

## DTC C0660

### Circuit Description

The automatic level control exhaust solenoid valve is switched ON or OFF by the electronic suspension control (ESC) module. The ESC module provides a ground whenever exhaust activity is required and during a head-relief sequence which occurs before each compressor start-up. This drive output from the ESC module is continually monitored to determine if the voltage level agrees with the commanded state.

### DTC Descriptor

This diagnostic procedure supports the following DTC:

DTC C0660 Level Control Exhaust Valve Circuit

DTC Symptom	DTC Symptom Descriptor
01	Short to Battery
06	Short to Ground or Open Circuit

### Conditions for Running the DTC

The ignition is ON.

### Conditions for Setting the DTC

The following conditions must be present to set the DTC:

- The ESC module detects voltage less than a preset value in the exhaust solenoid control circuit during an exhaust solenoid valve OFF state test.
- The ESC module detects voltage greater than a preset value in the exhaust solenoid control circuit during an exhaust solenoid valve ON state test.
- The fault is detected during 3 consecutive ignition cycles, or during the same ignition cycle after clearing the DTC with a scan tool.

### Action Taken When the DTC Sets

- ALL rear leveling activity for the remainder of the ignition cycle will be disabled.
- The SERVICE SUSPENSION SYSTEM message will be displayed.

### Conditions for Clearing the MIL/DTC

- The scan tool can be used to clear the DTC.
- The DTC is saved as history when the ESC module no longer sees an out of range voltage condition in the exhaust solenoid control circuit. The DTC will clear if the fault does not return

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after 50 consecutive ignition cycles.

## Diagnostic Aids

These DTCs are set only by electrical problems with the electronic level control (ELC) exhaust solenoid control circuit. Pneumatic blockage problems do not set these DTCs.

A temporary compressor overload, such as high head pressure during a cold start, may cause the ELC fuse to open. This is one possible cause of DTC C0662.

## Test Description

The numbers below refer to the step numbers on the diagnostic table.

2. This step tests for voltage in the automatic level control (ALC) exhaust solenoid control circuit.
3. This step tests for a short to voltage in the ALC exhaust solenoid control circuit.
4. This step tests for voltage in the battery positive voltage circuit of the ALC compressor in order to isolate a short to ground or an open.

Step	Action	Yes	No
<i>Schematic Reference:</i> <a href="#">Automatic Level Control Schematics</a>			
1	Did you perform the Diagnostic System Check - Vehicle?	Go to <a href="#">Step 2</a>	Go to <a href="#">Diagnostic System Check - Vehicle</a>
<a href="#">2</a>	<ol style="list-style-type: none"> <li>1. Disconnect the electronic suspension control (ESC) module connector.</li> <li>2. Turn ON the ignition, with the engine OFF.</li> <li>3. Connect a test lamp between the automatic level control (ALC) exhaust solenoid control circuit and a good ground.</li> </ol> Does the test lamp illuminate?	Go to <a href="#">Step 3</a>	Go to <a href="#">Step 4</a>
<a href="#">3</a>	<ol style="list-style-type: none"> <li>1. Turn OFF the ignition.</li> <li>2. Disconnect the ALC compressor connector.</li> <li>3. Turn ON the ignition, with the engine OFF.</li> <li>4. Connect a test lamp between the ALC exhaust solenoid control circuit and a good ground.</li> </ol> Does the test lamp illuminate?	Go to <a href="#">Step 9</a>	Go to <a href="#">Step 7</a>
<a href="#">4</a>	<ol style="list-style-type: none"> <li>1. Turn OFF the ignition.</li> <li>2. Disconnect the ALC compressor connector.</li> <li>3. Turn ON the ignition, with the engine OFF.</li> <li>4. Connect a test lamp between the battery positive voltage circuit of the ALC compressor and a good ground.</li> </ol> Does the test lamp illuminate?	Go to <a href="#">Step 5</a>	Go to <a href="#">Step 8</a>

5	<p>Test the ALC exhaust solenoid control circuit for a short to ground or an open. Refer to <a href="#">Circuit Testing</a> and <a href="#">Wiring Repairs</a> .</p> <p>Did you find and correct the condition?</p>	Go to <a href="#">Step 12</a>	Go to <a href="#">Step 6</a>
6	<p>Inspect for poor connections at the ALC compressor connector. Refer to <a href="#">Testing for Intermittent Conditions and Poor Connections</a> and <a href="#">Connector Repairs</a> .</p> <p>Did you find and correct the condition?</p>	Go to <a href="#">Step 12</a>	Go to <a href="#">Step 10</a>
7	<p>Inspect for poor connections at the ESC module. Refer to <a href="#">Testing for Intermittent Conditions and Poor Connections</a> and <a href="#">Connector Repairs</a> .</p> <p>Did you find and correct the condition?</p>	Go to <a href="#">Step 12</a>	Go to <a href="#">Step 11</a>
8	<p>Repair the short to ground or the open in the battery positive voltage circuit of the ALC compressor connector. Refer to <a href="#">Circuit Testing</a> and <a href="#">Wiring Repairs</a> .</p> <p>Did you complete the repair?</p>	Go to <a href="#">Step 12</a>	--
9	<p>Repair the short to voltage in the ALC exhaust solenoid control circuit. Refer to <a href="#">Circuit Testing</a> and <a href="#">Wiring Repairs</a> .</p> <p>Did you complete the repair?</p>	Go to <a href="#">Step 12</a>	--
10	<p>Replace the ALC compressor. Refer to <a href="#">Automatic Level Control Air Compressor Air Filter Replacement</a> .</p> <p>Did you complete the replacement?</p>	Go to <a href="#">Step 12</a>	--
11	<p>Replace the ESC module. Refer to <a href="#">Control Module References</a> for replacement, setup, and programming.</p> <p>Did you complete the replacement?</p>	Go to <a href="#">Step 12</a>	--
12	<ol style="list-style-type: none"> <li>1. Use the scan tool in order to clear the DTCs .</li> <li>2. Operate the vehicle within the Conditions for Running the DTC as specified in the supporting text.</li> </ol> <p>Does the DTC reset?</p>	Go to <a href="#">Step 2</a>	System OK