

# PRODEMAND

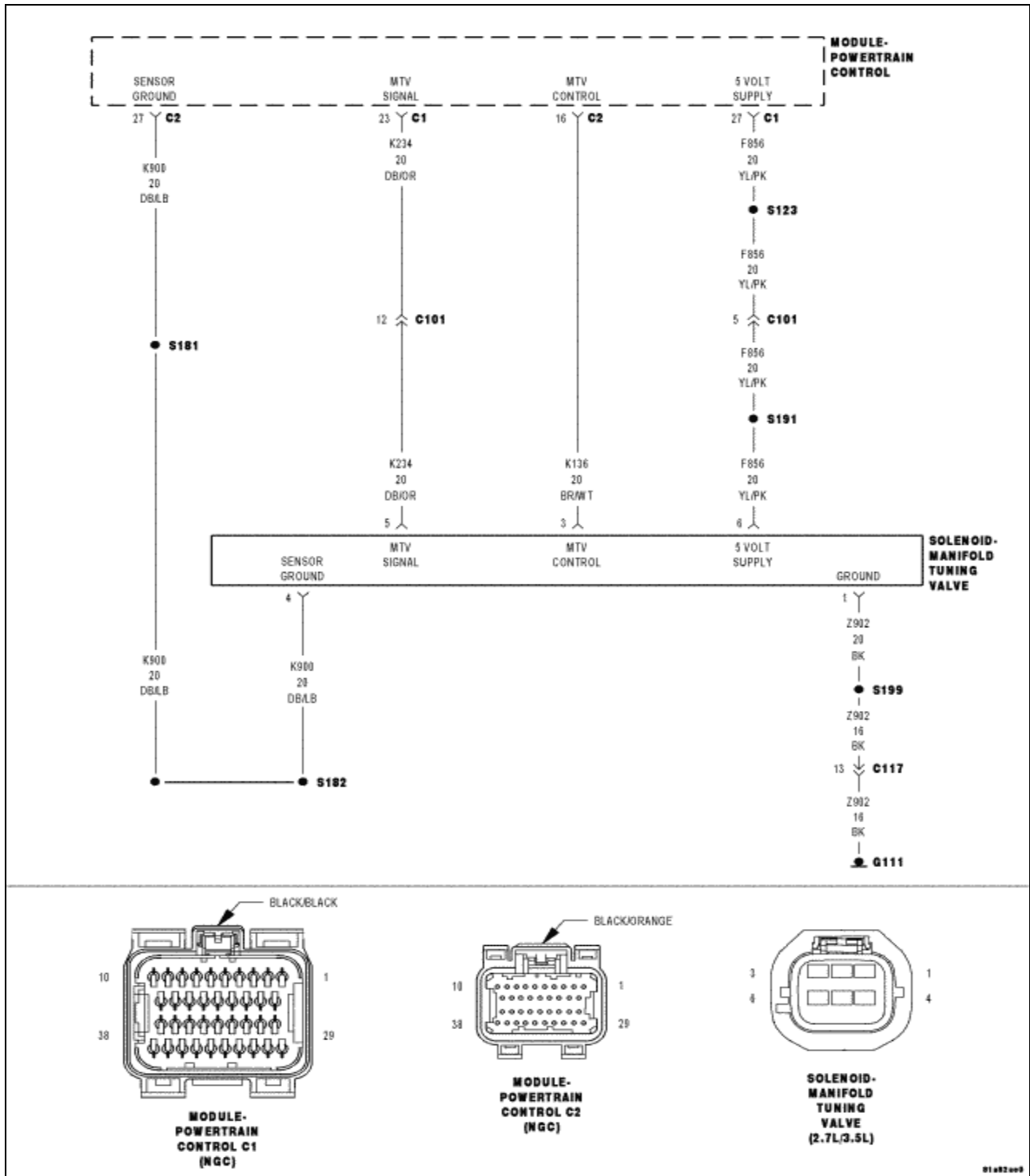
YMMS: 2008 Chrysler Sebring Limited  
Engine: 3.5L Eng  
VIN:

Apr 11, 2023  
License:  
Odometer:

## **P1005-MANIFOLD TUNING VALVE CONTROL PERFORMANCE**

### **Circuit Schematic**

Fig 1: Manifold Tuning Valve (MTV) Control Circuit Schematic



Courtesy of CHRYSLER LLC

### Additional Wiring

For complete wiring diagrams refer to:  
 SYSTEM WIRING DIAGRAMS for Avenger.  
 SYSTEM WIRING DIAGRAMS for Sebring 2D Convertible.  
 SYSTEM WIRING DIAGRAMS for Sebring 4D Sedan.

### Monitor Conditions

**When Monitored:**

With the engine run time above a calibrated value, battery voltage greater than 10.4 volts, ECT within a specific range, and the Manifold Tune Valve Assembly control active.

**Set Conditions**

- **Set Condition:**

This PCM compares the circuit feedback to a calibrated closed range when the circuit is de-energized or to a calibrated open range when the circuit is energized. If the value is determined to be out of the calibrated range in either the de-energized or energized state for more than a calibrated amount of time, this DTC will set.

**Possible Causes**

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INTERMITTENT DTC
(K136) MTV CONTROL CIRCUIT SHORTED TO VOLTAGE
(K136) MTV CONTROL CIRCUIT SHORTED TO GROUND
(K136) MTV CONTROL CIRCUIT OPEN OR HIGH RESISTANCE
(Z906) GROUND CIRCUIT OPEN OR HIGH RESISTANCE
MANIFOLD TUNE VALVE ASSEMBLY
POWERTRAIN CONTROL MODULE (PCM)

Always perform the \*PRE-DIAGNOSTIC TROUBLESHOOTING PROCEDURE before proceeding.

**Diagnostic Test****1. DTC IS ACTIVE**

Turn the ignition on.

With the scan tool, Clear DTCs in the Powertrain Control Module (PCM).

With the scan tool, actuate the MTV Solenoid Control State.

With the scan tool, select View DTCs.

**Is the status Active for this DTC?**

**Yes**

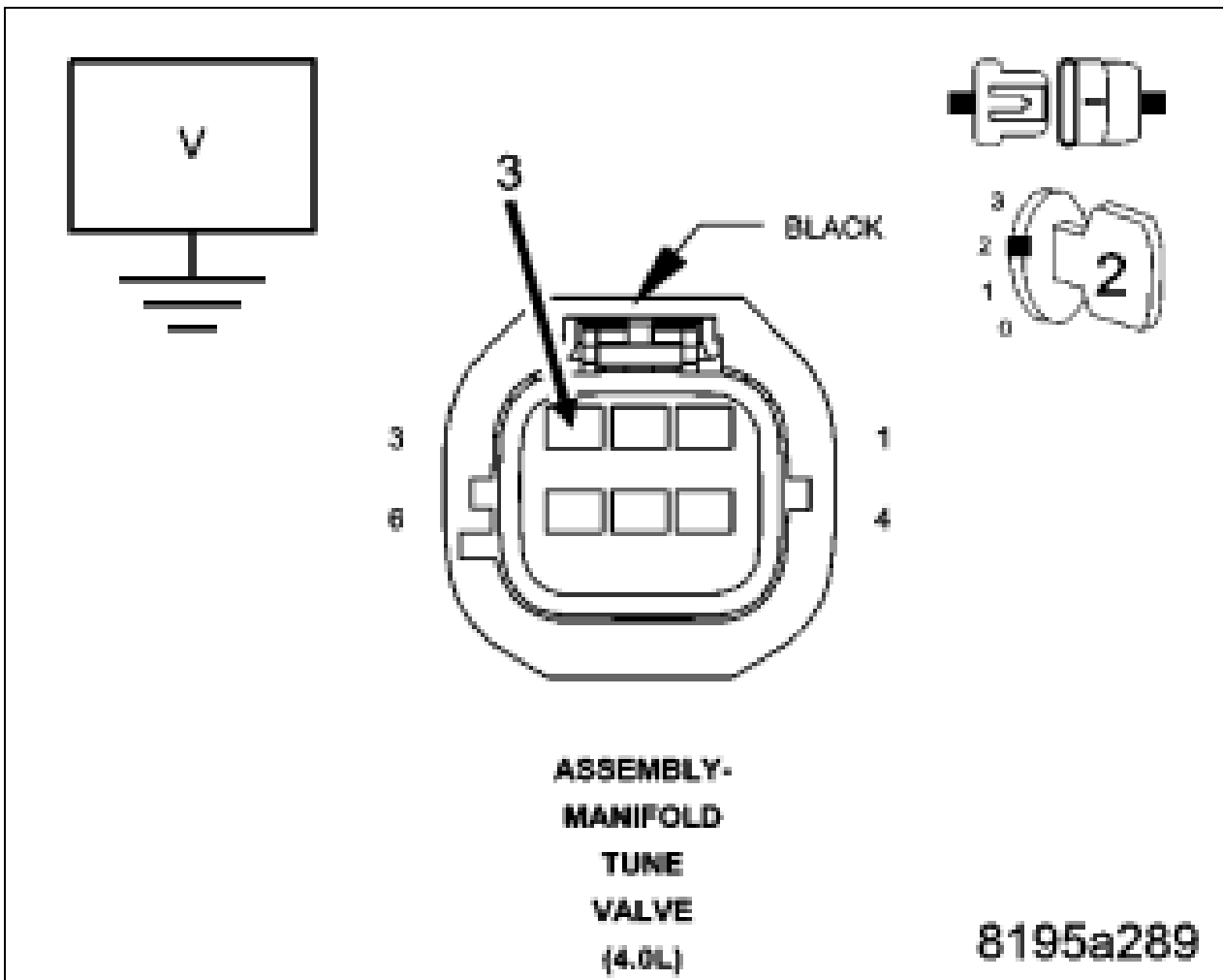
1. Go to 2.

**No**

1. Refer to the \*CHECKING FOR AN INTERMITTENT DTC Diagnostic Procedure.

**2. (K136) MTV CONTROL CIRCUIT SHORTED TO VOLTAGE**

Fig 2: MTV Control Circuit



Courtesy of CHRYSLER LLC

Turn the ignition off.

Disconnect the Manifold Tune Valve Assembly connector.

Disconnect the Powertrain Control Module (PCM) connector.

Turn the ignition on.

Measure the voltage of the (K136) MTV Control circuit in the Manifold Tune Valve Assembly harness connector.

**Is there any voltage present?**

**Yes**

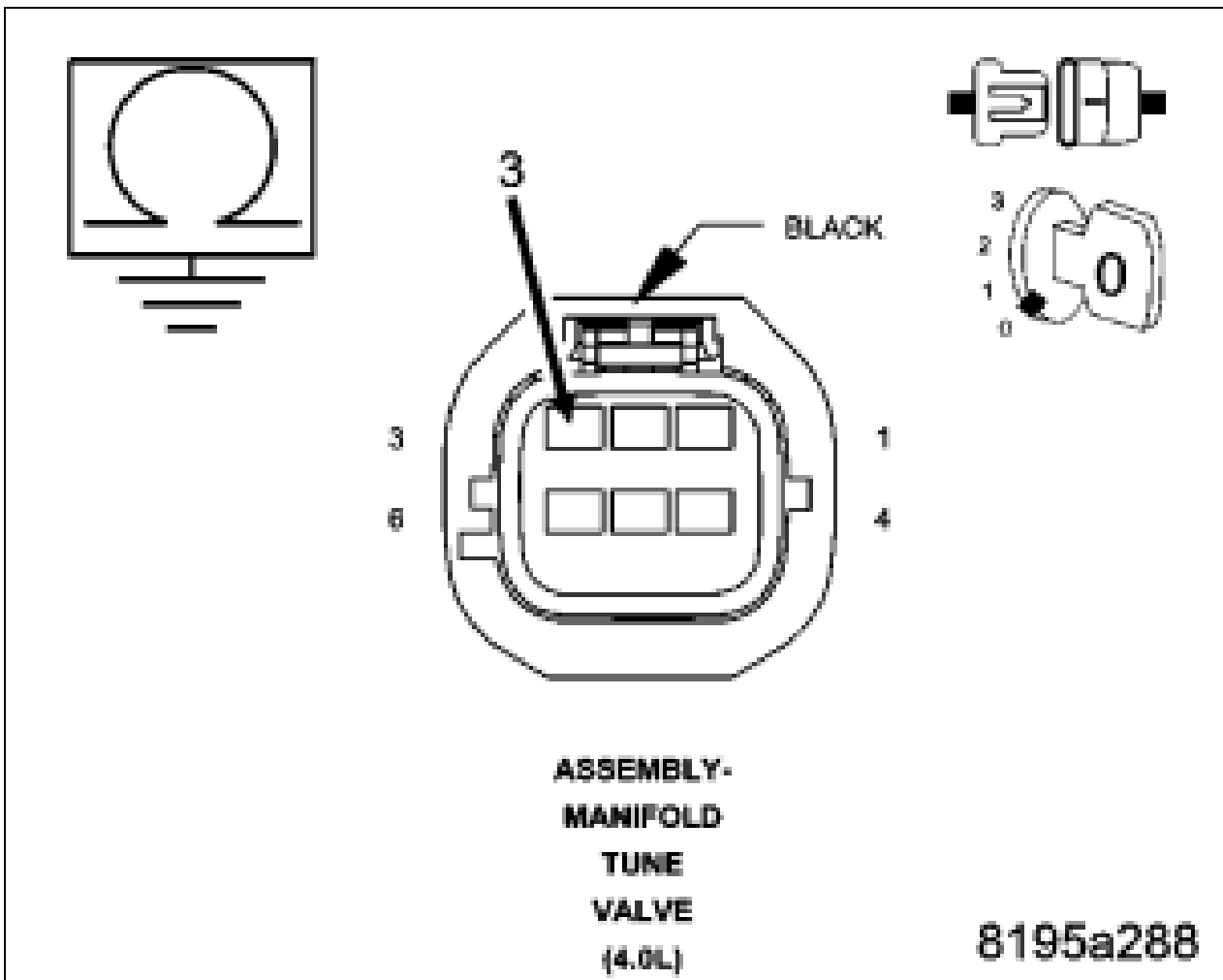
1. Repair the (K136) MTV Control circuit for a short to voltage.
2. Perform PCM VERIFICATION TEST (NGC).

**No**

1. Go to 3.

### **3. (K136) MTV CONTROL CIRCUIT SHORTED TO GROUND**

Fig 3: MTV Control Circuit



Courtesy of CHRYSLER LLC

Turn the ignition off.

Measure the resistance between ground and the (K136) MTV Control circuit in the Manifold Tune Valve Assembly harness connector.

**Is the resistance above 100 ohms?**

**Yes**

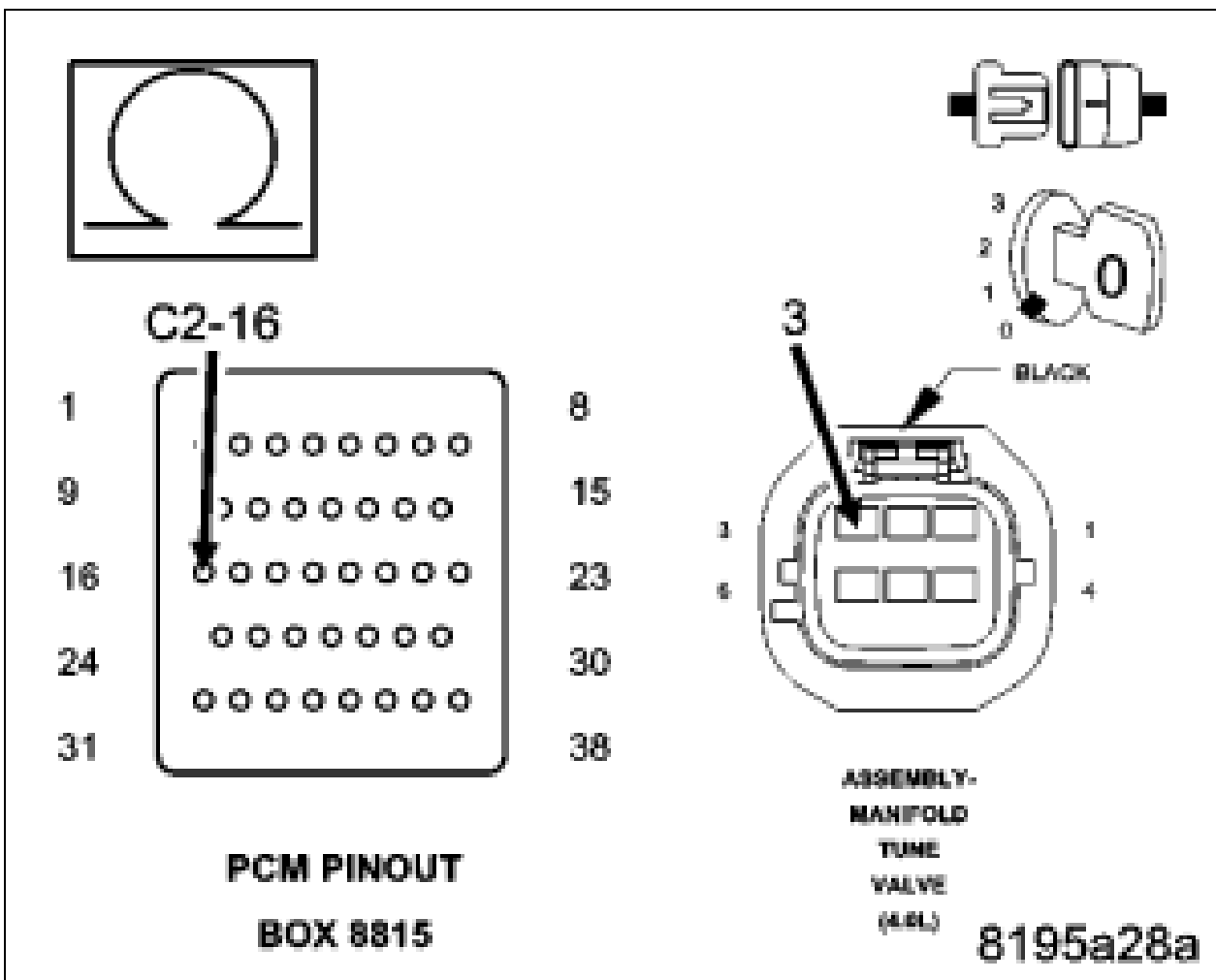
1. Go to 4.

**No**

1. Repair the (K136) MTV Control circuit for a short to ground.
2. Perform PCM VERIFICATION TEST (NGC).

**4. (K136) MTV CONTROL CIRCUIT OPEN OR HIGH RESISTANCE**

Fig 4: MTV Control Circuit



Courtesy of CHRYSLER LLC

**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 Miller Special Tool #8815 to perform diagnosis.

Measure the resistance of the (K136) MTV Control circuit between the Manifold Tune Valve Assembly harness connector and the appropriate terminal of special tool #8815.

**Is the resistance below 5.0 ohms?**

**Yes**

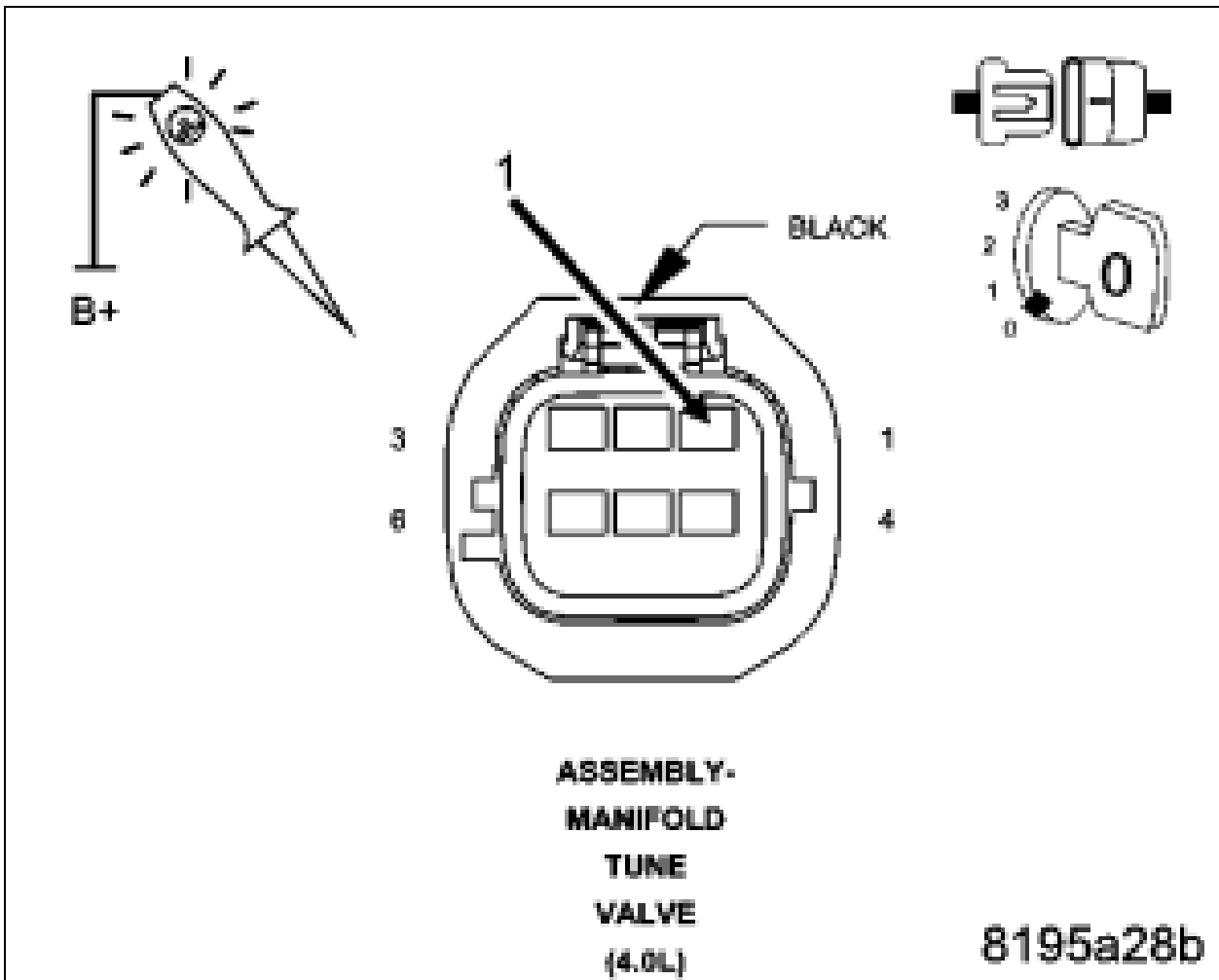
1. Go to 5.

**No**

1. Repair the (K136) MTV Control circuit for an open circuit or high resistance.
2. Perform PCM VERIFICATION TEST (NGC).

## 5. (Z906) GROUND CIRCUIT OPEN OR HIGH RESISTANCE

Fig 5: MTV Control Circuit



Courtesy of CHRYSLER LLC

Using a 12 volt test light connected to 12 volts, check the (Z906) Ground circuit in the Manifold Tune Valve Assembly harness connector.

**NOTE:** *The test light should be illuminated and bright. Compare the brightness to that of a direct connection to the battery.*

**Is the test light illuminated and bright?**

**Yes**

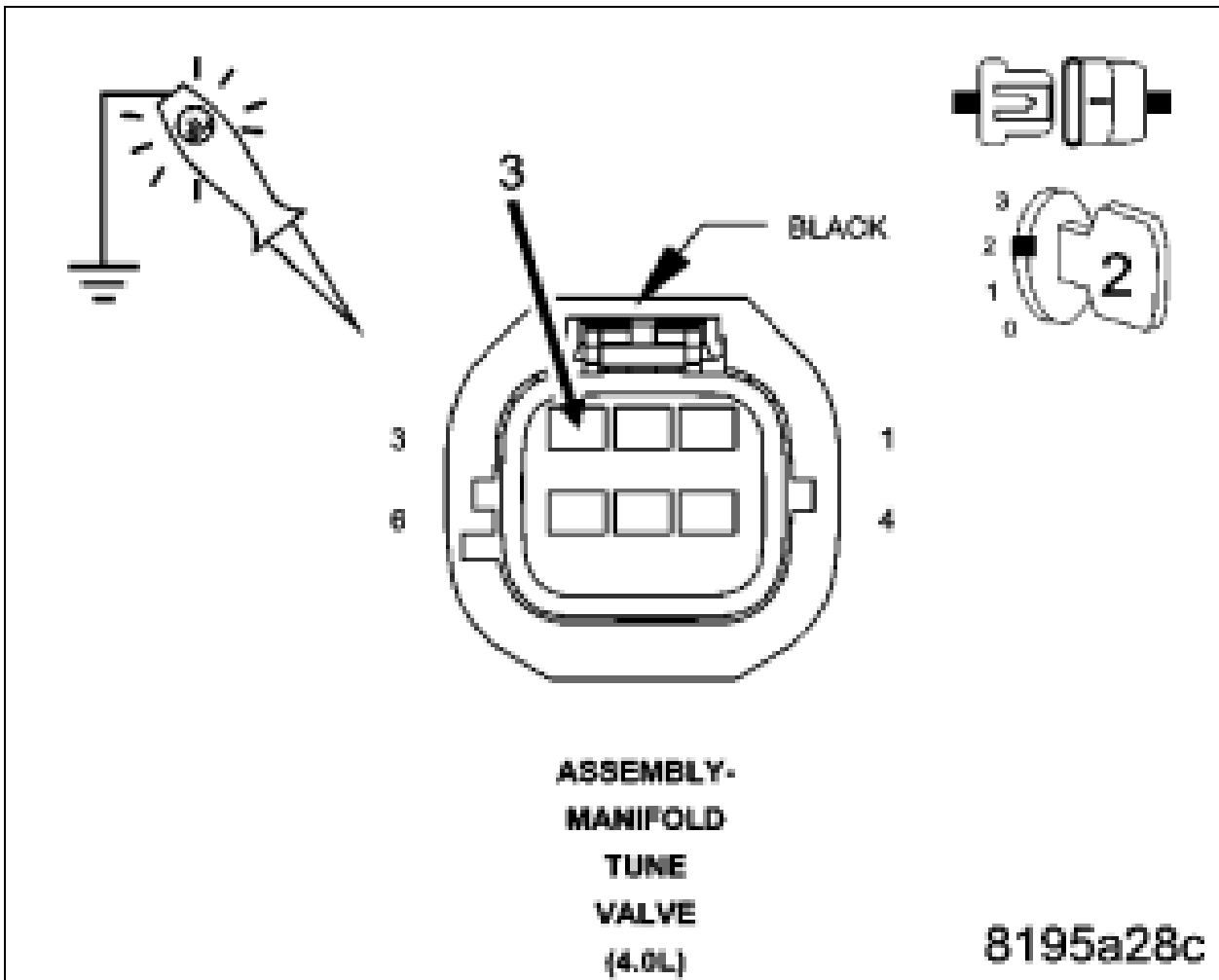
1. Go to 6.

**No**

1. Repair the (Z906) Ground circuit for an open circuit or high resistance.
2. Perform PCM VERIFICATION TEST (NGC).

## 6. MANIFOLD TUNE VALVE ASSEMBLY

Fig 6: MTV Control Circuit



Courtesy of CHRYSLER LLC

Connect the Powertrain Control Module (PCM) connector.

Turn the ignition on.

With the scan tool, actuate the MTV Solenoid Control State.

Using a 12 volt test light connected to ground, check the (K136) MTV Control circuit in the Manifold Tune Valve Assembly harness connector.

**NOTE:** If the DTC is active, the actuation test may not be allowed by the PCM. If may be necessary to clear the DTCs before starting the actuation.

**NOTE:** The voltage supplied to the solenoid circuit during the actuation may be less than battery voltage. The test light



*should be illuminated, but may not be as bright as a direct connection to the battery.*

**Is the test light illuminated during the actuation?****Yes**

1. Replace the Manifold Tune Valve Assembly in accordance with the Service Information.
2. Perform PCM VERIFICATION TEST (NGC).

**No**

1. Go to 7.

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

Using the wiring diagram/schematic as a guide, inspect the wiring and connectors between the Manifold Tune Valve Assembly and the Powertrain Control Module (PCM).

Look for any chafed, pierced, pinched, or partially broken wires.

Look for broken, bent, pushed out or corroded terminals.

Refer to any Technical Service Bulletins that may apply.

**Were any problems found?****Yes**

1. Repair as necessary.
2. Perform PCM VERIFICATION TEST (NGC).

**No**

1. Replace and program the Powertrain Control Module (PCM) in accordance with the Service Information.
2. Perform PCM VERIFICATION TEST (NGC).