

TEST FC-16A - IDLE AIR CONTROL MOTOR CIRCUITS

NOTE: For connector terminal identification, see **CONNECTOR IDENTIFICATION**. For appropriate wiring diagram, see **WIRING DIAGRAMS** at end of article.

1. Using DRB-II, erase fault messages. Turn ignition off. Start engine. Allow engine to reach operating temperature. Using DRB-II, read fault messages. If Idle Air Control (IAC) motor fault message does not return, go to next step. If IAC motor fault message returns, go to step 5).
2. Using DRB-II, set engine speed to 1800 RPM and then back down to 700 RPM. If engine speed responds to DRB-II command, go to next step. If engine speed does not respond to DRB-II command, go to step 5).
3. At this time, condition required to set fault is not present. IDLE AIR CONTROL MOTOR CIRCUITS fault sets if any of 4 wires are shorted to ground or to 12 volts. Possible causes are: open harness wires, harness shorted to ground, harness shorted to 12 volts, IAC motor is shorted internally, or IAC wires shorted together.
4. Inspect wiring and connectors. Repair as required. Perform VERIFICATION PROCEDURE VER-2. If wiring and connectors are okay, see INACTIVE FAULT CONDITION. Test is complete. Perform VERIFICATION PROCEDURE VER-2.
5. Turn ignition off. Disconnect IAC motor connector and Powertrain Control Module (PCM) connector. Place DRB-II in ohmmeter mode. Using DRB-II, check resistance of all IAC motor connector terminals.
6. If resistance is less than 5 ohms at any wire, repair IAC wiring for a short to ground. Perform VERIFICATION PROCEDURE VER-2. If resistance is more than 5 ohms at all wires, go to next step.
7. Turn ignition off. Using an external ohmmeter, check resistance of each wire between IAC motor connector and PCM connector. See PCM TERMINAL IDENTIFICATION table. If resistance for any wire is more than 5 ohms, repair open on necessary wire. Perform VERIFICATION PROCEDURE VER-2. If resistance for all wires is less than 5 ohms, go to next step.

PCM TERMINAL IDENTIFICATION

Wire Color	Terminal No.
Gray/Red	39
Brown/White	40
Violet/Black	59
Yellow/Black	60

8. Using an external ohmmeter, check resistance between following wires at IAC motor connector. Record resistance readings.
 - Violet/Black and Brown/White wires
 - Violet/Black and Yellow/Black wires
 - Violet/Black and Gray/Red wires
 - Brown/White and Yellow/Black wires
 - Brown/White and Gray/Red wires

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- Yellow/Black and Gray/Red wires

9. If resistance between any 2 wires is less than 5 ohms, repair those wires for shorting together. Perform VERIFICATION PROCEDURE VER-2. If resistance between all pairs of wires is more than 5 ohms, reconnect PCM connector.
10. Turn ignition on. Using DRB-II, actuate IAC motor. Place DRB-II in voltmeter mode. Using DRB-II, check voltage on each IAC motor connector wire at IAC motor connector. Normal voltage reading will switch from less than one volt to more than 10 volts.
11. If voltage is switching at each IAC motor connector wire, replace IAC motor. Perform VERIFICATION PROCEDURE VER-2. If voltage is not switching at each IAC motor connector wire, replace PCM. Perform VERIFICATION PROCEDURE VER-2.