

## DTC B0014-B0045

### Diagnostic Instructions

- Perform the [Diagnostic System Check - Vehicle](#) prior to using this diagnostic procedure.
- Review [Strategy Based Diagnosis](#) for an overview of the diagnostic approach.
- [Diagnostic Procedure Instructions](#) provides an overview of each diagnostic category.

### DTC Descriptors

**DTC B0014 01:** Driver Side Deployment Loop Short to Battery

**DTC B0014 02:** Driver Side Deployment Loop Short to Ground

**DTC B0014 08:** Driver Side Deployment Loop Signal Invalid

**DTC B0014 0D:** Driver Side Deployment Loop Resistance Above Threshold

**DTC B0014 0E:** Driver Side Deployment Loop Resistance Below Threshold

**DTC B0015 01:** Driver Pretensioner Deployment Loop Stage 1 Short to Battery

**DTC B0015 02:** Driver Pretensioner Deployment Loop Stage 1 Short to Ground

**DTC B0015 08:** Driver Pretensioner Deployment Loop Stage 1 Signal Invalid

**DTC B0015 0D:** Driver Pretensioner Deployment Loop Stage 1 Resistance Above Threshold

**DTC B0015 0E:** Driver Pretensioner Deployment Loop Stage 1 Resistance Below Threshold

**DTC B0016 01:** Driver Curtain Deployment Loop Initiator Short to Battery

**DTC B0016 02:** Driver Curtain Deployment Loop Initiator Short to Ground

**DTC B0016 08:** Driver Curtain Deployment Loop Initiator Signal Invalid

**DTC B0016 0D:** Driver Curtain Deployment Loop Initiator Resistance Above Threshold

**DTC B0016 0E:** Driver Curtain Deployment Loop Initiator Resistance Below Threshold

**DTC B0019 01:** Passenger Frontal Deployment Loop Stage 1 Short to Battery

**DTC B0019 02:** Passenger Frontal Deployment Loop Stage 1 Short to Ground

**DTC B0019 08:** Passenger Frontal Deployment Loop Stage 1 Signal Invalid

**DTC B0019 0D:** Passenger Frontal Deployment Loop Stage 1 Resistance Above Threshold

**DTC B0019 0E:** Passenger Frontal Deployment Loop Stage 1 Resistance Below Threshold

**DTC B0020 01:** Passenger Frontal Deployment Loop Stage 2 Short to Battery

**DTC B0020 02:** Passenger Frontal Deployment Loop Stage 2 Short to Ground

**DTC B0020 08:** Passenger Frontal Deployment Loop Stage 2 Signal Invalid

**DTC B0020 0D:** Passenger Frontal Deployment Loop Stage 2 Resistance Above Threshold

**DTC B0020 0E:** Passenger Frontal Deployment Loop Stage 2 Resistance Below Threshold

**DTC B0021 01:** Passenger Side Deployment Loop Stage 1 Short to Battery

**DTC B0021 02:** Passenger Side Deployment Loop Stage 1 Short to Ground

**DTC B0021 08:** Passenger Side Deployment Loop Stage 1 Signal Invalid

**DTC B0021 0D:** Passenger Side Deployment Loop Stage 1 Resistance Above Threshold

**DTC B0021 0E:** Passenger Side Deployment Loop Stage 1 Resistance Below Threshold

**DTC B0022 01:** Passenger Pretensioner Deployment Stage 1 Loop Short to Battery

**DTC B0022 02:** Passenger Pretensioner Deployment Stage 1 Loop Short to Ground

**DTC B0022 08:** Passenger Pretensioner Deployment Stage 1 Loop Signal Invalid

**DTC B0022 0D:** Passenger Pretensioner Deployment Stage 1 Loop Resistance Above Threshold

**DTC B0022 0E:** Passenger Pretensioner Deployment Stage 1 Loop Resistance Below Threshold

**DTC B0023 01:** Passenger Curtain Deployment Loop Initiator Short to Battery

**DTC B0023 02:** Passenger Curtain Deployment Loop Initiator Short to Ground

**DTC B0023 08:** Passenger Curtain Deployment Loop Initiator Signal Invalid

**DTC B0023 0D:** Passenger Curtain Deployment Loop Initiator Resistance Above Threshold

**DTC B0023 0E:** Passenger Curtain Deployment Loop Initiator Resistance Below Threshold

## Diagnostic Fault Information

Circuit	Short to Ground	Low Resistance	High Resistance	Open	Short to Voltage
Driver Side Impact Module - High Control	B0014 02	B0014 0E	B0014 0D	B0014 08	B0014 01
Driver Side Impact Module - Low Control	B0014 02	B0014 0E	B0014 0D	B0014 08	B0014 01
Driver Seat Belt Pretensioner - High Control	B0015 02	B0015 0E	B0015 0D	B0015 08	B0015 01
Driver Seat Belt Pretensioner - Low	B0015 02	B0015 0E	B0015 0D	B0015 08	B0015 01

Control					
Driver Roof Rail Module - High Control	B0016 02	B0016 0E	B0016 0D	B0016 08	B0016 01
Driver Roof Rail Module - Low Control	B0016 02	B0016 0E	B0016 0D	B0016 08	B0016 01
IP Module - Stage 1 - High Control	B0019 02	B0019 0E	B0019 0D	B0019 08	B0019 01
IP Module - Stage 1 - Low Control	B0019 02	B0019 0E	B0019 0D	B0019 08	B0019 01
IP Module - Stage 2 - High Control	B0020 02	B0020 0E	B0020 0D	B0020 08	B0020 01
IP Module - Stage 2 - Low Control	B0020 02	B0020 0E	B0020 0D	B0020 08	B0020 01
Passenger Side Impact Module - High Control	B0021 02	B0021 0E	B0021 0D	B0021 08	B0021 01
Passenger Side Impact Module - High Control	B0021 02	B0021 0E	B0021 0D	B0021 08	B0021 01
Passenger Seat Belt Pretensioner - High Control	B0022 02	B0022 0E	B0022 0D	B0022 08	B0022 01
Passenger Seat Belt Pretensioner - Low Control	B0022 02	B0022 0E	B0022 0D	B0022 08	B0022 01
Right Roof Rail Module - High Control	B0023 02	B0023 0E	B0023 0D	B0023 08	B0023 01
Right Roof Rail Module - Low Control	B0023 02	B0023 0E	B0023 0D	B0023 08	B0023 01

## Circuit/System Description

During a side or frontal crash of sufficient force the inflatable restraint sensing and diagnostic module (SDM) will allow current to flow through the deployment loop in order to deploy an inflatable restraint module. There are 2 shorting bars used within the module connector which will short together both high and low circuits, when the connector is disconnected. This will help to prevent unwanted deployment of the inflator module during servicing.

## Conditions for Running the DTC

Ignition voltage is between 9-16 volts.

## Conditions for Setting the DTC

**B0014 01, B0015 01, B0016 01, B0019 01, B0020 01, B0021 01, B0022 01, B0023 01**

The inflatable restraint module high and/or low control circuit is shorted to voltage for 2 seconds.

**B0014 02, B0015 02, B0016 02, B0019 02, B0020 02,  
B0021 02, B0022 02, B0023 02**

The inflatable restraint module high and/or low control circuit is shorted to ground for 2 seconds.

**B0014 08, B0015 08, B0016 08, B0019 08, B0020 08,  
B0021 08, B0022 08, B0023 08**

The inflatable restraint module high and/or low control circuit is open for 2 seconds.

**B0014 0D, B0015 0D, B0016 0D, B0019 0D, B0020 0D,  
B0021 0D, B0022 0D, B0023 0D**

The inflatable restraint module deployment loop resistance is greater than 5.5 ohms for 2 seconds.

**B0014 0E, B0015 0E, B0016 0E, B0019 0E, B0020 0E,  
B0021 0E, B0022 0E, B0023 0E**

The inflatable restraint module deployment loop resistance is less than 1.1 ohms for 2 seconds.

## **Action Taken When the DTC Sets**

- The SDM requests the instrument panel cluster (IPC) to illuminate the AIR BAG indicator.
- The SDM will store a DTC, however if an event occurs the system will still attempt deployments.

## **Conditions for Clearing the DTC**

- The condition for setting the DTC no longer exists.
- A history DTC will clear once 100 malfunction-free ignition cycles have occurred.

## **Reference Information**

### **Schematic Reference**

[SIR Schematics](#)

### **Connector End View Reference**

[Component Connector End Views](#)

### **Description and Operation**

## [SIR System Description and Operation](#)

# Electrical Information Reference

- [Circuit Testing](#)
- [Testing for Intermittent Conditions and Poor Connections](#)
- [Wiring Repairs](#)
- [Connector Repairs](#)

# Scan Tool Reference

[Control Module References](#) for scan tool information

# Special Tools

[J 38715-A](#) Driver and Passenger SIR Load Tool

# Circuit/System Testing

**Important:** Refer to [SIR Service Precautions](#).

When removing connectors inspect for damage or corrosion. Damage or corrosion to the following requires repair or replacement of the affected component/connector:

- Pretensioner
- Inflatable restraint module
- SDM module
- Inflatable restraint module wiring harness connector
- SDM wiring harness connector

**Important:** The connector and connector position assurance (CPA) may seat independent of each other. Both the connector and CPA should seat with an audible and/or tactile click. The CPA isolates the shorting-bars within the connector allowing the deployment circuit to operate properly.

1. Ignition OFF, disconnect the harness connector at the appropriate inflatable restraint module.
2. With the appropriate load tool adaptor, connect [J 38715-A](#) in place of the inflatable restraint module.
3. Ignition ON, with a scan tool, verify the appropriate DTC is set as current.  
If the DTC is not set or is set as history, cycle ignition OFF, disconnect the adapter and [J 38715-A](#), reconnect the harness connector at the inflator restraint module, and cycle the ignition ON. If the DTC resets after reconnecting the module, replace the inflator restraint module.
4. Ignition OFF, disconnect [J 38715-A](#) and the appropriate adaptor.
5. Disconnect the appropriate harness connector at the SDM.
6. Ignition ON, test for less than 1 volt between the appropriate control circuit listed below and ground:

- I/P module Stage 1 terminal 2 X1
- I/P module Stage 2 terminal 2 X2
- Left roof rail module terminal 1
- Right roof rail module terminal 1
- Left side impact module terminal 1 X1
- Right side impact module terminal 1 X1
- Driver seat belt buckle pretensioner terminal 1
- Passenger seat belt buckle pretensioner terminal 1
- Driver seat belt retractor pretensioner terminal 2
- Passenger seat belt retractor pretensioner terminal 2

If greater than the specified range, test the circuit for a short to voltage.

7. Test for less than 1 volt between the appropriate control circuit terminal listed below and ground:

- I/P module Stage 1 terminal 1 X1
- I/P module Stage 2 terminal 1 X2
- Left roof rail module terminal 2
- Right roof rail module terminal 2
- Left side impact module terminal 2
- Right side impact module terminal 2
- Driver seat belt buckle pretensioner terminal 2
- Passenger seat belt buckle pretensioner terminal 2
- Driver seat belt retractor pretensioner terminal 1
- Passenger seat belt retractor pretensioner terminal 1

If greater than the specified range, test the circuit for a short to voltage.

8. Ignition OFF, test for infinite resistance between the appropriate control circuit terminal listed below and ground:

- I/P module Stage 1 terminal 2 X1
- I/P module Stage 2 terminal 2 X2
- Left roof rail module terminal 1
- Right roof rail module terminal 1
- Left side impact module terminal 1 X1
- Right side impact module terminal 1 X1
- Driver seat belt buckle pretensioner terminal 1
- Passenger seat belt buckle pretensioner terminal 1
- Driver seat belt retractor pretensioner terminal 2
- Passenger seat belt retractor pretensioner terminal 2

If less than the specified value, test the circuit for a short to ground.

9. Test for infinite resistance between the appropriate control circuit terminal listed below and ground:

- I/P module Stage 1 terminal 1 X1
- I/P module Stage 2 terminal 1 X2
- Left roof rail module terminal 2

- Right roof rail module terminal 2
- Left side impact module terminal 2
- Right side impact module terminal 2
- Driver seat belt buckle pretensioner terminal 2
- Passenger seat belt buckle pretensioner terminal 2
- Driver seat belt retractor pretensioner terminal 1
- Passenger seat belt retractor pretensioner terminal 1

If less than the specified value, test the circuit for a short to ground.

10. Test for less than 1 ohm between the appropriate control circuit terminals listed below:

- I/P module Stage 1 terminal 2 X1 and SDM terminal 9 X2
- I/P module Stage 2 terminal 2 X2 and SDM terminal 8 X2
- Left roof rail module terminal 1 and SDM terminal 1 X2
- Right roof rail module terminal 1 and SDM terminal 4 X2
- Left side impact module terminal 1 X1 and SDM terminal 6 X1
- Right side impact module terminal 1 X1 and SDM terminal 5 X2
- Driver seat belt buckle pretensioner terminal 1 and SDM terminal 15 X1
- Passenger seat belt buckle pretensioner terminal 1 and SDM terminal 18 X2
- Driver seat belt retractor pretensioner terminal 2 and SDM terminal 11 X2
- Passenger seat belt retractor pretensioner terminal 2 and SDM terminal 14 X2

If greater than the specified range, test the circuit for an open/high resistance.

11. Test for less than 1 ohm between the appropriate control circuit terminals listed below:

- I/P module Stage 1 terminal 1 X1 and SDM terminal 10 X2
- I/P module Stage 2 terminal 1 X2 and SDM terminal 7 X2
- Left roof rail module terminal 2 and SDM terminal 2 X2
- Right roof rail module terminal 2 and SDM terminal 3 X2
- Left side impact module terminal 2 and SDM terminal 25 X2
- Right side impact module terminal 2 and SDM terminal 28 X2
- Driver seat belt buckle pretensioner terminal 2 and SDM terminal 16 X2
- Passenger seat belt buckle pretensioner terminal 2 and SDM terminal 17 X2
- Driver seat belt retractor pretensioner terminal 1 and SDM terminal 12 X2
- Passenger seat belt retractor pretensioner terminal 1 and SDM terminal 13 X2

If greater than the specified range, test the circuit for an open/high resistance.

12. If all circuits test normal, replace the SDM.

## Repair Instructions

Perform the [Diagnostic Repair Verification](#) after completing the diagnostic procedure.

- [Instrument Panel Inflatable Restraint Module Replacement](#)
- [Inflatable Restraint Roof Side Rail Module Replacement](#)
- [Driver or Passenger Seat Side Inflatable Restraint Module Replacement](#)
- [Driver or Passenger Seat Belt Tensioner Replacement](#)

- [SIR/SRS Wiring Repairs](#)
- [Control Module References](#) for SDM replacement, setup, and programming