DTC Troubleshooting

DTC P0401: EGR Insufficient Flow

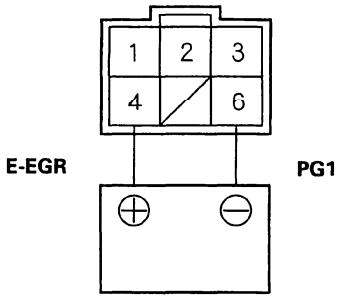
1. Reset the ECM/PCM (see page 11-4).
2. Test-drive under the following conditions. Then check for a Temporary DTC with the scan tool.
   - Without any electrical load.
   - Decelerate from 55 mph (88 km/h) for at least 5 seconds.

   Is Temporary DTC P0401 indicated?

   YES—Clean the intake manifold EGR port with carburetor cleaner. Clean the passage inside the EGR valve with carburetor cleaner, or replace the EGR valve. ■

   NO—Intermittent failure, go to step 3.
3. Turn the ignition switch OFF.
4. Disconnect the EGR valve 6P connector.
5. Connect the battery positive terminal to EGR valve connector terminal No. 4.

EGR VALVE 6P CONNECTOR



Terminal side of male terminals

6. Start the engine and let it idle, then connect the battery negative terminal to EGR valve 6P connector terminal No. 6.

   Did the engine stall or run rough?

   YES—Intermittent failure, system is OK at this time. ■

   NO—Clean the intake manifold EGR port with carburetor cleaner. Clean the passage inside the EGR valve with carburetor cleaner, or replace the EGR valve. ■

DTC P1491: EGR Valve Insufficient Lift

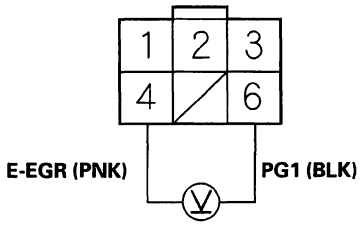
1. Reset the ECM/PCM (see page 11-4).
2. Start the engine. Hold the engine at 3,000 rpm with no load (in Park or neutral) until the radiator fan comes on.
3. Check for a Temporary DTC with the scan tool.
4. Test-drive the vehicle for approx. 10 minutes. Try to keep the engine speed in the 1,700—2,500 rpm range.

   Is Temporary DTC P1491 indicated?

   YES—Go to step 5.

   NO—Intermittent failure, system is OK at this time. Check for poor connections or loose wires at the EGR valve and the ECM/PCM. ■
5. Turn the ignition switch OFF.
6. Disconnect the EGR valve 6P connector.
7. Start the engine and let it idle.
8. Measure voltage between EGR valve 6P connector terminals No. 4 and No. 6.

EGR VALVE 6P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Substitute a known-good ECM/PCM and recheck (see page 11-5). If the symptom/indication goes away, replace the original ECM/PCM. ■

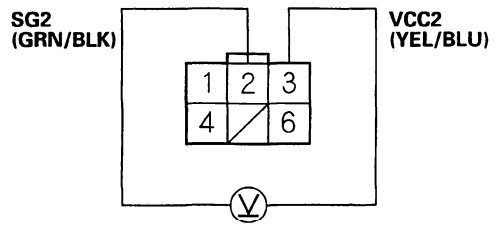
NO—Go to step 9.

9. Turn the ignition switch OFF.

10. Turn the ignition switch ON (II).

11. Measure voltage between EGR valve 6P connector terminals No. 2 and No. 3.

EGR VALVE 6P CONNECTOR



Wire side of female terminals

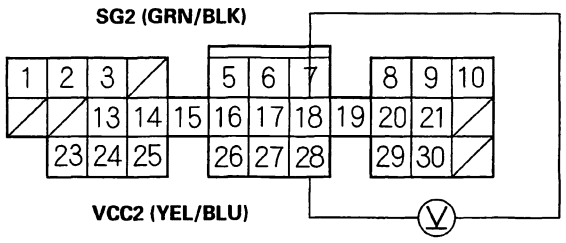
Is there approx. 5 V?

YES – Go to step 13.

NO – Go to step 12.

12. Measure voltage between ECM/PCM connector terminals C18 and C28.

ECM/PCM CONNECTOR C (31P)



Wire side of female terminals

Is there approx. 5 V?

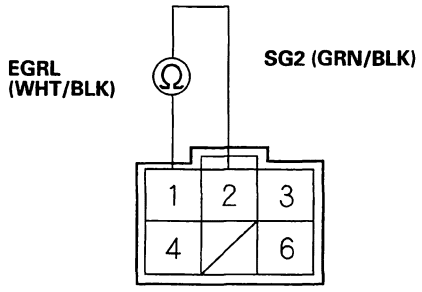
YES – Repair open in the wire between the EGR valve and the ECM/PCM (C18, C28). ■

NO – Substitute a known-good ECM/PCM and recheck (see page 11-5). If the symptom/indication goes away, replace the original ECM/PCM. ■

13. Turn the ignition switch OFF.

14. At the sensor side, measure resistance between EGR valve 6P connector terminals No. 1 and No. 2.

EGR VALVE 6P CONNECTOR



Terminal side of male terminals

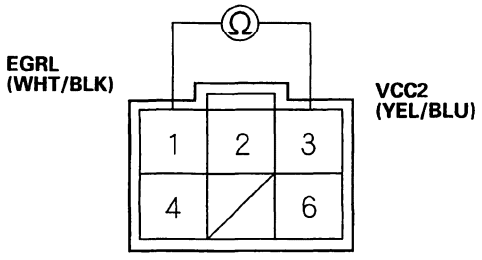
Is the resistance 100 kΩ or more?

YES – Replace the EGR valve. ■

NO – Go to step 15.

15. Measure resistance between EGR valve 6P connector terminals No. 1 and No. 3.

EGR VALVE 6P CONNECTOR



Terminal side of male terminals

Is there 100 kΩ or more?

YES – Replace the EGR valve. ■

NO – Go to step 16.

16. Reconnect the EGR valve connector.

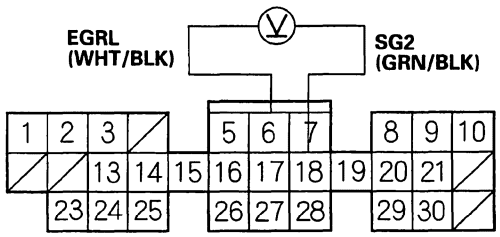
17. Turn the ignition switch ON (II).

(cont'd)

DTC Troubleshooting (cont'd)

18. Measure voltage between ECM/PCM connector terminals C6 and C18.

ECM/PCM CONNECTOR C (31P)



Wire side of female terminals

Is there approx. 1.2 V?

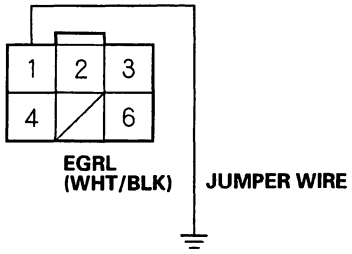
YES – Go to step 19.

NO – Repair short in the wire between the EGR valve and the PCM (C8). ■

19. Turn the ignition switch OFF.

20. Connect EGR valve 6P connector terminal No. 1 to body ground with a jumper wire.

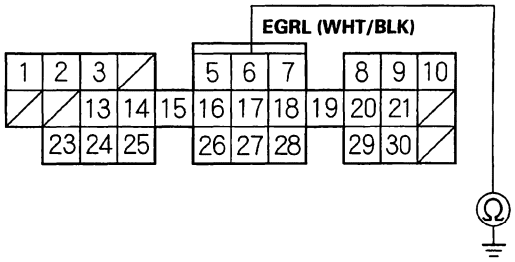
EGR VALVE 6P CONNECTOR



Wire side of female terminals

21. Check for continuity between ECM/PCM connector terminal C6 and body ground.

ECM/PCM CONNECTOR C (31P)



Wire side of female terminals

Is there continuity?

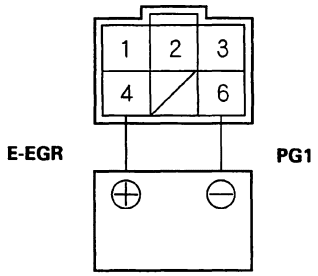
YES – Go to step 22.

NO – Repair open in the wire between the EGR valve and the ECM/PCM (C6). ■

22. Disconnect the EGR valve 6P connector.

23. Connect the battery positive terminal to EGR valve 6P connector terminal No. 4 with a jumper wire.

EGR VALVE 6P CONNECTOR



Terminal side of male terminals

24. Start the engine and let it idle, then connect the battery negative terminal to EGR valve 6P connector terminal No. 6 with a jumper wire.

Does the engine stall or run rough?

YES – Go to step 25.

NO – Replace the EGR valve. ■

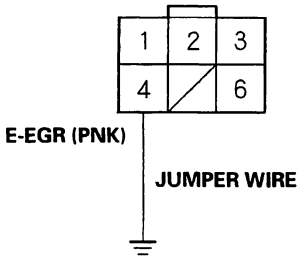
25. Turn the ignition switch OFF.

26. Disconnect ECM/PCM connector B (25P).

27. Turn the ignition switch OFF.

28. Connect EGR valve 6P connector terminal No. 4 to body ground with a jumper wire.

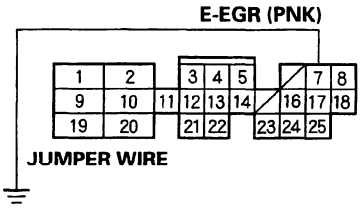
EGR VALVE 6P CONNECTOR



Wire side of female terminals

29. Check for continuity between ECM/PCM connector terminal B7 and body ground.

ECM/PCM CONNECTOR B (25P)



Wire side of female terminals

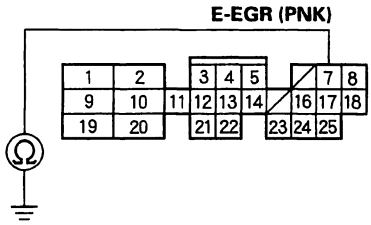
Is there continuity?

YES – Go to step 30.

NO – Repair open in the wire between the EGR valve and the ECM/PCM (B7).■

30. Check for continuity between ECM/PCM connector terminal B7 and body ground.

ECM/PCM CONNECTOR B (25P)



Wire side of female terminals

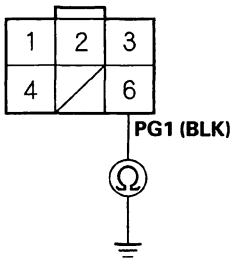
Is there continuity?

YES – Repair short in the wire between the EGR valve and the ECM/PCM (B7).■

NO – Go to step 31.

31. Check for continuity between EGR valve 6P connector terminal No. 6 and body ground.

EGR VALVE 6P CONNECTOR



Wire side of female terminals

Is there continuity?

YES – Substitute a known-good ECM/PCM and recheck (see page 11-5). If the symptom/indication goes away, replace the original ECM/PCM.■

NO – Repair open in the wire between the EGR valve and G101.■