

How To Troubleshoot The Fuel And Emissions Systems (2016-18)

Intermittent Failures

The term intermittent failure means a system may have had a failure, but it checks OK now. If the malfunction indicator lamp (MIL) on the dash does not come on, check for poor connections or loose terminals at all connectors related to the circuit that you are troubleshooting. If the MIL was on but then went off, the original problem may have been intermittent.

Service Information

Periodically, new PCM software or new service procedures may become available. Always check online for the latest software or service information related to the DTCs or symptoms you are troubleshooting.

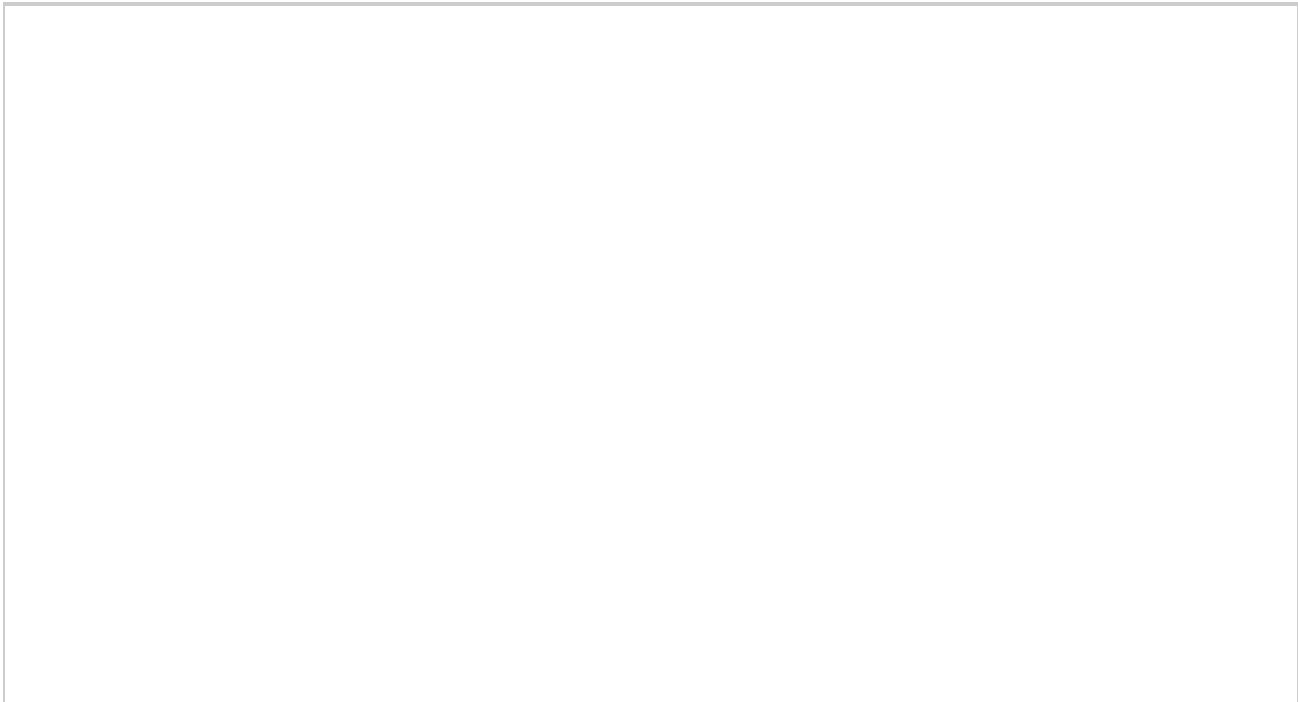
Opens And Shorts

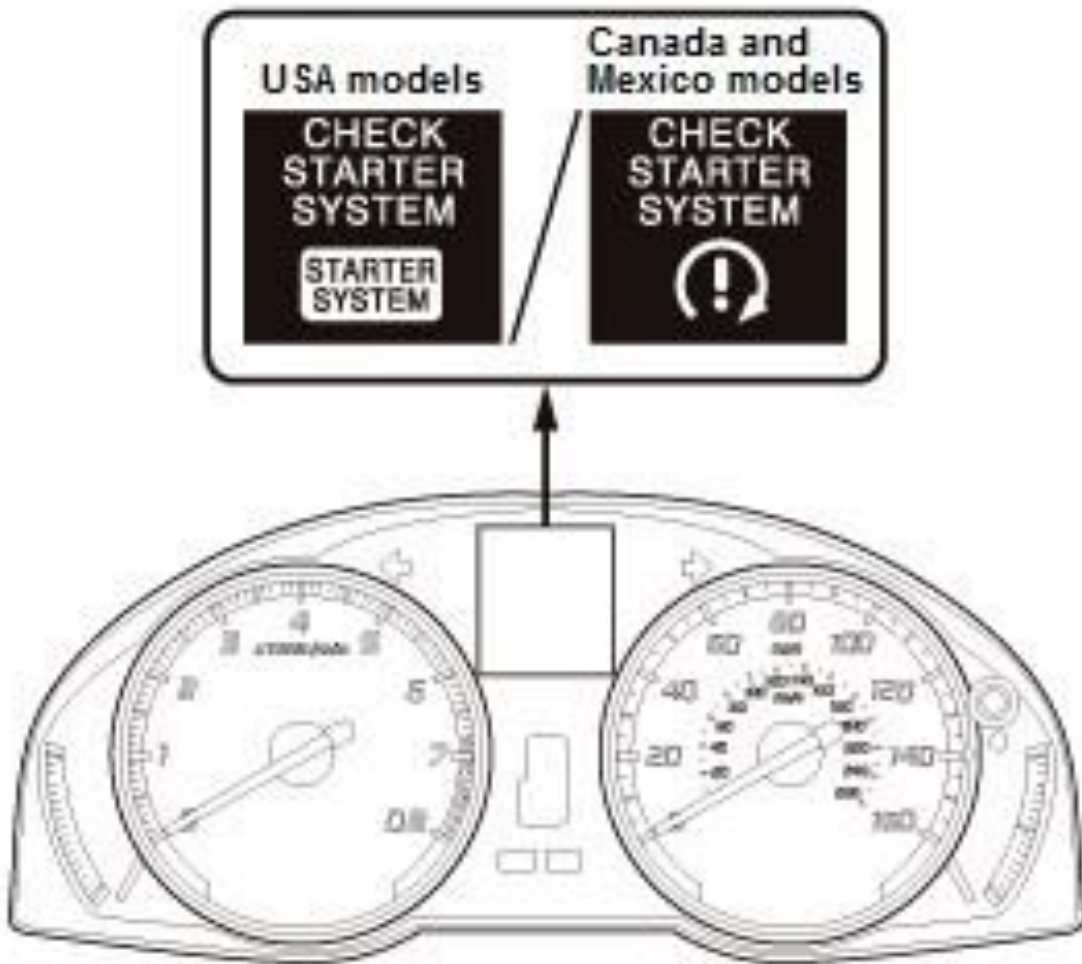
Open and short are common electrical terms. An open is a break in a wire or at a connection. A short is an accidental connection of a wire to power, ground, or to another wire. In simple electronics, this usually means something won't work at all. With complex electronics (such as PCMs) this can sometimes mean something works, but not the way it's supposed to.

CHECK SYSTEM Display Indication (CHECK STARTER SYSTEM)

1. If this indicator comes on in the MID, the starting system may have had a failure. Connect the HDS to the data link connector (DLC) located under the driver's side of the dashboard. Check the diagnostic trouble code (DTC) and note it. Then refer to the indicated DTC's troubleshooting, and begin the appropriate troubleshooting procedure.

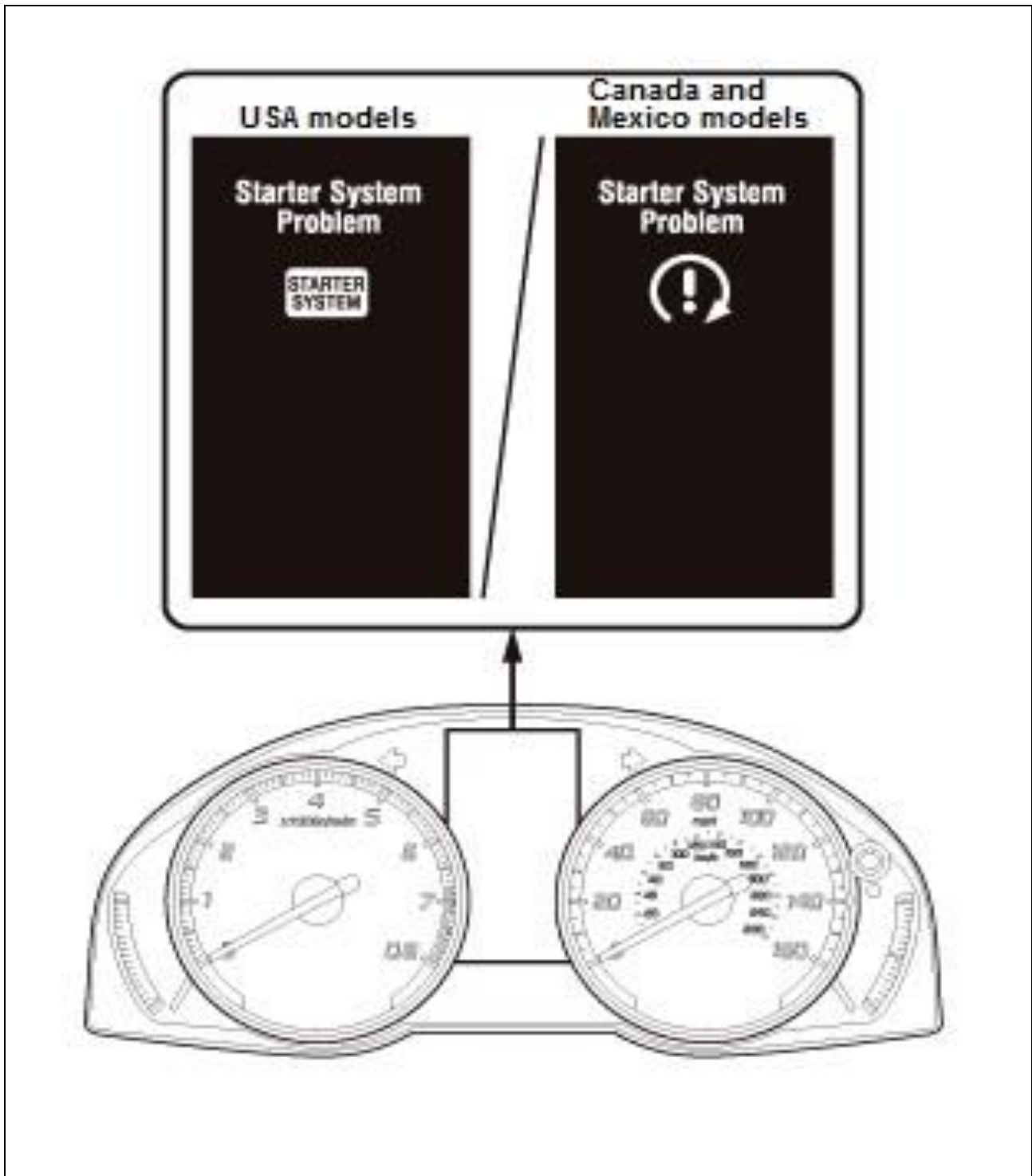
Without Color Multi-Information Display





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With Color Multi-Information Display

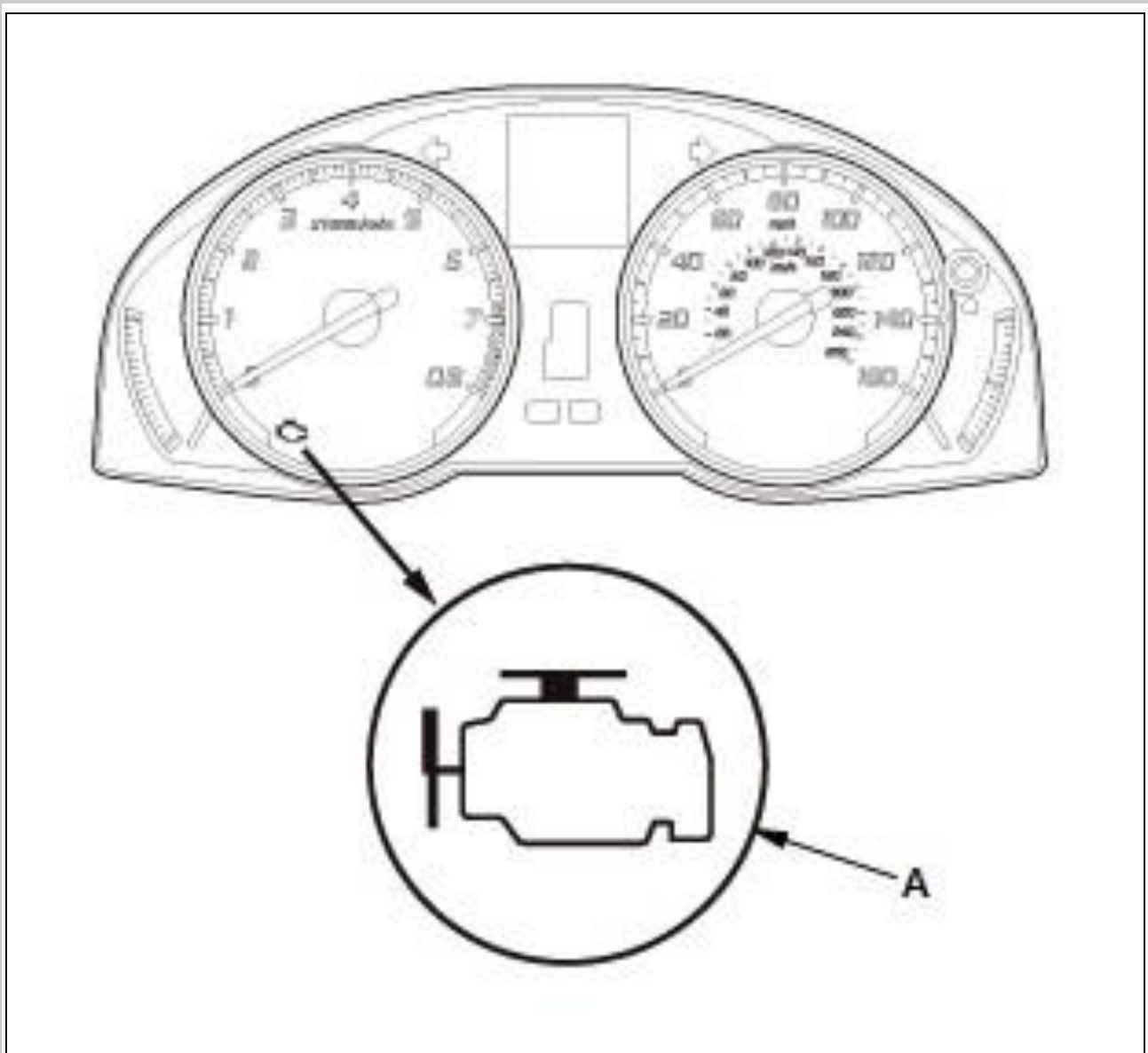


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How To Use The HDS (Honda Diagnostic System)

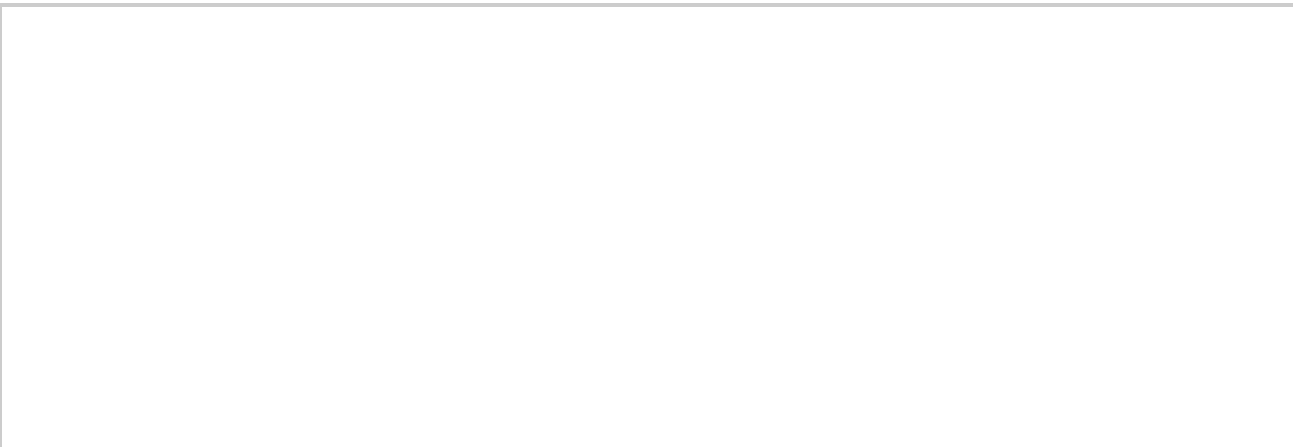
1. Start the engine, and check the MIL (A) in the gauge control module.

NOTE: If the vehicle is turned to the ON mode, and the engine is not started, the MIL stays on for 15-20 seconds.



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2. If the MIL stays on, connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.





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3. Press the engine start/stop button to select the ON mode.
4. Make sure the HDS communicates with the PCM and other vehicle systems. If it does not, go to the DLC circuit troubleshooting .
5. Check the diagnostic trouble code (DTC) and note it. Also check the freeze data and/or on-boardsnapshot data, and download any data found. Then refer to the indicated DTC's troubleshooting, and begin the appropriate troubleshooting procedure.

NOTE:

- Freeze data indicates the engine conditions when the first malfunction, misfire, or fuel trim malfunction was detected. The HDS can read the DTC, the freeze data, the on-board snapshot, the current data, and other PCM data.

For specific operations, refer to the user's manual that came with the HDS.

6. If no DTCs are found, go to the MIL circuit troubleshooting .

If The MIL Did Not Stay On

If the MIL did not stay on but there is a driveability problem, do the symptom troubleshooting.

If You Cannot Duplicate The DTC

Some of the troubleshooting requires you to reset the PCM and try to duplicate the DTC. If the problem is intermittent and you can't duplicate the DTC, do not continue through the procedure. To do so will only result in confusion and possibly, a needlessly replaced PCM.

HDS Clear Command

The PCM stores various specific data to correct the system even if there is no electrical power such as when the battery negative terminal or No. A25 (15 A) fuse is disconnected. Stored data based on failed parts should be cleared by using the CLEAR COMMAND of the HDS, if parts are replaced.

The HDS has three kinds of clear commands to meet this purpose. They are DTC clear, PCM reset, and CKP pattern clear. The DTC clear command erases all stored DTC's, freeze data, on-board snapshot, and readiness codes (USA and Canada models). This must be done with the HDS after reproducing the DTC during troubleshooting. The PCM reset command erases all stored DTC's, freeze data, on-board snapshot, readiness codes (USA and Canada models), and all specific data to correct the system except CKP pattern. If the CKP pattern data in the PCM was cleared, you must do the CKP pattern learn procedure. The CKP pattern clear command erases only CKP pattern data. This command is for repair of a misfire or the CKP sensor.

Scan Tool Clear Command

If you are using a generic scan tool to clear commands, be aware that there is only one setting for clearing the PCM, and it clears all commands at the same time (CKP pattern learn, idle learn, readiness codes (USA and Canada models), freeze data, on-board snapshot, and DTCs). After you clear all commands, you then need to do these procedures, in this order: PCM idle learn procedure ; CKP pattern learn procedure ; test-drive to set readiness codes to complete - Refer to: How to Set Readiness Codes(USA and Canada models) (2013-18), or How to Troubleshoot the Fuel and Emissions Systems (2016-18) (USA and Canada models).

DTC Clear

1. Clear the DTC with the HDS while the engine is stopped
2. Press the engine start/stop button to select the OFF mode
3. Press the engine start/stop button to select the ON mode, and wait 30 seconds
3. Press the engine start/stop button to select the OFF mode, and disconnect the HDS from the

DLC.PCM Reset

1. Reset the PCM with the HDS while the engine is stopped.
2. Press the engine start/stop button to select the OFF mode
3. Press the engine start/stop button to select the ON mode, and wait 30 seconds.

4. Press the engine start/stop button to select the OFF mode, and disconnect the HDS from the DLC.
5. Do the PCM idle learn procedure .

How To End A Troubleshooting Session (Required After Any Troubleshooting)

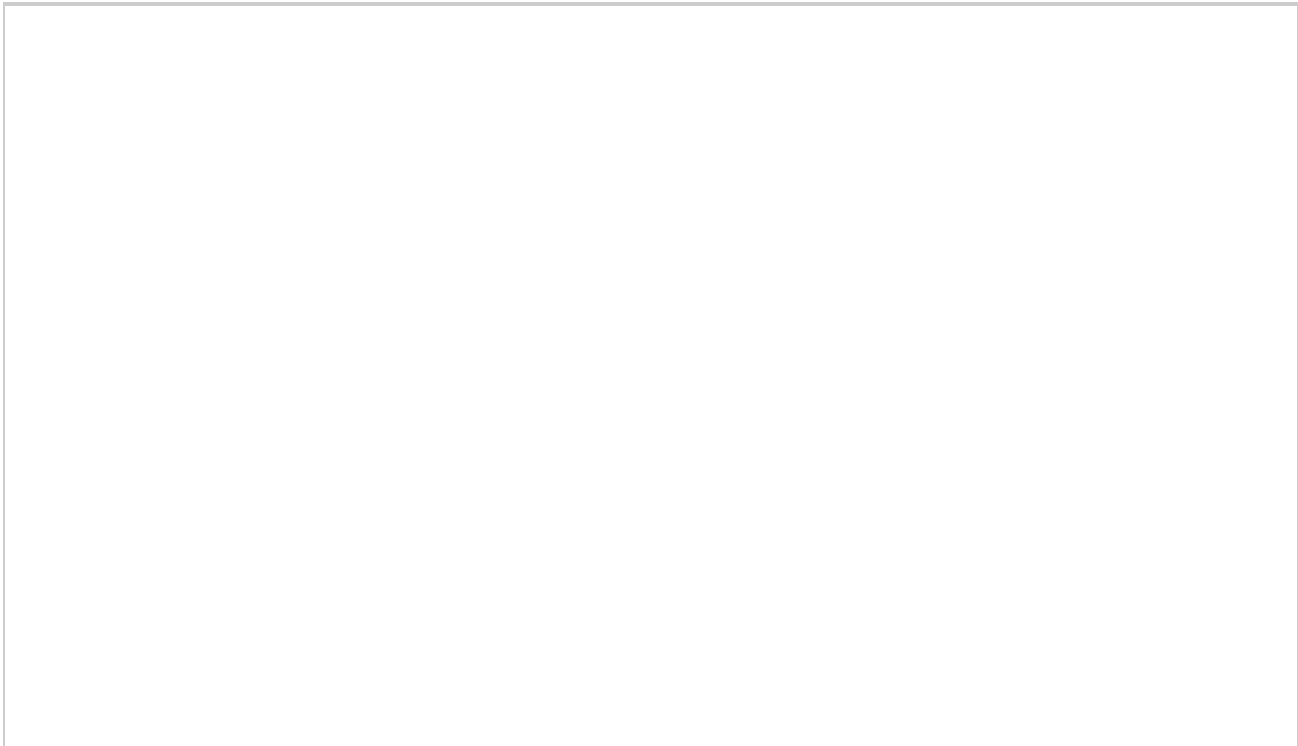
1. Reset the PCM with the HDS.
2. Do the PCM idle learn procedure .
3. Press the engine start/stop button to select the OFF mode
4. Disconnect the HDS from the DLC.

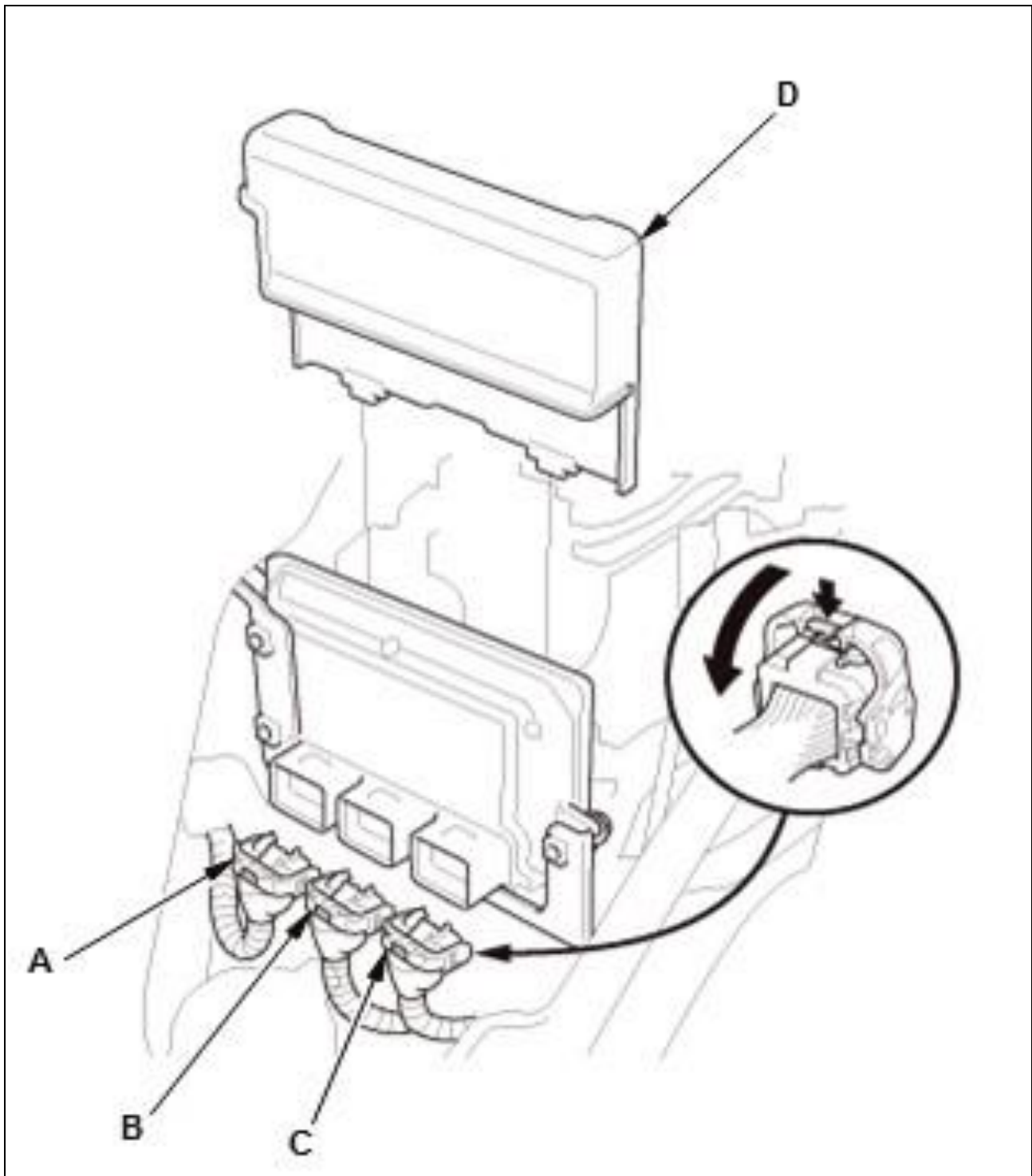
NOTE: The PCM is part of the immobilizer system. If you replace the PCM, you must register the PCM to the keyless access system.

How To Troubleshoot Circuits At The PCM Connectors

NOTE: The PCM stays on for up to an hour after the engine start/stop button is pressed to select the OFF mode. Jumping the SCS line after pressing the engine start/stop button to select the OFF mode cancels this function. Disconnecting the PCM during this function, without jumping the SCS line first, can damage the PCM.

1. Jump the SCS line with the HDS, and wait more than 1 minute
2. Remove the cover (D).



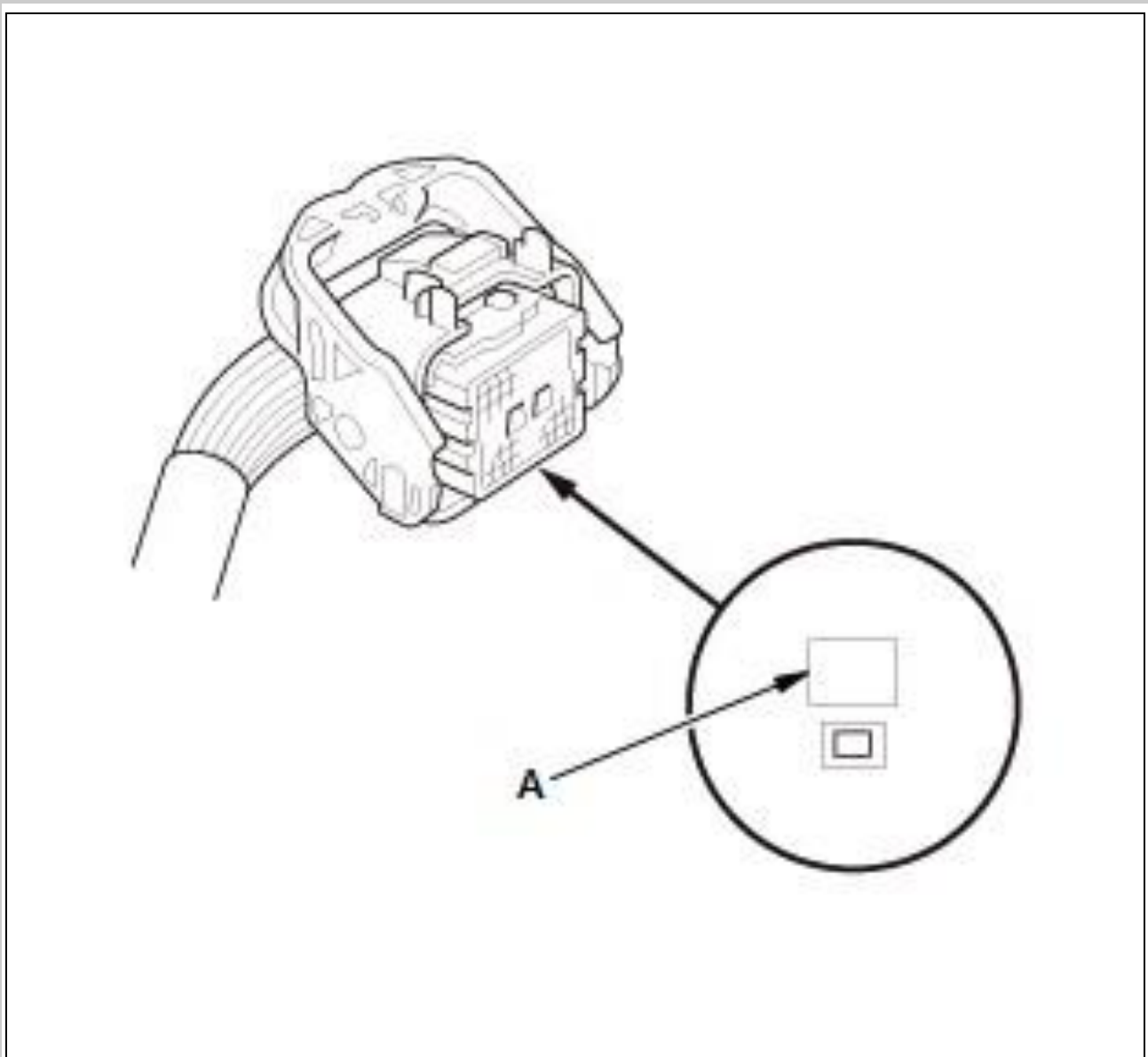


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3. Disconnect PCM connectors A, B, and C.

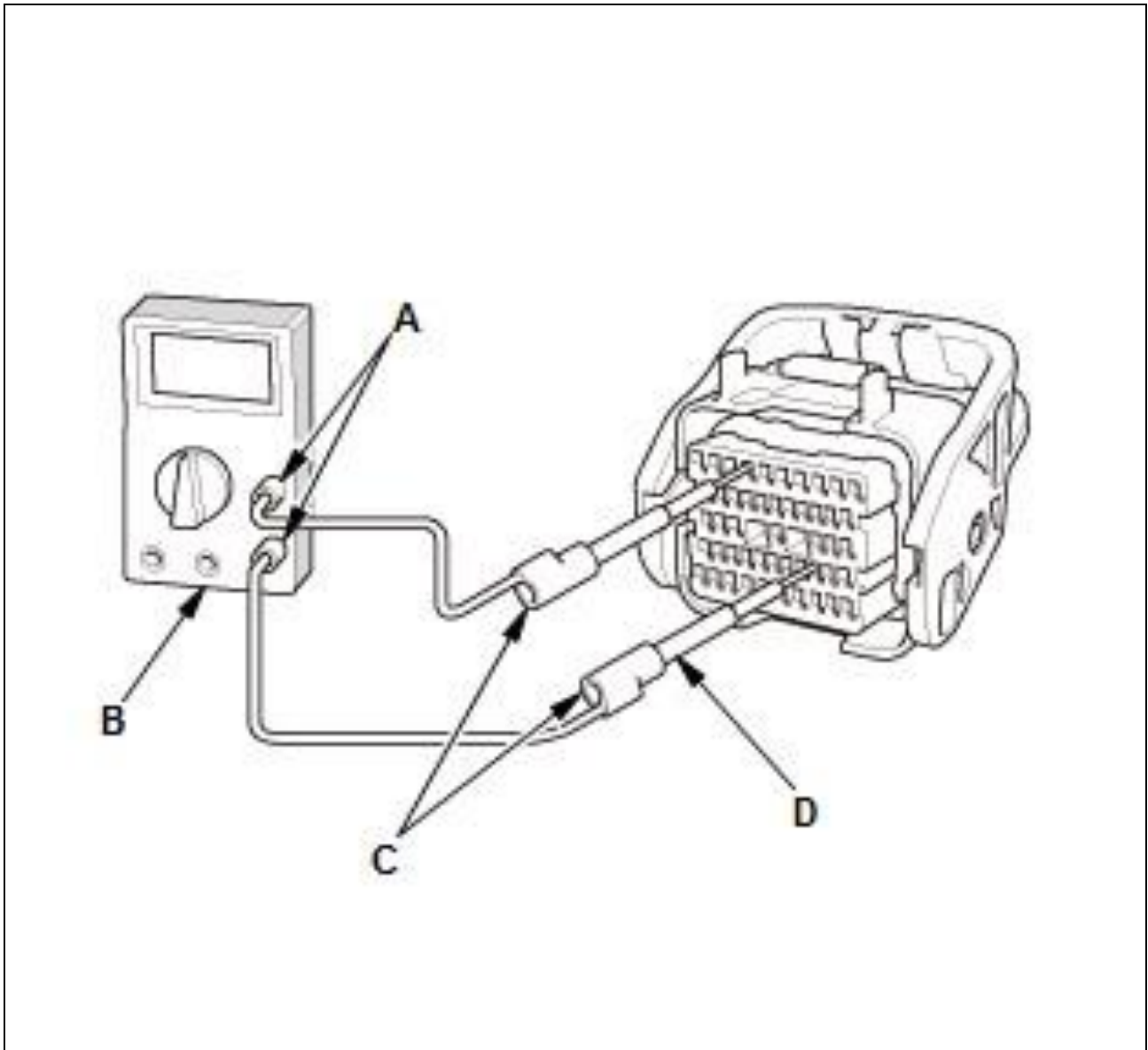
NOTE: PCM connectors A, B, and C have symbols (A=□, B=△, C=◊) embossed on them for identification

4. When diagnosis/troubleshooting is done at the PCM connectors, use the terminal test port (A) above the terminal you need to check.



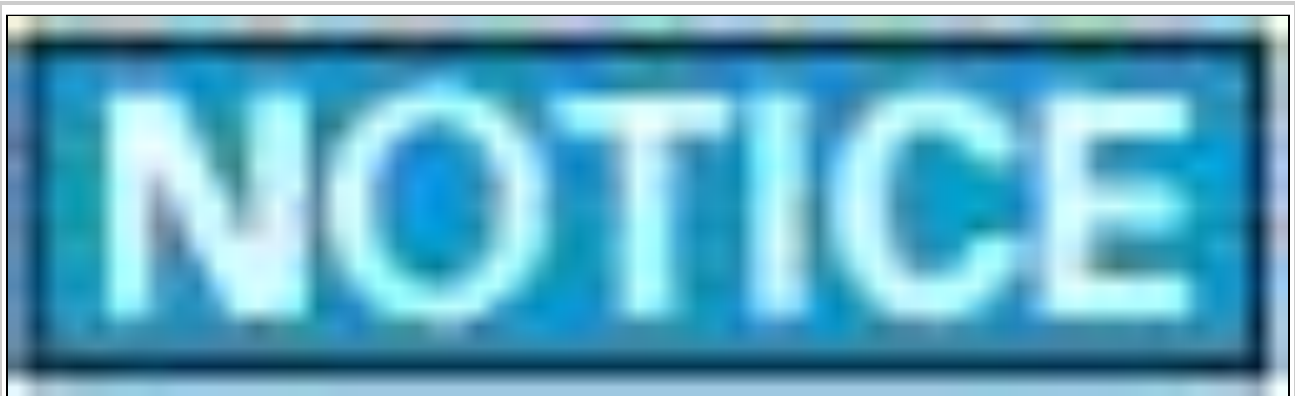
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5. Connect one side of the patch cord terminals (A) to a commercially available digital multimeter (B), and connect the other side of the terminal (C) to a commercially available banana jack (Pomona Electronics Tool No. 3563 or equivalent) (D).



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6. Gently contact the pin probe (male) at the terminal test port from the terminal side. Do not force the tips into the terminals.



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- For accurate results, always use the pin probe (male).
 - To prevent damage to the connector terminals, do not insert test equipment probes, paper clips, or other substitutes as they can damage the terminals. Damaged terminals cause a poor connection and an incorrect measurement.
 - Do not puncture the insulation on a wire. Punctures can cause or eventually lead to poor or intermittent electrical connections.

OBD Status

The OBD status shows the current system status of each DTC and all of the parameters. This function is used to see if the repair was successfully completed. The results of diagnostic tests for the DTC are displayed as:

- **PASSED:** The on-board diagnosis is successfully finished.
- **FAILED:** The on-board diagnosis has finished but failed.
- **EXECUTING:** The vehicle is in enable criteria conditions of the DTC, and the on-board diagnosis is running.
- **NOT COMPLETED:** The on-board diagnosis was running but is out of the enable conditions of the DTC.
- **OUT OF CONDITION:** The vehicle has stayed out of the enable conditions of the DTC.