DTC Troubleshooting (cont'd)

DTC P0401: EGR Insufficient Flow

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
4. Do the EGR TEST in the INSPECTION MENU with the HDS.

   Is the result OK?

   YES–Go to step 5.

   NO–Go to step 7.
5. Test-drive under these conditions:
   - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
   - A/T in D, M/T in 4th
   - Drive at a steady speed between 55—75 mph (88—120 km/h) for at least 10 seconds
   - During the drive, decelerate (with the throttle fully closed) for 5 seconds
6. Monitor the OBD STATUS for DTC P0401 in the DTCs MENU with the HDS.

   Does the HDS indicate FAILED?

   YES–Clean the intake manifold EGR port (see page 11-327) and the EGR pipe with throttle plate cleaner (see page 11-328). Also, clean the passage inside the EGR valve with throttle plate cleaner, then go to step 9.

   NO–If the HDS indicates PASSED, intermittent failure, the system is OK at this time. Check for poor connections or loose terminals at the EGR valve and the ECM/PCM. If the HDS indicates EXECUTING, keep driving until a result comes on. If the HDS indicates OUT OF CONDITION or NOT COMPLETED, go to step 5 and recheck.
7. Turn the ignition switch to LOCK (0).
8. Replace the EGR valve (see page 11-327).
9. Turn the ignition switch to ON (II).
10. Reset the ECM/PCM with the HDS.
11. Do the ECM/PCM idle learn procedure (see page 11-268).
12. Test-drive under these conditions:
    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Drive at a steady speed between 55—75 mph (88—120 km/h) for at least 10 seconds
    - During the drive, decelerate (with the throttle fully closed) for 5 seconds
13. Check for Pending or Confirmed DTCs with the HDS.

    Is DTC P0401 indicated?

    YES–Check for poor connections or loose terminals at the EGR valve and the ECM/PCM. If the connections and terminals are OK, go to step 15.

    NO–Go to step 14.
14. Monitor the OBD STATUS for DTC P0401 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES–Troubleshooting is complete. If any other Pending or Confirmed DTCs were indicated in step 13, go to the indicated DTC's troubleshooting.■

    NO–If the HDS indicates FAILED, check for poor connections or loose terminals at the EGR valve and the ECM/PCM, then go to step 1. If the HDS indicates EXECUTING, keep driving until a result comes on. If the HDS indicates OUT OF CONDITION or NOT COMPLETED, go to step 12.

15. Update the ECM/PCM if it does not have the latest software (see page 11-213), or substitute a known-good ECM/PCM (see page 11-7).

16. Test-drive under these conditions:
    - Engine coolant temperature (ECT SENSOR 1) above 158 °F (70 °C)
    - A/T in D, M/T in 4th
    - Drive at a steady speed between 55—75 mph (88—120 km/h) for at least 10 seconds
    - During the drive, decelerate (with the throttle fully closed) for 5 seconds

17. Check for Pending or Confirmed DTCs with the HDS.

    Is DTC P0401 indicated?

    YES–Check for poor connections or loose terminals at the EGR valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 16. If the ECM/PCM was substituted, go to step 1.

    NO–Go to step 18.

18. Monitor the OBD STATUS for DTC P0401 in the DTCs MENU with the HDS.

    Does the HDS indicate PASSED?

    YES–If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-215). If any other Pending or Confirmed DTCs were indicated in step 17, go to the indicated DTC's troubleshooting.■

    NO–If the HDS indicates FAILED, check for poor connections or loose terminals at the EGR valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 16. If the ECM/PCM was substituted, go to step 1. If the HDS indicates EXECUTING, keep driving until a result comes on. If the HDS indicates OUT OF CONDITION or NOT COMPLETED, go to step 16.

DTC P0404: EGR Control Circuit Range/Performance Problem

NOTE:
- Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see page 11-3).
- Information marked with an asterisk (*1) applies to '09-10 models and '11-12 models (M/T).
- Information marked with an asterisk (*2) applies to '11-12 models (A/T).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
4. Do the EGR TEST in the INSPECTION MENU with the HDS.

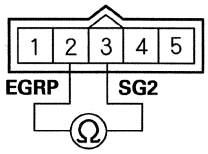
   Is the result OK?

   YES–Intermittent failure, the system is OK at this time. Clean any carbon build-up on the EGR valve with throttle plate cleaner.■

   NO–Go to step 5.

5. Turn the ignition switch to LOCK (0).
6. Disconnect the EGR valve 5P connector.
7. At the EGR valve side, measure the resistance between EGR valve 5P connector terminals No. 2 and No. 3.

EGR VALVE 5P CONNECTOR



Terminal side of male terminals

Is there 100 kΩ or more?

YES–Go to step 24.

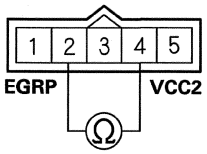
NO–Go to step 8.

(cont'd)

DTC Troubleshooting (cont'd)

8. At the EGR valve side, measure the resistance between EGR valve 5P connector terminals No. 2 and No. 4.

EGR VALVE 5P CONNECTOR



Terminal side of male terminals

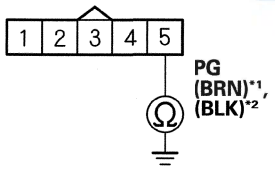
Is there 100 kΩ or more?

YES–Go to step 24.

NO–Go to step 9.

9. Check for continuity between EGR valve 5P connector terminal No. 5 and body ground.

EGR VALVE 5P CONNECTOR



Wire side of female terminals

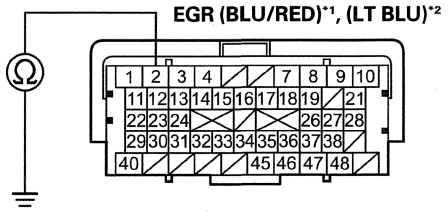
Is there continuity?

YES–Go to step 10.

NO–Repair an open in the wire between the EGR valve and G101, then go to step 25.

10. Jump the SCS line with the HDS.
11. Disconnect ECM/PCM connector B (49P).
12. Check for continuity between ECM/PCM connector terminal B2 and body ground.

ECM/PCM CONNECTOR B (49P)



Terminal side of female terminals

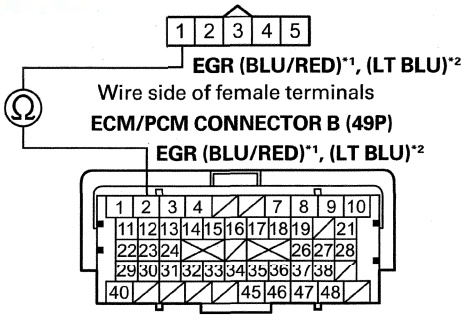
Is there continuity?

YES–Repair a short in the wire between the ECM/PCM (B2) and the EGR valve, then go to step 25.

NO–Go to step 13.

13. Check for continuity between ECM/PCM connector terminal B2 and EGR valve 5P connector terminal No. 1.

EGR VALVE 5P CONNECTOR



Terminal side of female terminals

Is there continuity?

YES–Go to step 14.

NO–Repair an open in the wire between the ECM/PCM (B2) and the EGR valve, then go to step 25.

14. Remove the EGR valve (see page 11-327).
15. Clean any carbon build-up on the EGR valve with throttle plate cleaner.
16. Install the EGR valve (see page 11-327).
17. Reconnect all connectors.
18. Turn the ignition switch to ON (II).
19. Reset the ECM/PCM with the HDS.
20. Do the ECM/PCM idle learn procedure (see page 11-268).
21. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
22. Do the EGR TEST in the INSPECTION MENU with the HDS.

    Is the result OK?

    YES–Go to step 31.

    NO–Go to step 23.
23. Turn the ignition switch to LOCK (0).
24. Replace the EGR valve (see page 11-327).
25. Reconnect all connectors.
26. Turn the ignition switch to ON (II).
27. Reset the ECM/PCM with the HDS.
28. Do the ECM/PCM idle learn procedure (see page 11-268).
29. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
30. Do the EGR TEST in the INSPECTION MENU with the HDS.
31. Check for Pending or Confirmed DTCs with the HDS.

    Is DTC P0404 indicated?

    YES–Check for poor connections or loose terminals at the EGR valve and the ECM/PCM, then go to step 1. If the connections and terminals are OK, go to step 32.

    NO–Troubleshooting is complete. If any other Pending or Confirmed DTCs are indicated, go to the indicated DTC's troubleshooting.■
32. Update the ECM/PCM if it does not have the latest software (see page 11-213), or substitute a known-good ECM/PCM (see page 11-7).
33. Start the engine. Hold the engine speed at 3,000 rpm without load (A/T in P or N, M/T in neutral) until the radiator fan comes on, then let it idle.
34. Do the EGR TEST in the INSPECTION MENU with the HDS.
35. Check for Pending or Confirmed DTCs with the HDS.

    Is DTC P0404 indicated?

    YES–Check for poor connections or loose terminals at the EGR valve and the ECM/PCM. If the ECM/PCM was updated, substitute a known-good ECM/PCM (see page 11-7), then go to step 33. If the ECM/PCM was substituted, go to step 1.

    NO–If the ECM/PCM was updated, troubleshooting is complete. If the ECM/PCM was substituted, replace the original ECM/PCM (see page 11-215). If any other Pending or Confirmed DTCs are indicated, go to the indicated DTC's troubleshooting.■

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