2003-06 ENGINE

Engine Mount Control System - MDX

COMPONENT LOCATION INDEX

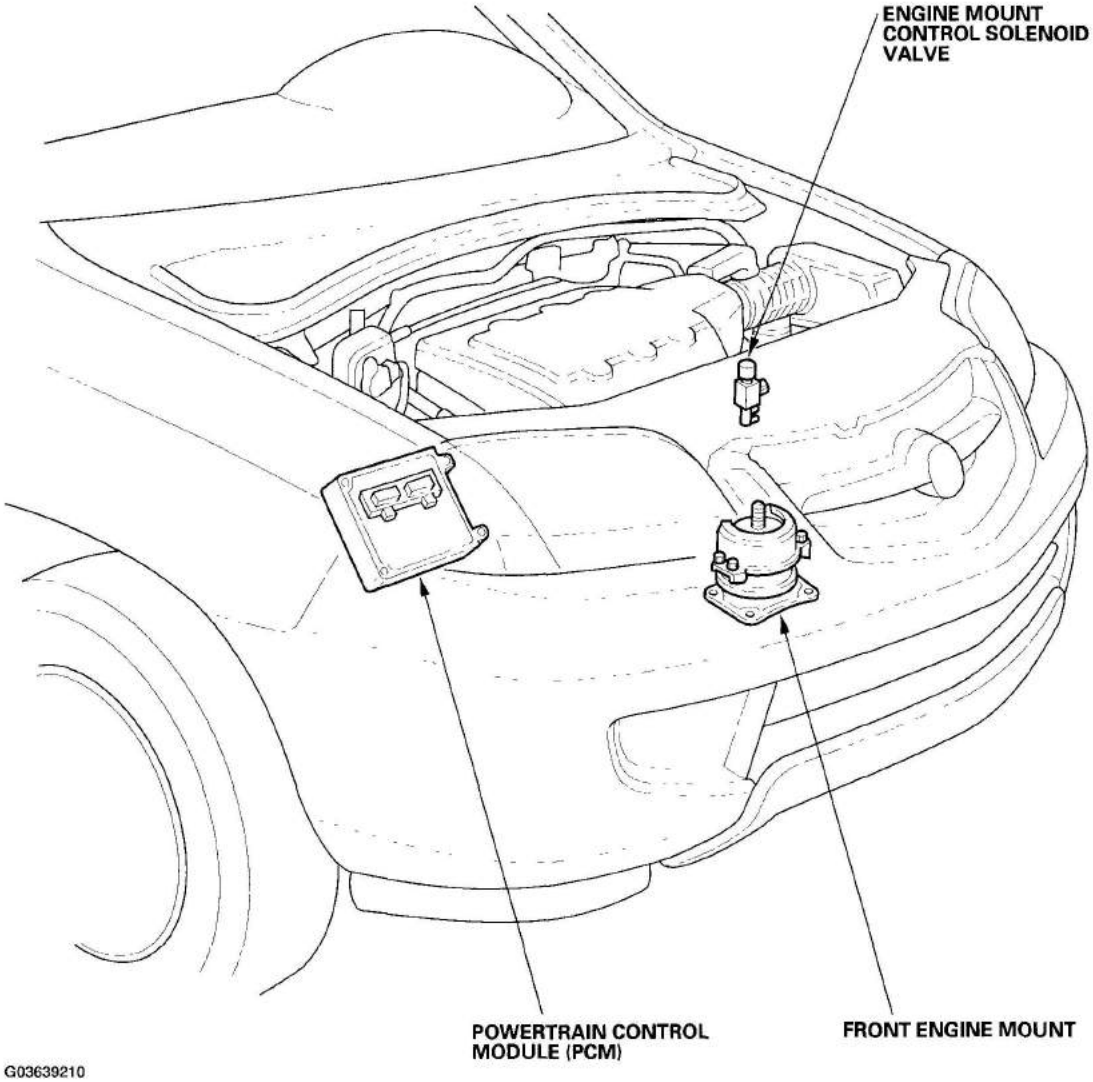

Fig. 1: Identifying Engine Mount Control System Components
Courtesy of AMERICAN HONDA MOTOR CO., INC.

CIRCUIT DIAGRAM

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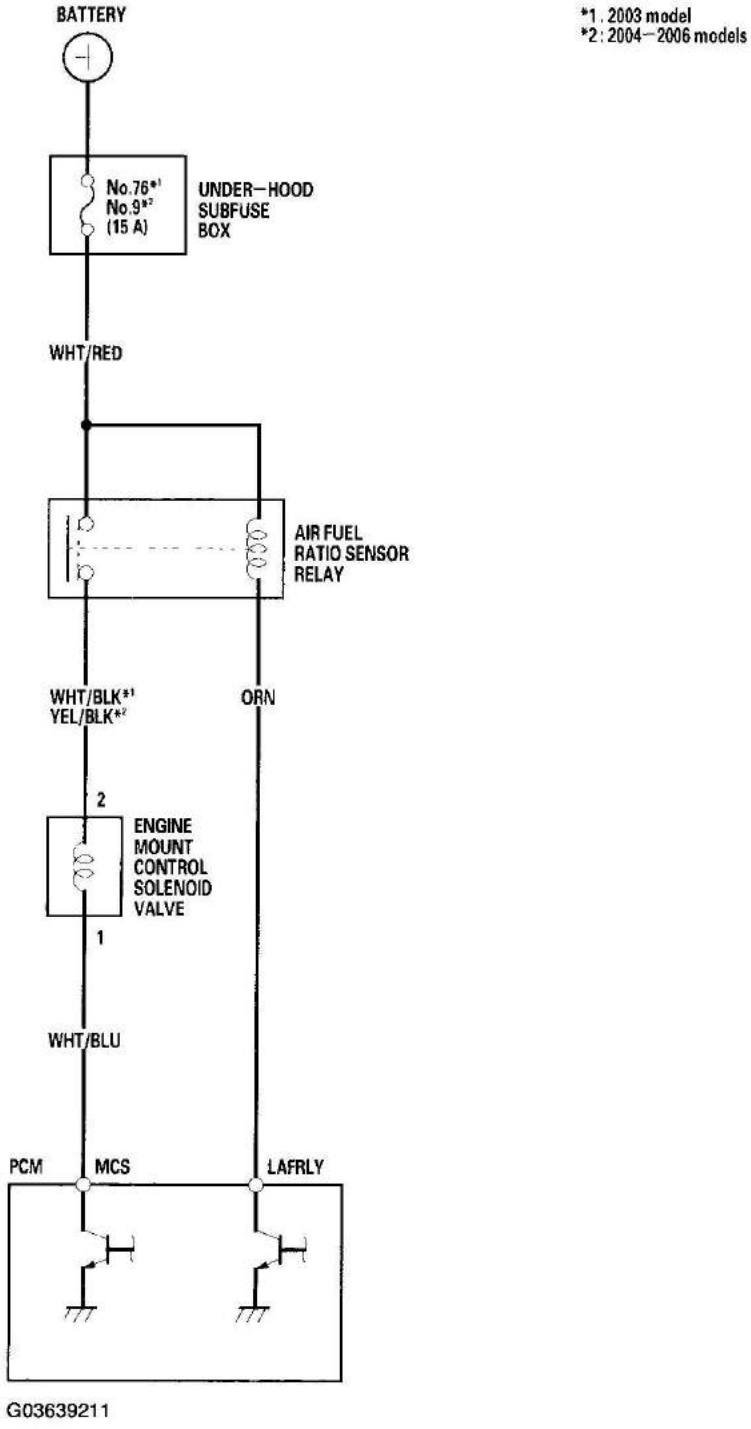

Fig. 2: Engine Mount Control System Circuit Diagram
Courtesy of AMERICAN HONDA MOTOR CO., INC.

TROUBLESHOOTING

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Special Tools Required

Vacuum pump/gauge, 0-30 in.Hg

Snap-on YA4000A or equivalent, commercially available

NOTE: Check the vacuum hoses and lines for damage and proper connections before troubleshooting.

Follow this procedure if the engine vibrates excessively when idling.

1. Connect the Honda Diagnostic System (HDS) to the data link connector (DLC), and check for DTCs. If a DTC is present, diagnose and repair the cause.
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 powertrain control module (PCM) if it does not have the latest software (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), or substitute a known-good PCM (see **HOW TO SUBSTITUTE THE 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 **PCM REPLACEMENT**).
5. Shift to P or N.
6. Disconnect the engine mount control solenoid valve 2P connector from the engine mount control solenoid valve.
7. Measure the voltage between engine mount control solenoid valve 2P connector terminal No. 2 and body ground.

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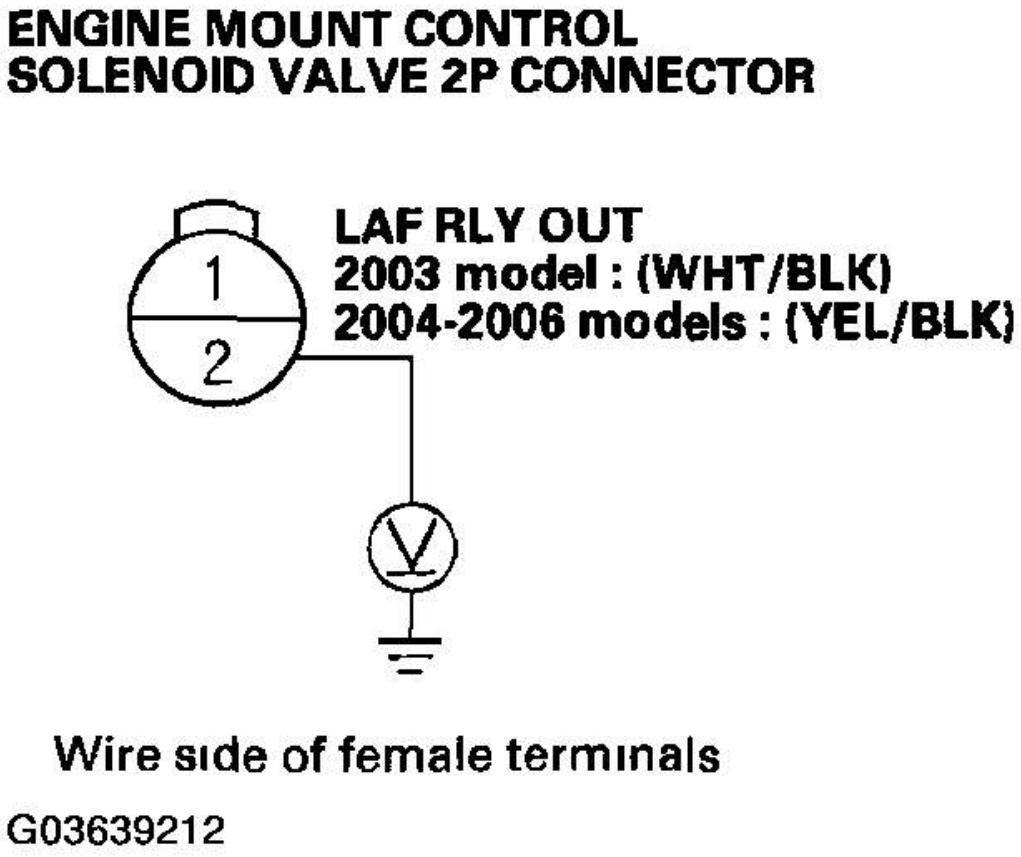

Fig. 3: Measuring Voltage Between Engine Mount Control Solenoid Valve 2P Connector Terminal 2 And Body Ground
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 8.

NO - Repair an open in the wire between the engine mount control solenoid valve 2P connector and the air fuel ratio sensor relay.

8. Measure the voltage between engine mount control solenoid valve 2P connector terminals No. 1 and No. 2.

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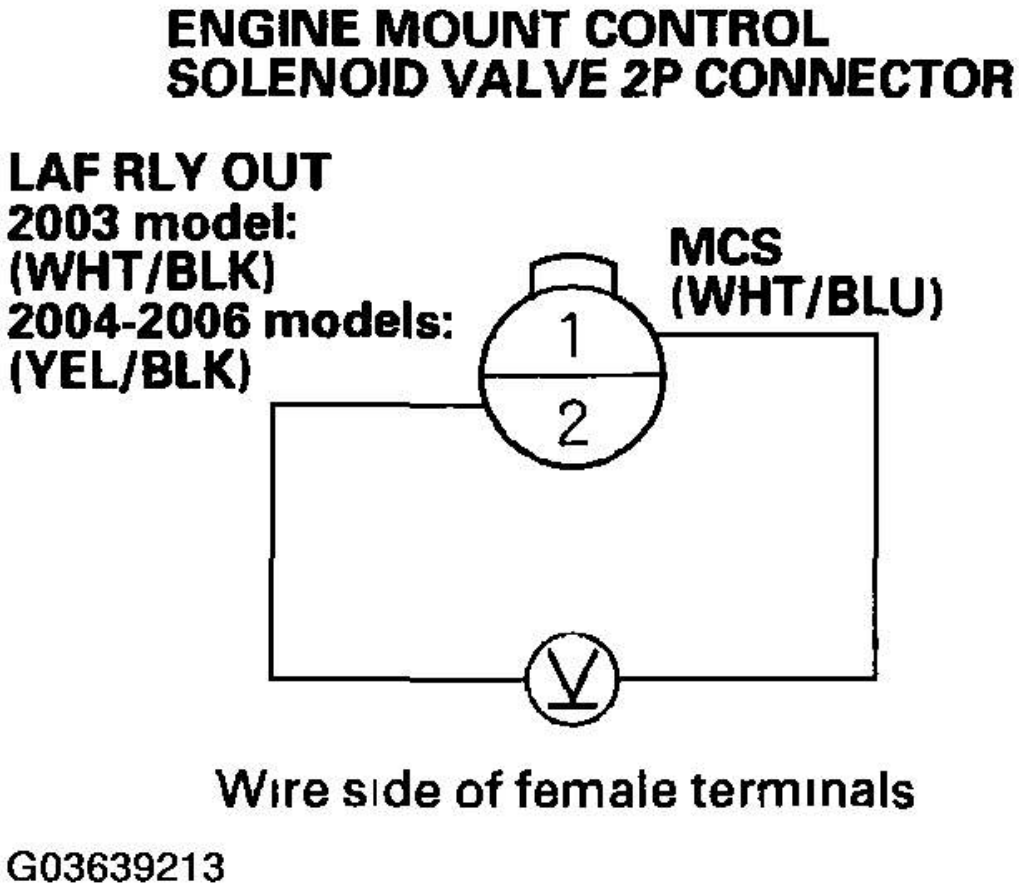

Fig. 4: Measuring Voltage Between Engine Mount Control Solenoid Valve 2P Connector Terminals 1 And 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Go to step 9.

NO - Repair an open in the wire between the PCM and the engine mount control solenoid valve 2P connector. If the wire is OK, update the PCM if it does not have the latest software (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), or substitute a known-good PCM (see **HOW TO SUBSTITUTE THE 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 **PCM REPLACEMENT**).

9. Raise the engine speed above 1,000 rpm.
10. Measure the voltage between engine mount control solenoid valve 2P connector terminals No. 1 and No.

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2.

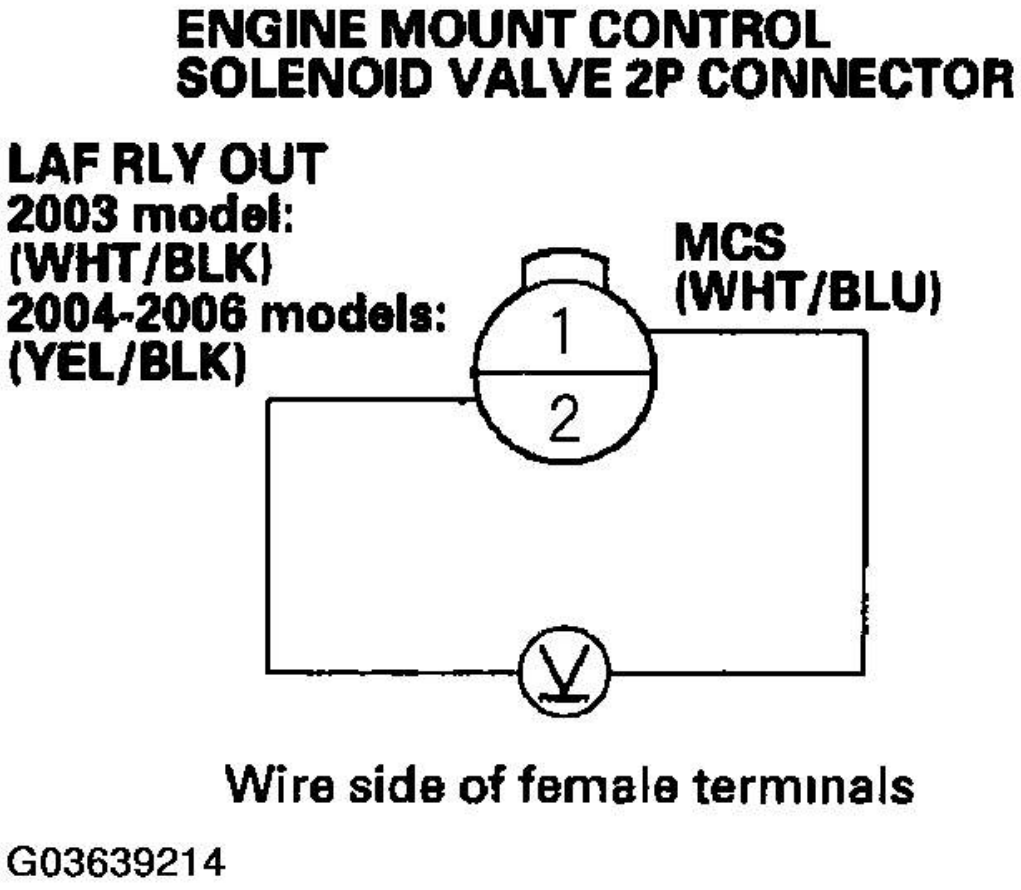

Fig. 5: Measuring Voltage Between Engine Mount Control Solenoid Valve 2P Connector Terminals 1 And 2
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there battery voltage?

YES - Repair a short to body ground in the wire between PCM and the engine mount control solenoid valve. If the wire is OK, update the PCM if it does not have the latest software (see **PCM UPDATING AND SUBSTITUTION FOR TESTING**), or substitute a known-good PCM (see **HOW TO SUBSTITUTE THE 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 **PCM REPLACEMENT**).

NO - Go to step 11.

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11. Disconnect the vacuum hose (A) that is closest to the solenoid connector from the engine mount control solenoid valve (B), and connect a vacuum pump/gauge, 0-30 in.Hg, to the hose. Apply vacuum for 20 seconds.

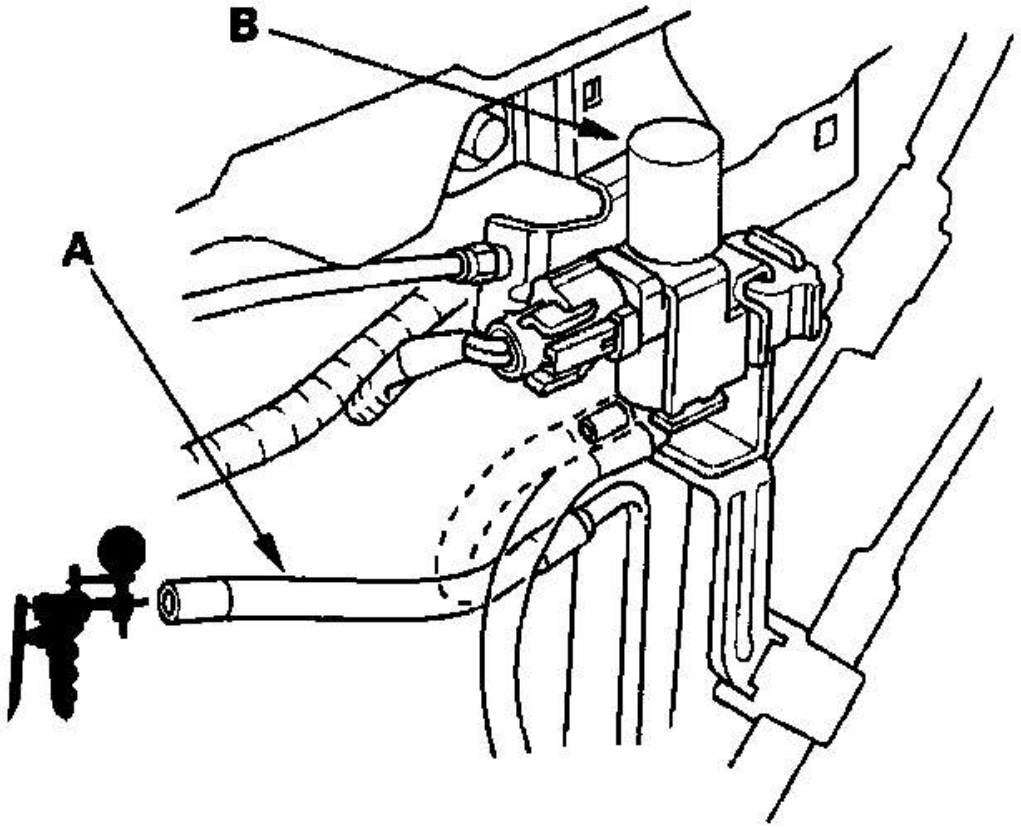

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Fig. 6: Disconnecting Vacuum Hose Closest To Solenoid Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Does the engine mount hold vacuum?

YES - Go to step 12.
NO - Either the vacuum hose or the engine mount has a vacuum leak. Repair as needed.

12. Release the vacuum, then apply vacuum again.

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

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YES - Go to step 13.

NO - Replace the front engine mount.

13. Connect a vacuum pump/gauge, 0-30 in.Hg. to the engine mount control solenoid valve (A) that is closest to the solenoid connector.

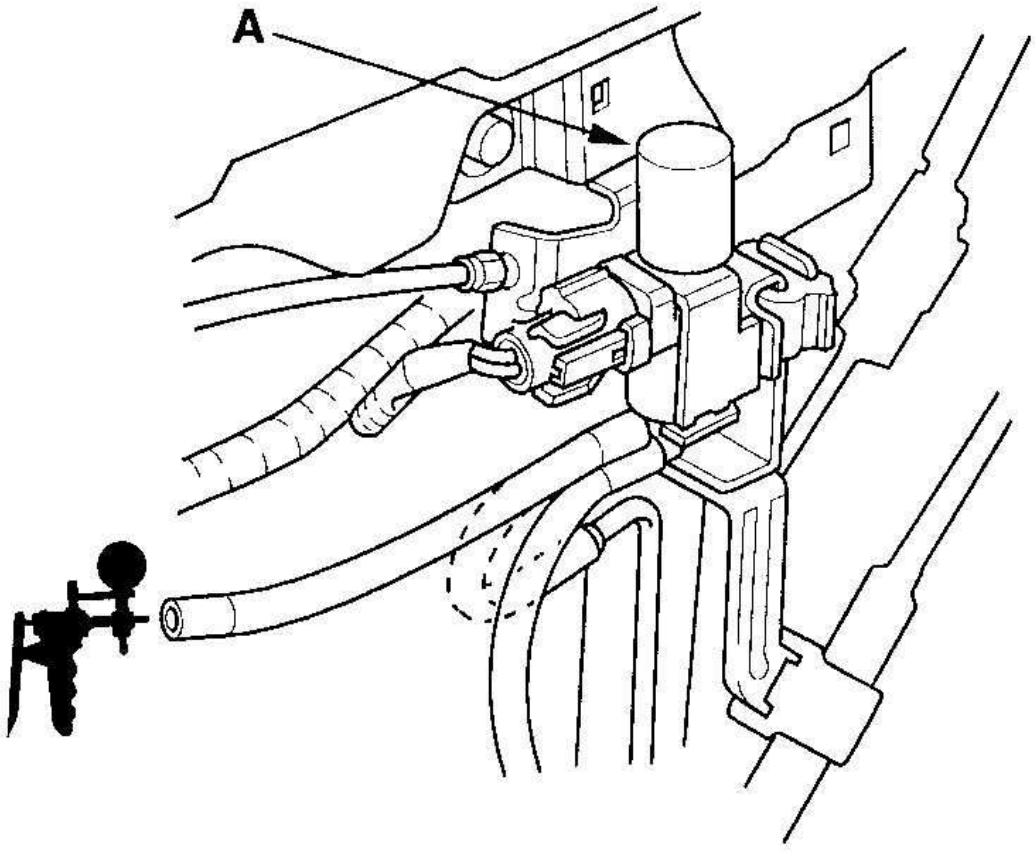

Fig. 7: Connecting Vacuum Pump/Gauge To Engine Mount Control Solenoid Valve
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Is there manifold vacuum at idle, and a decrease in manifold vacuum when you raise the engine speed above 1,000 rpm?

YES - The system is OK.

NO - Replace the engine mount control solenoid valve.

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