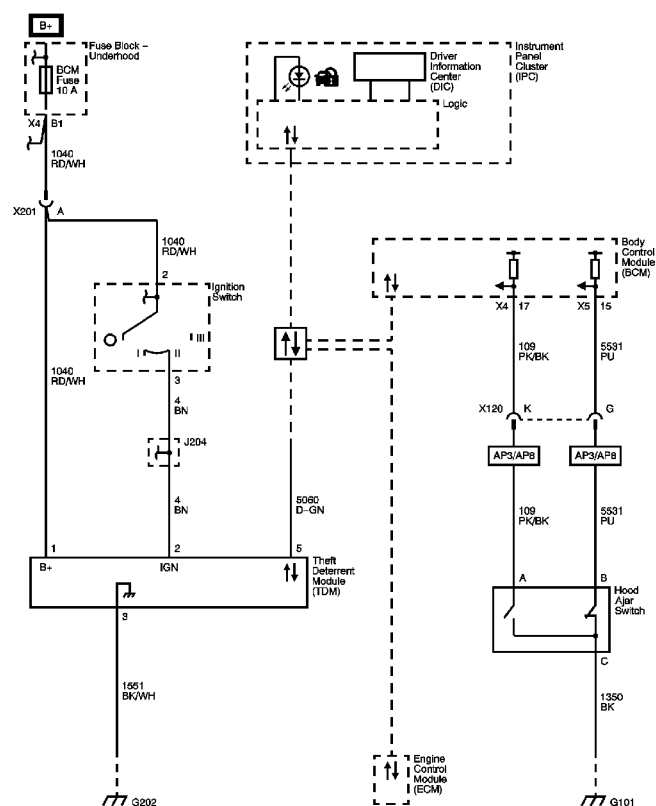
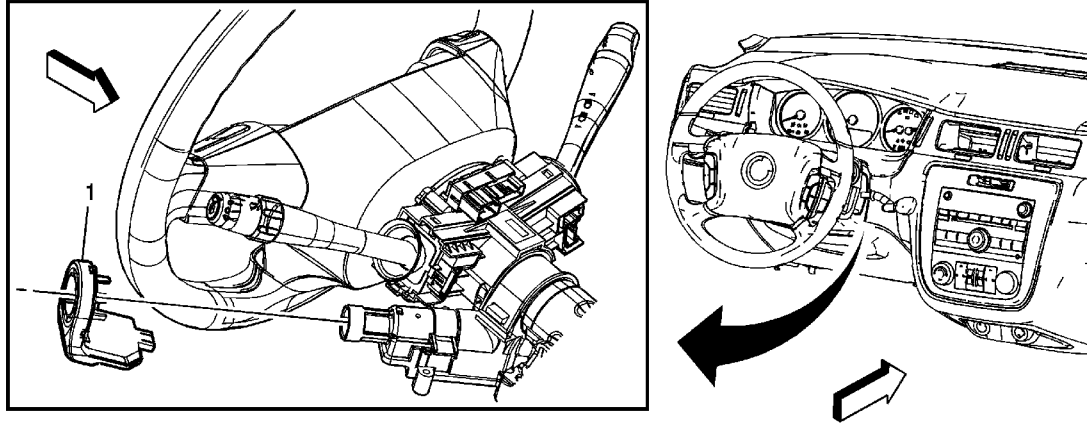


Immobilizer Schematics



Theft Deterrent Module Replacement



Callout	Component Name
Preliminary Procedure	
Remove the ignition lock cylinder. Refer to Ignition Lock Cylinder Replacement .	
1	Module Assembly, Theft Deterrent Tip Disconnect the electrical connector.

Immobilizer System Component Programming

10-Minute Immobilizer Relearn

This 10-minute relearn procedure will relearn the prerelease password and the challenge/response data between the theft deterrent module (TDM) and the engine control module (ECM).

1. Connect a scan tool to the vehicle in the pass-thru arrangement.
2. Turn ON the ignition, with the engine OFF.
3. Ensure that all power consuming devices are turned OFF on the vehicle.
4. On the Techline Terminal, select Service Programming System and follow the Techline Terminal on-screen instructions, using the Pass-Thru method. Ensure the correct programming selection is chosen based on component being replaced or programmed. For this procedure, go to the V.T.D. Vehicle Theft Deterrent Learn menu and choose the Vehicle Theft Deterrent Learn, ECM, or PK3 Replaced selection.
5. At this point the scan tool must remain connected for the duration of the 10-minute relearn procedure.

Important:

- The scan tool will initially display 12 Minutes. The first 2 minutes allow the scan tool to initialize the appropriate control module. The remaining 10 minutes is the relearn timer.
 - On some vehicles the security indicator may be illuminated for the duration of the 10-minute relearn procedure.
6. Observe the scan tool, after approximately 10 minutes the scan tool will display "Programming Successful, Turn OFF Ignition". The vehicle is now ready to relearn the key information and/or the passwords on the next ignition switch transition from OFF to CRANK.
 7. Turn OFF the ignition and wait 2 minutes.
 8. With a master vehicle key, turn the ignition to the RUN position for 15 seconds, then start the vehicle. The TDM and ECM have now relearned the pre-release password and the challenge/response data.
 9. With a scan tool, clear any DTCs.

Adding Keys

Important:

- To initiate, this procedure requires that a learned master key be available.
- A total of 10 keys may be programmed to a single vehicle.
- This procedure adds keys only. The procedure does not erase previously learned keys.
- The keys to be learned must duplicate the mechanical cut of the current key.
- If more than one valet key is to be learned, immediately precede each valet key with a learned master key.

1. With a previously learned master key, turn ON the ignition, with the engine OFF.
2. Turn OFF the ignition and remove the key.
3. Within 10 seconds of turning OFF the ignition, insert the key to be learned and turn ON the ignition. The vehicle has now learned the new key.

Replacing Keys (North America except Canada)

10-Minute Vehicle Key Relearn

Important: This procedure will only relearn the vehicle keys. This procedure will not learn the immobilizer prerelease password or the challenge/response data. Do not use this procedure as a substitute for a 10-minute relearn when replacing or reprogramming a theft deterrent module (TDM) or engine control module (ECM). Doing so will result in a failure to learn the pre-release password and/or the challenge/response data.

This 10-minute learn procedure should be used when all vehicle keys are desired to be replaced or reprogrammed. This procedure will erase all previously learned vehicle keys from the TDM. Once the 10-minute learn procedure has been completed, any remaining vehicle keys may be programmed using the Adding Keys procedure to ensure their continued functionality.

1. Connect a scan tool to the vehicle in the pass-thru arrangement.
2. Turn ON the ignition, with the engine OFF.
3. Ensure that all power consuming devices are turned OFF on the vehicle.
4. On the Techline Terminal, select Service Programming System and follow the Techline Terminal on-screen instructions, using the Pass-Thru method. Ensure the correct programming selection is chosen based on component being replaced or programmed. For this procedure, go to the V.T.D. Vehicle Theft Deterrent Learn menu and choose the Vehicle Theft Deterrent Learn for Learning Replacement Keys selection.
5. At this point the scan tool must remain connected for the duration of the 10-minute relearn procedure.

Important:

- The scan tool will initially display 12 Minutes. The first 2 minutes allow the scan tool to initialize the appropriate control module. The remaining 10 minutes is the relearn timer.
- On some vehicles the security indicator may be illuminated for the duration of the 10-minute relearn procedure.

6. Observe the scan tool, after approximately 10 minutes the scan tool will display "Programming Successful, Turn OFF Ignition". The vehicle is now ready to relearn the key information and/or the passwords on the next ignition switch transition from OFF to CRANK.
7. Turn OFF the ignition and wait 2 minutes.
8. With a master vehicle key, turn the ignition to the RUN position for 15 seconds, then start the vehicle. The TDM has now learned the key transponder information.
9. With a scan tool, clear any DTCs.

30-Minute Vehicle Key Relearn

Important: This procedure will only relearn the vehicle keys. This procedure will not learn the immobilizer prerelease password or the challenge/response data. Do not use this procedure as a substitute for a 10-minute relearn when replacing or reprogramming a TDM or ECM. Doing so will result in a failure to learn the prerelease password and/or the challenge/response data.

This 30-minute learn procedure should be used when all vehicle keys are desired to be replaced or reprogrammed. This procedure will erase all previously learned vehicle keys from the TDM. Once

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the 30-minute learn procedure has been completed, any remaining vehicle keys may be programmed using the Adding Keys procedure to ensure their continued functionality.

1. With an unlearned master vehicle key, turn ON the ignition, with the engine OFF.
2. Observe the security indicator, after approximately 10 minutes the telltale will turn off.
3. Turn OFF the ignition, and wait 5 seconds.
4. Repeat steps 1-3 two more times for a total of 3 cycles or 30 minutes.

Important: The TDM learns the key transponder information upon the ignition switch transition from OFF to ON. You must turn the ignition OFF before attempting to start the vehicle.

5. With a master vehicle key, start the vehicle. The vehicle has now learned the key transponder information.
6. If additional keys are required to be learned, refer to [Adding Keys](#).
7. With a scan tool, clear any DTCs.

Replacing Keys (Canada)

10-Minute Vehicle Key Relearn

Important: This procedure will only relearn the vehicle keys. This procedure will not learn the immobilizer prerelease password or the challenge/response data. Do not use this procedure as a substitute for a 10-minute relearn when replacing or reprogramming a theft deterrent module (TDM) or engine control module (ECM). Doing so will result in a failure to learn the pre-release password and/or the challenge/response data.

This 10-minute learn procedure should be used when all vehicle keys are desired to be replaced or reprogrammed. This procedure will erase all previously learned vehicle keys from the TDM. Once the 10-minute learn procedure has been completed, any remaining vehicle keys may be programmed using the Adding Keys procedure to ensure their continued functionality.

1. Connect a scan tool to the vehicle in the pass-thru arrangement.
2. Turn ON the ignition, with the engine OFF.
3. Ensure that all power consuming devices are turned OFF on the vehicle.
4. On the Techline Terminal, select Service Programming System and follow the Techline Terminal on-screen instructions, using the Pass-Thru method. Ensure the correct programming selection is chosen based on component being replaced or programmed. For this procedure, go to the VTD Vehicle Theft Deterrent Learn menu and choose the Vehicle Theft Deterrent Learn for Learning Replacement Keys selection.
5. At this point the scan tool must remain connected for the duration of the 10-minute relearn procedure.

Important:

- The scan tool will initially display 12 Minutes. The first 2 minutes allow the scan tool to initialize the appropriate control module. The remaining 10 minutes is the relearn timer.
 - On some vehicles the security indicator may be illuminated for the duration of the 10-minute relearn procedure.
6. Observe the scan tool, after approximately 10 minutes the scan tool will display "Programming Successful, Turn OFF Ignition". The vehicle is now ready to relearn the key information and/or the passwords on the next ignition switch transition from OFF to RUN.
 7. Turn OFF the ignition and wait 2 minutes.
 8. With a master vehicle key, turn the ignition to the RUN position for 15 seconds, then start the vehicle. The TDM has now learned the key transponder information.
 9. With a scan tool, clear any DTCs.