DTC B1000 AIRBAG ECU ASSY MALFUNCTION

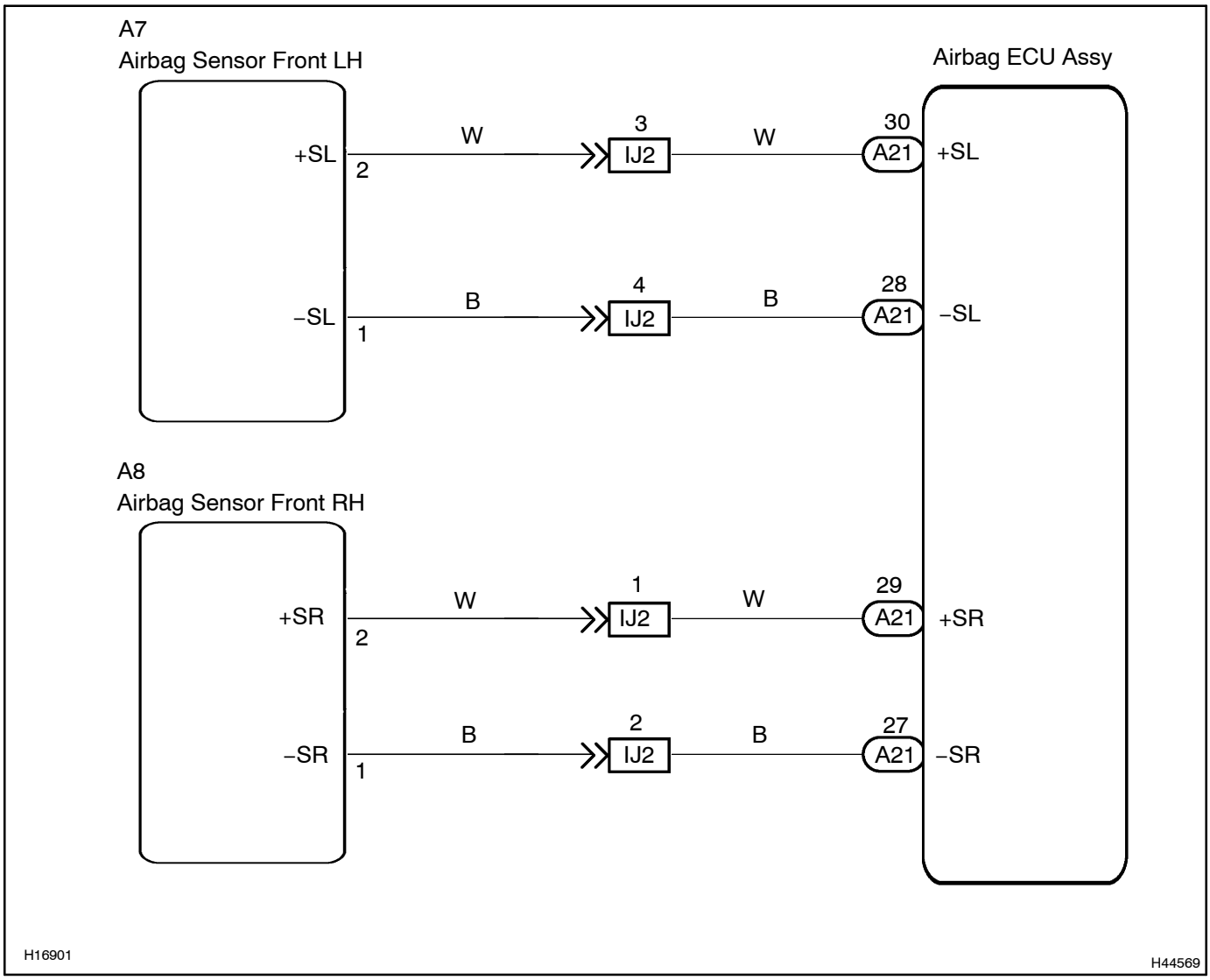
CIRCUIT DESCRIPTION

The airbag ECU assy consists of the airbag sensor, the safing sensor, the drive circuit, the diagnostic circuit, the ignition control, etc.
If the airbag ECU assy receives signals from the airbag sensor, it determines whether or not the SRS should be activated.
B1000 is recorded when a malfunction is detected in the airbag ECU assy.

DTC No.	DTC Detecting Condition	Trouble Area
B1000	• Airbag ECU assy malfunction • When the airbag ECU assy receives a line short signal, short to ground signal or B+ short signal in the front airbag sensor LH circuit for 2 seconds. • When the airbag ECU assy receives a line short signal, short to ground signal or B+ short signal in the front airbag sensor RH circuit for 2 seconds.	• Instrument panel wire • Engine room main wire • Airbag ECU assy

HINT:
When a trouble code is displayed simultaneously with B1000, repair the malfunction indicated by this code (except B1000) first.

WIRING DIAGRAM



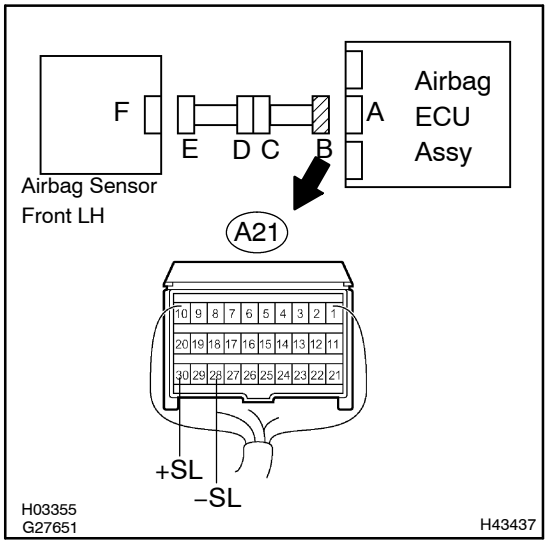
INSPECTION PROCEDURE

CAUTION:

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

(a) Turn the power switch off.
(b) Disconnect the negative (–) terminal cable from the battery, and wait for at least 90 seconds.
(c) Disconnect the connectors from the airbag ECU assy.
(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) Disconnect the connector from the curtain shield airbag assy LH.
(i) 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 FRONT AIRBAG SENSOR (LH) CIRCUIT(TO B+)



(a) Disconnect the connector from the airbag sensor front LH.
(b) Connect the negative (–) terminal cable to the battery, and wait for at least 2 seconds.
(c) Turn the power switch on (IG).
(d) Measure the voltage according to the value(s) in the table below.

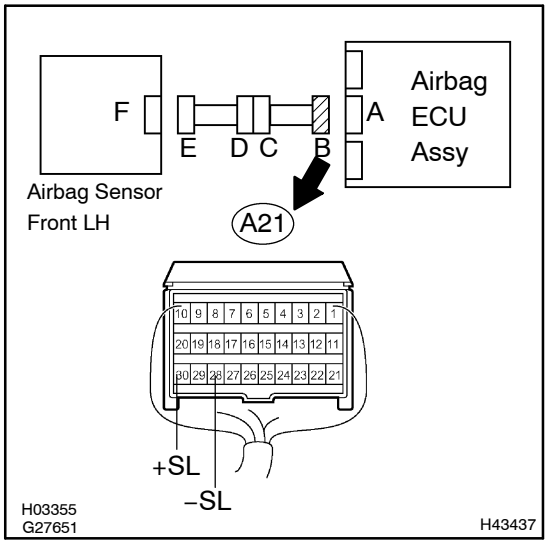
Standard:

Tester connection	Condition	Specified condition
A21–30 (+SL) – Body ground	Power switch is on (IG)	Below 1 V
A21–28 (–SL) – Body ground	Power switch is on (IG)	Below 1 V

NG → **Go to step 8**

OK

2 CHECK FRONT AIRBAG SENSOR (LH) CIRCUIT(SHORT)



(a) Turn the power switch off.
(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.

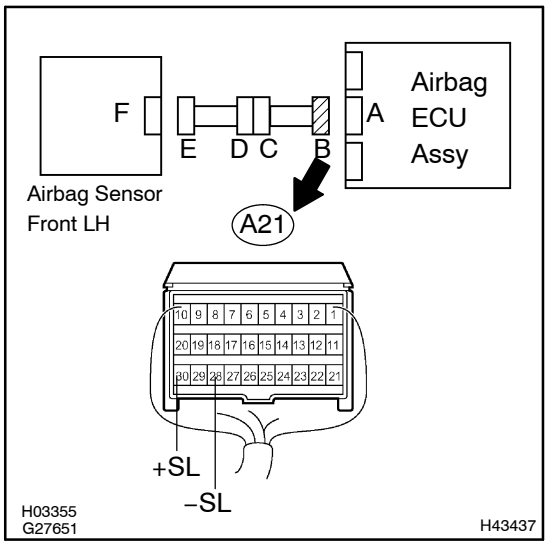
Standard:

Tester connection	Condition	Specified condition
A21–30 (+SL) – Body ground	Always	1 MΩ or Higher
A21–28 (–SL) – Body ground	Always	1 MΩ or Higher

NG → **Go to step 9**

OK

3 CHECK FRONT AIRBAG SENSOR (LH) CIRCUIT(TO GROUND)



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

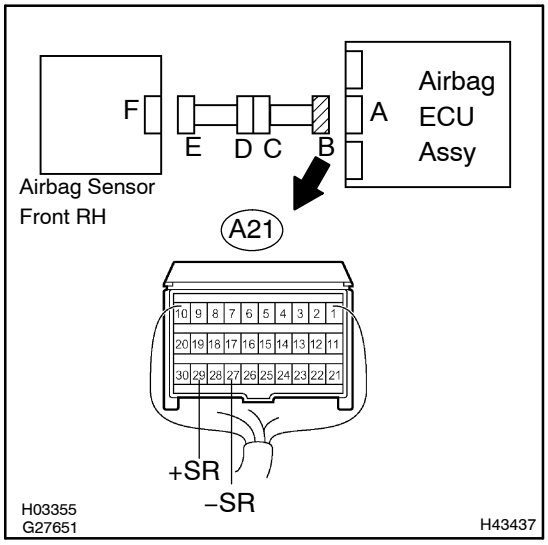
Standard:

Tester connection	Condition	Specified condition
A21–30 (+SL) – Body ground	Always	1 MΩ or Higher
A21–28 (–SL) – Body ground	Always	1 MΩ or Higher

NG → **Go to step 10**

OK

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



(a) Disconnect the connector from the airbag sensor front RH.
(b) Connect the negative (–) terminal cable to the battery, and wait for at least 2 seconds.
(c) Turn the power switch on (IG).
(d) Measure the voltage according to the value(s) in the table below.

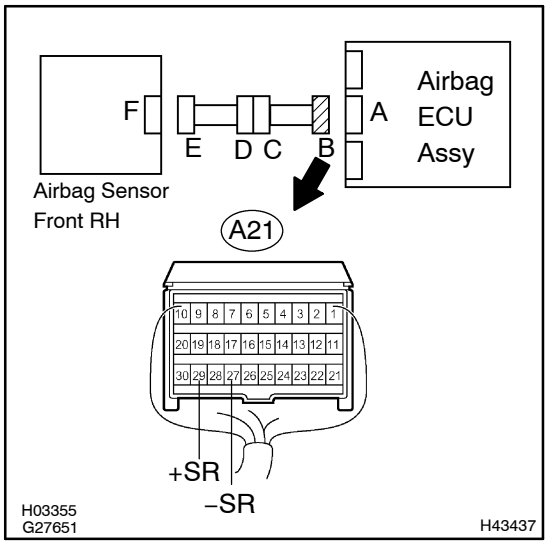
Standard:

Tester connection	Condition	Specified condition
A21–29 (+SR) – Body ground	Power switch is on (IG)	Below 1 V
A21–27 (–SR) – Body ground	Power switch is on (IG)	Below 1 V

NG → **Go to step 11**

OK

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



(a) Turn the power switch off.
(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.

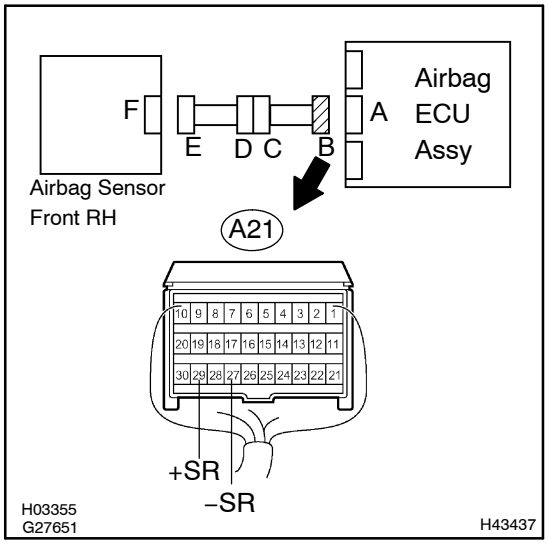
Standard:

Tester connection	Condition	Specified condition
A21–29 (+SR) – A21–27 (–SR)	Always	1 MΩ or Higher

NG → **Go to step 12**

OK

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



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

Standard:

Tester connection	Condition	Specified condition
A21–29 (+SR) – Body ground	Always	1 MΩ or Higher
A21–27 (–SR) – Body ground	Always	1 MΩ or Higher

NG → **Go to step 13**

OK

7 CHECK AIR BAG ECU ASSY

(a) Connect the negative (–) terminal cable to the battery, and wait for at least 2 seconds.
(b) Turn the power switch on (IG), and wait for at least 60 seconds.
(c) Clear the DTCs stored in memory (see page 05–1170).
(d) Turn the power switch off.
(e) Turn the power switch on (IG), and wait for at least 60 seconds.
(f) Check the DTCs (see page 05–1170).

OK:

DTC B1000 is not output.

HINT:

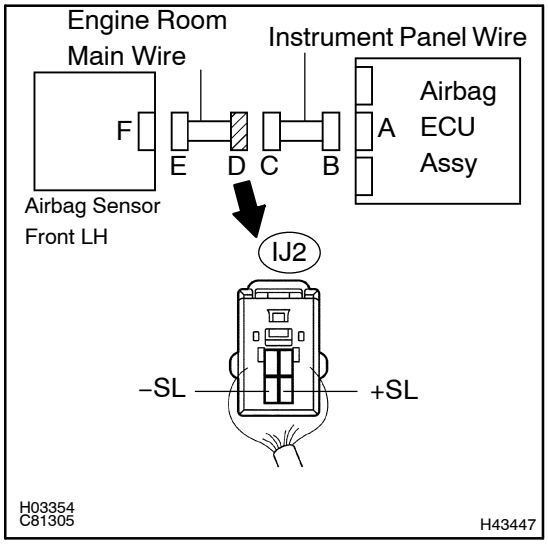
Codes other than code B1000 may be output at this time, but they are not related to this check.

NG → **REPLACE AIR BAG ECU ASSY (SEE PAGE 60–54)**

OK

USE SIMULATION METHOD TO CHECK (SEE PAGE 05–1155)

8 CHECK ENGINE ROOM MAIN WIRE(TO B+)



(a) Turn the power switch off.
(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 power switch on (IG).
(f) Measure the voltage according to the value(s) in the table below.

Standard:

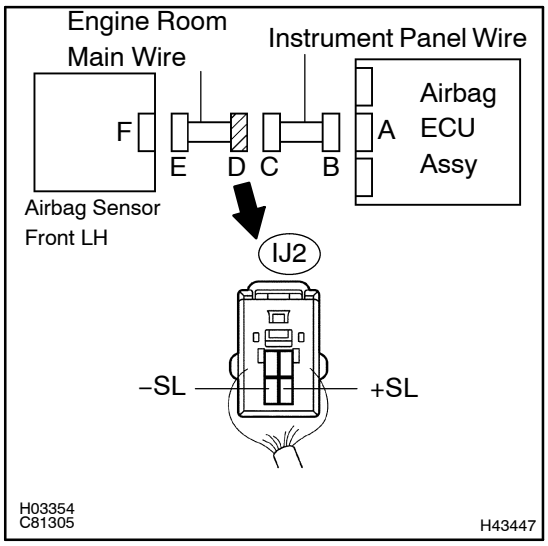
Tester connection	Condition	Specified condition
IJ2–3 (+SL) – Body ground	Power switch is on (IG)	Below 1 V
IJ2–4 (–SL) – Body ground	Power switch is on (IG)	Below 1 V

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:

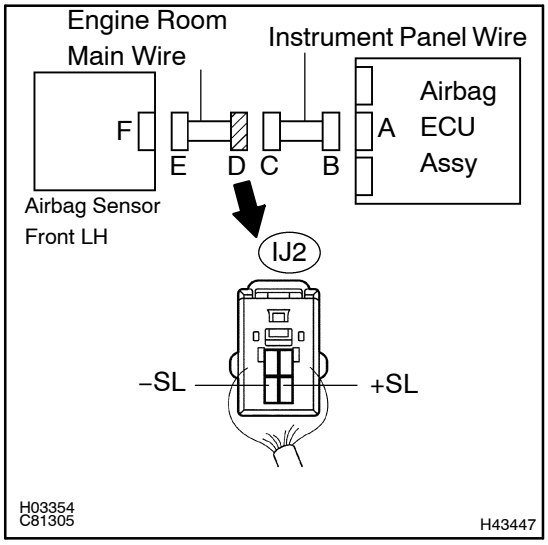
Tester connection	Condition	Specified condition
IJ2–3 (+SL) – IJ2–4 (–SL)	Always	1 MΩ or Higher

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

OK

REPAIR OR REPLACE INSTRUMENT PANEL WIRE

10 CHECK ENGINE ROOM MAIN WIRE(TO 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:

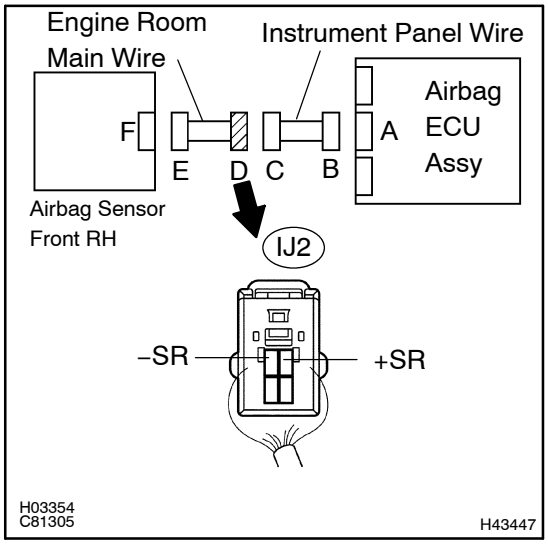
Tester connection	Condition	Specified condition
IJ2–3 (+SL) – Body ground	Always	1 MΩ or Higher
IJ2–4 (–SL) – Body ground	Always	1 MΩ or Higher

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

OK

REPAIR OR REPLACE INSTRUMENT PANEL WIRE

11 CHECK ENGINE ROOM MAIN WIRE(TO B+)



(a) Turn the power switch off.
(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 power switch on (IG).
(f) Measure the voltage according to the value(s) in the table below.

Standard:

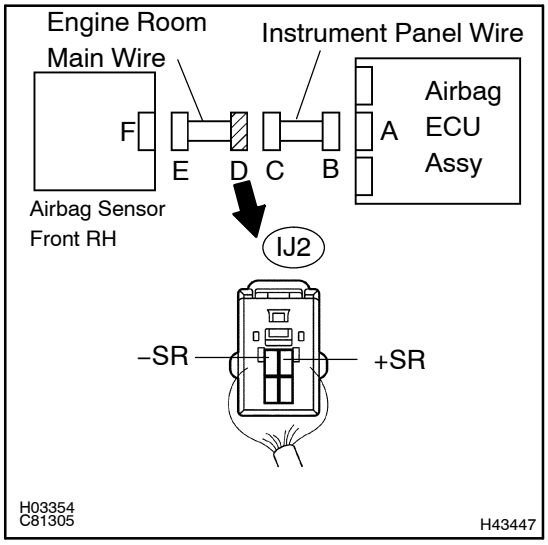
Tester connection	Condition	Specified condition
IJ2–1 (+SR) – Body ground	Power switch is on (IG)	Below 1 V
IJ2–2 (–SR) – Body ground	Power switch is on (IG)	Below 1 V

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

OK

REPAIR OR REPLACE INSTRUMENT PANEL WIRE

12 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:

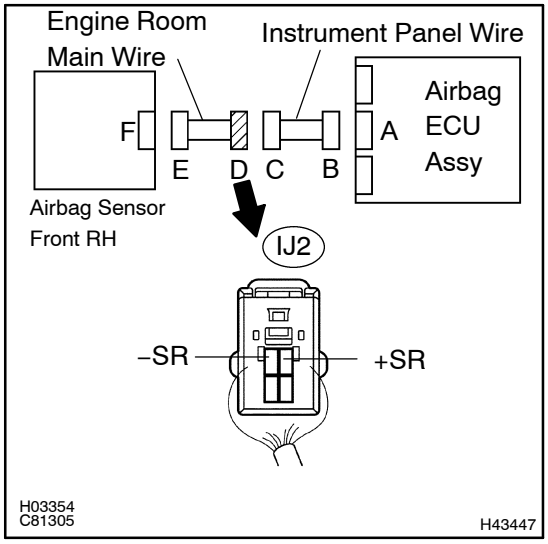
Tester connection	Condition	Specified condition
IJ2–1 (+SR) – IJ2–2 (–SR)	Always	1 MΩ or Higher

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

OK

REPAIR OR REPLACE INSTRUMENT PANEL WIRE

13 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
IJ2–1 (+SR) – Body ground	Always	1 MΩ or Higher
IJ2–2 (–SR) – Body ground	Always	1 MΩ or Higher

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

OK

REPAIR OR REPLACE INSTRUMENT PANEL WIRE