

## 7. Subaru Select Monitor

### A: OPERATION

#### 1. READ DIAGNOSTIC TROUBLE CODE (DTC)

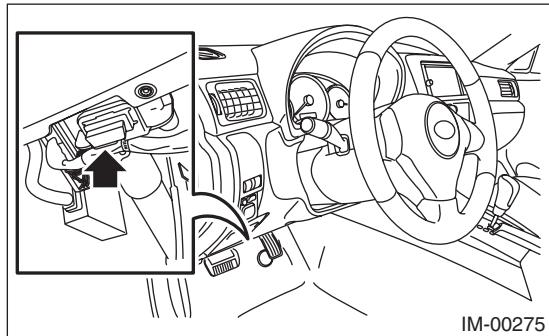
When malfunction of airbag system occurs, the DTC stored in airbag control module will be read out.

1) Prepare the Subaru Select Monitor kit. <Ref. to AB(diag)-8, SPECIAL TOOL, PREPARATION TOOL, General Description.>

2) Connect the diagnosis cable to Subaru Select Monitor.

3) Connect the Subaru Select Monitor to data link connector.

(1) Data link connector is located in the lower portion of instrument panel (on the driver's side).



(2) Connect the diagnosis cable to data link connector.

#### CAUTION:

**Do not connect the scan tools other than the Subaru Select Monitor.**

4) Turn the ignition switch to ON and run the Subaru Select Monitor.

5) On «Main Menu» display, select {Each System Check}.

6) On «System Selection Menu» display, select {Airbag System}.

7) After {Airbag System} is displayed, select [OK].

8) Select the {Diagnostic Code(s) Display} in «Airbag System».

#### NOTE:

- For details concerning the operation procedure, refer to "PC application help for Subaru Select Monitor".

- For details concerning DTCs, refer to List of Diagnostic Trouble Code (DTC). <Ref. to AB(diag)-39, List of Diagnostic Trouble Code (DTC).>

#### 2. CLEAR MEMORY MODE

Clear the DTC stored in the airbag control module after repairing the airbag system. (After the breakdown is recovered, the breakdown code for completed recoveries are read out when the next breakdown occurs if the memory clear work is not performed.)

1) On «Main Menu» display, select {Each System Check}.

2) On «System Selection Menu» display, select {Airbag System}.

3) Select the {Clearing Memory} in «Airbag System».

4) When the "Clear Memory?" is shown on the screen, select the [OK] button.

5) When "Done" is displayed, end the Subaru Select Monitor.

#### NOTE:

For details concerning the operation procedure, refer to "PC application help for Subaru Select Monitor".

### 3. DISPLAY OF STATUS INFORMATION

Check the operating condition of each sensor in the event of malfunction in the seat belt buckle switch, or when the seat belt buckle switch has been replaced.

- 1) On «Main Menu» display, select {Each System Check}.
- 2) On «System Selection Menu» display, select {Airbag System}.
- 3) Select the {Status Data} in «Airbag System».

The following table is for support data.

Item	Display Contents
Seat position sensor LH	—*2
Seat position sensor RH	—*2
Seat belt buckle switch LH	—*6
Seat belt buckle switch RH	Equipped*3/Unequipped*4/Other*5/Initial setting*1/—*6
Passenger's airbag control status	ON*7/OFF*8/Initial Setting*1

\*1: Displayed when it is initial.

\*2: Seat position sensor not supported

\*3: Seat belt fastened

\*4: Seat belt not fastened

\*5: Displayed when data other than belt fastened or not fastened, such as breakdowns is input.

\*6: Seat belt buckle switch not supported

\*7: Passenger's airbag operating state

\*8: Passenger's airbag non-operating state

#### NOTE:

For details concerning the operation procedure, refer to “PC application help for Subaru Select Monitor”.

## Subaru Select Monitor

## AIRBAG SYSTEM (DIAGNOSTICS)

## **B: INSPECTION**

## 1. COMMUNICATION FOR INITIALIZING IMPOSSIBLE

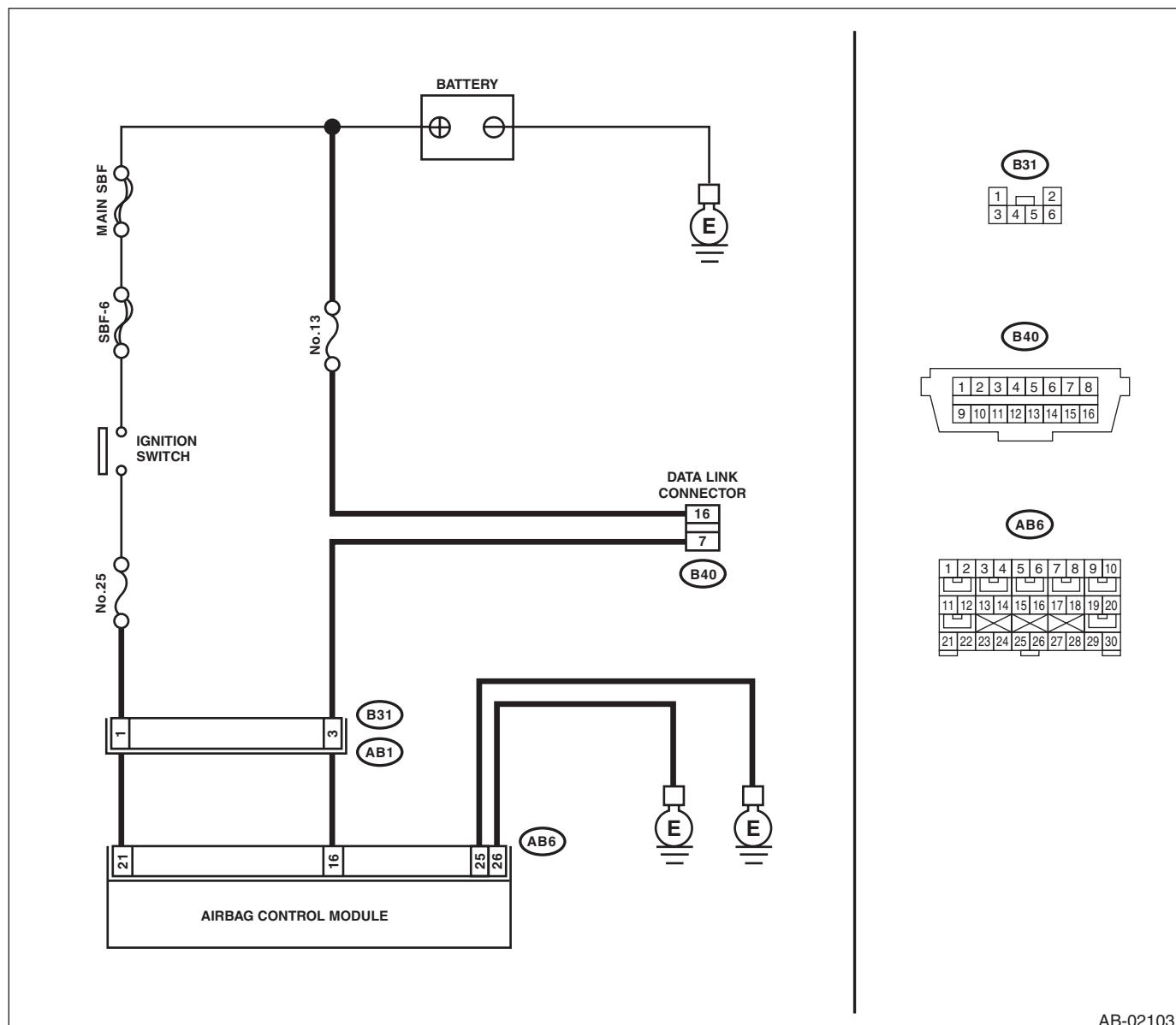
## DETECTING CONDITION:

## Defective harness connector

## **TROUBLE SYMPTOM:**

Communication is impossible between the airbag control module and the Subaru Select Monitor.

## WIRING DIAGRAM:



Step	Check	Yes	No
<b>1 CHECK IGNITION SWITCH.</b>	Is the ignition switch ON?	Go to step 2.	Turn the ignition switch to ON, and select the airbag mode using the Subaru Select Monitor.
<b>2 CHECK BATTERY.</b> 1) Turn the ignition switch to OFF. 2) Measure the battery voltage.	Is the voltage 11 V or more?	Go to step 3.	Charge or replace the battery.

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## AIRBAG SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>3 CHECK BATTERY TERMINAL.</b>	Is there poor contact at battery terminal?	Repair or tighten the battery terminal.	Go to step 4.
<b>4 CHECK SUBARU SELECT MONITOR COMMUNICATION.</b> 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, check whether communication to other systems can be executed normally.	Is the system name displayed on Subaru Select Monitor?	Go to step 11.	Go to step 5.
<b>5 CHECK SUBARU SELECT MONITOR.</b>	Is Subaru Select Monitor powered on?	Go to step 7.	Go to step 6.
<b>6 CHECK FUSE.</b> Remove fuse No. 13 from the fuse & relay box, and perform visual inspection.	Is the fuse OK?	Repair the harness between the battery and the data link connector.	Replace the fuse. If the fuse is blown out again, check the power supply circuit.
<b>7 CHECK AIRBAG CONTROL MODULE CONNECTOR.</b> 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Confirm that the connectors of airbag control module (AB6, AB17, AB18) are securely connected.	Is the connector of the airbag control module securely connected?	Go to step 8.	Connect the connector of the airbag control module.
<b>8 CHECK SUBARU SELECT MONITOR COMMUNICATION.</b> 1) Disconnect the airbag control module connector. 2) Connect the battery ground terminal. 3) Turn the ignition switch to ON. 4) Check whether communication to other systems can be executed normally.	Is the system name displayed on Subaru Select Monitor?	Replace the airbag control module. <Ref. to AB-22, Airbag Control Module.>	Go to step 9.
<b>9 CHECK HARNESS CONNECTOR BETWEEN EACH CONTROL MODULE AND DATA LINK CONNECTOR.</b> 1) Turn the ignition switch to OFF. 2) Disconnect the airbag control module, VDCCM&H/U, body integrated unit, ECM, and TCM. 3) Measure the resistance between data link connector and chassis ground. <i>Connector &amp; terminal (B40) No. 7 — Chassis ground:</i>	Is the resistance 1 MΩ or more?	Go to step 10.	Repair the harness and connector between each control module and data link connector. (Replace the entire harness if repair is necessary for airbag harness.)
<b>10 CHECK OUTPUT SIGNAL TO THE AIRBAG CONTROL MODULE.</b> 1) Turn the ignition switch to ON in the condition of step 9. 2) Measure the voltage between data link connector and chassis ground. <i>Connector &amp; terminal (B40) No. 7 (+) — Chassis ground (-):</i>	Is the voltage less than 1 V?	Repair each control module.	Repair the harness and connector between each control module and data link connector. (Replace the entire harness if repair is necessary for airbag harness.)
<b>11 CHECK FUSE.</b> Remove fuse No. 25 from the fuse & relay box, and perform visual inspection.	Is the fuse OK?	Go to step 12.	Replace the fuse. If the fuse is blown out again, check the power supply circuit.

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## AIRBAG SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<b>12 CHECK AIRBAG CONTROL MODULE CONNECTOR.</b> 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Confirm that the connectors of airbag control module (AB6, AB17, AB18) are securely connected.	Is the connector of the airbag control module securely connected?	Go to step 13.	Connect the connector of the airbag control module.
<b>13 CHECK THE HARNESS BETWEEN THE AIRBAG CONTROL MODULE AND DATA LINK CONNECTOR.</b> 1) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 2) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 3) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 4) Measure the resistance between connector (4AG) in the test harness AG and the data link connector. <i>Connector &amp; terminal (4AG) No. 1 — (B40) No. 7:</i>	Is the resistance less than 10 $\Omega$ ?	Go to step 14.	Repair the harness between the airbag control module and the data link connector. Or replace the airbag main harness along with the bulkhead harness.
<b>14 CHECK POWER SUPPLY CIRCUIT.</b> 1) Turn the ignition switch to ON. 2) Measure the voltage between connector (2AG) in the test harness AG and chassis ground. <i>Connector &amp; terminal (2AG) No. 1 (+) — Chassis ground (-):</i>	Is the voltage 10 V or more?	Go to step 15.	Repair the harness between the airbag control module and the battery. Or replace the airbag main harness along with the bulkhead harness.
<b>15 CHECK BETWEEN AIRBAG CONTROL MODULE AND CHASSIS GROUND.</b> 1) Turn the ignition switch to OFF. 2) Measure the resistance between connector (2AG) in the test harness AG and chassis ground. <i>Connector &amp; terminal (2AG) No. 4 — Chassis ground: (2AG) No. 3 — Chassis ground:</i>	Is the resistance less than 10 $\Omega$ ?	Go to step 16.	Repair the harness between the airbag control module and the chassis ground. Or replace the airbag main harness along with the bulkhead harness.
<b>16 CHECK POOR CONTACT OF CONNECTOR.</b>	Is there poor contact of the control module power supply, ground circuit and data link connector?	Repair the connector. (For airbag system connectors, do not repair but replace the entire harness.)	Replace the airbag control module. <Ref. to AB-22, REMOVAL, Airbag Control Module.>