

ELECTRICAL SYSTEM

Battery, Starter, Generator, Cruise Control (Sedan)

27 BATTERY, STARTER, GENERATOR, CRUISE CONTROL

GENERAL INFORMATION

BATTERY

The following descriptions can be found in General Information .

- Safety procedures and precautions
- Lead-acid battery warnings and safety precautions:

BATTERY, PREPARING FOR CHARGING

Procedure

WARNING: Risk of explosion on discharged battery with "visual indicator".

- If the "visual indicator" has no color or is light yellow, the battery may not be tested or charged. Jump starting must not be used! There is a risk of explosion during testing, charging or jump starting. The battery must be replaced.

Before the battery charger can be connected, the following preparations are necessary:

NOTE: It is recommended that the battery is charged when installed and connected. This is the only way to ensure the charging current is incorporated into the capacity calculation for the battery monitoring control module -J367-.

-- Turn off ignition, turn off all electrical components and remove the ignition key.

Vehicles through 05.08

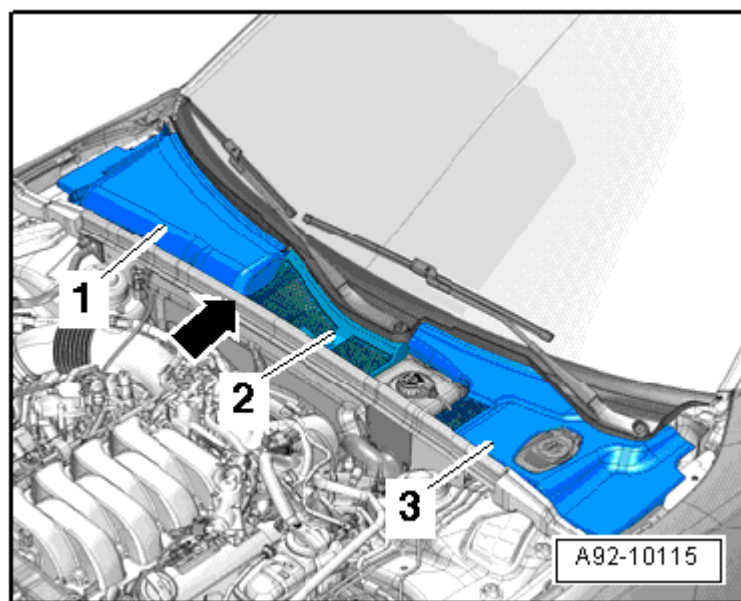


Fig. 1: Removing Plenum Chamber Covers

Courtesy of AUDI OF AMERICA, LLC

-- Unclip the plenum chamber cover -2- and remove it.

NOTE: Ignore items -1 and 3- and the -arrow-.

Vehicles from 06.08

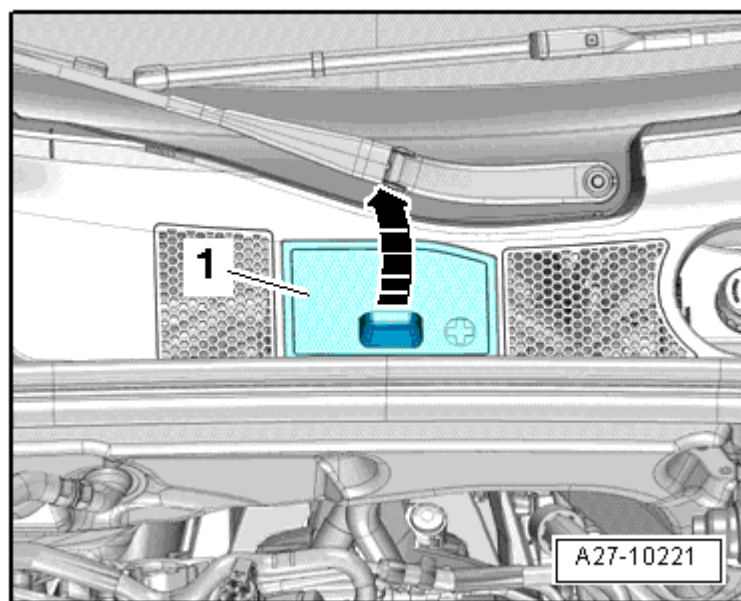


Fig. 2: Removing Cover

Courtesy of AUDI OF AMERICA, LLC

-- Pull the handle cover -1- upward -arrow-.

Continuation for All Vehicles

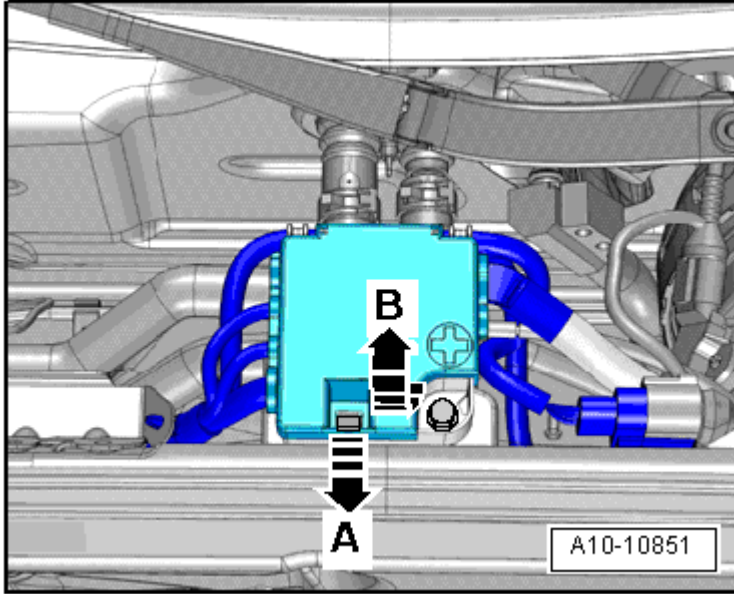


Fig. 3: Opening Terminal Box Cover
Courtesy of AUDI OF AMERICA, LLC

-- Release the retainer -arrow A- and open the cover -arrow B-.

-- Connect the battery charger red charging clamp "+" to the positive terminal clamp -1- and the black charging clamp "-" to the negative terminal clamp -2-.

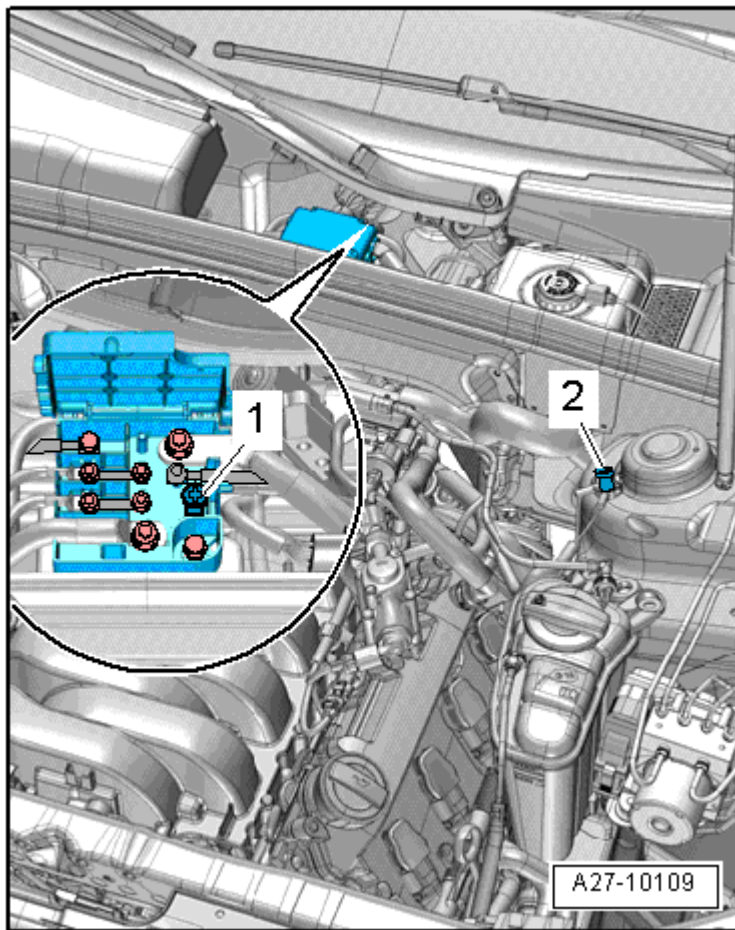


Fig. 4: Connecting Battery Charger Red Charging Clamp "+" To The Positive Terminal Clamp
 Courtesy of AUDI OF AMERICA, LLC

-- Connect the battery charger electrical system connector and turn the charger on. Refer to **General Information** .

-- Keep the rear lid open while charging.

BATTERY, PREPARING FOR SUPPORT MODE

Procedure

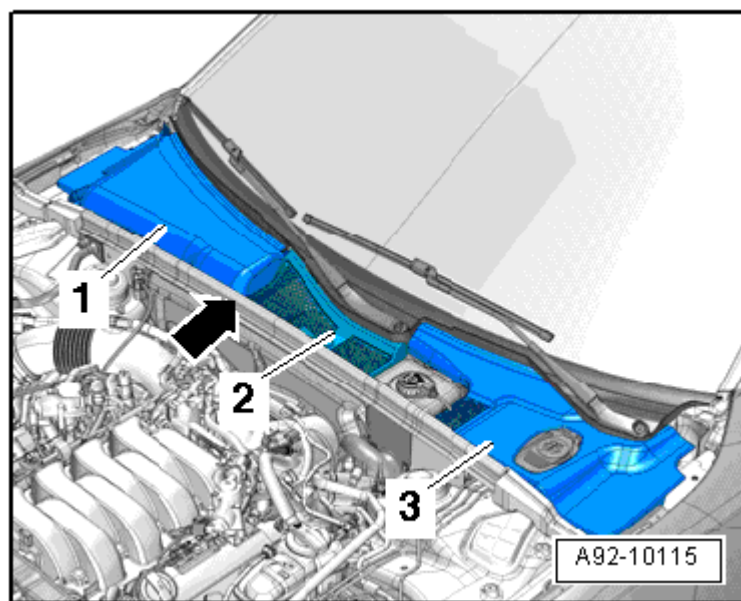


Fig. 5: Removing Plenum Chamber Covers
Courtesy of AUDI OF AMERICA, LLC

Vehicles through 05.08

-- Unclip the plenum chamber cover -2- and remove it.

NOTE: Ignore items -1 and 3- and the -arrow-.

Vehicles from 06.08

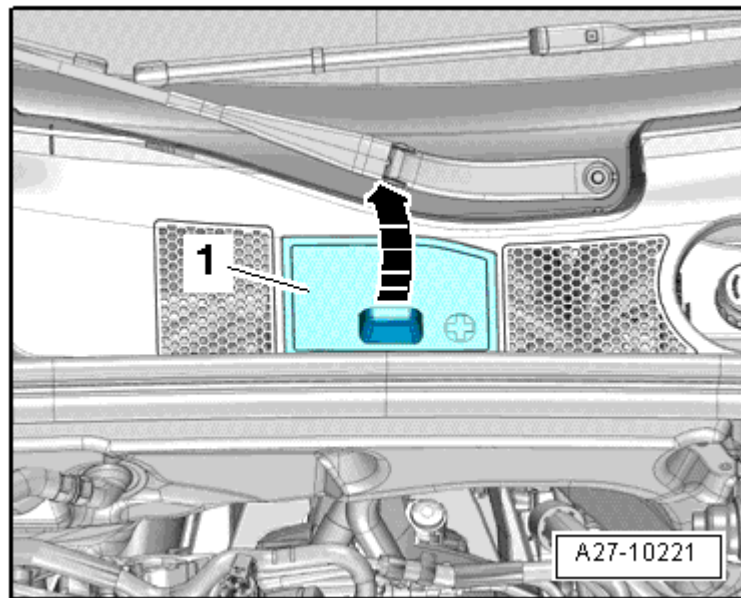


Fig. 6: Removing Cover

Courtesy of AUDI OF AMERICA, LLC

-- Pull the handle cover -1- upward -arrow-.

Continuation for All Vehicles

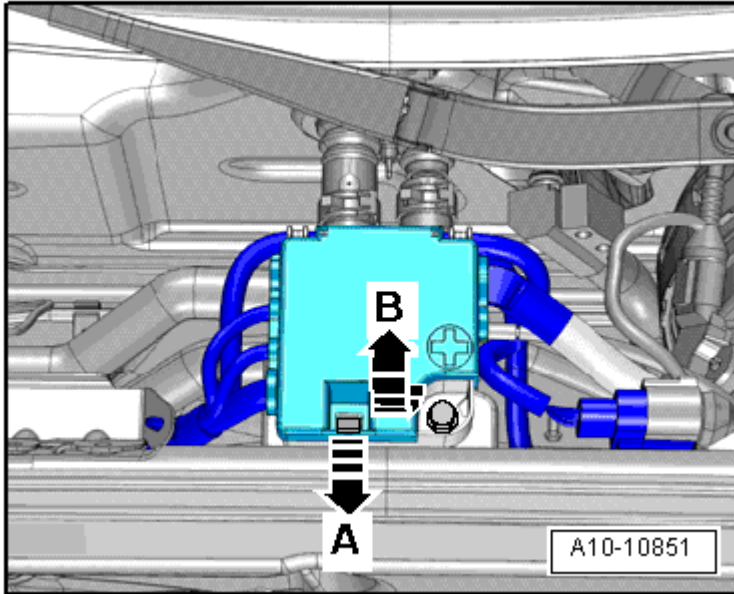


Fig. 7: Opening Terminal Box Cover

Courtesy of AUDI OF AMERICA, LLC

-- Release the retainer -arrow A- and open the cover -arrow B-.

-- Connect the battery charger red charging clamp "+" to the positive terminal clamp -1- and the black charging clamp "-" to the negative terminal clamp -2-.

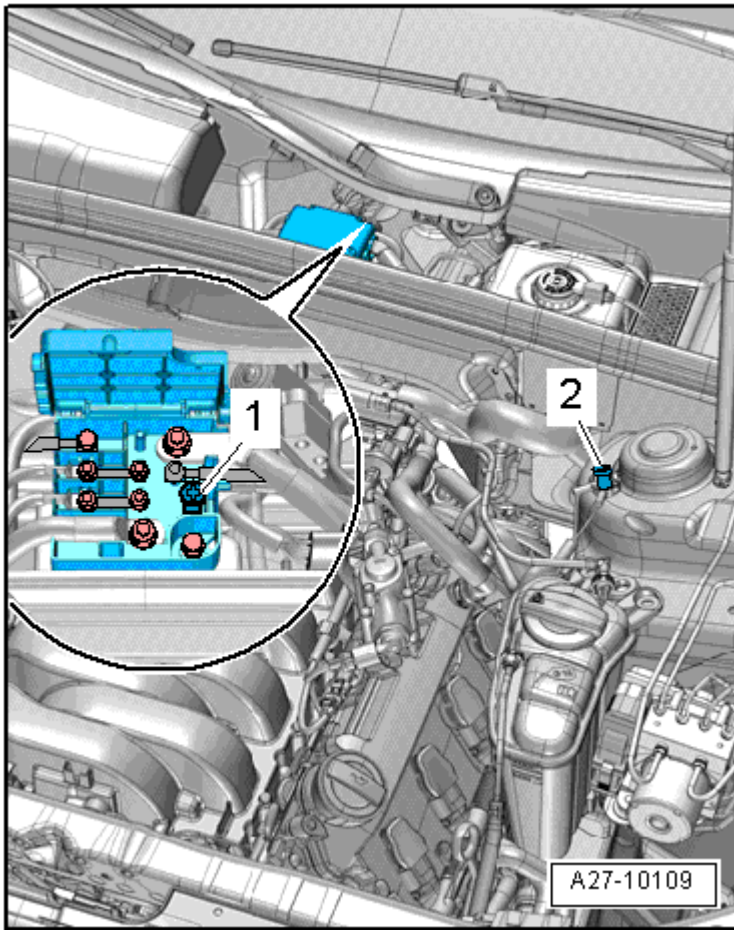


Fig. 8: Connecting Battery Charger Red Charging Clamp "+" To The Positive Terminal Clamp
Courtesy of AUDI OF AMERICA, LLC

-- Connect the battery charger electrical system connector and switch the charger on. Refer to **General Information** .

CONTACT CORROSION

Contact corrosion can occur if incorrect fasteners (bolts, nuts, washers, etc.) are used.

For this reason, only fasteners with a special surface coating are used.

In addition, rubber or plastic parts and adhesive consist of non-conductive materials.

If there are doubts as to whether parts are suitable or not, use new parts.

Note:

- We only recommend original replacement parts, they have been tested and are compatible with aluminum.
- We recommend using Audi accessories.

- Damage resulting from contact corrosion is not covered by warranty.

CRUISE CONTROL SYSTEM

The following description can be found in **General Information** .

- Cruise control system, activating and deactivating

GENERATOR, SERVICING

The following descriptions can be found in **General Information** .

- Bosch generator from 2007, assembly overview
- Voltage regulator, Bosch generator from 2007, removing and installing
- Carbon brushes, all Bosch generators from 2001, checking
- Valeo generator from 2001, assembly overview
- Voltage regulator, Valeo generator from 2007, removing and installing
- Carbon brushes, Valeo generator from 2007, checking
- Ribbed belt pulley without freewheel, removing and installing
- Ribbed belt pulley with freewheel, removing and installing
- Check the ribbed belt pulley with freewheel.

MAINTENANCE FREE BATTERY

The following descriptions can be found in **General Information** .

- Battery with visual indicator
- Battery with visual indicator, checking
- Central venting system
- Battery post/terminal
- Visual check of the battery
- Check the color display (battery electrolyte level), battery with visual indicator
- Battery electrolyte level, checking

SAFETY PRECAUTIONS, START/STOP SYSTEM

CAUTION: Danger of personal injury when the engine starts automatically.

- **When the start/stop system is activated (the indicator lamp in the instrument cluster is on), the engine can start up automatically.**
- **Always make sure the start/stop system is deactivated whenever working on the vehicle. Turn off the ignition.**

DESCRIPTION AND OPERATION**BATTERY OVERVIEW**

Observe the notes on contact corrosion, refer to **CONTACT CORROSION**.

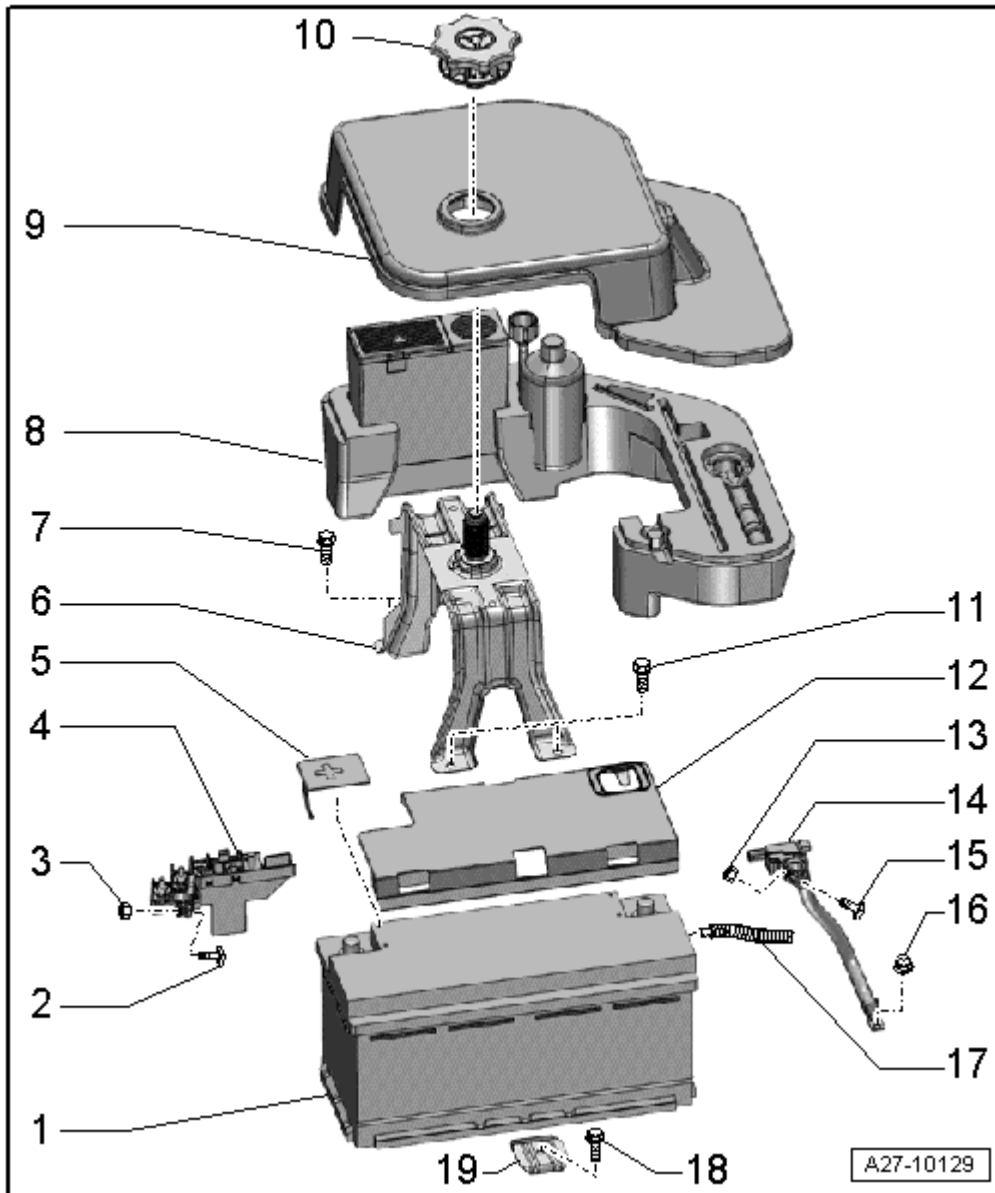


Fig. 9: Identifying Battery Overview
Courtesy of AUDI OF AMERICA, LLC

1. Battery
 - In the luggage compartment in the spare tire wheel well.
 - Removing and installing, refer to **BATTERY**.
2. Bolt

3. Nut
 - 6 Nm
4. Fuse Panel A -SA-
 - Disconnecting and connecting, refer to **BATTERY**.
 - Removing and installing, refer to **FUSE PANEL A, LUGGAGE COMPARTMENT** .
5. Positive Terminal Cover
6. Retainer
 - For the vehicle tool kit cover.
7. Bolt
 - 18 Nm
8. Mount
 - For the vehicle tool kit.
9. Cover
 - For the vehicle tool kit.
10. Nut
 - 4 Nm
 - For the vehicle tool kit cover.
11. Bolt
 - 18 Nm
12. Negative Terminal Cover
13. Nut
 - 6 Nm
14. Ground Wire with Battery Monitoring Control Module -J367-
 - Disconnecting and connecting, refer to **BATTERY, DISCONNECTING AND CONNECTING**.
 - Removing and installing, refer to **BATTERY MONITORING CONTROL MODULE -J367-**.
15. Bolt
16. Nut
 - 20 Nm
17. Central Venting System Hose
18. Bolt
 - 18 Nm
19. Retaining Bracket

GENERATOR OVERVIEW

Observe the notes on contact corrosion, refer to **CONTACT CORROSION**.

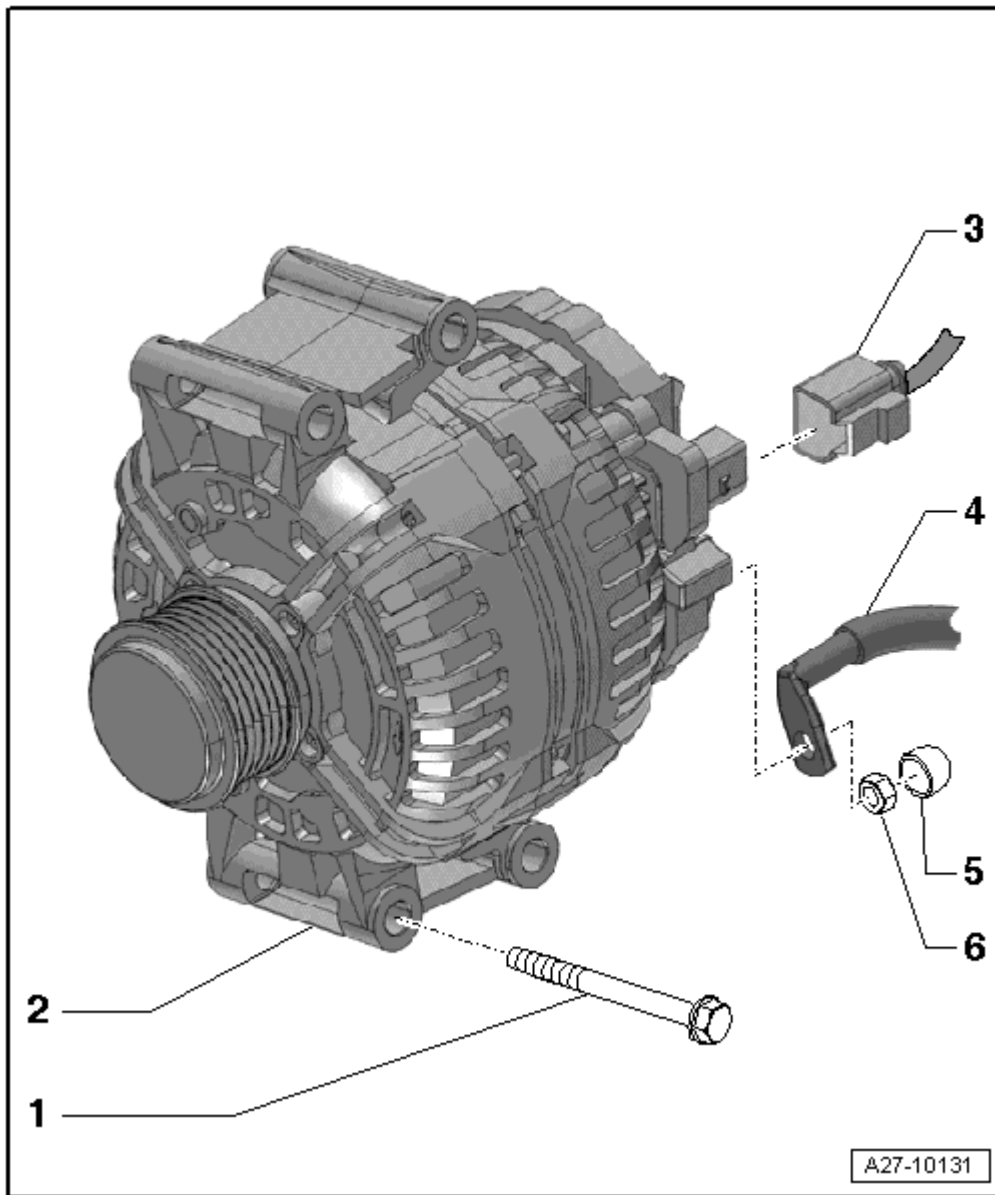


Fig. 10: Identifying Generator Overview
Courtesy of AUDI OF AMERICA, LLC

1. Bolts
 - 23 Nm
2. Generator
 - Removing and installing, refer to one of the following:
 - 2.0L TFSI vehicles, refer to **GENERATOR**.
 - 3.0L TFSI and 3.2L FSI vehicles, refer to **GENERATOR**.
3. Electrical Connector

4. Terminal 30/B+
5. Cap
6. Nut
 - 16 Nm

STARTER OVERVIEW

Observe the notes on contact corrosion, refer to **CONTACT CORROSION**.

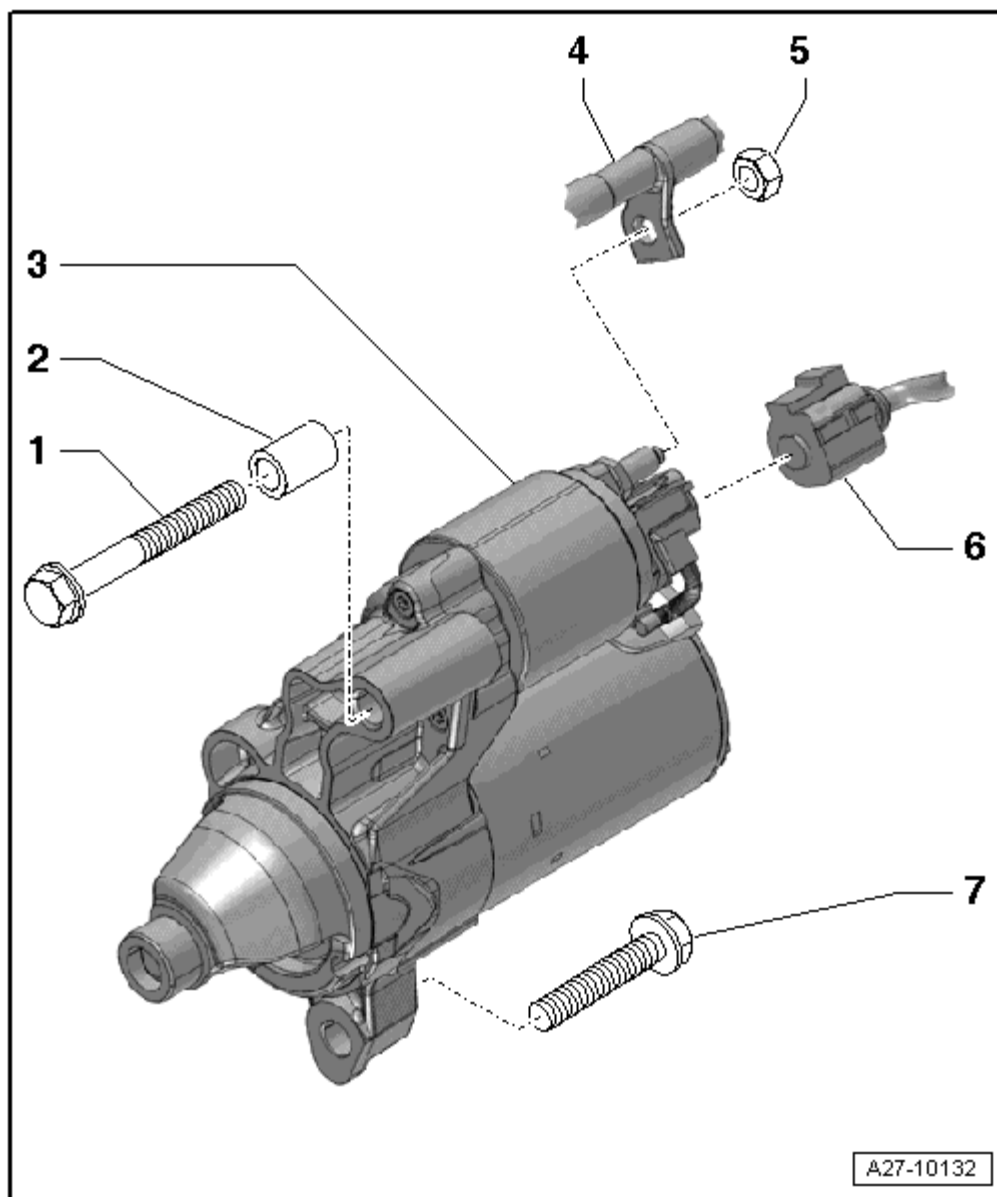


Fig. 11: Identifying Starter Overview
Courtesy of AUDI OF AMERICA, LLC

1. Bolt

- Tightening specification, refer to one of the following

With manual transmission **[For engine(s) CCBA] Specifications** or to **[For engine(s) CAEB, CALA] Specifications** .

With automatic transmission, refer to **Specifications** or to **[For engine(s) CAEB, CALA] Specifications** .

With a continuously variable transmission, refer to **[For transmission(s) 0AW] Specifications** .

With a S-tronic transmission, refer to **SPECIFICATIONS** .

2. Spacer Sleeve

- May only be on the 2.0L TFSI engine.

3. Starter

- Removing and installing, refer to one of the following:

2.0L TFSI vehicles, refer to **STARTER**.

3.0L TFSI and 3.2L FSI vehicles, refer to **STARTER**.

4. Terminal B+

5. Nut

- 15 Nm

6. Electrical Connector

7. Bolt

- Tightening specification, refer to one of the following:

With manual transmission **[For engine(s) CCBA] Specifications** or to **[For engine(s) CAEB, CALA] Specifications** .

With automatic transmission, refer to **[For engine(s) CAEB, CALA] Specifications** .

With a continuously variable transmission, refer to **[For transmission(s) 0AW] Specifications** .

With a S-tronic transmission, refer to **SPECIFICATIONS** .

START/STOP SYSTEM OVERVIEW



1. Voltage Stabilizer -J532-
 - Removing and installing, refer to **VOLTAGE STABILIZER -J532-**.
2. Nut
 - 3 Nm
3. Nut
 - 3 Nm
4. Cover/Multimedia Control Head -E380-
5. Start/Stop Mode Button -E693-
 - Various installed locations

2012 Audi S4

ELECTRICAL SYSTEM Battery, Starter, Generator, Cruise Control (Sedan)

- Removing and installing, refer to **START/STOP MODE BUTTON** .
- 6. Nut
 - 3 Nm
- 7. Bracket
 - For the voltage stabilizer.
- 8. Electrical Connector

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Component	Fastener Size	Nm
Battery Retaining Bracket to Body Bolt	-	18
Fuse Panel A Nut	-	6
Generator Bolt	-	23
Ground Wire with Battery Monitoring Control Module to Battery Nut	-	6
Ground Wire with Battery Monitoring Control Module to Body Nut	-	20
Spare Tire Retainer to Body Bolt ⁽²⁾	-	18
Spare Tire to Retainer Nut ⁽²⁾	-	4
Terminal 30/B+ Wire to Generator Nut	-	16
Terminal B+ Wire to Starter Nut	-	15
Vehicle Tool Kit Cover Retainer to Body Bolt ⁽¹⁾	-	18
Vehicle Tool Kit Cover to Retainer Nut ⁽¹⁾	-	4
Voltage Stabilizer Bracket to Body Nut	-	3
(1) Sedan only		
(2) Avant only		

DIAGNOSIS AND TESTING

BATTERY, TESTING

The following descriptions can be found in **General Information** .

- Battery check using the vehicle diagnosis, testing and information system VAS 5051B, VAS 5052 and VAS 5053.
- Measure the no load voltage - vehicles with a battery monitoring control module -J367- or energy management control module -J644-

BATTERY, CHARGING

2012 Audi S4

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The following descriptions can be found in **General Information** .

- Charge battery using the battery charger VAS 5095A, VAS 5900, VAS 5903 or VAS 5904.
- Exhaustively discharged battery.
- Battery support mode with battery charger VAS 5095A, VAS 5900, VAS 5903 or VAS 5904.

GENERATOR, CHECKING

Check the generator in "Guided Fault Finding" using the Vehicle Diagnostic Tester.

-- Select the function or path:

Go To button
Select Function/Component Selection
+ Body (Repair Groups 01, 27, 50 - 97)
+ Electrical Equipment (Repair Groups 01, 27, 90 - 97)
+ 27 Starter, voltage supply
+ Electrical Component
C- Generator, Checking Functionality (Repair Group 27)

-- Follow the instructions in the Vehicle Diagnosis Tester display.

REMOVAL AND INSTALLATION

BATTERY, DISCONNECTING AND CONNECTING

CAUTION: Accident risk.

- **When working on pyrotechnic components (such as airbags and belt tensioners), the battery must be disconnected with the ignition turned on General Safety Precautions .**

DISCONNECTING

-- Turn off the ignition and remove the ignition key.

Sedan

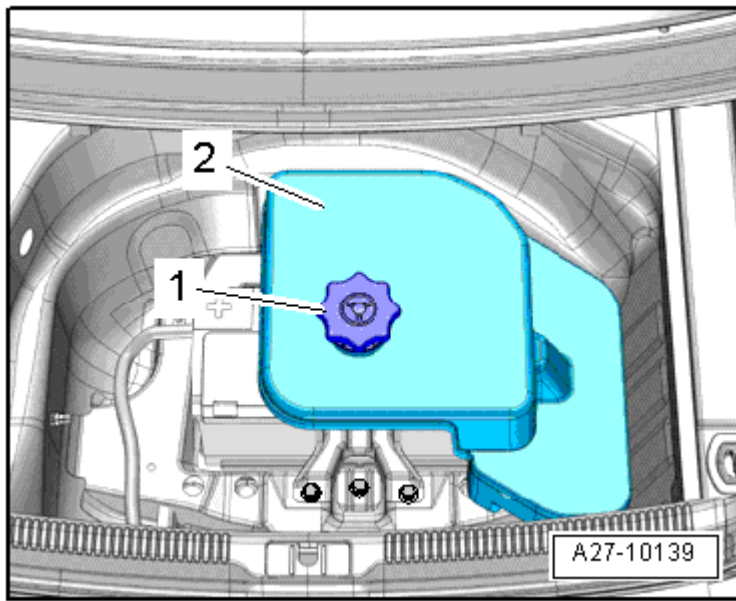


Fig. 13: Identifying Nut -1- And Tool Kit Cover -2-
Courtesy of AUDI OF AMERICA, LLC

-- Lift the luggage compartment floor cover by the handle and hang the handle on the rear lid seal.

-- Remove the nut -1- and the tool kit cover -2-.

Avant

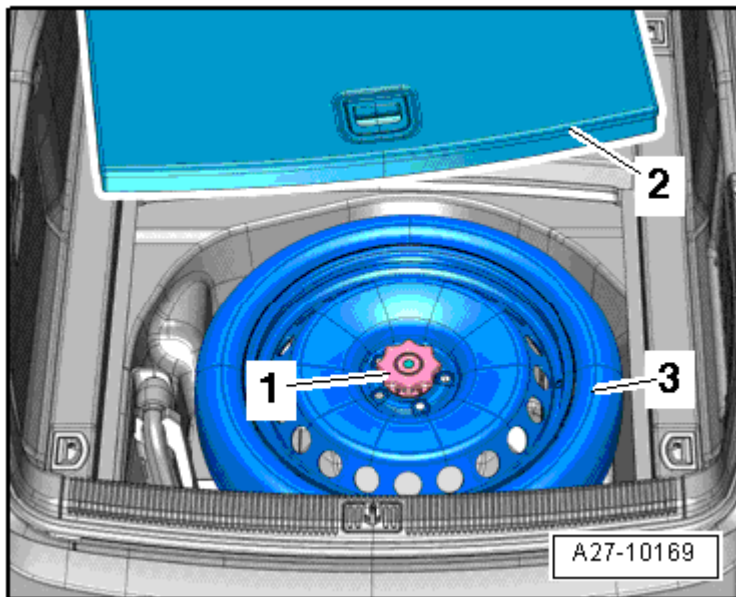


Fig. 14: Identifying Luggage Compartment Floor -2-, Nuts -1- And Spare Tire -3-
Courtesy of AUDI OF AMERICA, LLC

-- Remove the luggage compartment floor -2-.

-- Remove the nuts -1- and the spare tire -3-, if applicable.

Negative Terminal Cover - Version I

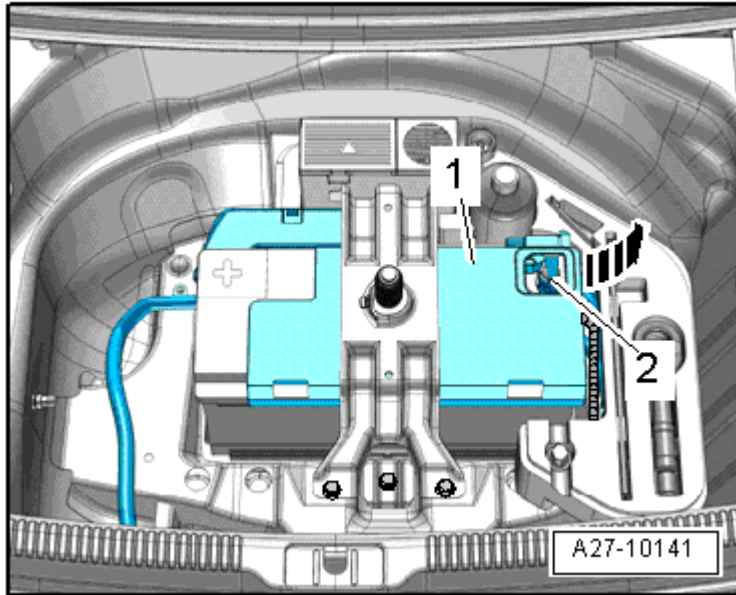


Fig. 15: Identifying Battery

Courtesy of AUDI OF AMERICA, LLC

-- Pull the cover -1- over the negative terminal up slightly -arrow-.

-- Loosen the nut several turns and remove the ground cable -2- from the battery terminal.

Negative Terminal Cover - Version II

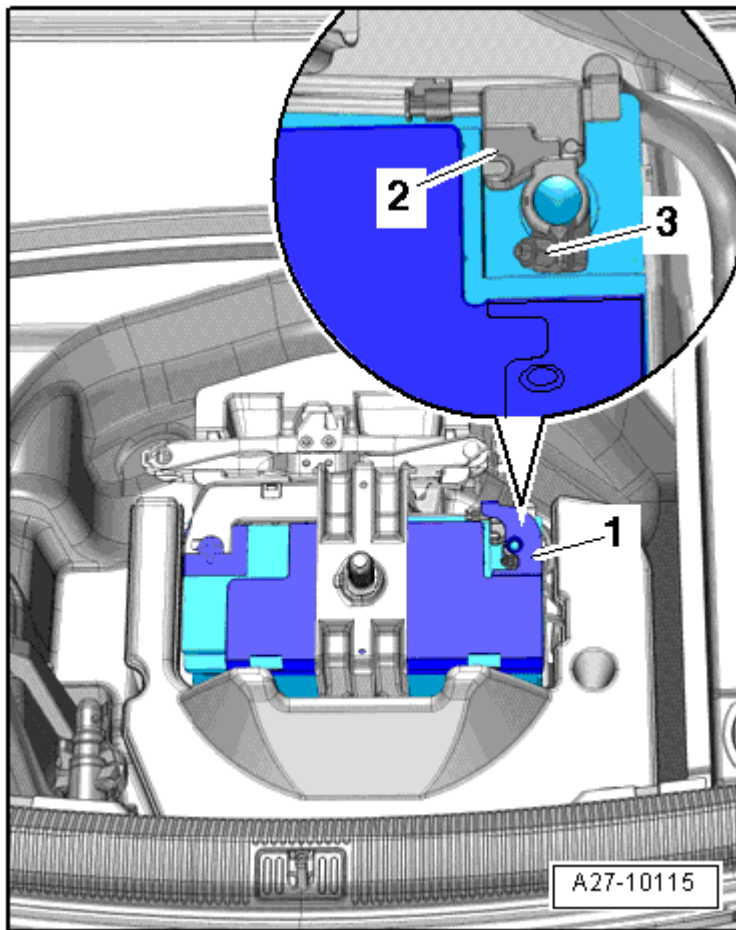


Fig. 16: Removing Negative Terminal Cover

Courtesy of AUDI OF AMERICA, LLC

- Open the cover -1- over the battery negative terminal.
- Loosen the nut -3- several turns and remove the ground wire terminal clamp -2- from the battery terminal.

CONNECTING

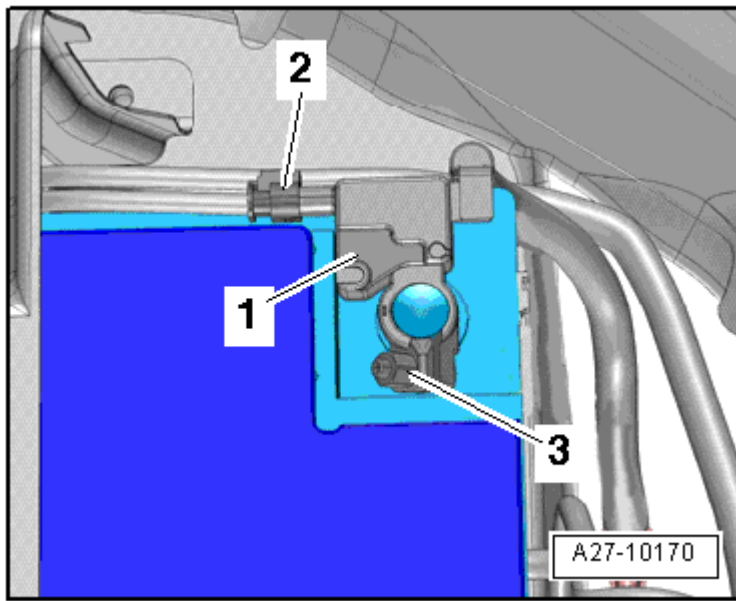


Fig. 17: Loosen Nut Several Turns And Remove Ground Wire Terminal Clamp
Courtesy of AUDI OF AMERICA, LLC

- Tightening specifications, refer to one of the following:

BATTERY OVERVIEW.

- Disconnect the connector -1- from the battery monitoring control module -J367- -1-.
- Connect the ground wire terminal clamp "3" by hand to the battery negative terminal and tighten the nut.
- Connect the electrical connector -1- to the battery monitoring control module -J367-.

When the battery is connected, the following steps must be performed:

- Activate the power window regulator one touch up/down function. Refer to the Owner's Manual.
- Check DTC memories of all control modules and erase "Undervoltage" DTC if necessary using the Vehicle Diagnostic Tester.

NOTE: After connecting the power supply, the Anti-lock Brake System (ABS) warning lamp may only go out after the vehicle has been driven a few yards.

BATTERY MONITORING CONTROL MODULE -J367-

Removing

- Turn off the ignition and remove the ignition key.

Sedan

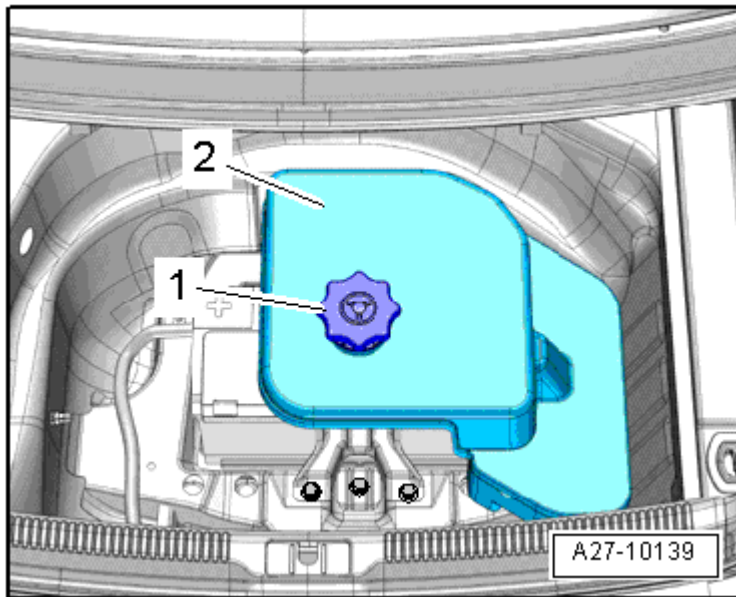


Fig. 18: Identifying Nut -1- And Tool Kit Cover -2-
Courtesy of AUDI OF AMERICA, LLC

- Lift the luggage compartment floor and engage it on the body.
- Remove the nut -1- and the tool kit cover -2-.
- Remove the tool kit mount.

Avant

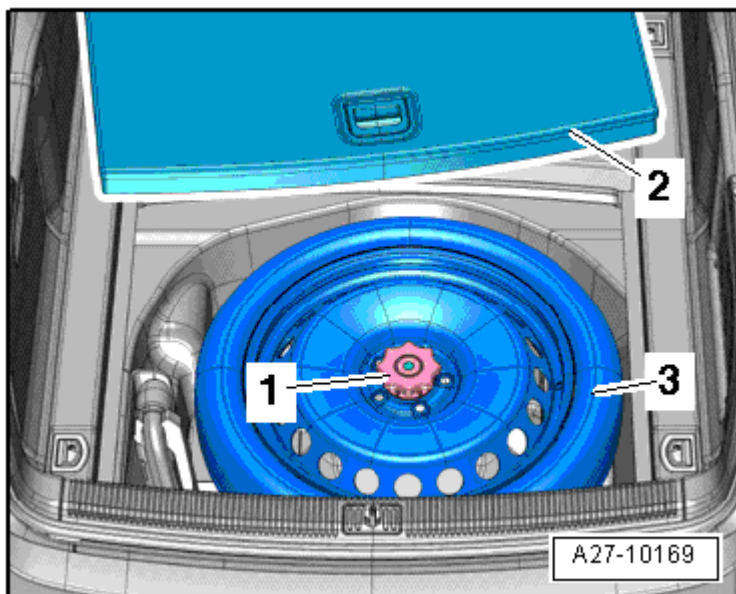


Fig. 19: Identifying Luggage Compartment Floor -2-, Nuts -1- And Spare Tire -3-
Courtesy of AUDI OF AMERICA, LLC

- Remove the luggage compartment floor -2-.
- Remove the nuts -1- and the spare tire -3-, if applicable.
- Remove the subwoofer, if applicable. Refer to **Removal and Installation** .

Negative Terminal Cover - Version I

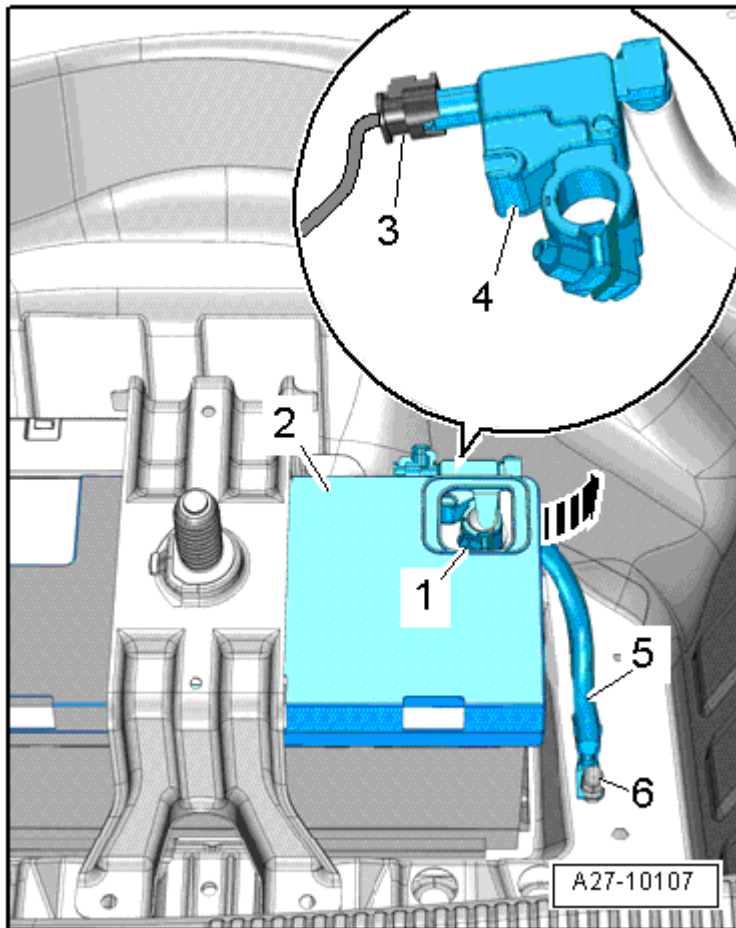


Fig. 20: Loosen Nut Several Turns And Remove Ground Cable
Courtesy of AUDI OF AMERICA, LLC

- -arrow-.
- Loosen the nut several turns and remove the ground cable -1- from the battery terminal.
- Disconnect the electrical connector -3-.
- Remove the nut -6- and ground cable -5- with the battery monitoring control module -J367- -4-.

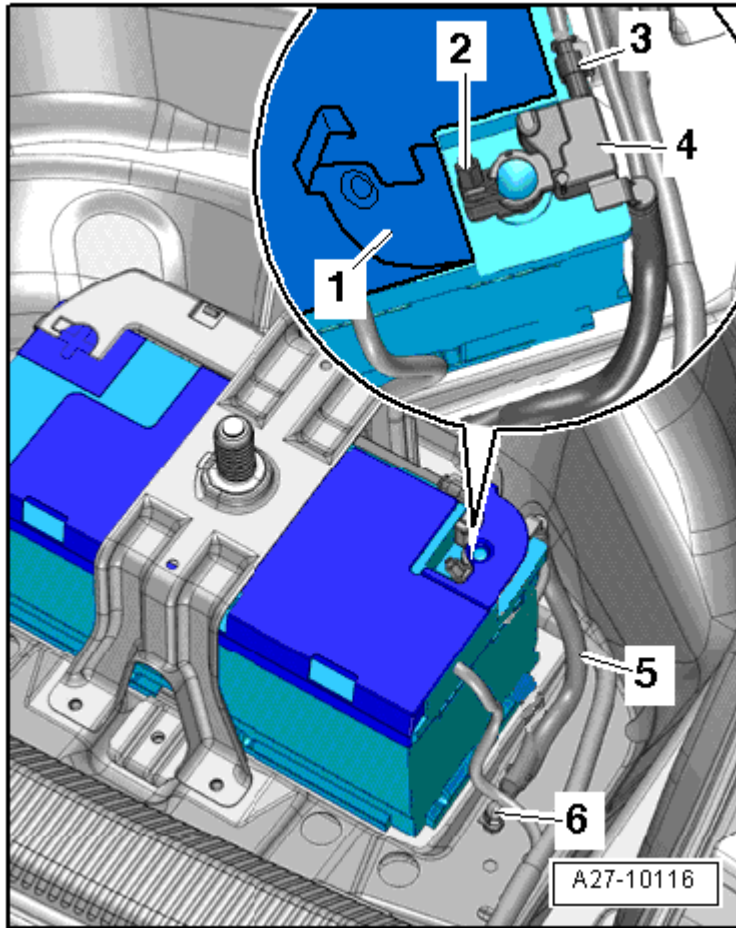
Negative Terminal Cover - Version II

Fig. 21: Opening Cover Over Battery Negative Terminal
Courtesy of AUDI OF AMERICA, LLC

- Open the cover -2- over the battery negative terminal.
- Loosen the nut several turns and remove the ground cable -1- from the battery terminal.
- Disconnect the electrical connector -3-.
- Remove the nut -6- and ground cable -5- with the battery monitoring control module -4-.

Installing

- Tightening specifications, refer to one of the following:

Sedan **BATTERY OVERVIEW.**

Avant .

Install in reverse order of removal, observing the following:

- Connect the battery. Refer to **BATTERY, DISCONNECTING AND CONNECTING**.
- Install the subwoofer, if applicable. Refer to **Removal and Installation** .

BATTERY

REMOVING

- Turn off the ignition and remove the ignition key.

Sedan

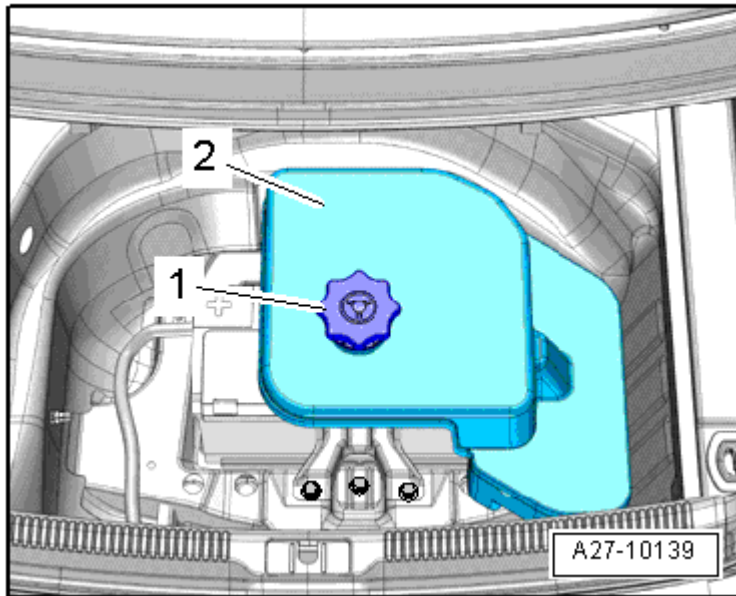


Fig. 22: Identifying Nut -1- And Tool Kit Cover -2-
Courtesy of AUDI OF AMERICA, LLC

- Lift the luggage compartment floor and engage it on the body.
- Remove the nut -1- and the tool kit cover -2-.

Avant

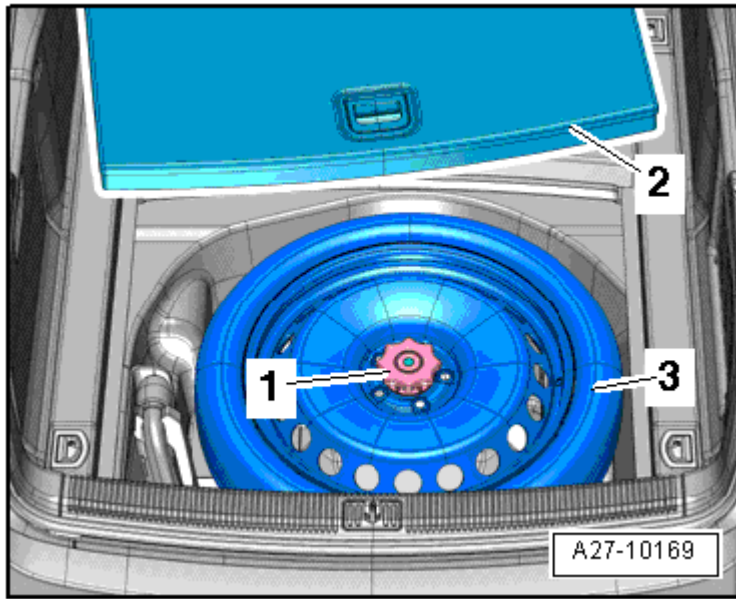


Fig. 23: Identifying Luggage Compartment Floor -2-, Nuts -1- And Spare Tire -3-
Courtesy of AUDI OF AMERICA, LLC

- Remove the luggage compartment floor -2-.
- Remove the nuts -1- and the spare tire -3-, if applicable.

Negative Terminal Cover - Version I

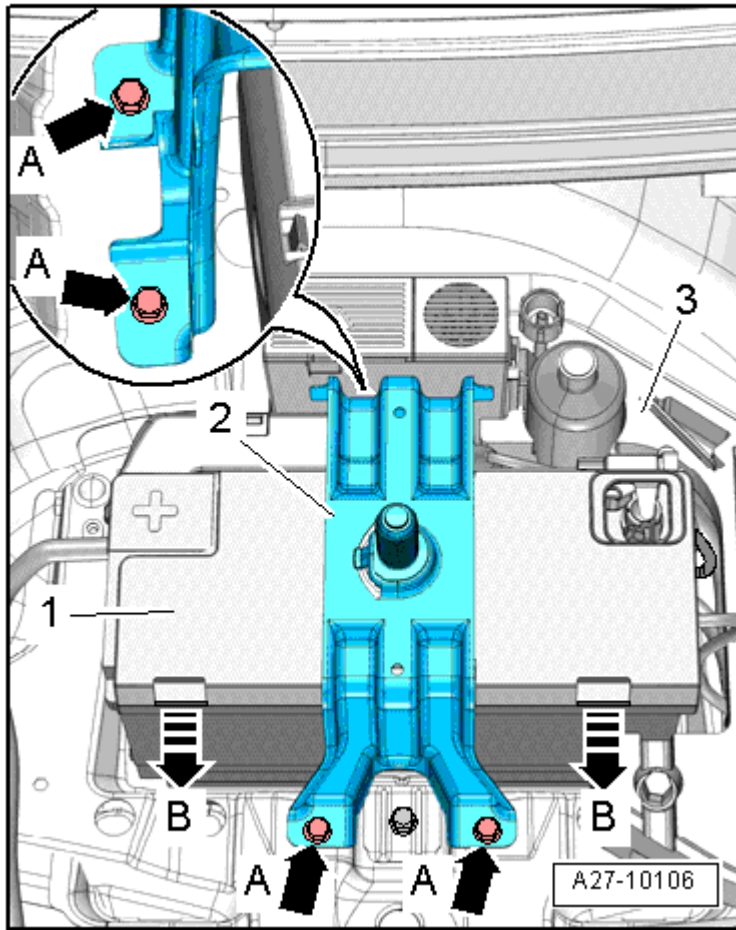


Fig. 24: Identifying Bolts -A Arrows- & Retaining Clips -B Arrows- Using A Screwdriver And Remove Ground Terminal Cap -1-

Courtesy of AUDI OF AMERICA, LLC

- Remove the tool kit mount -3-.
- Remove the bolts -A arrows-.
- Remove the retaining bracket -2- for the vehicle tool kit cover.
- Release the retaining clips -B arrows- using a screwdriver and remove the ground terminal cap -1-.
- Connect the battery charger for battery support mode. Refer to **General Information** .

Negative Terminal Cover - Version II

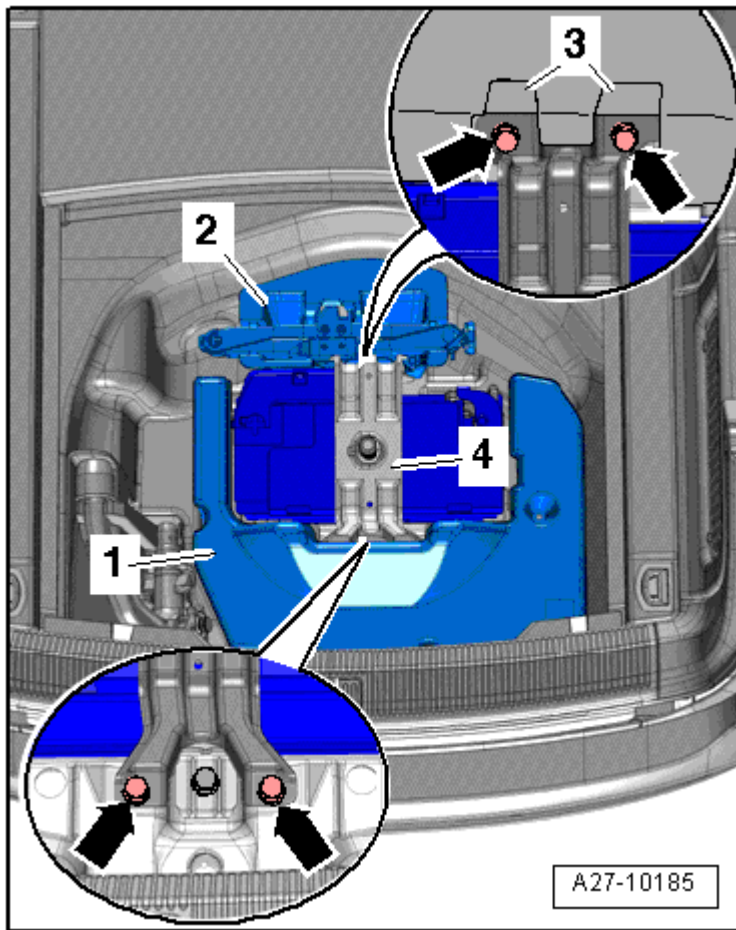


Fig. 25: Removing Bolts

Courtesy of AUDI OF AMERICA, LLC

- Remove the subwoofer -1- if applicable. Refer to **Removal and Installation** .
- Remove the tool kit mount -2-.
- Remove the bolts -arrows-.
- Remove the spare tire bracket -4-.
- Connect the battery charger for battery support mode. Refer to **General Information** .

Continuation for All Vehicles

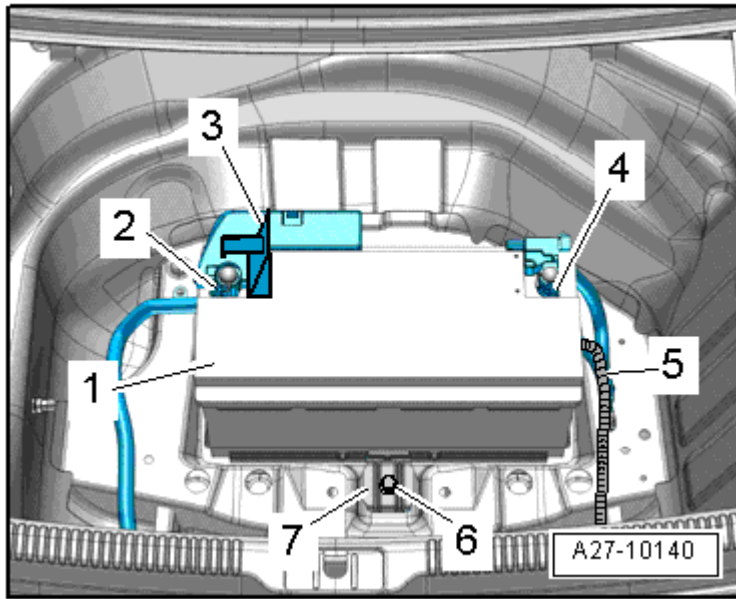


Fig. 26: Check Battery For Secure Fit
Courtesy of AUDI OF AMERICA, LLC

- Loosen the nut -4- a few turns and remove the ground cable terminal clamp from the battery terminal.
- Open the cover -3- over the battery positive terminal.
- Loosen the nut -2- several turns and remove the positive wire terminal clamp with fuse panel A -SA- from the battery terminal.
- Disconnect the central venting system hose -5-.
- Remove the bolt -6- on the battery mounting bracket -7-.
- Remove the battery -1- from the battery mount.
- Remove the battery from the luggage compartment.

WARNING: Pollution risk.

- **Battery and sulfuric acid disposal regulations must be followed when disposing of batteries. Refer to General Information .**

INSTALLING

- Tightening specifications, refer to one of the following:

Sedan **BATTERY OVERVIEW.**

Avant .

NOTE: Only maintenance-free batteries conforming to standards "TL82506" (as of December 1997) and "VW75073" (as of August 2001) may be installed.

Batteries from the Audi parts program have a bottom strip-adapter for adapting to different grip channels. For information on how to use the base strip adapter, if applicable, see the battery operating instructions.

-- Install the battery in the battery mount so the base strip engages in the battery mount retaining strips -arrow-.

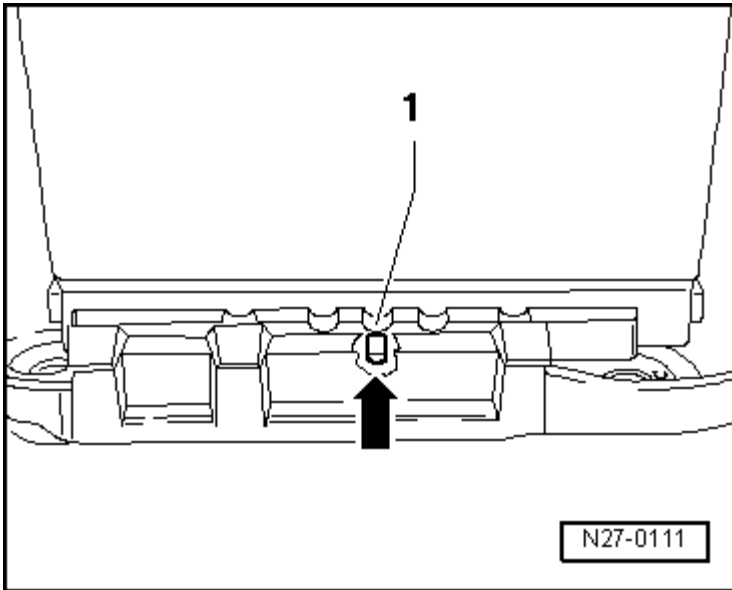


Fig. 27: Battery Foot Strip Cut-Out
Courtesy of AUDI OF AMERICA, LLC

- It should no longer be possible to move the battery.

-- Position the battery bracket -7-.

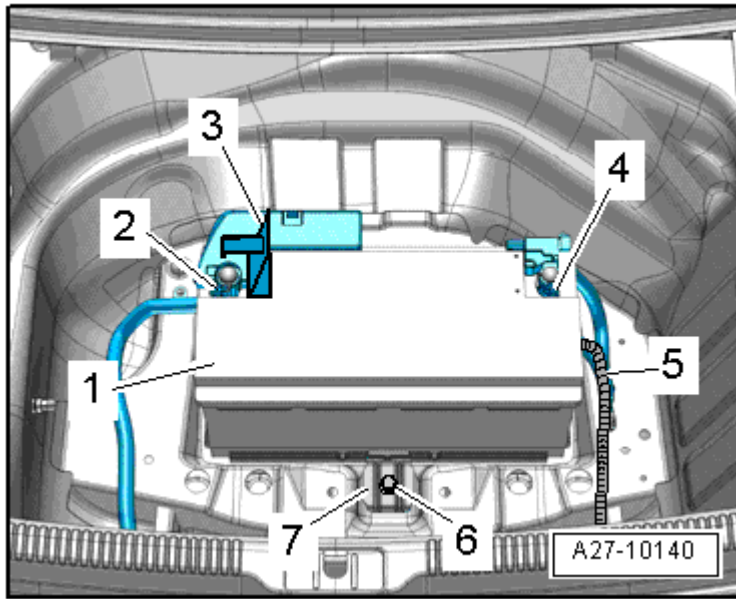


Fig. 28: Check Battery For Secure Fit
Courtesy of AUDI OF AMERICA, LLC

- Lug at battery bracket must engage in recess at battery base strip.

-- Hand tighten battery bracket bolt -6-.

-- Connect central venting system hose -5- while observing notes in the **General Information** .

With the ignition and electrical components turned off, connect the battery -1- in the following sequence:

-- Connect positive cable terminal clamp -2- by hand to battery positive terminal "+" and tighten nut.

-- Close the cover -3- over the battery positive terminal.

NOTE: Ignore item -4-.

-- Disconnect the connector -1- from the battery monitoring control module -J367- -1-.

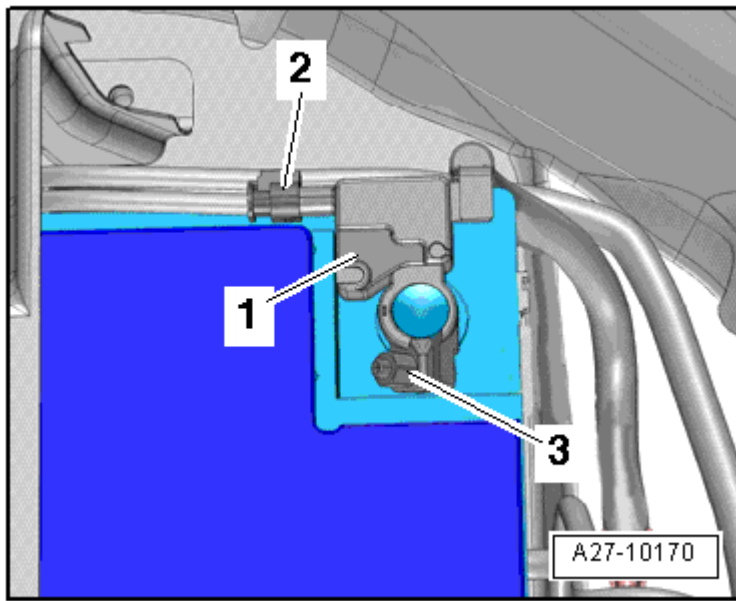


Fig. 29: Loosen Nut Several Turns And Remove Ground Wire Terminal Clamp
Courtesy of AUDI OF AMERICA, LLC

- Connect the ground wire terminal clamp "3" by hand to the battery negative terminal and tighten the nut.
- Connect the electrical connector to the battery monitoring control module.
- Check battery after installation for secure seating. Refer to **General Information** .

Negative Terminal Cover - Version I

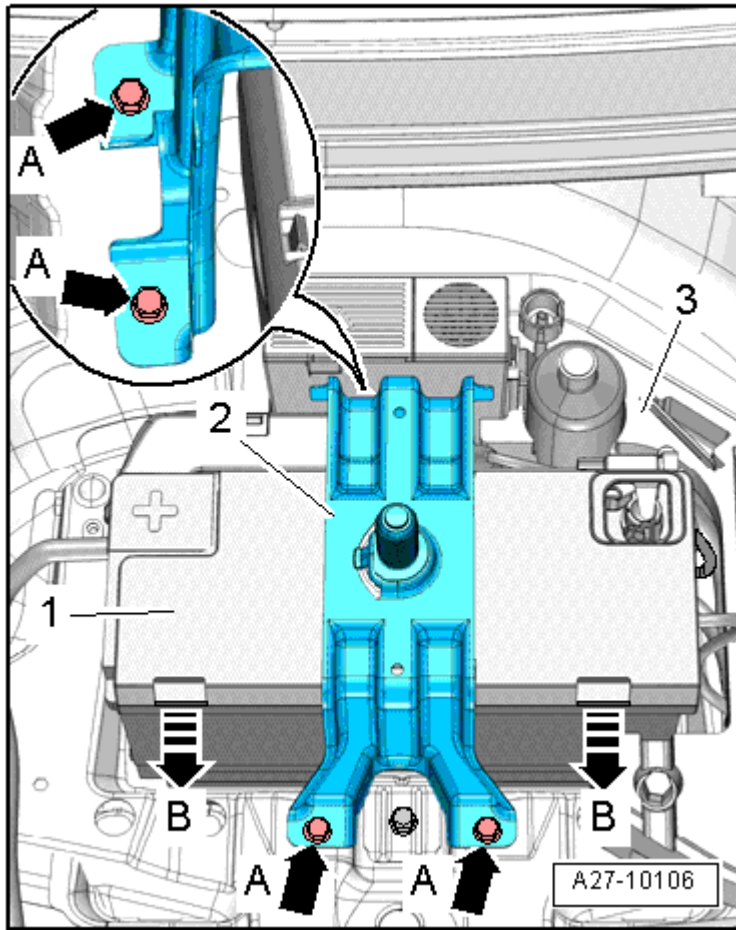


Fig. 30: Identifying Bolts -A Arrows- & Retaining Clips -B Arrows- Using A Screwdriver And Remove Ground Terminal Cap -1-

Courtesy of AUDI OF AMERICA, LLC

-- Press the negative terminal cover -1- onto the battery.

Continuation for All Vehicles

-- Insert the bracket -2- and tighten the bolts -a arrows-.

-- After replacing, adapt the battery in the "Guided Fault Finding" or "Guided Functions" mode using the Vehicle Diagnostic Tester.

When the battery is connected, the following steps must be performed:

- Activate the power window regulator one touch up/down function. Refer to the Owner's Manual.
- Check DTC memories of all control modules and erase "Undervoltage" DTC if necessary using the Vehicle Diagnostic Tester.

NOTE: After connecting the power supply, the Anti-lock Brake System (ABS) warning

lamp may only go out after the vehicle has been driven a few yards.

BATTERY INTERRUPT IGNITER -N253-

Replace the battery interrupt igniter if it is faulty or has deployed. Refer to **Removal and Installation** .

GENERATOR - ENGINE CODE(S): CAEB

Special tools and workshop equipment required

- Locking Tool T40098

Removing

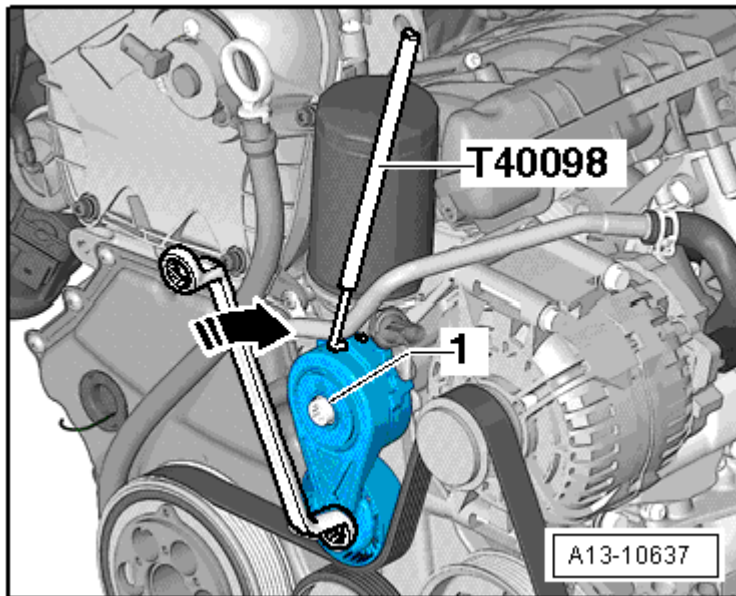


Fig. 31: Release Ribbed Belt Tension, Rotate Tensioner In Direction Of Arrow

Courtesy of AUDI OF AMERICA, LLC

-- With the ignition turned off, disconnect the battery. Refer to **BATTERY, DISCONNECTING AND CONNECTING**.

CAUTION: Risk of destroying if the running direction of a used ribbed belt is reversed.

- Before removing the ribbed belt, mark the running direction with chalk or a felt tip pen for reinstallation.

-- To release the ribbed belt, pivot the tensioner in the -direction of the arrow- and lock it using the T40098.

-- Remove the ribbed belt.

-- Remove the upper and lower bolts -arrows- and pivot the generator toward the front.

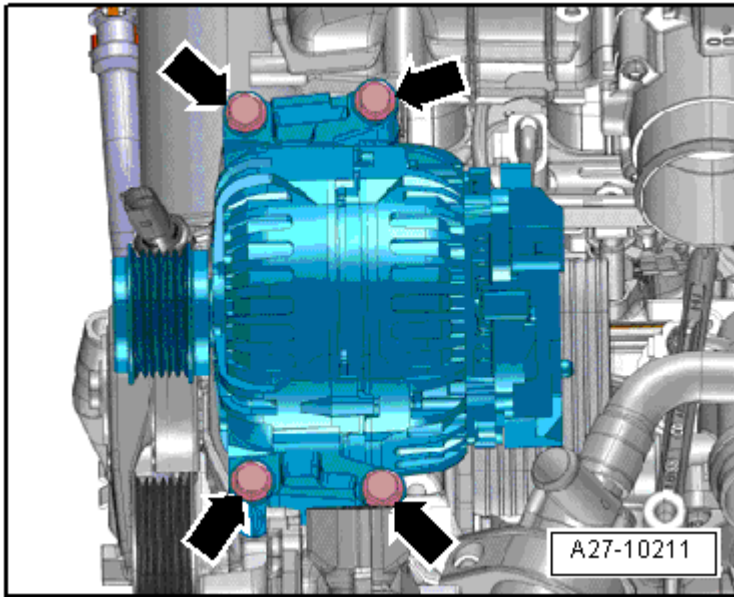


Fig. 32: Removing Upper And Lower Bolts And Pivot Generator Toward Front
Courtesy of AUDI OF AMERICA, LLC

-- Disconnect electrical connector -1-.

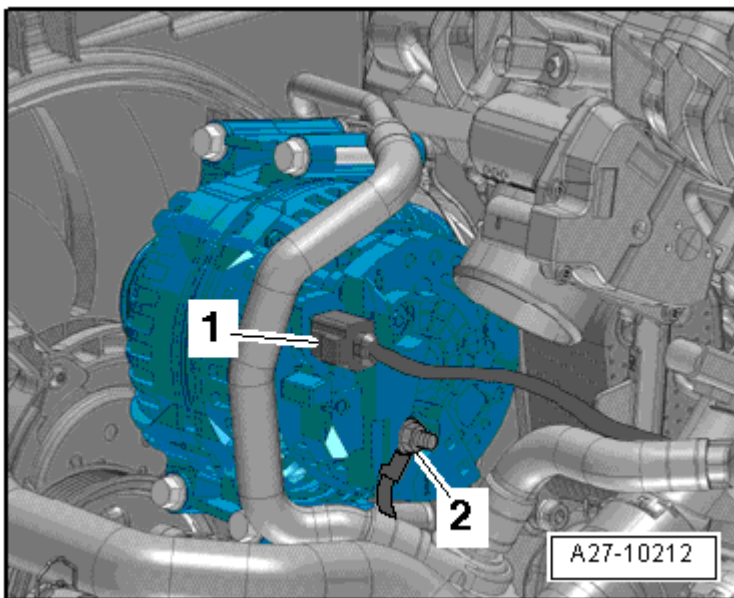


Fig. 33: Disconnecting Electrical Connector
Courtesy of AUDI OF AMERICA, LLC

-- Remove the terminal 30/B+ nut -item 2- and wire.

-- Remove the generator.

Installing

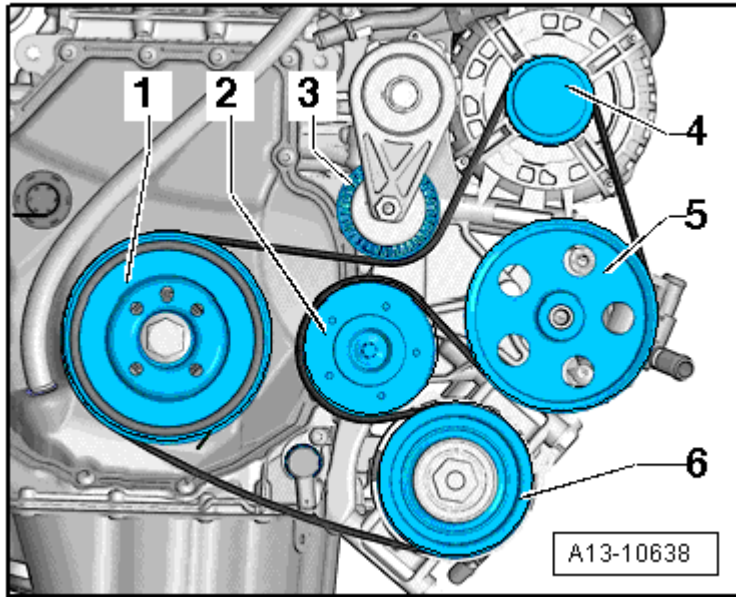


Fig. 34: Ribbed Belt Routing

Courtesy of AUDI OF AMERICA, LLC

- Tightening specifications, refer to **GENERATOR OVERVIEW**.

Install in reverse order of removal, observing the following:

-- Position the ribbed belt around the pulleys in the stated sequence.

1. Vibration damper
2. Coolant pump
3. Belt tensioner
4. Generator
5. Power steering pump
6. Air Conditioning (A/C) compressor

NOTE: When installing the ribbed belt, make sure it is seated correctly on the belt pulley.

-- Connect the battery. Required actions, refer to **BATTERY, DISCONNECTING AND CONNECTING**.

-- Start the engine and check the belt routing.

GENERATOR - ENGINE CODE(S): CALA & CCBA

Removing

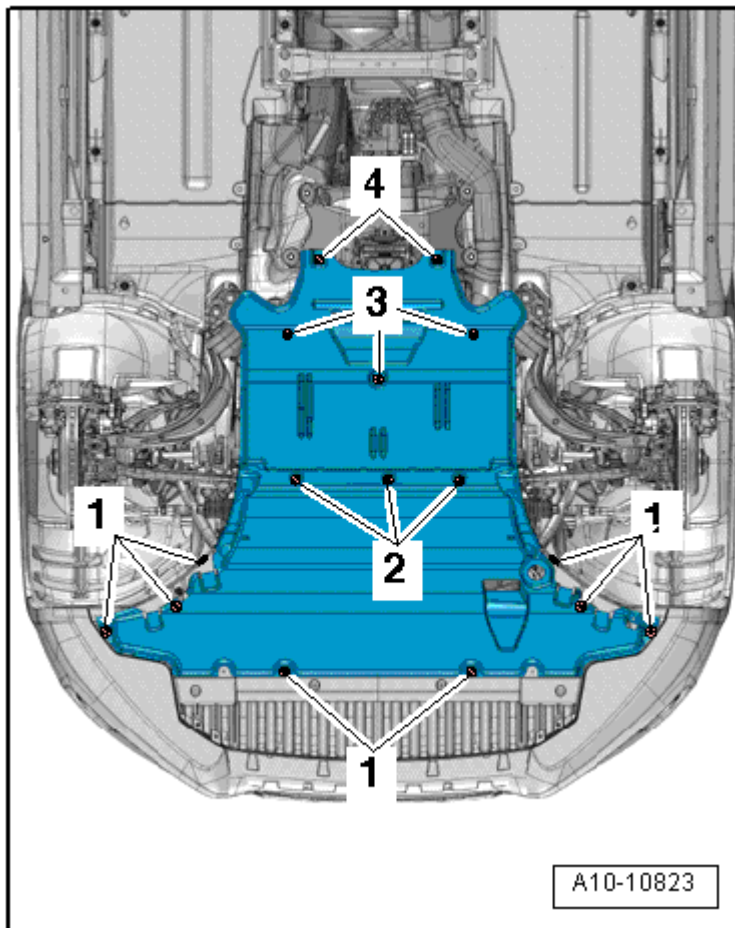


Fig. 35: Locating Rear Noise Insulation Bolts

Courtesy of AUDI OF AMERICA, LLC

-- With the ignition turned off, disconnect the battery. Refer to **BATTERY, DISCONNECTING AND CONNECTING**.

-- Remove the front noise insulation by loosening the fasteners -1 and 2-.

-- Remove the bolt -1- and nut -3-.

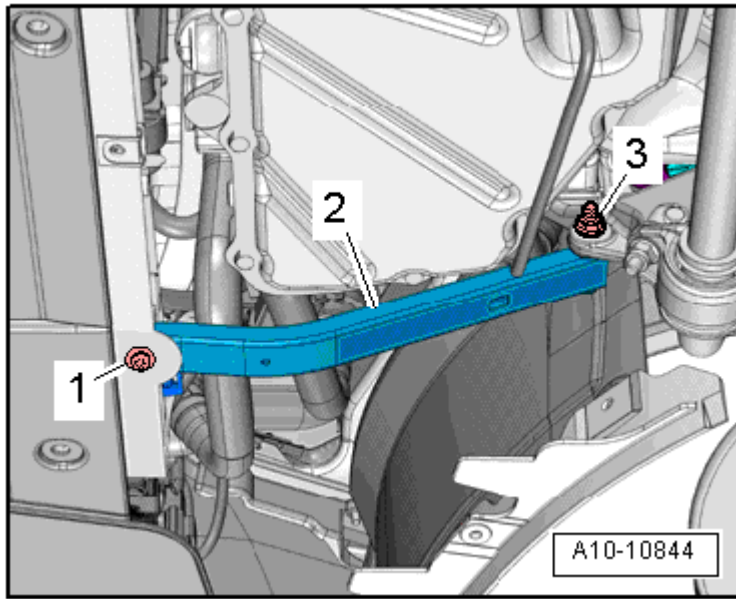


Fig. 36: Identifying Carrier Left Brace Components
Courtesy of AUDI OF AMERICA, LLC

-- Remove the right lock carrier brace -2-.

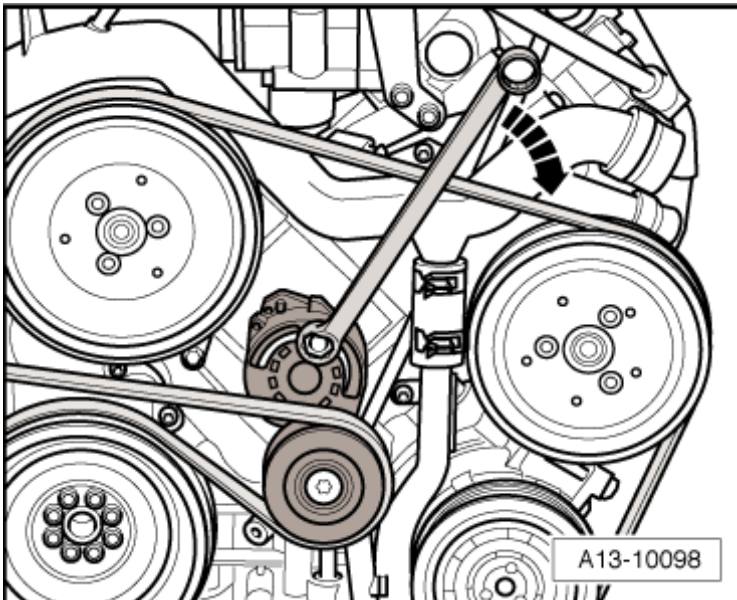


Fig. 37: Pivoting Tensioning Device To Relieve Tension On Ribbed Belt
Courtesy of AUDI OF AMERICA, LLC

CAUTION: Risk of destroying if the running direction of a used ribbed belt is reversed.

- Before removing the ribbed belt, mark the running direction with chalk or a felt tip pen for reinstallation.

- Pivot the tensioner in the -direction of the arrow- to release tension on the ribbed belt.
- Remove the ribbed belt from the generator pulley.
- Release the tensioner.

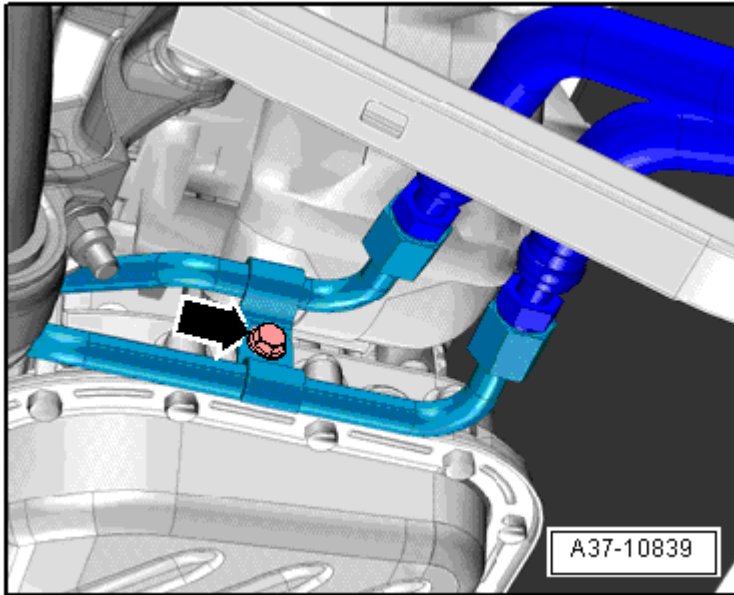
With an Automatic Transmission

Fig. 38: Removing Bolt For ATF Line Bracket

Courtesy of AUDI OF AMERICA, LLC

NOTE: Observe the safety precautions when working on the automatic transmission. Refer to General Information or to [For engine(s) CALA] General Information .

- Remove the bolt -arrow- for the automatic transmission fluid lines.
- Loosen the nut -1- on the electrical wiring bracket several turns.

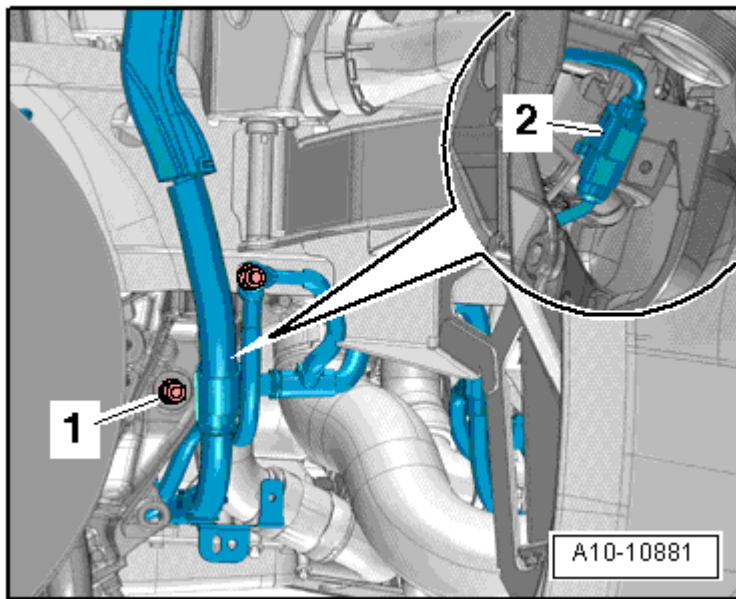


Fig. 39: Loosen Nut On Electrical Wiring Bracket Several Turns
 Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore item -2-.

-- Drain the coolant. Refer to [For transmission(s) 0AW] [For engine(s) CALA] General Information or to [For engine(s) CCBA] General Information .

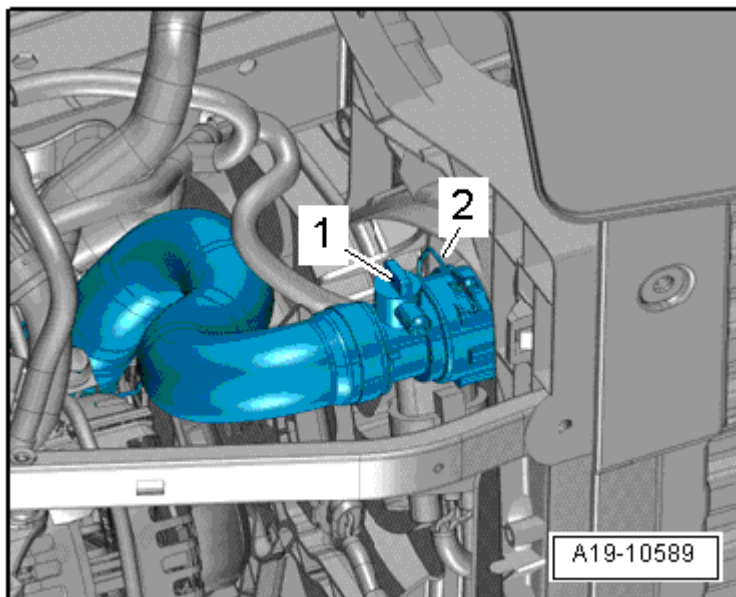


Fig. 40: Removing Drain Plug And Draining Coolant
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the coolant hose -2- from the radiator by raising the retaining clamps.

NOTE: Ignore item -1-.

-- Move the coolant hose up and to the side.

Continuation for All Vehicles

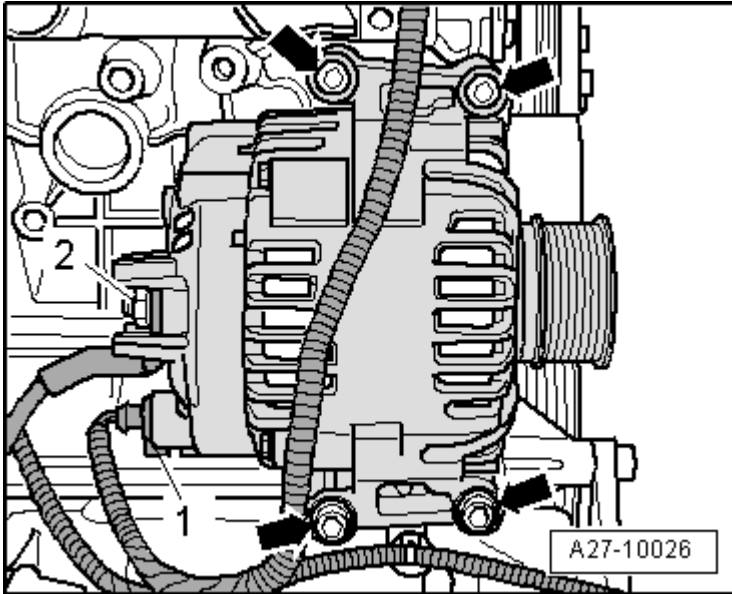


Fig. 41: Identifying Bolts, Electrical Connections, And Generator
Courtesy of AUDI OF AMERICA, LLC

-- Disconnect the electrical connector from the oil level thermal sensor -G266- and free up the wiring harness on the generator.

-- Remove the bolts -arrows- and remove the generator.

-- Disconnect the electrical connector -1-.

-- Remove the terminal 30/B+ nut -item 2- wire.

Installing

- Tightening specifications, refer to **GENERATOR OVERVIEW**.

Install in reverse order of removal, observing the following:

With a Automatic Transmission:

-- Secure the automatic transmission lines. Refer to **Specifications** or to **[For engine(s) CALA] Specifications** .

-- Fill the coolant system. Refer to **[For transmission(s) 0AW] [For engine(s) CALA] General Information**

or to [For engine(s) CCBA] General Information .

Continuation for All Vehicles

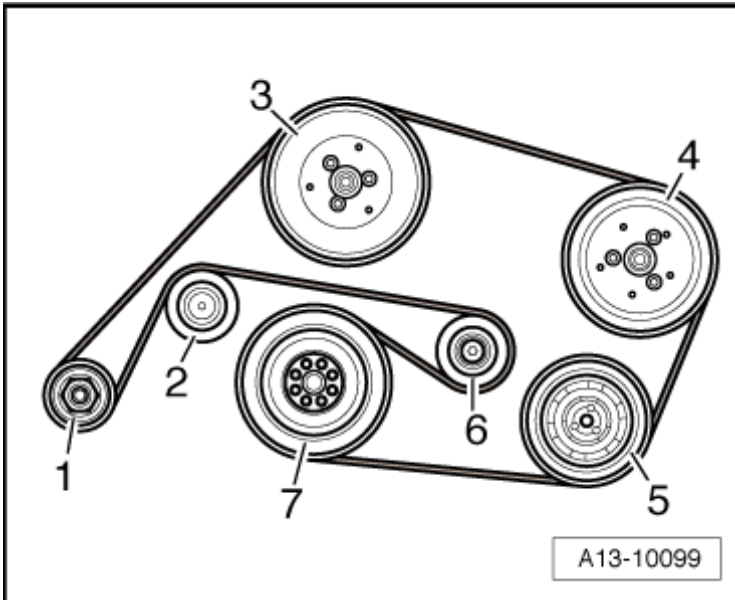


Fig. 42: Placing Ribbed Belt Over Belt Pulley
Courtesy of AUDI OF AMERICA, LLC

- Install the lock carrier right brace. Refer to Description and Operation .
- Install the ribbed belt over the pulleys in the stated sequence.

1. Generator
2. Idler pulley
3. Coolant pump
4. Power steering pump
5. A/C compressor
6. Belt tensioner
7. Crankshaft

NOTE: When installing the ribbed belt, make sure it is seated correctly on the belt pulley.

- Connect the battery. Required actions, refer to BATTERY, DISCONNECTING AND CONNECTING.
- Start the engine and check the belt routing.

STARTER - ENGINE CODE(S): CAEB

Removing

-- With the ignition turned off, disconnect the battery. Refer to **BATTERY, DISCONNECTING AND CONNECTING**.

-- Remove the right engine mount. Refer to **Removal and Installation** .

-- Remove the nut -1- and free up the ground wire on the engine mount bracket.

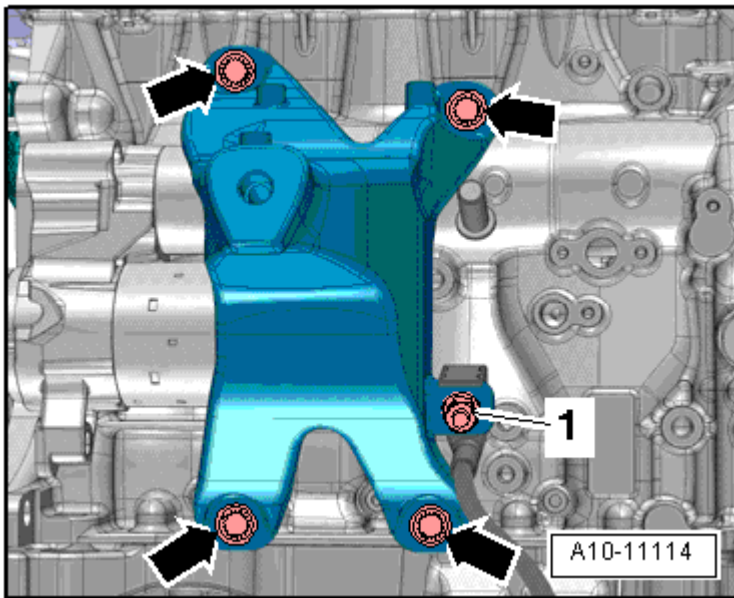


Fig. 43: Removing Nut And Free Up Ground Wire On Engine Mount Bracket
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -arrows- and the right engine mount bracket.

-- Remove the bolt -1- for the wiring bracket -2-.

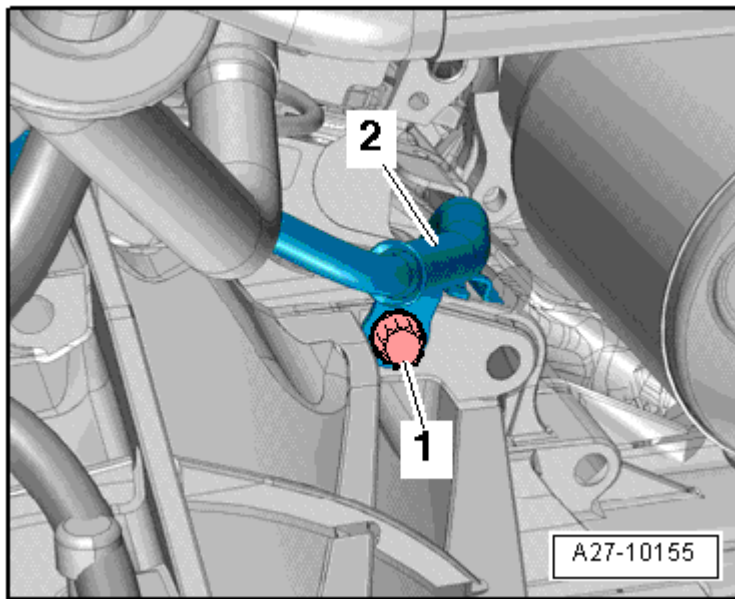


Fig. 44: Removing Bolt Form Wiring Bracket
 Courtesy of AUDI OF AMERICA, LLC

-- Disconnect the electrical connector -3- by sliding the retainer back and pressing the release down.

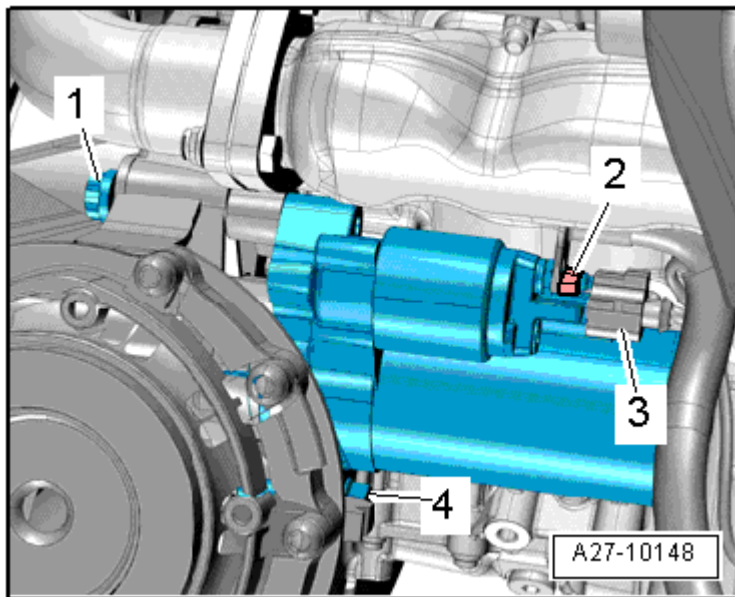


Fig. 45: Disconnecting Starter Electrical Connector
 Courtesy of AUDI OF AMERICA, LLC

-- Disconnect the electrical wire -2- from the starter.

-- Remove the bolts -1 and 4- and remove the starter.

NOTE: -Item 1- can be reached from above.

Installing

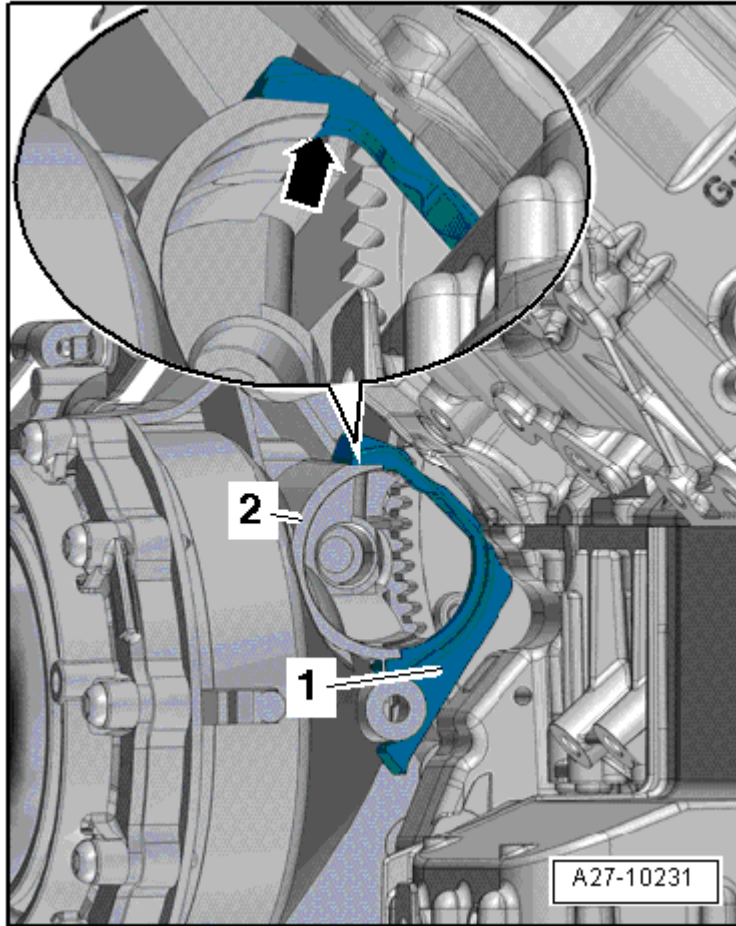


Fig. 46: Identifying Seal And Opening For Starter
Courtesy of AUDI OF AMERICA, LLC

- Tightening specifications, refer to **STARTER OVERVIEW**.

Install in reverse order of removal, observing the following:

-- If the vehicle has an automatic transmission, make sure the seal -1- fits correctly inside the starter opening before installing the starter.

- The seal -arrow- must cover the opening for the starter -2-.

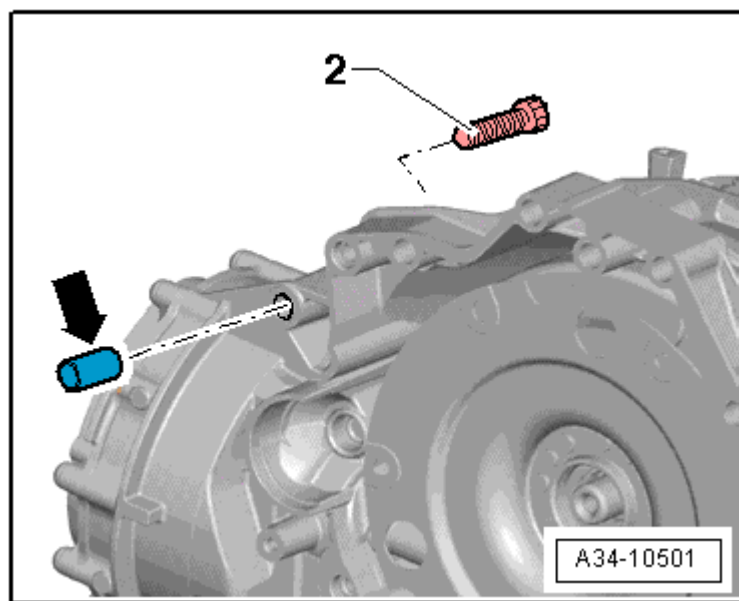


Fig. 47: Identifying Transmission Bolt & Spacer
 Courtesy of AUDI OF AMERICA, LLC

CAUTION: There is a risk of damaging the starter.

- To tighten the bolt -2-, insert the spacer sleeve -arrow- between the starter and transmission.

-- Install the engine mount bracket and the right engine mount. Refer to **Removal and Installation** .

-- Connect the battery. Required actions, refer to **BATTERY, DISCONNECTING AND CONNECTING**.

STARTER - ENGINE CODE(S): CCBA & CALA

Removing

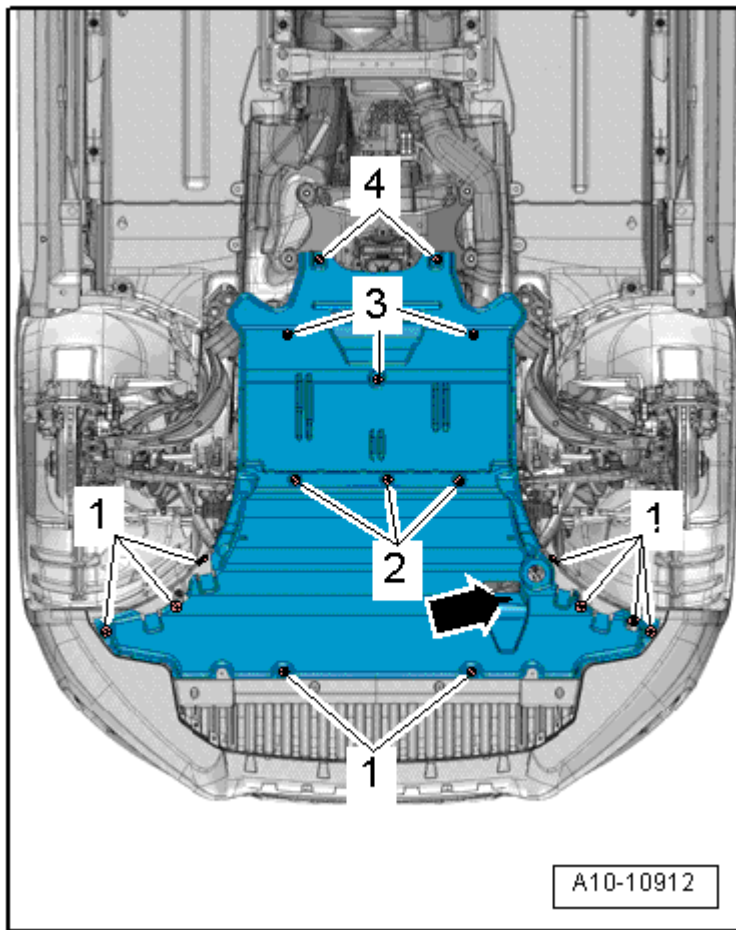


Fig. 48: Identifying Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

-- With the ignition turned off, disconnect the battery. Refer to **BATTERY, DISCONNECTING AND CONNECTING**.

-- Remove the noise insulation by loosening fasteners -1, 2, 3 and 4-.

NOTE: Ignore the -arrow-.

With a Manual/Continuously Variable Transmission

-- Remove the plenum chamber bulkhead. Refer to **Description and Operation**.

-- Remove the right front muffler. Refer to **[For transmission(s) 0AW] [For engine(s) CALA] Removal and Installation** or to **[For engine(s) CCBA] Removal and Installation**.

-- Remove the nuts -arrows- and bolt -1- and press the right catalytic converter to the right side.

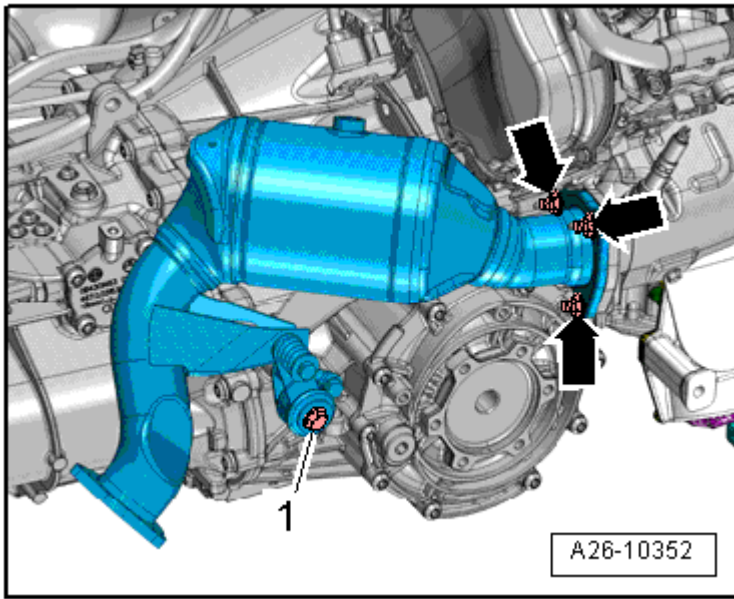


Fig. 49: Removing Nuts And Bolts And Remove Right Catalytic Converter From Exhaust
Courtesy of AUDI OF AMERICA, LLC

NOTE: For a better overview, the installed location is shown with the engine removed.

Continuation for All Vehicles

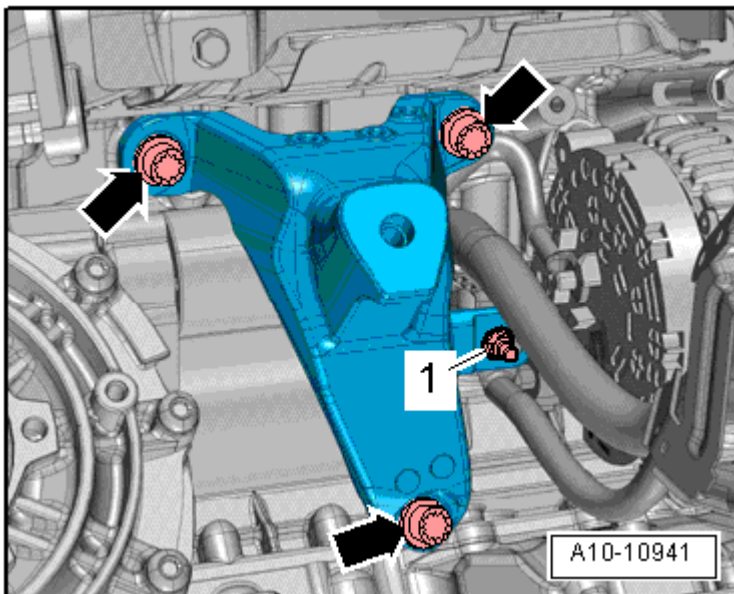


Fig. 50: Identifying Bolts And Right Engine Support
Courtesy of AUDI OF AMERICA, LLC

-- Remove the right engine mount. Refer to [For transmission(s) 0AW] [For engine(s) CALA] Removal and Installation or to [For engine(s) CCBA] Removal and Installation .

- Remove the nut -1- and free up the ground wire on the engine support.
- Remove the bolts -arrows- and the right engine support.
- Disconnect the electrical connector -3- by sliding the retainer back and pressing the release down.

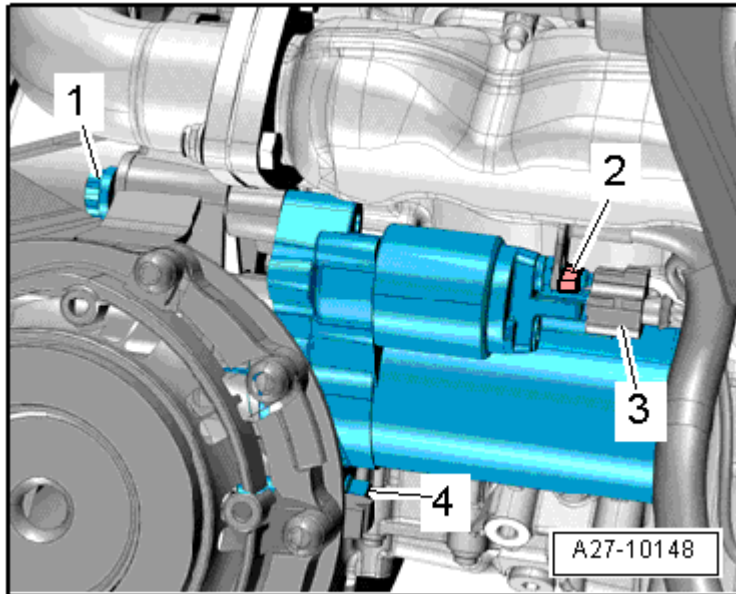


Fig. 51: Disconnecting Starter Electrical Connector
Courtesy of AUDI OF AMERICA, LLC

- Disconnect electrical wire -2- from starter.
- Remove the bolts -1 and 4- and remove the starter.

NOTE: -Item 1- is reached from above.

Installing

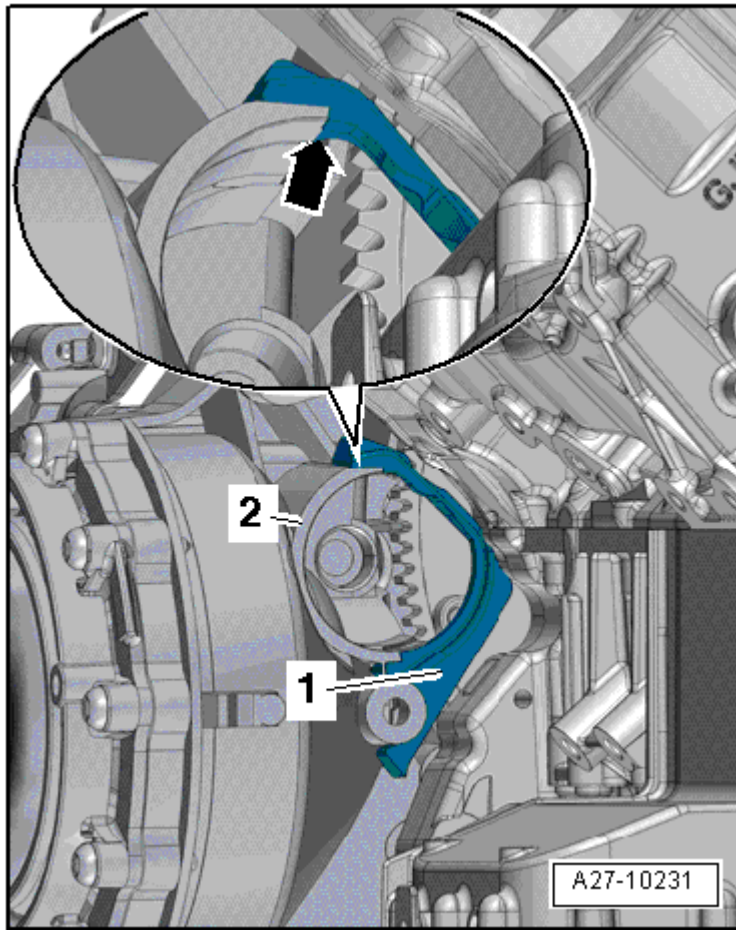


Fig. 52: Identifying Seal And Opening For Starter

Courtesy of AUDI OF AMERICA, LLC

- Tightening specifications, refer to **STARTER OVERVIEW**.

Install in reverse order of removal, observing the following:

-- If the vehicle has an automatic transmission, make sure the seal -1- fits correctly inside the starter opening before installing the starter.

- The seal -arrow- must cover the opening for the starter -2-.

-- Install the engine mount bracket and right engine mount. Refer to **[For transmission(s) 0AW] [For engine(s) CALA] Removal and Installation** or to **[For engine(s) CCBA] Removal and Installation** .

With a Manual/Continuously Variable Transmission

-- Install the right catalytic converter. Refer to **[For transmission(s) 0AW] [For engine(s) CALA] Removal and Installation** or to **[For engine(s) CCBA] Removal and Installation** .

2012 Audi S4

ELECTRICAL SYSTEM Battery, Starter, Generator, Cruise Control (Sedan)

NOTE: The exhaust manifold must be removed in order to replace the exhaust manifold gasket. Refer to [For transmission(s) 0AW] [For engine(s) CALA] Removal and Installation or to [For engine(s) CCBA] Removal and Installation .

-- Install the right front muffler. Refer to [For transmission(s) 0AW] [For engine(s) CALA] Removal and Installation or to [For engine(s) CCBA] Removal and Installation .

-- Install the plenum chamber bulkhead. Refer to Description and Operation .

Continuation for All Vehicles

-- Connect the battery. Required actions, refer to BATTERY, DISCONNECTING AND CONNECTING.

VOLTAGE STABILIZER -J532-

Removing

-- Turn off the ignition and remove the ignition key.

Sedan

-- Lift the luggage compartment floor and engage it on the body.

-- Remove the nut, if equipped, and remove the spare tire.

-- Remove the subwoofer, if applicable. Refer to Removal and Installation .

Avant

-- Remove the spare tire wheel well trim. Refer to Removal and Installation .

Continuation for All Vehicles

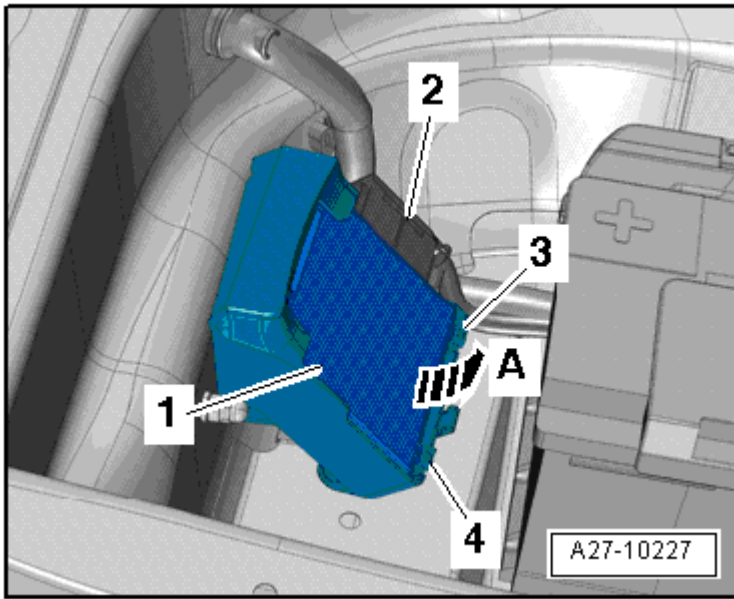


Fig. 53: Releasing Tabs And Remove Voltage Stabilizer From Its Mount
Courtesy of AUDI OF AMERICA, LLC

- Disconnect the electrical connector -2-.
- Release the tabs -3- and -4- and remove the voltage stabilizer -1- from its mount -arrow A-.

Installing

Install in reverse order of removal, observing the following:

- Install the subwoofer, if applicable. Refer to **Removal and Installation** .
- Install the spare tire wheel well trim. Refer to **Removal and Installation** .

SPECIAL TOOLS

Special tools and workshop equipment required

- Locking Tool T40098

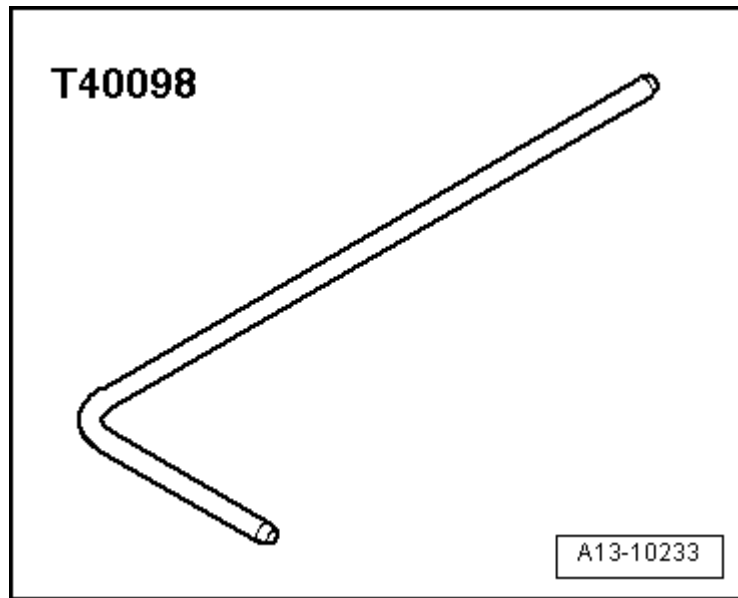


Fig. 54: Locking Tool T40098

Courtesy of AUDI OF AMERICA, LLC