

2012 ENGINE

Engine Mount Control System - TL

COMPONENT LOCATION INDEX

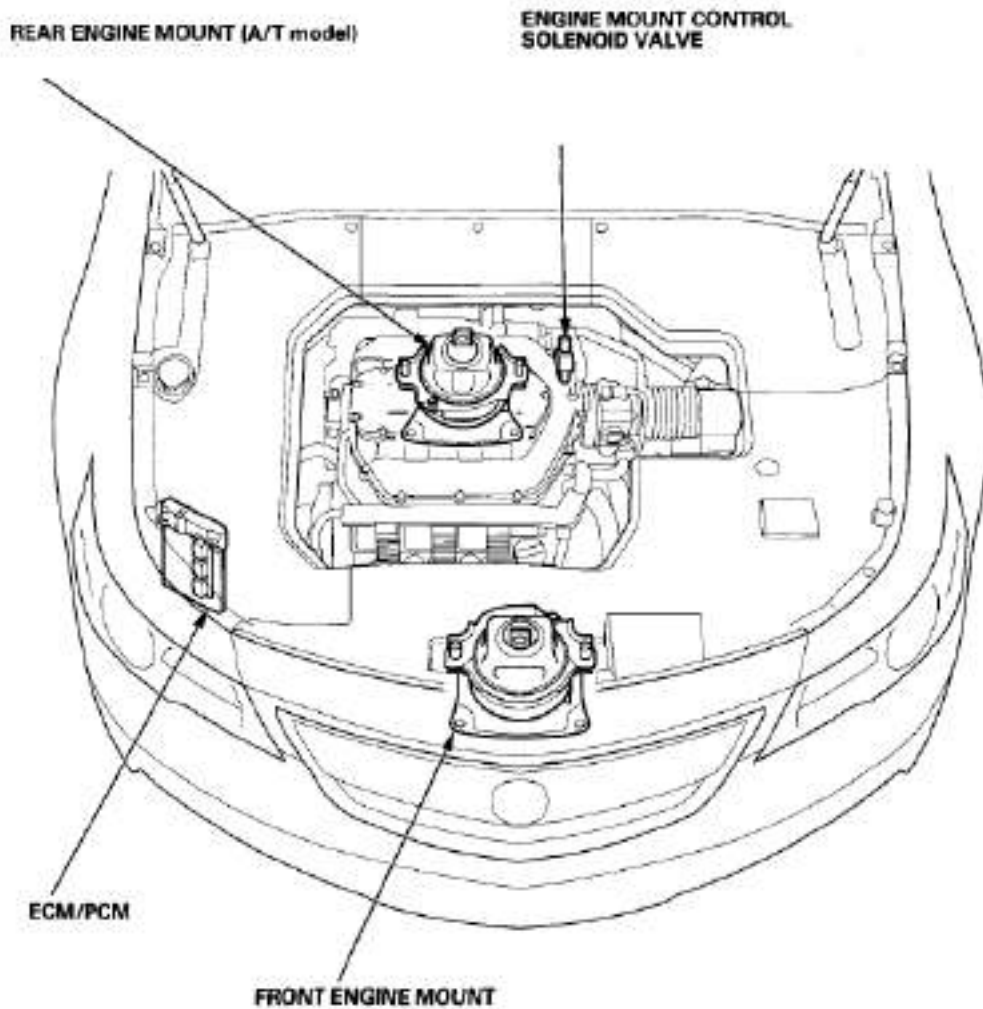


Fig. 1: Engine Mount Control System Components Location
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CIRCUIT DIAGRAM

WITHOUT KEYLESS ACCESS SYSTEM

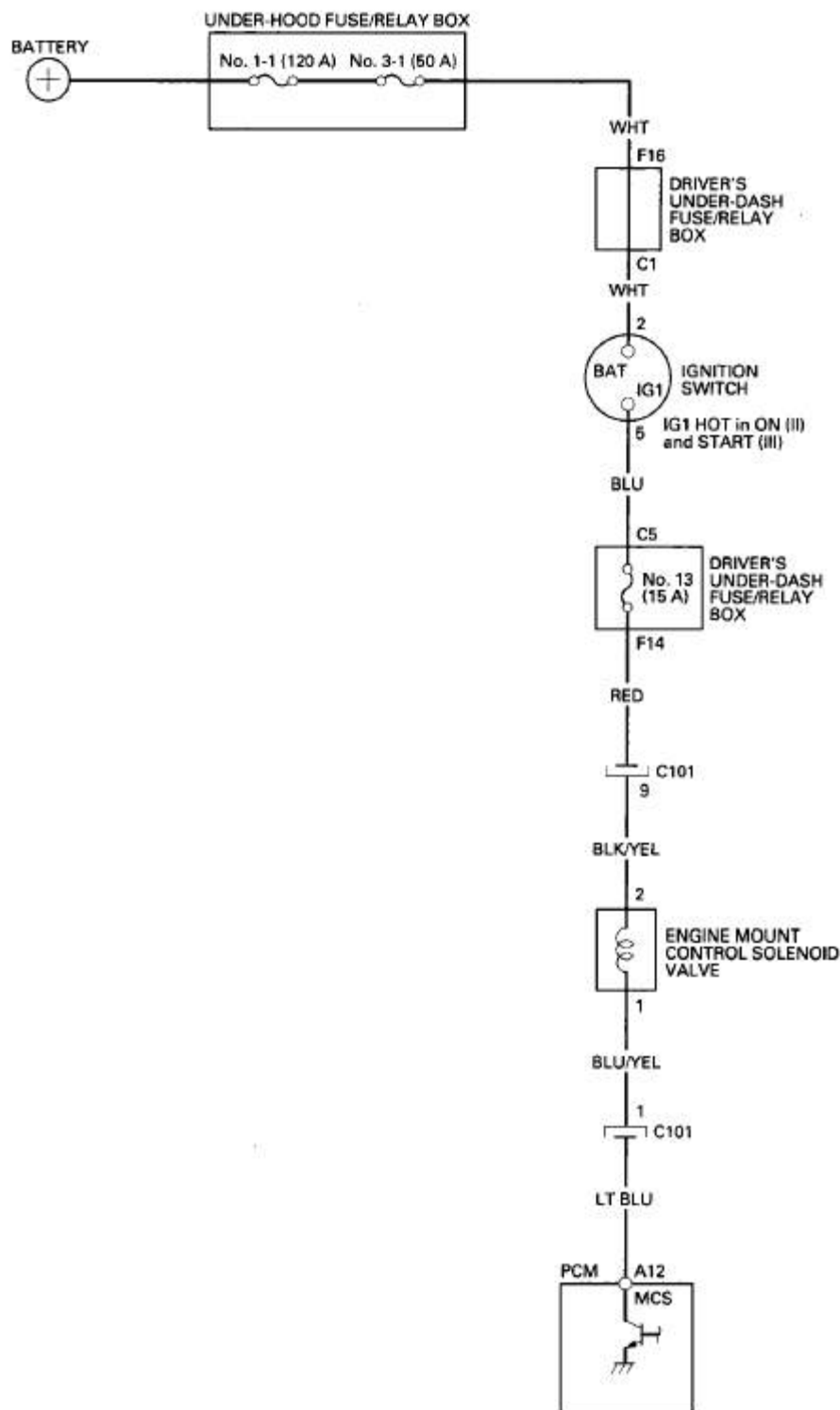


Fig. 2: Engine Mount Control System - Circuit Diagram (Without Keyless Access System)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

WITH KEYLESS ACCESS SYSTEM

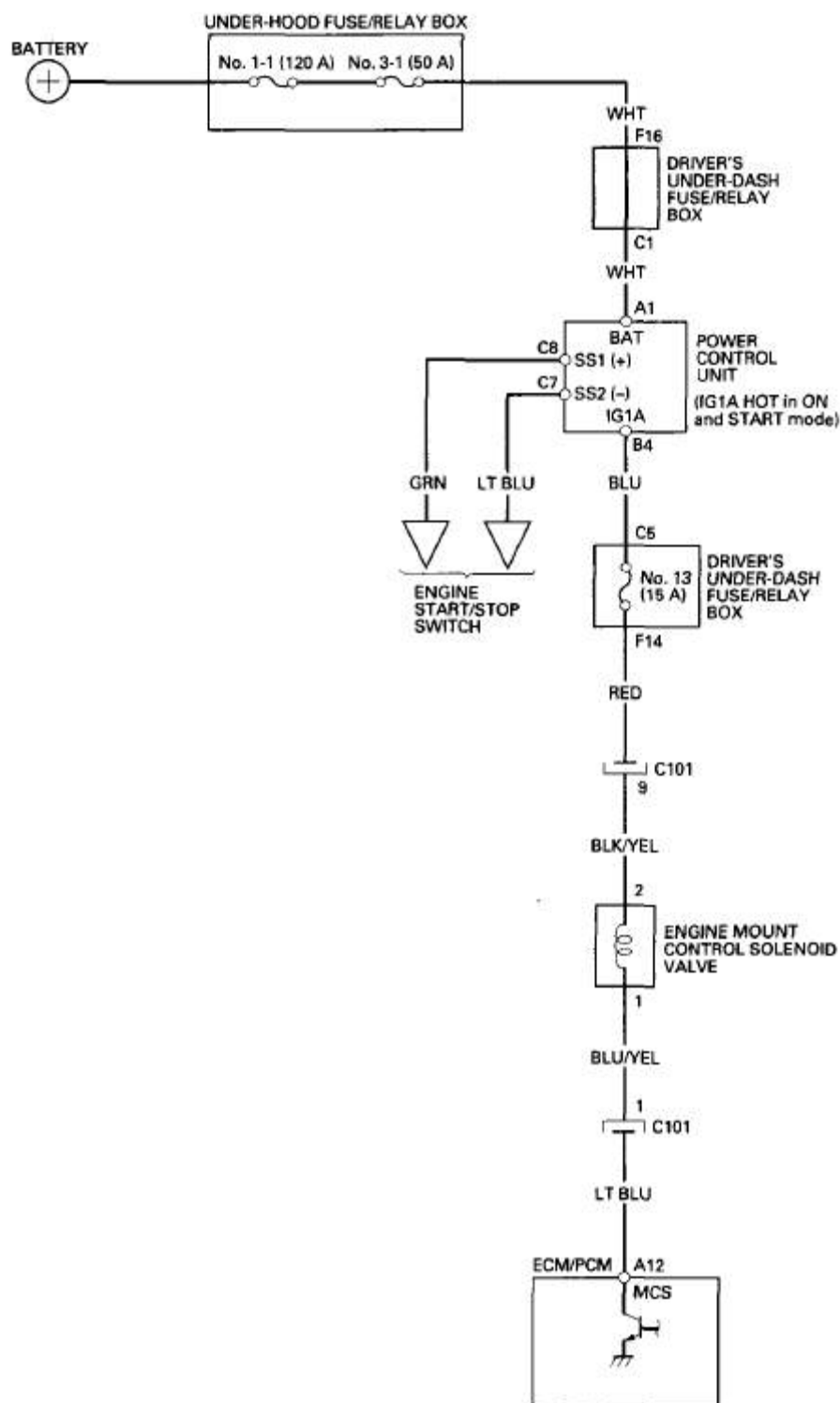


Fig. 3: Engine Mount Control System - Circuit Diagram (With Keyless Access System)
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

TROUBLESHOOTING

Special Tools Required

Vacuum Pump/Gauge, 0-30 inHg Snap-on YA4000A or equivalent, commercially available

M/T MODEL**NOTE:**

- Check the vacuum hoses and lines for damage and proper connections before troubleshooting.
- Check the liquid filled engine mount for damage. The rubber mount should have dimples in it. This is normal. If the internal bladder ruptures, the rubber mount will look like it is bulging. Replace it (see INSTALLATION).

Follow this procedure if the engine vibrates excessively when idling.

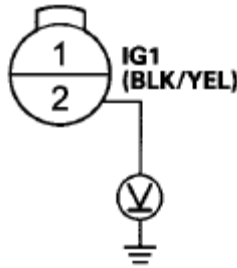
1. Remove the engine compartment cover (see ENGINE COMPARTMENT COVER REPLACEMENT).
2. Start the engine, and let it idle.
3. Raise the engine speed from idling to 2, 000 RPM.
4. Check the MOUNT CTRL SOL in the PGM-FI DATA LIST with the HDS.

Is ON indicated at idling and OFF indicated at 2, 000 RPM?

YES - Go to step 5.

NO - Update the ECM if it does not have the latest software (see ECM/PCM UPDATE), or substitute a known-good ECM (see SUBSTITUTING THE ECM/PCM), then recheck. If the engine mount control system works properly, and the ECM was updated, the troubleshooting is complete. If the ECM was substituted, replace the original ECM (see ECM/PCM REPLACEMENT).

5. Press the engine start/stop button to select the OFF mode.
6. Disconnect the engine mount control solenoid valve 2P connector from the engine mount control solenoid valve.
7. Press the engine start/stop button to select the ON mode.
8. Measure the voltage between engine mount control solenoid valve 2P connector terminal No. 2 and body ground.

**ENGINE MOUNT CONTROL
SOLENOID VALVE 2P CONNECTOR**

Wire side of female terminals

Fig. 4: Measuring Voltage Between Engine Mount Control Solenoid Valve 2P Connector Terminal No. 2 And Body Ground

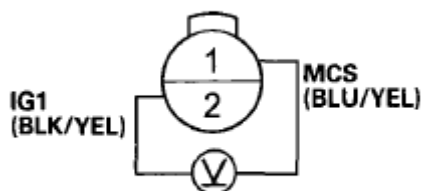
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 9.

NO - Repair an open in the wire between engine mount control solenoid valve 2P connector terminal No. 2 and No. 13 (15 A) fuse in the driver's under-dash fuse/relay box.

9. Start the engine, and let it idle.
10. Measure the voltage between engine mount control solenoid valve 2P connector terminals No. 1 and No. 2, with the engine at idle.

**ENGINE MOUNT CONTROL
SOLENOID VALVE 2P CONNECTOR**

Wire side of female terminals

Fig. 5: Measuring Voltage Between Engine Mount Control Solenoid Valve 2P Connector Terminals No. 1 And No. 2

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

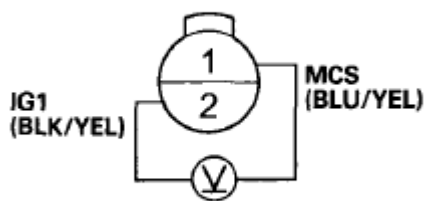
YES - Go to step 11.

NO - Repair an open in the wire between ECM connector terminal A12 and engine mount control

solenoid valve 2P connector terminal No. 1. If the wire is OK, update the ECM if it does not have the latest software (see **ECM/PCM UPDATE**), or substitute a known-good ECM (see **SUBSTITUTING THE ECM/PCM**), and recheck. If the engine mount control system works properly, and the ECM was updated, the troubleshooting is complete. If the ECM was substituted, replace the original ECM (see **ECM/PCM REPLACEMENT**).

11. Raise the engine speed above 2,000 RPM.
12. Measure the voltage between engine mount control solenoid valve 2P connector terminals No. 1 and No. 2.

**ENGINE MOUNT CONTROL
SOLENOID VALVE 2P CONNECTOR**



Wire side of female terminals

Fig. 6: Measuring Voltage Between Engine Mount Control Solenoid Valve 2P Connector Terminals No. 1 And No. 2

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Repair a short to body ground in the wire between ECM connector terminal A12 and the engine mount control solenoid valve. If the wire is OK, update the ECM if it does not have the latest software (see **ECM/PCM UPDATE**), or substitute a known-good ECM (see **SUBSTITUTING THE ECM/PCM**), and recheck. If the engine mount control system works properly, and the ECM was updated, the troubleshooting is complete. If the ECM was substituted, replace the original ECM (see **ECM/PCM REPLACEMENT**).

NO - Reconnect the engine mount control solenoid valve 2P connector, then go to step 14.

13. Press the engine start/stop button to select the OFF mode.
14. Disconnect the vacuum hose (A) from the engine mount control solenoid valve (B), and connect a vacuum pump/gauge, 0-30 inHg, to the vacuum hose. Apply about 20 inHg of vacuum, and wait for 20 seconds.

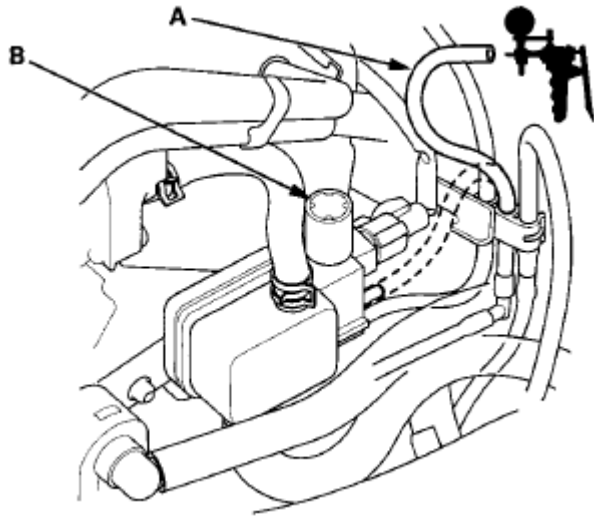


Fig. 7: Identifying Vacuum Hose And Engine Mount Control Solenoid Valve
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Does the engine mount hold vacuum?

YES - Reconnect the vacuum hose, then go to step 16.

NO - Reconnect the vacuum hose, then go to step 15.

15. Disconnect the vacuum hose (A) from the two way valve, and connect a vacuum pump/gauge to the hose. Apply about 20 inHg vacuum, and wait 20 seconds.

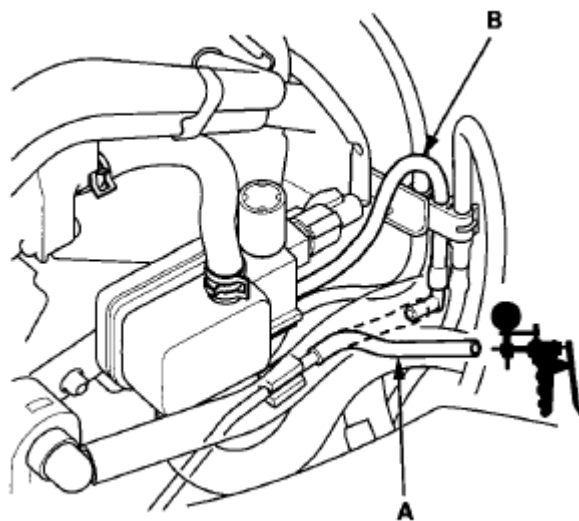


Fig. 8: Identifying Vacuum Hoses
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Does the engine mount hold vacuum?

YES - Repair the vacuum hose (B) between the engine mount control solenoid valve and the two way valve.

NO - The vacuum hose or the front engine mount has a vacuum leak. Repair as needed.

16. Disconnect the vacuum hose (A) from the two way valve, then connect the vacuum pump/gauge to the vacuum hose.

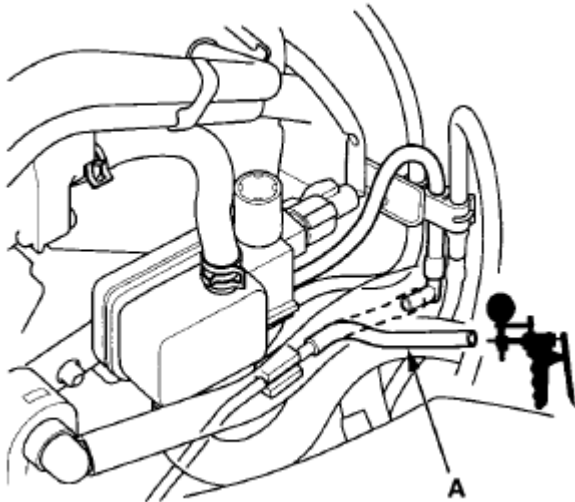


Fig. 9: Identifying Vacuum Hose

Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Start the engine and let it idle, then apply vacuum to the mount.

Is there a noticeable change in idle smoothness with and without vacuum applied?

YES - Reconnect the vacuum hose to the two way valve, then go to step 18.

NO - Replace the front engine mount (see **INSTALLATION**).

18. Disconnect the vacuum hose (A) from the engine mount control solenoid valve (B), then connect a vacuum pump/gauge to the engine mount control solenoid valve.

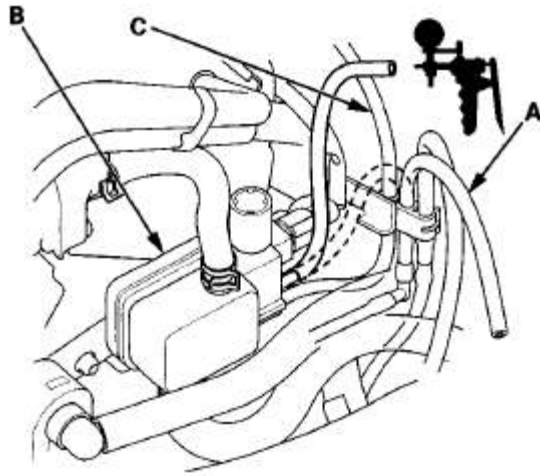


Fig. 10: Identifying Vacuum Hoses And Engine Mount Control Solenoid Valve
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there manifold vacuum at idle, and a decrease in manifold vacuum when you raise the engine speed above 2,000 RPM?

YES - The system is OK.

NO - Repair the vacuum hose (C) between the intake manifold and the engine mount control solenoid valve. If the vacuum hose is OK, replace the engine mount control solenoid valve.

Special Tools Required

Vacuum Pump/Gauge, 0-30 inHg Snap-on YA4000A or equivalent, commercially available

A/T MODEL

NOTE:

- Check the vacuum hoses and lines for damage and proper connections before troubleshooting.
- The rubber mount should have dimples in it. This is normal. If the internal bladder ruptures, the rubber mount looks like it is bulging, replace it:
 - Front engine mount (see **INSTALLATION**)
 - Rear engine mount (see **REMOVAL-A/T MODEL**)

Follow this procedure if the engine vibrates excessively when idling.

1. Remove the engine compartment covers (see **ENGINE COMPARTMENT COVER REPLACEMENT**).
2. Start the engine, and let it idle.
3. Raise the engine speed from idling to 2,000 RPM.

4. Check the MOUNT CTRL SOL in the PGM-FI DATA LIST with the HDS.

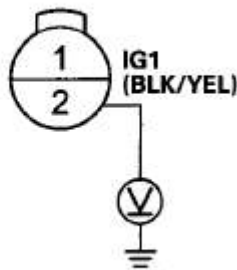
Is ON indicated at idling and OFF indicated at 2,000 RPM?

YES - Go to step 5.

NO - Update the PCM if it does not have the latest software (see **ECM/PCM UPDATE**), or substitute a known-good PCM (see **SUBSTITUTING THE ECM/PCM**), then recheck. If the engine mount control system works properly, and the PCM was updated, the troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **ECM/PCM REPLACEMENT**).

5. Turn the ignition switch to LOCK (0), or press the engine start/stop button to select the OFF mode.
6. Disconnect the engine mount control solenoid valve 2P connector from the engine mount control solenoid valve.
7. Turn the ignition switch to ON (II), or press the engine start/stop button to select the ON mode.
8. Measure the voltage between engine mount control solenoid valve 2P connector terminal No. 2 and body ground.

**ENGINE MOUNT CONTROL
SOLENOID VALVE 2P CONNECTOR**



Wire side of female terminals

Fig. 11: Measuring Voltage Between Engine Mount Control Solenoid Valve 2P Connector Terminal No. 2 And Body Ground

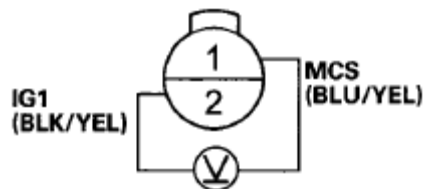
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 9.

NO - Repair an open in the wire between engine mount control solenoid valve 2P connector terminal No. 2 and No. 13(15 A) fuse in the driver's under-dash fuse/relay box.

9. Start the engine, and let it idle.
10. Measure the voltage between engine mount control solenoid valve 2P connector terminals No. 1 and No. 2, with the engine at idle.

**ENGINE MOUNT CONTROL
SOLENOID VALVE 2P CONNECTOR**

Wire side of female terminals

Fig. 12: Measuring Voltage Between Engine Mount Control Solenoid Valve 2P Connector Terminals No. 1 And No. 2

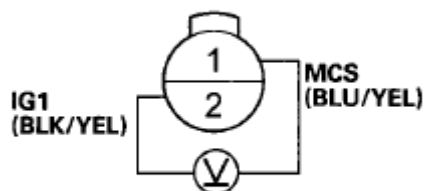
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 11.

NO - Repair an open in the wire between PCM terminal A12 and engine mount control solenoid valve 2P connector terminal No. 1. If the wire is OK, update the PCM if it does not have the latest software (see **ECM/PCM UPDATE**), or substitute a known-good PCM (see **SUBSTITUTING THE ECM/PCM**), and recheck. If the engine mount control system works properly, and the PCM was updated, the troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **ECM/PCM REPLACEMENT**).

11. Raise the engine speed above 2,000 RPM.
12. Measure the voltage between engine mount control solenoid valve 2P connector terminals No. 1 and No. 2.

**ENGINE MOUNT CONTROL
SOLENOID VALVE 2P CONNECTOR**

Wire side of female terminals

Fig. 13: Measuring Voltage Between Engine Mount Control Solenoid Valve 2P Connector Terminals No. 1 And No. 2

Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Repair a short to body ground in the wire between PCM terminal A12 and the engine mount control solenoid valve. If the wire is OK, update the PCM if it does not have the latest software (see **ECM/PCM UPDATE**), or substitute a known-good PCM (see **SUBSTITUTING THE ECM/PCM**), and recheck. If the engine mount control system works properly, and the PCM was updated, the troubleshooting is complete. If the PCM was substituted, replace the original PCM (see **ECM/PCM REPLACEMENT**).

NO - Reconnect the engine mount control solenoid valve 2P connector, then go to step 13.

13. Turn the ignition switch to LOCK (0), or press the engine start/stop button to select the OFF mode.
14. Disconnect the vacuum hose (A) from the engine mount control solenoid valve (B), and connect a vacuum pump/gauge, 0-30 inHg, to the vacuum hose. Apply about 20 inHg of vacuum, and wait for 20 seconds.

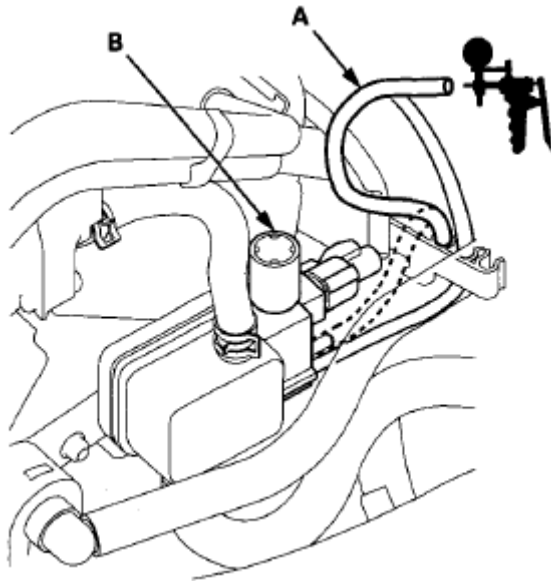


Fig. 14: Identifying Vacuum Hose And Engine Mount Control Solenoid Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Do both engine mounts hold vacuum?

YES - Reconnect the vacuum hose, then go to step 17.

NO - Reconnect the vacuum hose, then go to step 15.

15. Disconnect the vacuum hose (A) from the three way valve, and connect a vacuum pump/gauge to the vacuum hose. Apply about 20 inHg of vacuum, and wait for 20 seconds.

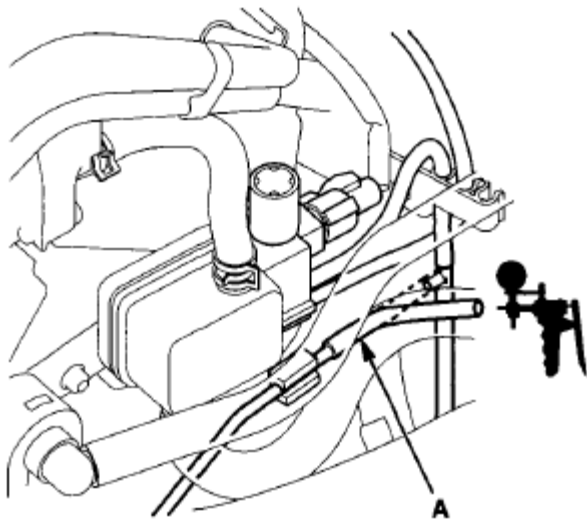


Fig. 15: Identifying Vacuum Hose From Three Way Valve
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Does the front engine mount hold vacuum?

YES - Go to step 16.

NO - The vacuum hose or the front engine mount has a vacuum leak. Repair as needed.

16. Disconnect the vacuum hose (A) from the three way valve, and connect a vacuum pump/gauge to the hose. Apply about 20 inHg of vacuum, and wait for 20 seconds.

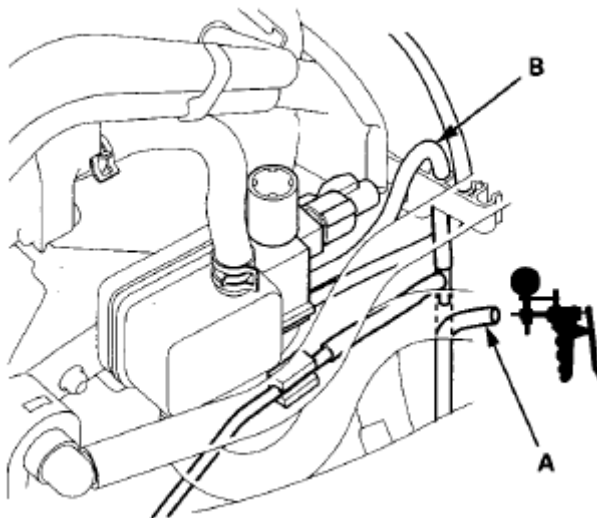


Fig. 16: Identifying Vacuum Hoses
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Does the rear engine mount hold vacuum?

YES - Repair the vacuum hose (B) between the engine mount control solenoid valve and the three way valve.

NO - The vacuum hose or the rear engine mount has a vacuum leak. Repair as needed.

17. Disconnect the vacuum hose (A) from the three way valve. Block the open port, then connect the vacuum pump/gauge to the vacuum hose.

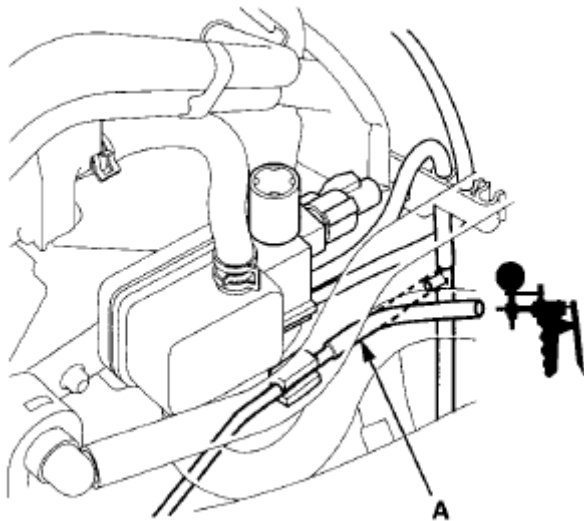


Fig. 17: Identifying Vacuum Hose From Three Way Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Start the engine and let it idle, then apply vacuum to the mount.

Is there a noticeable change in idle smoothness with and without vacuum applied?

YES - Reconnect the vacuum hose to the three way valve, then go to step 19.

NO - Replace the front engine mount (see **INSTALLATION**).

19. Disconnect the vacuum hose (A) from the three way valve. Block the open port, then connect the vacuum pump/gauge to the vacuum hose.

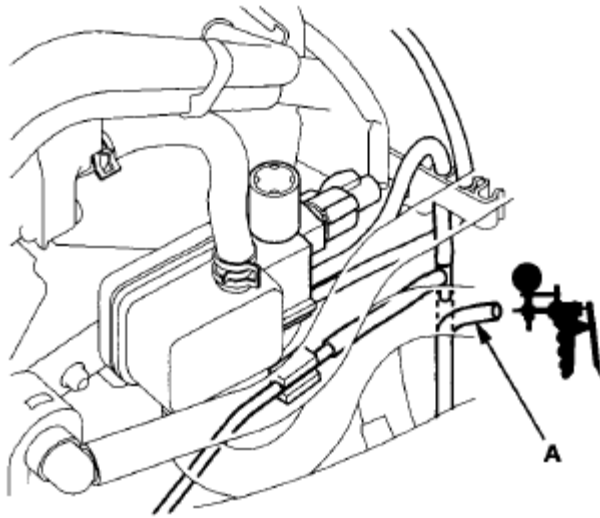


Fig. 18: Identifying Vacuum Hose
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there a noticeable change in idle smoothness with and without vacuum applied?

YES - Reconnect the vacuum hose to the three way valve, then go to step 20.

NO - Replace the rear engine mount (see **REMOVAL-A/T MODEL**).

20. Disconnect the vacuum hose (A) from the engine mount control solenoid valve (B), then connect a vacuum pump/gauge to the engine mount control solenoid valve.

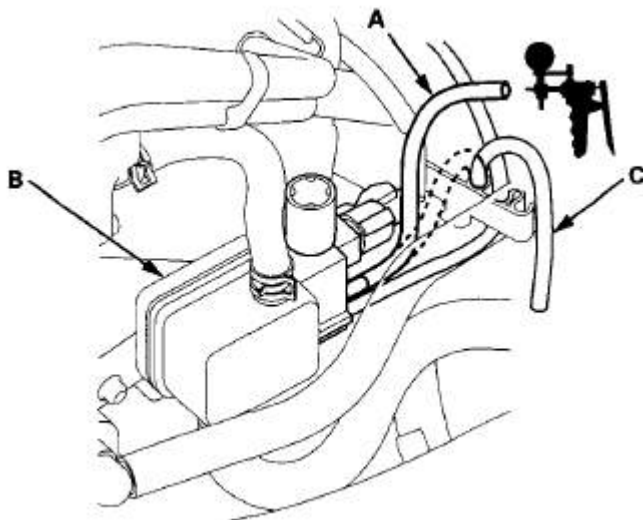


Fig. 19: Identifying Vacuum Hose, Engine Mount Control Solenoid Valve And Vacuum Pump
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there manifold vacuum at idle, and a decrease in manifold vacuum when you raise the engine speed

above 2,000 RPM?

YES - The system is OK.

NO - Repair the vacuum hose (C) between the intake manifold and the engine mount control solenoid. If the vacuum hose is OK, replace the engine mount control solenoid valve.