

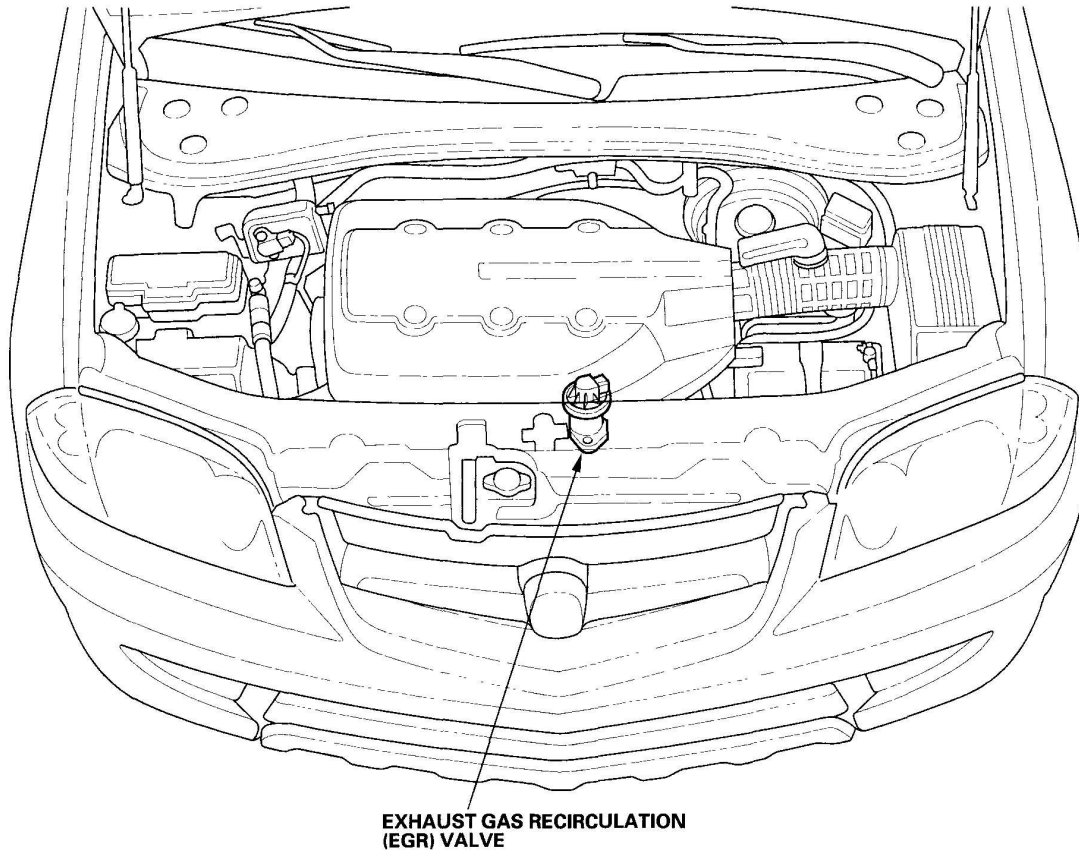
2006 Acura MDX

2003-06 ENGINE PERFORMANCE EGR System - MDX

2003-06 ENGINE PERFORMANCE

EGR System - MDX

COMPONENT LOCATION INDEX



G03640011

Fig. 1: Identifying Exhaust Gas Recirculation (EGR) Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

DTC CODES

DTC CHARTS

DTC	Description
<u>DTC P0401</u>	EGR Insufficient Flow
<u>DTC P0403</u>	EGR Control Circuit Malfunction
<u>DTC P0404</u>	EGR Control Circuit Range/Performance Problem
<u>DTC P0406</u>	EGR Valve Position Sensor Circuit High Voltage
<u>DTC P2413</u>	EGR System Malfunction

DTC TROUBLESHOOTING

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 GENERAL TROUBLESHOOTING INFORMATION).

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.
3. Start the engine. Hold the engine speed at 3,000 RPM without load (in Park or 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 test result OK?

YES - Go to step 5.

NO - Go to step 7 .

5. Test-drive under these conditions:
 - Engine coolant temperature above 158 °F (70 °C)
 - A/T in D5 position
 - Vehicle speed at 30 mph (48 km/h) or more, and engine speed between 1,100 RPM and 2,300 RPM
 - 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 screen indicate FAILED?

YES - Remove the EGR pipe (see INTAKE MANIFOLD REMOVAL AND INSTALLATION), and clean the intake manifold port with carburetor cleaner, then go to step 9 .

NO - If the screen indicates PASSED, intermittent failure, system is OK at this time. If the screen indicates EXECUTING, keep the driving condition continually until a result comes on. If the screen indicates OUT OF CONDITION, go to step 5 and recheck.

7. Turn the ignition switch OFF.
8. Replace the EGR valve (see EGR VALVE REPLACEMENT).
9. Turn the ignition switch ON (II).
10. Reset the PCM with the HDS.
11. Do the PCM idle learn procedure (see PCM IDLE LEARN PROCEDURE).
12. Test-drive under these conditions:
 - Engine coolant temperature above 158 °F (70 °C)
 - A/T in D5 position
 - Vehicle speed at 30 mph (48 km/h) or more, and engine speed between 1,100 RPM and 2,300 RPM

- During the drive, decelerate (with the throttle fully closed) for 5 seconds

13. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0401 is indicated, check for poor connections or loose terminals at the EGR valve and the PCM. If connections are OK, go to step 15 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

NO - Go to step 14.

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

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

NO - If the screen indicates FAILED, go to step 1 and recheck. If the screen indicates EXECUTING, keep the driving condition continually until a result comes on. If the screen indicates OUT OF CONDITION, go to step 12 and recheck.

15. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).

16. Test-drive under these conditions:

- Engine coolant temperature above 158 °F (70 °C)
- A/T in D5 position
- Vehicle speed at 30 mph (48 km/h) or more, and engine speed between 1,100 RPM and 2,300 RPM
- During the drive, decelerate (with the throttle fully closed) for 5 seconds

17. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0401 is indicated, check for poor connections or loose terminals at the EGR valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**).

DTC P0403: EGR CONTROL CIRCUIT MALFUNCTION

NOTE: Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **GENERAL TROUBLESHOOTING INFORMATION**).

1. Turn the ignition switch ON (II).
2. Clear the DTC with the HDS.

2006 Acura MDX

2003-06 ENGINE PERFORMANCE EGR System - MDX

3. Start the engine. Hold the engine speed at 3,000 RPM without load (in Park or neutral) until the radiator fan comes on, then let it idle.
4. Do the EGR TEST in the INSPECTION MENU with the HDS.

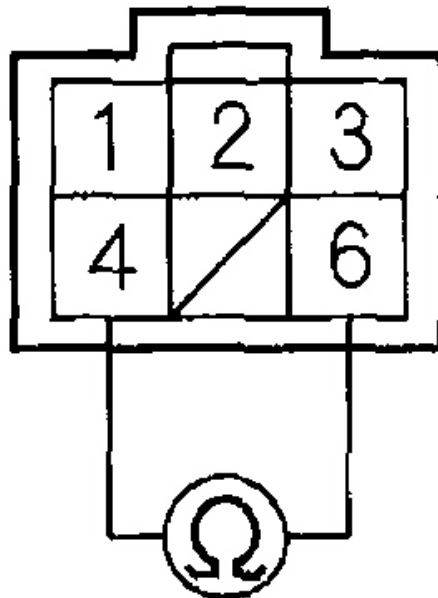
Is the EGR SYSTEM OK?

YES - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the EGR valve and the PCM.

NO - Go to step 5.

5. Turn the ignition switch OFF.
6. Disconnect the EGR valve 6P connector.
7. At the EGR valve side, measure resistance between EGR valve 6P connector terminals No. 4 and No. 6.

EGR VALVE 6P CONNECTOR



Terminal side of male terminals

G03640012

Fig. 2: Measuring Resistance Between EGR Valve 6P Connector Terminals No. 4 And No. 6
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 6.3 - 6.7 ohm?

YES - Go to step 8.

NO - Go to step 14 .

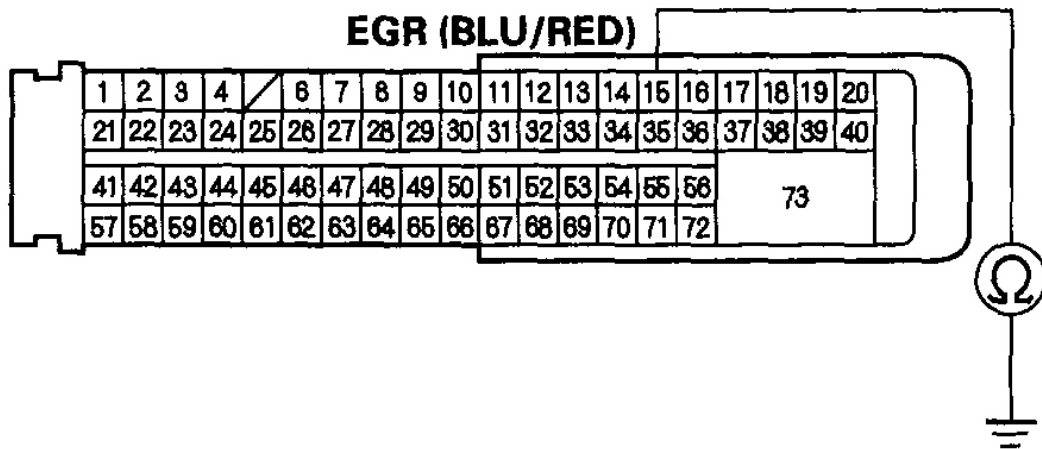
8. Jump the SCS line with the HDS.

2006 Acura MDX

2003-06 ENGINE PERFORMANCE EGR System - MDX

9. Disconnect PCM connector A (73P).
10. Check for continuity between PCM connector terminal A15 and body ground.

PCM CONNECTOR A (73P)



Terminal side of female terminals

G03640013

Fig. 3: Checking Continuity Between PCM Connector Terminal A15 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

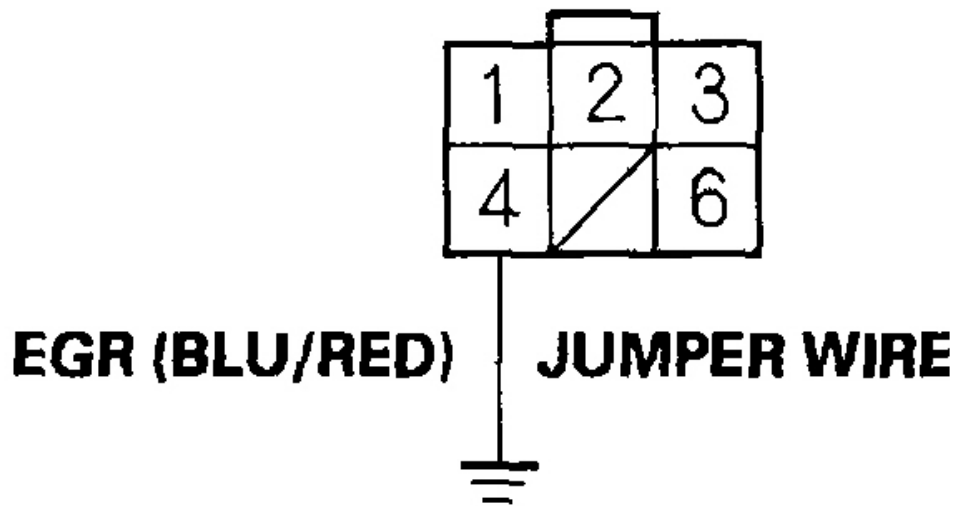
Is there continuity?

YES - Repair short in the wire between the PCM (A15) and the EGR valve, then go to step 15 .

NO - Go to step 11.

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

EGR VALVE 6P CONNECTOR

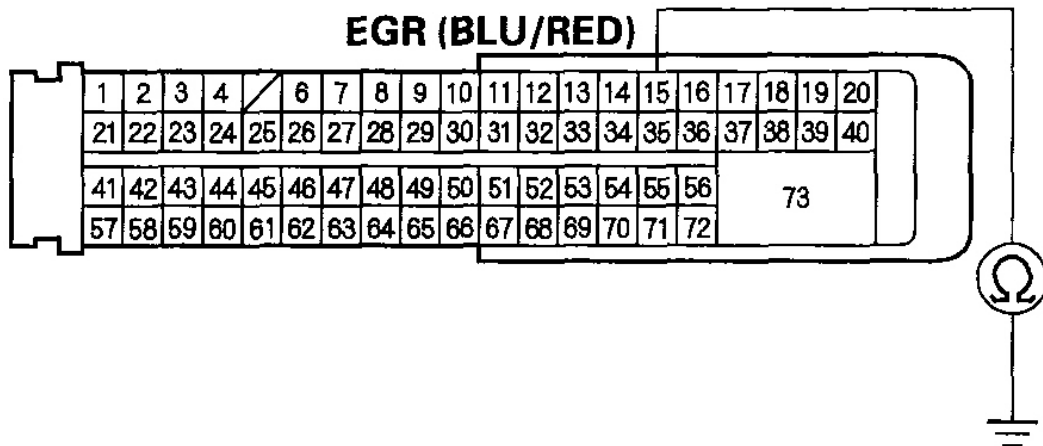


Wire side of female terminals

G03640014

Fig. 4: Connecting EGR Valve 6P Connector Terminal No. 4 To Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Check for continuity between PCM connector terminal A15 and body ground.

PCM CONNECTOR A (73P)

Terminal side of female terminals

G03640015

Fig. 5: Checking Continuity Between PCM Connector Terminal A15 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

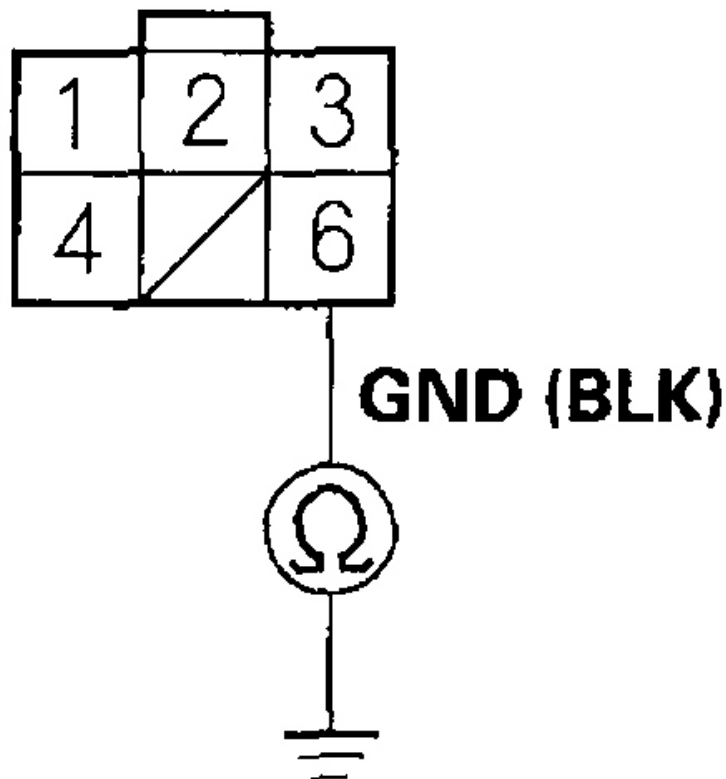
Is there continuity?

YES - Go to step 13.

NO - Repair open in the wire between the PCM (A15) and the EGR valve, then go to step 15 .

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

EGR VALVE 6P CONNECTOR



Wire side of female terminals

G03640016

Fig. 6: Checking Continuity Between EGR Valve 6P Connector Terminal No. 6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), then go to step 15 .

NO - Repair open in the wire between the EGR valve and G101, then go to step 15 .

14. Replace the EGR valve (see **EGR VALVE REPLACEMENT**).
15. Turn the ignition switch ON (II).
16. Reset the PCM with the HDS.
17. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
18. Start the engine. Hold the engine speed at 3,000 RPM without load (in Park or neutral) until the radiator fan comes on, then let it idle.
19. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0403 is indicated, check for poor connections or loose terminals at the EGR valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

NO - Troubleshooting is complete.

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 GENERAL TROUBLESHOOTING INFORMATION).**

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

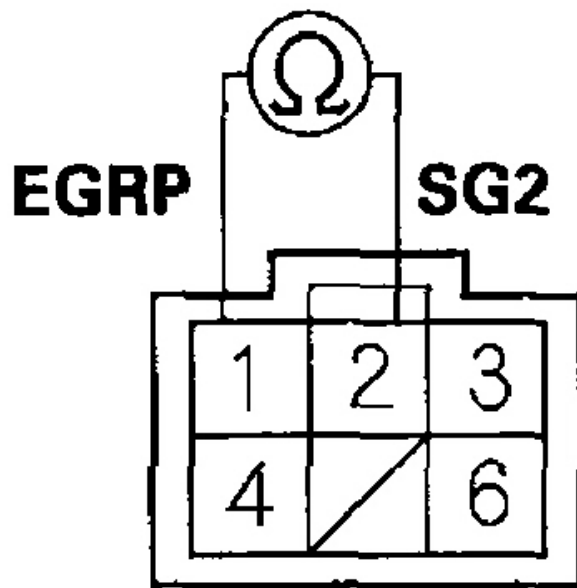
Is the test result OK?

YES - Intermittent failure system is OK at this time. Clean any carbon build-up on the EGR valve with carburetor cleaner.

NO - Go to step 5.

5. Turn the ignition switch OFF.
6. Disconnect the EGR valve 6P connector.
7. 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

G03640017

Fig. 7: Measuring Resistance Between EGR Valve 6P Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

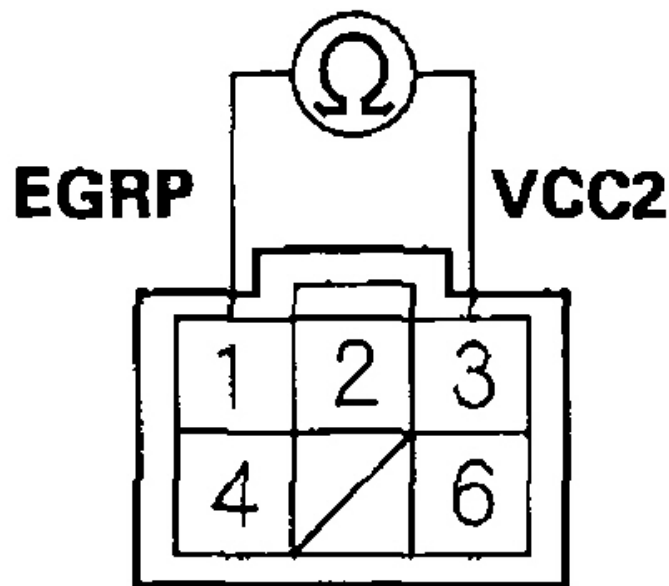
Is there 100 kohm or more?

YES - Go to step 25 .

NO - Go to step 8.

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

EGR VALVE 6P CONNECTOR



Terminal side of male terminals

G03640018

Fig. 8: Measuring Resistance Between EGR Valve 6P Connector Terminals No. 1 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

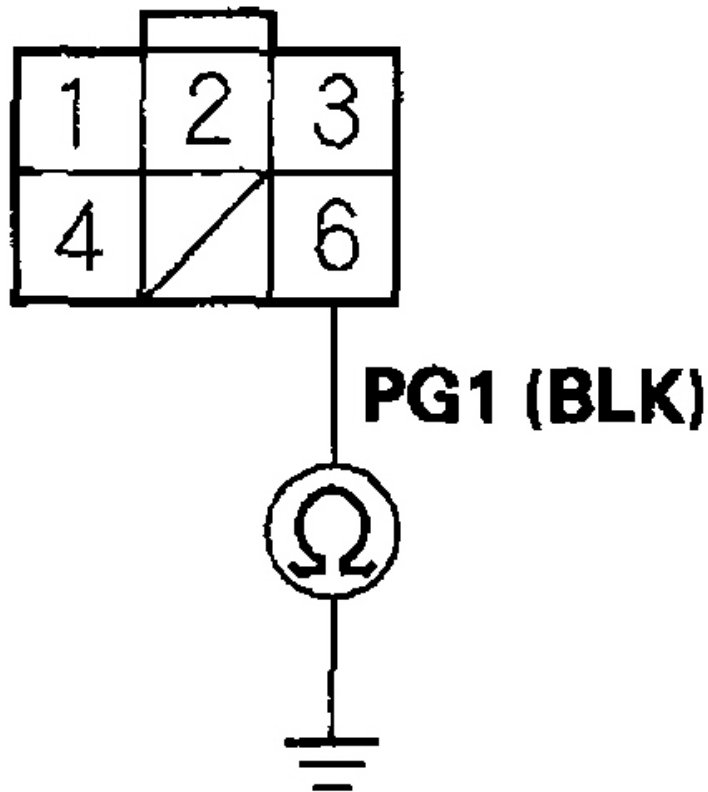
Is there 100 kohm or more?

YES - Go to step 25 .

NO - Go to step 9.

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

EGR VALVE 6P CONNECTOR

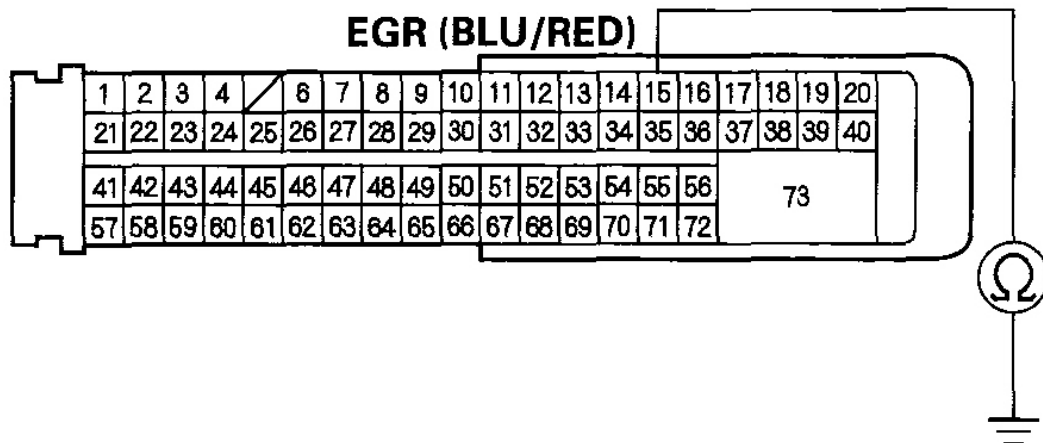


Wire side of female terminals

G03640019

Is there continuity?**YES** - Go to step 10.**NO** - Repair open in the wire between the EGR valve and G101, then go to step 26 .

10. Jump the SCS line with the HDS.
11. Disconnect PCM connector A (73P).
12. Check for continuity between PCM connector terminal A15 and body ground.

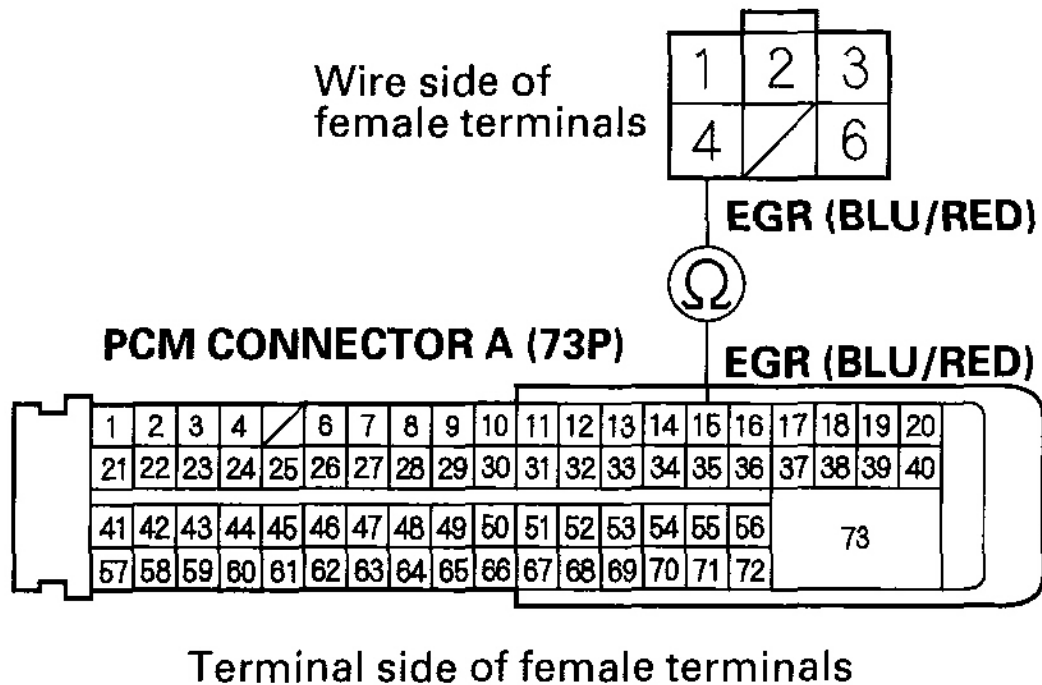
PCM CONNECTOR A (73P)**Terminal side of female terminals**

G03640020

Fig. 10: Checking Continuity Between PCM Connector Terminal A15 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?**YES** - Repair short in the wire between the PCM (A15) and the EGR valve, then go to step 26 .**NO** - Go to step 13.

13. Check for continuity between PCM connector terminal A15 and EGR valve 6P connector terminal No. 4.

EGR VALVE 6P CONNECTOR

G03640021

Fig. 11: Checking Continuity Between PCM Connector Terminal A15 And EGR Valve 6P Connector Terminal No. 4

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 14.

NO - Repair open in the wire between the PCM (A15) and the EGR valve, then go to step 26 .

14. Remove the EGR valve (see **EGR VALVE REPLACEMENT**).
15. Clean the intake manifold port with carburetor cleaner. Also, clean the passage inside the EGR valve with carburetor cleaner.
16. Install the EGR valve (see **EGR VALVE REPLACEMENT**).
17. Reconnect the EGR valve 6P connector.
18. Reconnect PCM connector A (73P).
19. Turn the ignition switch ON (II).
20. Reset the PCM with the HDS.
21. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).

2006 Acura MDX

2003-06 ENGINE PERFORMANCE EGR System - MDX

22. Start the engine. Hold the engine speed at 3,000 RPM without load (in Park or neutral) until the radiator fan comes on, then let it idle.
23. Do the EGR TEST in the INSPECTION MENU with the HDS.

Is the result OK?

YES - Go to step 31 .

NO - Go to step 24.

24. Turn the ignition switch OFF.
25. Replace the EGR valve (see **EGR VALVE REPLACEMENT**).
26. Reconnect all connectors.
27. Turn the ignition switch ON (II).
28. Reset the PCM with the HDS.
29. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
30. Start the engine. Hold the engine speed at 3,000 RPM without load (in Park or neutral) until the radiator fan comes on, then let it idle.
31. Do the EGR TEST in the INSPECTION MENU with the HDS.
32. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0404 is indicated, check for poor connections or loose terminals at the EGR valve and the PCM. If the connections and terminals are OK, go to step 34 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

NO - Go to step 33.

33. Monitor the OBD STATUS for DTC P0404 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

NO - If the screen indicates FAILED, then go to step 1 , and recheck. If the screen indicates, EXECUTING, keep the driving condition continually until a result comes on. If the screen indicates OUT OF CONDITION, go to step 31 and recheck.

34. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
35. Do the EGR TEST in the INSPECTION MENU with the HDS.
36. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0404 is indicated, check for poor connections or loose terminals at the EGR valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the

2006 Acura MDX

2003-06 ENGINE PERFORMANCE EGR System - MDX

indicated DTCs troubleshooting.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**).

DTC P0406: EGR VALVE POSITION SENSOR CIRCUIT HIGH VOLTAGE

NOTE: **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see GENERAL TROUBLESHOOTING INFORMATION).**

1. Turn the ignition switch ON (II).
2. Check the EGR VLS in the DATA LIST with the HDS.

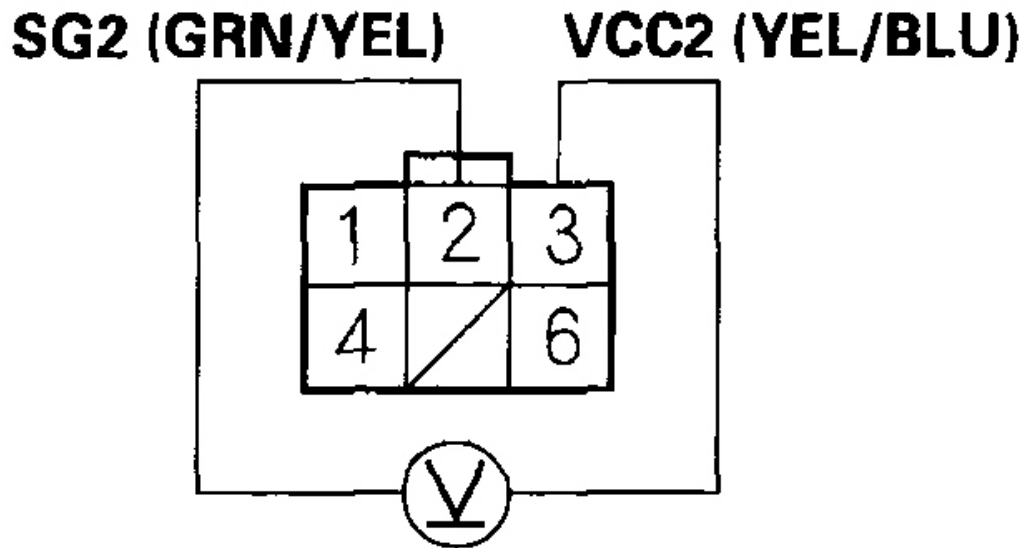
Is 4.88 V or more indicated?

YES - Go to step 3.

NO - Intermittent failure, system is OK at this time. Check for poor connections or loose terminals at the EGR valve and the PCM.

3. Turn the ignition switch OFF.
4. Disconnect the EGR valve 6P connector.
5. Turn the ignition switch ON (II).
6. Measure voltage between EGR valve 6P connector terminals No. 2 and No. 3.

EGR VALVE 6P CONNECTOR



Wire side of female terminals

G03640022

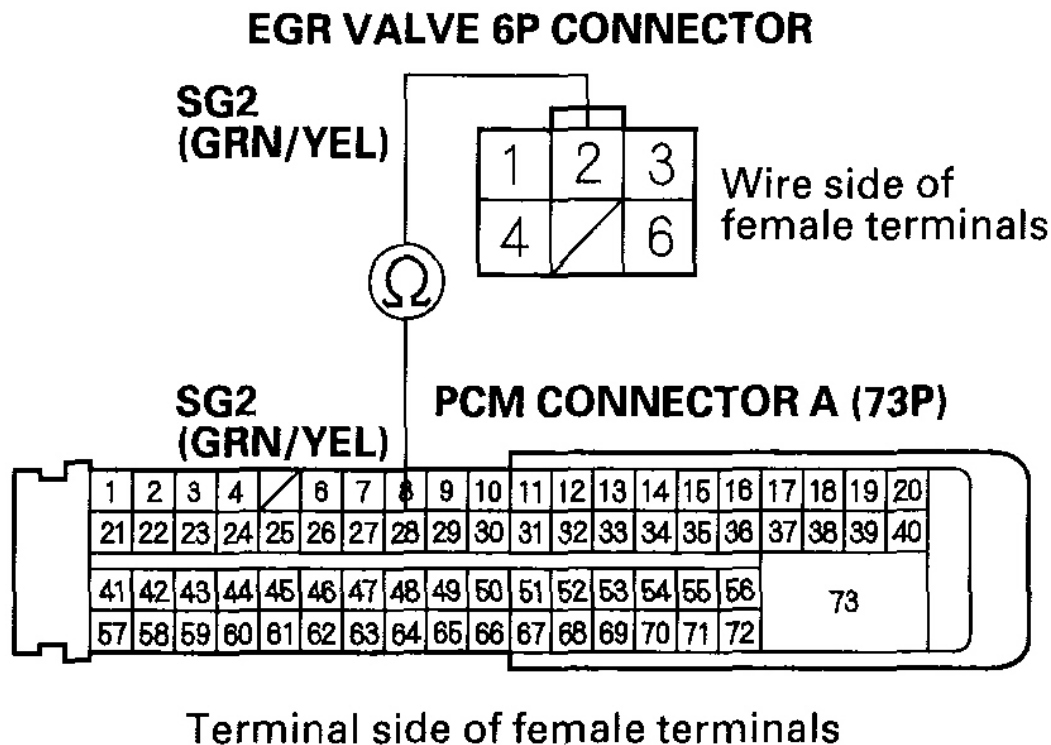
Fig. 12: Measuring Voltage Between EGR Valve 6P Connector Terminals No. 2 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 11 .

NO - Go to step 7.

7. Turn the ignition switch OFF.
8. Jump the SCS line with the HDS.
9. Disconnect PCM connector A (73P).
10. Check for continuity between PCM connector terminal A28 and EGR valve 6P connector terminal No. 2.



G03640023

Fig. 13: Checking Continuity Between PCM Connector Terminal A28 And EGR Valve 6P Connector Terminal No. 2

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Go to step 18 .

NO - Repair open in the wire between the EGR valve and the PCM (A28), then go to step 13 .

11. Turn the ignition switch OFF.
12. Replace the EGR valve (see **EGR VALVE REPLACEMENT**).
13. Reconnect all connectors.
14. Turn the ignition switch ON (II).
15. Reset the PCM with the HDS.
16. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
17. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

2006 Acura MDX

2003-06 ENGINE PERFORMANCE EGR System - MDX

YES - If DTC P0406 is indicated, check for poor connections or loose terminals at the EGR valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

NO - Troubleshooting is complete.

18. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
19. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P0406 is indicated, check for poor connections or loose terminals at the EGR valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**).

DTC P2413: EGR SYSTEM MALFUNCTION

NOTE:

- **Before you troubleshoot, record all freeze data and any on-board snapshot, and review the general troubleshooting information (see **GENERAL TROUBLESHOOTING INFORMATION**).**
- **If DTC P0651 is indicated at the same time as DTC P2413, troubleshoot DTC P0651 first, then recheck for P2413.**

1. Turn the ignition switch ON (II).
2. Reset the PCM with the HDS.
3. Start the engine. Hold the engine speed at 3,000 RPM without load (in Park or 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, system is OK at this time. Check for poor connections or loose terminals at the EGR valve and the PCM.

NO - Go to step 5.

5. Turn the ignition switch OFF.
6. Turn the ignition switch ON (II).
7. Check the EGR VLS in the DATA LIST with the HDS.

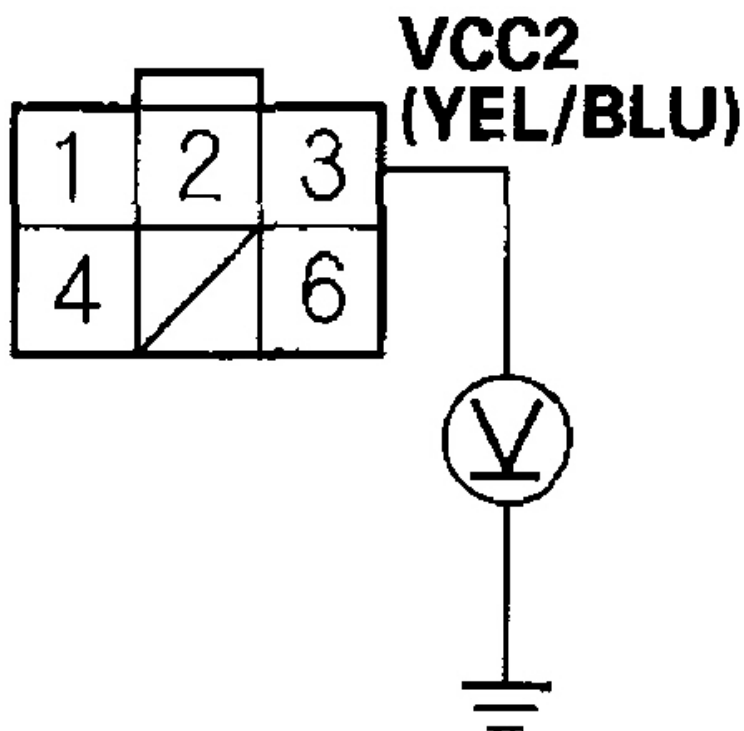
Is about 0 V indicated?

YES - Go to step 8.

NO - Go to step 29 .

8. Turn the ignition switch OFF.
9. Disconnect the EGR valve 6P connector.
10. Turn the ignition switch ON (II).
11. Measure voltage between EGR valve 6P connector terminal No. 3 and body ground.

EGR VALVE 6P CONNECTOR



Wire side of female terminals

G03640024

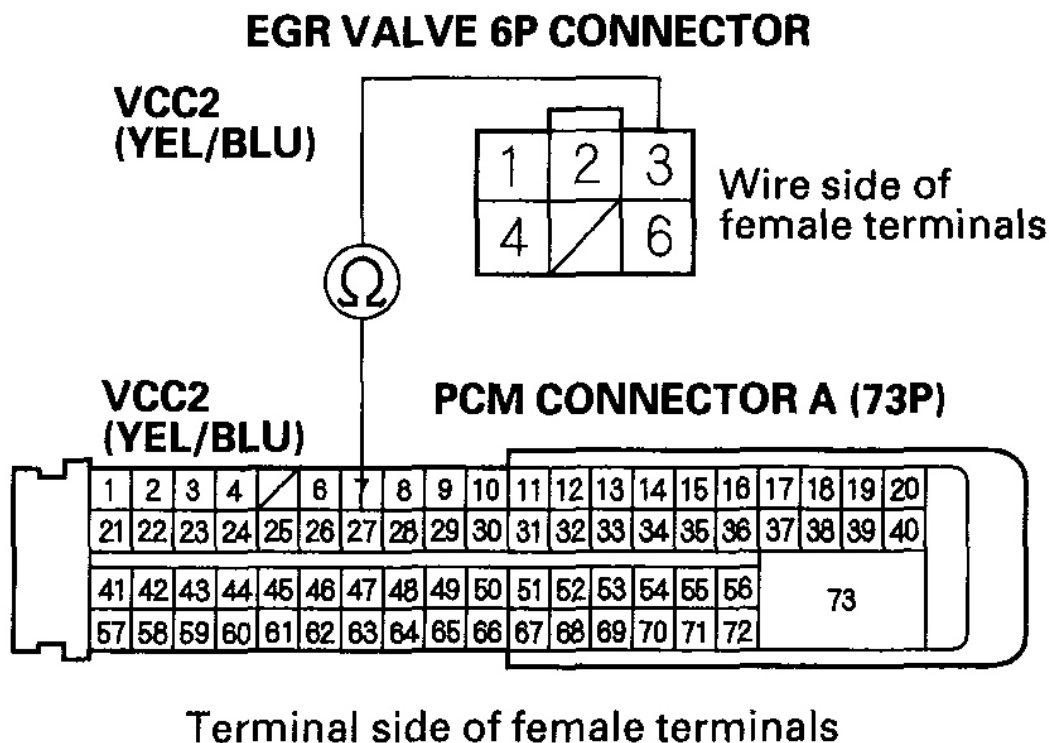
Fig. 14: Measuring Voltage Between EGR Valve 6P Connector Terminal No. 3 And Body Ground
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there about 5 V?

YES - Go to step 16 .

NO - Go to step 12.

12. Turn the ignition switch OFF.
13. Jump the SCS line with the HDS.
14. Disconnect PCM connector A (73P).
15. Check for continuity between PCM connector terminal A27 and EGR valve 6P connector terminal No. 3.



G03640025

Fig. 15: Checking Continuity Between PCM Connector Terminal A27 And EGR Valve 6P Connector Terminal No. 3
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

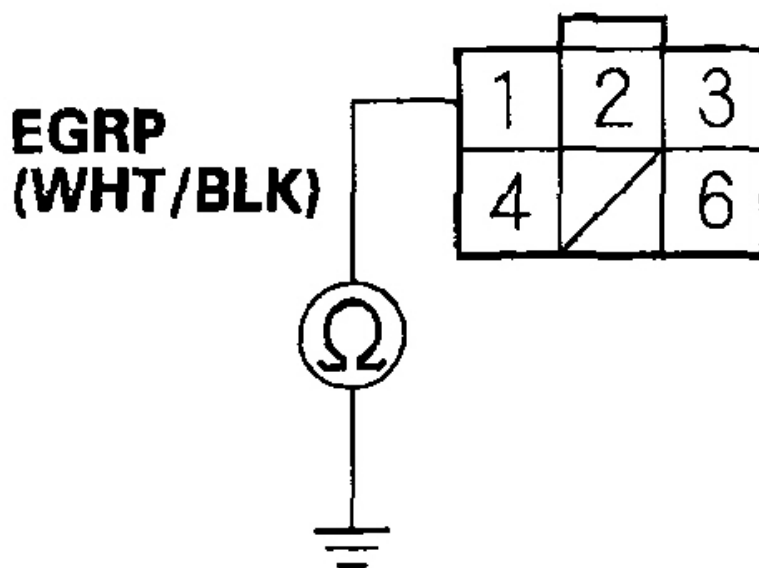
Is there continuity?

YES - Go to step 52 .

NO - Repair open in the wire between the EGR valve and the PCM (A27), then go to step 45 .

16. Turn the ignition switch OFF.
17. Jump the SCS line with the HDS.
18. Disconnect PCM connector A (73P).
19. Check for continuity between EGR valve 6P connector terminal No. 1 and body ground.

EGR VALVE 6P CONNECTOR



Wire side of female terminals

G03640026

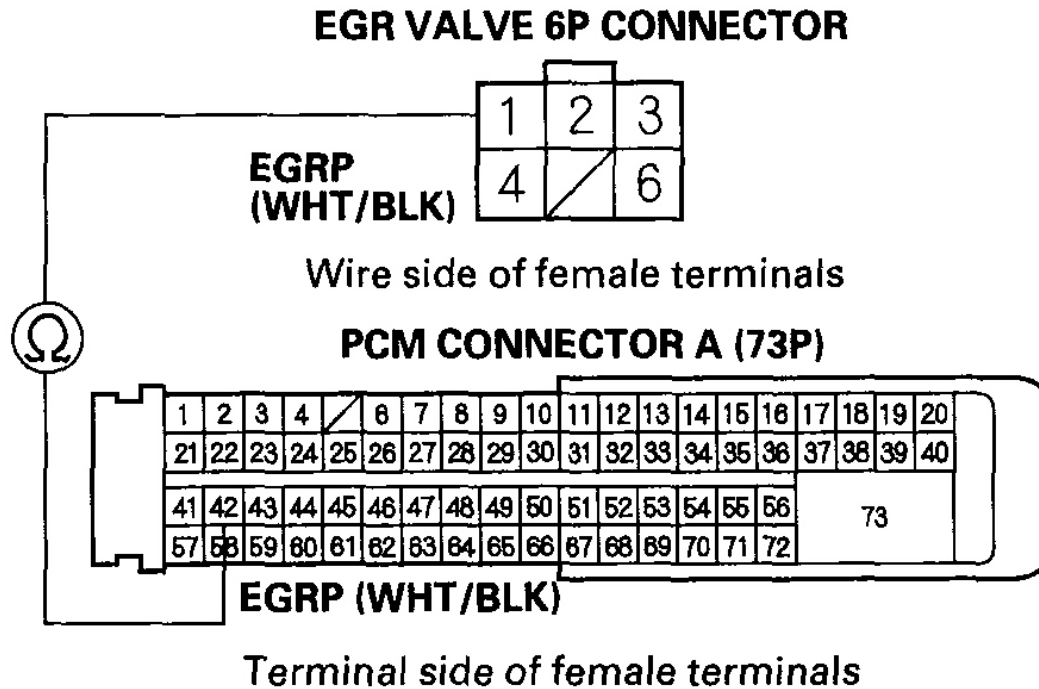
Fig. 16: Checking Continuity Between EGR Valve 6P Connector Terminal No. 1 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A42) and the EGR valve, then go to step 45 .

NO - Go to step 20.

20. Check for continuity between PCM connector terminal A42 and EGR valve 6P connector terminal No. 1.



G03640027

Fig. 17: Checking Continuity Between PCM Connector Terminal A42 And EGR Valve 6P Connector Terminal No. 1

Courtesy of AMERICAN HONDA MOTOR CO., INC.

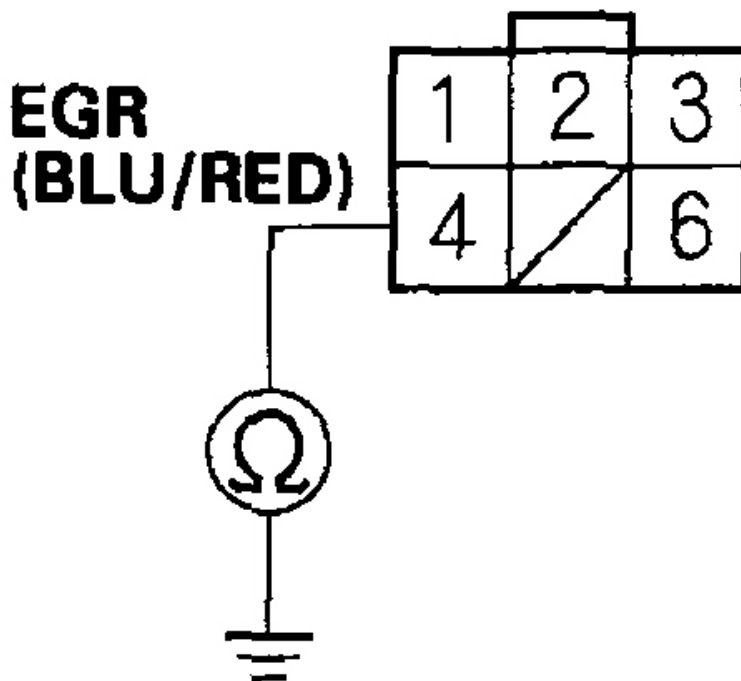
Is there continuity?

YES - Go to step 21.

NO - Repair open in the wire between the PCM (A42) and the EGR valve, then go to step 45 .

21. Turn the ignition switch OFF.
22. Disconnect the EGR valve 6P connector.
23. Check for continuity between EGR valve 6P connector terminal No. 4 and body ground.

EGR VALVE 6P CONNECTOR



Wire side of female terminals

G03640028

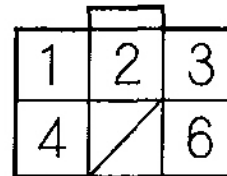
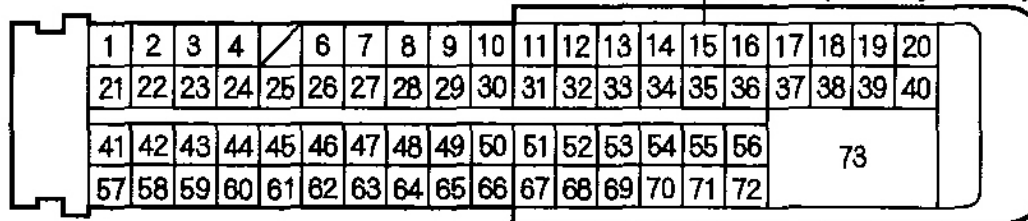
Fig. 18: Checking Continuity Between EGR Valve 6P Connector Terminal No. 4 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?

YES - Repair short in the wire between the PCM (A15) and the EGR valve, then go to step 45 .

NO - Go to step 24.

24. Check for continuity between PCM connector terminal A15 and EGR valve 6P connector terminal No. 4.

EGR VALVE 6P CONNECTORWire side of
female terminals**EGR (BLU/RED)****PCM CONNECTOR A (73P)****EGR (BLU/RED)**

Terminal side of female terminals

G03640029

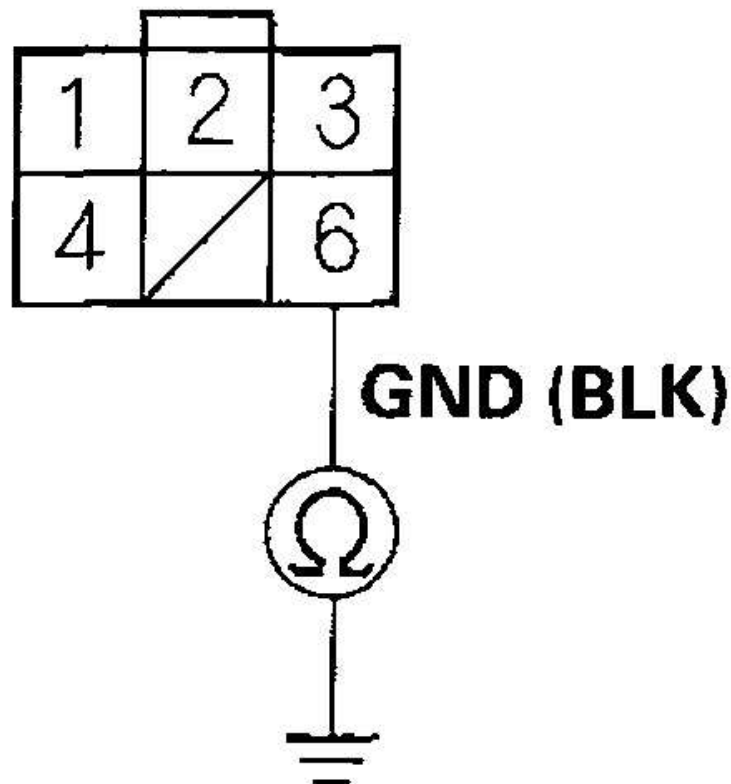
Fig. 19: Checking Continuity Between PCM Connector Terminal A15 And EGR Valve 6P Connector Terminal No. 4

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there continuity?**YES** - Go to step 25.**NO** - Repair open in the wire between the PCM (A15) and the EGR valve, then go to step 45 .

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

EGR VALVE 6P CONNECTOR



Wire side of female terminals

G03640030

Fig. 20: Checking Continuity Between EGR Valve 6P Connector Terminal No. 6 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

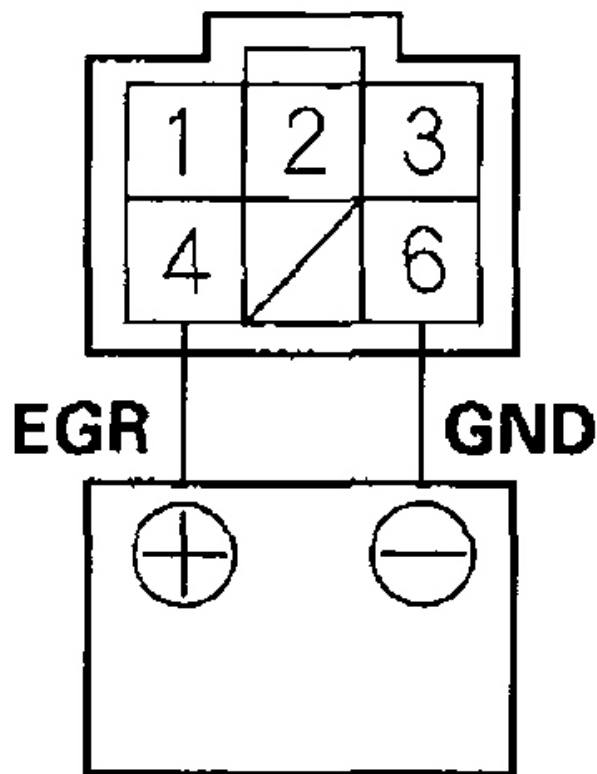
Is there continuity?

YES - Go to step 26.

NO - Repair open in the wire between the EGR valve and G101, then go to step 45 .

26. Reconnect PCM connector A (73P).
27. 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

G03640031

Fig. 21: Connecting Battery Positive Terminal To EGR Valve 6P Connector Terminal No. 4 With Jumper Wire

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2006 Acura MDX

2003-06 ENGINE PERFORMANCE EGR System - MDX

28. 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.

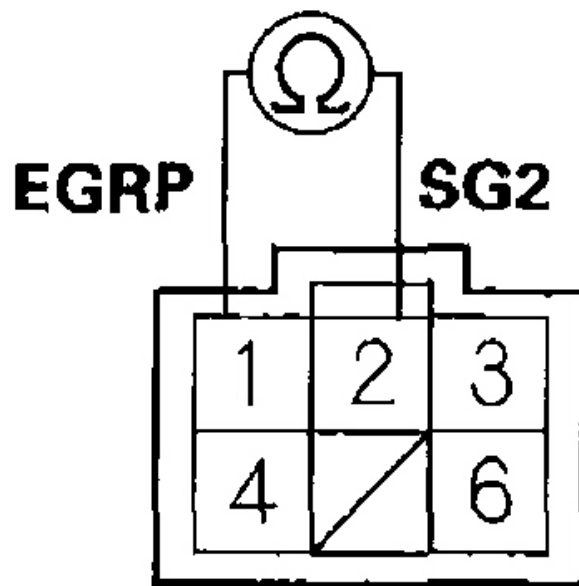
Does the engine stall or run rough?

YES - Go to step 52 .

NO - Go to step 33 .

29. Turn the ignition switch OFF.
30. Disconnect the EGR valve 6P connector.
31. 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

G03640032

Fig. 22: Measuring Resistance Between EGR Valve 6P Connector Terminals No. 1 And No. 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

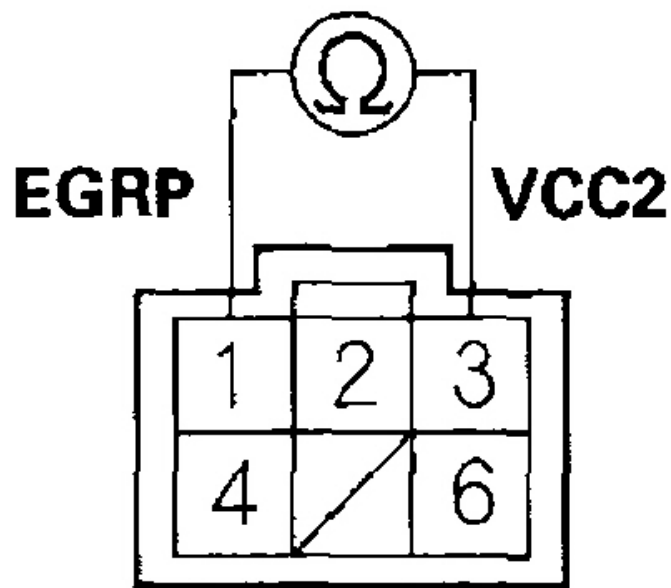
Is there continuity or resistance of 100 kohm or more?

YES - Go to step 44 .

NO - Go to step 32.

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

EGR VALVE 6P CONNECTOR



Terminal side of male terminals

G03640033

Fig. 23: Measuring Resistance Between EGR Valve 6P Connector Terminals No. 1 And No. 3
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there 100 kohm or more?

YES - Go to step 44 .

NO - Go to step 33.

2006 Acura MDX

2003-06 ENGINE PERFORMANCE EGR System - MDX

33. Remove the EGR valve (see **EGR VALVE REPLACEMENT**) and the EGR pipe (see **INTAKE MANIFOLD REMOVAL AND INSTALLATION**).
34. Clean the intake manifold EGR port with carburetor cleaner. Also, clean the passage inside the EGR valve with carburetor cleaner.
35. Install the EGR valve (see **EGR VALVE REPLACEMENT**) and the EGR plate.
36. Reconnect PCM connector A (73P).
37. Reconnect the EGR valve 6P connector.
38. Turn the ignition switch ON (II).
39. Reset the PCM with the HDS.
40. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
41. Start the engine. Hold the engine speed at 3,000 RPM without load (in Park or neutral) until the radiator fan comes on, then let it idle.
42. Do the EGR TEST in the INSPECTION MENU with the HDS.

Is EGR system OK?

YES - Go to step 49 .

NO - Go to step 43.

43. Turn the ignition switch OFF.
44. Replace the EGR valve (see **EGR VALVE REPLACEMENT**).
45. Turn the ignition switch ON (II).
46. Reset the PCM with the HDS.
47. Do the PCM idle learn procedure (see **PCM IDLE LEARN PROCEDURE**).
48. Start the engine. Hold the engine speed at 3,000 RPM without load (in Park or neutral) until the radiator fan comes on, then let it idle.
49. Test-drive the vehicle under load for about 10 minutes. Try to keep the engine speed in the 1,700-2,500 RPM range.
50. Check for Temporary DTCs or DTCs with the HDS.

Are any Temporary DTCs or DTCs indicated?

YES - If DTC P2413 is indicated, check for poor connections or loose terminals at the EGR valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

NO - Go to step 51.

51. Monitor the OBD STATUS for DTC P2413 in the DTCs MENU with the HDS.

Does the screen indicate PASSED?

YES - Troubleshooting is complete.

NO - If the screen indicates FAILED, then go to step 1 , and recheck. If the screen indicates

2006 Acura MDX

2003-06 ENGINE PERFORMANCE EGR System - MDX

EXECUTING, keep the driving condition continually until a result comes on. If the screen indicates OUT OF CONDITION, go to step 48 and recheck.

52. Update the PCM if it does not have the latest software, or substitute a known-good PCM (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**).
53. Start the engine. Hold the engine speed at 3,000 RPM without load (in Park or neutral) until the radiator fan comes on, then let it idle.
54. Test-drive the vehicle under load for about 10 minutes. Try to keep the engine speed in the 1,700-2,500 RPM range.
55. Check for Temporary DTCs or DTCs with the HDS.

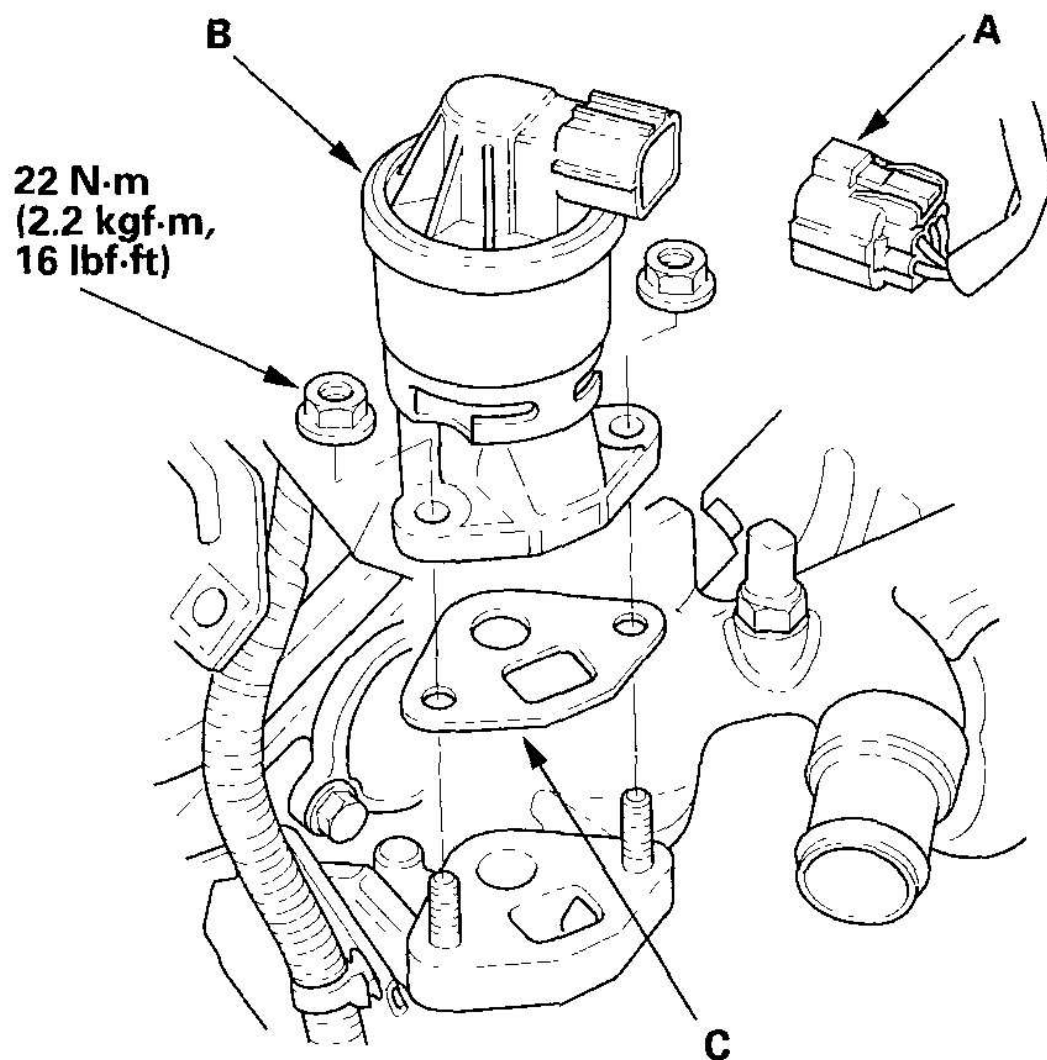
Are any Temporary DTCs or DTCs indicated?

YES - If DTC P2413 is indicated, check for poor connections or loose terminals at the EGR valve and the PCM, then go to step 1 . If any other Temporary DTCs or DTCs are indicated, go to the indicated DTCs troubleshooting.

NO - If the PCM was updated, troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **PCM REPLACEMENT**).

EGR VALVE REPLACEMENT

1. Remove the intake manifold cover and the ignition coil cover (see **IGNITION COIL REMOVAL/INSTALLATION**).
2. Disconnect the EGR valve 6P connector (A).



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Fig. 24: Removing EGR Valve

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the EGR valve (B).
4. Install the valve in the reverse order of removal with a new gasket (C).
5. Install the ignition coil cover and the intake manifold cover (see **IGNITION COIL REMOVAL/INSTALLATION**).