**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

## 2005 RESTRAINTS

## Supplemental Restraint System - Diagnostics - RAV4

# HOW TO PROCEED WITH TROUBLESHOOTING

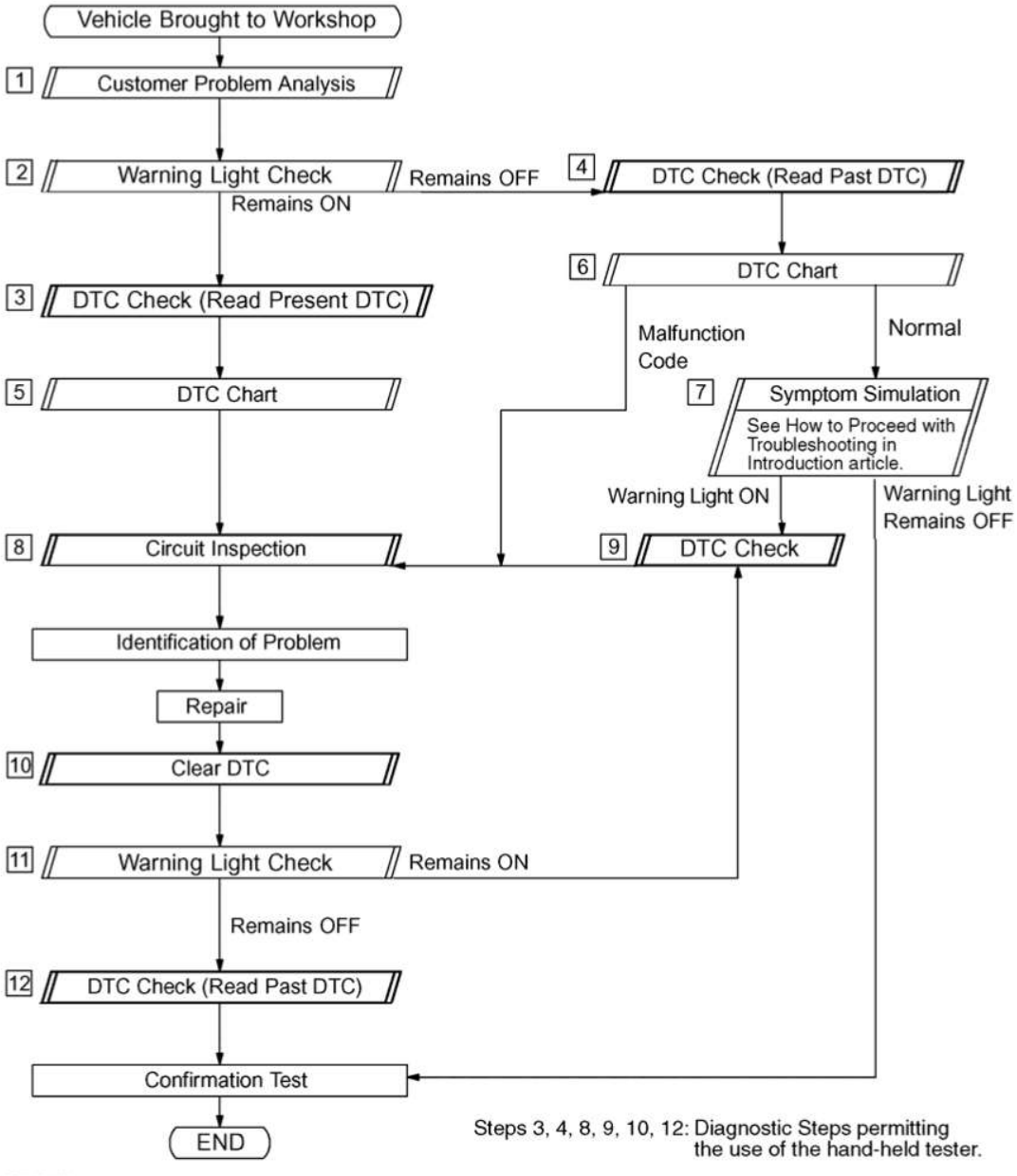



**Fig. 1: Supplemental Restraint System Troubleshooting Flow Chart**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

# CUSTOMER PROBLEM ANALYSIS CHECK

**SUPPLEMENTAL RESTRAINT SYSTEM Check Sheet**

Inspector's Name _____

| | | | |
|---|---|---|---|
| Customer's Name | | VIN | |
| | | Production Date | / / |
| | | License Plate No. | |
| Date Vehicle Brought in | / / | Odometer Reading | km Miles |

| | |
|---|---|
| Date Problem Occurred | / / |
| Weather | ☐ Fine ☐ Cloudy ☐ Rainy ☐ Snowy ☐ Other |
| Temperature | Approx. |

| | |
|---|---|
| Vehicle Operation | ☐ Starting ☐ Idling<br>☐ Driving [ ☐ Constant speed ☐ Acceleration ☐ Deceleration<br>☐ Other ] |
| Road Conditions | |
| Details of Problem | |

| | |
|---|---|
| Vehicle Inspection, Repair History Prior to Occurrence of Malfunction (Including Supplemental Restraint System) | |

Diagnosis System Inspection

| | | |
|---|---|---|
| SRS Warning Light Inspection | 1st Time | ☐ Remains ON ☐ Sometimes Lights Up ☐ Does Not Light Up |
| | 2nd Time | ☐ Remains ON ☐ Sometimes Lights Up ☐ Does Not Light Up |
| DTC Inspection | 1st Time | ☐ Normal Code ☐ Malfunction Code [ Code. ] |
| | 2nd Time | ☐ Normal Code ☐ Malfunction Code [ Code. ] |

G02642508

**Fig. 2: Customer Problem Analysis Check Sheet**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

# PRE-CHECK

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

1. **DIAGNOSIS SYSTEM**
   a. Check the DLC3.

HINT:

The vehicle's ECM uses ISO 9141-2 for communication. The terminal arrangement of the DLC3 complies with SAE J1962 and matches the ISO 9141-2 format.

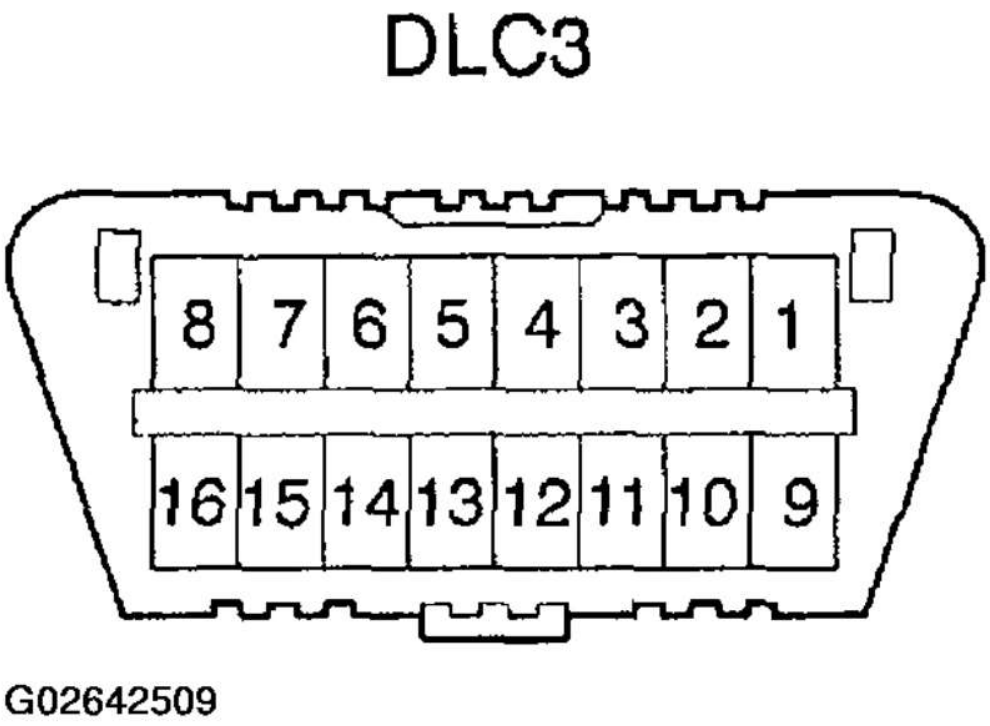



**Fig. 3: Identifying DLC3 Terminals**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**DLC3 TERMINALS VOLTAGE OR RESISTANCE**

| Terminal No. | Connection/Voltage or Resistance | Condition |
|---|---|---|
| 7 | Bus (+) Line/Pulse generation | During Transmission |
| 4 | Chassis ground <--> Body ground/below 1 ohm | Always |
| 16 | Battery positive <--> Body ground/10 to 14 V | Always |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

HINT:

If your display shows UNABLE TO CONNECT TO VEHICLE when you have connected the cable of the OBD II scan tool or hand-held tester to the DLC3, turned the ignition switch ON and operated the scan tool, there is a problem on the vehicle side or tool side.

- If communication is normal when the tool is connected to another vehicle, inspect the DLC3 on the original vehicle.
- If communication is still not possible when the tool is connected to another vehicle, the problem is probably in the tool itself, so consult the Service Department listed in the tool's instruction manual.

2. **SRS WARNING LIGHT CHECK**
   a. Turn the ignition switch to the ON position, and check that the SRS warning light turns on for approximately 6 seconds (primary check).
   b. Check that the SRS warning light turns off approximately 6 seconds after the ignition switch is turned to the ON position (constant check).

HINT:

When any of the following symptoms occur, (see **PROBLEM SYMPTOMS TABLE**).

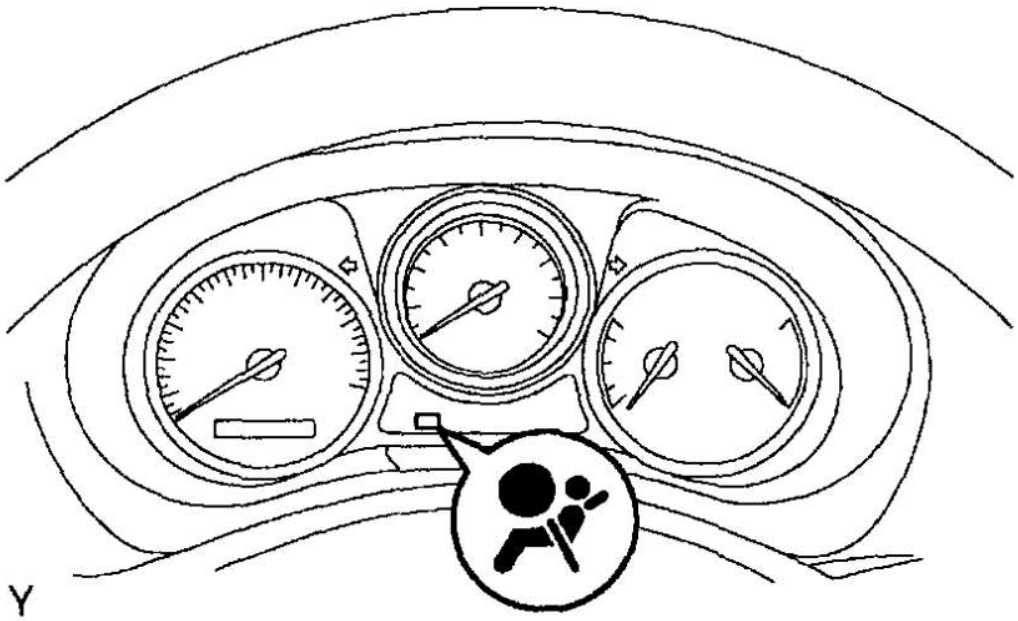



**Fig. 4: Identifying Illumination Of SRS Warning Light**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

- The SRS warning light turns on occasionally, after the primary check period has elapsed.
- The SRS warning light turns on, but DTC is not output.
- The ignition switch is turned from the LOCK to ON position, but the SRS warning light does not turn on.

3. **CHECK DTC** (Using hand-held tester)
   a. Check the DTCs.
      1. Connect the hand-held tester to the DLC3.
      2. Turn the ignition switch to the DLC3.
      3. Read the DTCs by following the prompts on the tester screen.

HINT:

Refer to the hand-held tester operator's manual for further details.

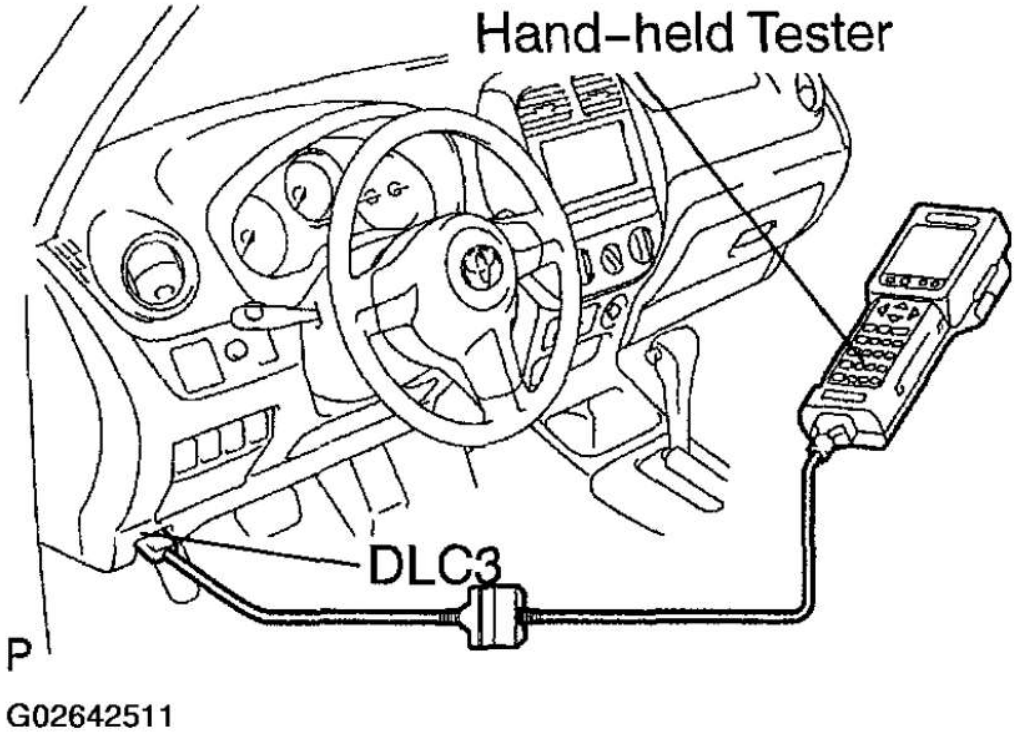



**Fig. 5: Connecting Hand-Held Tester To DLC3**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

4. **CHECK DTC (Using diagnosis check wire)**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

a. Check the DTCs (present trouble code).
   1. Turn the ignition switch to the ON position, and wait for approximately 60 seconds.
   2. Using SST, connect terminals TC and CG of the DLC3.

   SST 09843-18040

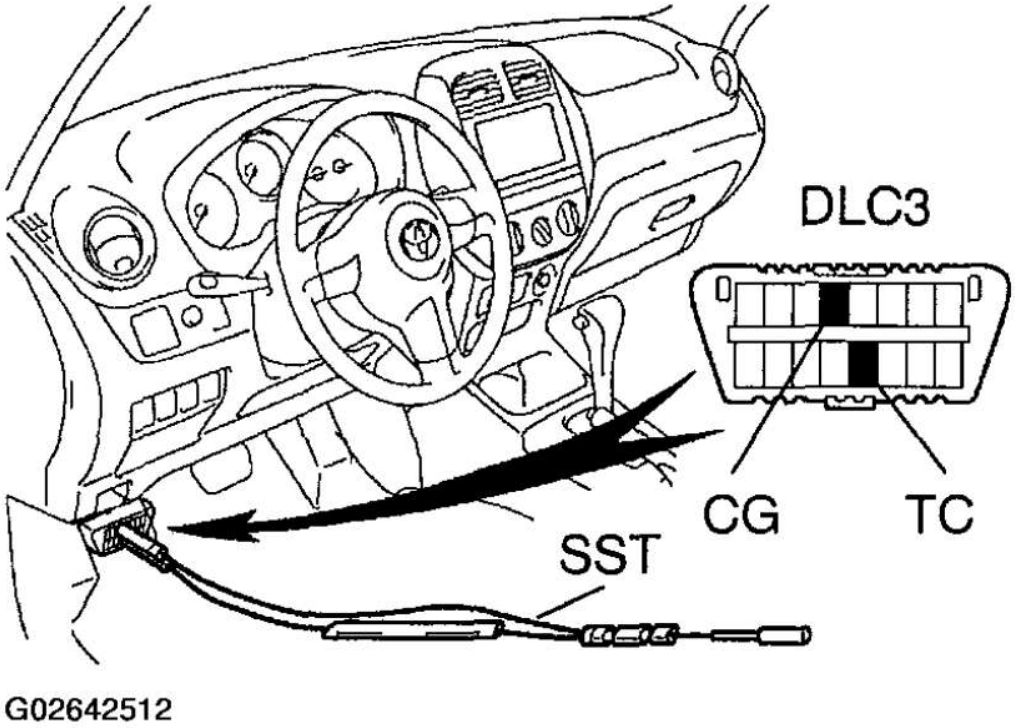



**Fig. 6: Connecting Terminals TC And CG Of DLC3**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NOTE: Connect the terminals to the correct positions to avoid a malfunction.**

b. Check the DTCs (past trouble code).
   1. Using SST, connect terminals TC and CG of the DLC3.

      SST 09843-18040

      **NOTE: Connect the terminals to the correct positions to avoid a malfunction.**

cardiagn.com

2. Turn the ignition switch to the ON position, and wait for approximately 60 seconds.

c. Read the DTCs.

1. Read the blinking patterns of the DTCs. As examples, the blinking patterns for trouble codes 11 and 31 are shown in the illustration on the left.

- Normal system code indication (without past trouble code)

  The light blinks twice per second.

- Normal system code indication (with past trouble code)

  When the past trouble code is stored in the airbag sensor assy center, the light blinks only once per second.

If there are more than 1 code, there will be a 2.5-second pause between each code. After all codes are shown, there will be a 4.0-second pause, and they all will be repeated.

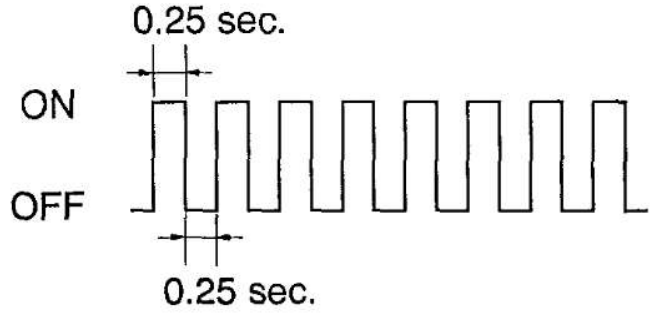
HINT:

- If 2 or more malfunctions are found, the indication begins with the smaller numbered code.
- If DTCs are indicated without connecting the terminals, proceed to the "TC terminal circuit" on **TC TERMINAL CIRCUIT**.

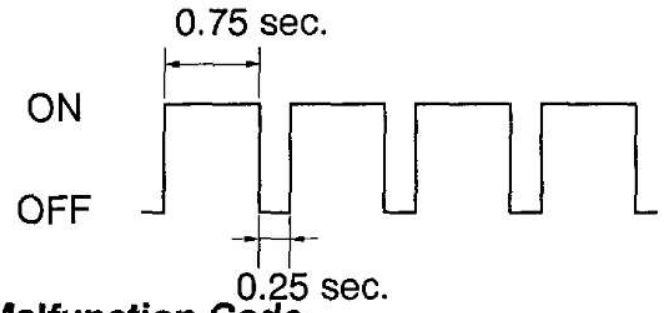
cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

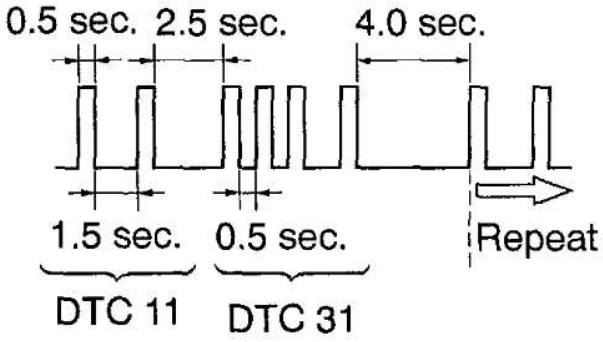
**Normal Code**
**(without Past Trouble Code)**




**Normal Code (with Past Trouble Code)**




**Malfunction Code**
**(Example Code 11 and 13)**




N
G02642513

**Fig. 7: Blinking Patterns For Trouble Codes 11 And 31**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

5. **CHECK DTC**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**Check Mode (Using hand-held tester)**

a. Connect the hand-held tester to the DLC3.
b. Turn the ignition switch ON.
c. Select the "TEST MODE", and proceed checking with the hand-held tester screen.

HINT:

Hand-held tester only:

Compared to the normal mode, the check mode has an increased sensitivity to detect malfunctions. Furthermore, the same diagnostic items as ones detected in the normal mode can also be detected in the check mode.

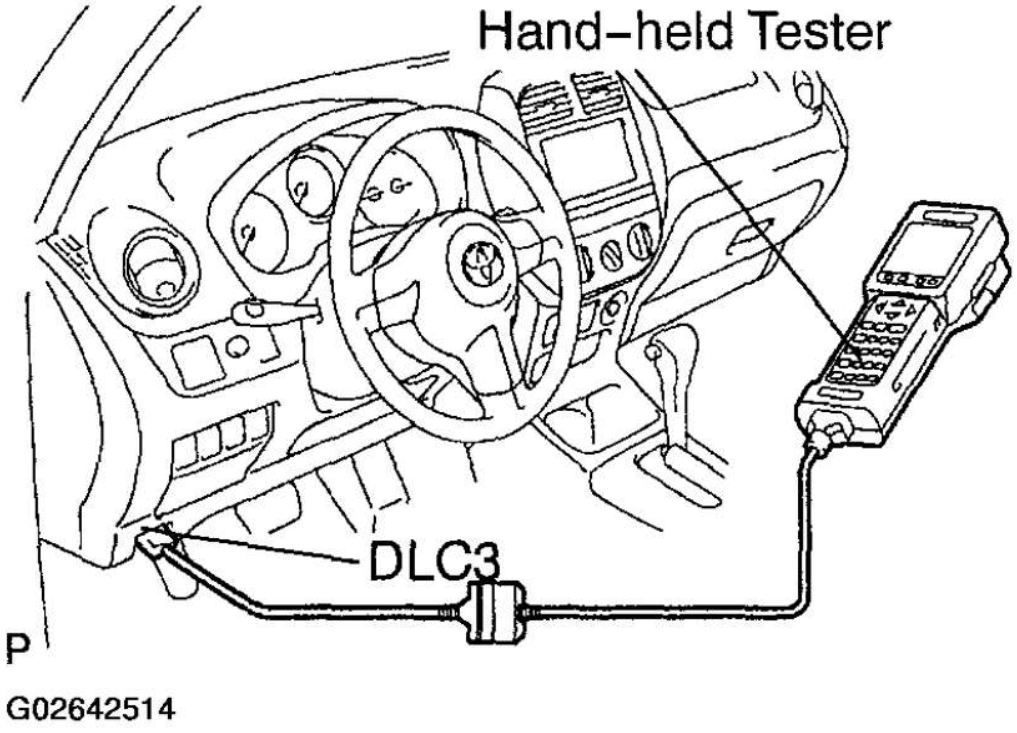



**Fig. 8: Connecting Hand-Held Tester To DLC3**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

6. **CLEAR DTC (Using service wire)**

Clear the DTCs.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

1. When the ignition switch is turned off, the DTCs are cleared.

   HINT:

   Some DTC may not be cleared by turning off the ignition switch. In this case, proceed to the next procedure.

2. Using SST, connect terminals TC and CG of the DLC3, and then turn the ignition switch to the ON position.

   SST 09843-18040

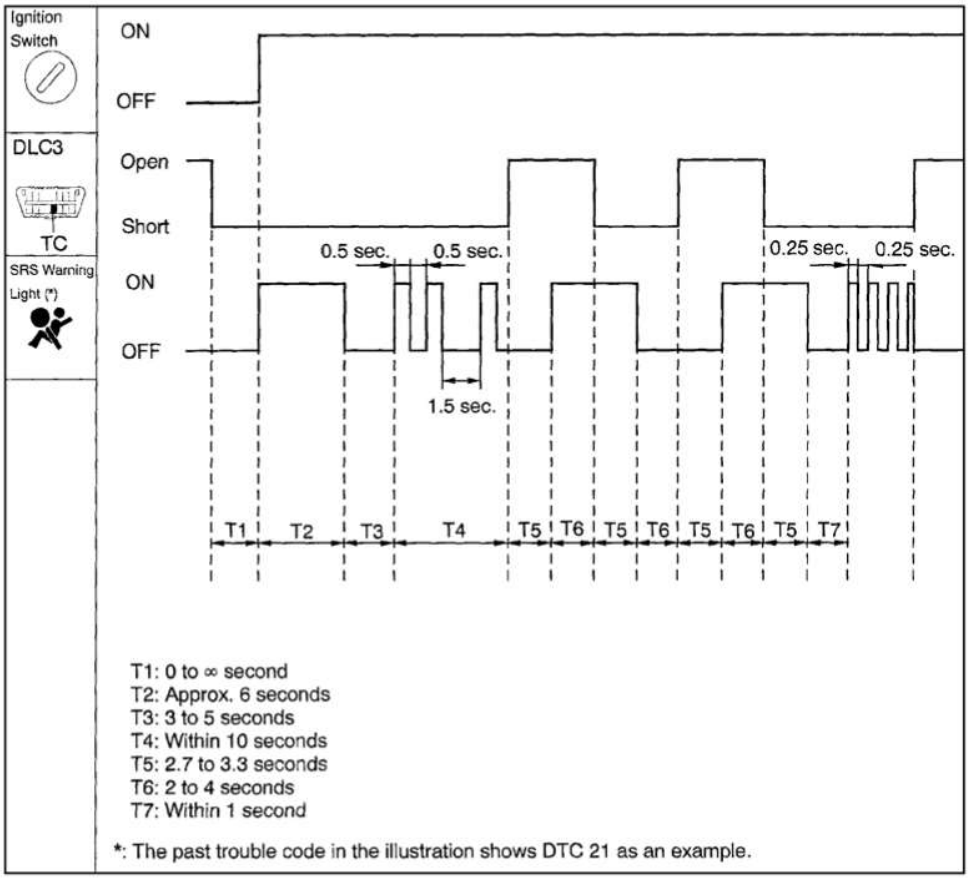
3. Disconnect terminal TC of the DLC3 within 3 to 10 seconds after the DTCs are output, and check if the SRS warning light turns on after 3 seconds.
4. Within 2 to 4 seconds after the SRS warning light turns on, connect terminals TC and CG of the DLC3.
5. The SRS warning light should turn off within 2 to 4 seconds after connecting terminals TC and CG of the DLC3. Then, disconnect terminal TC within 2 to 4 seconds after the SRS warning light turns off.
6. The SRS warning light turns on again within 2 to 4 seconds after disconnecting terminal TC. Then, reconnect terminals TC and CG within 2 to 4 seconds after the SRS warning light turns on.
7. Check if the SRS warning light turns off 2 to 4 seconds after connecting terminals TC and CG of the DLC3. Also check if the normal system code is output within 1 second after the SRS warning light turns off.

If DTCs are not cleared, repeat this procedure until the codes are cleared.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4




N
G02642515

**Fig. 9: Identifying Blinking Pattern Of SRS Warning Light**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

## 7. RELEASE METHOD OF AIRBAG ACTIVATION PREVENTION MECHANISM

An airbag activation prevention mechanism is built into the connector for the squib circuit of the SRS.

As explained in the troubleshooting later, insert a paper with the same thickness as the male terminal between the terminal and the short spring to release it (refer to **Fig. 10** and **Fig. 11**).

**CAUTION: Never release the airbag activation prevention mechanism on the squib connector.**

**NOTE:**

- **Do not release the airbag activation prevention mechanism unless**

cardiagn.com

**specifically directed by the troubleshooting procedure.**

- **To prevent the terminal and the short spring from being damaged, always use a paper with the same thickness as the male terminals.**

cardiagn.com

## 2005 Toyota RAV4

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

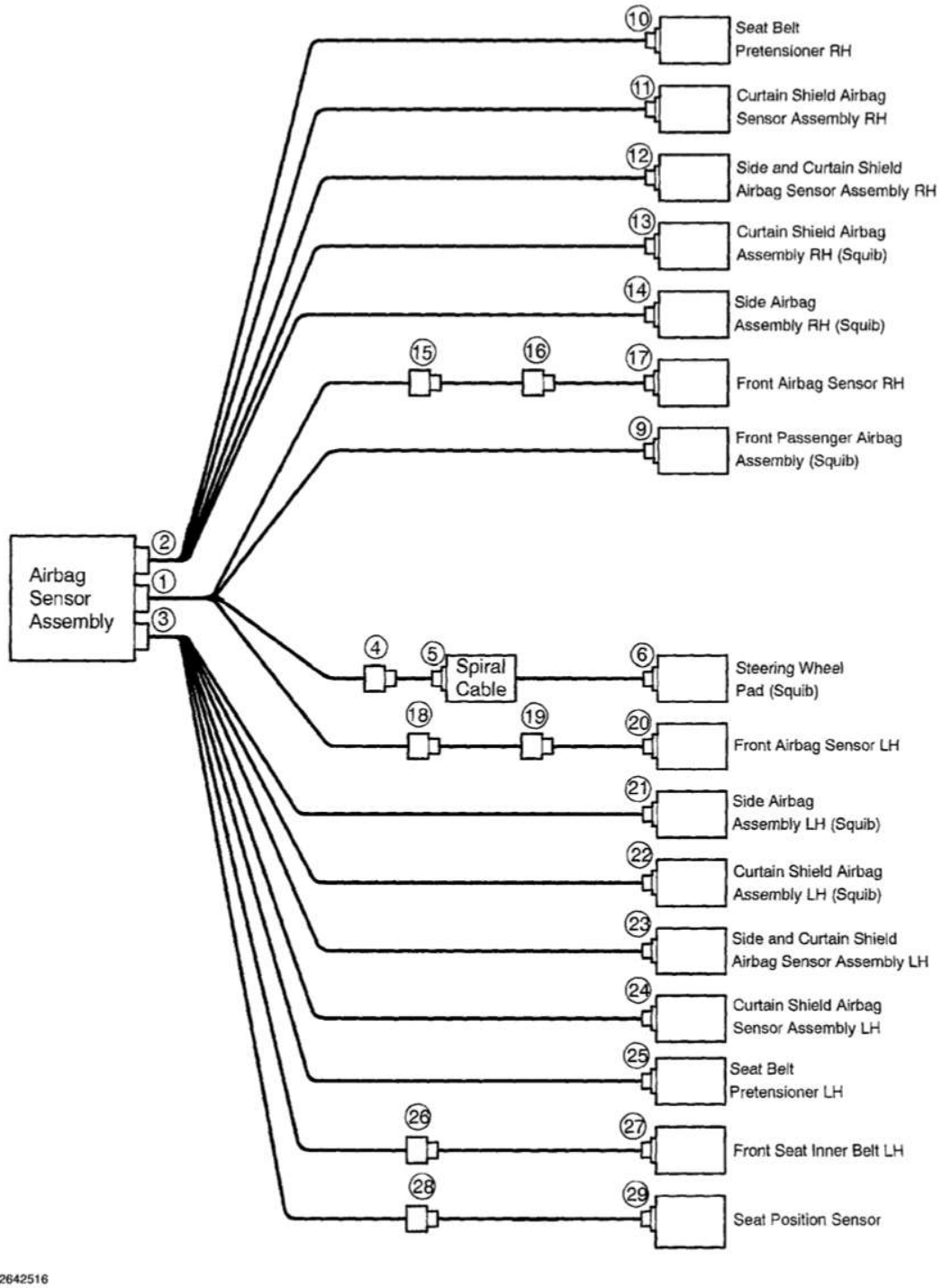



**Fig. 10: Identifying SRS Squib Circuits**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

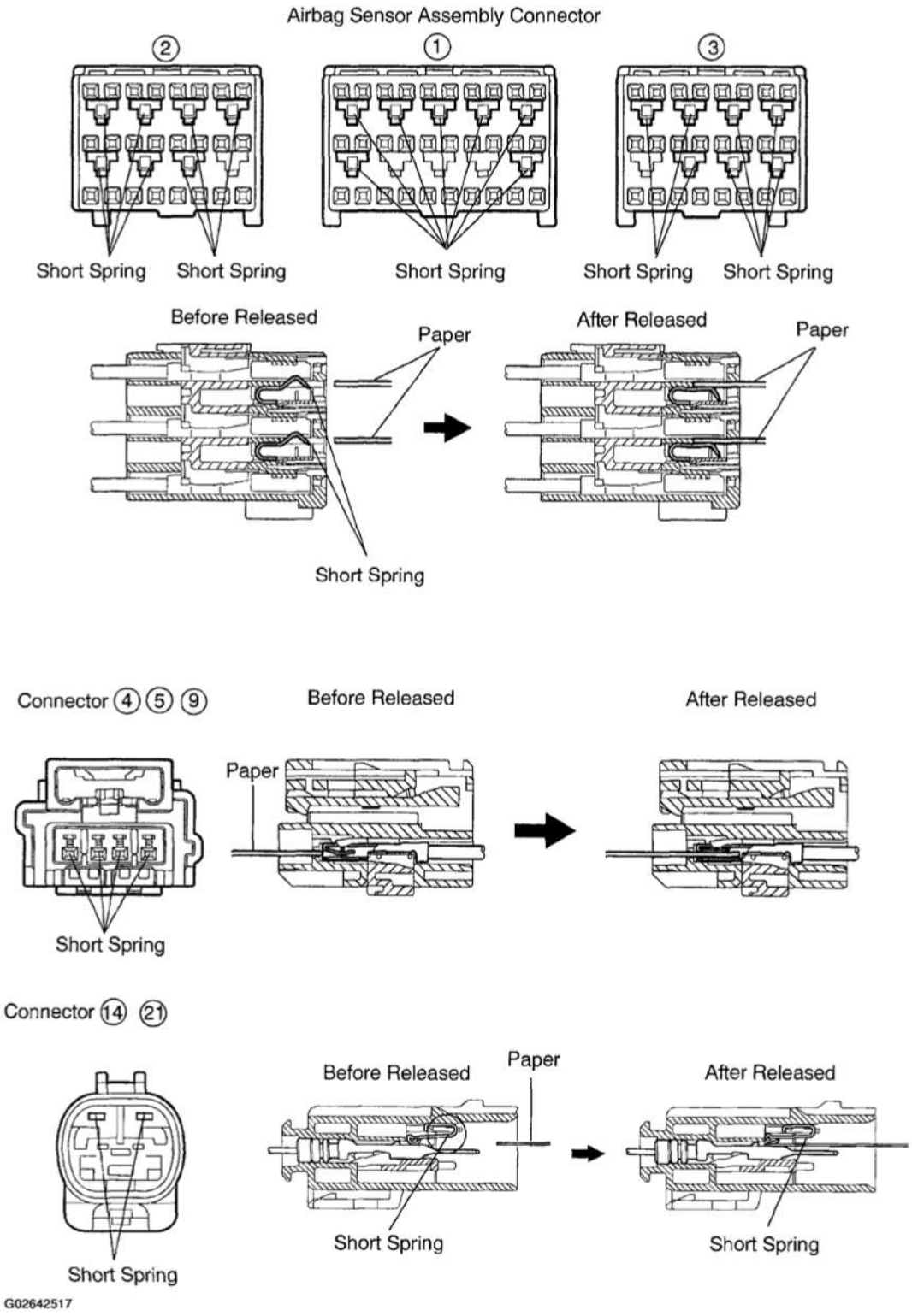



**Fig. 11: Identifying SRS Connectors**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

# DIAGNOSTIC TROUBLE CODE CHART

If a malfunction code is displayed during the DTC check, check the circuit listed for that code in the tables below.

| DTC No. | Detection Item | Trouble Area | Check Mode *1 / *2 | SRS Warning Light |
|---|---|---|---|---|
| B1000/31 | • Airbag Sensor Assembly Malfunction | • Airbag Sensor Assembly | x / x | ON |
| B1610/13 | • Front Airbag Sensor RH Malfunction | • Front Airbag Sensor RH<br>• Airbag Sensor Assembly<br>• Instrument Panel Wire<br>• Engine Room Main Wire | - / x | ON |
| B1615/14 | • Front Airbag Sensor LH Malfunction | • Front Airbag Sensor LH<br>• Airbag Sensor Assembly<br>• Instrument Panel Wire<br>• Engine Room Main Wire | - / x | ON |
| B1620/21 | • Side Airbag Sensor Assembly LH Malfunction | • Side Airbag Sensor Assembly LH<br>• Floor No. 1 Wire<br>• Airbag Sensor Assembly | - / x | ON |
| B1625/22 | • Side Airbag Sensor Assembly RH Malfunction | • Side Airbag Sensor Assembly RH<br>• Floor No. 1 Wire<br>• Airbag Sensor Assembly | - / x | ON |
| B1630/23 | • Curtain Shield Airbag Assembly LH Malfunction | • Curtain Shield Airbag Sensor Assembly LH<br>• Floor No. 1 Wire<br>• Airbag Sensor Assembly | - / x | ON |
| B1635/24 | • Curtain Shield Airbag Assembly RH Malfunction | • Curtain Shield Airbag Assembly RH<br>• Floor No. 1 Wire<br>• Airbag Sensor Assembly | - / x | ON |
| B1653/35 | • Seat Position Sensor Assembly Malfunction | • Seat Position Sensor Assembly<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / - | ON |
| B1655/37 | • Seat Belt Buckle Switch Assembly LH Malfunction | • Front Seat Inner Belt LH Assembly LH (Seat Belt Buckle Switch LH)<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / - | ON |
| B1800/51 | • Short in D Squib Circuit | • Steering Wheel Pad (D squib)<br>• Spiral Cable<br>• Airbag Sensor Assembly | ○ / ○ | ON |
| B1801/51 | • Open in D Squib Circuit | • Steering Wheel Pad (D squib)<br>• Spiral Cable<br>• Airbag Sensor Assembly | ○ / ○ | ON |
| B1802/51 | • Short in D Squib Circuit (to ground) | • Steering Wheel Pad (D squib)<br>• Spiral Cable<br>• Airbag Sensor Assembly | ○ / ○ | ON |
| B1803/51 | • Short in D Squib Circuit (to B+) | • Steering Wheel Pad (D squib)<br>• Spiral Cable<br>• Airbag Sensor Assembly | ○ / ○ | ON |
| B1805/52 | • Short in P Squib Circuit | • Instrument Panel Wire<br>• Front Passenger Airbag Assembly (P squib)<br>• Airbag Sensor Assembly | ○ / ○ | ON |

G02913144

cardiagn.com

## 2005 Toyota RAV4

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**Fig. 12: Diagnostic Trouble Code Chart (1 Of 4)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

| | | | | |
|---|---|---|---|---|
| B1806/52 | • Open in P Squib Circuit | • Instrument Panel Wire<br>• Front Passenger Airbag Assembly (P squib)<br>• Airbag Sensor Assembly | ○ / ○ | ON |
| B1807/52 | • Short in P Squib Circuit (to ground) | • Instrument Panel Wire<br>• Front Passenger Airbag Assembly (P squib)<br>• Airbag Sensor Assembly | ○ / ○ | ON |
| B1808/52 | • Short in P Squib Circuit (to B+) | • Instrument Panel Wire<br>• Front Passenger Airbag Assembly (P squib)<br>• Airbag Sensor Assembly | ○ / ○ | ON |
| B1810/53 | • Short in D Squib (Dual stage - 2nd step) Circuit | • Steering Wheel Pad (D squib, 2nd step)<br>• Spiral Cable<br>• Airbag Sensor Assembly<br>• Instrument Panel Wire | ○ / ○ | ON |
| B1811/53 | • Open in D Squib (Dual stage - 2nd step) Circuit | • Steering Wheel Pad (D squib, 2nd step)<br>• Spiral Cable<br>• Airbag Sensor Assembly<br>• Instrument Panel Wire | ○ / ○ | ON |
| B1812/53 | • Short in D Squib (Dual stage - 2nd step) Circuit (to ground) | • Steering Wheel Pad (D squib, 2nd step)<br>• Spiral Cable<br>• Airbag Sensor Assembly<br>• Instrument Panel Wire | ○ / ○ | ON |
| B1813/53 | • Short in D Squib (Dual stage - 2nd step) Circuit (to B+) | • Steering Wheel Pad (D squib, 2nd step)<br>• Spiral Cable<br>• Airbag Sensor Assembly<br>• Instrument Panel Wire | ○ / ○ | ON |
| B1815/54 | • Short in P Squib (Dual stage - 2nd step) Circuit | • Front Passenger Airbag Assembly (P squib, 2nd step)<br>• Airbag Sensor Assembly<br>• Instrument Panel Wire | ○ / ○ | ON |
| B1816/54 | • Open in P Squib (Dual stage - 2nd step) Circuit | • Front Passenger Airbag Assembly (P squib, 2nd step)<br>• Airbag Sensor Assembly<br>• Instrument Panel Wire | ○ / ○ | ON |
| B1817/54 | • Short in P Squib (Dual stage - 2nd step) Circuit (to ground) | • Front Passenger Airbag Assembly (P squib, 2nd step)<br>• Airbag Sensor Assembly<br>• Instrument Panel Wire | ○ / ○ | ON |
| B1818/54 | • Short in P Squib (Dual stage - 2nd step) Circuit (to B+) | • Front Passenger Airbag Assembly (P squib, 2nd step)<br>• Airbag Sensor Assembly<br>• Instrument Panel Wire | ○ / ○ | ON |
| B1820/55 | • Short in D-Seat Side Squib Circuit | • D-Seat Side Airbag Assembly (D-seat Side, squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / ○ | ON |
| B1821/55 | • Open in D-Seat Side Squib Circuit | • D-Seat Side Airbag Assembly (D-seat Side, squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / ○ | ON |
| B1822/55 | • Short in D-Seat Side Squib Circuit (to ground) | • D-Seat Side Airbag Assembly (D-seat side squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / ○ | ON |

G02913145

cardiagn.com

## 2005 Toyota RAV4

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**Fig. 13: Diagnostic Trouble Code Chart (2 Of 4)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

| | | | | |
|---|---|---|---|---|
| B1823/55 | • Open in D-Seat Side Squib Circuit (to B+) | • D-Seat Side Airbag Assembly (D-seat side squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / O | ON |
| B1825/56 | • Short in P-Seat Side Squib Circuit | • P-Seat Side Airbag Assembly (P-seat side squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / O | ON |
| B1826/56 | • Open in P-Seat Side Squib Circuit | • P-Seat Side Airbag Assembly (P-seat side squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / O | ON |
| B1827/56 | • Short in P-Seat Side Squib Circuit (to ground) | • P-Seat Side Airbag Assembly (P-seat side squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / O | ON |
| B1828/56 | • Short in P-Seat Side Squib Circuit (to B+) | • P-Seat Side Airbag Assembly (P-seat side squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / O | ON |
| B1830/57 | • Short in D-Seat Curtain Shield Squib Circuit | • D-Seat Curtain Shield Airbag Assembly (D-seat curtain shield squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / O | ON |
| B1831/57 | • Open in D-Seat Curtain Shield Squib Circuit | • D-Seat Curtain Shield Airbag Assembly (D-seat curtain shield squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / O | ON |
| B1832/57 | • Short in D-Seat Curtain Shield Squib Circuit (to ground) | • D-Seat Curtain Shield Airbag Assembly (D-seat curtain shield squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 Wire | - / O | ON |
| B1833/57 | • Short in D-Seat Curtain Shield Squib Circuit (to B+) | • D-Seat Curtain Shield Airbag Assembly (D-seat curtain shield squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 wire | - / O | ON |
| B1835/58 | • Short in P-Seat Curtain Shield Squib Circuit | • P-Seat Curtain Shield Airbag Assembly (P-seat curtain shield squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 wire | - / O | ON |
| B1836/58 | • Open in P-Seat Curtain Shield Squib Circuit | • P-Seat Curtain Shield Airbag Assembly (P-seat curtain shield squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 wire | - / O | ON |
| B1837/58 | • Short in P-Seat Curtain Shield Squib Circuit (to ground) | • P-Seat Curtain Shield Airbag Assembly (P-seat curtain shield squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 wire | - / O | ON |
| B1838/58 | • Short in P-Seat Curtain Shield Squib Circuit (to B+) | • P-Seat Curtain Shield Airbag Assembly (P-seat curtain shield squib)<br>• Airbag Sensor Assembly<br>• Floor No. 1 wire | - / O | ON |

G02913146

**Fig. 14: Diagnostic Trouble Code Chart (3 Of 4)**

cardiagn.com

## 2005 Toyota RAV4

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

| | | | | |
|---|---|---|---|---|
| B1900/73 | • Shirt in P/T Squib LH Circuit | • Floor No. 1 wire<br>• Airbag Sensor Assembly<br>• Front Seat Outer Belt Assembly LH (P/T squib LH) | ○ / ○ | ON |
| B1901/73 | • Open in P/T Squib LH Circuit | • Floor No. 1 wire<br>• Airbag Sensor Assembly<br>• Front Seat Outer Belt Assembly LH (P/T squib LH) | ○ / ○ | ON |
| B1902/73 | • Shirt in P/T Squib LH Circuit (to ground) | • Floor No. 1 wire<br>• Airbag Sensor Assembly<br>• Front Seat Outer Belt Assembly LH (P/T squib LH) | ○ / ○ | ON |
| B1903/73 | • Short in P/T Squib LH Circuit (to B+) | • Floor No. 1 wire<br>• Airbag Sensor Assembly<br>• Front Seat Outer Belt Assembly LH (P/T squib LH) | ○ / ○ | ON |
| B1905/74 | • Short in P/T Squib RH Circuit | • Front Seat Outer Belt Assembly RH (P/T squib RH)<br>• Airbag Sensor Assembly<br>• Floor No. 1 wire | ○ / ○ | ON |
| B1906/74 | • Open in P/T Squib RH Circuit | • Front Seat Outer Belt Assembly RH (P/T squib RH)<br>• Airbag Sensor Assembly<br>• Floor No. 1 wire | ○ / ○ | ON |
| B1907/74 | • Short in P/T Squib RH Circuit (to ground) | • Front Seat Outer Belt Assembly RH (P/T squib RH)<br>• Airbag Sensor Assembly<br>• Floor No. 1 wire | ○ / ○ | ON |
| B1908/74 | • Short in P/T Squib RH Circuit (to B+) | • Front Seat Outer Belt Assembly RH (P/T squib RH)<br>• Airbag Sensor Assembly<br>• Floor No. 1 wire | ○ / ○ | ON |
| Normal | • Voltage Source Drop | • Battery<br>• Airbag Sensor Assembly | - / - | ON |
| | • System Normal | | - / - | OFF |

*1: Check mode applicable to vehicles without curtain shield airbag.
*2: Check mode applicable to vehicles with curtain shield airbag.

G02913147

**Fig. 15: Diagnostic Trouble Code Chart (4 Of 4)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

HINT:

- When the SRS warning light remains on and the DTC is the normal code, a voltage source drop is possible.

  This malfunction is not stored in memory of the airbag sensor assembly and if the power source voltage returns to normal, the SRS warning light will automatically turn off.

- When 2 or more codes are indicated, smaller numbered code will be shown first.
- If a code not listed on the chart is displayed, the airbag sensor assembly is at fault.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

- In the case of any malfunction concerning any open circuit, ground short, or B+ short due to any squib, another malfunction code may not be detected. In this case, repair the malfunction currently indicated and then perform malfunction diagnosis again. Another malfunction code may then be detected.

**DIAGNOSTIC TROUBLE CODES (DTC) LIST**

| DTC | Description |
|---|---|
| DTC B1000/31 | Airbag Sensor Assembly Malfunction |
| DTC B1610/13 | Front Airbag Sensor (RH) Malfunction |
| DTC B1615/14 | Front Airbag Sensor (LH) Malfunction |
| DTC B1620/21 | Side Airbag Sensor Assembly LH Malfunction |
| DTC B1625/22 | Side Airbag Sensor Assembly RH Malfunction |
| DTC B1630/23 | Curtain Shield Airbag Sensor Assembly LH Malfunction |
| DTC B1635/24 | Curtain Shield Airbag Sensor Assembly RH Malfunction |
| DTC B1653/35 | Seat Position Sensor Assembly Malfunction |
| DTC B1655/37 | Seat Belt Buckle Switch assembly LH Malfunction |
| DTC B1800/51, B1801/51, B1802/51, B1803/51 | Short/Open in D Squib Circuit (to Ground/to B+) |
| DTC B1805/52, B1806/52, B1807/52, B1808/52 | Short/Open in P Squib Circuit (to Ground/to B+) |
| DTC B1810/53, B1811/53, B1812/53, B1813/53 | Short/Open in D Squib (Dual stage - 2nd step) Circuit (to Ground/to B+) |
| DTC B1815/54, B1816/54, B1817/54, B1818/54 | Short/Open in P Squib (Dual stage - 2nd step) Circuit (to Ground/to B+) |
| DTC B1820/55, B1821/55, B1822/55, B1823/55 | Short/Open in D-seat Side Squib Circuit (to Ground/to B+) |
| DTC B1825/56, B1826/56, B1827/56, B1828/56 | Short/Open in P-seat Side Squib Circuit (to Ground/to B+) |
| DTC B1830/57, B1831/57, B1832/57, B1833/57 | Short/Open in D-seat Curtain Shield Squib Circuit (to Ground/to B+) |
| DTC B1835/58, B1836/58, B1837/58, B1838/58 | Short/Open in P-seat Curtain Shield Squib Circuit (to Ground/to B+) |
| DTC B1900/73, B1901/73, B1902/73, B1903/73 | Short/Open in P/T Squib (LH) Circuit (to Ground/to B+) |
| DTC B1905/74, B1906/74, B1907/74, B1908/74 | Short/Open in P/T Squib (RH) Circuit (to Ground/to B+) |

## PARTS LOCATION

cardiagn.com

## 2005 Toyota RAV4

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

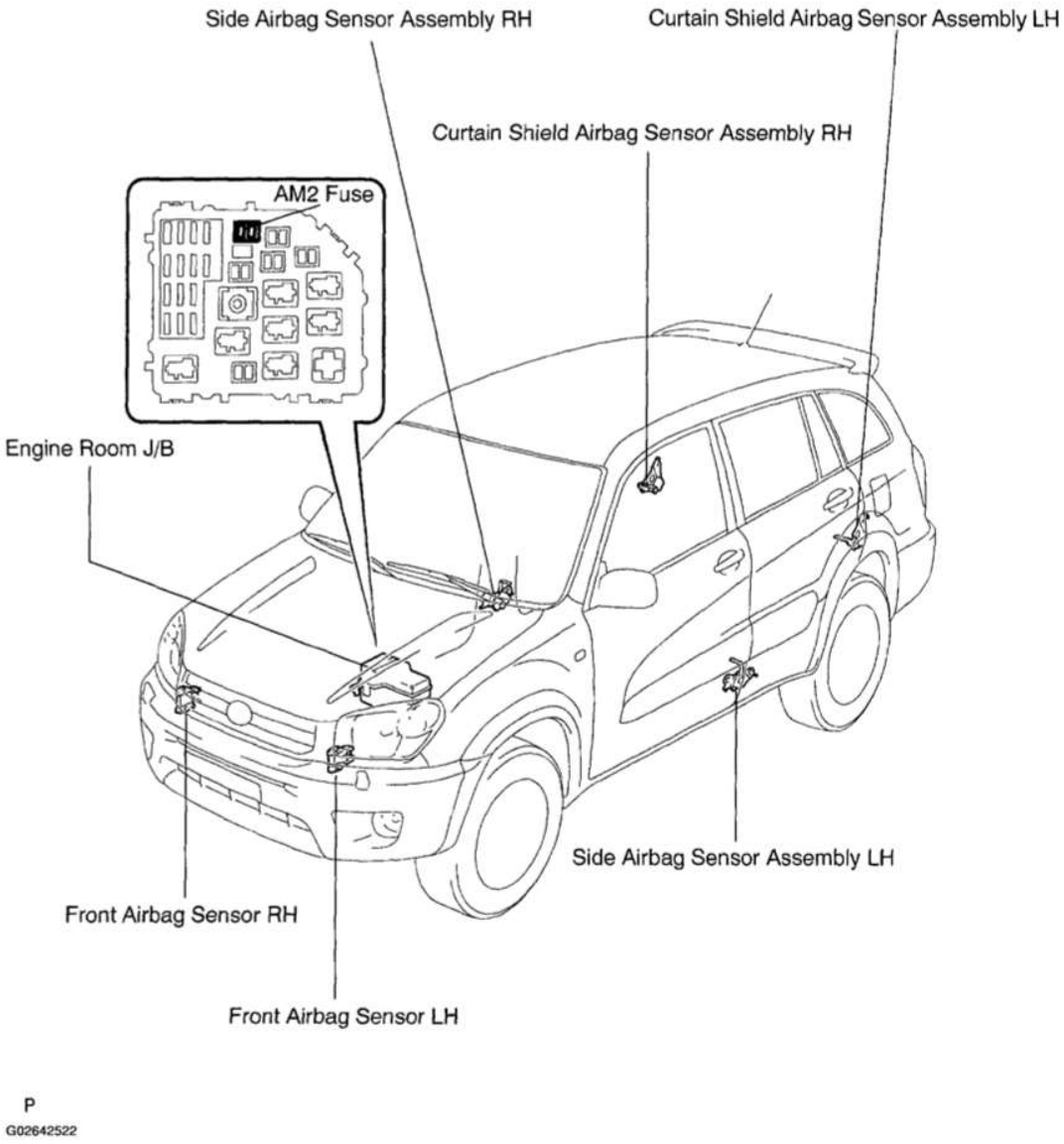



**Fig. 16: Identifying SRS System Parts Location (1 Of 2)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

## 2005 Toyota RAV4

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

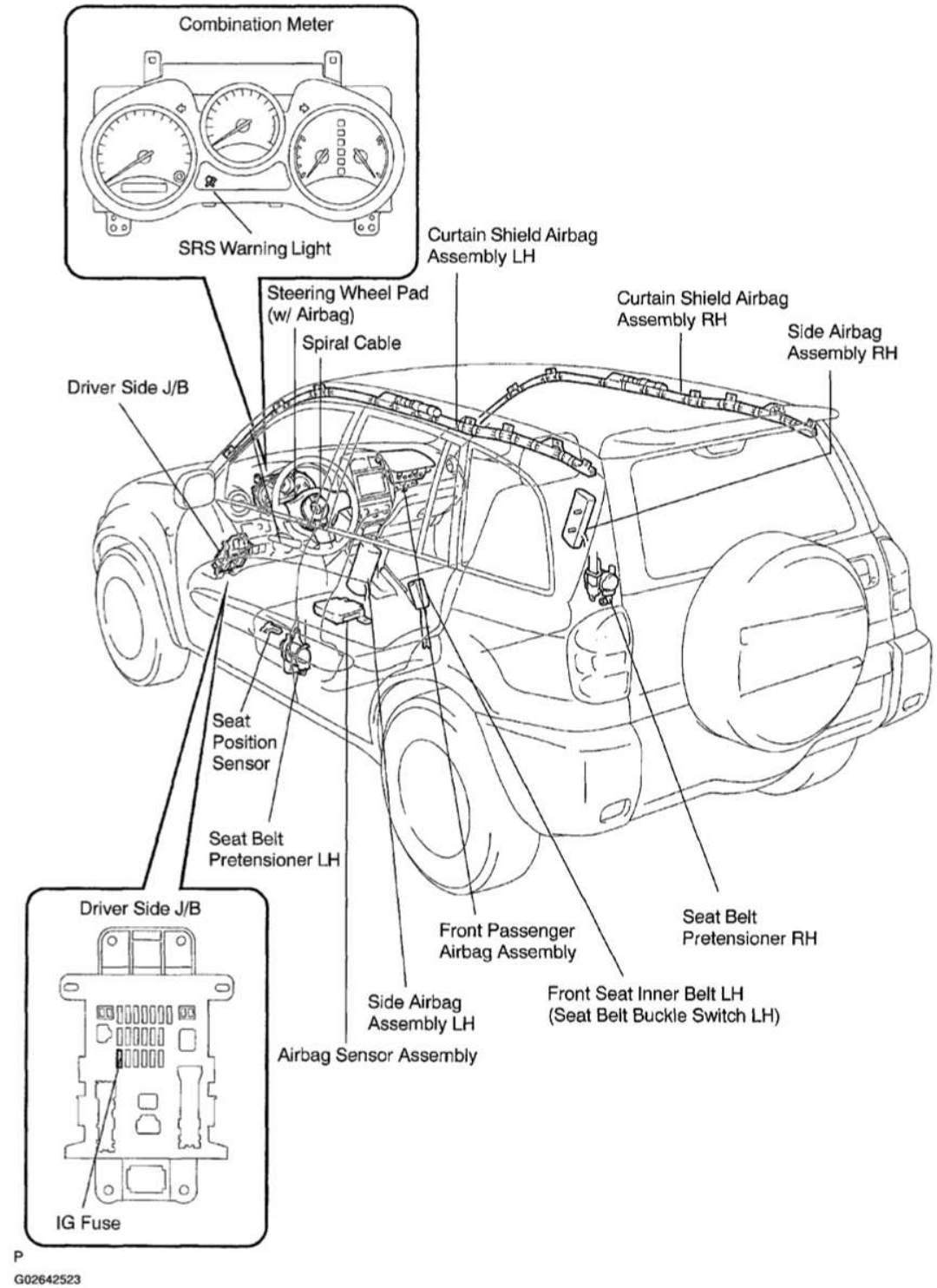


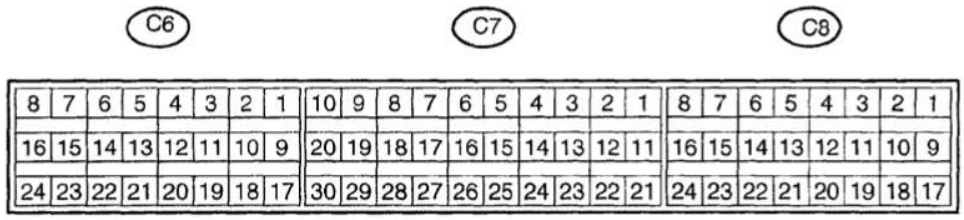

**Fig. 17: Identifying SRS System Parts Location (2 Of 2)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

# TERMINALS OF ECU




P
G02642524

**Fig. 18: Identifying ECU Terminals**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**ECU TERMINALS SYMBOLS AND NAME**

| No. | Symbols | Terminal Name |
|---|---|---|
| C6-1 | SFD+ | Squib (Side, LH) |
| C6-2 | SFD- | Squib (Side, LH) |
| C6-3 | ICD- | Squib (Curtain Shield, LH) |
| C6-4 | ICD+ | Squib (Curtain Shield, LH) |
| C6-5 | PD+ | Squib (Seat Belt Pretensioner, LH) |
| C6-6 | PD- | Squib (Seat Belt Pretensioner, LH) |
| C6-9 | DSP+ | Seat Position Sensor Assembly |
| C6-10 | DBE+ | Seat Belt Buckle Switch LH |
| C6-17 | DSP- | Seat Position Sensor Assembly |
| C6-18 | DBE- | Seat Belt Buckle Switch LH |
| C6-19 | VUPD | Side and Curtain Shield Airbag Sensor Assembly LH |
| C6-20 | VUCD | Curtain Shield Airbag Sensor Assembly LH |
| C6-21 | ESD | Side and Curtain Shield Airbag Sensor Assembly LH |
| C6-22 | ESCD | Curtain Shield Airbag Sensor Assembly LH |
| C7-1 | P2+ | Squib (Passenger, 2nd step) |
| C7-2 | P2- | Squib (Passenger, 2nd step) |
| C7-3 | P- | Squib (Passenger) |
| C7-4 | P+ | Squib (Passenger) |
| C7-5 | D+ | Squib (Driver) |
| C7-6 | D- | Squib (Driver) |
| C7-7 | D2- | Squib (Driver, 2nd step) |
| C7-8 | D2+ | Squib (Driver, 2nd step) |
| C7-14 | LA | SRS Warning Light |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

| | | |
|---|---|---|
| C7-15 | TC | Diagnosis |
| C7-16 | SIL | Diagnosis |
| C7-21 | IG2 | Power Source |
| C7-22 | GSW2 | Diagnosis |
| C7-25 | E1 | Ground |
| C7-26 | E2 | Ground |
| C7-27 | -SR | Front Airbag Sensor RH |
| C7-29 | +SR | Front Airbag Sensor RH |
| C7-30 | +SL | Front Airbag Sensor LH |
| C7-28 | -SL | Front Airbag Sensor LH |
| C8-3 | PP- | Squib (Seat Belt Pretensioner, RH) |
| C8-4 | PP+ | Squib (Seat Belt Pretensioner, RH) |
| C8-5 | ICP+ | Squib (Curtain Shield, RH) |
| C8-6 | ICP- | Squib (Curtain Shield, RH) |
| C8-7 | SFP- | Squib (Side, RH) |
| C8-8 | SFP+ | Squib (Side, RH) |
| C8-15 | PBE+ | Buckle switch RH |
| C8-19 | ESCP | Curtain Shield Airbag Sensor Assembly RH |
| C8-20 | ESP | Side and Curtain Shield Airbag Sensor Assembly RH |
| C8-21 | VUCP | Curtain Shield Airbag Sensor Assembly RH |
| C8-22 | VUPP | Side and Curtain Shield Airbag Sensor Assembly RH |

## PROBLEM SYMPTOMS TABLE

Proceed with troubleshooting of each circuit in the table below.

**PROBLEM SYMPTOMS**

| Symptom | Suspected Area | Refer To |
|---|---|---|
| When the ignition switch is in the ON position, the SRS warning light sometimes turns on after approximately 6 seconds. | SRS warning light circuit malfunction (Always turns on when DTC is not output) | **SRS WARNING LIGHT CIRCUIT MALFUNCTION (DOES NOT LIGHT UP, WHEN IGNITION SWITCH IS TURNED TO ON)** |
| SRS warning light always turns on even when DTC is not output. | SRS warning light circuit malfunction (Always turns on when DTC is not output) | |
| With the ignition switch in the ON position, the SRS warning light does not turn on. | SRS warning light circuit malfunction (Does not turn on when ignition switch is turned to the ON position). | **TC TERMINAL CIRCUIT** |
| Although SRS warning light operates normally, DTC or normal system code is not displayed. | TC Terminal circuit | **SRS WARNING LIGHT CIRCUIT MALFUNCTION (DOES NOT LIGHT UP, WHEN IGNITION SWITCH IS TURNED TO ON)** |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

| | | |
| --- | --- | --- |
| Although terminals TC and CG are not connected, DTC or normal system code is displayed. | TC Terminal circuit | **TC TERMINAL CIRCUIT** |

# CIRCUIT INSPECTION

## DTC B1000/31: AIRBAG SENSOR ASSEMBLY MALFUNCTION

### CIRCUIT DESCRIPTION

The airbag sensor assembly consists of an airbag sensor, safing sensor, drive circuit, diagnosis circuit and ignition control, etc. It receives signals from the airbag sensor, judges whether or not the SRS should be activated, and detects diagnosis system malfunction.

### DTC DETECTION CONDITION AND TROUBLE AREA

| DTC No. | DTC Detection Condition | Trouble Area |
| --- | --- | --- |
| B1000/31 | Airbag sensor assembly malfunction | Airbag sensor assembly |

HINT:

When a DTC other than DTC B1000/31 is displayed at the same time, first repair the malfunction indicated by the DTC other than DTC B1000/31.

### INSPECTION PROCEDURE

1. **Check airbag sensor assembly.**

   **PREPARATION:**

   a. Turn the ignition switch to the LOCK position.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

   **CHECK:**

   a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

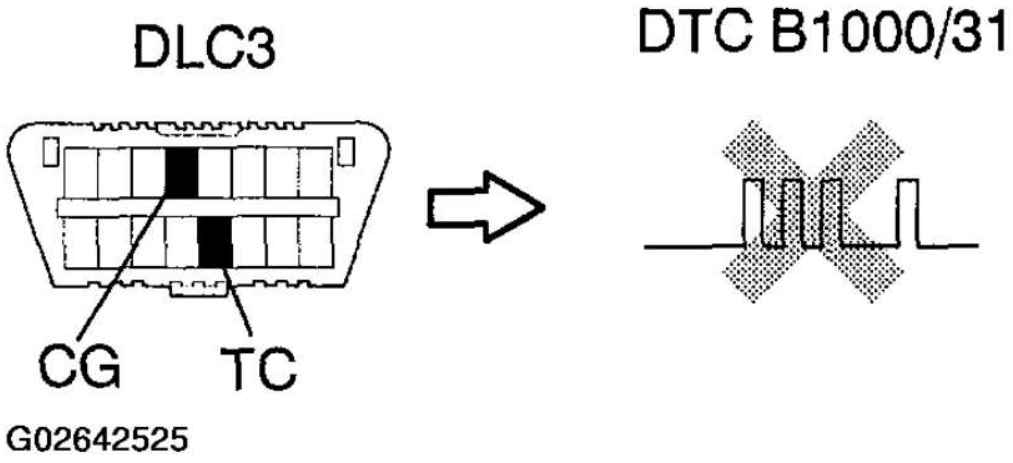



**Fig. 19: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTC (see **PRE-CHECK**).

**OK:**

**DTC B1000/31 is not output.**

**NG: Replace airbag sensor assembly.**

**OK: Using simulation method, reproduce malfunction symptoms (see HOW TO PROCEED WITH TROUBLESHOOTING ).**

## DTC B1610/13: FRONT AIRBAG SENSOR (RH) MALFUNCTION

### CIRCUIT DESCRIPTION

The front airbag sensor (RH) circuit consists of the diagnosis circuit and frontal deceleration sensor, etc. It receives signals from the frontal deceleration sensor, judges whether or not the SRS should be activated, and detects diagnosis system malfunction.

cardiagn.com

**2005 Toyota RAV4**

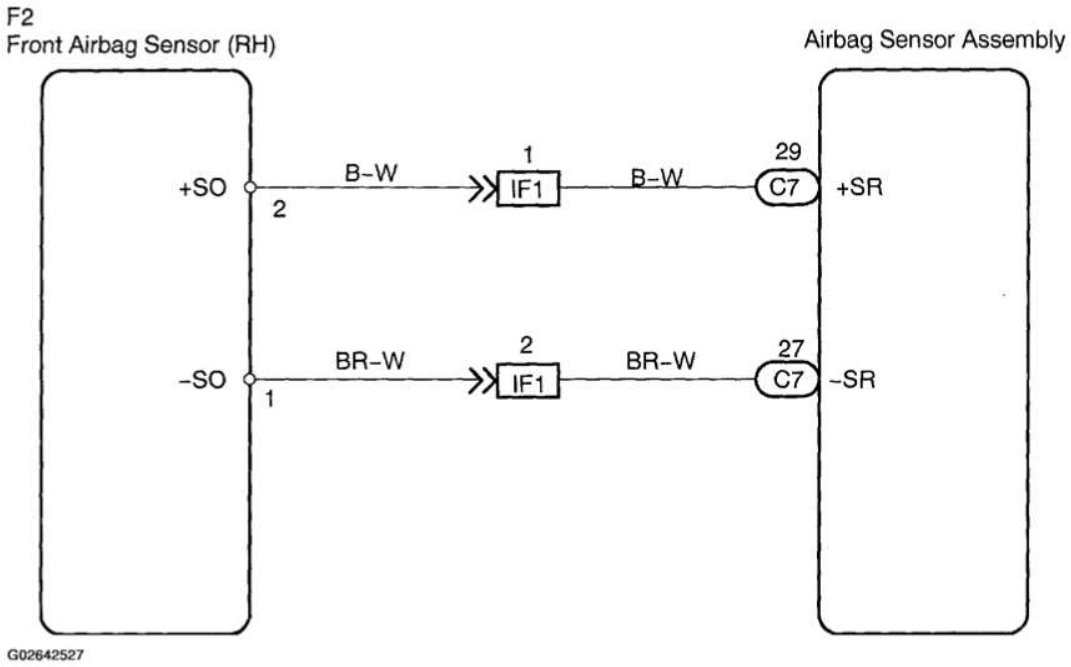
2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1610/13 | • When airbag sensor assembly receives line short signal, open signal, short to ground signal or B+ short signal in front airbag sensor circuit for 2 seconds.<br>• Front airbag sensor (RH) malfunction.<br>• Airbag sensor assembly malfunction. | • Front airbag sensor (RH)<br>• Airbag sensor assembly<br>• Instrument panel wire<br>• Engine room main wire |

G02642526

**Fig. 20: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**WIRING DIAGRAM**




G02642527

**Fig. 21: Wiring Diagram - Front Airbag Sensor (RH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.

cardiagn.com

e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check DTC.**

**PREPARATION:**

a. Connect the connectors to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

HINT:

Codes other than DTC B1610/13 may be output at this time, but they are not related to this check.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

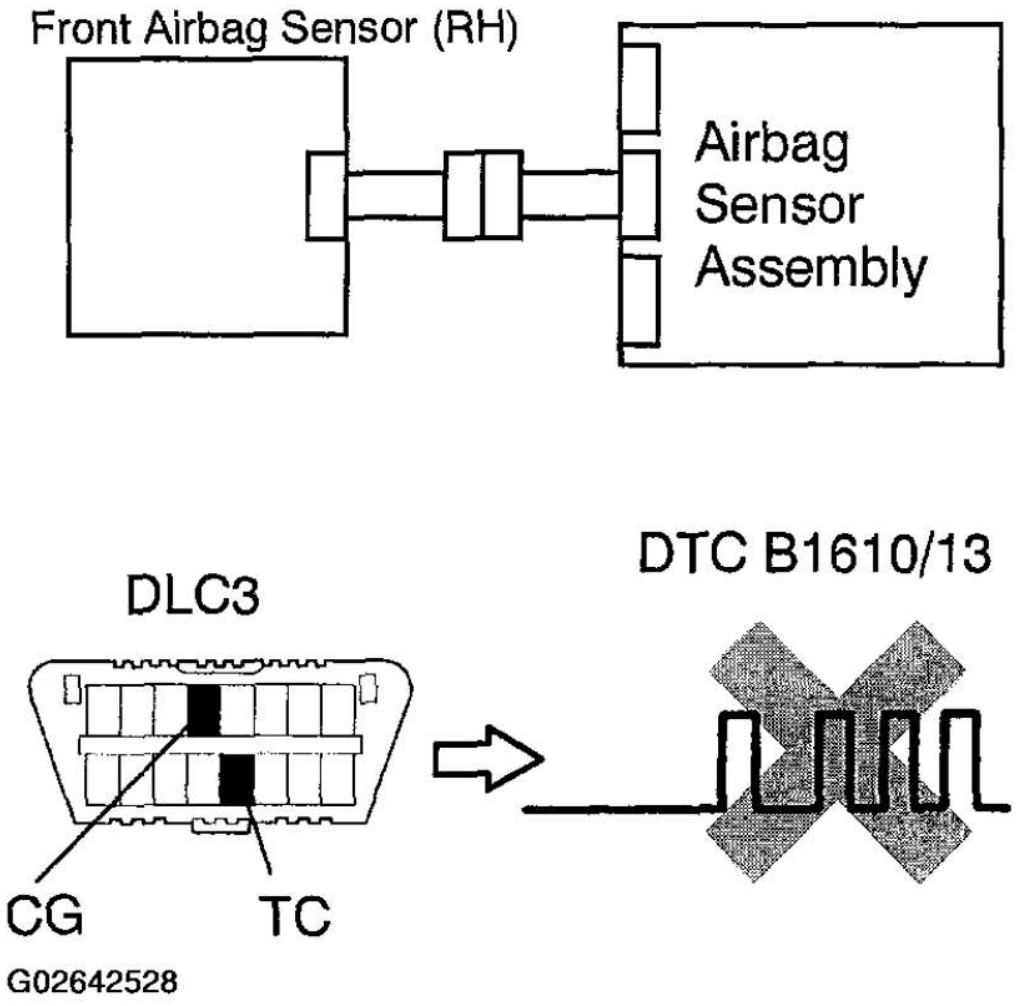



**Fig. 22: Checking For DTC B1610/13**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC B1610/13 is not output.**

**OK: Go to next step.**

**NG: Malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

2. **Check connection of connectors.**

**PREPARATION:**

cardiagn.com

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Check that the connectors are properly connected to the airbag sensor assembly and the airbag front RH sensor.

**OK:**

**The connectors are connected.**

**NG: Connect connectors, then go to step 1.**
**OK: Go To Next Step.**

3. **Check front airbag sensor (RH) circuit (open).**

**PREPARATION:**

a. Disconnect the connectors from the airbag sensor assembly and the front airbag sensor (RH).
b. Using a service wire, connect terminals F2-2 and F2-1 of connector "E".

**NOTE: Do not forcibly insert a service wire into the terminals of the connector when connecting.**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FRONT AIRBAG SENSOR (RH) CIRCUIT (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C7-29 (+SR) C7-27 (-SR) | Always | Below 1ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

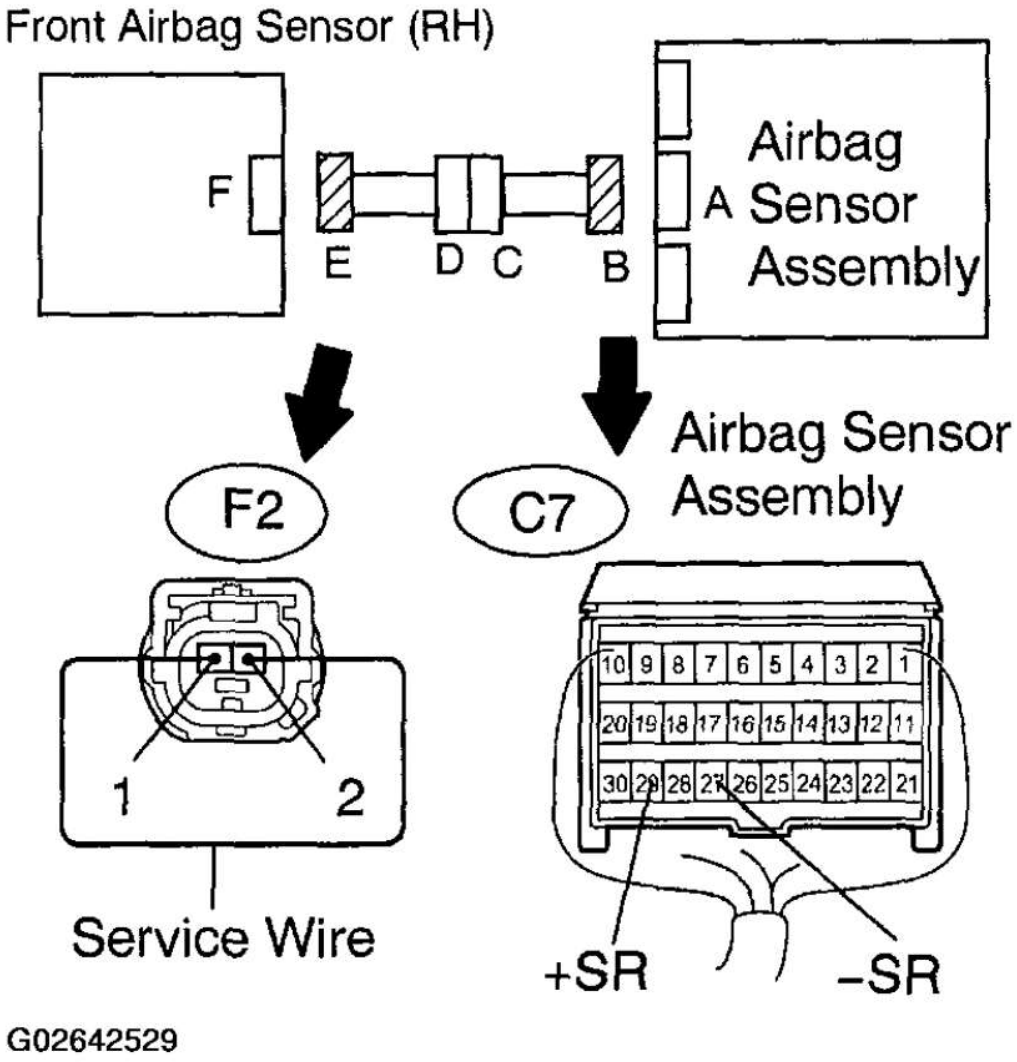



**Fig. 23: Checking Front Airbag Sensor (RH) Circuit (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 8.**

**OK: Go To Next Step.**

4. **Check front airbag sensor (RH) circuit (short).**

**PREPARATION:**

Disconnect the service wire from connector "B".

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

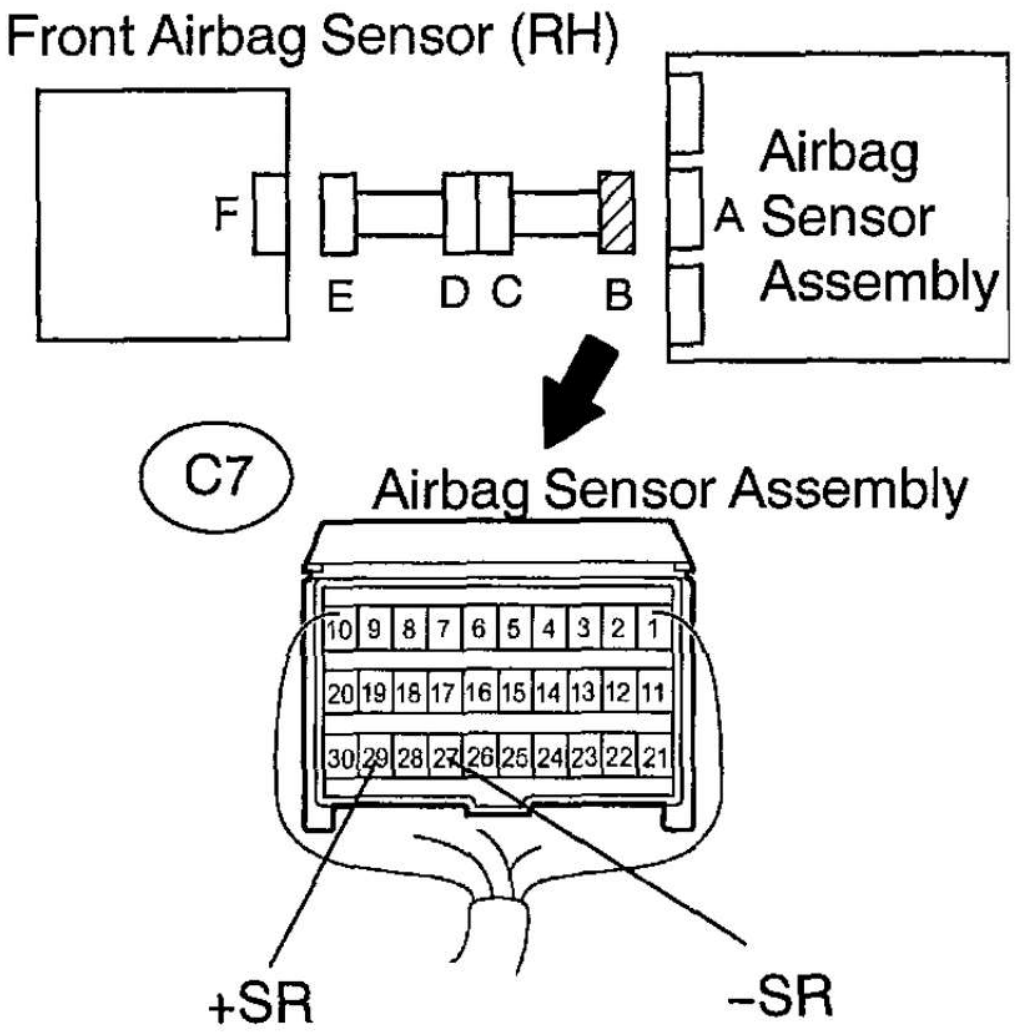
**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FRONT AIRBAG SENSOR (RH) CIRCUIT (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C7-29 (+SR) - C7-27 (-SR) | Always | 1 Mohm or higher |




G02642530

cardiagn.com

**Fig. 24: Checking Front Airbag Sensor (RH) Circuit (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 9.**

**OK: Go To Next Step.**

5. **Check front airbag sensor (RH) circuit (to B+).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FRONT AIRBAG SENSOR (RH) CIRCUIT (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C7-29 (+SR) - Body ground | Ignition switch ON | Below 1 V |
| C7-27 (-SR) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

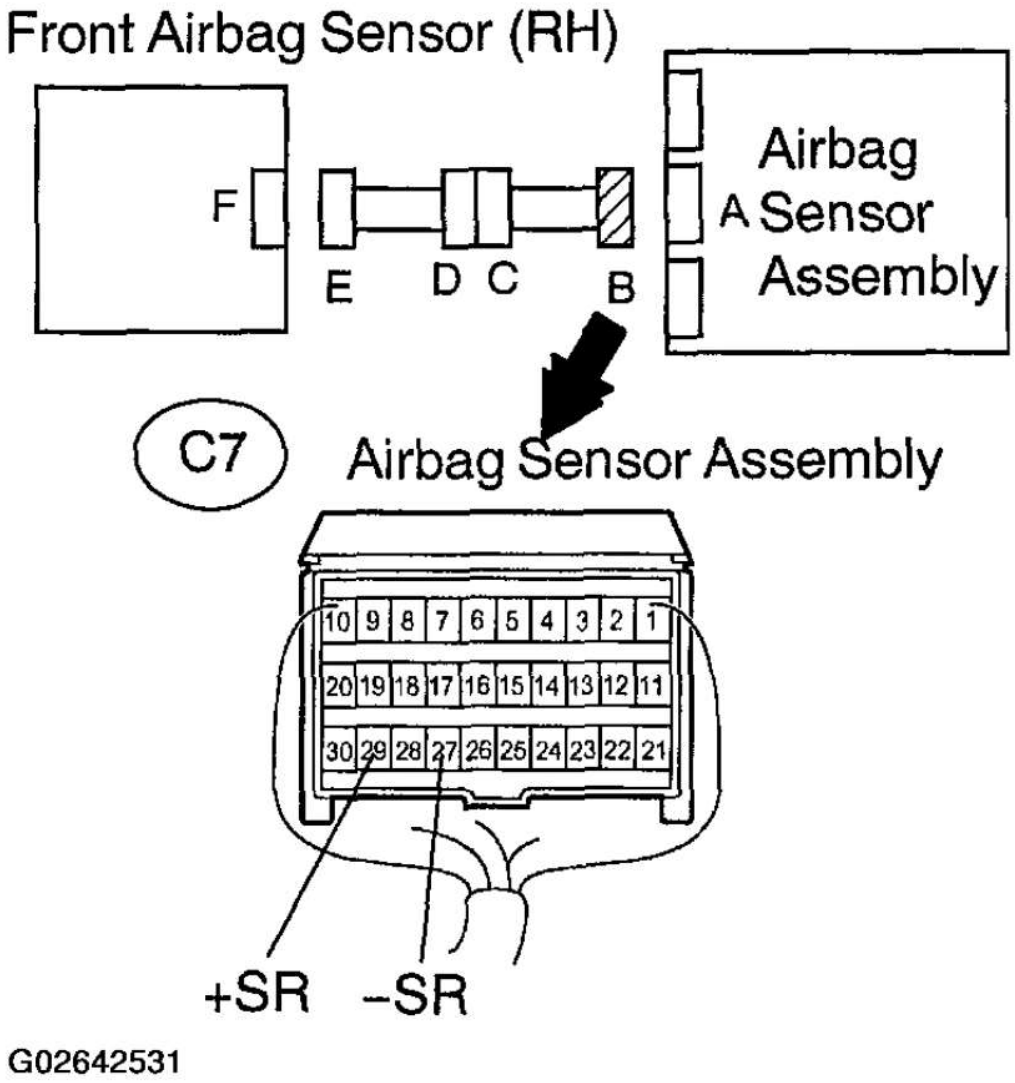



**Fig. 25: Checking Front Airbag Sensor (RH) Circuit (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 10.**

**OK: Go To Next Step.**

6. **Check front airbag sensor (RH) circuit (to ground)**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.

cardiagn.com

b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FRONT AIRBAG SENSOR (RH) CIRCUIT (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C7-29 (+SR) - Body ground | Always | 1 Mohm or higher |
| C7-27 (-SR) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

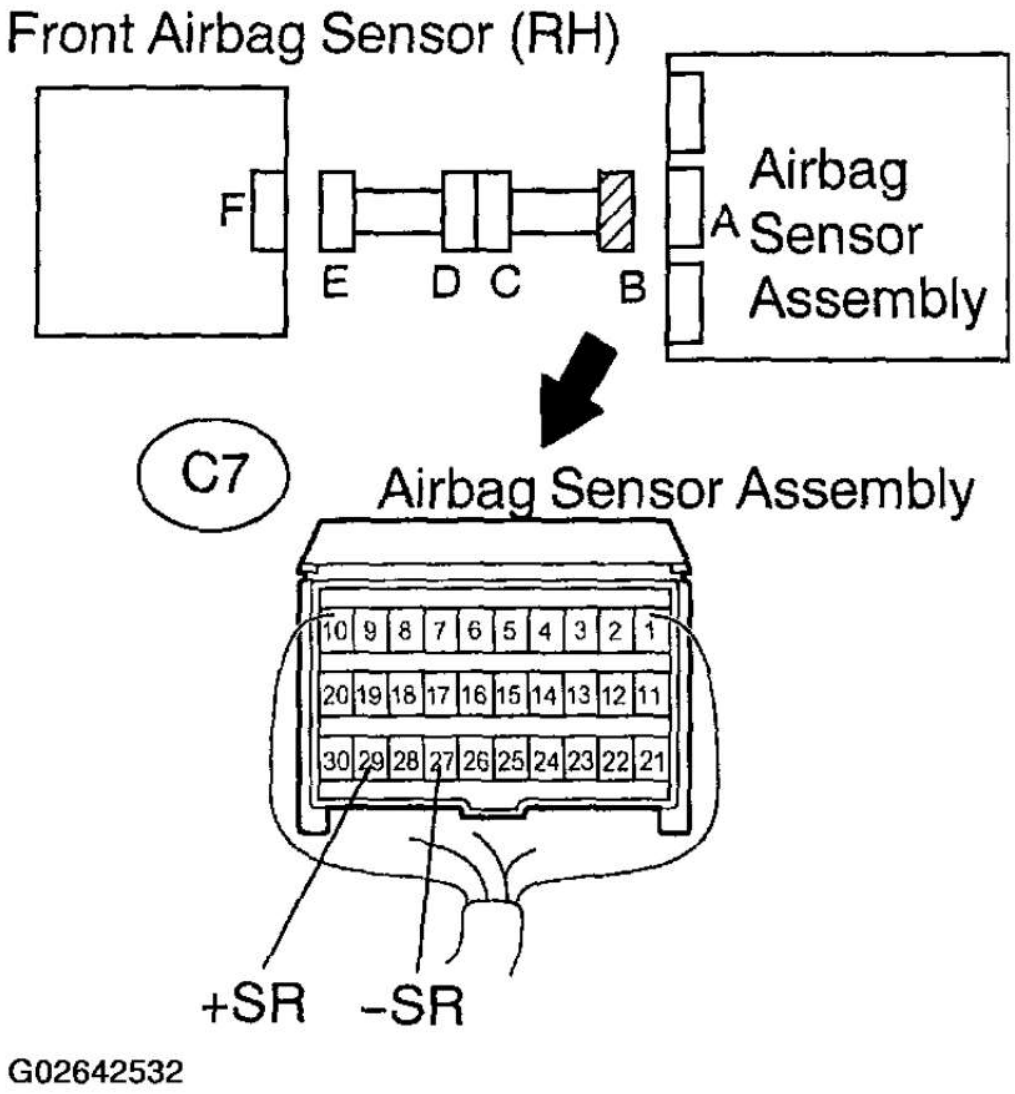



**Fig. 26: Checking Front Airbag Sensor (RH) Circuit (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 11.**

**OK: Go To Next Step.**

7. **Check front airbag sensor (RH).**

**PREPARATION:**

a. Connect the airbag sensor assembly connectors.

cardiagn.com

b. Interchange the airbag front RH sensor with the airbag sensor front LH and connect the connectors to them.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

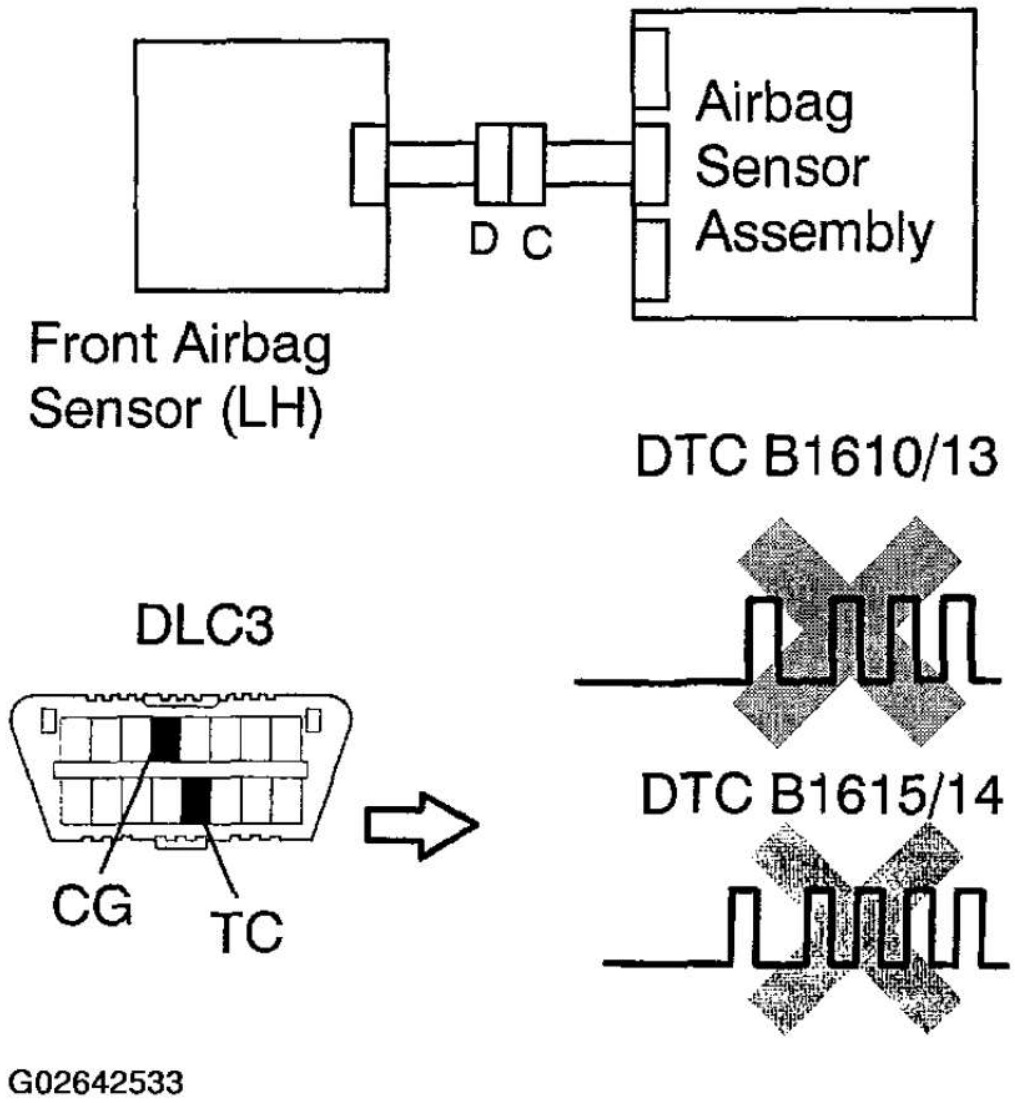



**Fig. 27: Checking Front Airbag Sensor (RH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC OUTPUT**

| | |
|---|---|
| DTC B1610/13 is output. | A |
| DTC B1615/14 is output. | B |
| DTC B1610/13 and B1615/14 are not output. | C |

cardiagn.com

**A: Replace airbag sensor assembly.**

**B: Replace front airbag sensor (RH).**

**C: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

8. **Check engine room main wire harness (open).**

**PREPARATION:**

Disconnect the engine room main wire harness connector from the instrument panel wire.

HINT:

Connector "E" has already been inserted into the service wire.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**ENGINE ROOM MAIN WIRE HARNESS (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| IF1-1 (+SR) - IF1-2 (-SR) | Always | Below 1 ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

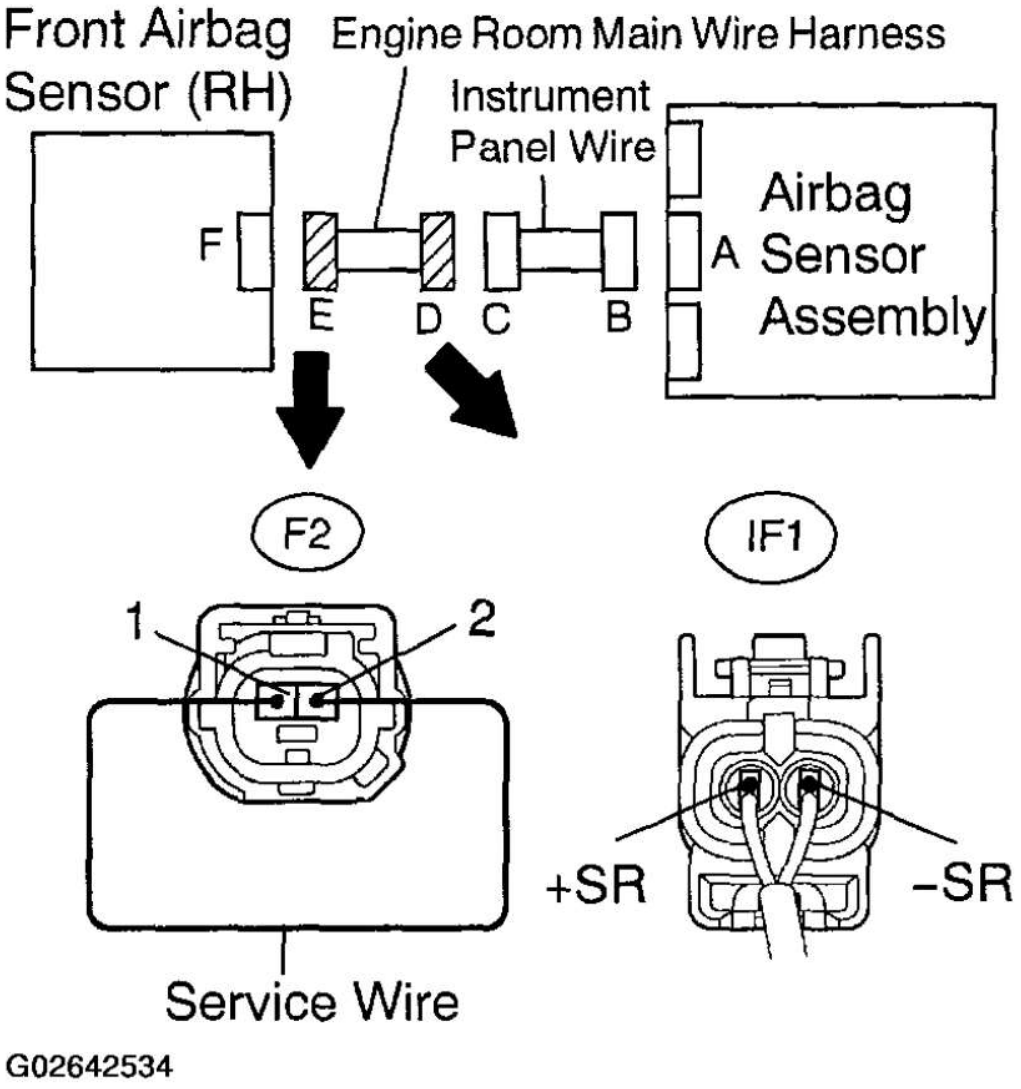



**Fig. 28: Checking Engine Room Main Wire Harness (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace engine room main wire harness.**

**OK: Repair or replace instrument panel wire.**

9. **Check engine room main wire harness (short).**

**PREPARATION:**

Disconnect the engine room main wire harness connector from the instrument panel wire.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

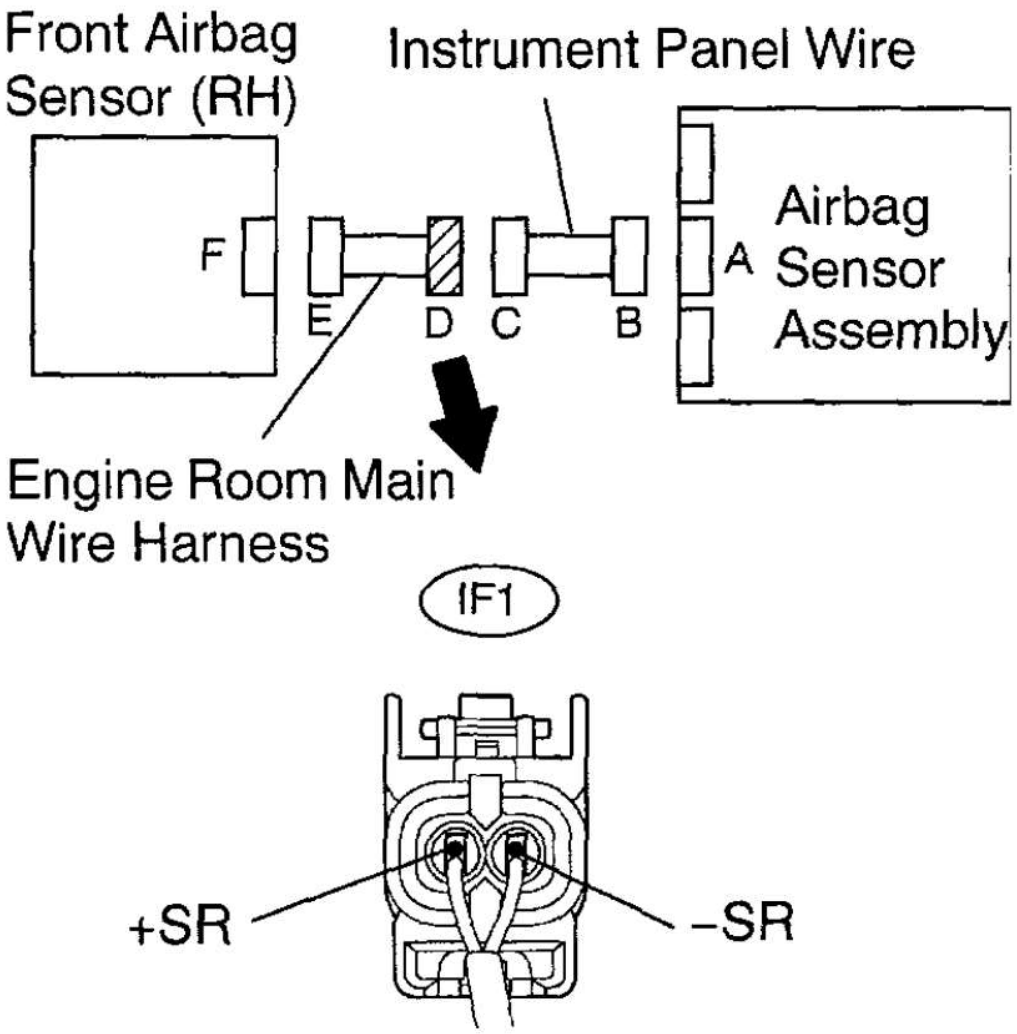
**CHECK:**

Measure the resistance according to the table below.

**OK:**

**ENGINE ROOM MAIN WIRE HARNESS (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| IF1-1 (+SR) - IF1-2 (-SR) | Always | 1 Mohm or higher |




G02642535

cardiagn.com

**Fig. 29: Checking Engine Room Main Wire Harness (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace engine room main wire harness.**

**OK: Repair or replace instrument panel wire.**

10. **Check engine room main wire harness (to B+).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the engine room main wire harness connector from the instrument panel wire.
d. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**ENGINE ROOM MAIN WIRE HARNESS (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| IF1-1 (+SR) - Body ground | Ignition switch ON | Below 1 V |
| IF1-2 (-SR) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

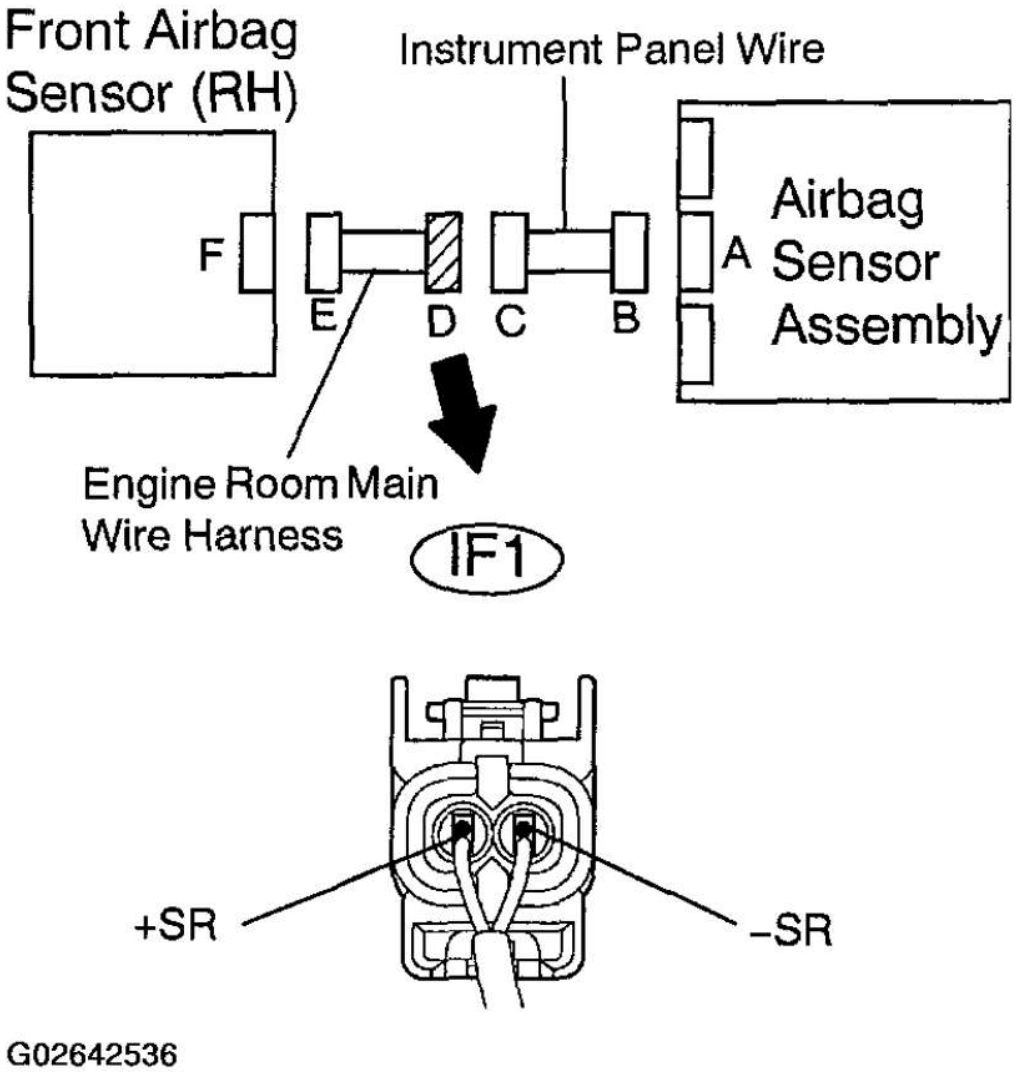



**Fig. 30: Checking Engine Room Main Wire Harness (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace engine room main wire harness.**

**OK: Repair or replace instrument panel wire.**

11. **Check engine room main wire harness (to ground).**

**PREPARATION:**

Disconnect the engine room main wire harness connector from the instrument panel wire.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**ENGINE ROOM MAIN WIRE HARNESS (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| IF1-1 (+SR) - Body ground | Always | 1 Mohm or higher |
| IF1-2 (-SR) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

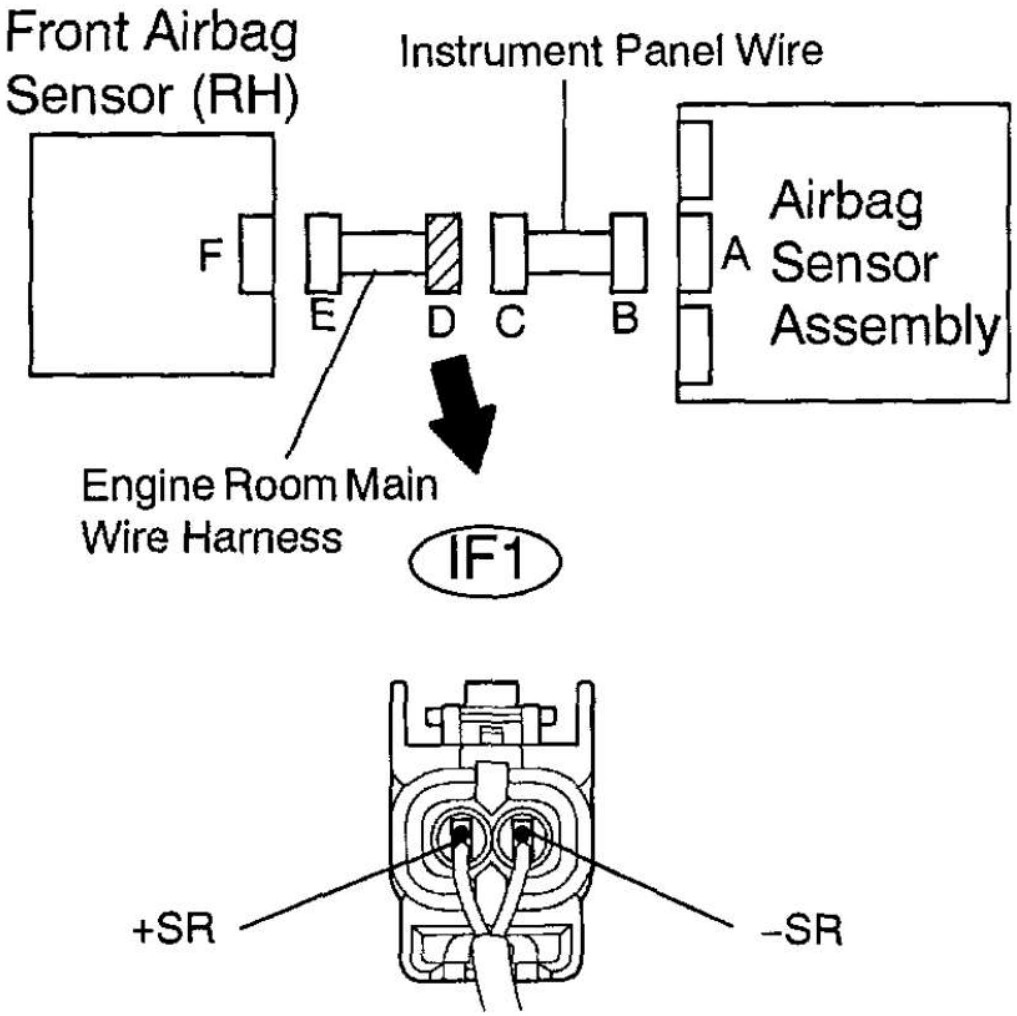



**Fig. 31: Checking Engine Room Main Wire Harness (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace engine room main wire harness.**

**OK: Repair or replace harness or connector between airbag sensor assembly and engine room main wire harness.**

## DTC B1615/14: FRONT AIRBAG SENSOR (LH) MALFUNCTION

### CIRCUIT DESCRIPTION

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

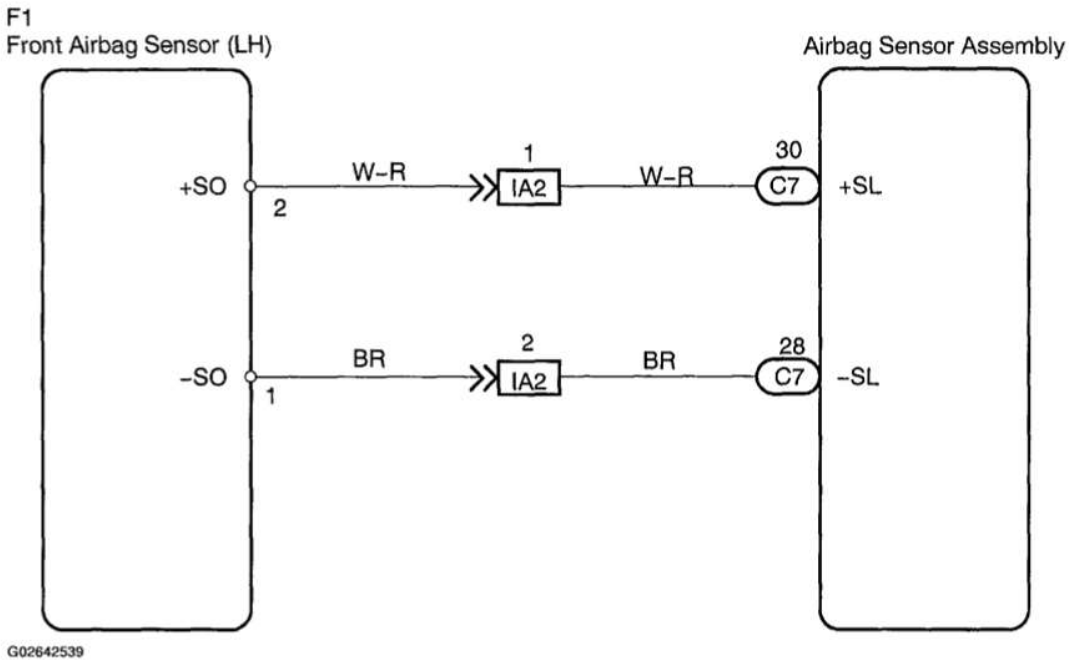
The front airbag sensor (LH) circuit consists of the diagnosis circuit and frontal deceleration sensor, etc. It receives signals from the frontal deceleration sensor, judges whether or not the SRS should be activated, and detects diagnosis system malfunction.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1615/14 | • When airbag sensor assembly receives line short signal, open signal, short to ground signal or B+ short signal in front airbag sensor LH circuit for 2 seconds.<br>• Front airbag sensor (LH) malfunction.<br>• Airbag sensor assembly malfunction. | • Front airbag sensor (LH)<br>• Airbag sensor assembly<br>• Instrument panel wire<br>• Engine room main wire |

G02642538

**Fig. 32: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**WIRING DIAGRAM**




G02642539

**Fig. 33: Wiring Diagram - Front Airbag Sensor (LH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

cardiagn.com

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check DTC.**

**PREPARATION:**

a. Connect the connectors to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see step 5 on **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

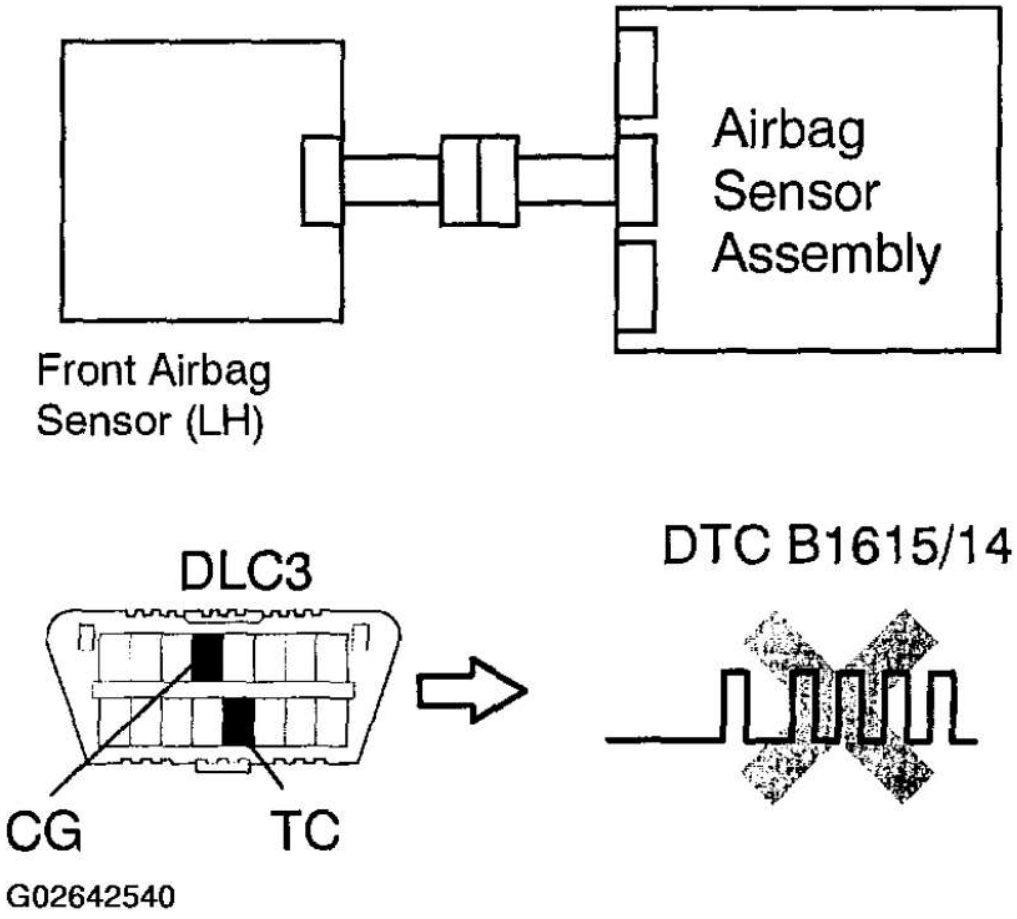



**Fig. 34: Checking For DTC**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

HINT:

Codes other than DTC B1615/14 may be output at this time, but they are not related to this check.

**OK:**

**DTC B1615/14 is not output.**

**NG: Go to step 2.**

**NG: Malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

2. **Check connection of connectors.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Check that the connectors are properly connected to the airbag sensor assembly and the airbag front LH sensor.

**OK:**

**The connectors are connected.**

**NG: Connect connectors, then go to step 1.**
**OK: Go To Next Step.**

3. **Check front airbag sensor (LH) circuit (open).**

**PREPARATION:**

a. Disconnect the connectors from the airbag sensor assembly and front airbag sensor (LH).
b. Using a service wire, connect terminals F1-2 and F1-1 of connector "E".

**NOTE: Do not forcibly insert a service wire into the terminals of the connector when connecting.**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FRONT AIRBAG SENSOR (LH) CIRCUIT (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C7-30 (+SL) - C7-28 (-SL) | Always | Below 1 ohm |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

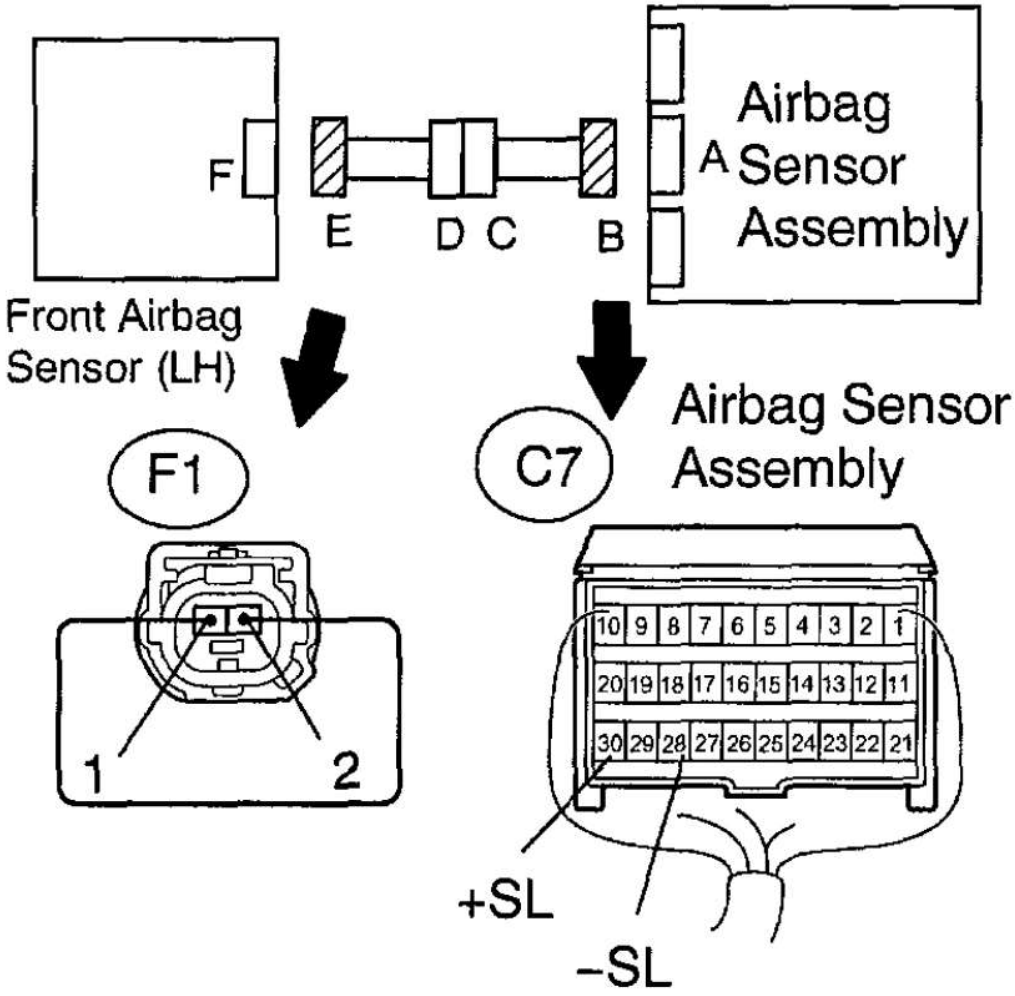



**Fig. 35: Checking Front Airbag Sensor (LH) Circuit (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 8.**

**OK: Go To Next Step.**

4. **Check front airbag sensor (LH) circuit (short).**

**PREPARATION:**

Disconnect the service wire from connector "E".

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FRONT AIRBAG SENSOR (LH) CIRCUIT (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C7-30 (+SL) - C7-28 (-SL) | Always | 1 Mohm or higher |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

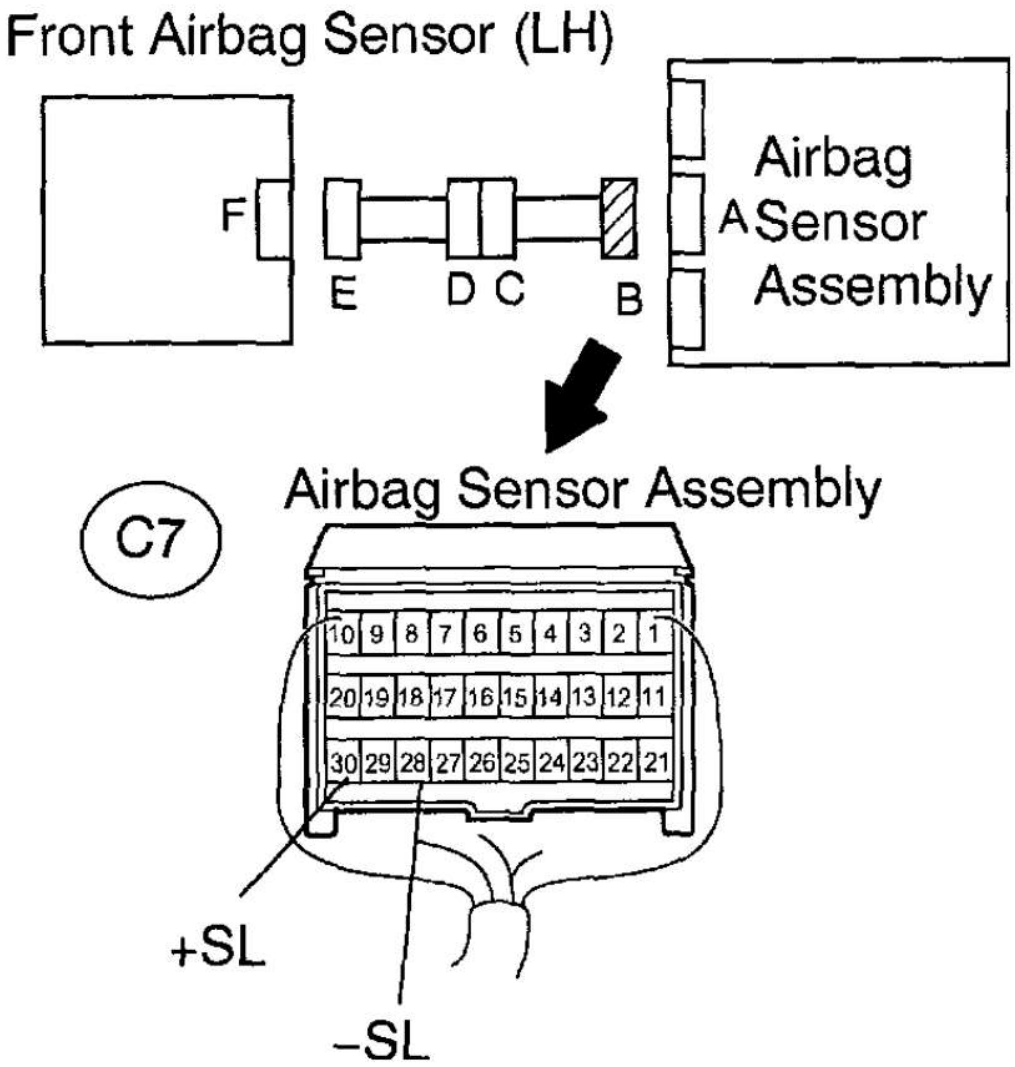



**Fig. 36: Checking Front Airbag Sensor (LH) Circuit (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 9.**

**OK: Go To Next Step.**

5. **Check front airbag sensor (LH) circuit (to B+).**

**PREPARATION:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FRONT AIRBAG SENSOR (LH) CIRCUIT (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C7-30 (+SL) - Body ground | Ignition switch ON | Below 1 V |
| C7-28 (-SL) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

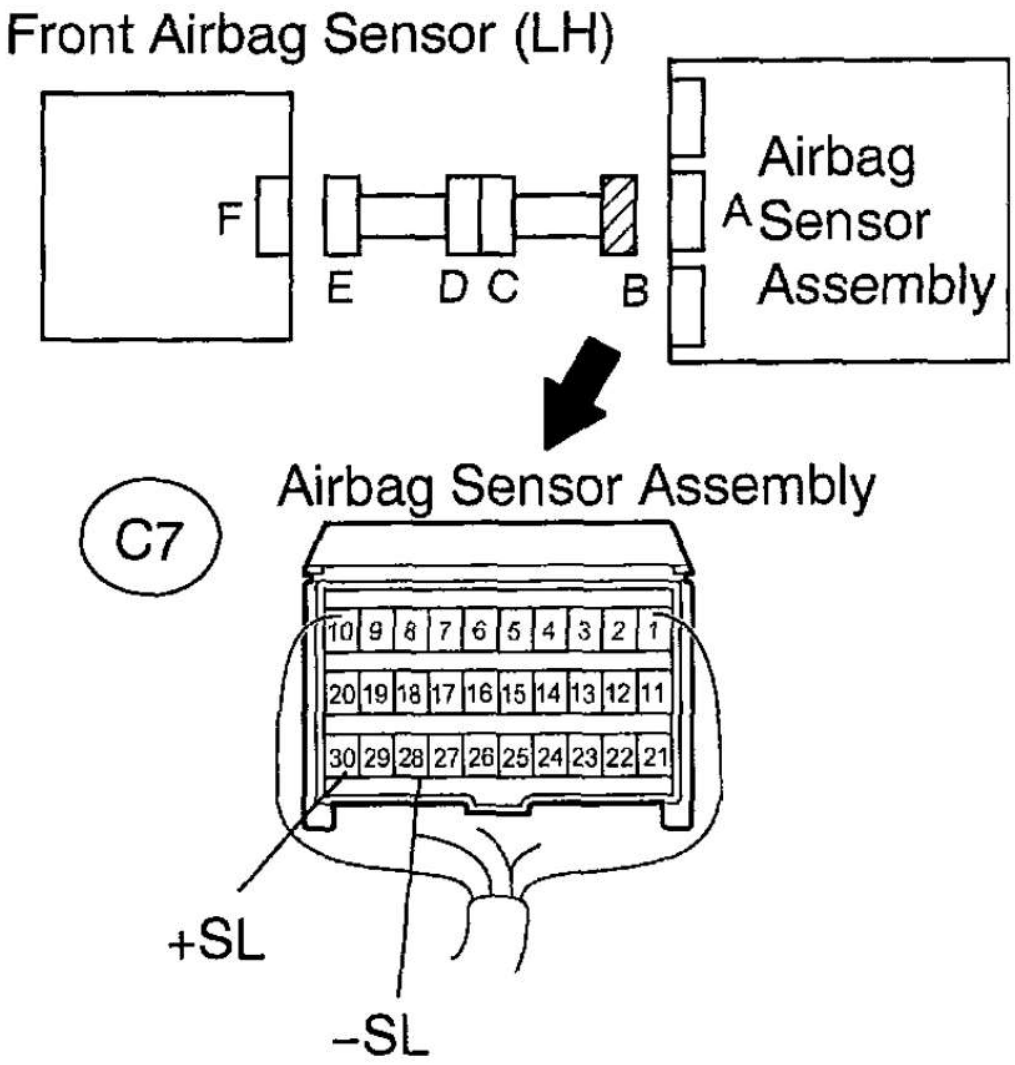



**Fig. 37: Checking Front Airbag Sensor (LH) Circuit (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 10.**

**OK: Go To Next Step.**

6. **Check front airbag sensor (LH) circuit (to ground).**

**PREPARATION:**

cardiagn.com

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FRONT AIRBAG SENSOR (LH) CIRCUIT (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C7-30 (+SL) - Body ground | Always | 1 Mohm or higher |
| C7-28 (-SL) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

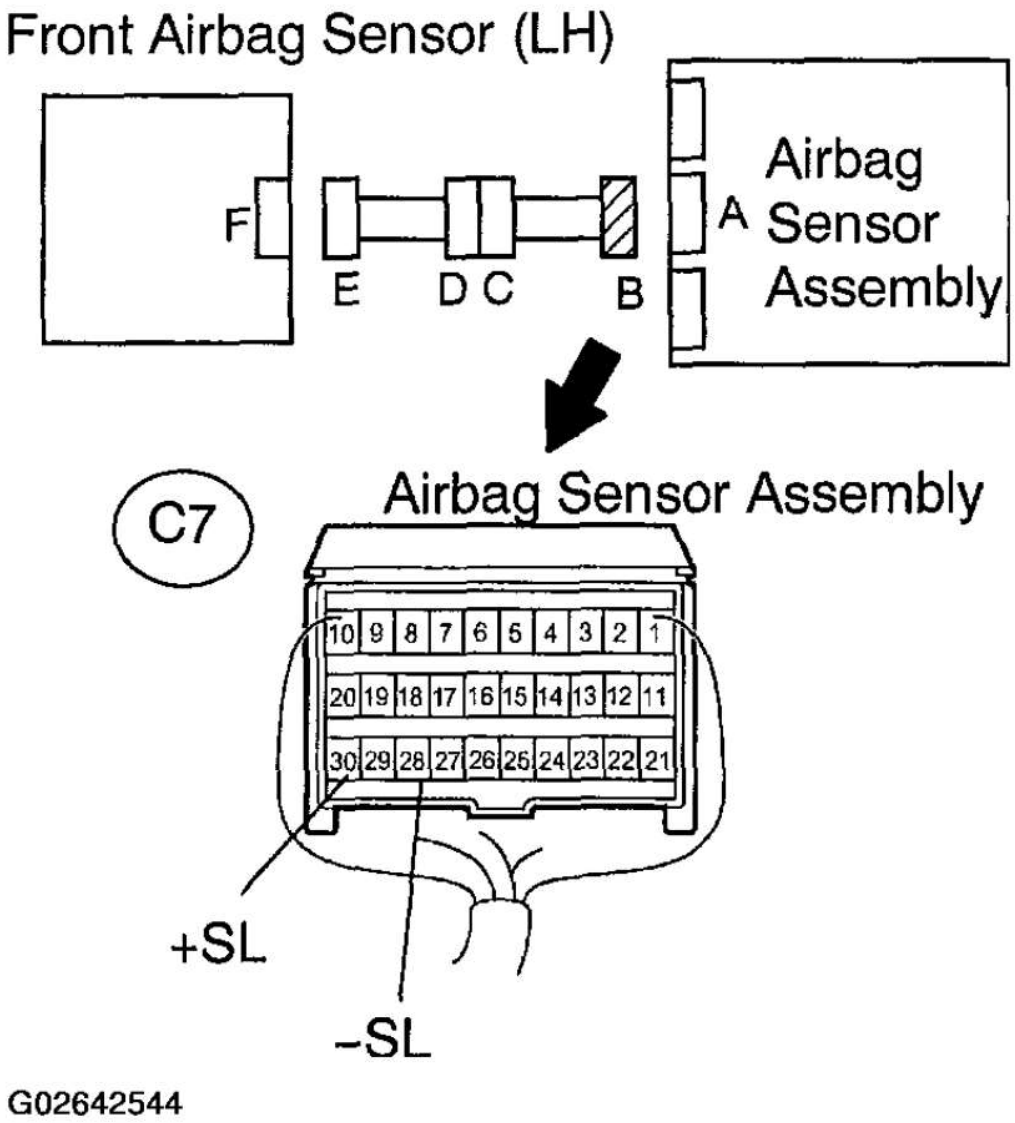



**Fig. 38: Checking Front Airbag Sensor (LH) Circuit (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 11.**

**OK: Go To Next Step.**

7. **Check front airbag sensor (LH).**

**PREPARATION:**

cardiagn.com

a. Connect the airbag sensor assembly connectors.
b. Interchange the airbag front RH sensor with the airbag sensor front LH and connect the connectors to them.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

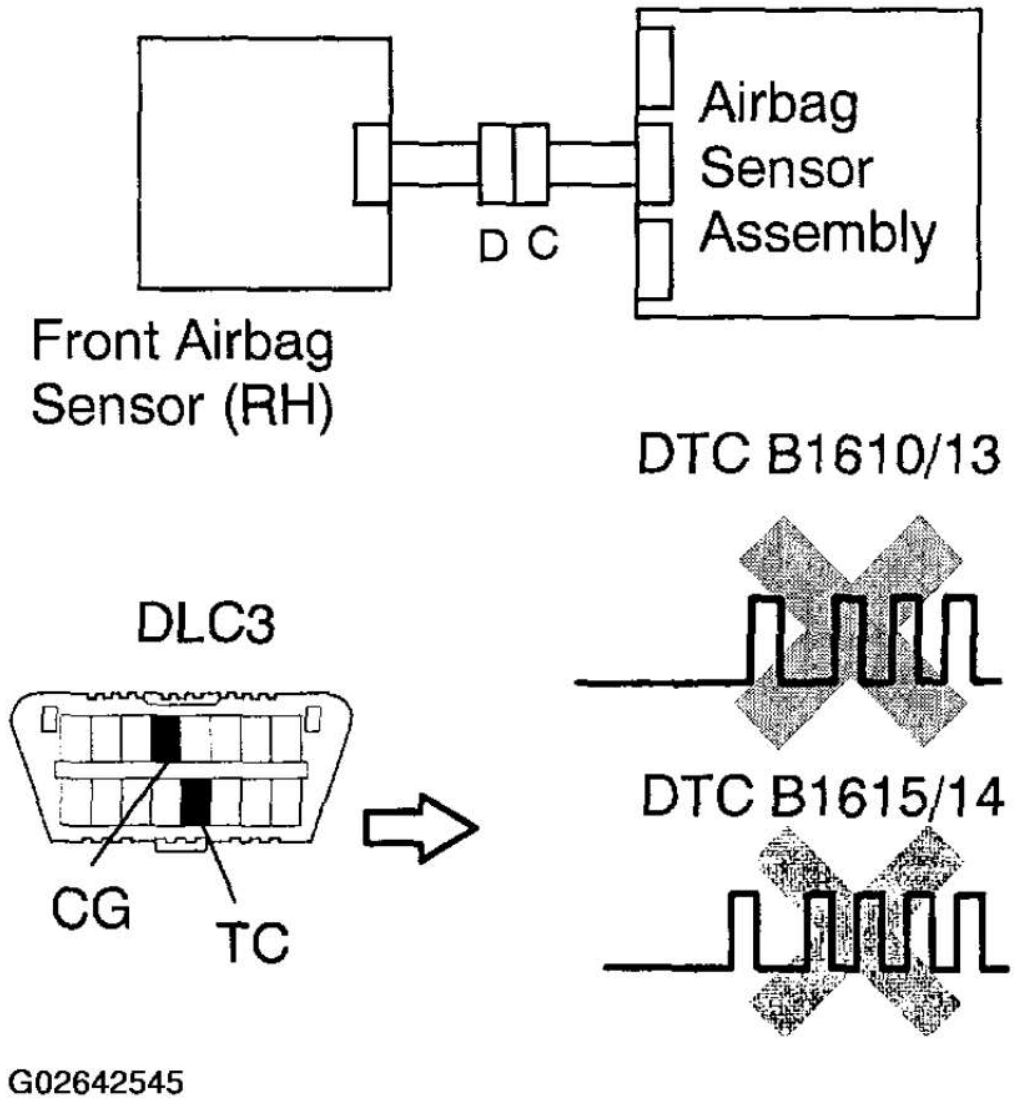



**Fig. 39: Checking Front Airbag Sensor (LH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC OUTPUT**

| | |
|---|---|
| DTC B1615/14 is output. | A |
| DTC B1610/13 is output. | B |
| DTC B1610/13 and B1615/14 are not output. | C |

cardiagn.com

**A: Replace airbag sensor assembly.**

**B: Replace front airbag sensor (LH).**

**C: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

8. **Check engine room main wire harness (open).**

**PREPARATION:**

Disconnect the engine room main wire harness connector from the instrument panel wire.

HINT:

Connector "E" has already been inserted into the service wire.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**ENGINE ROOM MAIN WIRE HARNESS (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| IA2-1 (+SL) - IA2-2 (-SL) | Always | Below 1 ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

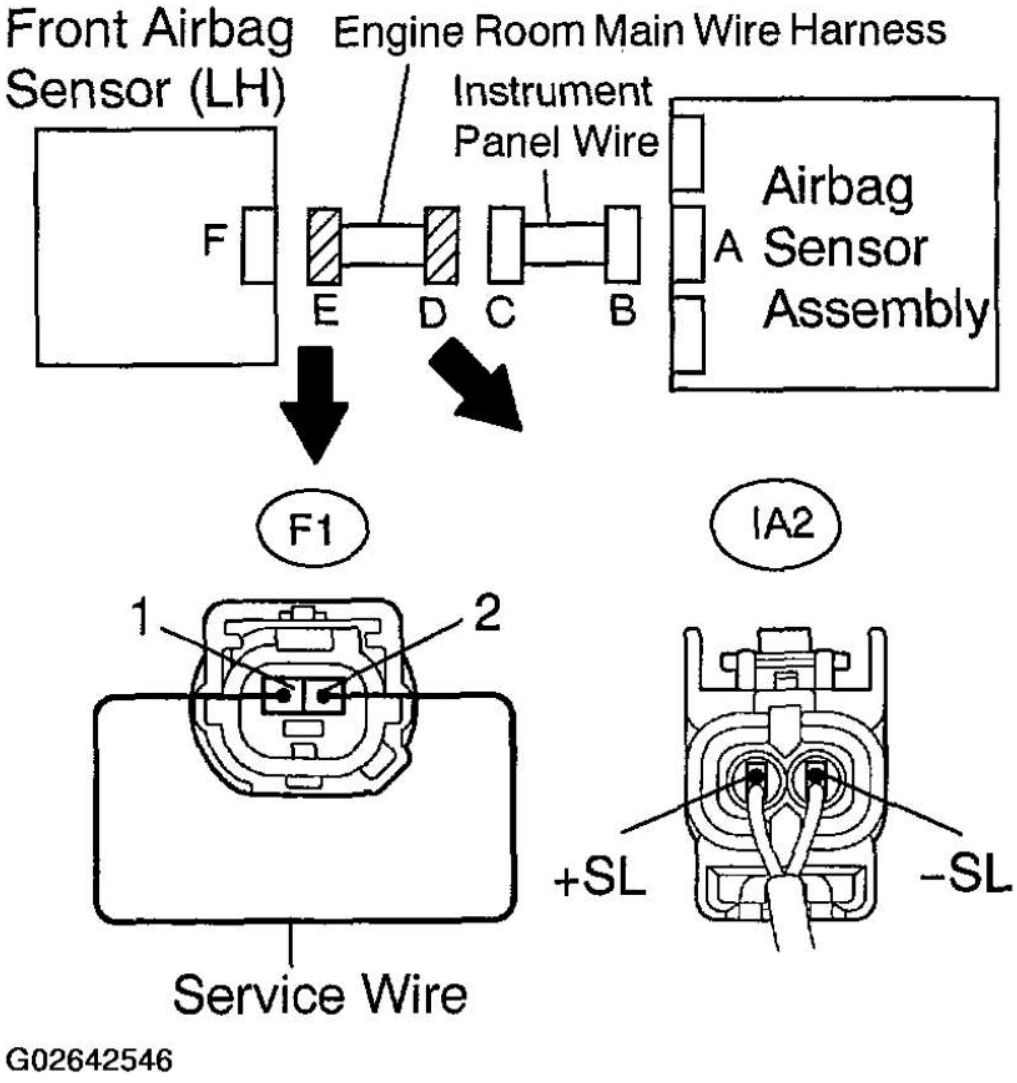



**Fig. 40: Checking Engine Room Main Wire Harness (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace engine room main wire harness.**

**OK: Repair or replace instrument panel wire.**

9. **Check engine room main wire harness (short).**

**PREPARATION:**

Disconnect the engine room main wire harness connector from the instrument panel wire.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

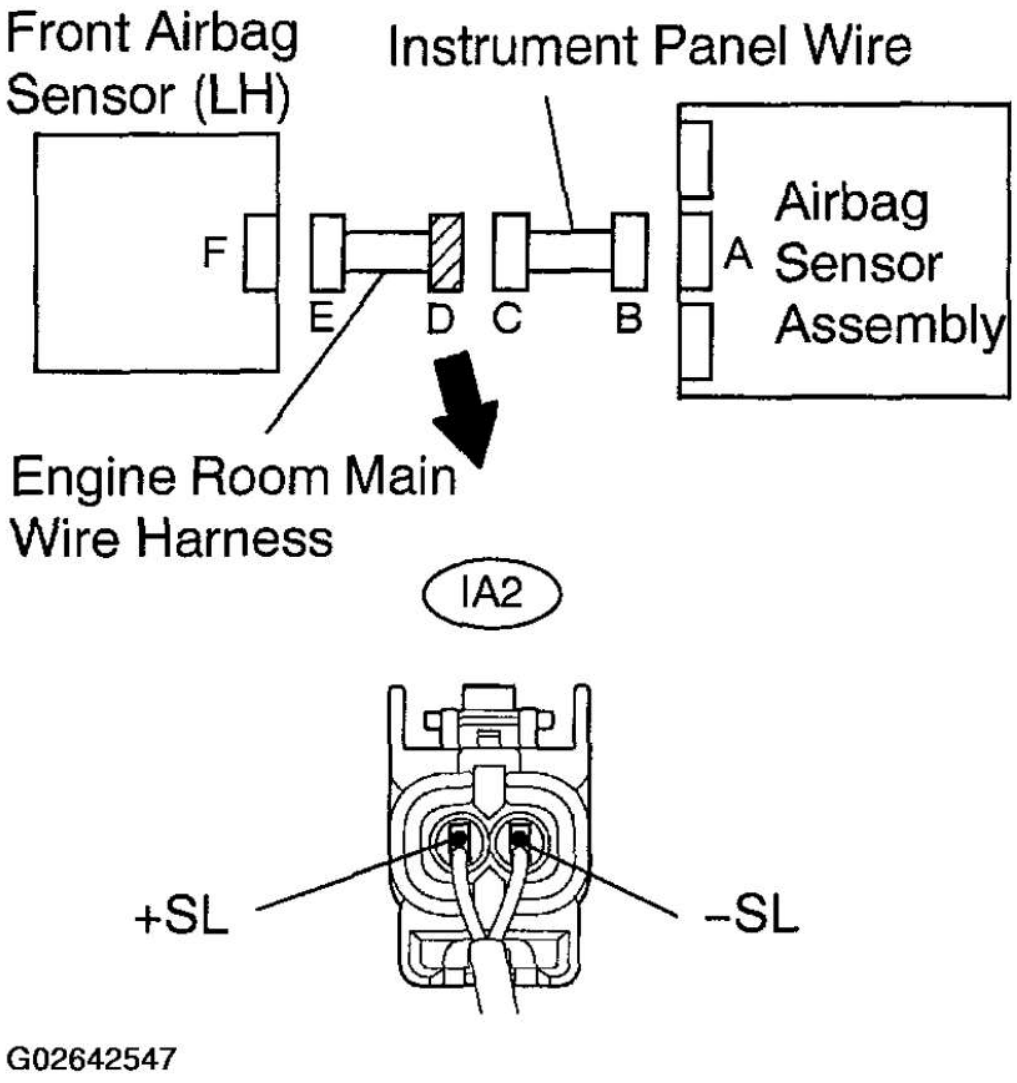
**CHECK:**

Measure the resistance according to the table below.

**OK:**

**ENGINE ROOM MAIN WIRE HARNESS (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| IA2-1 (+SL) - IA2-2 (-SL) | Always | 1 Mohm or higher |




G02642547

cardiagn.com

**Fig. 41: Checking Engine Room Main Wire Harness (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace engine room main wire harness.**

**OK: Repair or replace instrument panel wire.**

10. **Check engine room main wire harness (to B+).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the engine room main wire connector from the instrument panel wire.
d. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**ENGINE ROOM MAIN WIRE HARNESS (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| IA2-1 (+SL) - Body ground | Ignition switch ON | Below 1 V |
| IA2-2 (-SL) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

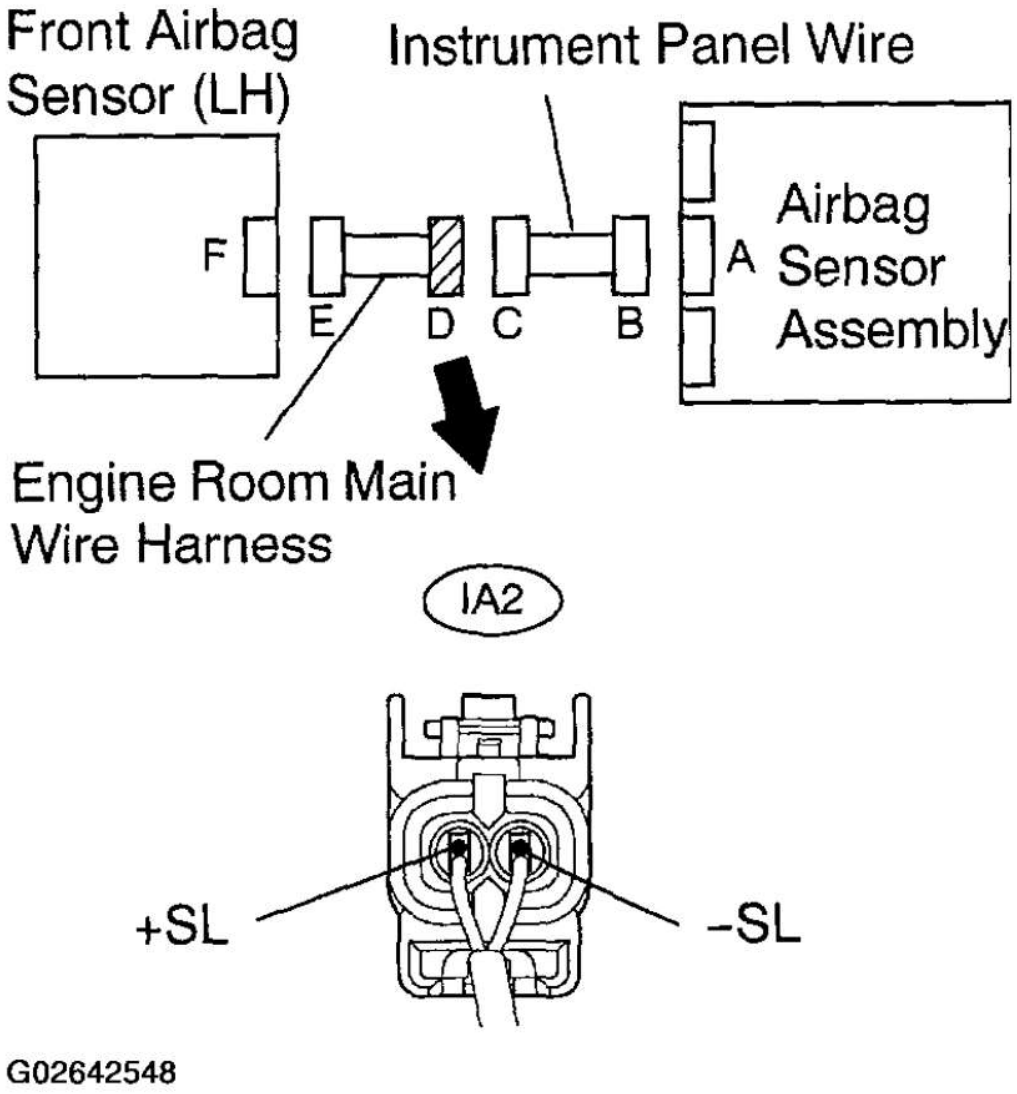



**Fig. 42: Checking Engine Room Main Wire Harness (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace engine room main wire harness.**

**OK: Repair or replace instrument panel wire.**

11. **Check engine room main wire harness (to ground).**

**PREPARATION:**

Disconnect the engine room main wire harness connector from the instrument panel wire.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**ENGINE ROOM MAIN WIRE HARNESS (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| IA2-1 (+SL) - Body ground | Always | 1 Mohm or higher |
| IA2-2 (-SL) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

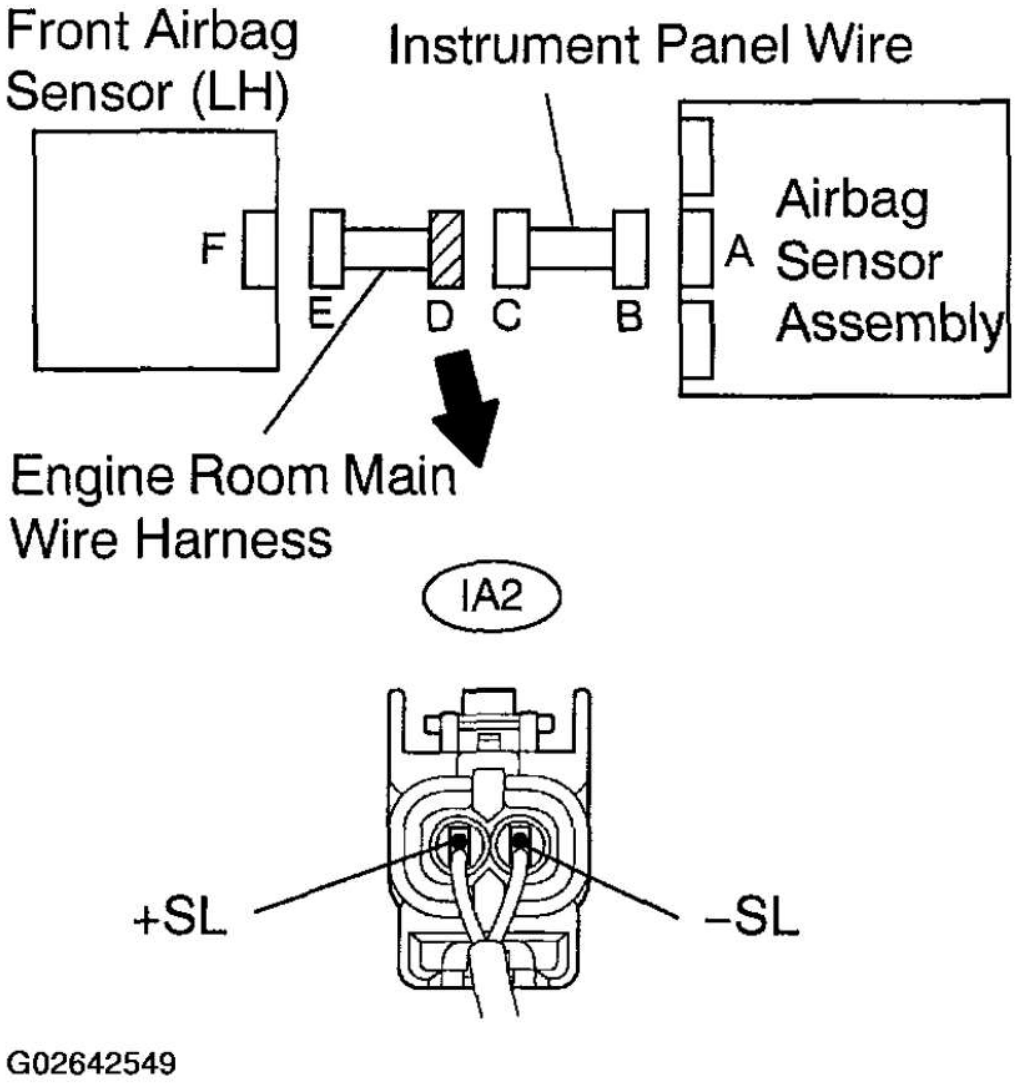



**Fig. 43: Checking Engine Room Main Wire Harness (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace engine room main wire harness.**
**OK: Repair or replace instrument panel wire.**

## DTC B1620/21: SIDE AIRBAG SENSOR ASSEMBLY LH MALFUNCTION

### CIRCUIT DESCRIPTION

The side airbag sensor assembly LH consists of the safing sensor, diagnosis circuit and lateral deceleration

cardiagn.com

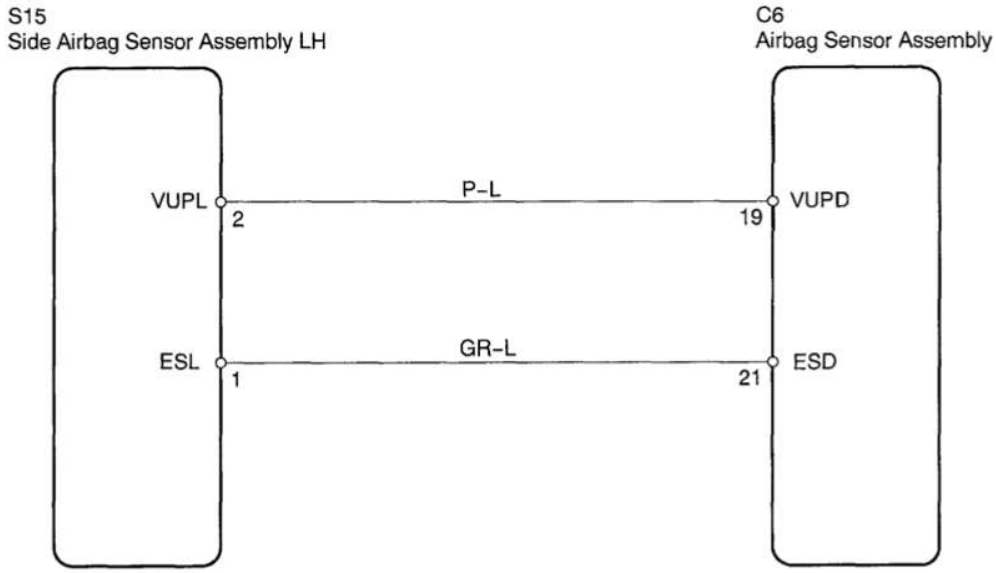
sensor, etc. It receives signals from the lateral deceleration sensor, judges whether or not the SRS should be activated, and detects diagnosis system malfunction.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1620/21 | • When airbag sensor assembly receives line short signal, open signal, short to found signal or B+ short signal in side airbag sensor assembly LH circuit for 2 seconds.<br>• Side airbag sensor assembly LH malfunction.<br>• Airbag sensor assembly malfunction. | • Side airbag sensor assembly LH<br>• Floor No. 1 wire<br>• Airbag sensor assembly |

G02642550

**Fig. 44: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**WIRING DIAGRAM**




Y
G02642551

**Fig. 45: Wiring Diagram - Side Airbag Sensor Assembly LH**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

cardiagn.com

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check DTC.**

**PREPARATION:**

a. Connect the connectors to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTC stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

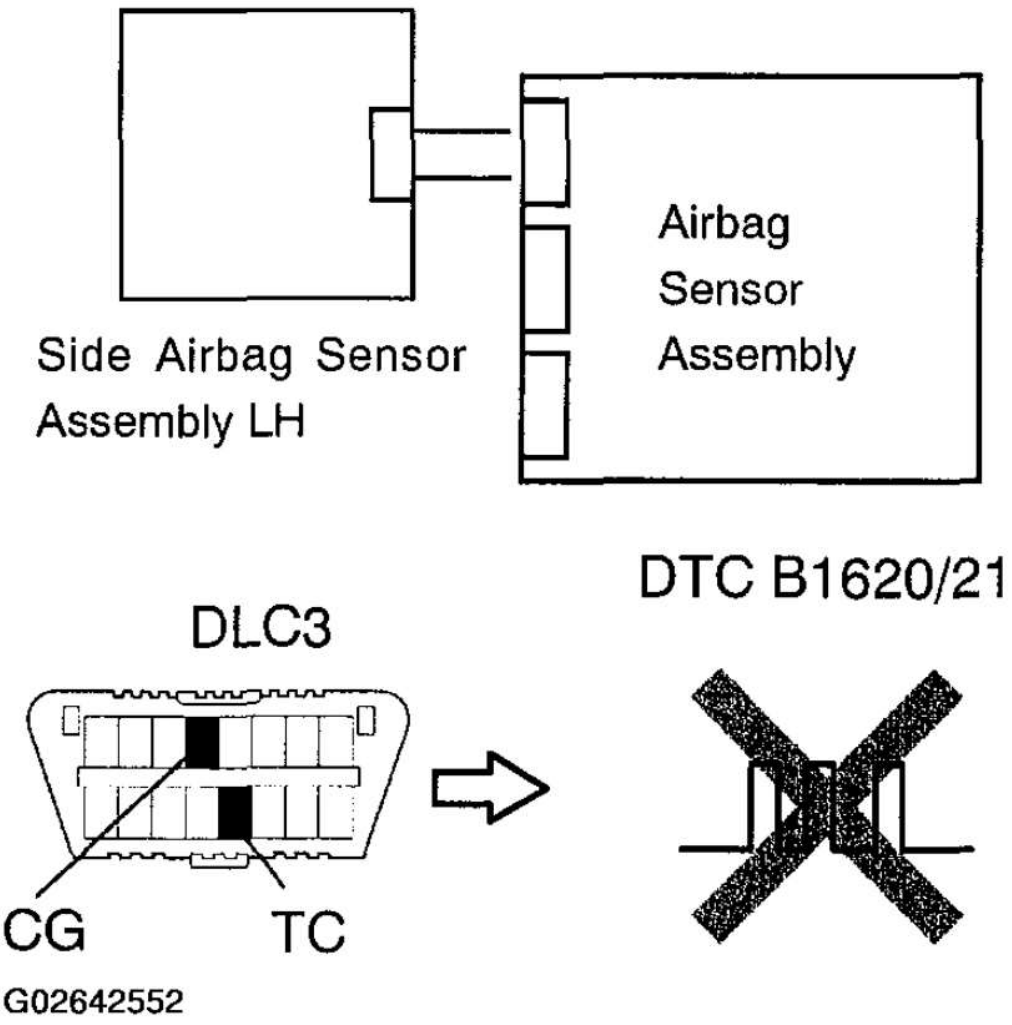



**Fig. 46: Checking For DTC**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC B1620/21 is not output.**

HINT:

Codes other than DTC B1620/21 may be output at this time, but they are not related to this check.

**NG: Go to step 2.**

cardiagn.com

**OK: The malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

2. **Check connection of connectors.**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Check that the connectors are properly connected to the airbag sensor assembly and side airbag sensor assembly LH.

**OK:**

**The connectors are connected.**

**NG: Connect connectors, then go to step 1.**
**OK: Go To Next Step.**

3. **Check floor No. 1 wire (open).**

**PREPARATION:**

a. Disconnect the connectors from the airbag sensor assembly and the side airbag sensor assembly LH.
b. Using SST connect terminals S15-2 and S15-1 of connector "C".

SST 09843-18040

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C6-19 (VUPD) - C6-21 (ESD) | Always | Below 1 ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

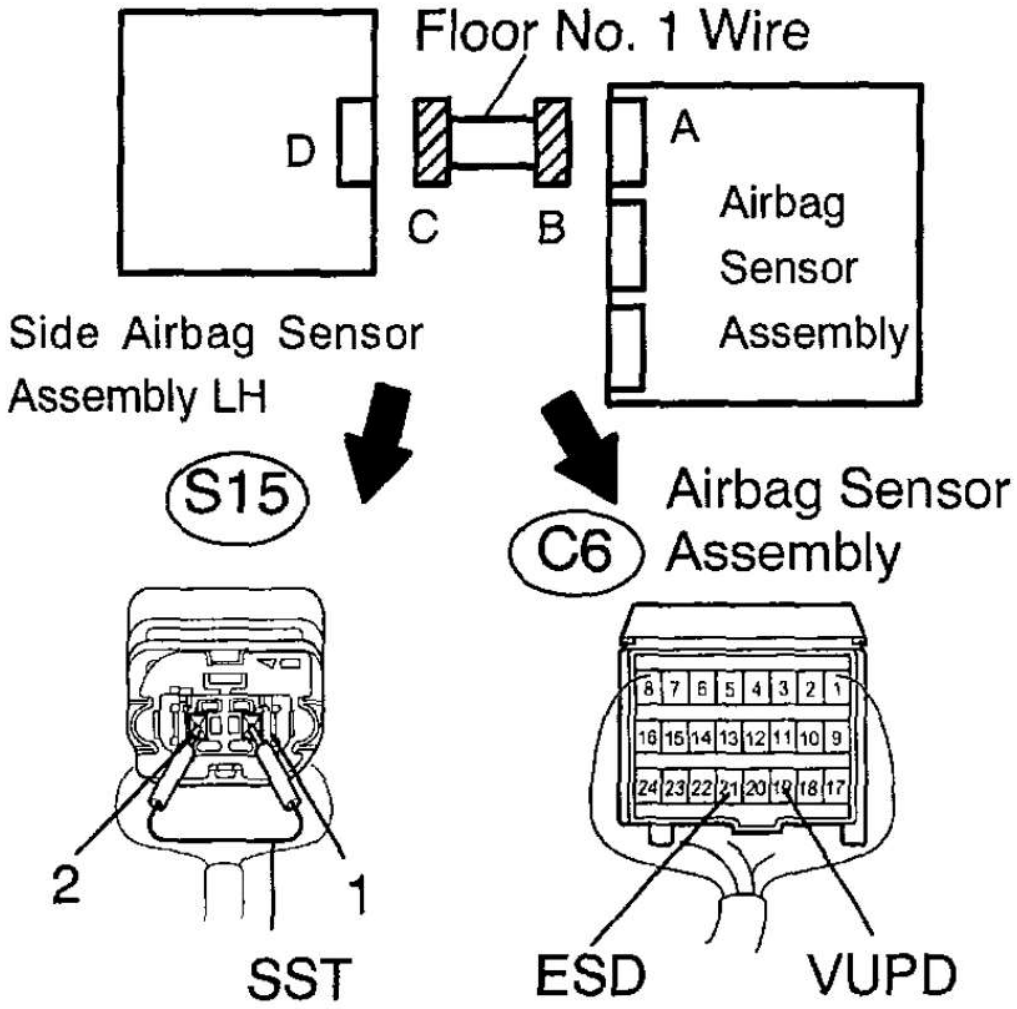



**Fig. 47: Checking Floor No. 1 Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

4. **Check floor No. 1 wire (short).**

**PREPARATION:**

Disconnect the SST from connector "C".

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C6-19 (VUPD) - C6-21 (ESD) | Always | 1 Mohm or higher |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

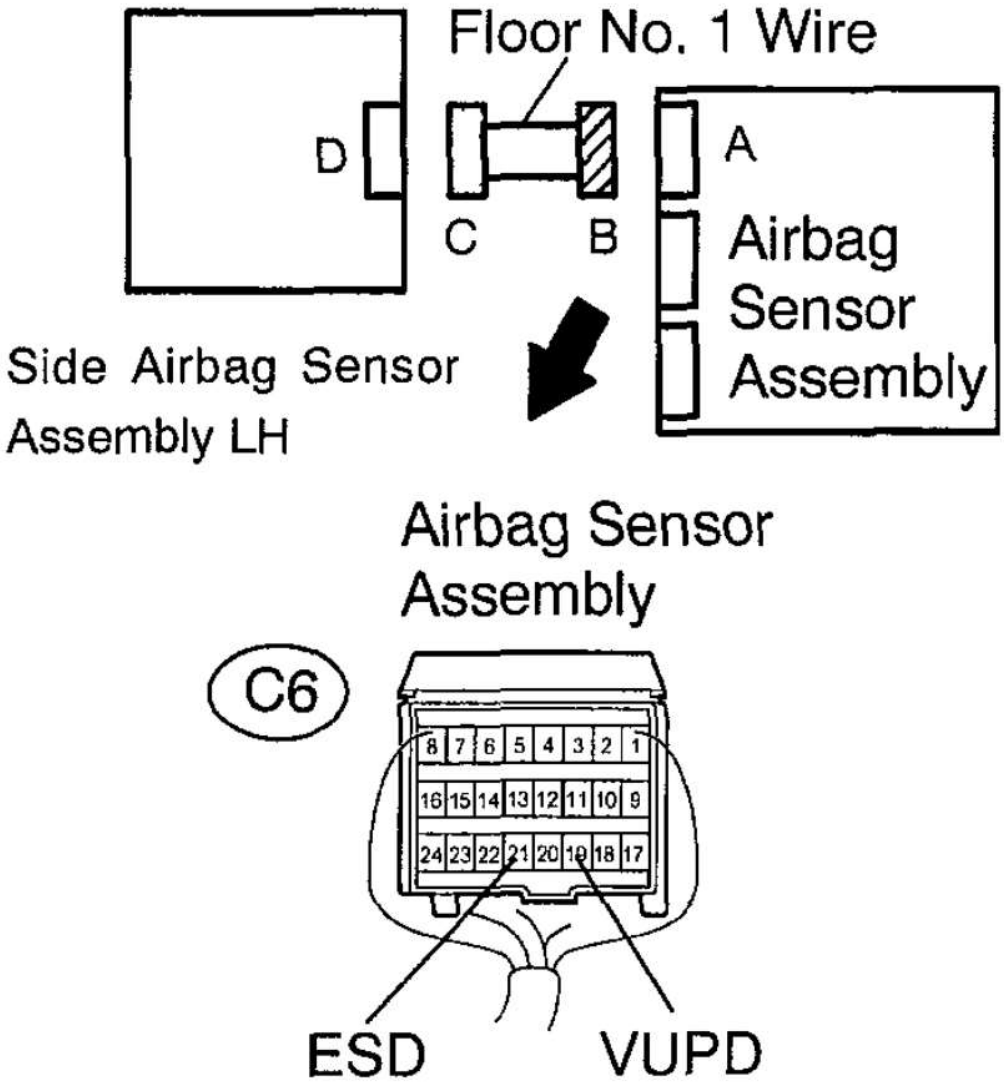



**Fig. 48: Checking Floor No. 1 Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

5. **Check floor No. 1 wire (to B+).**

**PREPARATION:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C6-19 (VUPD) - Body ground | Ignition switch ON | Below 1 V |
| C6-21 (ESD) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

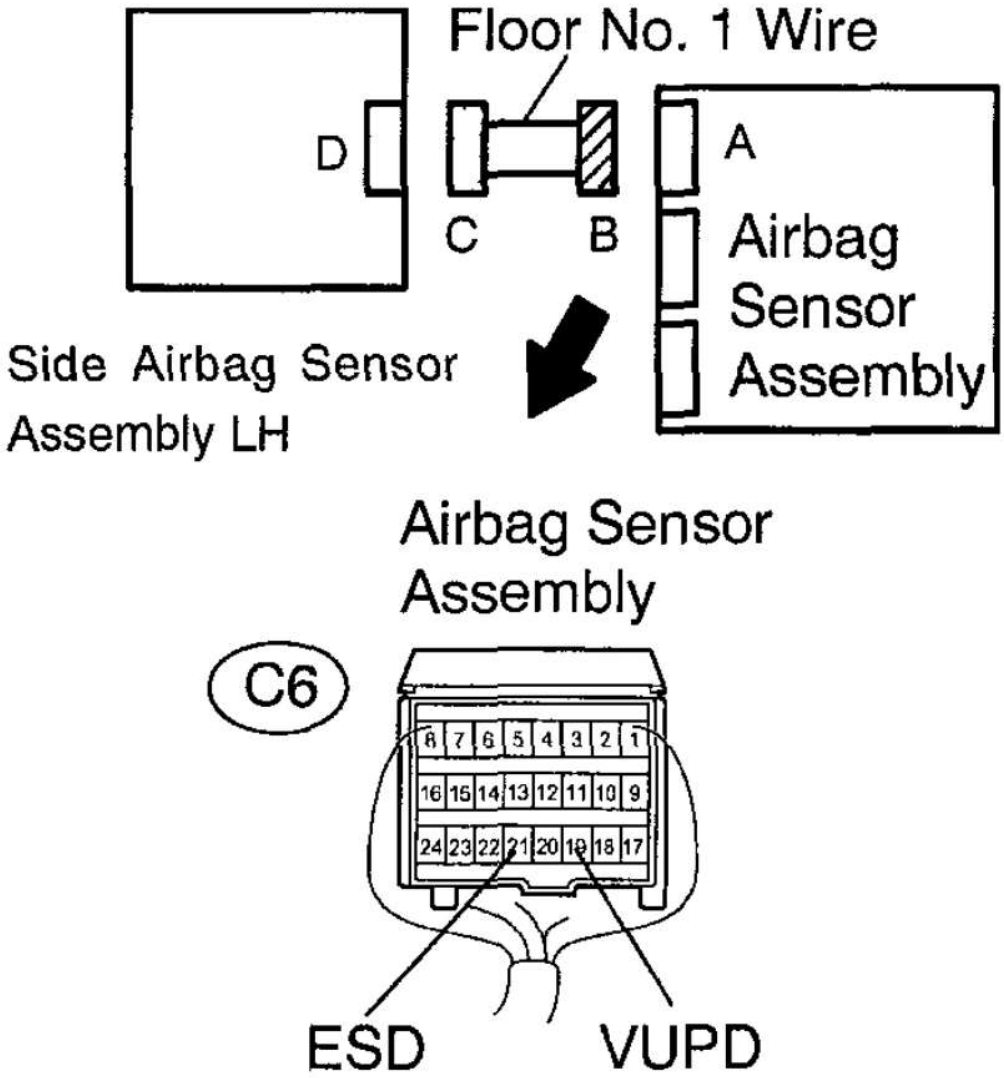



**Fig. 49: Checking Floor No. 1 Wire (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

6. **Check floor No. 1 wire (to ground).**

**CHECK:**

cardiagn.com

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C6-19 (VUPD) - Body ground | Always | 1 Mohm or higher |
| C6-21 (ESD) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

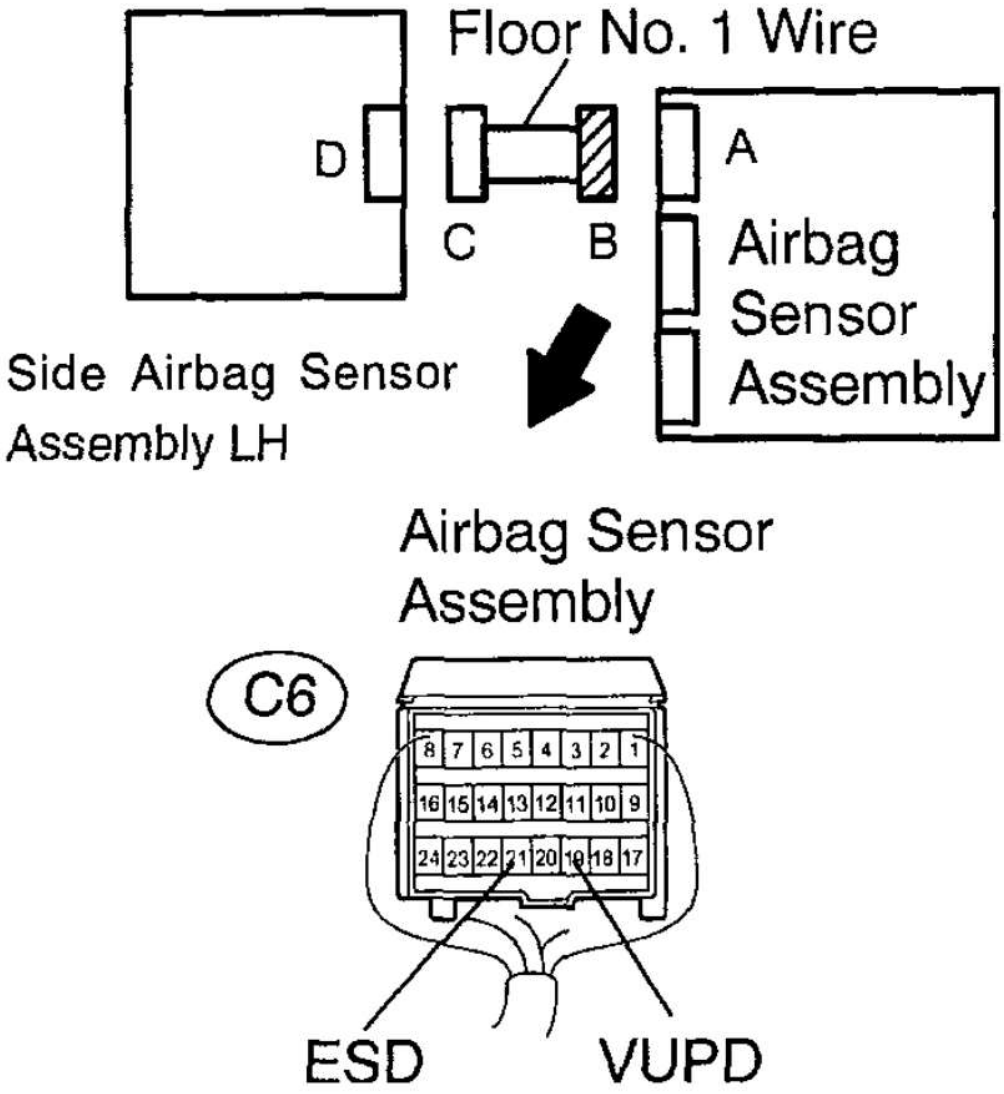



**Fig. 50: Checking Floor No. 1 Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

7. **Check side airbag sensor assembly (LH).**

**PREPARATION:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

a. Connect the connector to the airbag sensor assembly.
b. Interchange the side airbag sensor assembly RH with LH and connect the connectors to them.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

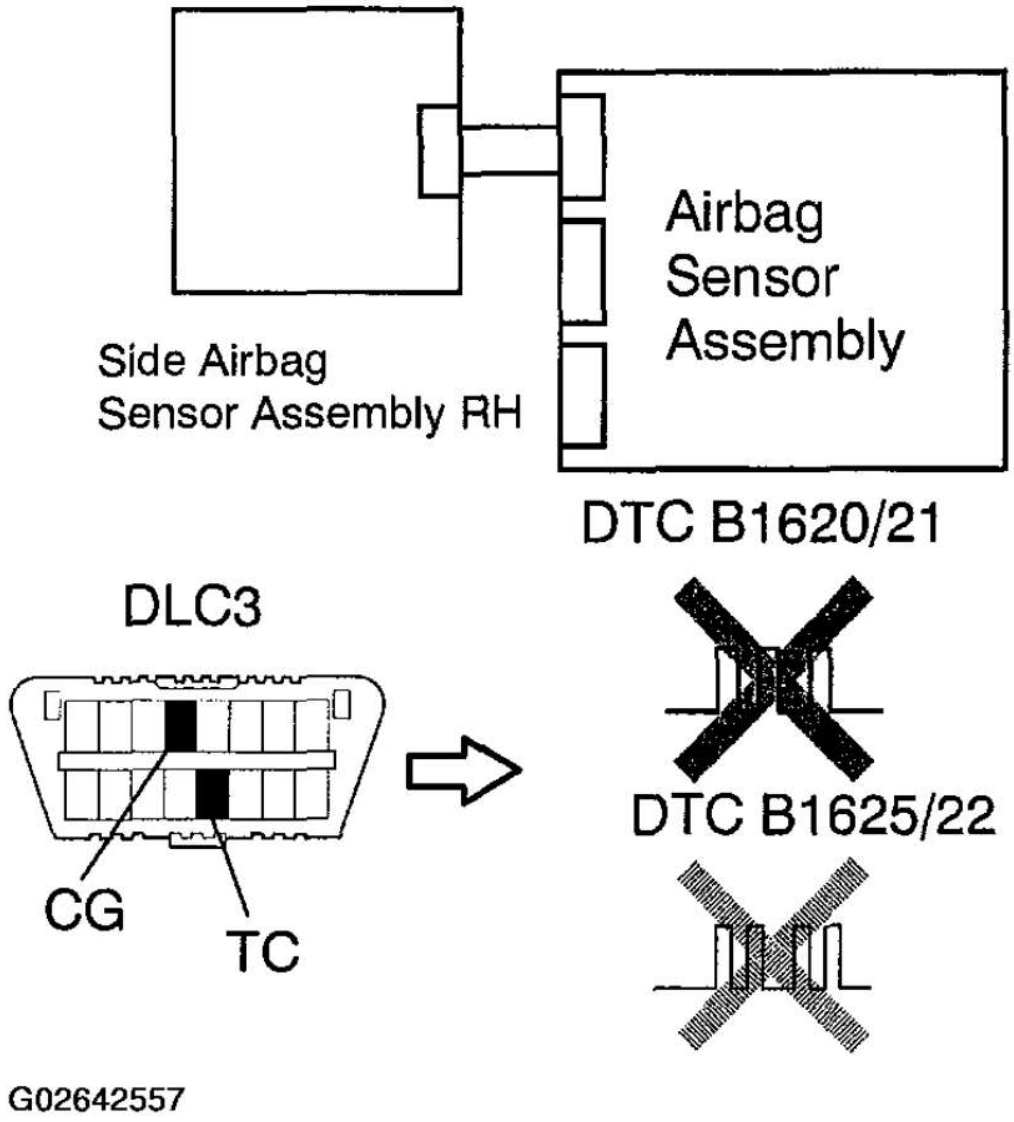



**Fig. 51: Checking Side Airbag Sensor Assembly (LH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC OUTPUT**

| | |
|---|---|
| DTC B1620/21 is output. | A |
| DTC B1625/22 is output. | B |
| DTC B1620/21 and B1625/22 are not output. | C |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

HINT:

Codes other than DTC B1620/21 or B1625/22 may be output at this time, but they are not relevant to this check.

**A: Replace airbag sensor assembly.**

**B: Replace side airbag sensor assembly LH.**

**C: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

## DTC B1625/22: SIDE AIRBAG SENSOR ASSEMBLY RH MALFUNCTION

### CIRCUIT DESCRIPTION

The side airbag sensor assembly RH consists of the safing sensor, diagnosis circuit and lateral deceleration sensor, etc. It receives signals from the lateral deceleration sensor, judges whether or not the SRS should be activated, and detects diagnosis system malfunction.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1625/22 | • When airbag sensor assembly receives line short signal, open signal, short to ground signal or B+short signal in side airbag sensor assembly RH circuit for 2 seconds.<br>• Side airbag sensor assembly RH malfunction.<br>• Airbag sensor assembly malfunction. | • Side airbag sensor assembly RH<br>• Floor No. 1 wire<br>• Airbag sensor assembly |

G02642558

**Fig. 52: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

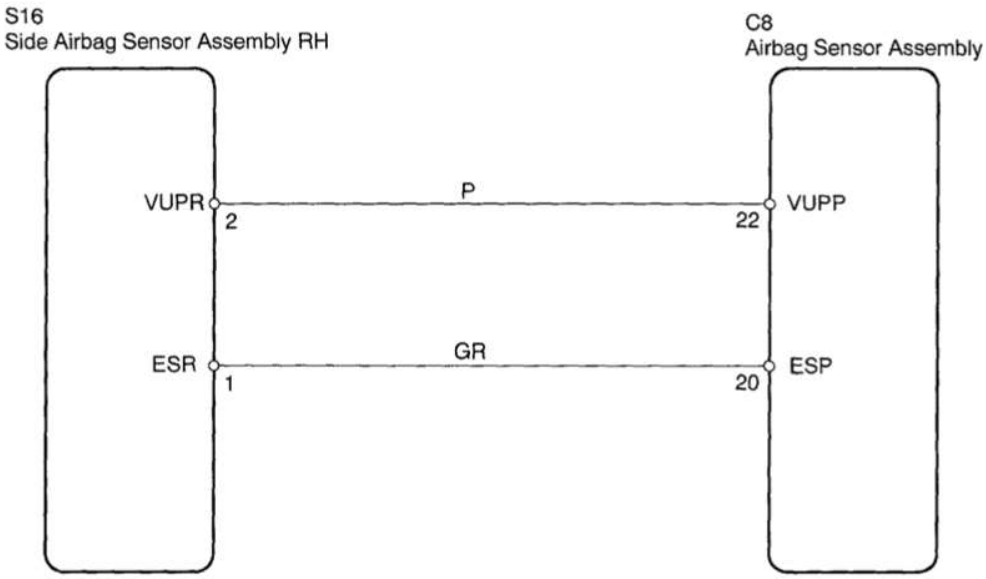



**Fig. 53: Wiring Diagram - Side Airbag Sensor Assembly RH**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check DTC.**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**PREPARATION:**

a. Connect the connectors to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

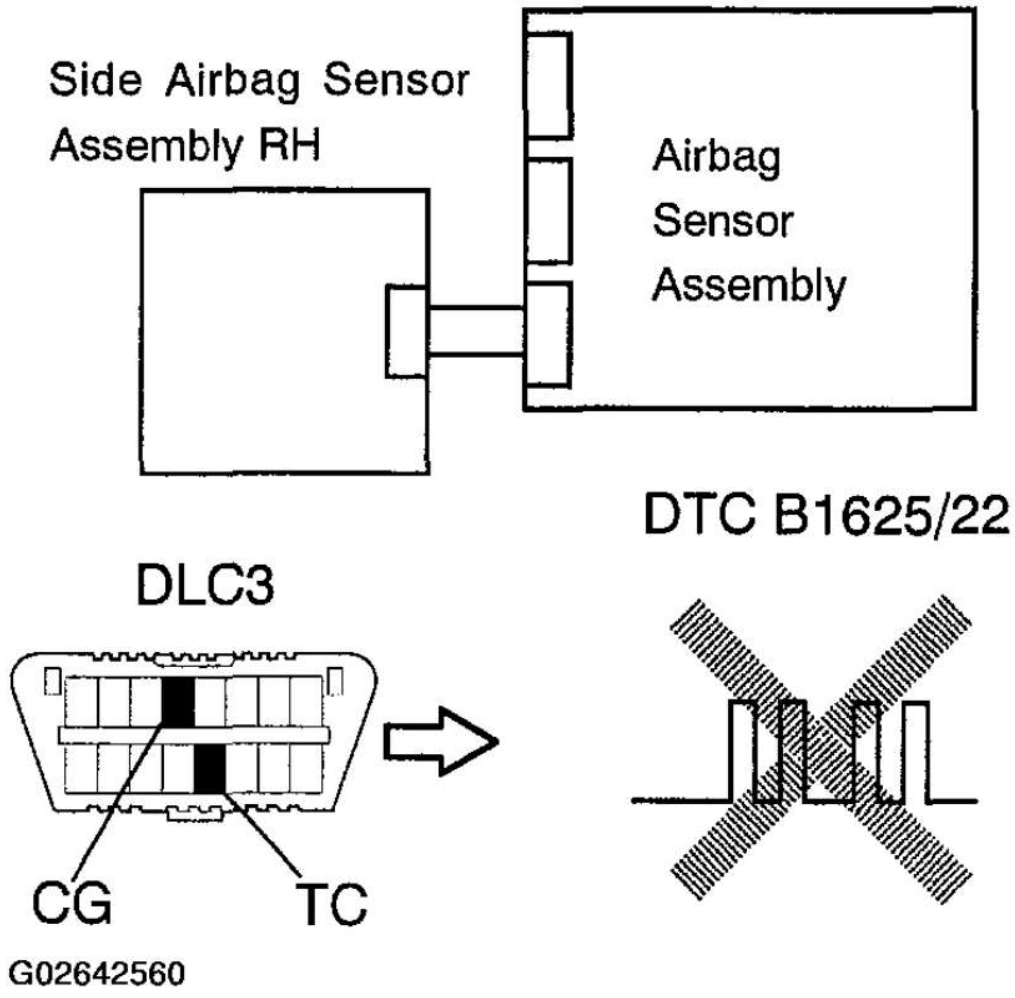



**Fig. 54: Checking For DTC**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC B1625/22 is not output.**

HINT:

Codes other than DTC B1625/22 may be output at this time, but they are not related to this check.

**NG: Go to step 2.**
**OK: The malfunctioning part can now be considered normal. To make sure of this, use**

cardiagn.com

**simulation method to check.**

2. **Check connection of connectors**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Check that the connectors are properly connected to the airbag sensor assembly and side airbag sensor assembly RH.

**OK:**

**The connectors are connected.**

**NG: Connect connectors, then go to step 1.**

**OK: Go To Next Step.**

3. **Check floor No. 1 wire (open).**

**PREPARATION:**

a. Disconnect the connectors from the airbag sensor assembly and the side airbag sensor assembly RH.
b. Using SST, connect terminals S16-2 and S16-1 of connector "C".

SST 09843-18040

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C8-22 (VUPP) - C8-20 (ESP) | Always | Below 1 ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

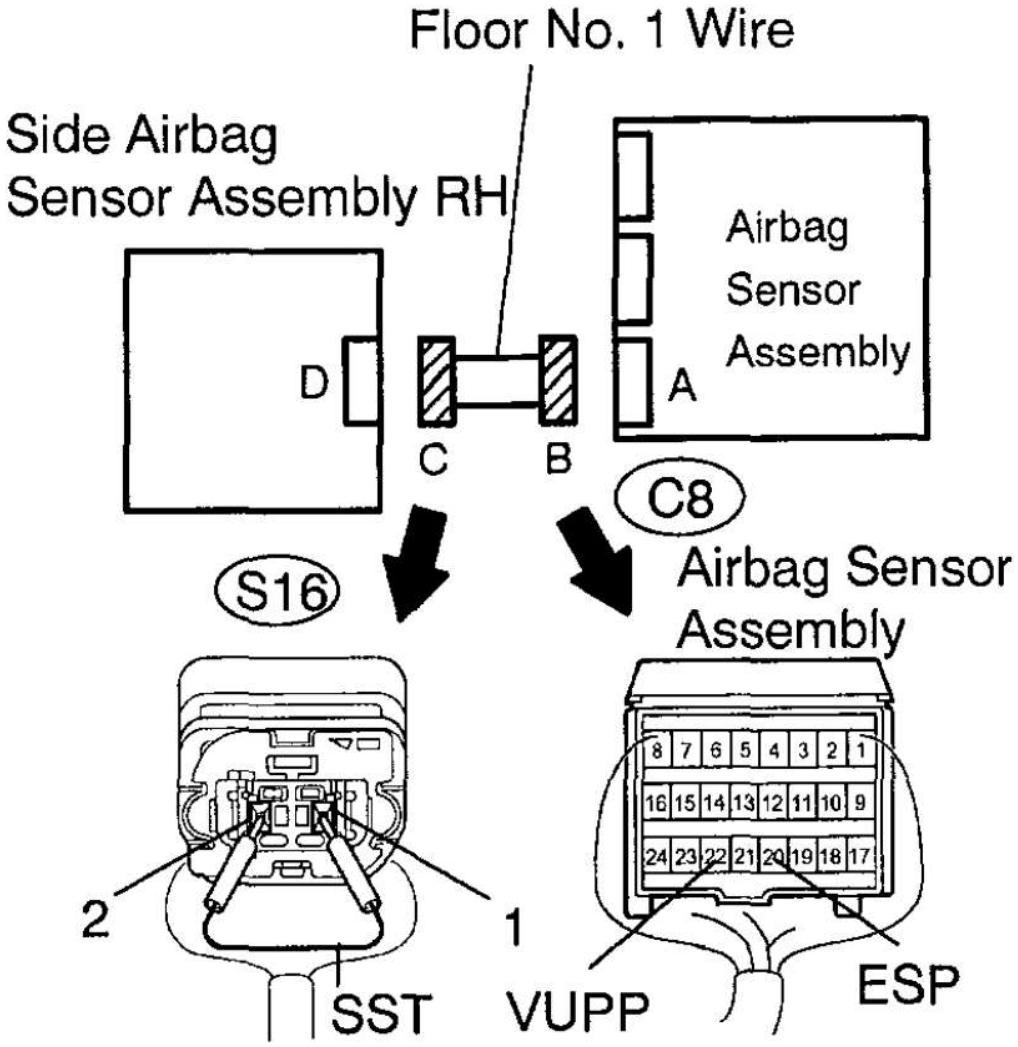



**Fig. 55: Checking Floor No. 1 Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

4. **Check floor No. 1 wire (short).**

**PREPARATION:**

Disconnect the SST from connector "C".

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C8-22 (VUPP) - C8-20 (ESP) | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

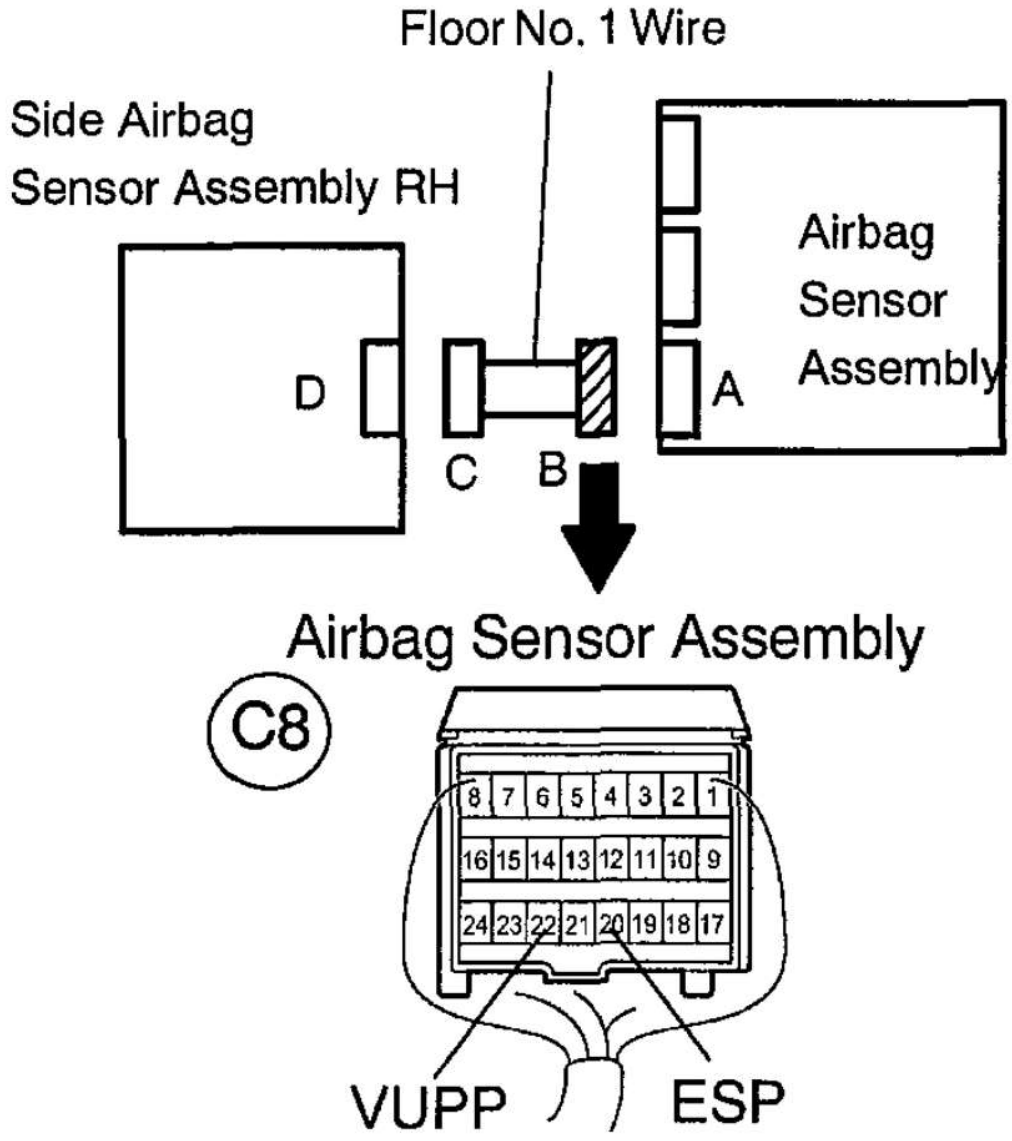



**Fig. 56: Checking Floor No. 1 Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

5. **Check floor No. 1 wire (to B+).**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**PREPARATION:**

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

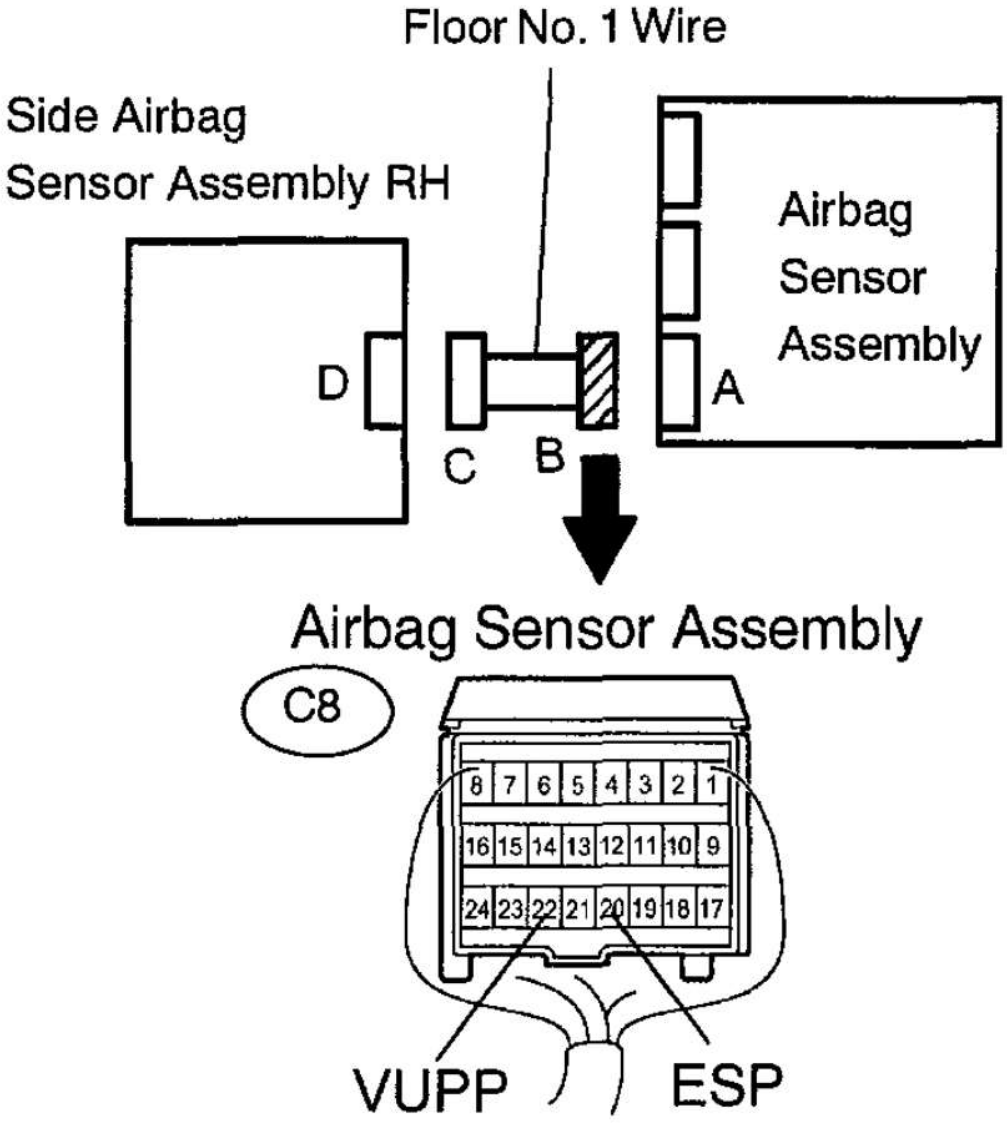
**OK:**

**FLOOR NO. 1 WIRE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C8-22 (VUPP) - Body ground | Ignition switch ON | Below 1 V |
| C8-20 (ESP) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |




G02642563

**Fig. 57: Checking Floor No. 1 Wire (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

6. **Check floor No. 1 wire (to ground).**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**CHECK:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C8-22 (VUPP) - Body ground | Always | 1 Mohm or higher |
| C8-20 (ESP) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

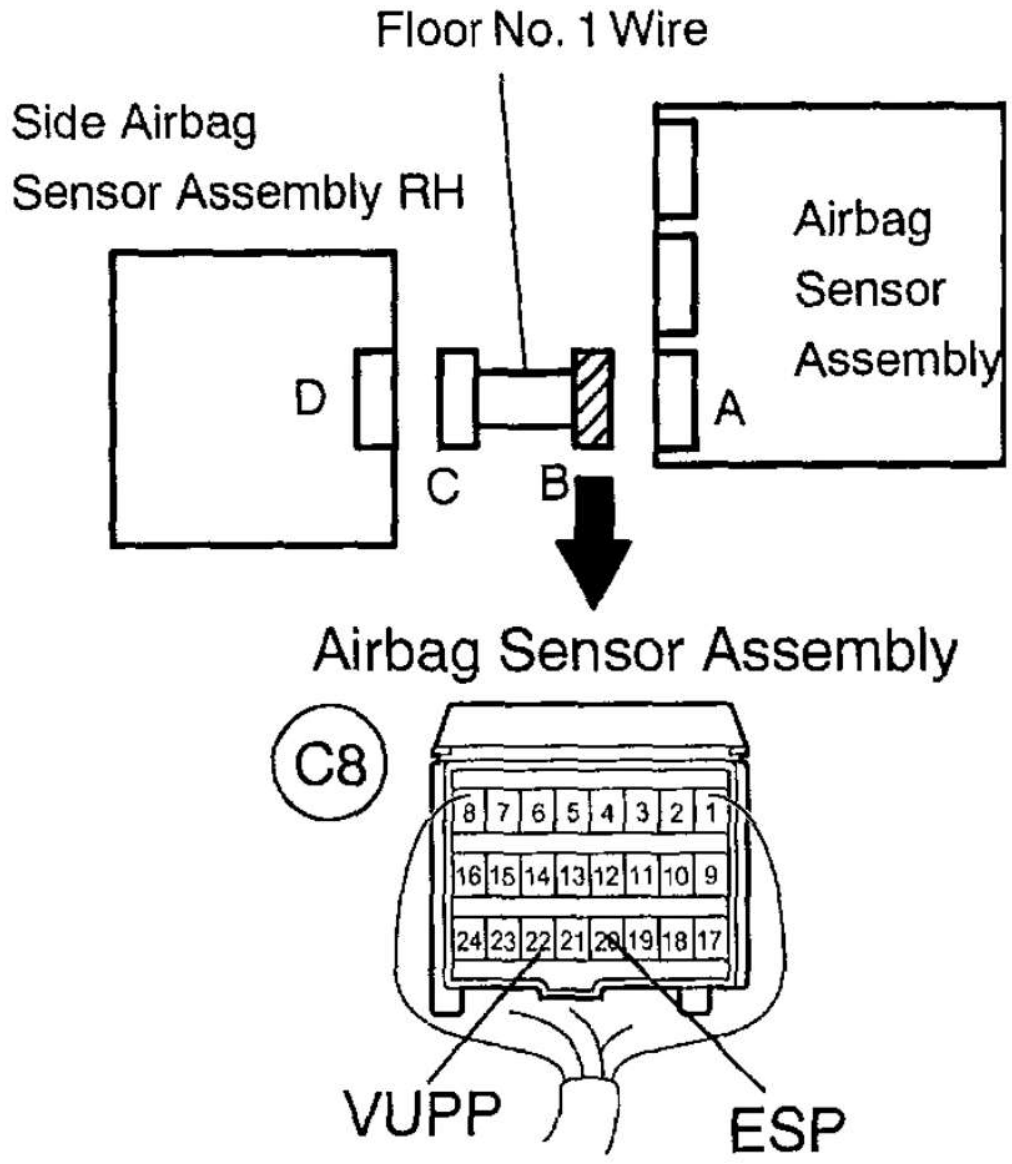



**Fig. 58: Checking Floor No. 1 Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**
**OK: Go To Next Step.**

7. **Check side airbag sensor assembly (RH).**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**PREPARATION:**

a. Connect the connector to the airbag sensor assembly.
b. Interchange the side airbag sensor assembly RH with LH and connect the connectors to them.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**)
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

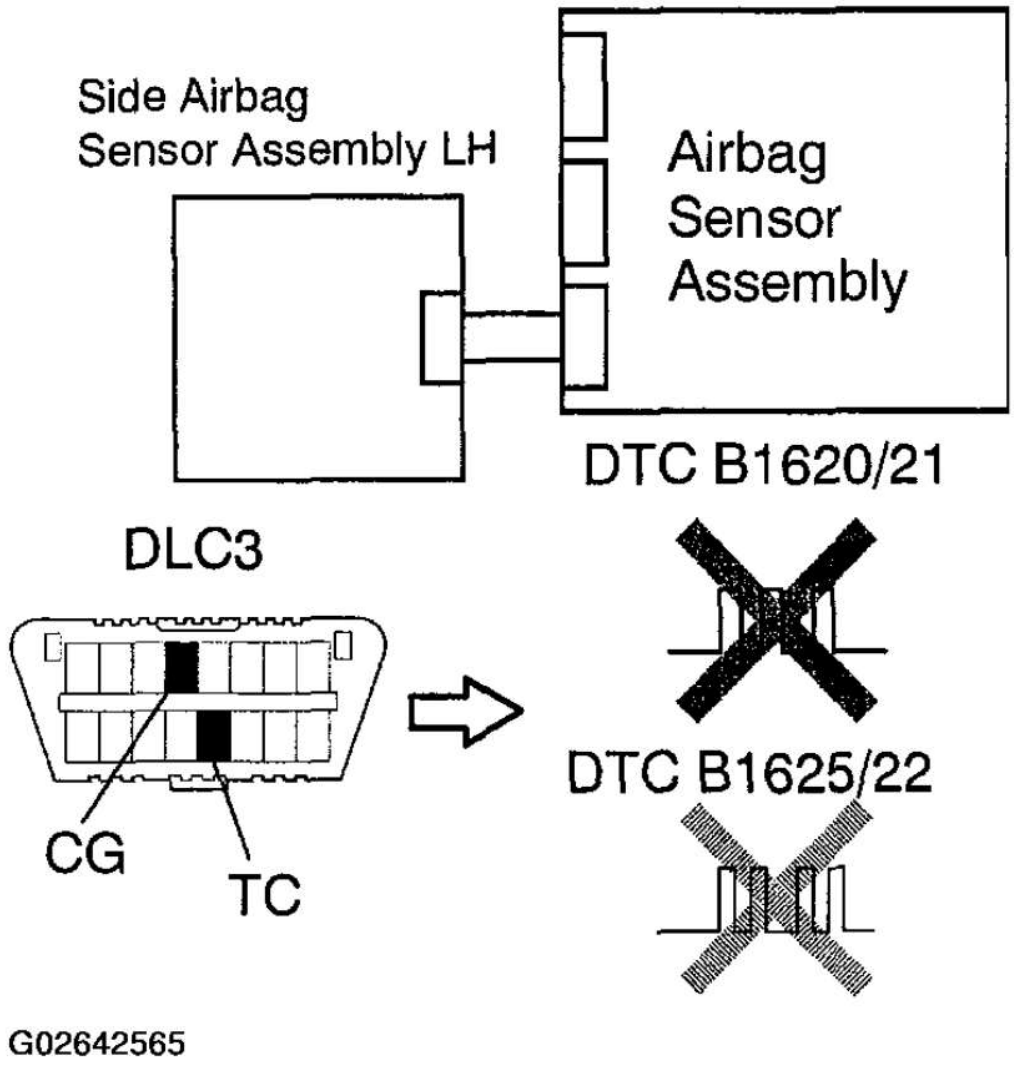



**Fig. 59: Checking Side Airbag Sensor Assembly (RH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC OUTPUT**

| | |
| --- | --- |
| DTC B1625/22 is output. | A |
| DTC B1620/21 is output. | B |
| DTC B1620/21 and B1625/22 are not output. | C |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

HINT:

Codes other than DTC B1625/22 or B1620/21 may be output at this time, but they are not relevant to this check.

**A: Replace airbag sensor assembly.**

**B: Replace side airbag sensor assembly RH.**

**C: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

## DTC B1630/23: CURTAIN SHIELD AIRBAG SENSOR ASSEMBLY LH MALFUNCTION

### CIRCUIT DESCRIPTION

The curtain shield airbag sensor assembly LH consists of the safing sensor, diagnosis circuit and lateral deceleration sensor, etc. It receives signals from the lateral deceleration sensor, judges whether or not the SRS should be activated, and detects diagnosis system malfunction.

| DTC No. | DTC Detecting Condition | Trouble Area |
|---|---|---|
| B1630/23 | • When airbag sensor assembly receives line short signal, open signal, short to ground signal or B+ short signal in airbag sensor rear LH circuit for 2 seconds.<br>• Curtain shield airbag sensor assembly LH malfunction.<br>• Airbag sensor assembly malfunction. | • Curtain shield airbag sensor assembly LH<br>• Floor No. 1 wire<br>• Airbag sensor assembly |

G02642566

**Fig. 60: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

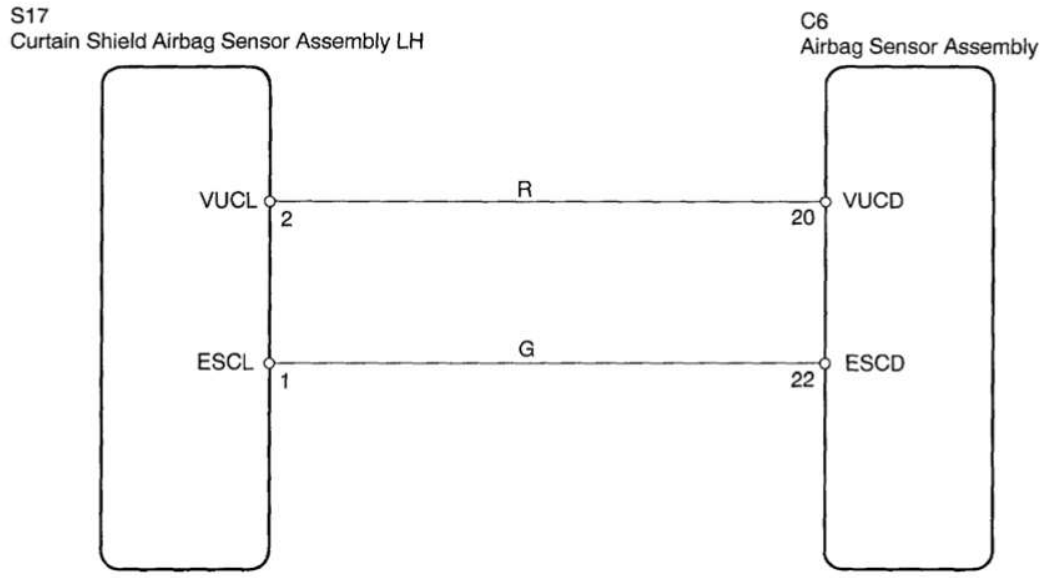



**Fig. 61: Wiring Diagram - Curtain Shield Airbag Sensor Assembly LH**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check DTC.**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**PREPARATION:**

a. Connect the connectors to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

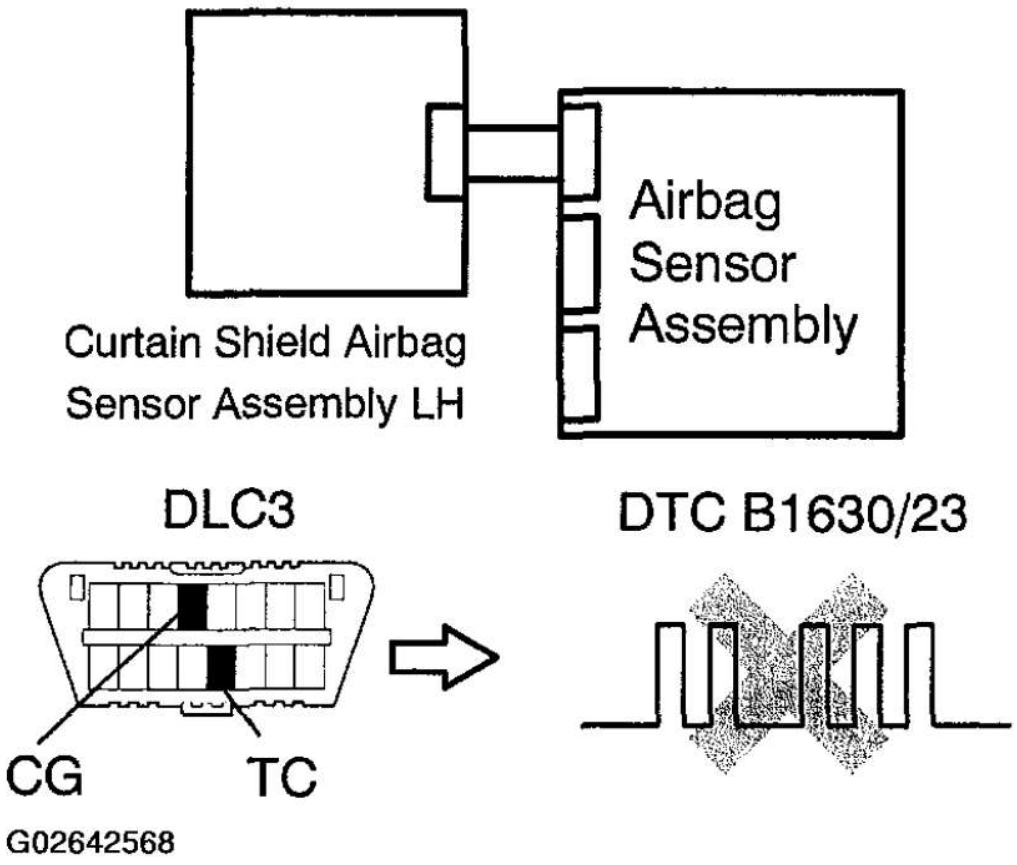



**Fig. 62: Checking For DTC**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**OK:**

**DTC B1630/23 is not output.**

HINT:

Codes other than DTC B1630/23 may be output at this time, but they are not related to this check.

**NG: Go to step 2.**

**OK: The malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

2. **Check connections of connectors**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Check that the connectors are properly connected to the airbag sensor assembly and curtain shield airbag sensor assembly LH.

**OK:**

**The connectors are connected.**

**NG: Connect connectors, then go to step 1.**

**OK: Go To Next Step.**

3. **Check floor No. 1 wire (open).**

**PREPARATION:**

a. Disconnect the connectors from the airbag sensor assembly and the curtain shield airbag sensor assembly LH.
b. Using SST, connect terminals S17-2 and S17-1 of connector "C".

SST 09843-18040

**CHECK:**

Measure the resistance according to the table below.

**OK:**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**FLOOR NO. 1 WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C6-20 (VUCD) - C6-22 (ESCD) | Always | Below 1 ohm |

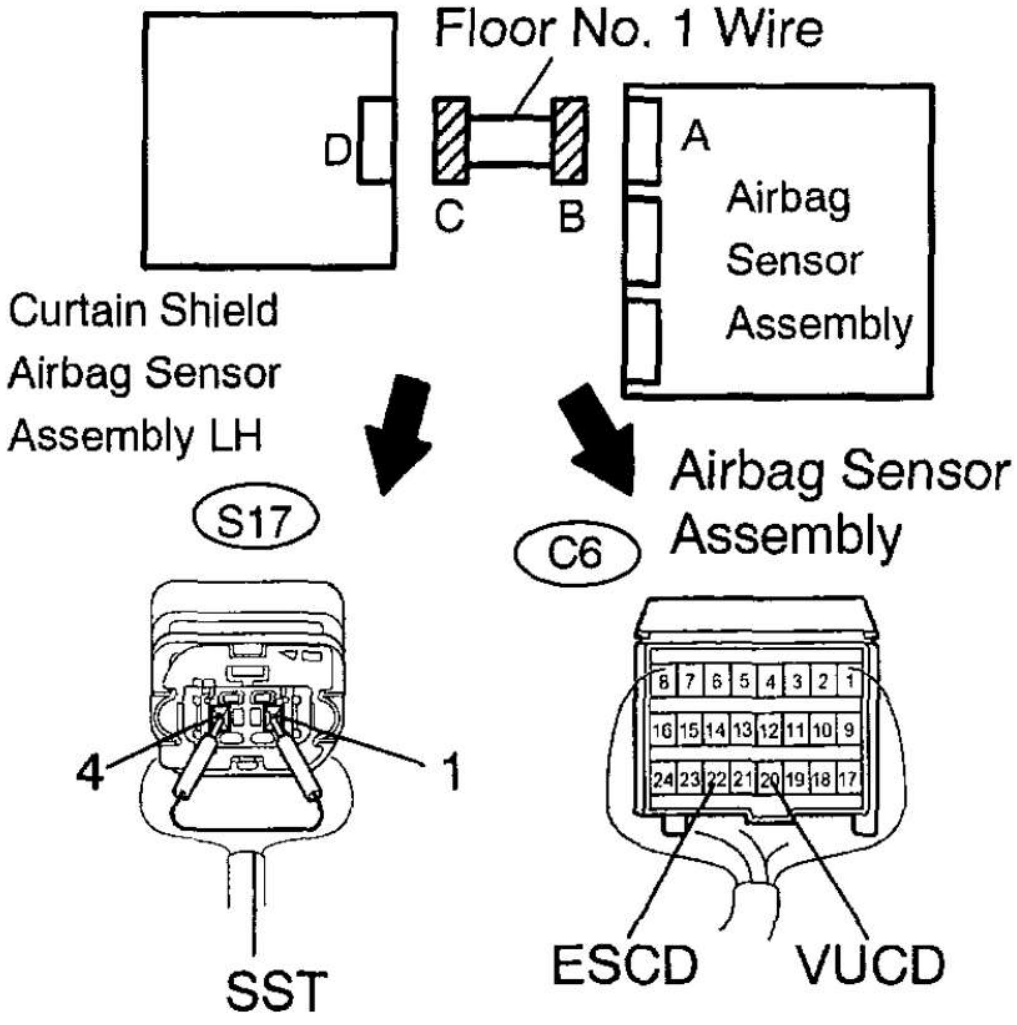



**Fig. 63: Checking Floor No. 1 Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

4. **Check floor No. 1 wire (short).**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**PREPARATION:**

Disconnect the SST from connector "C".

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C6-20 (VUCD) - C6-22 (ESCD) | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

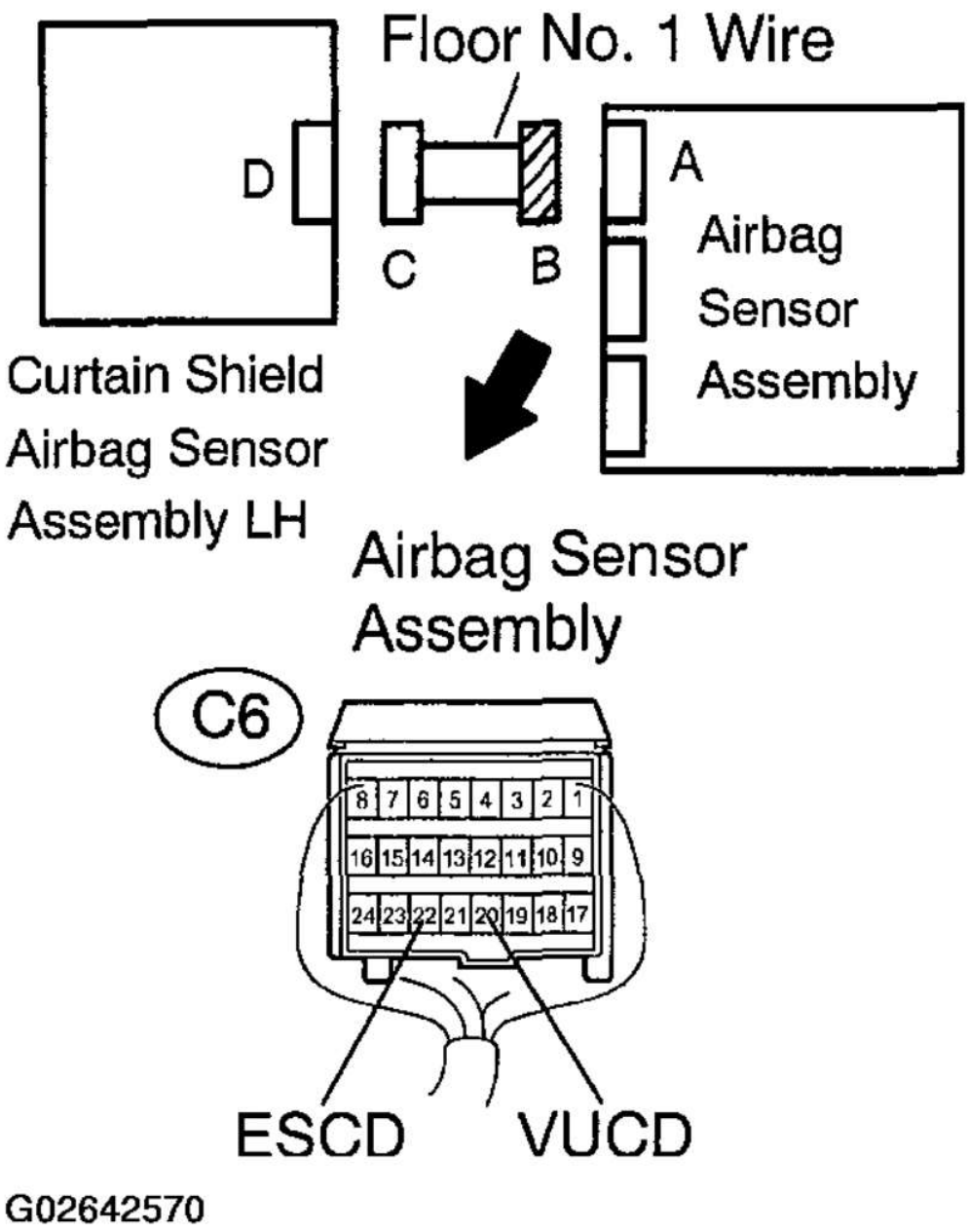



**Fig. 64: Checking Floor No. 1 Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go To Next Step.**

5. **Check floor No. 1 wire (to B+).**

**PREPARATION:**

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C6-20 (VUCD) - Body ground | Ignition switch ON | Below 1 V |
| C6-22 (ESCD) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

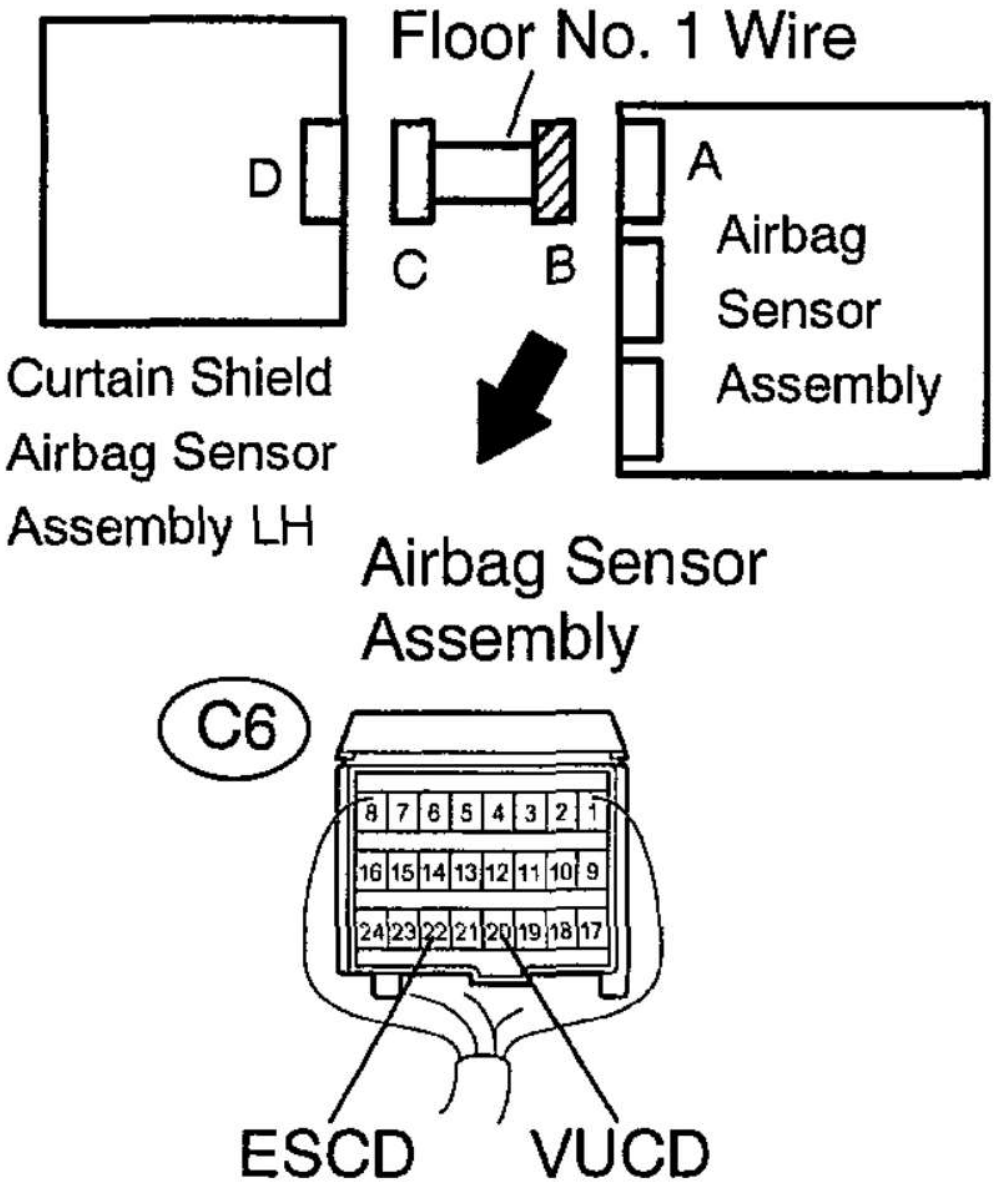



**Fig. 65: Checking Floor No. 1 Wire (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**
**OK: Go To Next Step.**

cardiagn.com

6. **Check floor No. 1 wire (to ground).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C6-20 (VUCD) - Body ground | Always | 1 Mohm or higher |
| C6-22 (ESCD) Body ground | Always | 1 Mohm or higher |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

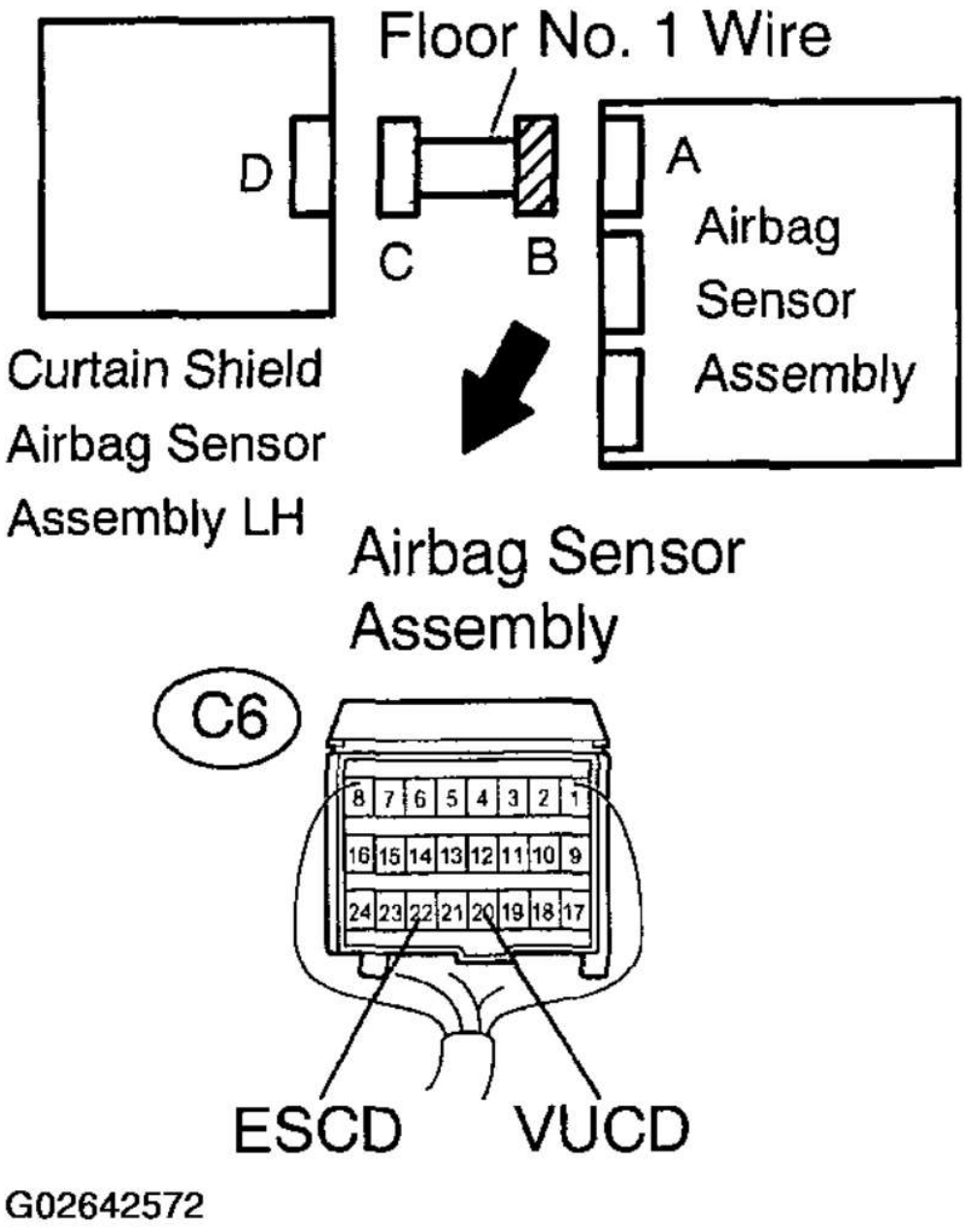



**Fig. 66: Checking Floor No. 1 Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**OK: Go To Next Step.**

7. **Check airbag sensor assembly.**

**PREPARATION:**

a. Connect the connector to the airbag sensor assembly.
b. Interchange the curtain shield airbag sensor assembly RH with the LH and connect the connectors to them.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

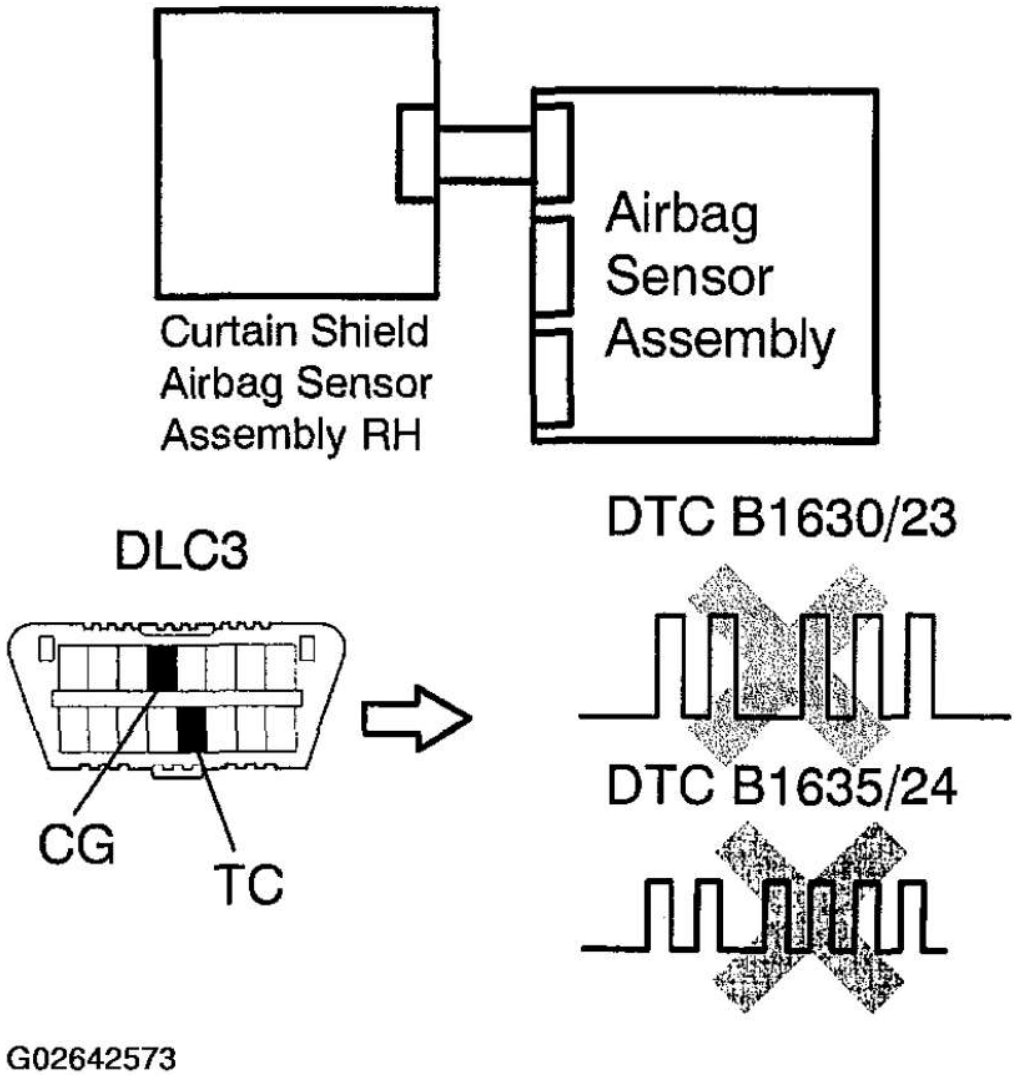



**Fig. 67: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC OUTPUT**

| | |
| --- | --- |
| DTC B1630/23 is output. | A |
| DTC B1635/24 is output. | B |
| DTC B1630/23 and B1635/24 are not output. | C |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

HINT:

Codes other than DTC B1630/23 or B1635/24 may be output at this time, but they are not related to this check.

**A: Replace airbag sensor assembly.**

**B: Replace curtain shield airbag sensor assembly LH.**

**C: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

## DTC B1635/24: CURTAIN SHIELD AIRBAG SENSOR ASSEMBLY RH MALFUNCTION

### CIRCUIT DESCRIPTION

The curtain shield airbag sensor assembly RH consists of the safing sensor, diagnosis circuit and lateral deceleration sensor, etc. It receives signals from the lateral deceleration sensor, judges whether or not the SRS should be activated, and detects diagnosis system malfunction.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1635/24 | • When airbag sensor assembly receives a line short signal, open signal, short to ground signal or B+ short signal in the airbag sensor rear RH circuit for 2 seconds.<br>• Curtain shield airbag sensor assembly RH malfunction.<br>• Airbag sensor assembly malfunction. | • Curtain shield airbag sensor assembly RH<br>• Floor No. 1 wire<br>• Airbag sensor assembly |

G02642574

**Fig. 68: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

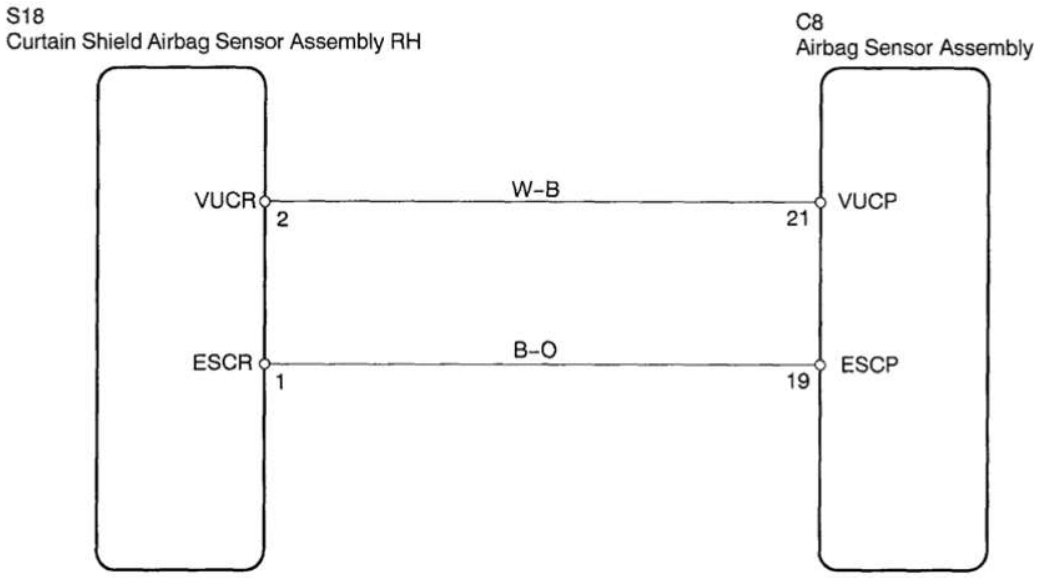



**Fig. 69: Wiring Diagram - Curtain Shield Airbag Sensor Assembly RH**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check DTC**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**PREPARATION:**

a. Connect the connectors to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

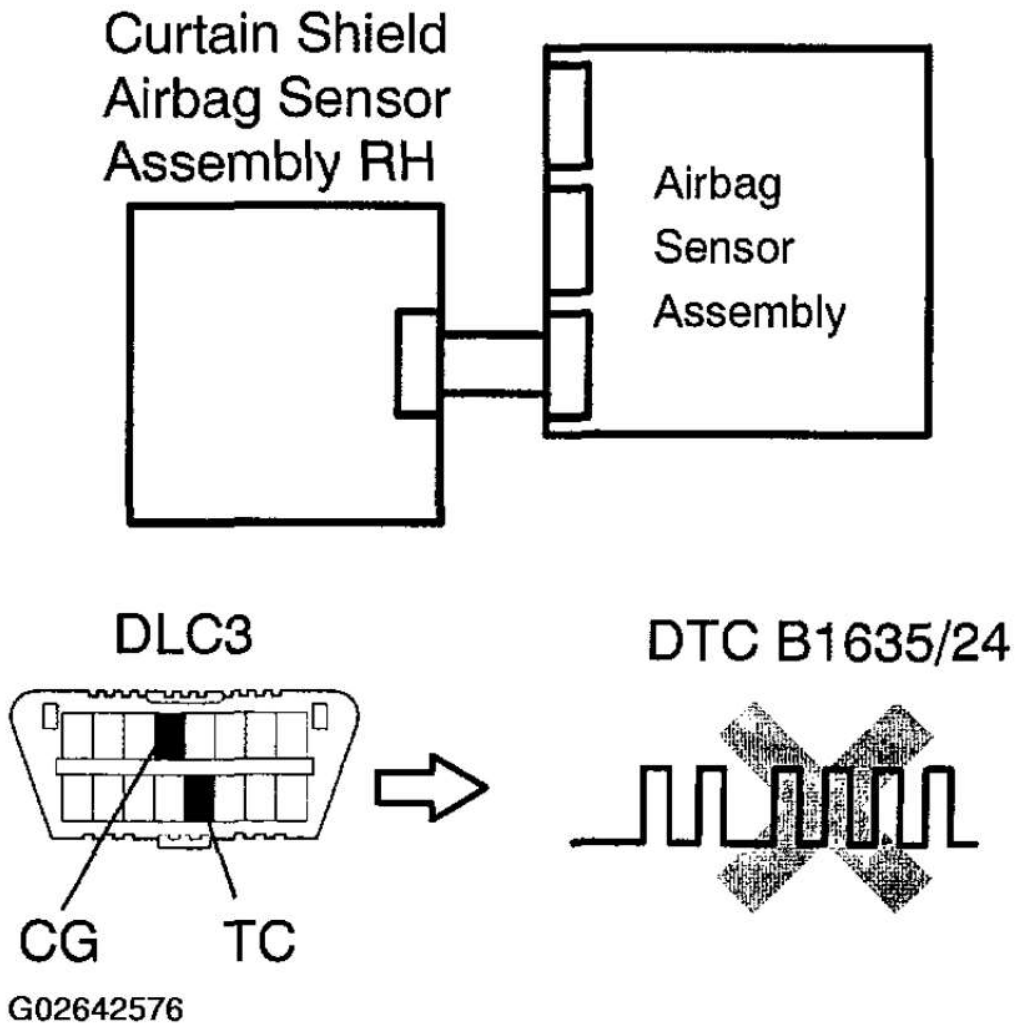



**Fig. 70: Checking For DTC**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC B1635/24 is not output.**

HINT:

Codes other than DTC B1635/24 may be output at this time, but they are not related to this check.

**NG: Go to step 2.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**OK: Malfunctioning part can now be considered normal. To make sure of this, use simulation method of check.**

2. **Check connections of connectors**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Check that the connectors are properly connected to the airbag sensor assembly and curtain shield airbag sensor assembly RH.

**OK:**

**The connectors are connected.**

**NG: Connect connectors, then Go to step 1.**

**OK: Go To Next Step.**

3. **Check floor No. 1 wire (open).**

**PREPARATION:**

a. Disconnect the connectors from the airbag sensor assembly and the curtain shield airbag sensor assembly RH.
b. Using SST, connect terminals S18-2 and S18-2 of connector "C".

SST 09843-18040

**CHECK:**

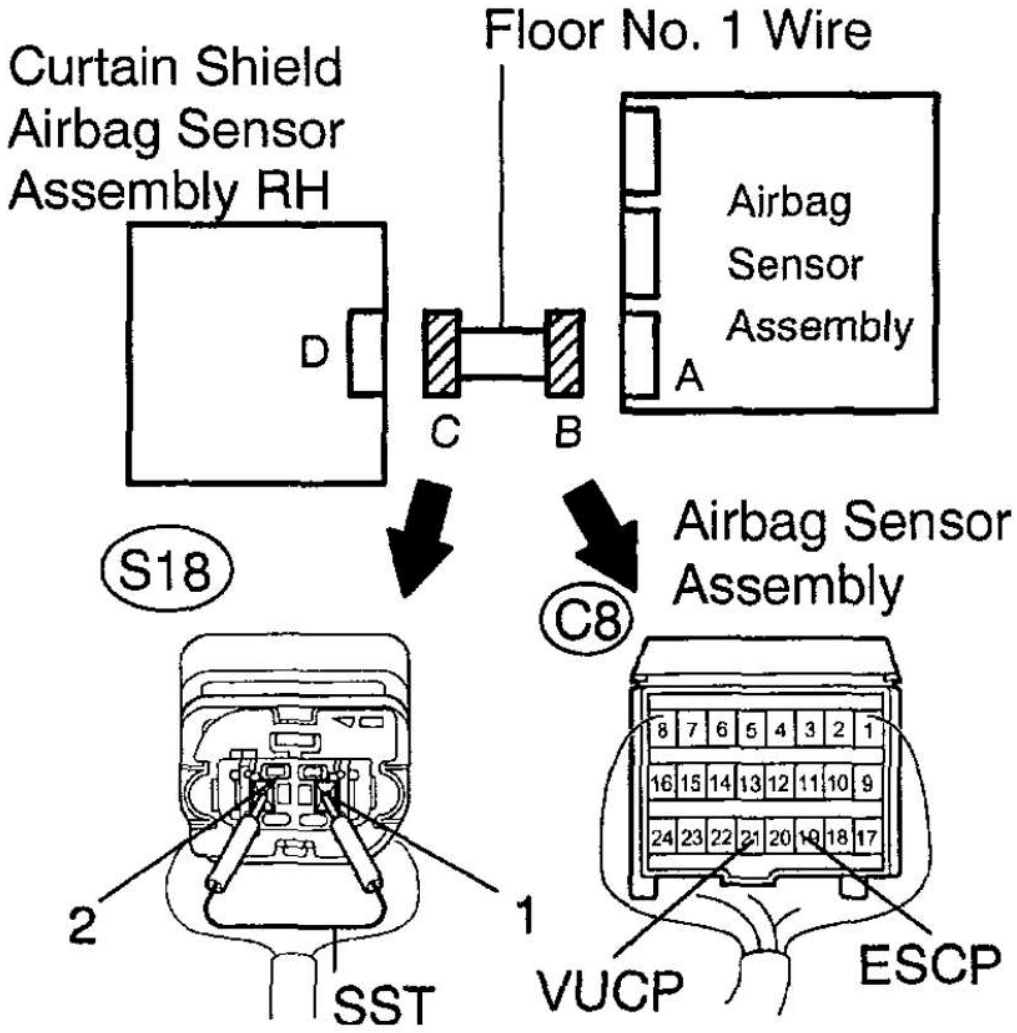
Measure the resistance between terminals VUCP and ESCP of the floor No. 1 wire connector on the airbag sensor assembly side.

**FLOOR NO. 1 WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C8-21 (VUCP) - C8-19 (ESCP) | Always | Below 1 ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |




G02642577

**Fig. 71: Checking Floor No. 1 Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**
**OK: Go To Next Step.**

4. **Check floor No. 1 wire (short).**

**PREPARATION:**

Disconnect the SST from connector "C".

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

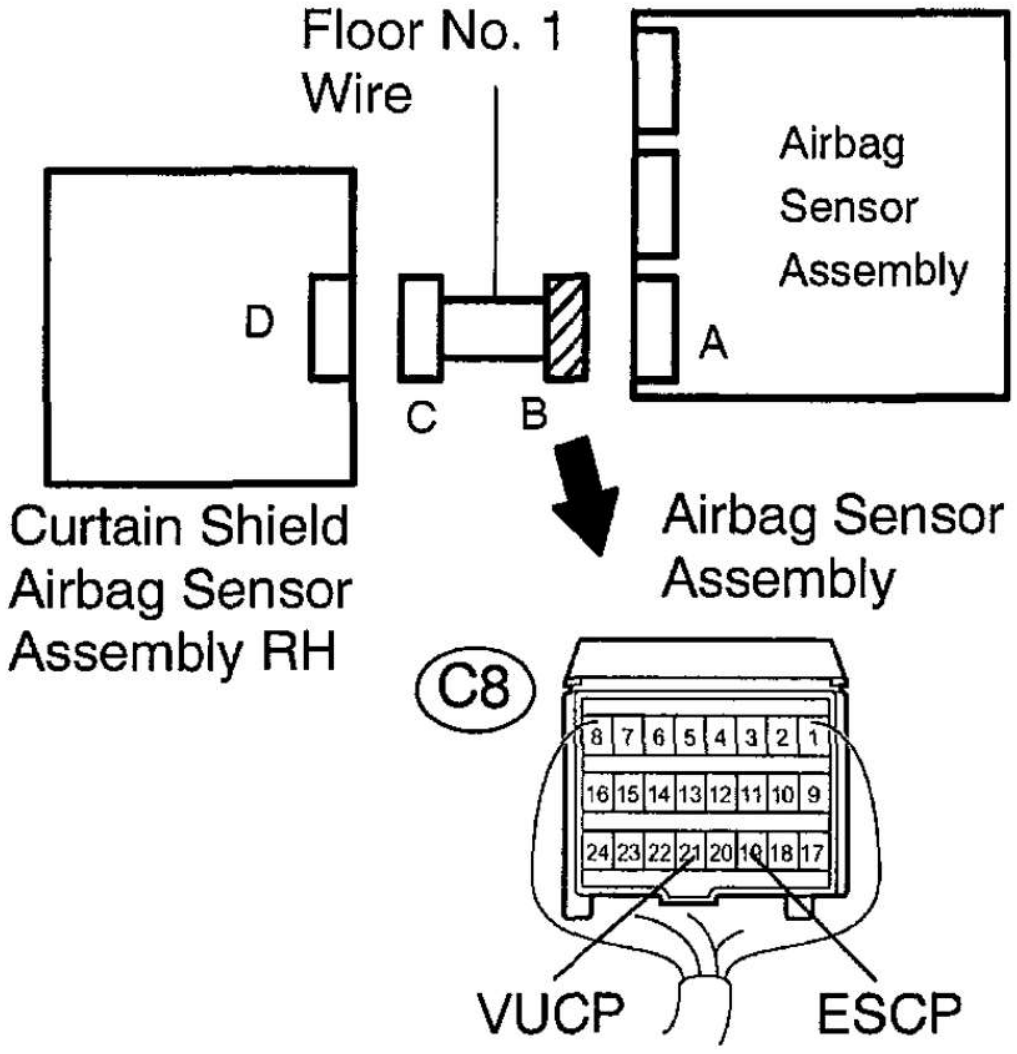
**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C8-21 (VUCP) - C8-19 (ESCP) | Always | 1 Mohm or higher |




G02642578

cardiagn.com

**Fig. 72: Checking Floor No. 1 Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

5. **Check floor No. 1 wire (to B+).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

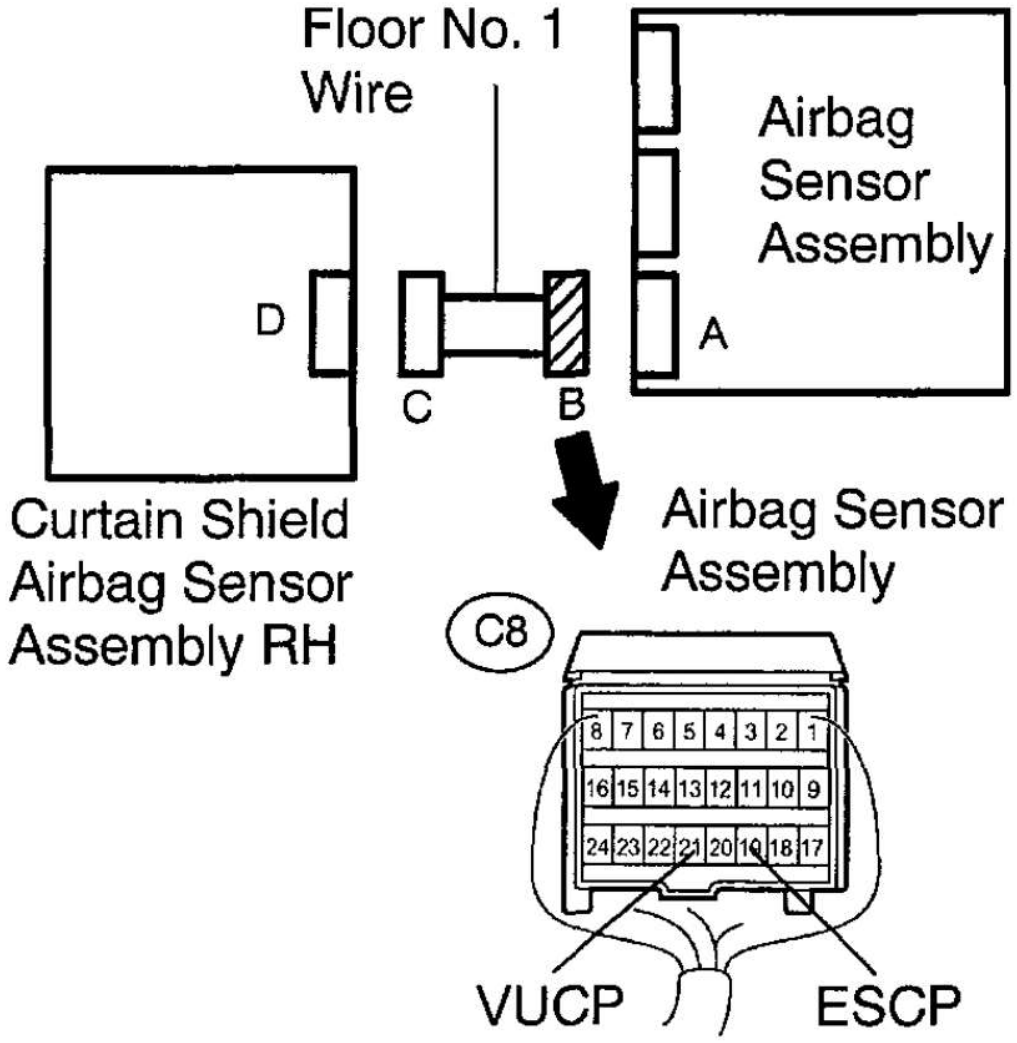
**OK:**

**FLOOR NO. 1 WIRE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C8-21 (VUCP) - Body ground | Ignition switch ON | Below 1 V |
| C8-19 (ESCP) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |




G02642579

**Fig. 73: Checking Floor No. 1 Wire (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

6. **Check floor No. 1 wire (to ground).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.

cardiagn.com

b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C8-21 (VUCP) - Body ground | Always | 1 Mohm or higher |
| C8-19 (ESCP) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

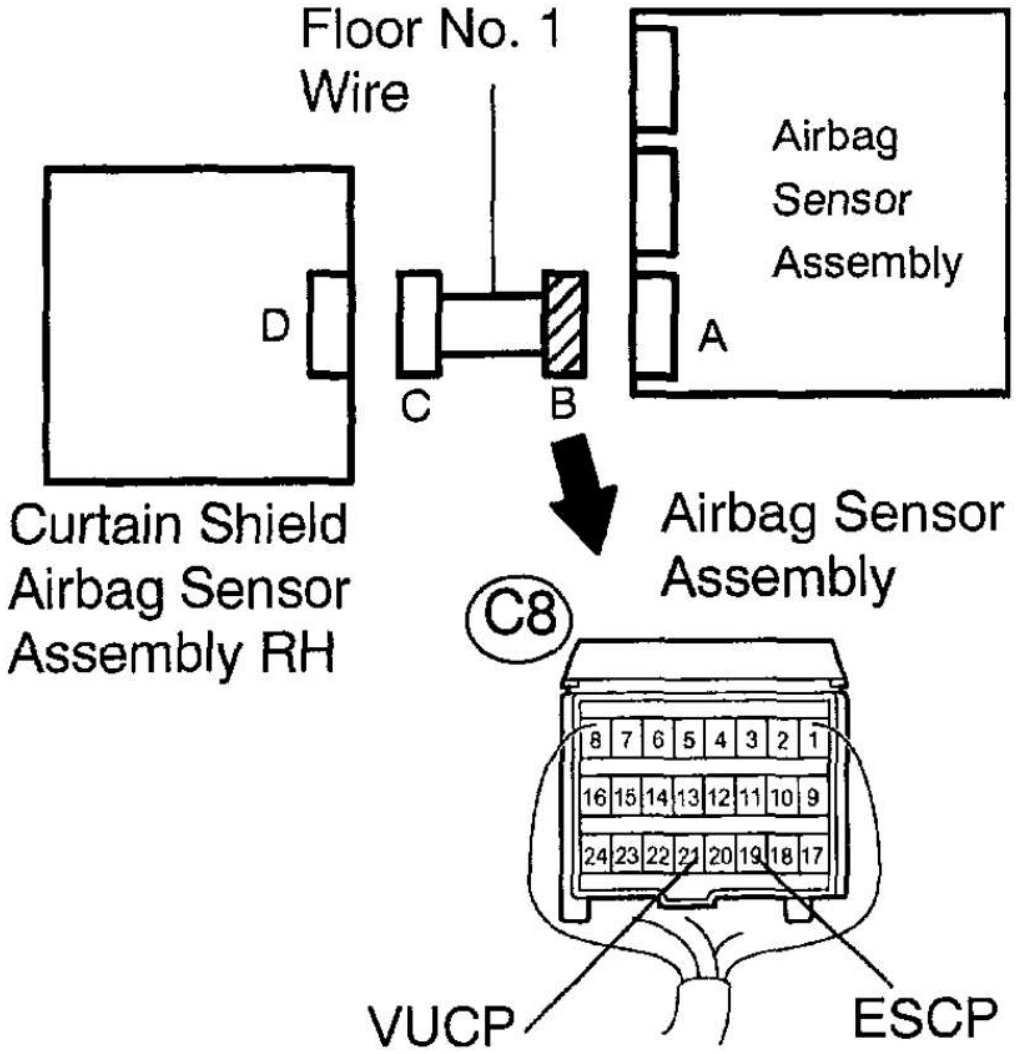



**Fig. 74: Checking Floor No. 1 Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

7. **Check airbag sensor assembly.**

**PREPARATION:**

cardiagn.com

a. Connect the connector to the airbag sensor assembly.
b. Interchange the curtain shield airbag sensor assembly RH with the LH and connect the connectors to them.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

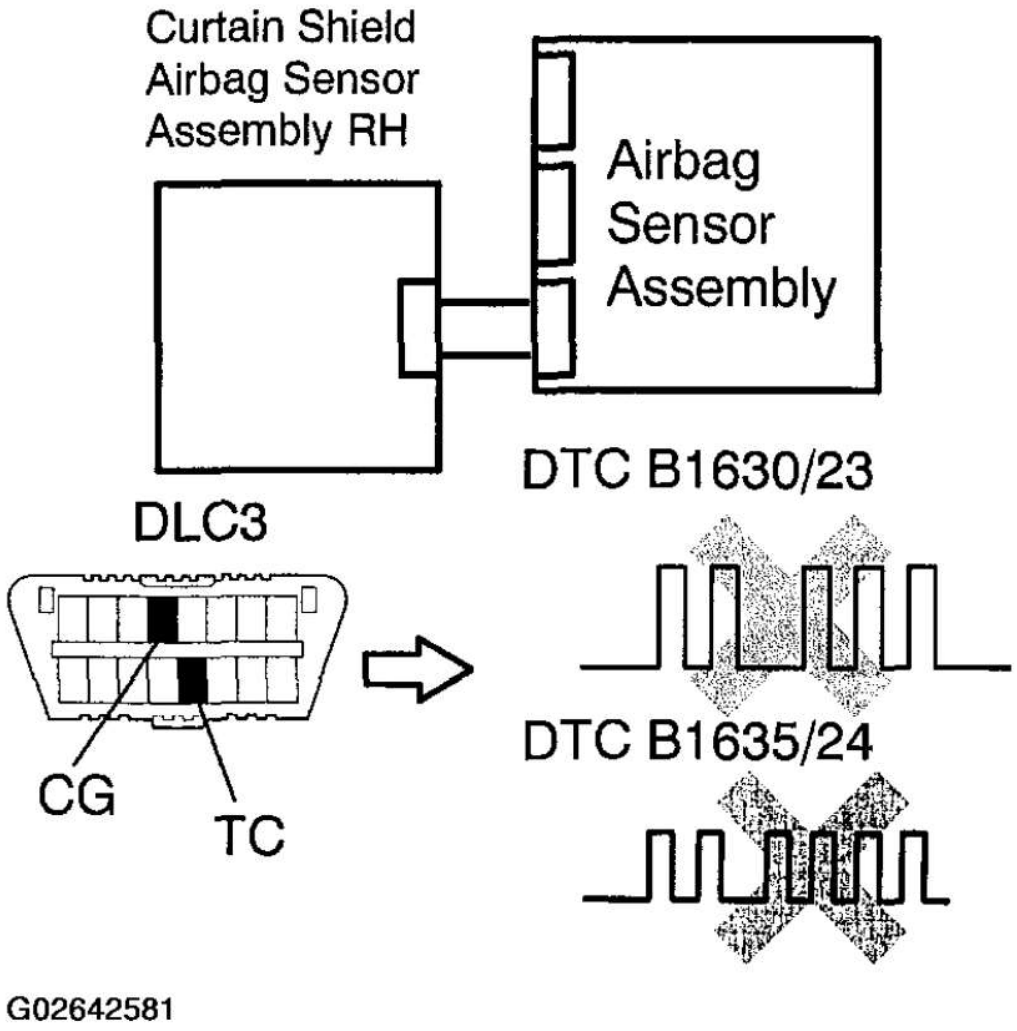



**Fig. 75: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC OUTPUT**

| | |
| --- | --- |
| DTC B1635/24 is output. | A |
| DTC B1630/23 is output. | B |
| DTC B1630/23 and B1635/24 are not output. | C |

HINT:

cardiagn.com

Codes other than DTC B1630/24 or B1635/24 may be output at this time, but they are not relevant to this check.

**A: Replace airbag sensor assembly.**

**B: Replace curtain shield airbag sensor assembly RH**

**C: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

## DTC B1653/35: SEAT POSITION SENSOR ASSEMBLY MALFUNCTION

### CIRCUIT DESCRIPTION

The seat position sensor circuit consists of the airbag sensor assembly and the seat position sensor assembly. For details of the function of each components, see **OPERATION** .

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1653/35 | • When airbag sensor assembly receives line short signal, open signal, short to ground signal or B+ short signal in seat position airbag sensor circuit for 2 seconds.<br>• Seat position sensor assembly malfunction.<br>• Airbag sensor assembly malfunction. | • Seat position sensor assembly<br>• Airbag sensor assembly<br>• Floor No. 1 wire |

G02642582

**Fig. 76: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

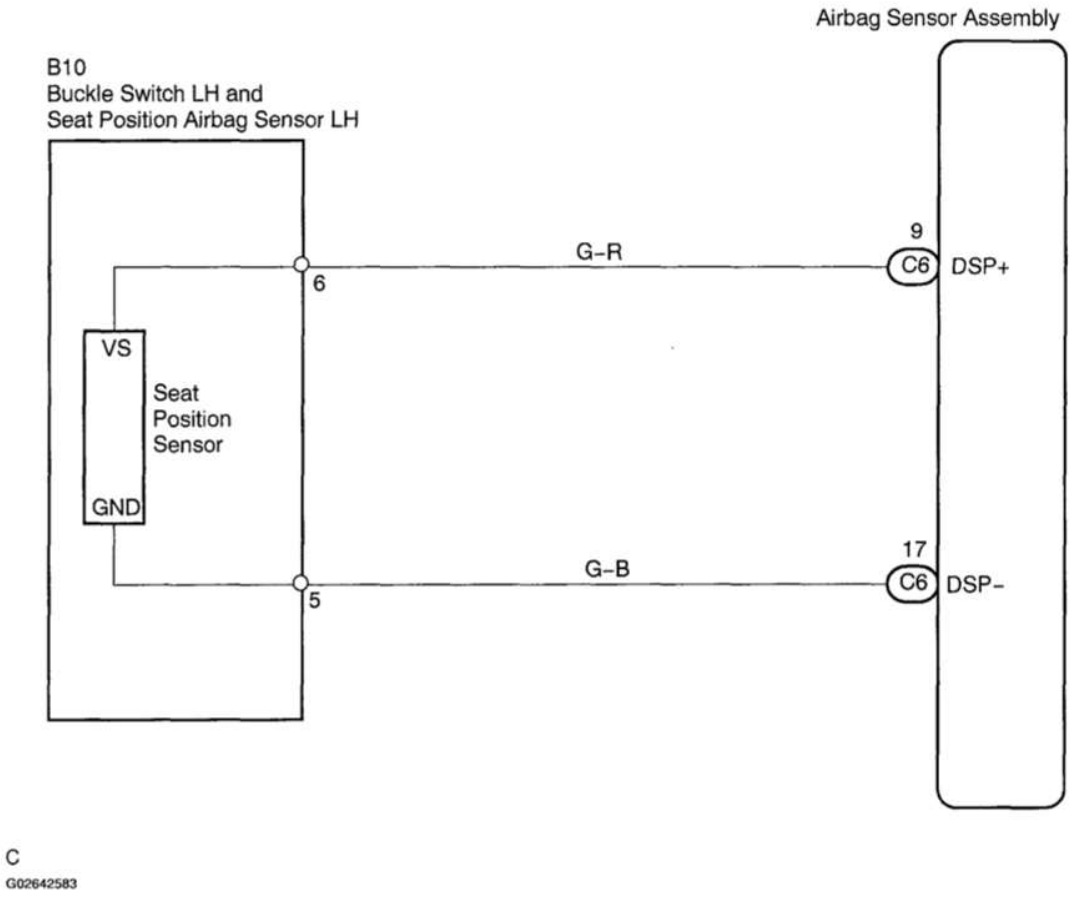



**Fig. 77: Wiring Diagram - Seat Position Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.

cardiagn.com

j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check DTC.**

**PREPARATION:**

a. Connect the connectors to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

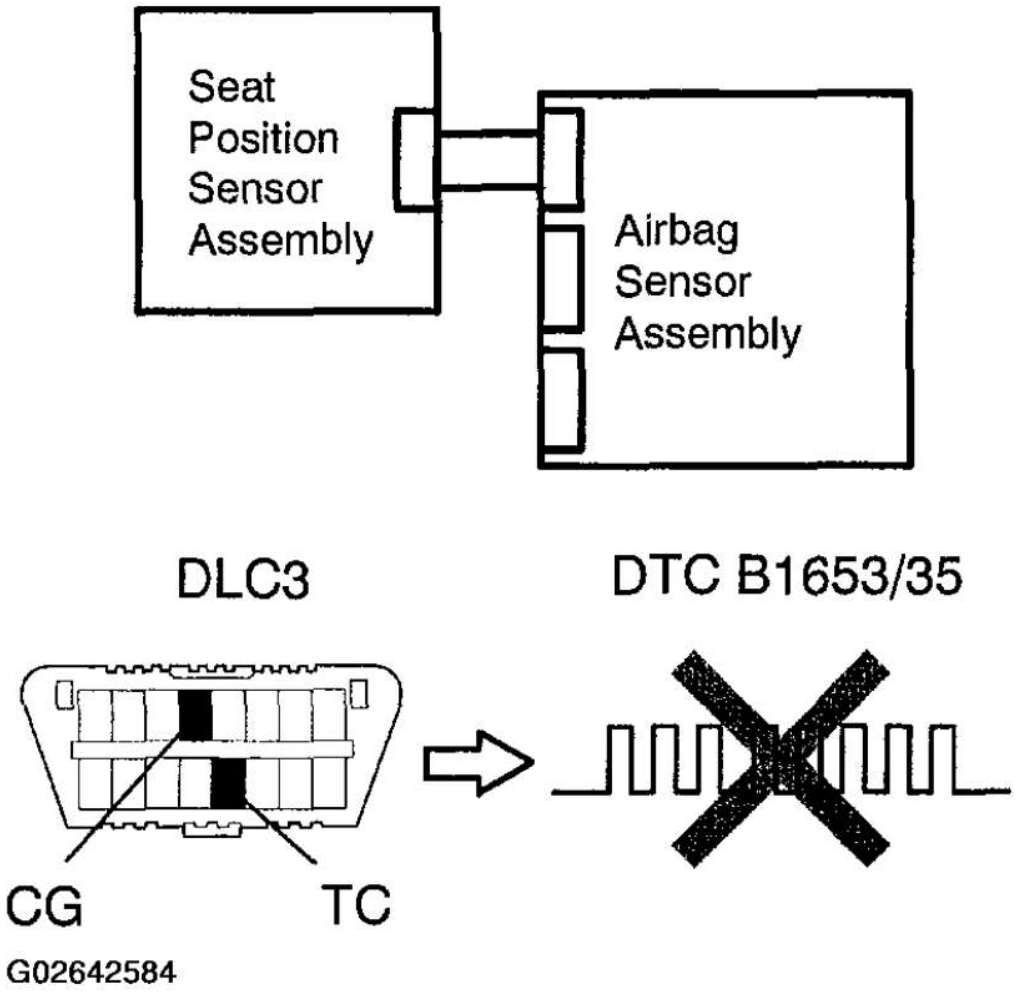



**Fig. 78: Checking For DTC**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC B1653/35 is not output.**

HINT:

Codes other than DTC B1653/35 may be output at this time, but they are not related to this check.

**NG: Go to step 2.**

**OK: The malfunctioning part can now be considered normal. To make sure of this, use**

cardiagn.com

**simulation method to check.**

2. **Check connection of connectors**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Check that the connectors are properly connected to the airbag sensor assembly and seat position sensor assembly.

**OK:**

**The connectors are connected.**
**NG: Connect connectors, then Go to step 1.**
**OK: Go To Next Step**

3. **Check floor No. 1 wire (open).**

**PREPARATION:**

a. Disconnect the connectors from the airbag sensor assembly and the seat position sensor assembly.
b. Using a service wire, connect terminals B10-6 and B10-5 of connector "C".

**NOTE: Do not forcibly insert a service wire into the terminals of the connector when connecting.**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C6-9 (DSP+) - C6-17 (DSP-) | Always | Below 1 ohm |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

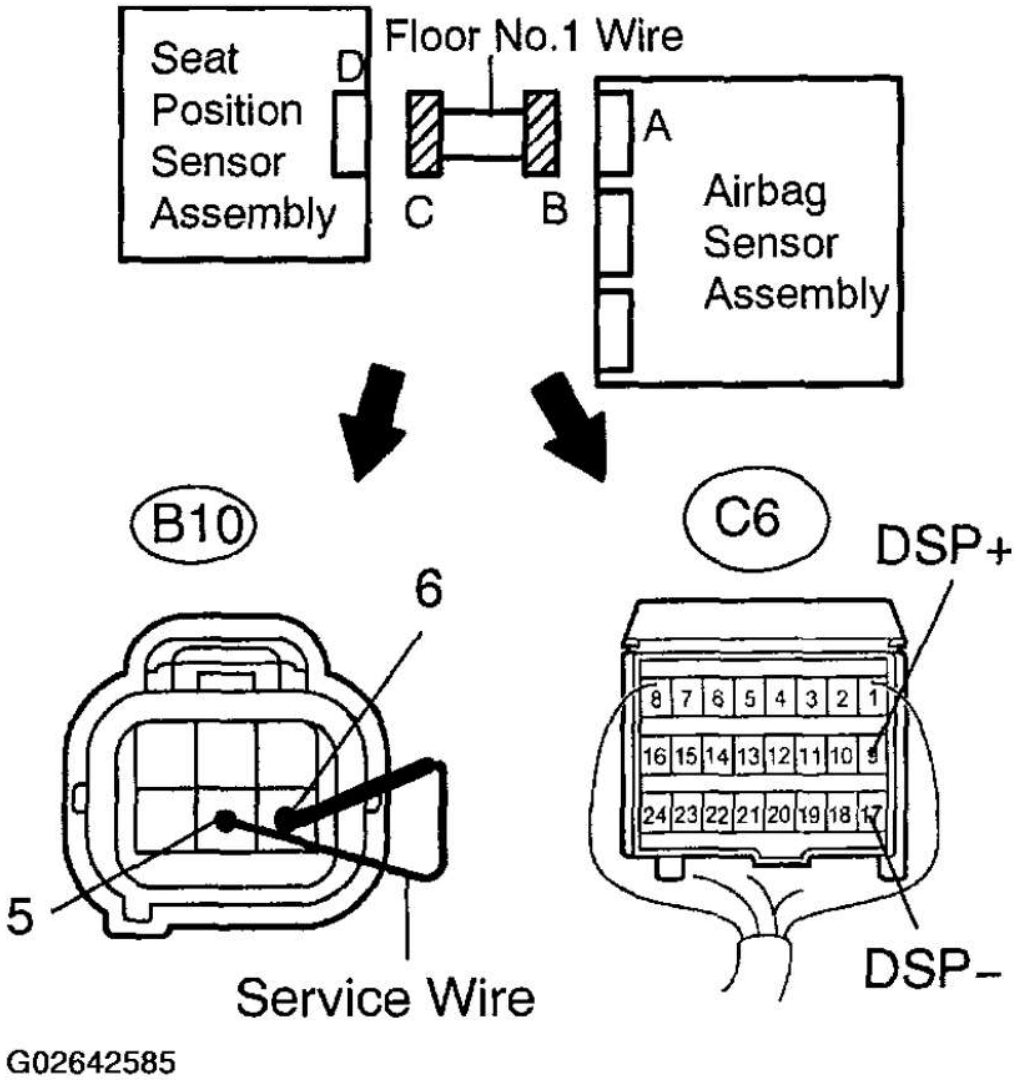



**Fig. 79: Checking Floor No. 1 Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step**

4. **Check floor No. 1 wire (short).**

**PREPARATION:**

Disconnect the service wire from connector "C".

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C6-9 (DSP+) - C6-17 (DSP-) | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

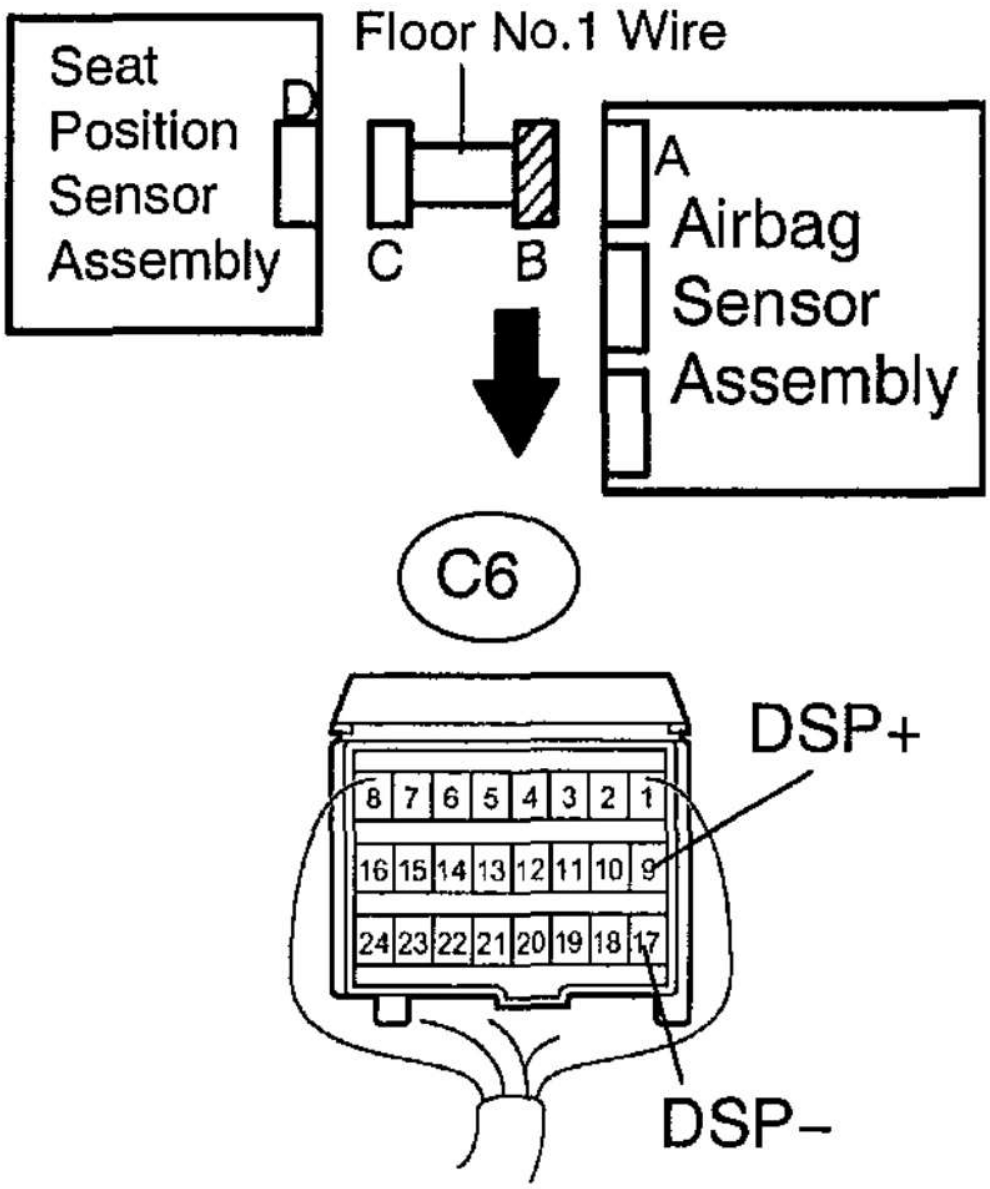



**Fig. 80: Checking Floor No. 1 Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go To Next Step.**

5. **Check floor No. 1 wire (to B+)**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C6-9 (DSP+) - Body ground | Ignition switch ON | Below 1 V |
| C6-17 (DSP-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

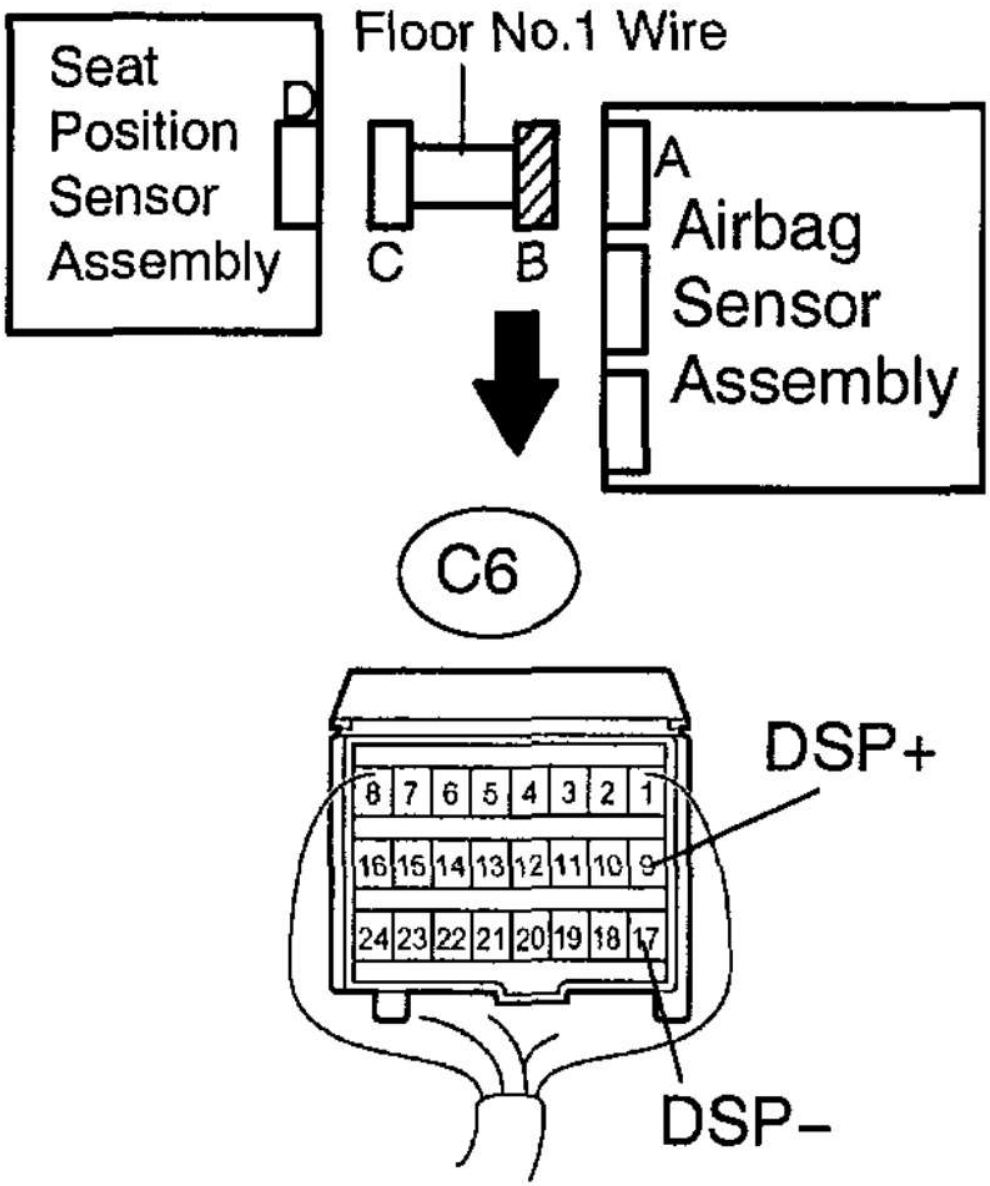



**Fig. 81: Checking Floor No. 1 Wire (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go To Next Step.**

6. **Check floor No. 1 wire (to ground).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C6-9 (DSP+) - Body ground | Always | 1 Mohm or higher |
| C6-17 (DSP-) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

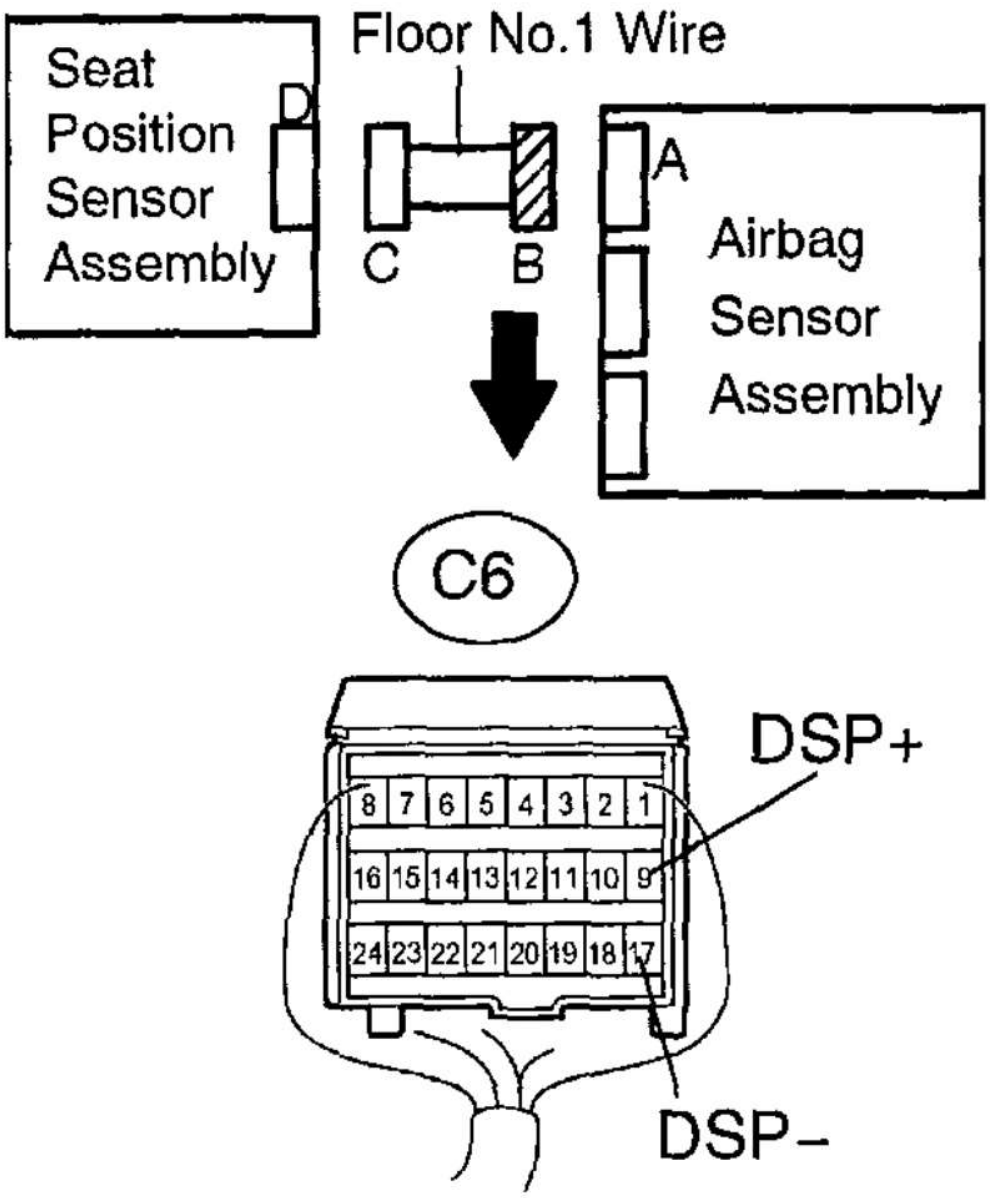



**Fig. 82: Checking Floor No. 1 Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go To Next Step.**

7. **Check seat position sensor assembly.**

**PREPARATION:**

a. Connect the connectors of the seat position sensor assembly and the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC B1653/35 is not output.**

HINT:

Codes other that DTC B1653/35 may be output at this time, but they are not related to this check.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

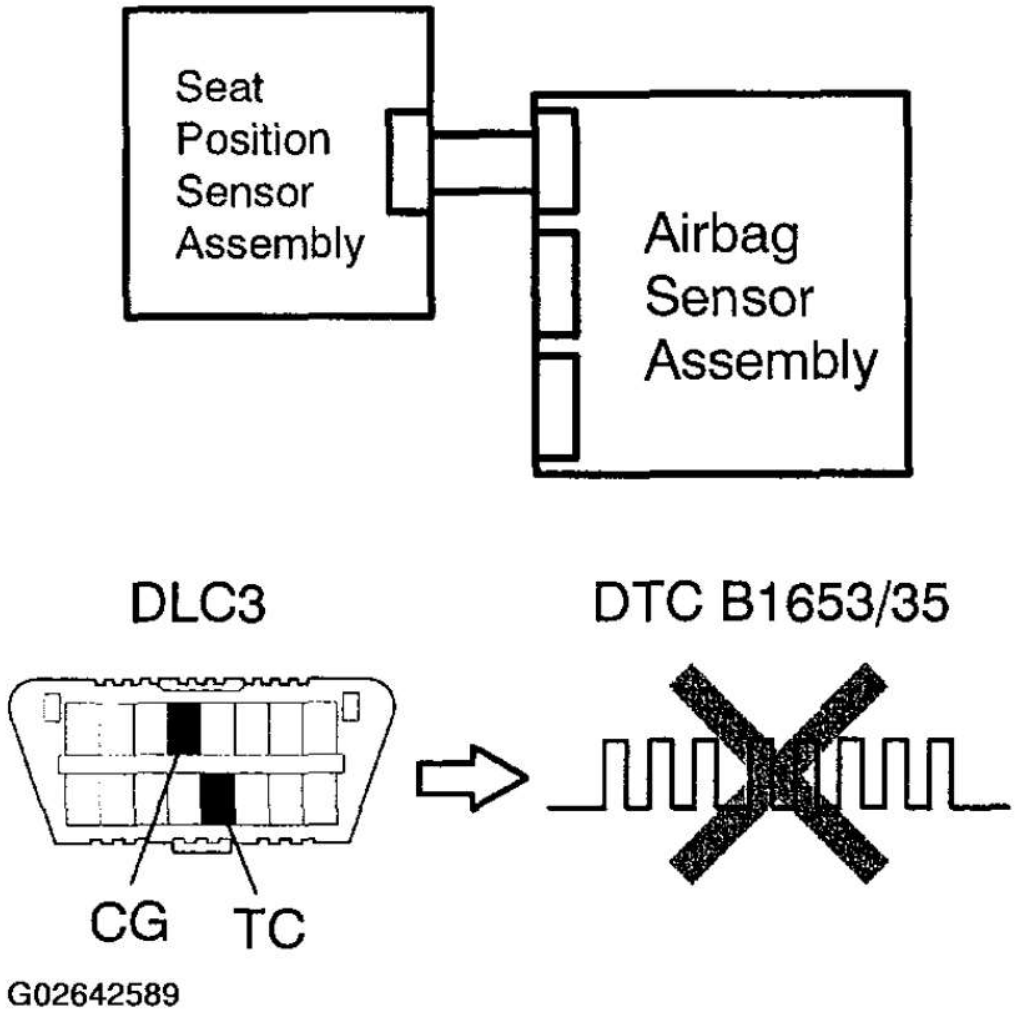



**Fig. 83: Checking Seat Position Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 8.**

**OK: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

8. **Replace seat position sensor assembly.**
   a. Turn the ignition switch to the LOCK position.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Replace the seat position sensor assembly (see **REPLACEMENT** ).

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

HINT:

Perform the inspection using parts from a normal vehicle when possible.

9. **Check airbag sensor assembly.**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least for 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC B1653/35 is not output.**

HINT:

Codes other that DTC B1653/35 may be output at this time, but they are not related to this check.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

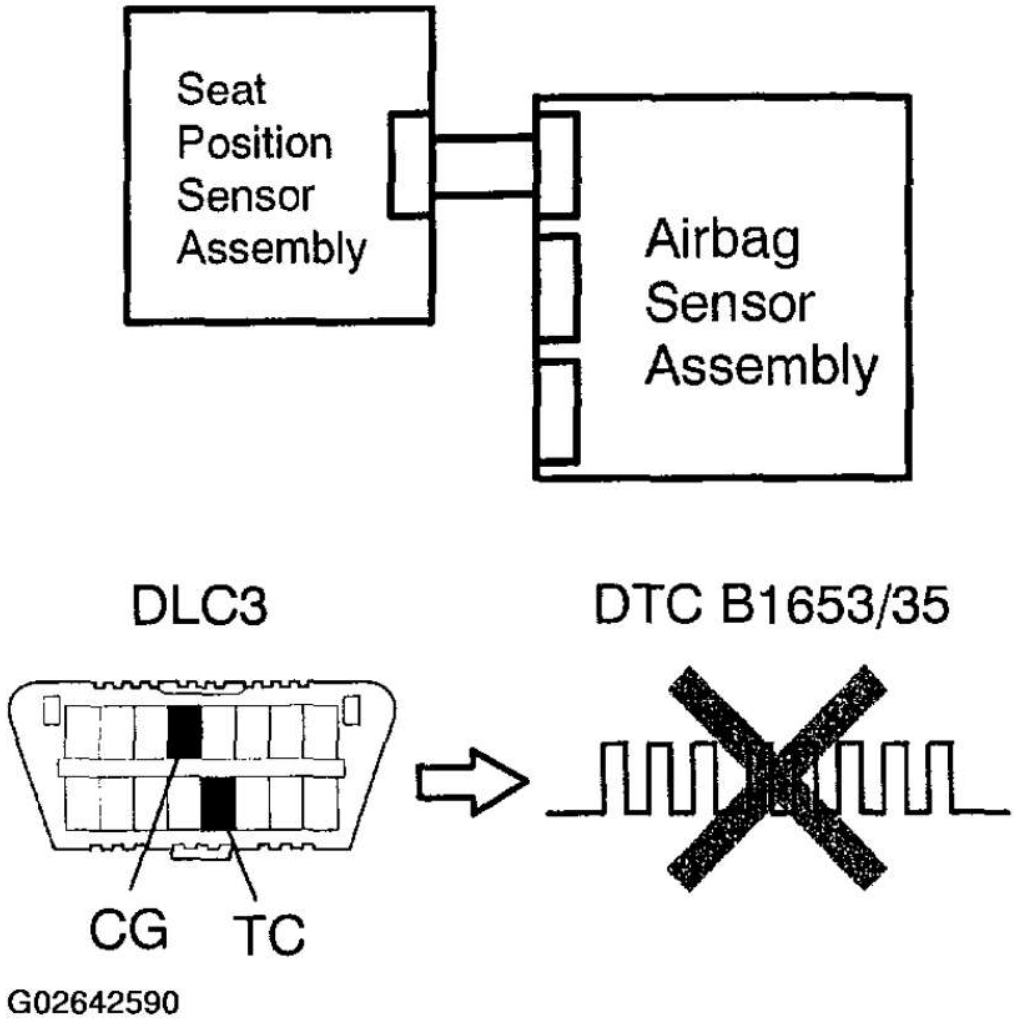



**Fig. 84: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Replace airbag sensor assembly.**
**OK: END**

## DTC B1655/37: SEAT BELT BUCKLE SWITCH ASSEMBLY LH MALFUNCTION

### CIRCUIT DESCRIPTION

The seat belt buckle switch LH circuit consists of the airbag sensor assembly and the front seat inner belt LH (seat belt buckle switch LH). For details of the function of each component, see **OPERATION** .

cardiagn.com

## 2005 Toyota RAV4

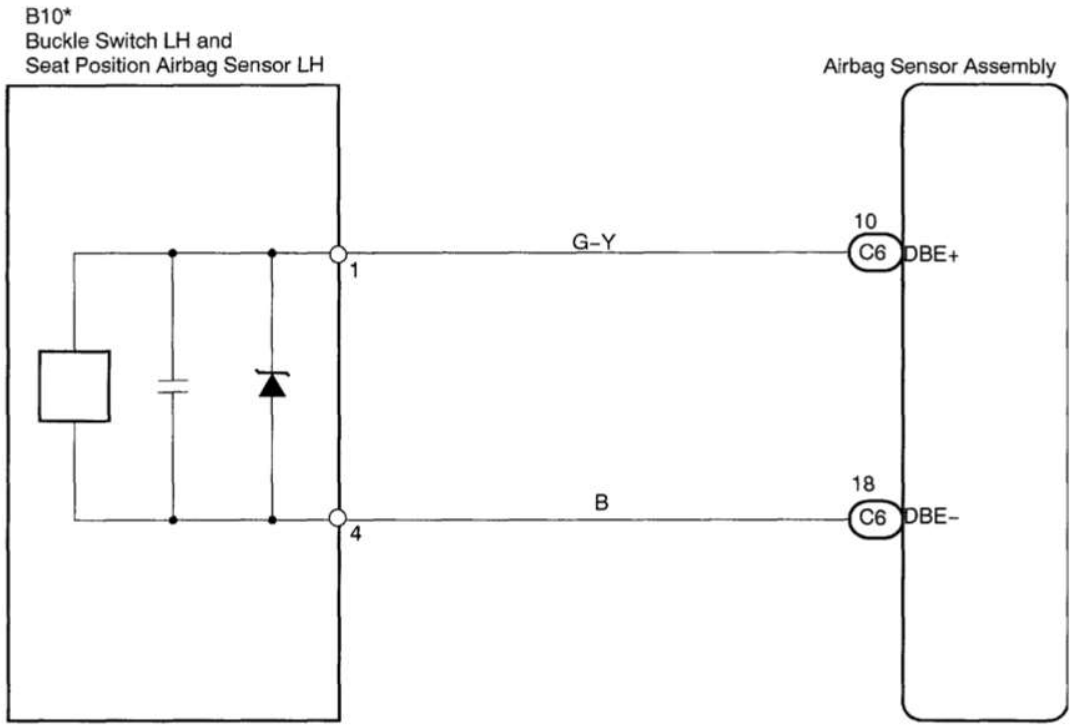
2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1655/37 | • When airbag sensor assembly receives line short signal, open signal, short to ground signal or B+ short signal in seat belt buckle switch LH circuit for 2 seconds.<br>• Front seat inner belt assembly LH malfunction.<br>• Airbag sensor assembly malfunction. | • Front seat inner belt assembly LH (Seat belt buckle switch LH)<br>• Airbag sensor assembly<br>• Floor No. 1 wire |

G02642591

**Fig. 85: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM




*: The connectors of the seat position airbag sensor LH and the front seat inner belt assembly LH (buckle switch LH) are in common use.

G02642592

**Fig. 86: Wiring Diagram - Seat Belt Buckle Switch assembly LH**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### INSPECTION PROCEDURE

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

cardiagn.com

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check DTC**

**PREPARATION:**

a. Connect the connectors to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

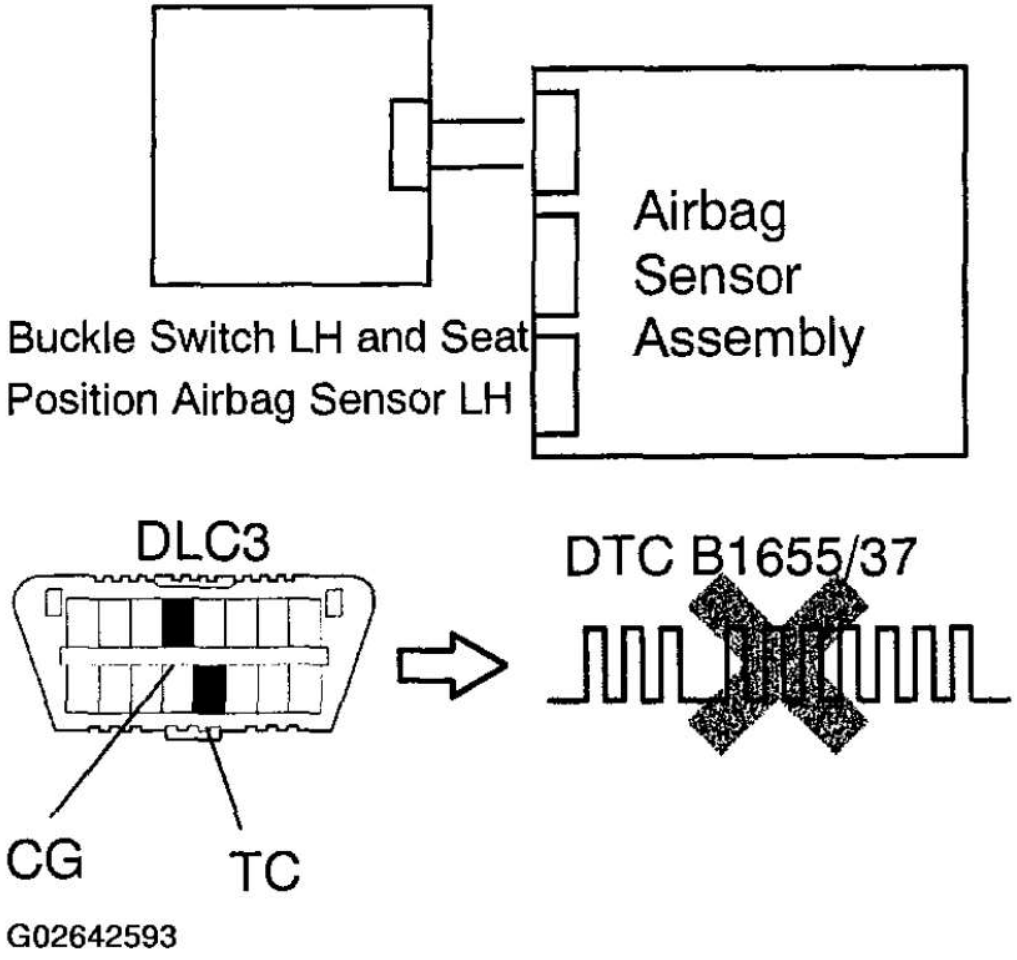



**Fig. 87: Checking For DTC**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC B1655/37 is not output.**

HINT:

Codes other than DTC B1655/37 may be output at this time, but they are not related to this check.

**NG: Go to step 2.**

**OK: Malfunctioning part can not be considered normal. To make sure of this, use simulation method to check.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

2. **Check connection of connectors.**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Check that the connectors are properly connected to the airbag sensor assembly and buckle switch LH and seat position airbag sensor LH.

**OK:**

**The connectors are connected.**
**NG: Connect connector, then Go to step 1.**
**OK: Go To Next Step.**

3. **Check wire harness (open).**

**PREPARATION:**

a. Disconnect the connectors from the airbag sensor assembly and the buckle switch LH and seat position airbag sensor LH.
b. Using a service wire, connect terminals B10-1 and B10-4 of connector "C".

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**AIRBAG SENSOR ASSEMBLY AND BUCKLE SWITCH LH AND SEAT POSITION AIRBAG SENSOR LH RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C6-10 (DBE+) - 06-18 (DBE-) | Always | Below 1 ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

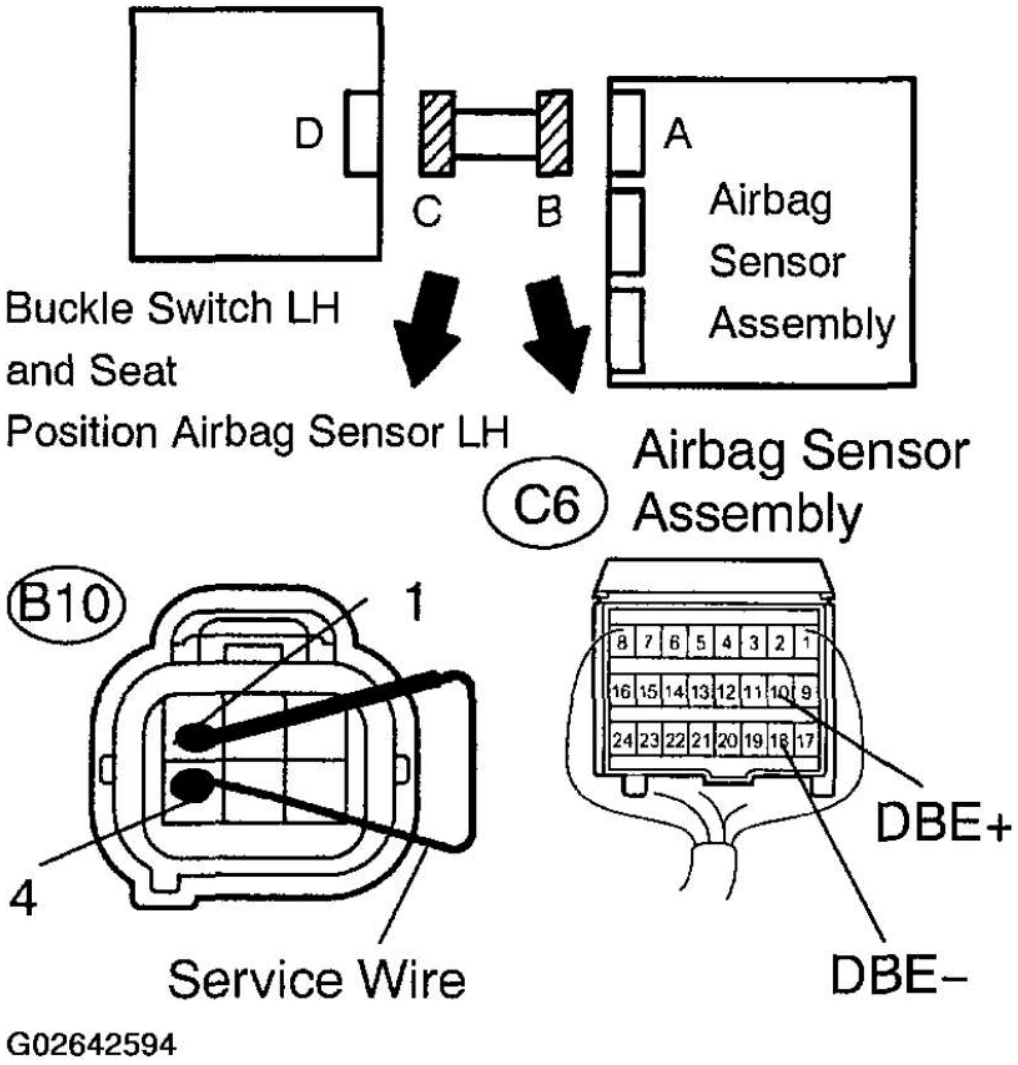



**Fig. 88: Checking Wire Harness (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**
**OK: Go To Next Step.**

4. **Check wire harness (short).**

**PREPARATION:**

Disconnect the service wire from connector "C".

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**CHECK:**

Measure the resistance according to the table below.

**OK:**

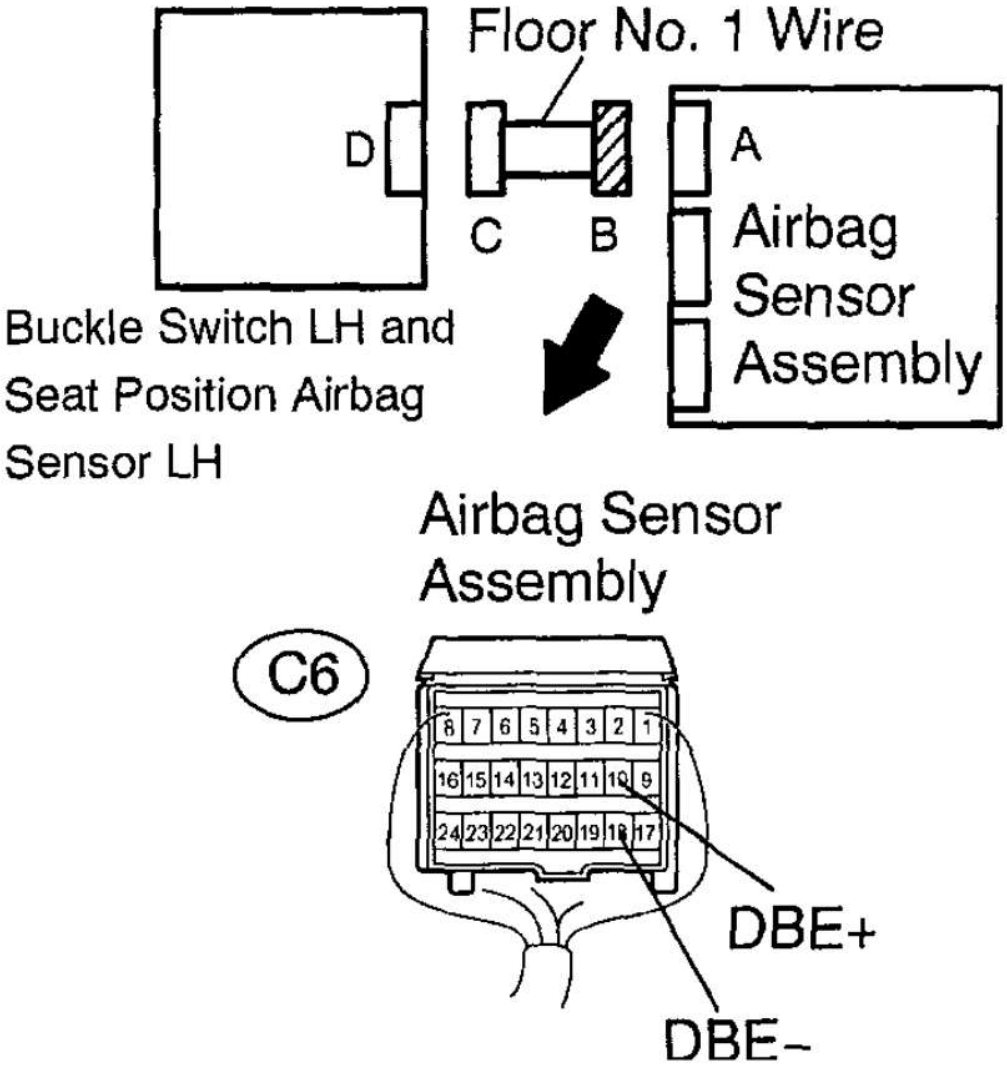
**WIRE HARNESS (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C6-10 (DBE+) - C6-18 (DBE-) | Always | 1 Mohm or higher |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4




G02642595

**Fig. 89: Checking Wire Harness (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

5. **Check wire harness (to B+).**

**PREPARATION:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

Connect negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**WIRE HARNESS (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C6-10 (DBE+) - Body ground | Ignition switch ON | Below 1 V |
| C6-18 (DBE-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

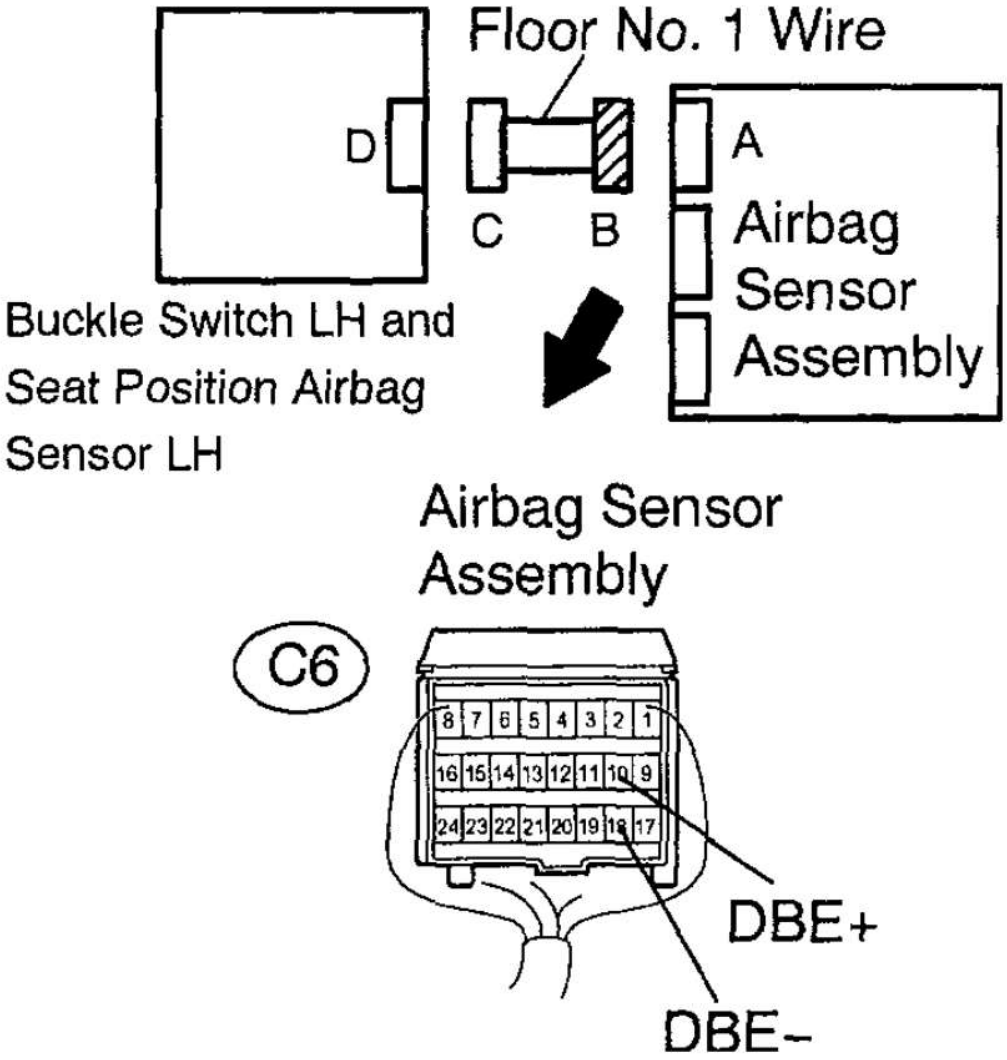



**Fig. 90: Checking Wire Harness (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

6. **Check wire harness (to ground).**

**PREPARATION:**

cardiagn.com

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**WIRE HARNESS (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C6-10 (DBE+) - Body ground | Always | 1Mohm or higher |
| C6-18 (DBE-) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

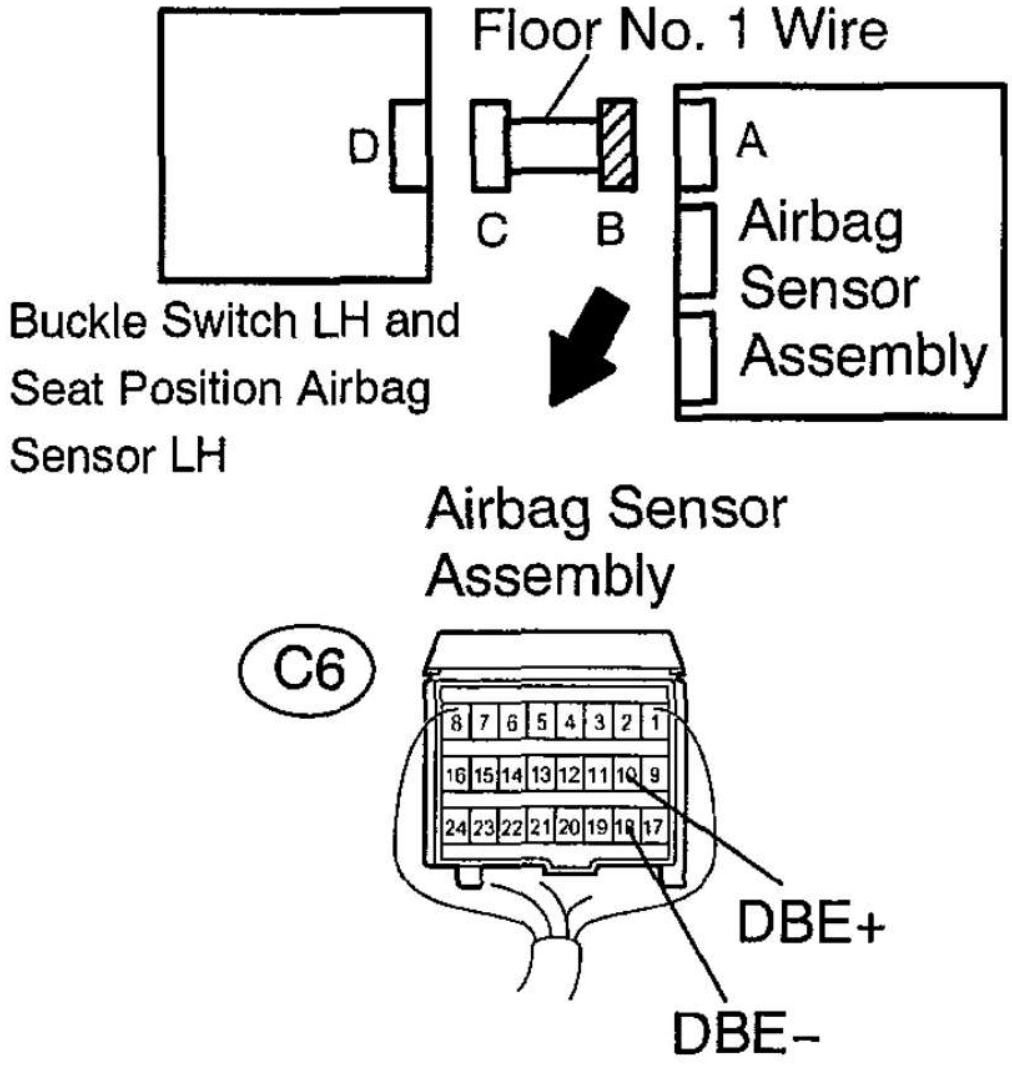



**Fig. 91: Checking Wire Harness (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

7. **Check airbag sensor assembly.**

**PREPARATION:**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

a. Connect the buckle switch LH and seat position airbag sensor LH connector and airbag sensor assembly connector.
b. Connect negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

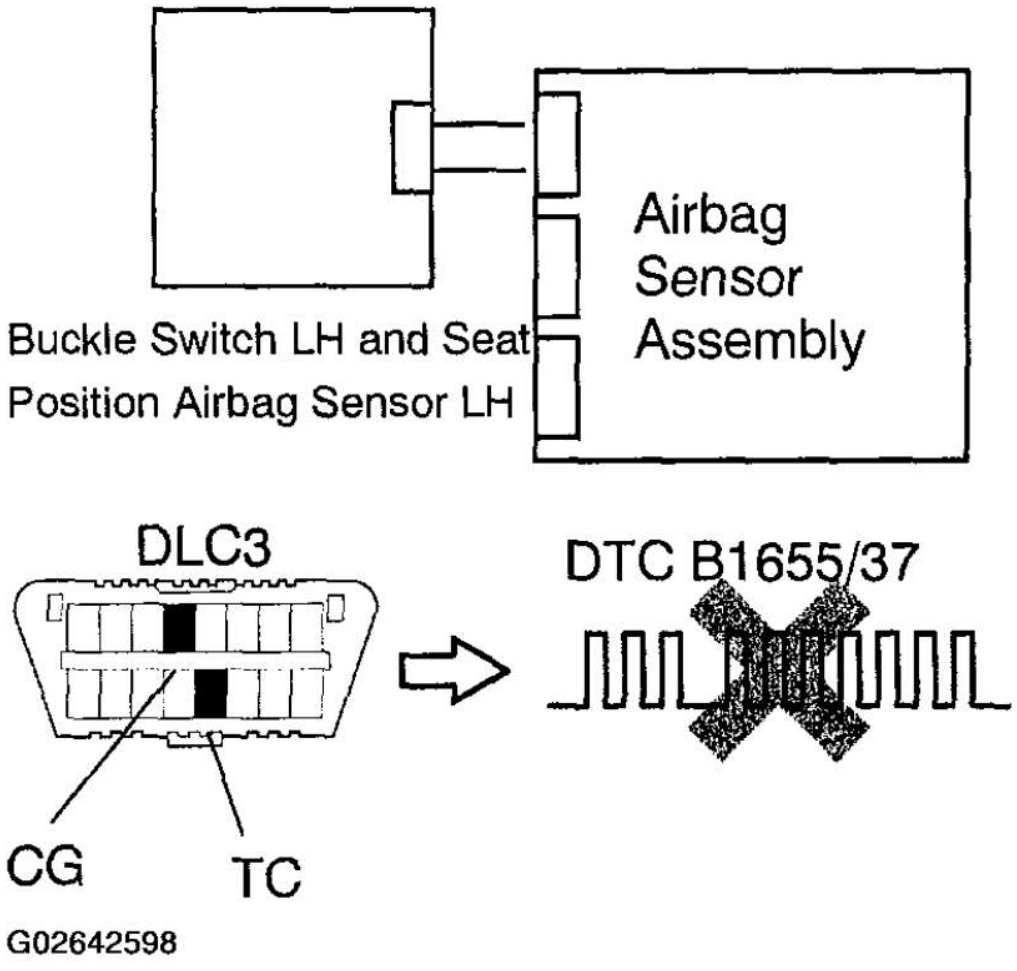



**Fig. 92: Checking Airbag Sensor Assembly**

cardiagn.com

**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC B1655/37 is not output.**

HINT:

Codes other than DTC B1655/37 may be output at this time, but they are not related to this check.

**NG: Go to step 8.**

**OK: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

8. **Replace buckle switch LH and seat position airbag sensor LH.**
   a. Turn the ignition switch to the LOCK position.
   b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
   c. Replace the buckle switch LH and seat position airbag sensor LH.

HINT:

Perform inspection using parts from a normal vehicle when possible.

9. **Check airbag sensor assembly.**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC B1655/37 is not output.**

HINT:

Codes other than DTC B1655/37 may be output at this time, but they are not related to this check.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

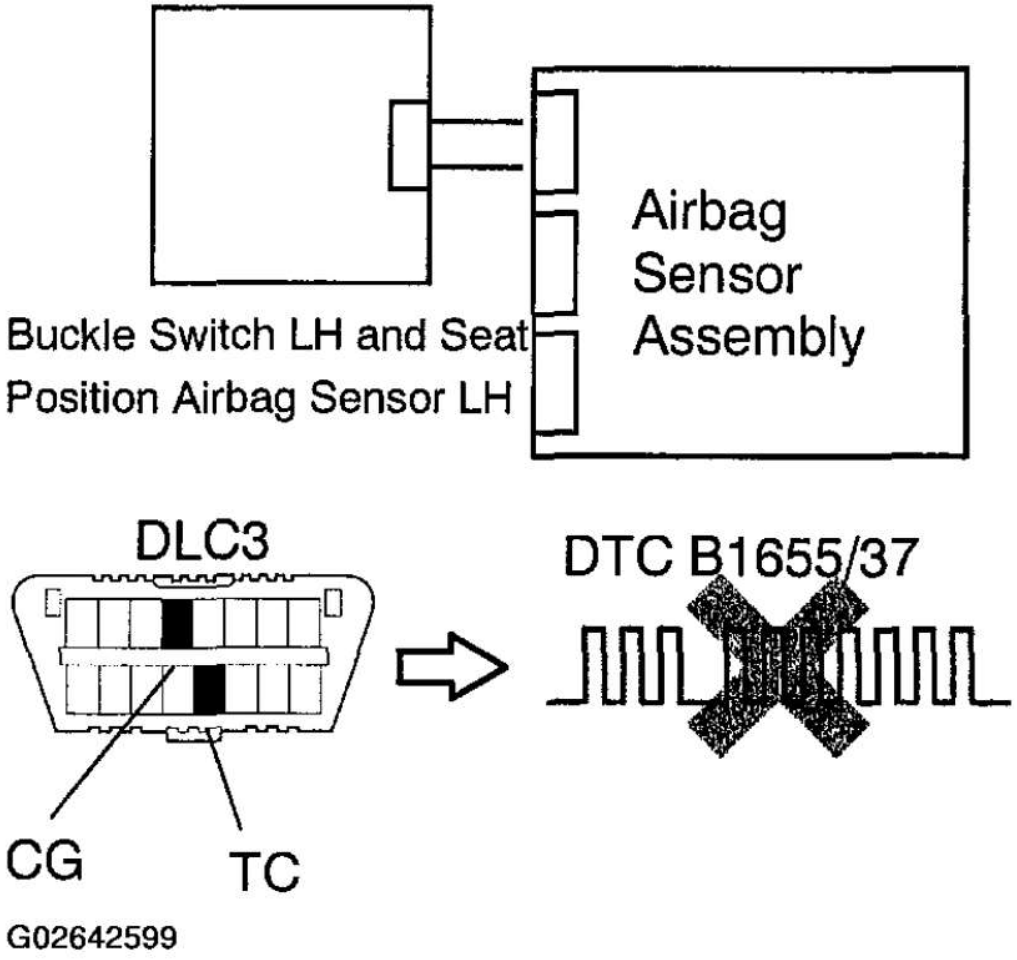



**Fig. 93: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Replace airbag sensor assembly.**
**OK: END**

## DTC B1800/51, B1801/51, B1802/51, B1803/51: SHORT/OPEN IN D SQUIB CIRCUIT (TO GROUND/TO B+)

### CIRCUIT DESCRIPTION

The D squib circuit consists of the airbag sensor assembly, the spiral cable sub-assembly and the horn button assembly.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

The circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the D squib circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1800/51 | • When airbag sensor assembly receives line short circuit signal 5 times in D squib circuit during primary check. | • Steering wheel pad (D squib)<br>• Spiral cable<br>• Airbag sensor assembly<br>• Instrument panel wire |
| B1801/51 | • When airbag sensor assembly receives open circuit signal in D squib circuit for 2 seconds. | • Steering wheel pad (D squib)<br>• Spiral cable<br>• Airbag sensor assembly<br>• Instrument panel wire |
| B1802/51 | • When airbag sensor assembly receives short circuit to ground signal in D squib circuit for 0.5 seconds. | • Steering wheel pad (D squib)<br>• Spiral cable<br>• Airbag sensor assembly<br>• Instrument panel wire |
| B1803/51 | • When airbag sensor assembly receive B+ short circuit signal in D squib circuit for 0.5 seconds. | • Steering wheel pad (D squib)<br>• Spiral cable<br>• Airbag sensor assembly<br>• Instrument panel wire |

G02642600

**Fig. 94: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**WIRING DIAGRAM**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

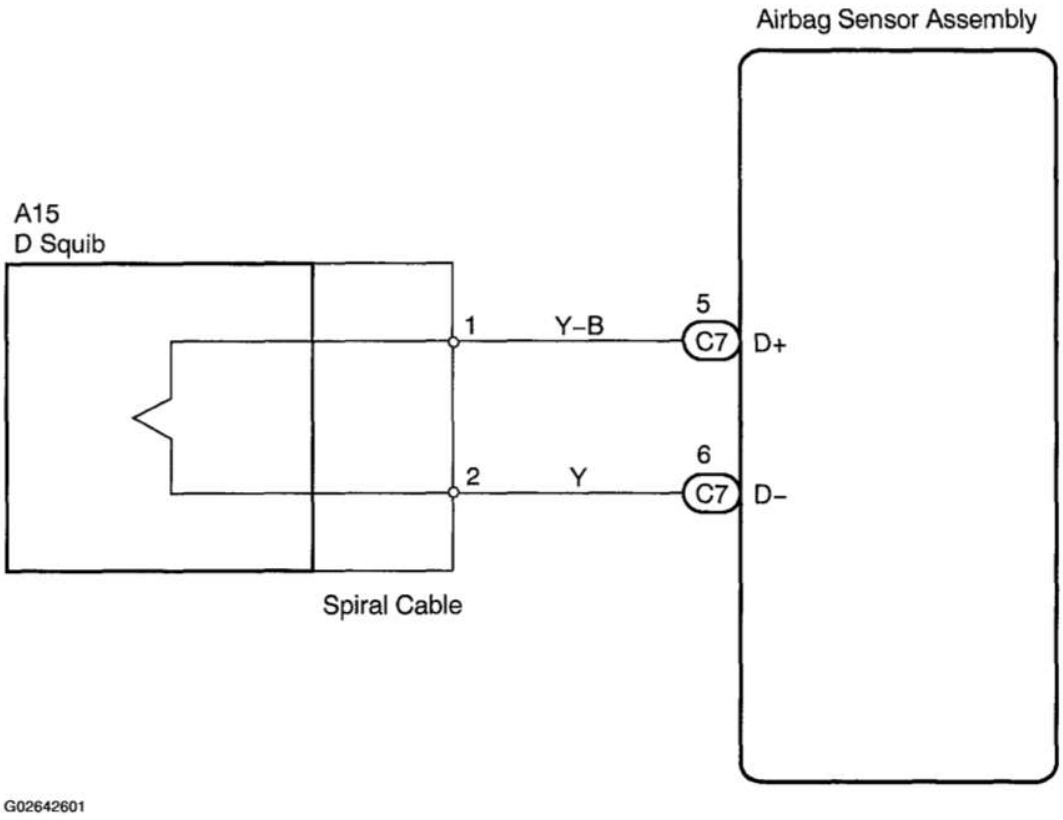



**Fig. 95: Wiring Diagram - D Squib**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check read method of DTC.**

   **CHECK:**

   If using the hand-held tester (read the 5-digit code of DTC):

   Using the hand-held tester, check the DTC (see **PRE-CHECK**).

   **RESULT:**

   **A: DTC B1800 is output.**
   **B: DTC B1801 is output.**
   **C: DTC B1802 is output.**
   **D: DTC B1803 is output.**

   **CHECK:**

   If not using the hand-held tester (read the 2-digit code of DTC):

   Check the DTC (see **PRE-CHECK**).

   **RESULT:**

   **E: DTC 51 is output.**
   **B Go to step 4**
   **C Go to step 5**
   **D Go to step 6**
   **E Go to step 7**
   **A Go To Next Step**

2. **Check connector.**

   **CHECK:**

   Check that the spiral cable connectors (on the horn button assembly side) are not damaged.

   **OK:**

   **The lock button is not disengaged, or the claw of the lock is not deformed or damaged.**
   **NG: Replace spiral cable.**
   **OK: Go To Next Step**

3. **Check D squib circuit (short).**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

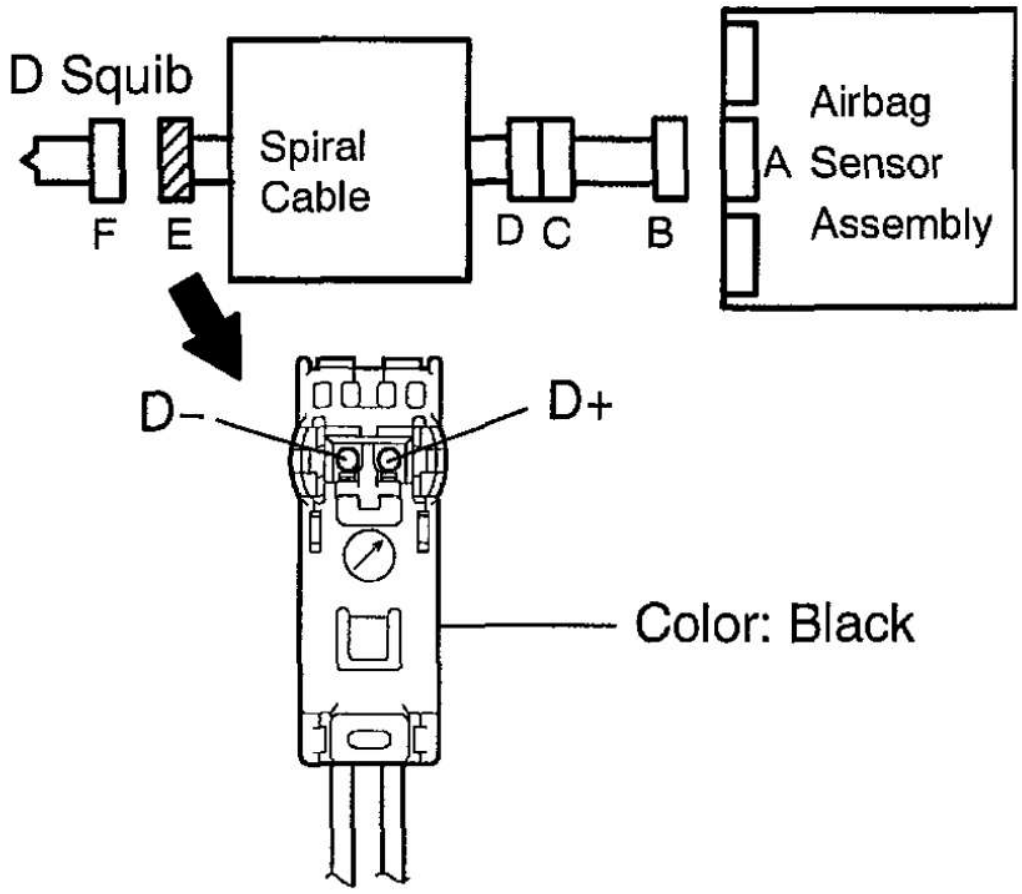
**CHECK:**

Measure the resistance according to the table below.

**OK:**

**D SQUIB CIRCUIT (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| D+ - D- | Always | 1 Mohm or higher |




G02642602

cardiagn.com

**Fig. 96: Checking D Squib Circuit (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 13.**

**OK: Go to step 10.**

4. **Check D squib circuit (open).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**D SQUIB CIRCUIT (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D+ - D- | Always | Below 1 ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

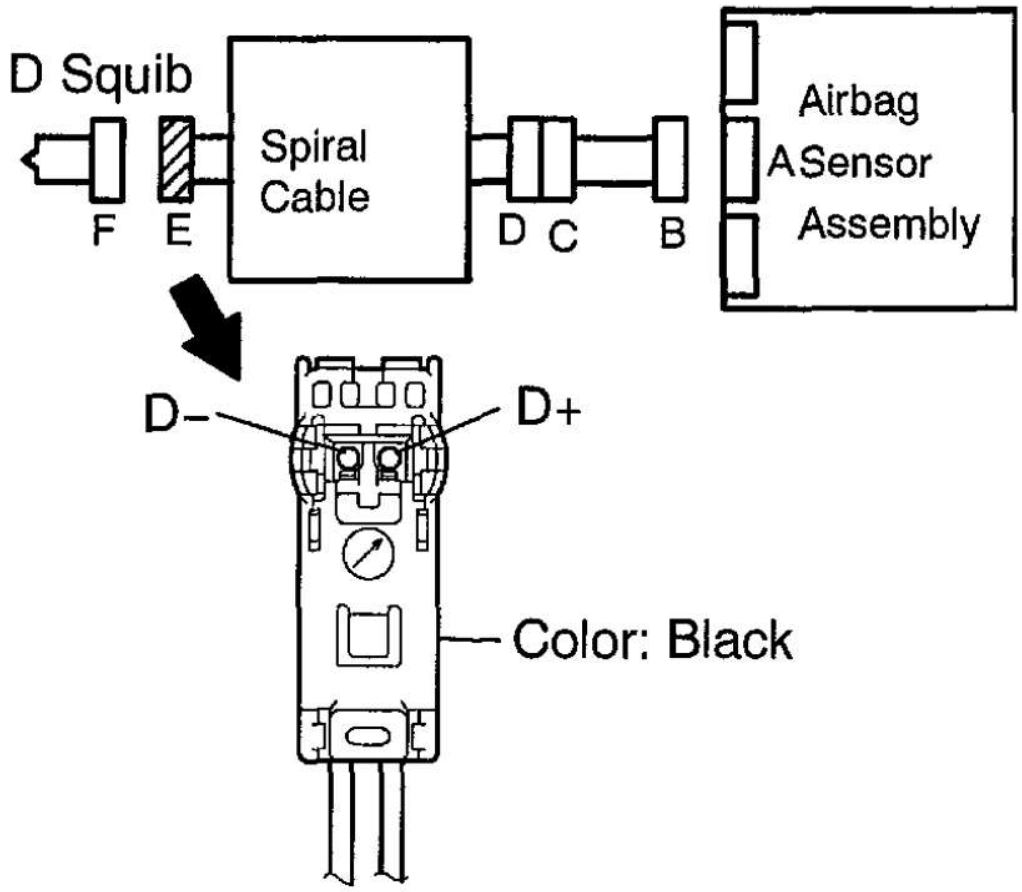



**Fig. 97: Checking D Squib Circuit (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 15.**

**OK: Go to step 11.**

5. **Check D squib circuit (to ground).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**D SQUIB CIRCUIT (TO GROUND) RESISTANCE**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D+ - Body ground | Always | 1 Mohm or higher |
| D- - Body ground | Always | 1 Mohm or higher |

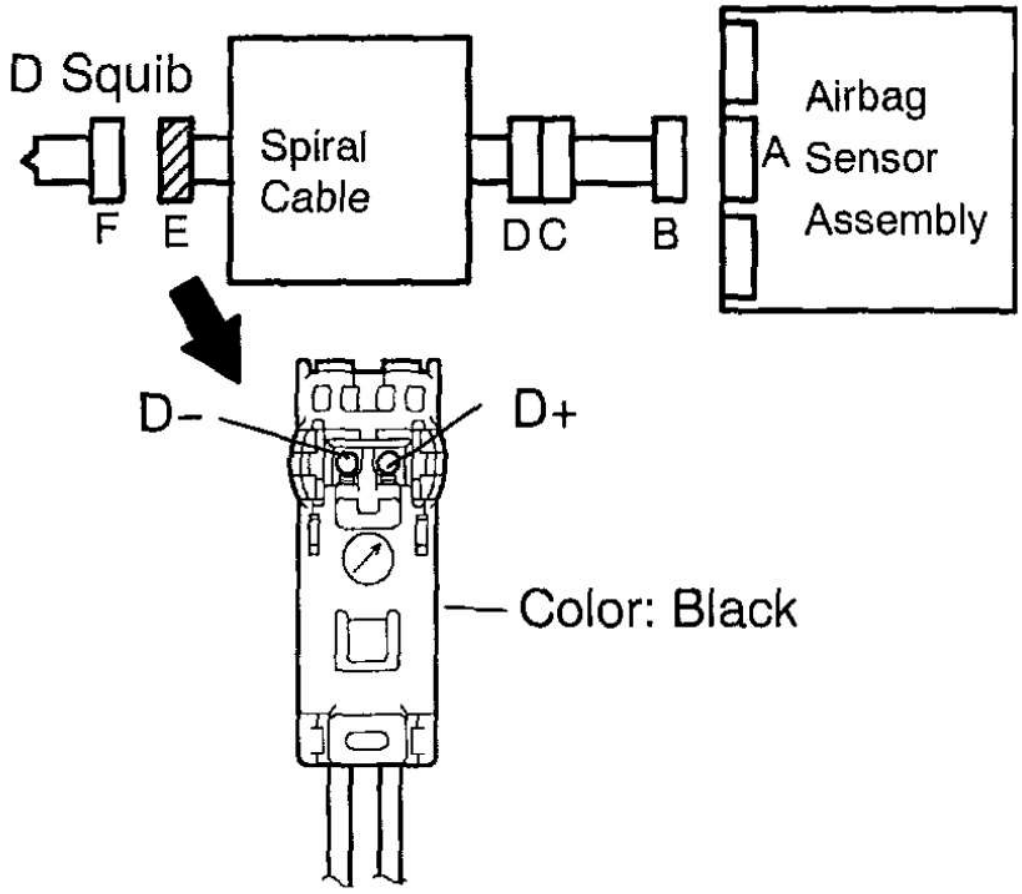



**Fig. 98: Checking D Squib Circuit (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 17.**

**OK: Go to step 11.**

6. **Check D squib (to B+).**

**PREPARATION:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**D SQUIB (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D+ - Body ground | Ignition switch ON | Below 1 V |
| D- - Body ground | Ignition switch ON | Below 1 V |

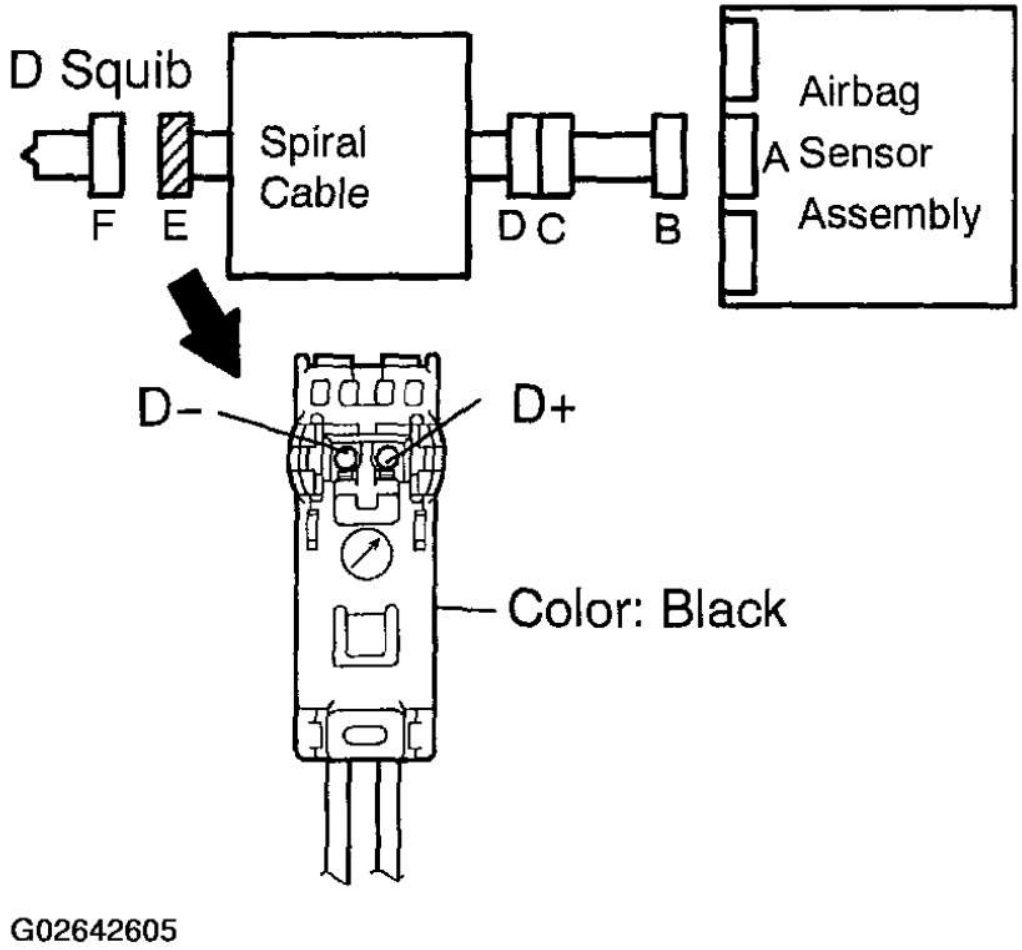



**Fig. 99: Checking D Squib (To B+)**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 19.**
**OK: Go to step 11.**

7. **Check connector.**

**CHECK:**

Check that the spiral cable connectors (on the horn button assembly side) are not damaged.

**OK:**

**The lock button is not disengaged, or the claw of the lock is not deformed or damaged.**
**NG: Replace spiral cable.**
**OK: Go To Next Step**

8. **Check D squib circuit.**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**D SQUIB CIRCUIT VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D+ - Body ground | Ignition switch ON | Below 1 V |
| D- - Body ground | Ignition switch ON | Below 1 V |

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect negative (-) terminal cable from the battery, and wait for at least 90 seconds.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

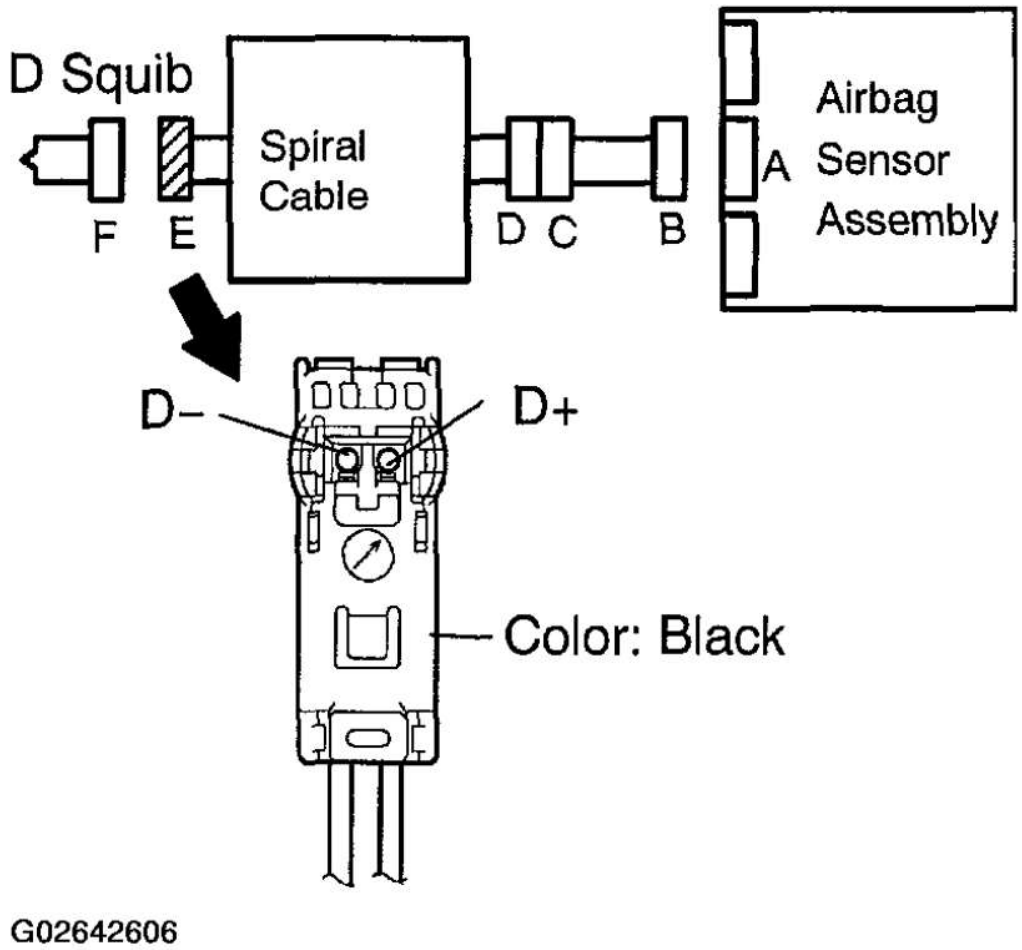



**Fig. 100: Checking D Squib Circuit**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**D SQUIB CIRCUIT RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D+ - D- | Always | Below 1 ohm |
| D+ - Body ground | Always | 1 Mohm or higher |
| D- - Body ground | Always | 1 Mohm or higher |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**PREPARATION:**

Release the activation prevention mechanism built into the connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**D+ TO D- RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D+ - D- | Always | 1 Mohm or higher |

**NG: Go to step 21.**

**OK: Go To Next Step**

9. **Replace horn button assembly (D squib).**

**PREPARATION:**

a. Replace the horn button assembly (see **REPLACEMENT** ).

HINT:

Perform the inspection using parts from a normal vehicle when possible.

b. Connect the connector to the airbag sensor assembly.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Clear the DTCs stored in memory (see **PRE-CHECK**).
f. Turn the ignition switch to the LOCK position.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

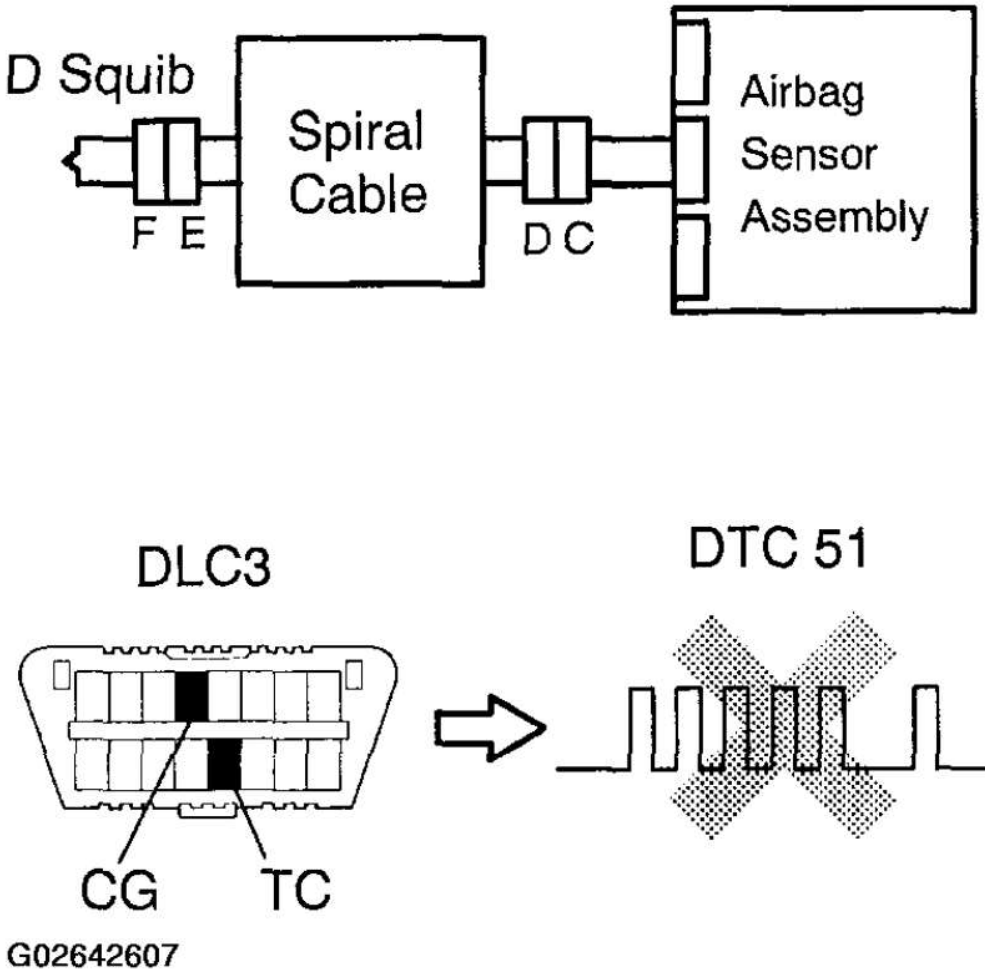



**Fig. 101: Checking Horn Button Assembly (D Squib)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC 51 is not output.**

HINT:

cardiagn.com

Codes other than DTC 51 may be output at this time, but they are not relevant to this check.

**NG: Replace airbag sensor assembly.**

**OK: END**

10. **Check airbag sensor assembly.**

**PREPARATION:**

a. Connect the connectors to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
d. Clear the DTCs stored in memory (see **PRE-CHECK**).

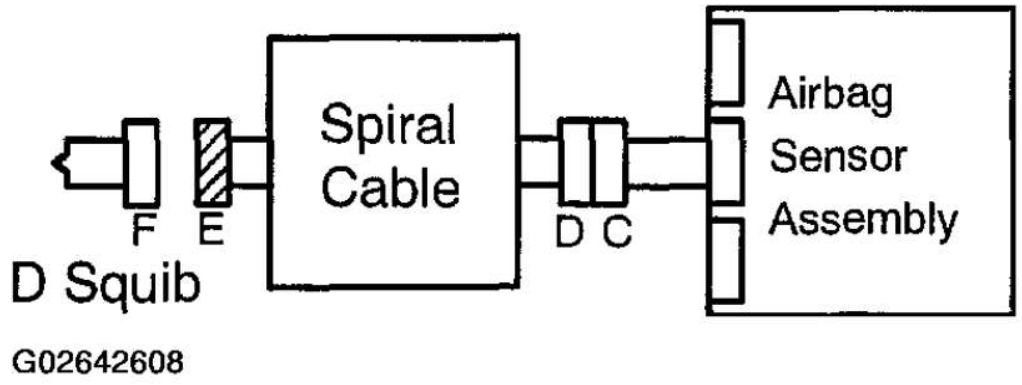



**Fig. 102: Connecting Connectors To Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

a. Turn the ignition switch to the LOCK position.
b. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
c. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC B1800 is not output.**

HINT:

Codes other than DTCs B1800 may be output at this time, but they are not relevant to this check.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**NG: Replace airbag sensor assembly.**

**OK: Go to step 12.**

11. **Check airbag sensor assembly.**

**PREPARATION:**

a. From step 6:

Turn the ignition switch to the LOCK position.

b. From step 6:

Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

c. Connect the connectors to the airbag sensor assembly.
d. Using a service wire, connect terminals D+ and D- of connector "E".

**NOTE:**

- **Twist the end of the service wire in order to insert it into the connector.**
- **Do not forcibly insert the twisted service wire into the terminals of the connector when connecting.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

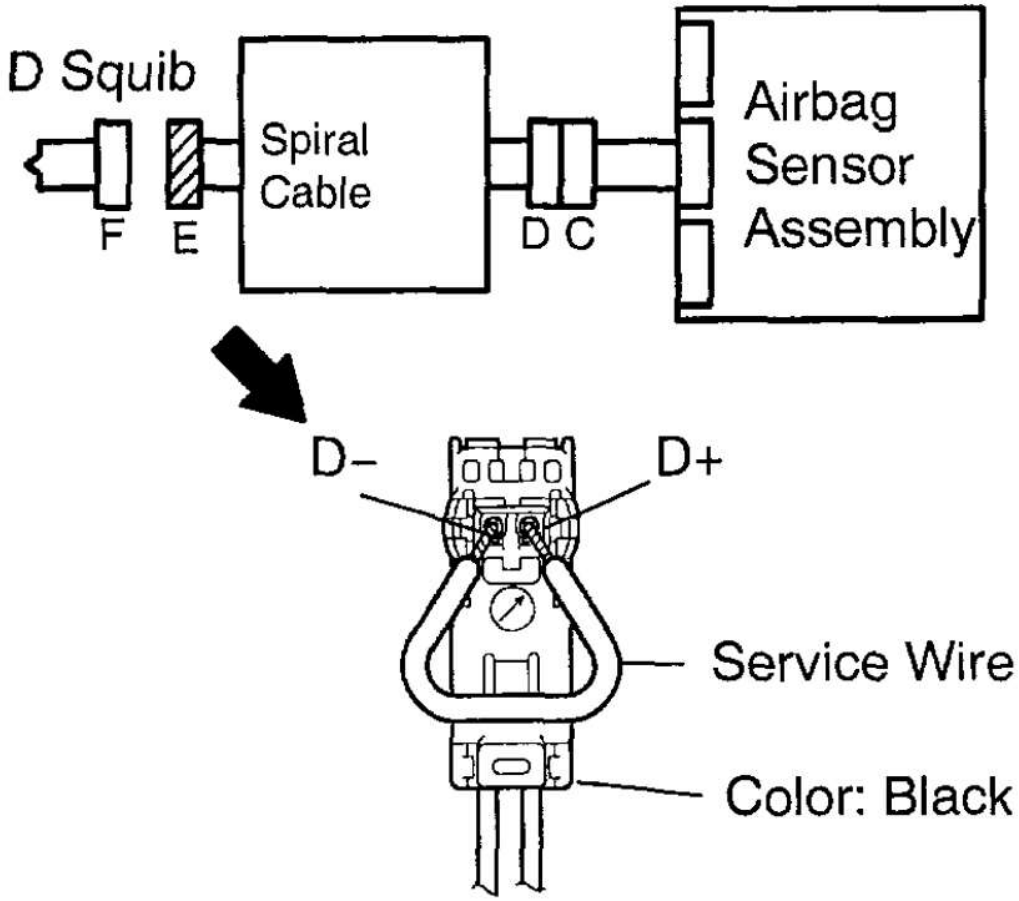



**Fig. 103: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**OK:**

**DTCs B1801, B1802 and B1803 are not output.**

HINT:

Codes other than DTCs B1801, B1802 and B1803 may be output at this time, but they are not relevant to this check.

**NG: Replace airbag sensor assembly.**

**OK: Go To Next Step**

12. **Check horn button assembly (D squib).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. From the step 10:

Disconnect the service wire from connector "E".

d. Connect the connectors to the horn button assembly.
e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.

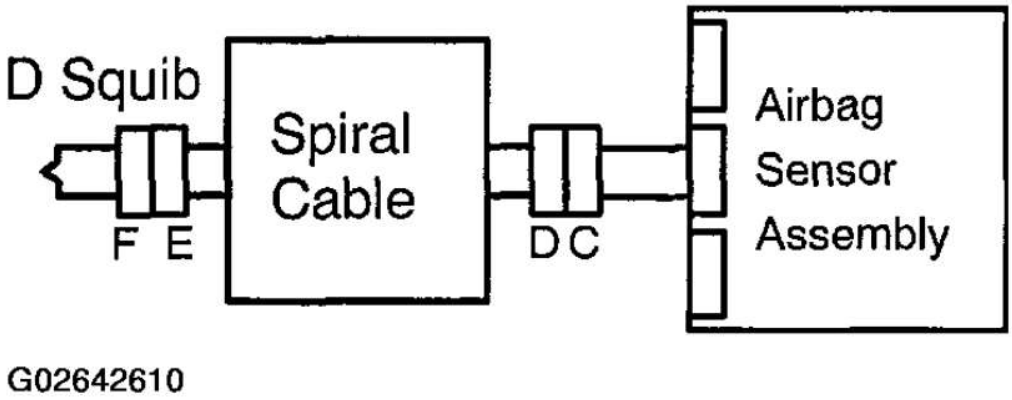



**Fig. 104: Checking Horn Button Assembly (D Squib)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch ON, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1800, B1801, B1802 and B1803 are not output.**

HINT:

Codes other than DTCs B1800, B1801, B1802 and B1803 may be output at this time, but they are not relevant to this check.

**NG: Replace horn button assembly.**

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selection check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

13. **Check instrument panel wire (short).**

**PREPARATION:**

Disconnect the instrument panel wire connector from the spiral cable.

HINT:

The activation prevention mechanism of connector "B" has already been released.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**INSTRUMENT PANEL WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| A15-1 (D+) - A15-2 (D-) | Always | 1 Mohm or higher |

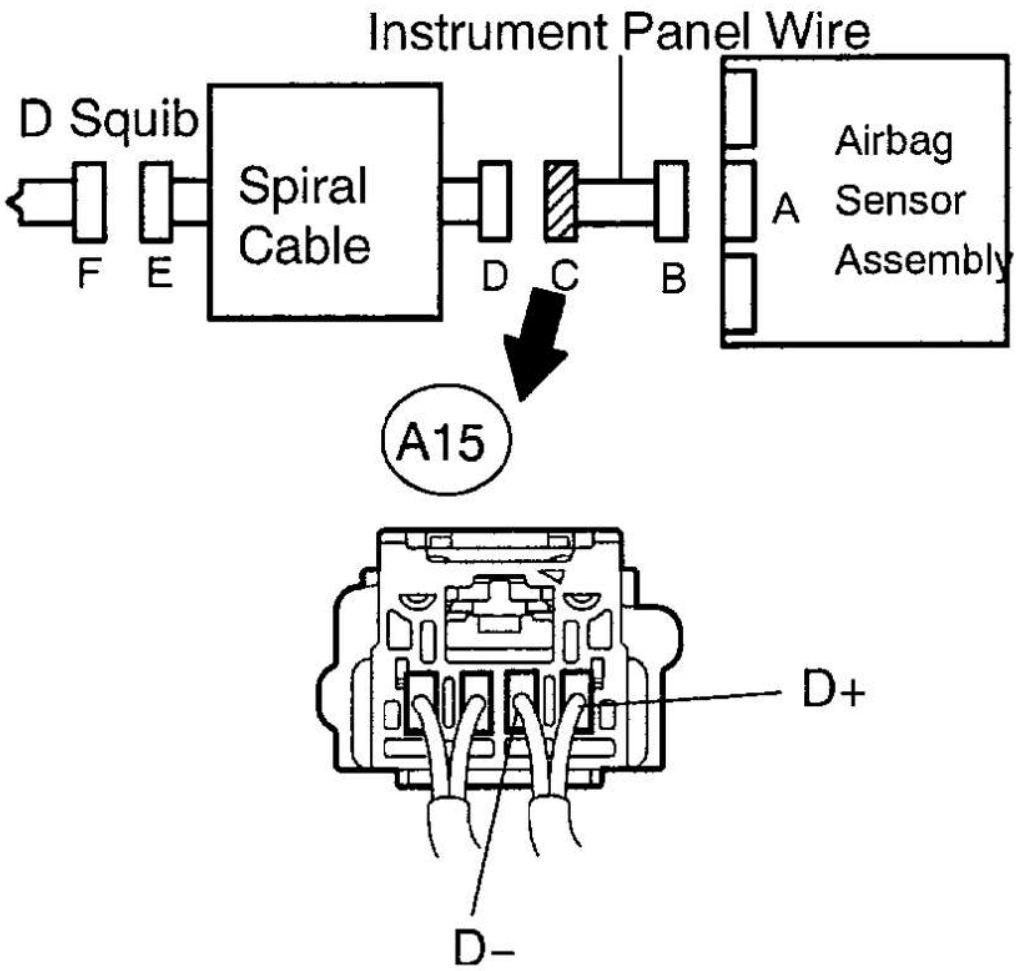



**Fig. 105: Checking Instrument Panel Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step**

14. **Check spiral cable (short).**

**PREPARATION:**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

Release the activation prevention mechanism built into connector "D" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below

**OK:**

**SPIRAL CABLE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| D+ - D- | Always | 1 Mohm or higher |

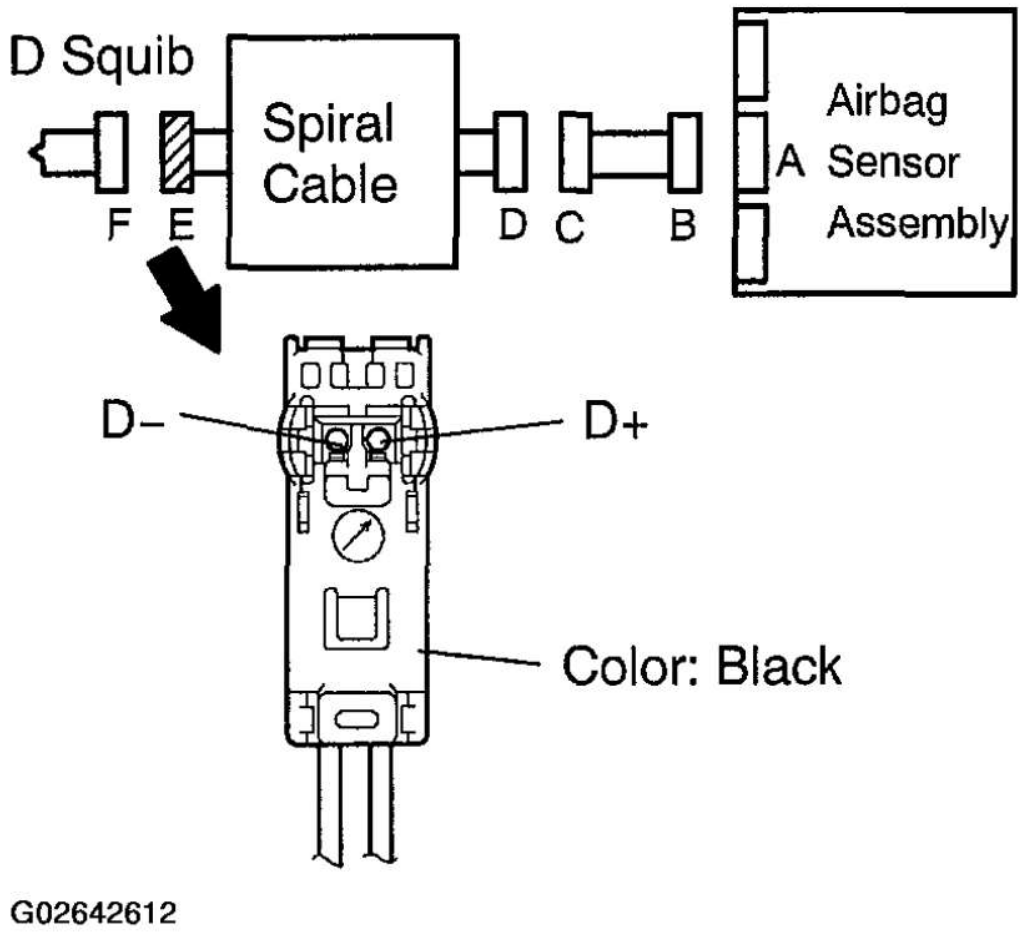



**Fig. 106: Checking Spiral Cable (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

**NG: Repair or replace spiral cable.**

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selection check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

15. **Check instrument panel wire (open).**

**PREPARATION:**

Disconnect the instrument panel wire connector from the spiral cable.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

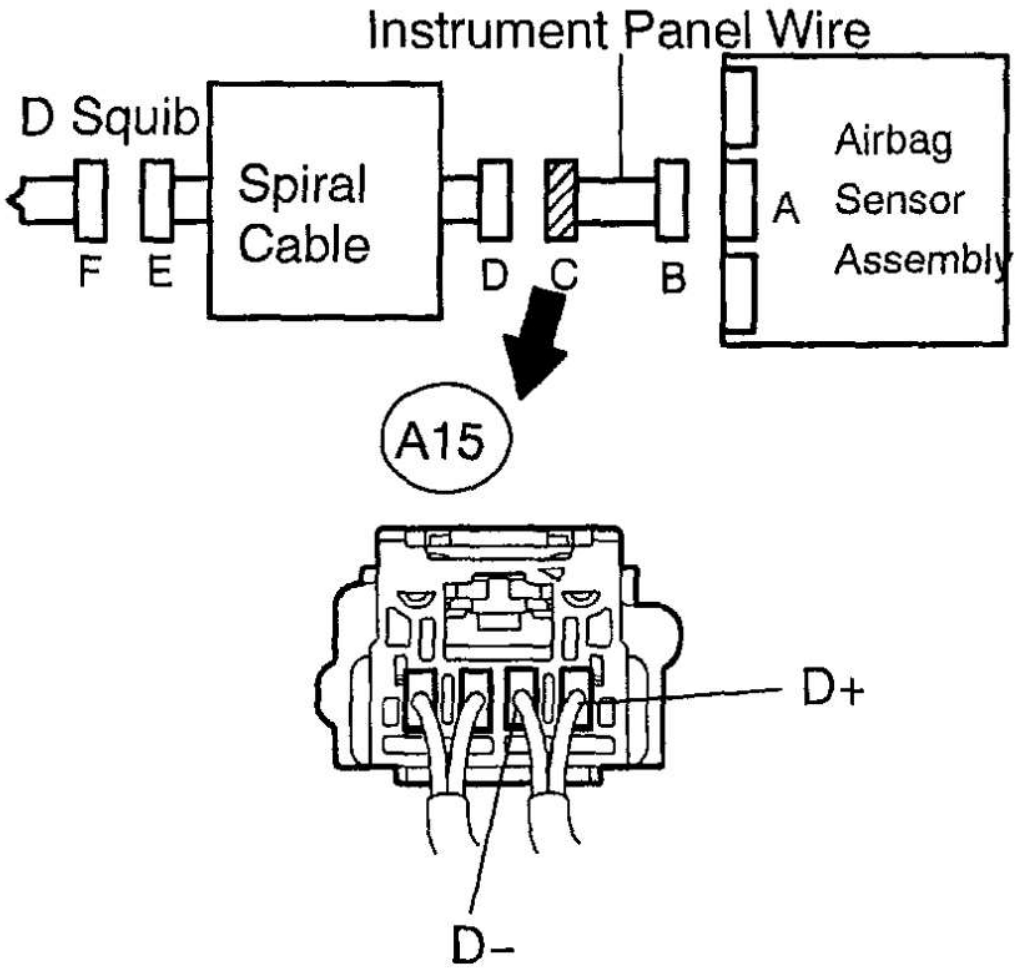
**INSTRUMENT PANEL WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-1 (D+) - A15-2 (D-) | Always | Below 1 ohm |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4




G02642613

**Fig. 107: Checking Instrument Panel Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step**

16. **Check spiral cable (open).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**SPIRAL CABLE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D+ - D- | Always | Below 1 ohm |

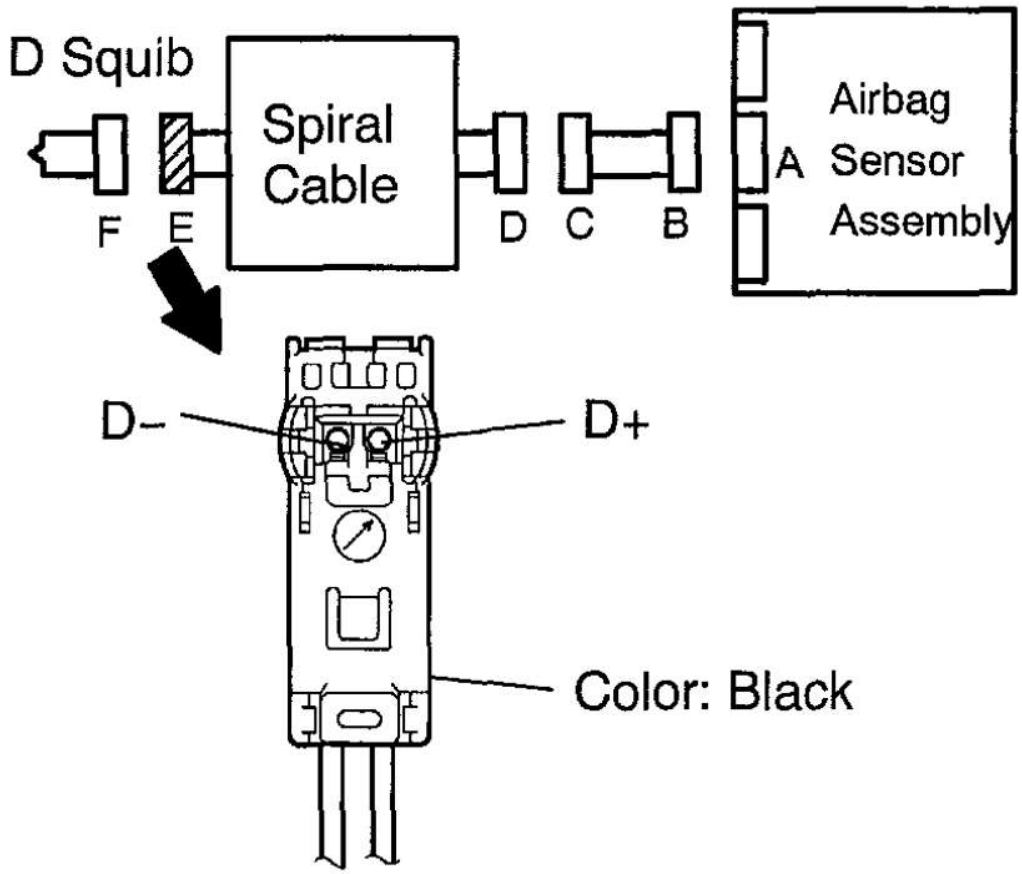



**Fig. 108: Checking Spiral Cable (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace spiral cable.**

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check.**

HINT:

- Before performing the simulation method, check that the airbag assembly center is in check mode

cardiagn.com

(see **PRE-CHECK**).

- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

17. **Check instrument panel wire (to ground).**

**PREPARATION:**

Disconnect the instrument panel wire connector from the spiral cable.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-1 (D+) - Body ground | Always | 1 Mohm or higher |
| A15-2 (D-) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

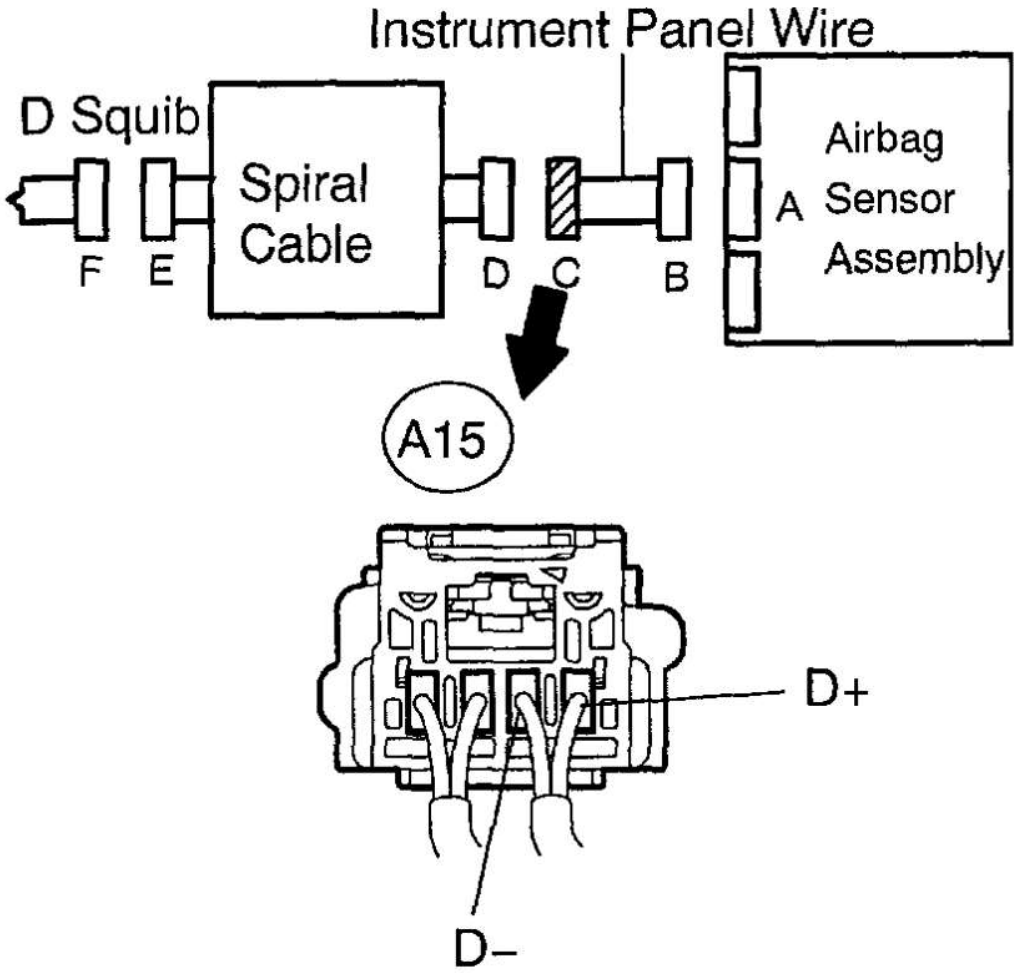



**Fig. 109: Checking Instrument Panel Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step**

18. **Check spiral cable (to ground).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

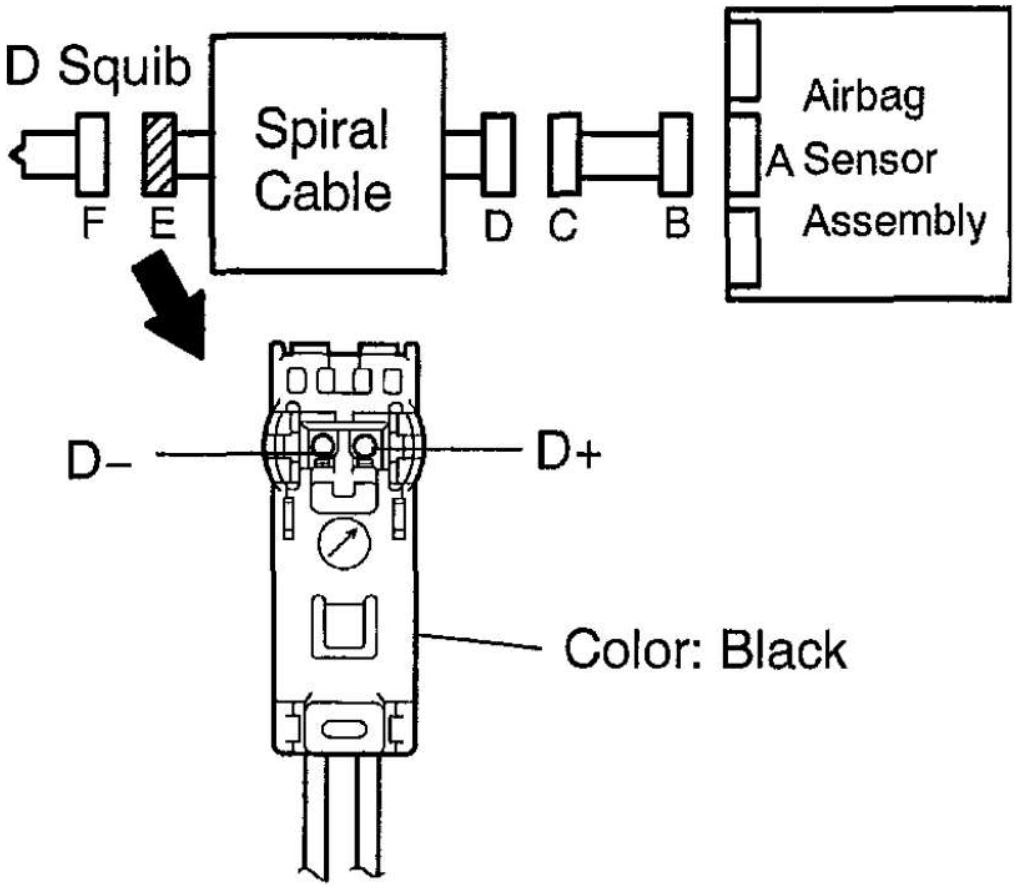
cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**SPIRAL CABLE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D+ - Body ground | Always | 1 Mohm or higher |
| D- - Body ground | Always | 1 Mohm or higher |




G02642616

**Fig. 110: Checking Spiral Cable (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace spiral cable.**

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check. If suspected part can not be detected by simulation method, replace all SRS components including wire harness.**

HINT:

cardiagn.com

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selection check mode. perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

19. **Check instrument panel wire (to B+).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connector between the airbag sensor assembly and the spiral cable.
d. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-1 (D+) - Body ground | Ignition switch ON | Below 1 V |
| A15-2 (D-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

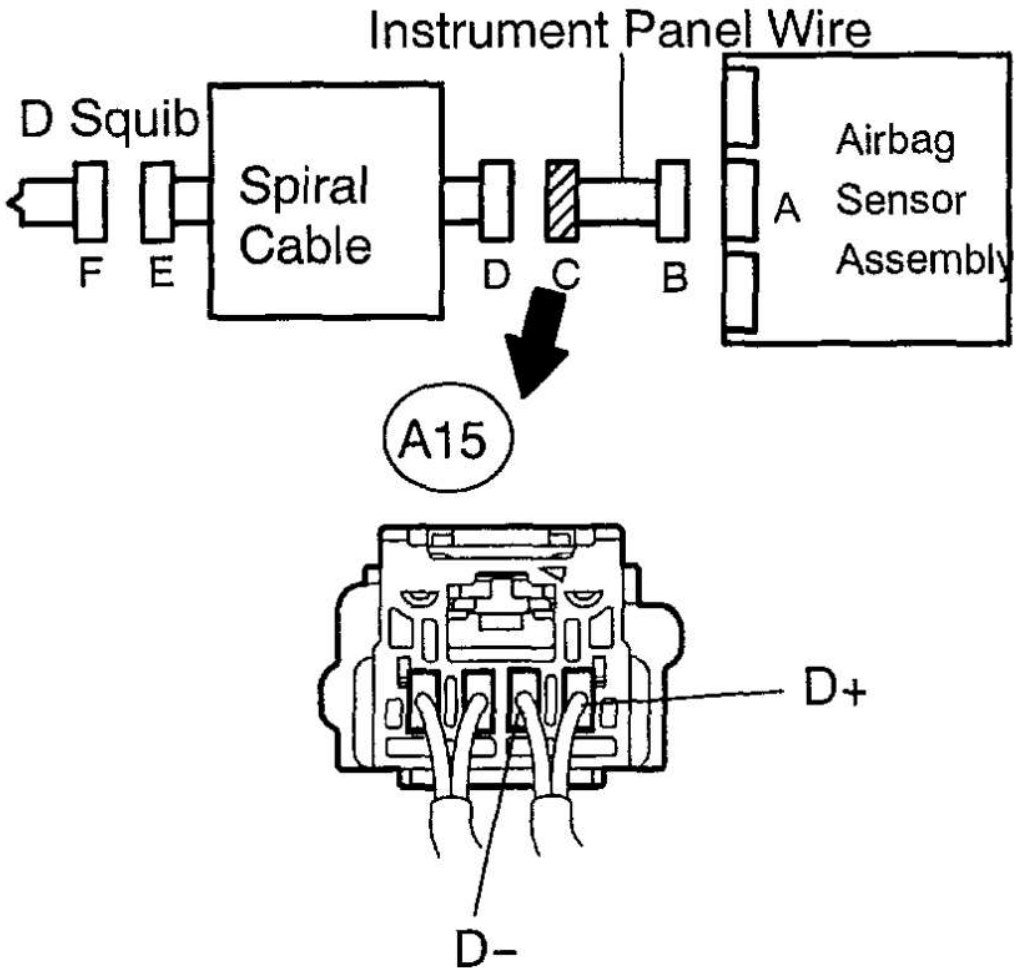



**Fig. 111: Checking Instrument Panel Wire (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step**

20. **Check spiral cable (to B+).**

**CHECK:**

Measure the voltage according to the table below.

**OK:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**SPIRAL CABLE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D+ - Body ground | Ignition switch ON | Below 1 V |
| D- - Body ground | Ignition switch ON | Below 1 V |

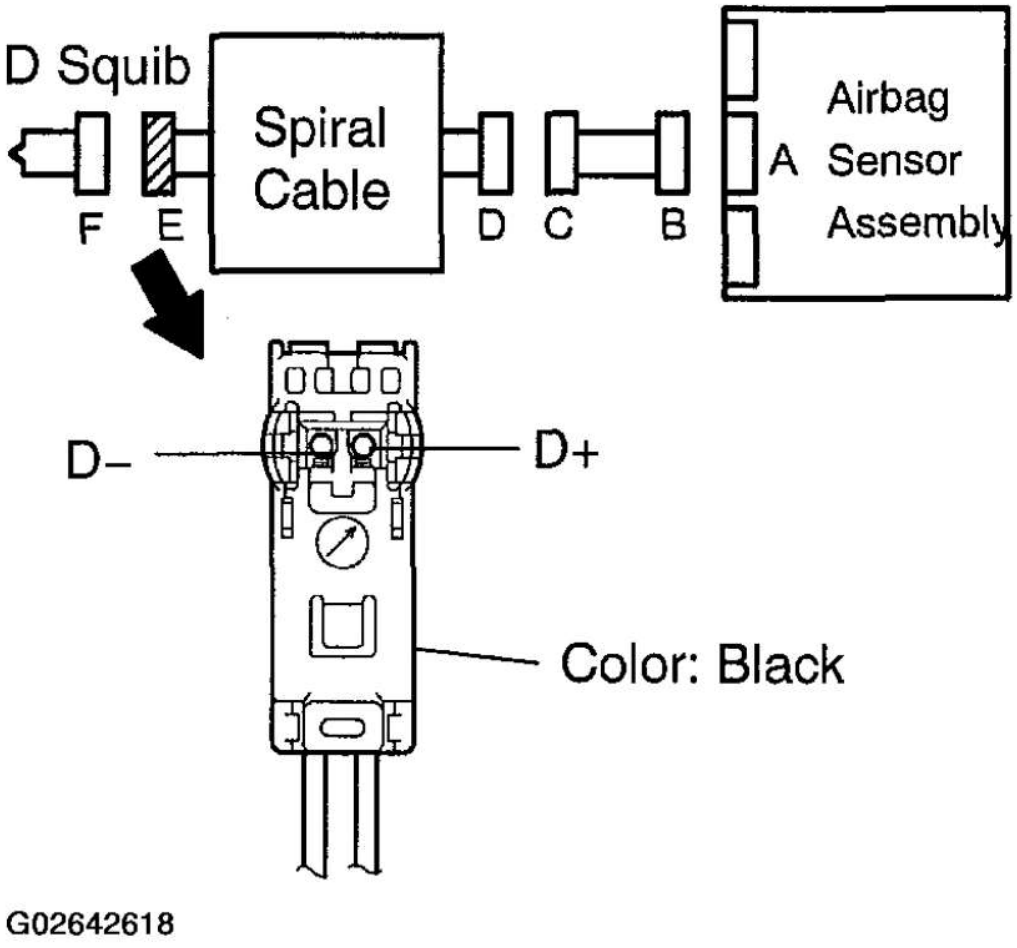



**Fig. 112: Checking Spiral Cable (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace spiral cable.**

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check. If suspected part cannot be detected by simulation method, replace all SRS components including wire harness.**

HINT:

cardiagn.com

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selection check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

21. **Check instrument panel wire.**

**PREPARATION:**

a. Restore the released activation prevention mechanism of connector "B" to the original condition.
b. Disconnect the instrument panel wire connector from the spiral cable.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Measure the voltage according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-1 (D+) - Body ground | Ignition switch ON | Below 1 V |
| A15-2 (D-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

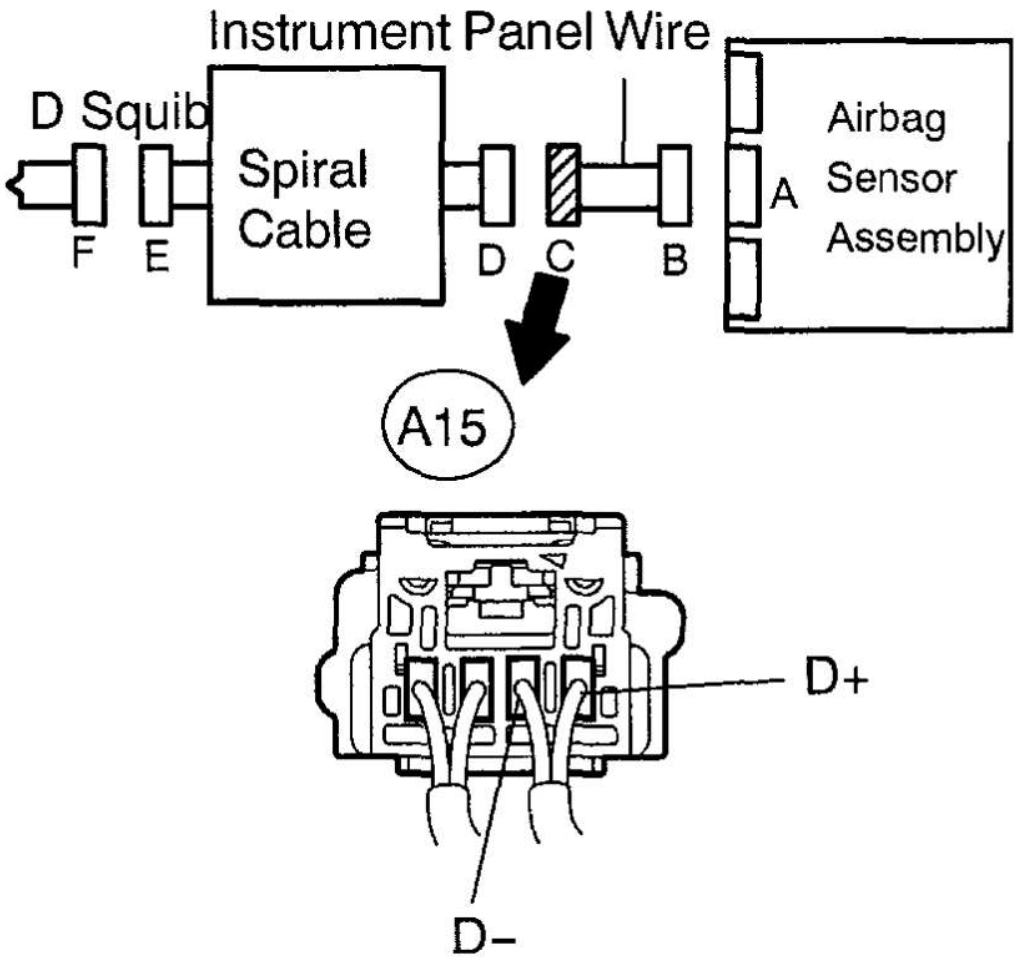



**Fig. 113: Checking Instrument Panel Wire**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**INSTRUMENT PANEL WIRE RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-1 (D+) - A15-2 (D-) | Always | Below 1 ohm |
| A15-1 (D+) - Body ground | Always | 1 Mohm or higher |
| A15-2 (D-) - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-1 (D+) - A15-2 (D-) | Always | 1 Mohm or higher |

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step**

22. **Check spiral cable.**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**SPIRAL CABLE VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D+ - Body ground | Ignition switch ON | Below 1 V |
| D- - Body ground | Ignition switch ON | Below 1 V |

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**SPIRAL CABLE RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| D+ - D- | Always | Below 1 ohm |
| D+ - Body ground | Always | 1 Mohm or higher |
| D- - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the activation prevention mechanism built into connector "D" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

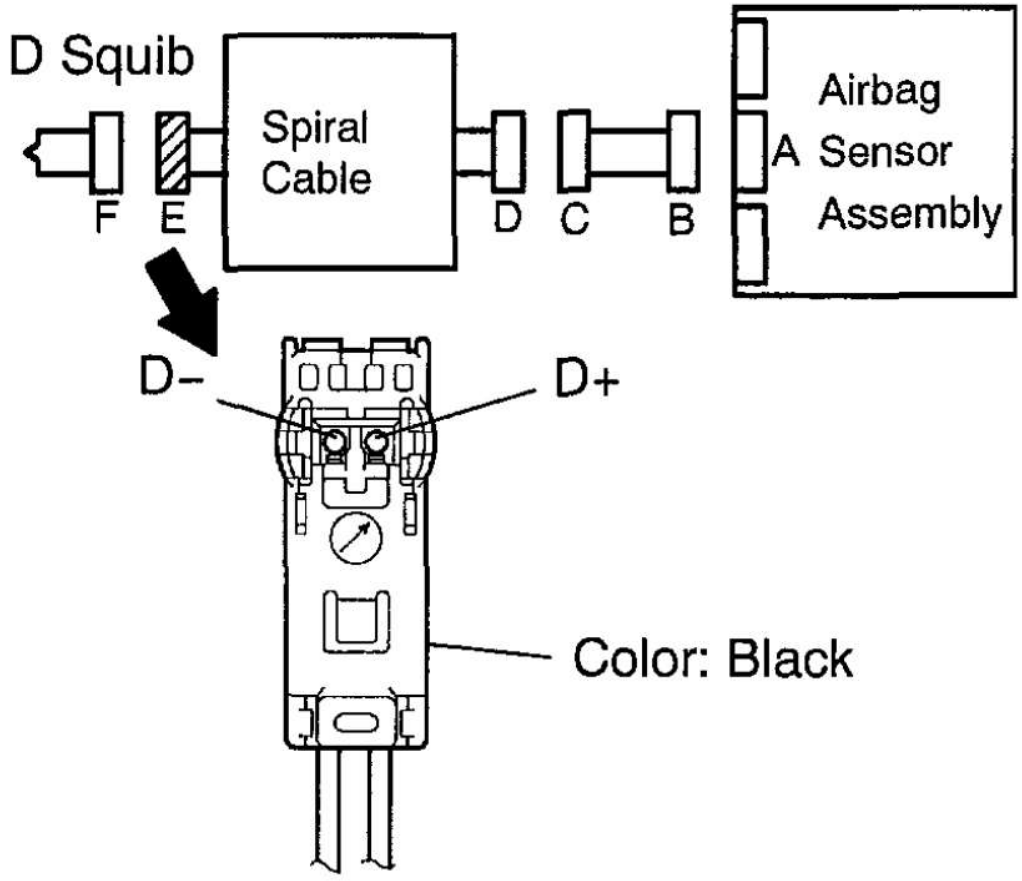



**Fig. 114: Checking Spiral Cable**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**SPIRAL CABLE RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| D+ - D- | Always | 1 Mohm or higher |

**NG: Repair or replace spiral cable.**

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check. If suspected part can not be detected by simulation method, replace all SRS components including wire harness.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selection check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

## DTC B1805/52, B1806/52, B1807/52, B1808/52: SHORT/OPEN IN P SQUIB CIRCUIT (TO GROUND/TO B+)

### CIRCUIT DESCRIPTION

The P squib circuit consists of the airbag sensor assembly and the front passenger airbag assy.

The circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the P squib circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1805/52 | • When airbag sensor assembly receives line short circuit signal 5 times in P squib circuit during primary check. | • Instrument panel wire<br>• Front passenger airbag assembly (P squib)<br>• Airbag sensor assembly |
| B1806/52 | • When airbag sensor assembly receives open circuit signal in P squib circuit for 2 seconds. | • Instrument panel wire<br>• Front passenger airbag assembly (P squib)<br>• Airbag sensor assembly |
| B1807/52 | • When airbag sensor assembly receives short circuit to ground signal in P squib circuit for 0.5 seconds. | • Instrument panel wire<br>• Front passenger airbag assembly (P squib)<br>• Airbag sensor assembly |
| B1808/52 | • When airbag sensor assembly receives B+ short circuit signal in P squib circuit for 0.5 seconds. | • Instrument panel wire<br>• Front passenger airbag assembly (P squib)<br>• Airbag sensor assembly |

G02642621

**Fig. 115: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

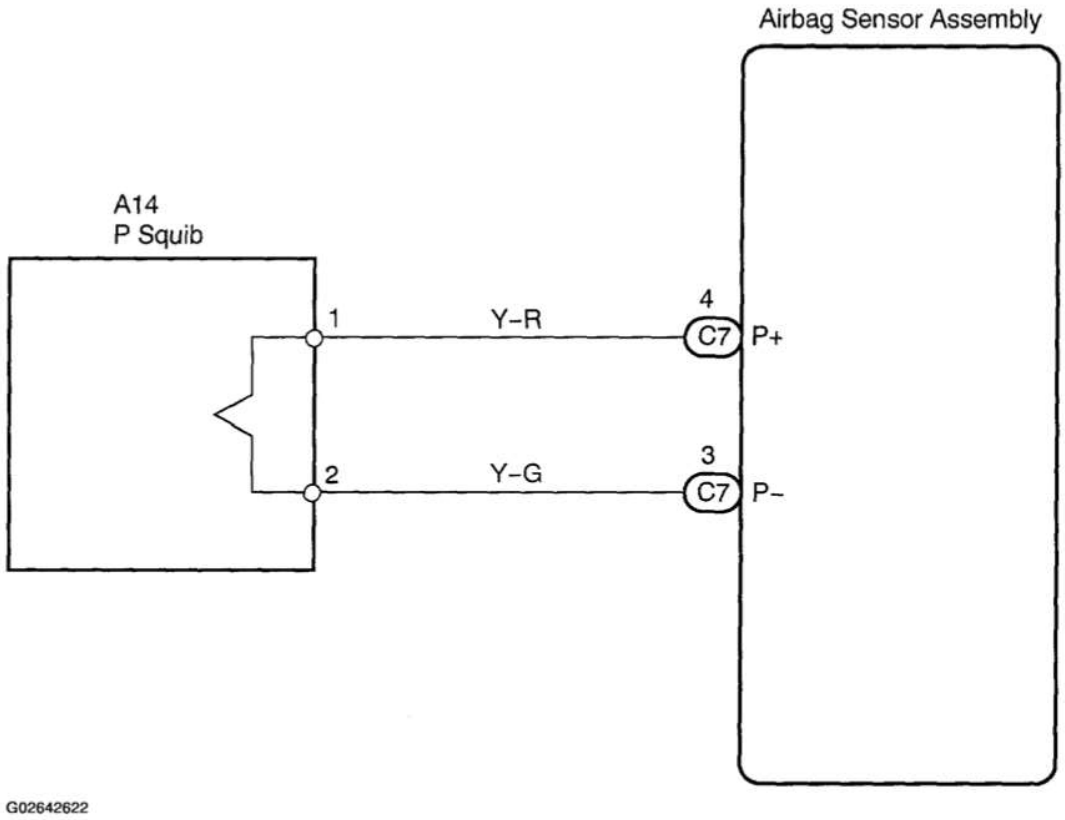



**Fig. 116: Wiring Diagram - P Squib**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.

cardiagn.com

k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check read method of DTC.**

**CHECK:**

If using the hand-held tester (read the 5-digit code of DTC):

Using the hand-held tester, check the DTC (see **PRE-CHECK**).

**RESULT:**

**A: DTC B1805 is output.**
**B: DTC B1806 is output.**
**C: DTC B1807 is output.**
**D: DTC B1808 is output.**

**CHECK:**

If not using the hand-held tester (read the 2-digit code of DTC):

Check the DTC (see **PRE-CHECK**).

**RESULT:**

**E: DTC 52 is output.**
**B: Go to step 4**
**C: Go to step 5**
**D: Go to step 6**
**E: Go to step 7**
**A: Go To Next Step**

2. **Check connector.**

**CHECK:**

Check that the instrument panel wire connectors (on the front passenger airbag assembly side) are not damaged.

**OK:**

**The lock button is not disengaged, or the claw of the lock is not deformed or damaged.**
**NG: Repair or replace instrument panel wire.**
**OK: Go To Next Step**

cardiagn.com

3. **Check instrument panel wire (short).**

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A14-1 (P+) - A14-2 (P-) | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

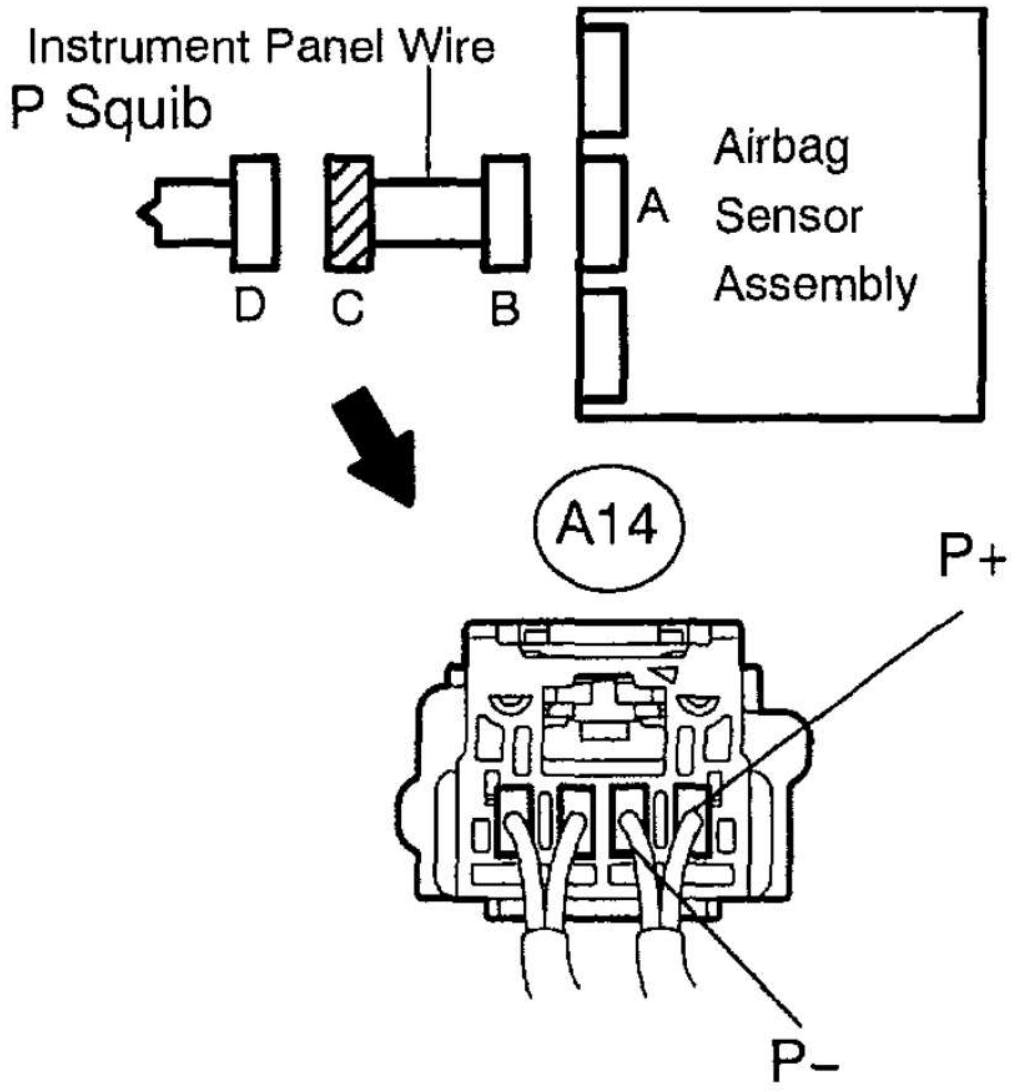



**Fig. 117: Checking Instrument Panel Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go to step 10.**

4. **Check instrument panel wire (open).**

**CHECK:**

cardiagn.com

**2005 Toyota RAV4**

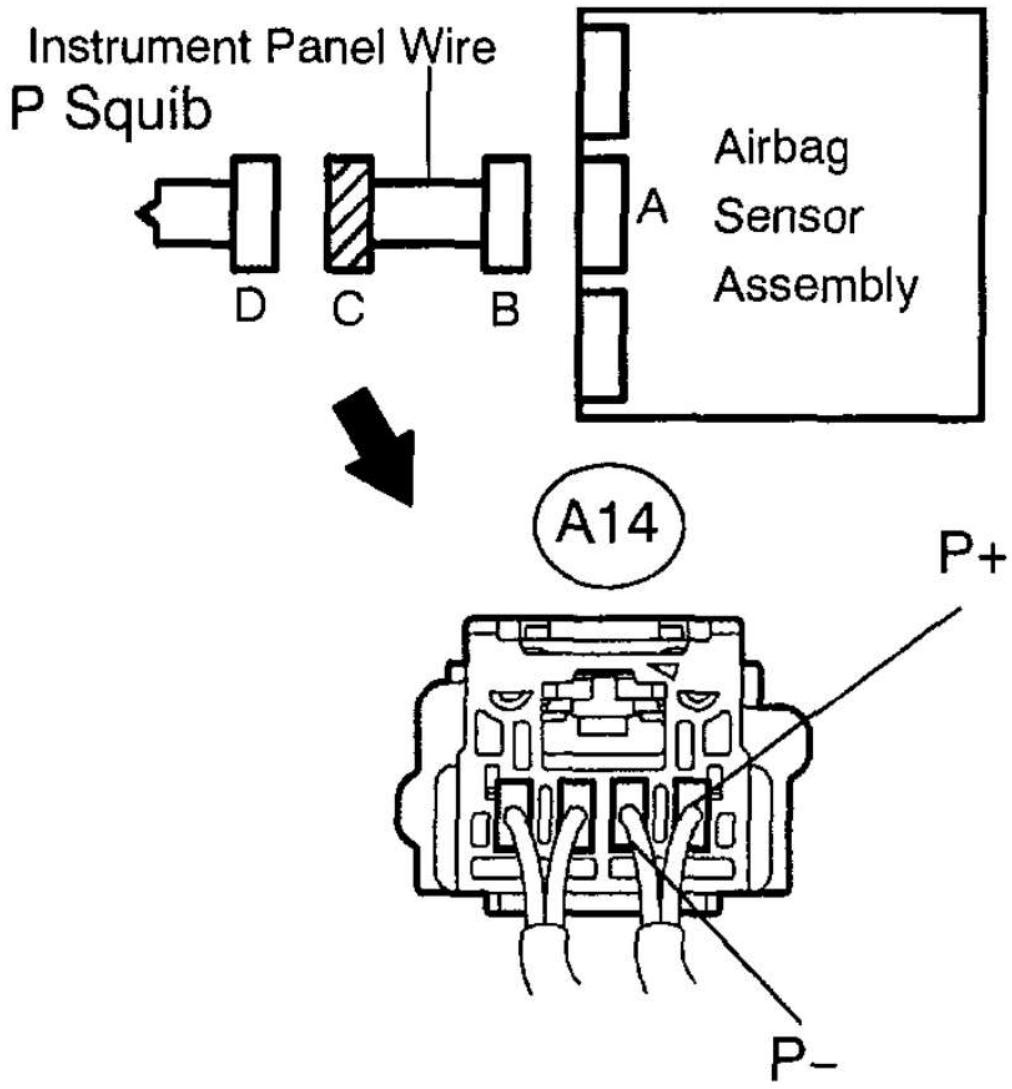
2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

Measure the resistance according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A14-1 (P+) - A14-2 (P-) | Always | Below 1 ohm |




G02642624

cardiagn.com

**Fig. 118: Checking Instrument Panel Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go to step 11.**

5. **Check instrument panel wire (to ground).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A14-1 (P+) - Body ground | Always | 1 Mohm or higher |
| A14-2 (P-) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

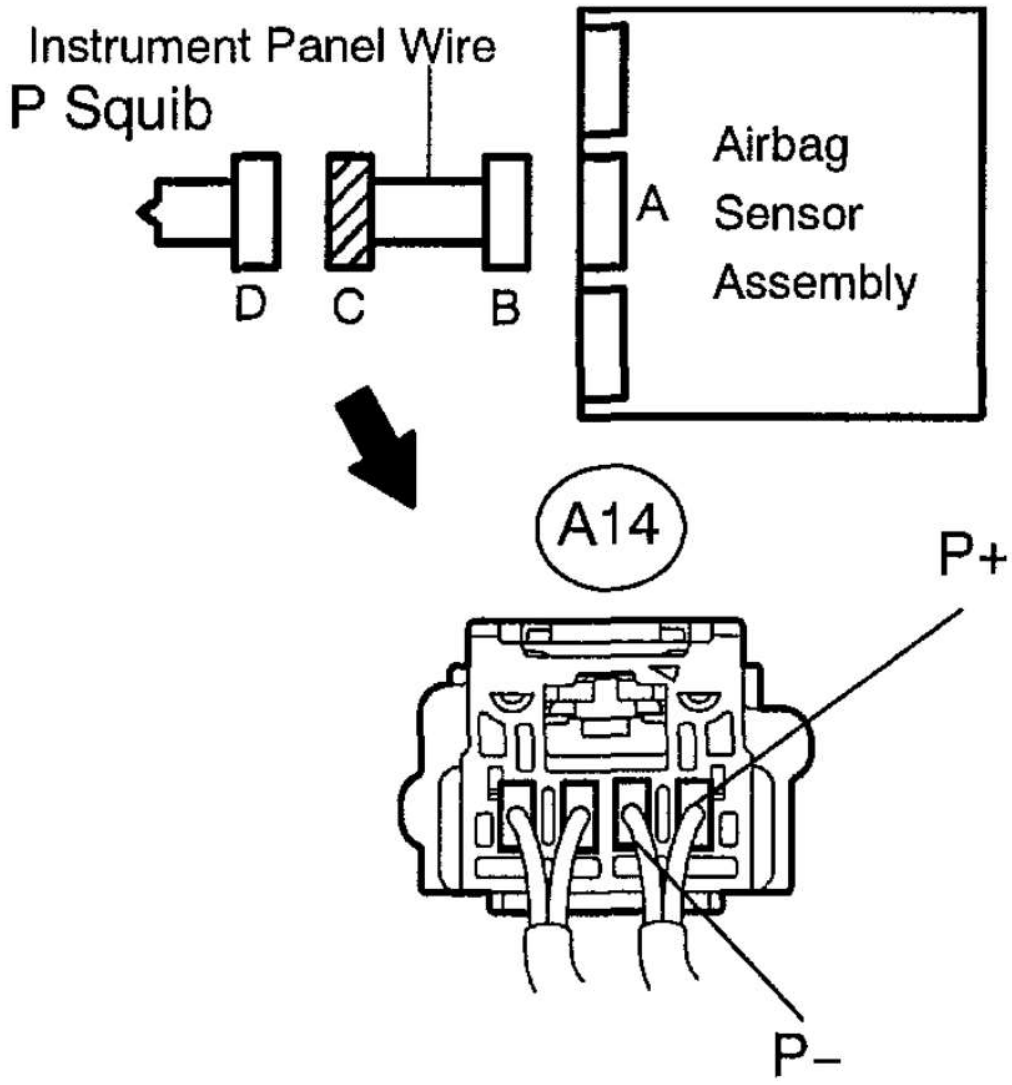



**Fig. 119: Checking Instrument Panel Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go to step 11.**

6. **Check instrument panel wire (to B+).**

**PREPARATION:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A14-1 (P+) - Body ground | Ignition switch ON | Below 1 V |
| A14-2 (P-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

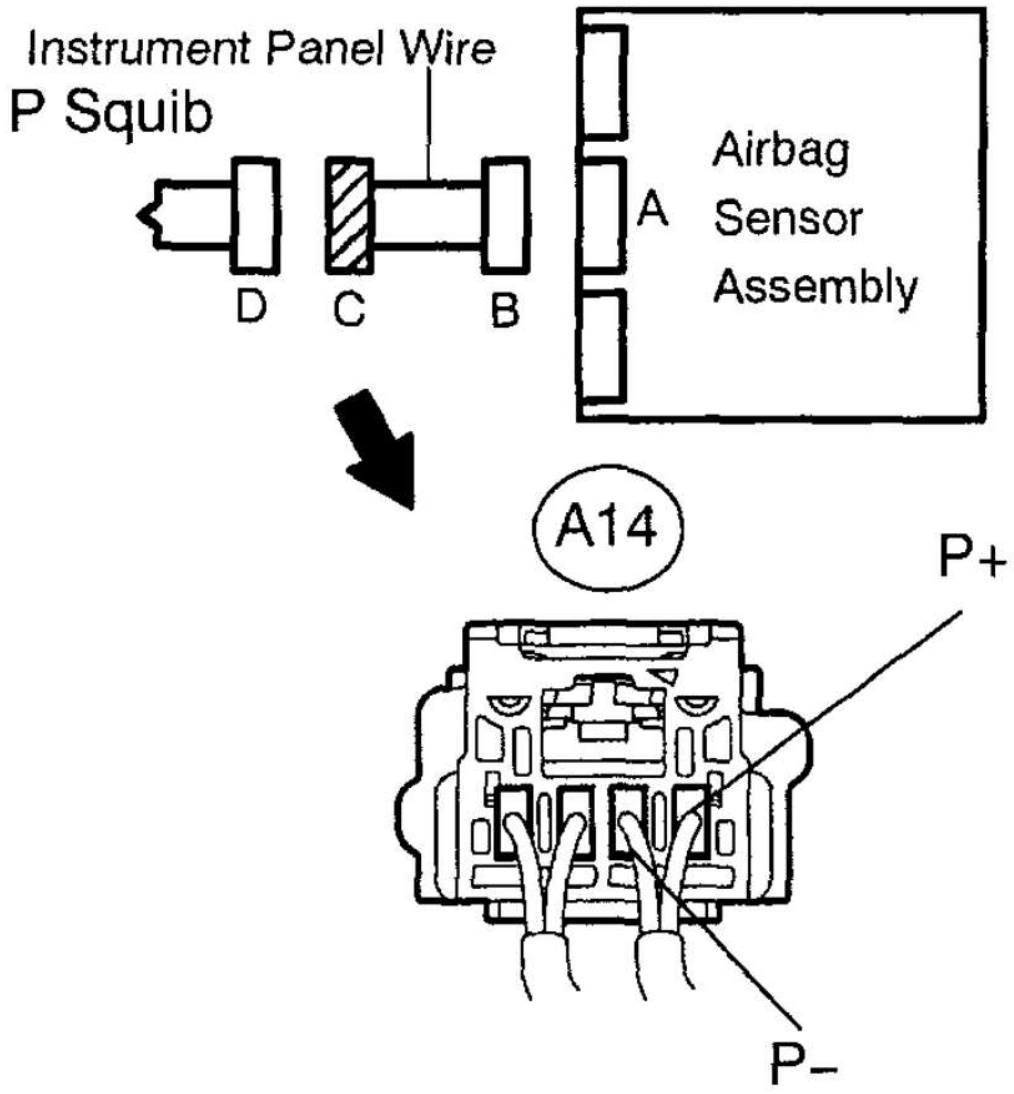



**Fig. 120: Checking Instrument Panel Wire (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go to step 11.**

7. **Check connector.**

**CHECK:**

cardiagn.com

Check that the instrument panel wire connectors (on the front passenger airbag assembly side) are not damaged.

**OK:**

**The lock button is not disengaged, or the claw of the lock is not deformed or damaged.**

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step**

8. **Check instrument panel wire (P squib circuit).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (P SQUIB CIRCUIT) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A14-1 (P+) - Body ground | Ignition switch ON | Below 1 V |
| A14-2 (P-) - Body ground | Ignition switch ON | Below 1 V |

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect negative (-) terminal cable from the battery, and wait for at least 90 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

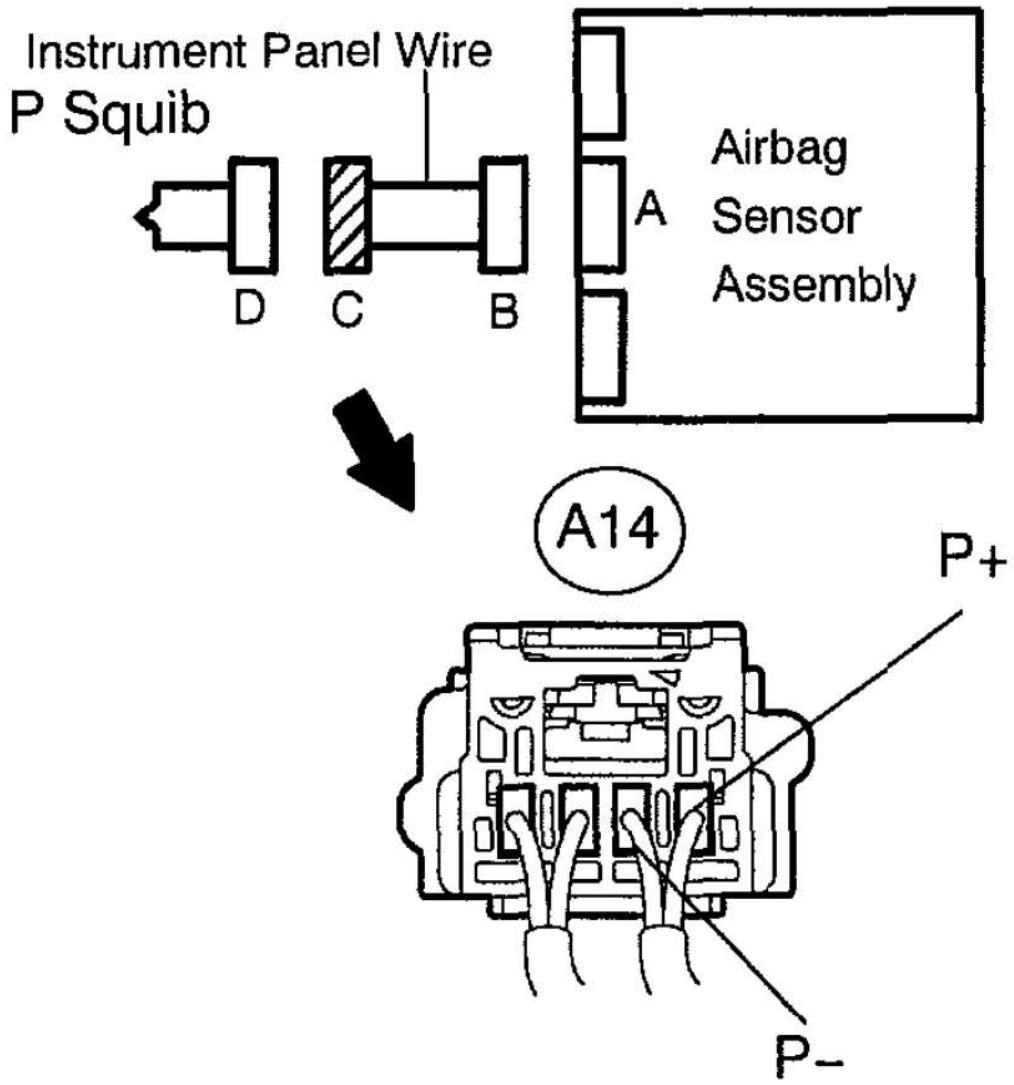



**Fig. 121: Checking Instrument Panel Wire (P Squib Circuit)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

cardiagn.com

**INSTRUMENT PANEL WIRE (P SQUIB CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A14-1 (P+) - A14-2 (P-) | Always | Below 1 ohm |
| A14-1 (P+) - Body ground | Always | 1 Mohm or higher |
| A14-2 (P-) - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (P SQUIB CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A14-1 (P+) - A14-2 (P-) | Always | 1 Mohm or higher |

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step**

9. **Replace front passenger airbag assembly (P squib).**

**PREPARATION:**

a. Replace the front passenger airbag assembly (see **REPLACEMENT** ).
b. Connect the connector to the airbag sensor assembly.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Clear the DTCs stored in memory (see **PRE-CHECK**).
f. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

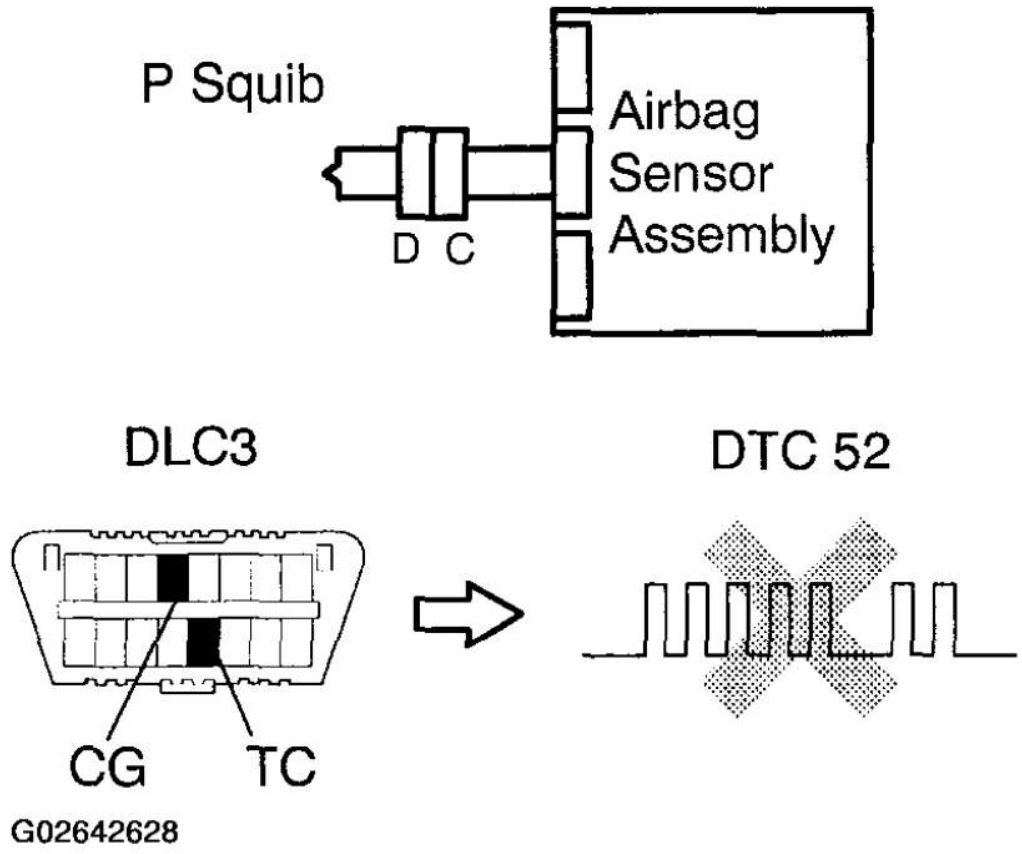



**Fig. 122: Checking Front Passenger Airbag Assembly (P Squib)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC 52 is not output.**

HINT:

Codes other than DTC 52 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: END**

10. **Check airbag sensor assembly.**

**PREPARATION:**

cardiagn.com

a. Connect the connector to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
d. Clear the DTCs stored in memory (see **PRE-CHECK**).

**CHECK:**

a. Turn the ignition switch to the LOCK position.

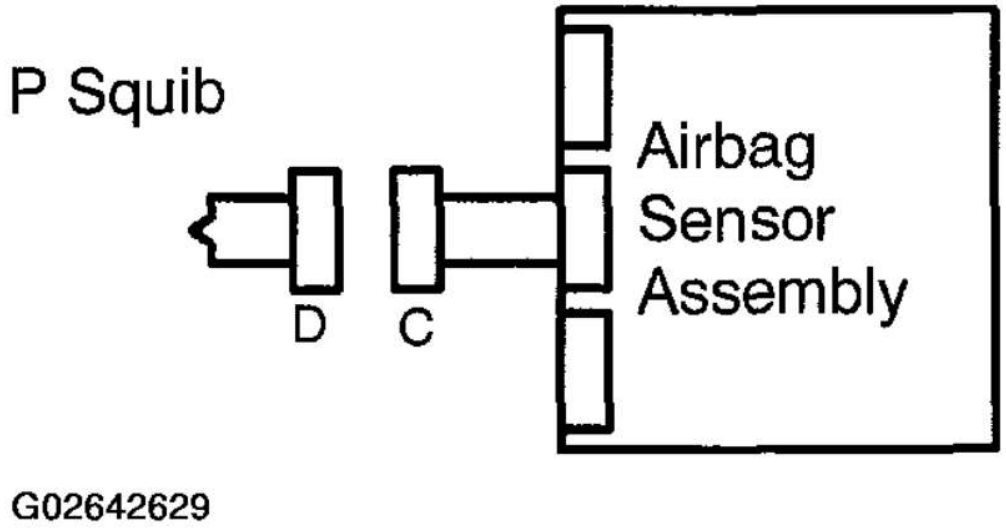



**Fig. 123: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

b. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
c. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC B1805 is not output.**

HINT:

Codes other than DTC B1805 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**

cardiagn.com

**OK: Go to step 12.**

11. **Check airbag sensor assembly.**

**PREPARATION:**

a. From step 6:

Turn the ignition switch to the LOCK position.

b. From step 6:

Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

c. Connect the connectors to the airbag sensor assembly.
d. Using a service wire, connect terminals A14-1 (P+) and A14-2 (P-) of connector "C".

**NOTE:**

- **Twist the end of the service wire in order to insert it into the connector.**
- **Do not forcibly insert the twisted service wire into the terminals of the connector when connecting.**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

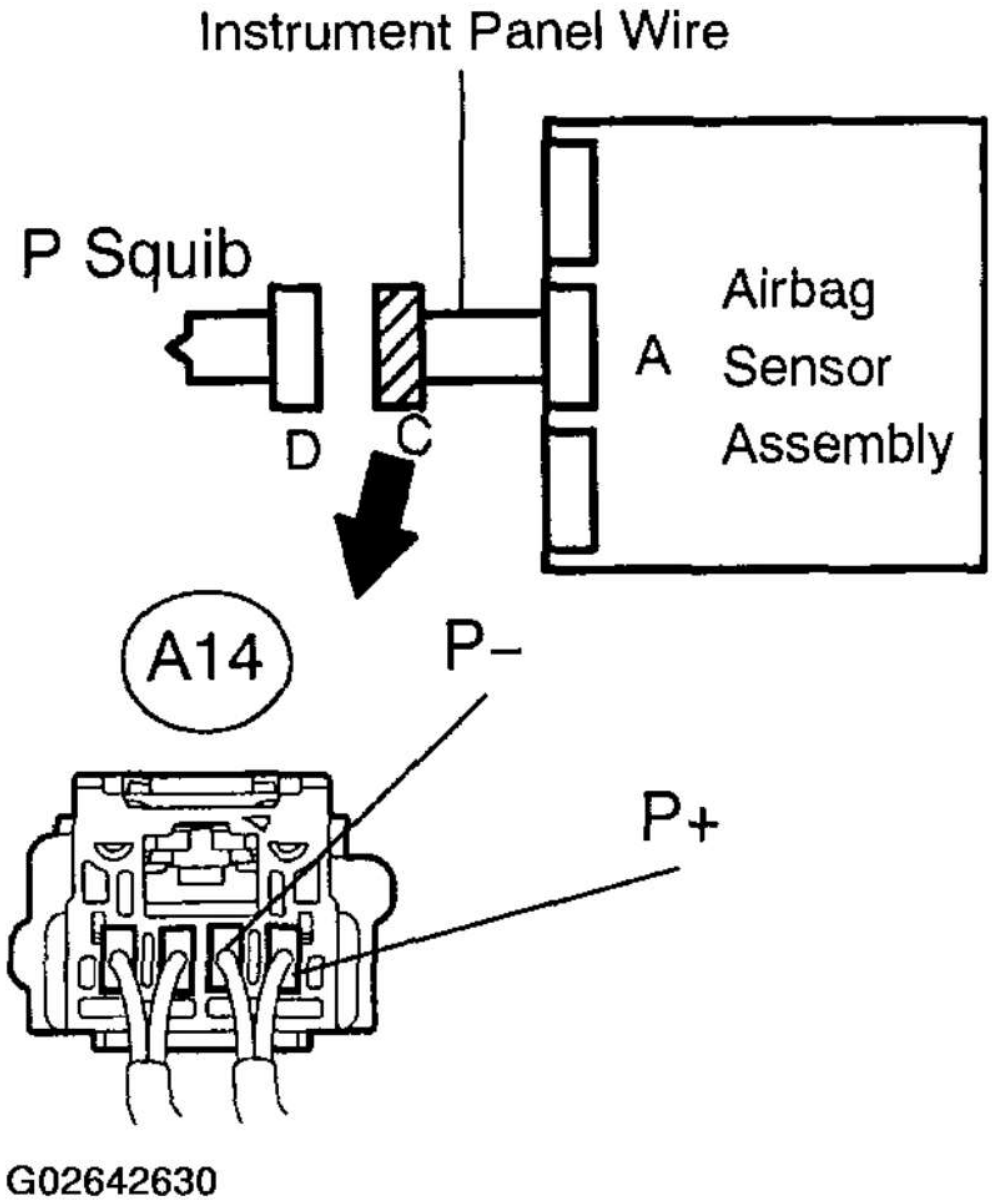



**Fig. 124: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).

cardiagn.com

h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1806, B1807 and B1808 are not output.**

HINT:

Codes other than DTCs B1806, B1807 and B1808 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: Go To Next Step**

12. **Check front passenger airbag assembly (P squib).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. From step 11:

Disconnect the service wire from connector "C".

d. Connect the connectors to the front passenger airbag assembly.
e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

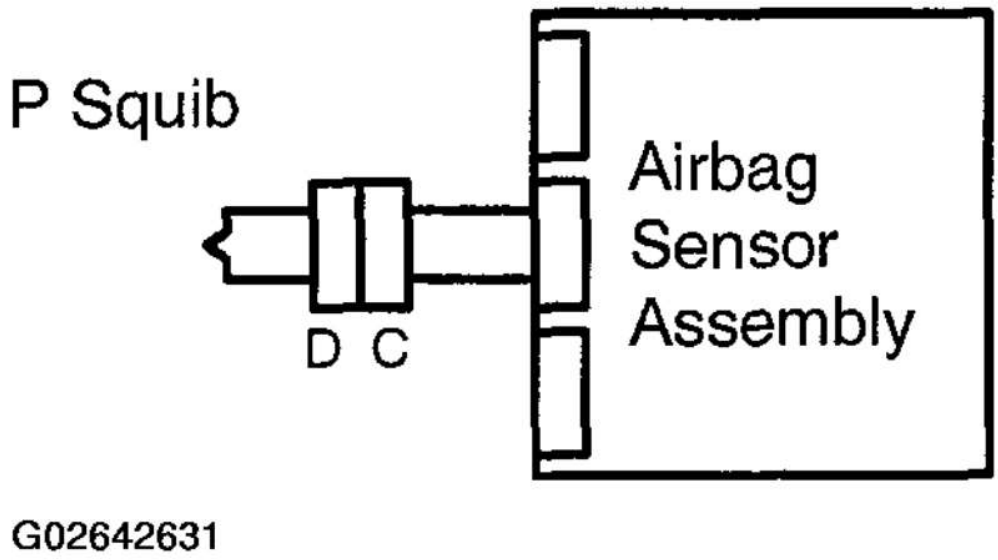



**Fig. 125: Checking Front Passenger Airbag Assembly (P Squib)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1805, B1806, B1807 and B1808 are not output.**

HINT:

Codes other than DTCs B1805, B1806, B1807 and B1808 may be output at this time, but they are not related to this check.

**NG: Replace front passenger airbag assembly.**

**OK: From results of above inspection, suspected part can now be considered normal. To**

cardiagn.com

**make sure of this, use simulation method to check.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

## DTC B1810/53, B1811/53, B1812/53, B1813/53: SHORT/OPEN IN D SQUIB (DUAL STAGE - 2ND STEP) CIRCUIT (TO GROUND/TO B+)

### CIRCUIT DESCRIPTION

The D squib (Dual stage - 2nd step) circuit consists of the airbag sensor assembly, the spiral cable sub-assembly and the horn button assembly.

The circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the D squib (Dual stage - 2nd step) circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1810/53 | •When airbag sensor assembly receives line short circuit signal 5 times in D squib (Dual stage – 2nd step) circuit during primary check. | •Steering wheel pad (D squib, 2nd step)<br>•Spiral cable<br>•Airbag sensor assembly<br>•Instrument panel wire |
| B1811/53 | •When airbag sensor assembly receives open circuit signal in D squib (Dual stage - 2nd step) circuit for 2 seconds. | •Steering wheel pad (D squib, 2nd step)<br>•Spiral cable<br>•Airbag sensor assembly<br>•Instrument panel wire |
| B1812/53 | •When airbag sensor assembly receives short circuit to ground signal in D squib (Dual stage -2nd step) circuit for 0.5 seconds. | •Steering wheel pad (D squib, 2nd step)<br>•Spiral cable<br>•Airbag sensor assembly<br>•Instrument panel wire |
| B1813/53 | •When airbag sensor assembly receives B+ short circuit signal in D squib (Dual stage – 2nd step) circuit for 0.5 seconds. | •Steering wheel pad (D squib, 2nd step)<br>•Spiral cable<br>•Airbag sensor assembly<br>•Instrument panel wire |

G02642632

**Fig. 126: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

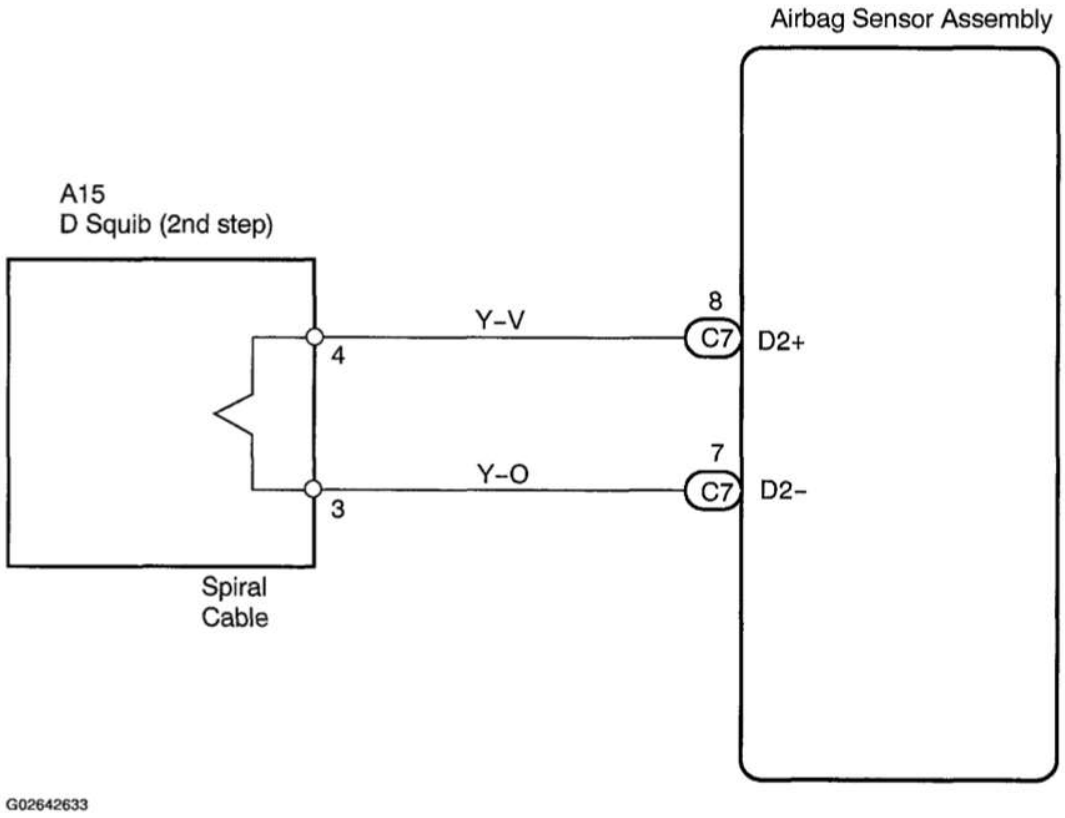



**Fig. 127: Wiring Diagram - D Squib**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check read method of DTC.**

   **CHECK:**

   If using the hand-held tester (read the 5-digit code of DTC):

   Using the hand-held tester, check the DTC (see **PRE-CHECK**).

   **RESULT:**

   **A: DTC B1810 is output.**
   **B: DTC B1811 is output.**
   **C: DTC B1812 is output.**
   **D: DTC B1813 is output.**

   **CHECK:**

   If not using the hand-held tester (read the 2-digit code of DTC):

   Check the DTC (see **PRE-CHECK**).

   **RESULT:**

   **E: DTC 53 is output.**
   **B: Go to step 4**
   **C: Go to step 5**
   **D: Go to step 6**
   **E: Go to step 7**
   **A: Go To Next Step**

2. **Check connector.**

   **CHECK:**

   Check that the spiral cable connectors (on the horn button assembly side) are not damaged.

   **OK:**

   **The lock button is not disengaged, or the claw of the lock is not deformed or damaged.**
   **NG: Replace spiral cable.**
   **OK: Go To Next Step**

3. **Check D squib (dual stage - 2nd step) circuit (short).**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**D SQUIB (DUAL STAGE - 2ND STEP) CIRCUIT (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D2+ - D2- | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

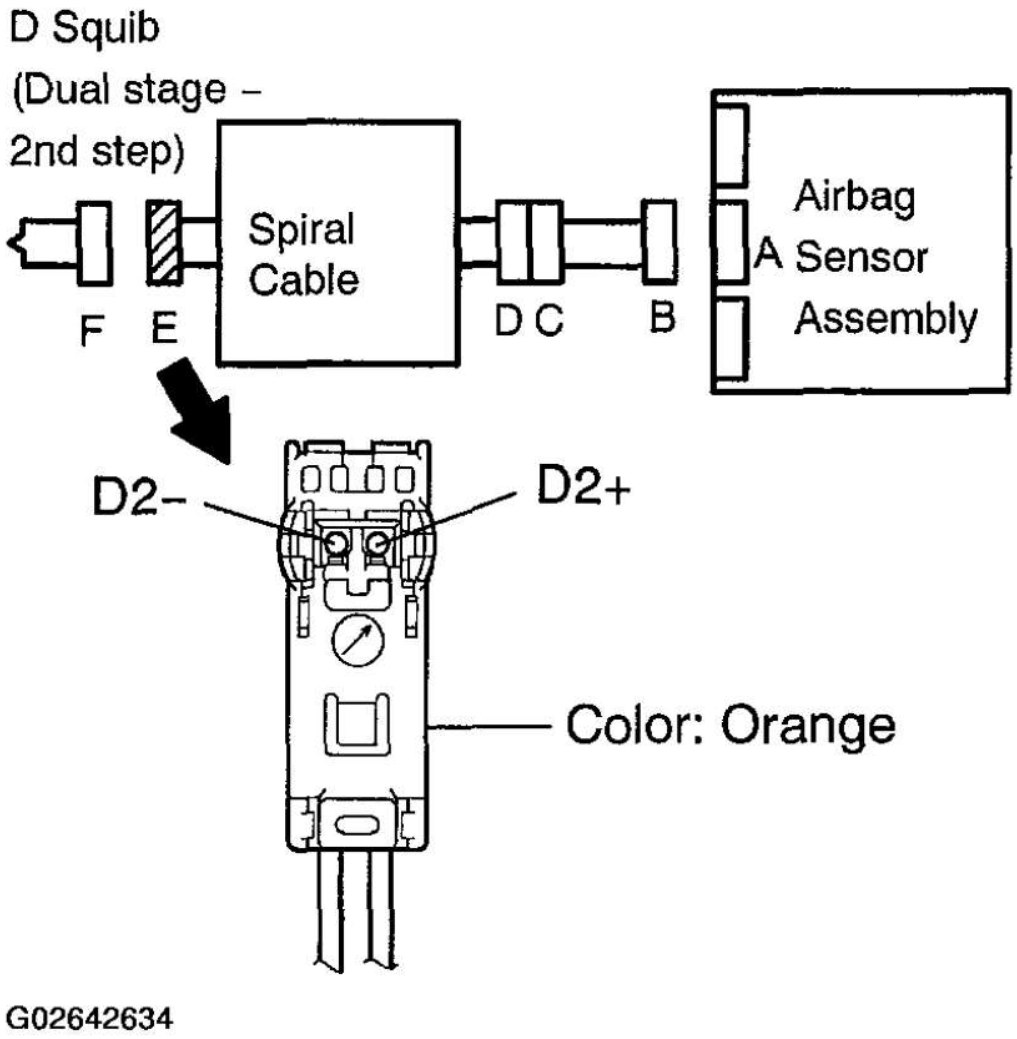



**Fig. 128: Checking D Squib (Dual Stage - 2nd Step) Circuit (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 13.**

**OK: Go to step 10.**

4. **Check D squib (dual stage - 2nd step) circuit (open).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**D SQUIB (DUAL STAGE - 2ND STEP) CIRCUIT (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D2+ - D2- | Always | Below 1 ohm |

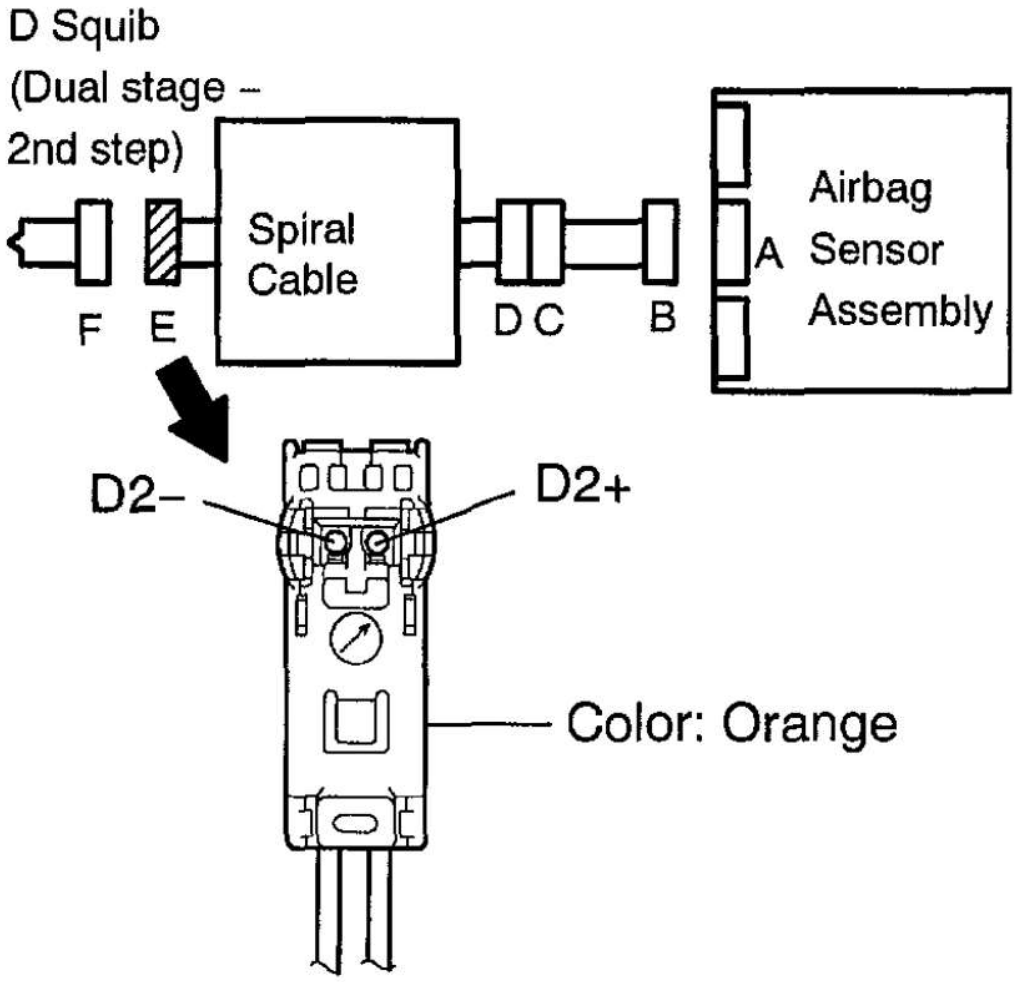



**Fig. 129: Checking D Squib (Dual Stage - 2nd Step) Circuit (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 15.**

**OK: Go to step 11.**

5. **Check D squib (dual stage - 2nd step) circuit (to ground).**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

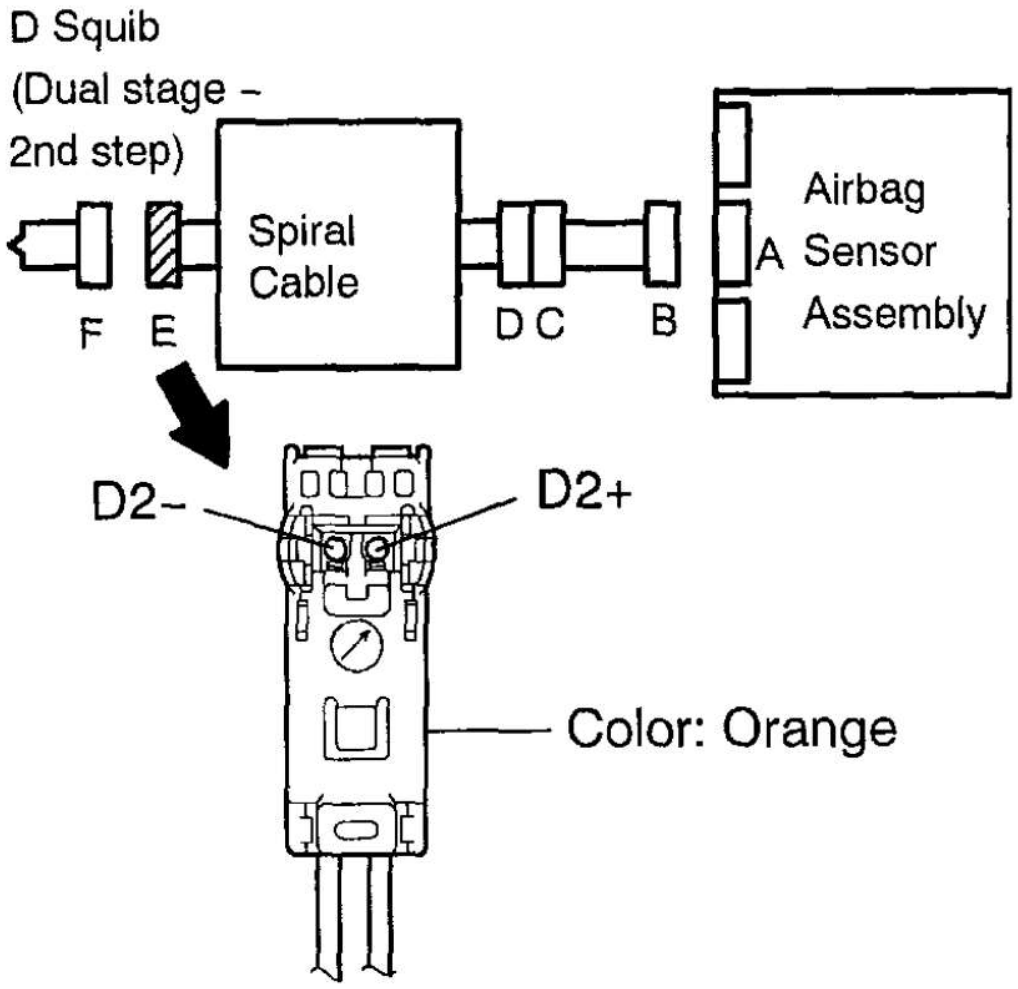
**CHECK:**

Measure the resistance according to the table below.

**OK:**

**D SQUIB (DUAL STAGE - 2ND STEP) CIRCUIT (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| D2+ - Body ground | Always | 1 Mohm or higher |
| D2- - Body ground | Always | 1 Mohm or higher |




G02642636

cardiagn.com

**Fig. 130: Checking D Squib (Dual Stage - 2nd Step) Circuit (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 17.**

**OK: Go to step 11.**

6. **Check D squib (dual stage - 2nd step) (to B+).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**D SQUIB (DUAL STAGE - 2ND STEP) (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D2+ - Body ground | Ignition switch ON | Below 1 V |
| D2- - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

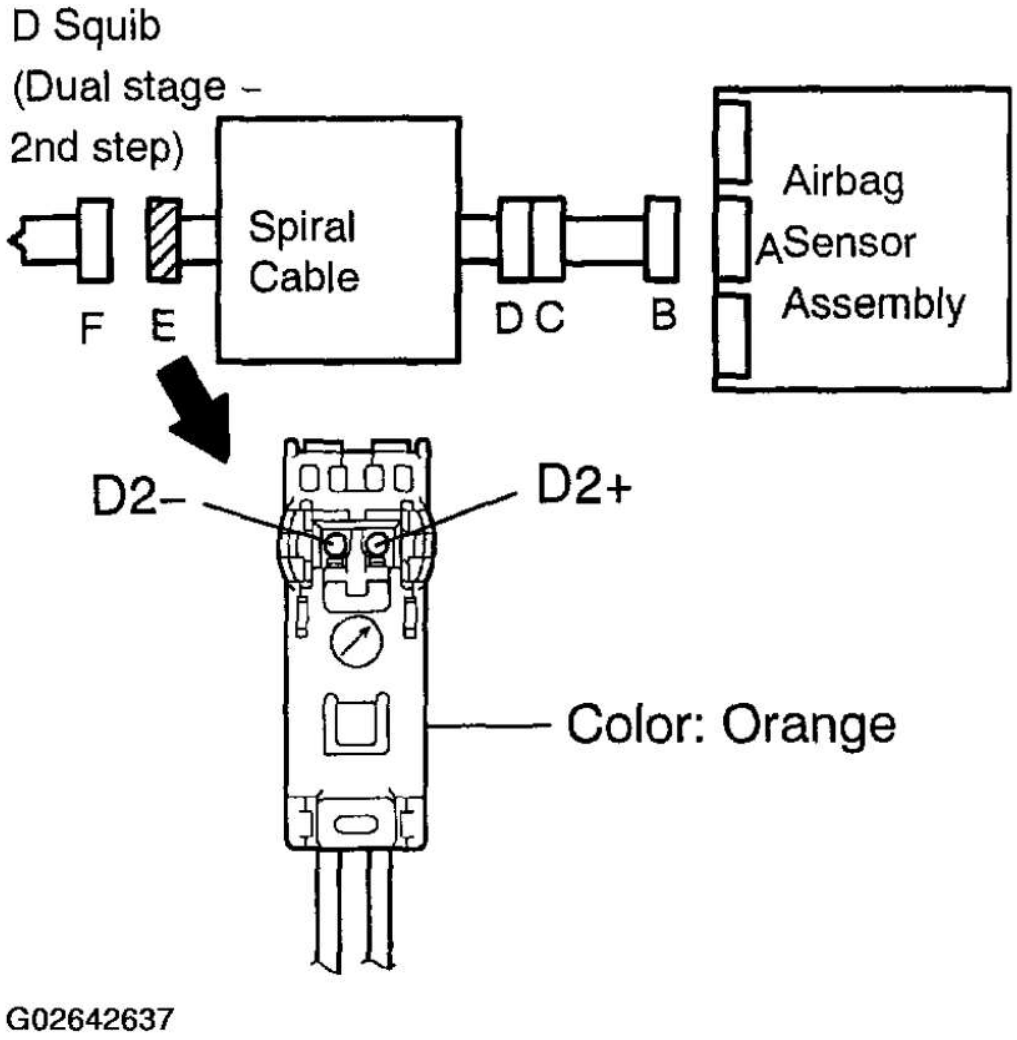



**Fig. 131: Checking D Squib (Dual Stage - 2nd Step) (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Go to step 19.**

**OK: Go to step 11.**

7. **Check connector.**

**CHECK:**

Check that the spiral cable connectors (on the horn button assembly side) are not damaged.

**OK:**

cardiagn.com

**The lock button is not disengaged, or the claw of the lock is not deformed or damaged.**

**NG: Replace spiral cable.**

**OK: Go To Next Step**

8. **Check D squib (dual stage - 2nd step) circuit.**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**D SQUIB (DUAL STAGE - 2ND STEP) CIRCUIT VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D2+ - Body ground | Ignition switch ON | Below 1 V |
| D2- - Body ground | Ignition switch ON | Below 1 V |

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

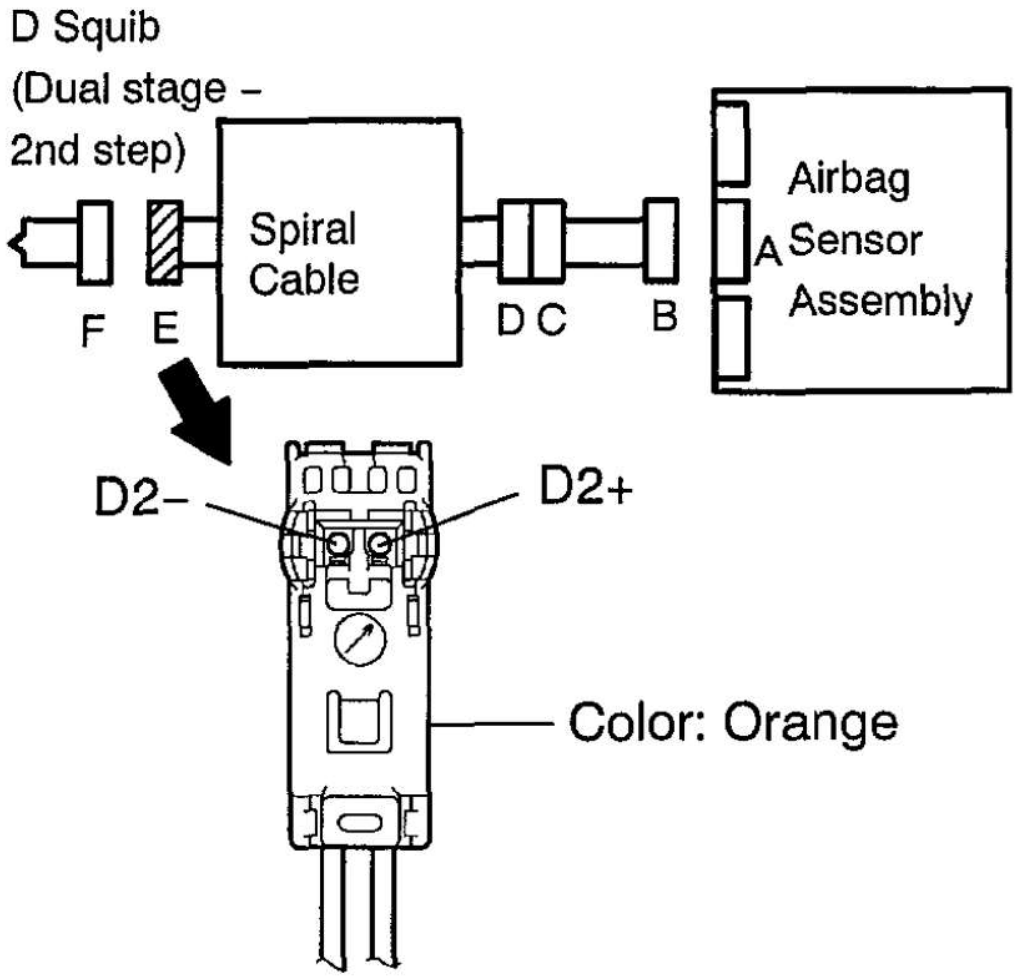



**Fig. 132: Checking D Squib (Dual Stage - 2nd Step) Circuit**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**D SQUIB (DUAL STAGE - 2ND STEP) CIRCUIT RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| D2+ - D2- | Always | Below 1 ohm |

cardiagn.com

| | | |
|---|---|---|
| D2+ - Body ground | Always | 1 Mohm or higher |
| D2- - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**D SQUIB (DUAL STAGE - 2ND STEP) CIRCUIT RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D2+ - D2- | Always | 1 Mohm or higher |

**NG: Go to step 21.**
**OK: Go To Next Step**

9. **Replace horn button assembly (D squib, dual stage - 2nd step).**

**PREPARATION:**

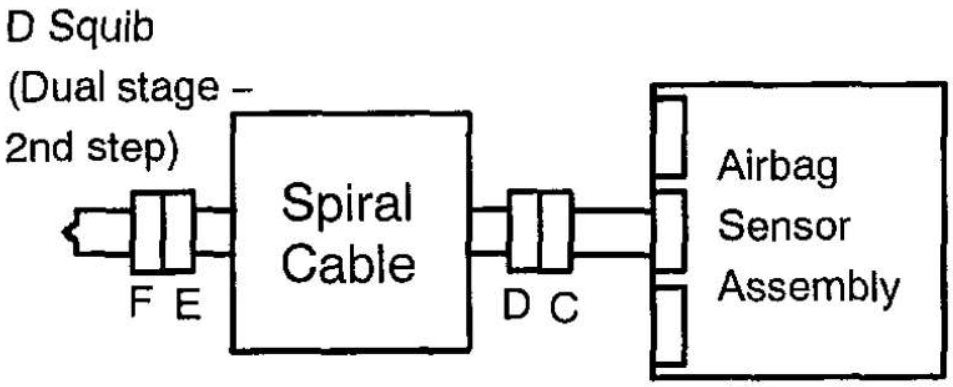
a. Replace the horn button assembly (see **REPLACEMENT** ).
b. Connect the connector to the airbag sensor assembly.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Clear the DTCs stored in memory (see **PRE-CHECK**).
f. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |



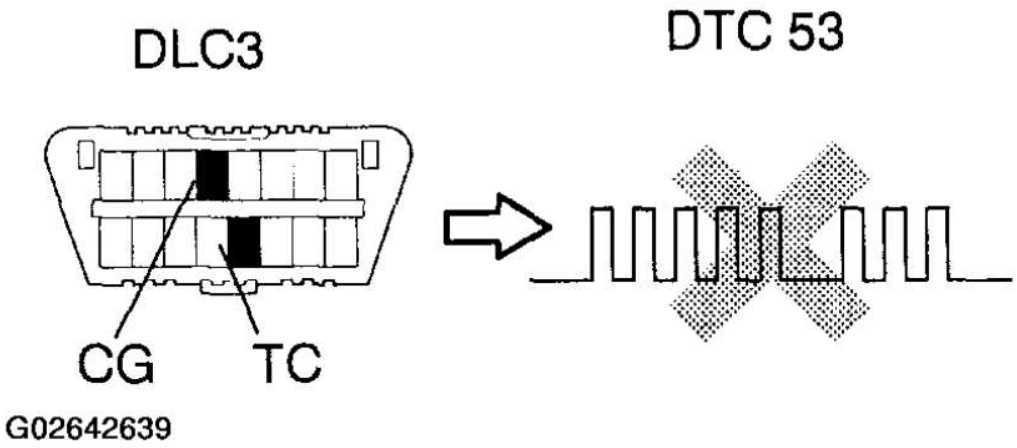




**Fig. 133: Checking Horn Button Assembly (D Squib, Dual Stage 2nd Stage)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC 53 is not output.**

HINT:

Codes other than DTC 53 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**

cardiagn.com

**OK: END**

10. **Check airbag sensor assembly.**

**PREPARATION:**

a. Connect the connectors to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
d. Clear the DTCs stored in memory (see **PRE-CHECK**).

**CHECK:**

a. Turn the ignition switch to the LOCK position.
b. Turn the ignition switch to the ON position, and wait for at least 60 seconds.

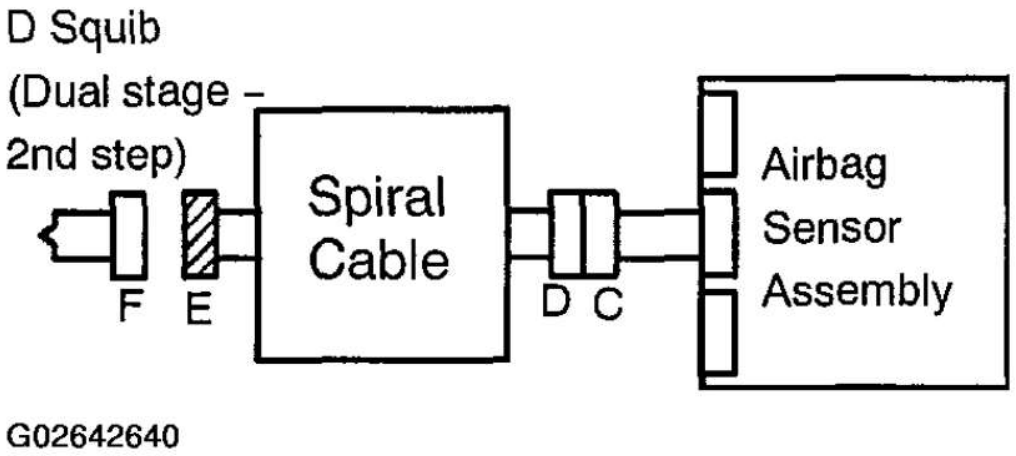



**Fig. 134: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

c. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC B1810 is not output.**

HINT:

Codes other than DTC B1810 may be output at this time, but they are not related to this check.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**NG: Replace airbag sensor assembly.**

**OK: Go to step 12.**

11. **Check airbag sensor assembly.**

**PREPARATION:**

a. From step 6:

Turn the ignition switch to the LOCK position.

b. From step 6:

Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

c. Connect the connectors to the airbag sensor assembly.
d. Using a service wire, connect terminals D2+ and D2- of connector "E".

**NOTE:**

- **Twist the end of the service wire in order to insert it into the connector.**
- **Do not forcibly insert the twisted service wire into the terminals of the connector when connecting.**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

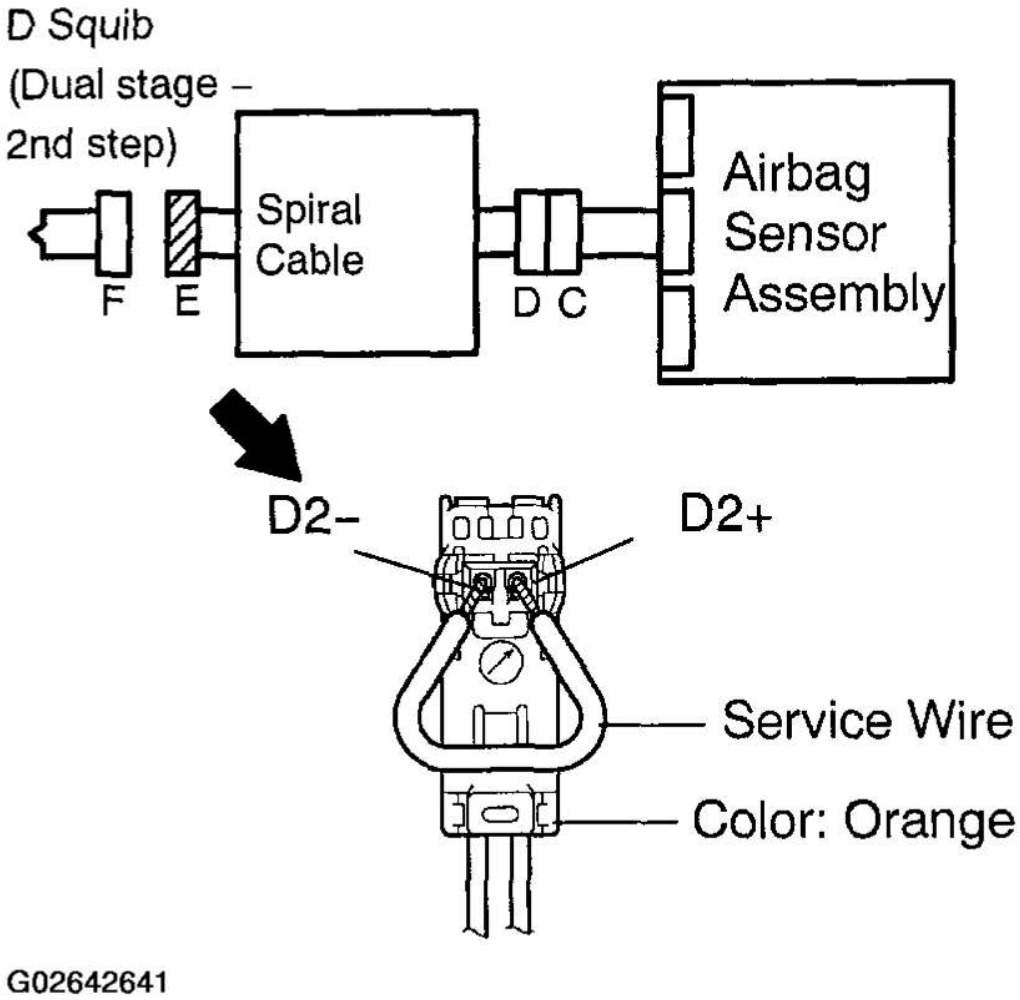



**Fig. 135: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**OK:**

**DTCs B1811, B1812 and B1813 are not output.**

HINT:

Codes other than DTCs B1811, B1812 and B1813 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**

**OK: Go To Next Step.**

12. **Check horn button assembly (D squib, dual stage - 2nd step).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. From step 11:

Disconnect the service wire from connector "E".

d. Connect the connectors to the horn button assembly.
e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

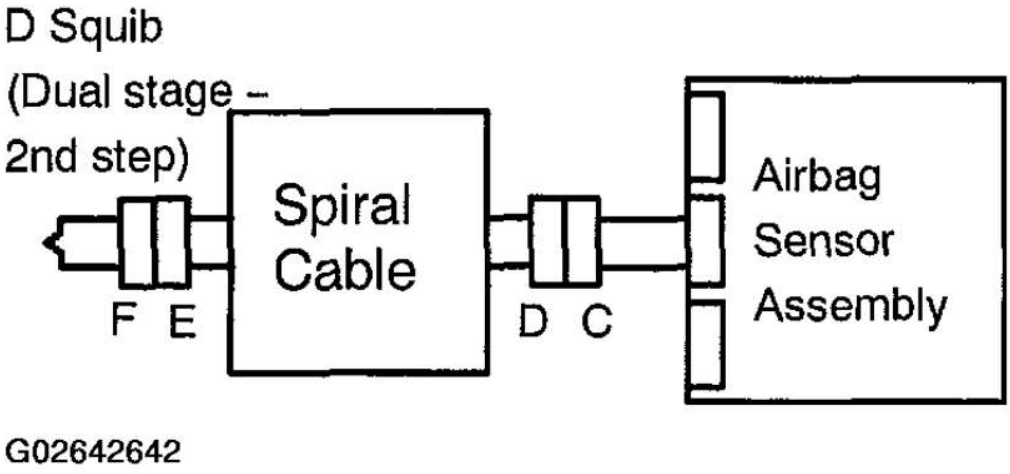



**Fig. 136: Checking Horn Button Assembly (D Squib, Dual Stage - 2nd Step)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1810, B1811, B1812 and B1813 are not output.**

HINT:

Codes other than DTCs B1810, B1811, B1812 and B1813 may be output at this time, but they are not related to this check.

**NG: Replace horn button assembly.**

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

13. **Check instrument panel wire (short).**

**PREPARATION:**

Disconnect the instrument panel wire connector from the spiral cable.

HINT:

The activation prevention mechanism of connector "B" has already been released.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**INSTRUMENT PANEL WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-4 (D2+) - A15-3 (D2-) | Always | 1 Mohm or higher |

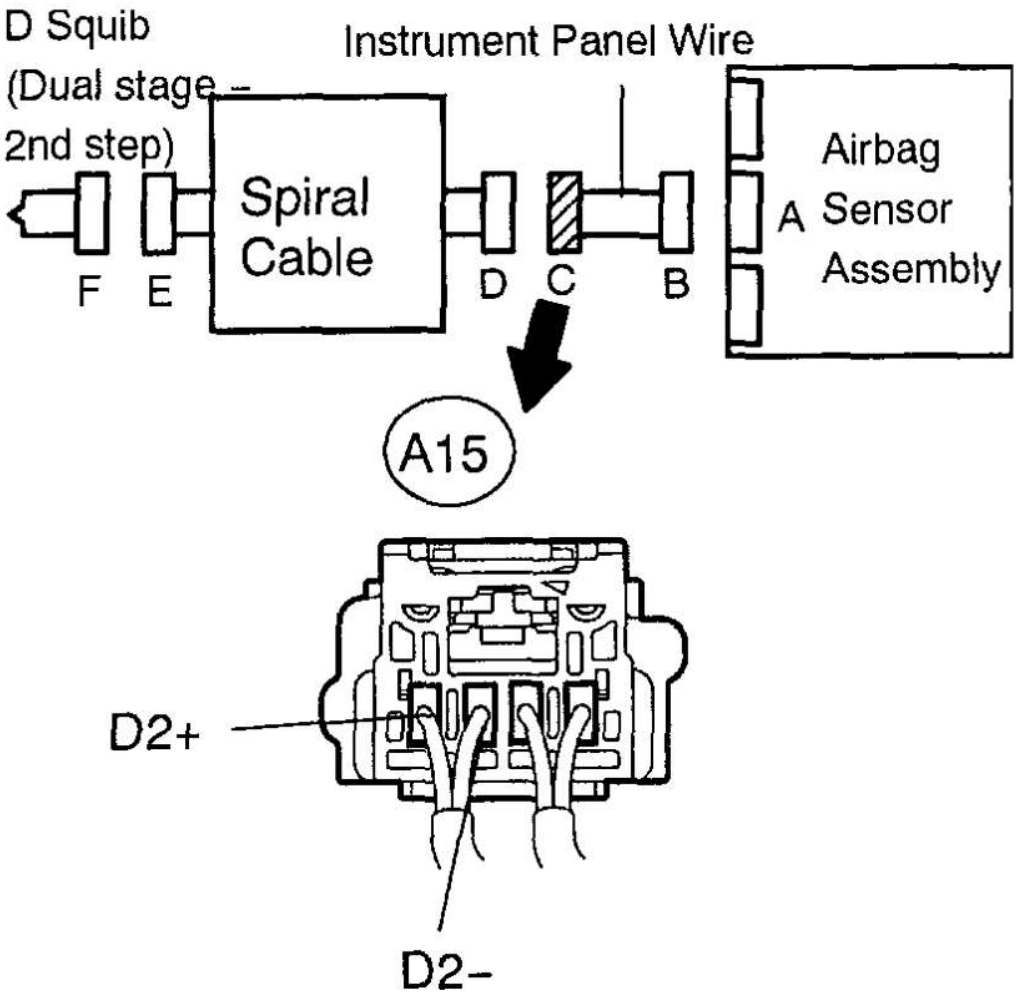



**Fig. 137: Checking Instrument Panel Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step.**

14. **Check spiral cable (short).**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**PREPARATION:**

Release the activation prevention mechanism built into connector "D" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**SPIRAL CABLE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| D2+ - D2- | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

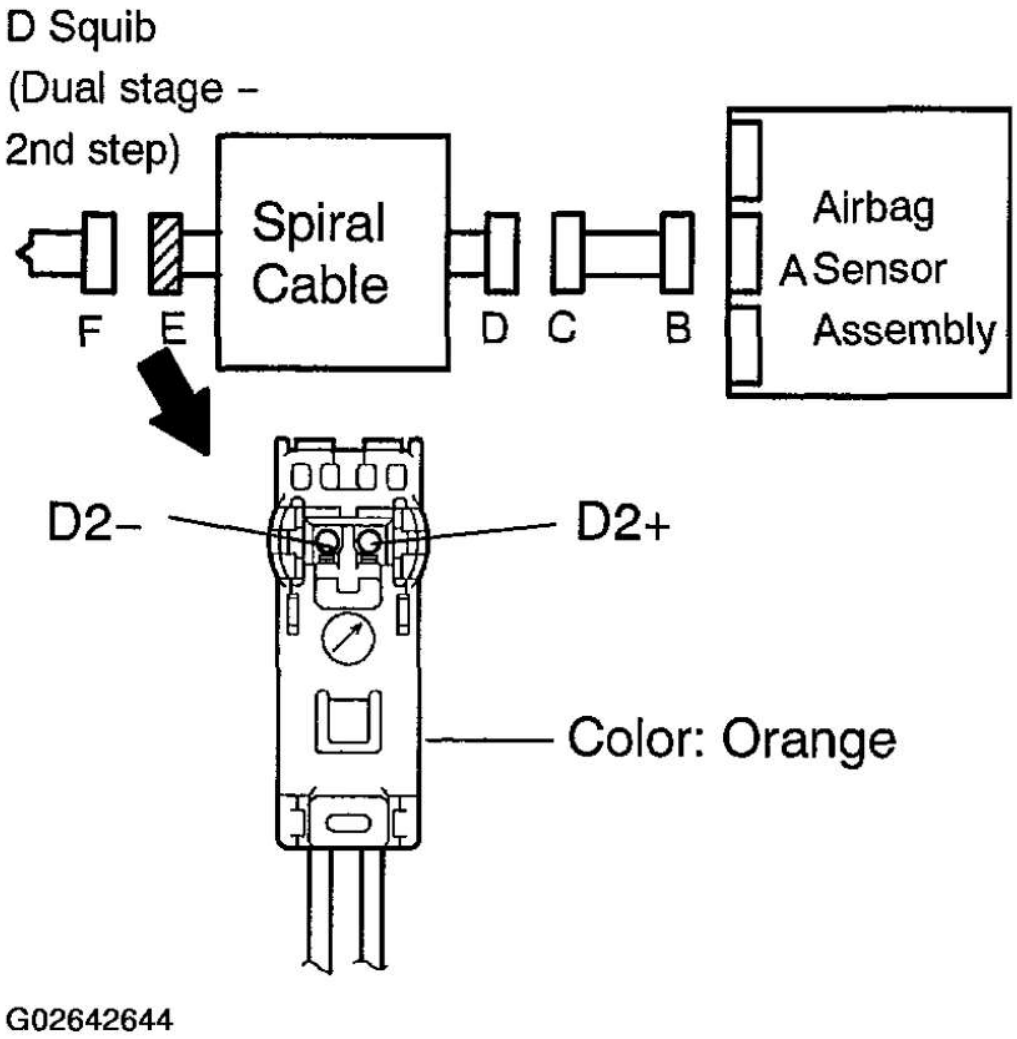



**Fig. 138: Checking Spiral Cable (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace spiral cable.**

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-**

cardiagn.com

**CHECK**).

- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

15. **Check instrument panel wire (open).**

**PREPARATION:**

Disconnect the instrument panel wire connector from the spiral cable.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

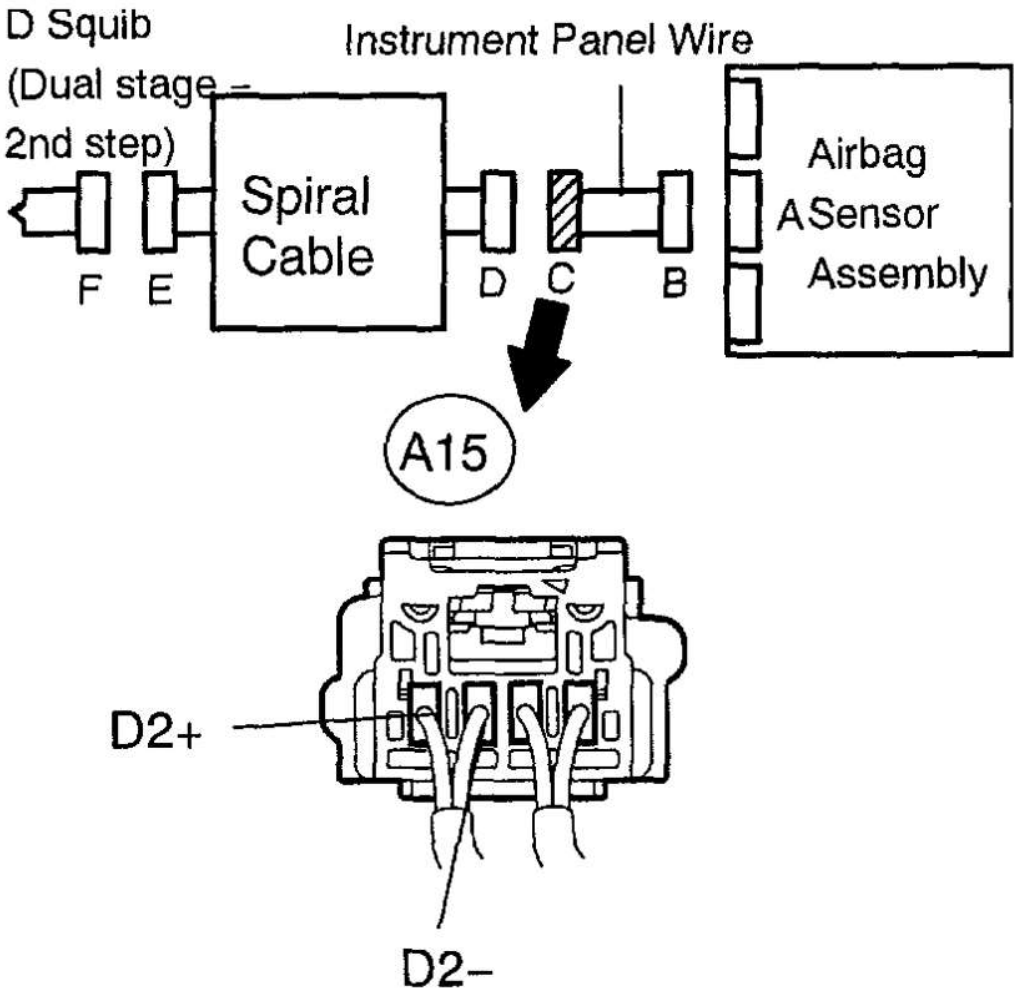
**INSTRUMENT PANEL WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-4 (D2+) - A15-3 (D2-) | Always | Below 1 ohm |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4




G02642645

**Fig. 139: Checking Instrument Panel Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step.**

16. **Check spiral cable (open).**

**CHECK:**

Measure the resistance according to the table below.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**OK:**

**SPIRAL CABLE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| D2+ - D2- | Always | Below 1 ohm |

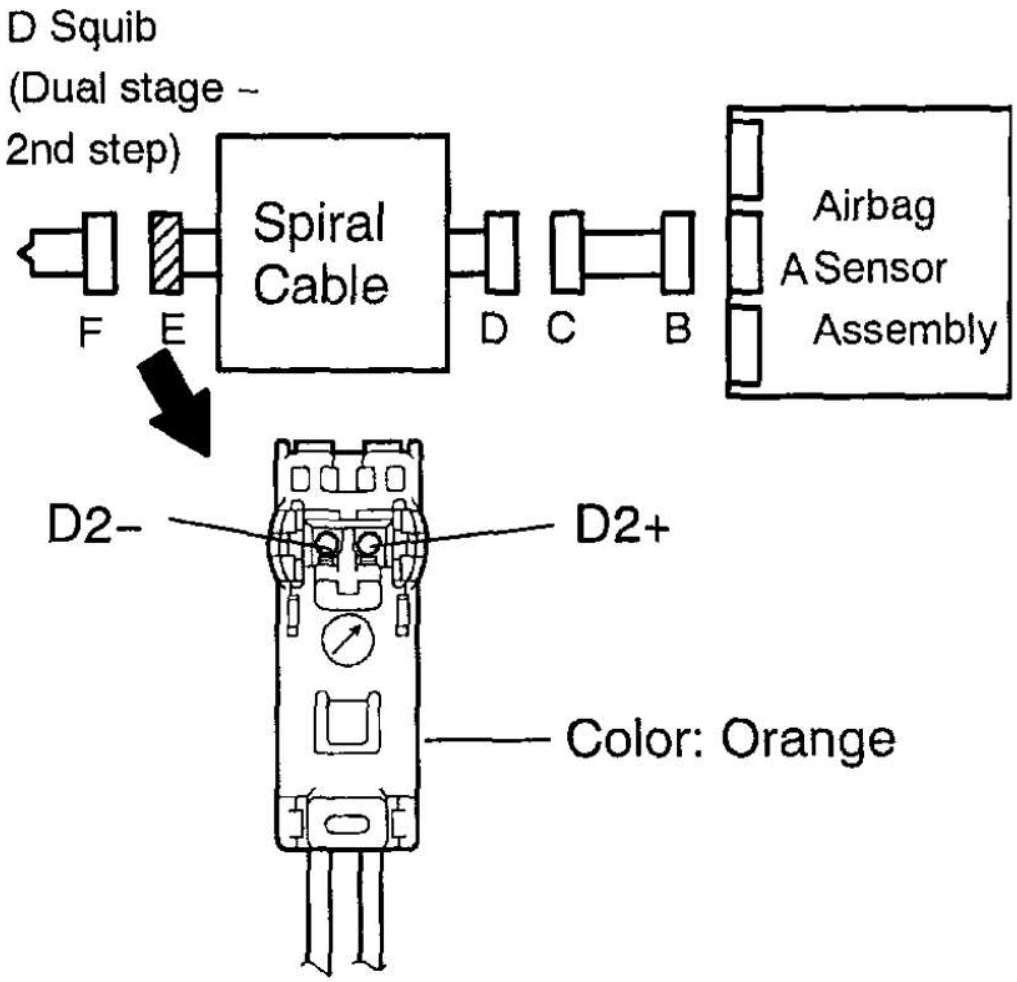



**Fig. 140: Checking Spiral Cable (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace spiral cable.**

**OK: From results of above inspection, suspected part can now be considered normal. To**

cardiagn.com

**make sure of this, use simulation method to check.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

17. **Check instrument panel wire (to ground).**

**PREPARATION:**

Disconnect the instrument panel wire connector from the spiral cable.

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-4 (D2+) - Body ground | Always | 1 Mohm or higher |
| A15-3 (D2-) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

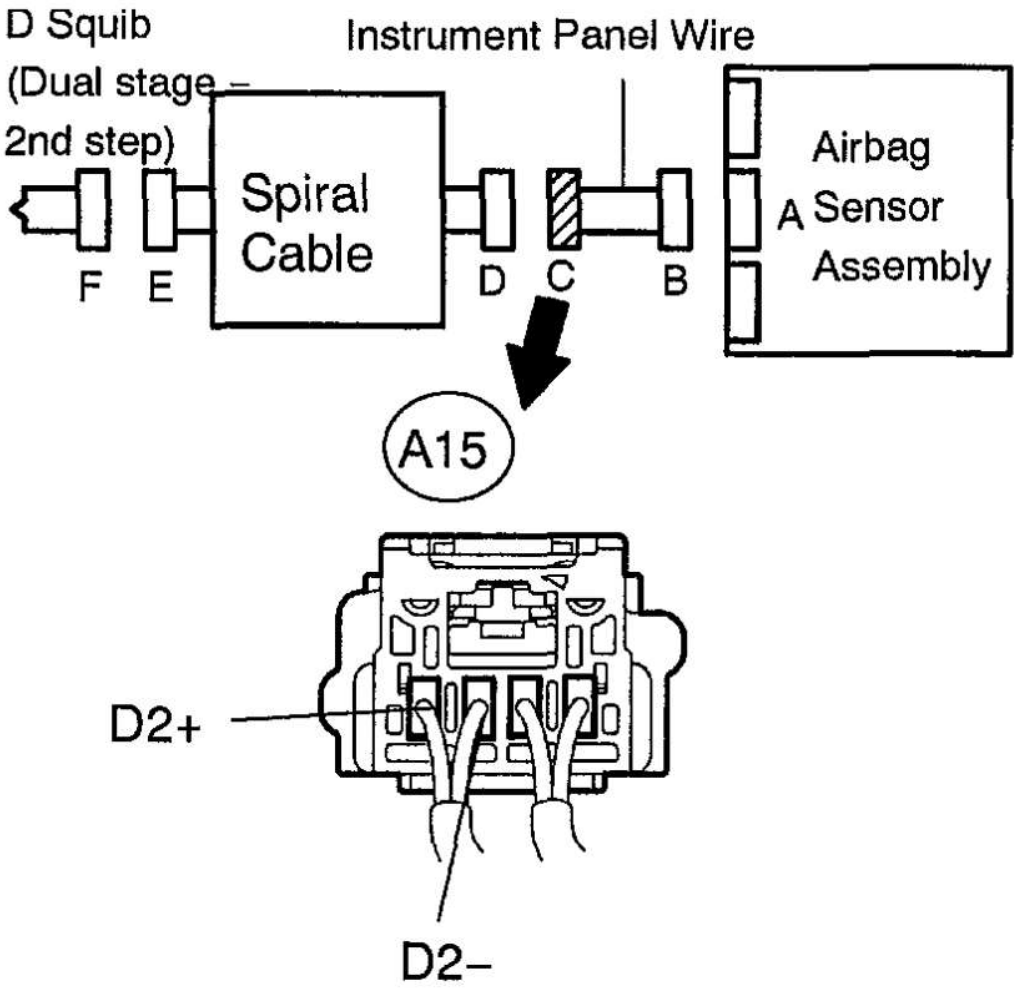



**Fig. 141: Checking Instrument Panel Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step.**

18. **Check spiral cable (to ground).**

**CHECK:**

a. Measure the resistance according to the table below.

**OK:**

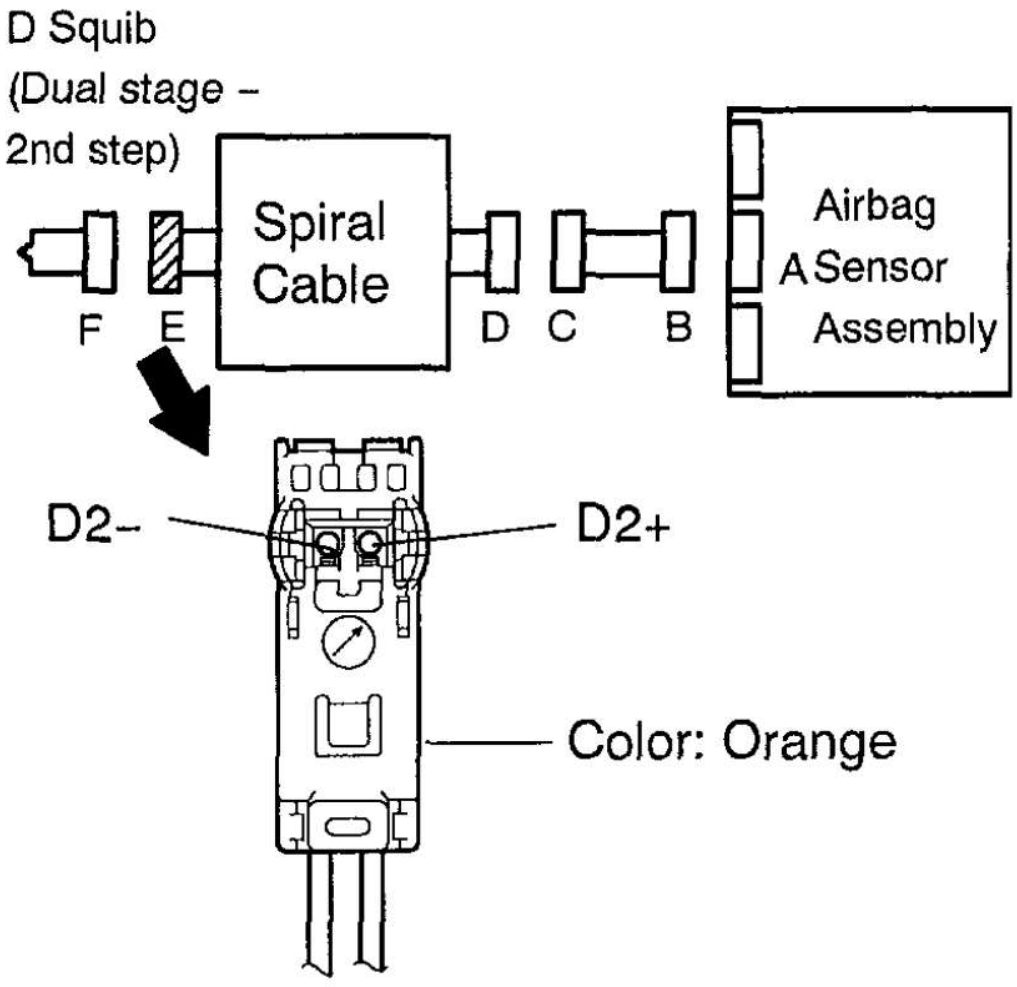
cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**SPIRAL CABLE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D2+ - Body ground | Always | 1 Mohm or higher |
| D2- - Body ground | Always | 1 Mohm or higher |




G02642648

**Fig. 142: Checking Spiral Cable (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace spiral cable.**

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check. If suspected part cannot be detected by**

cardiagn.com

**simulation method, replace all SRS components including wire harness.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

19. **Check instrument panel wire (to B+)**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the instrument panel wire connector from the spiral cable.
d. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-4 (D2+) - Body ground | Ignition switch ON | Below 1 V |
| A15-3 (D2-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

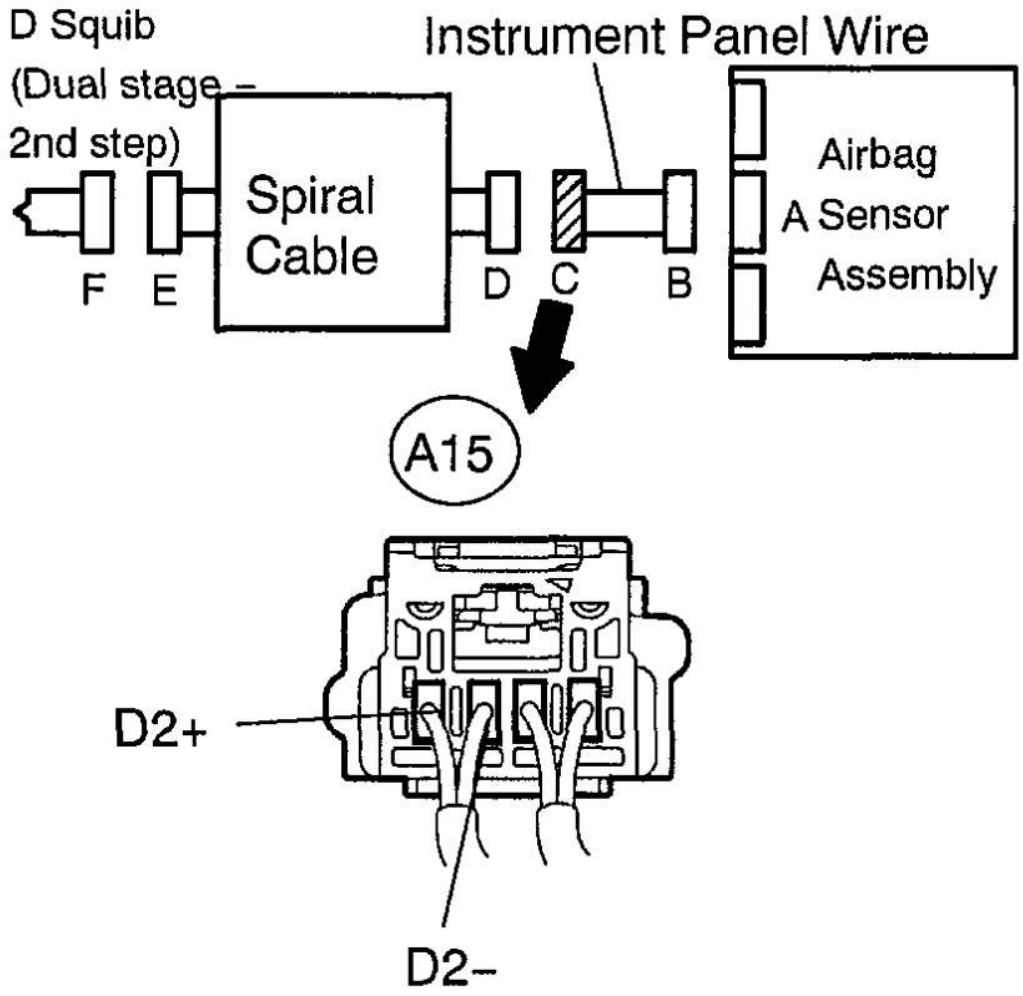



**Fig. 143: Checking Instrument Panel Wire (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step.**

20. **Check spiral cable (to B+).**

**CHECK:**

Measure the voltage according to the table below.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**OK:**

**SPIRAL CABLE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| D2+ - Body ground | Ignition switch ON | Below 1 V |
| D2- - Body ground | Ignition switch ON | Below 1 V |

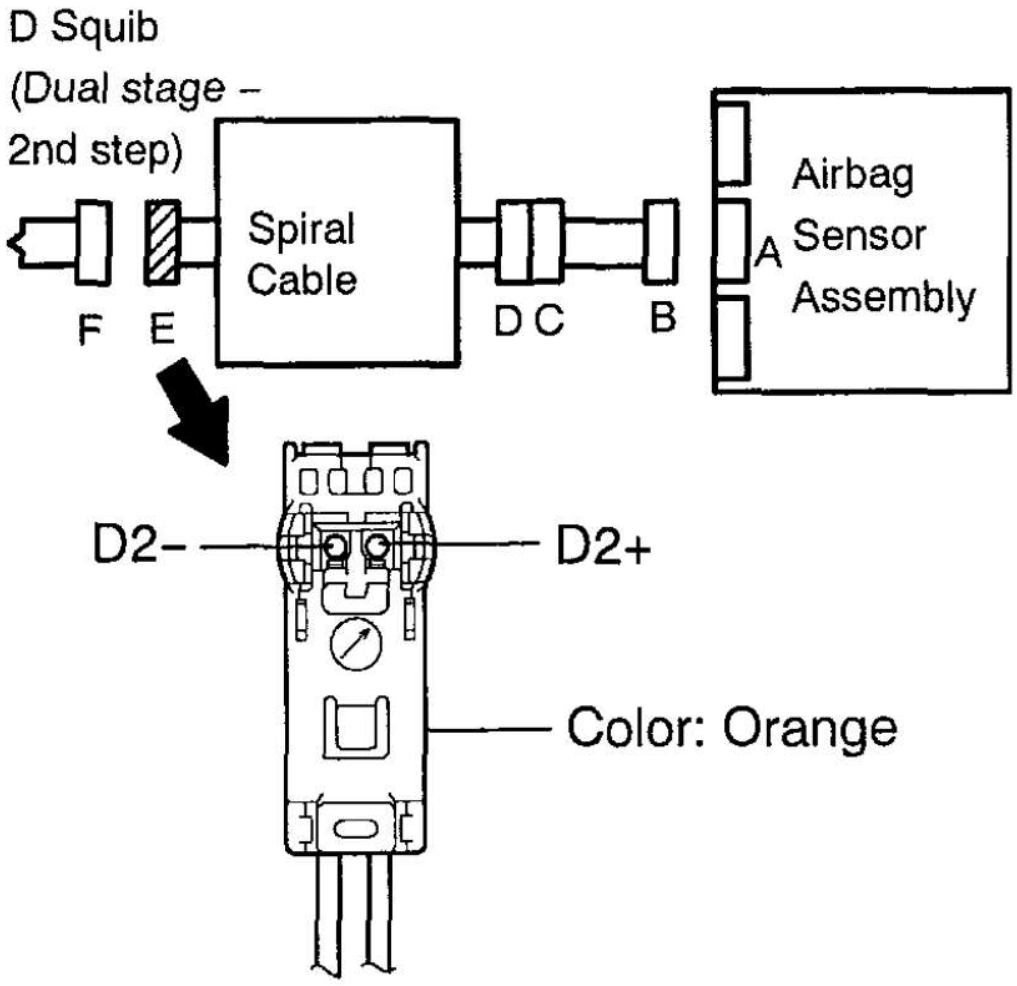



**Fig. 144: Checking Spiral Cable (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace spiral cable.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check. If suspected part cannot be detected by simulation method, replace all SRS components including wire harness.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

21. **Check instrument panel wire.**

**PREPARATION:**

a. Restore the released activation prevention mechanism of connector "B" to the original condition.
b. Disconnect the instrument panel wire connector from the spiral cable.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-4 (D2+) - Body ground | Ignition switch ON | Below 1 V |
| A15-3 (D2-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

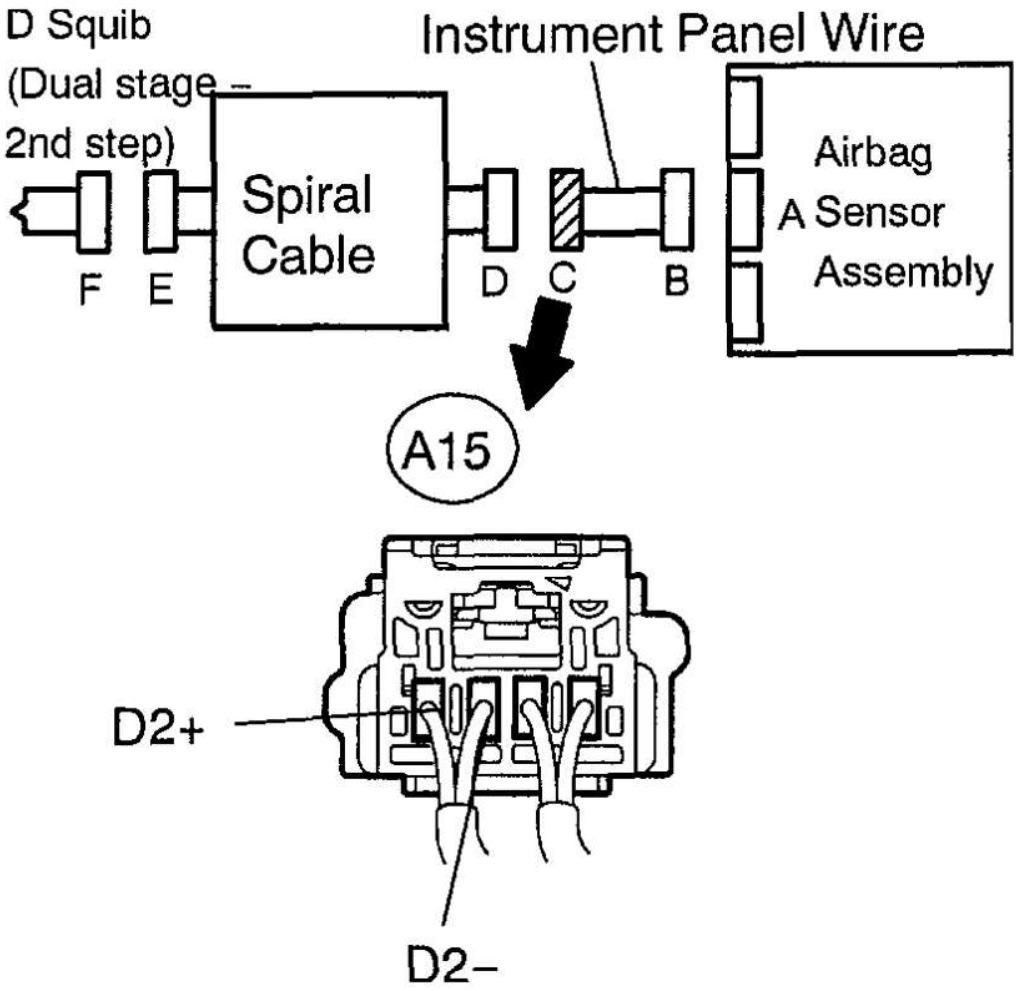



**Fig. 145: Checking Instrument Panel Wire**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Measure the resistance according to the table below.

cardiagn.com

**OK:**

**INSTRUMENT PANEL WIRE RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-4 (D2+) - A15-3 (D2-) | Always | Below 1 ohm |
| A15-4 (D2+) - Body ground | Always | 1 Mohm or higher |
| A15-3 (D2-) - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A15-4 (D2+) - A15-3 (D2-) | Always | 1 Mohm or higher |

**NG: Repair or replace instrument panel wire.**
**OK: Go To Next Step.**

22. **Check spiral cable.**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**SPIRAL CABLE VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D2+ - Body ground | Ignition switch ON | Below 1 V |
| D2- - Body ground | Ignition switch ON | Below 1 V |

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

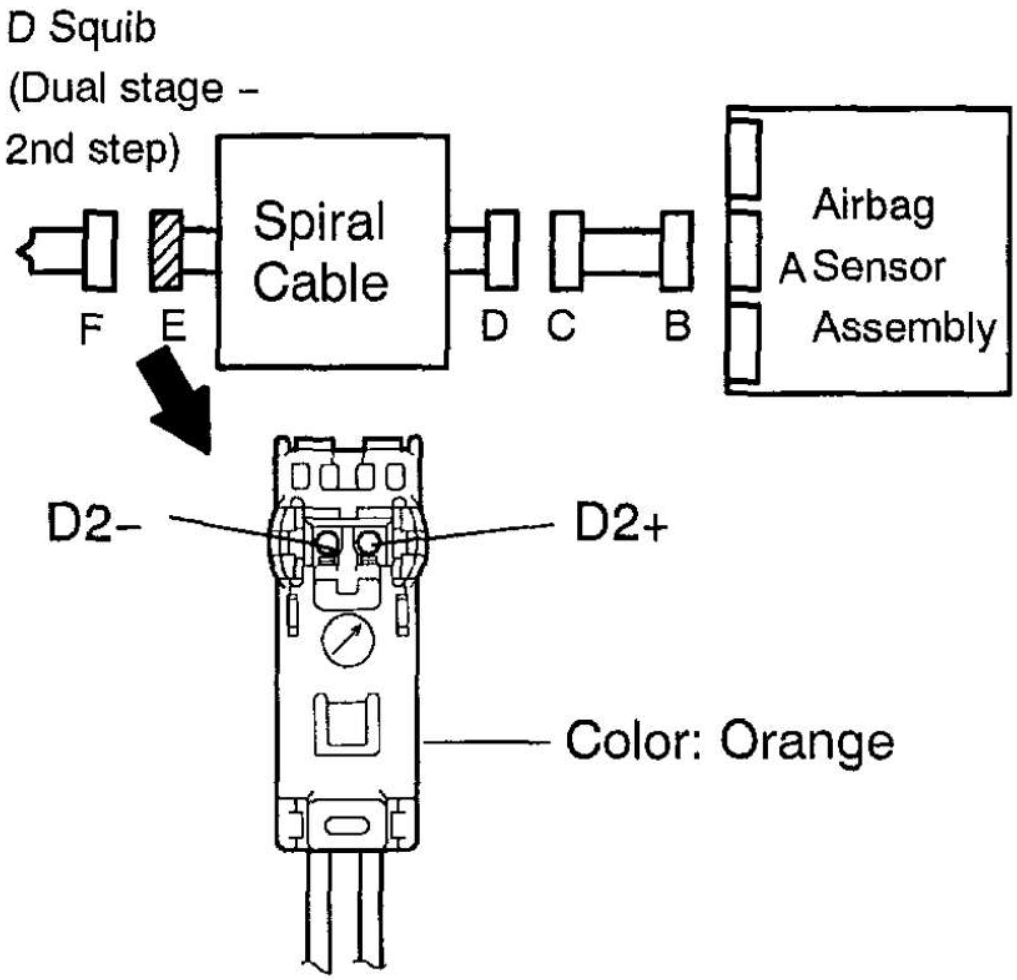



**Fig. 146: Checking Spiral Cable**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**SPIRAL CABLE RESISTANCE**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D2+ - D2- | Always | Below 1 ohm |
| D2+ - Body ground | Always | 1 Mohm or higher |
| D2- - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the airbag activation prevention mechanism built into connector "D" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**SPIRAL CABLE RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D2+ - D2- | Always | 1 Mohm or higher |

**NG: Repair or replace spiral cable.**

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check. If suspected part cannot be detected by simulation method, replace all SRS components including wire harness.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

## DTC B1815/54, B1816/54, B1817/54, B1818/54: SHORT/OPEN IN P SQUIB (DUAL STAGE - 2ND STEP) CIRCUIT (TO GROUND/TO B+)

### CIRCUIT DESCRIPTION

The P squib (Dual stage - 2nd step) circuit consists of the airbag sensor assembly and the front passenger airbag assembly.

The circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the P squib (Dual stage - 2nd step) circuit.

cardiagn.com

## 2005 Toyota RAV4

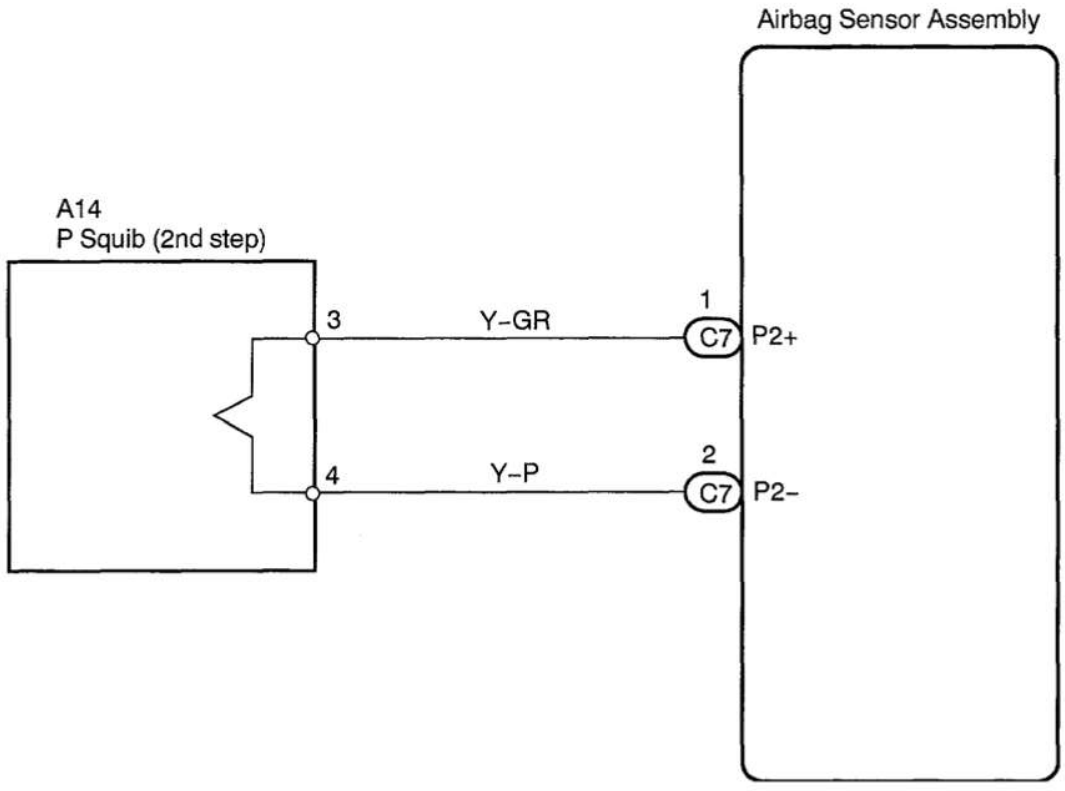
2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1815/54 | • When airbag sensor assembly receives line short circuit signal 5 times in P squib (dual stage – 2nd step) circuit during primary check. | • Front passenger airbag assembly (P squib, 2nd step)<br>• Airbag sensor assembly<br>• Instrument panel wire |
| B1816/54 | • When airbag sensor assembly receives open circuit signal in P squib (Dual stage – 2nd step) circuit for 2 seconds. | • Front passenger airbag assembly (P squib, 2nd step)<br>• Airbag sensor assembly<br>• Instrument panel wire |
| B1817/54 | • When airbag sensor assembly receives short circuit to ground signal in P squib (Dual stage – 2nd step) circuit for 0.5 seconds. | • Front passenger airbag assembly (P squib, 2nd step)<br>• Airbag sensor assembly<br>• Instrument panel wire |
| B1818/54 | • When airbag sensor assembly receives B+ short circuit signal in P squib (Dual stage – 2nd step) circuit for 0.5 seconds. | • Front passenger airbag assembly (P squib, 2nd step)<br>• Airbag sensor assembly<br>• Instrument panel wire |

G02642653

**Fig. 147: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**WIRING DIAGRAM**




G02642654

**Fig. 148: Wiring Diagram - P Squib Dual Stage 2nd Step**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check read method of DTC.**

**CHECK:**

If using the hand-held tester (read the 5-digit code of DTC):

Using the hand-held tester, check the DTCs (see **PRE-CHECK**).

**RESULT:**

**A: DTC B1815 is output.**
**B: DTC B1816 is output.**
**C: DTC B1817 is output.**
**D: DTC B1818 is output.**

**CHECK:**

If not using the hand-held tester (read the 2-digit code of DTC):

Check the DTCs (see **PRE-CHECK**).

**RESULT:**

**E: DTC 54 is output.**
**B: Go to step 4**

cardiagn.com

**C: Go to step 5**

**D: Go to step 6**

**E: Go to step 7**

**A: Go To Next Step**

2. **Check connector.**

**CHECK:**

Check that the instrument panel wire connectors (on the front passenger airbag assembly side) are not damaged.

**OK:**

**The lock button is not disengaged, or the claw of the lock is not deformed or damaged.**

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step**

3. **Check instrument panel wire (short).**

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A14-3 (P2+) - A14-4 (P2-) | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

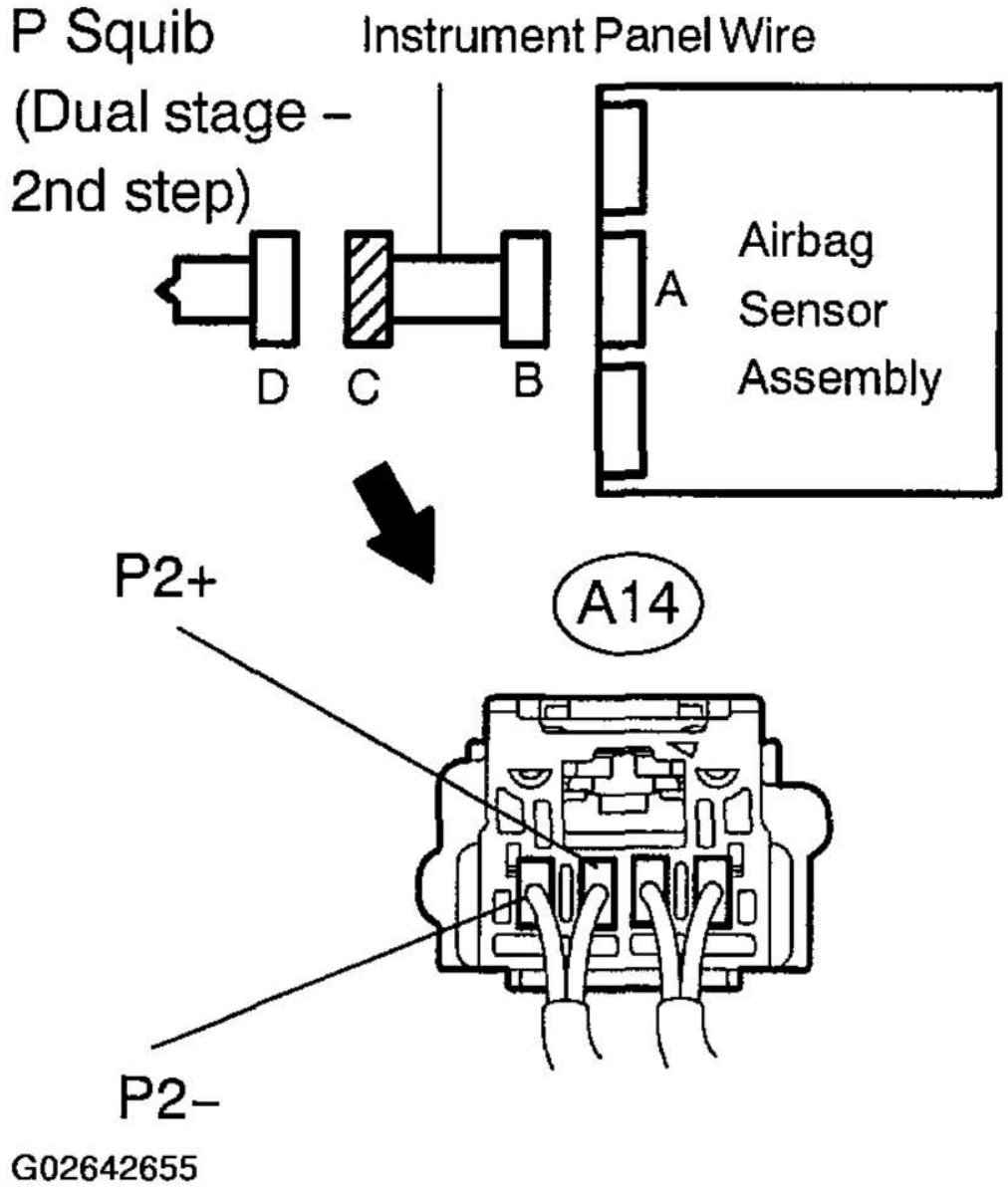



**Fig. 149: Checking Instrument Panel Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**
**OK: Go to step 10.**

4. **Check instrument panel wire (open).**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| A14-3 (P2+) - A14-4 (P2-) | Always | Below 1 ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

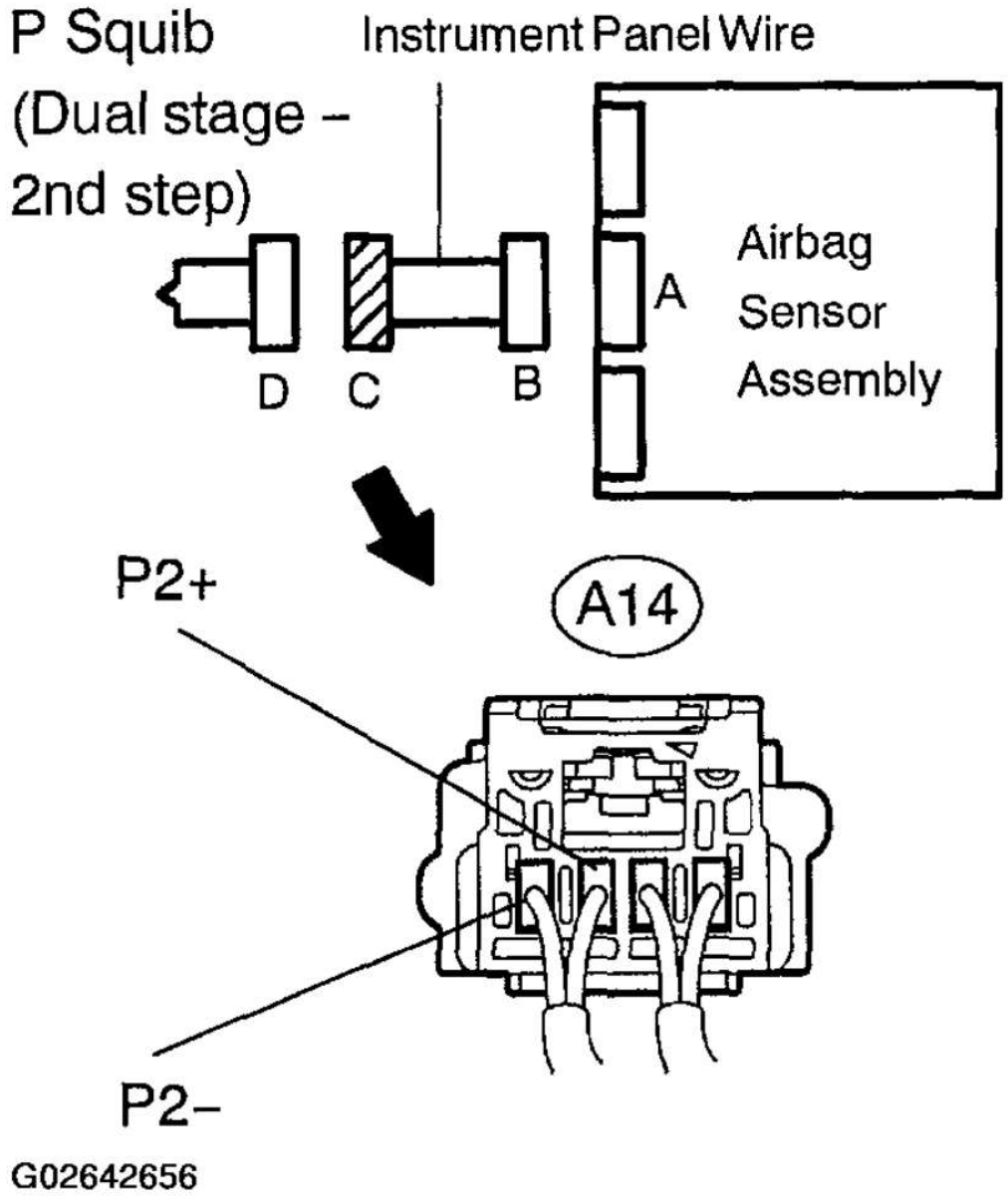



**Fig. 150: Checking Instrument Panel Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go to step 11.**

5. **Check instrument panel wire (to ground).**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| A14-3 (P2+)-Body ground | Always | 1 Mohm or higher |
| A14-4 (P2-)-Body ground | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

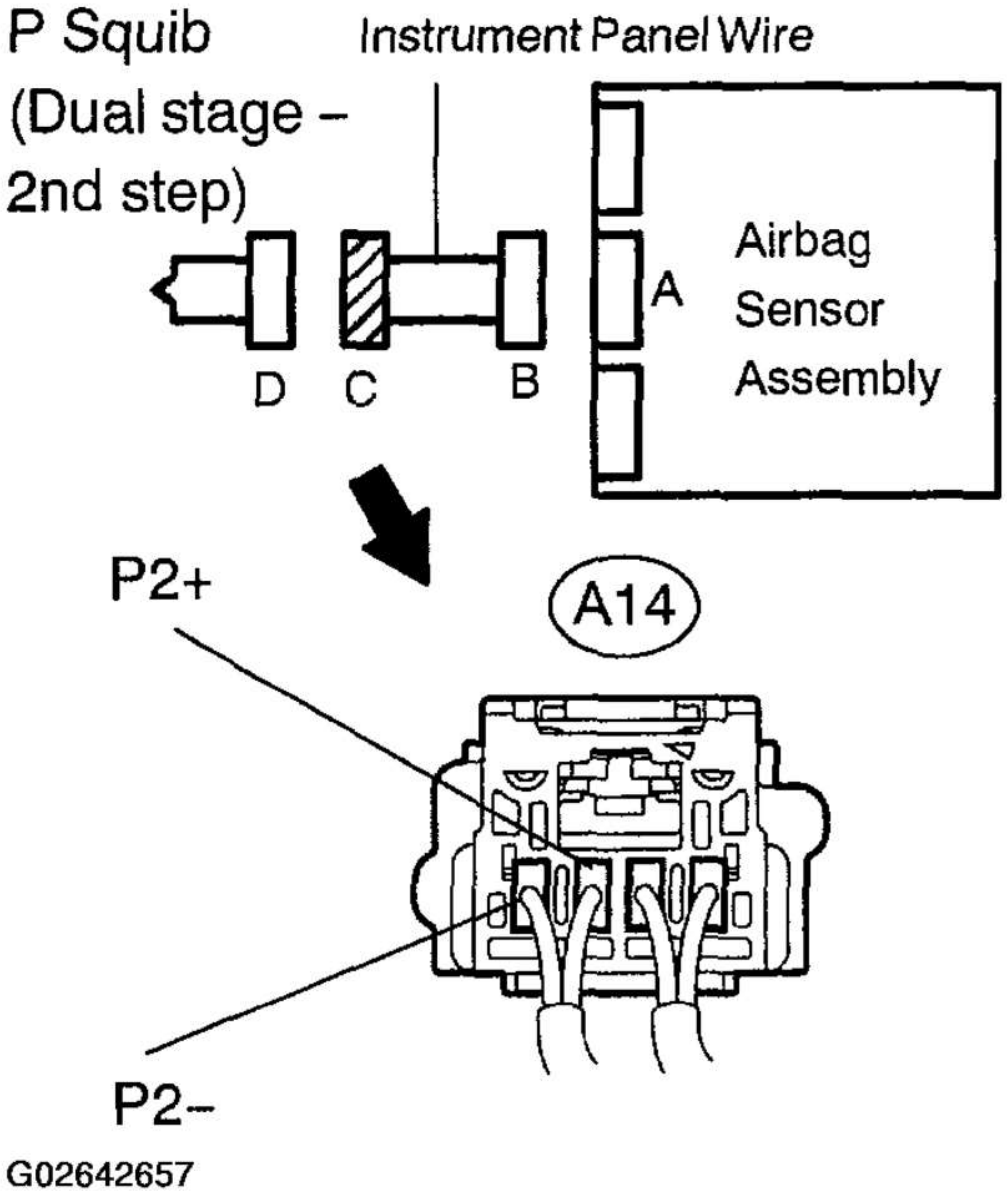



**Fig. 151: Checking Instrument Panel Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**

**OK: Go to step 11.**

6. **Check instrument panel wire (to B+)**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A14-3 (P2+) - Body ground | Ignition switch ON | Below 1 V |
| A14-4 (P2-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

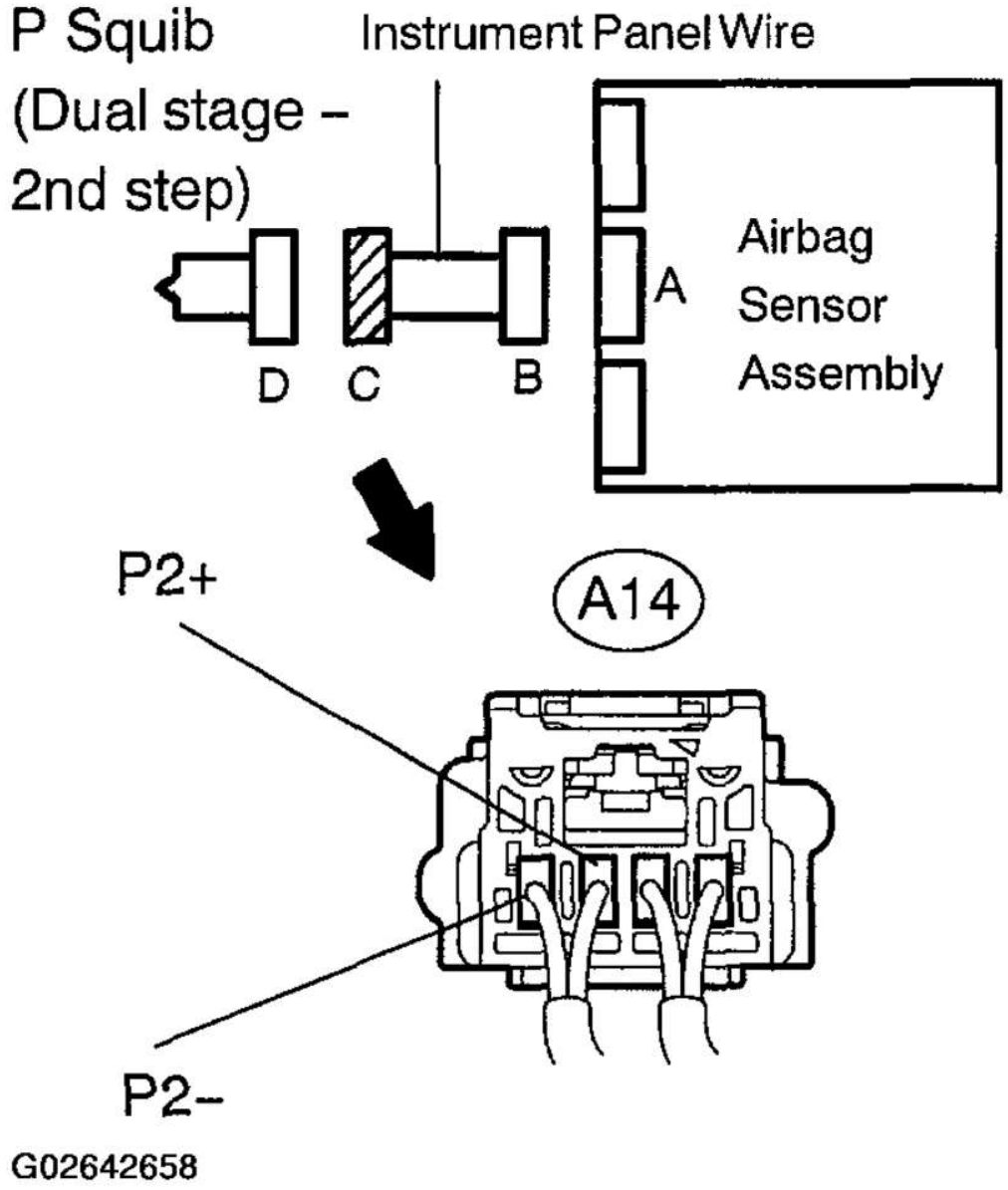



**Fig. 152: Checking Instrument Panel Wire (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace instrument panel wire.**
**OK: Go to step 11.**

7. **Check connector.**

cardiagn.com

**CHECK:**

Check that the instrument panel wire connectors (on the front passenger airbag assembly side) are not damaged.

**OK:**

**The lock button is not disengaged, or the claw of the lock is not deformed or damaged.**

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step.**

8. **Check instrument panel wire (P squid circuit, dual stage - 2nd step).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (P SQUID CIRCUIT, DUAL STAGE - 2ND STEP) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A14-3 (P2+) - Body ground | Ignition switch ON | Below 1 V |
| A14-4 (P2-) - Body ground | Ignition switch ON | Below 1 V |

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect negative (-) terminal cable from the battery, and wait for at least 90 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

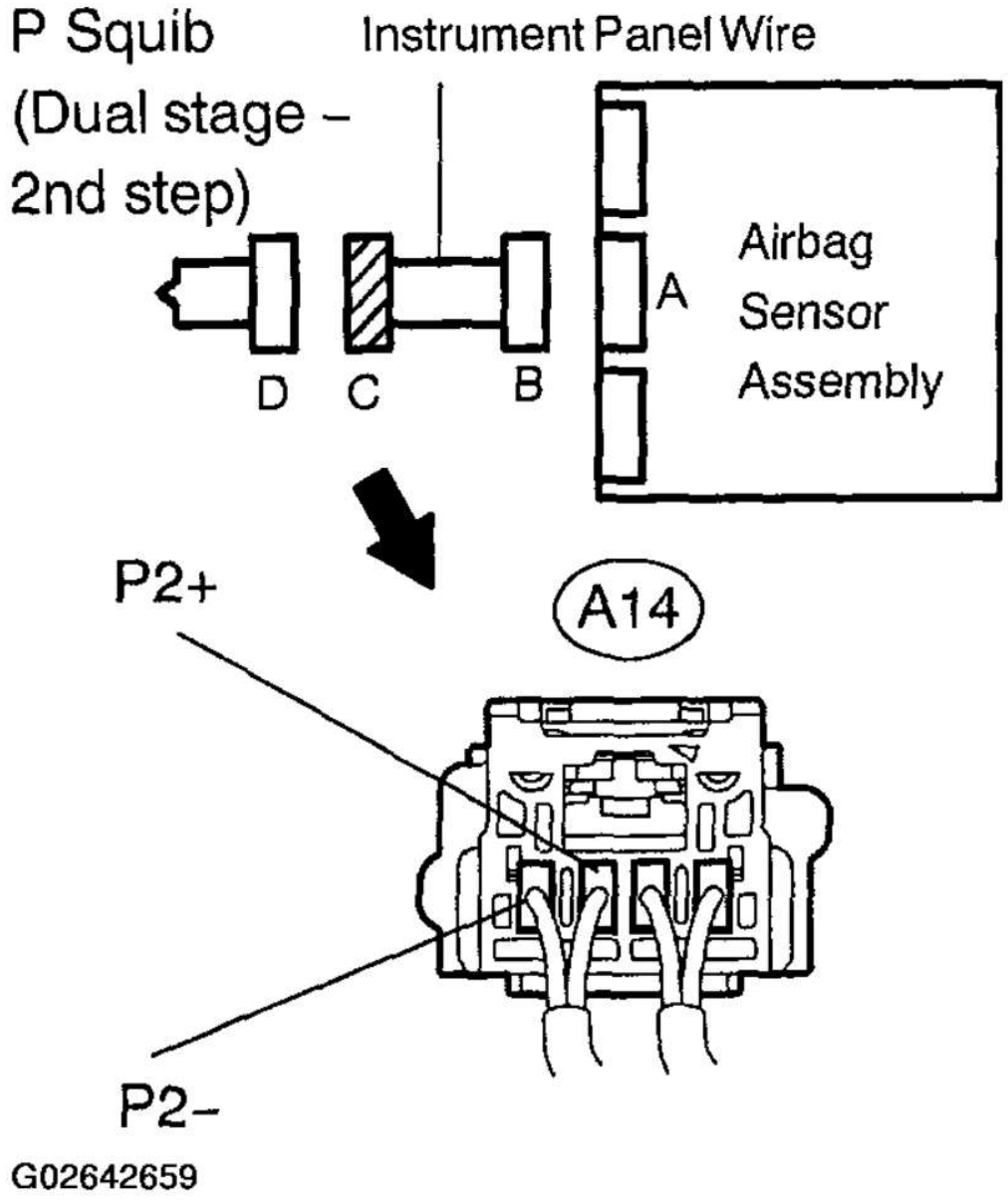



**Fig. 153: Checking Instrument Panel Wire (P Squid Circuit, Dual Stage - 2nd Step)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

Measure the resistance according to the table below.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**OK:**

**INSTRUMENT PANEL WIRE (P SQUID CIRCUIT, DUAL STAGE - 2ND STEP) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A14-3 (P2+) - A14-4 (P2-) | Always | Below 1 ohm |
| A14-3 (P2+) - Body ground | Always | 1 Mohm or higher |
| A14-4 (P2-) - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**INSTRUMENT PANEL WIRE (P SQUID CIRCUIT, DUAL STAGE - 2ND STEP) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| A14-3 (P2+) - A14-4 (P2-) | Always | 1 Mohm or higher |

**NG: Repair or replace instrument panel wire.**

**OK: Go To Next Step.**

9. **Replace front passenger airbag sensor assembly (P squib, dual stage - 2nd step).**

**PREPARATION:**

a. Replace the front passenger airbag assembly (see **REPLACEMENT** ).
b. Connect the connector to the airbag sensor assembly.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
d. Turn the ignition switch ON, and wait for at least 60 seconds.
e. Clear the DTCs stored in memory (see **PRE-CHECK**).
f. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

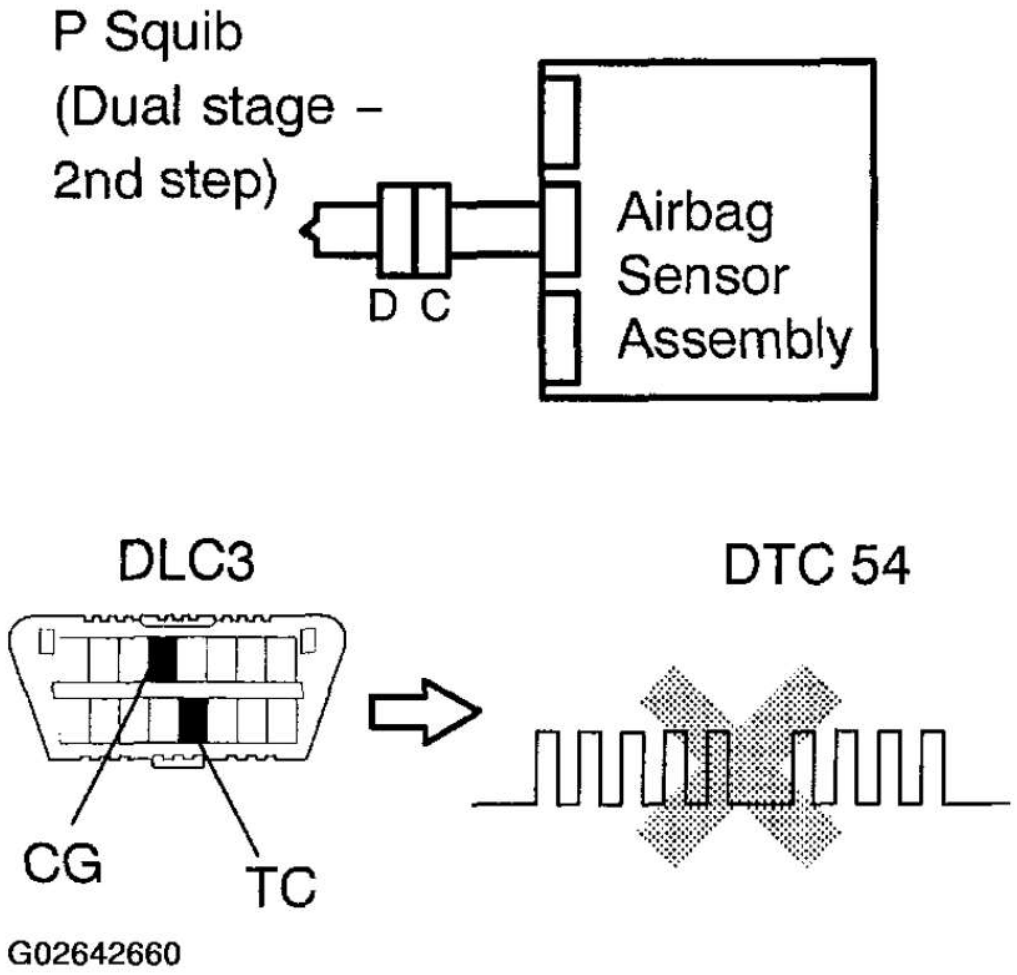



**Fig. 154: Checking Front Passenger Airbag Sensor Assembly (P Squib, Dual Stage - 2nd Step)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC 54 is not output**

HINT:

Codes other than DTC 54 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: END**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

10. **Check airbag sensor assembly.**

**PREPARATION:**

a. Connect the connector to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
d. Clear the DTCs stored in memory (see **PRE-CHECK**).

**CHECK:**

a. Turn the ignition switch to the LOCK position.
b. Turn the ignition switch ON, and wait for at least 60 seconds.

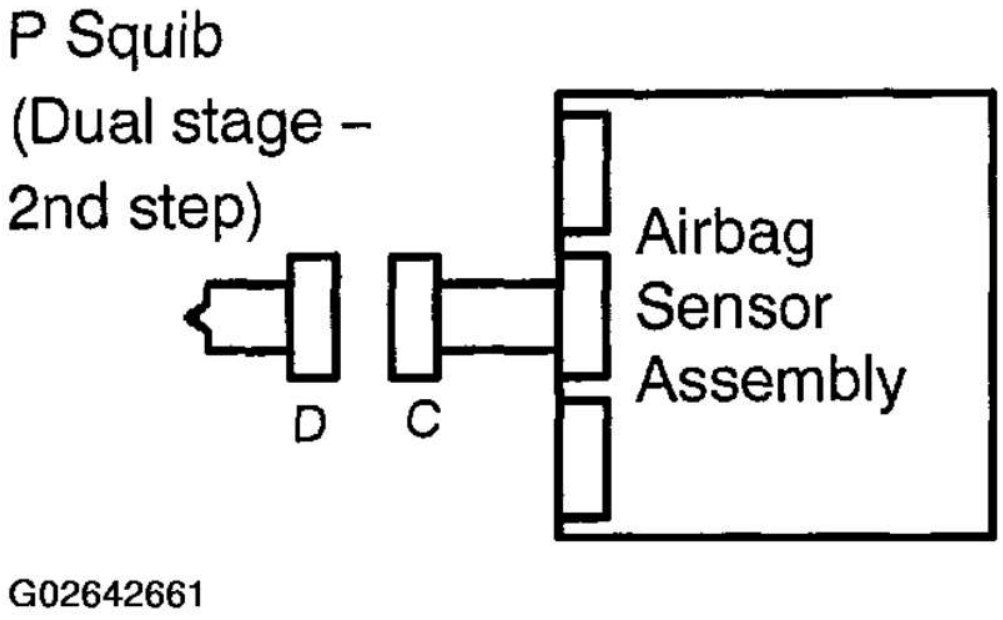



**Fig. 155: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

c. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC B1815 is not output.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

HINT:

Codes other than DTC B1815 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**

**OK: Go to step 12.**

11. **Check airbag sensor assembly.**

**PREPARATION:**

a. From step 6:

Turn the ignition switch to the LOCK position.

b. From step 6:

Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

c. Connect the connectors to the airbag sensor assembly.

d. Using a service wire, connect terminals A14-3 (P2+) and A14-4 (P2-) of connector "C".

**NOTE:**

- **Twist the end of the service wire in order to insert it into the connector.**
- **Do not forcibly insert the twisted service wire into the terminals of the connector when connecting.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

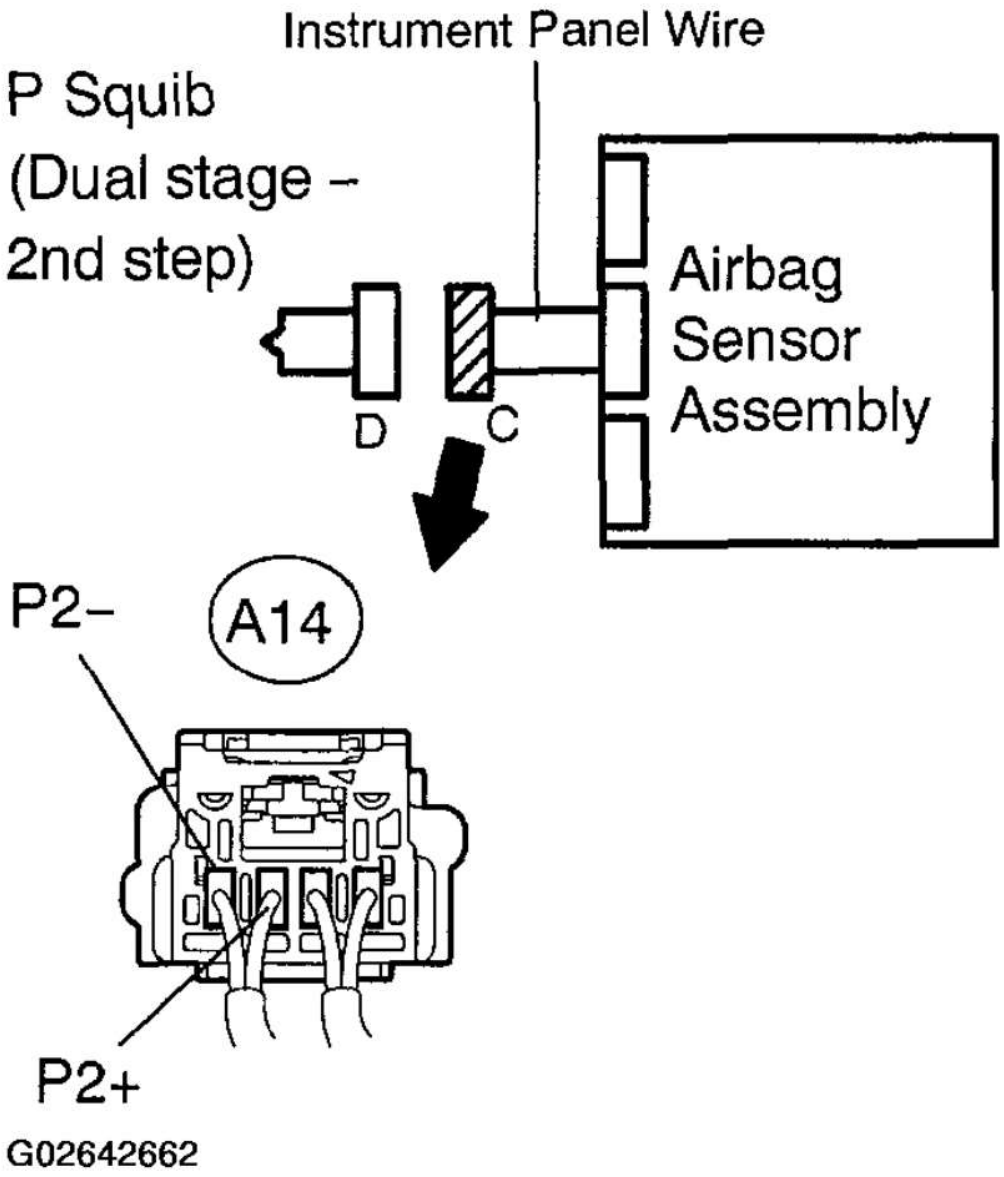



**Fig. 156: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
f. Turn the ignition switch to the ON, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

cardiagn.com

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1816, B1817 and B1818 are not output.**

HINT:

Codes other than DTCs B1816, B1817 and B1818 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: Go To Next Step**

12. **Check front passenger airbag assembly (P squib, dual stage - 2nd step).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. From step 11:

Disconnect the service wire from connector "C".

d. Connect the connectors to the front passenger airbag assembly.
e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

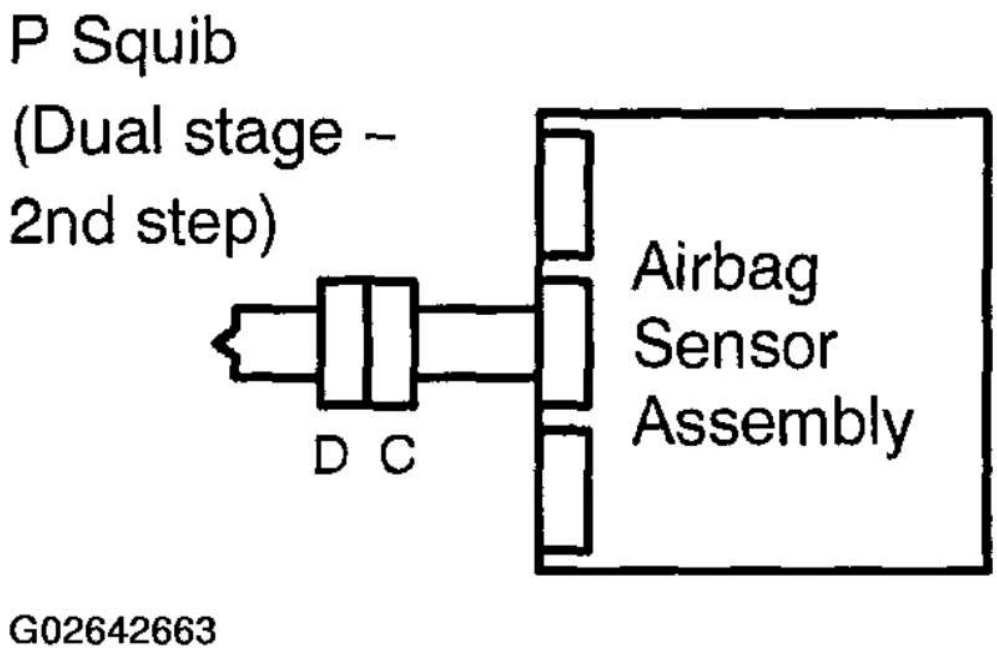



**Fig. 157: Checking Front Passenger Airbag Assembly (P Squib, Dual Stage - 2nd Step)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1815, B1816, B1817 and B1818 are not output.**

HINT:

Codes other than DTCs B1815, B1816, B1817 and B1818 may be output at this time, but they are not related to this check.

cardiagn.com

**NG: Replace front passenger airbag assembly.**

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

## DTC B1820/55, B1821/55, B1822/55, B1823/55: SHORT/OPEN IN D-SEAT SIDE SQUIB CIRCUIT (TO GROUND/TO B+)

### CIRCUIT DESCRIPTION

The side squib LH circuit consists of the airbag sensor assembly and the seat adjuster frame assembly (side squib LH).

This circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the side squib LH circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1820/55 | • When airbag sensor assembly receives line short circuit signal 5 times in side squib LH circuit during primary check. | • D-seat side airbag assembly ( D-seat side squib)<br>• Airbag sensor assembly<br>• Floor No. 1 wire |
| B1821/55 | • When airbag sensor assembly receives open circuit signal in side squib LH circuit for 2 seconds. | • D-seat side airbag assembly ( D-seat side squib)<br>• Airbag sensor assembly<br>• Floor No. 1 wire |
| B1822/55 | • When airbag sensor assembly receives short circuit to ground signal in side squib LH circuit for 0.5 seconds. | • D-seat side airbag assembly ( D-seat side squib)<br>• Airbag sensor assembly<br>• Floor No. 1 wire |
| B1823/55 | • When airbag sensor assembly receives B+ short circuit signal in side squib LH circuit for 0.5 seconds. | • D-seat side airbag assembly ( D-seat side squib)<br>• Airbag sensor assembly<br>• Floor No. 1 wire |

G02642664

**Fig. 158: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

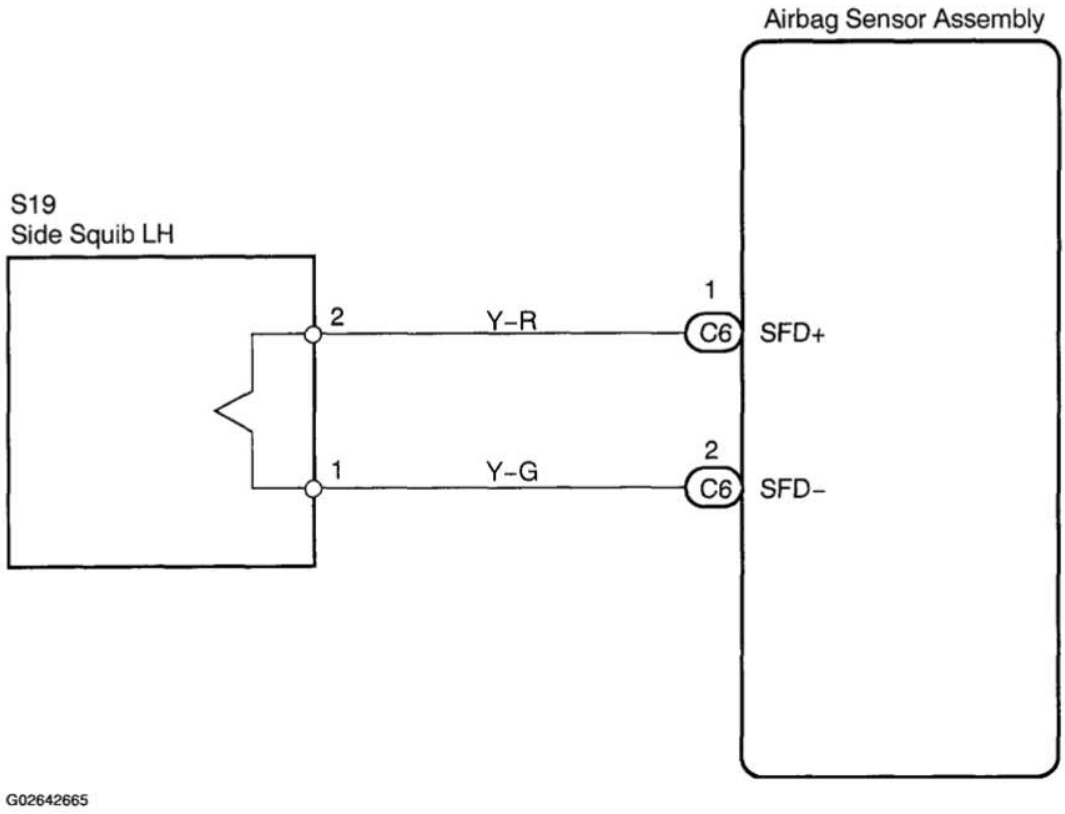



**Fig. 159: Wiring Diagram - D-Seat Side Squib Circuit**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.

cardiagn.com

k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check read method of DTC.**

**CHECK:**

If using the hand-held tester (read the 5-digit code of DTC):

Using the hand-held tester, check the DTCs (see **PRE-CHECK**).

**RESULT:**

**A: DTC B1820 is output.**
**B: DTC B1821 is output.**
**C: DTC B1822 is output.**
**D: DTC B1823 is output.**

**CHECK:**

If not using the hand-held tester (read the 2-digit code of DTC):

Check the DTCs (see **PRE-CHECK**).

**RESULT:**

**E: DTC 55 is output.**
**B Go to step 3.**
**C Go to step 4.**
**D Go to step 5.**
**E Go to step 6.**
**A Go To Next Step**

2. **Check floor No. 1 wire (short).**

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SHORT) RESISTANCE**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| S19-2 (SFD+) - S19-1 (SFD-) | Always | 1 M ohm or higher |

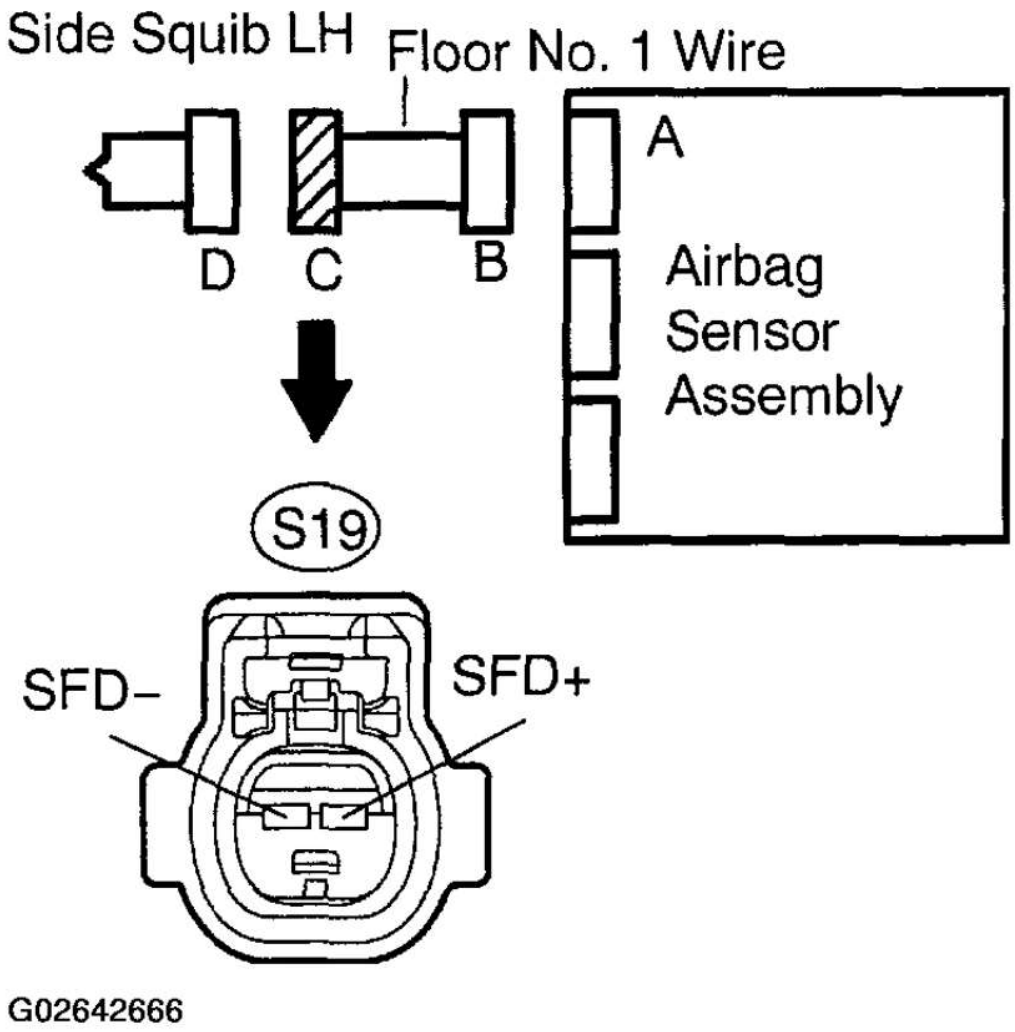



**Fig. 160: Checking Floor No. 1 Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go to step 8.**

3. **Check floor No. 1 wire (open).**

**CHECK:**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| S19-2 (SFD+) - S19-1 (SFD-) | Always | Below 1 ohm |

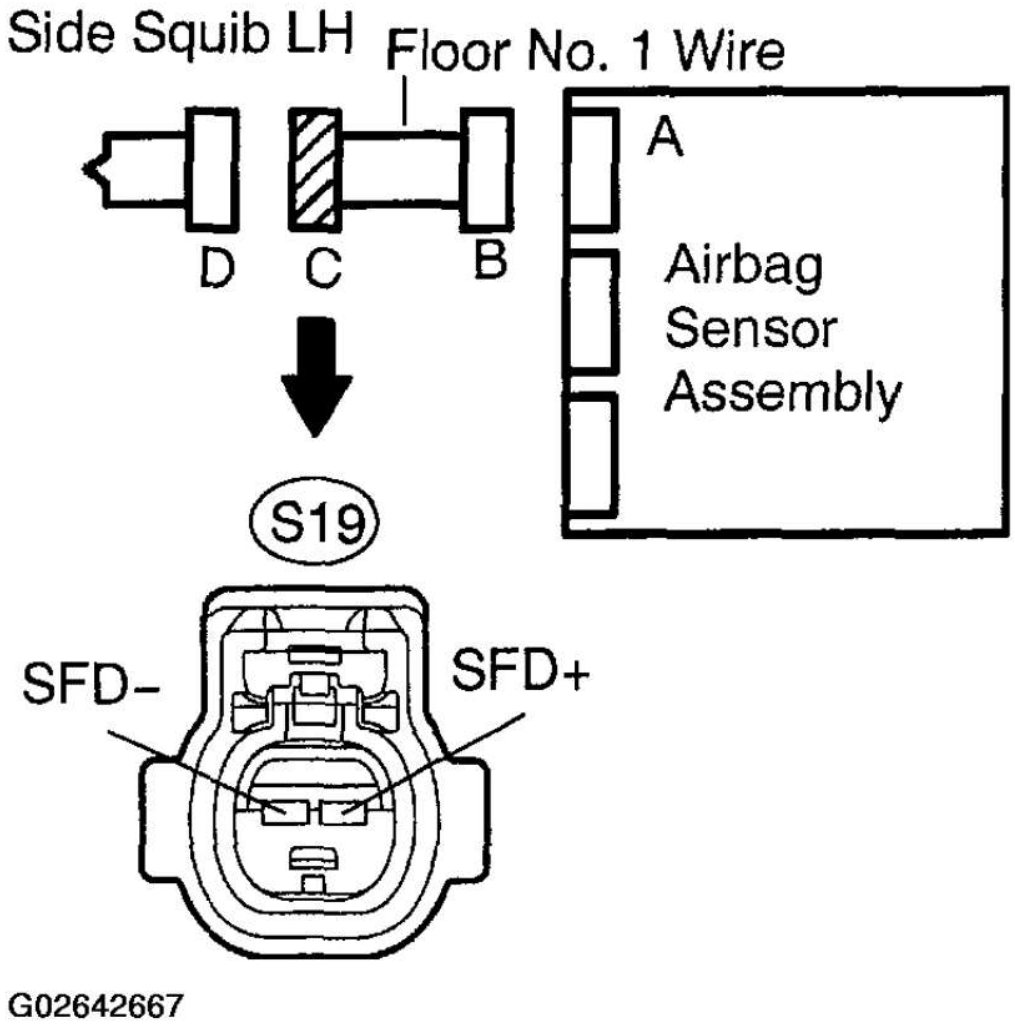



**Fig. 161: Checking Floor No. 1 Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go to step 9.**

4. **Check floor No. 1 wire (to ground).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| S19-2 (SFD+) - Body ground | Always | 1 Mohm or higher |
| S19-1 (SFD-) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

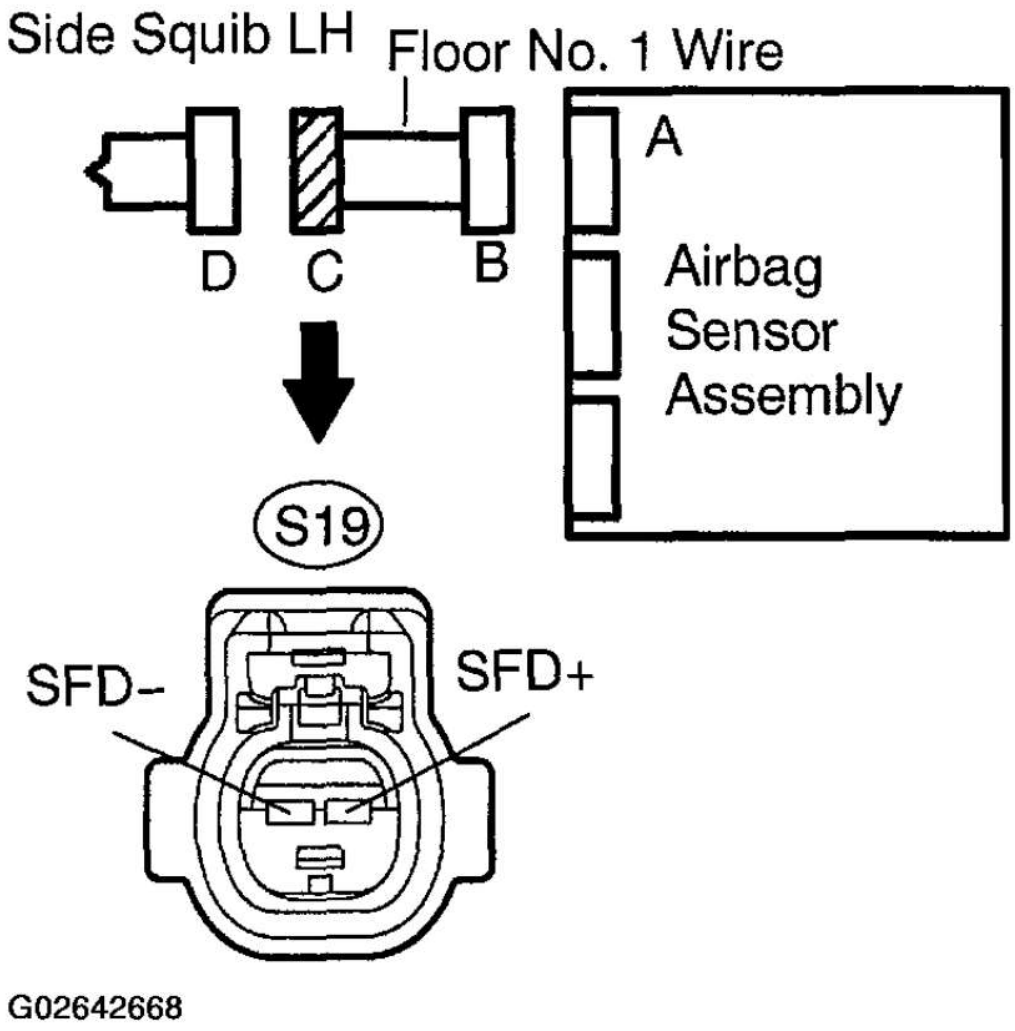



**Fig. 162: Checking Floor No. 1 Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go to step 9.**

5. **Check floor No. 1 wire (to +B).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO +B) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| S19-2 (SFD+) - Body ground | Ignition switch ON | Below 1 V |
| S19-1 (SFD-) - Body ground | Ignition switch ON | Below 1 V |

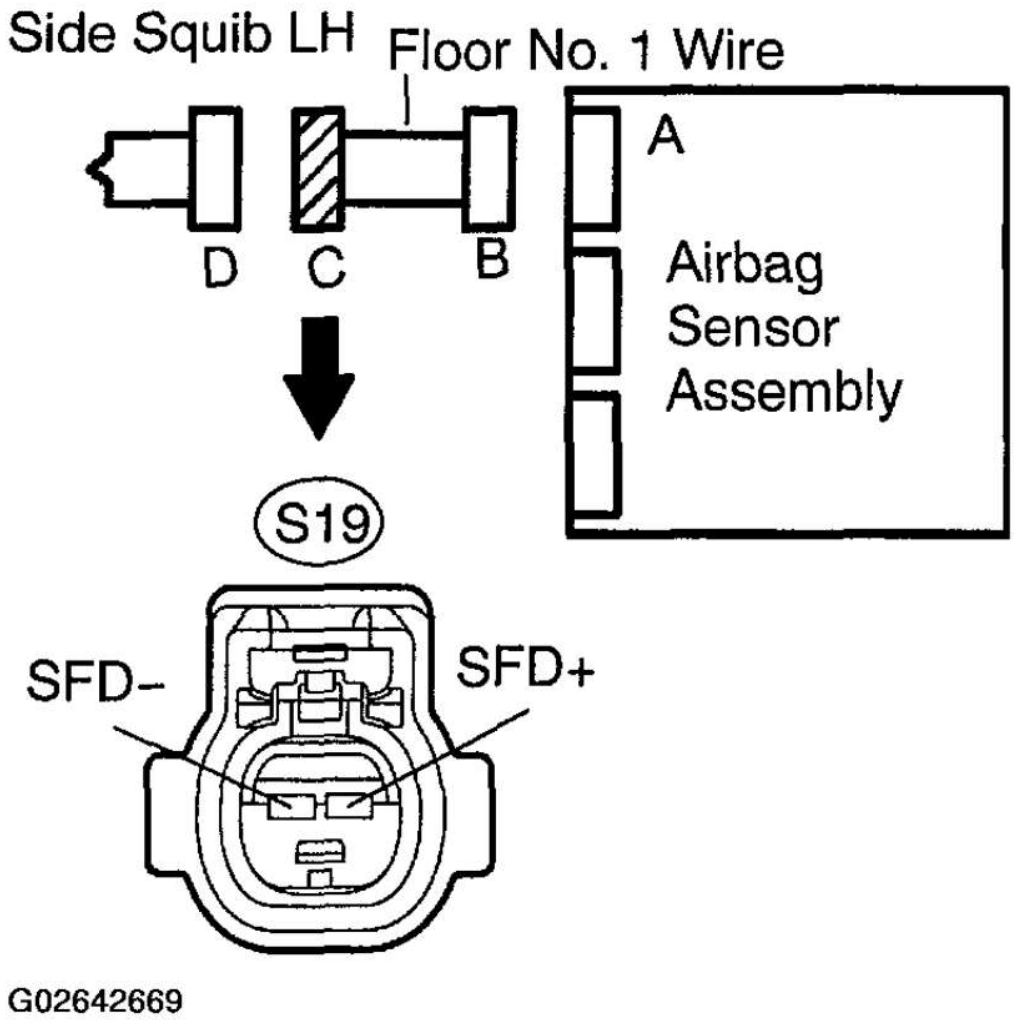



**Fig. 163: Checking Floor No. 1 Wire (To +B)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

**NG: Repair or replace floor No. 1 wire.**

**OK: Go to step 9.**

6. **Check floor No. 1 wire (side squib LH circuit).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SIDE SQUIB LH CIRCUIT) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| S19-2 (SFD+) - Body ground | Ignition switch ON | Below 1 V |
| S19-1 (SFD-) - Body ground | Ignition switch ON | Below 1 V |

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

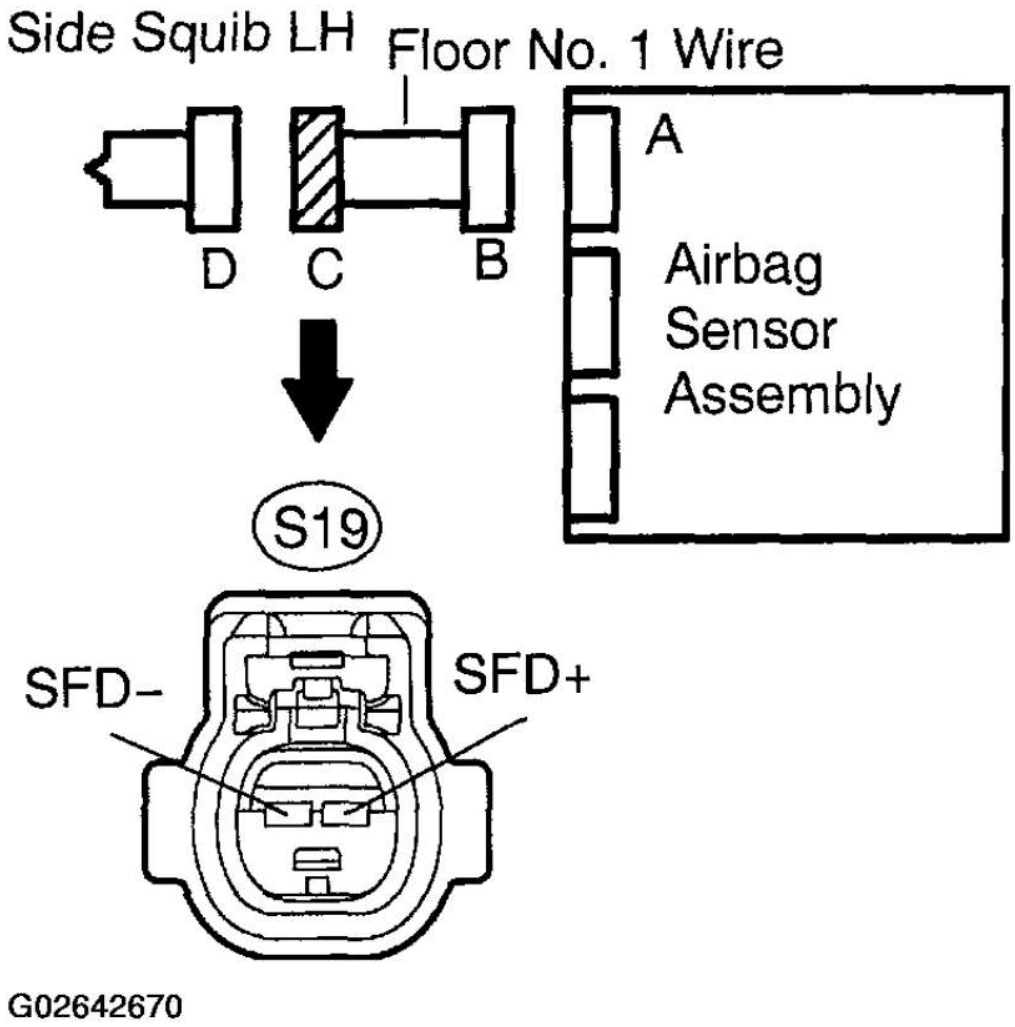



**Fig. 164: Checking Floor No. 1 Wire (Side Squib LH Circuit)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SIDE SQUIB LH CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| S19-2 (SFD+) - S19-1 (SFD-) | Always | Below 1 ohm |

cardiagn.com

| | | |
|---|---|---|
| S19-2 (SFD+) - Body ground | Always | 1 Mohm or higher |
| S19-1 (SFD-) - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SIDE SQUIB LH CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| S19-2 (SFD+) - S19-1 (SFD-) | Always | 1 Mohm or higher |

**NG: Repair or replace floor No. 1 wire.**
**OK: Go To Next Step**

7. **Replace seat adjuster frame assembly (side squib LH).**

**PREPARATION:**

a. Replace the seat adjuster frame assembly (see **REMOVAL** ).
b. Connect the connector to the airbag sensor assembly.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Clear the DTCs stored in memory (see **PRE-CHECK**).
f. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

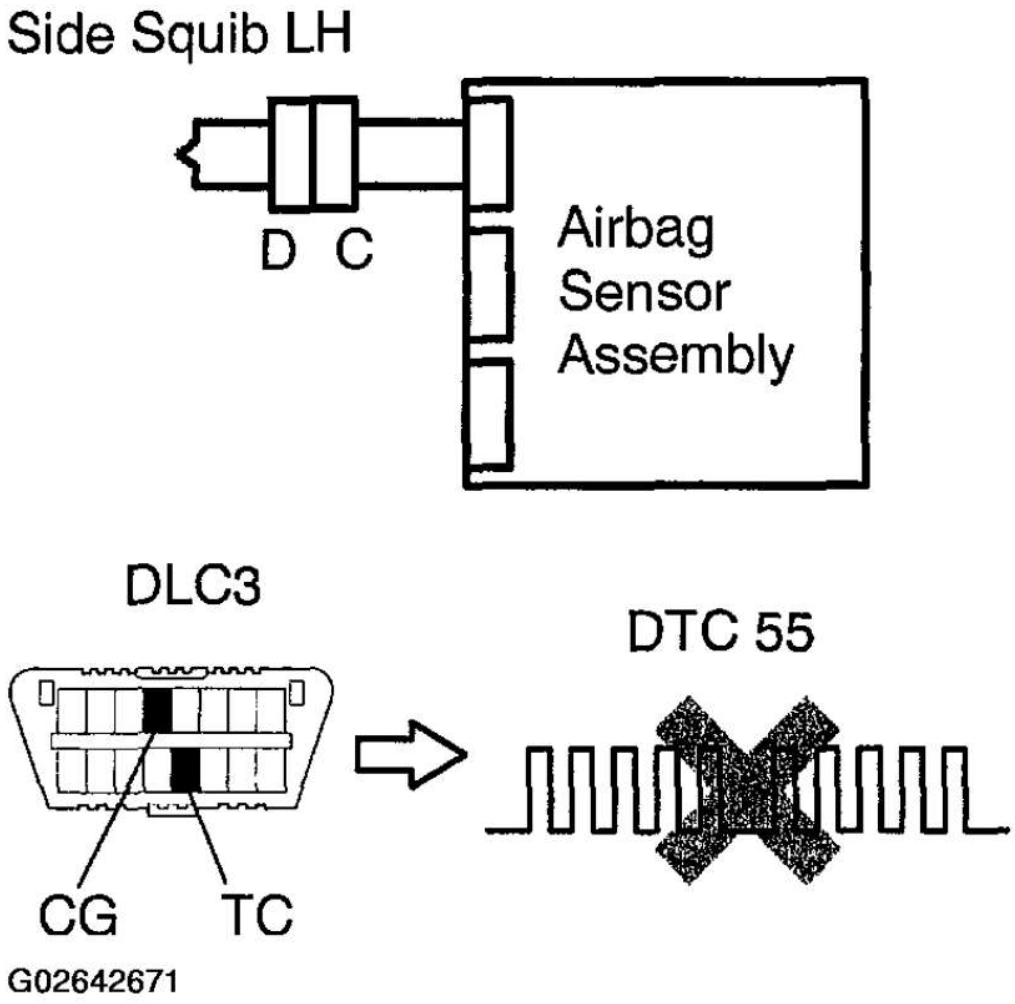



**Fig. 165: Checking Seat Adjuster Frame Assembly (Side Squib LH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC 55 is not output.**

HINT:

Codes other than DTC 55 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: END**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

8. **Check airbag sensor assembly.**

**PREPARATION:**

a. Connect the connector to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.

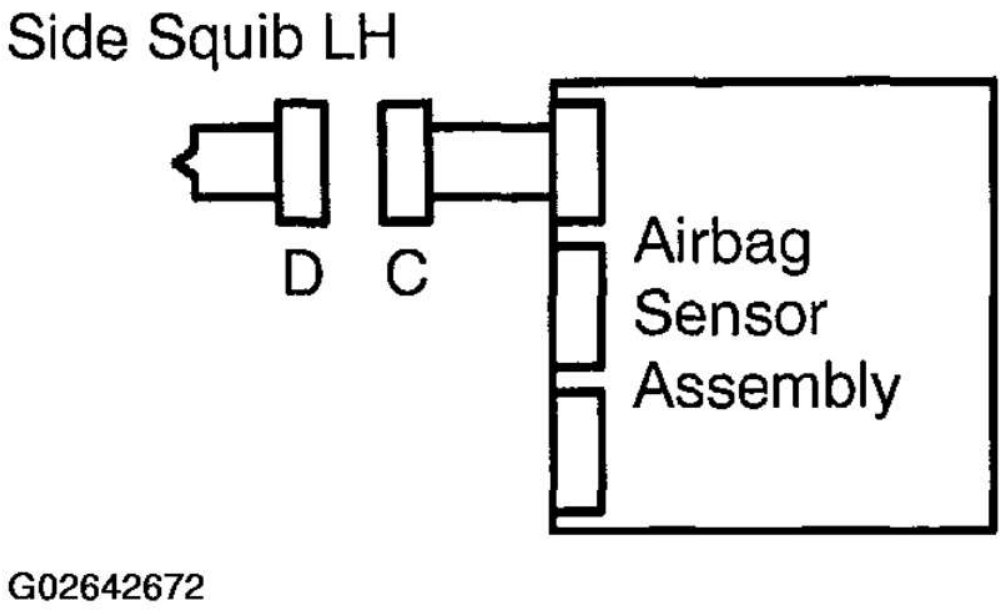



**Fig. 166: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

e. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC B1820 is not output.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

HINT:

Codes other than DTC B1820 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**

**OK: Go to step 10.**

9. **Check airbag sensor assembly.**

**PREPARATION:**

a. From step 5:

Turn the ignition switch to the LOCK position.

b. From step 5:

Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

c. Connect the connectors to the airbag sensor assembly.

d. Using a service wire, connect terminals S19-2 (SFD+) and S19-1 (SFD-) of connector "C".

**NOTE: Do not forcibly insert the twisted service wire into the terminals of the connector when connecting.**

e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

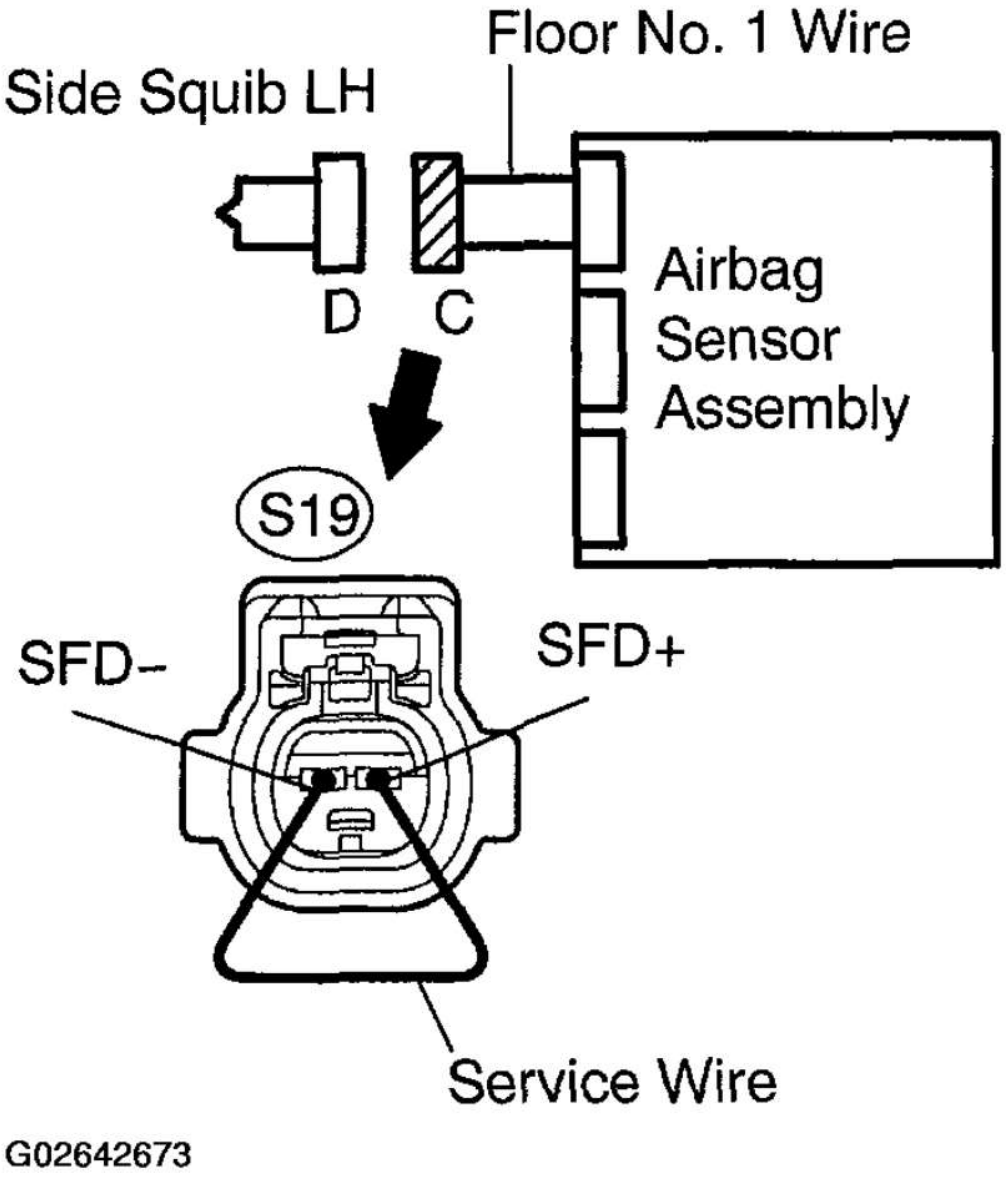



**Fig. 167: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

cardiagn.com

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1821, B1822 and B1823 are not output.**

HINT:

Codes other than DTCs B1821, B1822 and B1823 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: Go To Next Step**

10. **Check seat adjuster frame assembly (side squib LH).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. From step 9:

Disconnect the service wire from connector "C".

d. Connect the connectors to the seat adjuster frame assembly (side squib LH).
e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

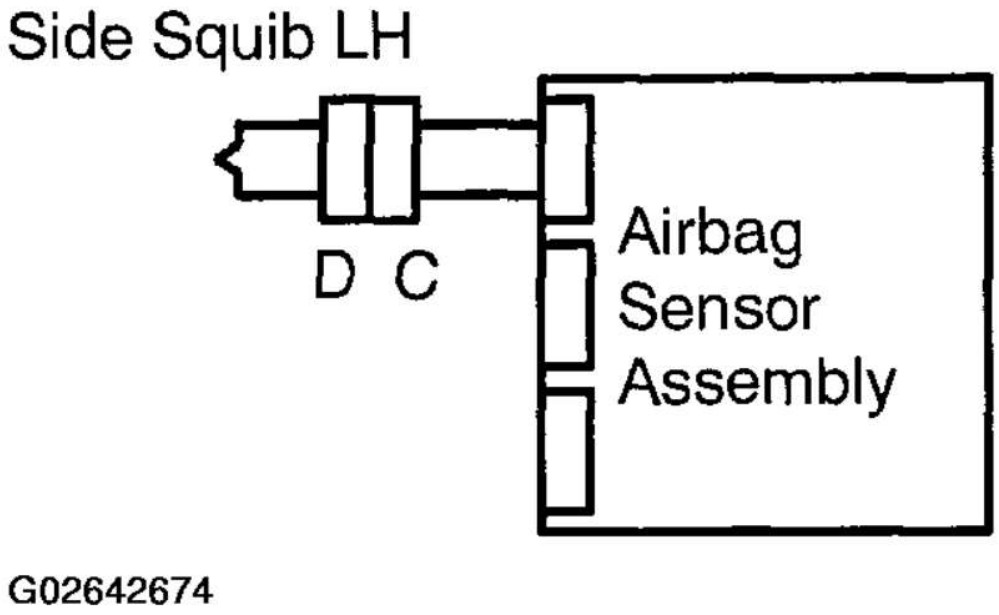



**Fig. 168: Checking Seat Adjuster Frame Assembly (Side Squib LH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1820, B1821, B1822 and B1823 are not output.**

HINT:

Codes other than DTCs B1820, B1821, B1822 and B1823 may be output at this time, but they are not related to this check.

**NG: Replace seat adjuster frame assembly.**

cardiagn.com

**OK: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

## DTC B1825/56, B1826/56, B1827/56, B1828/56: SHORT/OPEN IN P-SEAT SIDE SQUIB CIRCUIT (TO GROUND/TO B+)

### CIRCUIT DESCRIPTION

The side squib RH circuit consists of the airbag sensor assembly and the seat adjuster frame assembly (side squib RH).

The circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the side squib RH circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1825/56 | •When airbag sensor assembly receives line short circuit signal 5 times in side squib RH circuit during primary check. | •P-seat side airbag assembly (P-seat side squib)<br>•Airbag sensor assembly<br>•Floor No. 1 wire |
| B1826/56 | •When airbag sensor assembly receives open circuit signal in side squib RH circuit for 2 seconds. | •P-seat side airbag assembly (P-seat side squib)<br>•Airbag sensor assembly<br>•Floor No. 1 wire |
| B1827/56 | •When airbag sensor assembly receives short circuit to ground signal in side squib RH circuit for 0.5 seconds. | •P-seat side airbag assembly (P-seat side squib)<br>•Airbag sensor assembly<br>•Floor No. 1 wire |
| B1828/56 | •When airbag sensor assembly receives B+ short circuit signal in side squib RH circuit for 0.5 seconds. | •P-seat side airbag assembly (P-seat side squib)<br>•Airbag sensor assembly<br>•Floor No. 1 wire |

G02642675

**Fig. 169: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

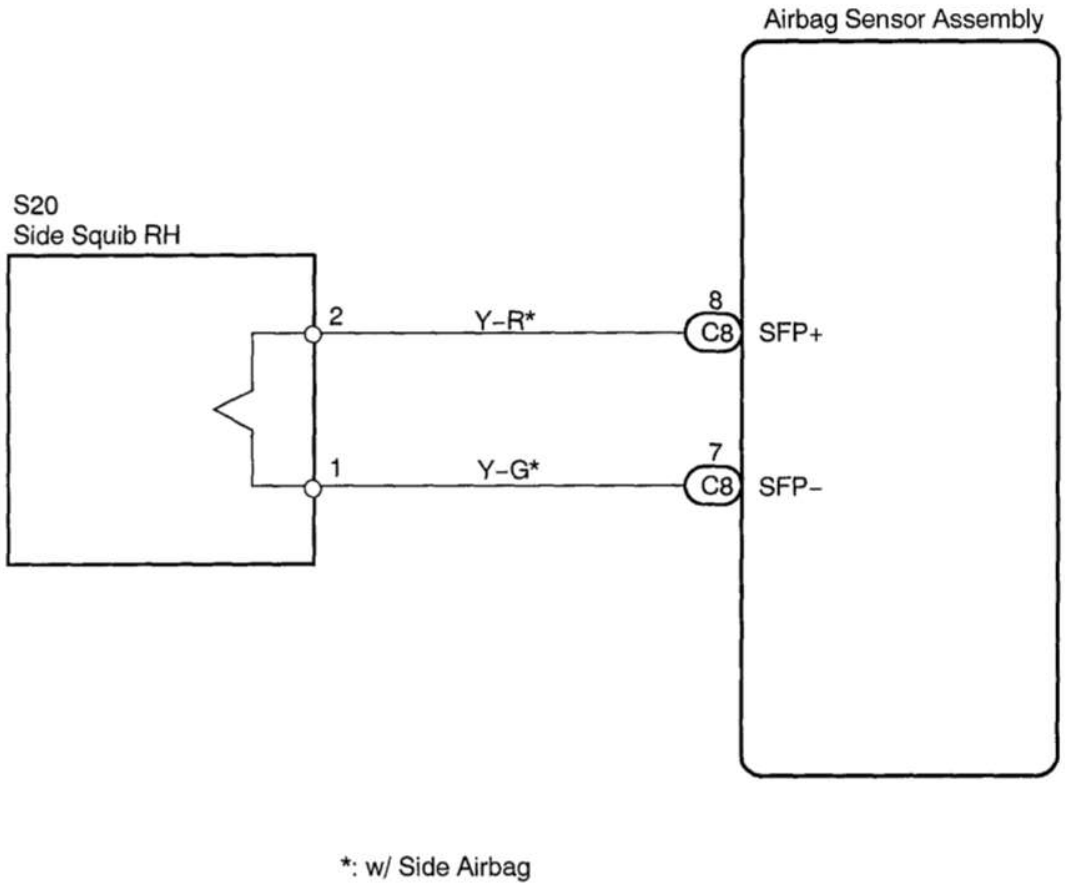



**Fig. 170: Wiring Diagram - P-Seat Side Squib Circuit**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check read method of DTC.**

**CHECK:**

If using the hand-held tester (read the 5-digit code of DTC):

Using the hand-held tester, check the DTCs (see **PRE-CHECK**).

**RESULT:**

**A: DTC B1825 is output.**
**B: DTC B1826 is output.**
**C: DTC B1827 is output.**
**D: DTC B1828 is output.**

**CHECK:**

If not using the hand-held tester (read the 2-digit code of DTC):

Check the DTCs (see **PRE-CHECK**).

**RESULT:**

**E: DTC 56 is output.**
**B: Go to step 3.**
**C: Go to step 4.**
**D: Go to step 5.**
**E: Go to step 6.**
**A: Go To Next Step**

2. **Check floor No. 1 wire (short).**

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

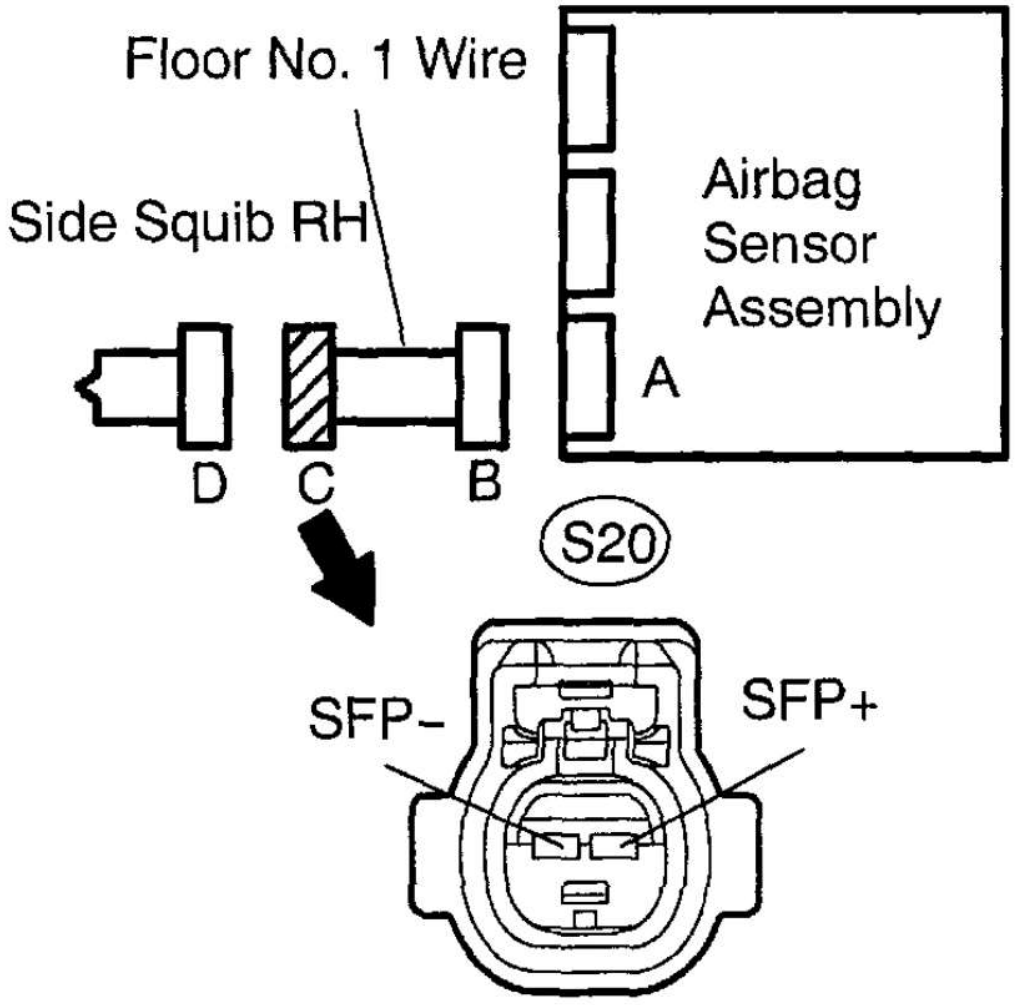
cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**OK:**

**FLOOR NO. 1 WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| S20-2 (SFP+) - S20-1 (SFP-) | Always | 1 Mohm or higher |




G02642677

**Fig. 171: Checking Floor No. 1 Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go to step 8.**

3. **Check floor No. 1 wire (open).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| S20-2 (SFP+) - S20-1 (SFP-) | Always | Below 1 ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

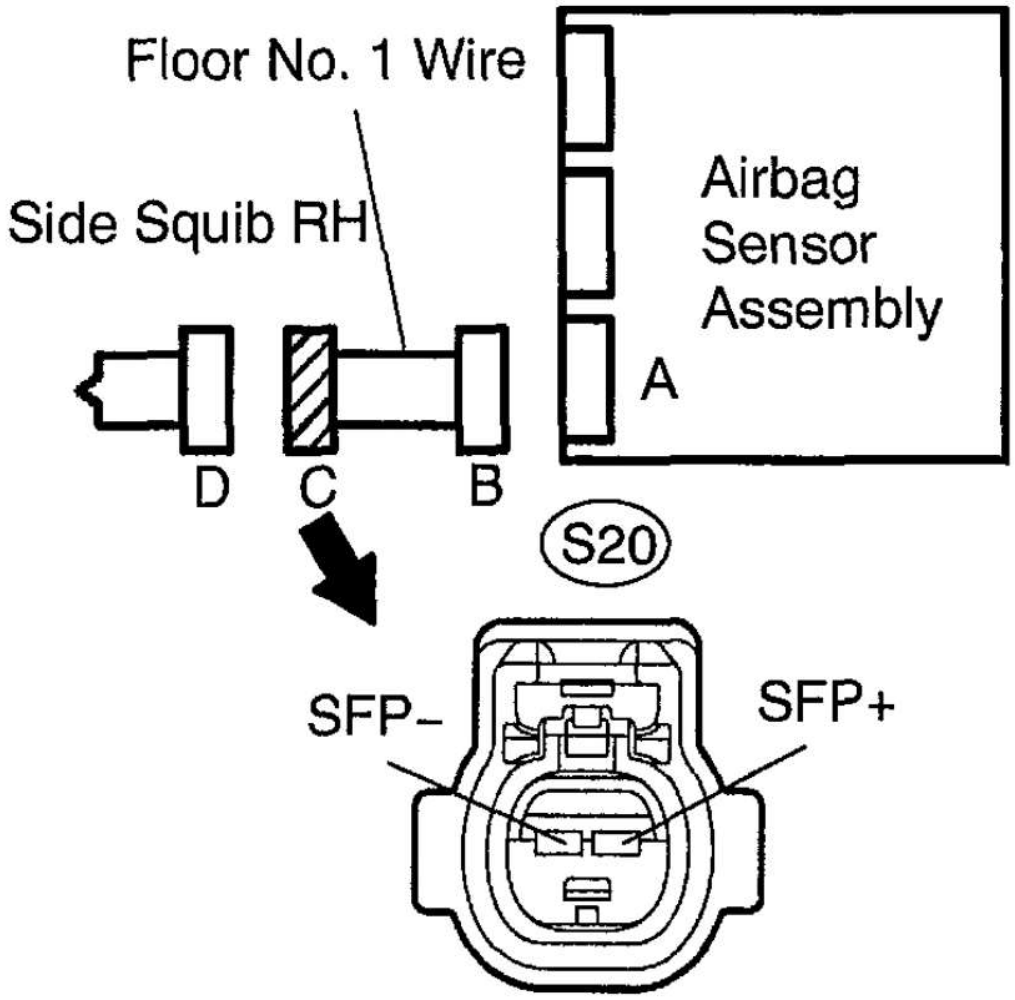



**Fig. 172: Checking Floor No. 1 Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go to step 9.**

4. **Check floor No. 1 wire (to ground).**

**CHECK:**

Measure the resistance according to the table below.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**OK:**

**FLOOR NO. 1 WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| S20-2 (SFP+) - Body ground | Always | 1 Mohm or higher |
| S20-1 (SFP-) - Body ground | Always | 1 Mohm or higher |

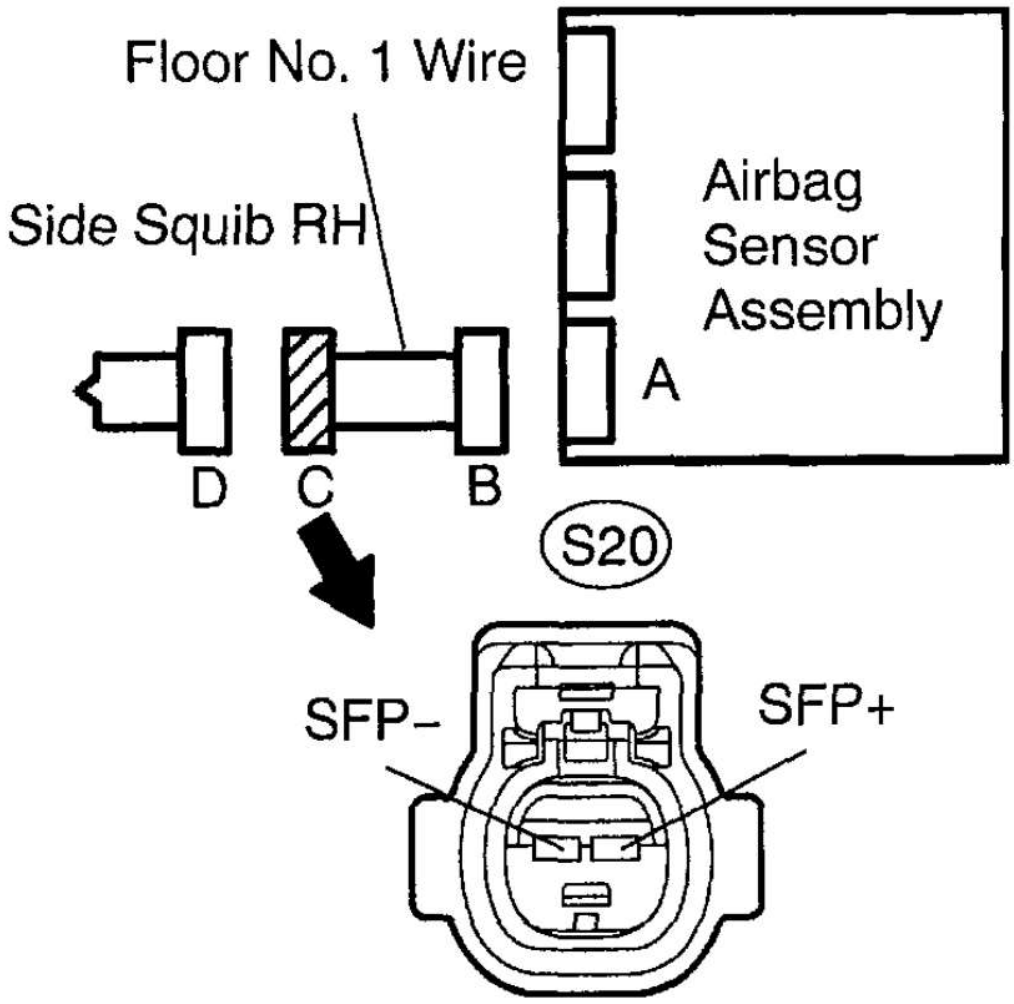



**Fig. 173: Checking Floor No. 1 Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

**NG: Repair or replace floor No. 1 wire.**

**OK: Go to step 9.**

5. **Check floor No. 1 wire (to B+).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| S20-2 (SFP+) - Body ground | Ignition switch ON | Below 1 V |
| S20-1 (SFP-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

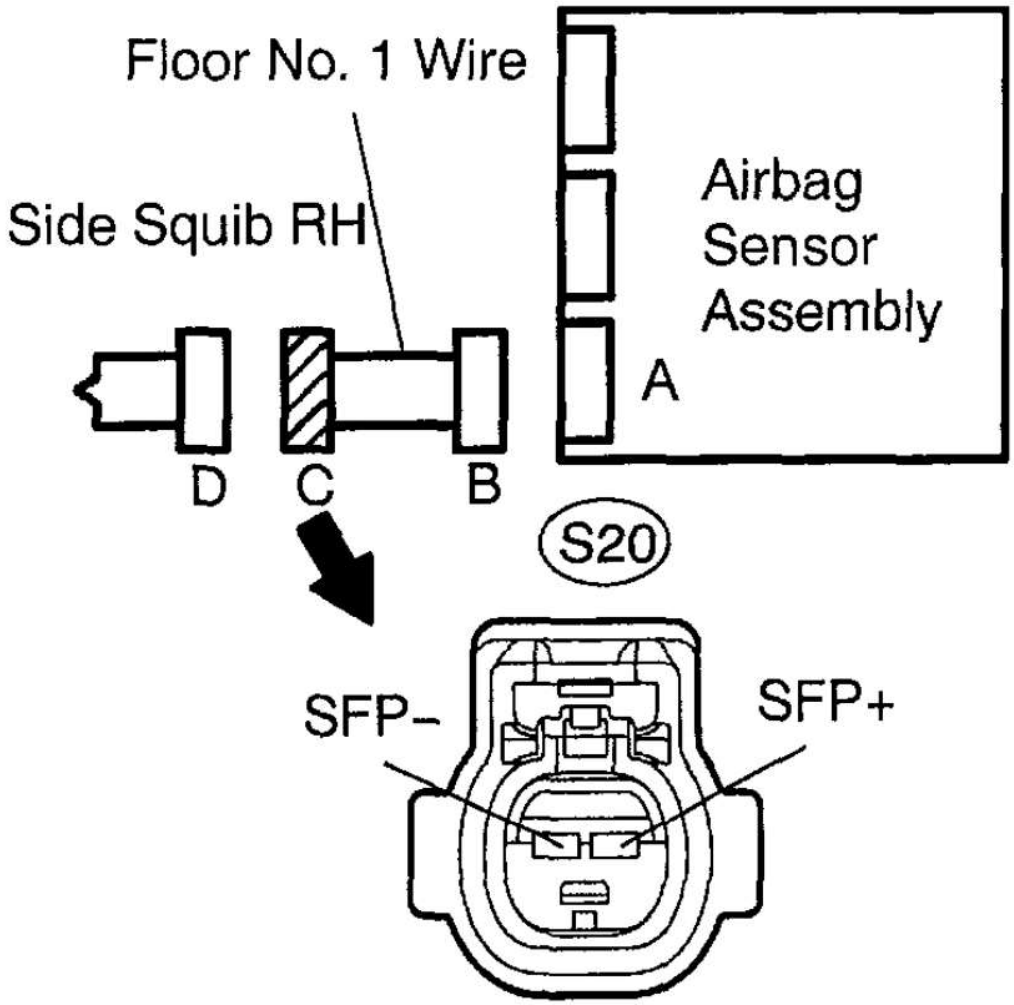



**Fig. 174: Checking Floor No. 1 Wire (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**
**OK: Go to step 9.**

6. **Check floor No. 1 wire (side squib LH circuit).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SIDE SQUIB LH CIRCUIT) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| S19-2 (SFP+) - Body ground | Ignition switch ON | Below 1 V |
| S19-1 (SFP-) - Body ground | Ignition switch ON | Below 1 V |

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

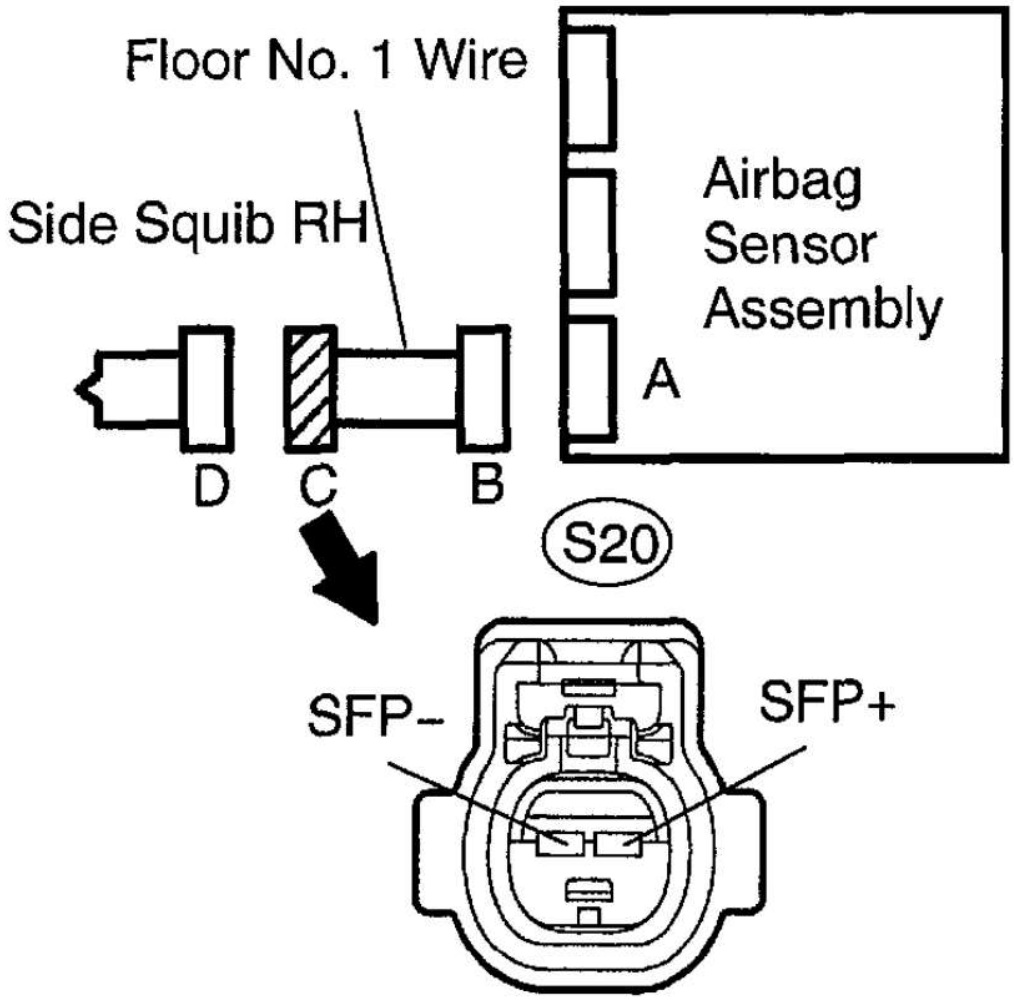



**Fig. 175: Checking Floor No. 1 Wire (Side Squib LH Circuit)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SIDE SQUIB LH CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |

cardiagn.com

| | | |
|---|---|---|
| S19-2 (SFP+) - S19-1 (SFP-) | Always | Below 1 ohm |
| S19-2 (SFP+) - Body ground | Always | 1 Mohm or higher |
| S19-1 (SFP-) - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SIDE SQUIB LH CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| S19-2 (SFP+) - S19-1 (SFP-) | Always | 1 Mohm or higher |

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step**

7. **Replace seat adjuster frame assembly (side squib RH).**

**PREPARATION:**

a. Replace the seat adjuster frame assembly (see **REPLACEMENT** ).
b. Connect the connectors to the airbag sensor assembly.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Clear the DTCs stored in memory (see **PRE-CHECK**).
f. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

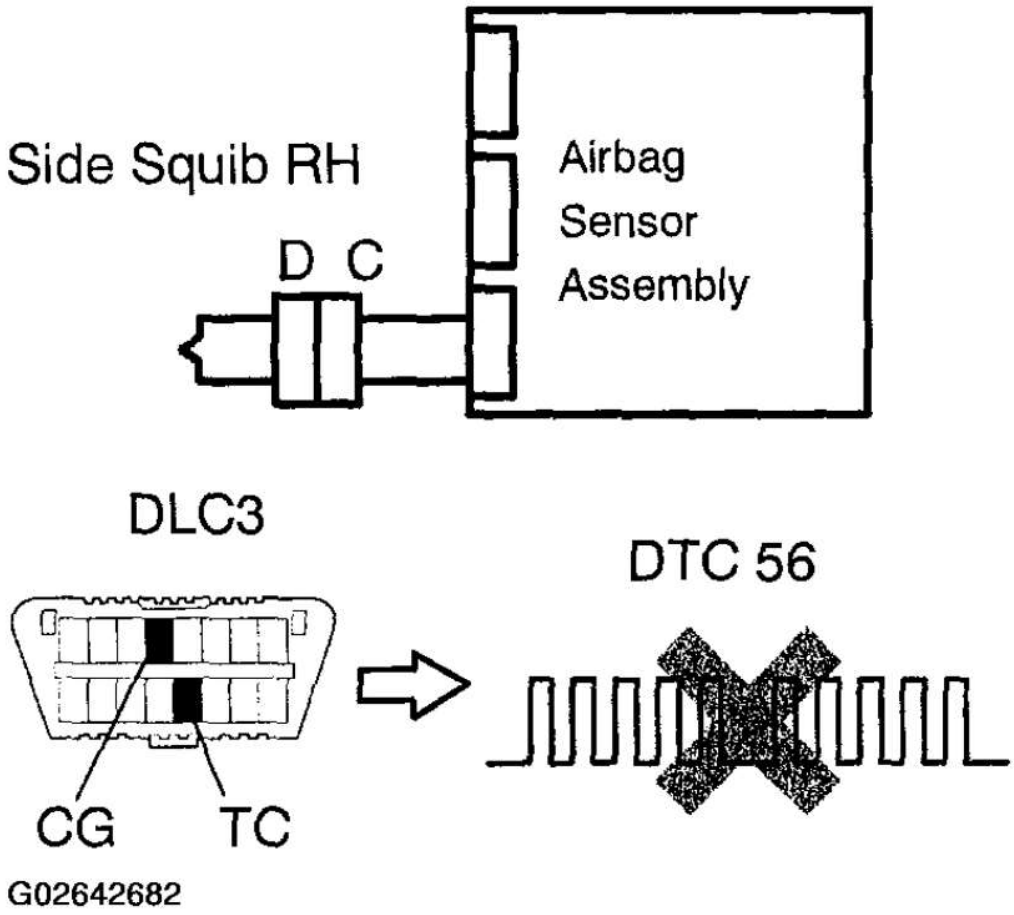



**Fig. 176: Checking Seat Adjuster Frame Assembly (Side Squib RH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC 56 is not output.**

HINT:

Codes other than DTC 56 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**

**OK: END**

8. **Check airbag sensor assembly.**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**PREPARATION:**

a. Connect the connector to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.

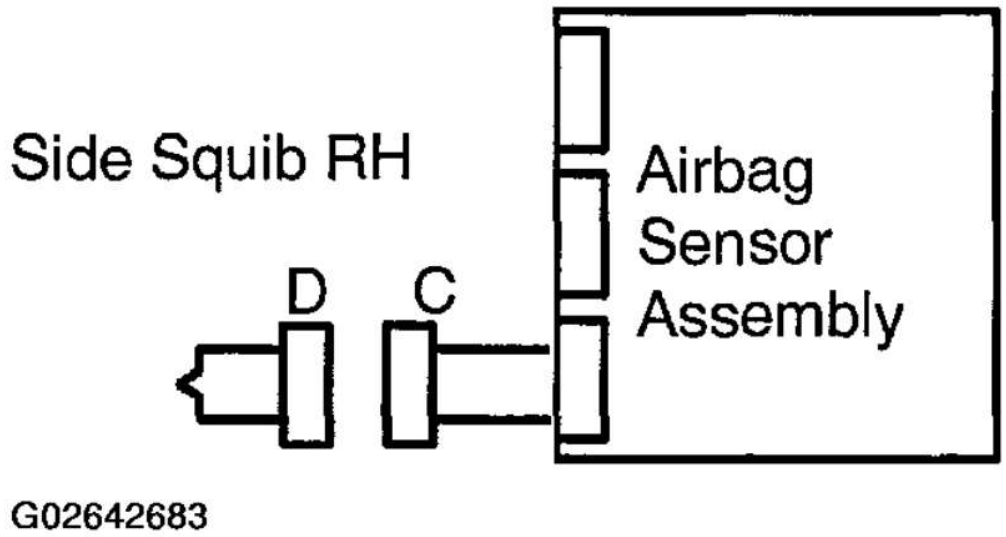



**Fig. 177: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC B1825 is not output.**

HINT:

Codes other than DTC B1825 may be output at this time, but they are not related to this check.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**NG: Replace airbag sensor assembly.**

**OK: Go to step 10.**

9. **Check airbag sensor assembly.**

**PREPARATION:**

a. From step 5:

Turn the ignition switch to the LOCK position.

b. From step 5:

Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

c. Connect the connectors to the airbag sensor assembly.
d. Using a service wire, connect terminals S20-2 (SFP+) and S20-1 (SFP-) of connector "C".

**NOTE: Do not forcibly insert the twisted service wire into the terminals of the connector when connecting.**

e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

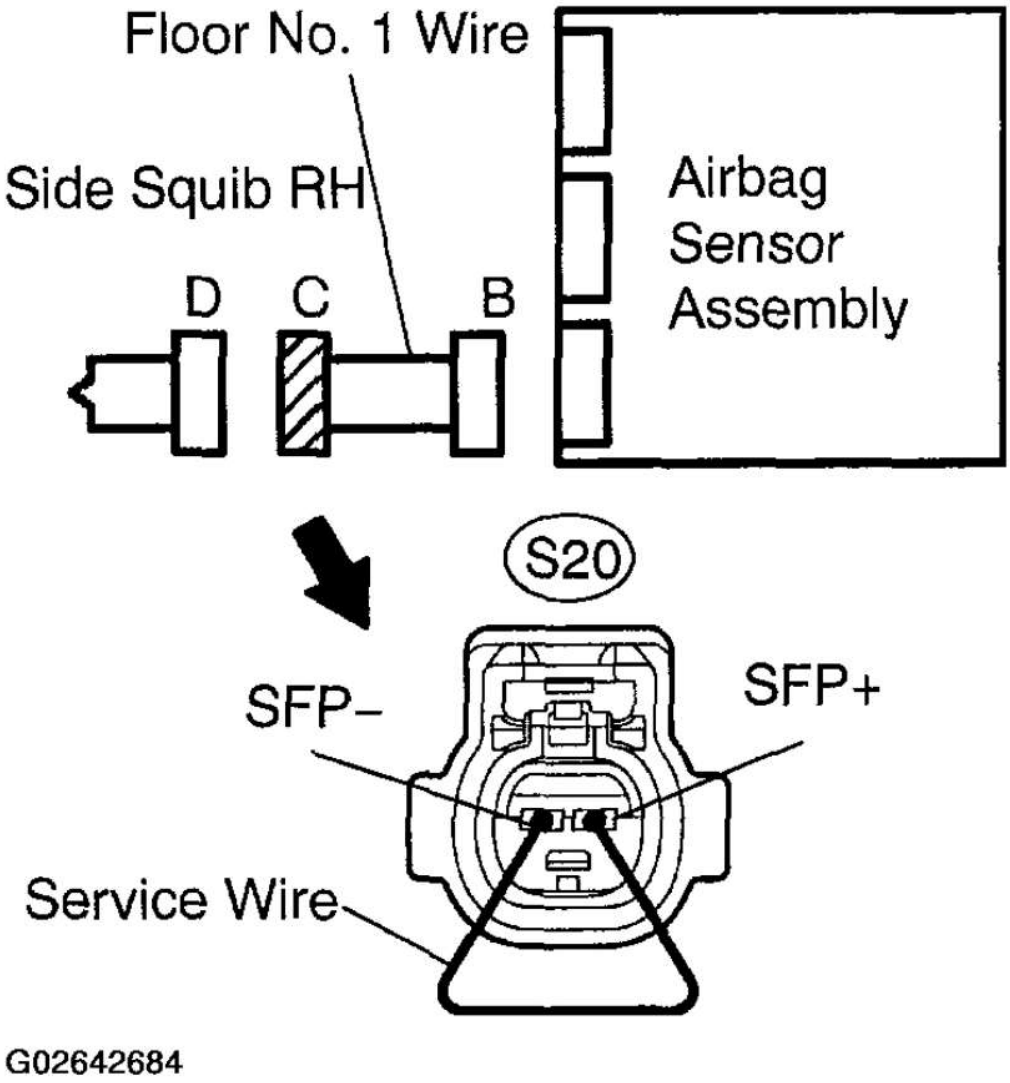



**Fig. 178: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**OK:**

**DTCs B1826, B1827 and B1828 are not output.**

HINT:

Codes other than DTCs B1826, B1827 and B1828 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**

**OK: Go To Next Step**

10. **Check seat adjuster frame assembly (side squib RH).**

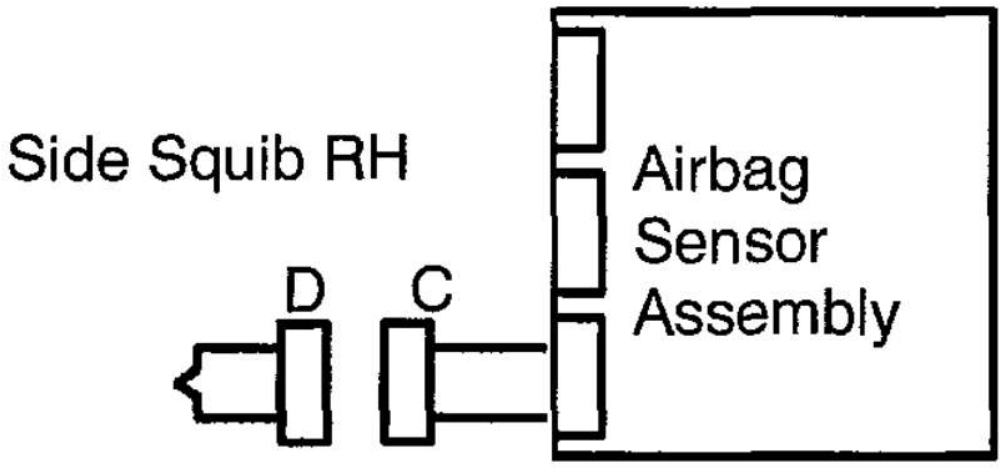
**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. From step 9:

Disconnect the service wire from connector "C".

d. Connect the connectors to the seat adjuster frame assembly (side squib RH).
e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

cardiagn.com




G02642685

**Fig. 179: Checking Seat Adjuster Frame Assembly (Side Squib RH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1826, B1827 and B1828 are not output.**

HINT:

Codes other than DTCs B1826, B1827 and B1828 may be output at this time, but they are not related to this check.

**NG: Replace seat adjuster frame assembly.**

**OK: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

## DTC B1830/57, B1831/57, B1832/57, B1833/57: SHORT/OPEN IN D-SEAT CURTAIN SHIELD SQUIB CIRCUIT (TO GROUND/TO B+)

### CIRCUIT DESCRIPTION

The curtain shield squib LH circuit consists of the airbag sensor assembly and the curtain shield airbag assembly LH.

The circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the curtain shield squib LH circuit.

cardiagn.com

## 2005 Toyota RAV4

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1830/57 | •When airbag sensor assembly receives line short circuit signal 5 times in curtain shield squib LH circuit during primary check. | •D-seat curtain shield airbag assembly (D-seat curtain shield squib)<br>•Airbag sensor assembly<br>•Floor No. 1 wire |
| B1831/57 | •When airbag sensor assembly receives open circuit signal in curtain shield squib LH circuit for 2 seconds. | •D-seat curtain shield airbag assembly (D-seat curtain shield squib)<br>•Airbag sensor assembly<br>•Floor No. 1 wire |
| B1832/57 | •When airbag sensor assembly receives short to ground circuit signal in curtain shield squib LH circuit for 0.5 seconds. | •D-seat curtain shield airbag assembly (D-seat curtain shield squib)<br>•Airbag sensor assembly<br>•Floor No. 1 wire |
| B1833/57 | •When airbag sensor assembly receives B+ short circuit signal in curtain shield squib LH circuit for 0.5 seconds. | •D-seat curtain shield airbag assembly (D-seat curtain shield squib)<br>•Airbag sensor assembly<br>•Floor No. 1 wire |

G02642686

**Fig. 180: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

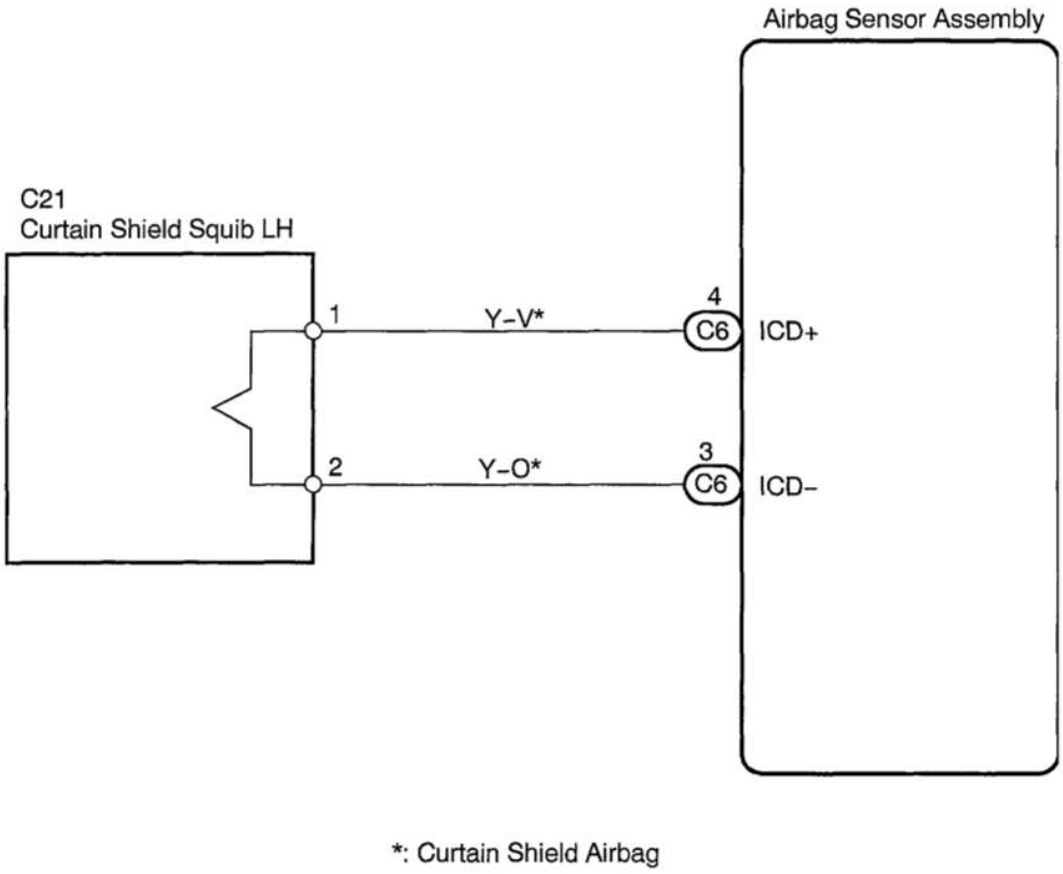



**Fig. 181: Wiring Diagram - D-Seat Curtain Shield Squib Circuit**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.

cardiagn.com

i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check read method of DTC.**

**CHECK:**

If using the hand-held tester (read the 5-digit code of DTC):

Using the hand-held tester, check the DTCs (see **PRE-CHECK**).

**RESULT:**

**A: DTC B1830 is output.**
**B: DTC B1831 is output.**
**C: DTC B1832 is output.**
**D: DTC B1833 is output.**

**CHECK:**

If not using the hand-held tester (read the 2-digit code of DTC):

Check the DTCs (see **PRE-CHECK**).

**RESULT:**

**E: DTC 57 is output.**
**B: Go to step 3.**
**C: Go to step 4.**
**D: Go to step 5.**
**E: Go to step 6.**
**A: Go To Next Step**

2. **Check floor No. 1 wire (short).**

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**OK:**

**FLOOR NO. 1 WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C21-1 (ICD+) - C21-2 (ICD-) | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

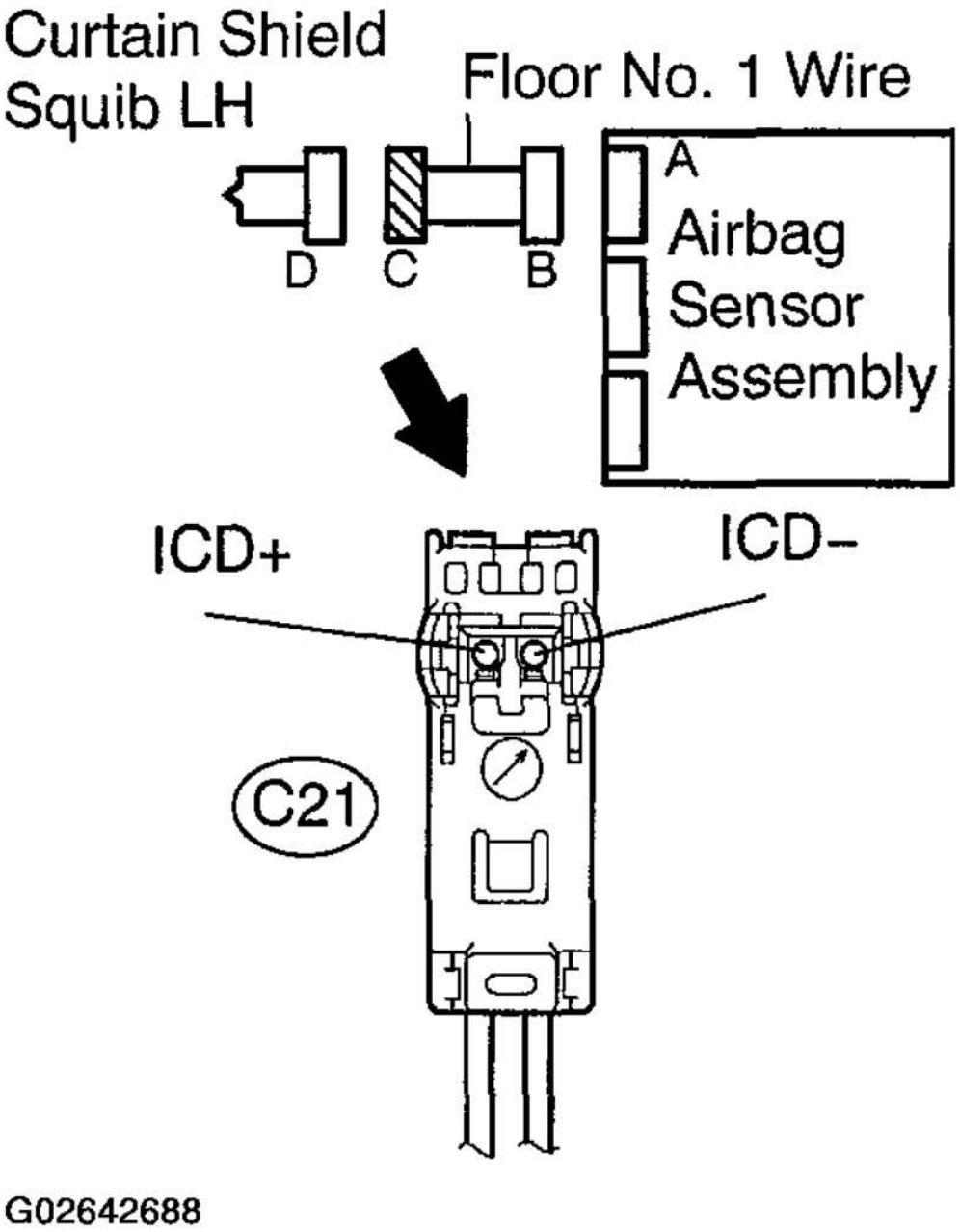



**Fig. 182: Checking Floor No. 1 Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go to step 8.**

3. **Check floor No. 1 wire (open).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C21-1 (ICD+) - C21-2 (ICD-) | Always | Below 1 ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

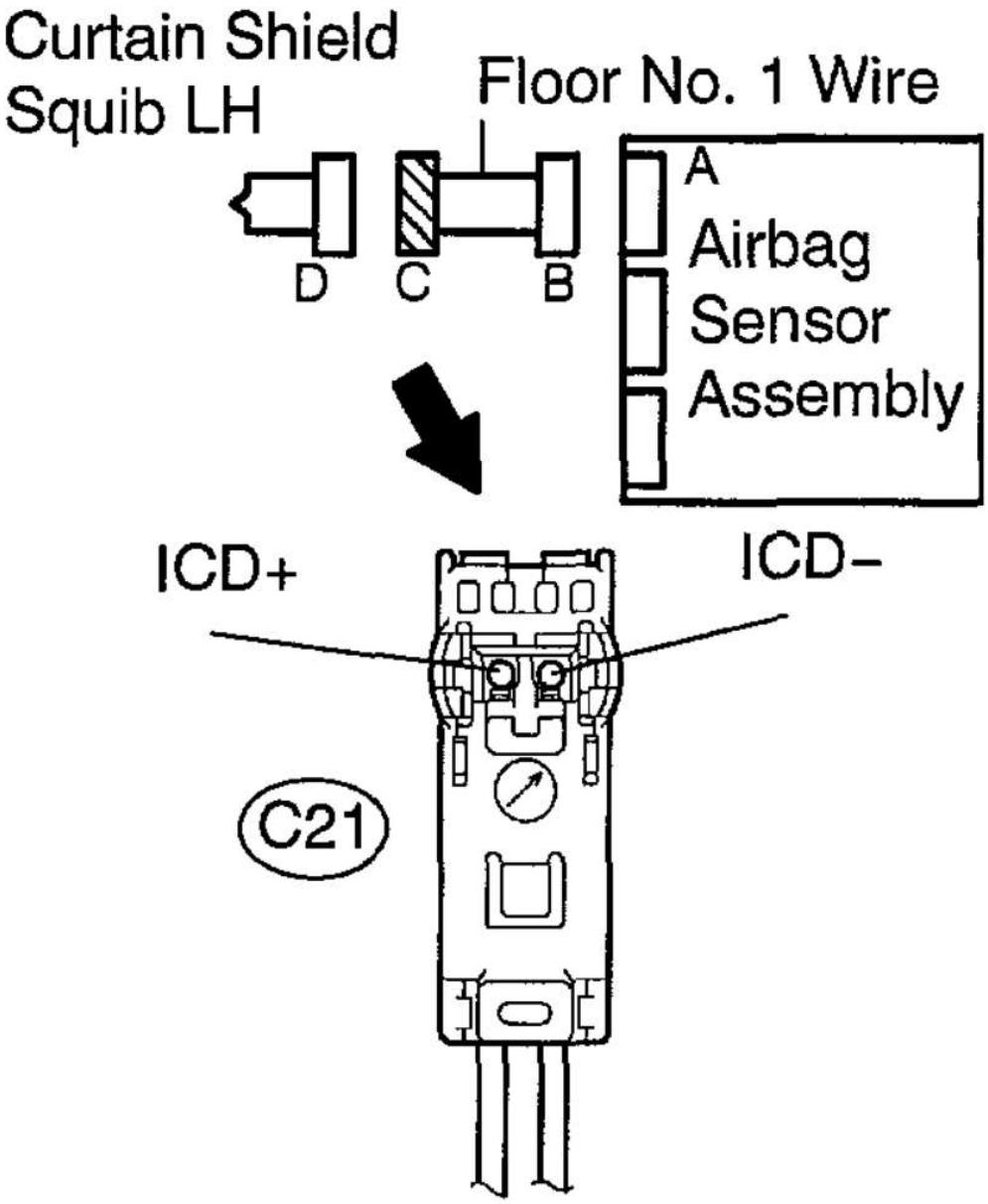



**Fig. 183: Checking Floor No. 1 Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go to step 9.**

4. **Check floor No. 1 wire (to ground).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C21-1 (ICD+) - Body ground | Always | 1 Mohm or higher |
| C21-2 (ICD-) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

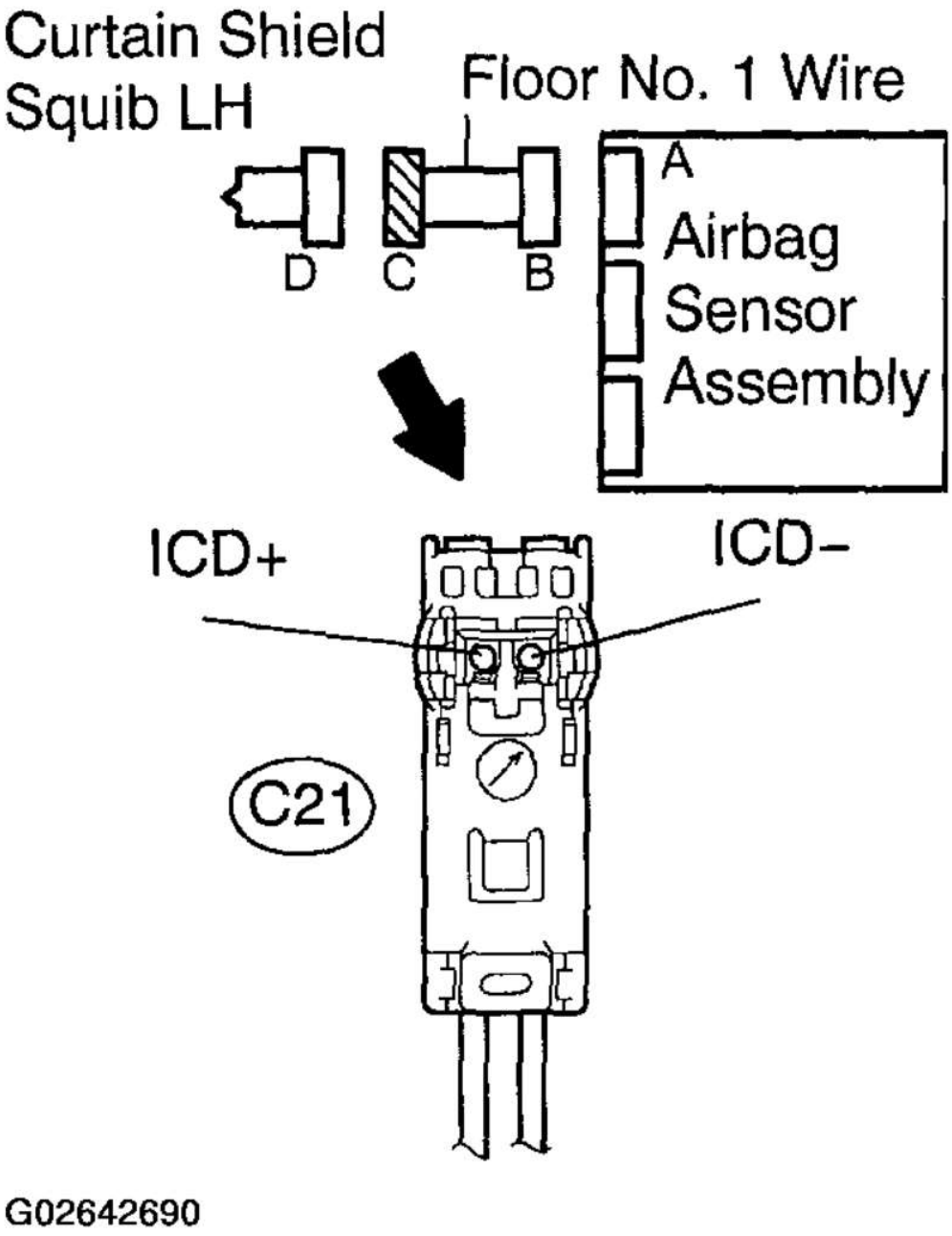



**Fig. 184: Checking Floor No. 1 Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go to step 9.**

5. **Check floor No. 1 wire (to B+).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C21-1 (ICD+) - Body ground | Ignition switch ON | Below 1 V |
| C21-2 (ICD-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

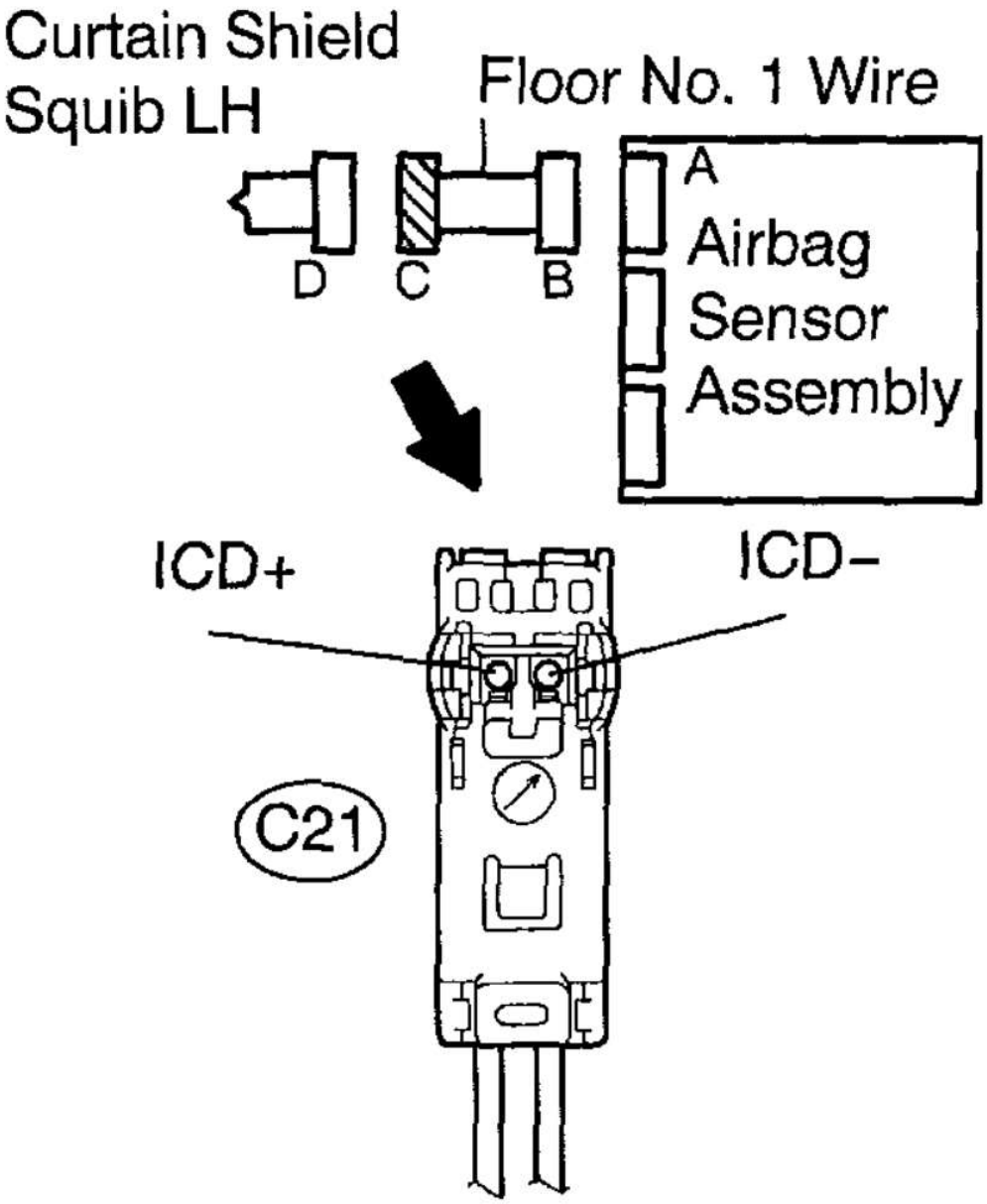



**Fig. 185: Checking Floor No. 1 Wire (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go to step 9.**

6. **Check floor No. 1 wire (curtain shield squib LH circuit).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (CURTAIN SHIELD SQUIB LH CIRCUIT) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C21-1 (ICD+) - Body ground | Ignition switch ON | Below 1 V |
| C21-2 (ICD-) - Body ground | Ignition switch ON | Below 1 V |

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least for 90 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

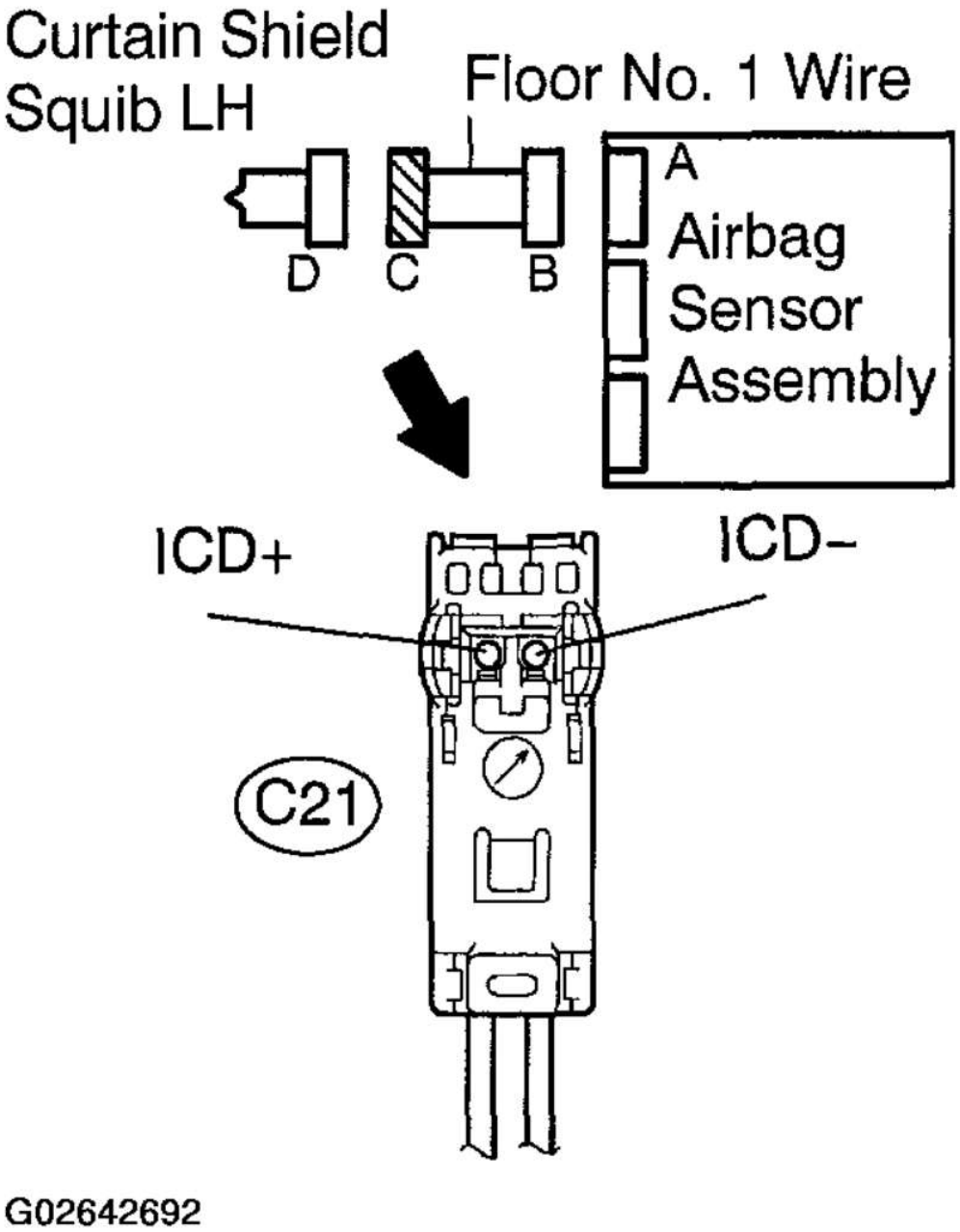



**Fig. 186: Checking Floor No. 1 Wire (Curtain Shield Squib LH Circuit)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

cardiagn.com

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (CURTAIN SHIELD SQUIB LH CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C21-1 (ICD+) - C21-2 (ICD-) | Always | Below 1 ohm |
| C21-1 (ICD+) - Body ground | Always | 1 Mohm or higher |
| C21-2 (ICD-) - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the activation prevention mechanism built into the connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (CURTAIN SHIELD SQUIB LH CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C21-1 (ICD+) - C21-2 (ICD-) | Always | 1 Mohm or higher |

**NG: Repair or replace floor No. 1 wire.**
**OK: Go To Next Step**

7. **Replace curtain shield airbag assembly LH (curtain shield squib LH).**

**PREPARATION:**

a. Replace the curtain shield airbag assembly LH (see **REMOVAL** ).
b. Connect the connector to the airbag sensor assembly.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Clear the DTCs stored in memory (see **PRE-CHECK**).
f. Turn the ignition switch to the LOCK position.

CHECK:

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

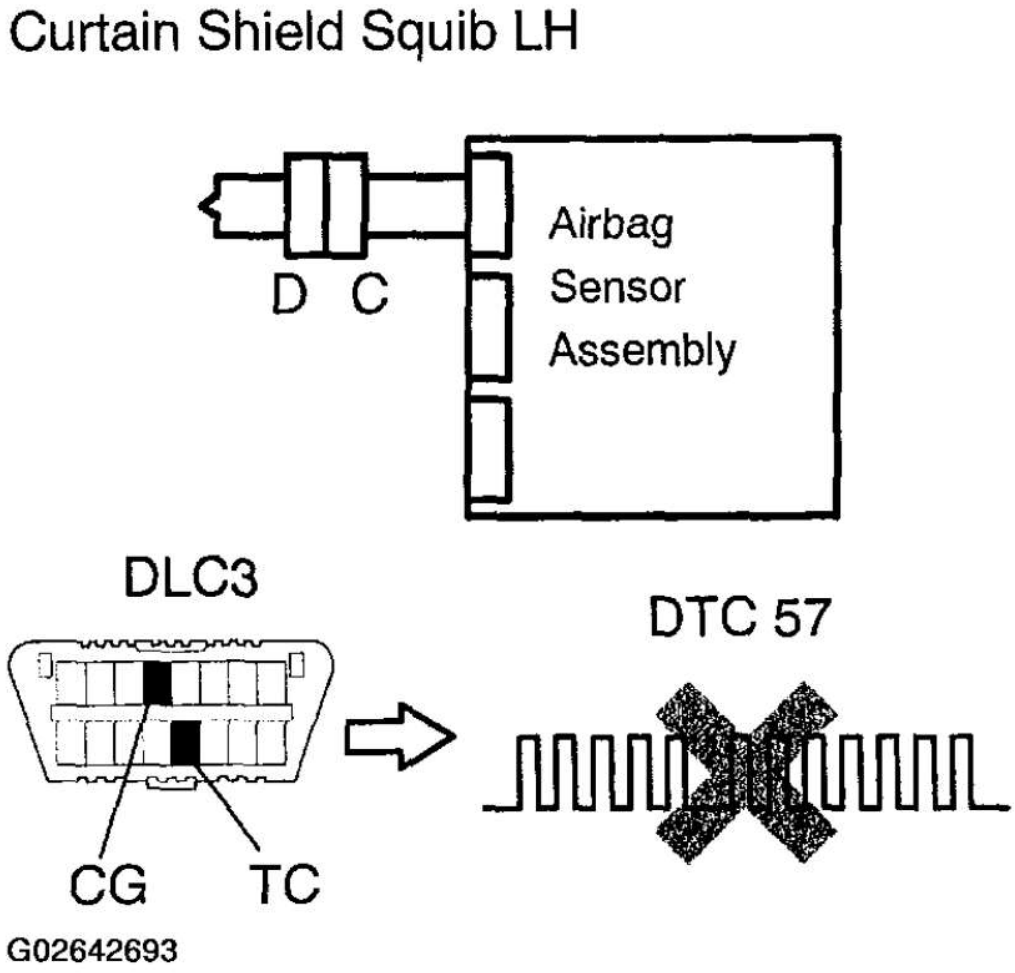



**Fig. 187: Checking Curtain Shield Airbag Assembly LH (Curtain Shield Squib LH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC 57 is not output.**

HINT:

Codes other than DTC 57 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: END**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

8. **Check airbag sensor assembly.**

**PREPARATION:**

a. Connect the connector to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.

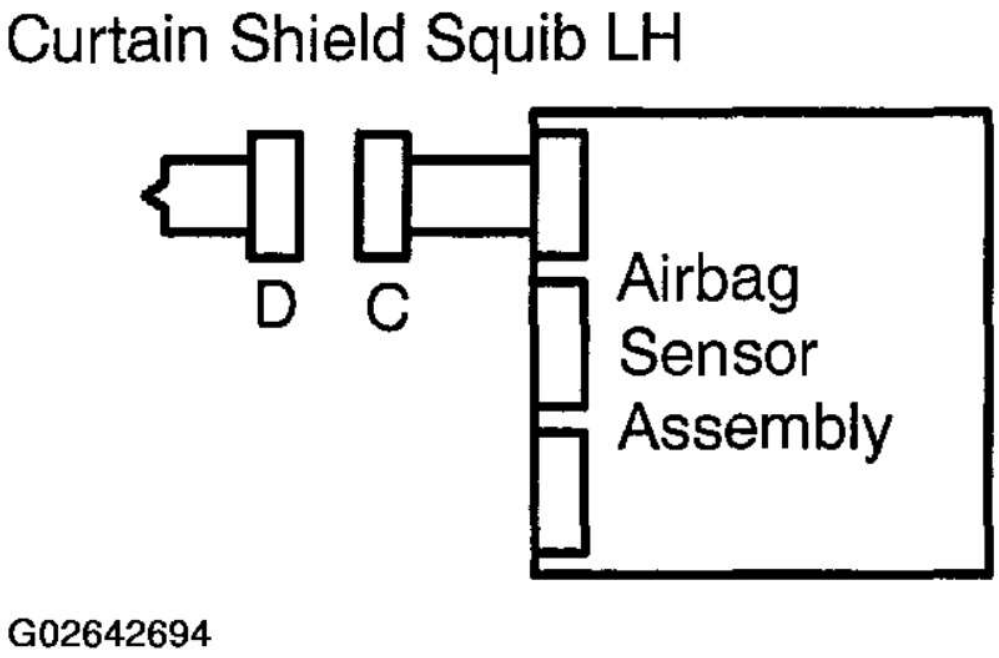



**Fig. 188: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

**OK:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**DTC B1830 is not output.**

HINT:

Codes other than DTC B1830 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: Go to step 10.**

9. **Check airbag sensor assembly.**

**PREPARATION:**

a. From step 5:

Turn the ignition switch to the LOCK position.

b. From step 5:

Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

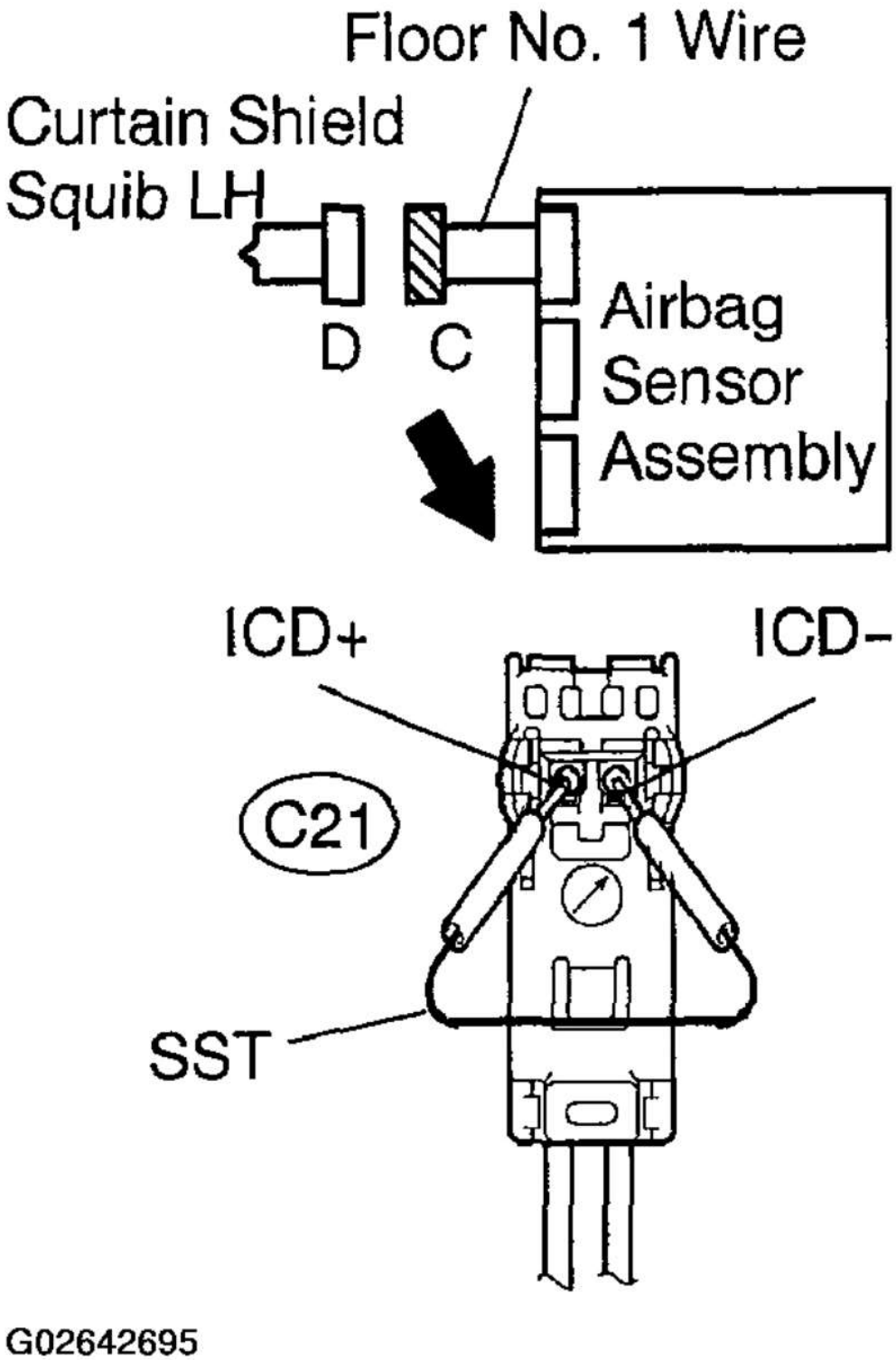
c. Using SST, connect terminals C21-1 (ICD+) and C21-2 (ICD-) of connector "C".

SST 09843-18040

d. Connect the connectors to the airbag sensor assembly.
e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |




G02642695

cardiagn.com

**Fig. 189: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1831, B1832 and B1833 are not output.**

HINT:

Codes other than DTCs B1831, B1832 and B1833 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: Go To Next Step**

10. **Check curtain shield airbag assembly LH (curtain shield squib LH).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. From step 9:

Disconnect the SST from connector "C".

d. Connect the connector to the curtain shield airbag assembly LH (curtain shield squib LH).
e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

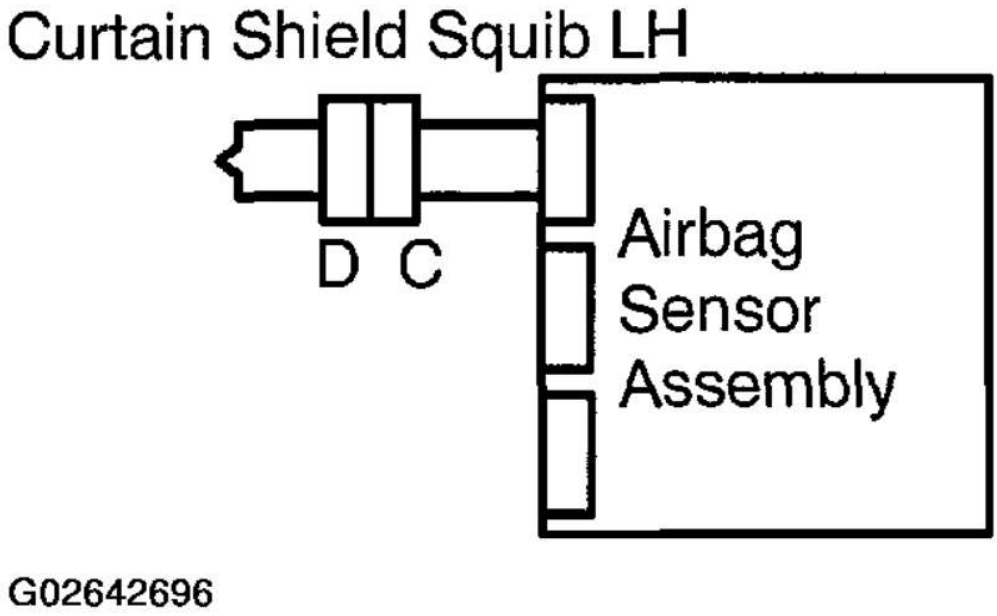



**Fig. 190: Checking Curtain Shield Airbag Assembly LH (Curtain Shield Squib LH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1831, B1832 and B1833 are not output.**

HINT:

Codes other than DTCs B1831, B1832 and B1833 may be output at this time, but they are not related to this check.

**NG: Replace curtain shield airbag assembly LH.**

cardiagn.com

**OK: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

## DTC B1835/58, B1836/58, B1837/58, B1838/58: SHORT/OPEN IN P-SEAT CURTAIN SHIELD SQUIB CIRCUIT (TO GROUND/TO B+)

### CIRCUIT DESCRIPTION

The curtain shield squib RH circuit consists of the airbag sensor assembly and the curtain shield airbag assembly RH.

The circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the curtain shield squib RH circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1835/58 | •When airbag sensor assembly receives line short circuit signal 5 times in curtain shield squib RH circuit during primary check. | •P-seat curtain shield airbag assembly (P-seat curtain shield squib)<br>•Airbag sensor assembly<br>•Floor No. 1 wire |
| B1836/58 | •When airbag sensor assembly receives open circuit signal in curtain shield squib RH circuit for 2 seconds. | •P-seat curtain shield airbag assembly (P-seat curtain shield squib)<br>•Airbag sensor assembly<br>•Floor No. 1 wire |
| B1837/58 | •When airbag sensor assembly receives short to ground circuit signal in curtain shield squib RH circuit for 0.5 seconds. | •P-seat curtain shield airbag assembly (P-seat curtain shield squib)<br>•Airbag sensor assembly<br>•Floor No. 1 wire |
| B1838/58 | •When airbag sensor assembly receives B+ short circuit signal in curtain shield squib RH circuit for 0.5 seconds. | •P-seat curtain shield airbag assembly (P-seat curtain shield squib)<br>•Airbag sensor assembly<br>•Floor No. 1 wire |

G02642697

**Fig. 191: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

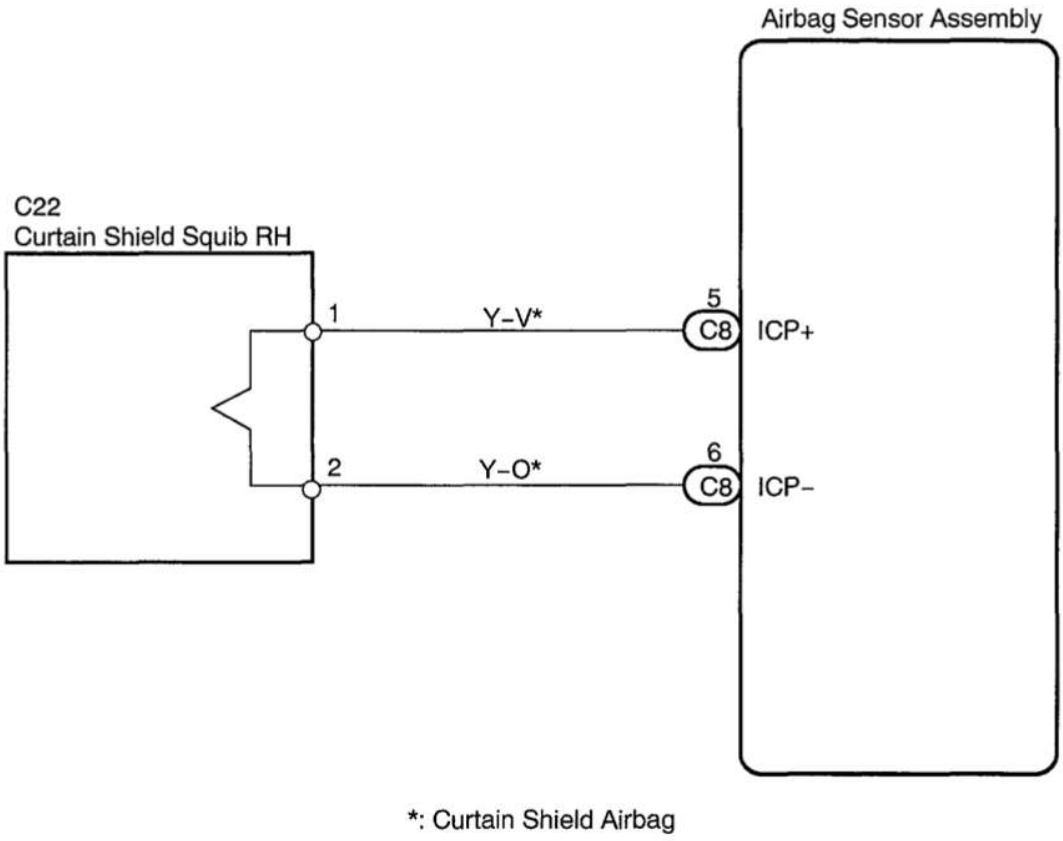



**Fig. 192: Wiring Diagram - P-Seat Curtain Shield Squib Circuit**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.

cardiagn.com

j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check read method of DTC.**

**CHECK:**

If using the hand-held tester (read the 5-digit code of DTC):

Using the hand-held tester, check the DTCs (see **PRE-CHECK**).

**RESULT:**

**A: DTC B1835 is output.**
**B: DTC B1836 is output.**
**C: DTC B1837 is output.**
**D: DTC B1838 is output.**

**CHECK:**

If not using the hand-held tester (read the 2-digit code of DTC):

Check the DTCs (see **PRE-CHECK**).

**RESULT:**

**E: DTC 58 is output.**
**B: Go to step 3.**
**C: Go to step 4.**
**D: Go to step 5.**
**E: Go to step 6.**
**A: Go To Next Step**

2. **Check floor No. 1 wire (short).**

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

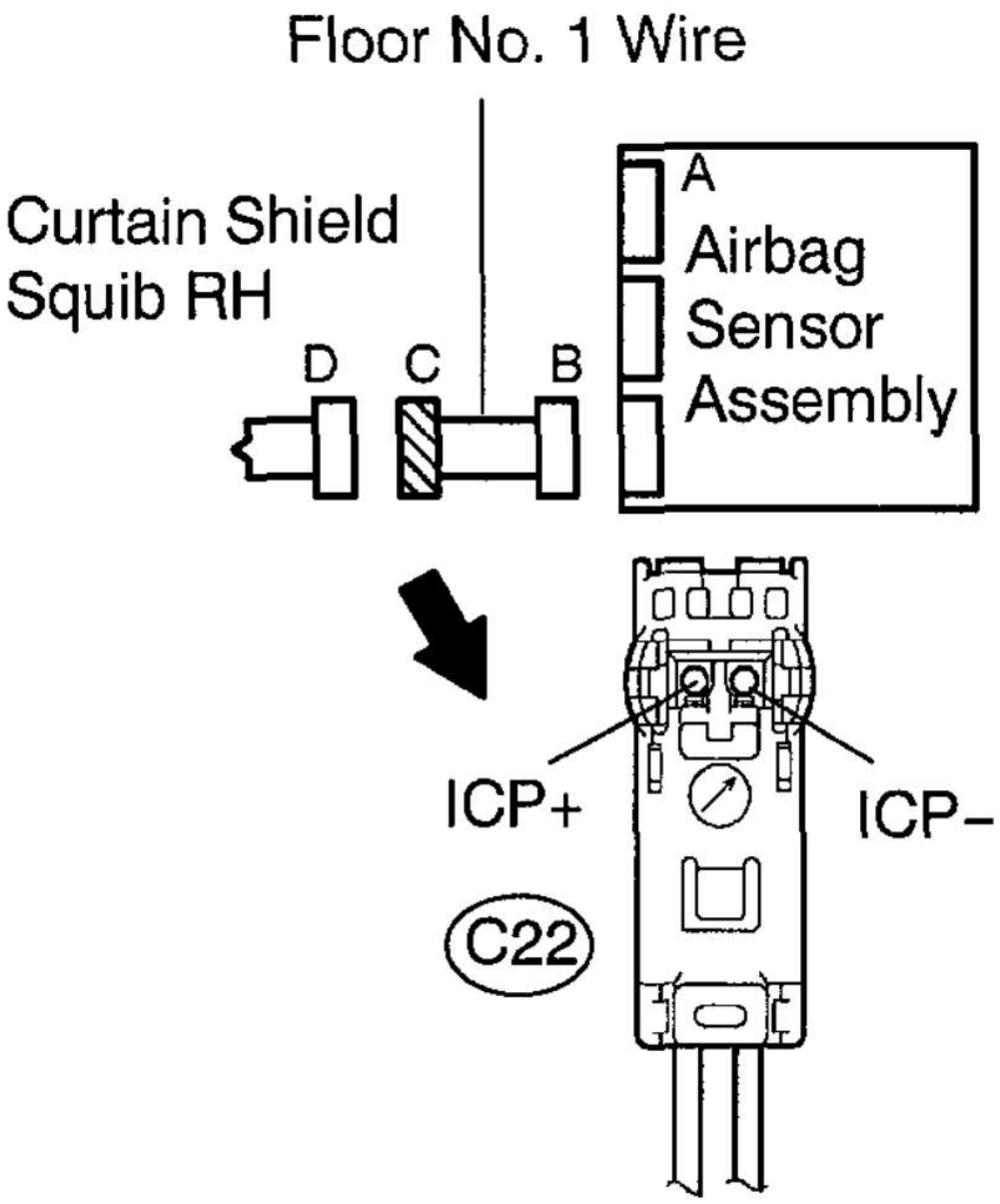
**OK:**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**FLOOR NO. 1 WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C22-1 (ICP+) - C22-2 (ICP-) | Always | 1 Mohm or higher |




G02642699

cardiagn.com

**Fig. 193: Checking Floor No. 1 Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go to step 8.**

3. **Check floor No. 1 wire (open).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C22-1 (ICP+) - C22-2 (ICP-) | Always | Below 1 ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

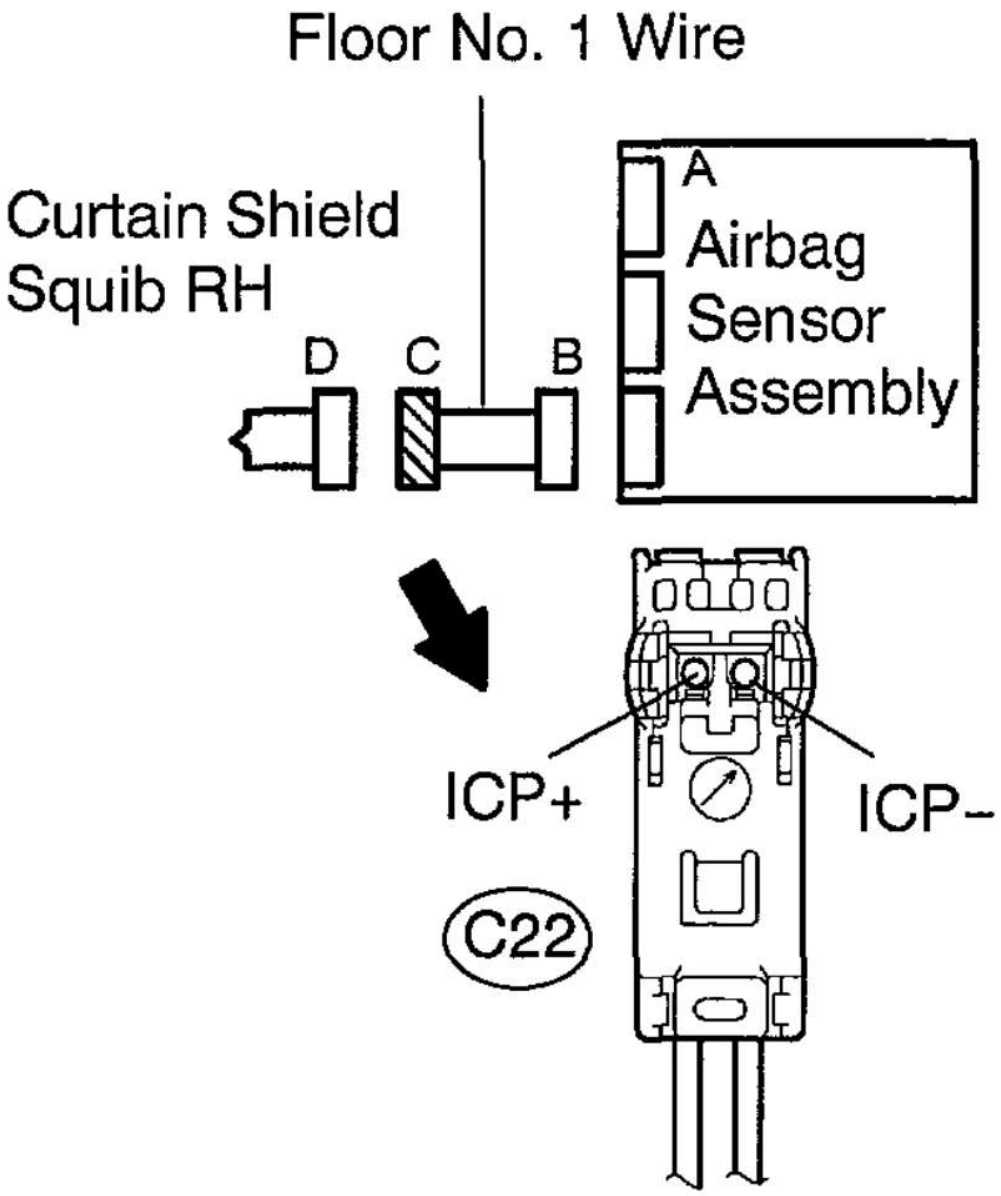



**Fig. 194: Checking Floor No. 1 Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go to step 9.**

4. **Check floor No. 1 wire (to ground).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C22-1 (ICP+) - Body ground | Always | 1 Mohm or higher |
| C22-2 (ICP-) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

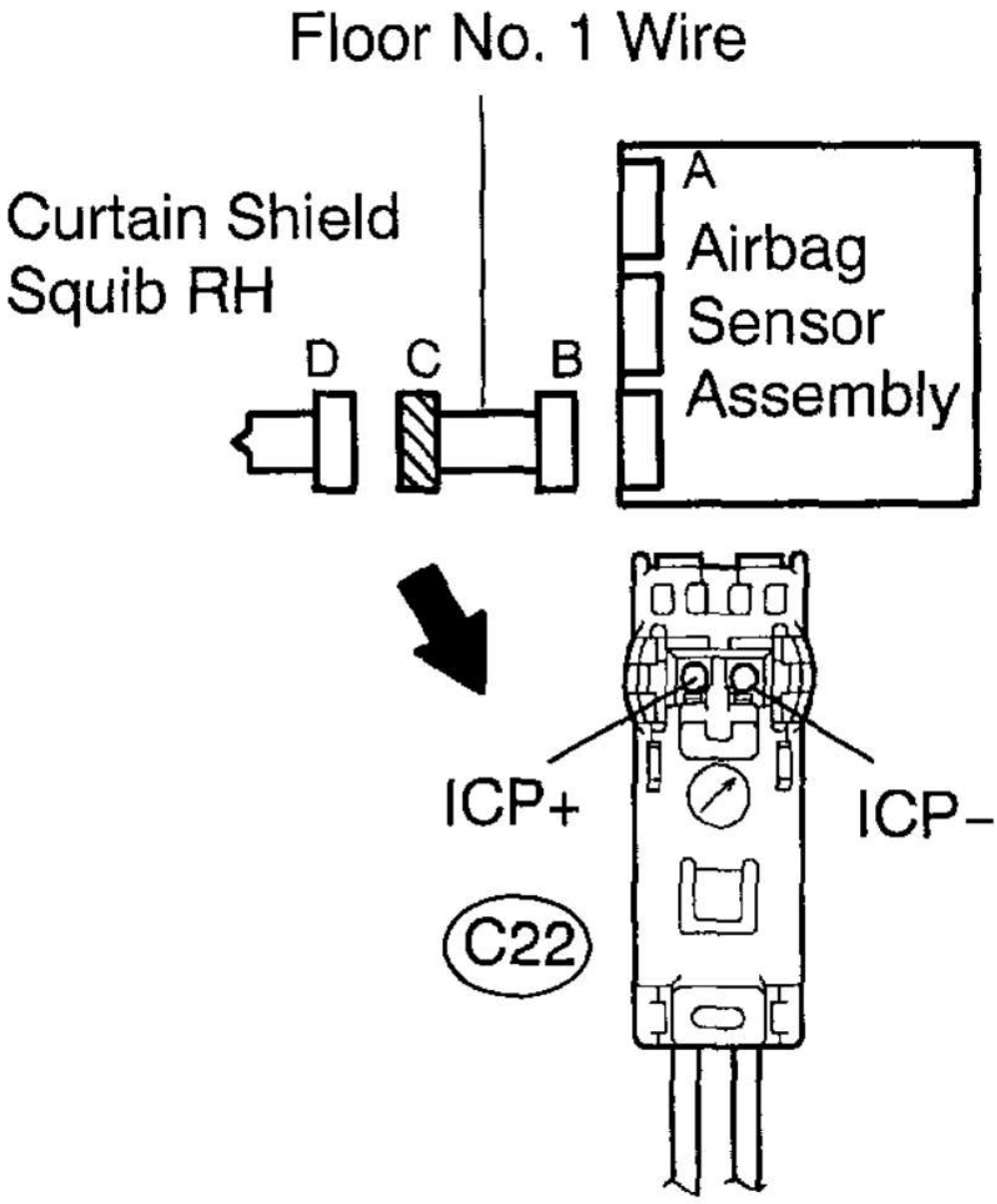



**Fig. 195: Checking Floor No. 1 Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go to step 9.**

5. **Check floor No. wire (to B+).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. WIRE (TO B+) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C22-1 (ICP+) - Body ground | Ignition switch ON | Below 1 V |
| C22-2 (ICP-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

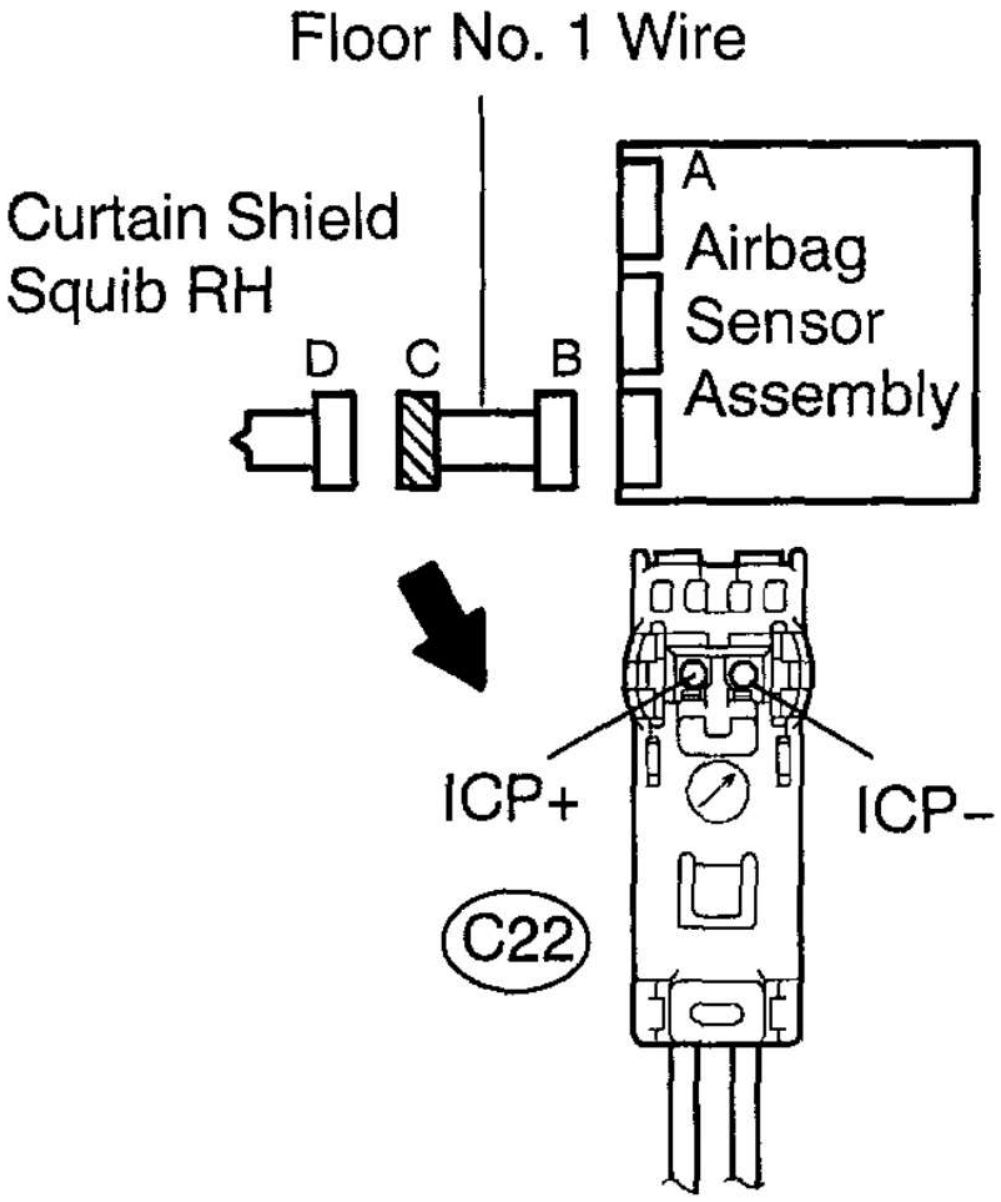



**Fig. 196: Checking Floor No. Wire (To B+)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go to step 9.**

6. **Check floor No. 1 wire (curtain shield squib RH circuit).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (CURTAIN SHIELD SQUIB RH CIRCUIT) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C22-1 (ICP+) - Body ground | Ignition switch ON | Below 1 V |
| C22-2 (ICP-) - Body ground | Ignition switch ON | Below 1 V |

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

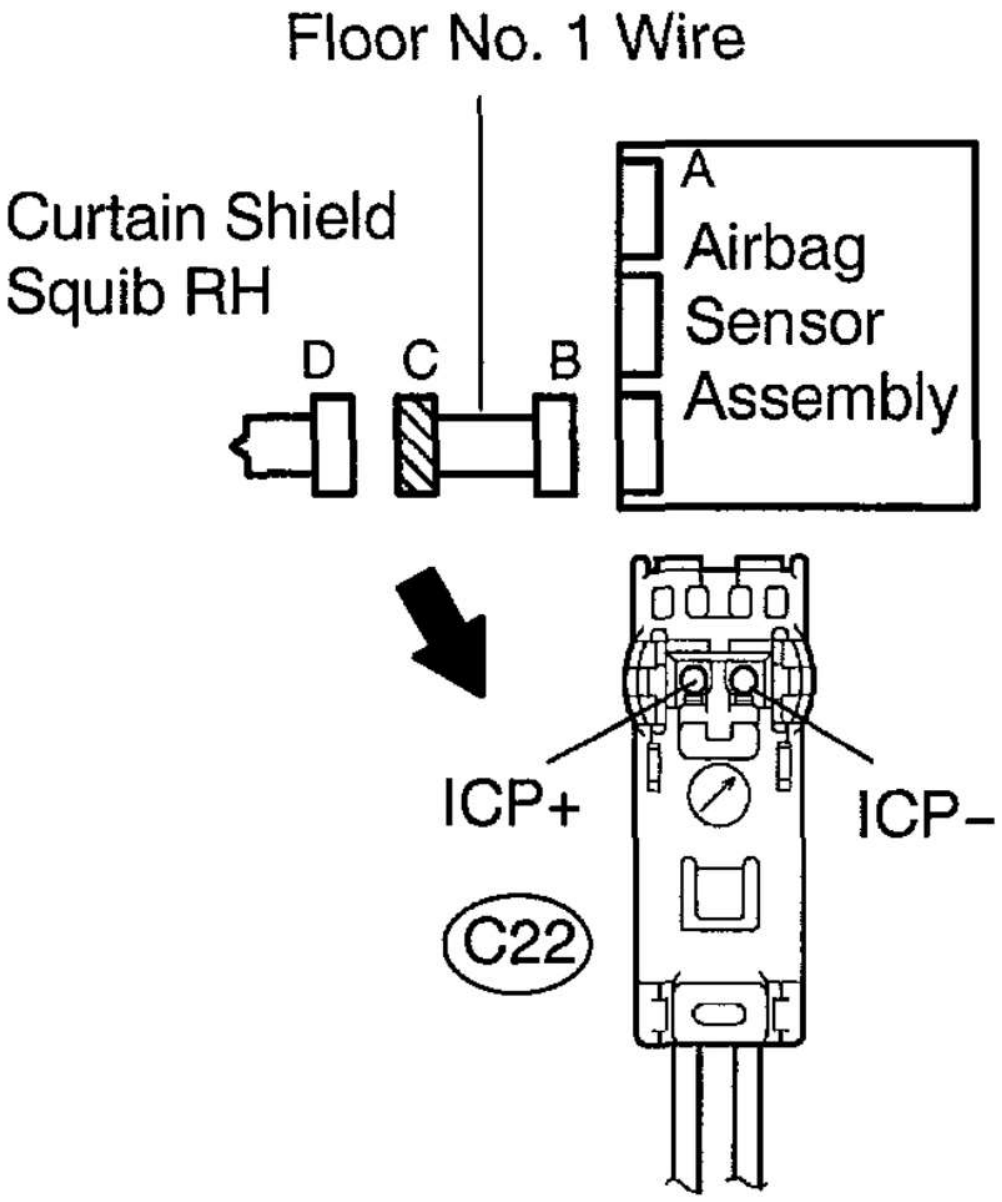



**Fig. 197: Checking Floor No. 1 Wire (Curtain Shield Squib RH Circuit)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

cardiagn.com

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (CURTAIN SHIELD SQUIB RH CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C22-1 (ICP+) - C22-2 (ICP-) | Always | Below 1 ohm |
| C22-1 (ICP+) - Body ground | Always | 1 Mohm or higher |
| C22-2 (ICP-) - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (CURTAIN SHIELD SQUIB RH CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C22-1 (ICP+) - C22-2 (ICP-) | Always | 1 Mohm or higher |

**NG: Repair or replace floor No. 1 wire.**
**OK: Go To Next Step**

7. **Replace curtain shield airbag assembly RH (curtain shield squib RH).**

**PREPARATION:**

a. Replace the curtain shield airbag assembly RH (see **REPLACEMENT** ).
b. Connect the connector to the airbag sensor assembly.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Clear the DTCs stored in memory (see **PRE-CHECK**).
f. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

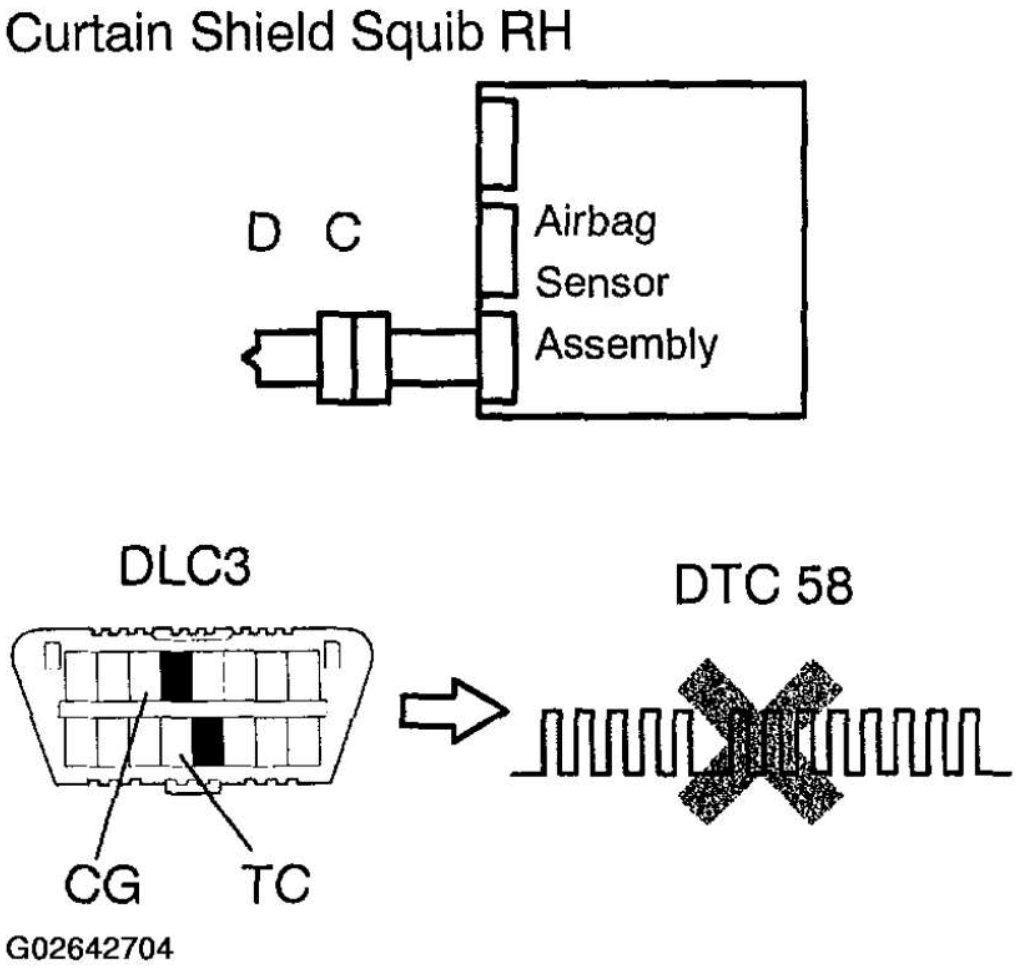



**Fig. 198: Checking Curtain Shield Airbag Assembly RH (Curtain Shield Squib RH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC 58 is not output.**

HINT:

Codes other than DTC 58 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**

**OK: END**

8. **Check airbag sensor assembly.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**PREPARATION:**

a. Connect the connector to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Clear the DTCs stored in memory (see **PRE-CHECK**).
c. Turn the ignition switch to the LOCK position.

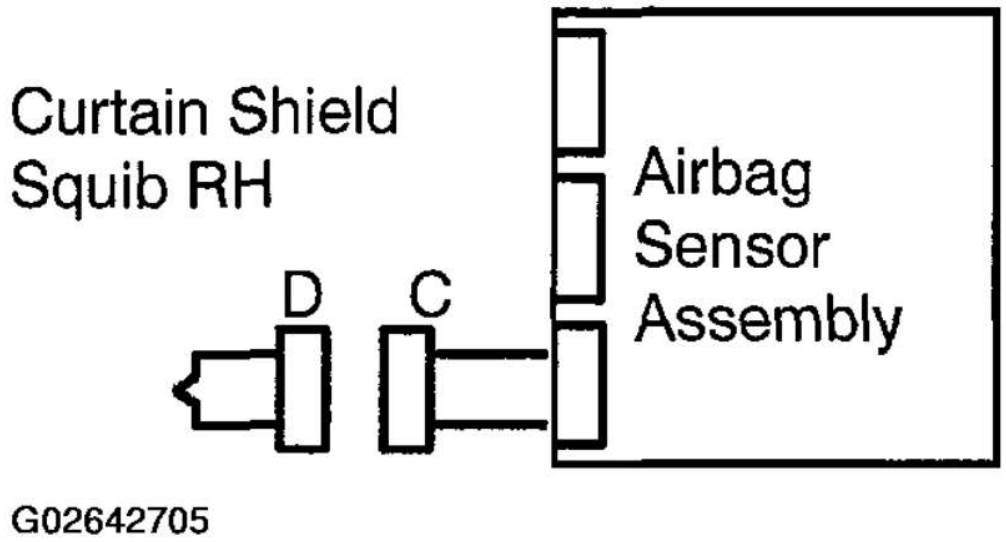



**Fig. 199: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC B1835 is not output.**

HINT:

Codes other than DTC B1835 may be output at this time, but they are not related to this check.

cardiagn.com

**NG: Replace airbag sensor assembly.**

**OK: Go to step 10.**

9. **Check airbag sensor assembly.**

**PREPARATION:**

a. From step 5:

Turn the ignition switch to the LOCK position.

b. From step 5:

Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

c. Using SST, connect terminals C22-1 (ICP+) and C22-2 (ICP-) of connector "C".

SST 09843-18040

d. Connect the connectors to the airbag sensor assembly.
e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

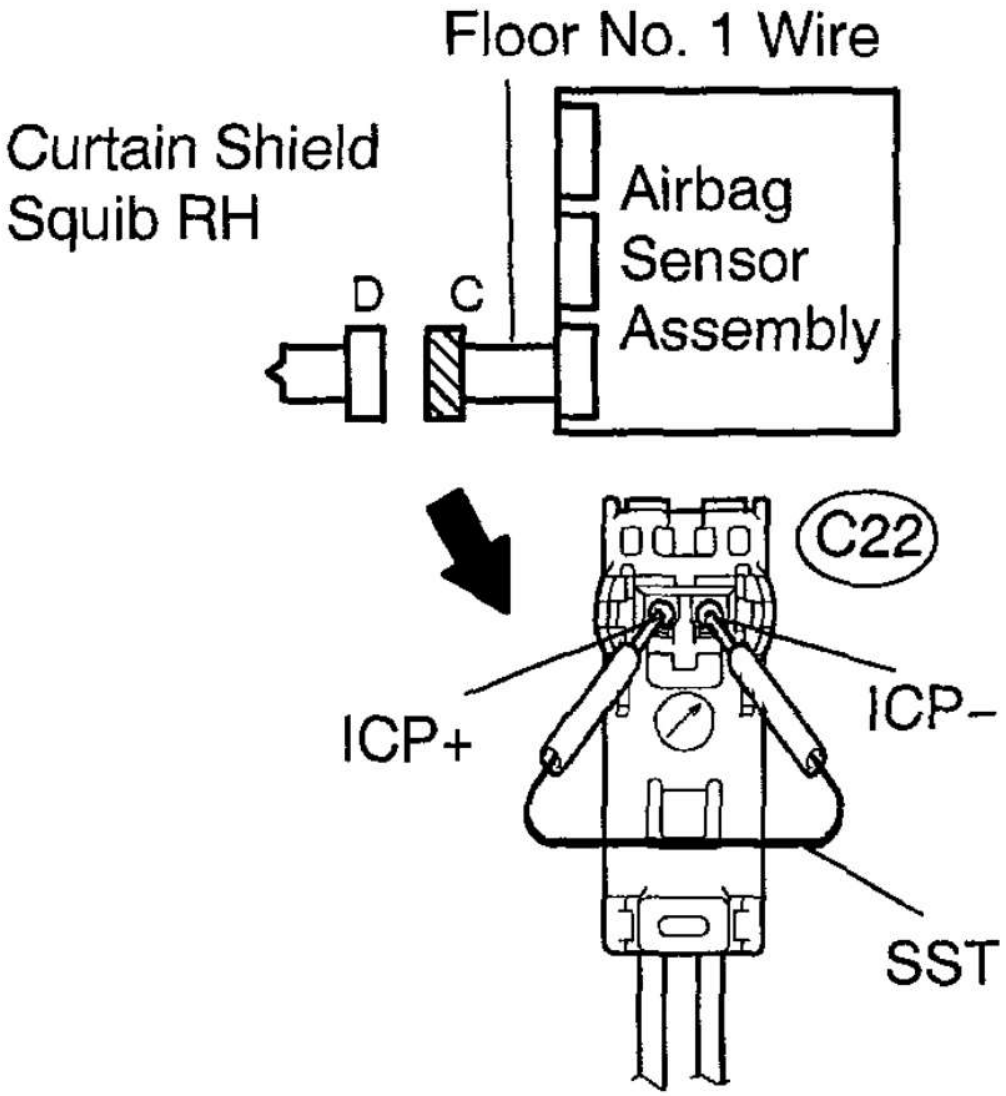



**Fig. 200: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

cardiagn.com

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1836, B1837 and B1838 are not output.**

HINT:

Codes other than DTCs B1836, B1837 and B1838 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: Go To Next Step**

10. **Check curtain shield airbag assembly RH (curtain shield squib RH).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. From step 9:

Disconnect the SST from connector "C".

d. Connect the connector to the curtain shield airbag assembly RH (curtain shield squib RH).
e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

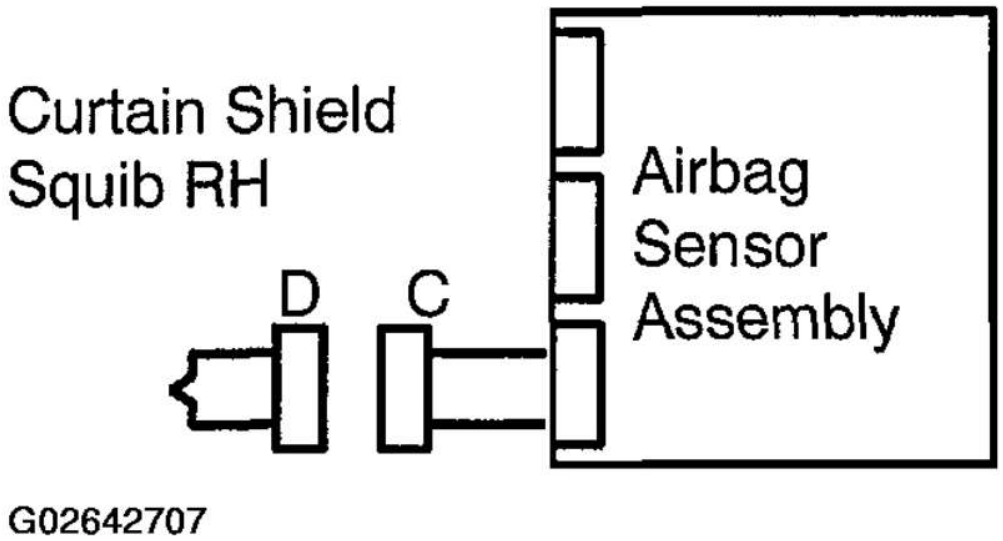



**Fig. 201: Checking Curtain Shield Airbag Assembly RH (Curtain Shield Squib RH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1836, B1837 and B1838 are not output.**

HINT:

Codes other than DTCs B1836, B1837 and B1838 may be output at this time, but they are not related to this check.

**NG: Replace curtain shield airbag assembly RH.**

**OK: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

## DTC B1900/73, B1901/73, B1902/73, B1903/73: SHORT/OPEN IN P/T SQUIB (LH) CIRCUIT (TO GROUND/TO B+)

### CIRCUIT DESCRIPTION

The P/T squib (LH) circuit consists of the airbag sensor assembly and the front seat outer belt assembly LH (seat belt pretensioner LH).

The circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the P/T squib LH circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1900/73 | • When airbag sensor assembly receives line short circuit signal 5 times in P/T squib LH circuit during primary check. | • Floor No. 1 wire<br>• Airbag sensor assembly<br>• Front seat outer belt assembly LH (P/T squib LH) |
| B1901/73 | • When airbag sensor assembly receives open circuit signal in P/T squib LH circuit for 2 seconds. | • Floor No. 1 wire<br>• Airbag sensor assembly<br>• Front seat outer belt assembly LH (P/T squib LH) |
| B1902/73 | • When airbag sensor assembly receives short to ground circuit signal in P/T squib LH circuit for 0.5 seconds. | • Floor No. 1 wire<br>• Airbag sensor assembly<br>• Front seat outer belt assembly LH (P/T squib LH) |
| B1903/73 | • When airbag sensor assembly receives B+ short circuit signal in P/T squib LH circuit for 0.5 seconds. | • Floor No. 1 wire<br>• Airbag sensor assembly<br>• Front seat outer belt assembly LH (P/T squib LH) |

G02642708

**Fig. 202: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

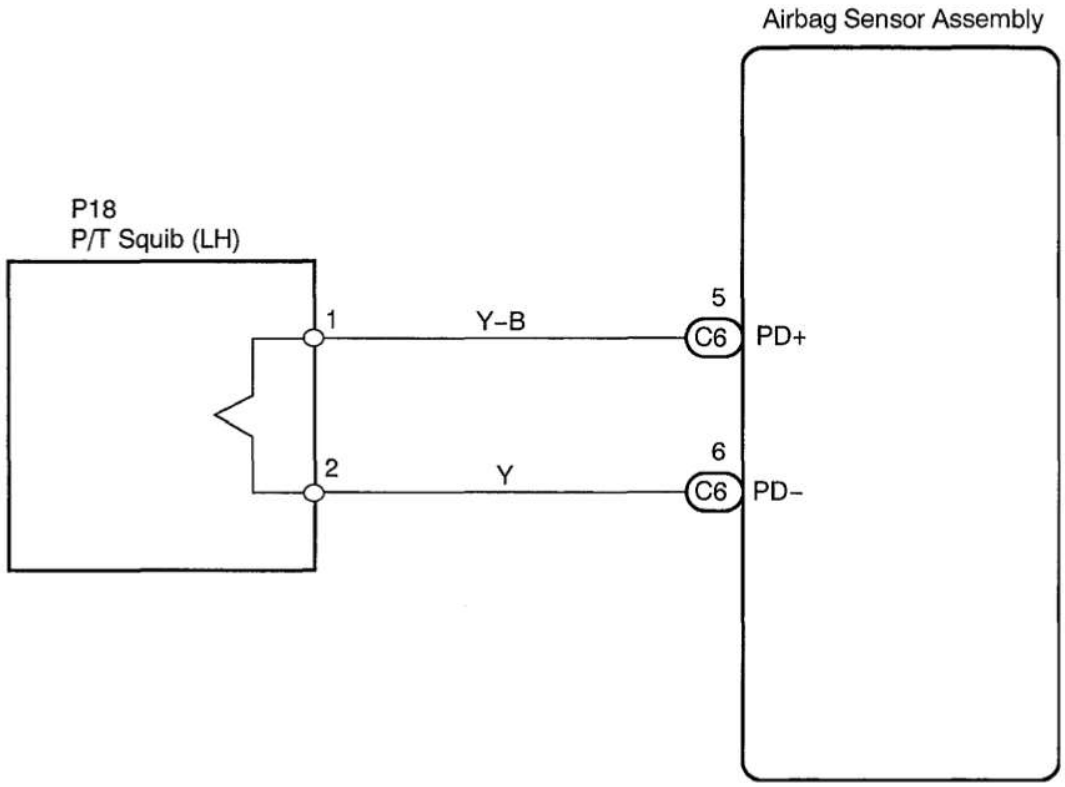



**Fig. 203: Wiring Diagram - P/T Squib (LH) Circuit**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check read method of DTC.**

   **CHECK:**

   If using the hand-held tester (read the 5-digit code of DTC):

   Using the hand-held tester, check the DTCs (see **PRE-CHECK**).

   **RESULT:**

   **A: DTC B1900 is output.**
   **B: DTC B1901 is output.**
   **C: DTC B1902 is output.**
   **D: DTC B1903 is output.**

   **CHECK:**

   If not using the hand-held tester (read the 2-digit code of DTC):

   Check the DTCs (see **PRE-CHECK**).

   **RESULT:**

   **E: DTC 73 is output.**
   **B: Go to step 4.**
   **C: Go to step 5.**
   **D: Go to step 6.**
   **E: Go to step 7.**
   **A: Go To Next Step**

2. **Check connector.**

   **CHECK:**

   Check that the floor No. 1 wire connector (on the front seat outer belt assembly LH side) is not damaged.

   **OK:**

   **The lock button is not disengaged, or the claw of the lock is not deformed or damaged.**
   **NG: Repair or replace floor No. 1 wire.**
   **OK: Go To Next Step**

3. **Check floor No. 1 wire (short).**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| P18-1 (PD+) - P18-2 (PD-) | Always | 1 Mohm or Higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

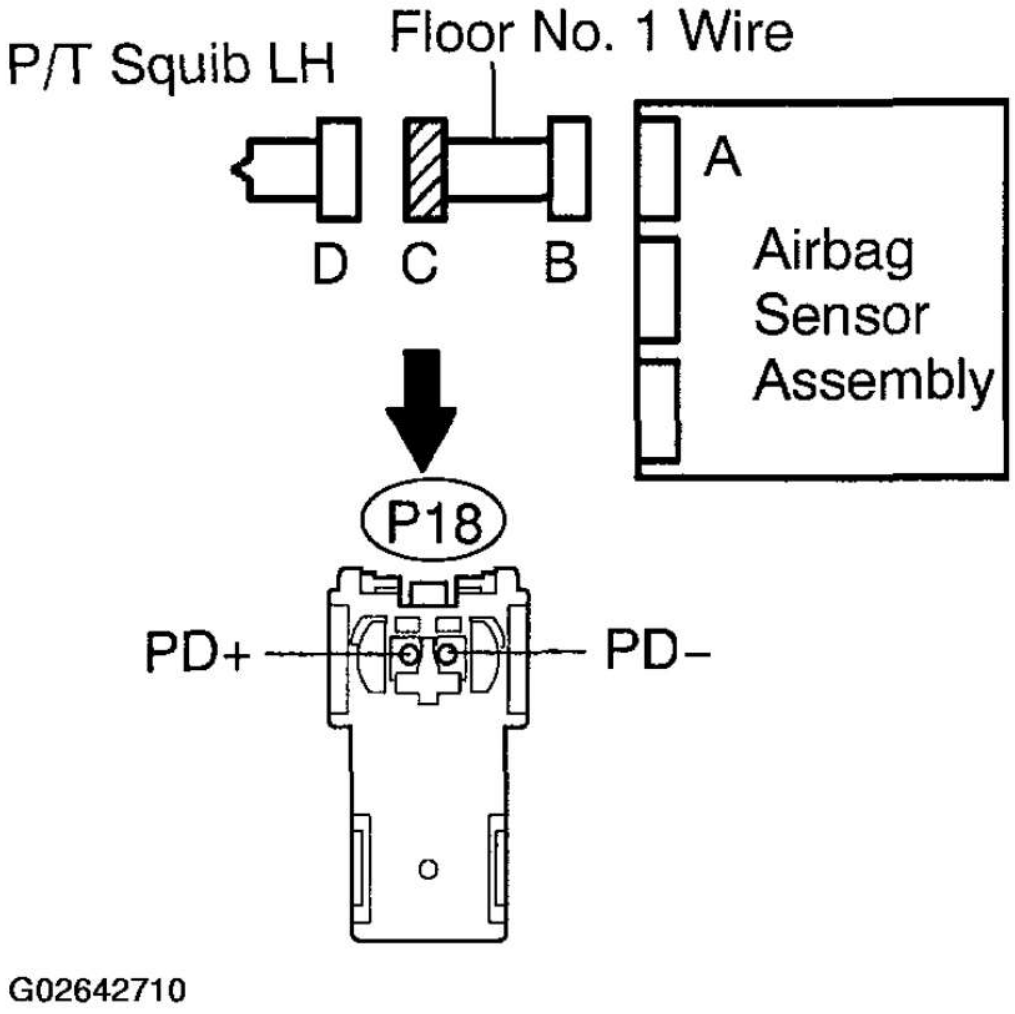



**Fig. 204: Checking Floor No. 1 Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**
**OK: Go to step 10.**

4. **Check floor No. 1 wire (open).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**FLOOR NO. 1 WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| P18-1 (PD+) - P18-2 (PD-) | Always | Below 1 ohm |

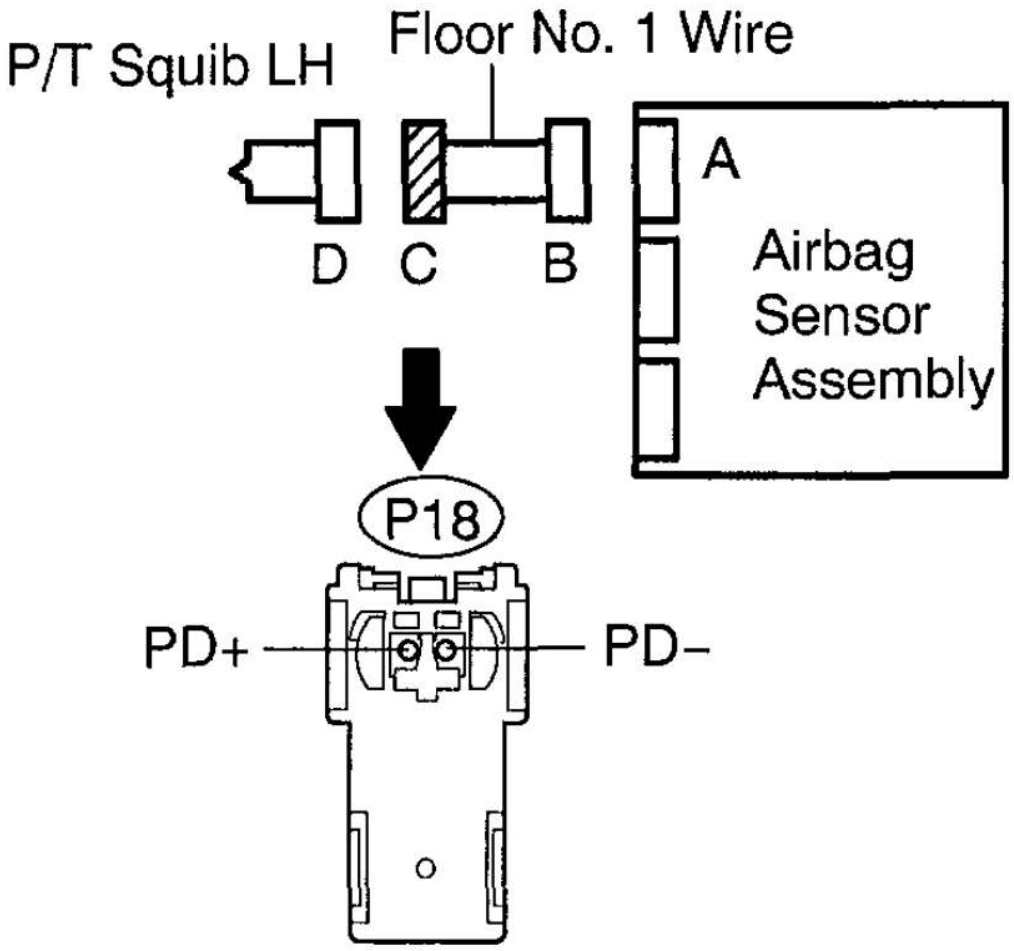



Fig. 205: Checking Floor No. 1 Wire (Open)
Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.

NG: Repair or replace floor No. 1 wire.

OK: Go to step 11.

5. Check floor No. 1 wire (to ground).

CHECK:

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| P18-1 (PD+) - Body ground | Always | 1 Mohm or higher |
| P18-2 (PD+) - Body ground | Always | 1 Mohm or higher |

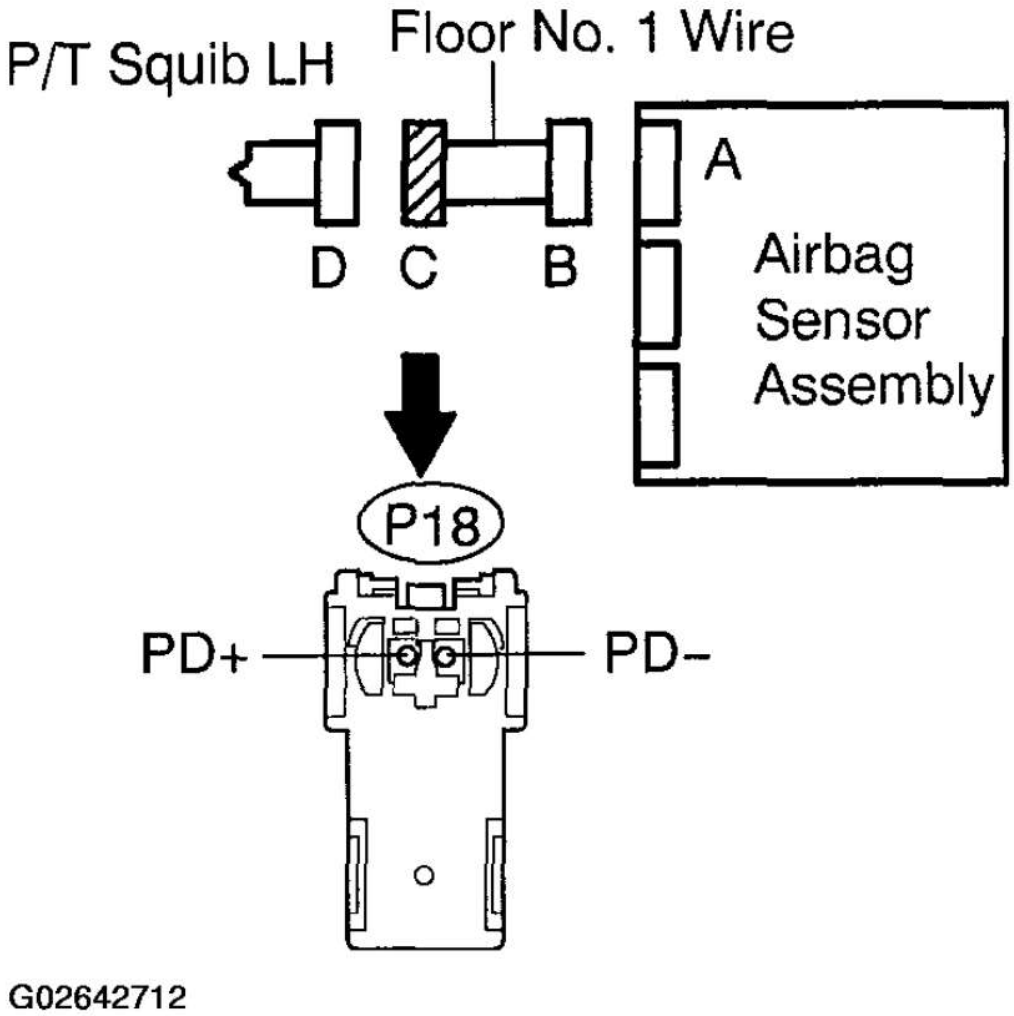



**Fig. 206: Checking Floor No. 1 Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

cardiagn.com

**NG: Repair or replace floor No. 1 wire.**

**OK: Go to step 11.**

6. **Check floor No. 1 wire (to +B).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (TO +B) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| P18-1 (PD+) - Body ground | Ignition switch ON | Below 1 V |
| P18-2 (PD-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

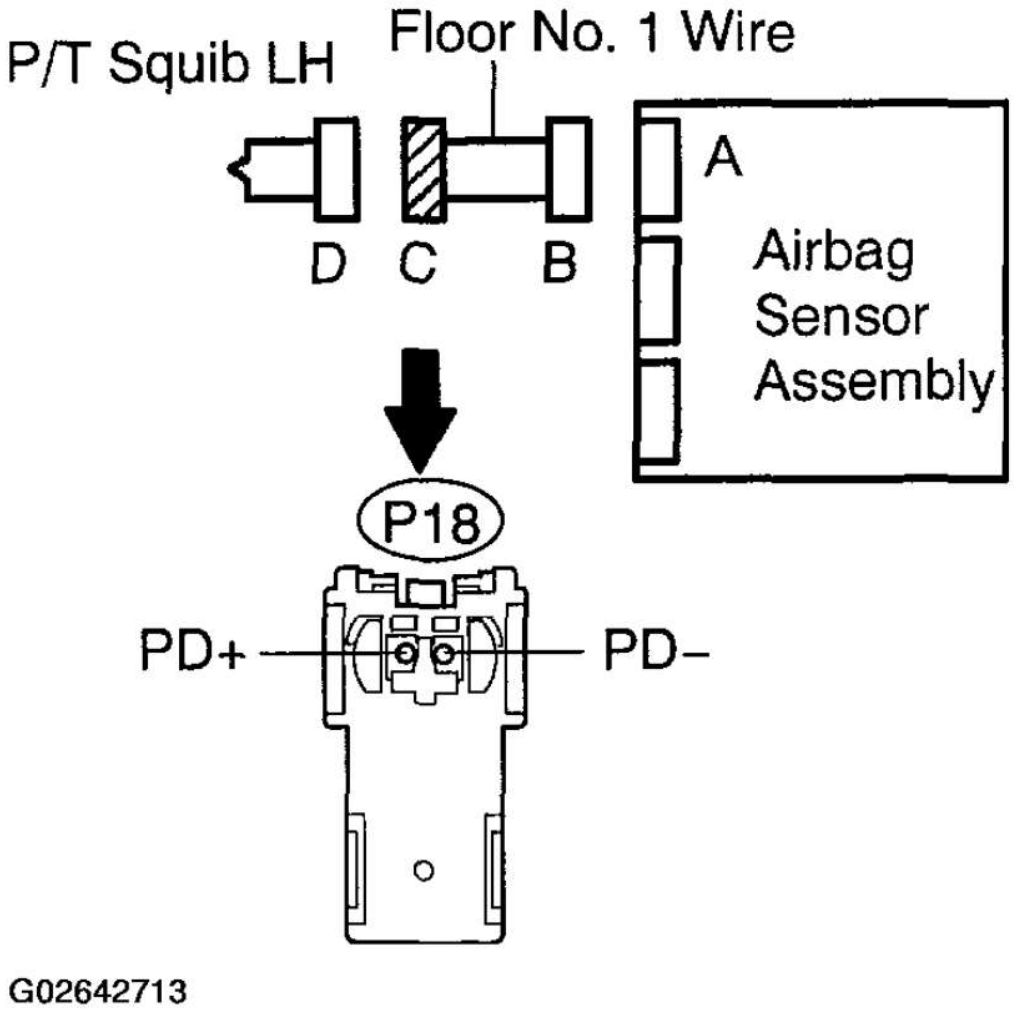



**Fig. 207: Checking Floor No. 1 Wire (To +B)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go to step 11.**

7. **Check connector.**

**CHECK:**

Check that the floor No. 1 wire connector (on the front seat outer belt assembly LH side) is not damaged.

**OK:**

cardiagn.com

**The lock button is not disengaged, or the claw of the lock is not deformed or damaged.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step**

8. **Check floor No. 1 wire (PT squib LH circuit).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (PT SQUIB LH CIRCUIT) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| P18-1 (PD+) - Body ground | Ignition switch ON | Below 1 V |
| P18-2 (PD-) - Body ground | Ignition switch ON | Below 1 V |

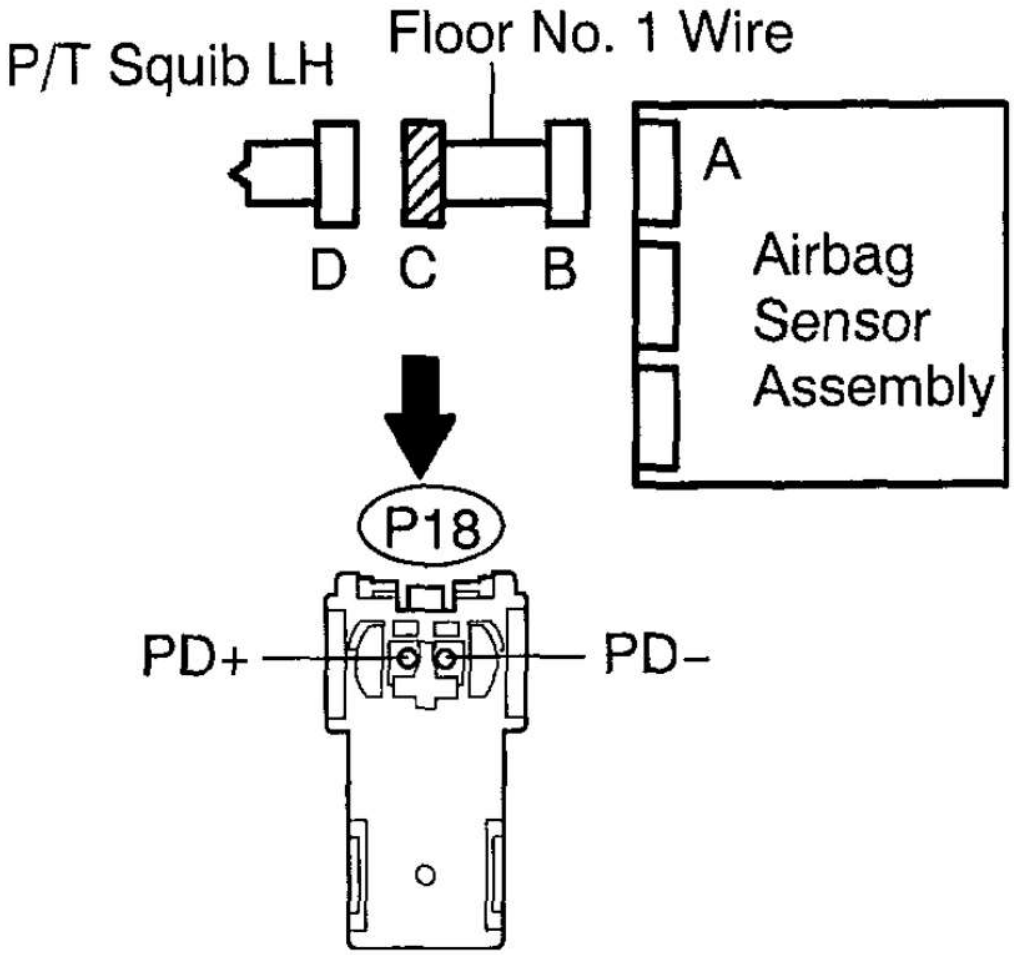
**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4




G02642714

**Fig. 208: Checking Floor No. 1 Wire (PT Squib LH Circuit)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (PT SQUIB LH CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| P18-1 (PD+) - P18-2 (PD-) | Always | Below 1 ohm |

cardiagn.com

| | | |
|---|---|---|
| P18-1 (PD+) - Body ground | Always | 1 Mohm or higher |
| P18-2 (PD-) - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (PT SQUIB LH CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| P18-1 (PD+) - P18-2 (PD-) | Always | 1 Mohm or higher |

**NG: Repair or replace floor No. 1 wire.**
**OK: Go To Next Step.**

9. **Replace front seat outer belt assembly LH (PT squib LH).**

**PREPARATION:**

a. Replace the front seat outer belt assembly LH (see **REPLACEMENT** ).
b. Connect the connectors to the airbag sensor assy assembly.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Clear the DTCs stored in memory (see **PRE-CHECK**).
f. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

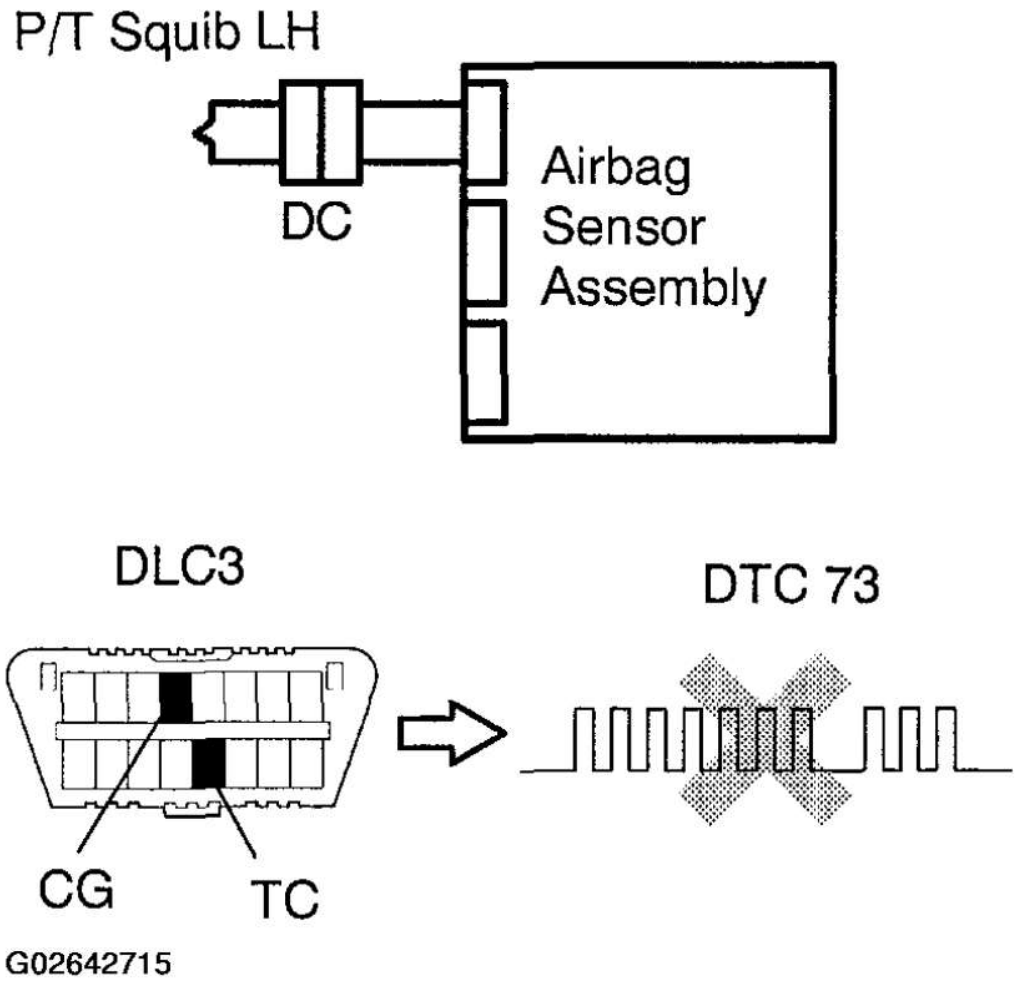



**Fig. 209: Checking Front Seat Outer Belt Assembly LH (PT Squib LH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC 73 is not output.**

HINT:

Codes other than DTC 73 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: END.**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

10. **Check airbag sensor assembly.**

**PREPARATION:**

a. Connect the connectors to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
d. Clear the DTCs stored in memory (see **PRE-CHECK**).
e. Turn the ignition switch to the LOCK position.

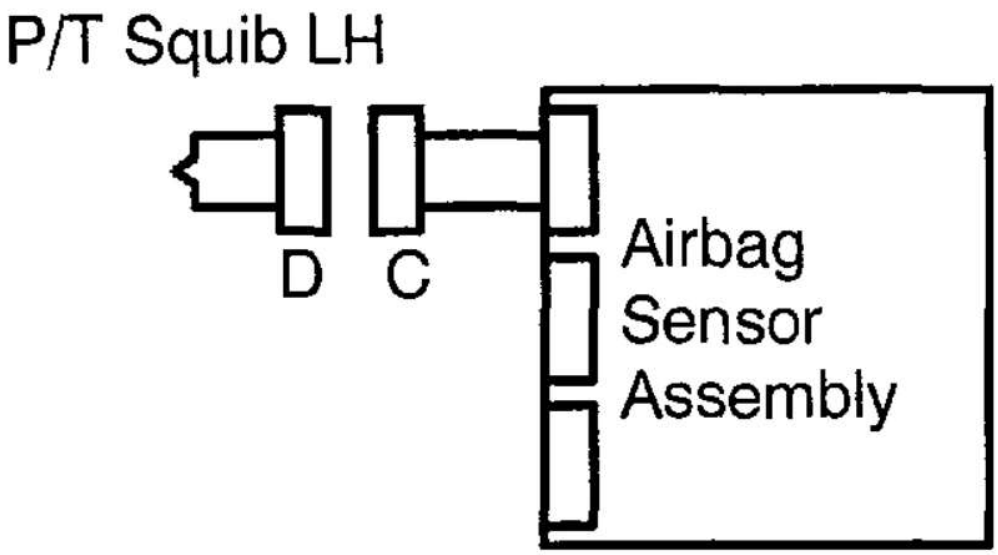



**Fig. 210: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC B1900 is not output.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

HINT:

Codes other than DTC B1900 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**

**OK: Go to step 12.**

11. **Check airbag sensor assembly.**

**PREPARATION:**

a. From step 6:

Turn the ignition switch to the LOCK position.

b. From step 6:

Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

c. Connect the connectors to the airbag sensor assembly.

d. Using a service wire, connect terminals P18-1 (PD+) and P18-2 (PD-) of connector "C".

**NOTE:**

- **Twist the end of the service wire in order to insert it into the connector.**
- **Do not forcibly insert the twisted service wire into the terminals of the connector when connecting.**

e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

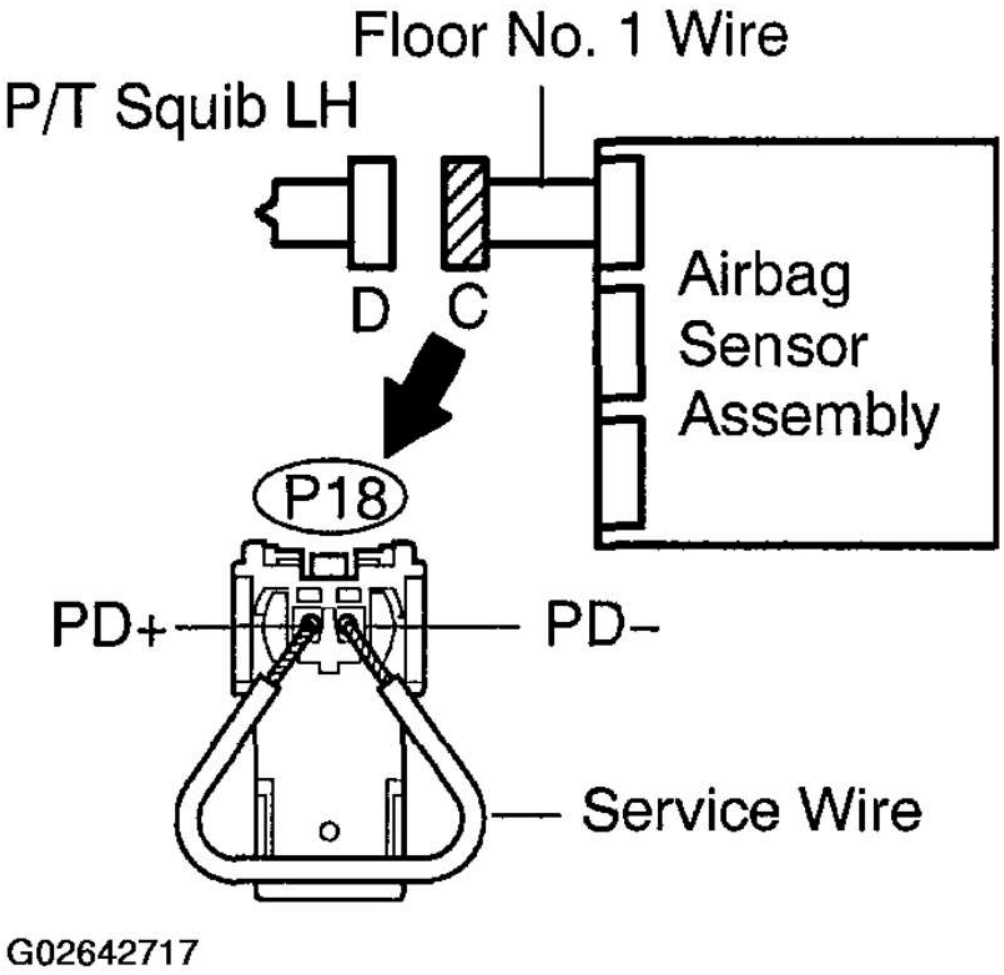



**Fig. 211: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

**OK:**

**DTCs B1901, B1902 and B1903 are not output.**

HINT:

Codes other than DTCs B1901, B1902 and B1903 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**

**OK: Go To Next Step.**

12. **Check front seat outer belt assembly LH (PT squib LH).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. From step 10:

Disconnect the service wire from connector "C".

d. Connect the connector to the front seat outer belt assembly LH.
e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

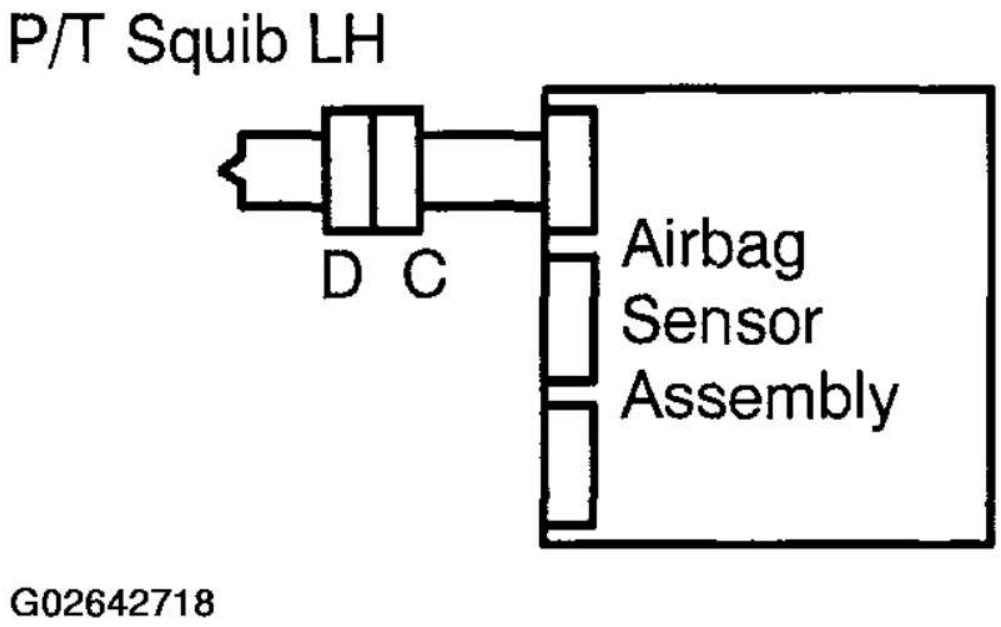



**Fig. 212: Checking Front Seat Outer Belt Assembly LH (PT Squib LH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1901, B1902 and B1903 are not output.**

HINT:

Codes other than DTCs B1901, B1902 and B1903 may be output at this time, but they are not related to this check.

**NG: Replace front seat outer belt assembly LH.**

cardiagn.com

**OK: From results of above inspection, malfunctioning part can now be considered normal. To make sure of this, use simulation method to check.**

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

## DTC B1905/74, B1906/74, B1907/74, B1908/74: SHORT/OPEN IN P/T SQUIB (RH) CIRCUIT (TO GROUND/TO B+)

### CIRCUIT DESCRIPTION

The P/T squib (RH) circuit consists of the airbag sensor assembly and the front seat outer belt assembly RH (seat belt pretensioner RH).

The circuit instructs the SRS to deploy when deployment conditions are met.

These DTCs are recorded when a malfunction is detected in the P/T squib RH circuit.

| DTC No. | DTC Detection Condition | Trouble Area |
|---|---|---|
| B1905/74 | • When airbag sensor assembly receives line short circuit signal 5 times in P/T squib RH circuit during primary check. | • Front seat outer belt assembly RH (P/T squib RH)<br>• Airbag sensor assembly<br>• Floor No. 1 wire |
| B1906/74 | • When airbag sensor assembly receives open circuit signal in P/T squib RH circuit for 2 seconds. | • Front seat outer belt assembly RH (P/T squib RH)<br>• Airbag sensor assembly<br>• Floor No. 1 wire |
| B1907/74 | • When airbag sensor assembly receives short circuit to ground signal in P/T squib RH circuit for 0.5 seconds. | • Front seat outer belt assembly RH (P/T squib RH)<br>• Airbag sensor assembly<br>• Floor No. 1 wire |
| B1908/74 | • When airbag sensor assembly receives B+ short circuit signal in P/T squib RH circuit for 0.5 seconds. | • Front seat outer belt assembly RH (P/T squib RH)<br>• Airbag sensor assembly<br>• Floor No. 1 wire |

G02642719

**Fig. 213: DTC Detection Condition Table**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

### WIRING DIAGRAM

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

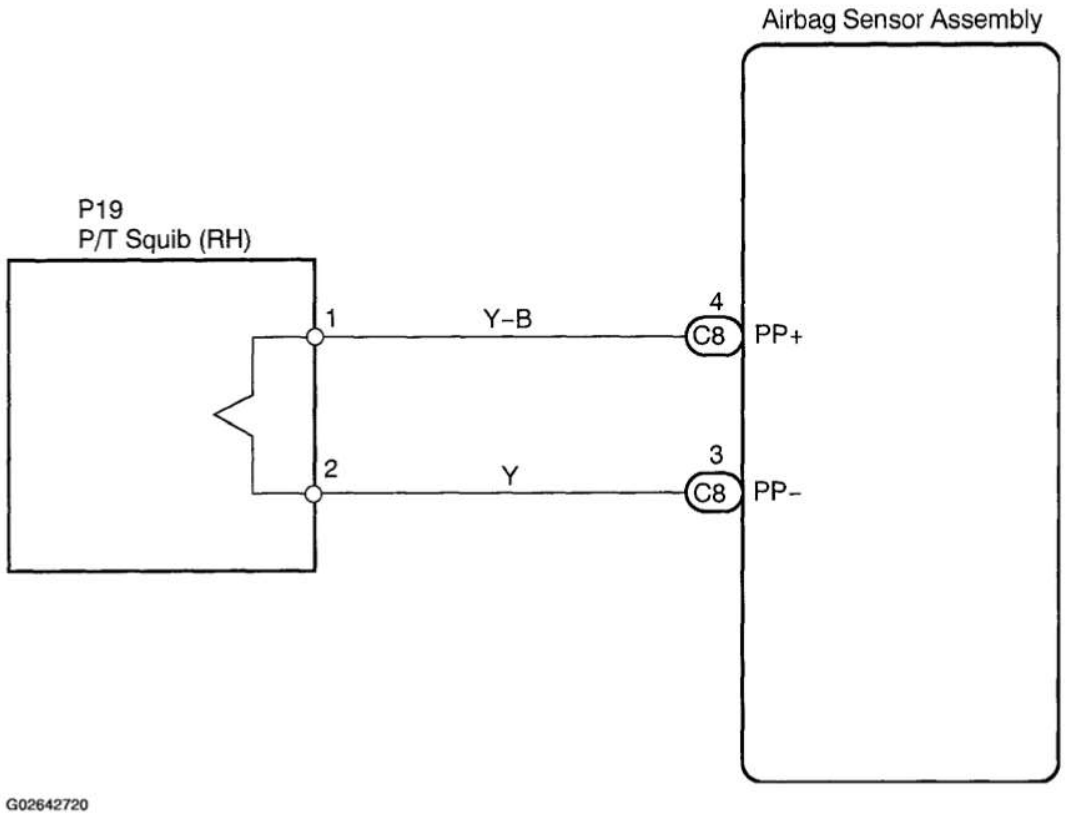



**Fig. 214: Wiring Diagram - P/T Squib (RH) Circuit**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.

cardiagn.com

k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check read method of DTC.**

**CHECK:**

If using the hand-held tester (read the 5-digit code of DTC):

Using the hand-held tester, check the DTCs (see **PRE-CHECK**).

**RESULT:**

**A: DTC B1905 is output.**
**B: DTC B1906 is output.**
**C: DTC B1907 is output.**
**D: DTC B1908 is output.**

**CHECK:**

If not using the hand-held tester (read the 2-digit code of DTC):

Check the DTCs (see **PRE-CHECK**).

**RESULT:**

**E: DTC 74 is output.**
**B: Go to step 4.**
**C: Go to step 5.**
**D: Go to step 6.**
**E: Go to step 7.**
**A: Go To Next Step.**

2. **Check connector.**

**CHECK:**

Check that the floor No. 1 wire connector (on the front seat outer belt assembly RH side) is not damaged.

**OK:**

**The lock button is not disengaged, or the claw of the lock is not deformed or damaged.**
**NG: Repair or replace floor No. 1 wire.**
**OK: Go To Next Step.**

3. **Check floor No. 1 wire (short).**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

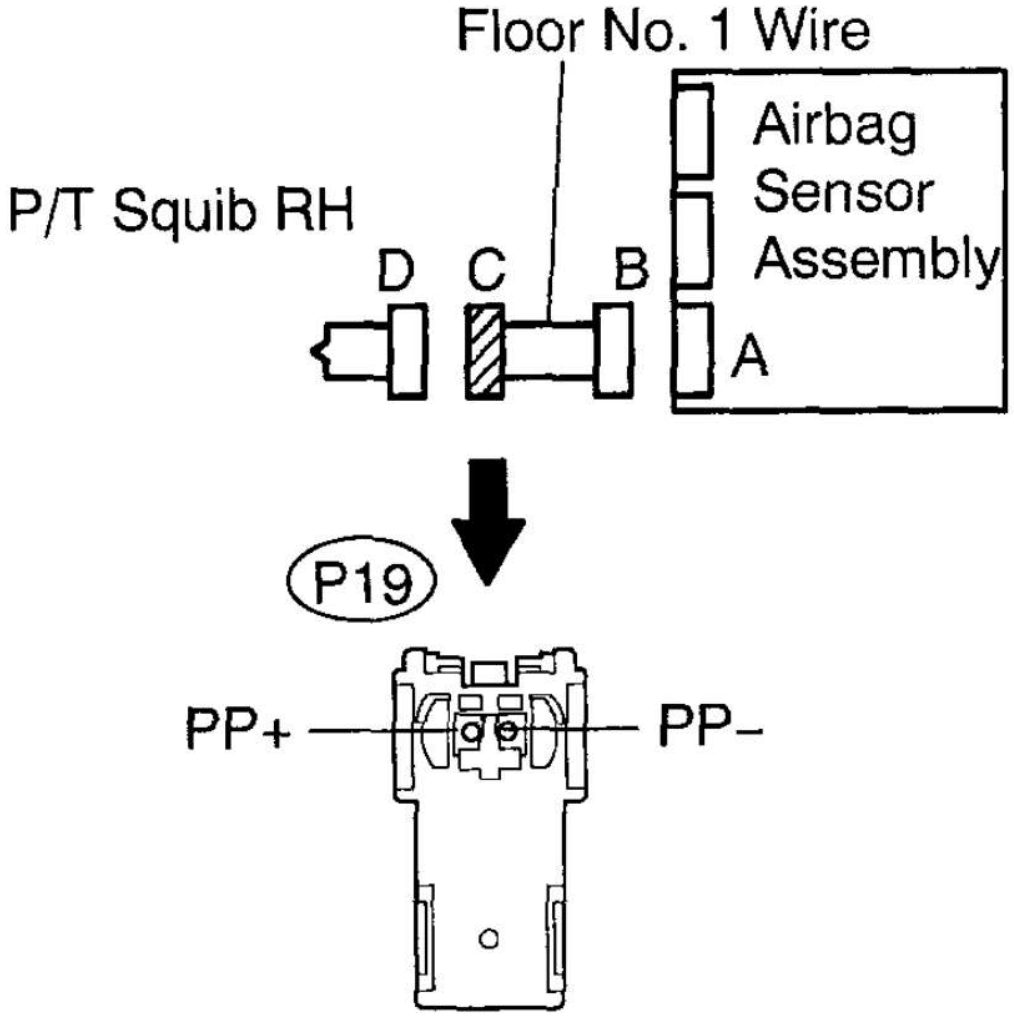
**OK:**

**FLOOR NO. 1 WIRE (SHORT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| P19-1 (PP+) - P19-2 (PP-) | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |




G02642721

**Fig. 215: Checking Floor No. 1 Wire (Short)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go to step 10.**

4. **Check floor No. 1 wire (open).**

**CHECK:**

Measure the resistance according to the table below.

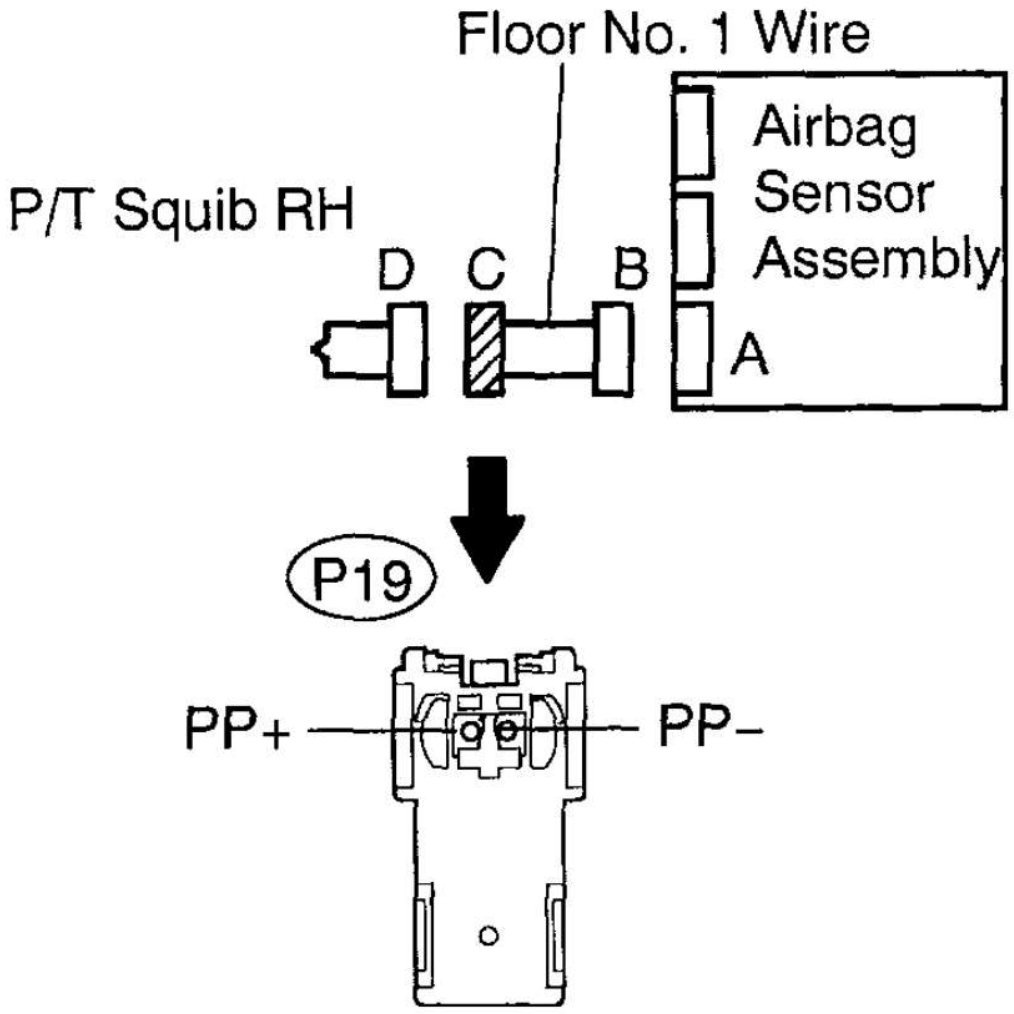
cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**OK:**

**FLOOR NO. 1 WIRE (OPEN) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| P19-1 (PP+) - P19-2 (PP-) | Always | Below 1 ohm |




G02642722

**Fig. 216: Checking Floor No. 1 Wire (Open)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

cardiagn.com

**OK: Go to step 11.**

5. **Check floor No. 1 wire (to ground).**

**CHECK:**

Measure the resistance according to the table below.

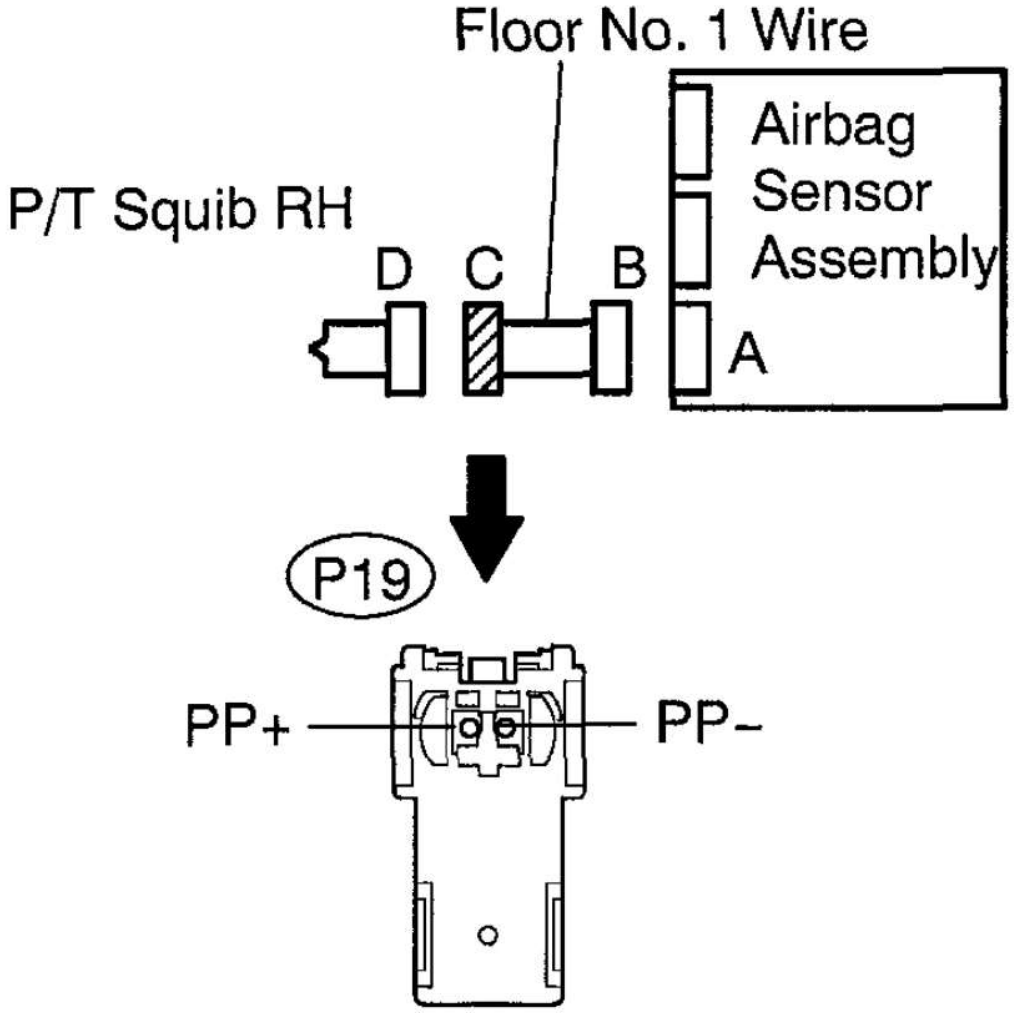
**OK:**

**FLOOR NO. 1 WIRE (TO GROUND) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| P19-1 (PP+) - Body ground | Always | 1 Mohm or higher |
| P19-2 (PP-) - Body ground | Always | 1 Mohm or higher |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |




G02642723

**Fig. 217: Checking Floor No. 1 Wire (To Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go to step 11.**

6. **Check floor No. 1 wire (to +B).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**CHECK:**

Measure the voltage according to the table below.

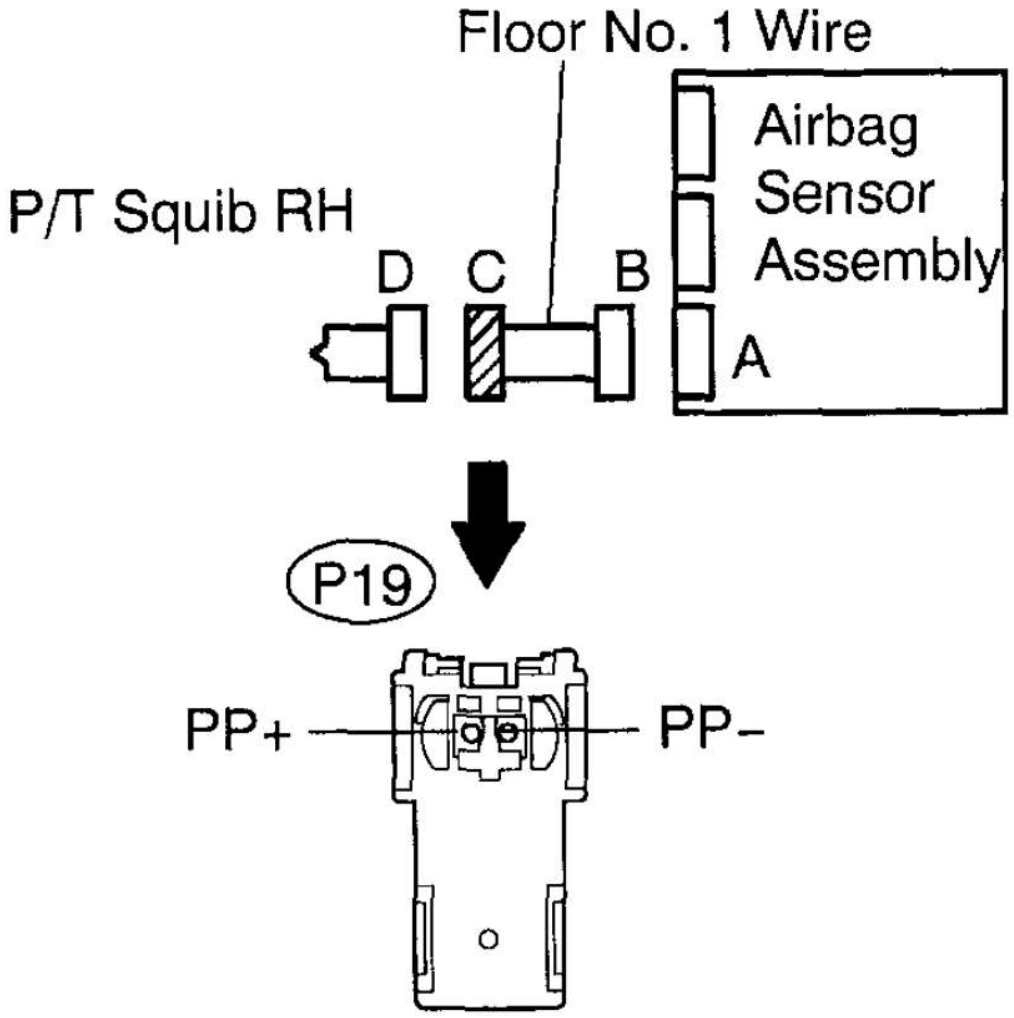
**OK:**

**FLOOR NO. 1 WIRE (TO +B) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| P19-1 (PP+) - Body ground | Ignition switch ON | Below 1 V |
| P19-2 (PP-) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |




G02642724

**Fig. 218: Checking Floor No. 1 Wire (To +B)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace floor No. 1 wire.**

**OK: Go to step 11.**

7. **Check connector.**

**CHECK:**

Check that the floor No. 1 wire connector (on the front seat outer belt assembly RH side) is not damaged.

cardiagn.com

**OK:**

**The lock button is not disengaged, or the claw of the lock is not deformed or damaged.**
**NG: Repair or replace floor No. 1 wire.**
**OK: Go To Next Step.**

8. **Check floor No. 1 wire (PT squib RH circuit).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (PT SQUIB RH CIRCUIT) VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| P19-1 (PP+) - Body ground | Ignition switch ON | Below 1 V |
| P19-2 (PP-) - Body ground | Ignition switch ON | Below 1 V |

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

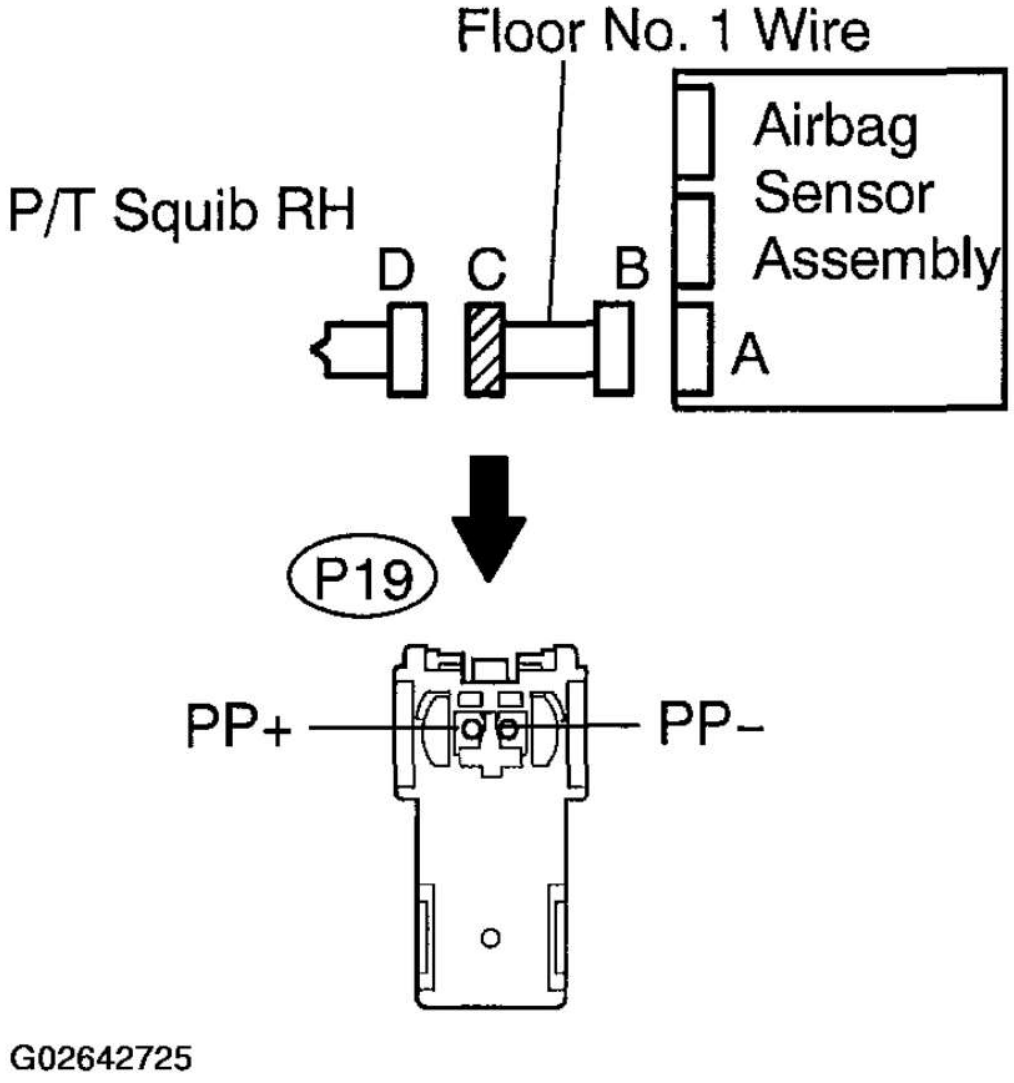



**Fig. 219: Checking Floor No. 1 Wire (PT Squib RH Circuit)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (PT SQUIB RH CIRCUIT) RESISTANCE**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| P19-1 (PP+) - P19-2 (PP-) | Always | Below 1 ohm |
| P19-1 (PP+) - Body ground | Always | 1 Mohm or higher |
| P19-2 (PP-) - Body ground | Always | 1 Mohm or higher |

**PREPARATION:**

Release the activation prevention mechanism built into connector "B" (see **PRE-CHECK**).

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**FLOOR NO. 1 WIRE (PT SQUIB RH CIRCUIT) RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| P19-1 (PP+) - P19-2 (PP-) | Always | 1 Mohm or higher |

**NG: Repair or replace floor No. 1 wire.**

**OK: Go To Next Step.**

9. **Replace front seat outer belt assembly RH (PT squib RH).**

**PREPARATION:**

a. Replace the front seat outer belt assembly RH (see **REPLACEMENT** ).
b. Connect the connectors to the airbag sensor assembly.
c. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
d. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
e. Clear the DTCs stored in memory (see **PRE-CHECK**).
f. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

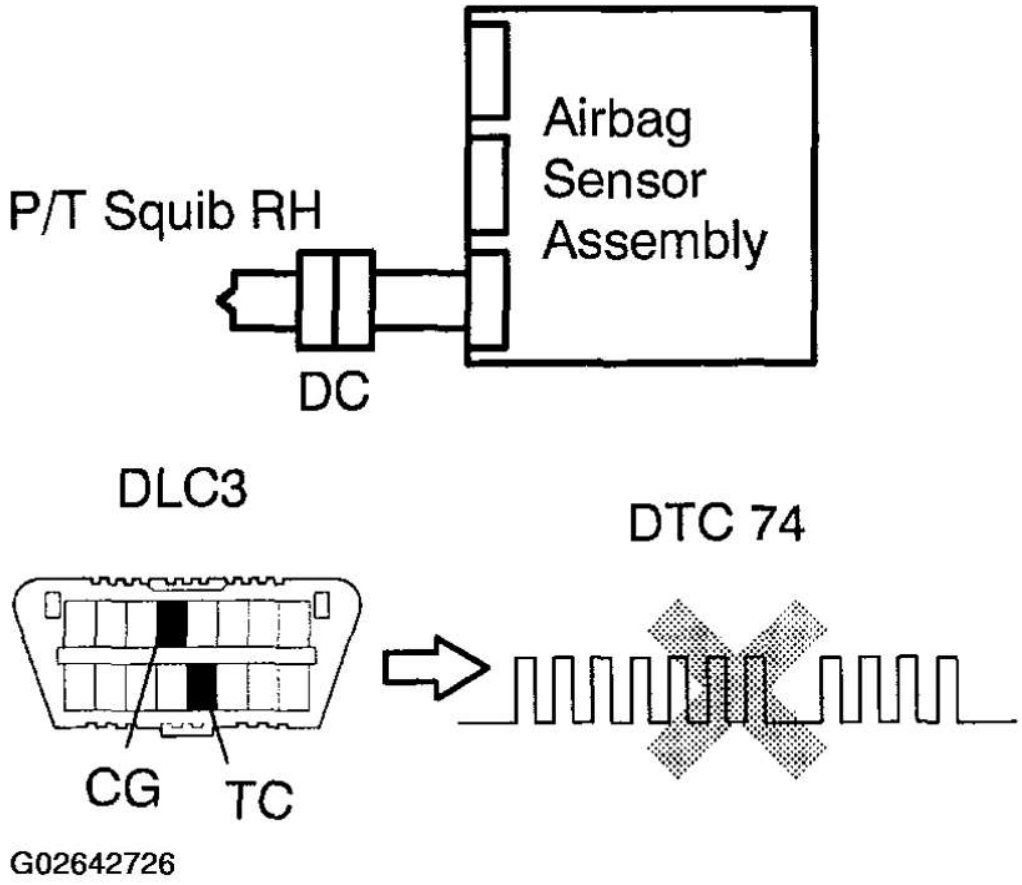



**Fig. 220: Checking Front Seat Outer Belt Assembly RH (PT Squib RH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**DTC 74 is not output.**

HINT:

Codes other than DTC 74 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: END.**

10. **Check airbag sensor assembly.**

**PREPARATION:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

a. Connect the connectors to the airbag sensor assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
c. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
d. Clear the DTCs stored in memory (see **PRE-CHECK**).
e. Turn the ignition switch to the LOCK position.

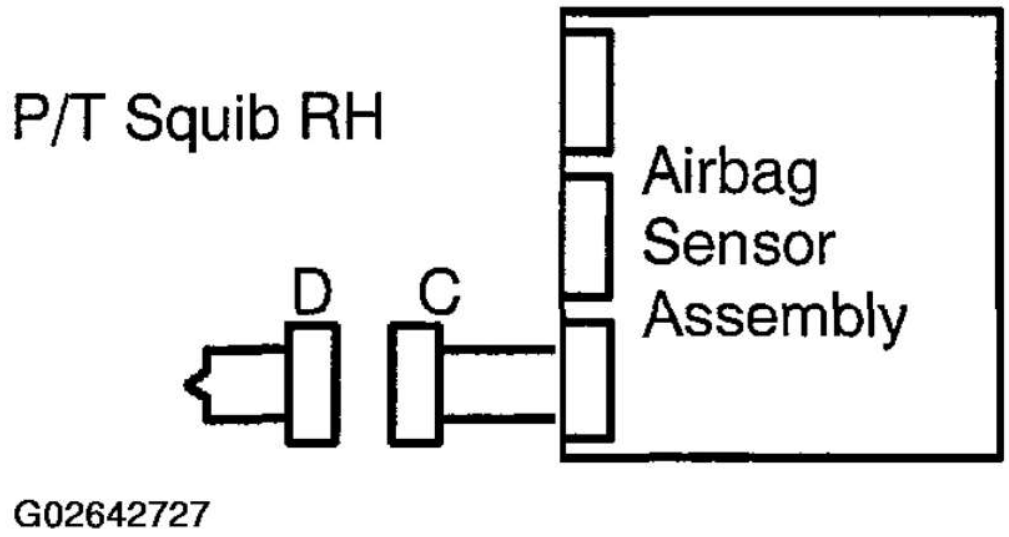



**Fig. 221: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTC B1905 is not output.**

HINT:

Codes other than DTC B1905 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: Go to step 12.**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

11. **Check airbag sensor assembly.**

**PREPARATION:**

a. From the step 6:

Turn the ignition switch to the LOCK position.

b. From the step 6:

Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

c. Connect the connectors to the airbag sensor assembly.
d. Using a service wire, connect terminals P19-1 (PP+) and P19-2 (PP-) of connector "C".

**NOTE:**

- **Twist the end of the service wire in order to insert it into the connector.**
- **Do not forcibly insert the twisted service wire into the terminals of the connector when connecting.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

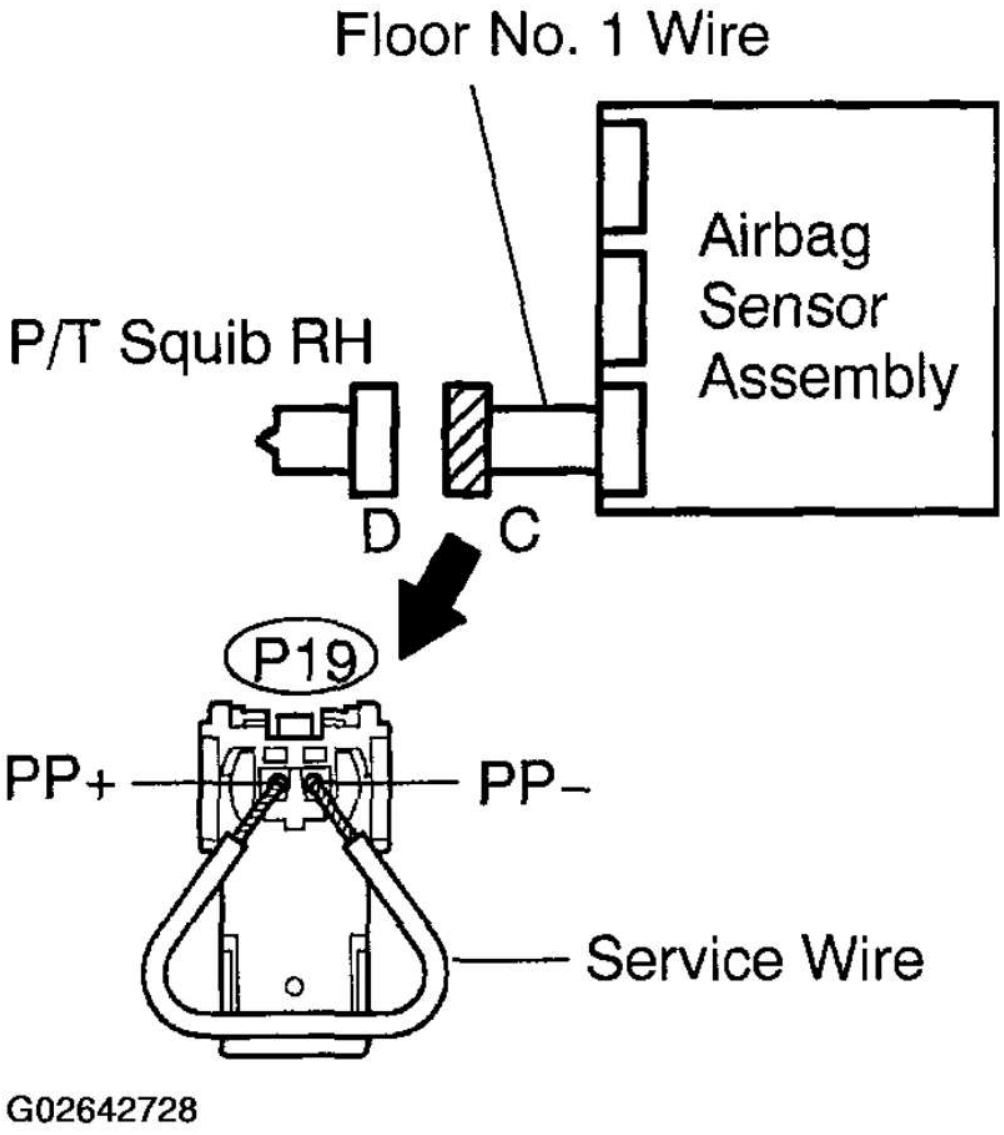



**Fig. 222: Checking Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1906, B1907 and B1908 are not output.**

HINT:

Codes other than DTCs B1906, B1907 and B1908 may be output at this time, but they are not related to this check.

**NG: Replace airbag sensor assembly.**
**OK: Go To Next Step.**

12. **Check front seat outer belt assembly RH (P/T squib RH).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait at least for 90 seconds.
c. From the step 10:

Disconnect the service wire from connector "C".

d. Connect the connector to the front seat outer belt assembly RH.
e. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

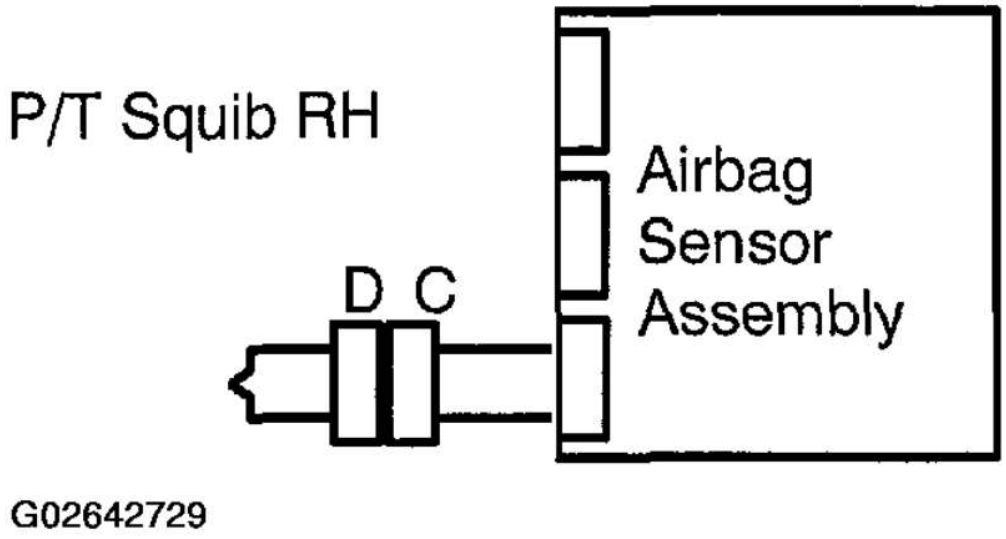



**Fig. 223: Checking Front Seat Outer Belt Assembly RH (P/T Squib RH)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

f. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
g. Clear the DTCs stored in memory (see **PRE-CHECK**).
h. Turn the ignition switch to the LOCK position.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 60 seconds.
b. Check the DTCs (see **PRE-CHECK**).

**OK:**

**DTCs B1906, B1907 and B1908 are not output.**

HINT:

Codes other than DTCs B1906, B1907 and B1908 may be output at this time, but they are not related to this check.

**NG: Replace front seat outer belt assembly RH.**

**OK: From results of above inspection, suspected part can now be considered normal. To make sure of this, use simulation method to check.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

HINT:

- Before performing the simulation method, check that the airbag sensor assembly is in check mode (see **PRE-CHECK**).
- Perform the simulation method by selecting the check mode using the hand-held tester (see **PRE-CHECK**).
- After selecting the check mode, perform the simulation method by wiggling each connector of the airbag system or driving the vehicle on a city or rough road (see **PRE-CHECK**).

## DIAGNOSTIC TROUBLE CODES NORMAL SOURCE VOLTAGE DROP

### CIRCUIT DESCRIPTION

The SRS is equipped with a voltage-increase circuit (DC-DC converter) in the airbag sensor assembly in case that the source voltage drops.

When the battery voltage drops, the voltage-increase circuit (DC-DC converter) functions to increase the voltage of the SRS to normal voltage.

A malfunction in this circuit is displayed differently from other codes. The source voltage drop is indicated when the SRS warning light turns on without showing any DTCs.

A malfunction in this circuit is not recorded in the airbag sensor assembly. The SRS warning light automatically turns off when the source voltage returns to normal.

### DTC DIAGNOSIS

| DTC No. | Diagnosis |
|---|---|
| (Normal) | Source voltage drops |

### WIRING DIAGRAM

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

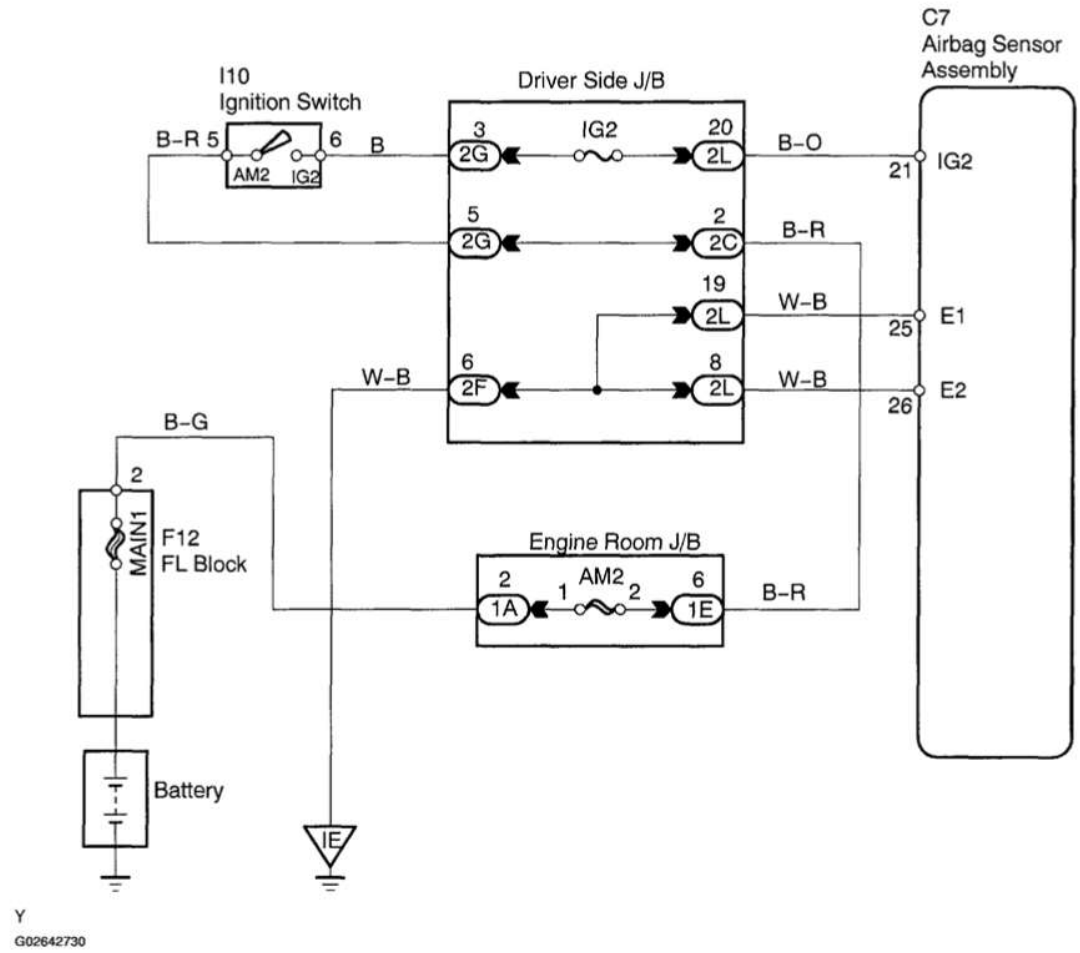



**Fig. 224: Wiring Diagram - Voltage-Increase Circuit (DC-DC Converter)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.

cardiagn.com

h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check source voltage (power source).**

**PREPARATION:**

Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**AIRBAG SENSOR ASSY TO BODY GROUND VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C7-21 (IG2) - Body ground | Ignition switch ON | 10 to 14 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

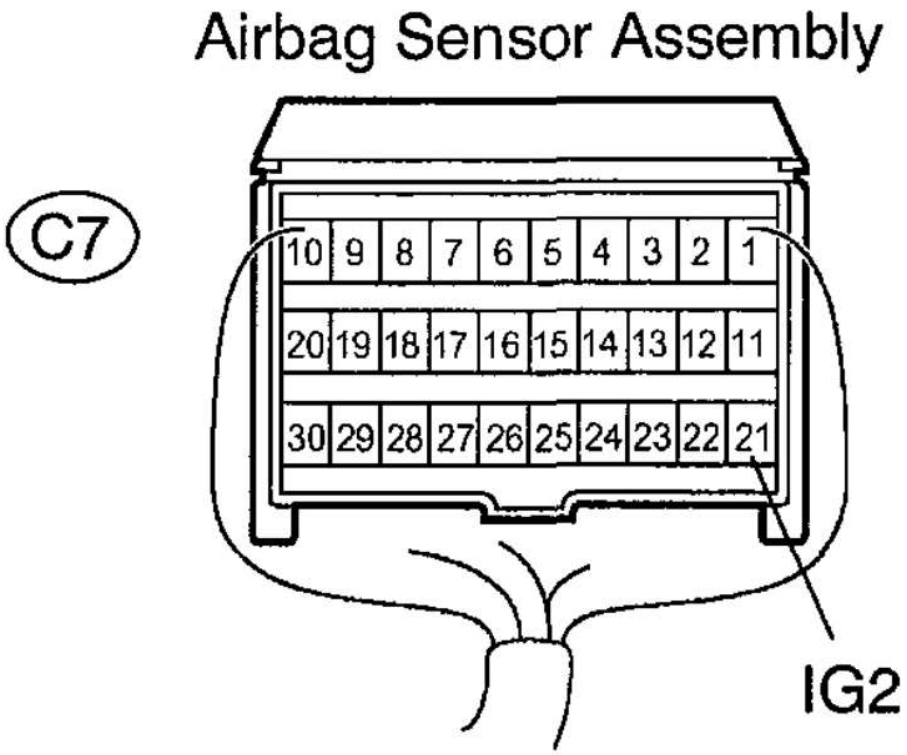



**Fig. 225: Checking Source Voltage (Power Source) Airbag Sensor Assembly**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace wire harness (battery - airbag sensor assembly), charging system and battery.**

**OK: Go To Next Step.**

2. **Check wire harness (airbag sensor assembly - body ground).**

**PREPARATION:**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

Measure the resistance according to the table below.

**OK:**

**AIRBAG SENSOR ASSEMBLY - BODY GROUND RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| C7-25 (E1) - Body ground | Always | Below 1 ohm |
| C7-26 (E2) - Body ground | Always | Below 1 ohm |

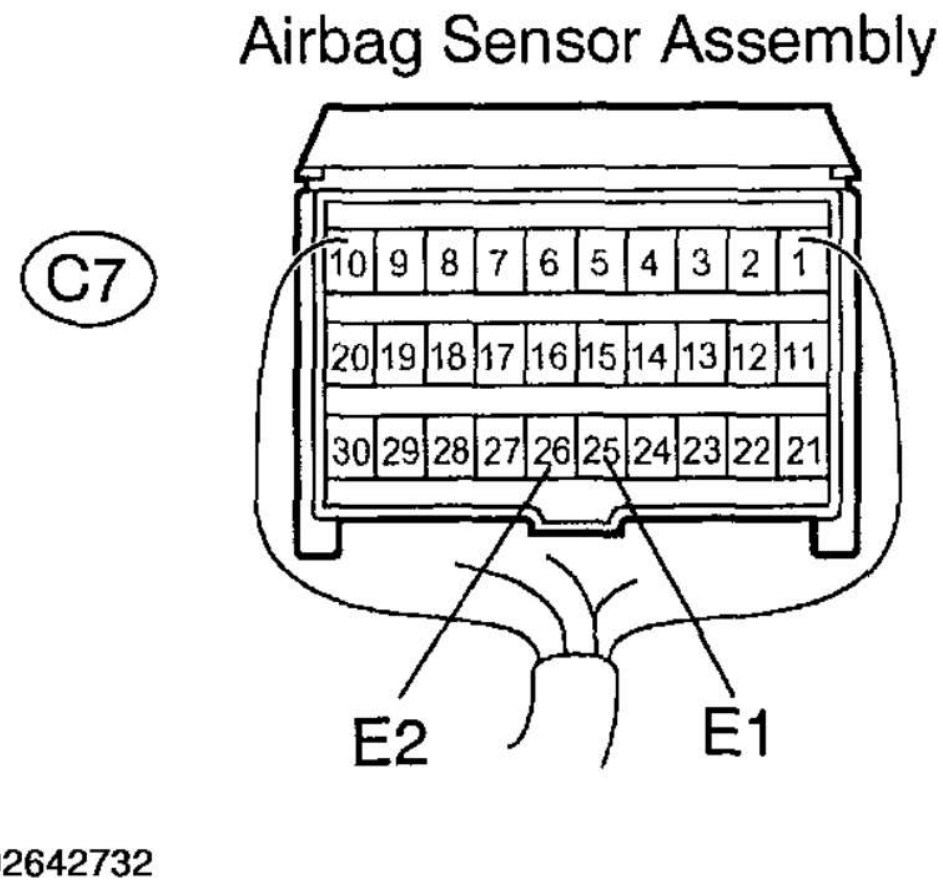



**Fig. 226: Checking Wire Harness (Airbag Sensor Assembly - Body Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace wire harness.**

**OK: Go To Next Step.**

cardiagn.com

3. **Check SRS warning light.**

**PREPARATION:**

a. Connect the connectors to the airbag sensor assembly.
b. Connect the connectors to the horn button assembly.
c. Connect the connectors to the front passenger airbag assembly.
d. Connect the connector to the front seat airbag assembly LH.
e. Connect the connector to the front seat airbag assembly RH.
f. Connect the connector to the curtain shield airbag assembly LH.
g. Connect the connector to the curtain shield airbag assembly RH.
h. Connect the connector to the front seat outer belt assembly LH.
i. Connect the connector to the front seat outer belt assembly RH.
j. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

a. Turn the ignition switch to the ON position, and wait for at least 6 seconds.
b. Operate all components of the electrical system (defogger, wiper, headlight, heater blower, etc.) and check the SRS warning light operation.

**OK:**

**The SRS warning light does not turn on.**
**NG: Repair or replace airbag sensor assembly.**
**OK: END.**

## SRS WARNING LIGHT CIRCUIT MALFUNCTION (ALWAYS LIGHT UP, WHEN DIAGNOSTIC TROUBLE CODES IS NOT OUTPUT)

### CIRCUIT DESCRIPTION

The SRS warning light is located on the combination meter assembly.

When the SRS is normal, the SRS warning light turns on for approximately 6 seconds after the ignition switch is turned from the LOCK position to ON position, and then turns off automatically.

If there is a malfunction in the SRS, the SRS warning light turns on to inform the driver of a problem. When terminals Tc and CG of the DLC3 are connected, the DTCs are displayed by blinking the SRS warning light.

### WIRING DIAGRAM

cardiagn.com

## 2005 Toyota RAV4

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

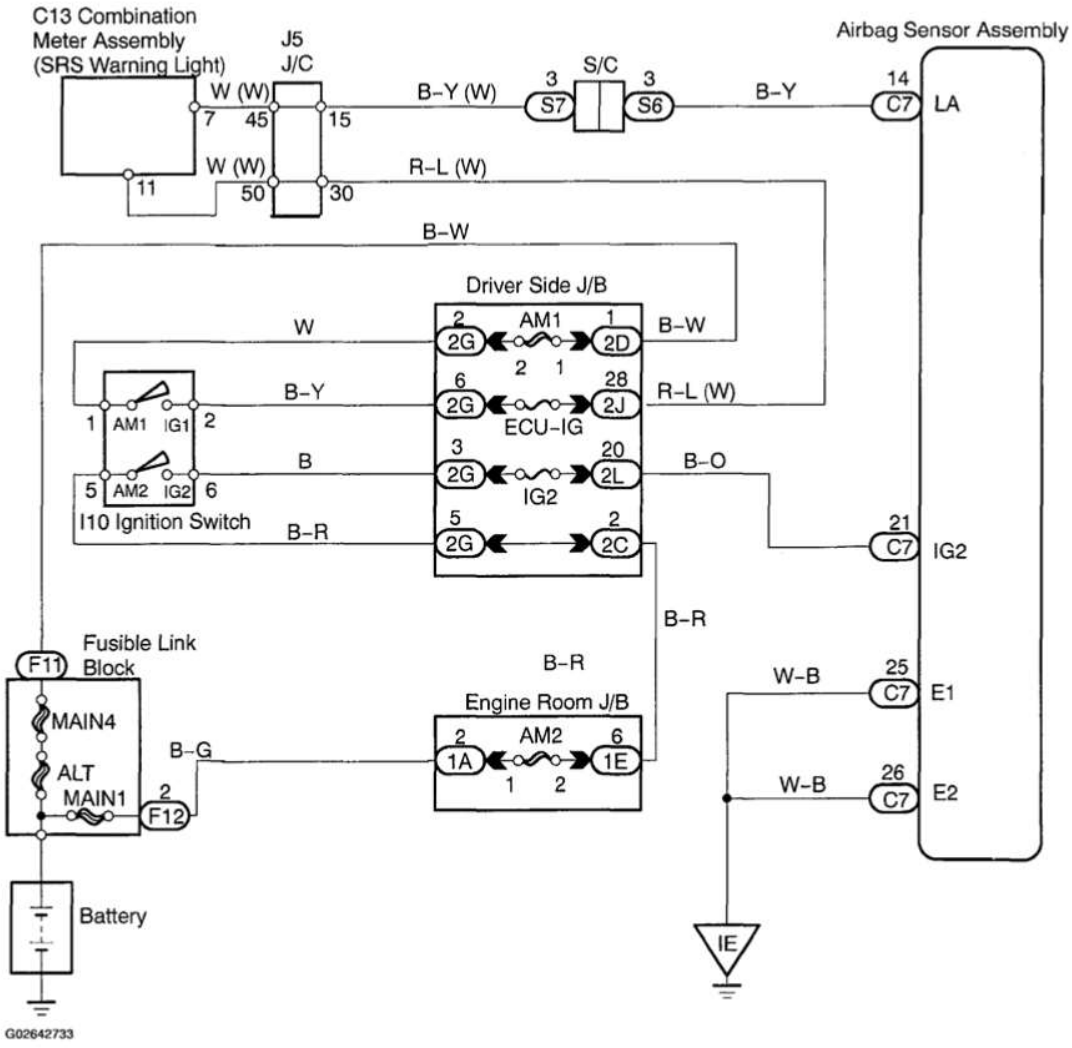



**Fig. 227: Wiring Diagram - SRS Warning Light Circuit**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**INSPECTION PROCEDURE**

1. **Check battery.**

   **CHECK:**

   Measure the voltage of the battery.

   **OK:**

   **Voltage: 11 to 14 V**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**NG: Replace battery.**

**OK: Go To Next Step.**

2. **Check connection of connectors.**

**PREPARATION:**

Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.

**CHECK:**

Check that the connectors are properly connected to the airbag sensor assembly.

**OK:**

**The connectors are connected.**

**NG: Connect connectors.**

**OK: Go To Next Step.**

3. **Prepare for inspection.**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

4. **Check wire harness (airbag sensor assembly - combination meter assembly).**

**PREPARATION:**

Disconnect the connectors from the combination meter assembly.

**CHECK:**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

Measure the voltage and resistance according to the table below.

**OK:**

**AIRBAG SENSOR ASSEMBLY - COMBINATION METER ASSEMBLY VOLTAGE/RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C7-14 (LA) - C13-7 | Always | Below 1 ohm |
| C7-14 (LA) - Body ground | Always | 1 Mohm or higher |
| C7-14 (LA) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

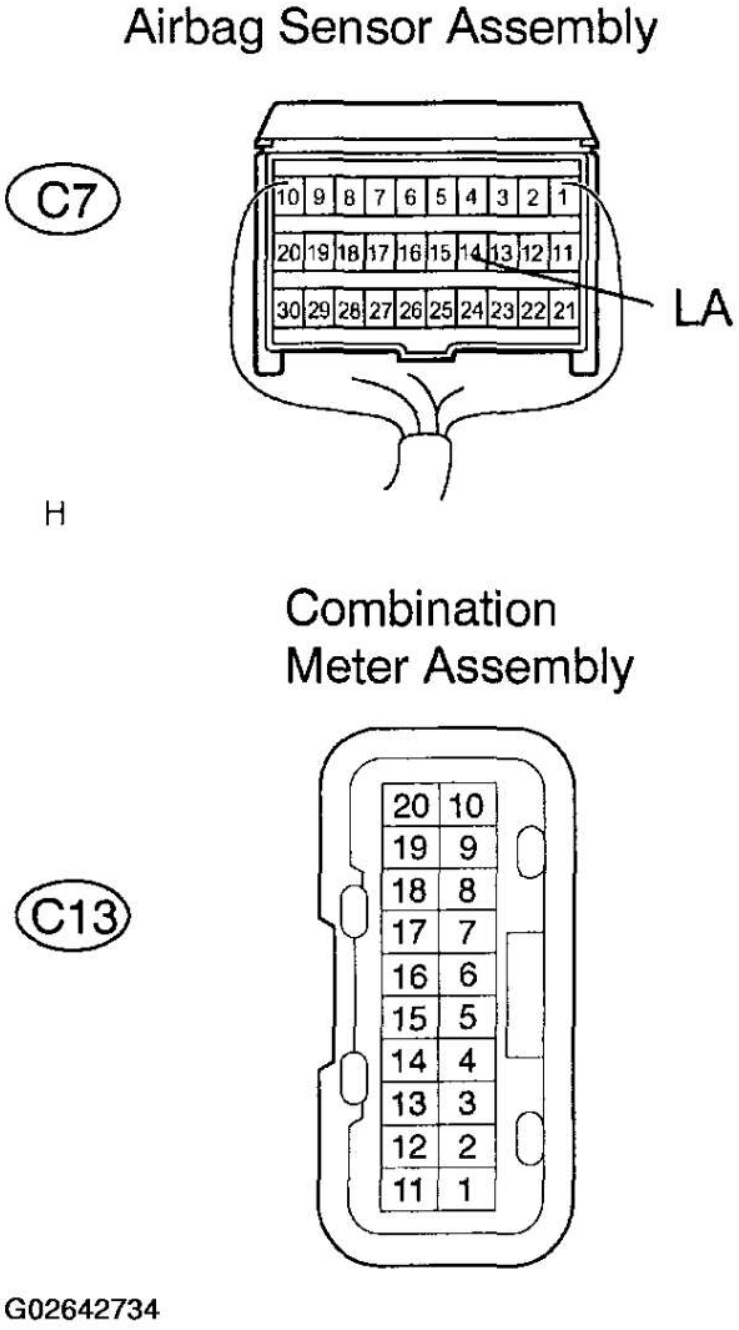



**Fig. 228: Checking Wire Harness (Airbag Sensor Assembly - Combination Meter Assembly)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace wire harness**

cardiagn.com

**OK: Go To Next Step.**

5. **Check combination meter assembly.**

**PREPARATION:**

a. Connect the connector to the combination meter assembly.
b. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**COMBINATION METER ASSEMBLY VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C13-7 - Body ground | Ignition switch ON | 8 to 14 V |

**NG: Replace combination meter assembly.**
**OK: Replace airbag sensor assembly.**

## SRS WARNING LIGHT CIRCUIT MALFUNCTION (DOES NOT LIGHT UP, WHEN IGNITION SWITCH IS TURNED TO ON)

### CIRCUIT DESCRIPTION

The SRS warning light is located on the combination meter assembly.

When the SRS is normal, the SRS warning light turns on for approximately 6 seconds after the ignition switch is turned from the LOCK position to the ON position, and then turns off automatically.

If there is a malfunction in the SRS, the SRS warning light turns on to inform the driver of a problem.

When terminals TC and CG of the DLC3 are connected, the DTC is displayed by blinking the SRS warning light.

### WIRING DIAGRAM

See SRS Warning Light Circuit under **WIRING DIAGRAM**.

### INSPECTION PROCEDURE

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check battery.**

**CHECK:**

Measure the voltage of the battery.

**OK:**

**Voltage: 11 to 14 V**
**NG: Repair or replace wire harness and battery.**
**OK: Go To Next Step.**

2. **Check combination meter assembly.**

**PREPARATION:**

a. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
b. Turn the ignition switch to the ON position.

**CHECK:**

Check the SRS warning light operation.

**OK:**

**The SRS warning light does not turn on.**
**NG: Replace combination meter assembly.**
**OK: Go To Next Step.**

3. **Check wire harness (combination meter assembly - airbag sensor assembly).**

**PREPARATION:**

cardiagn.com

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connector from the combination meter assembly.
d. Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.

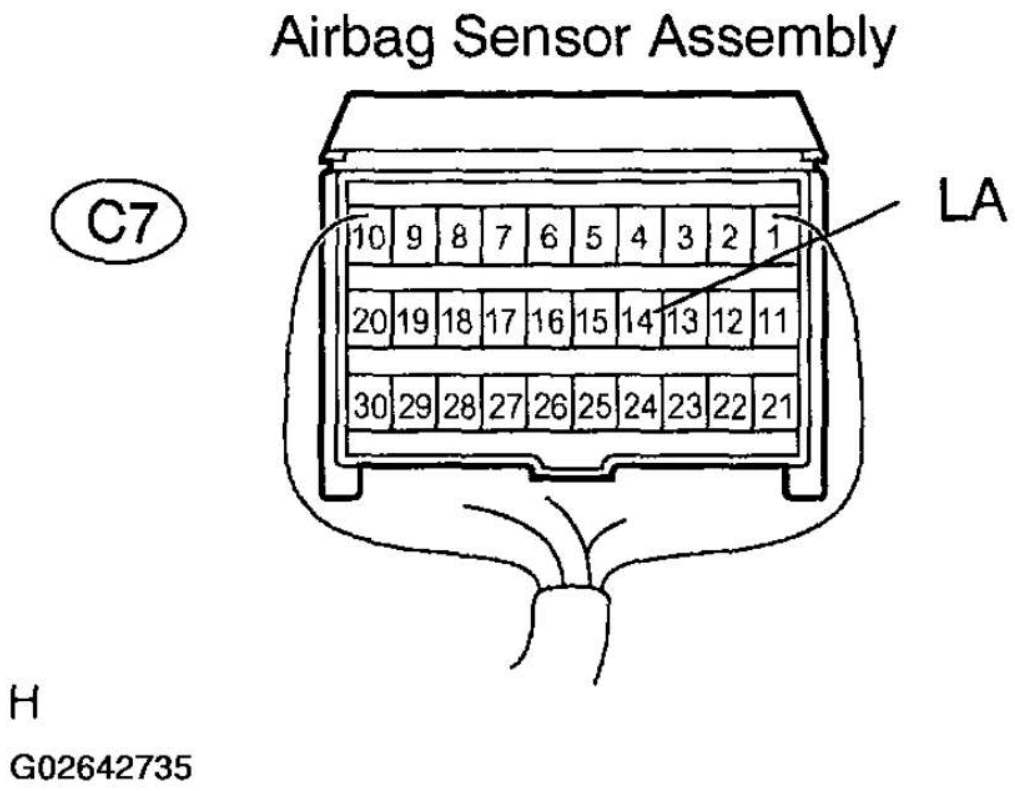



**Fig. 229: Checking Wire Harness (Combination Meter Assembly - Airbag Sensor Assembly)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**CHECK:**

Measure the voltage according to the table below.

**OK:**

**COMBINATION METER ASSEMBLY - AIRBAG SENSOR ASSEMBLY VOLTAGE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C7-14 (LA) - Body ground | Ignition switch ON | Below 1 V |

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**NG: Repair or replace wire harness.**

**OK: Replace airbag sensor assembly.**

## TC TERMINAL CIRCUIT

### CIRCUIT DESCRIPTION

DTC output mode is set by connecting terminals TC and CG of the DLC3. The DTCs are displayed by blinking of the SRS warning light.

### WIRING DIAGRAM

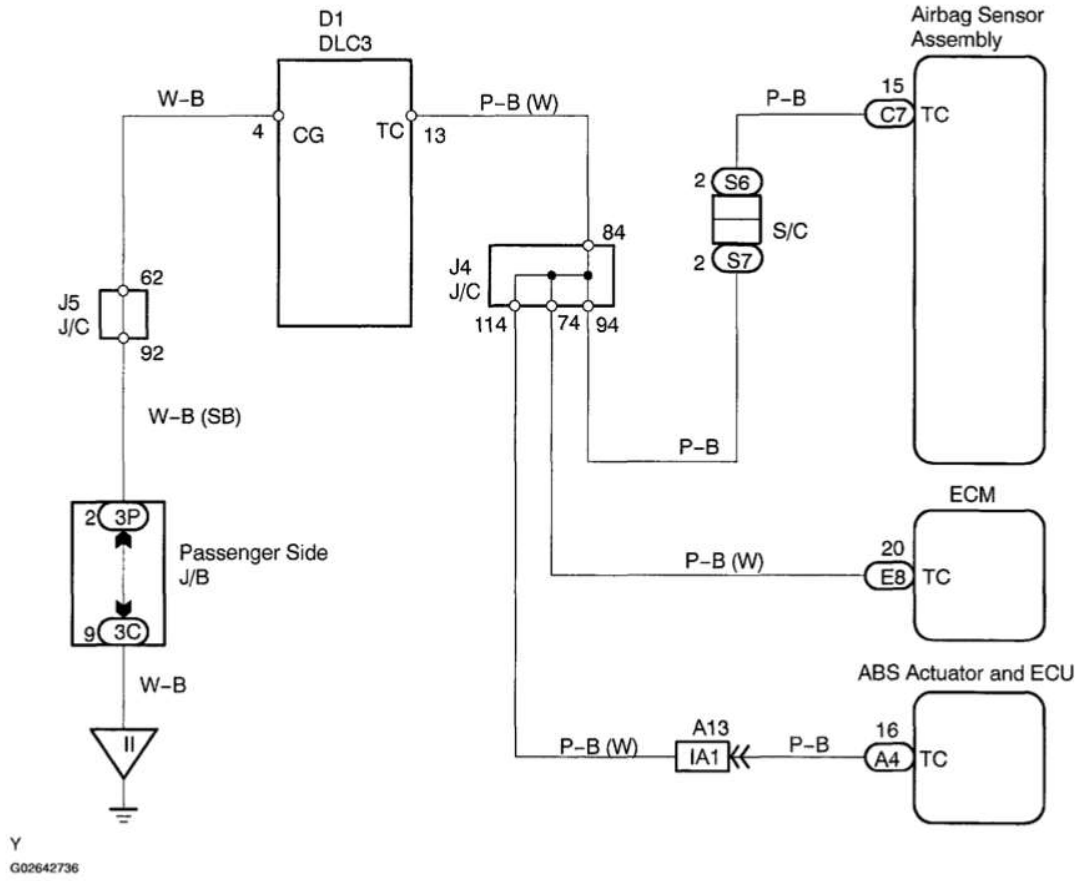



**Fig. 230: Wiring Diagram - TC Terminal Circuit**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

HINT:

When each warning light stays blinking, a ground short in the wiring of terminal TC of the DLC3 or an internal ground short in each ECU is suspected.

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

**INSPECTION PROCEDURE**

**CAUTION: Be sure to perform the following procedures before troubleshooting to avoid unexpected airbag deployment.**

a. Turn the ignition switch to the LOCK position.
b. Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
c. Disconnect the connectors from the airbag sensor assembly.
d. Disconnect the connectors from the horn button assembly.
e. Disconnect the connectors from the front passenger airbag assembly.
f. Disconnect the connector from the front seat airbag assembly LH.
g. Disconnect the connector from the front seat airbag assembly RH.
h. Disconnect the connector from the curtain shield airbag assembly LH.
i. Disconnect the connector from the curtain shield airbag assembly RH.
j. Disconnect the connector from the front seat outer belt assembly LH.
k. Disconnect the connector from the front seat outer belt assembly RH.

1. **Check wire harness (DLC3 - airbag sensor assembly).**

**CHECK:**

Measure the resistance according to the table below.

**OK:**

**DLC3 - AIRBAG SENSOR ASSEMBLY RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| D1-13 (TC) - C7-15 (Tc) | Always | Below 1 ohm |

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

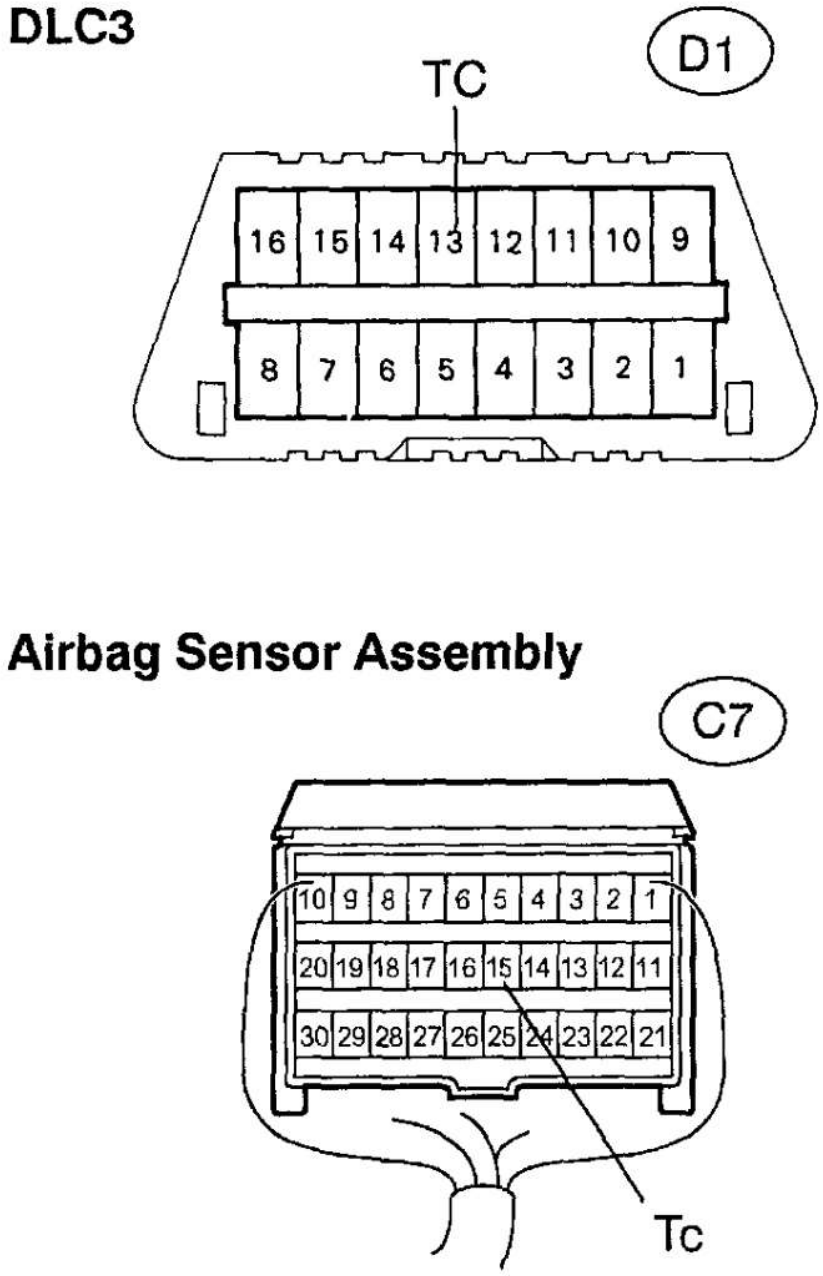



**Fig. 231: Checking Wire Harness (DLC3 - Airbag Sensor Assembly)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace wire harness (TC of DLC3 - Tc of airbag sensor assembly).**

cardiagn.com

| 2005 Toyota RAV4 |
| --- |
| 2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4 |

**OK: Go To Next Step.**

2. **Check wire harness (CG of DLC3 - body ground).**

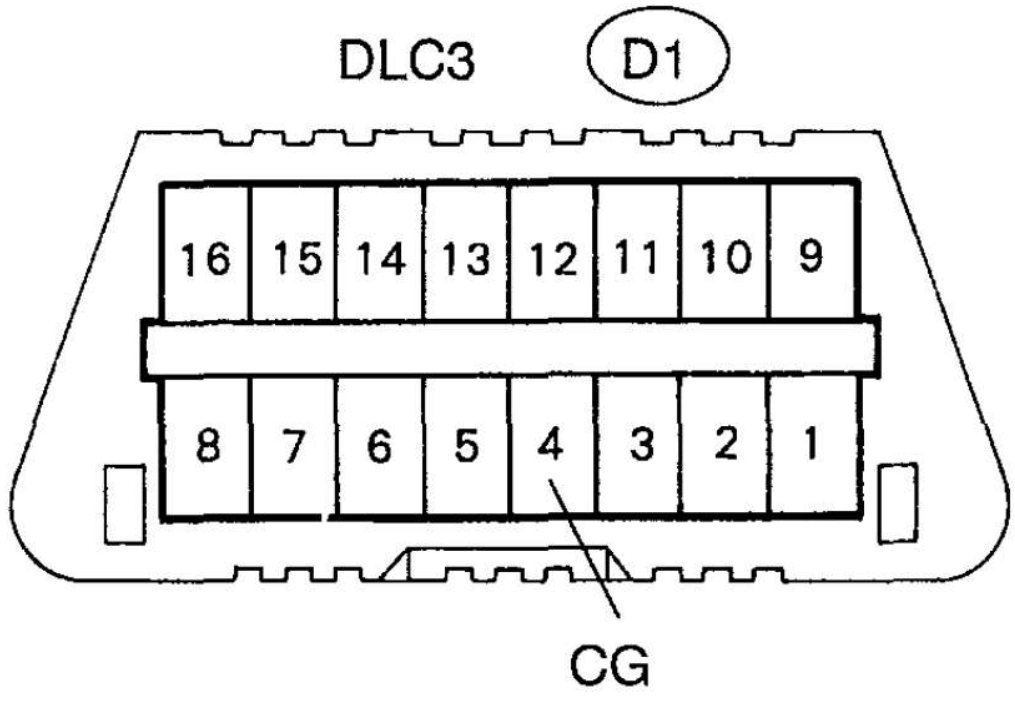
**CHECK:**

Measure the resistance according to the table below.

**OK:**

**CG OF DLC3 - BODY GROUND RESISTANCE**

| Tester Connection | Condition | Specified Condition |
| --- | --- | --- |
| D1-4 (CG) - Body ground | Always | Below 1 ohm |




G02642738

**Fig. 232: Checking Wire Harness (CG Of DLC3 - Body Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**NG: Repair or replace wire harness (CG of DLC3 - body ground).**
**OK: Go To Next Step.**

cardiagn.com

**2005 Toyota RAV4**

2005 RESTRAINTS Supplemental Restraint System - Diagnostics - RAV4

3. **Check wire harness (Tc of airbag sensor assembly - body ground).**

**CHECK:**

Measure the resistance according to the table below.

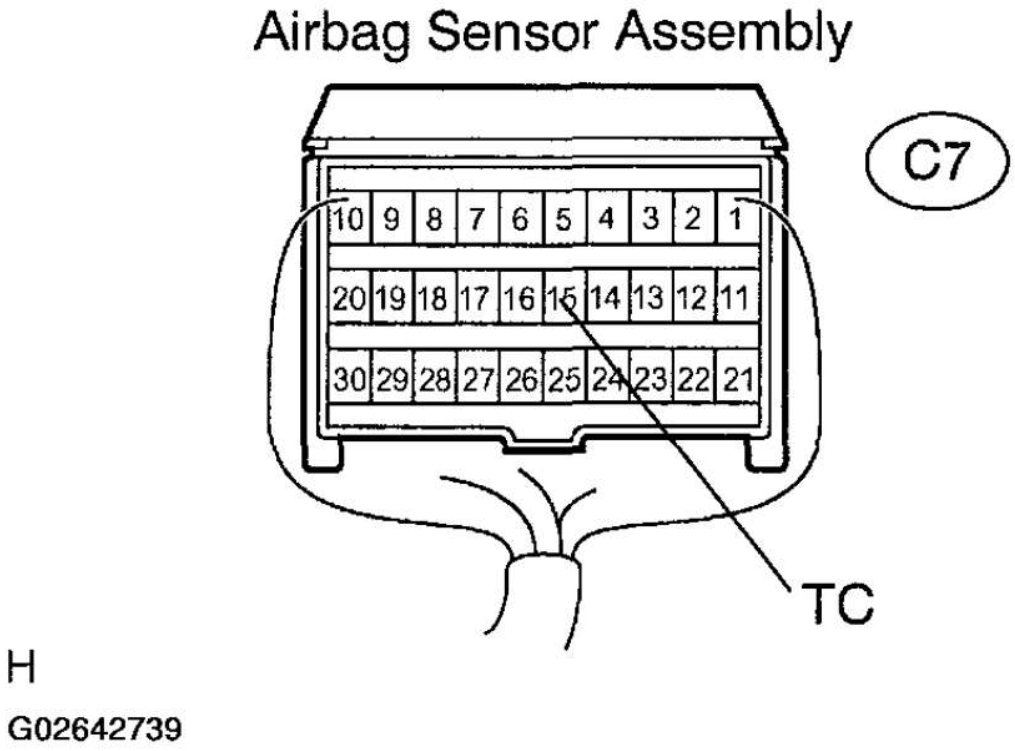



**Fig. 233: Checking Wire Harness (Tc Of Airbag Sensor Assembly - Body Ground)**
**Courtesy of TOYOTA MOTOR SALES, U.S.A., INC.**

**OK:**

**TC OF AIRBAG SENSOR ASSEMBLY - BODY GROUND RESISTANCE**

| Tester Connection | Condition | Specified Condition |
|---|---|---|
| C7-15 (TC) - Body ground | Always | 1 Mohm or higher |

**NG: Repair or replace wire harness or each ECU.**

**OK: Replace airbag sensor assembly.**

cardiagn.com