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<td>1. What that is is we as engineers or project engineers sit down and review at the initial stages of the design and look for, I want to say, high risks or potential failure modes. And based on, I want to say, the risk level, we address changes or make changes to the design to assess or reduce the high risk, so it makes ultimately -- you're designing out all the potential failures with a particular switch.</td>
<td>1. was in the run position, it wouldn't just move to the accessory position, correct?</td>
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<td>MR. HOLLADAY: Object to the form. You can answer. THE WITNESS: No, because in our minds, moving the key from, I want to say, run to accessory is not a failure mode, it is an expected condition. It is important for the customer to be able to rotate the key fore and aft, so as long as we meet those requirements, it's not deemed as a risk.</td>
<td>MR. HOLLADAY: Object to the form. You can answer.</td>
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<td>Q. (By Mr. Cooper): Well, it's not expected to move from run to accessory when you're driving down the road at 55 miles an hour, is it?</td>
<td>Q. (By Mr. Cooper): Why is the run position a detented position?</td>
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<td>MR. HOLLADAY: Object to the form. You can answer. THE WITNESS: It is expected for the key to be easily and smoothly transitioned from one state to the other without binding and without harsh actuations.</td>
<td>A. In the run position, primarily, it's a detented position because all the major, I want to say, electronic modules, okay, are fed off of that detent. If you look at this electric diagram on, I want to say, page 4 of the drawing -- page 4 of the drawing probably. Page 4 of the drawing.</td>
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<td>Q. (By Mr. Cooper): And why do you have a minimum torque requirement from run to accessory?</td>
<td>Q. Page 4 of the drawing is fine?</td>
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<td>MR. HOLLADAY: Object to the form. Missrates the testimony. You can answer. THE WITNESS: It's a design feature that is required. You don't want anything flopping around. You want to be able to control the dimensions and basically provide -- one of the requirements in this document talks about having a smooth transition from detent to detent. One of the criticisms -- I shouldn't say criticisms. One of the customer complaints we have had in the -- and previous to this was we had cheap feeling switches, they were cheap feeling, they were higher effort, and the intent of this design was to provide a smooth actuation, provide a high feeling of a robust design. That was the intent.</td>
<td>A. Yeah. If you look at the run position, okay, and you look at these traces down below, you have all the electrical systems of the vehicle running off of the run detent, okay? You got -- I want to say off-run crank, you've got accessory features, and you also have powertrain features, so all the major electrical systems of the vehicle are ran off that detent, so it's important to make sure you maintain</td>
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<td>Q. (By Mr. Cooper): I assume the intent was also to make sure that when people were using the vehicle under ordinary driving conditions, that if the key</td>
<td>the key in that position.</td>
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<td>can answer.</td>
<td>Q. And what happens when the key moves to the accessory position? What does the driver lose?</td>
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<td>A. Primarily you lose the off-run -- if you look at this drawing, you can see that off-run crank circuit may drop off. I take that back. Should not drop off. The run crank position could potentially fail off. There is that gray band in there that is, I want to say, a tolerance. Again, you have a tolerance in there that could potentially fail off.</td>
<td>A. Primarily you lose the off-run -- if you look at this drawing, you can see that off-run crank circuit may drop off. I take that back. Should not drop off. The run crank position could potentially fail off. There is that gray band in there that is, I want to say, a tolerance. Again, you have a tolerance in there that could potentially fail off.</td>
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<td>Q. And then if you look at page 17 of the specification, there's the &quot;Tactile Characteristics,&quot; section at the very bottom of the page.</td>
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<td>A. Yes.</td>
<td>A. Yes.</td>
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<td>Q. What is being described here?</td>
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<td>A. It says, &quot;Refer to the force displacement curve. Final switch tactile feel is subject to engineering approval.&quot;</td>
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<td>Q. Okay. So I assume you would have been the one to actually feel the switch --</td>
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<td>A. Correct.</td>
<td>A. Correct.</td>
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<td>Q. -- tactility to see if it was acceptable?</td>
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<tr>
<td>A. To basically see if it meets -- supports</td>
<td>A. To basically see if it meets -- supports</td>
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Q. All right. Now ultimately GM’s responsible for the design and performance of the ignition switch in the Cobalt?
A. Yes.
Q. And Delphi began supplying the ignition switches for the ’05 Cobalt, and based on your testimony, you believe that Delphi continued to provide the ignition switches up through the 2010 Cobalt?
A. That’s correct.
Q. And that there weren’t any changes made -- or were there changes made to the switch between ’05 and 2010 that would have affected the torque values to move the key from the various positions in the cylinder?
A. There was one change made to the resistor in ’08, but that should not have affected the torque or the displacement of the switch.
I can restate this way: There was an electrical change made in ’08, but not a mechanical change -- at least there were no official changes, mechanical changes, made to the switch that I know of.
Q. When you say no official, could there be unofficial changes made?
A. I’m not saying that there was, I’m just saying if

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there was something changed at the supplier side, we were not aware of it and we did not approve it, okay?
Q. Well, have you -- as part of this investigation -- part of your involvements, you’ve been involved since ’05 with this program of the key turning off -- turning from the run to the accessory position in certain Cobalts, correct?
MR. HOLLADAY: Object to the form.
THE WITNESS: I had heard of a couple of instances in ’05, yes.
Q. (By Mr. Cooper): Well, you were involved in an investigation back in ’05?
A. Yes.
MR. HOLLADAY: Objection to the form.
Q. (By Mr. Cooper): And that investigation, there was a question as to the detent force in the ignition switch, correct?
A. That’s correct.
Q. And since that date, have you or anyone at GM that you are aware of actually taken a look at the various ignition switches from ’05 to 2010 to see if there are any differences?
A. I recall back then I was approached to look into essentially enhancing the detent in the switch by adding, I want to say, another detent.
Q. There were a group of us that got together and we were asked what can we do to improve this ignition system. One of my tasks was to look into essentially adding, I want to say, a second detent in the switch. There was a second request made by the key cylinder engineer to eliminate the slot on the key itself and go with a hole and reduce the torque lever angle.
In those discussions, we reviewed -- we reviewed those discussions, those tasks, and we deemed that it was a low risk and we left it at that. Shortly thereafter, there was an incident that occurred in Milford Proving Grounds. I believe, where an individual had, in aggressive driving, was able to shut the car off inadvertently.
At that point, we all got back together and said, “Hey, guys, there may be a potential issue here. You know, what can we do here?” And we re-activated that initial study that we had done and a decision was made essentially to provide for any customers that may come in to service complaining about inadvertent actuation, to provide a service fix. And I believe the decision was made

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1 to provide, I want to say, a feature or a fix to eliminate the slot in the key.
3 MR. COOPER: All right. Let’s take a quick break.
5 VIDEOGRAPHER: We are going off the video record at 2:18.
7 (Whereupon a break was taken from 2:18 p.m. to 2:30 p.m.)
9 VIDEOGRAPHER: We are back on the record at 2:30.
11 Q. (By Mr. Cooper): I’m going to show you what we pulled from a Cobalt and ask if you’ve seen something like this before.
A. Yes, I have.
15 Q. All right. Can you tell us what this is?
17 A. This appears to be the IGN or Cobalt lock housing.
19 Lock housing assembly and key cylinder. It looks like it was done with the service key, I want to say.
21 Q. And if you can explain to us, what is the function of the ignition switch as it relates to the ability or the force it takes to turn the key in the various positions?
23 A. Initially the -- initially, everything is free
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<td>1</td>
<td>A. No, I have not.</td>
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<td>Q. &quot;At today's Jim Federico update on the '05 through '07 Cobalt airbag investigation, our primary discussion was on what it would take to keep the SDM active if the ignition key was turned to the accessory mode. In addition to that, we also discussed other potential options. One mention was revising the ignition switch to increase the effort to turn the key from run to accessory. The torque value desired is to be determined.&quot; Did I read that correctly?</td>
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<td>3</td>
<td>A. Yes.</td>
<td>3</td>
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<td>4</td>
<td>Q. Okay. And then it says, &quot;For our next Federico update, approximately two weeks, please develop a high-level proposal on what it would take to create a new switch for service with higher efforts.&quot; Did I read that correctly?</td>
<td>4</td>
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<td>5</td>
<td>A. Yes.</td>
<td>5</td>
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<td>6</td>
<td>Q. Okay. So you were brought back into the investigation to this extent?</td>
<td>6</td>
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<td>7</td>
<td>A. Yes.</td>
<td>7</td>
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<td>8</td>
<td>Q. And then you write back the next day, email back to Brian Stouffer. And you CC Brian Thompson. He's your --</td>
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<td>9</td>
<td>A. He's my manager.</td>
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<td>10</td>
<td>A. The Red X team is essentially a group of engineers that essentially evaluate or essentially try and identify, I want to say, a good part from a bad part and what potential design changes that can be made to enhance the design.</td>
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<td>11</td>
<td>Q. And just to be clear, as we sit here today, you don't even know whether the Red X team was assigned to this project?</td>
<td>11</td>
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<td>12</td>
<td>A. That's correct.</td>
<td>12</td>
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<td>13</td>
<td>Q. All right. Let's look at Bates No. 133153, which is a series of emails in October 2012. The subject is, &quot;'05 through '07 Cobalt and Ignition Switch Effort.&quot; Do you see that?</td>
<td>13</td>
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<td>14</td>
<td>A. I'm sorry. I'm not sure I see where you're reading. Down here?</td>
<td>14</td>
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<td>15</td>
<td>Q. Subject.</td>
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<td>17</td>
<td>Q. Do you recall receiving this email from Mr. Stouffer?</td>
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<td>18</td>
<td>A. Yes.</td>
<td>18</td>
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<td>19</td>
<td>Q. It's directed to you on October 4th of 2012?</td>
<td>19</td>
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<td>20</td>
<td>A. Yes.</td>
<td>20</td>
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<td>21</td>
<td>A. Yes.</td>
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<td>22</td>
<td>Q. And Mr. Stouffer writes you the email -- this email, and it says, &quot;At today's Jim Federico update...&quot; Have you ever met Mr. Federico?</td>
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<td>23</td>
<td>A. But it can be higher.</td>
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| 24   | Q. Well, could it be 100? Would 100 be practical from
1. The same thing that we do on their side.
2. (Marked for identification: 
3. Deposition Exhibit No. 13.)
4. Q. (By Mr. Cooper): All right. Let me show you what
5. I'll mark as Exhibit 13. Can you identify, does
6. this appear to be similar to what we were looking
7. at earlier, and that is, the cutout of a --
8. A. Detent plunger.
9. Q. -- detent plunger for the Cobalt?
10. A. That looks like the detent plunger on the -- yes,
11. on the switch.
12. MR. COOPER: Okay. And I'll represent to
13. you this is the detent plunger for the '05 or '06
15. (Marked for identification: 
16. Deposition Exhibit No. 14.)
17. Q. (By Mr. Cooper): Let me show you what I'll mark as
18. Exhibit 14, which is the detent plunger for a --
19. it's either an '08 Cobalt or a replacement switch.
20. Can you hold those up for the jury,
21. please?
22. A. (The witness complies.)
23. Q. The one on the right, Exhibit 13, is an '05 or an
24. '06, and the one on the left, Exhibit 14, is either
25. an '08 or replacement. Do you see the difference?

1. A. Yes.
2. Q. Have you noticed that before today, Mr. DeGiorgio?
3. A. No, sir.
4. Q. Were you aware of this before today, Mr. DeGiorgio?
5. MR. HOLLADAY: Object to the form. You
6. can answer.
7. THE WITNESS: No, sir.
8. Q. (By Mr. Cooper): It appears to be pretty clear
9. that the plunger and the cap is taller on
10. Exhibit 14 compared to Exhibit 13, isn't it?
11. A. That's correct.
12. Q. How is a taller cap going to affect the rotational
13. resistance?
14. A. It's hard to determine from these pictures exactly
15. if it is a taller cap or is it recessed inside the
16. housing or not. It's hard for me to assess,
17. really, what I'm looking at.
18. Q. You've taken apart a number of switches and you're
19. telling the jury you've never noticed the
20. difference in the plunger between the '05 and '06
21. versus the new resistor or switch?
22. MR. HOLLADAY: Object to the form.
23. THE WITNESS: I did not notice, no.
24. (Marked for identification: 
25. Deposition Exhibit No. 15.)

1. Q. (By Mr. Cooper): Let me show you what I will mark
2. as Exhibit 15. Do you see this photograph,
3. Mr. DeGiorgio?
4. A. Yes.
5. Q. Can you hold that up for the jury, please?
6. A. (The witness complies.)
7. Q. The plunger and spring on the '05 is up top and
8. the replacement switch is down below. Do you see
9. that?
10. MR. HOLLADAY: Object to form, lack of
11. foundation, but you can answer.
13. Q. (By Mr. Cooper): And I'll ask the same question.
14. You were not aware before today that GM had changed
15. the spring -- excuse me -- the spring on the
16. ignition switch had been changed from '05 to the
17. replacement switch?
18. MR. HOLLADAY: Object to the form. Lack
19. of predicate and foundation. You can answer.
20. THE WITNESS: I was not aware of a detent
21. plunger switch change. We certainly did not
22. approve a detent plunger design change.
23. Q. (By Mr. Cooper): Well, suppliers aren't supposed
24. to make changes such as this without GM's approval,
25. correct?