

Safety Recall

Code: 93E8



Subject High Voltage Battery Charging Socket

Release Date August 28, 2019

Affected Vehicles

Country	ModelYear	Vehicle	Vehicle Count
USA	2019	E-TRON QUATTRO	1,646
CAN	2019	E-TRON QUATTRO	232

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 only valid campaign inquiry & verification source.

- ✓ 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.

Problem Description

A potentially faulty seal may allow moisture to enter the high-voltage (HV) battery through the wiring between the HV battery charging socket and the high-voltage electronics. If this happens, the instrument cluster will display the message “Electrical system: fault.” and a warning will appear in the instrument panel. If moisture enters the high-voltage battery, there is a risk of a short circuit leading to a fire in the high-voltage system.

Corrective Action

A robustness package will be installed on the affected vehicles to seal the wiring harness for the charging socket.

Precautions

Should either of the following warning lamps appear along with the message “**Electrical system: fault**”, ***immediately stop, park the vehicle outdoors and do not charge it.***



Contact Audi Roadside Assistance at 800-411-9988 to make arrangements to have the vehicle towed to an authorized dealer for inspection/service without delay.

Dealers that receive customer vehicles where the message/lights have appeared should keep them in a secure, **outdoor** area until the recall repair has been performed. These vehicles must also be covered to protect the charging socket from moisture/rain.

Parts Information

<p>Parts Control Type: VIN to Order</p>	<p>Please reference the Repair Projection Tool (below) to view your potential VIN population.</p> <p>If parts are needed to support a vehicle repair:</p> <ul style="list-style-type: none"> • US Dealers - use AVA • CAN Dealers - contact the Parts Specialists via phone (800-767-6552), email (VWoAPartsSpecialists@vw.com), or chat/text with the VIN to order
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<p>Initial Allocation: YES</p>	<p>Dealers will be sent an initial allocation prior to customer notification. If no initial allocation was received, please reference the Repair Projection Tool (below) to view your potential VIN population.</p>
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The repair information in this document is intended for use only by skilled technicians who have the proper tools, equipment and training to correctly and safely maintain your vehicle. These procedures are not intended to be attempted by “do-it-yourselfers,” and you should not assume this document applies to your vehicle, or that your vehicle has the condition described. To determine whether this information applies, contact an authorized Audi dealer. ©2019 Audi of America, Inc. All Rights Reserved.

Criteria	Part Number	Description	Qty. per Vehicle	Ordering Method
01	4KE-998-122-A	Service Kit	1	VIN to Order
01	D -172-090-A2	Adhesive	1	VIN to Order
01	4KE-810-001	Insert	1	VIN to Order

Repair Projection Tool (right click to open): 

Code Visibility

Since June 07, 2019, affected vehicles were listed on the Inventory Vehicle Open Campaign Action report under My Dealership Reports (found on www.accessaudi.com & OMD Web). A list was not posted for dealers who did not have any affected vehicles.

Since June 07, 2019, this campaign code showed open on affected vehicles in Elsa.

Since June 07, 2019, affected vehicles were identified with this campaign code in the VIN Lookup tool at www.audiusa.com and on the NHTSA VIN lookup tool at www.safercar.gov.

Owner Notification

Owner notification will take place in September 2019. Owner letter examples are included in this bulletin for your reference.

Additional Information

Please alert everyone in your dealership about this action, including Sales, Service, Parts and Accounting personnel. Contact Warranty if you have any questions.

IMPORTANT REMINDER ON VEHICLES AFFECTED BY SAFETY & COMPLIANCE RECALLS

New Vehicles in Dealer Inventory: It is a violation of federal law for a dealer to deliver a new motor vehicle or any new or used item of motor vehicle equipment (including a tire) covered by this notification under a sale or lease until the defect or noncompliance is remedied. By law, dealers must correct, prior to delivery for sale or lease, any vehicle that fails to comply with an applicable Federal Motor Vehicle Safety Standard or that contains a defect relating to motor vehicle safety.

Pre-Owned Vehicles in Dealer Inventory: Dealers should not deliver any pre-owned vehicles in their inventory which are involved in a safety or compliance recall until the defect has been remedied.

Dealers must ensure that every affected inventory vehicle has this campaign completed before delivery to consumers.

Customer Letter Example (USA)

NHTSA: 19V434

**Subject: Safety Recall 93E8 – High-Voltage (HV) Battery Charging Socket
2019 Model Year Audi e-Tron**

Dear Audi Owner,

This notice is sent to you in accordance with the National Traffic and Motor Vehicle Safety Act. Audi has decided that a defect, which relates to motor vehicle safety, exists in certain 2019 model year Audi e-Tron vehicles. Our records show that you are the owner of a vehicle affected by this action.

What is the issue? A potentially faulty seal may allow moisture to enter the high-voltage (HV) battery through the wiring between the HV battery charging socket and the high-voltage electronics. If this happens, the instrument cluster will display the message “Electrical system: fault.” and a warning will appear in the instrument panel. If moisture enters the high-voltage battery, there is a risk of a short circuit leading to a fire in the high-voltage system.

What will we do? To correct this defect, your authorized Audi dealer will install a robustness package to seal the wiring harness for the charging socket. This work will take a few hours 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 repair, as well as to accommodate their daily workshop schedule.

Your dealer will need to keep the vehicle for 24 hours after this repair has been performed. This will help ensure that the adhesive used during the repair cures properly.

What should you do? Please contact your authorized Audi dealer without delay to schedule this recall repair. 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.

Precautions you should take Should either of the following warning lights appear along with the message “**Electrical system: fault**”, ***immediately stop, park the vehicle outdoors and do not charge it***. Contact Audi Roadside Assistance at 800-411-9988 to make arrangements to have the vehicle towed to an authorized dealer for inspection/service without delay. Towing will be FREE of charge.



Lease vehicles and address changes If you are the lessor and registered owner of the vehicle identified in this action, the law requires you to 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).

If you still cannot obtain satisfaction, you may file a complaint with: The Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, SE., Washington, DC 20590; or call the toll-free Vehicle Safety Hotline at 1-888-327-4236 (TTY: 1-800-424-9153); or go to <http://www.safercar.gov>.

We apologize for any inconvenience this matter may cause; however we are taking this action to help ensure your safety and continued satisfaction with your vehicle.

Sincerely,

Audi Customer Protection

DANGER

Risk of injury. Refer to “Warning and Safety Precautions”, found in **Appendix A** at the end of this document.

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.

Repair Overview



- Inspect high-voltage charging cable and SX6.
- Install repair kit on charging socket.

Required Parts

<u>Criteria</u>	<u>Quantity</u>	<u>Part Number</u>	<u>Part Description</u>
01	1	4KE.998.122.A	Service Kit
	1	D 172.090.A2	Adhesive
	1	4KE.810.001	Charge door unit

NOTE

The specified part numbers reflect the status at the start of this recall. Interim updates made in ETKA can cause a listed part number to become unavailable. In this case, the new part number specified in ETKA should be used.

Required Tools

 <p>Trim Removal Wedge -3409- (or equivalent)</p>	 <p>Cartridge Gun -VAG1628- (or equivalent)</p>
 <p>Warning Sign - High Voltage -VAS6649-</p>	 <p>Warning Sign - "Do Not Switch On" -VAS6650A-</p>
 <p>Padlock -T40262/1- (from Service Disconnect Lock -T40262-)</p>	 <p>Diagnostic Tester -VAS6150X- (or equivalent)</p>
 <p>Battery Tester/Charger - GRX3000VAS- (or equivalent)</p>	

Repair Instruction

Section A - Check for Previous Repair

Applicable criteria ID(s)	Campaign/Action Status
01 ← 2	Open ← 1

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.

Proceed to Section B

Section B – Inspect For Water Ingress in Charging Cable

DANGER

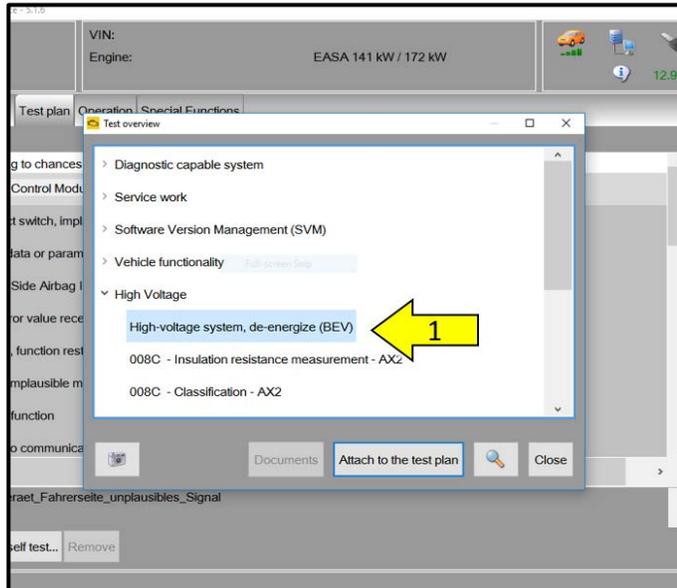
High voltage can cause fatal injury

- The voltage levels in the high-voltage system constitute a safety hazard. Danger of severe or fatal injuries from electric shock.
- Persons with life-sustaining or other electronic medical devices in or on their body must not perform any work on the high-voltage system. Such medical devices include internal analgesic pumps, implanted defibrillators, pacemakers, insulin pumps and hearing aids.
- **An Audi high-voltage technician (HVT) or an Audi high-voltage expert (HVE) must de-energize and re-energize the high-voltage system.**

CAUTION

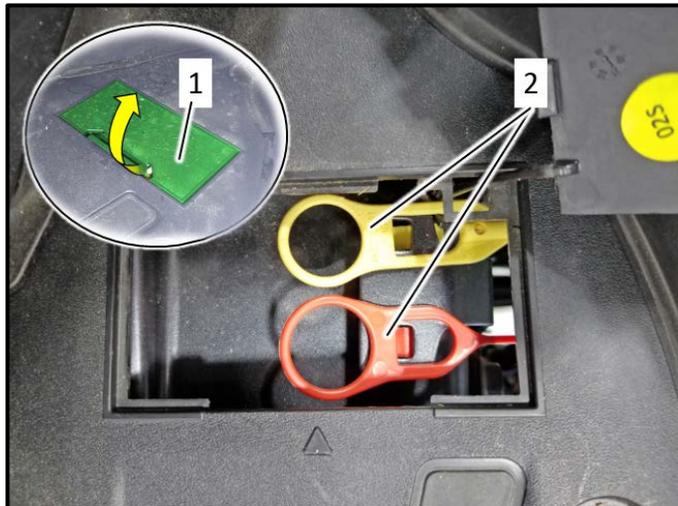
Risk of damaging the high-voltage cables.

Incorrect handling can damage the insulation of the high-voltage cables or high-voltage connectors.



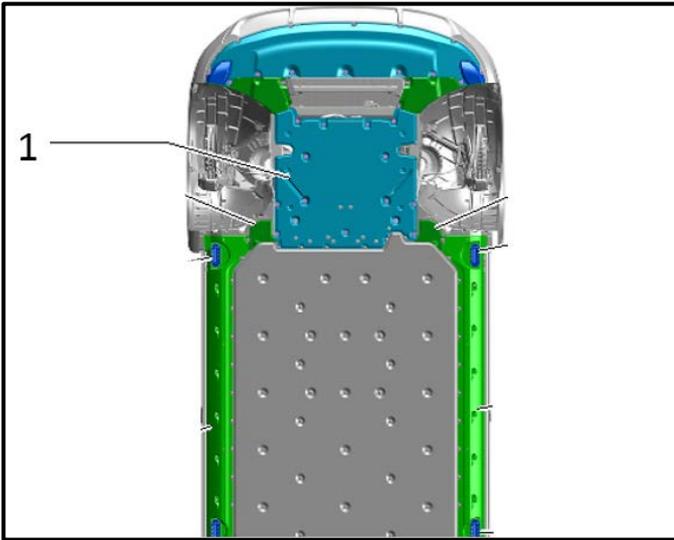
De-energize high-voltage system:

- Attach a 12V battery maintainer/charger.
- Select and perform the “High-voltage system, de-energize (BEV)” test plan <1>.
- Follow all of the test plan steps until the high-voltage system is successfully de-energized.



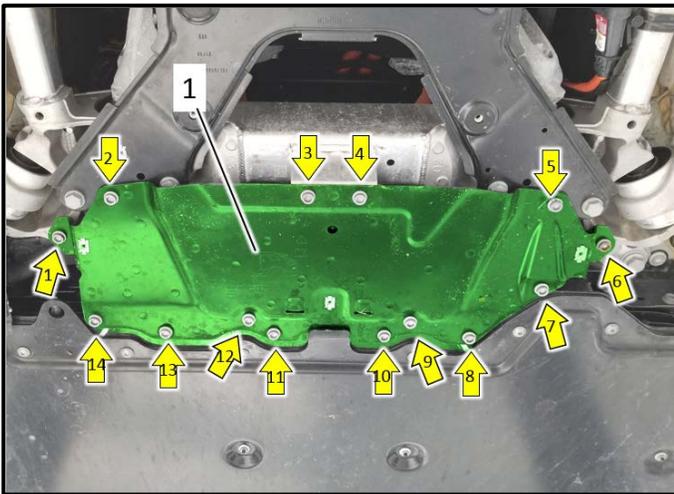
Remove emergency release cables:

- Release locking tab and open emergency release cable access door <1>.
- Unclip emergency release cables <2>.



Remove underbody trim panel:

- Remove fasteners and remove underbody trim panel <1>.



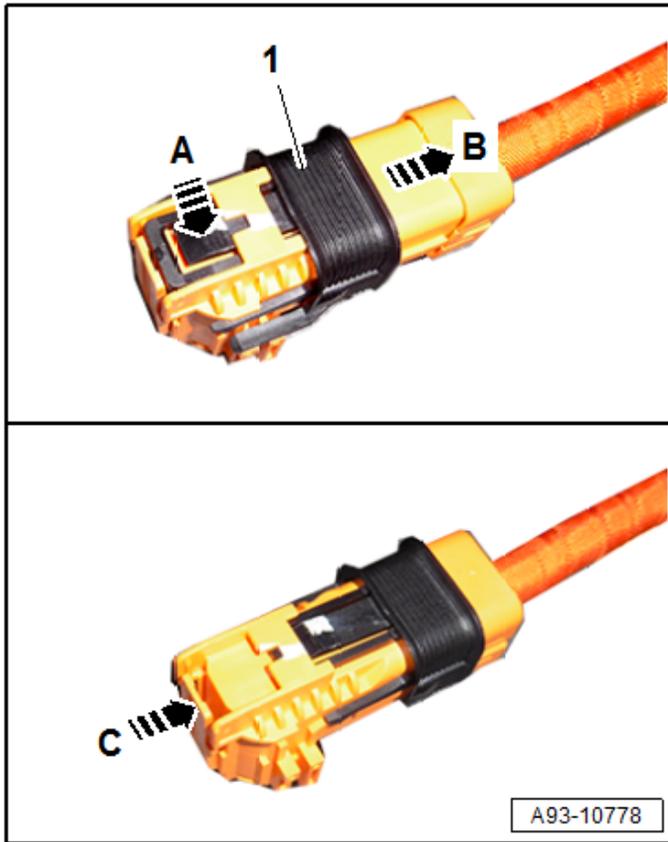
Remove impact guard:

- Remove bolts <arrows> and remove impact guard <1>.



Disconnect charging socket cable from SX6:

- Disconnect charging socket cable connectors <1> and <2> from the high-voltage battery control module SX6.



Procedure for disconnecting the connectors:

- Push down the catch <arrow A> and remove the connector lock <1> all the way <arrow B>.
- Push the catch in the direction of <arrow C> and remove the connector.



Check for water ingress in the charging socket cables and SX6:

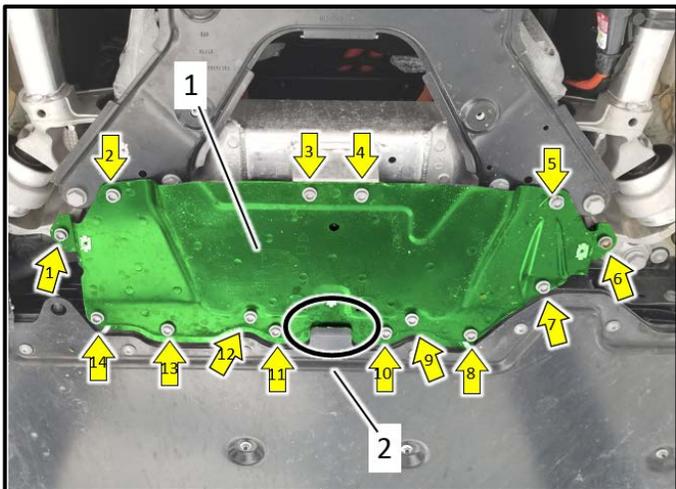
- Both high voltage cables and both cable connections on the SX6 must be inspected.
- If water ingress is found:
 - U.S. Dealers - Take photos and create an Audi Technical Assistance phone contact.
 - Canadian Dealers - Take photos and create an Audi Technical Assistance ticket.
- If no water is found:
 - Service kit must be installed.
 - Proceed to Section C.

Section C – Service Kit Installation



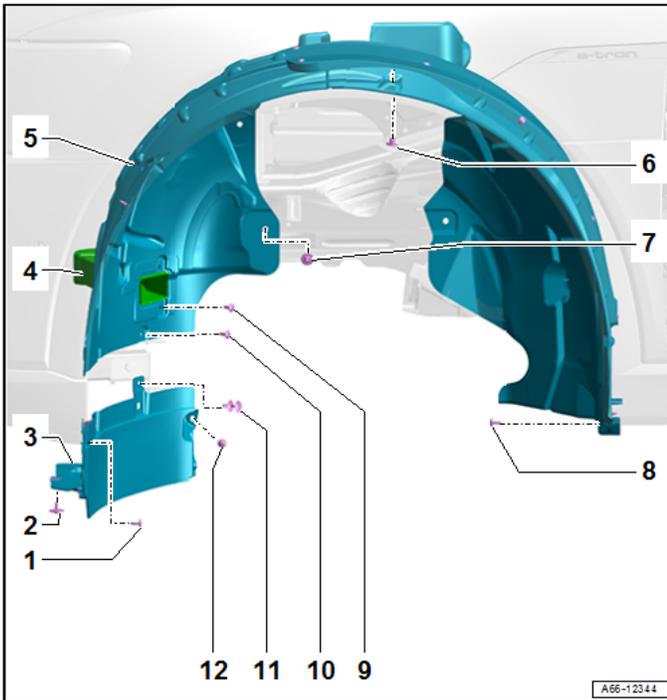
Reconnect charging socket cables:

- Connect and lock charging socket cable connectors <1> and <2> in reverse order of removal.



Reinstall impact guard:

- Installation is the reverse order of removal.
- Ensure the impact guard <1> is installed under the tab <circle> on the high-voltage battery <2>.
- Torque bolts <arrows> as follows:
 - Tighten by hand all the way.
 - Torque to 24 Nm in sequence 1 through 14.



Remove driver front wheel housing liner:

- Remove driver front wheel.
- Remove fasteners <6-10>.
- Remove wheel housing liner <5>.

NOTE

Lower section <3> and air duct <4> do not require removal.

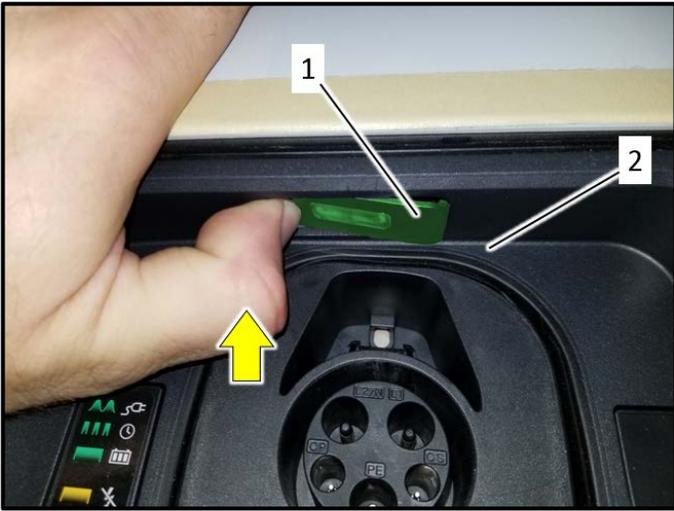


Mask off area around charge door unit:

- The area around the charge door unit must be taped off to avoid damaging the paint.
- The tape should be applied with the charge door open to ensure maximum coverage.
- The shaded area along the wheel arch trim must have multiple layers of tape.

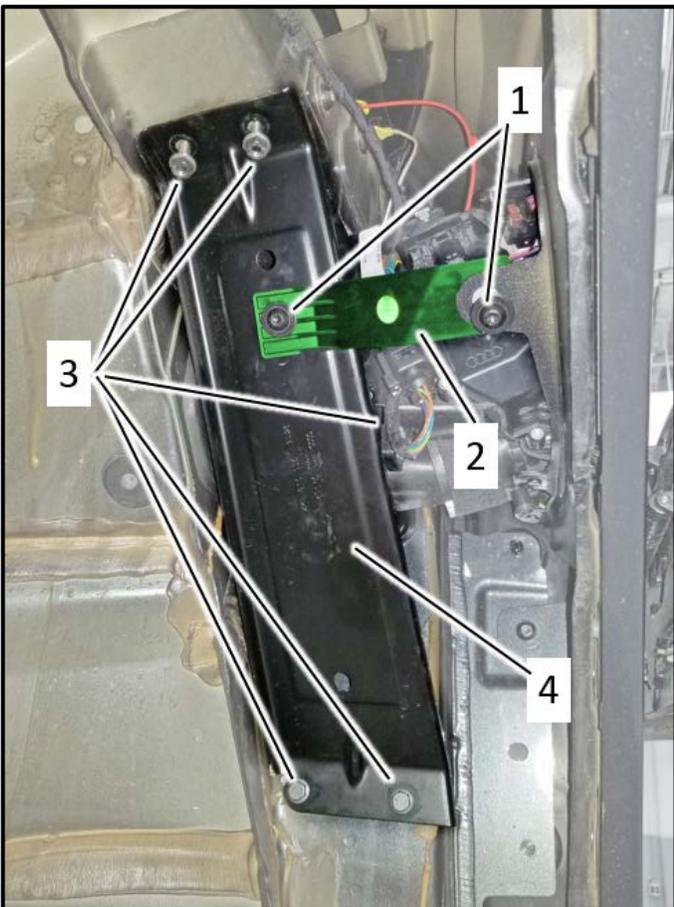


- The tape on the wheel arch trim should also cover the inside edge of the trim <arrows>.
- There must be multiple layers of tape along the wheel arch trim to prevent damage during removal and installation of the charge door unit.



Remove charge door lamp:

- Press upward on the charge door lamp <1> as shown and remove lamp downward from charge door unit <2>.
- Disconnect the lamp.



Remove brackets:

- Remove bolts <1>.
- Remove bracket <2>.
- Remove bolts <3>.
- Remove bracket <4>.



Removing the charge door unit:

NOTE

- Locking tabs will be damaged and require the replacement of the charge door unit, which is included in this repair.
- Contrary to the information in the ELSA Repair Manual, it is not necessary to remove the driver's door or the wheel arch cover.

- The five locking tabs for the charge door unit are at the locations shown <arrows>.
- Locking tabs <1, 2 and 3> can be accessed through the body, in the fender well.
- Locking tab <4> can be accessed through the charge door light opening.
- Locking tab <5> will require drilling.

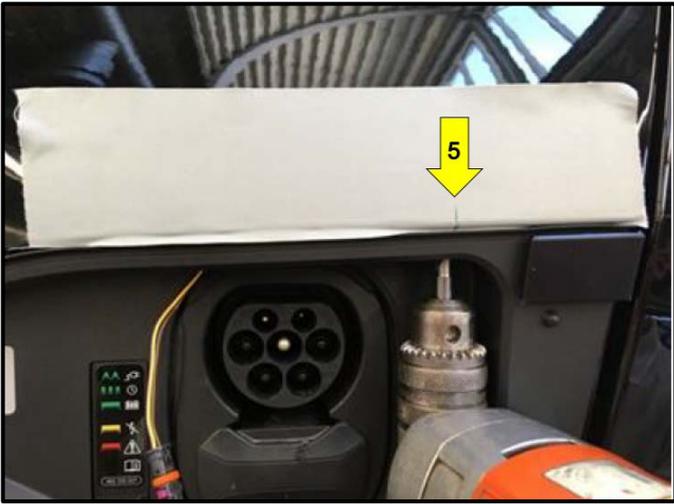


Removing locking tab <5>:

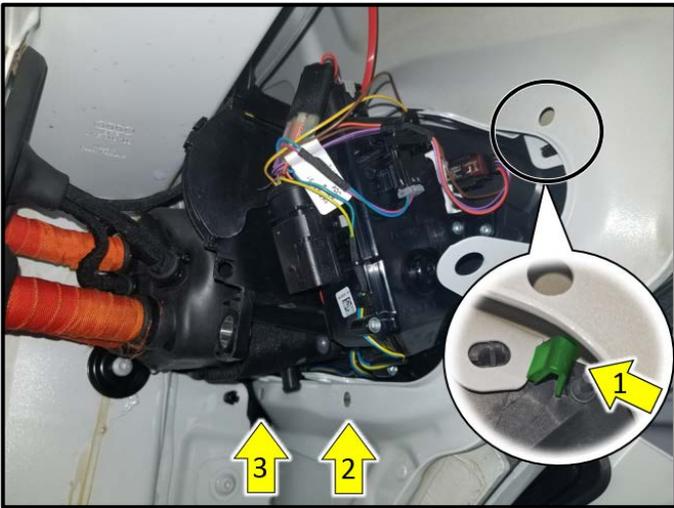
- Open charging flap.
- Close charging flap.
- Make a mark in the middle of the "n" of "e-tron".



- Open charging flap.
- Make a drill reference mark in line with the previously made mark <circle> 2 cm away from charge door unit as shown.

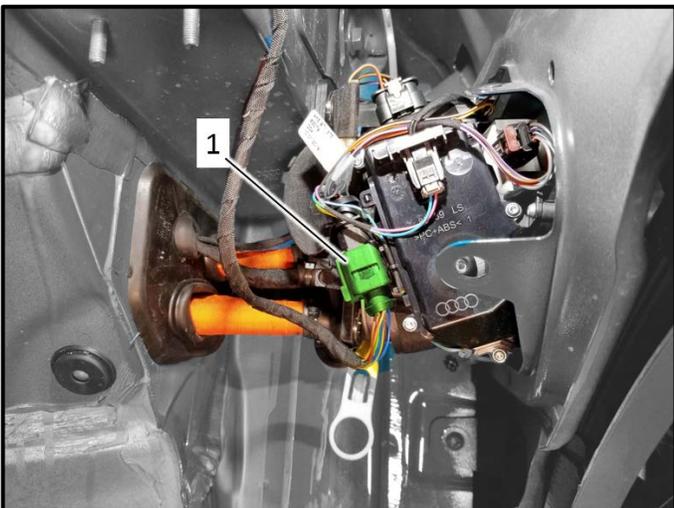


- Drill through locking tab <5> at the reference mark using an angled drill/angled bit and a short commercially available spot weld drill (diameter approx. 7 mm) to a depth of approx. 15 mm at the marked location.
- Remove drilling residue at charging socket using a compressed air gun.



Removing locking tabs <1, 2 and 3>:

- Release locking tabs <2 and 3> through the holes <arrows> in the body using a pick/hook tool or a flat bladed screwdriver.
- Locking tab <1> is exposed and can be released using a pick/hook tool or a flat bladed screwdriver.



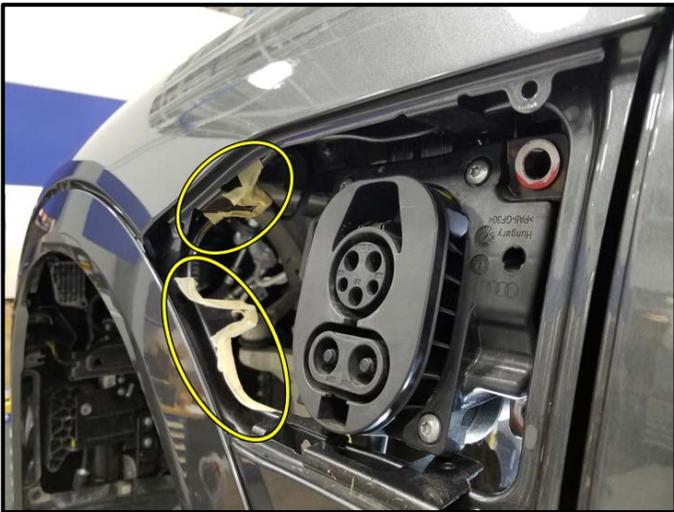
Disconnect connector to charge door unit:

- Disconnect connector <1> from charge door unit.



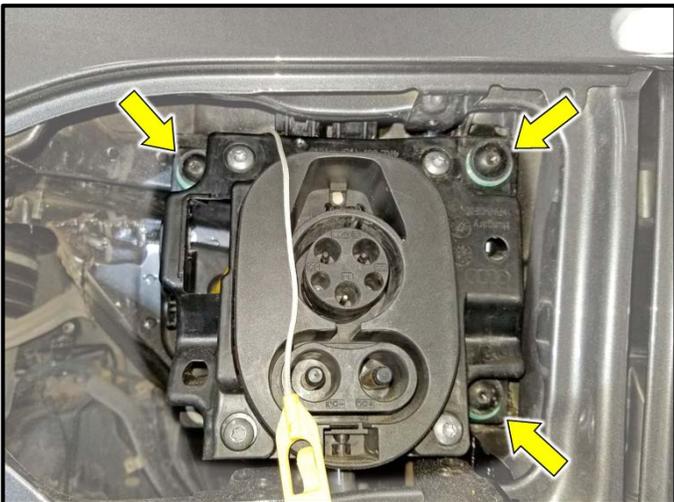
Remove charge door unit:

- Remove charge door unit.
- The wheel arch trim <1> must be pressed out carefully at the same time to enable the charging flap unit to be removed.



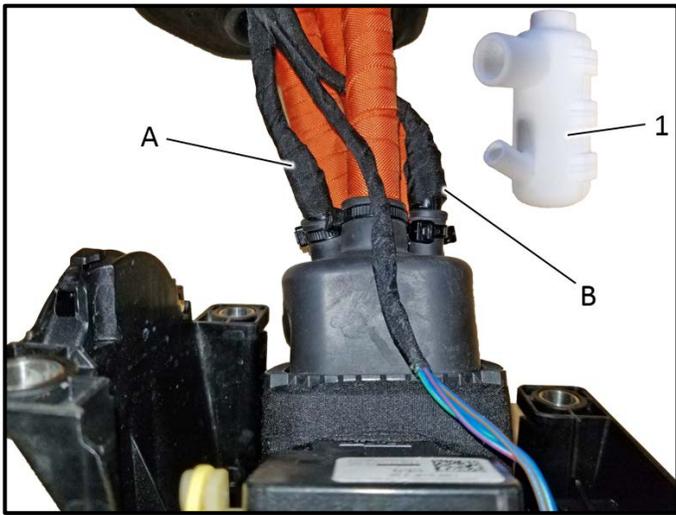
Mask off fender:

- Mask off the edges of the fender support as shown to avoid damaging the charging socket.



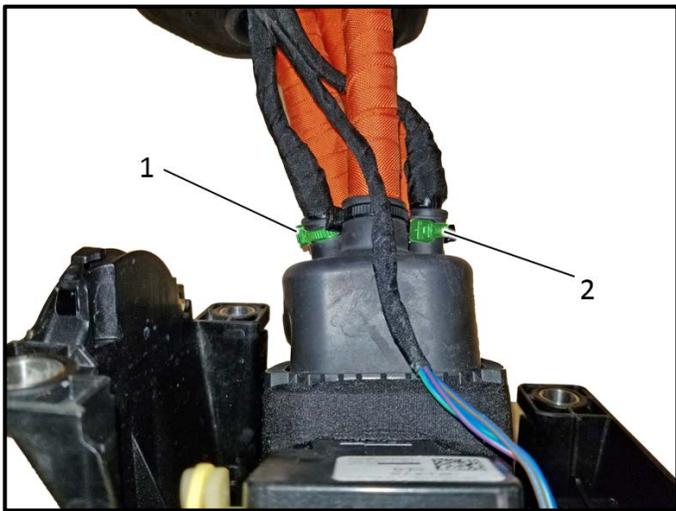
Unbolt charging socket:

- Mark the position of the bolts in relation to the charging socket.
- Remove bolts <arrows>.
- Lift up on the charging socket, then swivel the charging socket down and toward the front of the vehicle.

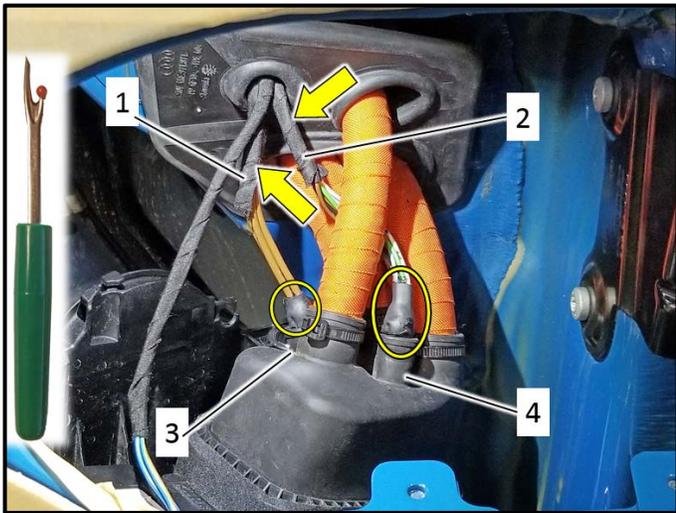


REPAIR NOTES

- Two molds <1> from the service kit will be installed on the ground wiring harness <A> and charging socket wiring harness .
- The wiring harnesses will be opened before installing the molds.
- Some of the following steps are illustrated with the charging socket cable removed from the vehicle. The charging socket cable does not require removal from the vehicle.



- Remove cable ties:**
- Remove cable ties <1> and <2>.
 - DO NOT cut the charging socket when removing the cable ties.
 - DO NOT remove the cable ties around the high-voltage charging cables.

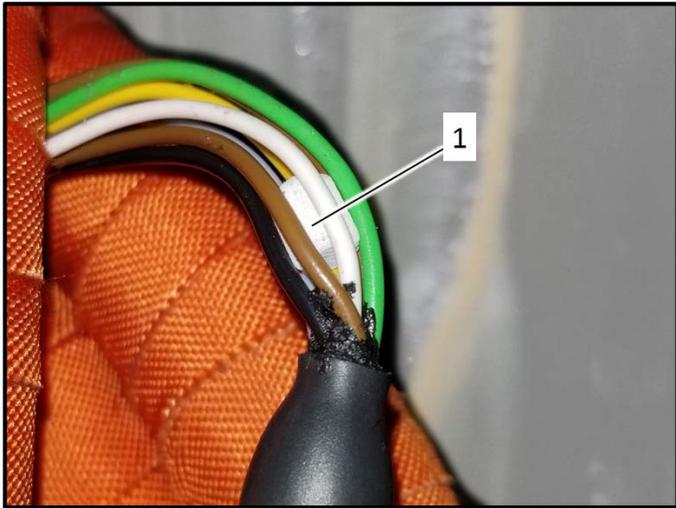


Remove tape:

CAUTION

- When using the seam ripper, use caution so the wires are not damaged.
- Work away from grommets <3> and <4> so they are not punctured.

- Using the supplied seam ripper, carefully open the wiring harnesses <1 and 2> and remove the fabric tape.
 - There needs to be approximately 15 - 20 mm of tape remaining on the wiring harnesses <arrows>, measured from the body grommet.
- Then remove the plastic electrical tape so the heat shrink tubing <circles> are exposed.

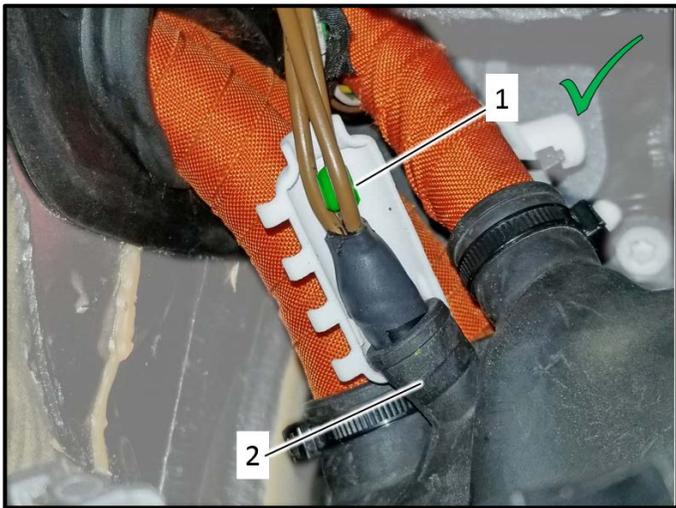


Install insert:

- Install an insert <1> from the service kit between the wires.
 - Space the individual wires evenly around the insert.
 - This will ensure complete distribution of the adhesive for betting sealing.

! NOTE

Charging socket harness shown. The procedure for both harnesses is similar.



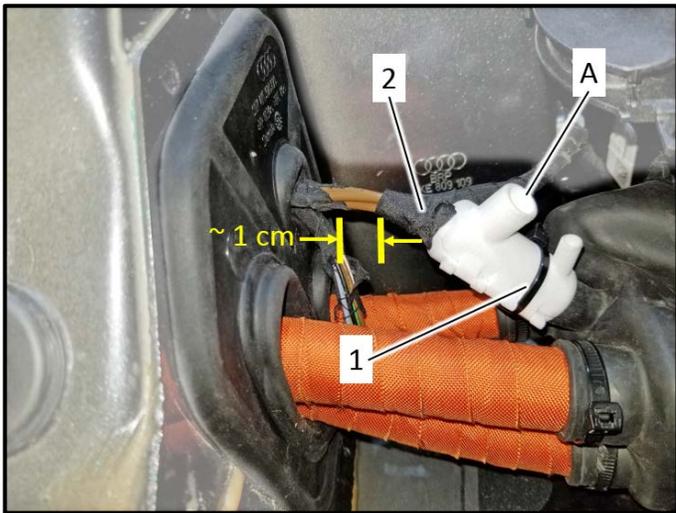
Installing mold:

- When installing the mold, the wire insert <1> must fit in the large cavity in the mold as shown.
- The mold must fit completely around the grommet <2> on the charging socket.
- To ensure the mold fits around the grommet <2> and the insert <1> fits inside the mold, the wiring harness may have to be adjusted in the grommet <2>.

! NOTE

Ground cable harness shown. The procedure for both harnesses is similar.





Position the molds:

! NOTE

Ground cable harness shown. The procedure for both harnesses is similar.

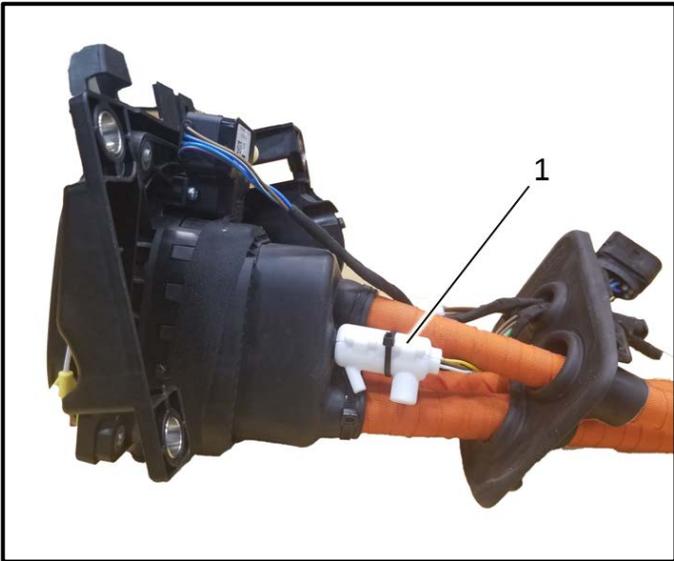
- Rotate the molds so the large port <A> is accessible to apply the adhesive into (ground harness shown).
- Once the molds are in position, install tie wrap <1>.
 - Cut off the excess and ensure any sharp edges will not interfere with the high-voltage cables.
- Install fabric tape <2> on the end of mold so approximately 1 cm of wiring is still exposed.
- If necessary, remove additional tape remaining on wiring harness.

! NOTE

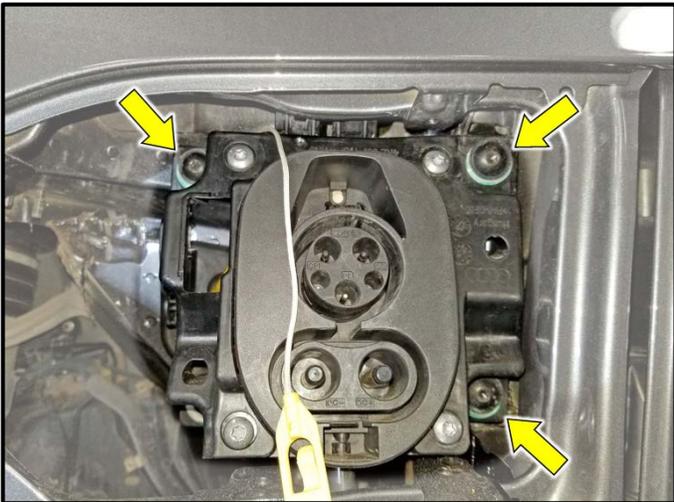
If water wicks into the wiring harnesses, at least 1 cm of wiring must be exposed so the water can leak out.

- This photo illustrates how the charging socket should look with both molds completely installed.



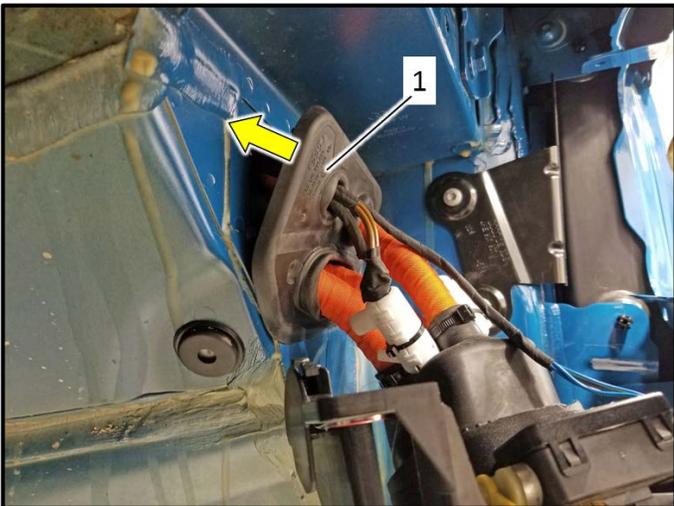


- The filling port on the mold installed on the charging socket harness <1> will have to point straight down as shown.



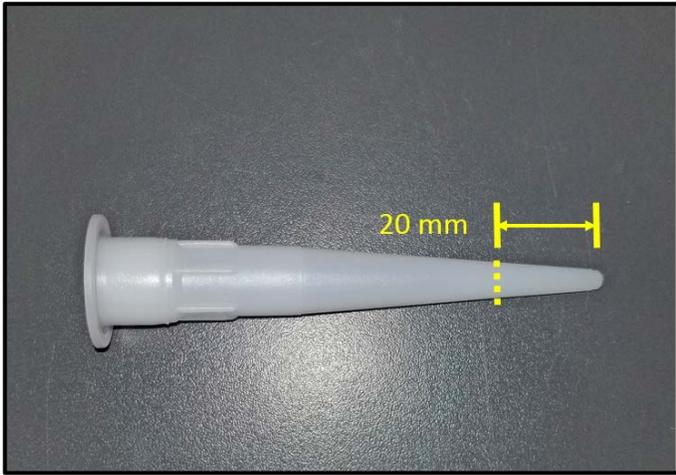
Reinstall charging socket:

- Reference the previously made marks on the charging socket.
- Installation is the reverse order of removal.
- Torque bolts <arrows> to 9 Nm.



Reinstall body grommet:

- In the event the wiring harness grommet came loose during the repair, press the grommet in direction of <arrow> until it is full seated in the body.

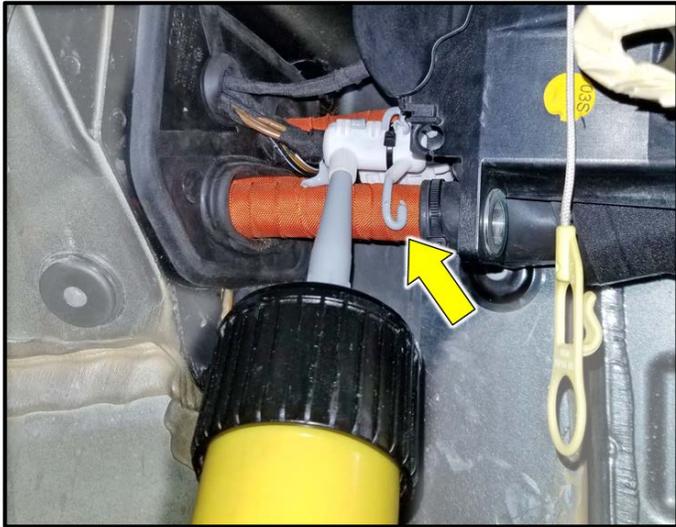


Prepare nozzle:

- Remove 20 mm from the end of the filling nozzle.

! NOTE

The end of the nozzle must fit into the filling port so the nozzle fills the mold cavity AND the filling port. This will ensure complete adhesive distribution.



Fill molds:

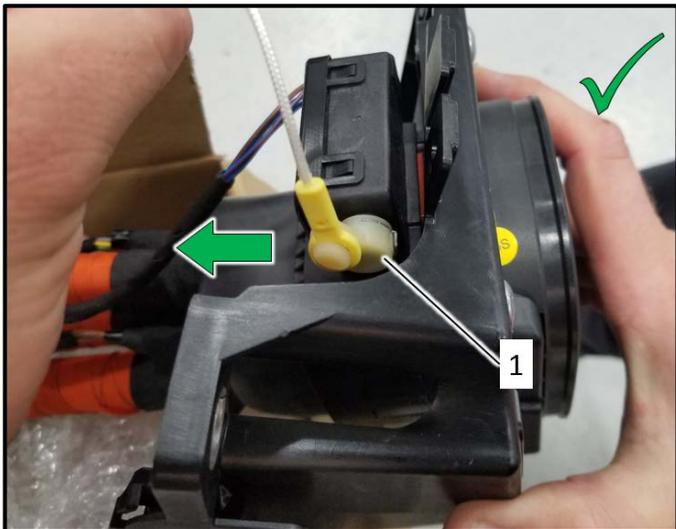
- Slowly fill both molds until adhesive is coming out of the small opening as shown <arrow>.
- Clean off all excess adhesive that may seep out of other locations on the mold.

! NOTE

Ground cable harness shown. The procedure for both harnesses is similar.



- This photo illustrates filling the charging socket harness mold.

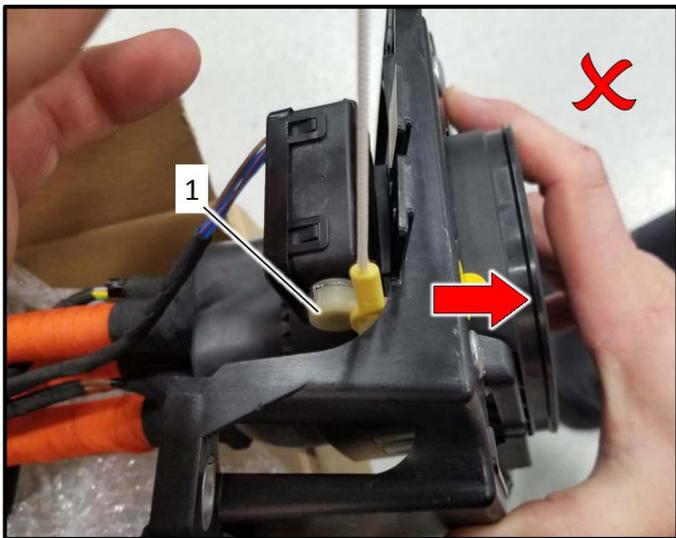


Adjust emergency release cable lever:

- Before securing the charging socket, ensure the emergency release cable lever <1> is in the position shown (pointed inward).
- If the lever <1> is in the incorrect position (pointed outward), the lever will not operate correctly and could break.

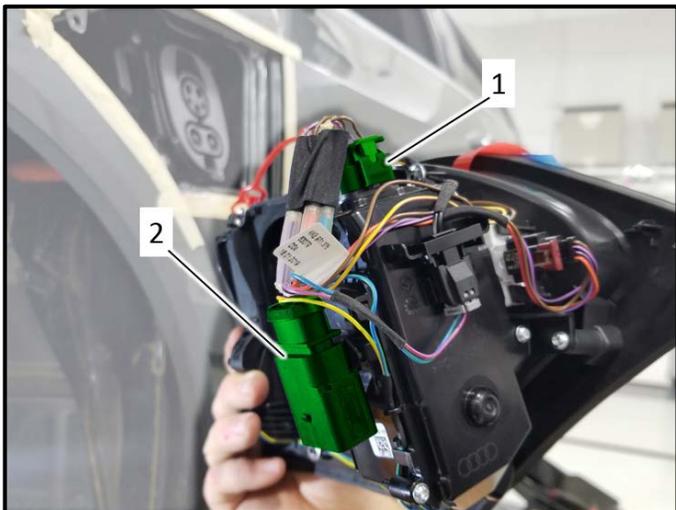
NOTE

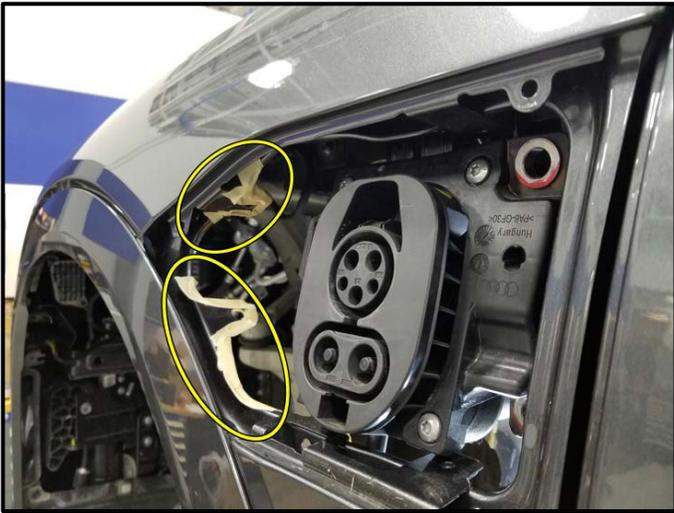
Charging socket shown removed for clarity.



Prepare charge door unit for installation:

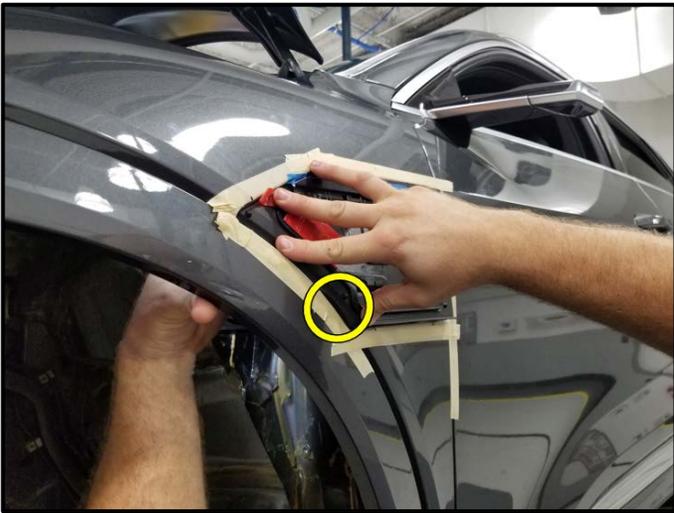
- Before installing the charge door unit, disconnect connector <1> and unclip connector <2>. This reduces the risk of damaging the new charge door unit and wiring.





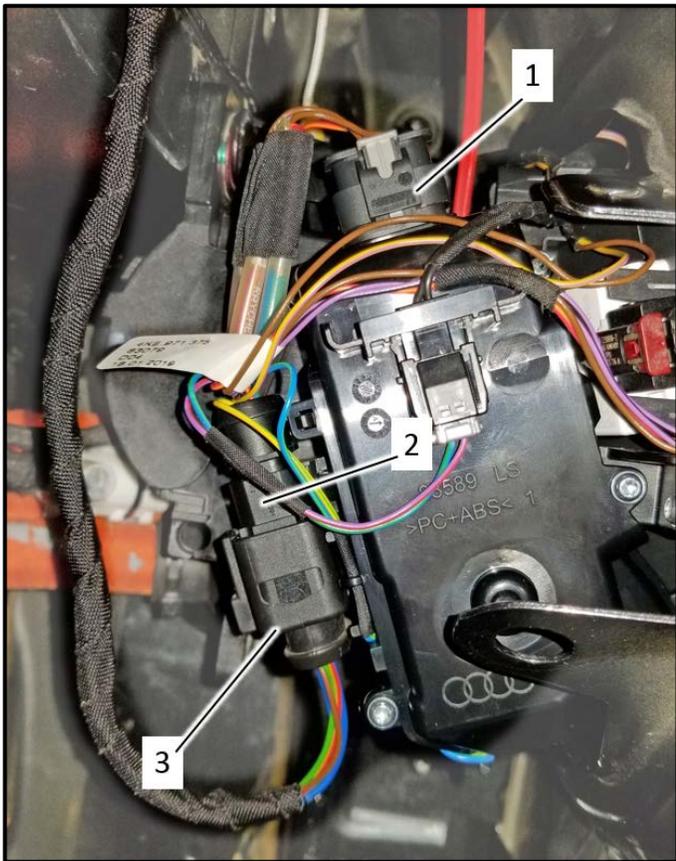
Remove tape:

- Remove tape from fender support.



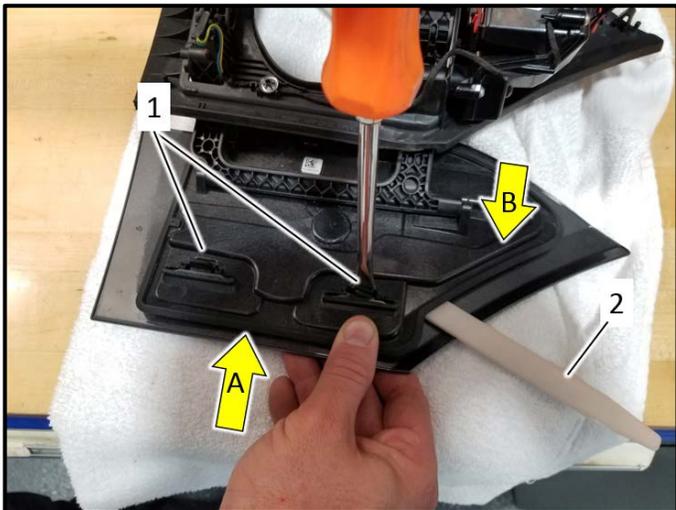
Install charge door unit:

- Installation is the reverse order of removal.
- Feed emergency release cables to their installed location.
- Pay attention to all connectors and wiring so they are not damaged.
- The fender trim will have to be pressed out slightly during installation.
- Install the charge door unit behind the fender trim at <circle> first.
- After the charge door unit is installed, press the fender trim back in firmly.
- Reconnect previously removed connectors.



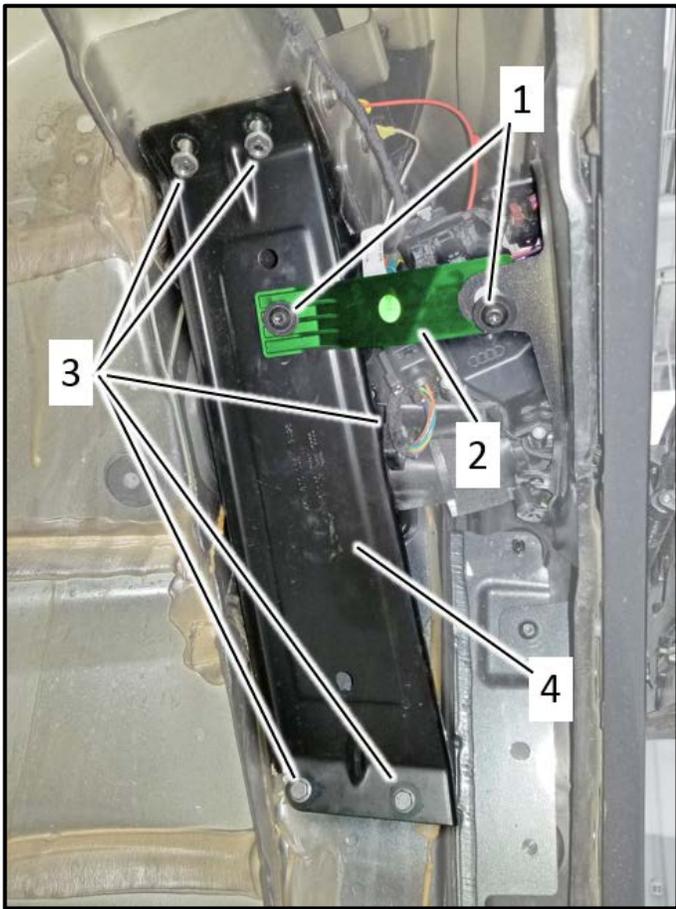
Reconnect connectors:

- Reconnect and lock connector <1>.
- Secure connector <2> to the charging socket.
- Connect connector <3>.



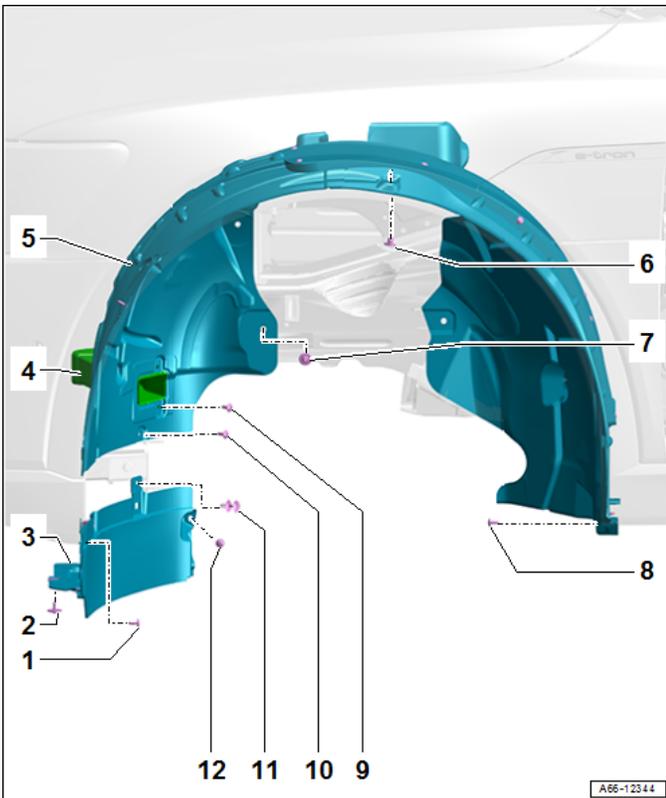
Swap charge door unit panel:

- Insert a trim removal wedge <2> as shown and at <arrow A> to aid in releasing the tabs <1>.
- Release locking tabs <1> with a screwdriver.
- Once the locking tabs are released, pull the panel away from the charge door unit and remove in direction of <arrow B>.
- If adhesive tape is present, remove all residue from the panel.
- Clean the panel with cleaning solution D 009.401.04 (shop supply) and allow the panel to dry completely.
- Install the panel onto the new charge door unit in the reverse order of removal.



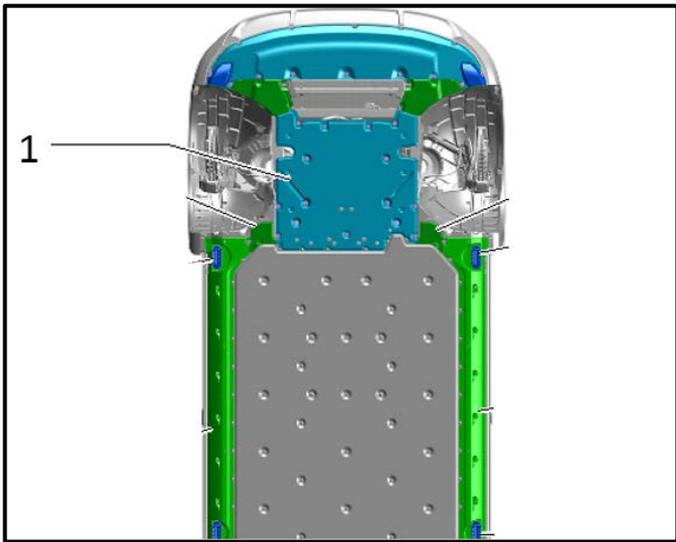
Reinstall brackets:

- Installation is the reverse order of removal.
- Torque bolts <3> to 10 Nm.
- Torque bolts <1> to 6 Nm.



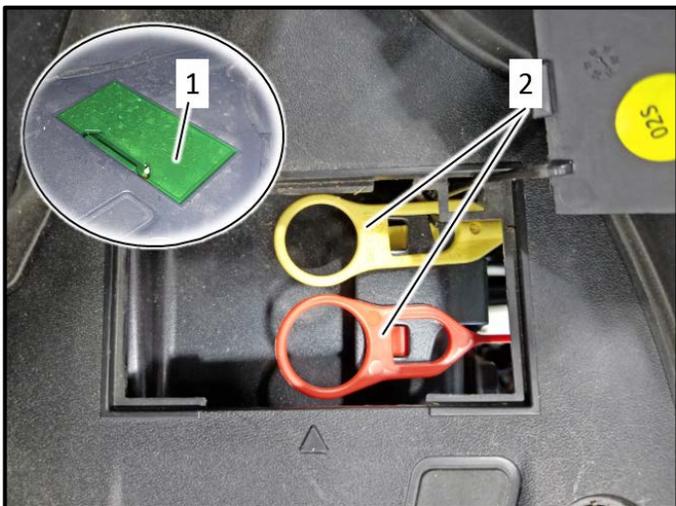
Reinstall left front fender liner:

- Installation is the reverse order of removal.
- Torque fasteners to 2 Nm.
- Install left front wheel.
 - Torque lug bolts to 160 Nm.



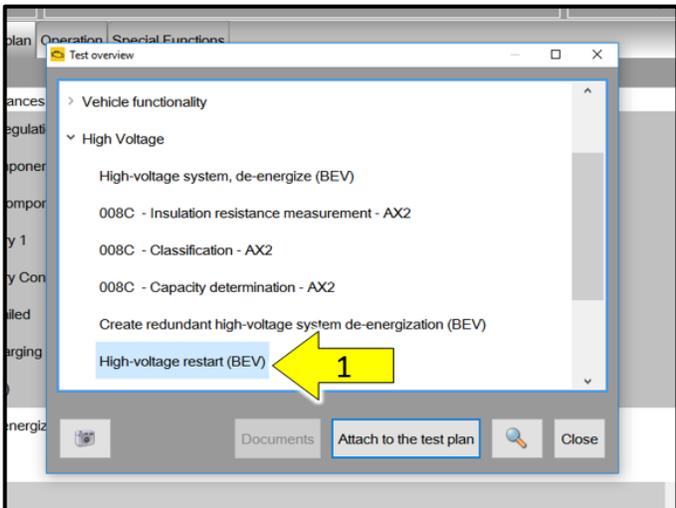
Reinstall underbody trim panel:

- Installation is the reverse order of removal.
- Torque screws to 2.5 Nm.
- Torque M6 bolts to 8 Nm.



Secure emergency release cables:

- Clip emergency release cables <2> in place.
- Close access door <1>.



Re-energize high-voltage system:

DANGER

An Audi high-voltage technician (HVT) or an Audi high-voltage expert (HVE) must re-energize the high-voltage system.

- Attach a 12V battery maintainer/charger.
- Select and perform the “High-voltage restart (BEV)” test plan <1>.
- Follow all of the test plan steps until the high-voltage system is successfully re-energized.



Allow the adhesive to cure:

- DO NOT WASH THE VEHICLE!
- Park the vehicle in a **DRY** location.
- Do not move the vehicle for 24 hours to allow the adhesive to harden properly.

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

-OR-

Je certifie que cette
campagne de rappel a été
exécutée suivant les strictes
directives de réparation
d'Audi

Code de SAGA: _____
Technicien: _____
Date: _____

Item # AUD4927FRE

- 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/province and local requirements, unless otherwise indicated and/or requested through the Warranty Parts Portal (WPP) for U.S. and the Part Destruction and Core Disposition Report for Canada.

Appendix A – Warning and Safety Precautions

Safety Precautions When Working ON the High-voltage System

DANGER

High voltage can cause fatal injury

- The voltage levels in the high-voltage system constitute a safety hazard. Danger of severe or fatal injuries from electric shock.
- Persons with life-sustaining or other electronic medical devices in or on their body must not perform any work on the high-voltage system. Such medical devices include internal analgesic pumps, implanted defibrillators, pacemakers, insulin pumps and hearing aids.
- The high-voltage system must be de-energized by a suitably qualified person.

DANGER

There Is a Risk of Explosion Caused by Cooling System Leaks in the High-Voltage Battery. This Can Cause a Buildup of Explosive Gases in the Battery Housing.

- Explosions May Cause Severe Bodily Injuries.
- So long as no coolant is added when the coolant level is low in the coolant expansion tank, until the cause of the leak is corrected.
- If the indicator lights for “coolant level” and “high-voltage battery error” turn on, move the vehicle into the open air into the defined separate parking area.
- Notify the high-voltage expert (HVE).

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 IN THE VICINITY of the High-voltage System

DANGER

High voltage can cause fatal injury

- 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.