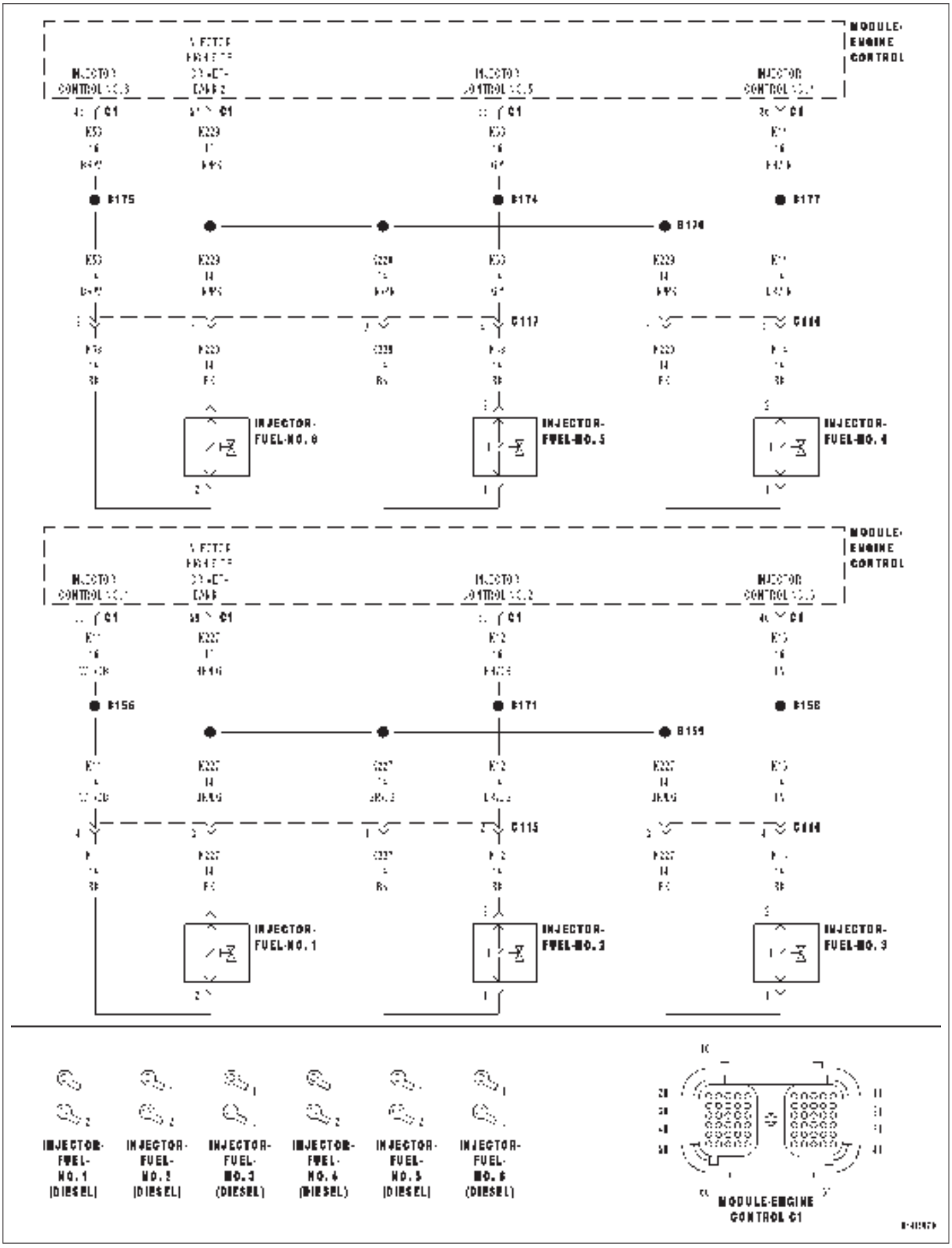
P0203-INJECTOR #3 CONTROL CIRCUIT



P0203-INJECTOR #3 CONTROL CIRCUIT (CONTINUED)

For the Engine circuit diagram (Refer to 8 - ELECTRICAL/ELECTRONIC CONTROL MODULES/ENGINE CONTROL MODULE - SCHEMATIC - ELECTRICAL)

For a complete wiring diagram **Refer to Section 8W**.

- **When Monitored:**
  While the engine is running.
- **Set Condition:**
  When the injector current falls below a calibrated threshold.

Possible Causes
PASS TROUGH CONNECTORS OPEN
FUEL INJECTOR
INJECTOR HARNESS OPEN
HIGH SIDE DRIVER HARNESS OPEN
LOW SIDE DRIVER HARNESS OPEN
ECM

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. (Refer to 9 - ENGINE - DIAGNOSIS AND TESTING)

Diagnostic Test

1. OTHER DTC'S

With the scan tool, read DTCs.

Are all 6 of the injector DTC's (P0201 - P0206) present?

Yes >> Go To 2

No >> Go To 3

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2. PASS TROUGH CONNECTORS OPEN

Inspect wiring harness for signs of multiple open circuits between the ECM and the injector pass through connectors. Inspect the wiring harness between the pass through connectors to the injectors.

Are there open circuits in the wiring harness?

Yes >> Repair or replace the open connectors or wiring.
Perform POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). (Refer to 8 - ELECTRICAL/ELECTRONIC CONTROL MODULES/ENGINE CONTROL MODULE - DIAGNOSIS AND TESTING)

No >> Go To 3

P0203-INJECTOR #3 CONTROL CIRCUIT (CONTINUED)

3. FUEL INJECTOR

Turn the ignition off.

Disconnect the pigtail nuts from the suspect injector. Using an Ohmmeter, measure the resistance between the solenoid posts of the injector.

NOTE: Be sure to zero the ohm meter prior to checking the injector circuit.

Is the resistance less than 1 ohm and greater than 0 ohms?

Yes >> Go To 4

No >> Replace the fuel injector.
Perform POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). (Refer to 8 - ELECTRICAL/ELECTRONIC CONTROL MODULES/ENGINE CONTROL MODULE - DIAGNOSIS AND TESTING)

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4. INJECTOR HARNESS OPEN

Connect the pigtail nuts for the suspect injector.

Disconnect the injector harness connector for the suspect injector.

Measure the resistance of the injector harness circuit between the high side driver circuit and the low side driver circuit for the suspect injector at the injector harness connector.

NOTE: Be sure to zero the ohm meter prior to checking the injector circuit.

Is the resistance less than 1 ohm and greater than 0 ohms?

Yes >> Go To 5

No >> Replace or repair the injector harness.
Perform POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). (Refer to 8 - ELECTRICAL/ELECTRONIC CONTROL MODULES/ENGINE CONTROL MODULE - DIAGNOSIS AND TESTING)

P0203-INJECTOR #3 CONTROL CIRCUIT (CONTINUED)

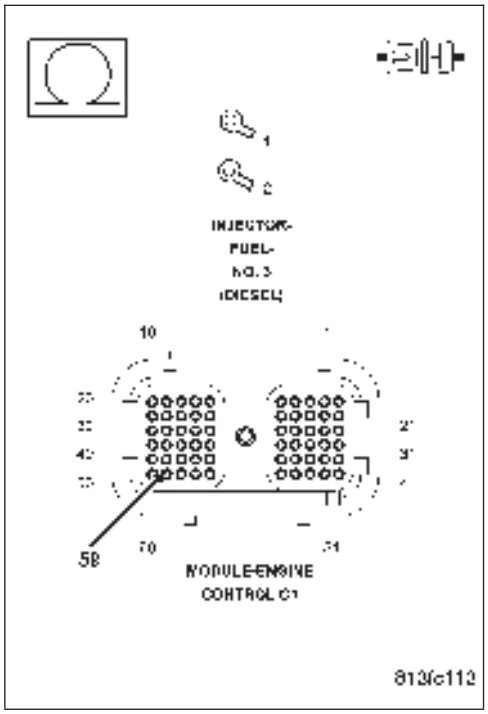
5. HIGH SIDE DRIVER HARNESS OPEN

Disconnect the ECM harness connectors.

Disconnect the Injector harness connector.

Check connectors - Clean/repair as necessary.

Measure the resistance of the Bank 1 high side driver circuit between the ECM connector and the injector harness connector.



Is the resistance less than 10 Ohms?

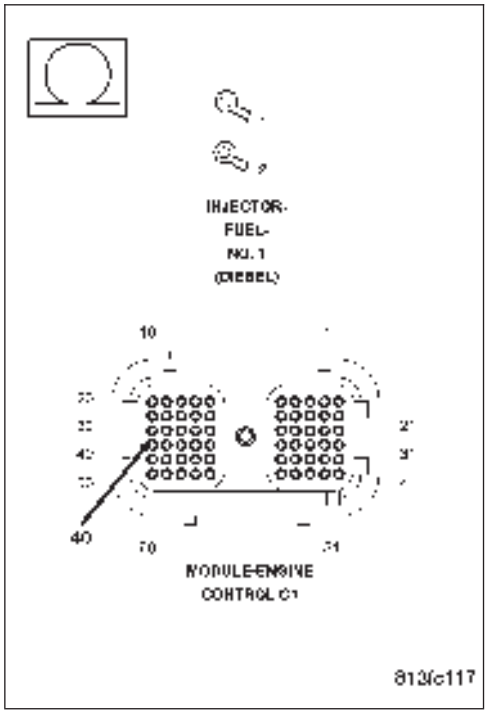
Yes >> Go To 6

No >> Replace or repair the open engine harness.

Perform POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). (Refer to 8 - ELECTRICAL/ELECTRONIC CONTROL MODULES/ENGINE CONTROL MODULE - DIAGNOSIS AND TESTING)

6. LOW SIDE DRIVER HARNESS OPEN

Measure the resistance of the Bank 1 low side driver circuit between the ECM connector and the injector harness connector.



Is the resistance less than 10 Ohms?

Yes >> Test Complete.

Perform POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). (Refer to 8 - ELECTRICAL/ELECTRONIC CONTROL MODULES/ENGINE CONTROL MODULE - DIAGNOSIS AND TESTING)

No >> Replace or repair the open engine harness.

Perform POWERTRAIN VERIFICATION TEST VER - 1 (DIESEL). (Refer to 8 - ELECTRICAL/ELECTRONIC CONTROL MODULES/ENGINE CONTROL MODULE - DIAGNOSIS AND TESTING)