

ATTENTION:

- GENERAL MANAGER
- PARTS MANAGER
- CLAIMS PERSONNEL
- SERVICE MANAGER

IMPORTANT - All Service Personnel Should Read and Initial in the boxes provided, right.



QUALITY DRIVEN® SERVICE

SERVICE INFORMATION

APPLICABILITY: 2010-14MY Legacy and Outback Models

NUMBER: 07-84-14R

SUBJECT: Revised B1650 Diagnostics and ODS Rezeroing Procedure

DATE: 03/13/14

REVISED: 06/07/19

INTRODUCTION

This bulletin provides clearer steps for completing the Occupant Detection System (ODS) rezeroing (system calibration) procedure along with a revised diagnostic chart for DTC B1650 (ODS Failure).

NOTE: Although the Service Manual uses these terms interchangeably throughout ODS diagnosis, the meaning of the terms “rezeroing”, “rezero” or “system calibration” is all the same.

SERVICE PROCEDURE / INFORMATION

12. System Calibration (Rezeroing)

A: OPERATION

IMPORTANT: When replacing the ODS, or removing and disassembling the passenger’s seat for any reason, (this includes, but is not limited to seat cover replacement), the rezeroing procedure must **ALWAYS** be performed after reinstalling the seat in the vehicle. The rezeroing procedure is not a “Stand Alone” operation.

Confirm no aftermarket devices are connected to the vehicle. If the DTC is a result of the presence of an aftermarket device, advise the customer to remove the device from the vehicle to avoid possible interference with the ODS function.

[VEHICLE PREPARATION]

- Park empty vehicle on a level surface.
- Check that seat temperature is in a range from 0 to 40°C (32 to 104°F).
- Remove any weighty objects from the vehicle.
- Check and adjust the following items on the vehicle:
 - Verify that all ODS-related harnesses and connectors are fully seated.
 - Verify that the seat assembly is correctly installed in the vehicle.
 - Adjust the seat backrest to be fully upright.
 - Adjust the seat slide position all the way back.



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CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

Subaru Service Bulletins are intended for use by professional technicians ONLY. They are written to inform those technicians of conditions that may occur in some vehicles, or to provide information that could assist in the proper servicing of the vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do the job correctly and safely. If a condition is described, DO NOT assume that this Service Bulletin applies to your vehicle, or that your vehicle will have that condition.

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The international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and regulations.

- Sit on the seat cushion to smooth the seat surface.
- Exit the seat.
- Do not place anything on the top of the seat cushion.
- Check that the passenger's seat belt is NOT inserted into the buckle and is fully retracted.

NOTE: If the vehicle has been parked outside in temperatures outside the 0° to 40° C (32°-104° F) range, bring the vehicle into an area within this temperature range, lower all windows and allow temperature to stabilize. The rezeroing procedure will not be successful if the ODS system is outside of this range during calibration.

1. Connect the SSMIII and turn the ignition switch ON.
2. On «Main Menu» display, select {Each System Check}.
3. On «System Selection Menu» display, select {Air Bag System}.
4. On the {Air Bag System} display, select {Diagnostic Code(s) Display}.
5. Make sure that none of the following DTCs are current or in memory:
2010 to 2012MY: 27, 29, 2A, 2C, 37 **2013 to 2014MY:** B1650, B1655, B16EE, B16EF

If any of these DTCs are current or in memory, read the DTC of the airbag system, and perform the diagnosis while referring to List of Diagnostic Trouble Code (DTC) in the applicable Service Manual.

6. On «Main Menu» display, select {Each System Check}.
7. On «System Selection Menu» display, select {Occupant Detection System}.
8. On the {Occupant Detection System} display, select {Rezeroing}.

NOTE: DO NOT TOUCH THE PASSENGER SEAT OR ROCK THE VEHICLE until the rezeroing procedure is completed. If you have touched the seat, even if only once, re-perform the steps from the beginning.

9. Follow to SSMIII screen to perform the rezeroing procedure.

NOTE: When the «Re-zeroing Empty the passenger seat» is displayed, make sure that the passenger's seat is empty and airbag "OFF" indicator is illuminated. After verifying the condition, TURN IGNITION OFF and, within 10 seconds, TURN IGNITION ON again, then select [OK].

10. When the rezeroing procedure completes normally, the «Re-zeroing is successfully completed» is displayed. Turn the ignition switch to OFF to finish the rezeroing procedure.
11. During the rezeroing procedure, if «Rezeroing is unsuccessful, See service manual» is displayed, Press "OK", and turn the ignition switch to OFF once and wait for a while. Please repeat the procedure from step 1), making sure to follow each step carefully.

NOTE: There is no limit to the number of rezeroing attempts. If rezeroing is unsuccessful, there is a possibility that the procedure was not completed correctly.

REMINDER: If are any current or stored DTCs in the ODS system, the rezeroing procedure will **NOT** be successful. Repair any faults following the procedures outlined in the applicable Service Manual then perform the rezeroing procedure.

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- The new B1650 diagnostic steps are indicated in RED below.

A: DTC B1650 ODS FAILURE

DTC DETECTING CONDITION:

- Occupant detection sensor is faulty.
- Occupant detection control module is faulty.
- Occupant detection harness is faulty.
- Rear airbag harness (RH) is faulty.
- Communication to occupant detection control module and airbag control module is faulty.
- Airbag control module is faulty.

- Fuse No. 25 (in fuse box) is blown out.
- System calibration (Rezeroing) is unsuccessful.

2 Newly Added Steps

CAUTION:

Before performing diagnosis, refer to “CAUTION” in “General Description” <Ref. to AB (dag)-4. Caution, General Description.>

Wiring Diagram:

Occupant Detection System <Ref. to WI-227, WIRING DIAGRAM, occupant Detection System.>

STEP	CHECK	YES	NO
1 CHECK DTC. Read diagnostic trouble code (DTC) for the airbag system.	Is another DTC displayed?	Perform the diagnosis according to DTC	Go to step 2.
2 CHECK DTC. POOR CONTACT OF CONNECTORS. Check for poor contact of the connectors between the occupant detection control module and the airbag control module.	Is there poor contact?	Reconnect the connectors. If defective is not improved, replace the airbag rear harness along with the body harness or the occupant detection harness (Seat harness)	Go to step 3.
3 PERFORM RE-ZEROING. Perform system calibration using the Subaru Select Monitor. <Ref. s017909> <div style="border: 1px solid black; padding: 2px; display: inline-block;">Newly Added Step</div>	Did the system calibration complete properly?	Turn the ignition switch to OFF once and turn it to ON again. It is confirmed to have turned off the airbag warning lamp. If it does not turn off, Go to step 4.	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-**, PASSENGER'S SEAT, DISASSEMBLY, Front Seat.>

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STEP	CHECK	YES	NO
<p>4 CHECK AIRBAG REAR HARNESS.</p> <p>1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more.</p> <p>2) Disconnect the connectors (AB6, AB17, AB18) from airbag control module.</p> <p>3) Disconnect the connectors (AB59) and (AB53) under the passenger's seat.</p> <p>4) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, AB18).</p> <p>NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG).</p> <p>5) Connect the connector (1AD) in the test harness AD to the connector (AB53).</p> <p>6) Measure the resistance between connector (6AG) or (5AG) in the test harness AG and connector (2AD) in the test harness AD.</p> <p>Connector & terminal Sedan model (5AG) No. 3 — (2AD) No. 2: (5AG) No. 8 — (2AD) No. 3:</p> <p>OUTBACK model (6AG) No. 10 — (2AD) No. 3: (6AG) No. 12 — (2AD) No. 2:</p>	<p>Is the resistance less than 10Ω?</p>	<p>Go to step 5.</p>	<p>Replace the airbag rear harness along with body harness.</p>
<p>5 CHECK AIRBAG REAR HARNESS.</p> <p>Measure the resistance between connector (2AD) in the test harness AD and chassis ground, and between connector (2AD) terminals.</p> <p>Connector & terminal (2AD) No. 2 — chassis ground: (2AD) No. 3 — chassis ground: (2AD) No. 2 — (2AD) No. 3:</p>	<p>Is the resistance 1 MΩ or more?</p>	<p>Go to step 6.</p>	<p>Replace the airbag rear harness along with body harness.</p>

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STEP	CHECK	YES	NO
<p>6 CHECK OCCUPANT DETECTION HARNESS.</p> <p>1) Turn the ignition switch to ON.</p> <p>2) Measure the voltage between connector (2AD) in the test harness AD and chassis ground.</p> <p>Connector & terminal (2AD) No. 1 (+) — Chassis ground (-):</p>	<p>Is the voltage 10 V or more?</p>	<p>Replace the occupant detection harness (seat harness). If defective is not improved, replace the occupant detection system (seat cushion & frame assembly), and then the airbag control module in this order.</p> <p><Ref. to SE-27, PASSENGER'S SEAT, DISASSEMBLY, Front Seat.></p>	<p>Check the battery voltage and fuse. If there is no fault, replace the airbag rear harness together with body harness.</p>