don't have any criticisms of how  
10 Kapton as a diaphragm material would act in that  
11 deactivation switch?

12 A. No, I do not.

Q. Okay. During your development of the speed control system, that next generation system that was used in the model year 1992 Panther platform vehicles, did you have any contact whatsoever with DuPont?

A. No, I did not.

Q. Those are all the questions I have.

20 Thank you.

MR. FEENEY: Just a couple on redirect, Mr. Klingler.

## **REEXAMINATION**

BY MR. FEENEY:

Q. Directing your attention to Exhibit 6,



## A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5160	734-769-7108	616-552-4438

1           the TI schematic of the deactivation switch and how  
2           it's wired into the speed control system, do you  
3           have that in front of you?

4           A. Yes, I do.

5           Q. It was pointed out to you in questioning  
6           by Mr. Carter that apparently that particular  
7           diagram does not contain a display of a brake light  
8           circuit?

9           A. That is correct.

10          Q. Nor does it contain a display of a brake  
11          light fuse? - .

12          A. That is correct.

13          Q. Did you develop the impression or  
14          understanding during the course of your dealings  
15          with TI that the TI engineers failed to understand  
16          that this vehicle would have brake lights?

17          A. Of course not. I'm sure they didn't  
18          assume that.

19          Q. Did you develop an understanding that the  
20          TI folks did not somehow thought that there would be  
21          no brake light fuse?

22          A. I don't believe they would have made that  
23          assumption.

24          Q. Is the fact that the brake light circuit  
25          or the fuse itself does not appear on this one

1 diagram schematic that we have, is that an  
2 indication to you that TI failed to understand that  
3 there would be a brake light circuit and a fuse?

4 A. I don't think so, no.

5 Q. Speaking of TI, you were asked some  
6 questions about why you didn't use a one amp fuse  
7 and a variety of things.

8 My question is was there any testing  
9 done to evaluate the capacity of the deactivation  
10 switch?

11 A. Yes, there was.

12 Q. Tell us about that.

13 A. Okay. Yeah, one of the concerns in the  
14 design of the system is that we had a wire going  
15 from the deactivator switch -- I guess I can point  
16 out here.

17 There's a wire going from the  
18 deactivator switch to the speed controlling unit,  
19 and what one of the concerns is that wire is running  
20 along the body of the car and the body of the car is  
21 ground and if, you know, the wire isn't properly  
22 routed over time with vibration, that the insulation  
23 could rub off that wire and short to the body and  
24 that could cause high currents to flow through the  
25 deactivator switch and so, you know, we were



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-436-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

1 concerned that we didn't want the switch to have any  
2 catastrophic failures if that happened, okay, so we  
3 had TI run some tests to evaluate what would happen  
4 to the switch under high levels of current.

5 Q. And were these tests referred to as high  
6 resistance or short-circuit testing or both or  
7 neither?

8 A. Yeah, I don't recall, you know, the  
9 specific name we gave them.

10 Q. What were the results of the test?

11 A. You know, what I recall is, you know, they  
12 subjected the switches to increasing levels of  
13 currents and, you know, switches went 25, 30, 40  
14 amps before they failed, and in no case did they  
15 fail in such a mode that they would cause any  
16 leakage of brake fluid. That was, you know, the  
17 primary concern.

18 Q. Now the brake light fuse that you referred  
19 to earlier, that is a 15 amp fuse?

20 A. Correct, and we were satisfied when the  
21 switches, as long as they were capable of carrying  
22 currents well above 15 amps, that there wouldn't be  
23 a problem in the system because as soon as a current  
24 in the system if it did short, as soon as the  
25 current got to 15 amps, okay, this brake light fuse



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-436-6300
Detroit	Ann Arbor	Kalamazoo
313-961-3560	734-769-7808	616-552-4438

1           would blow, okay, and that would eliminate current  
2           from flowing through the switch.

3           Q. And who did all this testing that you've  
4           just described that you relied upon to satisfy  
5           yourself that the switch would not present a problem  
6           to the system from that standpoint?

7           A. The testing of the switch by subjecting it  
8           to increasing levels of current, that testing was  
9           done by Texas instrument.

10          Q. You've been asked a number of questions  
11         about exactly what your role was in the design and  
12         development of the speed control system.

13           My question to you is little  
14           different than that. My question is this:

15           Who was responsible for the actual  
16         design of the deactivation switch?

17          A. The actual design of the switch, the  
18         responsibility was Texas Instruments.

19          Q. Are you familiar with the term black box  
20         design?

21          A. Yes.

22          Q. In the automotive engineering business?

23          A. Yes, I am.

24          Q. Would you tell the members of the jury  
25         what a black box design is in the context of the

1                   automotive industry?

2                   A. Okay. In a black box design, you know,  
3                   the user, okay, of whatever they're buying just  
4                   specifies the inputs, outputs of the device, okay,  
5                   and how they want it to operate, and then it's the  
6                   supplier's responsibility for the design of that  
7                   device, to make it meet those characteristics.

8                   Q. Was the TI supplied deactivation switch  
9                   that was supplied for the speed control system a  
10                  black box design?

11                  A. Yes, it was.

12                  Q. And who was responsible for the black box  
13                  design?

14                  A. Texas Instruments.

15                  Q. Finally, Mr. Klingler, you identified  
16                  several objectives or goals of a speed control  
17                  system. I think one of them was performance.

18                  Do you recall that?

19                  A. Mm-hmm.

20                  Q. Another one was reliability?

21                  A. Correct.

22                  Q. You've also used in your testimony, you've  
23                  several times referred to -- I wrote it down -- a  
24                  desire to address single point failure modes.

25                  A. Correct.

1           Q. Could you explain what you mean by a  
2         single point failure mode and whether or not that is  
3         also a goal of a speed control system, to address  
4         such modes?

5           A. Okay. You know, single point failure mode  
6         is you're always trying to insure, you know,  
7         especially for high probability items that a single  
8         point failure in the system doesn't cause the system  
9         to become unsafe, and so you try and address as many  
10        of those modes as you can reasonably.

11           So whenever you're redesigning the  
12        system, okay, you always try and improve upon that,  
13        try to protect for more single point failure modes.

14           Q. By selecting the deactivation switch and  
15        doing it the way you contemplated in this system,  
16        was that in furtherance of the need to eliminate  
17        single point failure modes?

18           A. Yeah, you know, the way it was -- the  
19        design of the system was done exclusively to improve  
20        upon eliminating single point failure modes.

21           Q. In your opinion to a reasonable degree of  
22        engineering certainty, does this represent an  
23        improvement from the previous generation system?

24           A. Yes, it is.

25           Q. Thank you.

  
**ESQUIRE™**  
DEPOSITION SERVICES

A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4436

ER2-628-13462

1 I have no further questions.

2 MR. CARTER: I have a few more on  
3 recross, Mr. Klingler.

4 REEXAMINATION

5 BY MR. CARTER:

6 Q. You testified that when you asked Mr.  
7 Offiler to perform the high current test that the  
8 switch did not fail, and I don't remember your exact  
9 phrase, but you answered essentially that the switch  
10 did not leak brake fluid?

11 A. Correct.

12 Q. Did the switch fail in a manner that was  
13 consistent with a thermal event?

14 A. By a thermal event you mean what?

15 Q. Something that would indicate, some event  
16 that would involve excessive heat?

17 A. Okay. Again, when they did the test,  
18 okay, they took the switches to 25, 35, 40 amps  
19 before they failed, okay, and they should never see  
20 that in a vehicle because a fuse would have blown,  
21 okay, when the current got to 15 amps, okay, so when  
22 the switches did get to 40 amps, yeah, I think  
23 contacts melted and things like that, correct.

24 Q. Is it possible that an older switch could  
25 have the same result at a lower current, for

1 example, less than 15 amps, due to contact wear of  
2 the switch?

3 A. I don't know that.

4 Q. Did you ask Texas Instruments to run any  
5 tests to address that possibility?

6 A. No, we did not.

7 MR. CARTER: I pass the witness.

8 MS. WEINER: I have no questions.

9 MR. FEENEY: Pass the witness.

10 VIDEO OPERATOR: This will conclude  
11 the deposition of Gary Klingler.

12 We're going off the record. The time  
13 is 14:49 hours.

14 MR. FEENEY: But let's open the paper  
15 record.

16 The one thing I wanted to indicate on  
17 the record is that when we started this deposition  
18 it was about 9:20 eastern standard time.

19 Neither Mr. Jolly nor Mr. Taylor nor  
20 anyone from their offices was present.

21 I made some phone calls or I asked my  
22 secretary to make some phone calls to find out what  
23 the situation was. Eventually she was advised by  
24 Mr. Taylor's office or Mr. Jolly's office, I'm not  
25 sure, but one of them, that no representative of the

1 plaintiff would be attending the deposition in  
2 person, they did not wish to participate by phone,  
3 but they were requesting a copy of the transcript,  
4 so we proceeded.

5 MR. CARTER: All right.

6 (Deposition concluded at about  
7 2:50 p.m.)

8 \* \* \*

9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-357-7937	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4434

ENR2-2025-6

1 State of Michigan)

2 County of Oakland)

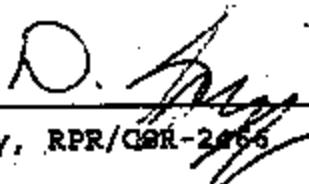
3                   Certificate of Notary Public

4                   I do hereby certify that the witness, whose  
5 attached testimony was taken in the above-entitled  
6 matter, was first duly sworn to tell the truth; the  
7 testimony contained herein was reduced to writing in  
8 the presence of the witness by means of stenography;  
9 afterwards transcribed; and is a true and complete  
10 transcript of the testimony given by the witness.

11                  I further certify that I am not connected  
12 by blood or marriage with any of the parties; their  
13 attorneys or agents; and that I am not interested,  
14 directly or indirectly, in the matter of  
15 controversy.

16                  In witness whereof, I have hereunto set my  
17 hand at Beverly Hills, Michigan, County of Oakland,  
18 State of Michigan.

19  
20  
21                  \_\_\_\_\_  
22                  \_\_\_\_\_  
23                  \_\_\_\_\_  
24                  \_\_\_\_\_  
25



Denise M. Kizy, RPR/CRR-2666

Registered Professional Reporter

Certified Shorthand Reporter

Notary Public, Oakland, Michigan

My Commission Expires: 7-28-03



A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4498

A	108:19	110:20	56:22	addressed	63:2,14
ABBOTT 3:1	108:24	128:2	126:11	148:6	63:1S
ability	109:3,4	achieve	162:15	adequate	64:17,25
80:19	111:23	135:16	162:17	124:24	65:2,13
143:15	122:10	act 158:10	actually	132:14	74:11
able 11:24	123:10	action	22:4	adjust	75:24
28:16	132:17	122:23	44:14	47:4	102:17
45:10	134:15	actions	45:10,16	advised	106:20
57:5	135:2	33:16,22	55:11	166:23	107:17
67:11	137:9,14	activate	56:9,21	affect	109:12
101:6,8	137:17	17:17,23	62:16	133:3,11	117:18
105:25	139:9	18:8	64:11	affected	121:5
113:7	142:19	30:16	81:19	132:19	125:2
131:1	142:20	38:7	104:20	132:21	129:10
151:11	143:11	46:19,20	119:8	132:23	130:19
about 5:3	145:9,10	46:24	122:23	affects	131:11
7:24	145:19	59:18	127:4	133:19	132:2,10
10:21	147:5	64:4	actuation	after 6:7	133:6
12:11,12	150:8	65:11	132:17	9:15	134:14
15:17	151:25	74:9	154:23	27:10	135:21
17:5	155:10	94:15	actuator	61:17	139:15
25:1,10	157:25	110:18	16:18,20	81:12,17	147:12
28:5	158:3	activated	16:22,24	151:21	149:5,13
29:24	160:6,12	12:3	17:1	afternoon	150:18
30:10	162:11	17:19	21:2	100:12	151:3
31:22	166:18	30:11	43:8	afterw...	156:7
34:5,23	167:6	63:21	54:16	168:9	165:17
39:17	above 47:2	66:5,21	55:12,23	again	against
41:25	161:22	activates	56:5	30:14	21:21
50:17	above -...	47:21	153:9,12	32:2,10	93:12
54:10	168:5	activa...	153:14	33:21	agents
59:3	absence	24:23	add 148:22	36:2	168:13
68:6	77:12,16	66:1,2	added	41:25	ago 81:20
69:14	77:19	activa...	93:25	42:19	95:9
71:10	80:8	58:14	adding	43:24	agree
74:11	absolu...	activi...	37:17	45:3,20	97:13,15
80:1	94:3	94:25	addition	48:3,19	ahmad 9:25
81:21	118:17	actual	13:5	49:7	27:9
82:11	125:9,20	16:12	additi...	51:9	28:21
84:23	137:13	17:14	35:12	52:23	29:7
98:14,19	accel 18:6	30:12	52:11,17	53:4	35:14
98:20	45:22	43:8	53:22	54:11,24	42:10
99:5,16	accele...	44:5,10	93:23,25	58:4	43:6
99:18	45:25	46:7	address	59:7	46:20,23
100:3,4	46:3	50:5	163:24	60:6,8	47:25
106:5,13	accurate	54:22	164:3,9	60:12,20	48:22
108:14	76:22	55:11	166:5	62:11,23	49:10,16

**ESQUIRE**  
DEPOSITION SERVICES

A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

49:18	67:13	28:16	57:11	105:20	160:5
50:18	84:7	39:8	72:6	117:16	162:10
51:6,16	146:2	49:13	80:17	126:9	165:6
52:1,18	164:6,12	58:7	81:15	applies	166:21
57:16	among	76:6	87:8	112:4	asking
58:17	68:11	82:8	90:2	115:18	12:24
60:3	amount	92:5	93:23	apply	89:24, 25
61:24	105:19	114:18	122:10	35:22	116:24
62:21	amp 90:22	120:17	122:13	39:23	142:18
63:13	90:22	120:18	123:22	64:3	143:11
99:6	91:17,23	122:2	132:21	65:17	143:12
air 17:9	92:1	128:8,23	145:1	93:19	143:19
17:11	118:6	163:20	158:3	applying	143:20
43:11	119:3	answer	anywhere	35:20	147:5
al 5:13	120:8,10	86:24	150:6	36:8,22	aspects
allow	121:17	110:7	appare...	39:11	124:11
22:15	149:23	115:20	159:6	approach	124:15
allowed	151:1	115:23	appear 2:9	83:5	assembly
52:6	160:6	116:3,17	159:25	approp...	30:25
allows	161:19	116:18	APPEAR...	121:18	32:20
15:3	amplifier	116:19	2:1	134:7	34:4
along 5:23	17:20,23	116:20	Appearing	archival	37:1
15:12	17:24	116:21	2:22 3:6	127:21	44:13, 21
18:9	18:19,22	120:6	3:14	area 25:12	45:4
116:10	19:19	133:14	applic...	108:5	54:24
160:20	20:5	138:4	39:2	132:10	55:1,4
already	23:8	148:7,8	63:21	areas	55:23
113:3	44:4,5	154:8	64:2	25:19	56:6,8
115:25	amps 91:12	answered	90:15	90:8	59:9
116:14	91:19	116:1,14	126:12	around	76:4
Alternate	118:18	116:16	126:14	7:18	97:1,5,6
49:14	161:14	142:20	128:7	55:2	140:8
altern...	161:22	146:9	129:17	58:23	assessed
82:4,14	161:25	165:9	129:20	59:5	139:3,6
82:15	165:18	anybody	134:7,13	121:17	139:7
83:21	165:21	109:21	applic...	arranged	141:3,4
101:14	165:22	131:2	10:18	41:12	141:9,17
altern...	166:1	anymore	126:10	arrang...	141:21
82:7,11	analog	96:13	128:1	41:19	assess...
altern...	30:9	anyone	applied	Asia 10:17	140:11
29:11	analysis	90:1	35:9	waked	140:16
although	117:14	124:17	37:4	114:21	142:24
15:24	139:2,5	147:22	43:24	115:25	143:4,8
always	142:22	166:20	55:14	116:16	149:11
22:19	144:8	anything	68:23	146:7	assign
26:9	146:4	23:11	84:16,21	154:8	141:18
38:14	another	24:13	93:16	157:21	assign...

13:4	21:18	a.m.1:21	21:17,24	26:22	14:2
assign...	24:15	5:3	23:12	27:4,7	15:18
81:13	71:23		24:14	29:11	16:1
assist...	73:16,24	<u>B</u>	35:11,15	37:4,10	43:4
13:8	73:25	B26:24	37:14,16	37:11,25	75:11,12
associ...	84:12	27:1,5	38:10	45:7	119:10
62:5	86:8,20	bachel...	39:19	65:10,17	125:7
89:22,23	113:3	8:5	45:1	65:19,20	161:14
assume	114:12	back23:18	50:3,10	66:6,14	165:19
80:17	117:9,21	28:7	52:2	69:12	began16:1
123:7	117:22	31:4	63:6	70:22	154:5
125:17	117:25	32:18	82:4	71:2,4	begin
158:8	140:18	37:3	88:8	72:4	125:10
159:18	140:19	39:1,14	<b>backwards</b>	75:25	behalf2:8
assuming	148:12	41:2,13	32:16	76:2	2:22 3:6
103:18	148:14	41:22	33:5	77:3,8	3:14
104:4	Avenue	49:8	61:16	92:6,17	behind
assump...	1:22	52:7,21	<b>bad</b> 88:2,5	94:9	12:13,15
80:22	2:13,19	53:3,3	94:6	110:13	13:21
98:5,7	5:14	58:24	118:13	111:19	100:16
98:12	avoid	59:2	118:14	112:7	110:16
123:4	142:6	60:11,12	118:23	118:7,16	111:3
159:23	aware11:1	61:1,16	<b>based</b>	118:20	122:10
assurance	11:15,16	61:19	99:13	118:23	155:1
84:5	24:7,9	62:2,12	<b>basic</b>	119:4	being5:14
attached	81:2,7	62:17,19	14:12	<b>bearings</b>	37:8
168:5	83:7	63:1,19	28:10	136:23	46:14
attending	86:25	64:18,20	69:18	<b>became</b>	50:6
167:1	89:22,25	65:3,5	<b>basically</b>	10:1	57:7
attention	90:2	67:25	11:8	54:15	62:8
158:25	115:19	69:12	13:1	90:6	68:23
attorneys	117:10	72:4	15:21	96:12	76:2,5
5:19	118:10	73:14	32:5,5	151:13	76:20,23
168:13	136:11	85:17	33:2	<b>become</b>	105:20
Austin	137:21	89:6	43:11	11:1	117:16
2:20	137:24	97:11	52:8	78:11	121:16
automo...	138:3,5	100:6,13	56:2,24	81:2	124:23
20:14,15	138:7,8	105:13	64:7	92:10	137:7
25:8,9	138:9,11	150:18	83:16	93:20	142:4
automo...	138:13	157:11	<b>basis</b>	164:9	143:23
83:4	138:16	backgr...	108:25	<b>becomes</b>	150:17
automo...	138:21	8:2	116:10	38:3	belief
162:22	145:11	158:2	116:13	93:17	83:23
163:1	145:14	<b>backing</b>	<b>bathroom</b>	<b>becoming</b>	believe
availa...	147:23	38:12	157:4	143:17	10:2
135:4	147:25	39:6	<b>battery</b>	before8:1	68:15,16
available	away94:5	backup	19:18	10:24,24	84:24

110:21	blocks	27:10	37:4	34:6	34:1
113:15	163:10	28:3	39:12	162:22	calls
120:24	blew	92:22	50:22	button	166:21
129:4,8	100:24	56:22	51:17,22	18:6,15	166:22
146:25	blood	body	61:3	18:17	came
159:22	168:12	111:22	53:2	31:6	20:6
below	Bloomf...	160:20	65:14	33:18,20	81:19
20:12,17	1:23	160:20	79:3	97:18	camera
25:5	2:14 S:1	160:23	93:20	58:6,7	14:7,20
34:8,12	5:15	book	127:1	60:15,17	40:22
34:15	blow	23:24	111:4,8	60:23	56:16
benefits	24:5,9	both	9:4	61:25	campbell
11:9,20	38:2	12:7,9	break	62:23	1:3,3
Bering...	107:16	24:22	40:9	63:17	5:12,12
3:17 6:3	107:21	33:13	63:24	65:1	capabi...
best	81:23	72:13	63:24	103:2,8	148:21
106:19	107:24	77:11	brief	buttons	capable
106:22	152:5,7	82:21	15:25	30:21	161:21
119:9	162:1	82:21	41:1	buying	capacity
143:15	blowing	bottom	67:24	163:3	160:9
better	24:1	93:24	85:16	buzz	car
8:2	93:12	box	53:24	53:24	7:13
83:24	101:14	28:23	157:10	C	9:7
106:14	104:2	29:23,25	briefly	C2:18	10:22
106:17	106:6,9	56:5,6	121:20	cable	31:3
between	blown	58:4	bring	31:17	28:12
28:10	23:5	60:1	13:6	41:13	30:17
29:14	25:2	63:17	122:17	43:16	42:8
70:12	37:19,24	122:14	BROWN	44:1	43:4
71:2	38:24	122:22	2:17	55:2	47:7
119:3,19	50:6,11	162:19	Bruce	59:6	50:14
145:17	50:19	162:25	2:4	Cady	55:16
149:23	52:20	163:2,10	build	1:25	58:15
150:9,21	63:9	163:12	buildup	calculate	83:18
151:1	66:10,13	boxes	77:17	72:16	108:4
Beverly	66:15,23	42:11	72:8	calendar	110:16
168:17	92:9	56:2	built	151:16	128:12
bigger	93:3,15	brain	87:25	151:19	129:16
143:17	147:6	57:11	bulb	call	132:5,7
billion	151:13	brains	152:4	55:7	139:11
139:13	165:20	30:3	bulbs	6:7	142:5
139:24	blows	56:12,17	151:25	14:4	148:13
black	93:18	brakes	152:1,4	15:20,24	149:1,17
63:16	blowups	23:9	152:7	17:20	152:21
65:1	13:22	32:22	bunch	22:2	160:20
162:19	board	33:14	53:9	burns	160:20
162:25	13:24	35:22	29:1	79:1	care
163:2,12	14:17	36:8,22	business	26:24	14:6
			9:12	29:21	carry
				30:8	123:18

carrying	130:7	Certified	chip	CI-99-...	33:7,8
161:21	131:6	168:23	chips	1:7	33:22
carry-on	138:25	certify	56:21	cleaner	34:3
41:17	146:23	168:4,11	choice	17:6	37:1,2,6
carw	24:3	chamber	97:22	clicking	37:9
27:20	148:2,14	16:24	choose	62:8	38:1
91:7	149:17	17:12,15	40:1	climbing	39:13,18
125:8	161:14	22:7,8	chose	20:20	39:20,22
126:3,9	161:2	22:15	11:16	21:5	54:25
126:12	catch	43:24	Chris	99:4	clockwise
128:13	114:4	chance	circles	58:21	55:13
128:22	cause	13:6	42:12	59:9	59:21
129:2,24	13:2	140:24	62:23	61:18	61:23
146:5	18:15,23	change	circuit	close	62:8,13
151:21	21:7,18	46:12,15	1:1	16:18	62:20
carter	33:4,16	changed	22:23	33:5	63:2
3:10	49:15	108:23	24:5	62:19	65:8,11
5:25 6:1	86:23	change...	26:7,21	146:24	65:15,16
85:7,21	87:1	126:4	27:6	147:19	65:21,22
85:22	123:14	changes	56:22	148:2,15	65:24
86:24	123:14	15:12	71:9,11	closed	66:3,6
87:7	136:7	21:3	71:16,18	22:9,11	66:14,17
100:12	160:24	89:21,25	72:19	36:16	66:18
108:15	161:15	90:2	91:11,13	47:20	69:8,6
108:20	164:8	135:2	107:23	104:9,13	71:6,20
109:5,7	causes	changing	119:5	104:23	76:4,5
110:7	35:22	58:11	120:5	105:2	77:13
116:2,11	43:12,25	charac...	156:10	147:10	91:21,25
116:17	46:13	124:7	159:8,24	149:7	92:5,12
116:20	66:6	charac...	160:3	closely	93:16,20
157:3,7	causing	78:5	circuitry	62:2	94:9
157:14	37:6	124:11	13:7	129:21	104:8,8
157:21	59:9	133:1	53:17	129:23	104:12
159:6	centered	134:16	65:7,9	closes	136:24
165:2,5	68:21	163:7	68:21,25	19:17	136:25
166:7	central	charac...	69:3,4	close-up	137:2,4
167:5	95:3	133:8	76:18	48:20	153:13
case 1:7	certain	charging	107:23	closing	153:22
5:12,13	36:18	70:22	120:13	17:3	coaching
38:15	137:19	Charlie	circuits	42:25	108:20
66:22,22	certainly	95:21	9:2 92:3	64:14	109:6
67:8	69:17	chart	107:21	cluster	110:6
79:24	certainty	100:16	circum...	46:16	coast 18:6
84:6	83:20	charts	64:8,10	clutch	45:22
88:9	164:22	152:24	66:19	30:22,23	coil 137:1
106:15	Certif...	china	CI-99-...	31:14	coils
116:2	168:3	116:7	5:14	32:20	136:22
					COLLINS

  
**ESQUIRE™**  
 PROPOSITION SERVICES

A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

1:10	common	86:13,15	130:25	65:24	82:3
comes 7:2	23:22,23	91:8	161:17	92:16	114:18
60:14,22	23:24	118:21	concerned	107:17	114:21
62:22,24	107:13	122:14	81:6	110:9	119:22
63:14,16	107:13	142:3	106:5,12	connected	119:23
69:17	107:15	143:20	130:4	22:4	119:24
70:24	commonly	144:19	145:5	43:15	120:1,4
96:19,22	106:10	156:24	161:1	58:22	120:7
96:23	commun...	158:4	concerns	69:7,8	131:4,5
97:8,11	57:2	compon...	145:5	69:10	143:13
97:13,15	company	4:21	160:13	76:6	147:22
97:22,23	1:9,13	7:16	160:19	92:1	147:23
101:13	2:23	10:4	conclude	112:6	150:15
108:4	5:13,23	25:24	151:14	132:13	150:20
110:3	7:8 9:17	29:19	166:10	168:11	150:25
113:7	10:2,5,7	38:15,17	concluded	connec...	consid...
140:3	90:7	39:5	167:6	9:5	50:9
147:7	94:23	42:5	condition	36:17	consid...
comes	134:8	53:13	102:11	37:25	82:12
127:20	156:8	63:25	conduc...	71:2,3,6	83:6
coming	compare	67:8	80:5	71:9,15	consis...
20:5	76:8	69:5	conducted	71:17,24	165:13
53:10	compar...	83:25	76:2	72:3	consists
57:6	152:23	84:2	conduc...	73:20	16:23
65:19	compet...	91:5	90:9	83:16	constant
98:16	83:1	109:17	confidant	119:15	34:19
command	complete	118:5	67:13	119:20	consumer
17:25	168:9	135:13	131:24	connector	146:14
18:2	completed	135:15	141:20	132:12	146:19
31:6,10	67:16	136:3	confid...	138:20	146:20
33:3,4	completes	137:9,11	154:19	connects	146:23
34:9	71:11	137:15	155:5	19:18	147:11
45:19	comple...	140:20	156:8	37:3	147:25
57:8	71:9	141:25	config...	120:3	148:13
58:6	comple...	142:8,12	109:16	conseq...	148:14
61:15	26:2	142:15	109:23	105:9	148:25
commun...	148:23	148:9	config...	comm...	149:6
39:11,16	compli...	157:23	76:13	100:25	consum...
commands	25:24	computer	confine	101:13	149:17
31:15	complied	56:25	116:11	101:22	contact
59:16	26:18	57:5	Congress	101:24	37:5
commenced	component	140:25	2:19	102:9	69:17
81:3	4:22	153:6,25	conjunct...	104:1,14	130:8
comment	10:10	concern	155:14	118:9	140:8
116:7	43:8	101:16	155:25	145:21	158:16
Commis...	76:20,23	106:18	connect	145:24	166:1
168:25	84:6	130:10	30:24	consider	contacts

36:16,19	114:12	corrosion	51:6	118:18	deacti...
36:23,24	115:12	79:19,24	75:10,15	118:22	19:2,4,6
65:13	115:15	123:15	88:4	120:2,4	19:11,23
66:5	115:16	corrosive	89:2,6	123:18	20:8,11
68:12	117:20	79:18	89:10	126:25	20:13,18
80:6	contro...	counted	92:21,24	126:25	23:2,10
82:22	158:5	134:5	93:1,7	135:2	24:15
123:17	contro...	county 1:1	93:19	161:4,23	31:25
124:19	17:25	168:2,17	94:7	161:25	32:2,3
130:5	34:3	couple	105:5,10	162:1,8	33:11,24
149:14	35:18	43:17	105:14	165:7,21	35:9,16
165:23	contro...	85:5	105:21	165:25	40:5
contain	16:25	98:24	106:1	currently	49:4,6
159:7,10	51:12	139:24	108:15	6:22	49:13,14
contained	103:15	158:21	108:16	15:13	49:25
44:14	160:18	course	110:18	90:10	50:2,25
127:2	controls	8:18	152:6	149:24	51:5,23
168:7	4:23	74:6	154:14	currents	52:2
contains	16:4,5,6	159:14	current	160:24	59:19
55:21	30:4	159:17	10:15	161:13	61:9,11
82:13	42:24	COURT 1:1	27:17	161:22	63:11
contam...	75:8	cover	57:20	customer	88:4
164:15	contro...	55:22	58:2	10:18	93:6
context	168:15	56:7	70:1,1,8	15:2	94:13
162:25	conven...	cranking	70:18,24	107:10	101:9,17
continue	15:2	46:11	71:1,1	cycle	104:4
23:15	conver...	create	71:19	131:14	105:21
24:10	98:6,8	17:9	72:13,19	131:18	106:1,25
41:7	99:11	22:6,7	72:21,21	132:1	107:11
68:2	copy 74:18	22:15	73:6,9	133:2,18	110:17
85:19	126:24	45:8	73:11,11	133:22	115:2
100:11	152:16	71:11	73:21,22	cycles	deacti...
100:14	154:16	72:11,12	77:13,16	133:25	12:5
157:13	167:3	79:19,20	77:19		21:15,19
continued	corporate	79:22	80:1,3,9	D	32:24
129:22	6:3	80:2,5	87:8,10	Dan 74:22	39:22
contin...	Corpor...	created	87:13,14	Daniel	57:22
77:3,7	6:22	29:5	87:17	1:25	61:12
84:13	correctly	135:15	88:9,11	5:17	deacti...
117:16	40:7	creating	88:15,19	date 1:20	24:23
117:18	67:3	138:15	89:13	97:2	31:22
151:10	116:22	critic...	90:17,23	day 81:2	38:11
contin...	corres...	158:9	90:25	days 81:20	50:10
9:19	13:25	Crown 7:18	91:4,8	da 1:12	51:2
73:16	corroded	27:20	92:3	3:7	64:7,11
112:25	123:16	cruise	118:6,13	deact	deacti...
113:17	123:18	49:2	118:14	147:2	34:2,2,5

  
**ESQUIRE™**  
 DEPOSITION SERVICES

A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-932-4438

35:3,6,7	142:15	1:20 5:2	102:11	descri...	155:8
35:17	142:19	5:16	102:17	76:23	160:14
37:3,12	145:11	decide	depicted	design	162:11
38:22	145:23	97:19	95:7	4:23	162:16
39:25	146:15	120:20	DEPONENT	7:11,15	162:17
57:12	146:23	Defendant	1:19	7:25	162:20
58:14	148:2,15	2:22 3:6	deposed	8:20 9:2	162:25
59:24	149:6,17	3:14	97:14	9:5	163:2,6
63:7,11	149:24	Defend...	deposit	11:22	163:10
64:1,17	150:5,10	1:16	4:14 5:6	19:23	163:13
64:23,24	150:21	defined	5:11	25:18,20	164:19
65:1,8	151:1,4	73:15	55:9	27:22,25	design...
65:13,20	154:6,24	defini...	74:14	28:14	27:5
66:2,4	157:23	138:3	75:5,5,7	32:7	designed
66:10,20	158:4,11	degree	97:23,24	68:7	25:13
66:25	159:1	8:7,11	98:1,9	74:6	28:2,11
67:5	160:9	8:22	98:14,19	75:9,9	29:14
69:10	162:16	83:19	99:13,24	77:24	31:24
70:20	163:8	164:21	100:9	80:18,25	32:21
73:15,17	164:14	degrees	166:11	81:9,18	38:5
74:7	deacti...	8:3	166:17	82:3	39:12
76:1,3	39:21	delay	167:1,6	89:12	70:20
77:14,24	58:8	61:17	depress	108:3	76:25
81:4,15	60:2	demand	23:6,15	109:17	81:21
82:10	63:17,20	87:11,13	106:24	113:16	87:2
84:10	69:7	demons...	112:4	115:21	88:18
89:2	71:5,20	12:18	depressed	119:1	89:9
90:18	72:4	45:11	22:13	120:16	109:15
92:5,11	73:21,23	59:1	describe	122:25	109:24
93:6,10	117:23	61:21	11:8	122:25	112:14
93:21	134:15	Denise	15:20	124:1,4	117:1,4
94:1,8	147:19	1:24	27:10	124:21	119:2
94:15	149:13	168:21	87:21	125:3	121:16
100:18	160:15	depart...	described	126:8	124:23
103:18	160:18	90:15	18:20	127:25	137:8
103:20	160:25	120:17	23:2,13	130:15	138:14
107:3	deal	120:18	24:22	131:12	138:17
114:3	141:23	depend	25:14	132:15	140:5
119:3,11	dealing	33:13	33:19	134:4,18	147:24
120:3	68:14	depended	35:2	134:23	148:16
122:24	146:2,11	20:25	56:11	135:7	150:17
123:3	dealings	135:5	75:16	136:14	151:7
131:9	159:14	dependent	83:21	136:16	designer
137:18	dealt	28:15	112:11	138:24	24:21
138:10	68:11	depending	162:4	144:20	75:14
140:7	78:12	36:7	descri...	145:2,15	76:16
141:5	December	depends	46:21	148:17	95:25

designing	10:25	54:13	67:7,11	42:15,21	164:15
8:21	78:10	56:1,2	disabling	44:6	done 81:23
80:14	80:15	59:2,2	64:7	45:18	124:17
82:18	83:11	61:1	discarded	135:13	139:5
90:11	125:13	65:5	127:22	159:7,10	140:2
94:17	develo...	75:17,20	discip...	disposed	160:9
95:3,5,7	7:11 9:6	75:21,22	8:24	127:8	162:9
95:23	68:7,10	75:24	discip...	distin...	164:19
120:13	68:17	159:7	9:4	145:17	dot 14:16
138:11	74:6	160:1	discloses	division	doubt
146:21	81:1	dial 46:11	143:21	121:7,10	15:23
desira...	117:14	47:4	143:22	128:14	155:23
23:12	126:1	58:11	discon...	128:18	down 14:15
desire	154:5	diaphragm	30:24	document	25:2,5
24:14	155:25	16:23	discuss	4:24	30:15
163:24	158:13	17:2	53:16	13:15,17	39:2
desired	162:12	43:25	74:7	13:23,24	45:14
18:14	develops	158:10	99:17	75:4,11	52:5
detail	125:22	differ...	130:24	75:12,16	85:5
88:13	device	28:10	131:4	125:10	102:6
134:14	18:18	66:9	discussed	152:12	103:4,8
details	40:14	differ...	69:6	docume...	121:7
10:16	53:22	29:14,16	99:15,21	127:2,3	155:18
156:10	64:6	different	99:22	127:4	163:23
detect	67:5	21:14	152:12	130:9	drafts
148:21	120:2,5	33:19	152:13	156:23	125:18
detects	163:4,7	38:4,5	discus...	documents	126:19
112:8	devices	50:14	86:9	76:17	drain
determine	52:12	92:16	discus...	154:4,9	118:7,16
133:25	diagno...	102:3	98:21	154:10	118:20
154:22	146:25	106:3	156:24	155:1,10	drains
155:16	147:25	125:18	discus...	155:13	118:23
determ...	148:12	126:13	53:20	155:14	drastic
140:24	148:17	126:19	68:18,20	155:25	135:19
develop	148:20	162:14	68:22	156:2,9	draw 118:7
11:17	148:24	difficult	74:5	156:13	drawer
16:2	149:16	41:18	121:5,17	doing	139:9
27:22	diagno...	direct	disengage	22:19	drawing
79:6	146:22	98:25	20:1	32:5,5	29:20
83:18	148:4,9	Directing	34:13,16	46:21,22	30:19
159:13	diagram	158:25	38:21	52:5	drawn 56:2
159:19	13:7	directly	66:7	57:2	draws
developed	14:11	26:22	diseng...	83:1,5	118:18
15:19	27:7	27:6	49:11	142:6	118:22
68:20	41:23	37:9	62:8,13	146:11	drive
77:23	42:12	168:14	display	148:8	31:14
develo...	45:14	disable	16:11,12	150:15	46:8

  
**ESQUIRE**  
 DEPOSITION SERVICES

A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-3560	734-769-7806	616-552-4438

61:16	23:16	6:3	73:6,8	17:21	end 99:24
62:17	24:18	effect	73:11,13	21:23	131:8
149:7	25:15	23:1	75:14	30:1,8	138:20
driver	44:25	31:15	76:16	32:13	engage
15:3,5	52:5	36:24	78:5,10	33:15	18:12,16
18:13	DuPont 3:7	65:4	78:15,18	39:9	31:14
19:4,5	6:5	66:3	79:9,11	46:15	47:6,10
30:14	157:19	effects	79:12,13	55:21	48:16
31:25	158:17	117:14	79:16,22	56:7,20	60:15
32:8	during	139:2	80:20,23	58:9	engaged
33:14,17	68:6,18	143:9,13	81:6	64:15	25:3
33:20	74:5	144:8	82:12	65:23	52:24,25
36:22	80:21	146:4	92:2	69:9	61:2
100:25	103:15	eight	94:22	71:8	94:11
101:24	151:18	152:16	95:20	97:6	engine
104:2,15	158:13	either	118:17	136:8	16:4,5
105:18	159:14	32:23	120:16	141:23	17:14
105:18	D&L 1:9,10	33:10	121:12	electrons	21:1,3,5
105:25	1:12	59:18	123:3,24	69:21	28:15
107:25	<hr/>	77:11	124:7,19	70:2,5,6	29:5,6
111:3	E	104:23	124:25	70:7,9	42:25
146:14	E 6:17	EILD 128:24	130:2,5	70:13,16	45:8,24
driver's	each	electric	130:8	element	46:2
32:4	118:18	16:25	133:1	72:22	48:4,9
drives	earlier	17:16,17	134:15	73:9	71:12,14
53:25	11:1,21	17:19	138:21	eliminate	73:17,18
driving	13:2	28:18	140:8	21:10	73:19
18:9	23:2	29:10	156:10	37:24	80:10
30:15	29:15,22	31:13	156:13	162:1	84:14
46:13	30:6	32:20	electr...	164:16	113:8,14
63:1	37:17	44:13	76:13,21	elimin...	135:3,4
94:6	38:5	45:7	124:8	34:20	135:5,8
dropped	54:14	46:9,12	electr...	elimin...	engineer
34:8,8	89:18	69:20	69:16,23	164:20	6:21
34:12,14	139:19	82:8	69:24,25	else's	15:24
drops	157:19	153:13	70:4	131:21	26:15,16
20:12,16	161:19	electr...	electron	employed	75:14
DU 1:12	enamel	8:23,24	70:18	7:6,7	75:16
dual	27:12	9:1	electr...	9:11,19	78:20
111:12	74:20	15:22,24	8:7 30:9	employee	81:10
due 21:3	easily	19:13,17	82:8	96:4,13	95:20
135:2	147:16	29:11	83:8	employees	engine...
166:1	eastern	36:12,13	126:14	90:5,6,6	4:24
duly 6:8	166:18	36:17	128:17	95:3,18	7:14 8:6
168:6	education	37:25	electr...	96:13,18	8:8,12
dump 22:2	83:15	65:16	118:5	employ...	8:14,19
22:9,14	educat...	72:14	electr...	7:9 9:10	8:23,25

  
**ESQUIRE**  
 DEPOSITION SERVICES

---

 A RECORD OF EXCELLENCE
 

---

Troy 248-244-9700	Lansing 517-337-7337	Grand Rapids 616-456-6300
Detroit 313-961-5560	Ann Arbor 734-769-7808	Kalamazoo 616-552-4438

9:1	29:18	everyday	exclus...	expect...	3:7
27:24	35:21	69:18	164:19	87:16	
32:7	69:24	everyone	Excuse	expected	F
75:9	86:3	115:23	41:5	79:7	fact 28:19
83:19	165:9	everyo...	99:23	expecting	37:21
128:11	et 5:13	40:20	116:4	107:10	76:17
128:12	evaluate	everyt...	executes	experi...	78:9
128:16	75:17	87:2	56:25	83:15	87:25
130:23	160:9	88:24	exhibit	experi...	90:3
130:25	161:3	121:7	9:7	106:11	96:12
162:22	evalua...	evidence	12:20, 21	expert	107:1
164:22	78:14	7:3	12:25	78:22	109:2
engineers	even 23:19	exact	13:16, 18	79:3	111:7
15:22	71:24, 25	90:20	14:1, 4	91:15	117:24
72:15	84:13	165:8	15:21	134:9	123:19
94:20, 20	88:8	exactly	16:8	expertise	125:10
126:23	89:1	9:23	27:10, 12	86:22	145:8
159:15	105:10	83:5	41:23	108:5	152:2
enough	109:2, 4	107:1	54:13	experts	159:24
11:7	111:6	153:15	55:7, 8	110:10	factor
74:2	114:18	162:11	55:10	130:15	93:25
94:15	118:4	examin...	74:15, 17	134:8	fail 38:16
101:10	136:11	6:11	74:25	Expires	39:10
103:23	145:22	76:10	75:5, 6	168:25	101:25
104:5	event	85:20	76:11, 22	explain	102:2, 3
106:24	165:13	157:16	77:2, 6	8:15	106:8
ensure	165:14	examined	86:9	9:22	136:7, 7
142:11	165:15	6:9	95:8	11:24	136:10
entire	eventu...	example	109:13	13:11	136:20
75:23	7:12	12:2	110:13	15:25	136:24
108:9, 12	166:23	22:21	110:23	27:16	137:3, 5
115:12	ever 16:9	37:17	119:8	29:7	137:10
120:13	68:20	38:18	121:21	30:13	139:25
132:5	75:12	43:3	121:21	40:12	140:6
entitled	81:2	88:3	152:9, 11	88:12	161:15
27:13	82:3	105:13	152:16	94:4	165:8, 12
equal 73:5	99:21, 22	110:4	152:19	112:1	failed
equipment	126:22	111:2	153:1, 4	133:5	39:18
61:22	130:25	117:25	153:10	156:25	67:9
especi...	139:13	122:22	153:16	164:1	101:19
24:2	every	124:18	153:18	explained	102:4, 13
164:7	84:23	148:25	153:20	43:10	102:15
Esquire	106:19	166:1	153:23	explai...	102:18
5:18	115:3, 4	except	154:1	52:13, 14	102:20
essent...	115:9, 11	111:7	158:25	express	103:6, 10
10:3	117:4	excessive	EXHIBITS	72:15	103:16
16:4	139:11	165:16	4:11	E.II:12	104:9, 13

104:17	140:11	77:22	85:12	14:11,24	79:12,13
105:4,7	140:21	78:11,17	86:21	15:9	79:15,18
105:15	141:3,5	162:19	87:5	18:13	79:22,25
105:25	141:9	fancy 19:2	108:13	28:9	80:2,4
108:1	143:10	43:19	108:18	30:22	80:20,23
131:6	143:13	58:1	108:22	42:14	81:5
137:15	143:17	far 12:9	110:5	46:17,23	114:4,7
137:18	144:21	17:24	115:24	46:25	123:2,5
146:15	144:24	76:12	116:4,13	54:8	123:24
146:16	145:12	109:23	116:18	61:14	130:2,4
146:18	145:14	115:19	152:13	62:17	130:8
146:23	146:3,8	fast 70:9	157:6	79:23	131:3
146:24	146:11	70:10	158:21	122:7,18	132:14
147:19	147:14	faster	158:24	129:20	138:20
148:2,15	147:16	70:17	166:9,14	134:25	140:7
149:18	148:6	feasible	felt 25:19	147:13	161:16
159:15	158:5	149:15	few 41:10	168:6	165:10
160:2	163:24	149:19	67:20	fit 41:16	fluids
161:14	164:2,5	149:23	68:4	56:9	123:7,8
165:19	164:8,13	150:1,4	81:19	109:22	123:9
failing	164:17	150:9	165:2	138:3	FMEA 125:5
101:23	164:20	federal	field	five	125:12
104:3	failures	26:6,8	69:20	116:15	125:17
106:6,15	21:22	26:17	final 84:9	fixed 15:4	125:20
139:16	39:4,6	113:5,10	126:11	floor 1:22	125:24
140:10	107:12	115:18	Finally	2:13	126:23
140:17	142:3	federally	163:15	flow 70:2	127:17
140:25	161:2	113:13	find 13:13	70:18,18	127:20
fails 84:6	fail-safe	feed	43:3	71:1,19	140:2
102:25	88:11,19	100:19	126:17	73:21,22	141:14
147:10	89:9,12	100:22	126:20	88:10	141:19
149:7	106:14	107:4	166:22	160:24	141:20
failure	106:16	150:5	fine 85:9	flowing	142:22
39:17	106:19	151:5	147:20	72:19	143:21
63:3,24	130:7	feel	149:9	73:9	144:14
82:21	131:5	137:24	finish	77:13	144:16
93:11	138:25	feeney	116:8	87:8,15	144:18
104:19	142:2,16	2:11,12	135:22	87:17	154:14
104:22	fail-a...	5:22,22	fire 72:9	88:15,19	154:16
106:23	87:24	6:12	77:20	89:13	FMEAs
107:2	fair 76:22	14:17,22	80:10	162:2	126:17
117:13	fall 89:6	14:23	86:18,23	fluid	126:24
131:8	familiar	40:20	114:4,8	35:25	142:4
138:2,4	8:16	41:4,8,9	fired 90:1	36:4,11	154:18
138:9	11:3,7	68:3	first 6:8	78:15,22	focus
139:2,4	11:20	74:21,24	9:9 11:4	78:24	58:19
139:11	28:7	85:4,9	12:11	79:1,9	142:25

143:5,9	109:14	110:6	98:4,6,7	66:2	101:14
145:15	109:21	four 97:11	100:13	functi...	104:2
focusing	117:13	149:7	105:24	13:3	106:5
128:6	120:9	fourth	112:6	53:17	107:2,12
folks	121:8,10	15:14	124:6	functi...	107:16
159:20	121:11	20:15	130:9	101:2	107:21
follows	122:2	Fred 75:5	132:9	functions	107:24
6:10	123:23	freeze	133:1	11:25	108:1
foot 25:6	124:14	136:23	140:18	28:6	111:22
force	124:18	frequency	140:23	40:17,19	119:3,19
69:21	125:4,4	145:17	141:7	53:7	119:25
70:6	126:9	from 5:17	143:17	110:13	120:8,10
ford 1:9	127:14	7:5 8:6	145:9	112:20	120:21
1:10,11	130:6,17	8:8 9:20	160:15	further	120:22
1:12	131:21	10:7	160:17	81:13	120:25
2:23	134:5,8	18:11	162:2,6	165:1	121:9,18
5:13,23	140:16	20:6	164:23	168:11	147:6
7:7,10	140:23	26:22	166:20	furthe...	149:23
9:16,17	142:1	29:11	front	164:16	149:25
9:19,24	144:7	30:25	74:25	fuse 22:22	150:10
10:2,3,7	146:21	32:4,6	152:10	22:24,25	150:22
10:9	147:23	32:22	152:16	23:5,23	151:1,2
11:2,4	156:8	34:17	159:3	24:1,6,9	151:13
11:13,16	Ford's	37:6,25	full 6:14	25:2	153:17
11:16	24:14	38:4,5	function	37:13,19	159:11
12:18	27:17	39:13	51:14,23	37:24	159:21
13:2,10	106:18	41:14	53:1	38:2,6	159:25
13:13	forget	43:5	57:1	38:24	160:3,6
15:7,9	139:9	44:23	64:5	50:5,6,7	161:18
15:14,16	forgetful	46:8	66:25	50:11,19	161:19
18:1	121:6	50:7	72:13	50:19,20	161:25
21:9	form 15:8	55:15	78:6	52:20	165:20
24:7	55:24	59:15	82:10	63:9	fuses
81:9	56:7	65:7,19	91:9	65:12,19	106:9
83:12,22	forms	66:6,7	110:15	66:10,13	future
84:22	125:19	70:24	110:23	66:15,23	97:9
89:18	formula	71:4	111:3,5	69:11	f/k/al:10
90:6	72:14	76:19,25	111:12	71:5,22	
94:22	73:2	77:3,8	111:21	72:5	g
95:3	forth 31:4	80:6	112:10	92:1,2,9	G6:17
96:2,4,6	58:24	87:8,11	112:16	92:19,22	gain 69:22
96:9,13	fortun...	87:14	114:19	93:3,10	76:19
99:13	41:15	88:15,19	114:23	93:13,15	gazy 1:19
105:23	founda...	89:13	115:22	93:15,18	4:14
108:3,8	86:22	92:12	133:4,11	94:2	5:11 6:6
108:11	108:25	94:5	133:20	100:22	6:16
109:7,9	109:2	97:18	functi...	100:24	99:25

100:9	98:1,9	85:10	88:12	160:21	123:20
166:11	99:6,13	92:18	99:18	group 78:4	128:10
gave 21:14	135:22	99:6	100:1	94:20,21	133:15
138:4	154:15	105:13	103:3,8	94:22	136:9
161:9	155:20	117:15	120:21	95:11,19	138:5,13
gear 30:25	given 78:9	118:14	127:11	96:6	143:18
54:23	116:18	137:8	130:12	109:25	145:5,25
59:8	142:3	142:22	133:22	121:7,11	146:10
66:7	154:13	149:2	144:14	121:13	148:11
gears 8:21	168:10	150:18	145:6,9	121:15	150:3
general	gives 84:5	152:23	156:24	121:16	153:14
53:19	143:21	goal	157:8	122:2	153:24
83:7	144:18	125:20	160:14	126:1,2	160:15
145:9	144:20	135:6,10	160:17	126:10	guessing
generally	144:20	148:5	166:12	126:13	91:11
53:15	144:21	164:3	gone	128:1,8	125:15
generate	GM 83:21	goals	125:18	128:11	<hr/>
73:5	go 9:24	25:21	126:6	128:23	H
86:4	14:13	134:24	good 6:13	129:1,4	half 90:22
generated	27:9	135:23	14:21,22	129:5,19	91:22
72:17,20	28:7,21	163:16	16:10	134:22	152:16
genera...	29:7	GODFREY	67:10	144:13	hand 14:15
15:14	30:12	3:9	100:12	150:15	168:17
122:15	35:14	goes 65:11	106:8	150:20	handed
134:19	40:11,21	65:12	govern	150:25	129:13
134:23	42:10,17	112:6	77:23	151:4	handle
151:15	43:6	148:19	grade	154:4	106:18
152:20	46:20,23	going 7:24	20:20	groups	106:21
158:14	47:24	12:21	34:19	95:12,13	handled
164:23	48:22	25:2	gradual	96:2,8	106:14
generic	49:10,16	29:4	129:18	129:14	106:17
126:8	49:18	33:7	graduated	134:5	106:22
gentlemen	50:18	40:10,11	9:11	group's	106:23
69:1	51:6,16	40:24	gradua...	129:7	107:2
gets 26:22	52:1,18	46:19,24	9:10	guess 17:7	handoff
31:10	53:21	47:18,25	Grand 7:18	52:16	129:18
62:19	55:23	54:4	27:20	58:1	happen
119:10	57:16	61:1	ground	82:1	30:21
131:18	58:17	64:19	65:18,21	86:25	31:9
getting	59:1	65:16	65:25	88:8	32:10
73:14	60:3,10	67:22	71:3,7,9	93:24	36:25
114:20	60:11,12	73:23	71:11,16	95:23,24	88:3,5
give 7:3	61:24	76:4	71:17,24	96:13	92:21
27:1	62:21	82:2	73:20	97:15,21	94:6,7
59:16	63:13	85:6,14	76:6	98:5,10	94:10
75:2	65:5	86:10,12	77:12	98:11	161:3
85:12	67:18	86:15	112:6	101:2	happened

39:18	154:7	5:15	30:15	32:18	24:21
81:16	hear 48:2	21:5	34:9,13	37:7	25:12,21
88:9	heard 28:5	168:17	47:3,5	39:14	40:4
102:6	62:4,7	him 99:5	48:13	47:20	53:5,8
104:15	heat 72:8	99:15,17	60:22	49:9,22	53:18
161:2	72:11,12	149:4	103:3,9	49:23	67:1
happens	72:17,20	hired 90:1	hours 5:10	52:7	125:21
19:16	73:5	histor...	40:25	53:3	134:25
43:14	77:17	127:4,21	67:23	61:17,20	135:10
50:22	86:5	hit 18:13	68:1	62:3,20	164:12
51:17	113:22	18:15	85:15,18	63:1,19	164:19
61:11,14	113:25	19:8	100:2,10	65:3	improved
62:16	165:16	30:20	157:9,12	ignite	25:20
71:12	help 13:11	32:2	166:13	79:25	34:20
105:17	144:20	33:3,17	housing	ignition	improv...
105:17	148:17	33:20	80:7	26:12,12	34:18
106:9	149:4	47:7,8	Houston	47:1	38:9
131:13	helpful	48:17,18	2:6 3:12	48:12	135:19
131:17	52:13,14	48:22,24	Huh 156:19	84:17,19	164:23
147:9	69:22	49:6	hundreds	84:21	improv...
hard 94:15	helping	53:2	136:2	86:9,11	15:11
101:10	13:8	60:8,15	hydraulic	86:13,16	improving
103:23	hereunto	60:22	35:19,20	86:18	42:7
104:5	168:16	62:22,25	35:21,23	87:9	impulse
105:19	hermetic	63:16	35:24,24	88:16,20	131:14
106:24	130:18	64:21	35:25	89:14	INC 1:9,10
harder	Higash...	hits 31:6	36:15	100:19	1:11,12
70:16	96:18	hitting	78:15,24	100:22	include
105:19	high 139:4	19:6	79:1,15	107:3	127:3
105:19	139:6,7	60:17	80:20,23	114:1,15	included
harness	146:9	64:25	81:5	115:17	157:24
132:13	160:24	hold 52:4	132:9	118:11	incorp...
HARTLINE	161:4,5	67:15	138:19	118:15	82:15
2:17	164:7	134:11	I	118:22	incorp...
having 6:8	165:7	honor	150:5,12	1:14 6:2	
15:5	higher	97:19	idea 8:2	151:5	increase
23:12	138:14	hooked	identi...	implen...	35:23
84:1	140:3	69:5	4:12 5:6	83:9	36:20
103:10	highly	hooking	55:6,9	implic...	70:15,17
148:1,12	154:1	24:3	74:14	145:2	increased
148:13	highway	hopefully	identi...	import...	36:18
148:22	18:9	41:11	157:24	87:21	increases
head 12:15	30:15	hoses	163:15	impres...	70:18
97:4	103:4,8	25:25	identify	132:3	increa...
121:14	hill 20:20	135:14	39:24	159:13	161:12
131:16	hills 1:23	hour 18:10	idle 22:20	improve	162:8
151:24	2:14 5:1	20:12	23:18	21:10	indepe...

**ESQUIRE™**  
OPPOSITION SERVICES

A RECORD OF EXCELLENCE

Troy 248-244-9700	Lansing 517-337-7337	Grand Rapids 616-456-6300
Detroit 313-961-3560	Ann Arbor 734-769-7808	Kalamazoo 616-352-4438

15:5	inputs	38:14	94:25	join 9:15	54:4,8
37:7	58:5,6	Intention	involves	joined	55:6,12
57:14	163:4	4:13	9:1,2,3	9:17	57:20
82:24	inputting	Interest	issue	jolly 2:3	59:1
83:25	78:10	1:12	52:19	2:4	64:19
84:2	inside	intere...	80:1	166:19	65:5
90:3	36:6	168:13	117:7,8	Jolly's	67:20
135:8	44:14	intere...	issues	166:24	68:4
140:16	58:9	10:20	23:4	July 10:3	69:1,18
144:7	123:16	55:25	24:25	jurors	72:15,25
indicate	153:24	Intern...	81:7	12:14	73:7,15
18:3	inssofar	9:12	98:20	jury 6:19	74:19
42:1,18	80:18	interpret	item 139:6	8:2,15	83:5,20
47:17	81:4	75:17	139:8	14:11	84:5,23
69:1	installed	interr...	itemm	15:23	85:4,12
165:15	83:17	29:2	139:4	42:1	86:19
166:16	instance	interr...	164:7	45:15	91:11
indica...	14:12,24	95:17		47:15	92:4,15
160:2	instead	interv...	<u>J</u>	69:2	92:15
indire...	112:24	81:16	JACKSON	162:24	94:5,11
168:14	112:24	introduce	1:1	just 8:3	96:8
indivi...	instru...	5:19	James 1:3	12:21	98:5
53:13	46:16	introd...	2:12	13:22	102:1,6
industry	162:9	15:10	5:12	14:15	103:12
163:1	instru...	17:15	January	20:3,14	107:10
inform...	1:13	157:19	96:22,24	23:9	108:23
141:12	3:15 6:1	introd...	Japan 6:22	24:22	112:11
144:25	6:2 35:4	11:5	6:23	25:1,14	112:15
initial	85:23	involve	10:14	25:15	112:16
125:25	152:12	108:16	41:14	26:23,23	112:19
129:16	154:5,13	110:24	96:15,17	28:7,23	112:23
ink 127:11	155:2,12	111:1	97:23	29:1	113:20
inoper...	155:21	165:16	Jeaze 99:7	33:18	114:21
104:18	156:4,12	involved	Jeff 5:23	34:6	116:6
inoper...	156:14	8:19	97:18	35:1	119:17
38:3,25	162:18	10:25	Jeffrey	36:2	125:15
39:5	163:14	53:13	2:18	37:18	127:10
66:16,17	166:4	81:17	Jim 5:22	40:9,10	130:11
66:18	insula...	94:25	job 10:12	40:11,12	138:4
92:10	160:22	95:3	10:15	40:21	139:8,8
93:17,21	insure	124:20	11:15	41:24,25	139:14
146:17	38:14	131:2	jobs 98:22	42:4	141:16
151:12	39:22	135:14	Joe 68:15	43:19	142:11
152:8	92:8	involv...	Johnny	47:14	142:16
input 32:8	145:16	7:10,25	3:10	48:20	143:12
33:15	164:6	78:1	5:25	50:8,21	147:18
121:4	intended	81:14	85:22	52:16	153:6

154:10	75:7	23:23	81:9	60:11,12	44:8,10
154:21	85:2,22	24:7	leaving	64:18	49:16
158:21	99:25	125:16	85:7	65:5	50:22,23
162:4	100:9,13	later 7:19	left 61:3	68:6	50:24
163:3	157:15	16:11	81:12	86:1	51:1
	157:18	83:1	legal 5:17	92:11	57:6
<u>K</u>	158:22	launch	98:8	94:5	64:14
K6:17	163:15	125:7	legally	100:14	84:19
Kapton	165:3	126:3	10:2	100:18	91:15
158:4,10	166:11	128:22	less 58:1	101:18	101:1
keep 48:6	knew 98:16	129:24	90:21,22	102:5,24	107:19
132:14	114:6,7	151:21	91:17,19	104:12	107:20
keeps	114:11	law 2:3	91:22	105:13	110:4,15
31:19	114:14	115:18	116:15	111:23	110:19
KELLETT	145:22	lawyer	145:5	116:5	111:2,8
2:11	145:23	14:7	151:23	119:7	111:20
key 21:12	KNISTER	lay 69:14	166:1	121:20	112:5,15
95:20	3:1	76:18	let 14:15	135:21	113:1,6
kind 13:7	knowing	layout	14:23	136:4,5	119:6,8
16:9	24:10	14:12	17:1	145:19	121:2
18:18	knowledge	121:12	46:3	151:25	151:9
40:16	11:12	leak 114:3	50:1	152:9	152:1,2
42:12	24:13	130:12	52:21	166:14	153:20
109:1	110:1,2	131:1	53:3	level	159:16
126:8	134:12	145:16	54:13	36:18,20	like 8:1
129:18	knowle...	165:10	74:16,19	105:19	10:19
kinds	145:7	leakage	113:4	141:22	14:9
79:21	knows	78:14	116:8	levels	16:8,13
Kisy 1:24	131:3	79:9	135:21	161:4,12	17:8
168:21	KUCHLER	80:2,6,8	lat's 9:22	162:8	31:1,2
klingler	3:1	80:19	10:21	life 80:21	41:16
1:19		81:5	12:11,11	131:8,14	47:6
4:14	<u>L</u>	138:18	20:19	131:18	55:15
5:11 6:6	L6:17,17	138:19	28:7	132:1,5	56:16
6:16,18	label 14:2	145:10	30:10	132:7	57:6,8
6:24 7:5	ladies	145:22	31:22	133:2,18	63:9
9:25	69:1	146:8	34:5,23	lightly	67:13
14:24	Lafayette	161:16	38:24	94:11	71:2
21:25	3:3	leaked	40:9,9	lights	85:10
27:15	laid 109:1	79:22	42:6	19:14,18	86:4
28:22	large	114:7	45:14	20:6	94:2
29:13	120:21	131:6	48:20	23:7,20	126:16
41:4,9	last 6:15	leaking	51:19	24:4,11	152:15
41:22	62:7	138:15	52:23	26:9	165:23
47:24	116:15	least	53:21	32:12,14	likeli...
68:3	132:4,6	23:22	55:6	37:20	141:3,8
73:2	late 11:13	leave 10:9	57:16	38:21	likely

**ESQUIRE™**  
DEPOSITION SERVICES

A RECORD OF EXCELLENCE

Troy 248-244-9700	Lansing 517-337-7337	Grand Rapids 616-456-6300
Detroit 313-961-5560	Ann Arbor 734-769-7808	Kalamazoo 616-552-4438

140:6	15:7	41:16	90:18	68:17	master's
limita...	20:21	56:16	92:5,12	manner	8:7,22
25:15,17	95:9	86:4	93:20	80:15,16	material
34:21	118:8,19	147:1	94:8	165:12	123:18
limita...	127:7,13	lose 23:25	136:24	manske	158:10
135:15	127:17	lot 53:12	136:25	2:18	matter
limiting	151:21	84:17	153:13	5:24	5:24 7:3
120:2,5	161:21	110:13	Mainly	97:18	87:25
limits	longer	135:14	133:1	98:6	96:12
155:9,17	23:6	lots 25:25	maintain	157:5	123:6
Lincoln	127:8	142:5	15:4	manufa...	127:16
7:13 9:7	look 16:8	Louisiana	18:24	140:13	168:6,14
10:22	16:11,13	3:4,11	60:25	140:14	may 8:15
27:19	26:20,21	low 36:14	128:20	manufa...	13:8
30:17	27:11	142:23	mainta...	84:23	36:2
55:16	36:25	143:4,8	127:7,14	117:5	38:16
83:18	37:23	143:23	mainta...	manufa...	39:15
LINCOL...	49:20	lower	34:19	83:4	75:9
1:11	51:19	165:25	major	84:25	81:15
line 93:24	54:9,11	lowest	148:5	115:18	129:10
lines 36:4	56:1	141:19	make 14:6	many 25:24	158:5
36:4,7	74:19	141:22	32:17	29:18	maybe
linkage	119:7,7	lunch	45:6	68:9	16:11
43:12	121:20	100:13	48:6,20	84:15	42:4
liquid	135:21	lungs	64:19	91:12	53:19
36:6	139:1,3	17:10	65:16	94:24	54:8
listed	139:4		66:9	106:11	75:1
150:16	143:16	M	70:16	133:22	107:15
151:2	144:16	M1:24 3:2	82:20	133:22	127:6,6
little	148:3,8	168:21	116:6,8	133:25	139:24
7:19 8:2	148:11	Machines	123:23	135:13	Mazda
42:11	152:9	9:12	124:16	147:14	90:16
107:7	locked	made 41:19	124:24	148:21	115:7,8
108:4	75:23	43:4	130:6	156:2,7	McCARROLL
134:21	82:6	46:22	134:5	164:9	2:17
162:13	126:22	63:22	135:19	marked 5:6	McCoy
living	141:11	71:7	148:5	55:9	42:13
6:19	141:14	97:16,17	151:12	74:14,16	mean 10:16
LLP 2:17	141:16	142:16	163:7	74:24	10:24
3:9	looking	159:22	166:22	75:4	15:17,20
located	26:14	166:21	makes 70:5	marker	17:5
6:22,23	113:11	magnetic	making	72:23	24:19
126:16	119:17	54:25	106:13	Marquis	29:8
LOCATION	136:3	55:13	137:14	7:18	39:5
1:22	145:6	65:8	137:17	27:20	42:18
long 6:23	146:3	66:17,18	manager	marriage	55:25
9:13	looks	76:4,5	10:17	168:12	56:14

72:7	44:25	168:18	56:22	mis 133:7	138:2,4
76:15	130:20	168:24	102:12	MISSIS...	146:4
79:14,15	131:12	micro	103:6,10	1:l	147:14
80:12	157:22	118:6,18	106:6,15	Mm-hmm	147:16
90:1	mechan...	153:7	136:16	133:13	148:6
92:14,15	30:24	microc...	microp...	163:19	163:24
102:19	mechanics	29:21	106:7	mode 23:17	164:4,10
103:1	78:22	30:2,5	middle	84:8	164:13
106:18	mechanism	31:10	96:22,24	93:11	164:17
110:25	11:6	33:21	might 39:6	106:14	164:20
112:18	16:22	39:9,15	47:15	106:17	modula...
114:1	30:22,23	55:21	72:17	106:19	18:23
115:16	32:17	56:11,20	85:2	131:8	Monique
119:13	33:8	59:22	103:13	138:9	3:2 6:4
146:4,6	44:15	61:15	118:16	139:2,4	157:18
164:1	47:22	63:4	144:9	144:21	months
165:14	49:8	64:15	151:16	144:24	6:25
meaning	66:8	101:19	154:18	145:12	more 14:19
151:14	meet 68:8	101:23	Milap 99:7	145:14	19:3
means 19:7	163:7	101:25	miles	146:8,11	26:3,4
20:10	meetings	102:2,6	18:10	158:5	34:8
23:2	68:9,18	102:15	20:12,17	161:15	62:9
35:8,11	melted	102:20	25:5	164:2,5	64:18
38:11	165:23	102:24	30:15	model 13:5	67:20
40:14,16	member	103:16	34:9,13	14:13	68:4
49:14	15:23	104:3	34:15	27:11	84:5
50:10	members	105:15	47:3,5	40:11,12	88:13
51:1,4	6:18	105:25	48:13	40:15,23	95:2
61:19	8:15	118:1,4	60:21	41:11,22	106:5,12
67:7	162:24	118:10	103:3,8	42:1,3	107:7
82:20	mentioned	118:15	million	42:13	123:8
115:2	34:6	136:5,6	139:25	43:2	134:21
168:8	45:25	136:7,10	mind 85:7	44:3,11	140:6
measure	54:14	136:15	101:13	45:11,16	141:4
70:2,8	66:24	139:16	135:24	52:14	164:13
measures	method	139:25	minute	67:17	165:2
124:24	131:5	140:6,11	34:6	158:15	morning
mechanic	Michael	140:13	40:10	models	6:13
149:2	2:4 6:16	140:14	54:4	7:18,21	113:21
mechan...	Michigan	140:17	68:6	13:3	114:2
8:6,12	1:23	140:25	85:13	30:6	123:1
8:14,19	2:14 5:1	141:4,10	108:18	models	152:13
22:2,8	5:15 7:1	141:21	minutes	34:12	most 91:8
22:14	7:2 8:7	153:3	41:10	117:13	145:7
23:16	8:8,10	microp...	68:4	137:19	motor 1:9
24:18	97:22	72:25	85:5	137:21	2:23
25:15	168:1,17	microp...	116:16	137:23	5:13,23

7:7 9:17	62:12	107:8	40:16,17	87:24	163:16
26:6,8	70:6,11	necess... 111:6	40:19 50:13	88:2 121:21	obliga... 98:8
26:17	70:13,16	121:6	52:15	125:18	observed
28:18,20	moved	necessary 90:17,23	53:8,21 next 48:10	126:18 140:3	75:19 obstru...
28:24	14:18	74:9	54:9	141:13	14:7
29:6,9	40:22	93:9	48:11	142:24	obvious 67:4
31:11	movement	need 16:18 62:6	60:8 96:20	143:23	obviously 110:12
32:15	48:19	65:17	122:15	154:22	occur
33:1,4	60:9	66:19	134:19	162:10	24:12
33:22	70:5,9	72:12,18	134:23	numbers	33:16
46:9,12	much 29:17	86:5	151:15	90:21	39:6
53:25	34:20	89:2	152:20	140:18	145:13
54:10,25	90:17,23	133:14	158:14	140:20	145:20
54:19,22	90:25	148:16	noise 48:2	140:23	146:5
55:11,12	148:4	164:16	62:4,7	numerous	occurred
59:7,21	multiple	needed	normal	136:9	34:21
61:2,15	96:2	28:15	24:8	0	128:5
62:13,16	112:12	29:3	37:18	Oakland	138:25
63:1	112:20	82:8	62:14	168:2,17	occurr...
94:22	147:16	91:13	63:21	168:24	103:25
134:8	must 26:9	needs 91:8	70:23,25	OAHS 2:17	141:18
136:19	63:6	negative	105:1	object	141:22
136:21	myself	17:8	normally	108:14	occurring
153:13	157:19	neither	104:16	108:20	105:24
156:8	MY92 75:9	161:7	105:2,2	108:25	139:14
Motorola	N	166:19	105:3,20	109:5	off 18:3
140:15	M 6:17	memours	NORMAN 2:3	objection	19:1,4,7
140:19	name 5:17	1:13 3:7	North 97:6	Notary	19:21,21
140:23	net 31:15	not 31:15	98:24	86:21	20:21
141:2,9	5:22,25	never	168:3,24	87:6	25:6
141:21	6:14,15	98:10	notes	108:21	26:12
motors	6:16	145:16	85:13	110:5	29:9
8:21	85:22	146:5	155:24	115:24	32:2,19
83:7	95:21	165:19	nothing	116:6,9	40:21,24
mounted	121:13	now 3:4	6:9	116:14	49:6
45:4,20	129:4	11:17,21	28:25	object...	52:21
move 14:9	157:18	11:22,24	87:18	116:12	54:3
17:2	161:9	12:8	88:14	objective	61:18
18:24	names	15:18	notice	147:12	62:14
21:2	95:10,11	16:2	4:13	object...	65:6
43:12,25	95:16	21:11,13	26:23	28:13	67:10,22
47:10,18	narrating	25:13,20	number	134:19	E S Q U I R E
47:22,23	46:21	28:14	4:12	135:18	deposition services
59:15	natural	31:24	13:16	135:23	Grand Rapids 616-456-6300 Kalamazoo 616-552-4438

## A RECORD OF EXCELLENCE

Troy 248-244-9700	Lansing 517-337-7337	Grand Rapids 616-456-6300
Detroit 313-961-5560	Ann Arbor 734-769-7808	Kalamazoo 616-552-4438

71:12,14	166:20	32:15,23	one 136:1	136:25	70:23,25
73:17,18	Officer	33:1,10	150:18	137:5	operator...
73:19	68:16	38:15	154:11	146:16	24:11
80:10	165:7	39:24	only 40:2	166:14	26:10
84:14,17	Oh 118:17	40:1,2	47:2	opened	92:25
84:19,21	124:16	42:7	84:11,22	51:10	93:2
85:11,14	125:9,20	46:4	106:1	136:22	101:3,5
86:9,11	134:25	50:4,8	112:16	opening	102:10
86:13,15	155:19	52:16,19	118:14	17:3	102:16
86:16,19	old 12:7	53:7	118:16	36:24	102:22
87:9,10	12:12	56:21	127:6	42:25	102:25
87:17	13:1	62:9	144:1	44:1	103:1,13
88:16,20	15:25	64:18	146:10	52:5	105:5,6
89:2,10	17:12	65:18,20	on/off	63:2	105:8
89:14,18	19:2,9	67:8	18:5	opens	113:13
90:7	19:12,23	69:25	45:21	31:19	133:23
96:12	20:9,19	74:19,25	open 16:18	93:21	operator...
97:4	20:23	75:1,2,3	22:6,14	operate	10:4
100:1	21:15	82:1,12	22:18	24:10	24:8
102:21	28:5,12	82:14,22	23:15	36:3	operator
103:17	32:6	84:9	28:16	40:7	5:8
113:8,14	34:7,18	87:20	31:4,12	45:10	14:19
114:1,15	42:7	96:25	31:17	46:5	40:24
115:17	45:2,11	99:4,24	36:19,23	64:1	41:2,5
118:6,11	45:16	109:19	37:5	91:14	47:6
118:15	50:9	112:24	39:11	104:16	63:5
118:22	51:2,3	112:24	47:22	163:5	67:12,22
121:13	52:8,10	115:3,4	49:1	operated	67:25
129:13	53:17	115:9	51:20,21	11:9	74:23
131:16	121:22	118:18	53:4	82:5	85:10,14
150:12	135:4	119:2	54:11	operates	85:17
150:16	older 30:7	126:22	55:2	43:23	99:23
151:24	165:24	134:25	56:15	69:17	100:6
152:5	one 30:14	135:18	58:25	147:20	157:8,11
154:7	131:18	139:13	59:9	operating	166:10
157:8	one 5:11	139:24	60:24	87:2	operators
160:23	16:2	142:15	61:3	operation	20:1
166:12	18:5,5	145:6	62:24	10:11	opinion
offering	19:3,6	149:23	63:15	12:10,18	83:19
15:7	20:11	151:1,3	66:5	17:24	164:21
office 2:3	21:9,12	159:25	67:15,15	22:10	opport...
98:15	23:4,13	160:6,13	71:15,25	27:17	135:22
120:17	24:17,25	160:19	104:17	30:4,12	order 22:5
166:24	25:21	163:17	104:20	37:18	66:10
166:24	27:1	163:20	104:24	56:12	74:9
offices	28:13,22	166:16	105:2,3	57:12,20	86:4
7:1	29:18	166:25	105:4,7	63:21	90:17,18



**ESQUIRE™**  
PROFESSIONAL SERVICES

A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

91:8,21	84:23	17:1,2	25:22	44:2,19	111:17
105:21	85:1	17:12	67:1	44:24	111:20
105:24	90:3	20:20	109:9	53:6	113:12
112:25	92:3	21:2,5	overhead	54:22	134:6,12
113:21	94:21	42:5,11	84:19	72:17	134:14
113:21	95:12,13	43:12	overload	83:11	142:3
113:24	96:8	50:19	24:5	84:11	143:20
113:25	97:8	58:25	107:21	114:14	148:18
114:23	98:13,18	76:18	overly	114:19	148:21
124:24	101:12	83:3	69:13	114:22	pass
150:11	110:3,12	112:15	own 10:5	118:21	157:14
organiz...	110:22	127:11	ownership	131:6	166:7,9
68:13	111:11	128:13	90:4	132:15	passenger
organized	111:14	132:14	P	132:18	128:12
85:13	111:17	134:22	P 2:12	134:9	128:22
orients	111:18	134:23	Pacific	144:15	past 9:24
14:11	111:20	135:24	10:17	144:16	26:24
origin	112:10	140:3	package	144:19	131:18
86:23	112:10	159:5	145:7	145:7	path 65:7
original	112:10	160:16	82:13,22	partially	65:9
62:15	113:10	166:22	pad 72:24	47:22	80:2,6,8
Orleans	113:12	output	page 4:12	partic...	80:9
3:4	114:22	60:23	72:24	167:2	Please
other 9:18	118:9	65:2	panel	partic...	129:8
14:7	120:22	outputs	57:25	95:23	Please's
18:5	120:25	163:4	58:12	partic...	129:5,7
20:8,10	121:3	outside	59:16	26:18	pedal
23:24	123:8	133:24	Panther	57:10	19:13
25:19	124:14	over 13:25	7:22	75:4,20	22:5
29:13,16	128:11	21:4	11:18	99:19	52:4
33:23	129:14	34:18	91:7	144:15	pejora...
38:15	134:5,6	38:9	100:15	150:19	24:20
39:4,5	134:12	41:19	109:10	159:6	pen 28:22
44:24	135:10	47:11	158:15	parties	Penn 97:6
49:25	135:18	48:24	paper 86:2	168:12	Pennsy...
57:3,7	135:23	60:14,22	155:18	parts 8:20	97:7
58:13	136:2	61:25	166:14	26:3	pens
63:5,25	157:1	62:22,24	papers	40:13	127:11
65:18,22	others	63:14,16	13:12,14	42:11	people
67:8	82:25	64:25	155:20	46:18	23:25
70:1	83:3	68:19	pardon	57:3	24:3
75:22	85:2	72:24	127:10	58:13	36:2
76:3,5	99:6,8	74:18	part 4:22	69:25	47:15,16
77:12	135:9	110:8	10:10	82:22	68:11,14
81:13	oudia 1:3	128:1	11:6	110:22	69:15
82:1,1,3	5:12	160:22	13:14	111:11	95:11
83:3,4	out 14:9	overall	43:5	111:14	98:15

**ESQUIRE**  
DEPOSITION SERVICES

A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-352-4438

13477  
6-19-2023  
ENR2-13477

107:17	periods	55:3	100:16	117:3	123:22
110:16	118:8,19	74:21	109:10	policy	138:20
128:25	permis...	picture	158:16	142:2	143:9
144:7	40:21	16:10	play 110:3	Pond 99:4	144:20
perceive	perpen...	42:21	please	PONT 1:12	144:21
144:24	14:20	piece	6:15	Porter	144:23
perceived	person	29:18	9:25	75:6	146:4
144:9	18:7,9	54:23	41:7	portion	165:24
146:6	37:21	55:1,4,7	68:2	124:21	possibly
perform	95:21	pieces	73:3	125:3	15:24
82:9	108:8,11	54:12,25	85:19	position	148:21
110:15	109:7,9	55:23	100:11	18:24	poster
111:12	109:13	109:20	157:13	31:20	27:9
111:21	109:19	109:22	plural	32:18	postgr...
112:10	120:12	157:1	108:19	47:14,20	8:9
114:19	120:14	plade 7:17	plum 26:24	47:20	potential
114:23	167:2	15:18	27:1,5	49:9,22	21:21
115:22	person...	28:9	point 9:22	49:23	26:4
125:4	151:15	45:7,8	42:5,10	51:20	39:4,17
165:7	personnel	46:2,10	46:17	52:7	72:8
perfor...	89:21	63:5	56:3	60:25	79:8
21:8	person's	87:8,14	67:17	61:4	81:5
34:17	37:18	92:6,17	72:1	62:3,15	96:21
79:8	pertain	105:23	81:17	62:20	114:8
132:19	111:6	117:2	82:21	63:2,19	138:23
132:21	pertained	placed	109:24	65:3	145:25
132:23	156:15	7:12	112:5	81:9	potent...
135:1	pertains	10:22	119:15	84:14	146:12
163:17	26:7	27:19	119:20	104:9,13	potent...
perfor...	27:18	28:11	124:7	104:17	79:23
64:5	philos...	plaintiff	127:20	105:1	114:9
performs	82:18	1:5 2:8	127:25	158:9	123:14
57:1	phone	167:1	146:10	possib...	143:18
110:13	166:21	plan 88:9	147:14	24:8	145:13
112:20	166:22	plane	147:16	77:17,20	146:10
perhaps	167:2	41:14	148:6	141:5	potent...
7:19	phrase	planning	160:15	143:13	146:3
12:14	165:9	96:19	163:24	143:22	power 16:5
14:8	phrasing	plans 97:8	164:2,5	143:23	21:1,6
period	133:7	plant 97:5	164:8,13	166:5	26:22
20:21	physical	97:6	164:17	possible	28:16,20
68:19	8:20	plants	164:20	102:17	29:3,5
103:15	physmic...	97:1	pointed	102:21	29:11,12
129:13	126:16	platform	159:5	106:19	32:19
129:14	126:20	7:22	pointer	106:22	33:7,22
period...	pick 41:11	11:10	14:5,8	123:17	34:3
97:10	42:17	91:7	pointing	123:21	37:2,6

38:1	13:7	12:18	probably	137:8	147:16
39:13	76:10	164:23	produce	147:17	
42:25	77:7	previo...	55:6	74:2	164:13
45:7	126:18	90:6	68:4	155:14	provide
54:1,15	presence	135:2	69:14	155:24	35:8
60:5	72:7	primary	90:22	producing	46:6
61:18	74:8	19:22	91:10,22	80:9	48:4
65:15	77:2	23:1	98:24	produ...	50:10
66:14	168:8	24:17	99:9	11:5	58:9
72:12,13	present	32:22	109:25	81:3	67:6
73:4,4,5	3:17	38:10	116:15	126:25	74:3
73:15,16	162:5	51:1,4	119:16	129:18	82:19
73:22	166:20	68:14	123:12	products	142:10
74:2,4	press	115:1	135:25	11:2	143:5
84:20	14:15	128:1,8	136:1,11	Profes...	146:22
86:5,8	38:20	128:20	136:13	168:22	154:4
86:10,12	103:2,7	128:25	154:10	program	155:1,9
86:14,20	103:23	136:1	156:21	56:25	156:3,9
90:11	104:5	161:17	problem	68:17	156:11
93:16	pressed	principal	26:1	96:25	provided
113:22	101:9	54:15-	34:21	127:1,2	37:2
113:25	pressure	66:25	50:14	progra...	46:14
114:11	17:8	68:12	81:3	9:3	53:14
115:16	35:18,31	prior	83:5	prohibit	117:19
117:16	35:23,24	13:10	103:22	80:19	154:10
117:19	36:6,10	29:19	105:24	project	155:11
135:5	36:15,18	32:1,11	123:8	140:21	156:23
147:2	36:20	34:22	143:17	proper	provides
150:11	75:10,15	38:9	143:22	131:25	65:15,20
151:10	77:4,8	63:10	143:24	154:23	92:2
powered	105:20	98:22	144:2,3	properly	providing
112:25	154:23	106:11	144:6	88:24	61:18
113:18	pressures	probab...	161:23	160:21	82:4
114:15	132:17	137:22	162:5	proper...	142:2,25
115:13	155:7	137:25	problems	130:20	143:5,11
115:15	Preston.	138:15	11:10,22	propri...	147:24
115:16	2:5	139:13	20:23,24	154:21	Public
practical	prevent	139:23	21:8,9	155:4	168:3,24
94:4	80:19	140:9,17	26:4	156:7	pull 21:7
precisely	87:8,14	141:17	79:20,21	protect	pulls 44:1
129:11	88:15,19	143:23	135:3	21:21	pump 45:9
Precision	105:24	144:2,21	proceeded	93:12	46:1
4:23	143:16	164:7	167:4	139:10	48:3,4
75:8	preven...	probable	Proce...	139:14	purpose
predict	89:13	141:4	100:4	139:15	35:5,7
97:12	previous	144:22	process	142:7	39:25
prepared	11:3	144:23	82:3	147:14	40:2

43:10	167:7	106:8	117:3, 6	recently	142:10
66:25		rate 70:2	117:7	10:1	redund...
purposely	9	70:10, 13	118:14	96:11	84:2
151:6, 7	quantity	70:17, 18	118:16	141:15	142:25
purposes	70:10	rated	119:23	recess	143:6, 12
41:25	question	144:22	120:7, 19	41:1	redundant
55:6	16:13	rates	120:20	67:24	21:18, 21
59:11	82:1, 2	140:21	122:3	85:16	23:12
push 52:4	84:9	reach	138:18	100:3	24:15
69:21	93:24	48:24	150:23	157:10	32:17
70:16	115:20	51:9	151:3, 8	reconv...	34:1
pushes	116:14	61:25	151:11	100:4	35:8, 11
70:7	116:23	64:25	155:22	record 5:9	35:15
pushing	116:24	reacted	156:22	5:20	45:1
22:11	123:20	32:8	157:2	6:15	50:3
put 12:20	128:10	read 19:20	reason...	40:21, 25	52:2
14:1	138:1	23:8	83:19	41:3, 25	61:19
20:5	142:19	32:14	164:21	46:18, 22	63:6
27:9, 12	146:7	46:15	reason...	48:7	67:7
41:22	148:11	57:5, 7	148:10	67:18, 23	82:19
46:3	160:8	real 40:13	164:10	68:1	reengage
47:13	162:13	42:13, 16	reasoning	85:11, 15	25:7
50:1	162:14	42:22	89:1	85:18	reengaged
54:13	questi...	43:3, 5	reasons	100:1, 7	52:22
55:6	68:4	44:20, 21	11:16	127:16	REEXAM...
74:17, 19	159:5	realizing	21:12	133:15	158:23
119:9, 17	questions	149:8	24:17	157:9, 12	165:4
119:19	7:24	really	recall	166:12	refer
121:24	67:16, 20	30:3	50:8	166:15	12:21
122:1, 3	81:21	46:9	68:14	166:17	reference
122:5	85:1, 3	64:4	90:20	records	12:23, 25
125:4, 7	157:20	69:21	95:10, 10	127:6, 13-	14:10
125:11	158:19	70:4	121:12	zecross	15:21
132:8	160:6	96:13	121:19	165:3	35:25
139:8	162:10	121:6	127:19	red 12:15	69:2
149:16	165:1	reason	129:3	14:16	152:25
149:23	166:8	20:16	141:7, 12	61:25	153:3, 9
150:9	quite	22:25	151:20	72:23	refere...
putting	25:23	34:7, 14	151:24	redesi...	96:9
82:12, 21		38:25	154:7, 9	164:11	referred
119:24	R	39:10, 20	154:10	redeve...	7:22
122:10	R1:3 5:12	62:17	155:3	42:8	13:22
122:13	6:17	88:21, 23	161:8, 11	redirect	161:5, 18
150:20	73:12	92:7	163:18	158:22	163:23
151:1	Rahaim	98:16	receive	reduced	regard 7:9
p.m 100:3	129:4	106:7	150:11	168:7	regarding
100:5	rarely	116:25	151:9	redund...	67:17



**ESQUIRE™**  
DEPOSITION SERVICES

A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-357-7357	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

79:8	remains	47:11	133:24	27:25	32:18
regard...	38:14	73:6	134:18	81:1,10	49:21
22:18	remarked	85:23	requires	90:10	62:14
39:15	75:6	157:19	113:6	109:8,9	84:7
Regist...	remember	154:22	132:4	109:14	returning
168:22	29:21	repres...	research	109:19	39:14
rejected	81:24	75:22	82:25	121:8,11	49:8
83:6	95:12,13	76:1	reset	123:25	reveal
relate	97:2	repres...	40:10,22	124:1,3	77:2,7
59:2	121:21	6:3 42:2	49:12	125:2,23	review
related	129:12	42:3	resident	129:1,8	75:9,20
82:23	129:15	166:25	10:13	130:19	96:25
98:22	151:18	repres...	resist...	131:11	124:4,4
133:21	165:8	68:8,9	72:18,22	131:25	124:10
relates	rememb...	repres...	73:8,13	133:10	124:14
42:12	129:11	6:5	161:6	134:12	reviewed
78:6,18	remove	19:14	respect	144:13	124:6
134:16	37:5	repres...	24:22,23	157:22	right...
relati...	39:13	29:25	80:17,18	162:15	119:10
9:24	Removed	42:2	response	163:12	119:16
70:12	50:20	63:17	157:20	rest 69:10	risk 67:4
relay	removes	request	respon...	89:5	139:4,6
150:9,21	66:5	7:3	78:4	92:13	139:7
release	removing	81:20	81:14	result	140:3
62:20	50:6	97:16,17	90:14	72:7	142:24
132:17	reorga...	97:18,20	108:6,7	83:14,15	143:4,8
154:23	41:10	requested	108:9,12	165:25	road 25:2
reliab...	reorient	37:8	125:25	results	role 111:5
25:22	41:24	99:12	126:3,5	155:6	129:7
106:7	repeat	reques...	126:7,11	161:10	162:11
135:11	104:11	167:3	126:13	resume	rotated
135:16	116:23	require	127:24	18:6	61:2
135:19	138:1	130:17	128:2,8	45:22	62:23
141:24	replaced	required	128:14	85:8	rotates
163:20	29:18	46:4	128:15	retained	58:21
reliable	replacing	111:16	128:21	126:2	59:8,8
142:12	48:4	113:13	129:14	127:18	rotating
relied	reporter	127:7,8	129:19	return	31:4
19:22	1:24	127:14	131:22	23:17,17	58:23
162:4	5:20	requir...	132:2,11	37:7	60:24
rely 29:4	48:7,21	26:6,8	132:16	52:7	routed
52:1	168:22	113:6	132:18	53:2	160:22
63:6	168:23	120:9	132:22	61:16,19	routine
140:23	reports	131:14	162:18	62:2,18	146:25
relying	98:25	133:3,19	163:6	67:18	148:17
51:1,3	represent	requir...	respon...	returned	148:20
64:23	5:23 6:1	78:12,18	7:15	22:19	148:24

RPR/CS...	58:18	69:2	24:21	46:13	130:5
1:24	60:16	75:21	29:20	54:1	134:22
168:21	76:14,17	76:9,25	40:23	60:21	134:22
rub 160:23	82:10,13	77:6,11	43:14	sent 32:23	168:16
rubber	92:2	85:8	47:8,9	separate	smts 82:21
16:23	104:7	91:6	47:10,16	10:5,6	setting
run 112:25	119:5	92:16	47:16,21	25:24	51:19
161:3	165:25	94:5,18	47:22	29:18	131:25
166:4	satisfied	95:1,8	48:13,21	32:23	setup 4:21
running	124:22	95:24	48:25	33:6	12:17,20
21:5	161:20	100:15	51:10,17	56:1	15:12
48:3,10	satisfy	101:15	54:24	84:1	16:12
127:11	162:4	101:21	56:19	separa...	40:18
160:19	saw 60:23	108:17	59:15	92:12	46:11
runs 29:9	62:2	111:13	63:18	94:9	57:19
S	63:1	111:15	74:20	service	58:2
65:2	111:18	86:14	146:17	64:10	
S 1:25	122:7,18	112:23	103:22	149:3	121:22
5:17	151:3	113:12	109:13	Services	several
safe 23:17	saying	117:3	111:8	5:18	9:2
38:15	48:7	119:18	117:7,8	serve 11:5	21:14
82:20	92:18	149:25	135:13	43:7,15	49:5
84:8	138:7	152:19	148:25	43:17	82:7
137:15	143:3	154:2	152:25	44:15	163:16
137:18	144:6	157:24	153:9,13	52:6	163:23
147:20	says 16:7	159:1	153:17	set 15:3	severe
149:10	26:9	160:1	153:20	17:16,21	144:24
149:12	31:7	schema...	153:22	17:25	145:12
149:13	86:18	27:1	165:19	18:6,10	145:14
safer	143:24	school 8:4	seeing	18:15,17	145:24
83:21,24	scale 43:2	Schuck	29:22	20:17	severity
safety	schematic	68:15	seeking	22:10	144:3,6
26:6,17	4:15,16	seat 67:19	53:5	25:5	144:22
40:4	4:18,20	second	seem 60:9	30:21	145:18
67:1,5	13:6,10	1:22	seen 16:9	34:15	145:19
84:2	13:13,20	2:13	75:12	36:18,20	146:9
87:22	13:25	19:7	selected	45:22	Shah 99:7
93:24,25	14:10	111:21	31:20	47:8	sheet 86:2
sale 15:8	26:14,15	127:10	61:6	48:18,22	shop 148:1
salesp...	26:17,20	secondary	selecting	48:25	148:14
68:16	27:14,16	35:11	164:14	51:6	short
Sam 129:4	27:18	secretary	send 18:18	60:8,20	61:17
samma 7:17	29:22	166:22	32:15	60:22	107:23
7:19	41:24	section	sends 31:7	62:23	138:15
28:8	42:14,20	41:17	31:11,13	63:14	157:3
32:5,8	44:14,17	see 12:15	sensor	101:6	160:23
33:18,21	54:21	14:17	46:8,9	103:9	161:24



**ESQUIRE™**  
POSITIONING SERVICES

A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-3560	734-769-7808	616-552-4438

shorted	59:10	31:11	simult...	snagged	98:21
136:22	65:14	32:23	31:12	72:24	99:1
Shorthand	71:8	46:4	since	snap 62:19	110:2
168:23	73:17,18	57:5,7	73:19	65:3	118:5,6
shorts	73:19	signif...	129:16	snaps	122:3
136:25	102:6	29:23	144:5	63:19	123:7
short-...	118:5	signif...	single	software	125:15
161:6	149:14	9:9	62:21	9:3	127:25
show 22:21	152:5	29:13	115:9,11	sole 95:25	135:15
26:15,17	shutoff	137:22	139:11	solenoid	139:12
40:18	34:12	137:25	147:14	44:13	139:23
45:15	side 65:18	148:22	148:6	solid	146:5
49:12	65:18,21	signif...	163:24	32:19	147:24
50:22	65:22,24	21:10	164:2,5	39:18	148:12
52:16	76:3,5	similar	164:7,13	65:23	149:15
56:15	77:12	12:9	164:17	76:6	151:17
57:19,22	78:15	17:7	164:20	104:8,12	157:20
60:3	79:9,12	30:20	sir 6:13	137:2,4	160:5
61:8	79:16,22	32:1,10	10:9	153:22	161:3
63:10	80:20,23	34:11	12:16	solution	165:15
65:7	81:6	42:5	13:14	83:24,24	166:21
74:16	123:3,24	75:22	14:3	solved	166:22
77:11	124:25	104:3	27:1	11:22	somebody
111:3	130:2,8	simpler	29:24	50:14	108:2
154:18	132:9	29:17	67:5	someday 7:24	111:8
showed	138:19	simpli...	74:16	8:9	somewhat
75:11	138:21	4:17,19	76:15	11:21	79:25
showing	140:8	27:13	79:17	13:12,21	82:23
40:15,17	signal	30:10	80:16	15:8,10	159:20
44:8	18:18,19	76:9	83:10	16:18,25	someone
54:10	19:20	154:1	84:3	18:18	19:1
75:24	20:4	simply	sit 118:8	22:25	24:8
76:1	23:7	33:17	mits	28:6	37:17
110:16	31:7,13	SIMSES 3:1	118:19	34:7	86:17
156:10	32:15	simulate	situation	36:2	88:3
shown 27:7	33:6,18	50:6,19	21:4	38:25	124:14
44:14	33:19	58:5,6,8	25:1	39:9,20	131:21
91:5	46:6,7	58:13	38:23	40:14	someplace
111:15	46:14	63:3,9	92:23	52:11	120:15
111:18	57:7	64:22	106:3	58:8,12	122:3
111:20	58:9	122:15	166:23	63:4	something
shut 28:16	60:20	122:23	Six 6:25	69:18	12:13
31:5	112:7,7	simulates	sime 121:9	80:5	15:1
32:16	117:9	45:16	slow 25:4	81:8	17:7
39:2	121:4	60:2	slowly	85:2	24:2,12
55:3	147:19	62:1	42:17	87:1	25:10
58:25	signals	65:1	62:3,18	95:2,18	26:24

ERB2-62541 13439


  
**ESQUIRE™**  
 DEPOSITION SERVICES
A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

29:21	17:14	134:6	42:11	97:9	still 38:7
38:18	21:1	specif...	St 3:11	stating	38:21
87:12	28:16, 20	78:11	stand 14:9	67:4	40:5
88:9	29:3, 5	124:5, 6	73:1	stay 39:11	51:20, 21
90:21	29:12	133:10	135:23	stamp	54:1
102:5	48:5	157:22	standard	20:20, 20	64:4
106:9, 10	54:15	specified	26:18	steering	72:1, 3
107:7	70:19	120:12	166:18	18:1, 2, 4	73:25
113:2	71:2	131:19	standa...	19:7	82:23
116:5	74:8	specifies	140:19	45:21	83:23
141:18	75:25	163:4	standp...	57:9	101:8
147:9	76:2	specify	32:4, 7	60:17	102:9, 15
148:19	77:3, 7	78:4	32:22	142:8	102:21
148:25	84:13	155:7	34:17	stemog...	102:25
149:1, 3	135:6	specif...	76:25	168:8	103:13
154:19	so-called	121:9	162:6	step 40:12	103:17
165:15	7:22	speedo...	stands	45:15	103:19
sometimes	34:23	48:14	73:10, 12	93:19	104:4
107:20	speak	spell 6:15	101:22	105:18	105:14
107:22	42:13	spin-off	start	111:7	117:8
somewhat	56:12	89:23	31:11	113:7	118:6
32:10	71:12	spite	86:1	stepped	129:20
58:1	83:1	37:21	125:12	93:5	141:23
62:3	speaking	spool	125:12	111:4	147:7, 20
soon	53:16	30:24	128:6	stepper	147:20
125:12	160:5	31:1, 2, 2	started	28:19, 24	152:5
161:23	specific	31:4, 14	14:2	29:6, 9	stint 9:15
161:24	87:1	31:17	20:21	31:11	stop 116:7
sorry-	95:10, 11	55:2, 13	77:20	33:1, 4	stoplamp
79:15	128:6	58:20, 21	86:18	33:22	152:5
95:17	134:21	58:23, 24	108:23	37:8	stopped
121:6	145:10	59:3, 5, 7	166:17	54:10, 15	33:7
sort 8:4	154:9, 11	59:8, 15	starting	54:22	straight
8:21	161:9	60:9, 23	62:15	59:7, 21	116:5
13:6	specif...	61:2	starts	61:2, 15	Street 3:3
16:18	78:13	62:2, 12	65:9	136:19	stresses
26:1	specif...	62:23	state	136:21	132:8
111:12	77:23	64:18	32:19	steps	strictly
147:24	78:2, 3	65:3	39:18	30:12	67:6
148:12	78:12	66:7	65:23	Steve 6:3	strike
149:16	120:21	spun 89:18	76:7	68:16	37:14
153:5, 14	124:11	90:7	104:9, 12	Steven	strongly
153:15	124:15	96:12	137:2, 4	3:17	109:5
153:24	130:20	squared	153:22	sticker	stuck
sought	131:15	72:21	168:1, 18	12:20	39:21
21:10	132:1, 4	73:7	States	14:1	104:20
source	133:19	squares	96:20, 24	55:7	104:23

104:23	65:21	106:13	114:23	112:15	109:3,4
105:4,7	76:24	112:18	115:22	134:3	142:20
study 8:18	163:8,9	114:20	switch's	136:4,5	145:9,10
83:10,14	supplier	123:23	78:14	148:1,13	155:10
stuff 95:5	143:21	124:16	sworn 6:8	155:24	157:25
style	144:1,2	124:18	168:6	157:3	tap 19:8,9
121:22	144:5,8	124:24	systems	taken 5:14	19:16
subject	144:18	126:21	8:10	100:3	23:9
127:15	144:23	127:15	12:9	124:24	25:3
subjected	145:4,6	130:6	21:3	128:1	32:3,11
161:12	154:15	134:5	57:15	168:5	49:15
subjec...	154:18	143:18	82:24	takes 46:2	50:21
162:7	suppliers	144:10	90:11	46:10	51:16
substance	53:10,12	145:14	94:21,22	119:9,10	107:10
98:19	53:13,16	146:6	108:16	taking	tape 5:10
99:10,16	142:4	148:5	108:19	14:6	99:24
99:22	suppli...	150:3,14	108:24	47:11	100:8
Successor	144:16	155:19	109:3	talk 10:21	tapped
1:11	163:6	157:5	110:3,10	12:11,11	51:18
suck 17:9	supplies	159:17	112:13	30:10	94:12,14
sucked	119:6	166:25	114:25	31:22	101:16
17:11,11	supply	surmise	118:18	34:5,23	tapping
43:11	45:8	158:3	120:23	68:6	19:11
sucking	54:1	surrou...	120:25	98:18	32:21
17:8	support	117:14	121:3	111:23	33:14
suffic...	67:1	survive	126:23	145:19	51:4,22
21:6	suppose	134:1	129:9	151:25	61:12
33:10	19:1	suscap...	135:1,2	talked	106:1
Suite 2:5	92:11,15	78:14	142:5	25:1	Taylor
2:19 3:3	100:18	SUSMAN 3:9	144:13	50:17	166:19
summarize	101:18	swear 5:21		54:10	Taylor's
116:22	102:5,24	switches	T	74:11	166:24
superv...	104:12	17:25	table	82:11	team 28:1
28:2	143:20	18:5	13:12	98:13	28:1
superv...	147:5	45:20,23	take 4:13	99:5	technical
7:15	supposed	57:8	10:4	135:1	69:14
27:24	16:13	82:13	14:8,10	talking	techni...
129:3	127:17	84:15,17	18:7,11	15:17	149:19
superv...	sure 14:6	115:15	40:9	17:5	149:22
98:24	32:17	138:14	45:14	41:25	150:1,4
99:1	42:17	161:12	50:19	59:3	150:9,13
supplied	48:6,20	161:13	51:19	71:10	154:15
34:25	64:17,19	161:21	54:8	98:20	techni...
35:3	80:4	165:18	85:4	99:16	148:18
57:13	82:20	165:22	91:22	108:14	149:4
63:7	89:24	switching	92:15	108:19	techno...
64:24	92:14	114:19	97:23	108:24	21:4

  
**ESQUIRE**  
 DIVISION SERVICES

## A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-352-4438

30:7	165:7,17	155:2,11	60:4,9	151:16	47:10,14
135:3	testified	155:20	60:16	151:23	47:17,19
tell	6:10	156:3,12	67:10	156:17	48:19,21
6:14,18	87:19	156:13	70:5	160:4	48:25
8:3 12:2	88:14	162:9,18	88:5	163:17	49:8,20
12:5	113:5	163:14	94:6	165:22	51:10,19
28:9	115:25	166:4	118:23	thinking	51:21
35:15	130:1	Thank	41:8	142:6	52:7
46:17,18	165:6	157:15	166:16	though	53:3,4
46:23	testify	158:20	things	9:2	23:19
54:4	86:23	164:25	31:9	50:18	58:25
57:24	123:1	their	10:5	32:15	59:9,13
75:19	129:12	11:2	50:4	131:5	59:19
133:6	testimony	20:2	61:14	138:16	60:24
160:12	86:17	23:25	88:2	thought	61:3,16
162:24	88:8	24:10	102:4	36:12	61:19
168:6	99:18	68:22	113:11	137:22	62:18,24
telling	116:22	83:8	117:15	140:5	63:16,19
95:24	116:25	107:17	136:2,9	159:20	67:15
102:1	129:11	107:19	139:3,12	threaded	111:22
107:14	130:11	140:21	142:24	31:2	122:14
115:11	133:6,9	144:14	150:16	three	7:21
140:4,22	142:1,14	145:15	160:7	18:5	13:1
141:2,6	163:22	156:24	165:23	97:11	14:10
145:4	168:5,7	166:20	think	149:7	17:16
tells	168:10	168:12	13:22	throttle	18:7
108:2	testing	themse...	14:1,4	16:4,8,9	24:8
144:1,3	7:11	5:20	15:9,10	16:12,14	30:12
144:5	78:13	110:11	15:13	16:17,19	36:17
term	155:16	155:11	16:11	17:3	37:2,12
17:4	160:8	thermal	18:4	18:23	37:12,17
19:2	161:6	165:13	20:25	21:2,7	38:22
43:17	162:3,7	165:14	41:18	22:6,19	40:11,12
73:7	162:8	thing	8:4	67:12,16	23:18
162:19	15:21	69:15	28:17	45:15	59:8
termin...	tests	8:21	69:15	31:5,12	65:11,12
28:6	154:22	30:3	87:19	31:18	65:16,22
terms	155:2,15	32:6	91:12	32:16,17	68:10
15:25	161:3,5	43:3	98:15,21	33:5	69:8
34:19	166:5	46:25	106:4	39:11,14	71:4,5,6
53:19	taxas	1:13	113:20	42:15,16	71:7,20
66:3	2:6,20	49:7	131:2	42:19,21	71:20,21
69:19	3:12,15	51:9	135:25	42:22	72:5,19
73:7	6:1,2	52:17	137:14	43:1,12	73:9,21
79:8	35:4	54:8	137:17	43:15	76:6
94:4	85:23	56:16,18	139:18	44:1	77:13
test	152:11	56:24	140:15		
161:10	154:5,13	58:19	144:12		

79:6	159:15	140:1,4	109:22	152:21	93:12
82:2	159:20	150:23	121:24	trailer	106:4
86:10,12	160:2,5	151:17	122:1,3	37:18	129:3
86:15	161:3	151:18	122:5,11	107:20	136:2
87:9,13	163:8	157:9,12	122:14	107:22	148:3
88:10,15	tie 36:11	160:22	125:5,7	trailers	155:7
88:19	121:1	166:12	125:11	24:3,4	164:6
89:13	ties	166:18	told 54:14	107:17	Tuesday
92:18	120:22	times	103:12	train	1:20 5:2
93:10,14	time 1:21		112:19	30:25	5:16
94:1	5:10 7:7	72:21,22	113:20	31:14	turn 13:24
100:21	7:10,19	73:8	114:1	54:23	16:5
100:22	9:22	97:11,12	130:11	59:8	18:19
118:7,15	15:10	106:11	139:18	66:7	19:1,4
120:3	16:19	116:15	140:9	90:11	19:20
125:18	20:21	133:22	tolerate	transa...	23:6
126:3,18	40:25	163:23	79:11	168:9	31:13,17
128:22	41:5	tire 142:7	123:2	transa...	32:12,16
129:23	62:10	142:8	130:2	167:3	32:18
132:6	64:19	tires	tool	168:10	33:5
137:8	67:23	142:20	149:16	troubl...	38:20
138:19	68:1	title	top 97:4	148:18	47:1
138:19	80:25	10:16	121:13	149:4	48:9,11
152:23	81:8,12	13:19	131:16	truck	49:16
160:24	81:18	75:8	151:24	128:11	53:23
162:2	84:12	today 5:16	154:7	128:15	54:3
through...	85:15,16	41:12	totally	128:16	60:7
97:10	95:9,22	59:12	82:24	trucks	61:18
117:16	96:4	76:10	83:25	126:9,15	65:5
117:19	100:2,9	81:19	Town 7:13	true 12:7	72:23
132:5	101:13	82:11,14	9:7	23:19	84:18
TI 57:12	103:16	85:24	10:22	26:11	89:2
63:7	109:24	90:9	27:19	28:4	103:2,17
64:24	118:8,19	97:14	28:12	84:22,24	105:10
68:8,10	121:15	98:14,19	30:17	168:9	119:10
68:12,19	122:7,18	98:20	42:8	truth 6:8	119:16
74:5	124:22	99:1,16	43:3	6:9,9	turned
76:20,24	125:15	115:1	50:14	168:6	62:14
130:9,11	128:15	117:11	55:16	try 25:10	64:20
138:14	128:22	137:24	58:15	52:23	71:12,14
139:5	129:13	138:8,10	83:18	62:9,18	128:13
140:9	129:13	138:13	91:7	147:17	turning
141:4,14	129:24	157:25	125:8	148:20	19:21
145:14	134:4	together	126:3	164:9,12	31:12
155:8	137:6,7,	55:24	129:2,16	164:13	64:14
157:1	138:11	56:9	129:24	trying	89:9
159:1,15	138:16	69:5	151:21	53:18	two 9:14

ER02-0201-13487



## A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-9960	734-769-7808	616-352-4498

19:5	19:9,23	unlikely	8:20	16:25	69:11
20:10	20:19	142:4	127:8	17:16,18	70:22
31:9	50:9,13	143:25	154:19	17:19	80:21
32:15,22	64:8,10	145:20	18:98:17	18:20,23	84:12,14
33:16,21	66:19	145:23		19:21	84:16,18
55:23	89:1	unsafe		V	92:3
56:1	98:8	164:9	vacuum	21:22	107:16
61:14	161:4	until 9:20	4:15,16	22:18	112:13
69:25	underg...	96:11	13:20	variance	117:4,9
76:17	8:11	use 9:4	16:20,22	36:10	118:19
82:12,22	undern...	17:4	17:1,4,5	varies	120:13
83:25	108:4	19:2	17:6,7,9	127:15	120:15
84:1	unders...	40:13	17:13,15	variety	121:3,12
100:8	15:22	72:15	20:25	160:7	126:25
135:25	36:3	87:20	21:3,6	various	148:1
149:7	88:7	112:16	22:7,8	46:18	159:16
152:24	134:2	112:22	22:15	54:12	165:20
two-year	143:3	112:23	25:23,24	57:5	vehicles
9:15	147:4	113:3	28:12,15	58:5	15:7,18
type 84:3	159:15	115:1,14	29:5	69:5	83:21
120:1	160:2	115:21	30:6,7	137:9	84:22
140:20	unders...	117:1,8	34:21	vary 36:7	90:16
142:6	69:15,16	120:8,10	40:13	vehicle	91:7
types	69:23	121:4	41:23	15:3	100:16
141:24	79:6	125:21	42:4,6	16:6	107:18
typically	97:21,25	149:4	43:24	17:14	107:19
19:25	98:4	160:6	45:8,9	18:25	109:11
26:3	159:14	used 16:20	45:11	19:15	115:19
27:4	159:19	43:17	46:1	20:12,16	116:8
typing	unders...	68:23	48:3,4,5	24:10	158:16
133:15	20:3	76:20,24	52:5	25:4	vents
	76:20	112:12	135:4,5	26:6,13	18:20
U	unfair	156:25	135:8,12	26:17	version
ultimate	134:11	158:15	vacuum...	29:10	13:2
129:19	unfort...	163:22	20:25	34:8,14	45:2
ultima...	63:8	user 163:3	value 84:1	43:5	versions
72:8	uninte...	uses 29:10	84:3	44:23	11:1
ultra	80:2	using 11:2	valve 22:2	45:20	versus
142:12	unit	52:13	22:4,9	46:5,6,8	5:13
unable	160:18	58:12	22:10,11	46:10	very 11:3
51:23	United	61:13,22	22:14,18	47:2,5	12:9
88:4	96:20,24	63:11	23:16	47:12	14:22
uncommon	97:9	94:7	24:16	48:12	15:25
24:2,5	Univer...	114:18	25:16	51:13	16:10
107:16	8:6,8,9	114:22	44:25	55:15	30:20
under	unless	152:20	52:6	63:6	32:1
17:12	108:2	usually	valves	67:13	41:18

1248  
E922-825

**ESQUIRE**  
DISPOSITION SERVICES
**A RECORD OF EXCELLENCE**

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7808	616-552-4438

62:2	89:16,18	111:8	12:14	49:5	117:20
96:11	90:2,6	116:8	water	82:4	119:7,15
106:8,10	96:12	119:21	123:10	136:6,19	121:2
129:21	98:14,19	119:24	123:10	136:24	123:20
149:9,9	voice 48:6	120:4	123:12	137:9,14	124:3
via 43:15	voltage	123:9,10	123:14	143:16	128:13
vibration	19:18	123:12	123:16	wear 166:1	128:17
160:22	27:4	131:3	123:17	Weber	129:16
Vicks 27:20	37:6	132:6	124:18	95:21	130:9
Victoria	65:10	133:8	124:25	weeks	131:4,13
7:18	66:6	150:3,6	way 14:9	118:20	133:2,6
video 1:25	69:19,20	152:23	15:12	weiner 3:2	135:21
5:8,18	69:25	161:1	19:3,22	6:4,4	138:5,13
12:14	70:6,13	163:5	20:15	157:17	138:16
14:7,19	70:15,17	wanted	26:5	157:18	140:9
40:24	70:19	19:1	28:8	166:8	141:14
41:2,5	71:2,23	25:12	32:8	well 10:10	142:5,18
41:11	72:1,6,7	50:2	41:13	33:2	143:2
46:18,22	72:10,13	53:8	43:23	46:25	144:1,4
47:16,18	73:24,25	81:20	46:3	55:13,25	146:7
67:22,25	74:2,3,8	82:23	49:13,25	56:18,25	147:4
74:23	77:3,8	106:16	50:1,15	62:4	148:11
85:10,14	84:13,16	150:13	53:9	64:3	161:22
85:17	112:4,7	151:11	64:1	66:12	went 8:4
99:23	117:20	155:8	66:13	69:24	9:6
100:6	117:22	166:16	67:14	72:16	10:11
157:8,11	117:25	wants	76:18	79:23	26:23
166:10	118:11	18:10	83:9	80:4	33:1,7
videog...	Volvo	30:16	100:23	82:18	35:18
5:17	115:5,6	64:16	102:2	87:16	75:16
64:16	vs 1:7	wasn't	106:19	88:14	81:12
74:20	—	21:6	106:22	90:5	87:12
videotape	W	24:5	107:1	92:4,7	122:10
4:14	W3:10	96:11	109:14	93:18	126:18
5:11	wait	117:6	117:4,5	95:7	126:24
99:24	108:18	125:2	119:17	97:21	129:14
100:8	walk 13:1	130:19	142:9	98:5,15	161:13
view 14:8	want 14:18	132:2	149:10	99:5	were 7:6
124:7	14:19	139:24	151:7	102:9,11	9:19
viewing	25:10	watch	164:15	103:5,7	11:9,10
47:15,16	46:20	48:18	164:18	107:8	11:22
Vistecn	52:1	49:8	ways 19:5	108:18	19:3,10
6:21	62:9	51:9	19:10	111:2,17	20:8,19
9:19,23	67:15	60:9	20:8	112:3,19	20:22,24
10:1,6	69:13	watched	21:14	113:4,20	21:5
10:11,14	73:2	62:2	24:21	116:2	22:18
10:15	88:3,5	watching	33:23	117:10	23:20

## A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor :	Kalamazoo
313-961-5560	734-769-7808	616-352-4438

**ESQUIRE™**  
PROFESSIONAL SERVICES

13482-4725-1

24:11	161:20	60:17	120:2	107:9	113:3,19
25:2,19	161:21	Whereas...	132:13	109:22	123:9
29:13	167:3	96:17	wish 167:2	124:8	132:15
32:22,23	weren't	whereof	withdraw	129:22	133:2,3
33:23	22:11	168:16	87:5	151:14	133:18
42:7	29:4	while	witness	worked	146:20
47:25	138:8	107:22	5:21 6:7	13:3	156:22
53:5,18	145:12	whole 6:9	86:22	16:1	156:25
60:16	west 20:20	82:3	157:14	35:16	161:22
68:12,20	we'll	WIENNER	166:7,9	40:14	wrap 58:23
78:10	14:13	2:11	168:4,8	45:12,17	wrapped
81:1	27:11	wind 31:3	168:10	83:11	55:2
82:12,23	30:12,14	wire 59:6	168:16	95:11,19	59:6
83:3,7	40:21,22	59:12	Woodward	95:22	write
83:25	55:7	70:3,14	1:22	99:19	28:23
89:21	62:22	92:4	2:13	128:17	73:2
90:5	63:14	93:9	5:14	129:20	155:18
92:12	64:21	107:18	WOOLWINE	working	writing
93:11	85:5,6	150:4,6	1:10	10:14	9:3
95:18	we're 7:1	151:4-	word 39:24	23:20	168:7
96:4,9	15:22	160:14	40:1,2	88:24	written
96:10	40:10	160:17	43:19	90:8	121:7
98:8	41:24	160:19	87:20	103:19	wrong
106:12	44:8	160:21	words	103:20	24:19
107:12	99:16	160:23	23:24	105:14	86:19
124:3,22	100:13	wired 27:6	83:3	112:17	87:12
124:24	108:19	37:9,11	98:11	workings	117:15
126:10	108:24	74:12	work 8:9	122:15	119:14
126:18	113:11	92:8,12	9:5,18	works	148:19
128:25	117:10	93:14	15:16	13:11	wrongly
131:24	138:13	94:8	22:3	15:21	133:7,8
134:6,18	145:5,6	100:19	30:19	52:15	wrote 86:1
134:19	145:8,10	100:21	37:16,20	60:4	86:3
134:24	146:2,3	100:22	45:6	110:1	163:23
135:23	166:12	100:23	47:2	112:1	
135:25	we've 28:5	107:3	53:9	122:23	X
137:6,21	74:24	118:11	65:17	world	yardstick
137:24	86:8	159:2	66:11	115:1,12	47:13
138:10	152:19	wiring	79:7	worst	56:4
138:11	157:25	24:3	83:11,16	79:24	yeah 10:1
138:16	whatso...	25:25	89:6,16	wouldn't	16:10
139:3	158:17	69:11	90:9,12	41:16	18:4,22
145:11	wheel 18:1	80:14	90:19,24	85:7	24:25
155:7	18:2,4	91:25	91:1,3	86:25	27:24
157:21	19:7	94:1	91:22	89:1	28:13
160:5,25	45:21	107:22	94:17	93:6	29:9
161:5,10	57:9	119:8	96:15,18	104:7,22	31:9

**A RECORD OF EXCELLENCE**

Troy	Lansing	Grand Rapids
248-244-9700	517-337-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7308	616-552-4458

34:11	122:8,19	1875:9	2520:12	51:20	744:23
43:21		1911:12	34:9,12	4:13,15	770022:6
62:11,16	Z	19779:11	47:2	4:16,17	77002-...
63:8	xero35:21	19799:17	161:13	4:19,21	3:12
67:12		9:20	165:18	4:22 5:2	78701-...
70:10	1	11:4	258-1580	5:16	2:20
72:10	14:13, 5:7	19808	7:15	55:8,10	
74:3	1,10 100:4	11:13		5018:10	8
85:12	1020:16	23:23	3	30:15	80#125:16
86:10,14	25:5	24:7	34:17	47:5	88127:5
90:20	34:14	19887:5	86:9	48:13	89127:5
103:14	91:19	126:18	95:8	60:21	
108:22	141:12	198975:9	109:13	103:3,8	9
111:14	10:16	19927:5	110:14	5043:5	9:20
113:15	40:25	7:13 9:7	110:23	5122:21	166:18
114:25	10:3141:6	10:22,24	119:8	554:22	9:30 1:21
123:8	10003:11	11:17	152:16	20:22	5:3
124:20	10182:5	27:19	152:19	568-9393	9:31 5:10
136:17	11152:16	30:16	153:16	3:5	90127:5
139:22	11:04	43:4	3A4:19		91127:5
141:23	67:23	81:8	5:7	6	9228:11
144:1	11:20 68:1	83:18	27:10,12	64:23	42:8
145:8,13	11:43	91:6	54:13	74:15,17	50:14
147:4	85:15	100:15	76:11	74:25	58:15
153:5	11:54	109:10	77:6	75:6	125:8
154:3	85:18	151:18	157:24	76:22	129:2,24
156:15	1112:19	158:15	30161:13	77:2	151:16
160:13	12141:12	1993	35165:18	152:9,11	151:21
161:8	12:10	109:10	359801:22	153:1,4	152:21
164:18	100:2,3		2:13	153:10	
165:22	13:11	2	5:14	153:18	
year 9:20	100:9	24:15 5:7		153:20	
10:3	14:25	13:18	4	153:23	
89:19	157:9	2A4:16	44:21 5:7	154:1	
97:10	14:39	5:7 14:4	12:21,25	158:25	
151:17	157:12	15:21	40161:13	6047:5	
151:19	14:49	16:8	165:18	60:21	
151:23	166:13	41:23	165:22	60#15:10	
158:15	14002:19	2:50 167:7	4003:3	653-7818	
year 9:14	1592:1	20116:15	4275:5	3:23	
21:4	120:8,10	2003:3	4502:5		
68:19	121:17	20001:20	479-9761	7	
81:16	161:19	5:2,16	2:21	7-28-03	
141:12	161:22	9:20	48304-...	168:25	
149:7	161:25	237-8383	2:14	701303:4	
yesterday	165:21	2:7		7132:7	
75:12	166:1	2482:15	5	3:13	



**ESQUIRE**  
DEPOSITION SERVICES

A RECORD OF EXCELLENCE

Troy	Lansing	Grand Rapids
248-244-9700	517-537-7337	616-456-6300
Detroit	Ann Arbor	Kalamazoo
313-961-5560	734-769-7908	616-552-4438