

Service Action

Code: 82C9



Subject	Electric Passenger Compartment High-Voltage (HV) Heater																				
Document History	<table border="1"> <thead> <tr> <th style="background-color: #c00000; color: white;">Date</th> <th colspan="4" style="background-color: #c00000; color: white;">Summary</th> </tr> </thead> <tbody> <tr> <td>01/24/2024</td> <td colspan="4">Updated parts information and work procedure</td> </tr> <tr> <td>10/26/2023</td> <td colspan="4">Original publication</td> </tr> </tbody> </table>					Date	Summary				01/24/2024	Updated parts information and work procedure				10/26/2023	Original publication				
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01/24/2024	Updated parts information and work procedure																				
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Affected Vehicles	<table border="1"> <thead> <tr> <th style="background-color: #c00000; color: white;">Country</th> <th style="background-color: #c00000; color: white;">Beginning Model Year</th> <th style="background-color: #c00000; color: white;">Ending Model Year</th> <th style="background-color: #c00000; color: white;">Vehicle</th> <th colspan="2" style="background-color: #c00000; color: white;">Vehicle Count</th> </tr> </thead> <tbody> <tr> <td>USA</td> <td>2022</td> <td>2023</td> <td>E-TRON GT</td> <td colspan="2" rowspan="2" style="text-align: center; vertical-align: middle;">*see below</td> </tr> <tr> <td>USA</td> <td>2022</td> <td>2023</td> <td>RS E-TRON GT</td> </tr> </tbody> </table> <p><i>Check Campaigns/Actions screen in Elsa on the day of repair to verify that a VIN qualifies for repair under this action. Elsa is the <u>only</u> valid campaign inquiry & verification source.</i></p> <ul style="list-style-type: none"> ✓ Campaign status must show "open." ✓ If Elsa shows other open action(s), inform your customer so that the work can also be completed at the same time the vehicle is in the workshop for this campaign. <p>*The 82C9 repair will be launched in multiple waves. The first wave will be assigned criteria 01, the second wave assigned criteria 02, and so on.</p>					Country	Beginning Model Year	Ending Model Year	Vehicle	Vehicle Count		USA	2022	2023	E-TRON GT	*see below		USA	2022	2023	RS E-TRON GT
Country	Beginning Model Year	Ending Model Year	Vehicle	Vehicle Count																	
USA	2022	2023	E-TRON GT	*see below																	
USA	2022	2023	RS E-TRON GT																		
Problem Description	<p>In the affected vehicles, the electric passenger compartment high-voltage heater may stop working. This is more likely to occur if the heater is used frequently for prolonged periods on high setting, or if the vehicle battery is frequently charged at low ambient temperatures. Thus, this issue is more likely to occur in locations with frequently cold environmental conditions. The waste heat scavenging heat pump remains operational.</p> <p>If the HV heater stops working, the vehicle interior will no longer be heated.</p>																				
Corrective Action	Inspect and, if necessary, replace the high-voltage heater.																				
Code Visibility	On or about October 26, 2023, the campaign code will be applied to affected vehicles.																				
Owner Notification	Owner notification will take place in waves, starting in November 2023. Owner letter examples are included in this bulletin for your reference.																				
Campaign Expiration Date	This campaign expires on December 01, 2028 . Work must be performed on or before this date to be eligible for payment. Keep this expiration date in mind when scheduling customers for this action. If a customer wishes to have this work performed after the expiration date, your dealerships normal costs associated with this work will apply.																				
Additional Information	<p>Please alert everyone in your dealership about this action, including Sales, Service, Parts and Accounting personnel. Contact Warranty if you have any questions.</p> <p>Dealers must ensure that every affected inventory vehicle has this campaign completed <u>before delivery to consumers</u>.</p>																				

Parts Information (if required)

Criteria	Quantity	Part Number	P.O.C. Part Description	Ordering Method (see description below)
ALL	1	9J1-963-507-F	HEATER	VIN to Order
	Up to 8.5L	G -12E-100-1G CON	COOLANT Concentrate	Free Order
	4	N -107-370-01	NUT	Free Order

Parts Control Type: VIN to Order	If parts are needed to support a vehicle repair: <ul style="list-style-type: none"> US Dealers - use AVA
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Parts Control Type: Free Order	Parts will be managed by Free Order
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Initial Allocation: NO	Please reference the Repair Projection Tool (below) to view your potential VIN population.
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Repair Projection Tool: (right click to open)	
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NOTE

Campaign parts should always be ordered as per the parts information in this circular. The ordering system will supersede the part, if applicable.

Claim Entry Instructions

The labor times listed here may differ from the labor operations and labor times listed in ELSA.

After campaign has been completed, enter claim as soon as possible to help prevent work from being duplicated elsewhere. Attach the Elsa screen print showing action open on the day of repair to the repair order.

If customer refused campaign work:

- ✓ U.S. dealers: Submit the request through Audi Warranty Online under the Campaigns/Update option.

Service Number	82C9		
Damage Code	0099		
Parts Vendor Code	002		
Claim Type	Sold vehicle: 7 10 Unsold vehicle: 7 90		
Causal Indicator	Mark labor as causal if the heater is OK Mark HEATER* as causal if the heater is NOT OK		
Vehicle Wash/Loaner	Do not claim wash/loaner under this action		
Criteria I.D.	ALL		
	Inspect high voltage heater		
	LABOR		
	Labor Op	Time Units	Description
	9310 83 00	SEE ELSA	Disable HV system voltage deactivate and activate
	7007 19 50	SEE ELSA	Storage compartment remove+reinstall
	8039 19 99	10	Check label for high-voltage heater
	2706 89 50	SEE ELSA	Connect battery charger
	0150 00 00	Time stated on diagnostic protocol	GFF Operations

AND (only if necessary)	Add if high voltage heater requires replacement		
	LABOR		
	Labor Op	Time Units	Description
	8039 19 50	SEE ELSA	Heater element remove+reinstall
	1938 17 50	SEE ELSA	Coolant drain+fill
	PARTS		
	Quantity	Part Number	Description
	1.00	9J1963507F	HEATER*
	Up to 85.00	G 12E100S1	COOLANT Concentrate
	4.00	N 10737001	HEX. NUT, SELF-LOCKING

Customer Letter Example (USA)

<MONTH YEAR>

<CUSTOMER NAME>

<CUSTOMER ADDRESS>

<CUSTOMER CITY STATE ZIPCODE>

This notice applies to your vehicle: <MODEL YEAR> <BRAND> <CARLINE>, <VIN>

Subject: Service Action 82C9 - Electric Passenger Compartment High-Voltage (HV) Heater

Dear Audi Owner,

As part of Audi's ongoing commitment to customer satisfaction, we are informing you of our decision to conduct a service action on certain 2022-2023 model year Audi vehicles. Our records show that you are the owner of a vehicle affected by this action.

What is the issue?

In the affected vehicles, the electric passenger compartment high-voltage heater may stop working. This is more likely to occur if the heater is used frequently for prolonged periods on high setting, or if the vehicle battery is frequently charged at low ambient temperatures. Thus, this issue is more likely to occur in locations with frequently cold environmental conditions. The waste heat scavenging heat pump remains operational.

If the HV heater stops working, the vehicle interior will no longer be heated.

What will we do?

Your authorized Audi dealer will inspect and, if necessary, replace the high voltage heater. This work will take up to a day to complete and will be performed for you free of charge. Please keep in mind that your dealer may need additional time for the preparation of the work, as well as to accommodate their daily workshop schedule.

What should you do?

In order to limit any possible inconvenience, please contact your authorized Audi dealer as soon as possible to schedule this work. Please keep in mind that your dealer may need additional time for the preparation of the work, as well as to accommodate their daily workshop schedule. For your convenience, you can also visit www.audiusa.com and click on the "Find a Dealer" link to locate a dealer near you and schedule this service.

This service action will be available for you free of charge only until December 01, 2028. If you wish to have this service performed after that date, your dealer's normal costs associated with this repair will apply.

Lease vehicles and address changes

If you are the lessor and registered owner of the vehicle identified in this action, please forward this letter immediately via first-class mail to the lessee within ten (10) days of receipt. If you have changed your address or sold the vehicle, please fill out the enclosed prepaid Owner Reply card and mail it to us so we can update our records.

Can we assist you further?

If your authorized Audi dealer fails or is unable to complete this work free of charge within a reasonable time, please contact Audi Customer Experience at 1-800-253-2834 or via our "Contact Us" page at www.audiusa.com.

Checking your vehicle for open Recalls and Service Campaigns

To check your vehicle's eligibility for repair under this or any other recall/service campaign, please visit the **Recall/Service Campaign Lookup** tool at www.audiusa.com and enter your Vehicle Identification Number (VIN).

We apologize for any inconvenience this matter may cause; however we are taking this action to help ensure your vehicle continues to meet and exceed your expectations.

Sincerely,

Audi Customer Protection

Safety Precautions When Working ON the High-voltage System (additional information is also available in the ELSA Repair Manual)

DANGER

Extremely dangerous due to high voltage.

- The high-voltage system is under heavy voltage. Severe bodily injury or death by electrocution or electric arcs is possible.
- When working on the high-voltage system the high-voltage system must be de-energized.
- When performing procedures that do not directly affect the high-voltage system, in some cases it is still necessary to de-energize the high-voltage system.
- Pay attention when the high-voltage system must be de-energized. Refer to the Repair Manual
- Have a High-Voltage Technician or a High-Voltage Expert de-energize the high-voltage system.

The electric and magnetic fields are extremely dangerous.

- There are electric and magnetic fields on the high-voltage system. Death or serious injury are possible due to malfunction of active implants (for example cardiac pacemakers, insulin pumps).
- Persons with active implants may not perform procedures on the high-voltage system.

WARNING

Risk of injury - motor may start unexpectedly

It is difficult to determine whether the drive system of an electric vehicle or hybrid vehicle is active. Moving parts can trap or draw in parts of the body.

CAUTION

Risk of damage to high-voltage wiring

- Incorrect handling may result in damage to the insulation of high-voltage wires or high-voltage connectors.
- Do not support yourself on high-voltage cables or connectors.
- Never prop tools against high-voltage wiring or high-voltage connectors.
- Never bend or kink high-voltage wiring.
- Observe the coding of the high-voltage connectors when joining them up.

Safety Precautions When Working NEAR the High-voltage System (additional information is also available in the ELSA Repair Manual)

DANGER

Extremely dangerous due to high voltage.

- The voltage levels in the high-voltage system constitute a safety hazard. Danger of severe or fatal injuries from electric shock if high-voltage components or high-voltage wiring are damaged.
- Carry out a visual check of high-voltage components and high-voltage wiring.
- Never use cutting/forming tools or other sharp-edged implements.
- Never perform work using welding, brazing, thermal bonding or hot air in the area of high-voltage components and high-voltage cables.

Repair Overview



- Inspect the Z189 high-voltage in-line heater.
- Replace if necessary.

NOTE

- These repair instructions may differ from the labor operations and labor times listed in ELSA.
- Damages resulting from improper repair or failure to follow these work instructions are the dealer's responsibility and are not eligible for reimbursement under this action.
- This procedure must be read in its entirety prior to performing the repair.
- Due to variations in vehicle equipment and options, the steps/illustrations in this work procedure may not identically match all affected vehicles.
- Diagnosis and repair of pre-existing conditions in the vehicle are not covered under this action.
- When working during extreme temperatures, it is recommended that the vehicle be allowed to acclimate inside the shop to avoid temperature-related component damage/breakage.

Required Tools

NOTE: Refer to ELSA Repair Manual and ODIS as needed for additional tools not listed

 <p>Battery Tester/Charger capable of minimum 90 Amp continuous supply</p>	 <p>Diagnostic Tester -VAS6150X/6160X- (or equivalent)</p>
 <p>Omega Clip Tool -T40280- (or equivalent)</p>	 <p>Safety Gloves and Safety Goggles</p>
 <p>Padlock -T40262/1- (from Service Disconnect Lock -T40262-)</p>	 <p>Cooling System Service Machine -VAS531011-</p>
 <p>Hose Clamps - Up To 25mm -3094- (or equivalent)</p>	 <p>Spring-Type Clip Pliers -VAS6891- (or equivalent)</p>
 <p>Removal Wedge -T40233- (or equivalent)</p>	 <p>Scraper Set -VAS6845- (or equivalent)</p>



Warning Sign - "Do Not
Switch On"
-VAS6650A-



Warning Sign - High
Voltage
-VAS6649-

Repair Instruction


Section A - Check for Previous Repair

TIP

If Campaign Completion label is present, no further work is required.

Applicable criteria ID(s)	Campaign/Action Status
01 	Open 

EXAMPLE

Campaign/Action	Start	Designation
	2015-11-10	W-SERV_ACT -
	2018-12-13	RECALL -
	2017-05-16	A-RECALL -

EXAMPLE

- Enter the VIN in Elsa and proceed to the “Campaign/Action” screen.

TIP

On the date of repair, print this screen and keep a copy with the repair order.

- Confirm the Campaign/Action is open <arrow 1>. If the status is closed, no further work is required.
- Note the Applicable Criteria ID <arrow 2> for use in determining the correct work to be done and corresponding parts associated.

CRITICAL REPAIR STEP



If multiple software update Campaign/Actions are open, they must be performed in order of the Start date <arrow 3>. The oldest should be performed first.

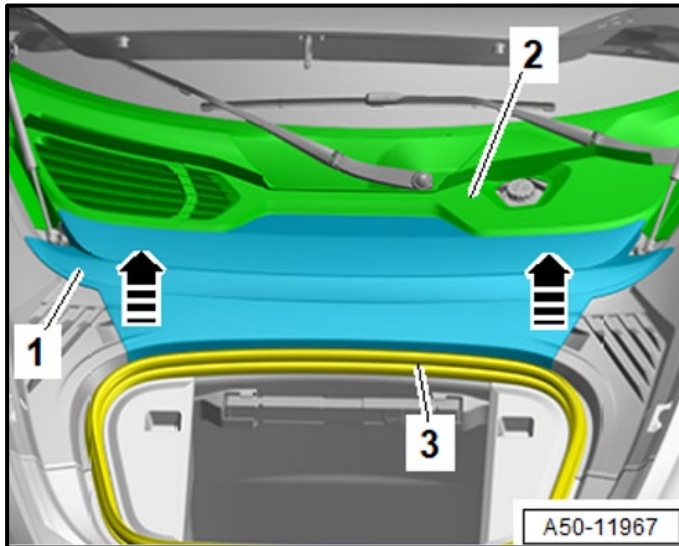
- **All Safety Recalls must be completed prior to completing this campaign.**
- **Proceed to Section B.**

Section B – Inspect Z189 High-Voltage In-Line Heater

NOTE

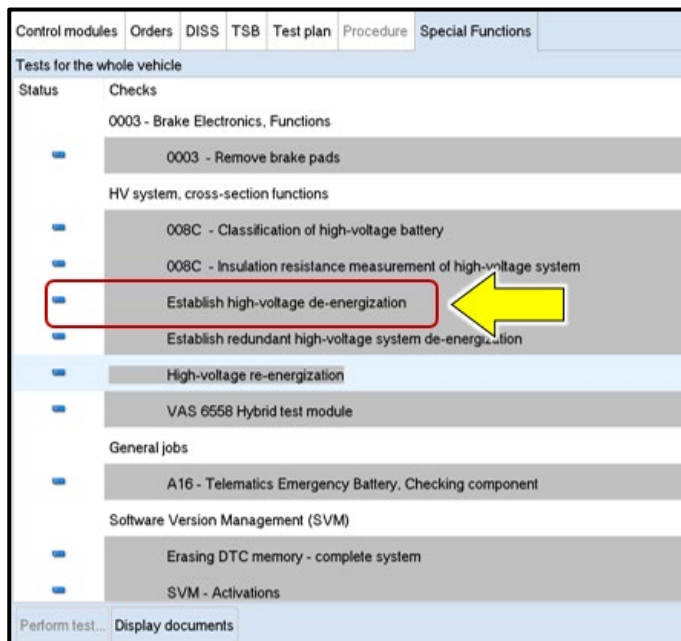
If any of the following faults are present, complete this repair before performing further diagnosis:

- B182C04: HV heater 2 control module faulty
- B182C29: HV heater 2 control module Range/Performance
- B182CF3: HV heater 2 control module High voltage power supply – error
- B182CF4: HV heater 2 control module High-voltage interlock, open circuit
- B182DF0: HV heater 2 Heater circuit 1 faulty



Remove the front plenum chamber:

- Loosen the plenum chamber cover <1> from the retainers <arrows> and remove from the luggage compartment seal <3>.
- Remove the plenum chamber cover <1> toward the front of the vehicle.
- Remove any remaining clips using the Omega Clip Tool -T40280-.



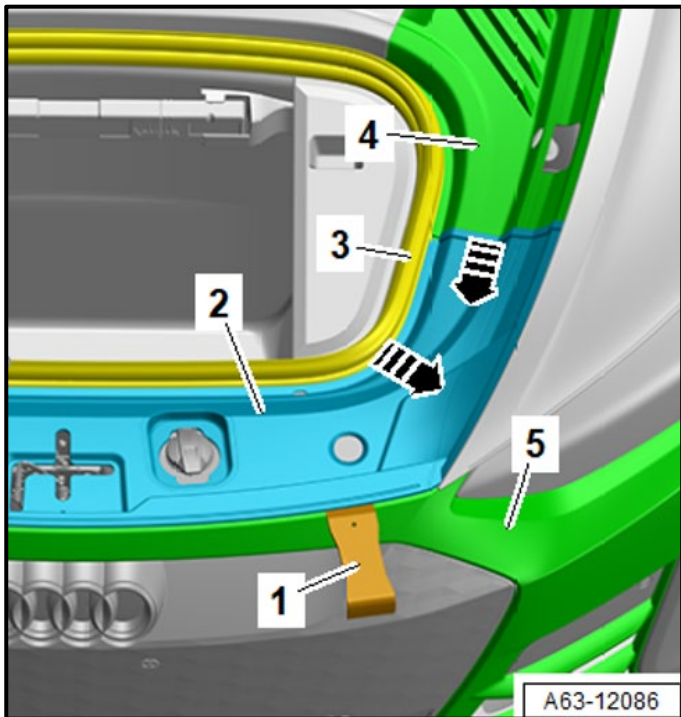
De-energize the high-voltage system:

⚠ DANGER

**High voltage increases the risk of fatal injury!
Electrocution can cause severe bodily or fatal injury!**

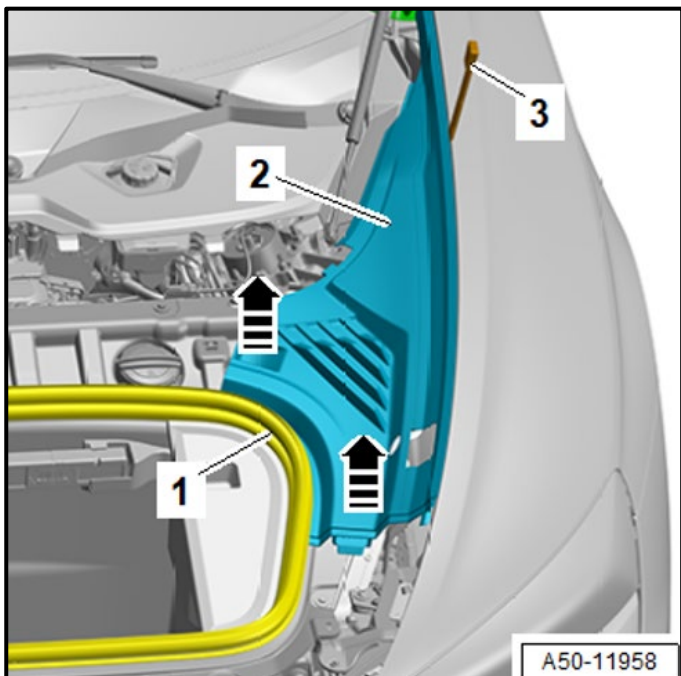
Have a high-voltage technician or a high-voltage expert de-energize the high-voltage system.

- Attach a 12V battery maintainer/charger.
- Under the special functions tab, select the test plan for “Establish high-voltage de-energization”.
- Follow the test plan steps until the high-voltage system is successfully de-energized.
- Also, reference the ELSA repair manual when de-energizing the high-voltage system: *Repair manual > Motor > Electric Drive Motor 0EG > 93 Electric drive > High-Voltage System, De-Energizing.*



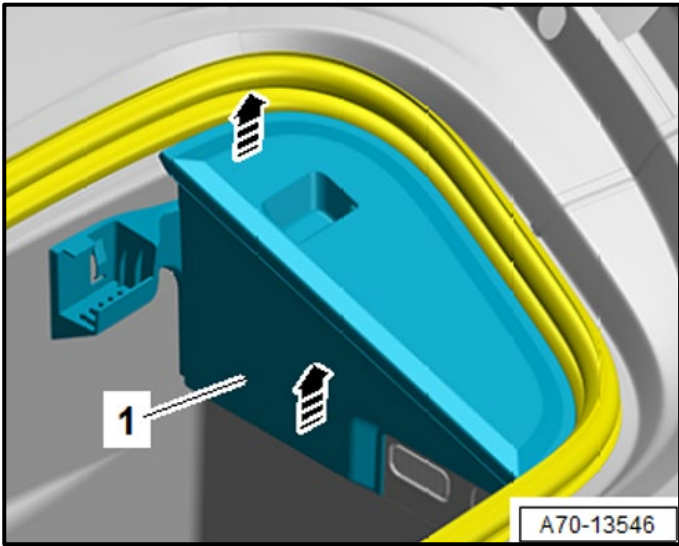
Remove the front lock carrier cover:

- Using Removal Wedge -T40233- <1>, release the retainers for the lock carrier <2> at the bumper cover <5>.
- Release the retainers at the fender using the trim removal wedge.
- Disengage the lock carrier cover <2> from the luggage compartment seal <3> and the cover <4> in the direction indicated <arrows> and remove.



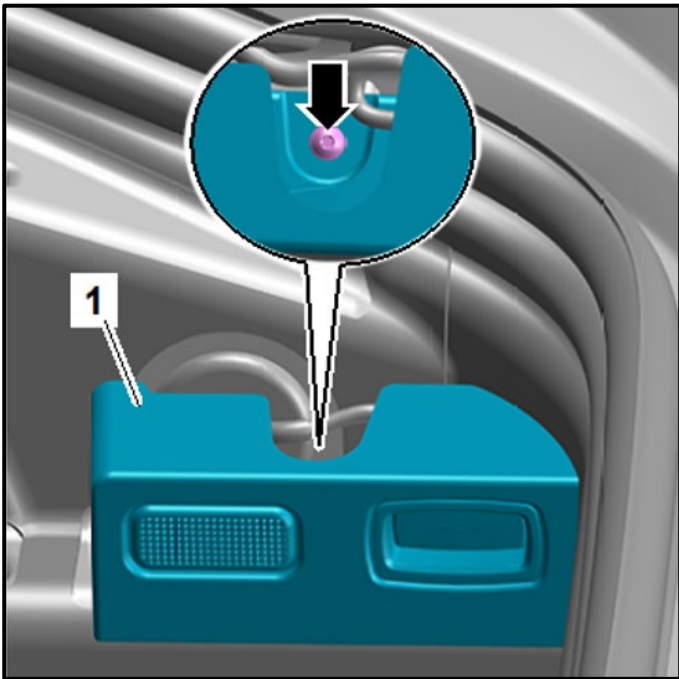
Remove the fender covers:

- Loosen the fender cover <2> using scraper number 3 from the Scraper Set -VAS6845- <3>.
- Loosen the cover from the catches <arrows>, disengage the cover from the luggage compartment seal <1>, and remove.

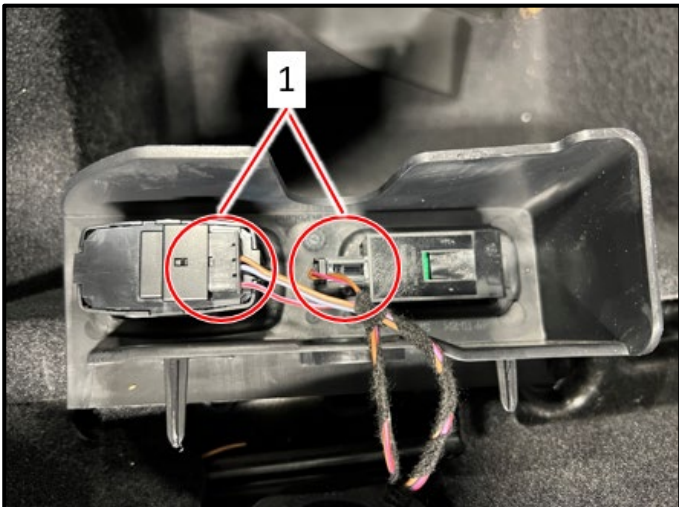


Remove the front luggage compartment lamp and emergency release button:

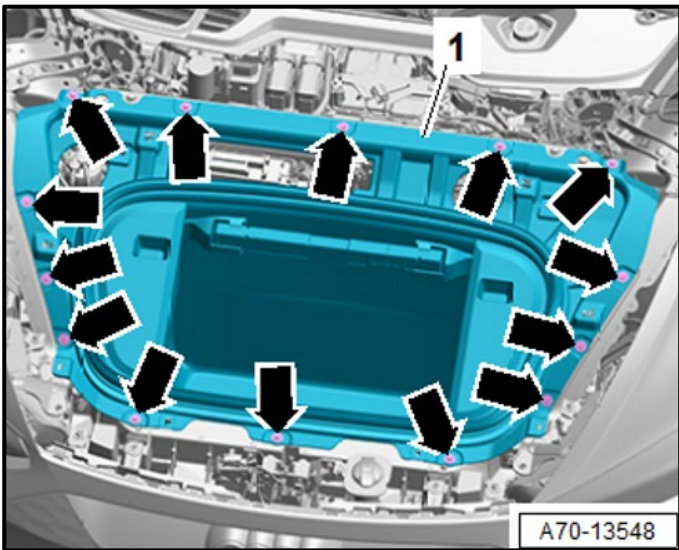
- Remove the driver's side storage compartment <1> from the luggage compartment liner mounts in the direction indicated <arrows>.



- Remove the bolt <arrow> from the cover <1>.

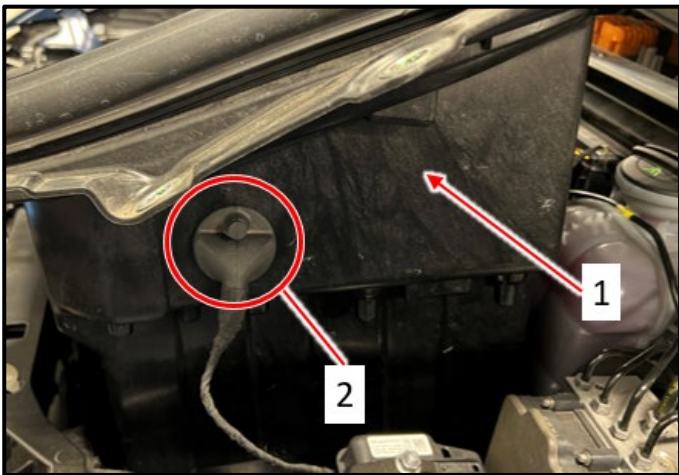


- Disconnect the connectors <1> and remove the cover.

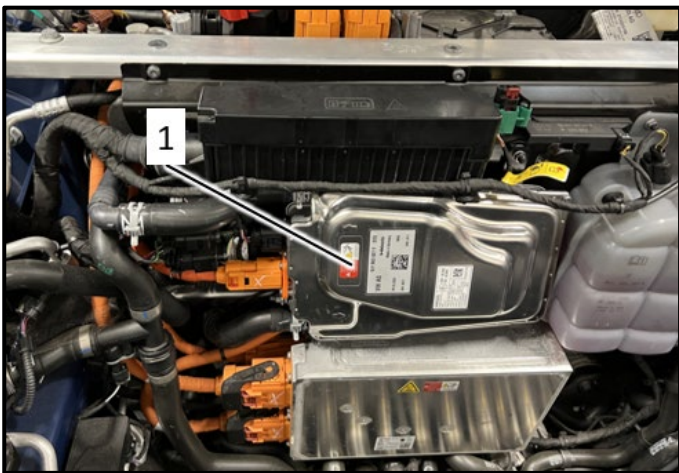


Remove the front luggage compartment liner:

- Remove the bolts <arrows>.



- Slightly lift the driver's side of the luggage compartment liner <1>
- Remove the rubber grommet <2> from the luggage compartment liner <1>.
- Remove the luggage compartment liner <1> from the vehicle.



Z189 High-Voltage heater inspection:

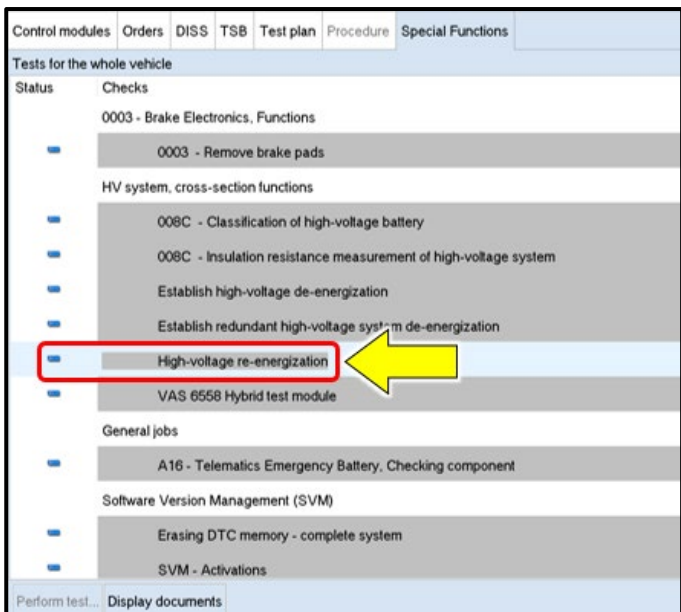
- Locate the Z189 high-voltage heater <1>.



- Check the production date <1> of the Z189 high-voltage heater.
 - If the Z189 high-voltage heater was produced **BEFORE** 14/02/2023:
 - Replacement is required.
 - Proceed to section C.
 - If the Z189 high-voltage heater was produced **ON** or **AFTER** 14/02/2023:
 - Replacement is not required.
 - Continue with the reassembly instructions in this section.

NOTE
The production date on the label <1> is in the DD/MM/YYYY format.

- Reassemble the vehicle in the reverse order of removal.
- Tighten luggage compartment liner bolts to 8 Nm.
- Tighten luggage compartment lamp cover bolt to 3 Nm.



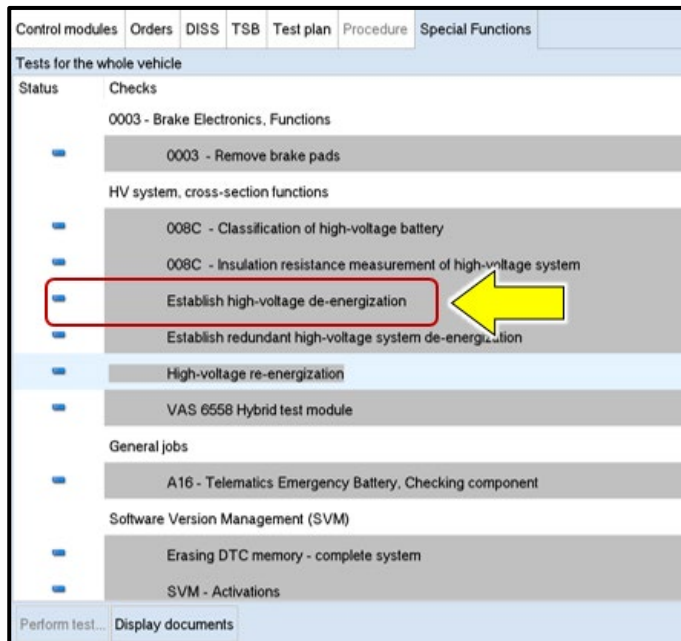
Re-energize the high-voltage system:

DANGER
High voltage increases the risk of fatal injury!
Electrocution can cause severe bodily or fatal injury!
Have a high-voltage technician or a high-voltage expert bring the high-voltage system back into service.

- Under the special functions tab, select the test plan for “high-voltage re-energization”.
- Follow all the test plan steps until the high-voltage system is successfully re-energized.
- Also, reference the ELSA repair manual when re-energizing the high-voltage system: *Repair manual > Motor > Electric Drive Motor OEG > 93 Electric drive > High-Voltage System, Re-Energizing.*
- Clear the fault memory by exiting the ODIS session.
- Send the log to GFF Paperless.

Proceed to section D

Section C – Replace Z189 High-Voltage In-Line Heater



**De-energize the high-voltage system
(if not already performed):**

⚠ DANGER

**High voltage increases the risk of fatal injury!
Electrocution can cause severe bodily or fatal injury!**

Have a high-voltage technician or a high-voltage expert de-energize the high-voltage system.

- Attach a 12V battery maintainer/charger.
- Under the special functions tab, select the test plan for “Establish high-voltage de-energization”.
- Follow the test plan steps until the high-voltage system is successfully de-energized.
- Also, reference the ELSA repair manual when de-energizing the high-voltage system: *Repair manual > Motor > Electric Drive Motor OEG > 93 Electric drive > High-Voltage System, De-Energizing.*



Drain the cooling system:

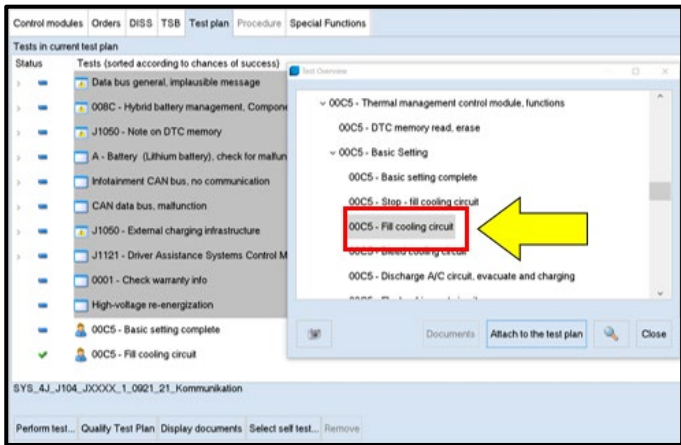
- Drain the cooling system per the ELSA repair manual: *Repair manual > Motor > 19 Cooling System > Cooling System/Coolant > Coolant, Draining.*

⚠ CAUTION

The cooling system can be under pressure. Risk of scalding by hot steam and hot coolant.

Possibility of scalding the skin and other parts of the body.

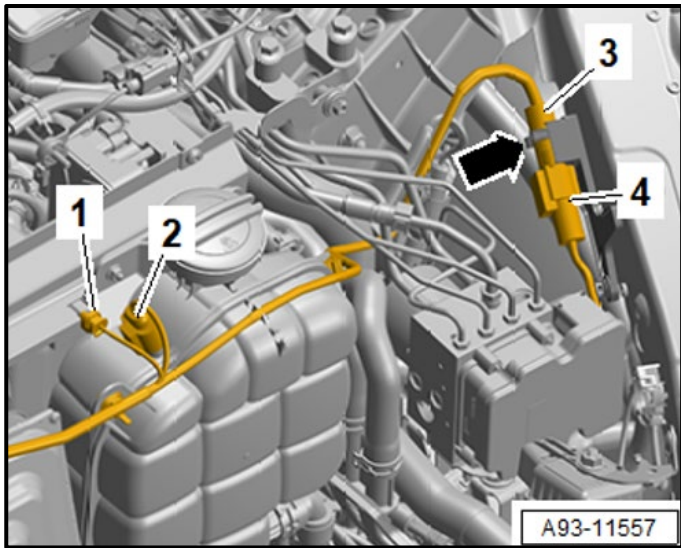
- Wear safety gloves.
- Wear protective eyewear.
- Reduce the pressure: cover the coolant expansion tank cap with a suitable towel and carefully open.



NOTE

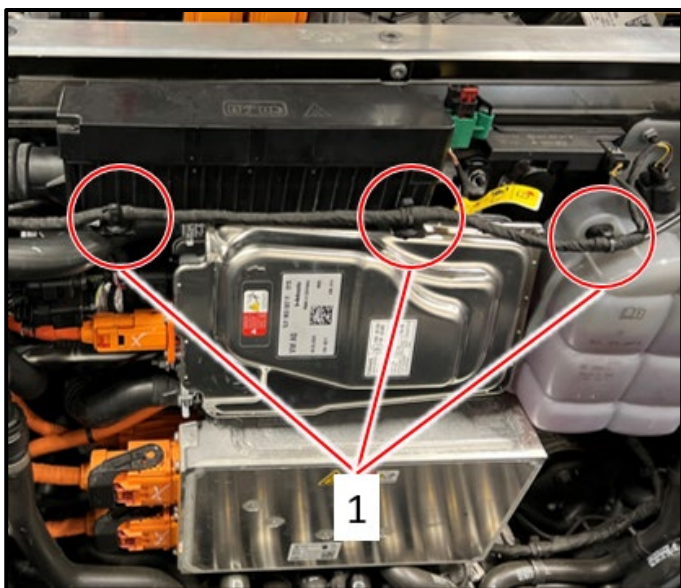
When looking under guided functions for the thermal management module, Diagnostic Address 00C5, there will not be a specific test plan for opening the coolant valves.

- In ODIS under the Diagnosis tab: *Select the test plan tab > select self test > Diagnostic capable systems > 00C5 - Thermal management control module > Thermal management control module, functions > 00C5 - Basic settings > 00C5 - Fill cooling circuit > Attach to the test plan.*
- Perform the test plan and follow the steps.
- Continue with draining the cooling system per the ELSA repair manual once the valves have been opened.

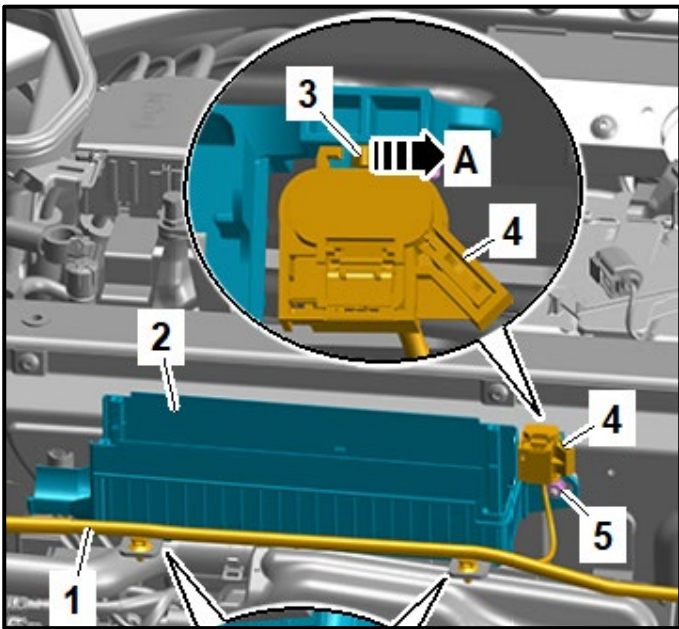


Loosen the under hood E-box:

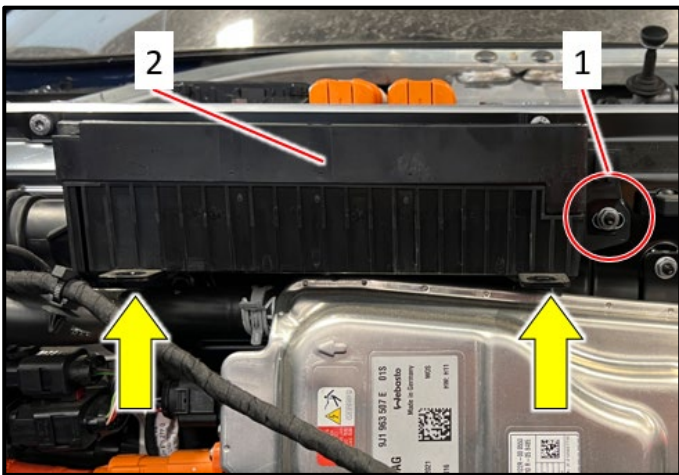
- Remove the connector housing <3> from the retainer <arrow>.
- Disconnect the connectors <1>, <2>, and <4>.



- Loosen the wiring harness by releasing the retaining clips <1>.



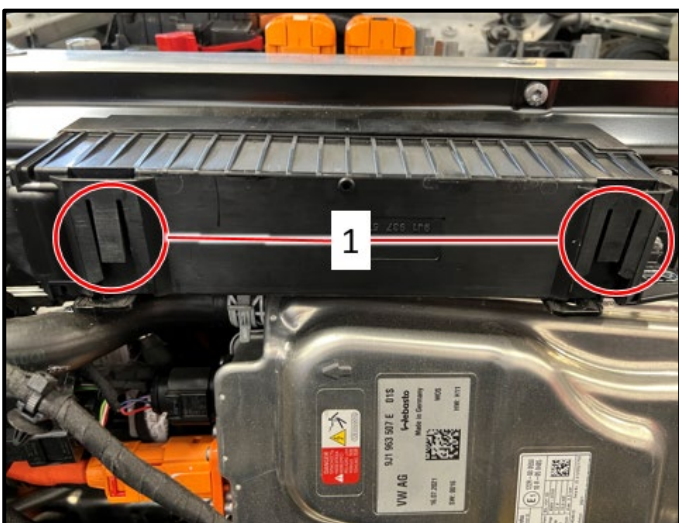
- Release the tab <3> in the direction indicated <arrow A> and slide the High-Voltage System Maintenance Connector housing -TW- <4> down to remove it.
- Move the harness <1> to the side.



- Remove the nut <1>.
- Release the retaining tabs under the E-box using a suitable tool <arrows>.
- Remove the E-box <2> from the bracket towards the front of the vehicle, and carefully lay to the side.

TIP

A long 90° pick tool works well for releasing the retaining tabs.



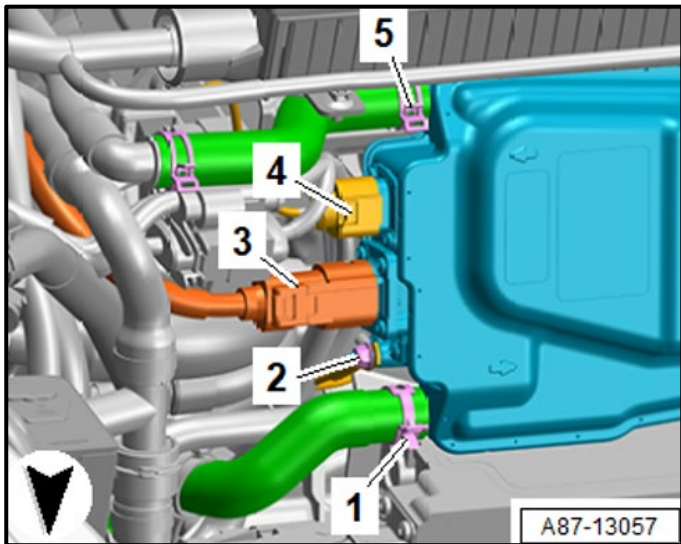
NOTE

E-box retaining tabs <1> shown with the E-box removed for clarity.

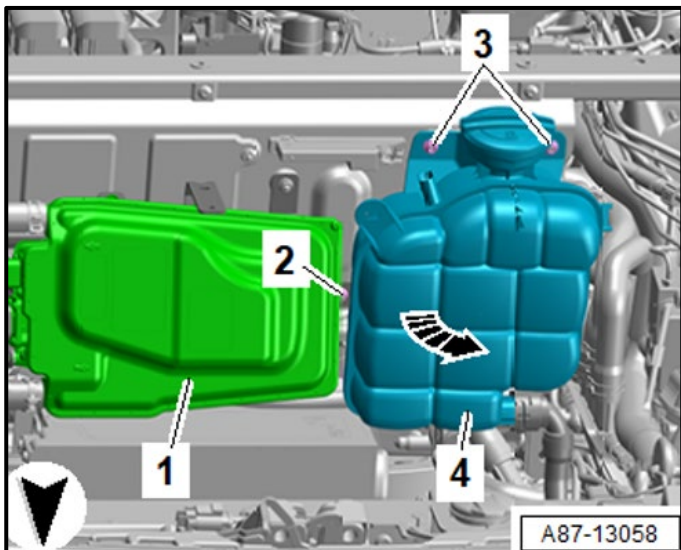
Replace the Z189 high-voltage in-line heater:

⚠ CAUTION

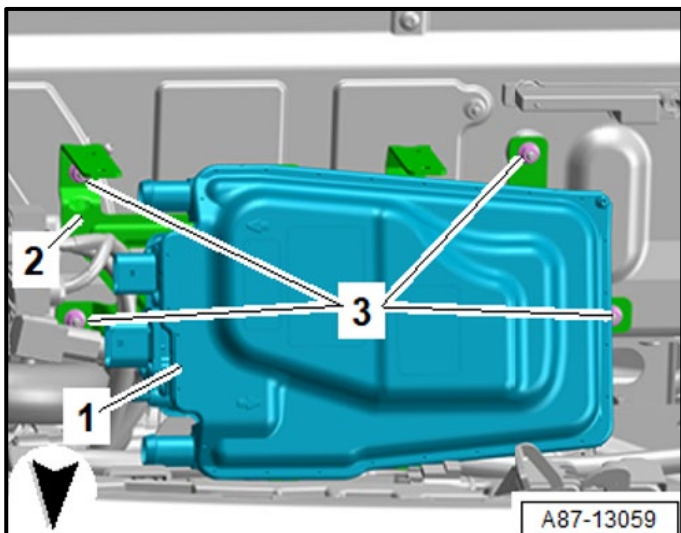
The high-voltage connections should be protected from residual coolant that may be present when removing the coolant hoses.

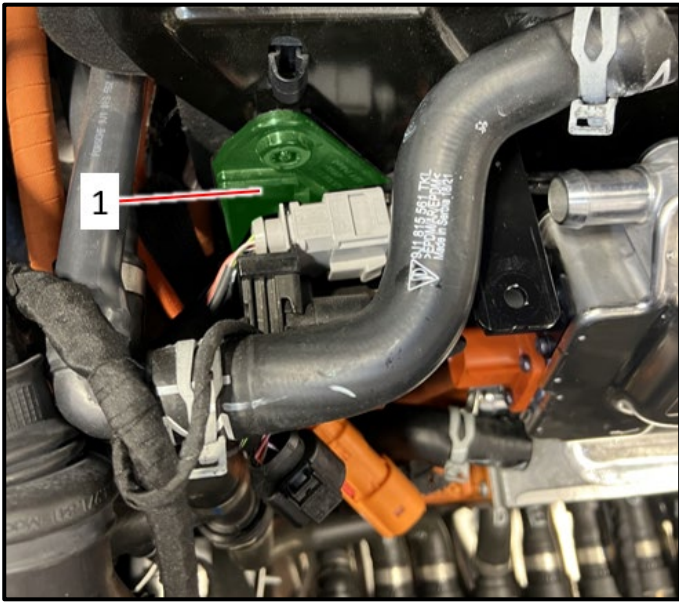


- Disconnect the connector <4> and secure to the side.
- Disconnect the high-voltage cable <3> and secure to the side.
- Place lint free cloths under the coolant hoses to catch any residual coolant.
- Loosen the hose clamps <1> and <5> and remove the coolant hoses.
- Remove the nut <2> and the potential equalization cable.
- Remove the nuts <3>.
- Disengage and move the coolant expansion tank <4> to the side until the nut <2> is accessible.



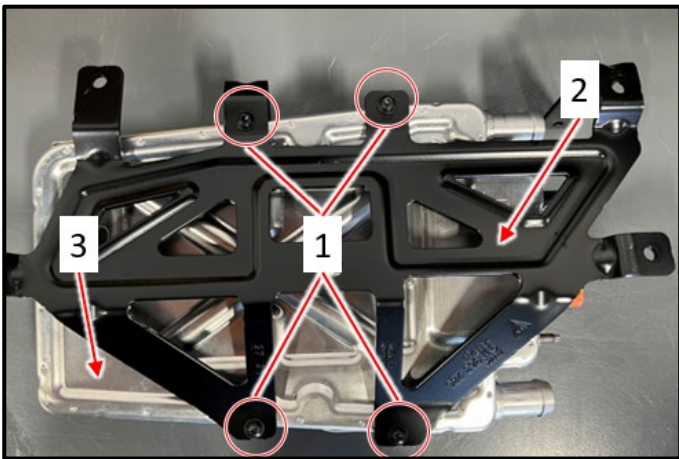
- Remove the nuts <3>.
- Remove the High-Voltage In-Line Heater -Z189- <1> with the bracket <2>.



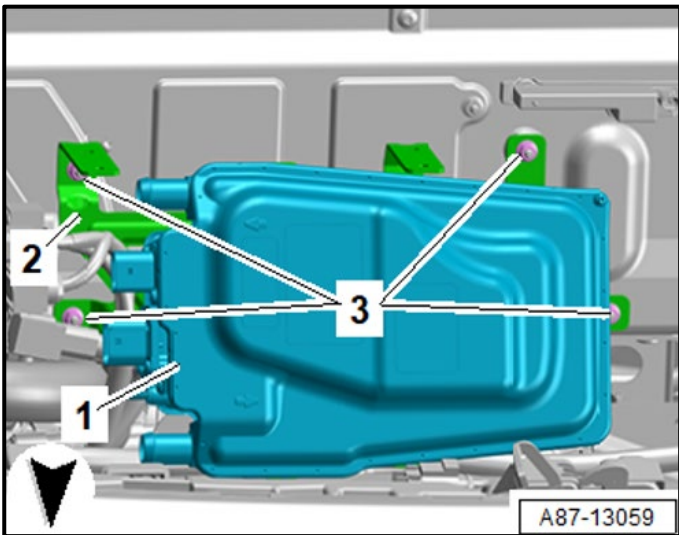


TIP

The wiring harness bracket <1> can be loosened to allow for better access to the -Z189- bracket fasteners.

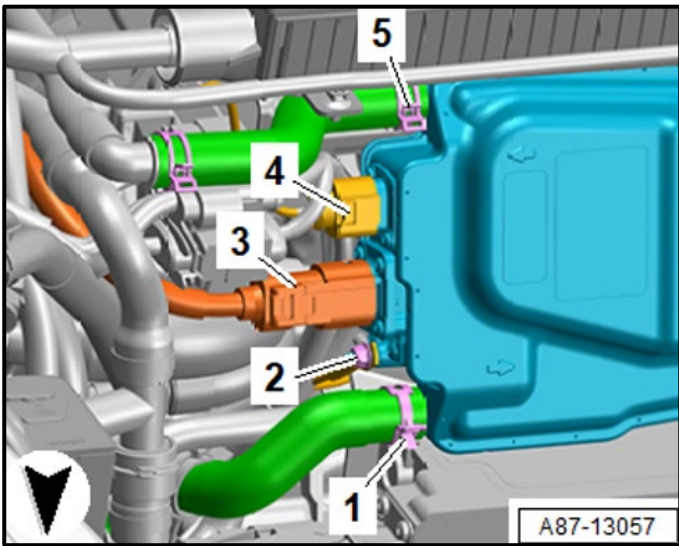


- Remove the screws <1>.
- Transfer the bracket <2> to the new High-Voltage In-Line Heater -Z189- <3>.
- Tighten the screws <1> to 4 Nm.

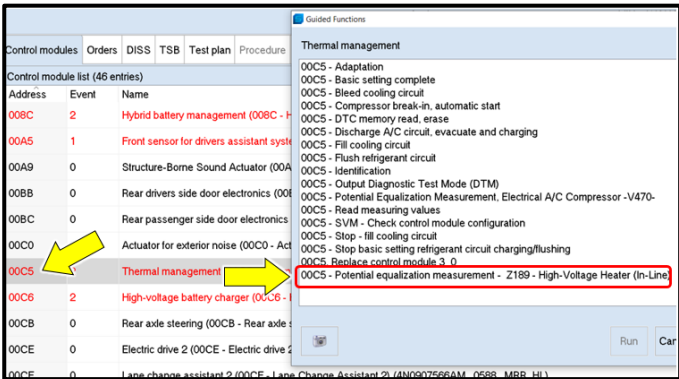


Install the Z189 high-voltage in-line heater:

- Install the high-voltage heater <1> with the bracket.
- Replace the nuts <3>.
- Tighten the nuts <3> to 8 Nm.



- Connect the potential equalization cable and tighten the nut <2> to 8 Nm.



Perform the potential equalization measurement:

- In ODIS: *Select Diagnosis > Select DA 00C5 (Thermal Management) > Guided functions > perform “Potential Equalization Measurement – Z189 – High-Voltage Heater (In-Line)”.*
- Follow the steps listed by the test plan.

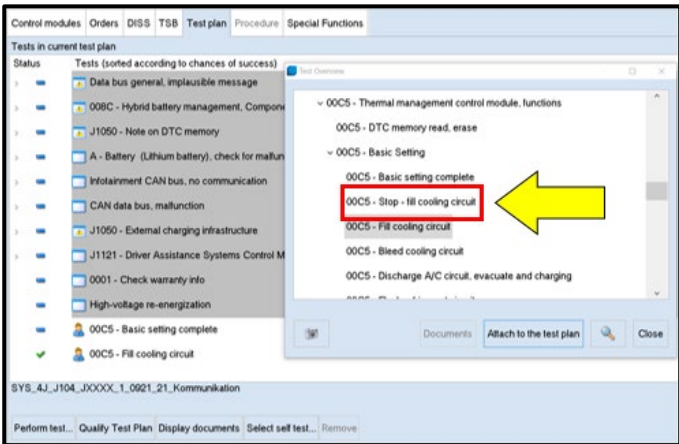
Installation is in the reverse order of removal while noting the following:

- Do not install the luggage compartment liner or under body panels at this time. This will aid in checking for leaks when filling and bleeding the cooling system in the next step.
- Tighten coolant expansion tank nuts to 8 Nm.
- Tighten under-hood e-box nut to 8 Nm.



Fill and bleed the cooling system:

- Fill the cooling system per the ELSA repair manual: *Repair manual > Motor > 19 Cooling System > Cooling System/Coolant > Cooling System, Filling.*

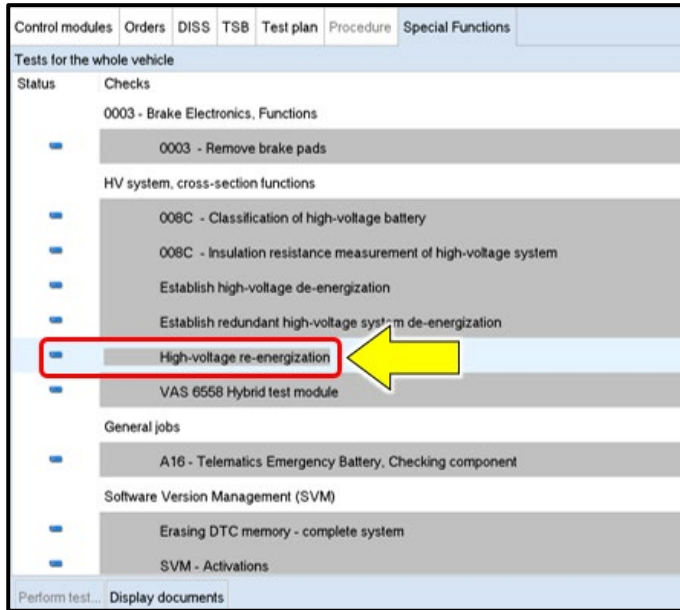


NOTE

When looking under guided functions for the thermal management module, Diagnostic Address 00C5, there will not be a specific test plan for closing the coolant valves after filling.

- In ODIS under the Diagnosis tab: *Select the test plan tab > select self test > Diagnostic capable systems > 00C5 - Thermal management control module > Thermal management control module, functions > 00C5 - Basic settings > 00C5 - Stop - fill cooling circuit > Attach to the test plan.*
- Perform the test plan and follow the steps.
- Continue with the steps in the ELSA repair manual once the valves have been closed after filling.
- Bleed the cooling system per the ELSA repair manual: *Repair manual > Motor > 19 Cooling System > Cooling System/Coolant > Cooling System, Bleeding.*

- Continue with reassembly of the remaining components in the reverse order of removal.
- Tighten luggage compartment liner bolts to 8 Nm.
- Tighten luggage compartment lamp cover bolt to 3 Nm.
- Tighten wheel well liner and under body trim panel screws to 2.5 Nm.



Re-energize the high-voltage system:

⚠ DANGER

**High voltage increases the risk of fatal injury!
Electrocution can cause severe bodily or fatal injury!**

Have a high-voltage technician or a high-voltage expert bring the high-voltage system back into service.

- Under the special functions tab, select the test plan for “high-voltage re-energization”.
- Follow all the test plan steps until the high-voltage system is successfully re-energized.
- Also, reference the ELSA repair manual when re-energizing the high-voltage system: *Repair manual > Motor > Electric Drive Motor OEG > 93 Electric drive > High-Voltage System, Re-Energizing.*
- Clear the fault memory by exiting the ODIS session.
- Send the log to GFF Paperless.

Proceed to section D

Section D – Campaign Completion Stamp

I certify that this campaign
has been performed in strict
accordance with the applicable
Audi repair procedure.

SAGA Code: _____

Technician: _____

Date: _____

Item#: AUD4927ENG

- Once the campaign has been completed, the technician should stamp the repair order.
- Stamps are available for ordering through the Compliance Label Ordering Portal.

Proceed to Section E

Section E - Parts Return/Disposal

Properly store (retain), destroy or dispose of removed parts in accordance with all state and local requirements, unless otherwise indicated and/or requested through the Warranty Parts Portal (WPP) for U.S.