



Exhaust Gas Recirculation (EGR) System

Troubleshooting Flowchart

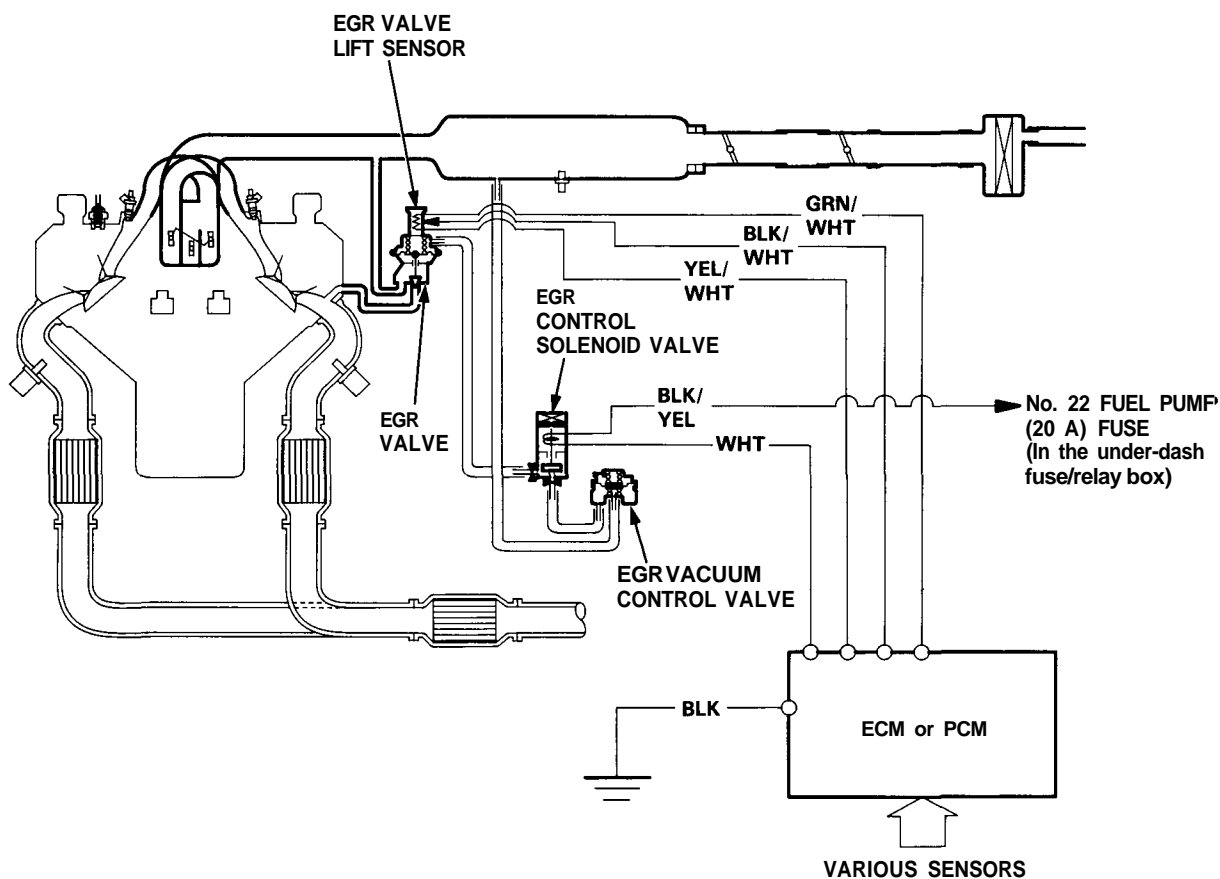


12

The Malfunction Indicator Lamp (MIL) indicates Diagnostic Trouble Code (DTC) 1 2: A problem in the Exhaust Gas Recirculation (EGR) system.

The EGR System is designed to reduce oxides of nitrogen emissions (NO_x) by recirculating exhaust gas through the EGR valve and the intake manifold into the combustion chambers. It is composed of the EGR valve, EGR vacuum control valve, EGR control solenoid valve, ECM or PCM and various sensors.

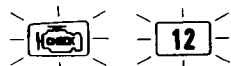
The ECM or PCM memory contains ideal EGR valve lifts for varying operating conditions. The EGR valve lift sensor detects the amount of EGR valve lift and sends the information to the ECM or PCM. The ECM or PCM then compares it with the ideal EGR valve lift which is determined by signals sent from the other sensors. If there is any difference between the two, the ECM or PCM cuts current to the EGR control solenoid valve to reduce vacuum applied to the EGR valve.



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Emission Control System

Exhaust Gas Recirculation (EGR) System (cont'd)



- The MIL has been reported on.
- With service check connector jumped (see page 11-34), code 12 is indicated.

Do the ECM or PCM Reset Procedure (see page 11-35).

Road test necessary: Warm up the engine to normal operating temperature (the radiator fan comes on). Drive the car on the road for approx. 10 minutes. Keep the engine speed in the 1700-2500 rpm range.

Is the MIL on and does it indicate code 12?

NO

Intermittent failure, system is OK at this time. Check for poor connections or loose wires at C355 (located at right shock tower), C106 (EGR valve), C359 (control box) and ECM or PCM.

YES

With the engine at idle, disconnect the #11 hose from the EGR valve and connect a vacuum pump/gauge to the hose.

Is there any vacuum?

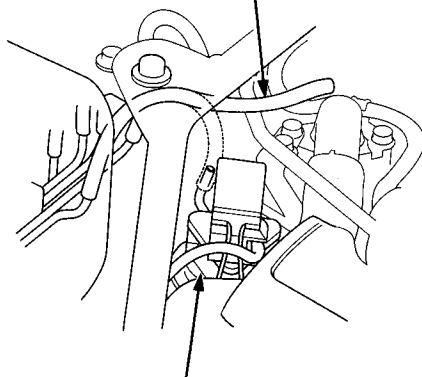
YES

Disconnect 4P connector from the control box and check the #11 hose for vacuum again.

NO

Move the vacuum pump/gauge to the EGR valve.

#11 HOSE

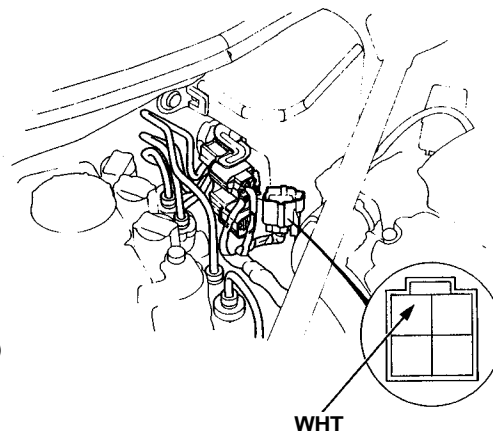
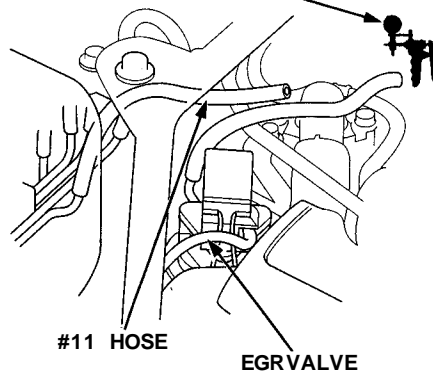


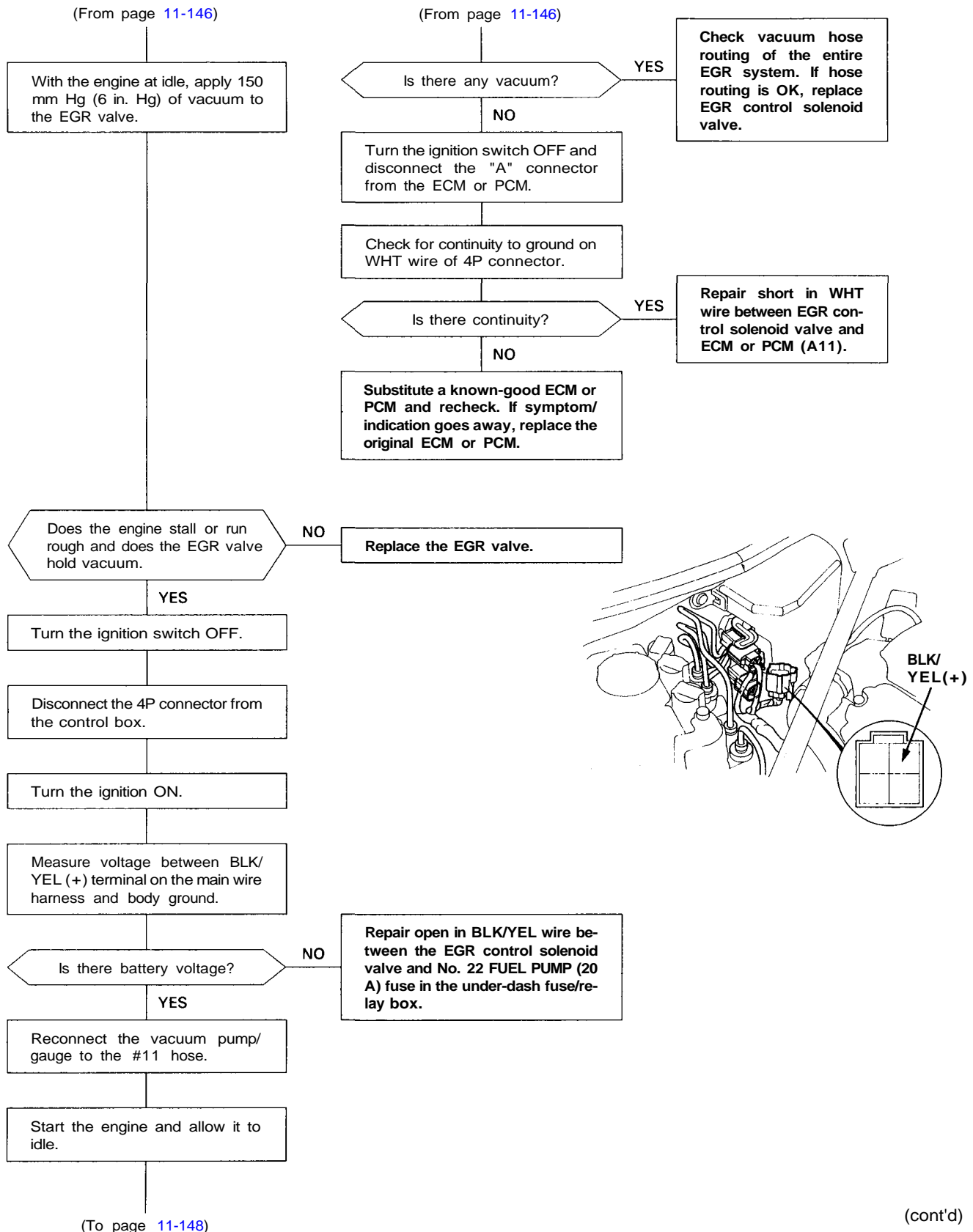
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EGR VALVE

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VACUUM PUMP/GAUGE
A973X-041-XXXXXX





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Emission Control System

Exhaust Gas Recirculation (EGR) System (cont'd)

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Connect the battery positive terminal to the A terminal of the 4P connector. While watching the vacuum gauge, connect the battery negative terminal to the B terminal.

Is there approx, 150 mmHg (6 in.Hg) within 1 second?

NO

Turn the ignition switch OFF and inspect the #11 and #5 hoses for leaks, restrictions, or misrouting.

YES

Turn the ignition switch OFF and reconnect the 4P connector to the control box.

Are the hoses OK?

NO

Correct as necessary.

YES

BLK/WHT
YEL/
WHT GRN/
WHT

EGR
VALVE
LIFT SENSOR

Disconnect 3P connector from the EGR valve lift sensor.

Turn the ignition switch ON.

Measure voltage between YEL/
WHT (+) terminal and GRN/WHT
(-) terminal.

Is there approx. 5V?

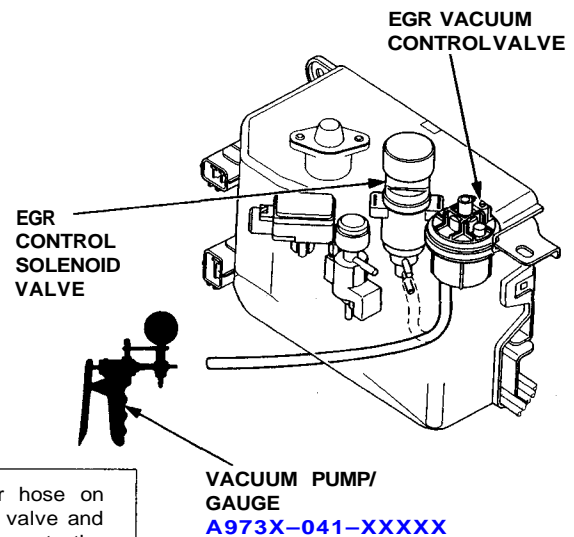
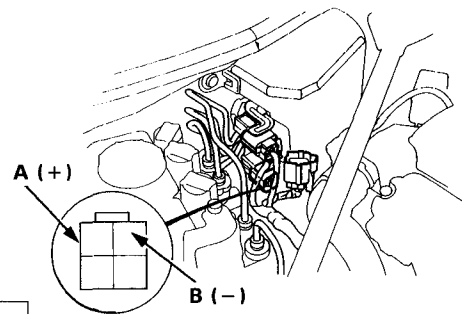
NO

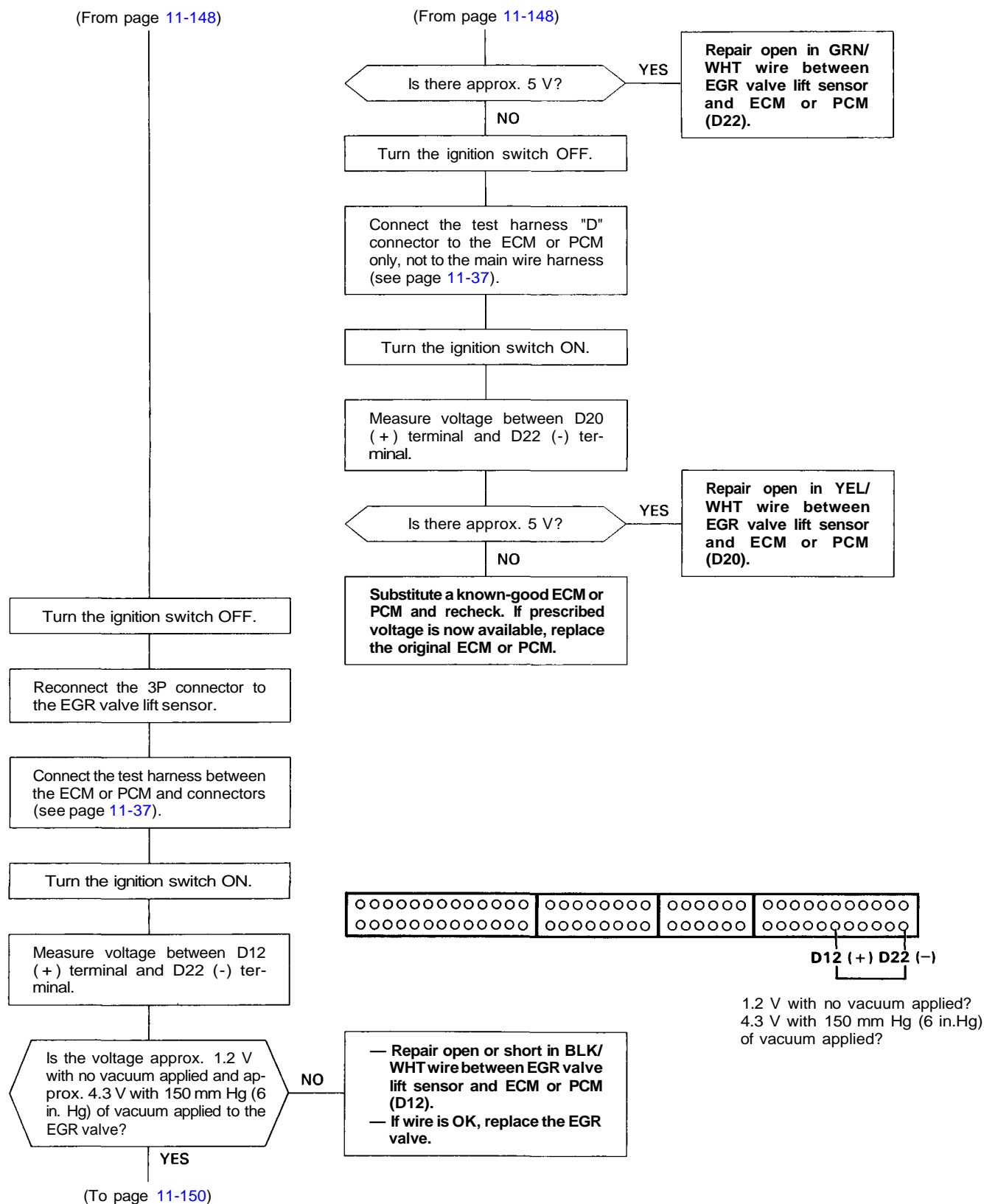
Measure voltage between YEL/
WHT (+) terminal and body
ground.

YES

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