ME: PCM Reset

ME: Introduction

ME1 CHECK VEHICLE BATTERY POWER CIRCUIT

- Install breakout box; connect PCM to breakout box.
- Key on, engine off.
- Measure voltage between PCM power test pins 55, 71 and 97 and PCM ground test pins 25, 51, 76, 77 and 103. Note voltage.
- Measure voltage across battery terminals. Note voltage.

Are both voltages greater than 10.5 volts, and are both voltages within 1.0 volts of each other?

Yes	No
GO to ME2 .	GO to A1 .

ME2 CHECK VREF VOLTAGE

- Measure voltage between PCM test pins 90 and 91.
- Key on, engine off.

Is voltage between 4.0 and 6.0 volts?

Yes	No
GO to ME3	Less than 4.0 volts, GO to ME5 . Greater than 6.0 volts, GO to ME4 .

ME3 CHECK VREF AND SIG RTN CIRCUITS FOR CONTINUITY

- Disconnect faulty sensor.
- Disconnect PCM from breakout box.
- Measure resistance between PC< test pin 90 and VREF circuit at harness connector of the sensor listed.
- Measure resistance between PCM test pin 91 and SIG RTN circuit at harness connector of the sensors listed.

Is each resistance less than 5.0 ohms?

Yes	No
RESTORE vehicle. CLEAR DTCs and RETEST.	REPAIR open in VREF or SIG RTN circuits. RESTORE vehicle. CLEAR DTCs and RETEST.

ME4 CHECK FOR EXCESS VOLTAGE ON VREF CIRCUIT

- Disconnect PCM from breakout box.
- Key on, engine off.
- Measure voltage between PCM test pin 90 and battery ground.

Is voltage less than 0.5 volts?

Yes	No
REPLACE PCM. RESTORE vehicle. CLEAR DTCs and RETEST.	REPAIR short to power in harness. RESTORE vehicle. CLEAR DTCs and RETEST.

ME5 SIG RTN CIRCUIT CHECK

- Measure resistance between PCM test pin 91 and pins 25, 76, 77 and 103.

Is each resistance less than 5 ohms?

Yes	No
GO to ME6 .	REPLACE PCM. RESTORE vehicle.

ME6 CHECK FOR SHORTED ACCELERATOR PEDAL (AP/ETC) SENSOR

- Disconnect AP/ETC sensor harness connector.
- Key on, engine off.
- Measure voltage between PCM test pins 90 and 91.

Is voltage less than 4.0 volts?

Yes	No
GO to ME7 .	REPLACE AP/ETC sensor. RESTORE vehicle. CLEAR DTCs and RETEST.

ME7 CHECK FOR SHORTED CAMSHAFT POSITION (CMP) SENSOR

- Disconnect CMP sensor harness connector.
- Key on, engine off.
- Measure voltage between PCM test pins 90 and 91.

Is voltage less than 4.0 volts?

Yes	No
GO to ME8 .	REPLACE CMP sensor. RESTORE vehicle.

ME8 CHECK FOR SHORTED INJECTION CONTROL PRESSURE (ICP) SENSOR

- Disconnect ICP sensor harness connector.
- Key on, engine off.
- Measure voltage between PCM test pins 90 and 91.

Is voltage less than 4.0 volts?

Yes	No
GO to ME9 .	REPLACE ICP sensor. RESTORE vehicle.

ME9 CHECK FOR SHORTED EXHAUST BACK PRESSURE (EBP) SENSOR

- Disconnect EBP sensor harness connector.
- Key on, engine off.
- Measure voltage between PCM test pins 90 and 91.

Is voltage less than 4.0 volts?

Yes	No
GO to ME10 .	REPLACE EBP sensor. RESTORE vehicle.

ME10 CHECK FOR SHORTED MANIFOLD ABSOLUTE PRESSURE (MAP) SENSOR

- Disconnect MAP sensor harness connector.
- Key on, engine off.
- Measure voltage between PCM test pins 90 and 91.

Is voltage less than 4.0 volts?

Yes	No
Leave MAP sensor disconnected. GO to ME11 .	REPLACE MAP sensor. RESTORE vehicle.

ME11 CHECK VREF CIRCUIT FOR SHORT TO GROUND

- Disconnect PCM from breakout box.
- AP/ETC, CMP, ICP, EBP, MAP disconnected.
- Measure resistance between PCM test pin 90 and PCM test pins 25, 51, 76, 77, 91 and 103.

Are all resistances greater than 10,000 ohms?

Yes	No
REPLACE PCM. RESTORE vehicle. RERUN Scan Tool Diagnostic Test.	GO to ME12 .

ME12 CHECK PCM AND VEHICLE HARNESS CONNECTORS

- Inspect for damage, loose or pushed-out pins, loose or poorly crimped wires.
- Remove the valve covers.
- Inspect under valve cover connectors and harnesses for damage.

Are connectors, terminals and harnesses OK?

Yes	No
GO to ME13 .	REPAIR as necessary. RESTORE vehicle. CLEAR DTCs and RETEST.

ME13 CHECK FOR SHORT TO GROUND IN HIGH SIDE CIRCUIT

- Disconnect both valve cover connectors on the bank with the code.
- Measure resistance between suspect high side circuit at IDM connector and battery negative post.

Is resistance greater than 10,000 ohms?

Yes	No
Fault may be intermittent. GO to ME14 .	REPAIR short to ground. RESTORE vehicle. CLEAR DTCs and RETEST.

ME14 CHECK FOR SHORT TO GROUND INJECTOR CIRCUIT

- Measure resistance between suspect high side circuit at the IDM connector.
- Grasp the harness close to the suspect injector harness connector. Wiggle and shake harness while working your way back to the IDM.

Do resistance readings ever go below 5 ohms?

Yes	No
ISOLATE short in circuit and REPAIR. RESTORE vehicle. CLEAR DTCs and RETEST.	If problem recurs, VERIFY no circuit issues are present and REPLACE IDM.