

<b>DTC</b>	<b>P0627</b>	<b>FUEL PUMP CONTROL CIRCUIT OPEN</b>
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**HINT:**

For more information on the supply pump (suction control valve) and the common rail system, see page 05-432.

**CIRCUIT DESCRIPTION**

Refer to the description on page 05-432.

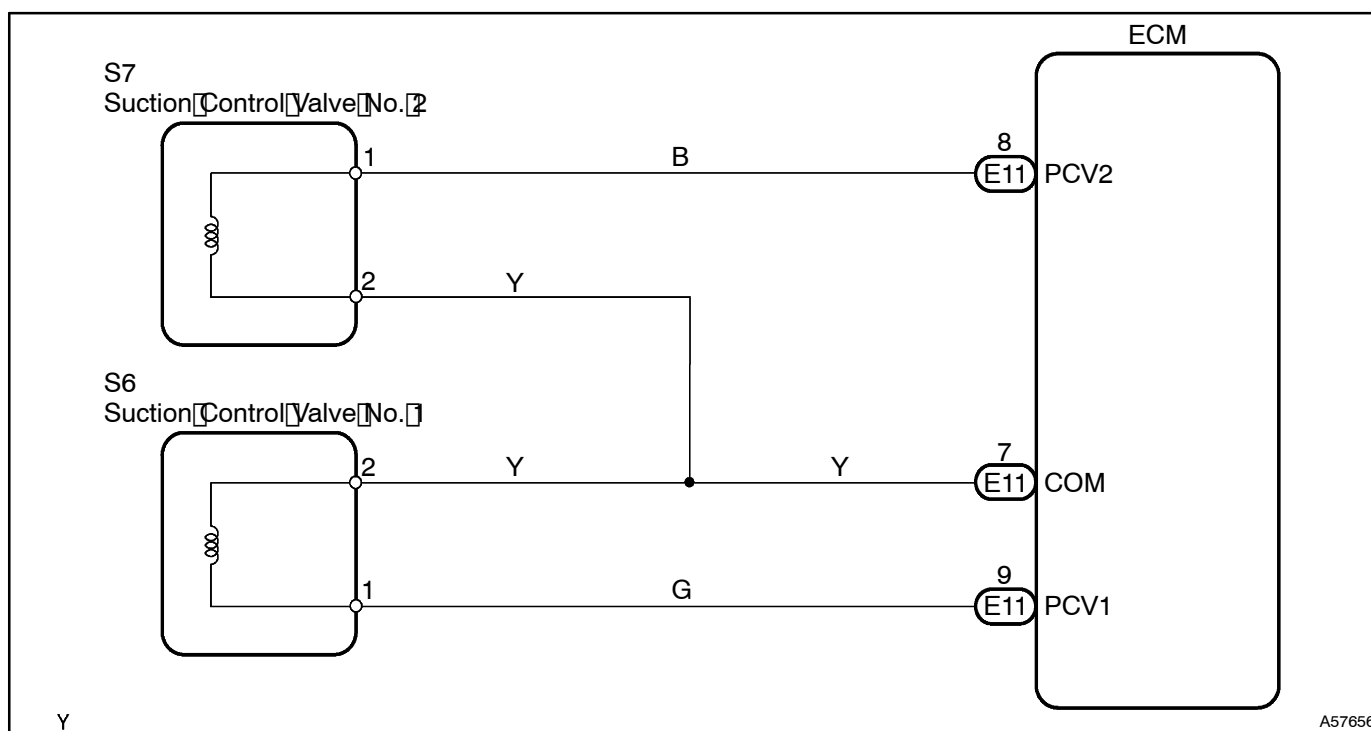
DTC No.	DTC Detection Condition	Trouble Area
P0627	<ul style="list-style-type: none"> <li>No fuel feed</li> <li>Internal fuel pressure is below the target fuel pressure despite the ECM opening the suction control valve (1 trip detection logic)</li> </ul>	<ul style="list-style-type: none"> <li>Short in supply pump (Suction control valve) circuit</li> <li>Supply pump (Suction control valve)</li> <li>Supply pump (Suction control valve stuck closed)</li> <li>ECM</li> </ul>

**HINT:**

When DTC P0627 is detected, check the internal fuel pressure of the common rail by selecting Powertrain / Engine and ECT / Data List / Common Rail Pressure on the intelligent tester II.

**Reference:**

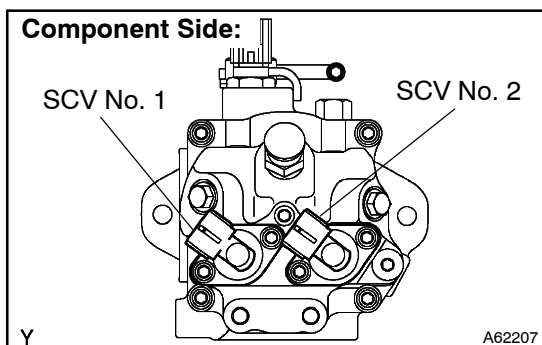
Engine Speed	Fuel Pressure (MPa)
Idling	Approximately 20 to 40
2,500 rpm (No engine load)	Approximately 40 to 80

**WIRING DIAGRAM****INSPECTION PROCEDURE****HINT:**

Read freeze frame data using the intelligent tester II. Freeze frame data record the engine condition when malfunctions are detected. When troubleshooting, freeze frame data can help determine if the vehicle was moving or stationary, if the engine was warmed up or not, and other data from the time the malfunction occurred.

# 1 INSPECT INJECTION OR SUPPLY PUMP ASSY(SUCTION CONTROL VALVE)

## Component Side:



- Disconnect the S6 and S7 suction control valve connectors.
- Measure the resistance between the terminals of the suction control valve No. 1 and suction control valve No. 2.  
**Standard: 1.5 to 1.7  $\Omega$  at 20°C (68°F)**
- Reconnect the suction control valve connectors.

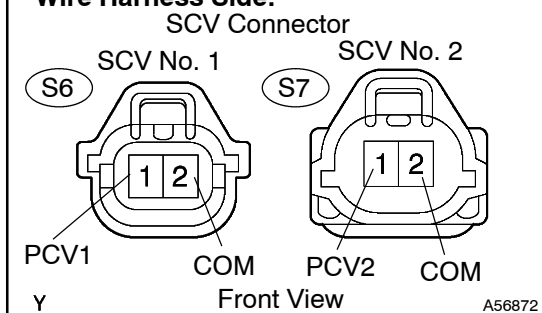
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**REPLACE INJECTION OR SUPPLY PUMP ASSY (SCV) (See page 11-31 of Pub. No. RM864E AVENSIS VERSO/ PICNIC REPAIR MANUAL)**

OK

# 2 CHECK HARNESS AND CONNECTOR(SUCTION CONTROL VALVE - ECM)

## Wire Harness Side:



- Disconnect the S6 and S7 suction control valve connectors.
- Disconnect the E11 ECM connector.
- Check the resistance.

### Standard (Check for open):

Tester Connection	Specified Condition
PCV1 (S6-1) - PCV1 (E11-9)	Below 1 $\Omega$
PCV2 (S7-1) - PCV2 (E11-8)	
COM (S6-2) - COM (E11-7)	
COM (S7-2) - COM (E11-7)	

### Standard (Check for short):

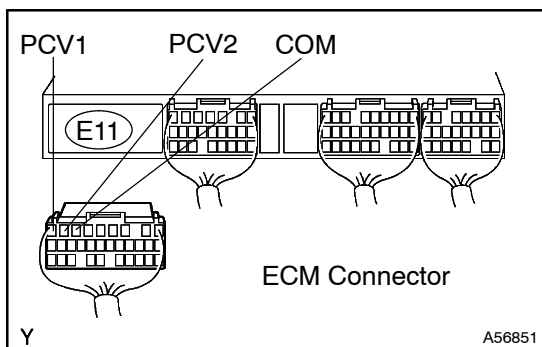
Tester Connection	Specified Condition
PCV1 (S6-1) or PCV1 (E11-9) - Body ground	10 k $\Omega$ or higher
PCV2 (S7-1) or PCV2 (E11-8) - Body ground	
COM (S6-2) or COM (E11-7) - Body ground	
COM (S7-2) or COM (E11-7) - Body ground	

- Reconnect the ECM connector.
- Reconnect the suction control valve connectors.

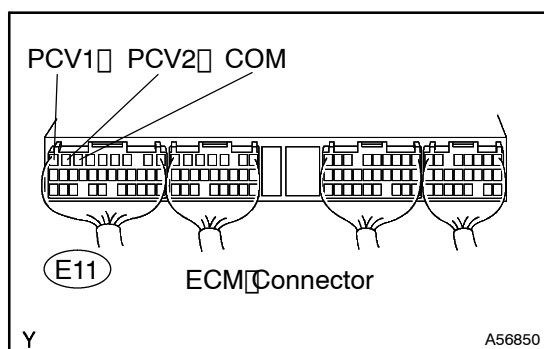
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**REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK



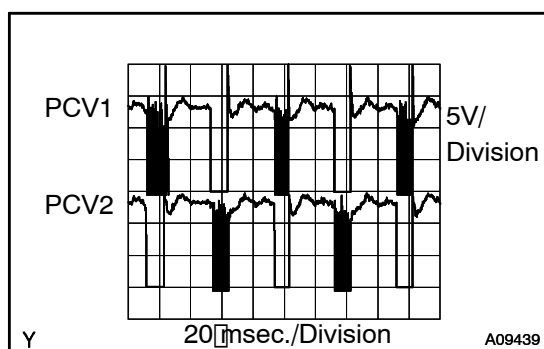
### 3 INSPECT ECM(PCV)VOLTAGE



- (a) Inspect using the oscilloscope.  
 (b) During cranking or idling, check the waveform between the specified terminals of the E11 ECM connector.

#### Standard

Tester Connection	Specified Condition
PCV1(S6-1) - COM(E11-7)	Correct waveform is as shown
PCV2(S7-1) - COM(E11-7)	



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REPLACE ECM (See page 10-30)

OK

### 4 CHECK IF DTC OUTPUT RECURS(DTC P0627)

- (a) Connect the Intelligent Tester II to the DLC3.  
 (b) Turn the ignition switch to ON and turn the Intelligent Tester II ON.  
 (c) Select the following menu items: Powertrain/Engine and ECT/DTC/Clear.  
 (d) Clear the DTCs.  
 (e) Drive the vehicle at 70 km/h (43 mph) for 40 seconds or more.  
 (f) Select the following menu items: Powertrain/Engine and ECT/DTC.  
 (g) Read DTCs.

#### Result:

Display (DTC Output)	Proceed To
P0627	A
No output	B

B

CHECK FOR INTERMITTENT PROBLEMS  
 (See page 05-440)

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REPLACE INJECTION OR SUPPLY PUMP ASSY (SUCTION CONTROL VALVE)  
 (See page 11-31 of Pub. No. RM864E AVENSIS VERSO/ REPAIR MANUAL)