What's this

THORAX SQUIB 1 CIRCUIT OPEN

For a complete wiring diagram, refer to the Wiring Information.

SEAT/CURTAIN SQUIBS

Theory of Operation

When powered, the Occupant Restraint Controller (ORC) sends a test current to the squibs to verify the integrity of the squib and wiring. These circuits are maintained in a “floating” configuration at the module (connected to neither power nor ground) as protection against inadvertent deployment. Use of the SRS Load Tool Kit 8443A in the tests below substitutes a suspect squib with a known good component. The use of the SRS Load Tool Adapter tool provides a test point as well as a method for opening the shorting bar connections within the harness connector.

- **When Monitored:** The ORC sends out a 40 mA diagnostic current on each squib voltage supply circuit at power up and every 500 ms thereafter while the ignition is in on.
- **Set Condition:** This DTC sets when the ORC detects an open on the squib circuit for more than 2.5 seconds. This DTC transitions from active to stored when the module sees a recovery from an open condition for greater than 2.5 seconds.

### Possible Causes

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Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. ([Refer to 28 - DTC-Based Diagnostics/CONTROLLER, Occupant Restraint (ORC) - Standard Procedure](http://identifix.com/Widgets/FactoryDirect/PrinterFriendlyUrl.aspx?Log...)).

Diagnostic Test
## 1. Determine Active or Stored DTC

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

1. Turn the ignition on.

2. With the scan tool, read all active ORC DTCs.

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

## 2. Check for Open Squib Circuits in Left Seat Airbag (Domestic Only)

**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. Disconnect the Left Seat Airbag connector.

**WARNING:**

Do not place an intact undeployed airbag face down on a hard surface, the airbag will propel into the air if accidentally deployed. Failure to follow these instructions may result in possible serious or fatal injury.

Does the scan tool display: **B1C27-13-LEFT SIDE THORAX SQUIB 1-CIRCUIT OPEN**?

- Yes **Go To 3**
- No
  - Replace the Left Seat Airbag in accordance with the Service Information.
  - Perform the RESTRAINTS SYSTEM VERIFICATION TEST. *(Refer to 28 - DTC-Based Diagnostics/CONTROLLER, Occupant Restraint (ORC) - Standard Procedure).*

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

2. Connect the SRS Load Tool Kit 8443A and the SRS Load Tool Jumper 8443-1 to the Left Seat Airbag connector.

**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.

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

   **WARNING:**

   Turn the ignition off, disconnect the 12-volt battery and wait two minutes before proceeding.

## 3. Check (R7) Left Seat Thorax Squib 1 Line 1 Circuit for an Open (Domestic Only)

**Is the resistance below 1.0 Ohm?**

- Yes **Go To 4**
- No
  - Repair or replace the (R7) Left Seat Thorax Squib 1 Line 1 circuit for an open in accordance with the Service Information. Then, **Go To 4**

## 4. Check (R5) Left Seat Thorax Squib 1 Line 2 Circuit for an Open (Domestic Only)
wait two minutes before proceeding. Failure to follow these instructions may result in possible serious or fatal injury.

**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. Disconnect the SRS Load Tool Kit 8443A and the SRS Load Tool Jumper 8443-1 from the Left Seat Airbag connector.

2. Disconnect the ORC connectors.

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

3. Connect the SRS Load Tool Adapter, Supplemental Restraint System Load Tool 8443-57 to the ORC connectors.

4. Measure the resistance of the (R7) Left Seat Thorax Squib 1 Line 1 circuit between the Left Seat Airbag connector and the appropriate test terminal of the Load Tool ORC Adapter, Supplemental Restraint System Load Tool 8443-57 Adapter.

   - Is the resistance below 1.0 Ohm?
     - Yes
       - Replace the ORC in accordance with the Service Information.
       - Perform the RERAINTS SYSTEM VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/CONTROLLER, Occupant Restraint (ORC) - Standard Procedure).
     - No
       - Repair or replace the (R5) Left Seat Thorax Squib 1 Line 2 circuit for an open in accordance with the Service Information.
       - Perform the RERAINTS SYSTEM VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/CONTROLLER, Occupant Restraint (ORC) - Standard Procedure).

5. CHECK FOR OPEN SQUIB CIRCUITS IN JUMPER WIRE HARNESSSES OR LEFT SEAT AIRBAG (EXPORT ONLY)

   - Does the scan tool display: B1C27-13-LEFT SIDE THORAX SQUIB 1-CIRCUIT OPEN?
     - Yes
       - Go To 6
     - No
       - Go To 8

6. CHECK (R7) LEFT SEAT THORAX SQUIB 1 LINE 1 CIRCUIT FOR AN OPEN (EXPORT ONLY)

   - Is the resistance below 1.0 Ohm?
     - Yes
NOTE: C377 in-line connector shown, C380 in-line connector similar.

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. Disconnect the C377 or C380 in-line harness connector.
   - Go To 7

No

   - Repair or replace the (R7) Left Seat Thorax Squib 1 Line 1 circuit for an open in accordance with the Service Information. Then, Go To 7

7. CHECK (R5) LEFT SEAT THORAX SQUIB 1 LINE 2 CIRCUIT FOR AN OPEN (EXPORT ONLY)

Is the resistance below 1.0 Ohm?

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

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

2. Connect the SRS Load Tool Kit 8443A and the SRS Load Tool Jumper 8443-52 to the C377 or C380 in-line harness connector.

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.

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

NOTE: C377 in-line connector shown, C380 in-line connector similar.

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. Disconnect the SRS Load Tool Kit 8443A and the SRS Load Tool Jumper 8443-52 from the C377 or C380 in-line harness connector.

2. Disconnect the ORC connectors.

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

Does the scan tool display: B1C27-13-LEFT SIDE THORAX SQUIB 1-CIRCUIT OPEN?

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

No

   - Replace the Left Seat Airbag in accordance with the Service Information.
   - Perform the RESTRAINTS SYSTEM VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/CONTROLLER, Occupant Restraint (ORC) - Standard Procedure).
WARNING: If the Occupant Restraint Controller (ORC) is dropped at any time, it must be replaced. Failure to take the proper precautions can result in accidental airbag deployment. Failure to follow these instructions may result in possible serious or fatal injury.

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: 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.

3. Connect the SRS Load Tool Adapter, Supplemental Restraint System Load Tool 8443-57 to the ORC connectors.

4. Measure the resistance of the (R7) Left Seat Thorax Squib 1 Line 1 circuit between the C377 or C380 in-line connector and the appropriate test terminal of the Load Tool ORC Adapter, Supplemental Restraint System Load Tool 8443-57 Adaptor.

NOTE: C377 in-line connector shown, C380 in-line connector similar.

1. Measure the resistance of the (R5) Left Seat Thorax Squib 1 Line 2 circuit between the C377 or C380 in-line connector and the appropriate test terminal of the SRS Load Tool Adapter Adapter, Supplemental Restraint System Load Tool 8443-57.
**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. Disconnect the SRS Load Tool Kit 8443A and the SRS Load Tool Jumper 8443-52 from the C377 or C380 in-line harness connector.

2. Reconnect the C377 or C380 in-line harness connector.

3. Disconnect the Left Seat Airbag connector.

**WARNING:**
Do not place an intact undeployed airbag face down on a hard surface, the airbag will propel into the air if accidentally deployed. Failure to follow these instructions may result in possible serious or fatal injury.

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

4. Connect the SRS Load Tool Kit 8443A and the SRS Load Tool Jumper 8443-1 to the Left Seat Airbag connector.

**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.

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