

<b>DTC</b>	<b>B1653/35</b>	<b>Seat Position Airbag Sensor Circuit Malfunction</b>
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**DESCRIPTION**

The seat position sensor circuit consists of the center airbag sensor assembly and the seat position sensor.

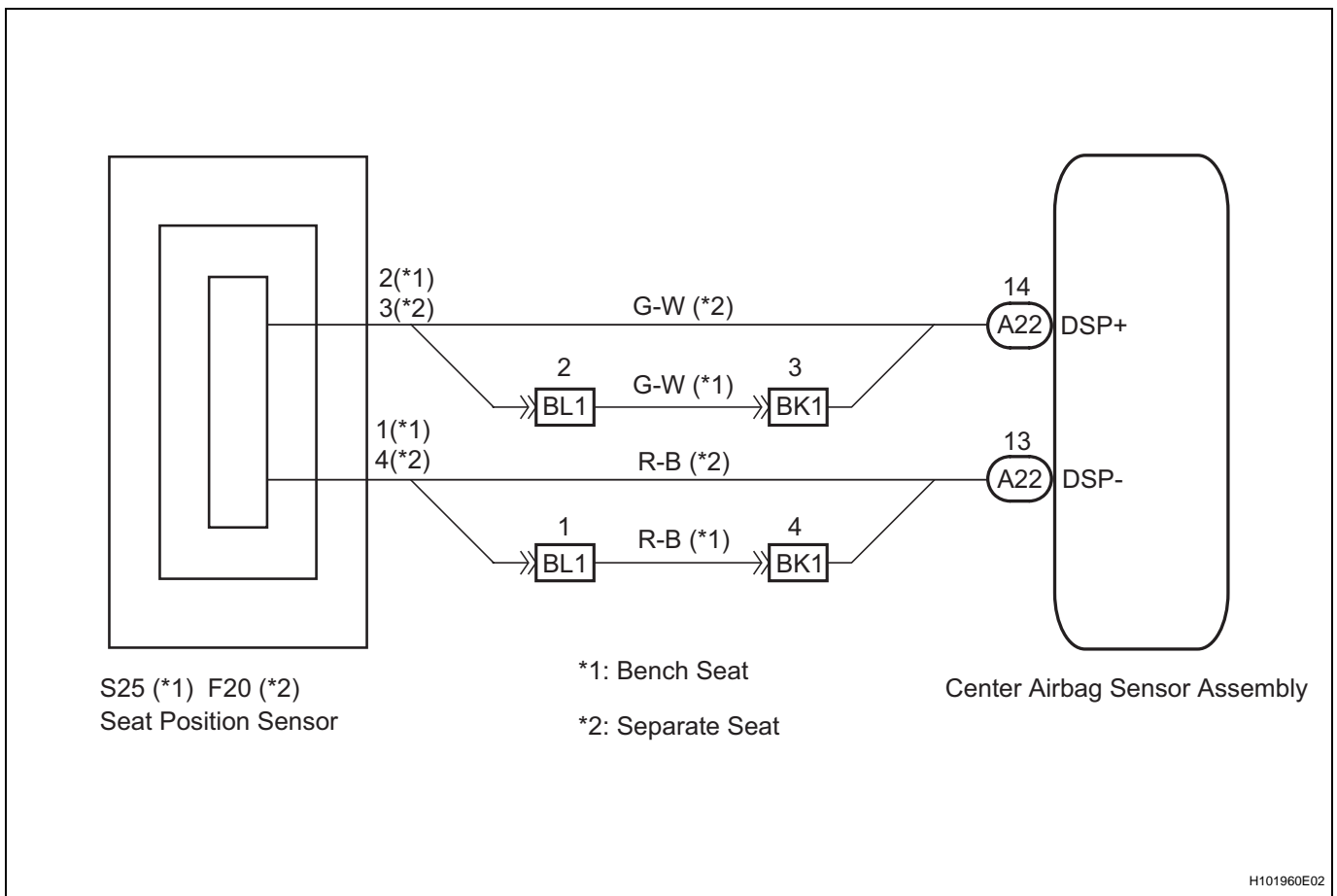
DTC B1653/35 is set when a malfunction is detected in the seat position sensor assembly circuit.

DTC No.	DTC Detecting Condition	Trouble Area
B1653/35	<ul style="list-style-type: none"> <li>The center airbag sensor assembly 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 seat position sensor assembly circuit for 2 seconds.</li> <li>Seat position sensor malfunction</li> <li>Center airbag sensor assembly malfunction</li> </ul>	<ul style="list-style-type: none"> <li>No. 2 floor wire</li> <li>No. 1 seat wire (*1)</li> <li>No. 2 seat wire (*1)</li> <li>Front seat belt inner assembly LH (*2)</li> <li>Seat position sensor</li> <li>Center airbag sensor assembly</li> </ul>

\*1: Bench seat

\*2: Separate seat

**WIRING DIAGRAM**



**RS**

H101960E02

**CAUTION:**

**In order to prevent unexpected airbag deployment, disconnect the following connectors before inspecting parts such as wire harnesses, if the application of tester probes to the center airbag sensor assembly connector is necessary.**

(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 center airbag sensor assembly.
- (d) Disconnect the connectors from the steering pad.
- (e) Disconnect the connector from the front passenger airbag assembly.
- (f) Disconnect the connector from the front seat outer belt assembly LH.
- (g) Disconnect the connector from the front seat outer belt assembly RH.

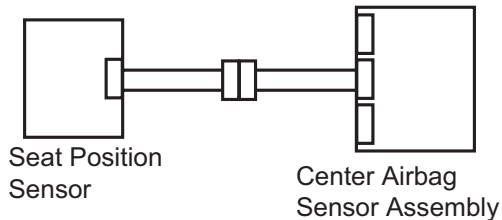
HINT:

Skip the following steps if side and curtain shield airbags are not fitted.

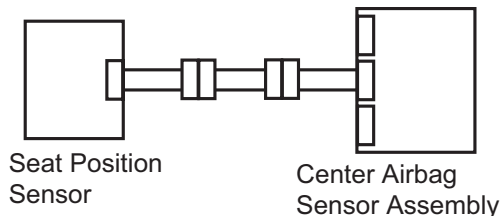
- (h) Disconnect the connector from the front seat airbag assembly LH.
- (i) Disconnect the connector from the front seat airbag assembly RH.
- (j) Disconnect the connector from the curtain shield airbag assembly LH.
- (k) Disconnect the connector from the curtain shield airbag assembly RH.

## 1 CHECK DTC

Separate Seat :

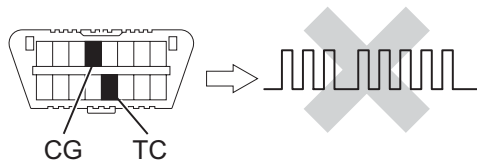


Bench Seat :



DLC3

DTC B1653/35



H102111E01

- (a) Turn the ignition switch to the ON position.
- (b) Clear any DTCs stored in the memory (See page [RS-34](#)).
- (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 for DTCs (See page [RS-34](#)).

**OK:**

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

HINT:

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

**OK**

**USE SIMULATION METHOD TO CHECK**

**NG**

## 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 center airbag sensor assembly and the seat position sensor.

**OK:**  
The connectors are properly connected.

**NG** → **CONNECT CONNECTORS**

**OK**

**3 CHECK CONNECTORS**

- (a) Check that the connectors (on the center airbag sensor assembly side and seat position sensor side) are not damaged (See page IN-34).

**OK:**  
The connectors are not deformed or damaged.

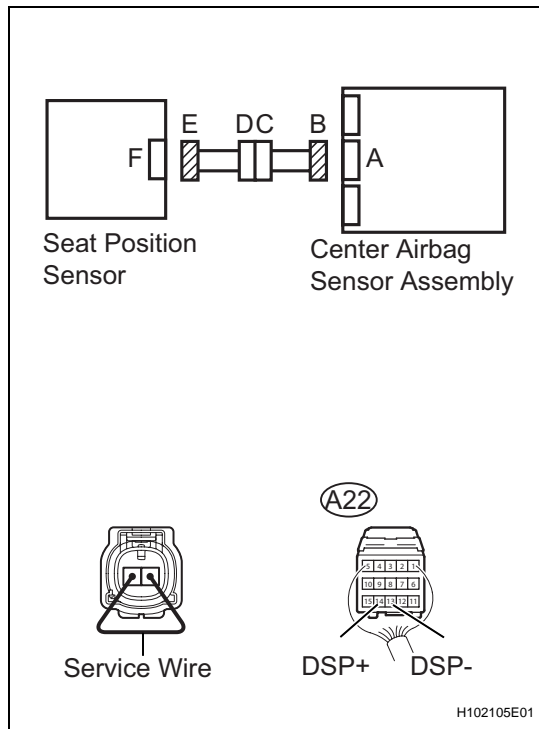
Condition	Proceed to
Normal (separate seat)	A
Normal (bench seat)	B
Abnormal	C

**B** → **Go to step 13**

**C** → **REPAIR OR REPLACE WIRE HARNESS**

**A**

**4 CHECK SEAT POSITION SENSOR CIRCUIT (FOR OPEN)**



- (a) Disconnect the connectors from the center airbag sensor assembly and the seat position sensor.
- (b) Using a service wire, connect 1 and 2 of connector E.

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

**HINT:**  
The connector is not allocated an ID number due to being part of the front seat inner belt assembly LH wire harness.

- (c) Measure the resistance.

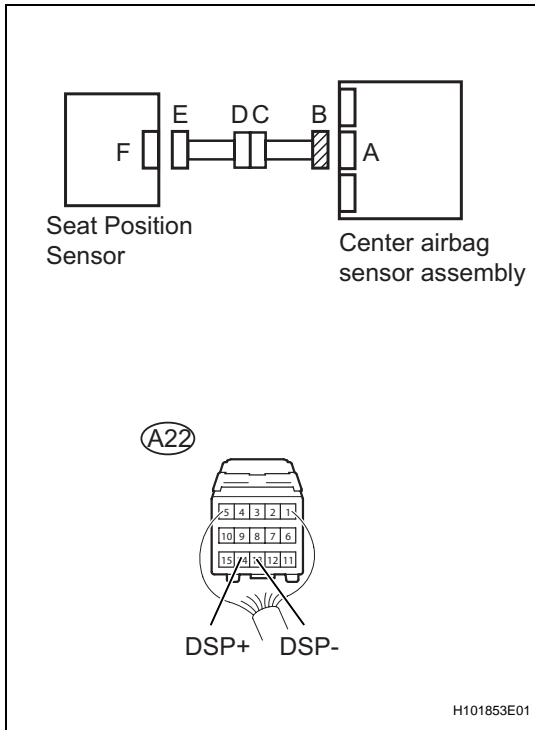
**Standard resistance**

Tester Connection	Condition	Specified Condition
A22-14 (DSP+) - A22-13 (DSP-)	Always	Below 1 Ω

**NG** → **Go to step 9**

**OK**

**5 CHECK SEAT POSITION SENSOR CIRCUIT (FOR SHORT)**



- (a) Disconnect the service wire from connector E.
- (b) Measure the resistance.

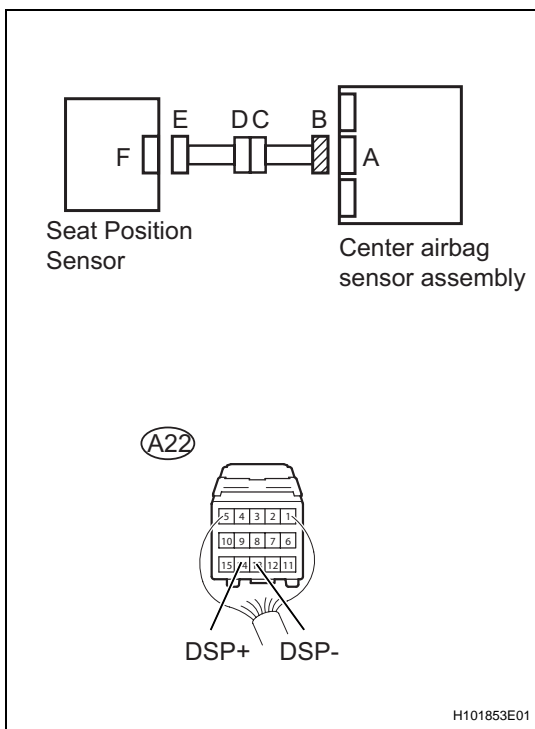
**Standard resistance**

Tester Connection	Condition	Specified Condition
A22-14 (DSP+) - A22-13 (DSP-)	Always	1 MΩ or Higher

**NG** → **Go to step 10**

**OK**

**6 CHECK SEAT POSITION SENSOR 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.

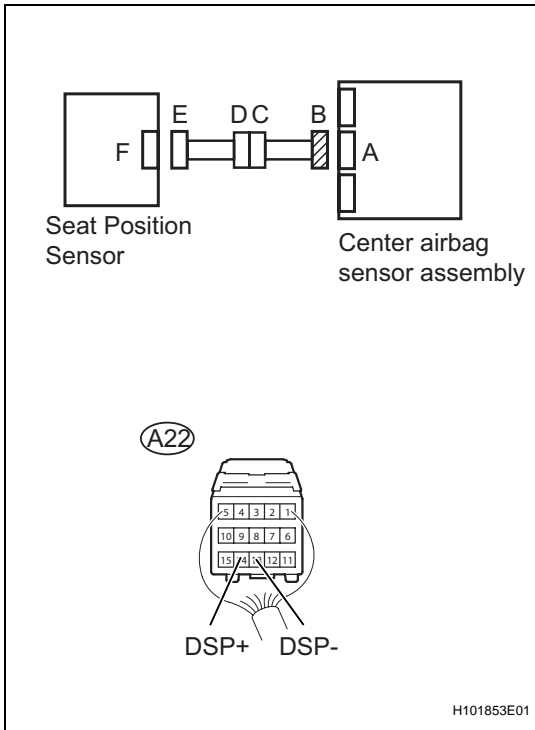
**Standard voltage**

Tester Connection	Condition	Specified Condition
A22-14 (DSP+) - Body ground	Ignition switch ON	Below 1 V
A22-13 (DSP-) - Body ground	Ignition switch ON	Below 1 V

**NG** → **Go to step 11**

**OK**

**7 CHECK SEAT POSITION SENSOR 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.

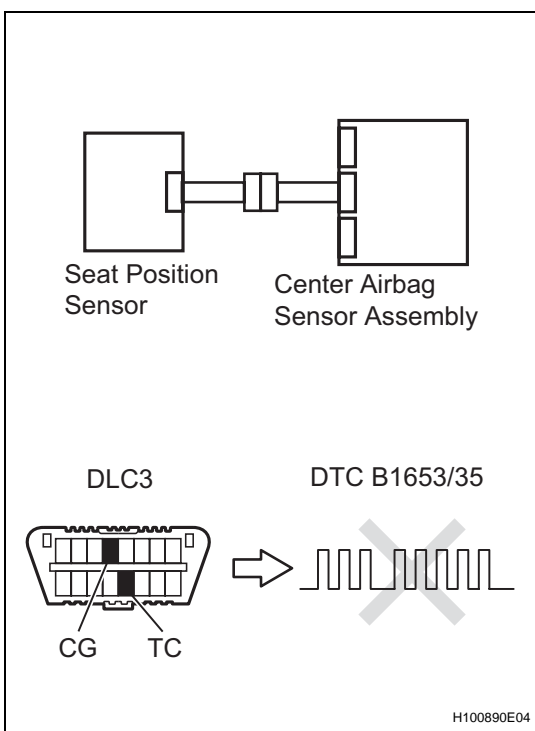
**Standard resistance**

Tester Connection	Condition	Specified Condition
A22-14 (DSP+) - Body ground	Always	1 MΩ or Higher
A22-13 (DSP-) - Body ground	Always	1 MΩ or Higher

**NG** → **Go to step 12**

**OK**

**8 CHECK SEAT POSITION SENSOR**



- (a) Connect the connectors to the center airbag sensor assembly.
- (b) Connect the connector to the seat position sensor.
- (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 any DTCs stored in the memory (See page RS-34).
- (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 for DTCs (See page RS-34).

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

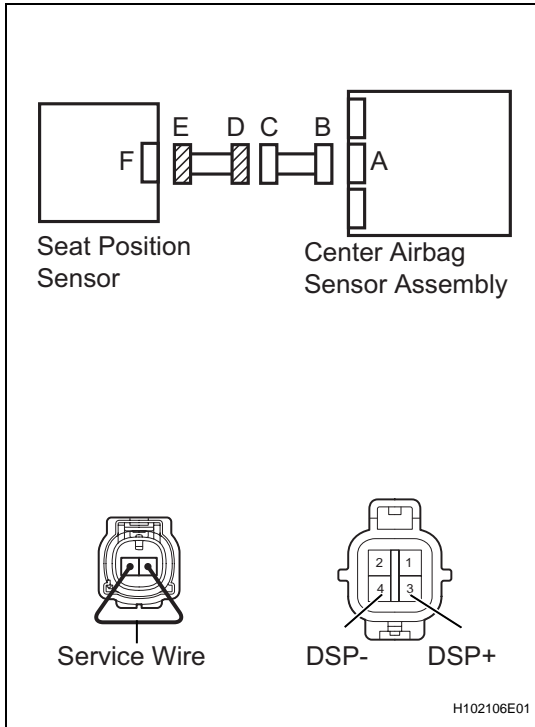
**HINT:**  
 DTCs other than B1653/35 may be output at this time, but they are not related to this check.

**NG** → **Go to step 26**

OK

USE SIMULATION METHOD TO CHECK

9 CHECK SEAT POSITION SENSOR CIRCUIT (FOR OPEN)



(a) Disconnect the front seat inner belt assembly connector from the instrument panel wire.

HINT:

- The service wire has already been inserted into connector E.
  - The connector is not allocated an ID number due to being part of the front seat inner belt assembly LH wire harness.
- (b) Measure the resistance.

**Standard resistance**

Tester Connection	Condition	Specified Condition
3 (DSP+) - 4 (DSP-)	Always	Below 1 Ω

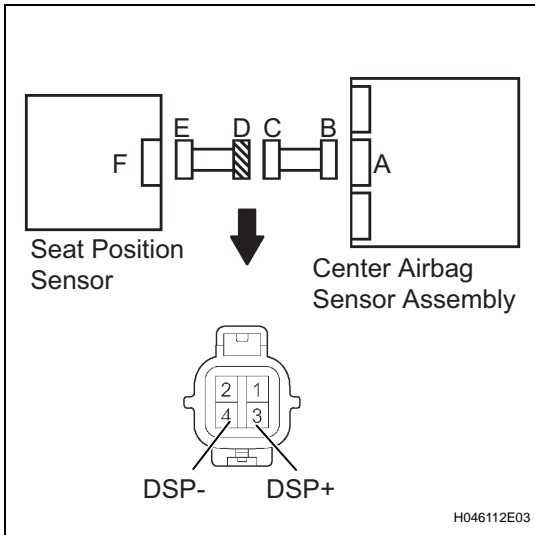
NG

REPAIR OR REPLACE FRONT SEAT INNER BELT ASSEMBLY LH

OK

REPAIR OR REPLACE NO. 2 FLOOR WIRE

**10 CHECK SEAT POSITION SENSOR CIRCUIT (FOR SHORT)**



- (a) Disconnect the front seat inner belt assembly connector from the instrument panel wire.

HINT:

The connector is not allocated an ID number due to being part of the front seat inner belt assembly LH wire harness.

- (b) Disconnect the service wire from connector E.
- (c) Measure the resistance.

**Standard resistance**

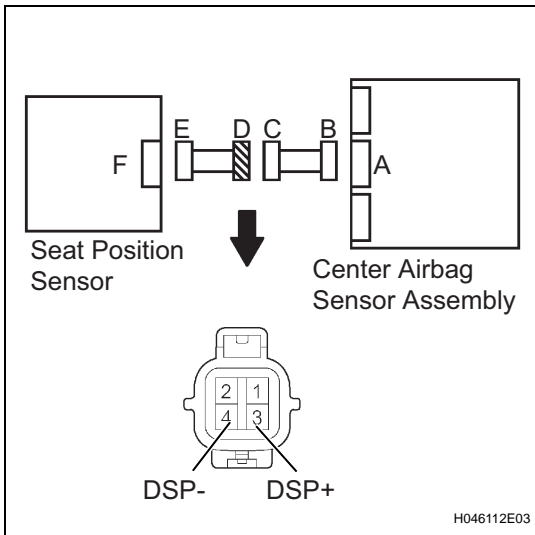
Tester Connection	Condition	Specified Condition
3 (DSP+) - 4 (DSP-)	Always	1 MΩ or Higher

**NG** REPAIR OR REPLACE FRONT SEAT INNER BELT ASSEMBLY LH

**OK**

**REPAIR OR REPLACE NO. 2 FLOOR WIRE**

**11 CHECK SEAT POSITION SENSOR CIRCUIT (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 seat inner belt assembly LH connector from the instrument panel wire.

HINT:

The connector is not allocated an ID number due to being part of the front seat inner belt assembly LH wire harness.

- (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.

**Standard Voltage**

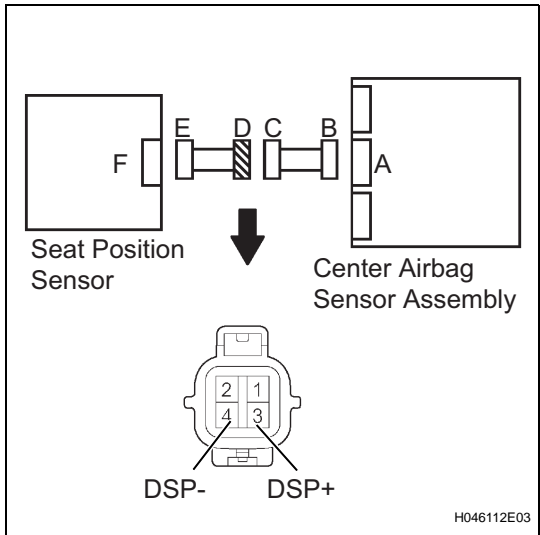
Tester Connection	Condition	Specified Condition
3 (DSP+) - Body ground	Ignition switch ON	Below 1 V
4 (DSP-) - Body ground	Ignition switch ON	Below 1 V

**NG** REPAIR OR REPLACE FRONT SEAT INNER BELT ASSEMBLY LH

**OK**

**REPAIR OR REPLACE NO. 2 FLOOR WIRE**

**12 CHECK SEAT POSITION SENSOR CIRCUIT (TO GROUND)**



(a) Disconnect the front seat inner belt assembly connector from the instrument panel wire.

HINT:

The connector is not allocated an ID number due to being part of the front seat inner belt assembly LH wire harness.

(b) Measure the resistance.

**Standard resistance**

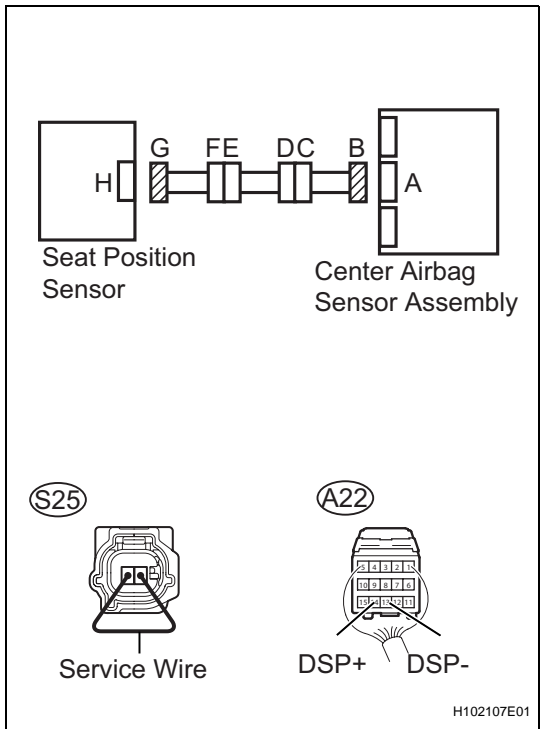
Tester Connection	Condition	Specified Condition
3 (DSP+) - Body ground	Always	1 MΩ or Higher
4 (DSP-) - Body ground	Always	1 MΩ or Higher

**NG** REPAIR OR REPLACE FRONT SEAT INNER BELT ASSEMBLY LH

**OK**

**REPAIR OR REPLACE NO. 2 FLOOR WIRE**

**13 CHECK SEAT POSITION SENSOR CIRCUIT (FOR OPEN)**



(a) Disconnect the connectors from the center airbag sensor assembly and the seat position sensor.

(b) Using a service wire, connect S25-1 and S25-2 of connector G.

NOTICE:

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

(c) Measure the resistance.

**Standard resistance**

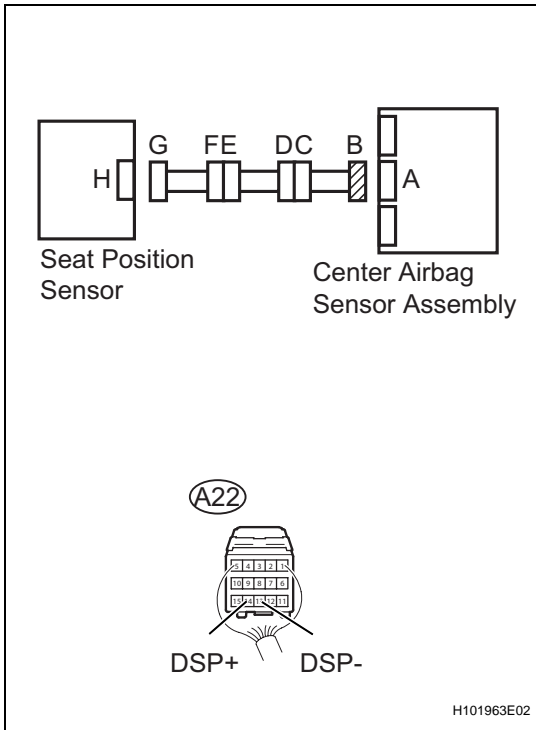
Tester Connection	Condition	Specified Condition
A22-14 (DSP+) - A22-13 (DSP-)	Always	Below 1 Ω

**NG** Go to step 18

**OK**



**14 CHECK SEAT POSITION SENSOR CIRCUIT (FOR SHORT)**



- (a) Disconnect the service wire from connector G.
- (b) Measure the resistance.

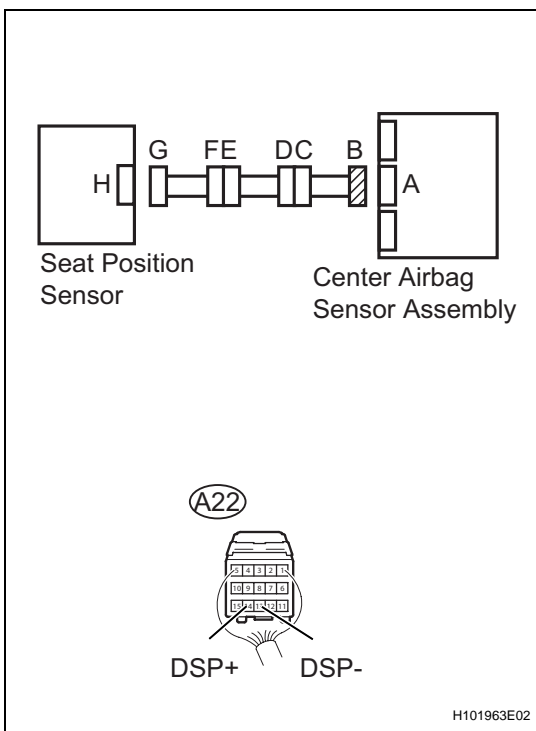
**Standard resistance**

Tester Connection	Condition	Specified Condition
A22-14 (DSP+) - A22-13 (DSP-)	Always	1 MΩ or Higher

**NG** → **Go to step 19**

**OK**

**15 CHECK SEAT POSITION SENSOR CIRCUIT (TO B+)**



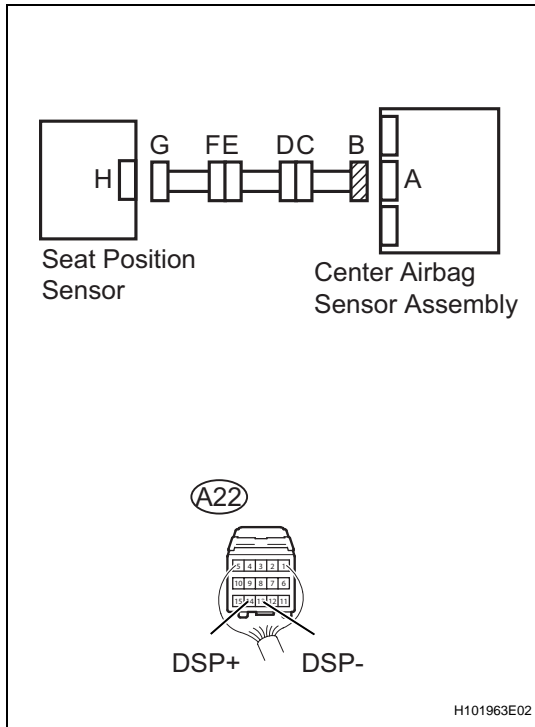
- (a) Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- (b) Turn the ignition switch to the ON position.
- (c) Measure the voltage.

**Standard voltage**

Tester Connection	Condition	Specified Condition
A22-14 (DSP+) - Body ground	Ignition switch ON	Below 1 V
A22-13 (DSP-) - Body ground	Ignition switch ON	Below 1 V

**NG** → **Go to step 20**

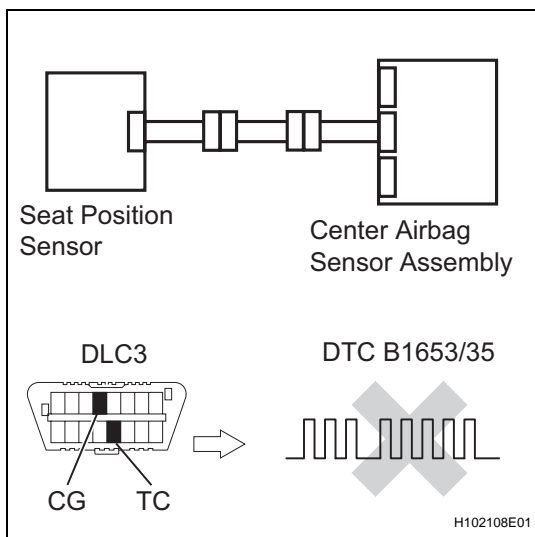
**OK**

**16 CHECK SEAT POSITION SENSOR CIRCUIT (TO GROUND)**

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

**Standard resistance**

Tester Connection	Condition	Specified Condition
A22-14 (DSP+) - Body ground	Always	1 MΩ or Higher
A22-13 (DSP-) - Body ground	Always	1 MΩ or Higher

**NG****Go to step 21****OK****17 CHECK SEAT POSITION SENSOR**

- Connect the connectors to the center airbag sensor assembly.
- Connect the connector to the seat position sensor.
- Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- Turn the ignition switch to the ON position, and wait for at least 60 seconds.
- Clear any DTCs stored in the memory (See page RS-34).
- Turn the ignition switch to the LOCK position.
- Turn the ignition switch to the ON position, and wait for at least 60 seconds.
- Check for DTCs (See page RS-34).

**OK:****DTC B1653/35 is not output.****HINT:**

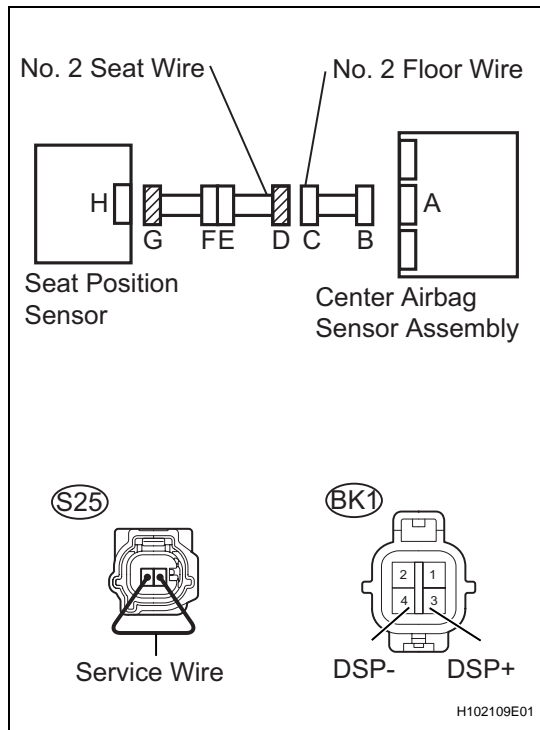
DTCs other than B1653/35 may be output at this time, but they are not related to this check.

**NG****Go to step 26**

OK

USE SIMULATION METHOD TO CHECK

**18 CHECK SEAT POSITION SENSOR CIRCUIT (FOR OPEN)**



(a) Disconnect the No. 2 seat wire connector from the No. 2 floor wire.

HINT:

The service wire has already been inserted into connector G.

(b) Measure the resistance.

**Standard resistance**

Tester Connection	Condition	Specified Condition
BK1-3 (DSP+) - BK1-4 (DSP-)	Always	Below 1 Ω

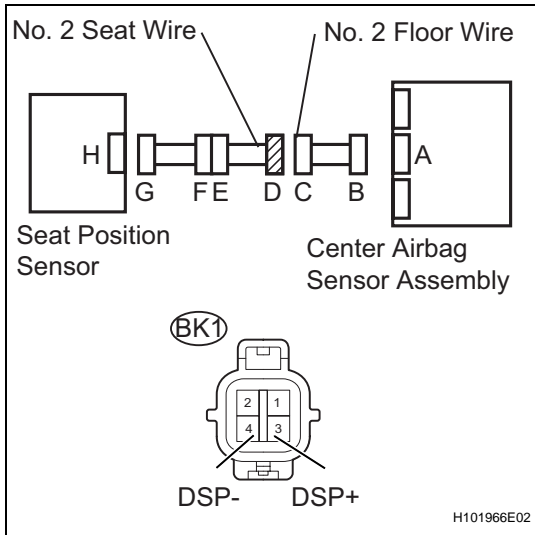
NG

Go to step 22

OK

REPAIR OR REPLACE NO. 2 FLOOR WIRE

**19 CHECK SEAT POSITION SENSOR CIRCUIT (FOR SHORT)**



- (a) Disconnect the No. 2 seat wire connector from the No. 2 floor wire.
  - (b) Measure the resistance.
- Standard resistance**

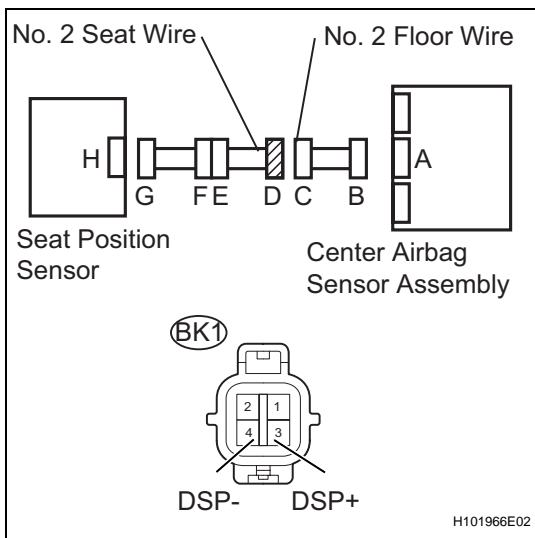
Tester Connection	Condition	Specified Condition
BK1-3 (DSP+) - BK1-4 (DSP-)	Always	1 MΩ or Higher

**NG** → **Go to step 23**

**OK**

**REPAIR OR REPLACE NO. 2 FLOOR WIRE**

**20 CHECK SEAT POSITION SENSOR CIRCUIT (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 No. 2 seat wire connector from the No. 2 floor 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.
- Standard Voltage**

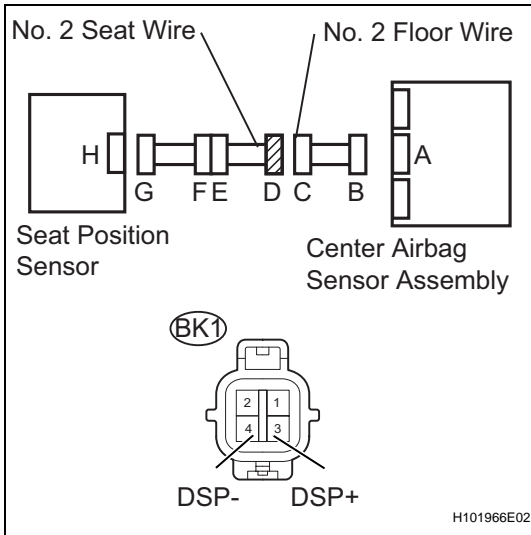
Tester Connection	Condition	Specified Condition
BK1-3 (DSP+) - Body ground	Ignition switch ON	Below 1 V
BK1-4 (DSP-) - Body ground	Ignition switch ON	Below 1 V

**NG** → **Go to step 24**

**OK**

**REPAIR OR REPLACE NO. 2 FLOOR WIRE**

**21 CHECK SEAT POSITION SENSOR CIRCUIT (TO GROUND)**



- (a) Disconnect the No. 2 seat wire connector from the No. 2 floor wire.
- (b) Measure the resistance.

**Standard resistance**

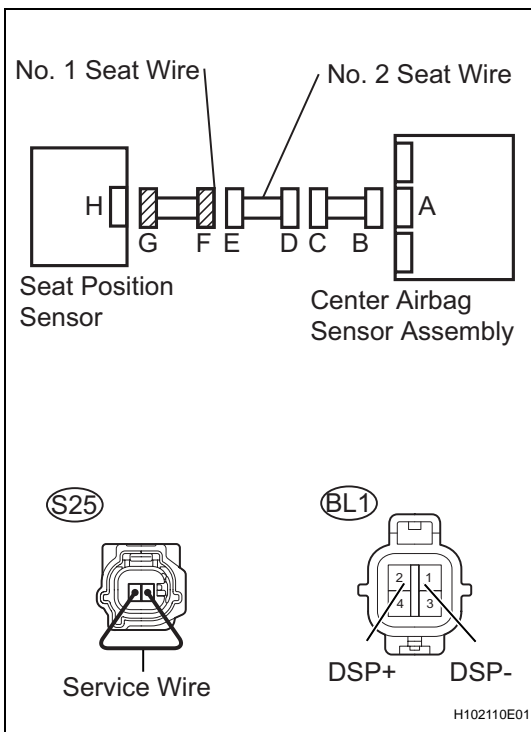
Tester Connection	Condition	Specified Condition
BK1-3 (DSP+) - Body ground	Always	1 MΩ or Higher
BK1-4 (DSP-) - Body ground	Always	1 MΩ or Higher

**NG** → **Go to step 25**

**OK**

**REPAIR OR REPLACE NO. 2 FLOOR WIRE**

**22 CHECK NO.1 SEAT WIRE (FOR OPEN)**



- (a) Disconnect the No. 1 seat wire connector from the No. 2 seat wire.

**HINT:**

The service wire has already been inserted into connector G.

- (b) Measure the resistance.

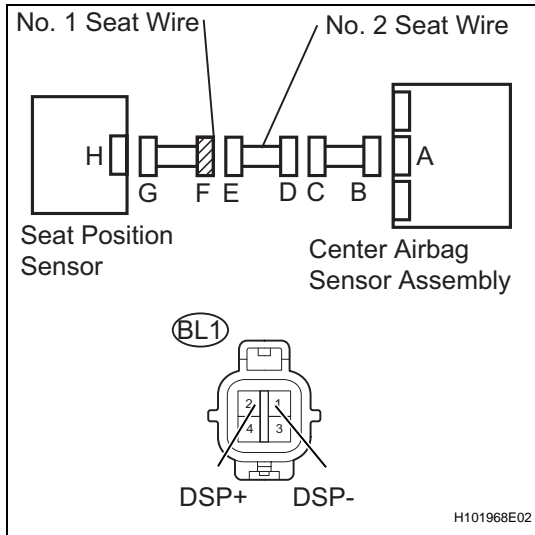
**Standard resistance**

Tester Connection	Condition	Specified Condition
BL1-2 (DSP+) - BL1-1 (DSP-)	Always	Below 1 Ω

**NG** → **REPAIR OR REPLACE NO. 1 SEAT WIRE**

**OK**

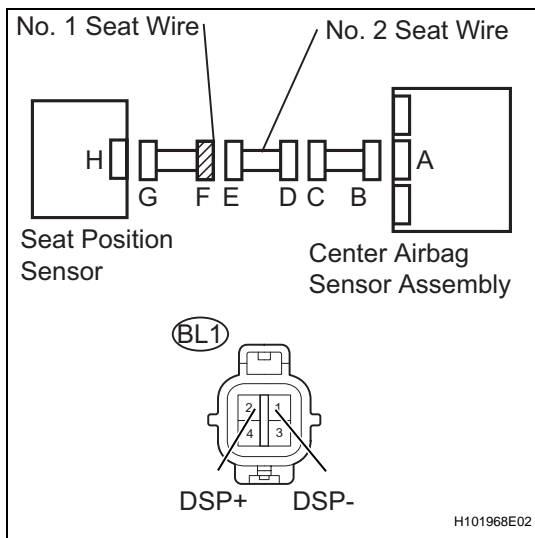
**REPAIR OR REPLACE NO. 2 SEAT WIRE**

**23 CHECK NO.1 SEAT WIRE (FOR SHORT)**

- Disconnect the No. 1 seat wire connector from the No. 2 seat wire.
- Measure the resistance.

**Standard resistance**

Tester Connection	Condition	Specified Condition
BL1-2 (DSP+) - BL1-1 (DSP-)	Always	1 MΩ or Higher

**NG****REPAIR OR REPLACE NO. 1 SEAT WIRE****OK****REPAIR OR REPLACE NO. 2 SEAT WIRE****24 CHECK NO.1 SEAT WIRE (TO B+)**

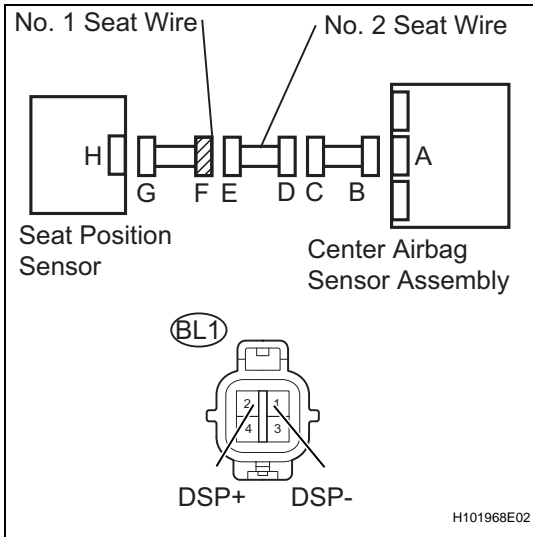
- Turn the ignition switch to the LOCK position.
- Disconnect the negative (-) terminal cable from the battery, and wait for at least 90 seconds.
- Disconnect the No. 1 seat wire connector from the No. 2 seat wire.
- Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- Turn the ignition switch to the ON position.
- Measure the voltage.

**Standard Voltage**

Tester Connection	Condition	Specified Condition
BL1-2 (DSP+) - Body ground	Ignition switch ON	Below 1 V
BL1-1 (DSP-) - Body ground	Ignition switch ON	Below 1 V

**NG****REPAIR OR REPLACE NO. 1 SEAT WIRE****OK****REPAIR OR REPLACE NO. 2 SEAT WIRE**

**25 CHECK NO.1 SEAT WIRE (TO GROUND)**



- (a) Disconnect the No. 1 seat wire connector from the No. 2 seat wire.
- (b) Measure the resistance.

**Standard resistance**

Tester Connection	Condition	Specified Condition
BL1-2 (DSP+) - Body ground	Always	1 MΩ or Higher
BL1-1 (DSP-) - Body ground	Always	1 MΩ or Higher

**NG REPAIR OR REPLACE NO. 1 SEAT WIRE**

**OK**

**REPAIR OR REPLACE NO. 2 SEAT WIRE**

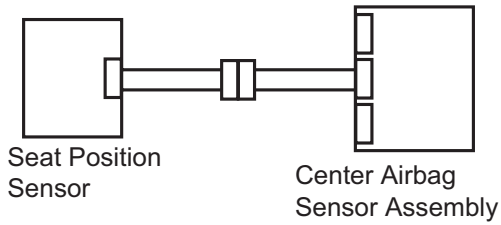
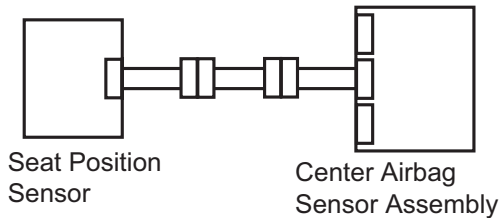
**26 REPLACE SEAT POSITION SENSOR**

- (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 (See page [RS-620](#) or [RS-617](#)).

**HINT:**

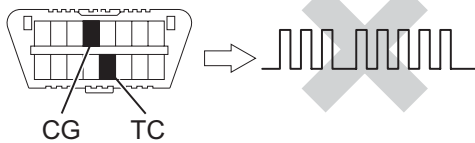
Perform the inspection using parts from a normal vehicle when possible.

**NEXT**

**27 CHECK CENTER AIRBAG SENSOR ASSEMBLY****Separate Seat :****Bench Seat :**

DLC3

DTC B1653/35



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- Connect the negative (-) terminal cable to the battery, and wait for at least 2 seconds.
- Turn the ignition switch to the ON position, and wait for at least 60 seconds.
- Clear any DTCs stored in the memory (See page RS-34).
- Turn the ignition switch to the LOCK position.
- Turn the ignition switch to the ON position, and wait for at least 60 seconds.
- Check for DTCs (See page RS-34).

**OK:****DTC B1653/35 is not output.****HINT:**

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

**NG****REPLACE CENTER AIRBAG SENSOR ASSEMBLY****OK****END**