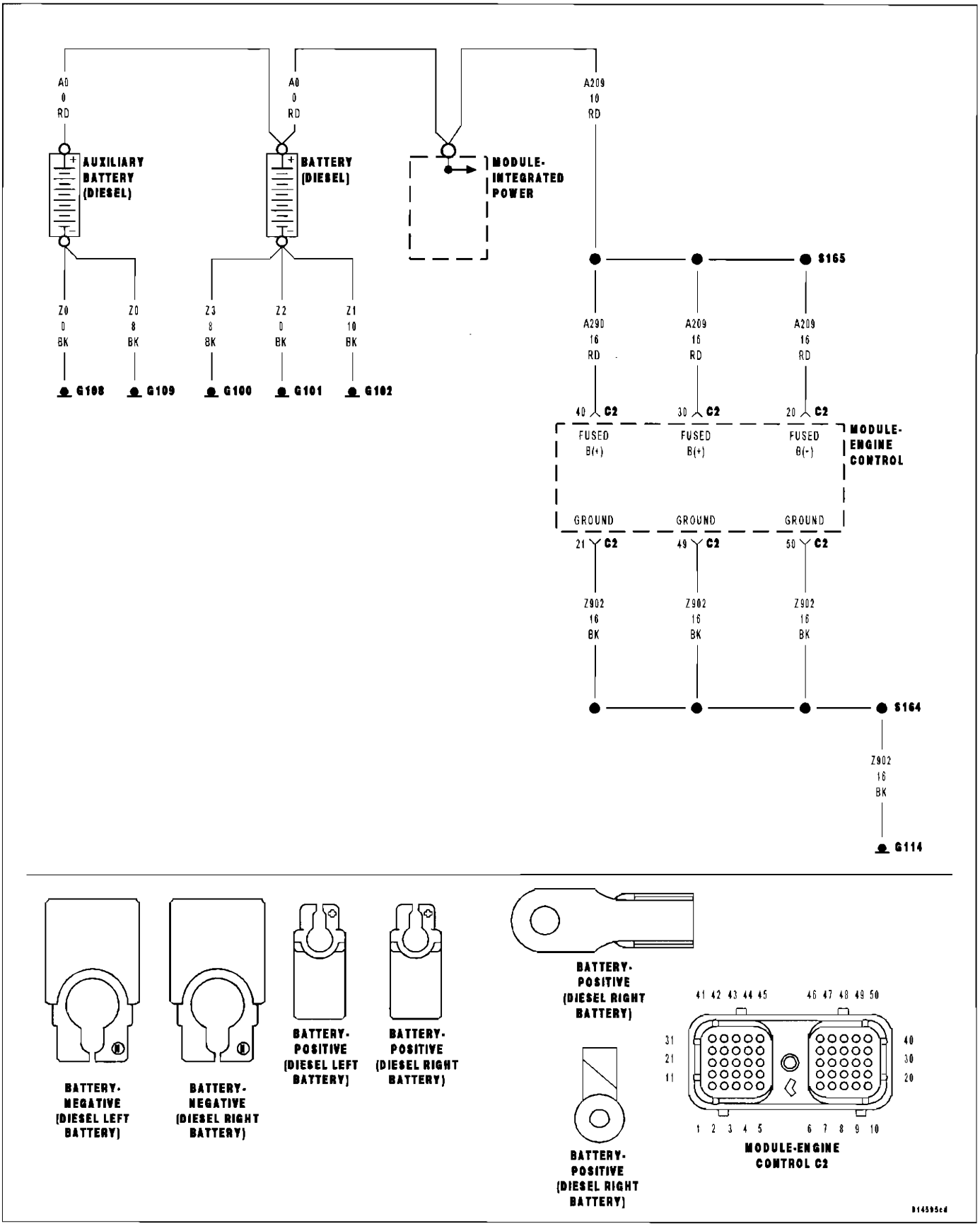
P2509-POWERDOWN DATA LOST ERROR



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

- **When Monitored:**
  Continuous - key on or key off.
- **Set Condition:**
  Loss of voltage detected at the ECM for a calibrated amount of time.

Possible Causes
POOR CONNECTIONS AT THE BATTERIES
LOW BATTERY VOLTAGE
OPEN FUSED B+ TO ECM
OPEN GROUND CIRCUIT
BATTERY + SHORTED TO OTHER CIRCUITS
RETURN CIRCUIT SHORTED
BATTERY + SHORTED TO GROUND
INTERMITTENT CONDITION

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

Diagnostic Test

1. POOR CONNECTIONS AT THE BATTERIES

Visually inspect the wiring at the battery for damaged wires, or corrosion.

Are the connections tight and free of corrosion?

Yes >> Go To 2

No >> Repair the poor connections at the batteries.
Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 9 - ENGINE - STANDARD PROCEDURE)

2. LOW BATTERY VOLTAGE

Measure the voltage between the positive and negative posts of the batteries.

Is the battery voltages both above 12 volts?

Yes >> Go To 3

No >> Recharge or replace the battery (s).
Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 9 - ENGINE - STANDARD PROCEDURE)

3. OPEN FUSED B+ TO ECM

Turn the ignition off.

Disconnect the ECM harness connectors.

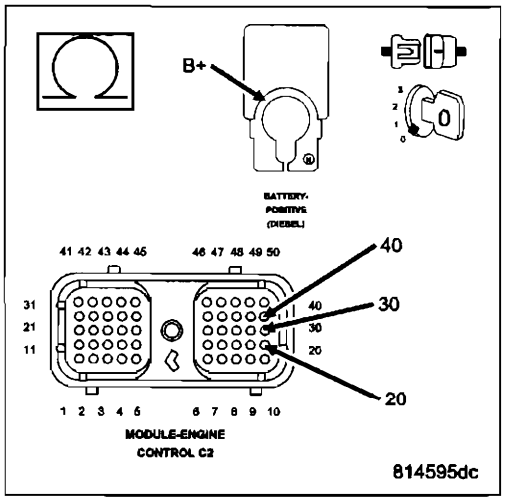
Turn the ignition on.

Measure the resistance between the positive battery post and the ECM supply circuits.

Is the resistance less than 10 Ohms?

Yes >> Go To 4

No >> Repair the open fused B+ circuit to ECM.
Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 9 - ENGINE - STANDARD PROCEDURE)



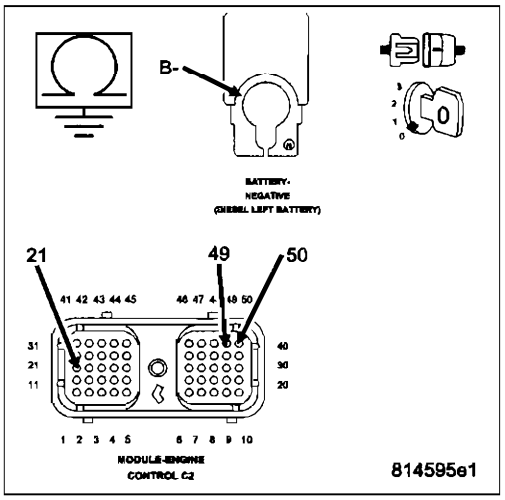
4. OPEN GROUND CIRCUIT

Measure the resistance between the negative battery post and the ECM ground circuits.

Is the resistance less than 10 Ohms?

Yes >> Go To 5

No >> Repair the open ground circuit.
Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 9 - ENGINE - STANDARD PROCEDURE)



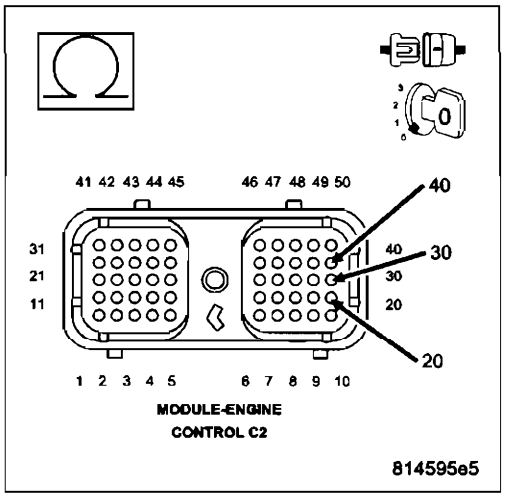
5. BATTERY + SHORTED TO OTHER CIRCUITS

Measure the resistance between the ECM supply circuits and all other circuits in the ECM harness connector, except other supply circuits.

Is the resistance greater than 100k Ohms?

Yes >> Go To 6

No >> Repair the battery circuit short to other circuits in engine harness.
Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 9 - ENGINE - STANDARD PROCEDURE)



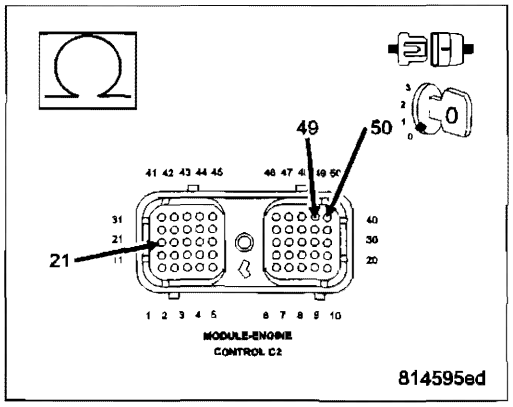
6. RETURN CIRCUIT SHORTED

Measure the resistance between the ECM return circuits and all other circuits in the ECM harness connector, except other return circuits.

Is the resistance greater than 100k Ohms?

Yes >> Go To 7

No >> Repair or replace the engine harness.
Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 9 - ENGINE - STANDARD PROCEDURE)



7. BATTERY + SHORTED TO GROUND

Measure the resistance between the ECM B+ supply circuits and ground.

Is the resistance greater than 100k Ohms?

Yes >> Refer to the INTERMITTENT CONDITION Symptom (Diagnostic Procedure). (Refer to 9 - ENGINE - DIAGNOSIS AND TESTING)

No >> Repair Battery + shorted to ground.
Perform POWERTRAIN VERIFICATION TEST (DIESEL). (Refer to 9 - ENGINE - STANDARD PROCEDURE)