



DTC P1166: A/F Sensor (Sensor 1) Heater Circuit Malfunction

1. Reset the ECM/PCM (see page 11-4).
2. Start the engine.

Is DTC P1166 indicated?

YES – Go to step 3.

NO – Intermittent failure, system is OK at this time. Check for poor connections or loose wires at C102 (located under the under-hood fuse/relay box), A/F Sensor relay, the A/F Sensor (Sensor 1) and the ECM/PCM. ■

3. Check the following fuses:

- POWER SEAT (20A) fuse in the under-hood fuse/relay box.
- No. 4 ECU (ECM/PCM) CRUISE CONTROL (15A) fuse in the driver's under-dash fuse/relay box.
- No. 6 LAF HEATER (20A) in the passenger's under-dash fuse/relay box.

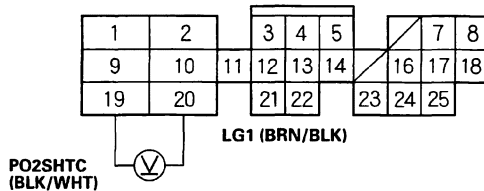
Are any of the fuses blown?

YES – Repair short in the wire between the A/F Sensor relay and the fuses. ■

NO – Go to step 4.

4. Measure voltage between ECM/PCM connector terminals B19 and B20, 30 seconds after the ignition switch is turned ON (II).

ECM/PCM CONNECTOR B (25P)



Wire side of female terminals

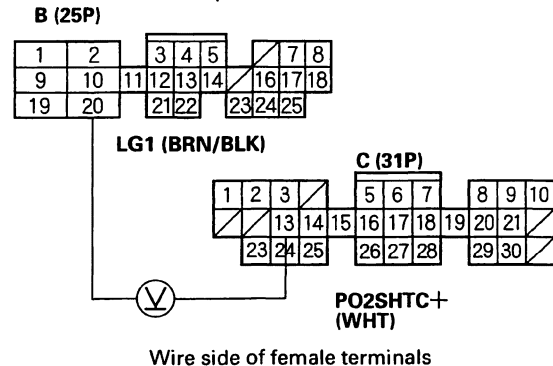
Is there battery voltage?

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 5.

5. Measure voltage between ECM/PCM connector terminals C13 and B20.

ECM/PCM CONNECTORS



Wire side of female terminals

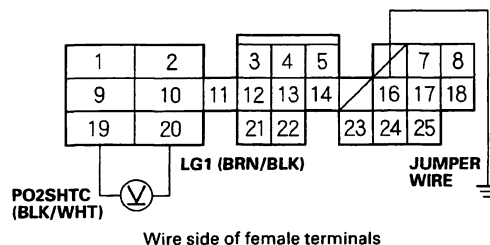
Is there battery voltage?

YES – Go to step 6.

NO – Go to step 10.

6. Turn the ignition switch OFF.
7. Disconnect ECM/PCM connector B (25P).
8. Turn the ignition switch ON (II).
9. Connect ECM/PCM connector terminal B16 to body ground with a jumper wire, then measure voltage between ECM/PCM connector terminals B19 and B20.

ECM/PCM CONNECTOR B (25P)



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 – Repair open or short in the wire between A/F Sensor (Sensor 1) and ECM/PCM (B19). ■

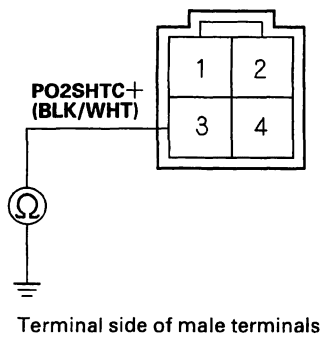
(cont'd)

PGM-FI System

DTC Troubleshooting (cont'd)

10. Turn the ignition switch OFF.
11. Disconnect ECM/PCM connector B (25P) and the A/F Sensor (Sensor 1) 4P connector.
12. Check for continuity between A/F Sensor (Sensor 1) 4P connector terminal No. 3 and body ground.

A/F SENSOR (SENSOR 1) 4P CONNECTOR



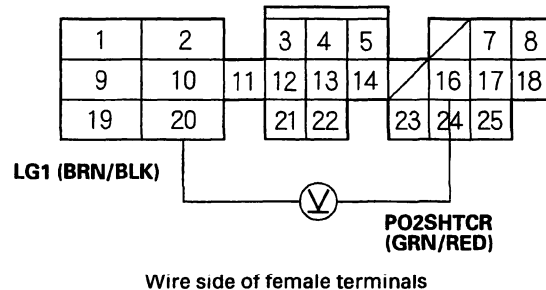
Is there continuity?

YES—Repair short in the wire between the A/F Sensor (Sensor 1) and ECM/PCM (B19). ■

NO—Go to step 13.

13. Turn the ignition switch ON (II).
14. Measure voltage between ECM/PCM connector terminals B16 and B20

ECM/PCM CONNECTOR B (25P)



Is there battery voltage?

YES—Repair open in the wire between the ECM/PCM (C13) and the A/F Sensor (Sensor 1) or Secondary HO2S (Sensor 2). ■

NO—Go to step 15.

15. Check for continuity in the wires between A/F Sensor and the fuses.

Is there continuity?

YES—The wires are OK. Replace the A/F Sensor relay. ■

NO—Repair open in the wire between the A/F Sensor relay and the fuses. ■



DTC P1167: A/F Sensor (Sensor 1) Heater System Malfunction

NOTE: If DTC P1162 is stored at the same time as DTC P1167, troubleshoot DTC P1162 first, then troubleshoot DTC P1167.

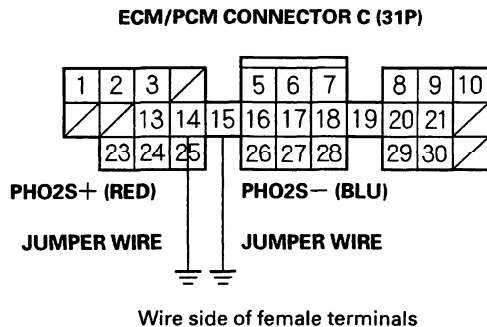
1. Reset the ECM/PCM (see page 11-4).
2. Start the engine. Wait for at least 80 seconds.

Is DTC P01167 indicated?

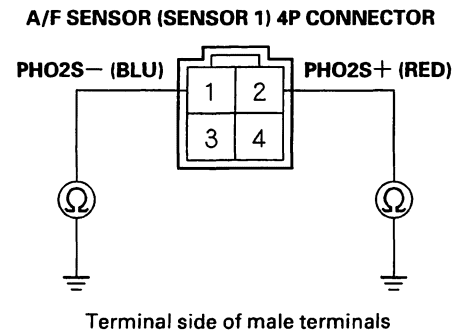
YES—Go to step 3.

NO—Intermittent failure, system is OK at this time. Check for poor connections or loose wires at C102 (located under the under-hood fuse/relay box), the A/F Sensor relay, the A/F Sensor (Sensor 1), and the ECM/PCM. ■

3. Disconnect the A/F Sensor 4P connector, and ECM/PCM connector C (31P).
4. Connect ECM/PCM connector terminals C14 and C15 to body ground with a jumper wire.



5. Check for continuity between A/F Sensor (Sensor 1) 4P connector terminal No. 1, No. 2, and body ground individually.



Is there continuity?

YES—Replace the A/F Sensor (Sensor 1) (see page 11-99). ■

NO—Repair open or short in the wire between the A/F Sensor (Sensor 1) and the ECM/PCM (C14 or C15). ■