

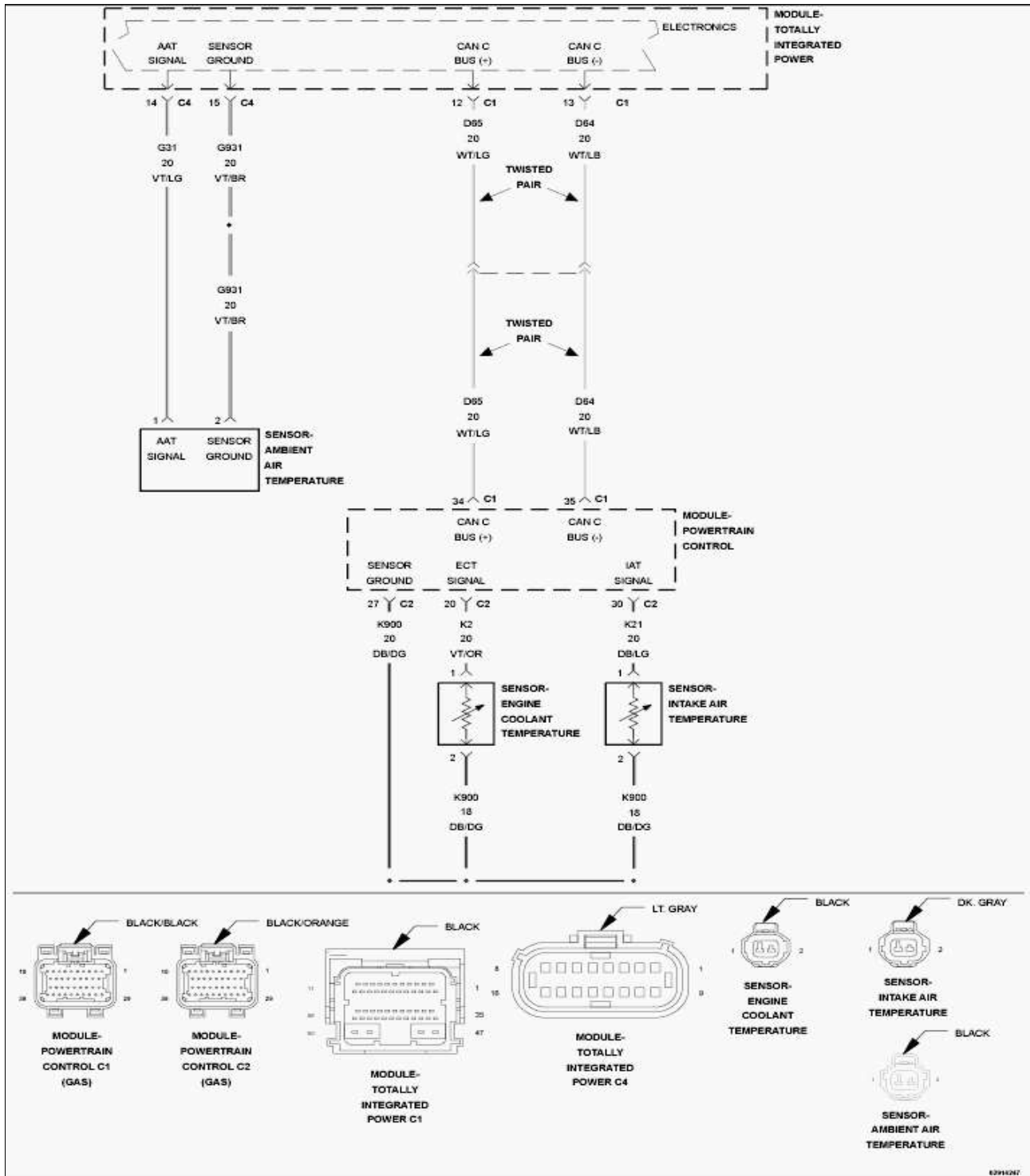
# PRODEMAND

YMMS: 2012 RAM Pickup 1500  
Engine: 5.7L Eng  
VIN:

Oct 22, 2021  
License:  
Odometer:

**DIAGNOSIS AND TESTING > P0118-ENGINE COOLANT TEMPERATURE SENSOR  
CIRCUIT HIGH**

Fig 1: AAT, ECT & IAT Sensors And PCM & TIPM Wiring Diagram



Courtesy of CHRYSLER GROUP, LLC

For a complete wiring diagram, refer to appropriate SYSTEM WIRING DIAGRAMS article .

## DIAGNOSIS AND TESTING > P0118-ENGINE COOLANT TEMPERATURE SENSOR CIRCUIT HIGH > DIAGNOSTIC TEST

### 1. ACTIVE DTC

1. Start the engine and allow it to reach normal operating temperature.

**WARNING:** *When the engine is operating, do not stand in direct line with the fan. Do not put your hands near the pulleys, belts or fan. Do not wear loose clothing. Failure to follow these instructions may result in possible serious or fatal injury.*

**NOTE:** *Diagnose and repair any system voltage DTCs before continuing with this test.*

2. With the scan tool, select View DTCs.

Is the DTC Active at this time?

**Yes**

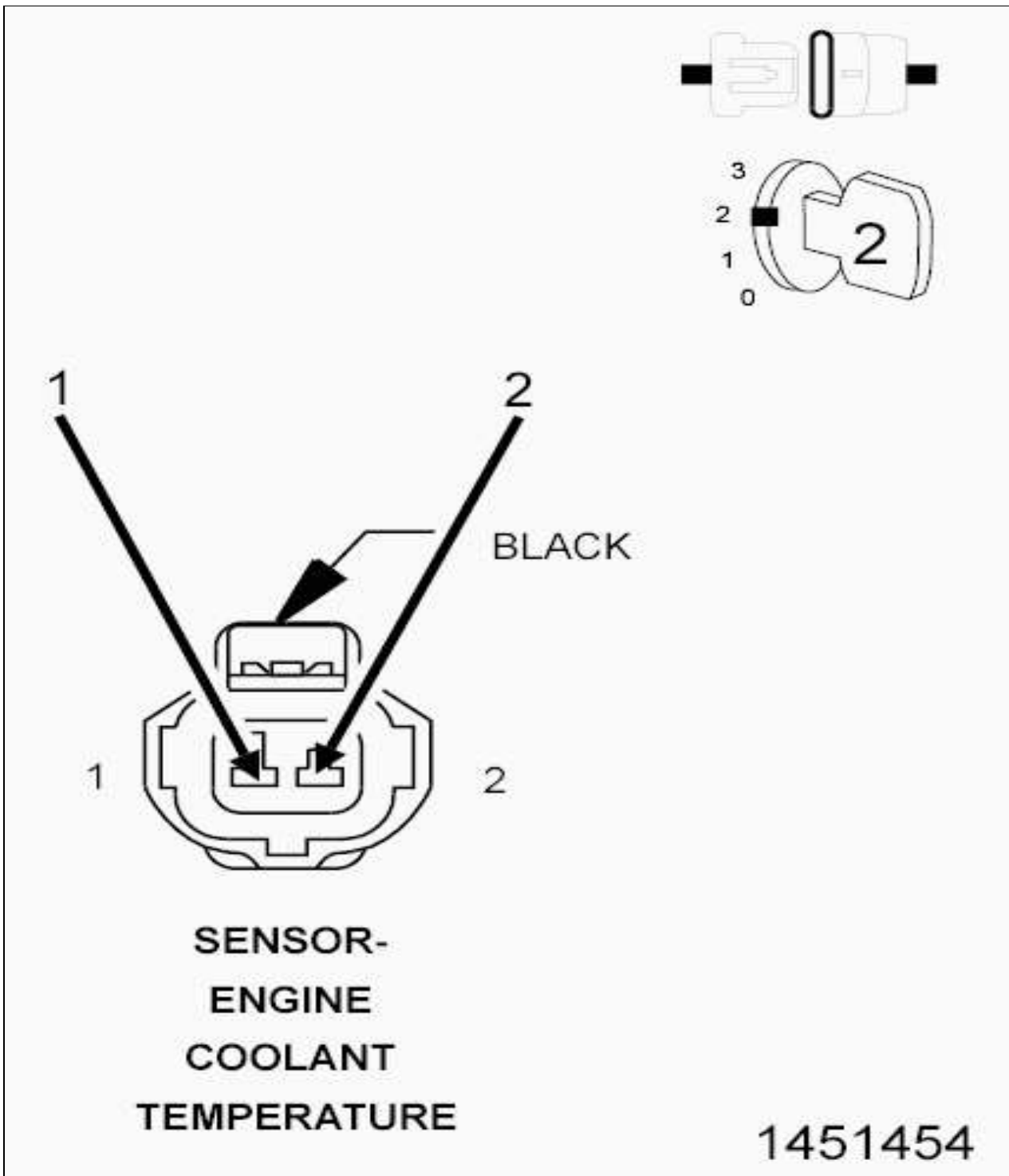
1. Go To 2.

**No**

1. Perform the INTERMITTENT CONDITION diagnostic procedure. Refer to INTERMITTENT CONDITION .

## 2. ECT SENSOR

Fig 1: Engine Coolant Temperature Sensor Harness Connector



Courtesy of CHRYSLER GROUP, LLC

1. Turn the ignition off.
2. Disconnect the ECT harness connector.
3. Ignition on, engine not running.
4. With the scan tool, read ECT voltage.

5. Connect a jumper wire between the (K2) ECT Signal circuit and the (K900) Sensor ground circuit in the ECT harness connector.

**NOTE:** *The sensor voltage should be approximately 0.0 Volts (plus or minus .1 of a Volt) with the jumper wire in place.*

Does the scan tool display the voltage as described above?

**Yes**

1. Verify that there is good pin to terminal contact in the Sensor and Powertrain Control Module connectors. Replace the ECT Sensor if no issues were found with the connectors. Refer to SENSOR, COOLANT TEMPERATURE, REMOVAL .
2. Perform the POWERTRAIN VERIFICATION TEST. Refer to POWERTRAIN VERIFICATION TEST .

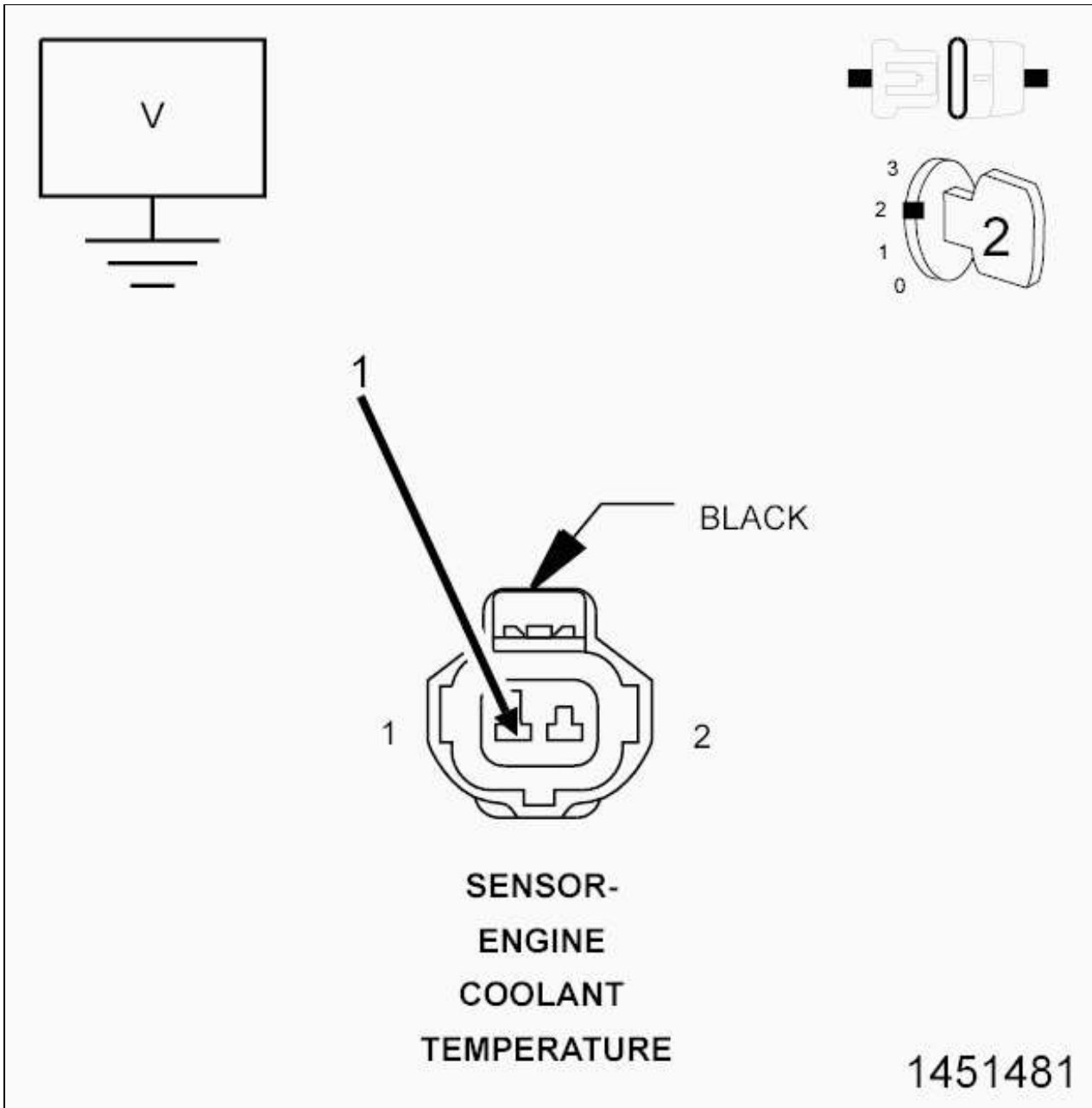
**No**

1. Go To 3.

**NOTE:** *Remove the jumper wire before continuing.*

**3. (K2) ECT SIGNAL CIRCUIT SHORTED TO VOLTAGE**

Fig 2: Measuring Voltage On ECT Sensor Signal Circuit Harness Connector



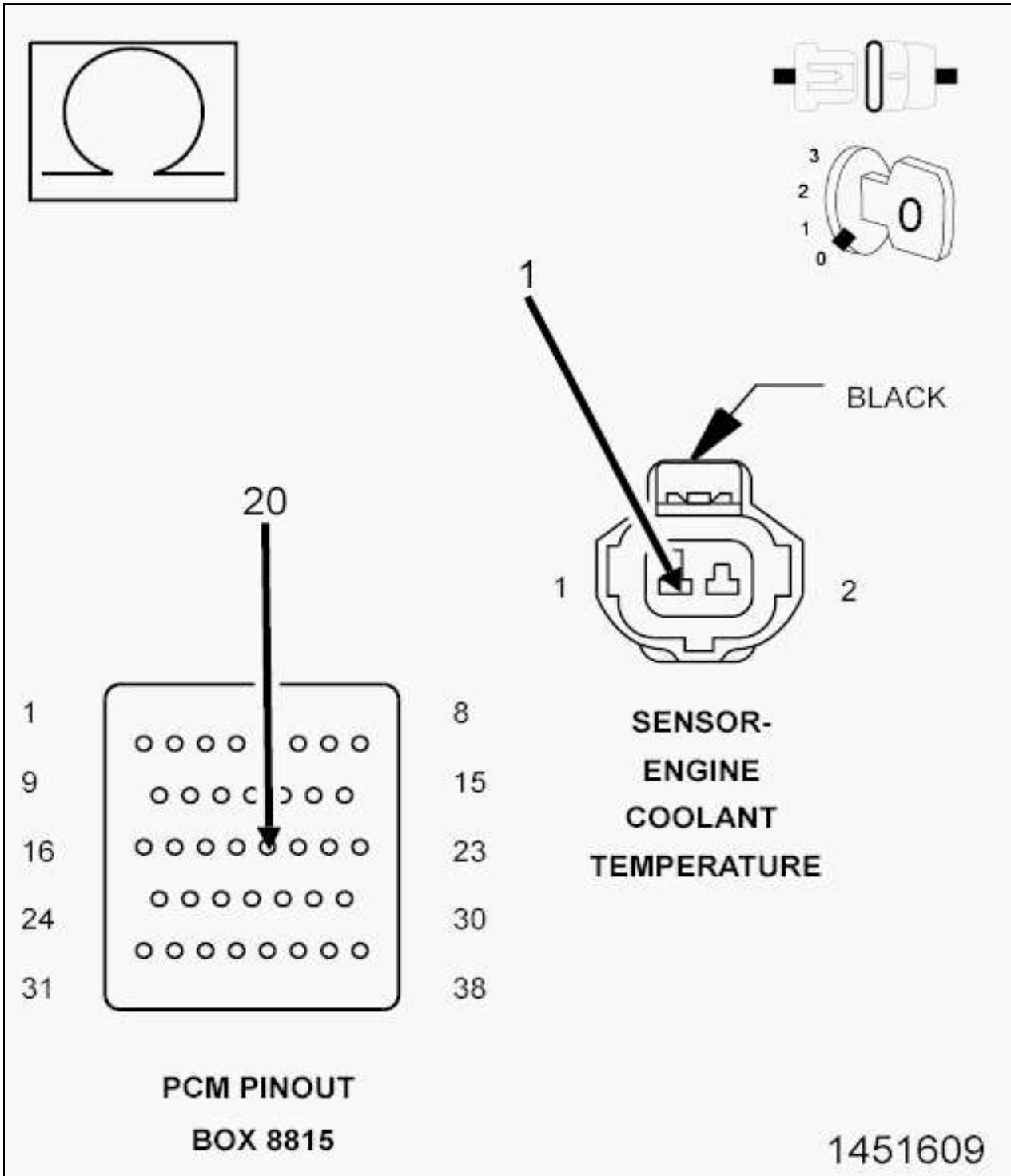
Courtesy of CHRYSLER GROUP, LLC

1. Turn the ignition off.
2. Disconnect the C2 PCM harness connector.
3. Ignition on, engine not running.
4. Measure the voltage on the (K2) ECT Signal circuit in the ECT Sensor harness connector.  
Is there any voltage present?  
**Yes**
  1. Repair the short to voltage in the (K2) ECT Signal circuit.
  2. Perform the POWERTRAIN VERIFICATION TEST. Refer to POWERTRAIN VERIFICATION TEST .**No**

1. Go To 4.

#### 4. (K2) ECT SIGNAL CIRCUIT OPEN

Fig 3: Measuring Resistance Of ECT Sensor Signal Circuit From Harness Connector To Appropriate Terminal Of PCM Pinout Box 8815



Courtesy of CHRYSLER GROUP, LLC

1. Turn the ignition off.

**CAUTION:** Do not probe the PCM harness connectors. Probing the PCM harness connectors will damage the PCM terminals resulting in poor terminal to pin connection. Install the PCM Pinout Box (special tool #8815A, Kit, NGC, 38 Position) to perform diagnosis.

2. Measure the resistance of the (K2) ECT Signal circuit from the ECT Sensor harness connector to the appropriate terminal of PCM Pinout Box (special tool #8815A, Kit, NGC, 38 Position).

Is the resistance below 5.0 Ohms?

**Yes**

1. Go To 5.

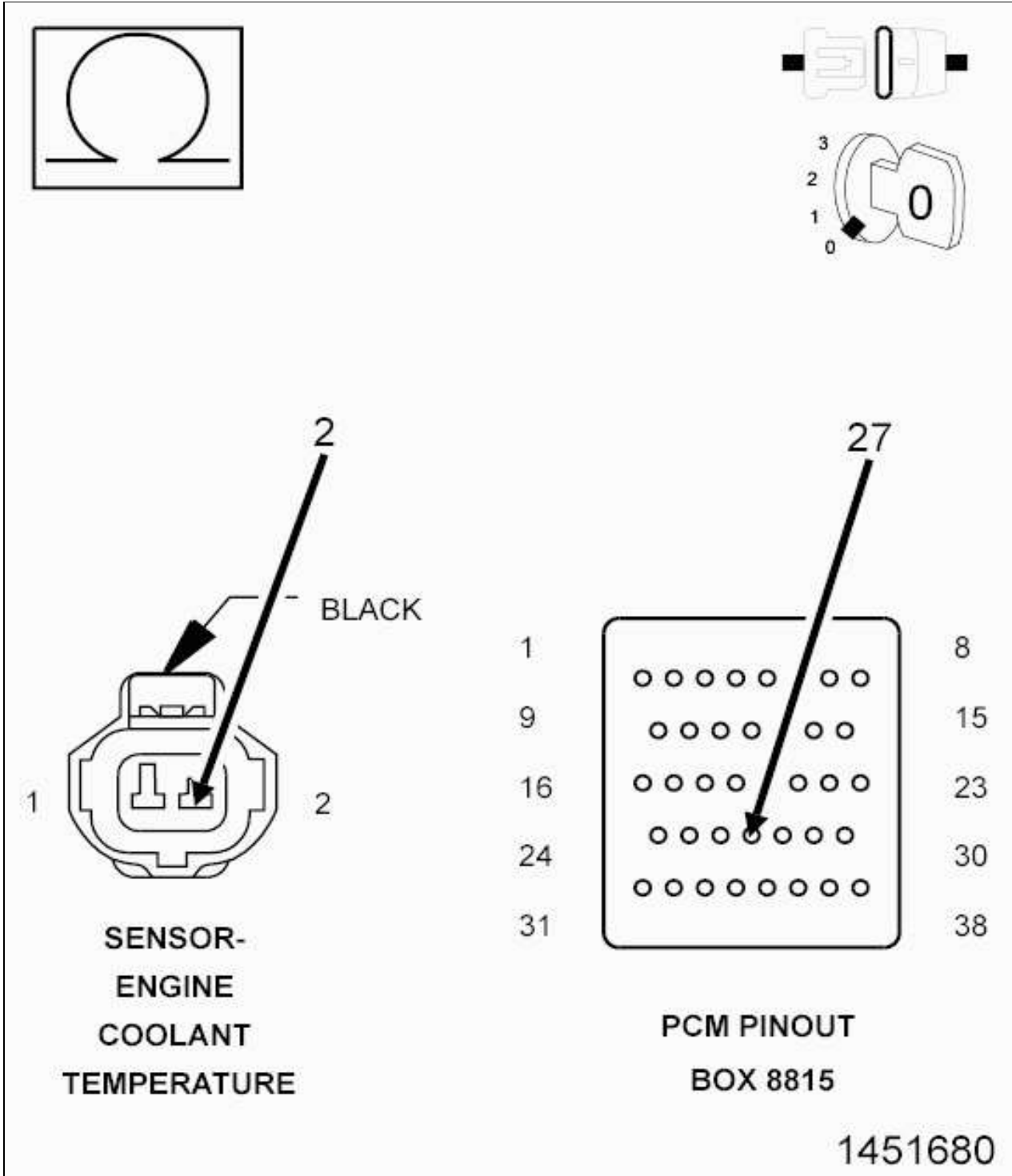
**No**

1. Repair the open in the (K2) ECT Signal circuit.
2. Perform the POWERTRAIN VERIFICATION TEST. Refer to POWERTRAIN VERIFICATION TEST .

#### 5. (K900) SENSOR GROUND CIRCUIT OPEN



Fig 4: Measuring Resistance Of ECT Sensor Ground Circuit From Harness Connector To Appropriate Terminal Of PCM Pinout Box 8815



Courtesy of CHRYSLER GROUP, LLC

1. Measure the resistance of the (K900) Sensor ground circuit from the ECT Sensor harness connector to the appropriate terminal of PCM Pinout Box (special tool #8815A, Kit, NGC, 38 Position).  
Is the resistance below 5.0 Ohms?  
**Yes**  
1. Go To 6.

**No**

1. Repair the open in the (K900) Sensor ground circuit.
2. Perform the POWERTRAIN VERIFICATION TEST. Refer to POWERTRAIN VERIFICATION TEST .

**6. POWERTRAIN CONTROL MODULE (PCM)**

1. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors between the ECT Sensor and the Powertrain Control Module (PCM).
2. Look for any chafed, pierced, pinched or partially broken wires.
3. Look for broken, bent, pushed out or corroded terminals. Verify that there is good pin to terminal contact in the Sensor and Control Module connectors.
4. Perform any Technical Service Bulletins that may apply.  
Were there any problems found?

**Yes**

1. Repair as necessary.
2. Perform the POWERTRAIN VERIFICATION TEST. Refer to POWERTRAIN VERIFICATION TEST .

**No**

1. Replace and program the Powertrain Control Module in accordance with the Service Information. Refer to PCM - REMOVAL , also see PCM / TCM PROGRAMMING .
2. Perform the POWERTRAIN VERIFICATION TEST. Refer to POWERTRAIN VERIFICATION TEST .