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| DTC | B1790 | AIRBAG SENSOR ASSY CENTER COMMUNICATION CIRCUIT MALFUNCTION |
|------------|--------------|--|

CIRCUIT DESCRIPTION

The airbag sensor assy center communication circuit consists of the occupant classification ECU and the airbag sensor assy center.

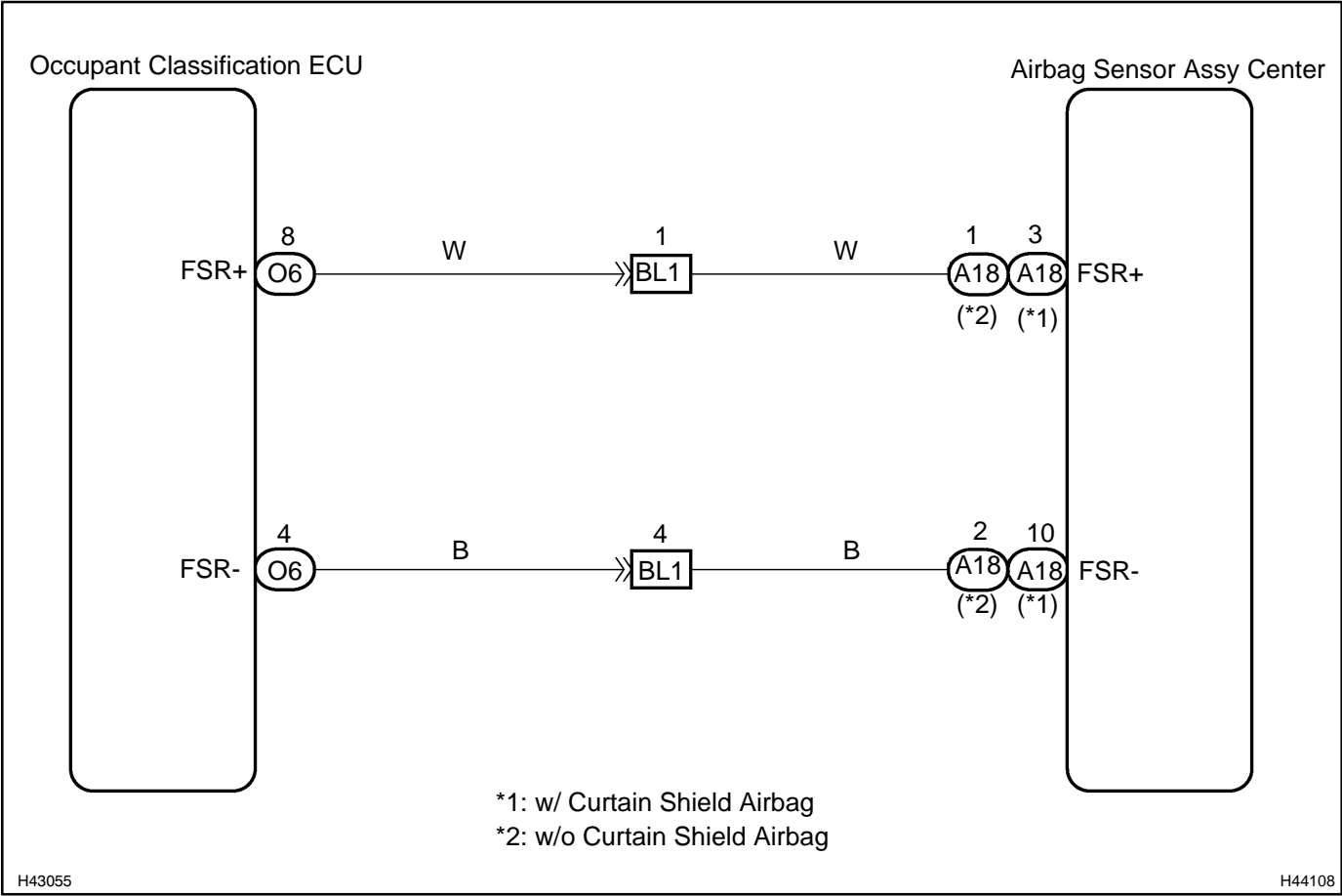
DTC B1790 is recorded when a malfunction is detected in the airbag sensor assy center communication circuit.

| DTC No. | DTC Detecting Condition | Trouble Area |
|---------|---|--|
| B1790 | <ul style="list-style-type: none"> • When the occupant classification ECU receives a line short signal, open signal, short to ground signal or B+ short signal in the airbag sensor assy center communication circuit for 2 seconds. • Airbag sensor assy center malfunction • Occupant classification ECU malfunction | <ul style="list-style-type: none"> • Occupant classification ECU • Airbag sensor assy center • Floor wire • Front seat wire RH |

HINT:

- When DTC B1150/23 is detected as a result of troubleshooting for the supplemental restraint system, perform troubleshooting for DTC B1790 of the occupant classification system.
- Use the hand-held tester to check the DTC of the occupant classification ECU, otherwise the DTC cannot be read.

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

- If troubleshooting (wire harness inspection) is difficult to perform, remove the front RH seat assy installation bolts to see the under surface of seat cushion.
- In the above case, hold the seat so that it does not fall down. Holding the seat for a long period of time may cause a problem, such as seat rail deformation. Hold the seat only as necessary.

1 CHECK DTC

- (a) Turn the ignition switch to the ON position.
- (b) Clear the DTCs stored in memory (see page 05-1215).

HINT:

- First clear DTCs stored in the occupant classification ECU memory and then in the airbag sensor assy center memory.
 - Use the hand-held tester to clear the DTC of the occupant classification ECU, otherwise the DTC cannot be cleared.
- (c) Turn the ignition switch to the LOCK position.
- (d) Turn the ignition switch to the ON position.
- (e) Using the hand-held tester, check the DTCs (see page 05-1215).

OK:

DTC B1790 is not output.

HINT:

Codes other than code B1790 may be output at this time, but they are not related to this check.

NG

Go to step 2

OK

USE SIMULATION METHOD TO CHECK (SEE PAGE 05-1207)

2 CHECK CONNECTION OF CONNECTORS

- (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) Check that the connectors are properly connected to the occupant classification ECU and the airbag sensor assy center.

OK:

The connectors are connected.

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CONNECT CONNECTORS, THEN GO TO STEP 1

OK

3 PREPARE FOR INSPECTION

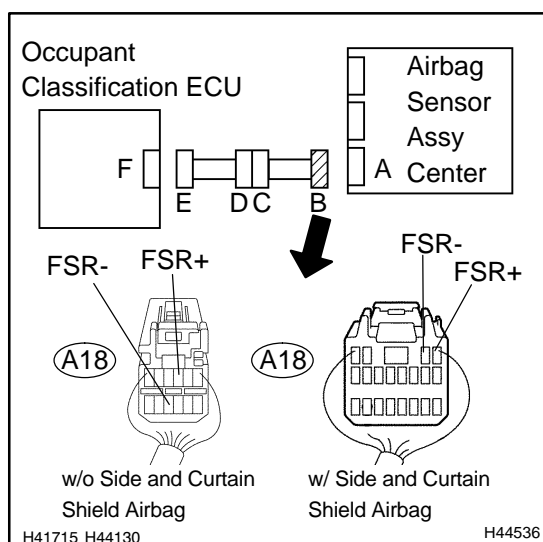
CAUTION:

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

- Turn the ignition switch to the LOCK position.
- Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- Disconnect the connectors from the airbag sensor assy center.
- Disconnect the connectors from the horn button assy.
- Disconnect the connectors from the front passenger airbag assy.
- Disconnect the connector from the front seat airbag assy LH.
- Disconnect the connector from the front seat airbag assy RH.
- Disconnect the connector from the curtain shield airbag assy LH.
- Disconnect the connector from the curtain shield airbag assy RH.
- Disconnect the connector from the front seat outer belt assy LH.
- Disconnect the connector from the front seat outer belt assy RH.



4 CHECK WIRE HARNESS (TO B+)



- Disconnect the connector from the occupant classification ECU.
- Connect the negative (-) terminal cable to the battery.
- Turn the ignition switch to the ON position.
- Measure the voltage according to the value(s) in the table below.

Standard:

w/ Side and curtain shield airbag:

| Tester connection | Condition | Specified condition |
|-----------------------------|--------------------|---------------------|
| A18-3 (FSR+) - Body ground | Ignition switch ON | Below 1 V |
| A18-10 (FSR-) - Body ground | Ignition switch ON | Below 1 V |

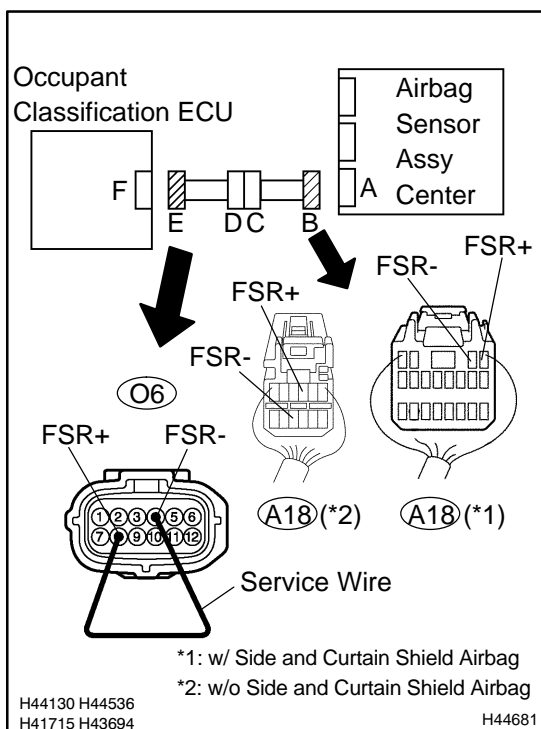
w/o Side and curtain shield airbag:

| Tester connection | Condition | Specified condition |
|----------------------------|--------------------|---------------------|
| A18-1 (FSR+) - Body ground | Ignition switch ON | Below 1 V |
| A18-2 (FSR-) - Body ground | Ignition switch ON | Below 1 V |

NG

Go to step 13

OK

5 CHECK WIRE HARNESS (OPEN)

- Turn the ignition switch to the LOCK position.
- Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- Using a service wire, connect the O6-8 (FSR+) and O6-4 (FSR-) of connector "E".

NOTICE:

Do not forcibly insert a service wire into the terminal of the connector when connecting.

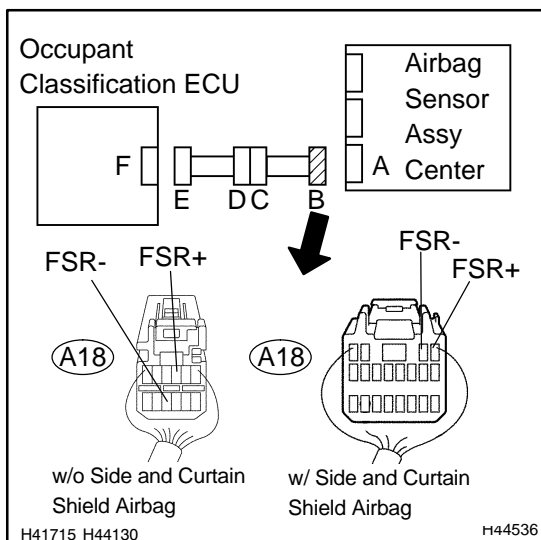
- Measure the resistance according to the value(s) in the table below.

Standard:**w/ Side and curtain shield airbag:**

| Tester connection | Condition | Specified condition |
|------------------------------|-----------|---------------------|
| A18-3 (FSR+) - A18-10 (FSR-) | Always | Below 1 Ω |

w/o Side and curtain shield airbag:

| Tester connection | Condition | Specified condition |
|-----------------------------|-----------|---------------------|
| A18-1 (FSR+) - A18-2 (FSR-) | Always | Below 1 Ω |

NG**Go to step 14****OK****6 CHECK WIRE HARNESS (SHORT)**

- Disconnect the service wire from connector "E".
- Measure the resistance according to the value(s) in the table below.

w/ Side and curtain shield airbag:

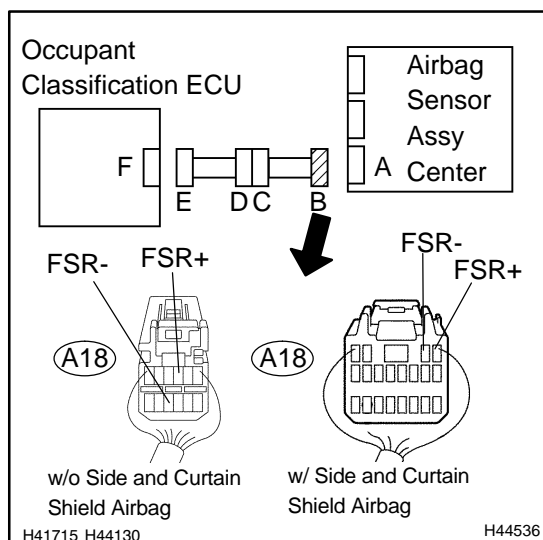
| Tester connection | Condition | Specified condition |
|------------------------------|-----------|------------------------|
| A18-3 (FSR+) - A18-10 (FSR-) | Always | 1 M Ω or Higher |

w/o Side and curtain shield airbag:

| Tester connection | Condition | Specified condition |
|-----------------------------|-----------|------------------------|
| A18-1 (FSR+) - A18-2 (FSR-) | Always | 1 M Ω or Higher |

NG**Go to step 15****OK**

7 CHECK WIRE HARNESS (TO GROUND)



- (a) Measure the resistance according to the value(s) in the table below.

Standard:

w/ Side and curtain shield airbag:

| Tester connection | Condition | Specified condition |
|-----------------------------|-----------|---------------------|
| A18-3 (FSR+) - Body ground | Always | 1 MΩ or Higher |
| A18-10 (FSR-) - Body ground | Always | 1 MΩ or Higher |

w/o Side and curtain shield airbag:

| Tester connection | Condition | Specified condition |
|----------------------------|-----------|---------------------|
| A18-1 (FSR+) - Body ground | Always | 1 MΩ or Higher |
| A18-2 (FSR-) - Body ground | Always | 1 MΩ or Higher |

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Go to step 16

OK

8 RECHECK DTC

- Connect the connectors to the occupant classification ECU and the airbag sensor assy center.
- Connect the negative (-) terminal cable to the battery.
- Turn the ignition switch to the ON position.
- Clear the DTCs stored in memory (see page 05-1215).

HINT:

- First clear DTCs stored in the occupant classification ECU memory and then in the airbag sensor assy center memory.
 - Use the hand-held tester to clear the DTC of the occupant classification ECU, otherwise the DTC cannot be cleared.
- Turn the ignition switch to the LOCK position.
 - Turn the ignition switch to the ON position.
 - Using the hand-held tester, check the DTCs (see page 05-1215).

OK:

DTC B1790 is not output.

HINT:

Codes other than code B1790 may be output at this time, but they are not related to this check.

NG

Go to step 9

OK

USE SIMULATION METHOD TO CHECK (SEE PAGE 05-1207)

9 REPLACE OCCUPANT CLASSIFICATION ECU

- (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 occupant classification ECU (see page 60-64).

HINT:

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

**10 PERFORM ZERO POINT CALIBRATION**

- (a) Using the hand-held tester, perform "Zero point calibration" (see page 05-1203).

OK:**The "COMPLETED" is displayed.****11 PERFORM SENSITIVITY CHECK**

- (a) Using the hand-held tester, perform "Sensitivity check" (see page 05-1203).

Standard value: 27 to 33 kg (59.52 to 72.75 lb)**12 RECHECK DTC**

- (a) Connect the connector to the occupant classification ECU.
- (b) Connect the negative (-) terminal cable to the battery.
- (c) Turn the ignition switch to the ON position.
- (d) Clear the DTCs stored in memory (see page 05-1215).

HINT:

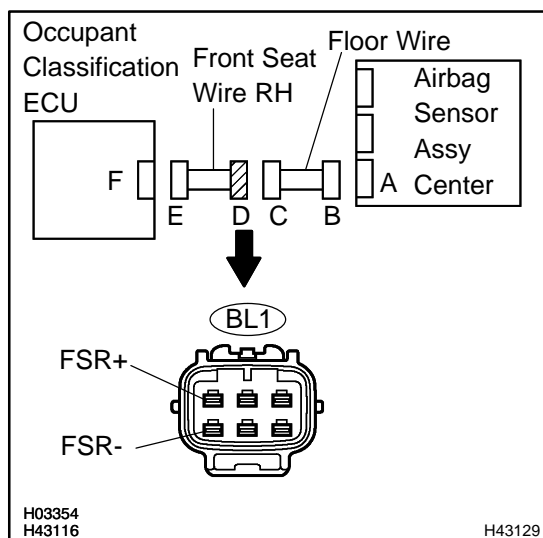
- First clear DTCs stored in the occupant classification ECU memory and then in the airbag sensor assy center memory.
 - Use the hand-held tester to clear the DTC of the occupant classification ECU, otherwise the DTC cannot be cleared.
- (e) Turn the ignition switch to the LOCK position.
 - (f) Turn the ignition switch to the ON position.
 - (g) Using the hand-held tester, check the DTCs (see page 05-1215).

OK:**DTC B1790 is not output.**

HINT:

Codes other than code B1790 may be output at this time, but they are not related to this check.

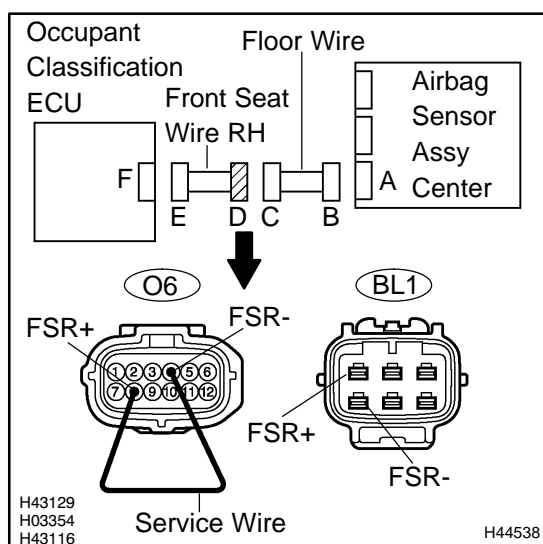
NG**REPLACE AIR BAG SENSOR ASSY CENTER
(SEE PAGE 60-53)****OK****END**

13 CHECK FRONT SEAT WIRE RH (TO B+)

- Turn the ignition switch to the LOCK position.
- Disconnect the negative (-) terminal cable from battery, and wait for at least 90 seconds.
- Disconnect the front seat wire RH connector from the floor wire.
- Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- Turn the ignition switch to the ON position.
- Measure the voltage according to the value(s) in the table below.

Standard:

| Tester connection | Condition | Specified condition |
|----------------------------|--------------------|---------------------|
| BL1-1 (FSR+) - Body ground | Ignition switch ON | Below 1 V |
| BL1-4 (FSR-) - Body ground | Ignition switch ON | Below 1 V |

NG**REPAIR OR REPLACE FRONT SEAT WIRE RH****OK****REPAIR OR REPLACE FLOOR WIRE****14 CHECK FRONT SEAT WIRE RH (OPEN)**

- Disconnect the front seat wire RH connector from the floor wire.

HINT:

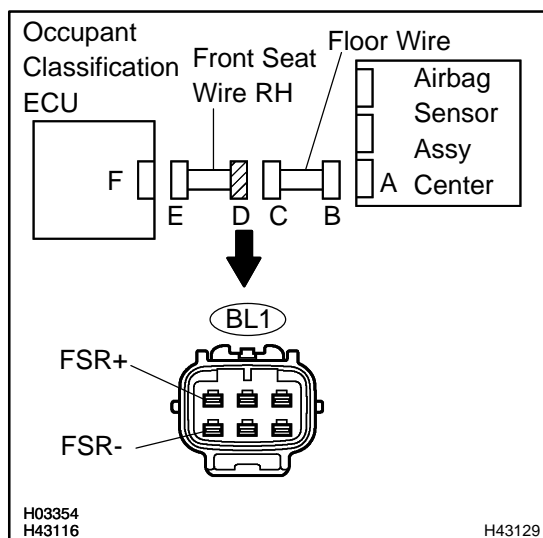
Connector "E" has already been inserted into the service wire.

- Measure the resistance according to the value(s) in the table below.

Standard:

| Tester connection | Condition | Specified condition |
|-----------------------------|-----------|---------------------|
| BL1-1 (FSR+) - BL1-4 (FSR-) | Always | Below 1 Ω |

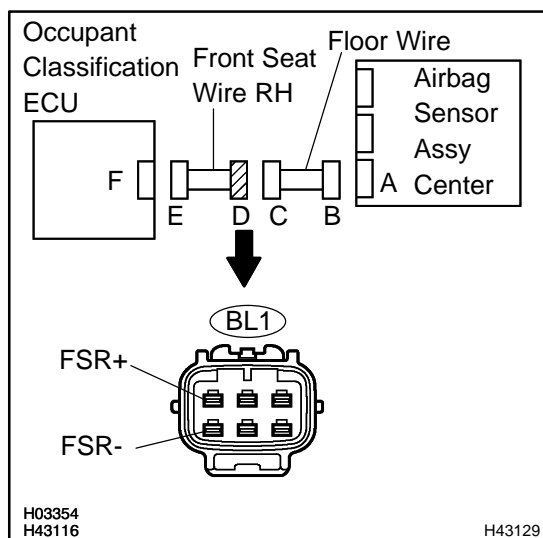
NG**REPAIR OR REPLACE FRONT SEAT WIRE RH****OK****REPAIR OR REPLACE FLOOR WIRE**

15 CHECK FRONT SEAT WIRE RH (SHORT)

- Disconnect the front seat wire RH connector from the floor wire.
- Measure the resistance according to the value(s) in the table below.

Standard:

| Tester connection | Condition | Specified condition |
|-----------------------------|-----------|---------------------|
| BL1-1 (FSR+) - BL1-4 (FSR-) | Always | 1 MΩ or Higher |

NG**REPAIR OR REPLACE FRONT SEAT WIRE RH****OK****REPAIR OR REPLACE FLOOR WIRE****16 CHECK FRONT SEAT WIRE RH (TO GROUND)**

- Disconnect the front seat wire RH connector from the floor wire.
- Measure the resistance according to the value(s) in the table below.

Standard:

| Tester connection | Condition | Specified condition |
|----------------------------|-----------|---------------------|
| BL1-1 (FSR+) - Body ground | Always | 1 MΩ or Higher |
| BL1-4 (FSR-) - Body ground | Always | 1 MΩ or Higher |

NG**REPAIR OR REPLACE FRONT SEAT WIRE RH****OK****REPAIR OR REPLACE FLOOR WIRE**