B1C14-DRIVER ACTIVE HEADREST CONTROL CIRCUIT OPEN

Special Tools: Click to display a list of tools used in this procedure
For a complete wiring diagram, refer to the Wiring Information.
Theory of Operation

The Driver Active Headrest signal circuit is driven by a solenoid that also uses a diode in parallel. The single electrical component of the AHR (Active Headrest) unit is the latch-release solenoid. The solenoid is connected by a 2 way pigtail wire and harness connector. The pigtail wire and 2 way connector are routed through the center of one of the headrest support posts and down through the guide sleeve to the interior of the seat back, where it connects to the seat wire harness. The solenoid is grounded at an independent dedicated ground. The AHR components itself cannot be repaired. If damaged or ineffective, the AHR (Active Headrest) must be replaced as a new assembly. If upon inspection the AHR has deployed it can be reset following the proper reset method. (Refer to 10 - Restraints/RESTRAINT, Active Head - Standard Procedure) . Also if the already deployed Driver or Driver AHR are latched in the locked position please see the scan tool miscellaneous functions to set the latch in the unlock or deployed position. Please be very observant and careful, the scan tool should never be used to actually deploy a known good non-deployed Driver or Driver AHR.

- **When Monitored:**

  The Occupant Restraint Controller (ORC) continuously communicates with the Driver Head Restraint over the Driver Head Restraint Solenoid Signal circuits. The Driver Head Restraint communication and on board diagnostics are powered by the ORC signal.

- **Set Condition:**

  This code will set, if the ORC detects an Open circuit on the (R676) Driver Head Restraint Solenoid Signal circuit.

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Possible Causes

| (R676) ACTIVE HEAD RESTRAINT 1ST ROW DRIVER SOLENOID SIGNAL CIRCUIT OPEN |
| (R676) ACTIVE HEAD RESTRAINT 1ST ROW DRIVER SOLENOID SIGNAL CIRCUIT SHORTED TO VOLTAGE |
| (Z914) ACTIVE HEAD RESTRAINT 1ST ROW DRIVER GROUND CIRCUIT OPEN |
| DRIVER HEAD RESTRAINT |
| OCCUPANT RESTRAINT CONTROLLER (ORC) |
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1. **VERIFY ACTIVE DTC**

   **NOTE:** Make sure the battery is fully charged.

   1. Turn the ignition on.
   2. With the scan tool, read the ORC DTCs

   **Does the scan tool display active B1C14-DRIVER ACTIVE HEADREST CONTROL CIRCUIT OPEN DTC?**
Yes

- Go To 2

No

- Perform the AIRBAG SYSTEM INTERMITTENT TEST. (Refer to 28 - DTC-Based Diagnostics/CONTROLLER, Occupant Restraint (ORC) - Standard Procedure).

2. CHECK FOR A SHORTED ACTIVE HEAD REST CIRCUIT IN DRIVER ACTIVE HEAD REST

**WARNING:**

Turn the ignition off disconnect the 12-volt battery and wait two minutes before proceeding. Failure to follow these instructions may result in possible serious or fatal injury.

1. Access the Driver Active Head Rest harness connector located in the driver seatback jumper harness.
2. Disconnect the Driver Active Headrest harness connectors.

**NOTE:** Check the connectors - Clean and repair as necessary.

**NOTE:** Please use the Active Head Rest Load Tool 10253 in testing the present status of the AHR signal circuit.
3. Connect the AHR Load Tool 10253 to the driver AHR seatback jumper harness connector going into the seatback and under the seat.

**WARNING:**

Turn the ignition on, then reconnect the 12-volt battery and wait two minutes before proceeding. Failure to follow these instructions may result in possible serious or fatal injury.

4. With the scan tool, read the active ORC DTCs.

**Does the scan tool display: B1C14-DRIVER ACTIVE HEADREST CONTROL CIRCUIT OPEN?**

Yes

- Go To 3

No

- **WARNING:**
Turn the ignition off disconnect the 12-volt battery and wait two minutes before proceeding. Failure to follow these instructions may result in possible serious or fatal injury.

Replace the Driver Active Head Rest in accordance with the Service Information.

3. CHECK THE (R676) ACTIVE HEAD RESTRAINT 1ST ROW DRIVER SIGNAL CIRCUIT FOR A SHORT TO GROUND

1. Measure the resistance between ground and the (R676) Active Head Restraint 1st Row Driver Signal circuit at the appropriate terminal of the SRS Load Tool Adapter 8443-25 connector.

Is the resistance below 3.0 Ohms?

Yes

• Repair the (R676) Active Head Restraint 1st Row Driver Signal circuit for a short to ground.
• Perform the AIRBAG SYSTEM VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/CONTROLLER, Occupant Restraint (ORC) - Standard Procedure).

No

• Go To 4

4. CHECK THE (R676) DRIVER HEAD RESTRAINT SOLENOID SIGNAL CIRCUIT FOR AN OPEN OR HIGH RESISTANCE

1. Measure the resistance of the (R676) Driver Head Restraint Solenoid Signal circuit between the Driver Head Restraint connector cavity 2 and the appropriate terminal of the SRS Load Tool Adapter 8443-25 .

Is the resistance below 3.0 Ohm?

Yes

• Go To 5

No

• Repair the (R676) Driver Head Restraint Solenoid Signal circuit for an open or high resistance.
• Perform the AIRBAG SYSTEM VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/CONTROLLER, Occupant Restraint (ORC) - Standard Procedure).

5. CHECK THE (Z914) ACTIVE HEAD RESTRAINT 1ST ROW DRIVER GROUND CIRCUIT FOR AN OPEN
1. Measure the resistance between ground and the (Z914) Active Head Restraint 1st Row Driver Ground circuit at the Active Head Restraint 1st Row Driver harness connector.

**Is the resistance below 3.0 Ohms?**

Yes

• Go To 6

No

• Repair the Ground circuit for a open or high resistance.
• Perform the AIRBAG SYSTEM VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/CONTROLLER, Occupant Restraint (ORC) - Standard Procedure).

6. CHECK OPERATION OF THE DRIVER HEAD RESTRAINT

1. Replace the Driver Head Restraint.
2. Reconnect the vehicle body harness to the Driver Head Restraint harness connector.
3. Remove any special tools or jumper wires and reconnect all previously disconnected components - except the Battery.

**WARNING:**
Turn the ignition on, then reconnect the 12-volt battery and wait two minutes before proceeding. Failure to follow these instructions may result in possible serious or fatal injury.

4. Connect the scan tool to the Data Link Connector - use the most current software available.
5. Use the scan tool and erase the ORC stored codes.
6. Turn the Ignition Off and wait 15 seconds before turning the Ignition On.
7. Wait one minute and read active codes and if there are none present read the stored codes.

**Does the scan tool display active B1C14-DRIVER ACTIVE HEADREST CONTROL CIRCUIT OPEN DTC?**

Yes
WARNING: Turn the ignition off, disconnect the 12-volt battery and wait two minutes before proceeding. Failure to follow these instructions may result in possible serious or fatal injury.

WARNING: If the Occupant Restraint Controller (ORC) is dropped at any time, it must be replaced. Failure to follow these instructions may result in possible serious or fatal injury.

- Replace the ORC in accordance with Service Information.
- Perform the AIRBAG SYSTEM VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/CONTROLLER, Occupant Restraint (ORC) - Standard Procedure).

No

- Repair is complete.
- Perform the AIRBAG SYSTEM VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/CONTROLLER, Occupant Restraint (ORC) - Standard Procedure).