

SIB 65 05 18

AIR BAG LAMP ILLUMINATED. FAULT CODE 9309A0

2021-11-29

This Service Information Bulletin (Revision 5) replaces SI B65 05 18 dated February 2020.

What's New (Specific text highlighted):

- Model Section Production date range specified
- Cause, Correction Section Updates for no programming if applicable
- Claim Section The limited warranty coverage for this repair procedure has been extended to 10 years/120,000 miles

MODEL

E-Series	MY	Model Description	Production Dates	Engine
F15	2016 to 2018	X5 xDrive40e	July 06, 2015 to June 30, 2018	N20

SITUATION

The red air bag warning light is illuminated:

Check Control message: restraint system, CCM-ID: 97

The following fault memory is entered in the ACSM4 (Advanced Crash Safety Module):

• 9309A0 - Safety battery terminal 3: Resistance too big / Safety cutout of EME: Resistance too great

CAUSE

A contact problem with connector A190*1B at the EME (Electrical Machine Electronics).

The wires going to pins 7 (CRASH +) and 20 (CRASH-) in connector A190*1B are under tension. Vibrations may sporadically increase the resistance values of these connections outside of the acceptable range, leading to an air bag warning light being illuminated.

Note: This repair will also satisfy <u>SI B12 28 18</u> 'F15 PHEV - Malfunction indicator lamp lit' for the same issue.

Repair-Specific Limited Warranty Extension to 10 years/120,000 miles

With the release of <u>SI B01 19 21</u>, the repair outlined in the Procedure and Claim Information section of this Service Information Bulletin is now covered for 10 years/120,000, whichever occurs first, as determined by the vehicle's original in-service date

If the procedure outlined in this bulletin was performed as a customer-pay (CP) repair on an eligible Model vehicle when it was beyond an applicable standard BMW limited warranty coverage, and it was done prior to the release of <u>SI B01 19 21</u>; the customer may be eligible to submit a reimbursement request for this repair.

The prior CP repair reimbursement request information is also provided in <u>SI B01 19 21</u>.

CORRECTION

1. If only fault code 9309A0 is set, do not run the corresponding test module (ABL-DIT-AT6577_ACSM31). This test plan is currently incorrect and may recommend other repairs that would not fix this vehicle.

Note: Replacing the battery cable plus terminal (BST), the ACSM control module or the EME will not correct this situation.

- 2. Change harness routing/taping to allow some slack at the EME connector.
- 3. Install new bracket onto EME to support harness.
- 4. Change zip tie direction on EME connector.

5. If applicable, program the vehicle to ISTA version 4.14.1x or higher to I-level F025-18-11-520 or higher.

PROCEDURE

Determine the vehicle's current I-level by either using AIR or the ISPA NEXT application.

(Attached repair instructions 61 25 900)	1. De-energize high-voltage system
(Attached repair instructions 61 20 900)	2. Disconnect the battery
(Attached repair instructions 51 71 016)	3. Remove underbody paneling on the right side



4. Perform a visual inspection of connector A190*1B on the bottom of the EME.

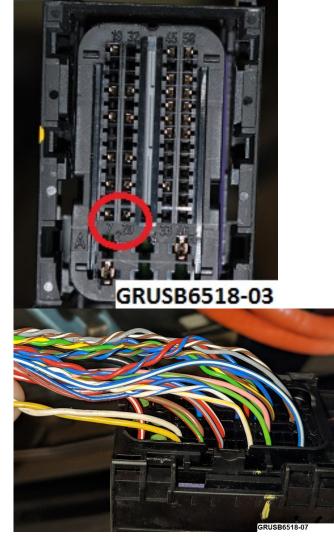


5. Remove connector A190*1B from the EME. Cut the cable tie holding the harness to the EME connector.

GRUSB6518-02

6. Examine pins 7 and 20 at the EME connector.

Notify technical support via a TSARA case if there is visual/water damage to these pins.



7. These two bottom wires (white & yellow) need to have some tension relieved on them.

• Remove the last 8" of tape from the harness at the EME connector to introduce some stress relief into this connection at the EME

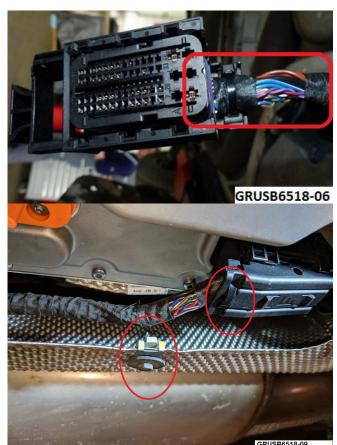


8. The wires between the zip tie location and the EME electrical connector/pins should NOT be under tension!

The wires now have a strain relief loop to eliminate tension on the electrical pins.

9. If you need more slack at the connector, go back to the last body tie down approx.6" (16 cm) back from this EME connector, and pull some slack from there.







10. Place two wraps of tape around the wiring under where the zip tie will go over the wiring harness.

• There should be a 2"+ gap between this wrap around the harness and where the harness wrap begins

11. When you reinstall the zip tie on the cable on the end of the EME connector, point the end of the tie upwards so it can't rub on the underbody panel of the vehicle (circled).

• 61 13 8 383 722 Cable Tie

Also check to make sure there is still tension on the harness so that it won't droop and touch the top of the underbody panel holddown screw (circled).

12. Remove bolt from EME. Install the new angle bracket and screw into the EME as shown here.

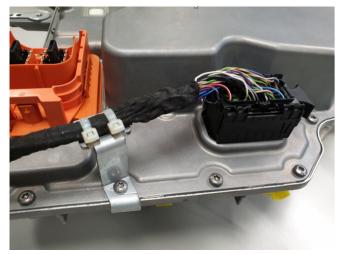
- 61 13 4 A03 DB3
 - Angle Bracket
- 61 25 7 621 147 Screw

The screw must be torqued to 8.5 Nm.

If the heat shield blocks access to this screw, gently bend it out of the way, and then after screw and bracket are installed, bend it back into position.

13. The wiring harness is then laid onto Copyright ©2021 BMW of North America, Inc.

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the new angle bracket and secured with two new cable ties as shown here.

• 61 13 8 383 722 Cable Ties

There must be some slack between the angle bracket and the EME electrical connector.

This slack functions as strain relief and prevents vibrations in the harness/underbody from being transmitted to the EME electrical connector.

- 14. Reinstall underbody paneling on the right side.
- 15. Reconnect vehicle battery.
- 16. Reconnect high-voltage system.

17. Clear fault memory. Program the vehicle with ISTA version 4.14.1x to I-level F025-18-11-520 or higher.

- 18. Is the vehicle current at I-Level F025-18-11-520 (per ISTA version 4.14.1x) or higher.
 - If NO, re-program the vehicle.

Note that ISTA will automatically reprogram and code all programmable control modules that do not have the latest software.

Always connect a BMW-approved battery charger/power supply (<u>SI B04 23 10</u>) when performing programming.

PARTS INFORMATION

Only use and invoice the part numbers below that apply.

Performing a part number look-up in ETK (EPC) by VIN or model in place of using/invoicing the following part numbers may result with the wrong part numbers being invoiced and installed, this could delay the payment of claim.

Part Number	Description	Quantity
61 13 4 A03 DB3	Angle Bracket	1
61 25 7 621 147	Screw	1
61 13 8 383 722	Cable Ties	3

CLAIM INFORMATION

Covered under the terms of the applicable repair-specific limited warranty extension to 10 years/120,000 miles, please refer to <u>SI B01 19 21</u> for more information.

This coverage is subject to the same vehicle eligibility requirements, limitations, and exclusion criteria that applies to the BMW New Vehicle Limited Warranty for Passenger Cars and Light Trucks.

Qualifying Repairs – Claim Submission

Defect	6112900100	F15 PHEV Wiring harness to electrical machine
Code:		electronics (EME)

Vehicle is already in the workshop

Work Pkg	Labor Operation	Description (Plus Work)	Labor Allowance
# 1	00 66 548	Performing vehicle test (with vehicle diagnosis system – checking faults) Perform Repair to EME connector, Clear faults (Plus work – Vehicle is already in the workshop)	18 FRU

Or:

The vehicle arrives at your center and this repair is needed and performed (No other Main work will be performed/claimed during this workshop visit)

Work Pkg	Labor Operation	Description (Main work)	Labor Allowance
#2	00 66 034	Performing vehicle test (with vehicle diagnosis system – checking faults) Perform Repair to EME connector, Clear faults (Main work)	20 FRU

Only one of the flat rate unit numbers above can be used for claim submission/reimbursement purposes.

And, as needed:

Sublet – Bulk Materials (RO and Claim Comments Required)

Sublet Code	Up to \$5.00	Reimbursement for the repair-related bulk materials (Do not use the BMW part numbers for claim submission)
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Sublet reimbursement calculation for claiming the applicable repair-related bulk materials (BMW part numbers) is at the dealer net price amount for the quantities used plus your center's handling.

Enter this material cost in sublet and itemize the amount on the repair order and in claim comment section.

And, if the:

Vehicle's current I-Level ISTA version is below F025-18-11-520 (4.14.1x)

Operation	Description (Associated work)	Labor Allowance
00 70 963	Programming and encoding the vehicle control units (with 00 66 548 or 00 66 034)	5 FRU

During this workshop visit, the affected vehicle may also show one or more programming and encoding Technical Campaign repairs open, the programming and encoding procedure may only be invoiced one time.

Select one of these open Technical Campaigns to perform and submit for updating the vehicle to the required I-level or higher instead.

Please be sure to also perform any additional before and/or after work (including attaching labels) as required by the open campaigns on the vehicle. Close any other open programming and encoding Campaign repairs as outlined in the corresponding Service Information Bulletin.

Only if the situation above does not apply, the additional flat rate labor operation code (00 70 963) listed above to perform the programming and encoding procedure is then claimable within the work procedure and coverage guidelines described in this bulletin.

Claim Repair Comments

Unless otherwise required by State law, only reference the SIB number and the work package (Pkg) number performed in the RO technician in the claim comments (For example: B12 28 18 or B65 05 18 and B01 19 21 WP 1).

Consequential Repair(s) (RO and Claim Comments Required)

When additional work and/or parts are required as a direct result of addressing the issue and/or performing the repair outlined in this Service Information bulletin, claim these items under the defect code listed above together with the corresponding labor operations (including any additional diagnosis) listed in AIR if applicable.

Please explain the reason for this consequential repair work (the why and the what) on the repair order and in the claim comments section.

Programming and Encoding (00 70 963) - Vehicle Control Units (RO and Claim Comments Required)

This procedure automatically reprograms and encodes any vehicle control modules that do not have the latest software I-level.

If one or more control modules fail during the reprogramming procedure, claim the required consequential repair work procedures to address this issue (including performing the IRAP Control Unit Recovery first as required, refer to the SIB in AIR) under the Defect Code in this bulletin with the labor operations in AIR that apply.

Please explain the additional work procedures that were performed (The why and the what) on the repair order and in the claim comments.

For covered repairs that address control module failures that occurred prior to performing this reprogramming procedure, claim this work with the Defect Code and labor operations (including diagnosis) in AIR that apply.

Based on which one applies to your center, please refer to <u>SI B01 01 20</u> or <u>B01 07 20</u> for the applicable procedure for documenting, claiming, and explaining, on the RO and in the claim comments, your diagnosis work time (WT), job/repair work time (WT), and the vehicle repairs your center performed, unless otherwise required by State law.

QUESTIONS REGARDING THIS BULLETIN

Technical Inquiries	Submit feedback at the top of this bulletin
Warranty Inquiries	Please contact the Warranty department by either using the Live Chat that's available in the Warranty Documentation Portal or through IDS by selecting Coverage, Policy, Coding Questions and Mileage Corrections
Parts Inquiries	Submit an IDS ticket to the Parts Department

Supporting Materials <u>picture_as_pdf</u> B65 05 18 REP 51 71 016.pdf

picture_as_pdf B65 05 18 REP61 25 900.pdf picture_as_pdf B65 05 18 REP 61 20 900.pdf BMW Group - AIR: 2018-03-15 / 13:07 Retailer: 31044/01 Model: X5 xDrive40e iPerformance Development code: F15 Model code: KT03 Lead type: KT03 Order number: -

Repair instruction

Removing and installing/replacing left and right underbody panelling 51 71 016

51 71 016 Removing and installing/replacing left and right underbody panelling



Necessary preliminary tasks:

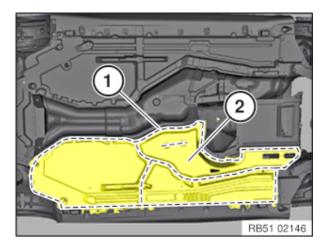
• Underbody panelling must not be jammed by vehicle hoist.

If necessary, fit suitable blocks under vehicle jacking points.



Note:

Description of work is illustrative, some details may differ on other models.



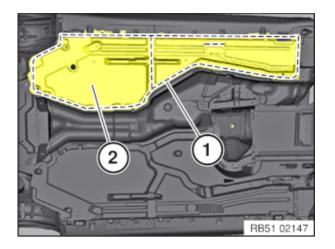
Left side:

Release all screws along dashed line (1).

Remove underbody panelling (2).

Installation note:

Ensure underbody panellings (2) are fitted correctly.



Right side:

Release all screws along dashed line (1).

Remove underbody panelling (2).

Installation note:

Ensure underbody panellings (2) are fitted correctly.

De-energising the high-voltage system

▲ DANGER
Danger to life in the high-voltage system.
Danger to life if the disconnection from power cannot be verified!
• Make sure that the Check Control message "High-voltage system deactivated" is displayed in the instrument cluster before commencing work.
• Lock the vehicle and block it with high-voltage barrier tape if the disconnection from power cannot be clearly verified.
 Contact Technical Support in all cases where the disconnection from power is not clearly verified.
• A certified qualified electrician 1000 V DC must verify the disconnection from power with measuring devices / measuring procedures.
1 TECHNICAL INFORMATION
The high-voltage safety disconnect cannot be fully disconnected.
i TECHNICAL INFORMATION
With the ignition off and the high-voltage service disconnect disconnected, the Check Control message "High voltage system faulty" is displayed by default.
The disconnection from power (high-voltage system switched off) will only be displayed if the ignition is switched on.
High-voltage system. The high-voltage system operates on the basis of hazardous, electrical voltage and high currents. Danger to life through electric shock!
• All work on the high-voltage system may only be carried out by specially trained and technically experienced personnel.
• For additional information see: 61 00 Safety information on handling hybrid vehicles
• For additional information see: 61 25 Repair information for high-voltage battery unit

1 TECHNICAL INFORMATION

With the ignition off and the high-voltage service disconnect disconnected, the Check Control message "High voltage system faulty" is displayed by default.

The disconnection from power (high-voltage system switched off) will only be displayed if the ignition is switched on.

Preliminary works

1. Removing the flap of the right luggage compartment trim panel

Main work

2. Disconnect high-voltage system from power Prerequisite

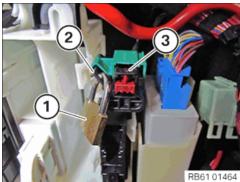
The battery chargers are disconnected.

Tailgate is open.

Ignition is switched off.

Vehicle has gone to sleep (rest state).





3. Check that no voltage is applied Prerequisite

1 TECHNICAL INFORMATION

The high-voltage safety disconnect cannot be fully disconnected.

- Unlock and pull out the high-voltage service disconnect (1) until the bore hole (2) on the connector and the bush are fully exposed.
- The OFF labelling on the high-voltage service disconnect is visible.
- Insert the shackle lock (1) into the exposed bore hole (2) on the high-voltage service disconnect (3) and lock it.
- Store the shackle lock key in a safe place.

Danger to life in the high-voltage system.

Danger to life if the disconnection from power cannot be verified!

Make sure that the Check Control message "High-voltage system deactivated" is displayed in the instrument cluster before commencing work.

Lock the vehicle and block it with high-voltage barrier tape if the disconnection from power cannot be clearly verified.

Contact Technical Support in all cases where the disconnection from power is not clearly verified.

A certified qualified electrician 1000 V DC must verify the disconnection from power with measuring devices / measuring procedures.

1 TECHNICAL INFORMATION

With the ignition off and the high-voltage service disconnect disconnected, the Check Control message "High voltage system faulty" is displayed by default.

The disconnection from power (high-voltage system switched off) will only be displayed if the ignition is switched on.



Check

• Switch on the ignition and check the disconnection from power in the instrument cluster (KOMBI).

Desired State

The Check Control message "High-voltage system deactivated" must be displayed.

Result

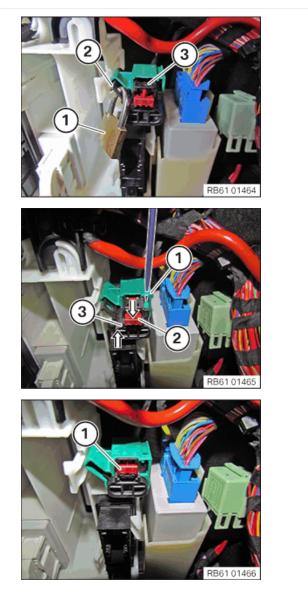
» If the **disconnection from power cannot be clearly** verified in the instrument cluster (KOMBI), commencement of work is prohibited. **Danger to life!**

Measure

- Before work begins, a qualified, certified electrician must verify that the system has been disconnected from the power supply 1000 V DC using appropriate measuring devices and measuring procedures.
- The 12 V battery of the vehicle must only be disconnected once the "High-voltage system deactivated" CC message appears on the instrument cluster (KOMBI).
- If the disconnection from power cannot be verified with certainty, contact Technical Support. Furthermore, the vehicle must be made inaccessible and blocked off with high-voltage barrier tape.

4. Activate high-voltage system

• Remove the shackle lock (1) from the exposed bore hole (2) on the high-voltage service disconnect (3).



Follow-up Work

5. Installing the flap of the right luggage compartment trim panel

- Insert the screwdriver into the opening (1) and simultaneously press the lock (2) downwards in the direction of the arrow.
- Push the bush (3) together.

• Fully press in the lock (1) to lock it.

BMW Group - AIR: 2018-03-15 / 13:06 Retailer: 31044/01 Model: X5 xDrive40e iPerformance Development code: F15 Model code: KT03 Lead type: KT03 Order number: -

Repair instruction

Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle) 61 20 900

61 20 900 Disconnect and connect battery earth lead (Plug-in Hybrid Electric Vehicle)



Warning!

High-voltage system - danger to life!

The following points must be strictly observed **prior to starting work**:

- De-energise the high-voltage system
- Observe safety information for handling hybrid cars



Warning!

Observe safety informations for handling battery.

Follow instructions for disconnecting and connecting battery.

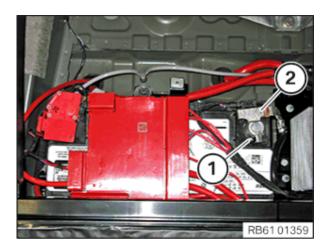
Follow instructions on intelligent battery sensor (IBS).



Necessary preliminary tasks:

Remove battery cover





Attention!

Before disconnecting the battery earth lead, it must be ensured that the vehicle goes to sleep. Observe a waiting period of at least 2 minutes.

Main battery:

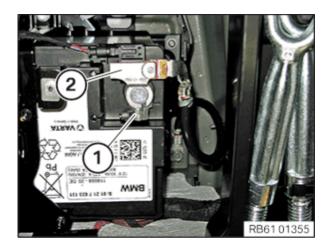
Attention!

Do not use force to pull or lever intelligent battery sensor (IBS) (2) off from the vehicle battery.

Loosen nut (1).

Tightening torque 61 21 1AZ.

Remove IBS (2) from vehicle battery and secure at side.



Auxiliary battery:

Attention!

Do not use force to pull or lever intelligent battery sensor (IBS) (2) off from the vehicle battery.

Loosen nut (1).

Tightening torque 61 21 1AZ.

Remove IBS (2) from vehicle battery and secure at side.