

# Diagnostic Procedure with Diagnostic Trouble Code (DTC)

## OCCUPANT DETECTION SYSTEM (DIAGNOSTICS)

### 14. Diagnostic Procedure with Diagnostic Trouble Code (DTC)

#### A: DTC 2A ODS CALIBRATION ERROR

##### DTC DETECTING CONDITION:

System calibration (Rezeroing) was not completed normally.

Step	Check	Yes	No
<b>1</b> <b>PERFORM RE-ZEROING.</b> Perform the system calibration using Subaru Select Monitor. <Ref. to OD(diag)-14, SYSTEM CALIBRATION (REZEROING), OPERATION, Subaru Select Monitor.>	Is the system calibration completed normally?	Finish the diagnosis.	Follow the system calibration procedures. <Ref. to OD(diag)-14, SYSTEM CALIBRATION (REZEROING), OPERATION, Subaru Select Monitor.>

#### B: DTC 2B ODS SYSTEM WRONG PARTS

##### DTC DETECTING CONDITION:

- Wrong airbag control module is installed.
- Wrong occupant detection system is installed.

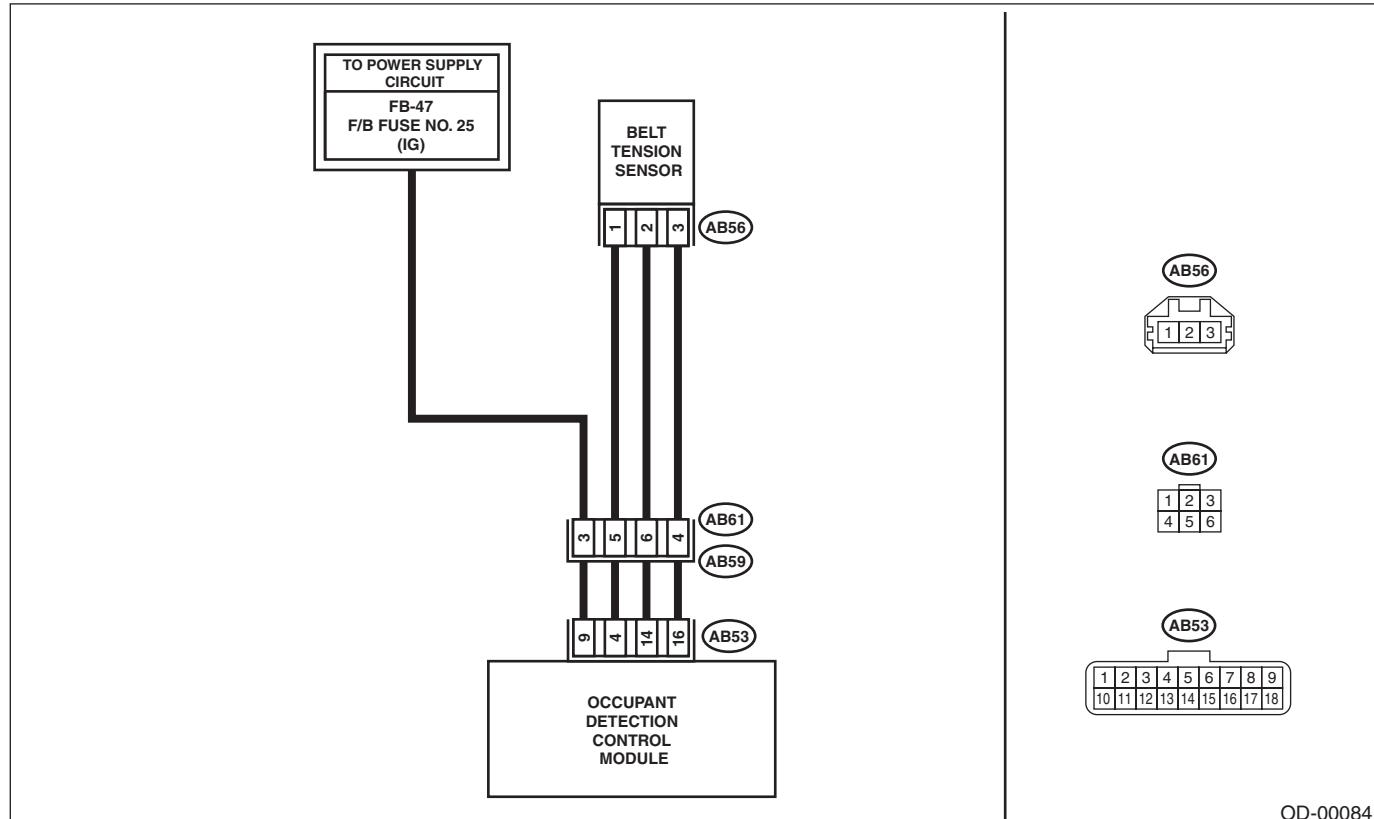
Step	Check	Yes	No
<b>1</b> <b>CHECK OCCUPANT DETECTION SYSTEM.</b> 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the passenger's seat frame assembly. <Ref. to SE-7, REMOVAL, Front Seat.> <Ref. to SE-10, PASSENGER'S SEAT, DISASSEMBLY, Front Seat.> 3) Connect the ground cable to battery. 4) Connect Subaru Select Monitor to the vehicle and perform the system calibration. <Ref. to OD(diag)-14, SYSTEM CALIBRATION (REZEROING), OPERATION, Subaru Select Monitor.>	Did the system calibration complete properly?	Finish the diagnosis.	Go to step 2.
<b>2</b> <b>CHECK AIRBAG CONTROL SYSTEM.</b> 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the airbag control module. <Ref. to AB-20, REMOVAL, Airbag Control Module.> 3) Connect the ground cable to battery. 4) Connect Subaru Select Monitor to the vehicle and perform the system calibration. <Ref. to OD(diag)-14, SYSTEM CALIBRATION (REZEROING), OPERATION, Subaru Select Monitor.>	Did the system calibration complete properly?	Finish the diagnosis.	Check between the occupant detection control module and airbag control module.

### C: DTC 2C BELT TENSION SENSOR FAILURE

#### DTC DETECTING CONDITION:

- Passenger's seat belt tension sensor is faulty.
- Airbag main harness circuit is open or shorted.
- Occupant detection control module is faulty.

#### WIRING DIAGRAM:



Step	Check	Yes	No
1 <b>CHECK POOR CONTACT OF CONNECTORS.</b> Check for poor contact of the connectors between the occupant detection control module and belt tension sensor.	Is there poor contact?	Reconnect the connector. If the fault is not fixed, replace the airbag harness.	Go to step 2.
2 <b>CHECK BELT TENSION SENSOR.</b> 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the belt tension sensor connector (AB56) from the airbag harness. 3) Connect the test harness AC to the connector (AB56). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for approximately 6 seconds and go off?	Replace the seat belt outer. <Ref. to SB-18, OUTER SEAT BELT ASSEMBLY, REMOVAL, Front Seat Belt.>	Go to step 3.

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Step	Check	Yes	No
<b>3 CHECK AIRBAG HARNESS.</b> 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the test harness AC from the belt tension sensor connector (AB56). 3) Connect the test harness AD (1AD) to the connector (AB56). 4) Disconnect the airbag harness connector (AB61), and connect the connector (1AB) in test harness AB. 5) Measure the resistance between test harness terminals. <b>Connector &amp; terminal</b> <b>(2AB) No. 5 — (2AD) No. 1:</b> <b>(2AB) No. 4 — (2AD) No. 3:</b> <b>(2AB) No. 6 — (2AD) No. 2:</b>	Is the resistance less than $10\ \Omega$ ?	Go to step 4.	Replace the airbag harness along with chassis harness.
<b>4 CHECK AIRBAG HARNESS.</b> Measure the resistance between test harness terminals, and between test harness terminal and chassis ground. <b>Connector &amp; terminal</b> <b>(2AB) No. 4 — (2AD) No. 1:</b> <b>(2AB) No. 4 — (2AD) No. 2:</b> <b>(2AB) No. 4 — chassis ground:</b> <b>(2AB) No. 5 — (2AD) No. 2:</b> <b>(2AB) No. 5 — chassis ground:</b>	Is the resistance $1\ M\Omega$ or more?	Go to step 5.	Replace the airbag harness along with chassis harness.
<b>5 CHECK AIRBAG HARNESS.</b> 1) Connect the battery ground terminal and turn the ignition switch to ON. 2) Measure the voltage between test harness and chassis ground. <b>Connector &amp; terminal</b> <b>(2AD) No. 1 (+) — Chassis ground (-):</b> <b>(2AD) No. 3 (+) — Chassis ground (-):</b>	Is the voltage 1 V or less?	Replace the airbag harness along with chassis harness.	Check the seat harness, and if any fault is found, replace the seat harness. If no fault is found in the seat harness, replace the seat cushion frame assembly. <Ref. to SE-10, PASSENGER'S SEAT, DISASSEMBLY, Front Seat.>

## D: DTC 27 ODS COMMUNICATION ERROR

Perform the diagnosis following diagnostic procedure for airbag system. <Ref. to AB(diag)-54, DTC 27 ODS COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

### E: DTC 29 ODS FAILURE

#### DTC DETECTING CONDITION:

- Occupant detection sensor is faulty.
- Occupant detection control module is faulty.
- Occupant detection harness is faulty.
- Rear airbag harness is faulty.
- Fuse No. 25 (in joint box) is blown.

Step	Check	Yes	No
<b>1</b> <b>CHECK POOR CONTACT OF CONNECTORS.</b> Check for poor contact of the connectors between the occupant detection control module and airbag control module.	Is there poor contact?	Reconnect the connector. If the fault is not fixed, replace the airbag harness.	Go to step <b>2</b> .
<b>2</b> <b>CHECK DTC.</b> Read diagnostic trouble code (DTC) for the airbag system.	Is "2C Belt Tension Sensor failure" or "37 Buckle Switch failure" displayed in the diagnostics code?	Perform the diagnosis according to each DTC.	Check the seat harness, and if any fault is found, replace the seat harness. If the fault is not fixed, replace the occupant detection system. <Ref. to SE-10, PASSENGER'S SEAT, DISASSEMBLY, Front Seat.>

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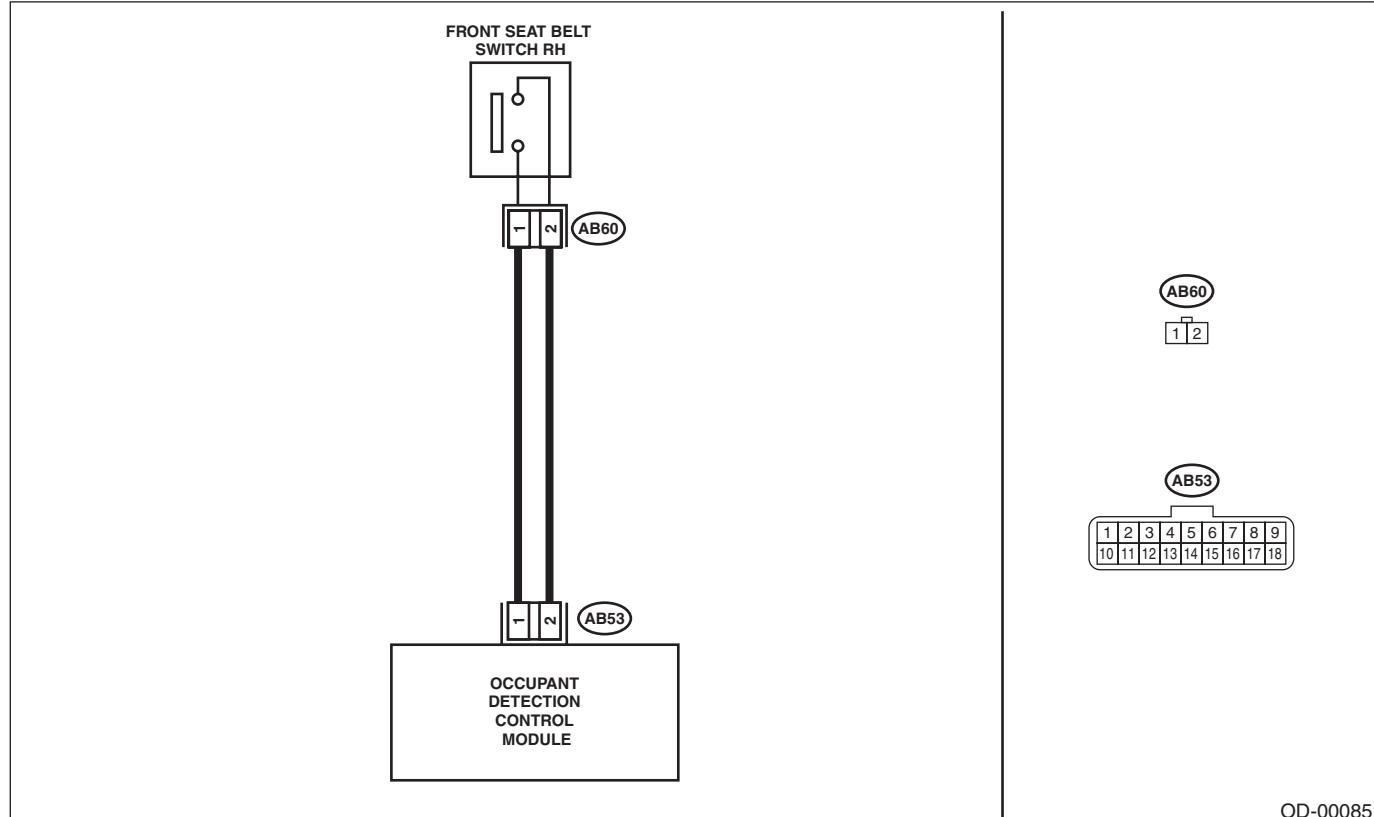
## OCCUPANT DETECTION SYSTEM (DIAGNOSTICS)

### F: DTC 37 BUCKLE SWITCH RH FAILURE

#### DTC DETECTING CONDITION:

- Passenger's buckle switch circuit is open, shorted or shorted to ground.
- Seat harness circuit is open, shorted or shorted to ground.
- Occupant detection control module is faulty.

#### WIRING DIAGRAM:



Step	Check	Yes	No
1 <b>CHECK POOR CONTACT OF CONNECTORS.</b> Check for poor contact of the connectors between the occupant detection control module and buckle switch.	Is there poor contact?	Reconnect the connector. If the fault is not fixed, replace the airbag harness.	Go to step 2.
2 <b>CHECK BUCKLE SWITCH.</b> 1) Turn the ignition switch to OFF, disconnect the battery ground terminal, and wait for 60 seconds. 2) Disconnect the buckle switch connector (AB60). 3) Connect the test harness AE and test harness Y to buckle switch connector (AB60). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the buckle switch. <Ref. to SB-18, INNER SEAT BELT ASSEMBLY, REMOVAL, Front Seat Belt.>	Check the seat harness, and if any fault is found, replace the seat harness. If the fault is not fixed, replace the occupant detection system.

# SEAT BELT SYSTEM

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