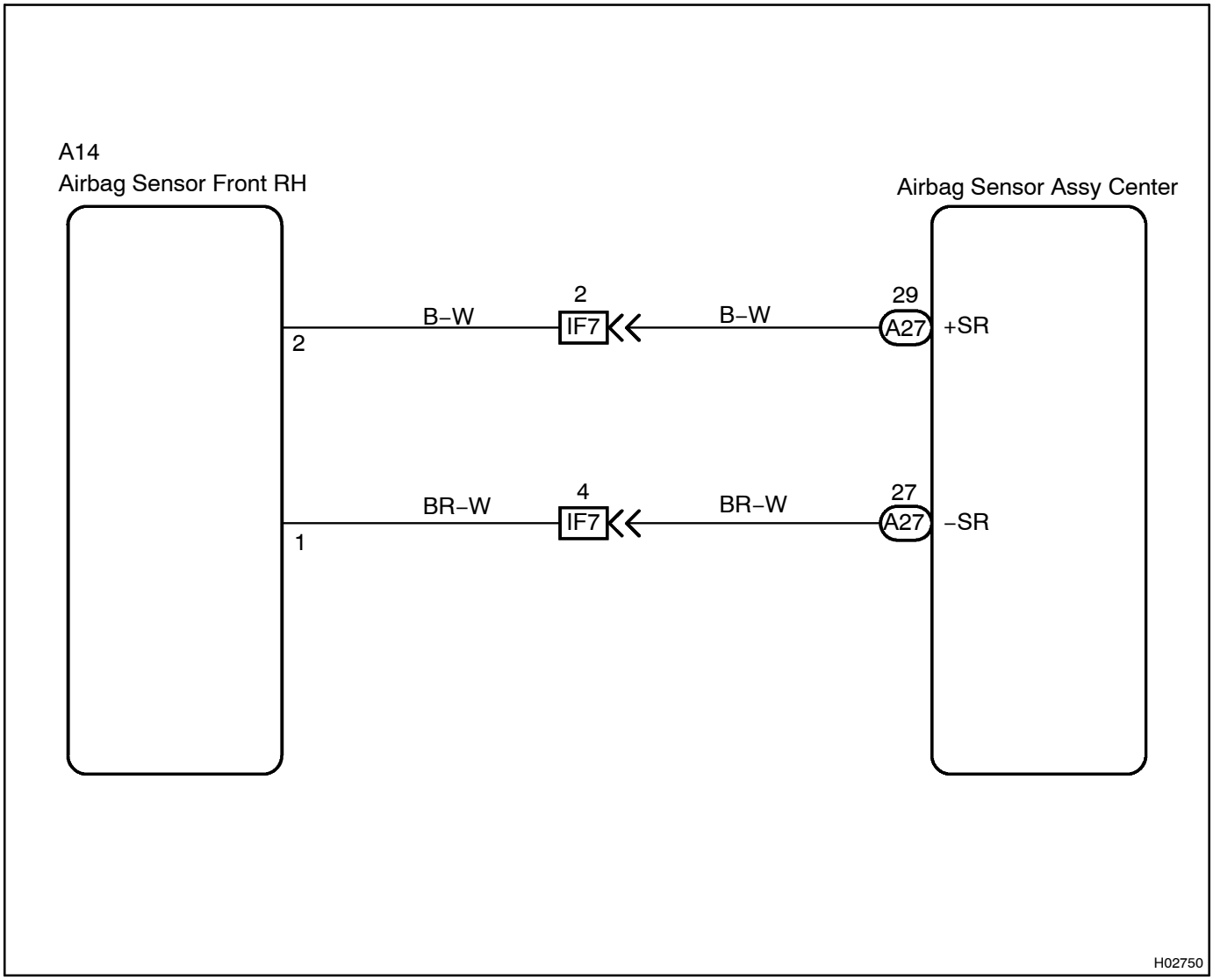
DTC	B1610/13	FRONT AIRBAG SENSOR (RH) MALFUNCTION

CIRCUIT DESCRIPTION

The front airbag RH consists of the diagnostic circuit, the frontal deceleration sensor, etc.
If the airbag sensor assy center receives signals from the frontal deceleration sensor, it determines whether or not the SRS should be activated.
DTC B1610/13 is recorded when a malfunction is detected in the front airbag sensor RH circuit.

DTC No.	DTC Detecting Condition	Trouble Area
B1610/13	• The airbag sensor assy center receives a line short circuit signal, an open circuit signal, a short circuit to ground signal or a short circuit to B+ signal in the front airbag sensor RH circuit for 2 seconds. • Airbag sensor front RH malfunction • Airbag sensor assy center malfunction	• Airbag sensor front RH • Airbag sensor assy center • Instrument panel wire • Engine room main wire

WIRING DIAGRAM



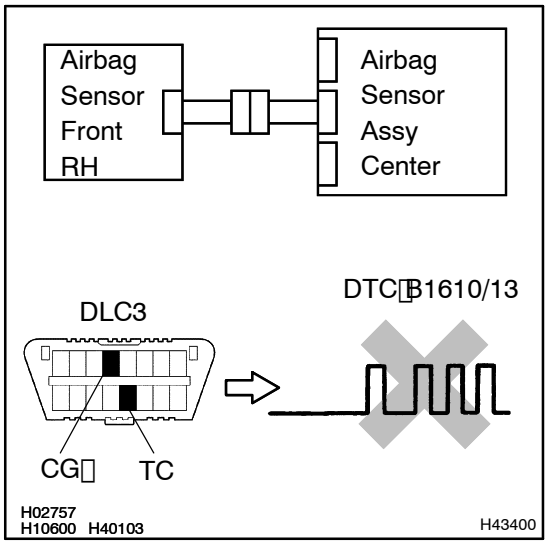
INSPECTION PROCEDURE

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 assy center.
(d) Disconnect the connectors from the horn button assy.
(e) Disconnect the connectors from the front passenger airbag assy.
(f) Disconnect the connector from the front seat airbag assy LH.
(g) Disconnect the connector from the front seat airbag assy RH.
(h) w/ Curtain shield airbag:
Disconnect the connector from the curtain shield airbag assy LH.
(i) w/ Curtain shield airbag:
Disconnect the connector from the curtain shield airbag assy RH.
(j) Disconnect the connector from the front seat outer belt assy LH.
(k) Disconnect the connector from the front seat outer belt assy RH.

1	CHECK DTC



(a) Connect the connectors to the airbag sensor assy center.
(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 page 05–16).
(e) Turn the ignition switch to the LOCK position.
(f) Turn the ignition switch to the ON position, and wait for at least 60 seconds.
(g) Check the DTCs (see page 05–16).
OK:
DTC B1610/13 is not output.

HINT:
Codes other than code B1610/13 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 05–10)

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 airbag sensor assy center and the airbag sensor front RH.

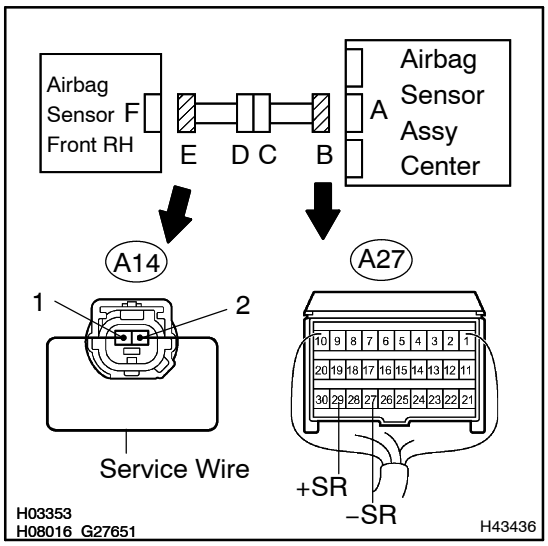
OK:

The connectors are connected.

NG → **CONNECT CONNECTORS, THEN GO TO STEP 1**

OK

3 CHECK FRONT AIRBAG SENSOR (RH) CIRCUIT (OPEN)



(a) Disconnect the connectors from the airbag sensor assy center and the airbag sensor front RH.
(b) Using a service wire, connect A14–2 and A14–1 of connector "E".

NOTICE:

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

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

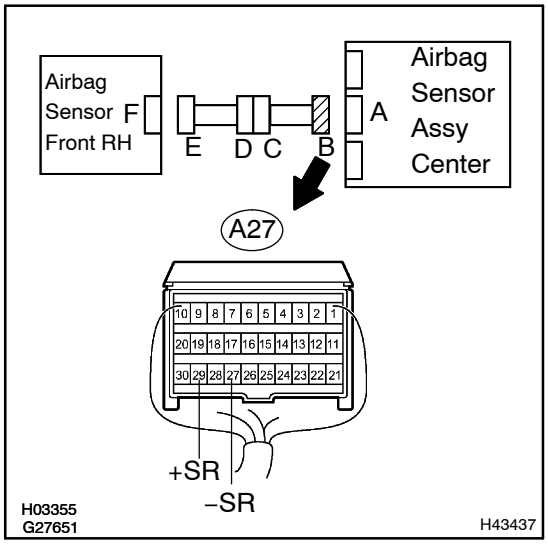
Standard:

Tester connection	Condition	Specified condition
A27–29 (+SR) – A27–27 (–SR)	Always	Below 1 Ω

NG → **Go to step 8**

OK

4 CHECK FRONT AIRBAG SENSOR (RH) CIRCUIT (SHORT)



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

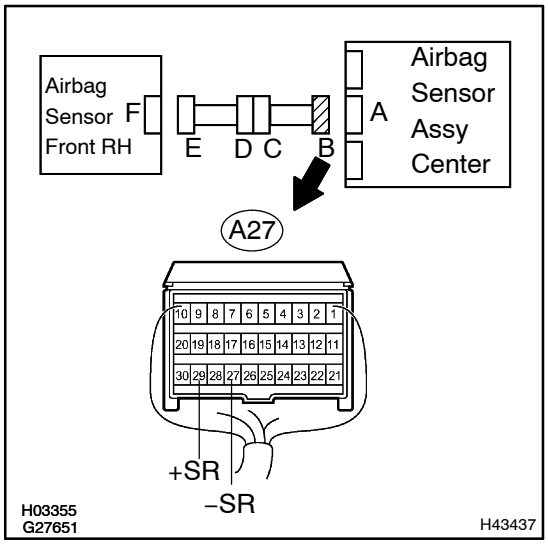
Standard:

Tester connection	Condition	Specified condition
A27–29 (+SR) – A27–27 (–SR)	Always	1 MΩ or Higher

NG → **Go to step 9**

OK

5 CHECK FRONT AIRBAG SENSOR (RH) CIRCUIT (TO B+)



(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.
(c) Measure the voltage according to the value(s) in the table below.

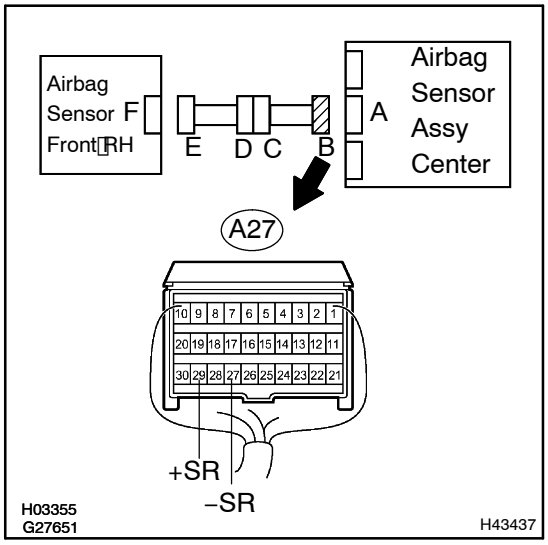
Standard:

Tester connection	Condition	Specified condition
A27–29 (+SR) – Body ground	Ignition switch ON	Below 1 V
A27–27 (–SR) – Body ground	Ignition switch ON	Below 1 V

NG → **Go to step 10**

OK

6 CHECK FRONT AIRBAG SENSOR (RH) CIRCUIT (TO GROUND)



(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 value(s) in the table below.

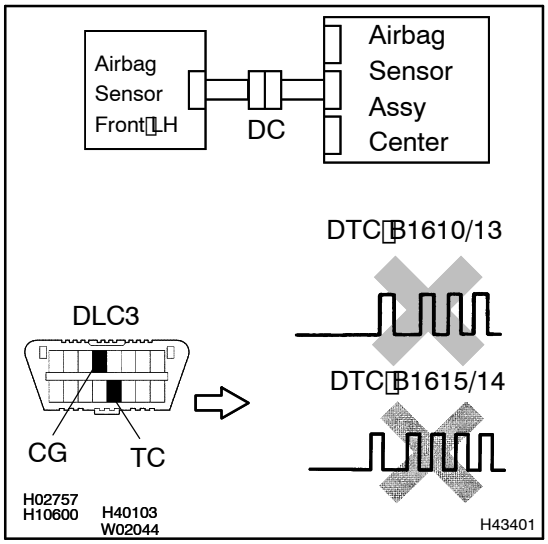
Standard:

Tester connection	Condition	Specified condition
A27–29 (+SR) – Body ground	Always	1 MΩ or Higher
A27–27 (–SR) – Body ground	Always	1 MΩ or Higher

NG → **Go to step 11**

OK

7 CHECK AIRBAG SENSOR FRONT RH



(a) Connect the connectors to the airbag sensor assy center.
(b) Interchange the airbag sensor front 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.
(d) Turn the ignition switch to the ON position, and wait for at least 60 seconds.
(e) Clear the DTCs stored in memory (see page 05–16).
(f) Turn the ignition switch to the LOCK position.
(g) Turn the ignition switch to the ON position, and wait for at least 60 seconds.
(h) Check the DTCs (see page 05–16).

Result:

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

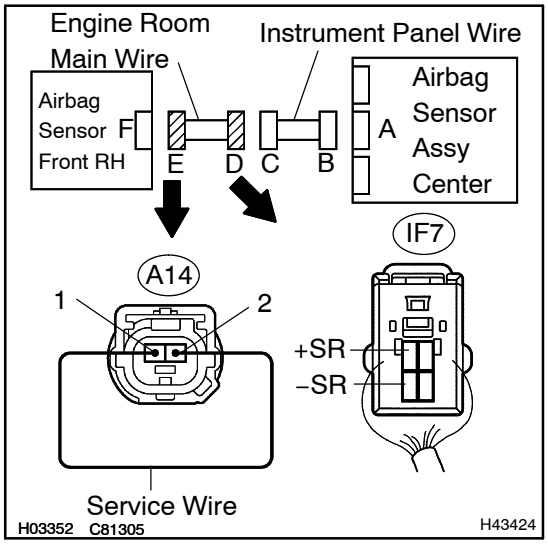
A → **REPLACE AIR BAG SENSOR ASSY CENTER (SEE PAGE 60–40)**

B → **REPLACE AIRBAG SENSOR FRONT RH (SEE PUB. NO. RM915E, PAGE 60–58)**

C

USE SIMULATION METHOD TO CHECK (SEE PAGE 05–16)

8 CHECK ENGINE ROOM MAIN WIRE (OPEN)



(a) Disconnect the engine room main wire connector from the instrument panel wire.

HINT:

The service wire has already been inserted into connector "E".

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

Standard:

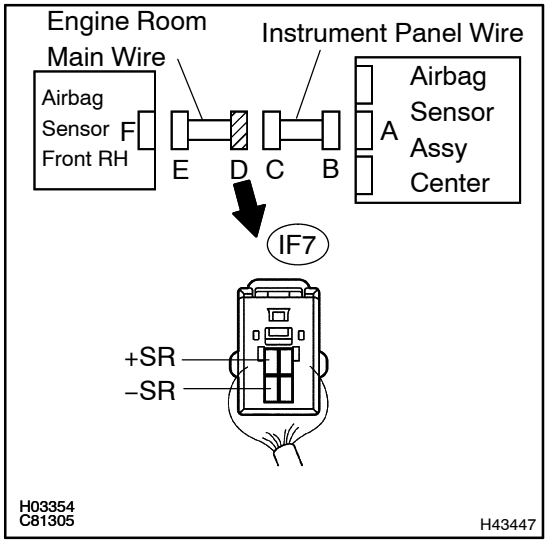
Tester connection	Condition	Specified condition
IF7–2 (+SR) – IF7–4 (–SR)	Always	Below 1 Ω

NG → **REPAIR OR REPLACE ENGINE ROOM MAIN WIRE**

OK

REPAIR OR REPLACE INSTRUMENT PANEL WIRE

9 CHECK ENGINE ROOM MAIN WIRE (SHORT)



(a) Disconnect the engine room main wire connector from the instrument panel wire.

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

Standard:

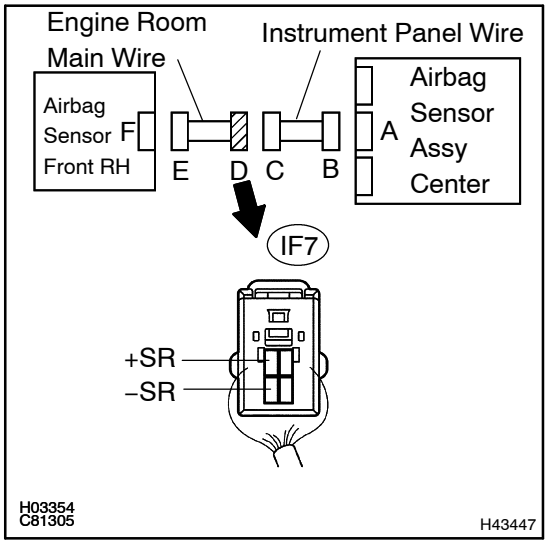
Tester connection	Condition	Specified condition
IF7–2 (+SR) – IF7–4 (–SR)	Always	1 MΩ or Higher

NG → **REPAIR OR REPLACE ENGINE ROOM MAIN WIRE**

OK

REPAIR OR REPLACE INSTRUMENT PANEL WIRE

10 CHECK ENGINE ROOM MAIN WIRE (TO B+)



(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.
(e) Turn the ignition switch to the ON position.
(f) Measure the voltage according to the value(s) in the table below.

Standard:

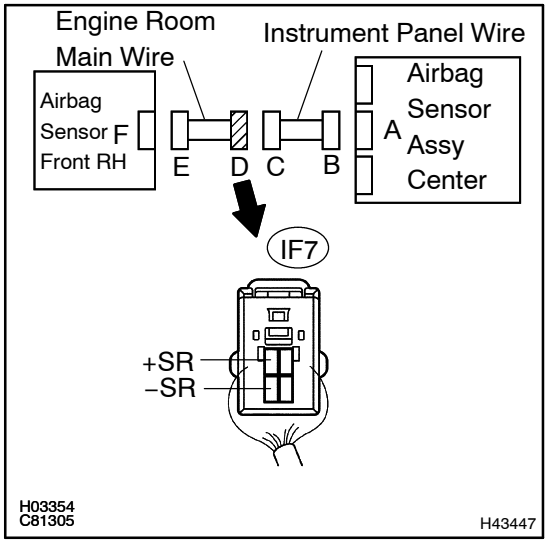
Tester connection	Condition	Specified condition
IF7–2 (+SR) – Body ground	Ignition switch ON	Below 1 V
IF7–4 (–SR) – Body ground	Ignition switch ON	Below 1 V

NG → **REPAIR OR REPLACE ENGINE ROOM MAIN WIRE**

OK

REPAIR OR REPLACE INSTRUMENT PANEL WIRE

11 CHECK ENGINE ROOM MAIN WIRE (TO GROUND)



(a) Disconnect the engine room main wire connector from the instrument panel wire.
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester connection	Condition	Specified condition
IF7–2 (+SR) – Body ground	Always	1 MΩ or Higher
IF7–4 (–SR) – Body ground	Always	1 MΩ or Higher

NG → **REPAIR OR REPLACE ENGINE ROOM MAIN WIRE**

OK

REPAIR OR REPLACE INSTRUMENT PANEL WIRE