

TRANSMISSION**Controls, Housing - S-Tronic Transmission 0B5 AWD****34 CONTROLS, HOUSING****GENERAL INFORMATION****ATF, CHECKING LEVEL AND CORRECTING****Special tools and workshop equipment required**

- Vehicle Diagnosis Tester
- Used Oil Collection and Extraction Device V.A.G 1782
- ATF Filler Tool V.A.G 1924
- Protective goggles

Test Conditions

- The transmission must not be in the emergency running
- Move vehicle onto a four-pillar shop hoist or over a work pit so that it is absolutely horizontal.
- The selector level is in "P".
- The parking brake button should be activated to set the electromechanical parking brake.
- Exhaust hose/-hoses of an exhaust extraction system connected.
- The Air Conditioning (A/C) and the heater are off.
- Vehicle diagnosis tester is connected.
- The ATF temperature must not be higher than 30 °C (86 °F) at the beginning of the test. The transmission must cool down first, if necessary.

NOTE: **Read the ATF temperature on the vehicle diagnosis tester.**

The ATF level will vary depending on the temperature of the ATF.

It is possible to overfill the ATF if the level is checked when the temperature is too low.

It is possible to underfill the ATF if the level is checked when the temperature is too high.

Overfilling or underfilling will influence the function of the transmission.

Procedure

- Tightening specifications, refer to **ATF DRAIN, FILL AND CHECK PLUGS ASSEMBLY**

OVERVIEW.

-- Select the following menu items in **Functions/Component Selection** "Guided Fault Finding" on the vehicle diagnosis tester:

- **Drive**
- **0B5 transmission**
- **01 - On Board Diagnostic (OBD) Capable System**
- **02-Transmission Electronics**
- **02-Transmission Electronics, Functions**
- **02-Measured Values**

-- Select **Transmission Fluid Temperature** from the list.

-- Check the ATF temperature.

ATF, Checking Level and Correcting

NOTE: **The ATF level is checked at the ATF inspection plug.**

ATF level is correct if a little bit of fluid still leaks out of the ATF inspection plug between 30 °C and 50 °C (86 °F and 122 °F) (dependent on the fluid level rising as the fluid warms up).

CAUTION: There is a risk of damaging the transmission.

- **Only use replacement part ATF for the S-Tronic transmission 0B5.**
- **Allocation.**
- **Using other types of ATF can result in the malfunctions or transmission failure.**
- **The ATF filler tool must be clean and the ATF must not be mixed with any other oils.**

-- Fill the V.A.G 1924 with ATF for S-Tronic transmission 0B5; ATF specification.

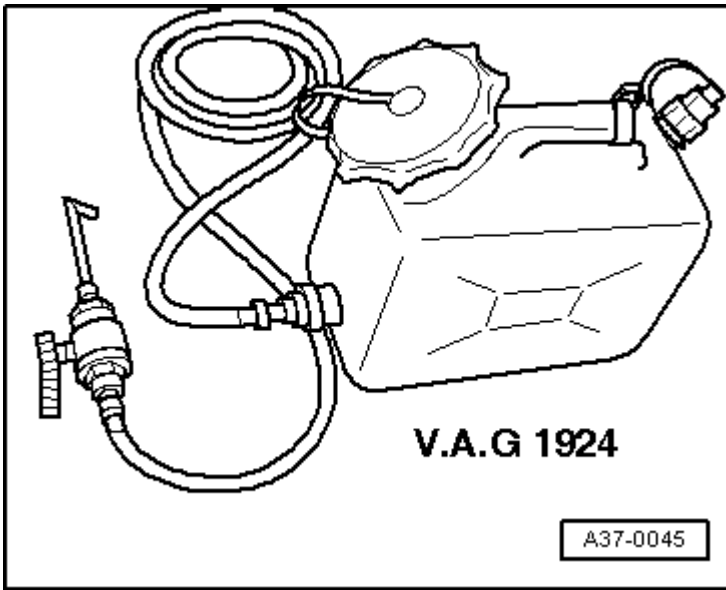


Fig. 1: ATF Filling System V.A.G 1924
Courtesy of AUDI OF AMERICA, LLC

-- Secure the V.A.G 1924 as high as possible on the vehicle.

CAUTION: There is a risk of damaging the transmission.

- Engine must not be started if only a small amount or no ATF is in the transmission after repair work or after significant ATF loss.
- In this case, pre-filling is necessary, refer to **ATF, DRAINING AND FILLING.**

-- Remove the rear noise insulation -2-. Refer to **Description and Operation** .

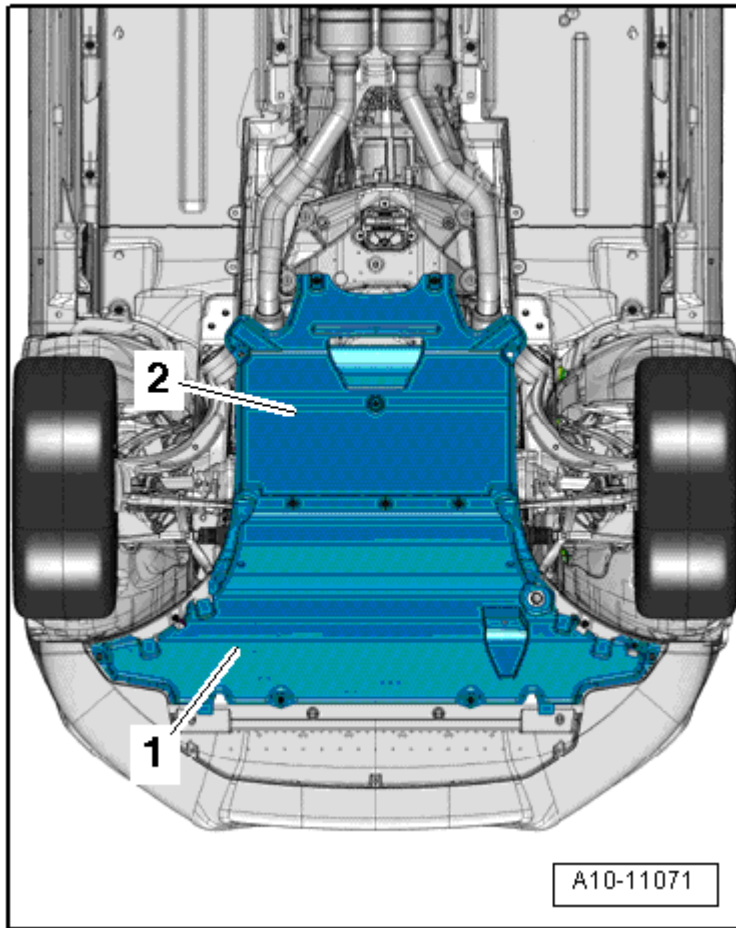


Fig. 2: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

- Start the engine with the selector lever in "P".
- While pressing the brake pedal and with the vehicle idling, shift through all the selector lever positions ("P", "R", "N", "D", "S") leaving each position engaged for at least 2 seconds.
- Move the selector lever into "N".
- Move the selector lever into "P".
- Run the engine at idle.
- Place the V.A.G 1782 under the transmission.

WARNING: Danger of eye injury.

- Wear protective goggles.

-- When the ATF reaches 30 °C (86 °F), remove the ATF check plug -arrow- and drain off any excess ATF if necessary.

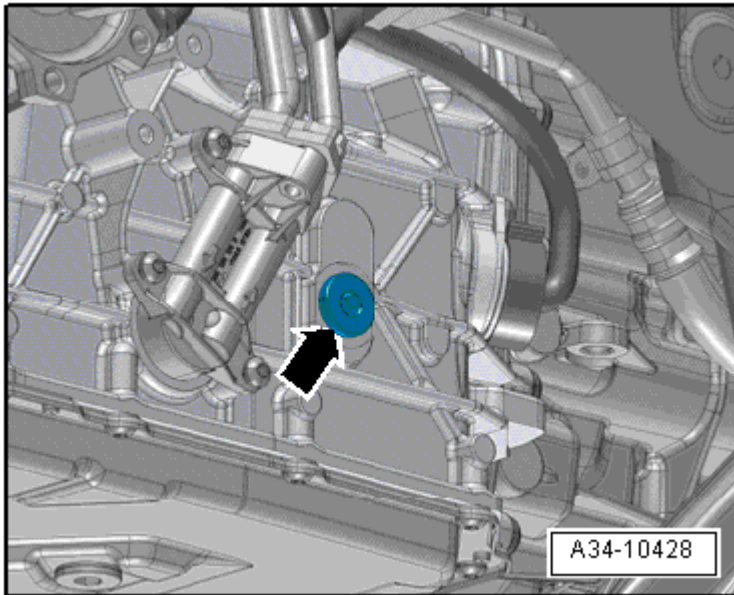


Fig. 3: Identifying ATF Check Plug -Arrow-
Courtesy of AUDI OF AMERICA, LLC

- If ATF starts to leak out of the ATF inspection opening before it reaches 40 °C (104 °F), then the ATF level is OK.

NOTE: ATF inspection opening must be closed again by 50 °C (122 °F) at the latest.

-- Tighten the ATF inspection plug. The ATF level test is now completed.

-- Install the noise insulation. Refer to Description and Operation .

- If no ATF drips out of the ATF inspection opening when the temperature has reached 40 °C (104 °F):

ATF, Filling

NOTE: ATF inspection plug must be closed again at the latest at 50°C (122 °F), if necessary, turn off the engine, let the transmission cool off and repeat test.

-- Engage the filler hook from the V.A.G 1924 into the ATF inspection opening.

-- Fill with ATF using V.A.G 1924 until the ATF starts to come out of the check hole.

NOTE: Too little or too much ATF will impair the transmission.

-- Tighten the ATF inspection plug. The ATF level test is now completed.

-- Install the noise insulation. Refer to **Description and Operation** .

ATF, DRAINING AND FILLING

Special tools and workshop equipment required

- Used Oil Collection and Extraction Device V.A.G 1782
- ATF Filler Tool V.A.G 1924
- Protective goggles

ATF, Draining

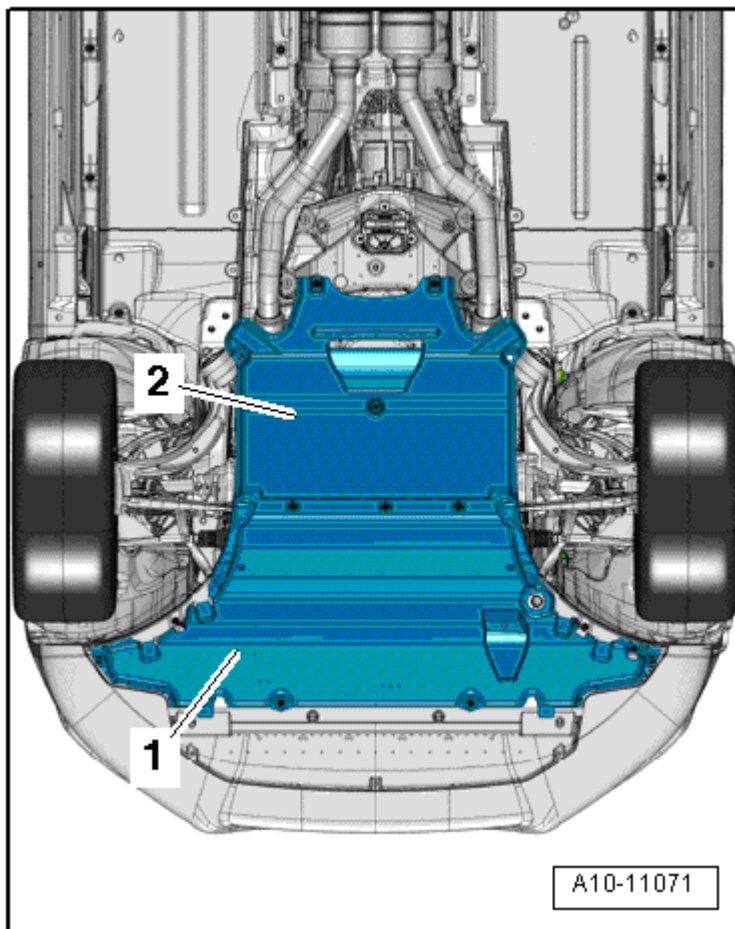


Fig. 4: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

- The engine is off.
- Move the vehicle onto a four-pillar shop hoist or over a work pit so that it is absolutely horizontal.
- The selector level is in "P".
- The parking brake button should be activated to set the electromechanical parking brake.

-- Remove the rear noise insulation -2-. Refer to **Description and Operation** .

-- Place the V.A.G 1782 under the transmission.

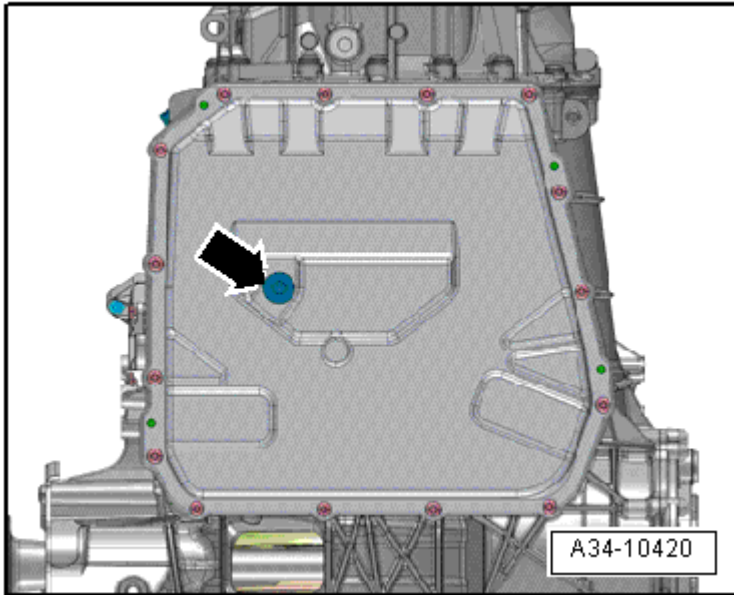


Fig. 5: Identifying ATF Drain Plug

Courtesy of AUDI OF AMERICA, LLC

WARNING: Danger of eye injury.

- Wear protective goggles.

-- Remove the ATF drain plug -arrow- and let the ATF drain out.

CAUTION: There is a risk of damaging the transmission.

- Do not start the engine when there is no ATF in the transmission.

NOTE: Follow the disposal requirements.

Replace the ATF drain plug seal.

-- Tighten the ATF drain plug.

There are 2 different ATF filter versions depending on the engine and the date of manufacture. ATF pipe filter -5- and ATF filter -10-.



On Transmissions with an ATF Filter -2- :

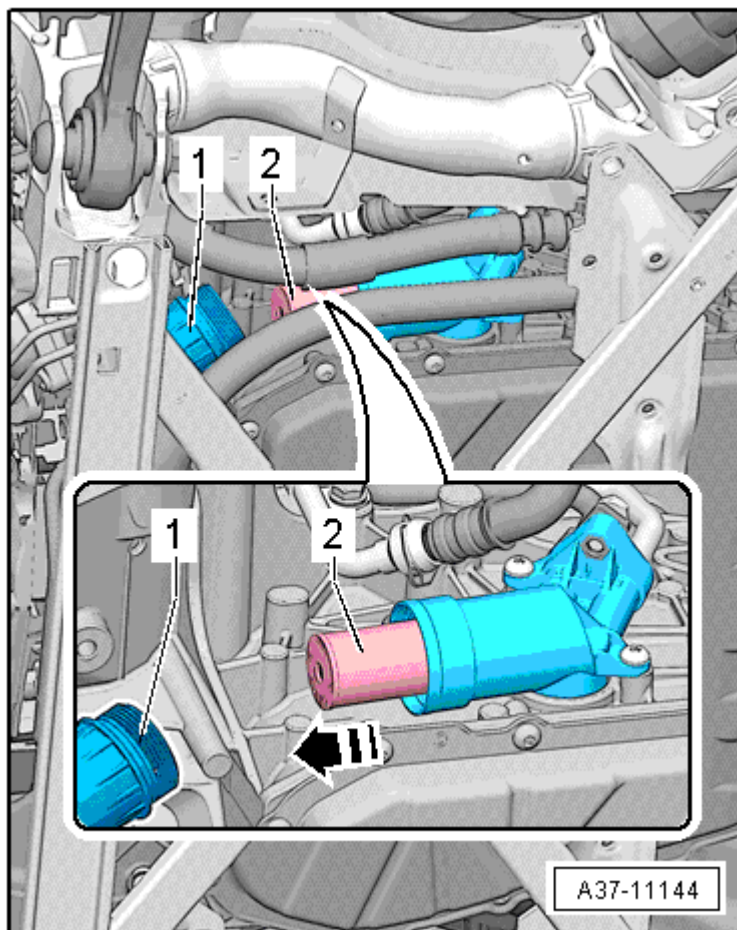


Fig. 7: Identifying ATF Filter -2-
 Courtesy of AUDI OF AMERICA, LLC

CAUTION: There is a risk of damaging the transmission.

- Always replace the ATF filter -2- every time the ATF is changed.

-- Replace the ATF filter. Refer to **ATF FILTER**.

Continuation for All Transmissions:

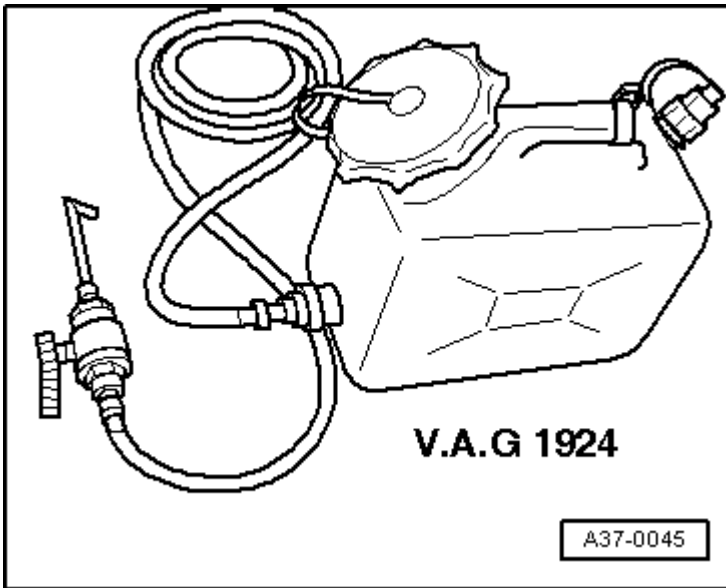


Fig. 8: ATF Filling System V.A.G 1924
Courtesy of AUDI OF AMERICA, LLC

Fill the Transmission with ATF.

CAUTION: There is a risk of damaging the transmission.

- Only use replacement part ATF for the S-Tronic transmission 0B5.
- Allocation.
- Using other types of ATF can result in the malfunctions or transmission failure.
- The ATF filler tool must be clean and the ATF must not be mixed with any other oils.

-- Fill the V.A.G 1924 with ATF for the S-Tronic transmission 0B5; ATF specification.

-- Secure reservoir of V.A.G 1924 as high as possible on the vehicle.

CAUTION: There is a risk of damaging the transmission.

- Engine must not be started if only a small amount or no ATF is in the transmission after repair work or after significant ATF loss.

-- Remove the ATF check plug -arrow-.

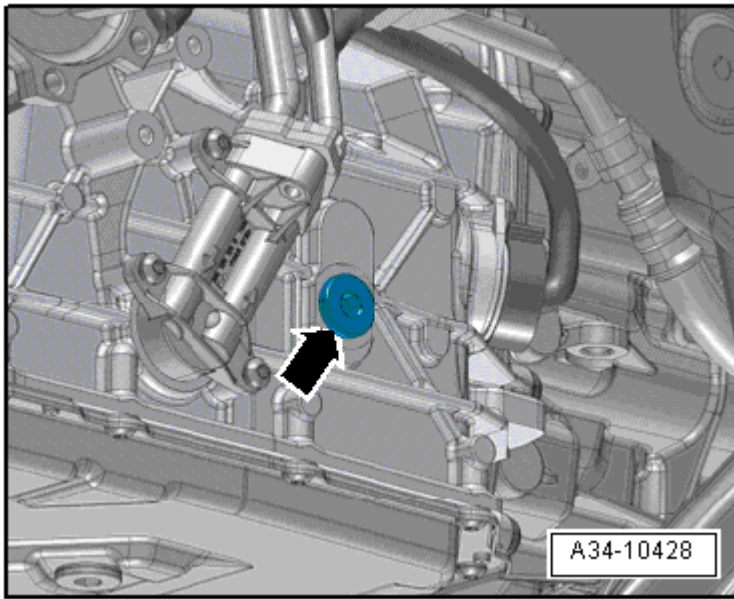


Fig. 9: Identifying ATF Check Plug -Arrow-
Courtesy of AUDI OF AMERICA, LLC

- Engage the filler hook from the V.A.G 1924 into the ATF inspection opening.
- Fill the ATF using V.A.G 1924 until the ATF starts to come out of the check hole.
- Move the selector lever into "P".
- Start the engine, wait 20 seconds and then turn it off.
- Fill the ATF one more time using V.A.G 1924 until the ATF start to come out of the check hole.
- Start the engine and let it run in idle.
- Continue to add ATF using the V.A.G 1924 until ATF starts to come out again from the check hole.
- Check the ATF level and correct if necessary. Refer to **ATF, CHECKING LEVEL AND CORRECTING**.

NOTE: Follow the instructions and test requirements for "checking the ATF level".

- Install the noise insulation. Refer to **Description and Operation** .

ATF PIPES AND ATF COOLER, CLEANING

Special tools and workshop equipment required

- Used Oil Collection and Extraction Device V.A.G 1782
- Hose diameter: approximately 18 mm

- Compressed air gun, commercially available
- Protective goggles

Procedure

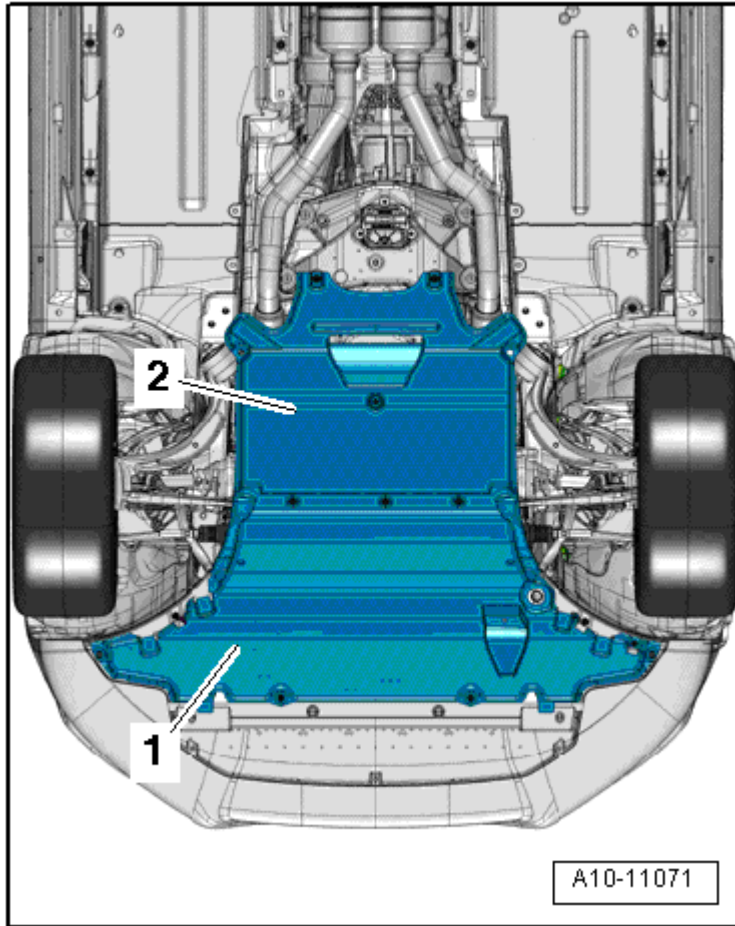


Fig. 10: Removing Noise Insulation
Courtesy of AUDI OF AMERICA, LLC

NOTE: CLEANLINESS WORKING CONDITIONS .

-- Remove the noise insulation -1 and 2-. Refer to Description and Operation .

WARNING: Danger of eye injury.

- Wear protective goggles.

-- Place the V.A.G 1782 under the separation location.

Vehicles with an ATF Pipe Filter

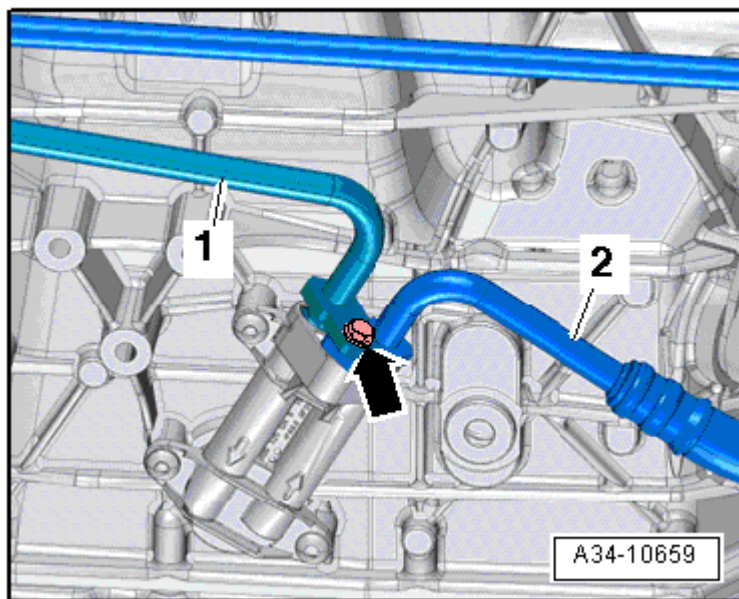


Fig. 11: Identifying ATF Pipe -1- & Bolt -Arrow-
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolt -arrow- and then pull the ATF pipe -1- off the transmission.

NOTE: Do not remove the ATF pipe going to the ATF pipe filter -2- if the ATF pipe filter is not going to be removed.

-- Remove the bolt -1-.

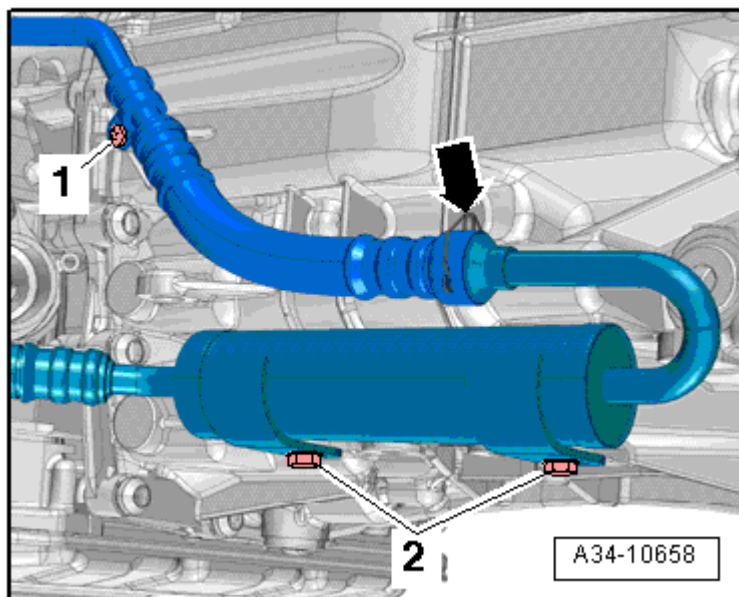


Fig. 12: Identifying ATF Pipe Filter
Courtesy of AUDI OF AMERICA, LLC

-- Remove the circlip -arrow- and separate the ATF pipe from the ATF pipe filter.

NOTE: Ignore -2- if the ATF pipe filter is not being removed.

Vehicles with an ATF Filter

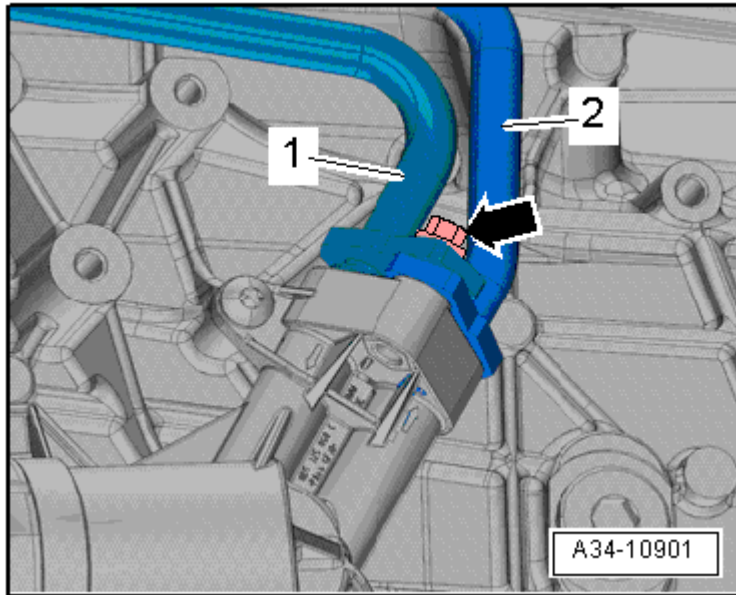


Fig. 13: Removing Bolt And Then Pull ATF Pipes Off Transmission
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolt -arrow- and then pull the ATF pipes -1- off the transmission.

All Vehicles

-- Clean the ATF pipes and the ATF with compressed air (maximum 10 bar).

NOTE: If extremely dirty ATF flows out when cleaning using compressed air, flush the ATF cooler and lines using clean ATF.

Vehicles with an ATF Pipe Filter

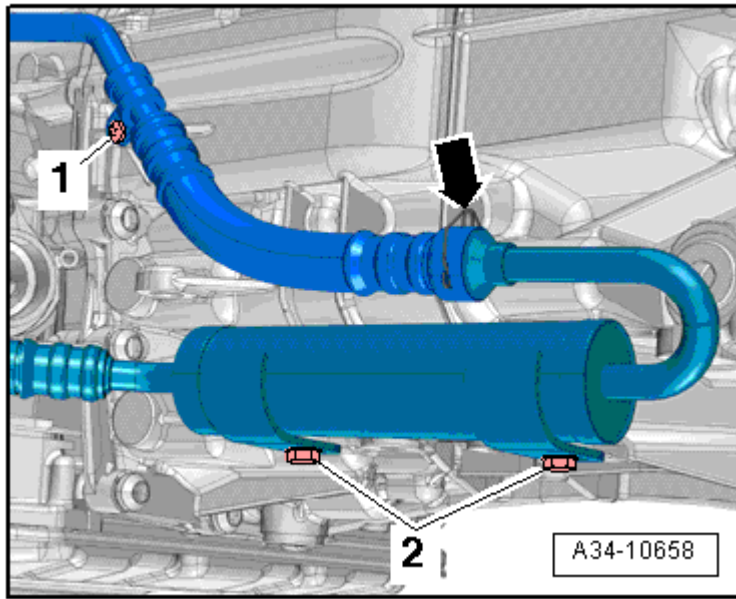


Fig. 14: Identifying ATF Pipe Filter

Courtesy of AUDI OF AMERICA, LLC

-- Always replace the ATF pipe filter if the transmission is going to be replaced or if the ATF is very dirty.
Refer to **ATF PIPE FILTER**.

Vehicles with an ATF Filter

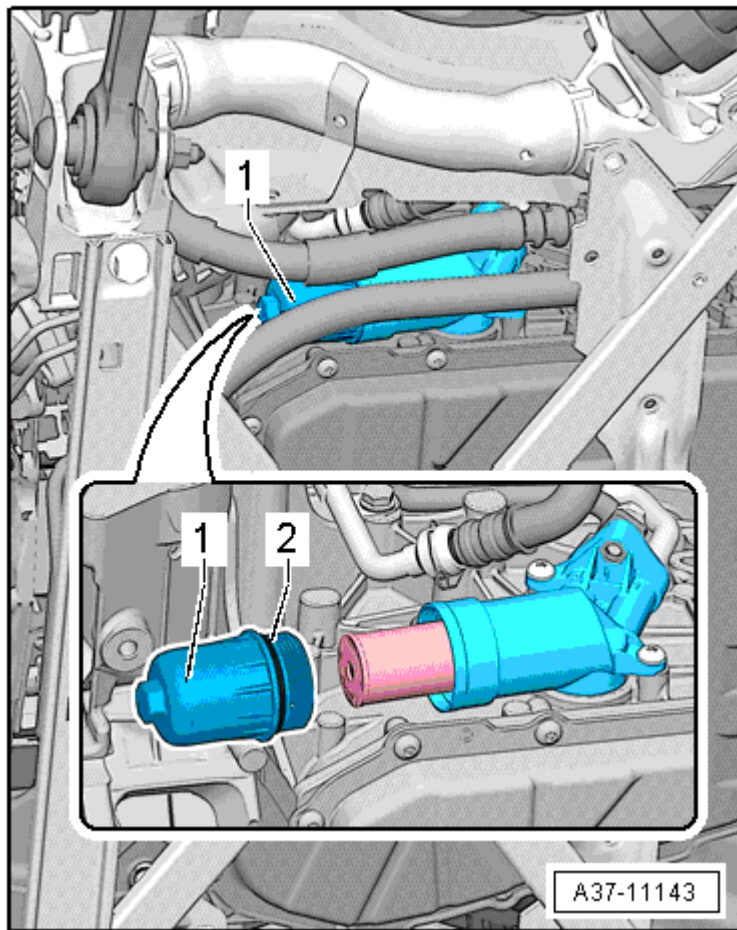


Fig. 15: Removing ATF Filter Cover
 Courtesy of AUDI OF AMERICA, LLC

-- Replace the ATF filter if the ATF is very dirty. Refer to **ATF FILTER**.

NOTE: The ATF filter is supplied with the new transmission.

Replace the ATF filter each time the ATF is replaced.

-- Install the ATF pipes. Refer to **ATF PIPES** or **ATF PIPES**

TRANSMISSION GUIDED FUNCTIONS

Special tools and workshop equipment required

- Vehicle Diagnosis Tester

Procedure:

- Vehicle diagnosis tester is connected.

-- Perform "Guided Function" in **Guided Functions** , directory **02 - Transmission Electronics, Functions** on the vehicle diagnosis tester.

Conditions:

- Follow the instructions on the vehicle diagnosis tester exactly so that "Guided Functions" can be performed successfully.

Perform "Guided Functions" with a vehicle diagnosis tester after performing the following:

1. Replacing the selector mechanism function unit: **02 - Basic Setting (Repair Group 34)**
TRANSMISSION GUIDED FUNCTIONS
2. Working on the selector lever cable, adjusting the selector lever cable: **2. ASSEMBLY WORK ON THE SELECTOR LEVER CABLE WHEN ADJUSTING THE CABLE****02 - Basic Setting (Repair Group 34)**
3. Replacing the DSG transmission Mechatronic -J743- and Transmission Control Module (TCM) -J217- :
3. REPLACING THE DSG TRANSMISSION MECHATRONIC WITH TCM**02 - Replace Control Module/Mechatronic (Repair Group 34)**
4. Replacing the dual clutch: **02- Basic Setting (Repair Group 34)** **TRANSMISSION GUIDED FUNCTIONS**
5. Changing the transmission fluid on vehicle with transmission fluid temperature sensor 2 -G754- (Audi RS 5): **02 - Reset Transmission Fluid Temperature Sensor 2 (Repair Group 34)** **TRANSMISSION GUIDED FUNCTIONS**.

1. REPLACING THE SELECTOR MECHANISM FUNCTION UNIT

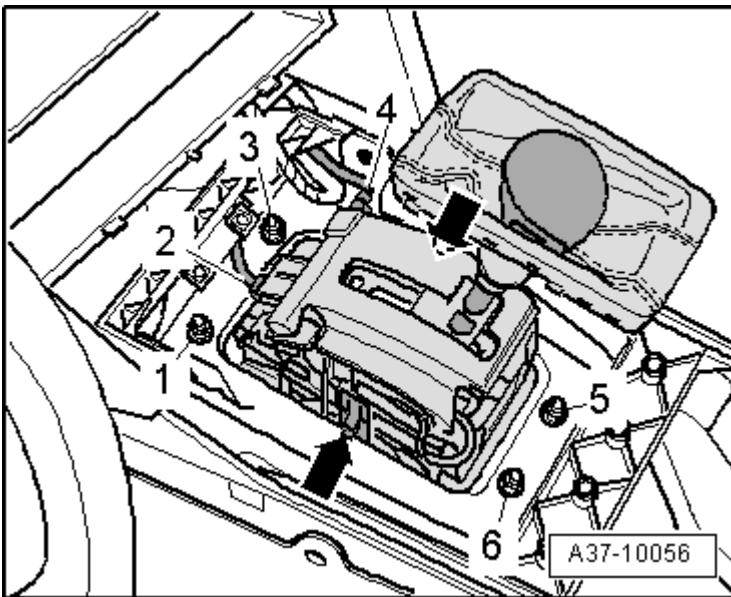


Fig. 16: Disconnecting Selector Mechanism Electrical Connectors And Removing Bolts
Courtesy of AUDI OF AMERICA, LLC

NOTE: **SHIFT MECHANISM FUNCTION UNIT**

The following steps must be performed after completing this procedure:

-- Select **Guided Functions** , directory **02 - Transmission Electronics, Functions** and **02 - Basic setting (Repair Group 34)** .

-- Select **Calibrate Drive Position Sensor -G676** and then follow the instructions given on the vehicle diagnosis tester.

2. ASSEMBLY WORK ON THE SELECTOR LEVER CABLE WHEN ADJUSTING THE CABLE

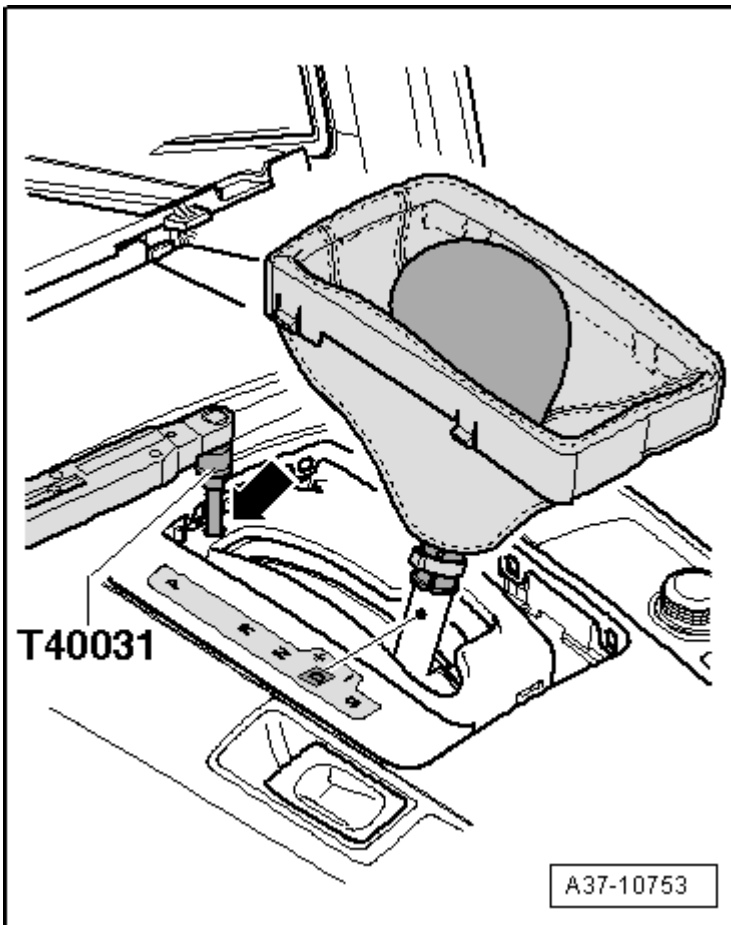


Fig. 17: Loosening Bolt On Selector Lever Cable One Turn Using Socket T40031
Courtesy of AUDI OF AMERICA, LLC

NOTE: SELECTOR LEVER CABLE, ADJUSTING

The following steps must be performed after completing this procedure:

-- Select **Guided Functions** , **02 - Transmission Electronics, Functions** and **02 - Basic Setting (Repair Group 34)** .

-- Select **Calibrate Drive Position Sensor -G676** and then follow the instructions given on the vehicle

diagnosis tester.

3. REPLACING THE DSG TRANSMISSION MECHATRONIC WITH TCM

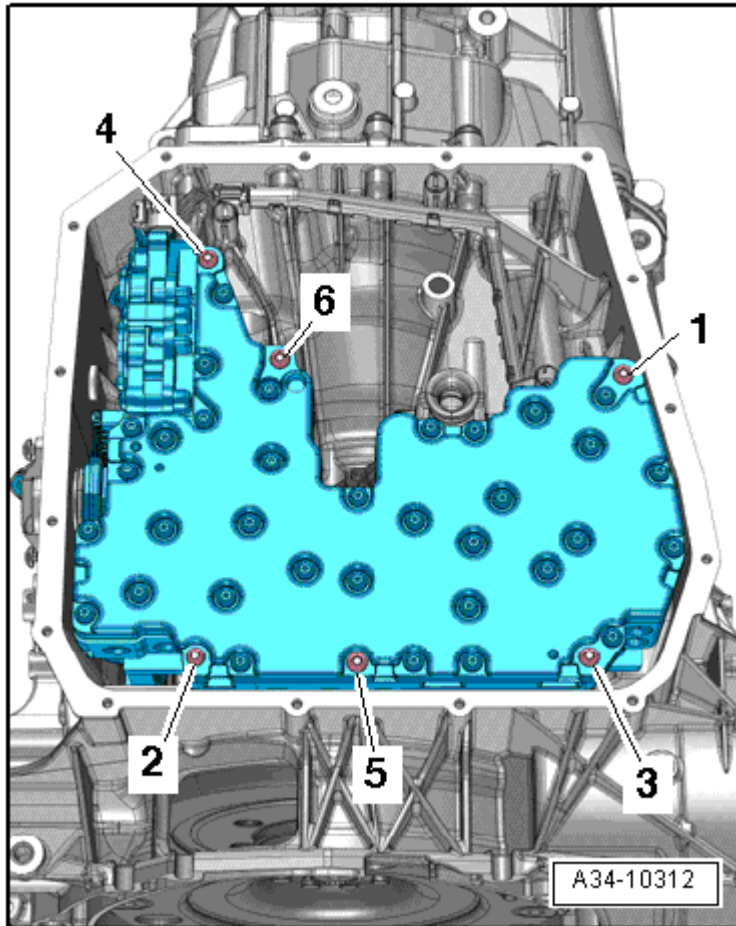


Fig. 18: Mechatronic, Tightening Specification And Sequence
Courtesy of AUDI OF AMERICA, LLC

NOTE: **DSG Transmission Mechatronic -J743-**

The following steps must be performed after completing this procedure:

-- Select **Guided Functions** , **02 - Transmission Electronics, Functions** and **02 - Replace Control Module/Mechatronic (Repair Group 34)** and then follow the instructions given on the vehicle diagnosis tester.

4. REPLACING THE DUAL CLUTCH

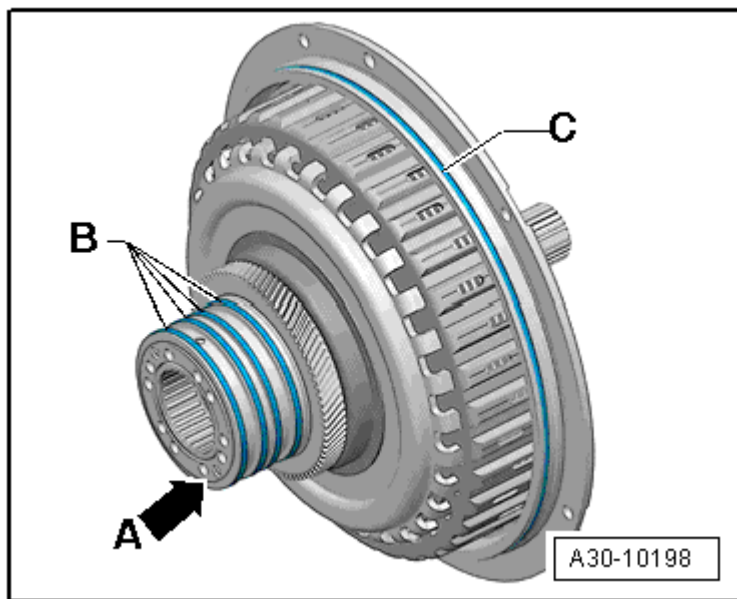


Fig. 19: Identifying Dual Clutch Components
Courtesy of AUDI OF AMERICA, LLC

NOTE: DUAL CLUTCH

The following steps must be performed after completing this procedure:

-- Select **Guided Functions** , **02 - Transmission Electronics, Functions** and **02 - Basic Setting (Repair Group 34)** .

-- Select the basic setting **Adapt Clutch Slip Points** and then follow the instructions given on the vehicle diagnosis tester.

5. CHANGING THE TRANSMISSION FLUID ON THE AUDI RS 5

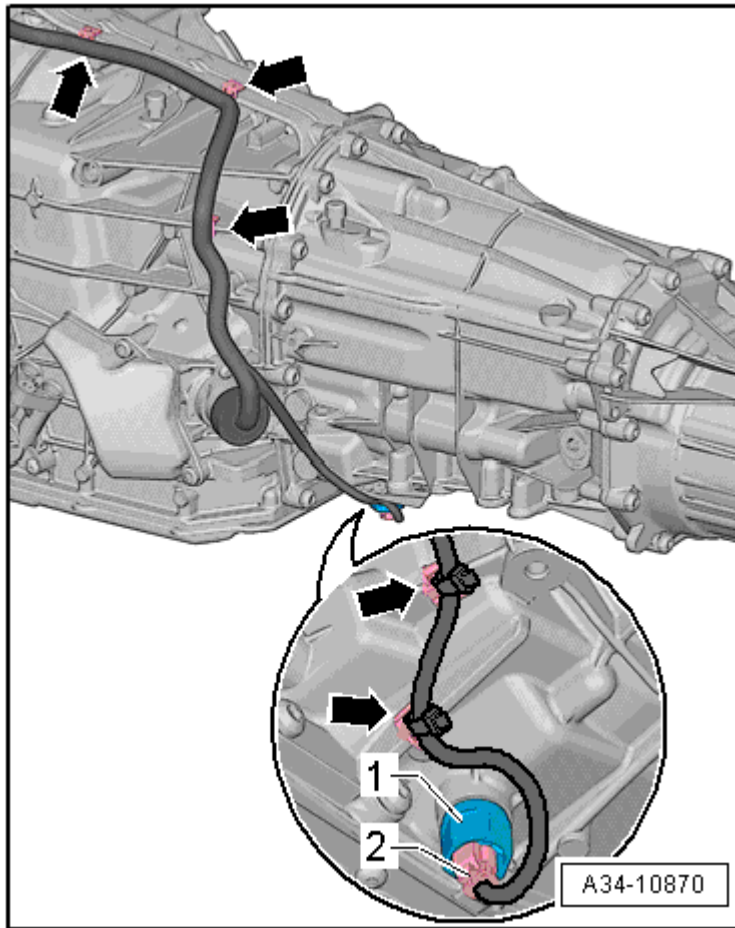


Fig. 20: Transmission Fluid Temperature Sensor

Courtesy of AUDI OF AMERICA, LLC

- The transmission fluid (MTF) must be changed at specific change intervals (at specific kilometers driven) if the vehicle is equipped with transmission fluid temperature sensor 2 -G754- -1-.
- The transmission fluid temperature is also monitored by transmission fluid temperature sensor 2 on these vehicles. An internal counter in the TCM starts to count when an increased transmission fluid temperature over a specific time period. The transmission control module stores a Diagnostic Trouble Code (DTC) memory entry when the temperature is exceeded a specific number of times. The transmission fluid (MTF) must then be changed.

In both cases, after changing the transmission fluid, the internal counter in the TCM must be reset in "Guided Function".

NOTE: The connector on the transmission fluid temperature sensor 2 can be disconnected only when the ignition is turned off. The transmission will switch to emergency mode if the ignition is on. The counter for the increased temperature will count up and a fault will be stored in the TCM after 10 minutes.

Work sequence:

-- Select **Guided Functions** , **02 - Transmission Electronics, Functions** and **02 - Reset Transmission Fluid Temperature Sensor (Repair Group 34)** .

DESCRIPTION AND OPERATION

ATF COOLER, ATF PIPES AND ATF FILTER OVERVIEW - ENGINE CODE(S): CCBA & CGXC

NOTE: There are 2 different ATF filter versions depending on the engine and the date of manufacture. ATF pipe filter -5- and ATF filter -10-.

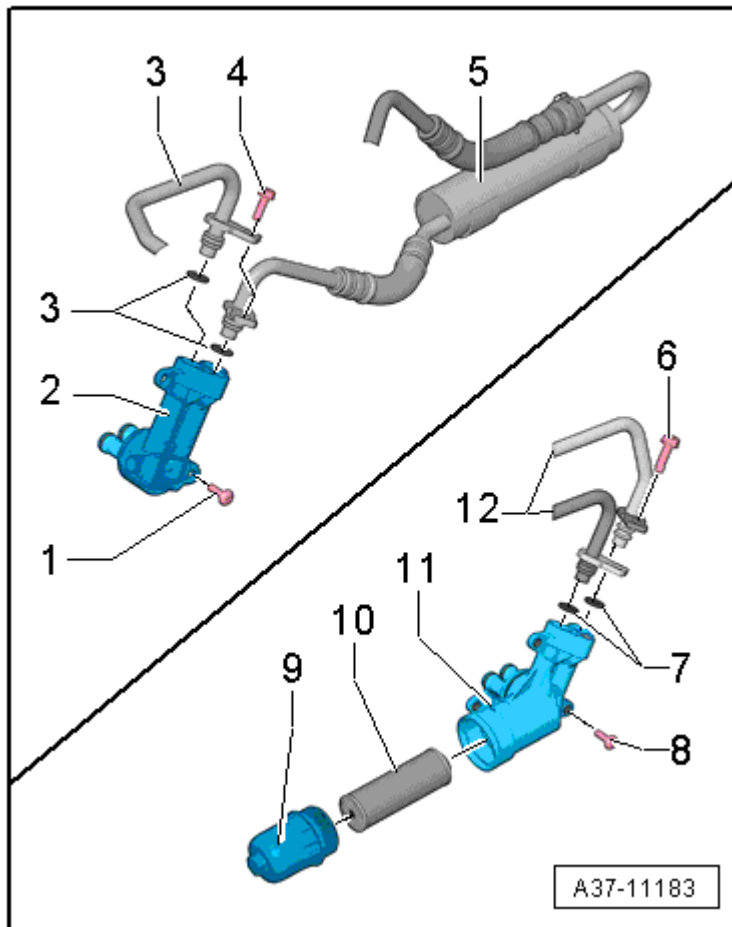


Fig. 21: Identifying 2 Different ATF Filter Versions ATF Pipe Filter -5- And ATF Filter -10-

Courtesy of AUDI OF AMERICA, LLC

ATF filter -10-, must be replaced at every ATF change or whenever a repair is made to the transmission.

ATF pipe filter -5-, must be replaced whenever the transmission is replaced or if the ATF is very dirty. for removing and installing, refer to ATF PIPE FILTER.

NOTE: The illustration shows the routing for ATF pipes with a 6-cylinder engine.

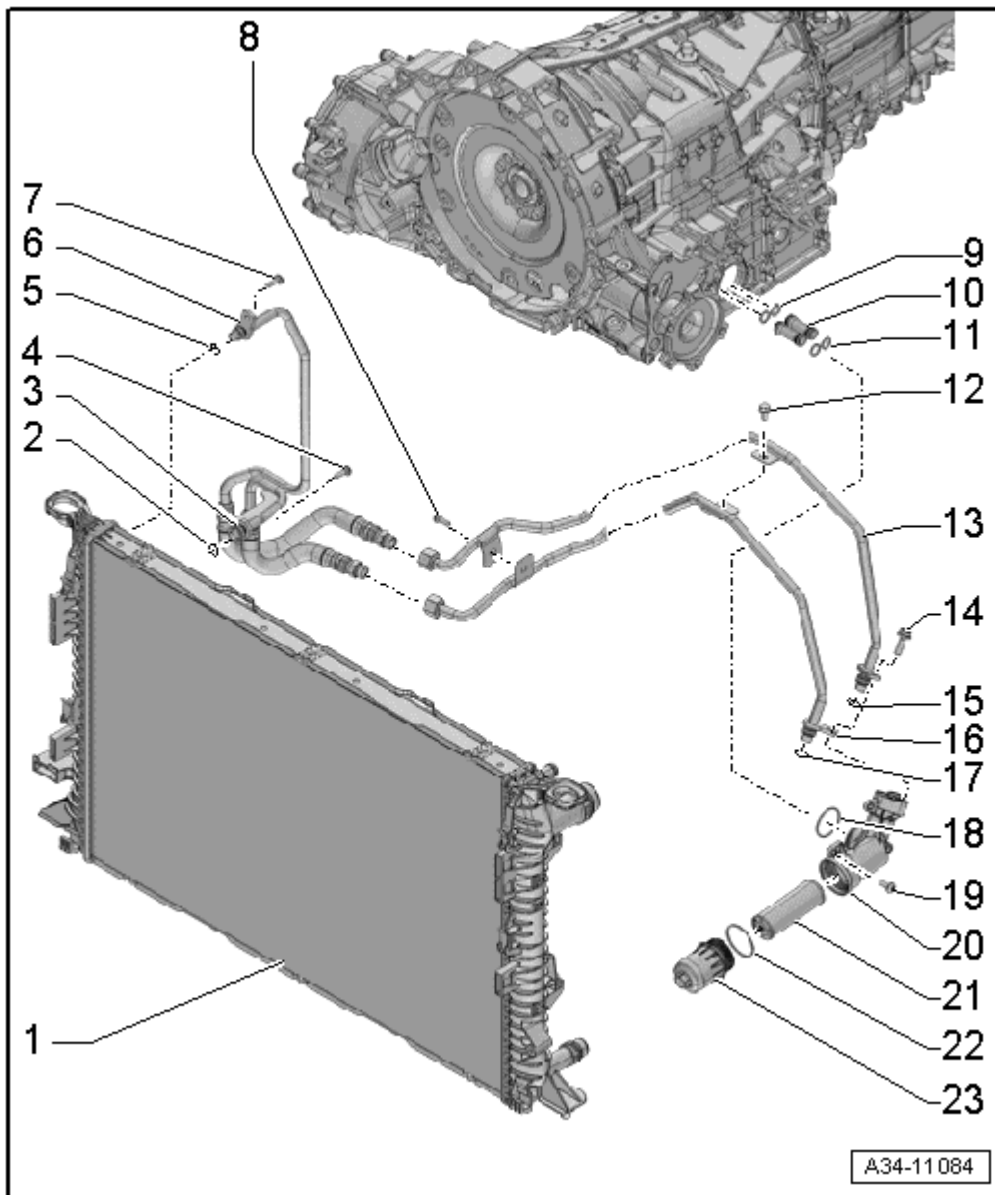


Fig. 22: Routing For ATF Pipes With A 6-Cylinder Engine
 Courtesy of AUDI OF AMERICA, LLC

1. ATF Cooler
 - Integrated in the coolant cooler
 - Removing and Installing, refer to **Removal and Installation** .
2. O-ring
 - Replace
 - Coat with ATF before installing
3. ATF Pipe - Hose Line - Return

- first insert the ATF pipe/hose lines with new O-rings by hand all the way
 - Cleaning, refer to **ATF PIPES AND ATF COOLER, CLEANING**
4. Bolt
 - 5 Nm
 5. O-ring
 - Replace
 - Coat with ATF before installing
 6. ATF Pipe - Hose Line - Supply
 - first insert the ATF pipe/hose lines with new O-rings by hand all the way
 - Cleaning, refer to **ATF PIPES AND ATF COOLER, CLEANING**
 7. Bolt
 - 5 Nm
 8. Union nut
 - 29 Nm
 9. Bolt
 - 9 Nm
 10. O-rings
 - Replace
 - Coat with ATF before installing
 11. Oil Pipes
 - replace after removal
 12. O-rings
 - Replace
 - Coat with ATF before installing
 13. Bolt
 - 9 Nm
 14. ATF Return Pipe
 - Cleaning, refer to **ATF PIPES AND ATF COOLER, CLEANING**
 - **ATF PIPES**
 - First insert the ATF hose/line assembly with new O-rings all the way in by hand
 - The tab must fit into the threaded hole in the transmission
 15. Bolt
 - 20 Nm
 16. O-ring
 - Replace
 - Coat with ATF before installing
 17. ATF Supply Pipe
 - Cleaning, refer to **ATF PIPES AND ATF COOLER, CLEANING**

- **ATF PIPE FILTER**

- First insert the ATF hose/line assembly with new O-rings all the way in by hand
- The tab must touch the lower tab.

18. O-ring

- Replace
- Coat with ATF before installing

19. O-ring

- Replace
- Coat with ATF before installing

20. Bolt

- 10 Nm

21. Filter Housing

22. ATF Filter

- Coat the O-ring on the first with ATF before installing the filter.
- **ATF FILTER**

23. O-ring

- Replace
- Coat with ATF before installing

24. ATF Filter Cover

- 8 Nm

ATF COOLER, ATF PIPES, ATF PIPE FILTER OVERVIEW - ENGINE CODE(S): CCBA & CGXC

NOTE: There are 2 different ATF filter versions depending on the engine and the date of manufacture. ATF pipe filter -5- and ATF filter -10-.

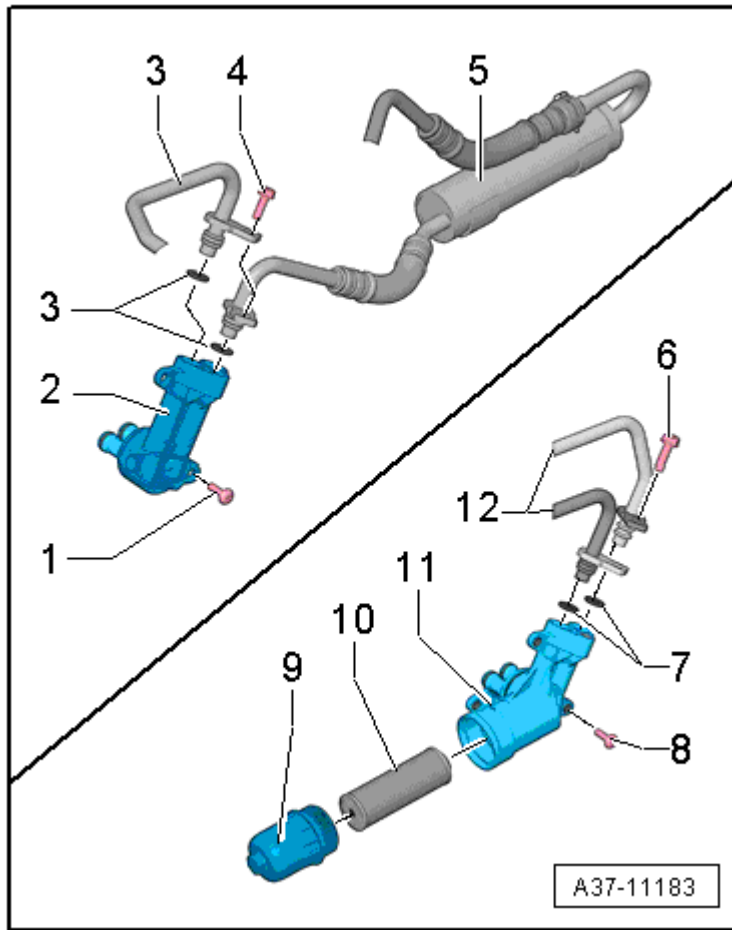


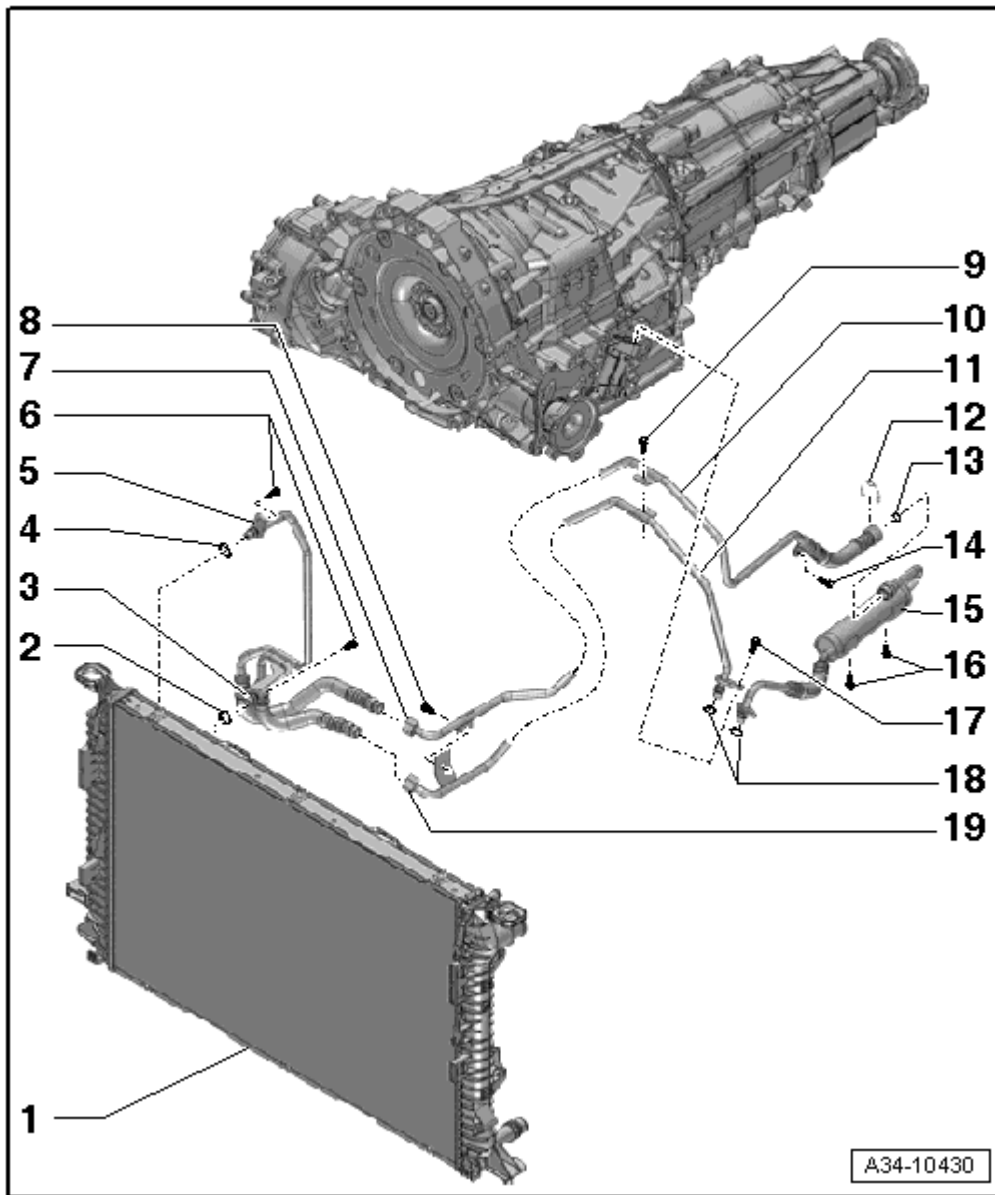
Fig. 23: Identifying 2 Different ATF Filter Versions ATF Pipe Filter -5- And ATF Filter -10-

Courtesy of AUDI OF AMERICA, LLC

ATF filter -10-, must be replaced at every ATF change or whenever a repair is made to the transmission.

ATF pipe filter -5-, must be replaced whenever the transmission is replaced or if the ATF is very dirty. for removing and installing, refer to ATF PIPE FILTER.

NOTE: The illustration shows the routing for ATF pipes with a 6-cylinder engine.



A34-10430

Fig. 24: Routing For ATF Pipes With A 6-Cylinder Engine

Courtesy of AUDI OF AMERICA, LLC

1. ATF Radiator
 - Integrated in the coolant cooler
 - Removing and Installing, refer to **Removal and Installation** .
2. O-ring
 - Replace
 - Coat with ATF before installing
3. ATF Pipe - Hose Line - Return
 - First insert the ATF pipe/hose lines with new O-rings by hand all the way
 - Cleaning, refer to **ATF PIPES AND ATF COOLER, CLEANING**

4. O-ring
 - Replace
 - Coat with ATF before installing
5. ATF Pipe - Hose Line - Supply
 - First insert the ATF pipe/hose lines with new O-rings by hand all the way
 - Cleaning, refer to **ATF PIPES AND ATF COOLER, CLEANING**
6. Bolts
 - 5 Nm
7. Union Nut
 - 29 Nm
8. Bolt
 - 9 Nm
9. Bolt
 - 9 Nm
10. ATF Supply Pipe
 - Mark the ATF pipe - hose line for installing
 - Removing and installing, refer to **ATF PIPES**
 - Cleaning, refer to **ATF PIPES AND ATF COOLER, CLEANING**
11. ATF Return Pipe
 - Mark the ATF pipe - hose line for installing
 - Removing and installing, refer to **ATF PIPES**
 - Cleaning, refer to **ATF PIPES AND ATF COOLER, CLEANING**
12. Retaining Clip
 - Press the circlip on the ATF pipe and ATF pipe filter connection; pull on it to make sure the circlip is installed correctly
13. O-ring
 - Replace
 - Coat with ATF before installing
14. Bolt
 - 9 Nm
15. ATF Pipe Filter
 - Removing and installing, refer to **ATF PIPE FILTER**
16. Bolt
 - 20 Nm
17. Bolt
 - 20 Nm
 - First insert the ATF pipes with new O-rings by hand as far as the stop
 - The retaining tab on the lower ATF pipe must fit inside the threaded hole in the transmission.

- The tab on the upper ATF pipe must align with the bottom one.
- O-rings
 - Replace
 - Coat with ATF before installing
 - Union Nut
 - 29 Nm

ATF COOLER, ATF PIPES AND ATF FILTER OVERVIEW - ENGINE CODE(S): CFSA

NOTE: There are 2 different ATF filter versions depending on the engine and the date of manufacture. ATF pipe filter -5- and ATF filter -10-.

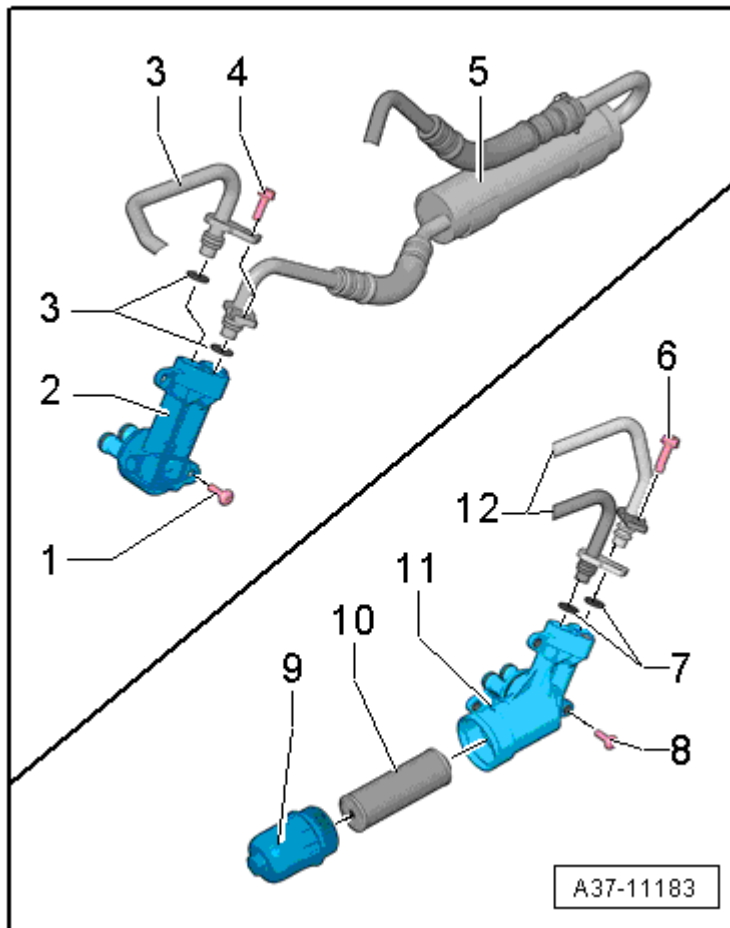


Fig. 25: Identifying 2 Different ATF Filter Versions ATF Pipe Filter -5- And ATF Filter -10-

Courtesy of AUDI OF AMERICA, LLC

ATF filter -10-, must be replaced at every ATF change or whenever a repair is made to the transmission.

ATF pipe filter -5-, must be replaced whenever the transmission is replaced or if the ATF is very dirty. for removing and installing, refer to ATF PIPE FILTER.

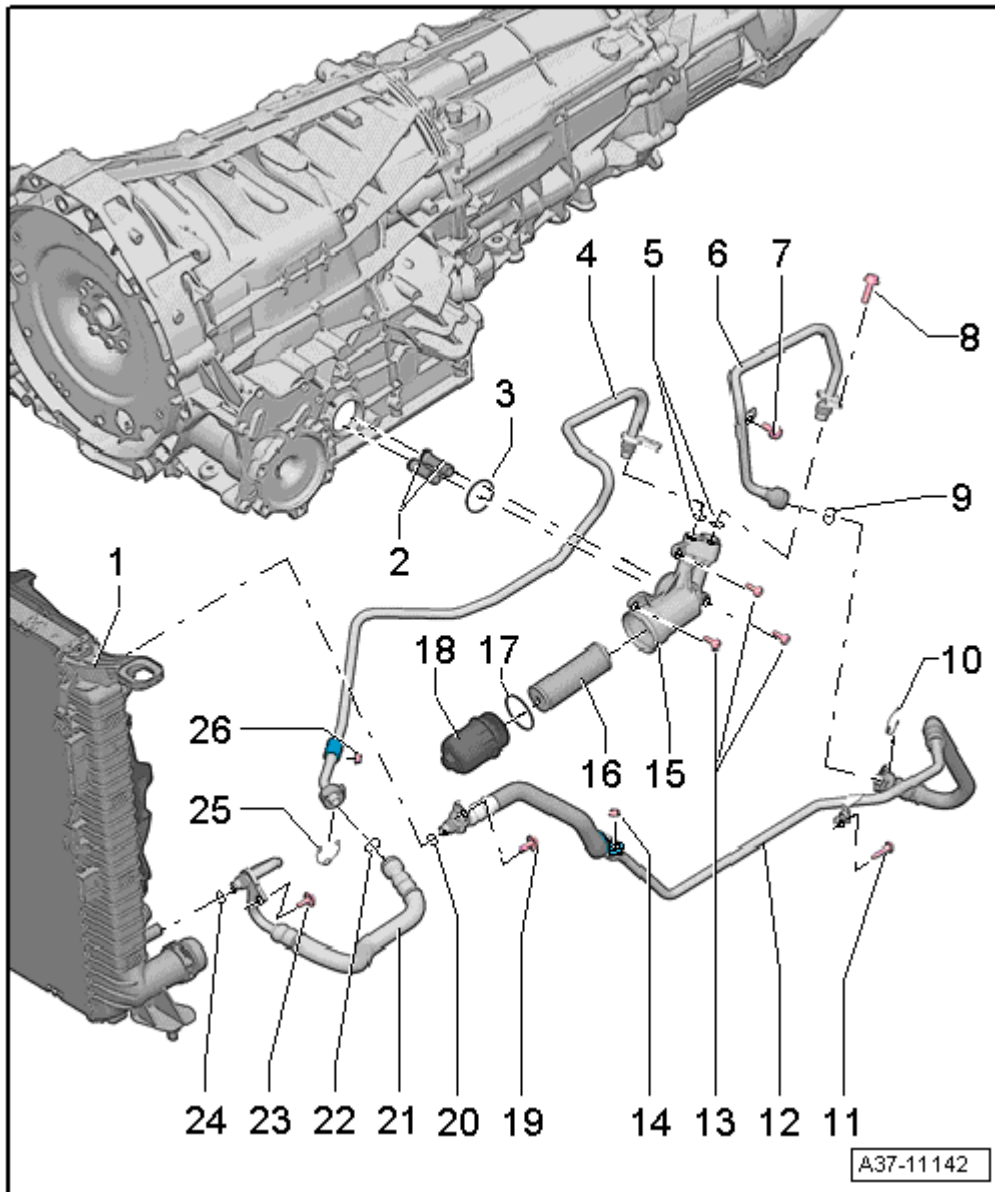


Fig. 26: ATF Cooler, ATF Pipes And ATF Filter Overview

Courtesy of AUDI OF AMERICA, LLC

1. ATF Radiator
 - Integrated in the coolant cooler
 - Removing and Installing, refer to **[For engine(s) CCBA] Removal and Installation**
2. Oil Pipes
 - Replace after removal
 - Coat the O-rings with ATF before installing

3. O-ring
 - Replace
 - Coat with ATF before installing
4. ATF Return Pipe
 - Removing and Installing, refer to ATF PIPES
 - Cleaning, refer to ATF PIPES AND ATF COOLER, CLEANING
5. O-rings
 - Replace
 - Coat with ATF before installing
6. ATF Supply Pipe
 - Removing and installing, refer to ATF PIPES
 - Cleaning, refer to ATF PIPES AND ATF COOLER, CLEANING
7. Bolt
 - 20 Nm
 - Attaching ATF supply pipe and catalytic converter bracket
8. Bolt
 - 20 Nm
 - First install the ATF return pipe (-item 4- ATF COOLER, ATF PIPES AND ATF FILTER OVERVIEW), by hand, all the way into the filter housing, then install the ATF supply pipe (refer to -item 6- ATF COOLER, ATF PIPES AND ATF FILTER OVERVIEW). Use a new O-ring for each pipe.
9. O-ring
 - Currently cannot be replaced. Replace the ATF pipe if it is leaking.
10. Circlip
 - Press on the connection and then pull on it to make sure the circlip is locked on securely.
11. Bolt
 - 9 Nm
12. ATF Supply Pipe/Hose/Line Assembly
 - First insert the ATF pipe/hose/line assembly with new O-rings all the way in by hand
 - Cleaning, refer to ATF PIPES AND ATF COOLER, CLEANING
13. Bolt
 - 10 Nm
14. Nut
 - 5 Nm
15. Filter Housing
16. ATF Filter
 - Coat the O-ring on the first with ATF before installing the filter.
 - Removing and installing, refer to ATF FILTER

17. O-ring
 - Replace
 - Coat with ATF before installing
18. ATF Filter Cover
 - 8 Nm
19. Bolts
 - 5 Nm
20. O-ring
 - Replace
 - Coat with ATF before installing
21. ATF Return Pipe/Hose/Line Assembly
 - First insert the ATF pipe/hose/line assembly with new O-rings all the way in by hand
 - Removing and Installing, refer to ATF PIPES
 - Cleaning, refer to ATF PIPES AND ATF COOLER, CLEANING
22. O-ring
 - Currently cannot be replaced. Replace the ATF pipe if it is leaking.
23. Bolt
 - 5 Nm
24. O-ring
 - Replace
 - Coat with ATF before installing
25. Circlip
 - Press on the connection and then pull on it to make sure the circlip is locked on securely.
26. Nut
 - 9 Nm

ATF COOLER, ATF PIPES AND ATF PIPE FILTER OVERVIEW - ENGINE CODE(S): CFSA

NOTE: **There are 2 different ATF filter versions depending on the engine and the date of manufacture. ATF pipe filter -5- and ATF filter -10-.**

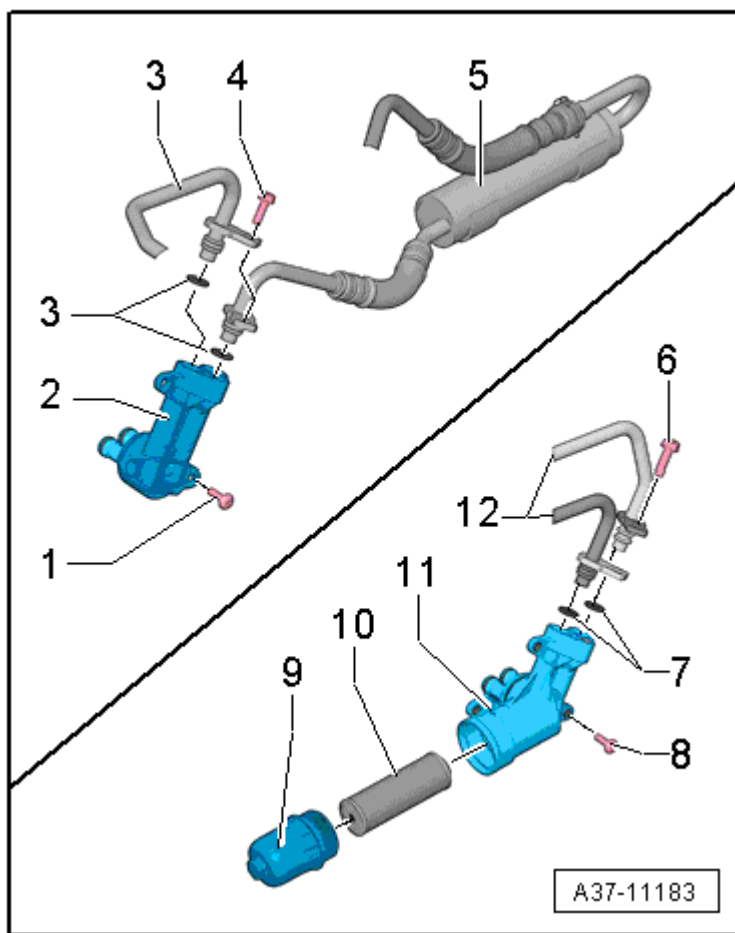


Fig. 27: Identifying 2 Different ATF Filter Versions ATF Pipe Filter -5- And ATF Filter -10-

Courtesy of AUDI OF AMERICA, LLC

ATF filter -10-, must be replaced at every ATF change or whenever a repair is made to the transmission.

ATF pipe filter -5-, must be replaced whenever the transmission is replaced or if the ATF is very dirty. for removing and installing, refer to ATF PIPE FILTER.

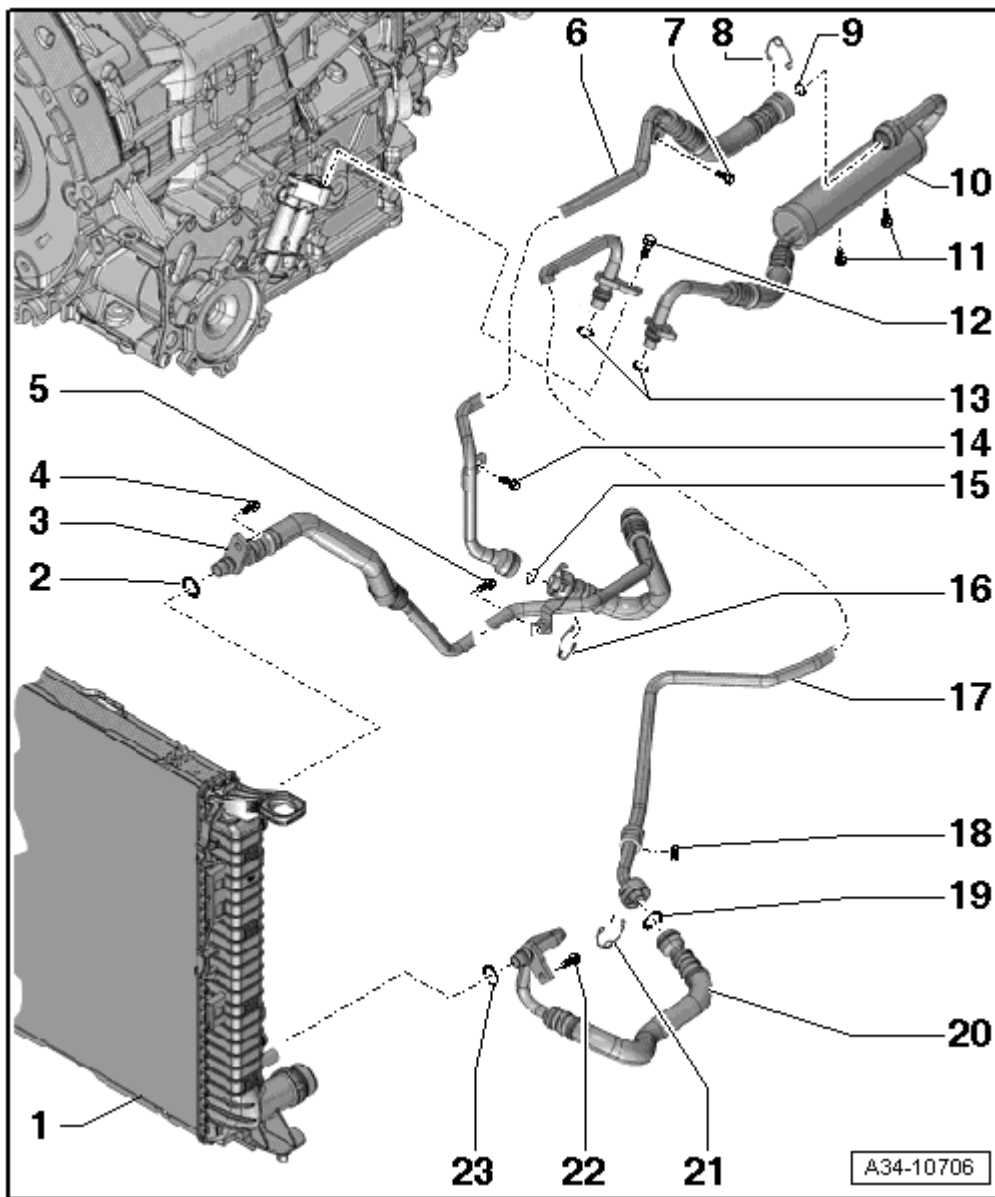


Fig. 28: ATF Cooler, ATF Pipes And ATF Pipe Filter Overview

Courtesy of AUDI OF AMERICA, LLC

1. ATF Radiator
 - Integrated in the coolant cooler
 - Removing and Installing, refer to **[For engine(s) CCBA] Removal and Installation**
2. O-ring
 - Replace
 - Coat with ATF before installing
3. ATF Pipe - Hose Line - Supply
 - First insert the ATF hose/line assembly with new O-rings all the way in by hand
 - Cleaning, refer to **ATF PIPES AND ATF COOLER, CLEANING**

4. Bolt
 - 5 Nm
5. Bolt
 - 9 Nm
6. ATF Supply Pipe
 - First insert the ATF pipe/hose lines with new O-rings by hand all the way
 - Cleaning, refer to **ATF PIPES AND ATF COOLER, CLEANING**
7. Bolt
 - 9 Nm
8. Retaining Clip
 - Press on the connection and then pull on it to make sure the circlip is locked.
9. O-ring
 - Currently cannot be replaced. Replace the ATF pipe if it leaks.
10. ATF Pipe Filter
 - Removing and installing, refer to **ATF PIPE FILTER**
11. Bolts
 - 23 Nm
12. Bolt
 - 20 Nm
13. O-rings
 - Replace
 - Coat with ATF before installing
14. Bolt
 - 23 Nm
 - Attaches the ATF pipe together with the bracket for the exhaust system to the transmission.
15. O-ring
 - Currently cannot be replaced. Replace the ATF pipe if it leaks.
16. Retaining Clip
 - Press on the connection and then pull on it to make sure the circlip is locked.
17. ATF Return Pipe
 - Removing and Installing, refer to **ATF PIPES**
 - Cleaning, refer to **ATF PIPES AND ATF COOLER, CLEANING**
18. Nut
 - 9 Nm
19. O-ring
 - Currently cannot be replaced. Replace the ATF pipe if it leaks.
20. ATF Pipe - Hose Line - Return
 - Removing and Installing, refer to **ATF PIPES**

- Cleaning, refer to **ATF PIPES AND ATF COOLER, CLEANING**

21. Retaining Clip

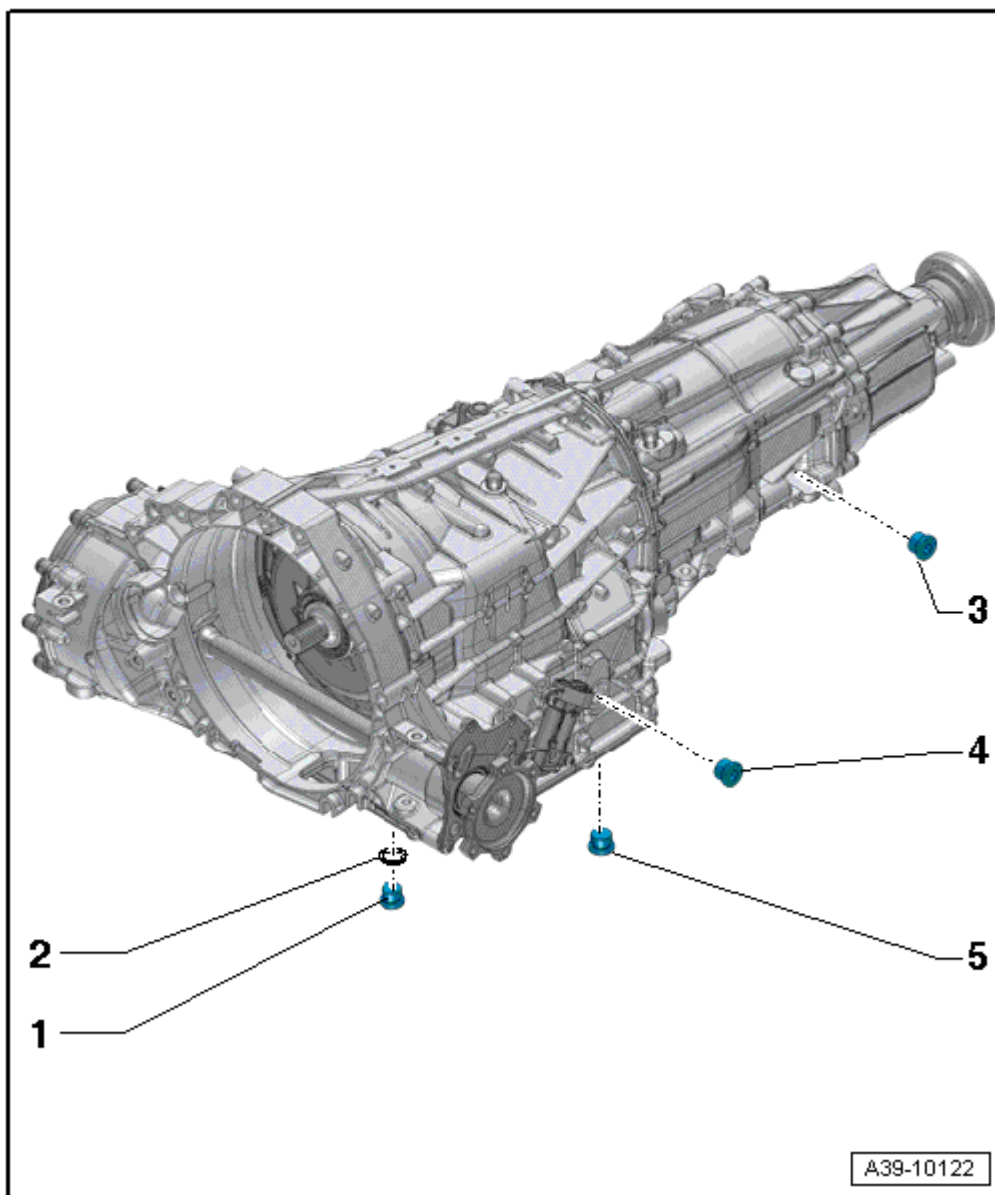
- Press on the connection and then pull on it to make sure the circlip is locked.

22. Bolt

- 5 Nm

23. O-ring

- Replace
- Coat with ATF before installing

ATF DRAIN, FILL AND CHECK PLUGS ASSEMBLY OVERVIEW**Fig. 29: ATF Drain, Fill And Check Plugs Assembly Overview**

Courtesy of AUDI OF AMERICA, LLC

1. ATF Drain Plug
 - 45 Nm
2. Seal
 - For the ATF drain plug
 - Replace
3. Transmission Fluid (MTF) Fill and Check Plug
 - Inside the manual transmission, front final drive and transfer case
 - Tightening specification -item 3- **MANUAL TRANSMISSION FLUID DRAIN AND CHECK PLUGS OVERVIEW**
4. ATF Fill and Check Plug
 - 45 Nm
5. Transmission Fluid (MTF) Drain Plug
 - Depending on the date of manufacture, transmission fluid temperature sensor 2 -G754- serves as the transmission fluid drain plug.
 - Tightening specification -item 5- **MANUAL TRANSMISSION FLUID DRAIN AND CHECK PLUGS OVERVIEW**

ELECTRICAL AND ELECTRONIC COMPONENTS AND COMPONENT LOCATIONS

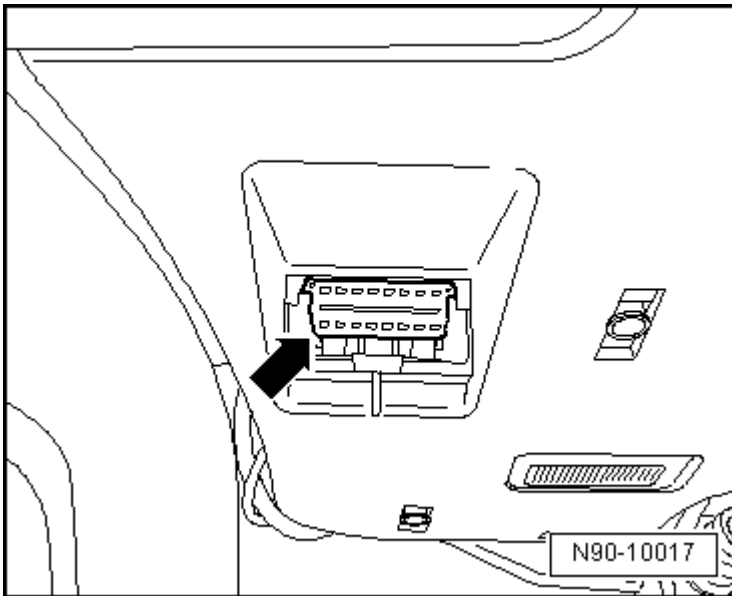


Fig. 30: Locating Data Link Connector
Courtesy of AUDI OF AMERICA, LLC

- Installed location: The DLC for the vehicle diagnosis tester is inside the footwell on the driver side.
- Before servicing the transmission, determine as best as possible the cause of the fault using the vehicle diagnosis tester in **Guided Fault Finding**, **Vehicle Self-Diagnosis** and **Test Instruments**.

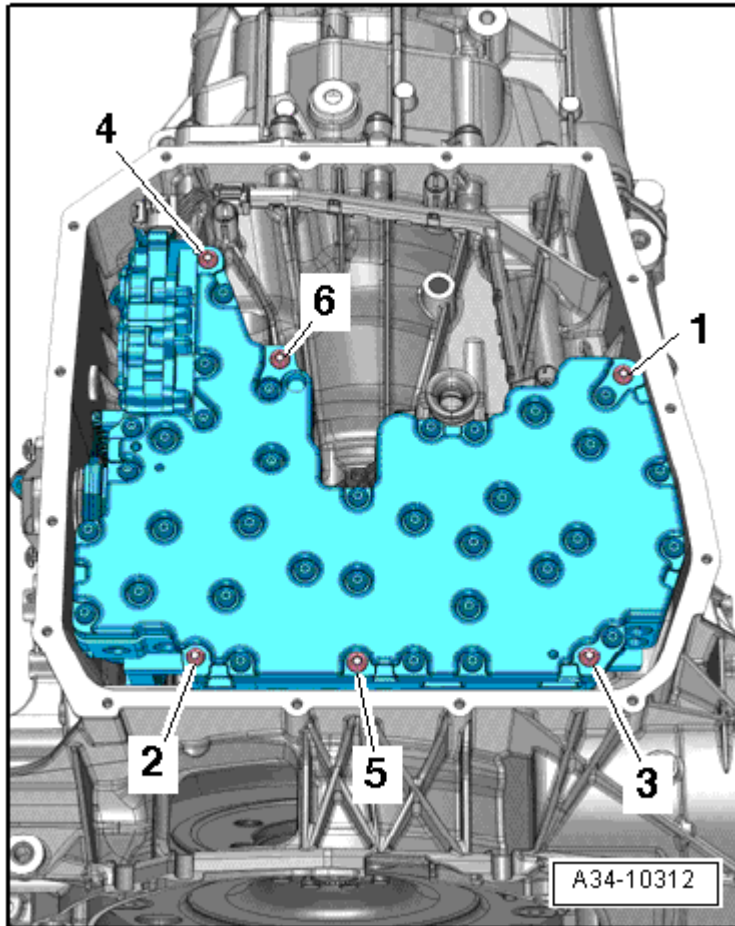
DSG Transmission Mechatronic -J743-, Valves, Sensor and Transmission Input RPM Sensor

Fig. 31: Mechatronic, Tightening Specification And Sequence
 Courtesy of AUDI OF AMERICA, LLC

- Installed location: The DSG transmission Mechatronic is attached to the transmission housing at the bottom and covered by the transmission fluid pan.

NOTE: The Mechatronic unit incorporates the hydraulic control, the Transmission Control Module (TCM), the multifunction transmission range switch and the sensors and actuators as a complete synchronized unit. On Board Diagnostics (OBD) checks all the components named.

DSG Transmission Mechatronic -J743- .

Gear Selector, Mechatronic Temperature Sensor in the Overview

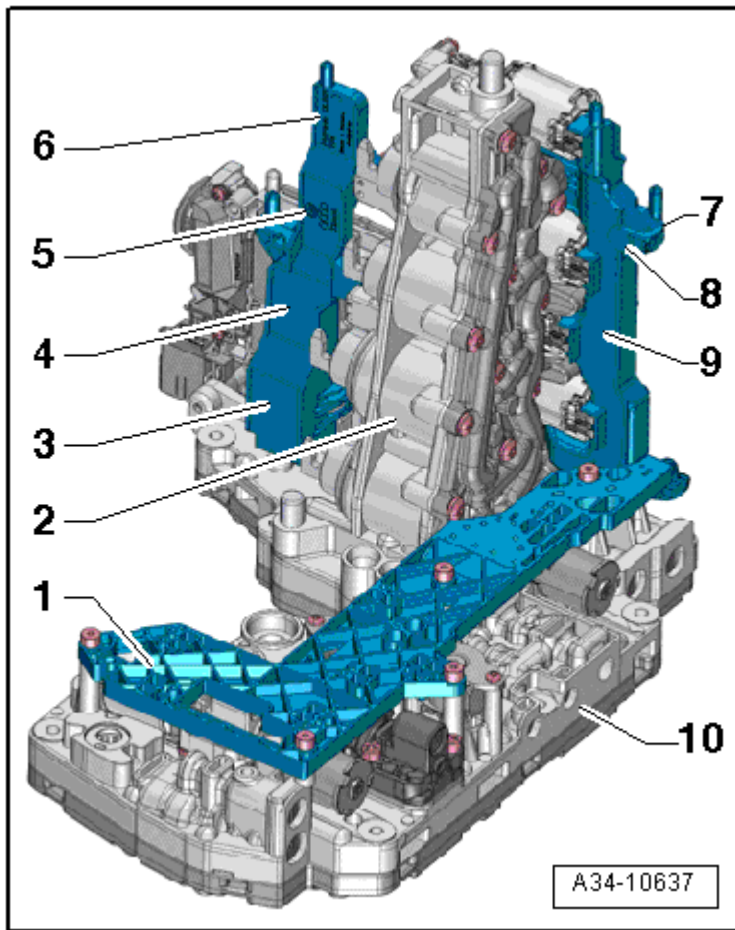


Fig. 32: Gear Selector, Mechatronic Temperature Sensor In Overview
 Courtesy of AUDI OF AMERICA, LLC

1. Circuit board 1
2. Gear selector module
3. Gear position distance sensor 1 -G487- for gear selector 2-R
4. Gear position distance sensor 2 -G488- for gear selector 1-3
5. Gear position distance sensor 3 -G489- for gear selector 7-5
6. Gear position distance sensor 4 -G490- for gear selector 4-6
7. Clutch oil temperature sensor -G509-
8. Transmission input speed sensor 3 -G641- for clutch input speed sensor
9. Circuit board 2
10. Electro-hydraulic control module

Mechatronic Connectors and Sensor Module

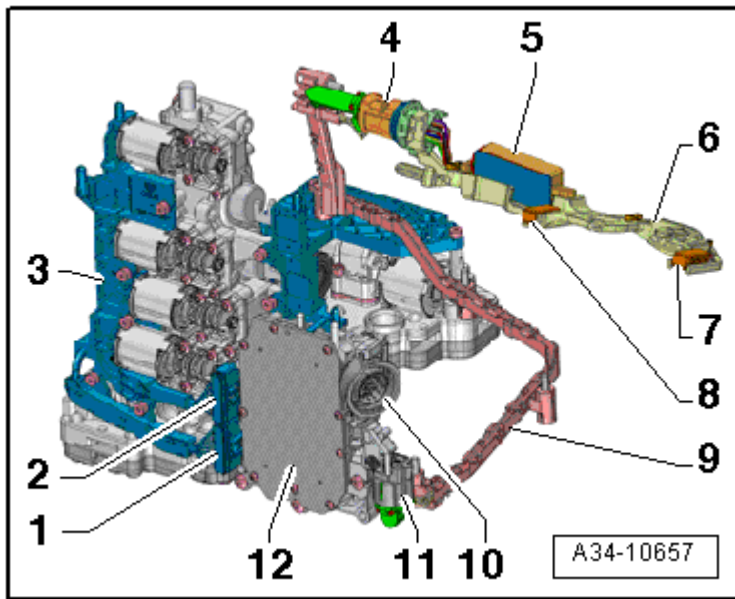


Fig. 33: Mechatronic Connectors And Sensor Module Overview
 Courtesy of AUDI OF AMERICA, LLC

Mechatronic connectors:

1. TCM to circuit board 1
2. TCM to circuit board 2
3. Circuit board 2
4. Sensor module to wire set
5. Drive position sensor -G676-
6. Circuit board 3 in the sensor module
7. Transmission input speed sensor 1 -G632-
8. Transmission input speed sensor 2 -G612-
9. Wire set with wiring channel
10. TCM to vehicle wiring harness
11. TCM to sensor module
12. TCM

Transmission Range Display -Y6-



Fig. 34: Transmission Range Display -Y6-
 Courtesy of AUDI OF AMERICA, LLC

- Installed location: The transmission range display is integrated in the instrument cluster.

NOTE: The instrument cluster must be replaced if the transmission range display is faulty. Refer to Removal and Installation .

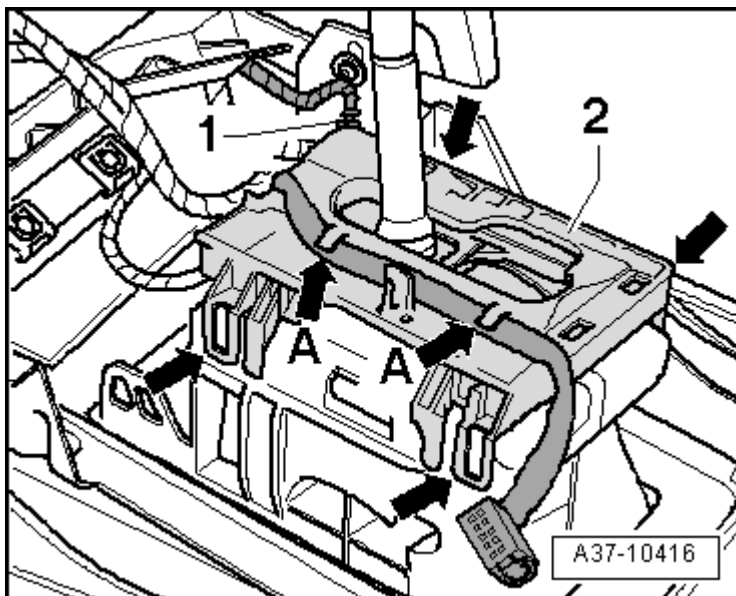


Fig. 35: Selector Lever Sensor System Control Module J587 And Tiptronic Switch F189
 Courtesy of AUDI OF AMERICA, LLC

- Installed location: The selector lever sensor system control module -2- is clipped to the gearshift mechanism function unit -arrows-.

NOTE: Ignore -arrow A-.

Selector Lever Sensor System Control Module -J587-

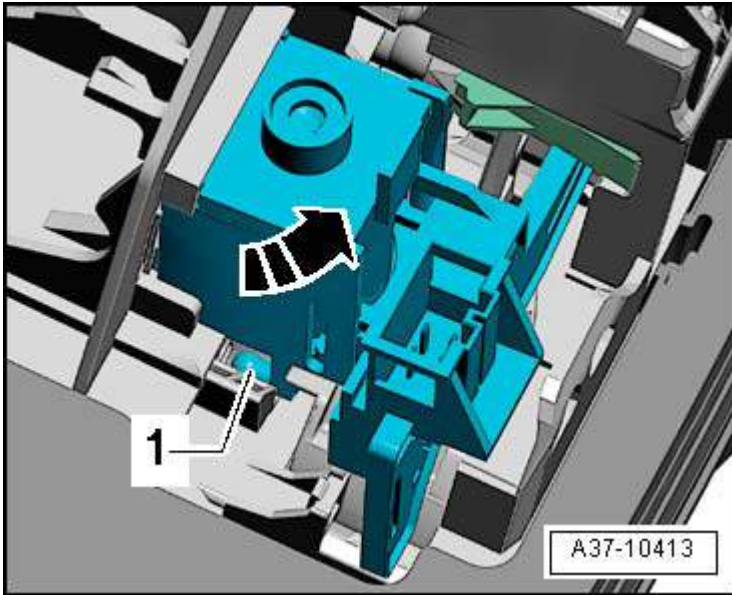


Fig. 36: Shift Lock Solenoid N110

Courtesy of AUDI OF AMERICA, LLC

- Installed location: The shift lock solenoid -1- is clipped to the gearshift mechanism.

Shift Lock Solenoid -N110-

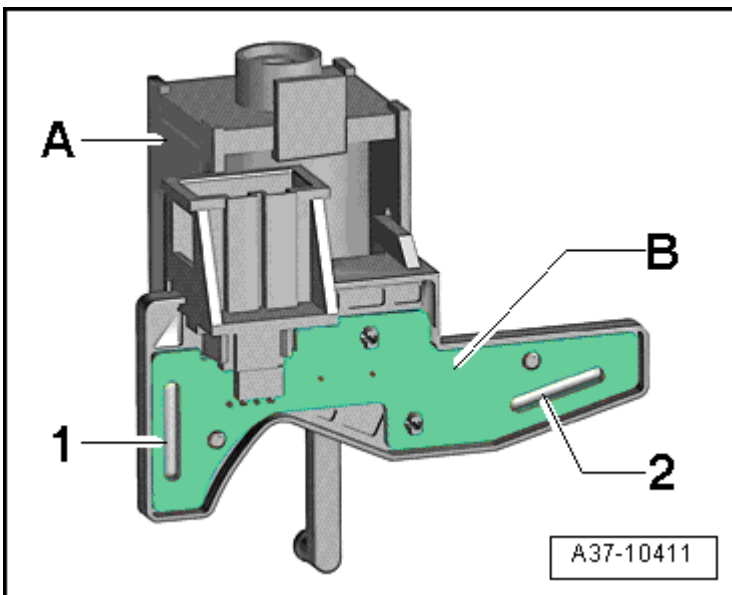


Fig. 37: Transmission Park Selector Switch F305

Courtesy of AUDI OF AMERICA, LLC

- Installed location: The transmission park selector switch, which consists of two reed contacts -1 and 2-, is installed on the circuit board -B- on the shift lock solenoid -A-.

NOTE: The transmission park selector switch can only be replaced together with the shift lock solenoid.

Shift Lock Solenoid -N110-

There are different versions and component locations depending on the date of manufacture.

Transmission Fluid Temperature Sensor 2 -G754-

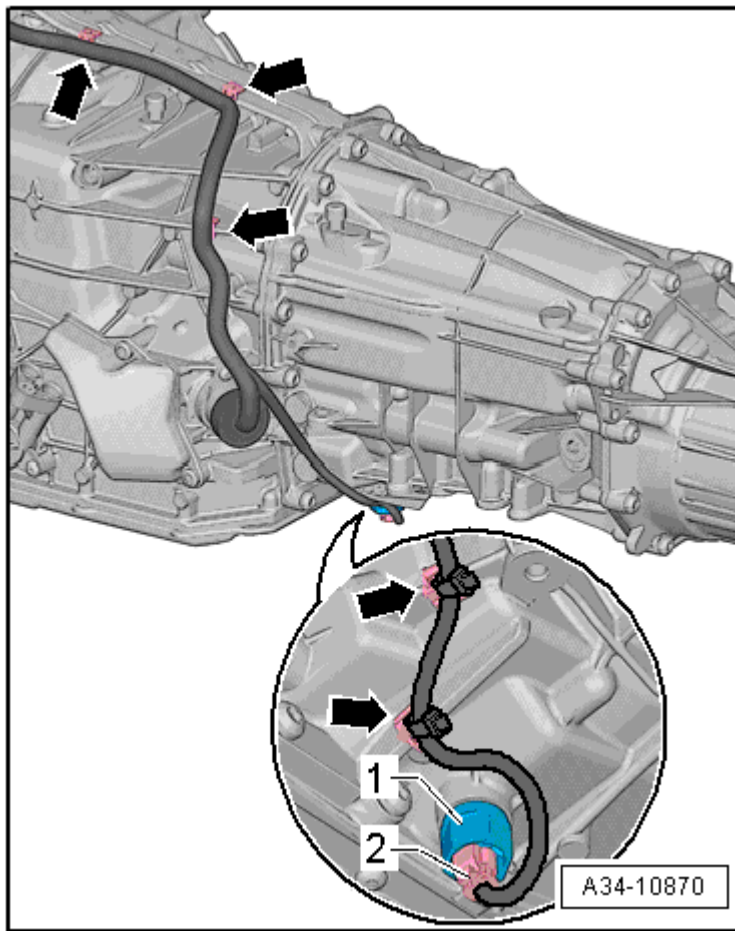


Fig. 38: Transmission Fluid Temperature Sensor
Courtesy of AUDI OF AMERICA, LLC

The 7-speed DSG transmission 0B5 (S-Tronic) has an additional transmission fluid temperature sensor 2 to monitor the transmission fluid temperature of the wheel set on certain engine versions.

- Installed location: Transmission fluid temperature sensor 2 is installed in the transmission near the transmission fluid pan.

- There are different versions and component locations depending on the date of manufacture. Refer to **Transmission Fluid Temperature Sensor 2 -G754-, REMOVING AND INSTALLING.**

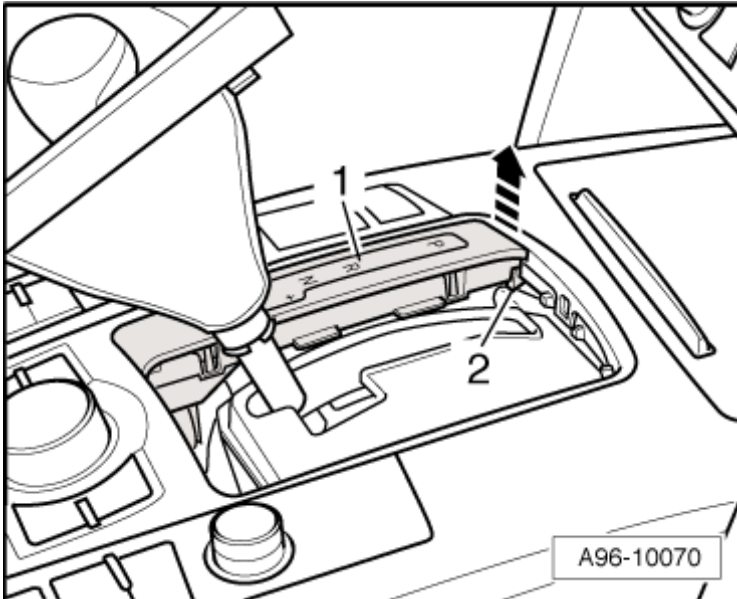


Fig. 39: Releasing Retaining Spring And Removing Selector Lever Transmission Range (TR) Position Display Y26 Upward

Courtesy of AUDI OF AMERICA, LLC

- Installed location: The selector lever transmission range position display unit -1- is clipped to the center console.

Selector Lever Transmission Range Position Display Unit -Y26-

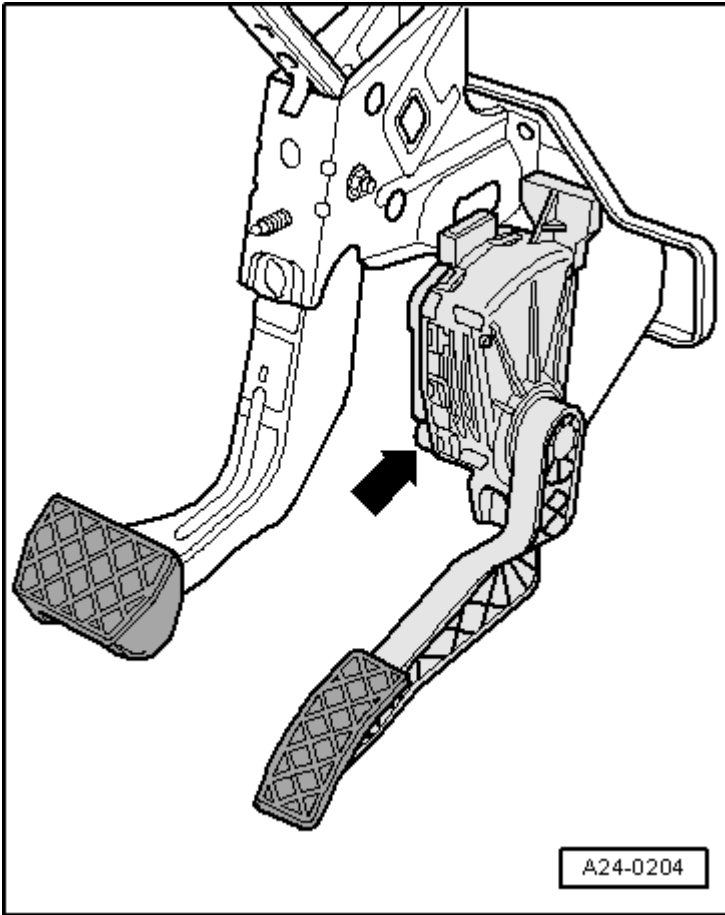


Fig. 40: Component Location Throttle Position (TP) Sensor G79/Accelerator Pedal Position Sensor 2 - G185

Courtesy of AUDI OF AMERICA, LLC

A specific value from the accelerator pedal position sensor -G79- and accelerator pedal position sensor 2 - G185- is stored inside the Engine Control Module (ECM).

- Installed location: The accelerator pedal position sensors are integrated inside the accelerator pedal module -arrow-.

NOTE: If the accelerator pedal sensor is faulty, then replace the accelerator pedal module. Refer to Removal and Installation .

TRANSMISSION FLUID TEMPERATURE SENSOR 2 -G754-, REMOVING AND INSTALLING

The 7-speed DSG transmission 0B5 (S-Tronic) has an additional transmission fluid temperature sensor 2 - G754- to monitor the transmission fluid temperature of the wheel set on certain engine versions.

- Depending on the date of manufacture, there are 2 versions and component locations, either on the side or in place of the transmission fluid drain plug (Manual Transmission Fluid).

Procedure

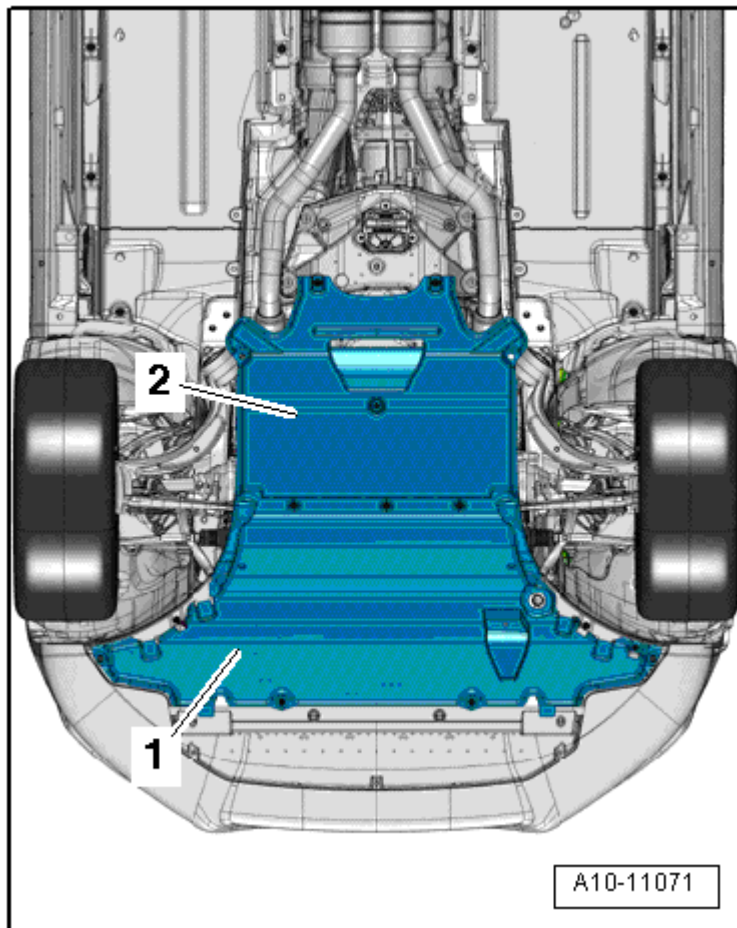


Fig. 41: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

-- Turn off the ignition.

NOTE: The connector on transmission fluid temperature sensor 2 -G754- can be disconnected only when the ignition is turned off. The transmission will switch to emergency mode if the ignition is on. The counter for the increased temperature will count up and a fault will be stored in the transmission control module -J217- after 10 minutes.

-- Remove the rear noise insulation -2-. Refer to Description and Operation .

-- Place the used oil collection and extraction device V.A.G 1782 under the transmission.

CAUTION: There is a risk of damaging the transmission.

If there is no transmission fluid in the transmission or if there is insufficient transmission fluid (Manual Transmission Fluid) in the transmission,

- do not start the engine and
- do not tow the vehicle

Vehicles with transmission fluid temperature sensor 2 -G754- on the side of the transmission housing -1-

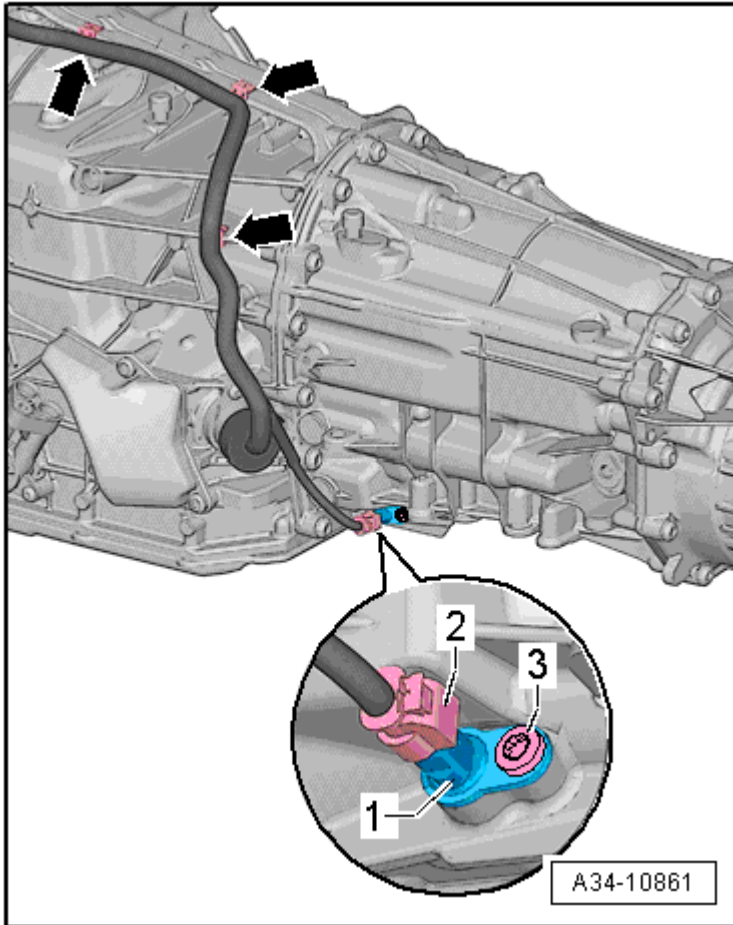


Fig. 42: Identifying Transmission Fluid Temperature Sensor 2 -G754- On Side Of Transmission Housing -1-

Courtesy of AUDI OF AMERICA, LLC

-- Remove the tunnel crossmember. Refer to **TUNNEL CROSSMEMBER**.

-- Disconnect the connector -2- from the transmission fluid temperature sensor 2 -G754-.

NOTE: Protect the connector -2- and the contacts on transmission fluid temperature sensor 2 -G754- from transmission fluid. Clean the connectors immediately if they come in contact with transmission fluid (Manual Transmission Fluid). Transmission fluid can cause contact problems in the connector contacts.

-- Remove the screw -3-.

-- Remove transmission fluid temperature sensor 2 -G754- -1-.

-- Drain the transmission fluid.

Install in reverse order of removal. Note the following:

- Tightening Specifications: Bolt -3- 10 Nm, for attaching transmission fluid temperature sensor 2 -G754- to the transmission

-- Attach the wiring harness to the transmission -arrows-.

-- Install tunnel crossmember **TUNNEL CROSSMEMBER**.

-- Fill the transmission fluid (MTF). Refer to **MANUAL TRANSMISSION FLUID, FILLING** .

-- Perform "Guided Function" **02 - reset transmission fluid temperature sensor 2 (G754)** on the Vehicle Diagnosis Tester after changing the transmission fluid. Refer to **TRANSMISSION GUIDED FUNCTIONS**

Vehicles where transmission fluid temperature sensor 2 -G754- is installed in the drain plug for the transmission fluid (MTF) -1-

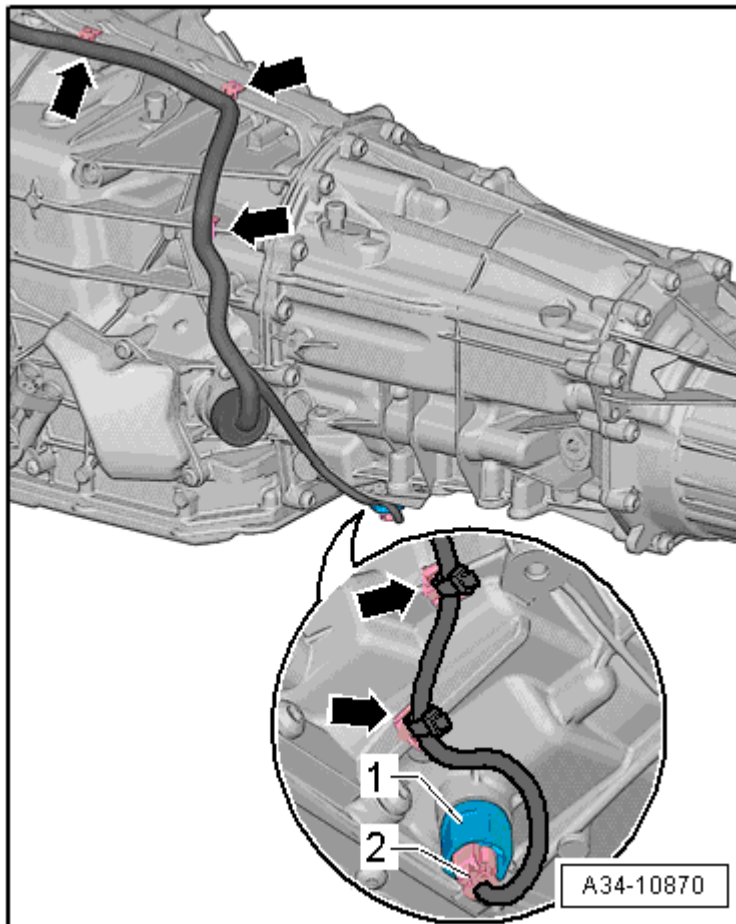


Fig. 43: Transmission Fluid Temperature Sensor

Courtesy of AUDI OF AMERICA, LLC

-- Disconnect the connector -2- from the transmission fluid temperature sensor 2 -G754-.

NOTE: **Protect the connector -2- and the contacts on transmission fluid temperature sensor 2 -G754- from transmission fluid. Clean the connectors immediately if they come in contact with transmission fluid (Manual Transmission Fluid). Transmission fluid can cause contact problems in the connector contacts.**

-- Remove transmission fluid temperature sensor 2 -G754- -1-.

-- Drain the transmission fluid.

Install in reverse order of removal. Note the following:

- Tightening Specifications: Transmission fluid temperature sensor 2 -G754- to transmission, 45 Nm

-- Attach the wiring harness to the transmission -arrows-.

-- Fill the transmission fluid (MTF). Refer to **MANUAL TRANSMISSION FLUID, FILLING** .

-- Perform "Guided Function" **02 - reset transmission fluid temperature sensor 2 (G754)** on the Vehicle Diagnosis Tester after changing the transmission fluid. Refer to **TRANSMISSION GUIDED FUNCTIONS**

SHIFT MECHANISM EMERGENCY RELEASE

NOTE: **The selector lever will not move out of "P" if the battery is disconnected or is discharged. The vehicle cannot be moved or towed.**

The shift lock solenoid -N110- will cancel out the lock when the emergency release is activated.

Procedure

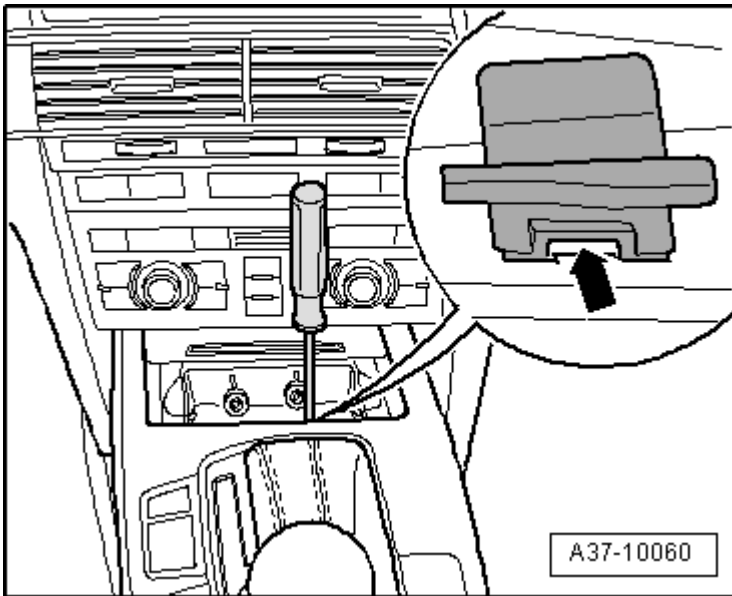


Fig. 44: Prying Off Cover Cap In Ashtray Housing Using Screwdriver
Courtesy of AUDI OF AMERICA, LLC

- Remove the front ashtray insert.
- Pry out the cap inside the ashtray housing with a screwdriver -arrow-.

NOTE: The shape of the cover caps may differ from those in the illustration.

- Press the cylinder -arrow- on the shift lock solenoid through the opening in the center of the ashtray housing and, at the same time, press the lock button in the selector lever handle and move the selector out of "P".

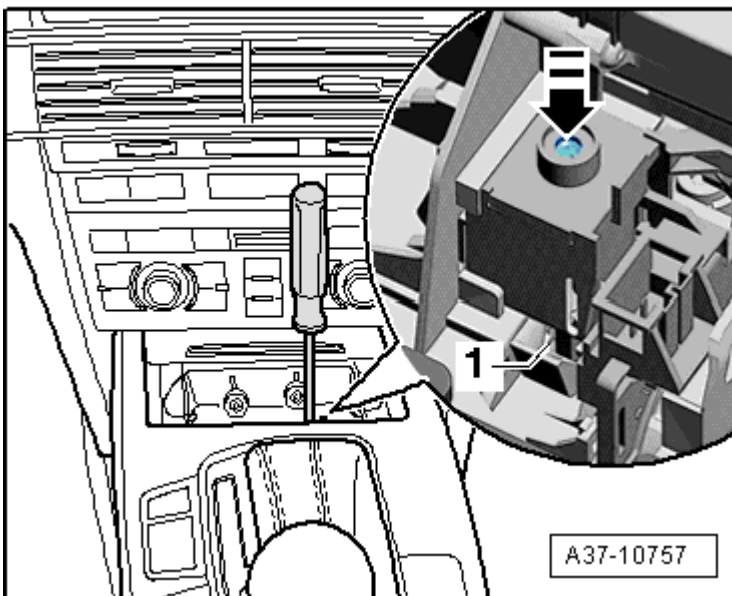


Fig. 45: Pressing In Cylinder On Shift Lock Solenoid N110 Through Center Opening In Ashtray Housing

Courtesy of AUDI OF AMERICA, LLC

NOTE: This unlocks the locking lever -1- when the selector lever is in "P".

If the cylinder -arrow- on the shift lock solenoid is covered by insulation or a wire, then move the insulation or the wire to the side.

SELECTOR MECHANISM OVERVIEW

WARNING: There is a risk of injury and accident from accidentally engaging a gear when the engine is running.

- Before working on a running engine, move the selector lever to "P" and push the parking brake button in order to lock the electro-mechanical parking brake.

Before disassembling the selector mechanism, perform check, refer to **SELECTOR MECHANISM, CHECKING.**

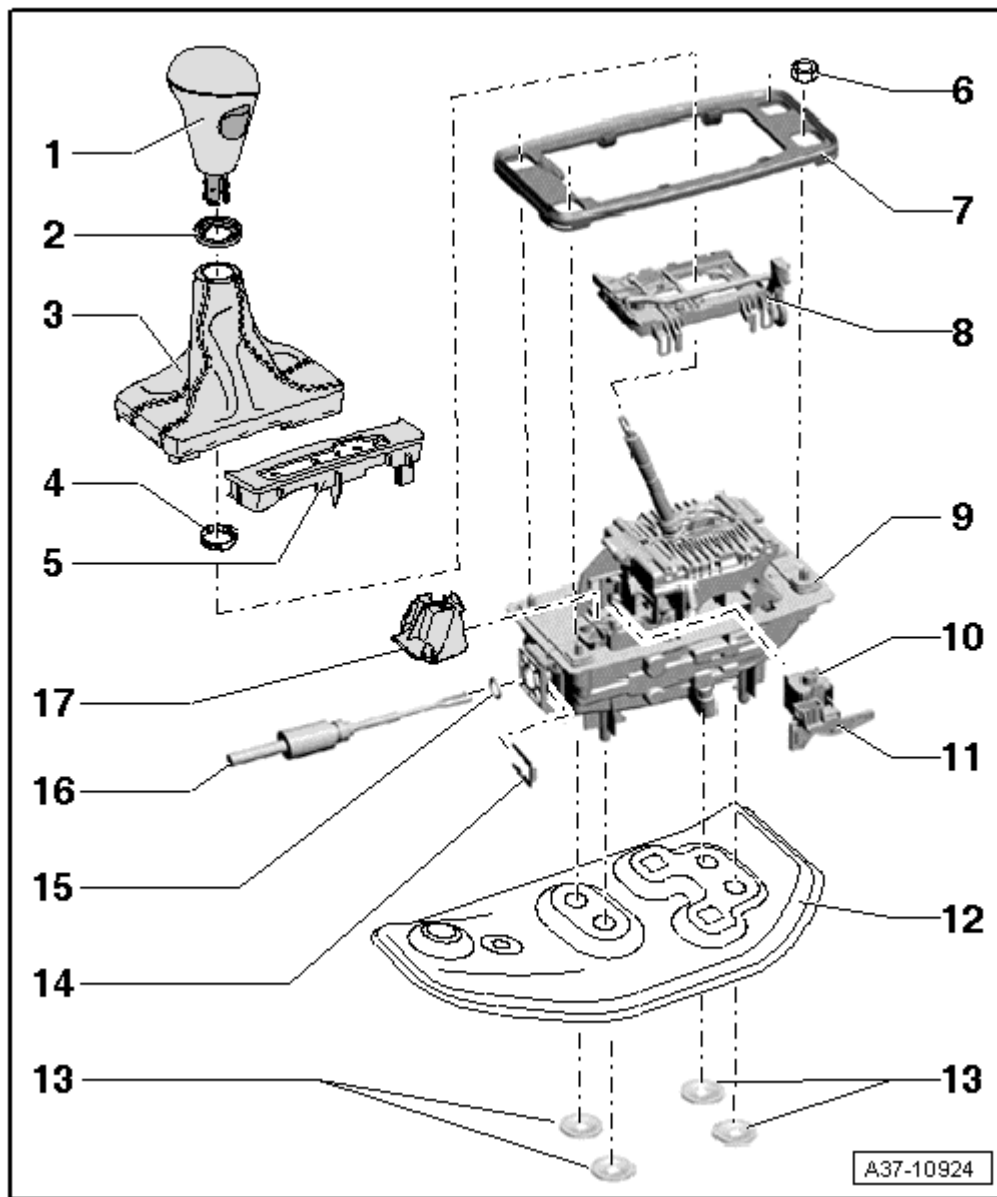


Fig. 46: Selector Mechanism Overview
 Courtesy of AUDI OF AMERICA, LLC

1. Selector Lever Handle
 - Overview, refer to **SELECTOR LEVER HANDLE AND Selector Lever Transmission Range Position Display Unit -Y26- OVERVIEW**
2. Decorative Ring
 - Overview, refer to **SELECTOR LEVER HANDLE AND Selector Lever Transmission Range Position Display Unit -Y26- OVERVIEW**
3. Selector Lever Boot
 - Overview, refer to **SELECTOR LEVER HANDLE AND Selector Lever Transmission Range Position Display Unit -Y26- OVERVIEW**

4. Clamp
 - Overview, refer to **SELECTOR LEVER HANDLE AND Selector Lever Transmission Range Position Display Unit -Y26- OVERVIEW**
5. Selector Lever Transmission Range Position Display Unit -Y26-
 - Overview, refer to **SELECTOR LEVER HANDLE AND Selector Lever Transmission Range Position Display Unit -Y26- OVERVIEW**
6. Nut
 - 10 Nm
 - Quantity: 4
 - For securing the shift mechanism to the body
7. Gasket
8. Selector Lever Sensor System Control Module -J587- with Tiptronic Switch -F189-
 - Removing and Installing, refer to **Selector Lever Sensor System Control Module -J587-**
9. Selector Mechanism Function Unit
 - Can only be replaced as a unit
 - Removing and Installing, refer to **SHIFT MECHANISM FUNCTION UNIT**
 - Perform the necessary "Guided Function" using the vehicle diagnosis tester after removing and installing the selector mechanism function unit. Refer to **TRANSMISSION GUIDED FUNCTIONS**.
10. Shift Lock Solenoid -N110-
 - Removing and Installing, refer to **Shift Lock Solenoid -N110-**
11. Transmission Park Selector Switch -F305-
 - Consists of two micro-switches on the circuit board on the shift lock solenoid
 - Can only be replaced together with the shift lock solenoid, refer to **Shift Lock Solenoid -N110-**
12. Noise Insulation
 - Not installed on all vehicles
 - For the correct allocation.
13. Lock Washers
 - Replace
 - Quantity: 4
 - For attaching the noise insulation to the selector mechanism function unit
14. Clip
 - Secure the selector lever cable to the selector mechanism function unit
15. O-ring
 - Replace
16. Selector Lever Cable
 - Do not bend
 - Overview, refer to **SELECTOR LEVER CABLE OVERVIEW**

17. Cover

- Over the shift lock solenoid

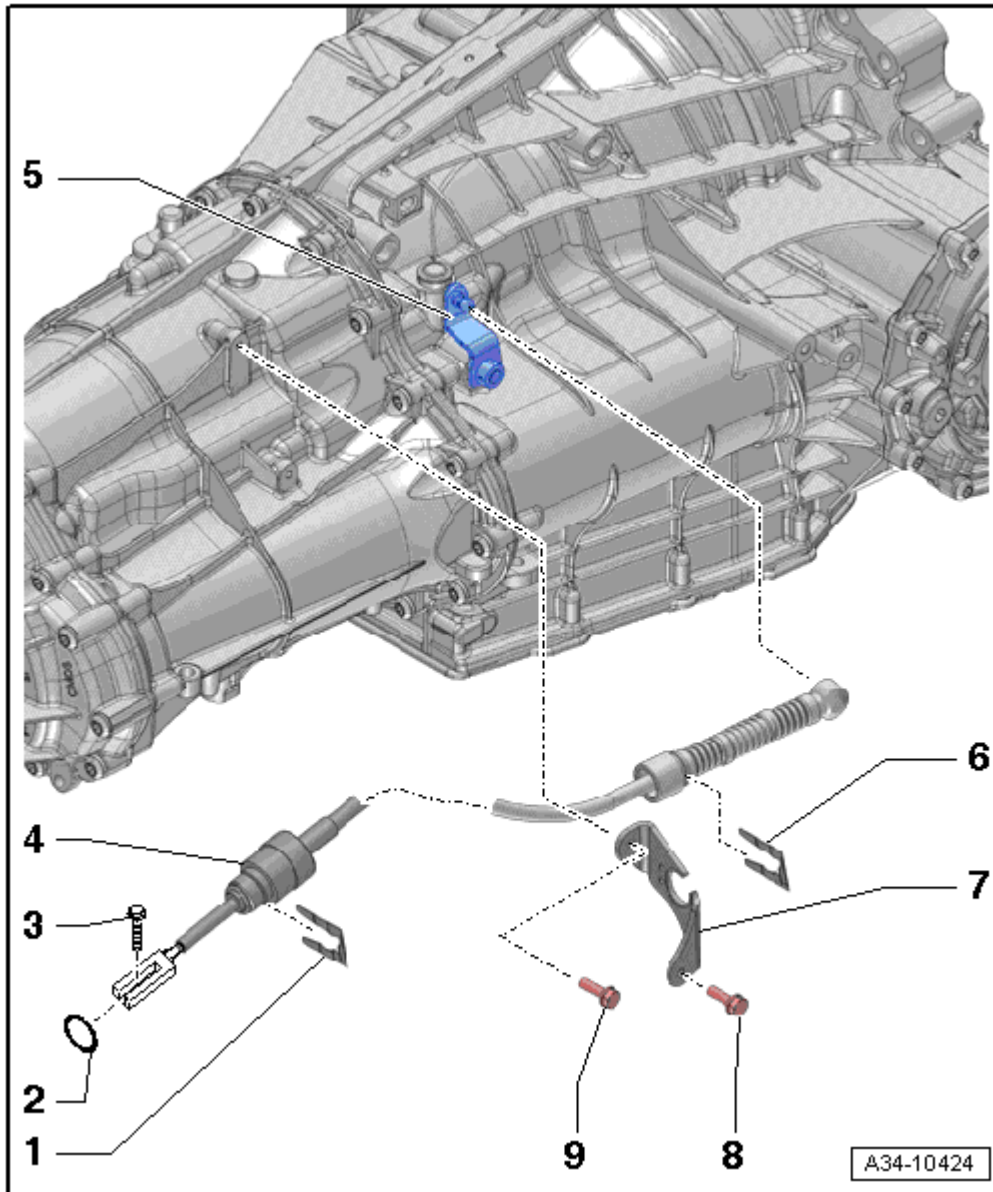
SELECTOR LEVER CABLE OVERVIEW

Fig. 47: Identifying Selector Lever Cable Overview
Courtesy of AUDI OF AMERICA, LLC

1. Clip

- For the selector lever cable on the selector mechanism function unit

2. O-ring

- Replace

3. Bolt

- 13 Nm
- For selector lever cable adjustment
- Attached to the selector mechanism function unit

4. Selector Lever Cable

- Do not bend
- Different versions depending on the vehicle; For the correct allocation.
- Removing and Installing, refer to **SELECTOR LEVER CABLE**
- The selector lever cable must be replaced if the rubber grommet is damaged.
- Lubricate the ball socket lightly with polycarbamide grease G 052 142 A2 before installing.
- Make sure the rubber grommet on the transmission side is not twisted when installing.
- Adjusting, refer to **SELECTOR LEVER CABLE, ADJUSTING**
 - Perform "Guided Functions" using the vehicle diagnosis tester after adjusting the selector lever cable. Refer to **TRANSMISSION GUIDED FUNCTIONS**.

5. Gearshift Lever

6. Clip

- For attaching the selector lever cable to the cable bracket

7. Cable Mounting Bracket

8. Bolt

- 8 Nm

9. Bolt

- 8 Nm

SELECTOR LEVER CABLE, ADJUSTING**Special tools and workshop equipment required**

- Trim Removal Wedge 3409
- Socket and Key T40031

Procedure

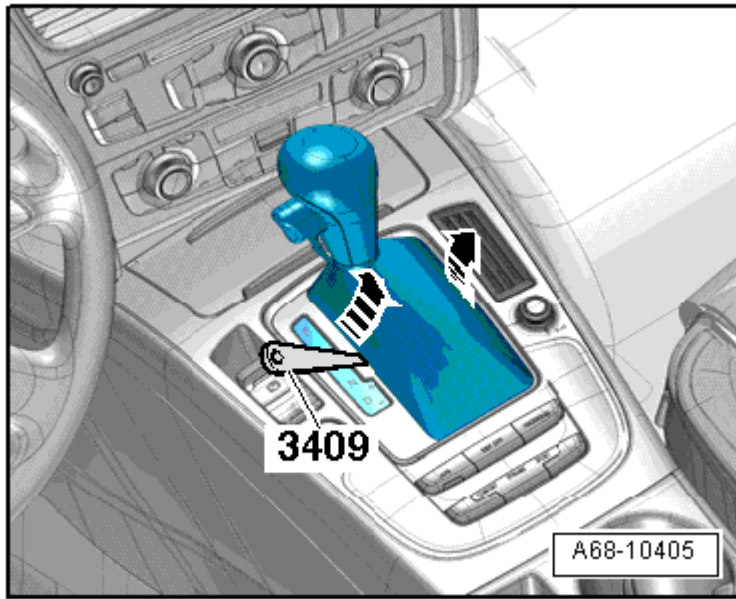


Fig. 48: Removing Selector Lever Boot
Courtesy of AUDI OF AMERICA, LLC

- Tightening specification, refer to **SELECTOR LEVER CABLE OVERVIEW**
- Press the button on the parking brake to activate it.
- Move the selector lever into "D".
- Carefully pry out the selector lever boot on the side using the 3409 -arrows- and fold it upward.
- Insert the T40031 through the opening -arrow- in the selector mechanism and loosen the bolt on the selector lever cable approximately one turn.

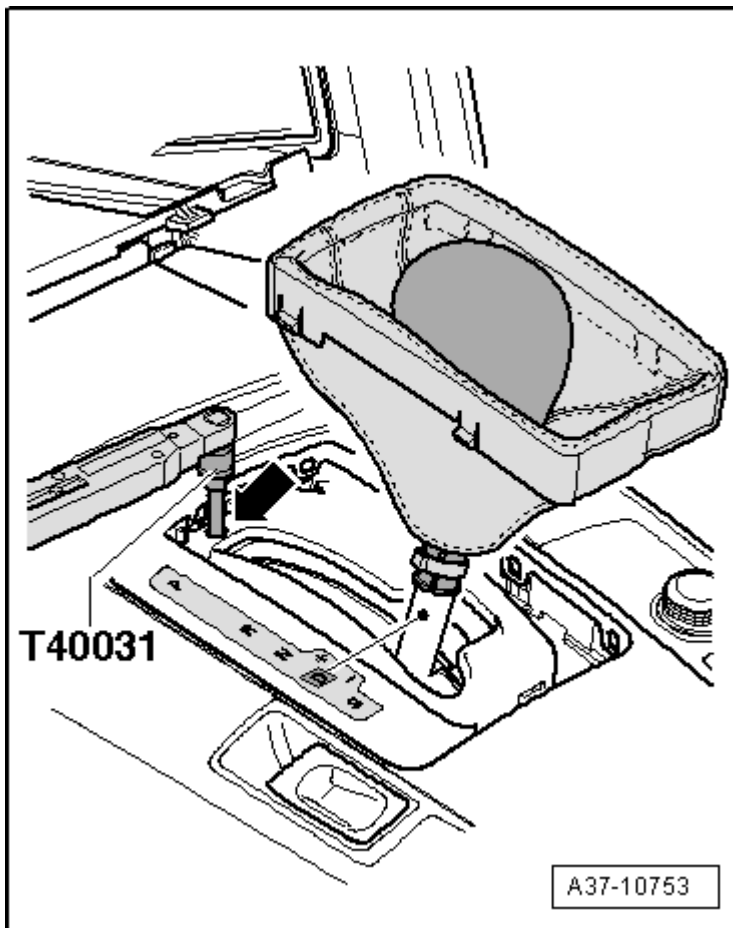


Fig. 49: Loosening Bolt On Selector Lever Cable One Turn Using Socket T40031

Courtesy of AUDI OF AMERICA, LLC

NOTE: Only loosen the clamping screw - do not remove it.

The clamping screw is only accessible when the selector lever is in "D".

The selector lever must remain in "D" when the clamping screw is loose.

-- Carefully move the selector forward and back gently without shifting into another selector lever position. This releases the tension in the selector lever cable.

-- Move the selector lever into the "tiptronic gate".

-- Tighten the clamping screw in this position with the T40031 without touching the selector lever.

-- Selector mechanism, checking, refer to **SELECTOR MECHANISM, CHECKING**.

- Perform "Guided Functions" using the vehicle diagnosis tester after adjusting the selector lever cable. Refer to **TRANSMISSION GUIDED FUNCTIONS**.

If the shift mechanism does not function properly after adjusting selector lever cable:

-- Bring the selector lever cable into the basic setting. Refer to **SELECTOR LEVER CABLE, BRINGING INTO BASIC SETTING**.

SELECTOR LEVER CABLE, BRINGING INTO BASIC SETTING

Special tools and workshop equipment required

- Vehicle Diagnosis Tester
- Pry Lever - Rmv Outside Mirror 80 - 200
- Socket and Key T40031

Procedure

- **Guided Fault Finding** when the vehicle diagnosis tester is completed; all faults have been corrected.

-- Select the following menu options under **Functions/Component selection** in "Guided Fault Finding" on the vehicle diagnosis tester:

- **Drive**
- **0B5 Transmission**
- **01-On Board Diagnostic (OBD) Capable Systems**
- **02-Transmission Electronics**
- **02-Transmission Electronics, Functions**
- **02-Measured Values**

-- Select **Driving Mode** from the list.

-- Compare the following displays:

- Measured value **Driving Mode** on the vehicle diagnosis tester
- Selector lever position
- Selector lever transmission range position display unit -Y26- on the selector mechanism
- Transmission range display -Y6- inside the instrument cluster

Conditions:

- The displays must match

If the displays do not match:

-- Adjust the selector lever cable. Refer to **SELECTOR LEVER CABLE, ADJUSTING**.

If the individual displays cannot be reached by adjusting the selector lever cable:

Selector Lever Cable, Bringing into Basic Setting:

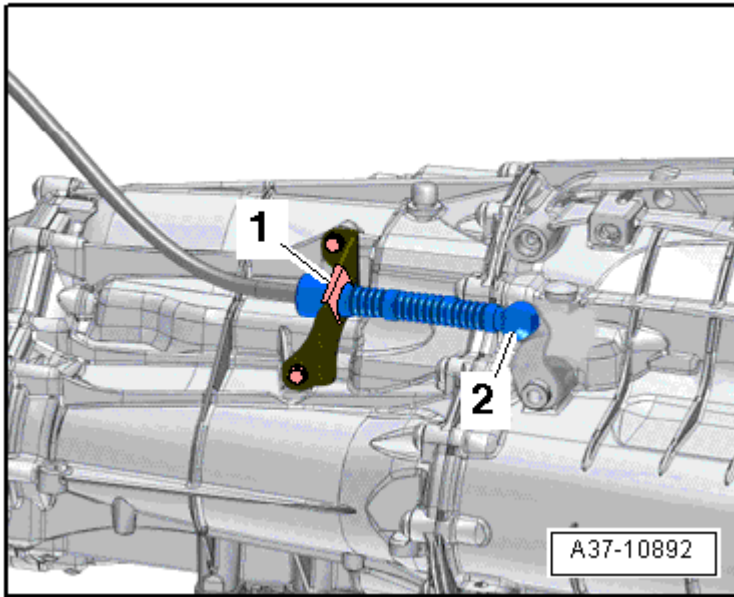


Fig. 50: Selector Lever Cable

Courtesy of AUDI OF AMERICA, LLC

- Tightening specifications, refer to **SELECTOR LEVER CABLE OVERVIEW**.

-- Pry the selector lever cable ball socket -2- off the selector lever using 80 - 200.

NOTE: **Do not bend or kink the selector lever cable.**

Ignore item -1-.

-- Push the selector shaft lever -1- on the transmission all the way to the back -arrow- until the parking lock locks into place.

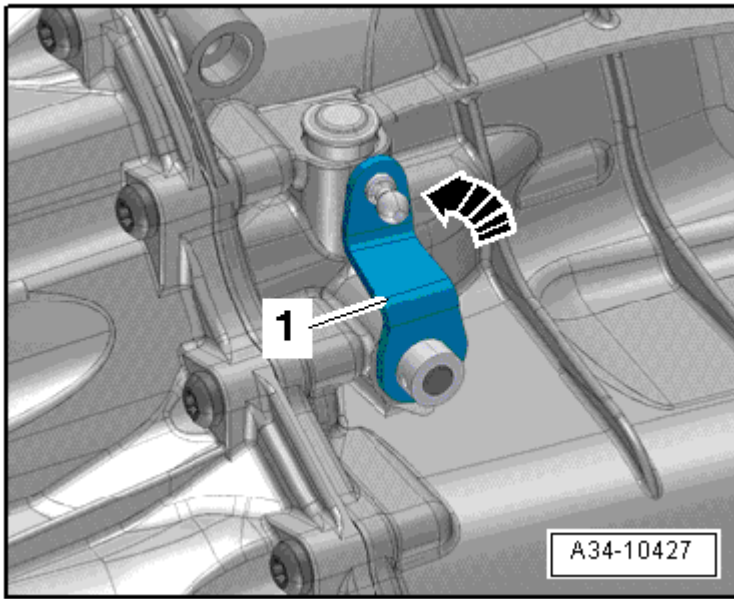


Fig. 51: Pushing Selector Shaft Lever On Transmission All Way To Back Until Parking Lock Locks Into Place

Courtesy of AUDI OF AMERICA, LLC

NOTE: When parking lock is engaged, it must not be possible to turn the front wheels.

- Push the selector lever into "D".
- Make sure the selector lever inside the vehicle is also in "D".
- Insert the T40031 through the opening -arrow- in the selector mechanism and loosen the bolt on the selector lever cable one turn.

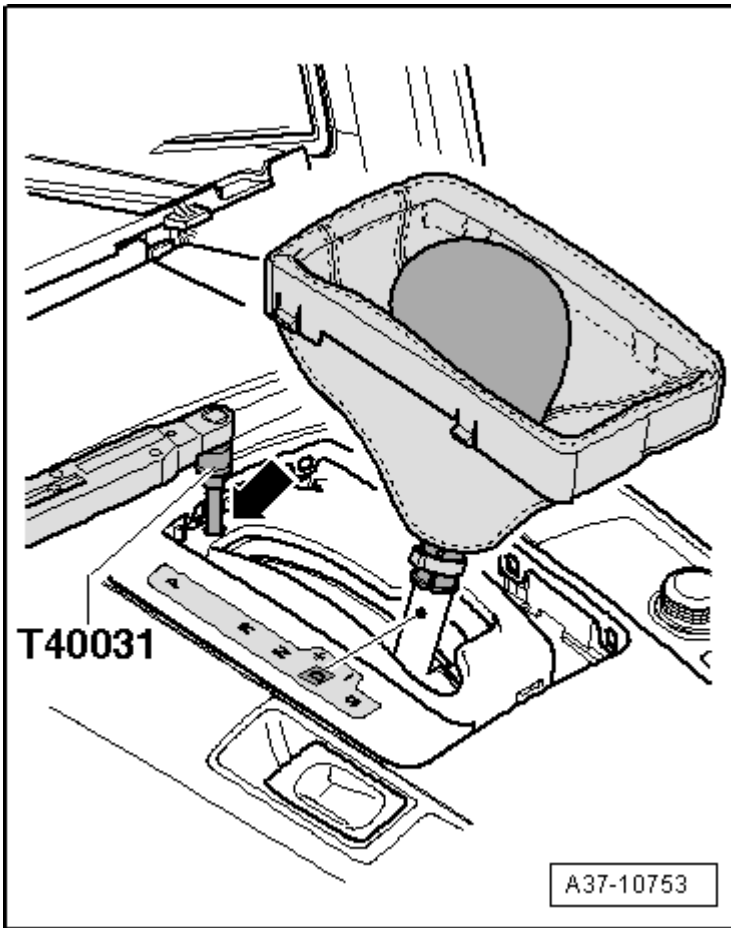


Fig. 52: Loosening Bolt On Selector Lever Cable One Turn Using Socket T40031

Courtesy of AUDI OF AMERICA, LLC

NOTE: Only loosen the clamping screw - do not remove it.

The clamping screw is only accessible when the selector lever is in "D".

The selector lever must remain in "D" when the clamping screw is loose.

-- Remove the T40031 from the torque wrench and let it move through the opening -arrow- in the selector mechanism.

-- Carefully press the selector lever cable ball socket -2- in this position onto the selector shaft lever.

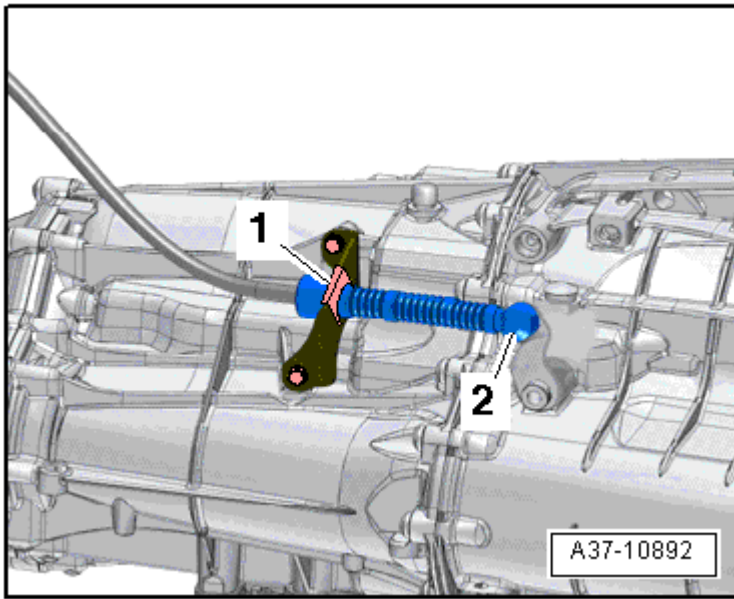


Fig. 53: Selector Lever Cable

Courtesy of AUDI OF AMERICA, LLC

NOTE: Do not bend selector shaft lever when pressing on, otherwise the shift mechanism can no longer be adjusted exactly.

Ignore -1-.

-- Select **02-Measured Values** in Guided Fault Finding **02 Transmission Electronics** on the vehicle diagnosis tester

-- Select **Driving Mode** from the list.

-- Compare the following displays:

- Measured value **Driving Mode** on the vehicle diagnosis tester
- Selector lever position
- Selector lever transmission range position display unit -Y26- on the selector mechanism
- Transmission range display -Y6- inside the instrument cluster

Conditions:

- The displays must match

-- Carefully move the selector forward and back gently without shifting into another selector lever position. This releases the tension in the selector lever cable.

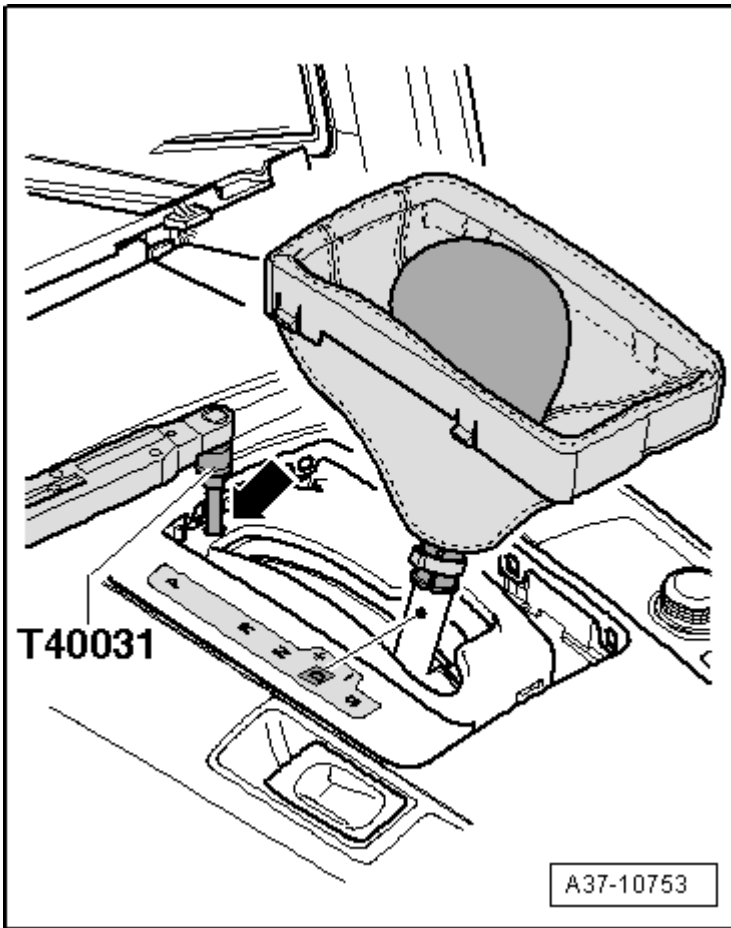


Fig. 54: Loosening Bolt On Selector Lever Cable One Turn Using Socket T40031
Courtesy of AUDI OF AMERICA, LLC

- Tighten the clamping screw in this position with the T40031 without touching the selector lever.
- Selector mechanism, checking, refer to **SELECTOR MECHANISM, CHECKING**.

SELECTOR LEVER HANDLE AND SELECTOR LEVER TRANSMISSION RANGE POSITION DISPLAY UNIT - Y26- OVERVIEW

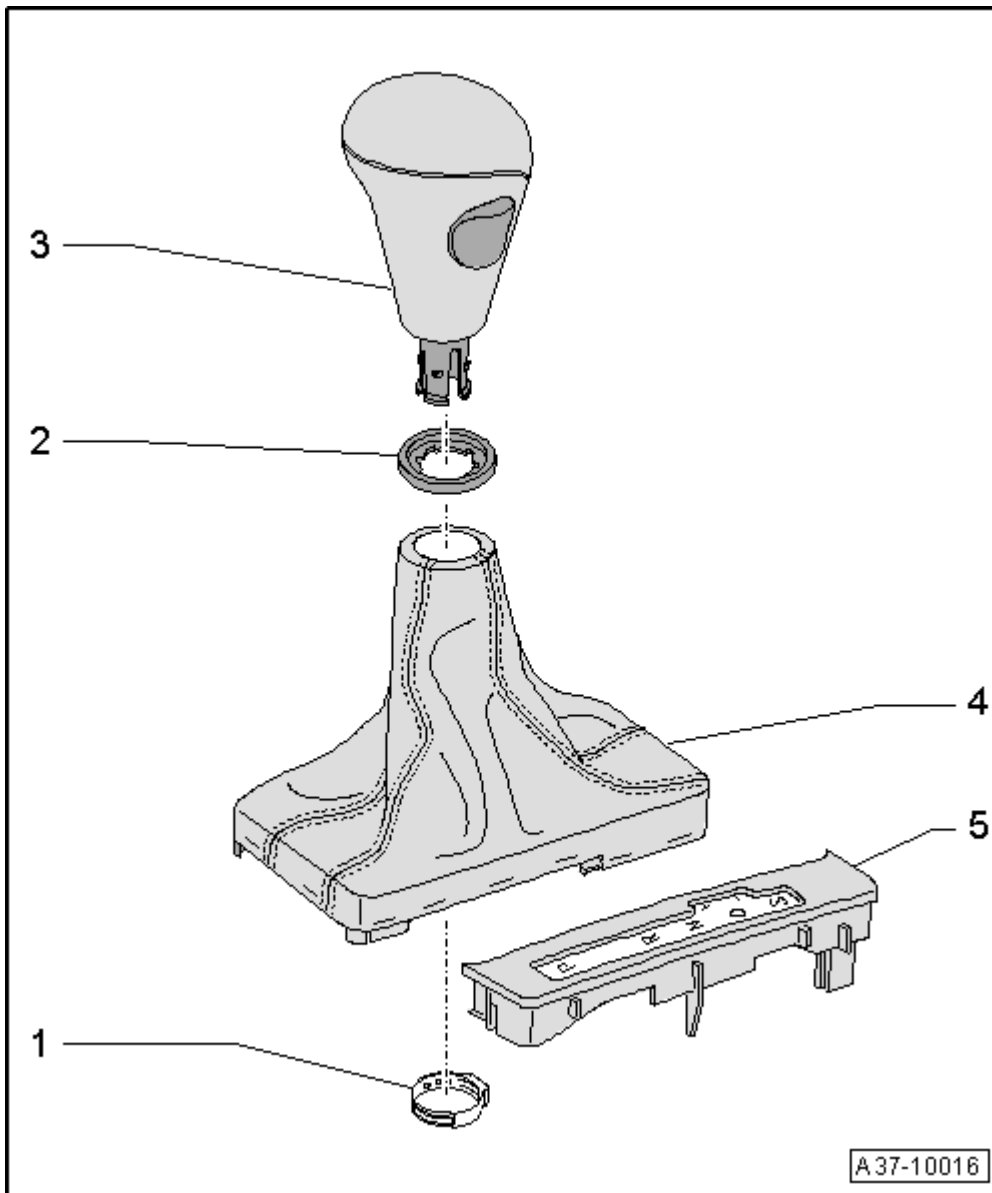


Fig. 55: Selector Lever Handle Components, Selector Lever Transmission Range Position Display Y26, Assembly Overview

Courtesy of AUDI OF AMERICA, LLC

1. Clip

- For securing the selector lever handle to the selector lever
- Replace
- Removing and Installing, refer to **SELECTOR LEVER HANDLE**

2. Decorative Ring

- Removing and installing, refer to **DISCONNECTING SELECTOR LEVER BOOT FROM SELECTOR LEVER HANDLE**

3. Selector Lever Handle

- Removing and installing, refer to **SELECTOR LEVER HANDLE**
- 4. Selector Lever Boot
 - Removing and installing, refer to **DISCONNECTING SELECTOR LEVER BOOT FROM SELECTOR LEVER HANDLE**
- 5. Selector Lever Transmission Range Position Display Unit -Y26-
 - Removing and installing, refer to **Selector Lever Transmission Range Position Display Unit - Y26-**

TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW

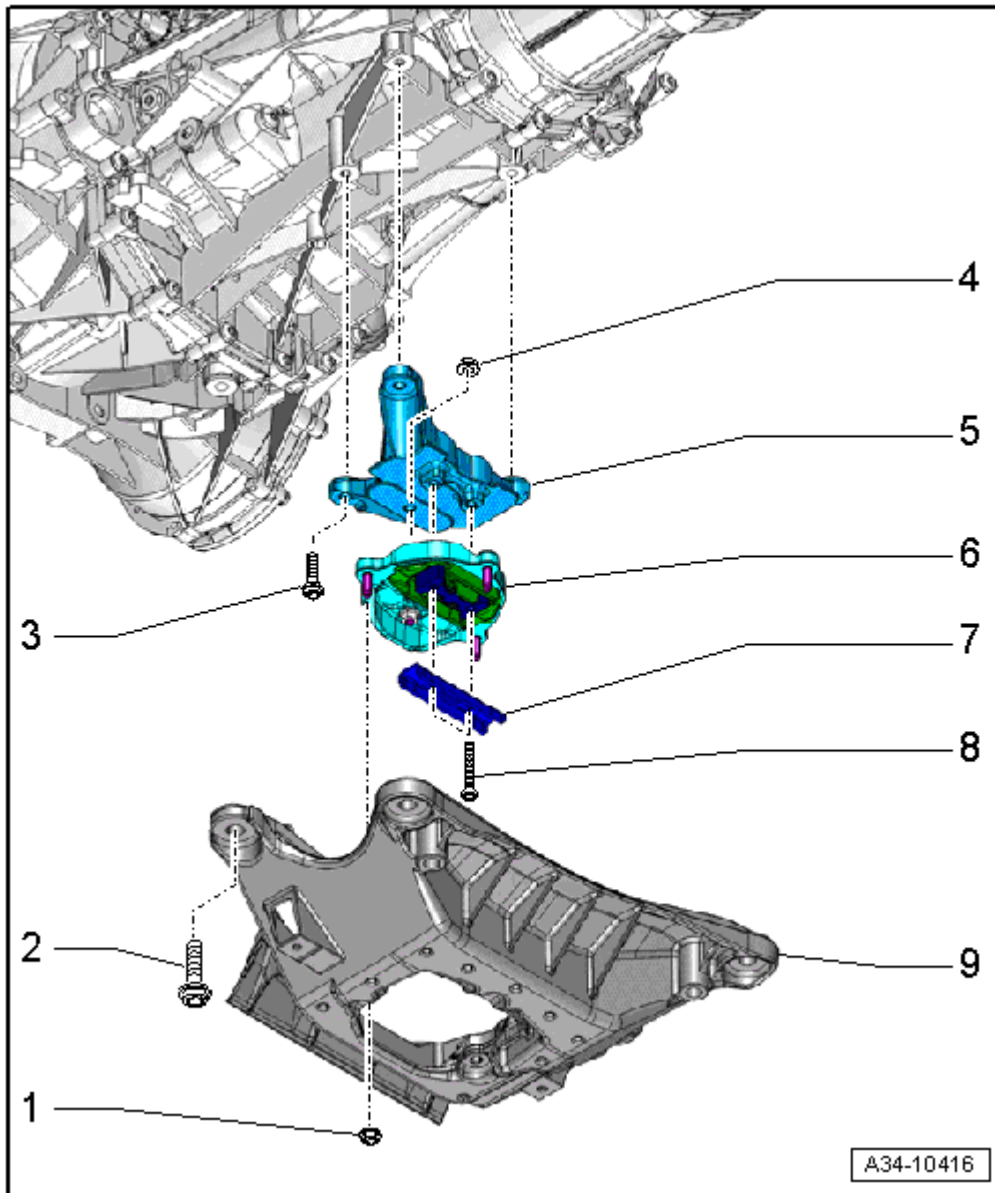


Fig. 56: Identifying Tunnel Crossmember, Transmission Mount And Transmission Support Overview
Courtesy of AUDI OF AMERICA, LLC

1. Nut
 - 20 Nm
2. Bolt
 - 70 Nm
3. Bolt
 - 40 Nm
4. Nut
 - 20 Nm
5. Transmission Support
 - Removing and installing, refer to **TRANSMISSION SUPPORT WITH TRANSMISSION MOUNT**
6. Transmission Mount
 - Removing and installing, refer to **TRANSMISSION MOUNT**
7. Lower stop
 - For the transmission mount
8. Bolt
 - 20 Nm
9. Tunnel Crossmember
 - Removing and installing, refer to **TUNNEL CROSSMEMBER**
 - Depending on the date of manufacture, an additional air guide for cooling the self-locking center differential is attached to the bottom of the tunnel crossmember.

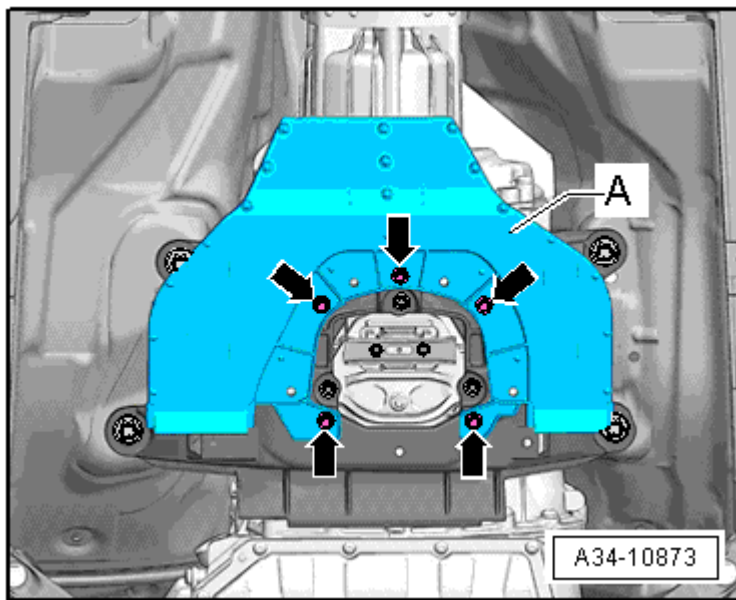


Fig. 57: Air Guide -A-

Courtesy of AUDI OF AMERICA, LLC

2012 Audi S4**TRANSMISSION Controls, Housing - S-Tronic Transmission 0B5 AWD**

- Bolt tightening specification -arrows-, 3 Nm

SPECIFICATIONS**FASTENER TIGHTENING SPECIFICATIONS**

Component	Fastener Size	Nm
ATF Drain Plug	-	45
ATF Fill and Check Plug	-	45
Cable Mounting Bracket	-	8
Transmission Support to Transmission		
Nut	-	20
Bolt	-	40
Securing the Shift Mechanism to the Body, Nut	-	10
Selector Lever Cable	-	13
Transmission Mount	-	20
Tunnel Crossmember		
Bolt	-	70
Nut	-	20
Union Nut	-	29
Bolts and Nuts		
	M6	9
	M7	15
	M8	20
	M10	40
	M12	65
ATF Filter 8 Cylinder		
ATF Return Pipe to Transmission Nut	-	9
ATF Return Pipe/Hose/Line Assembly to Radiator	-	5
ATF Supply Pipe to Catalytic Converter Bracket	-	20
ATF Supply Pipe/Hose/Line Assembly to Radiator		
-Bolt	-	5
-Nut	-	10
Filter Housing	-	10
ATF Pipe Filter 8 Cylinder		
ATF Pipe Filter	-	23
ATF Pipe - Hose Line - Supply ²		
-Bolt	-	5
-Bolt	-	9
ATF Return Pipe ⁴		
-Bolt	-	5

2012 Audi S4

TRANSMISSION Controls, Housing - S-Tronic Transmission 0B5 AWD

-Bolt	-	20
-Nut	-	9
ATF Supply Pipe ³		
-Bolt	-	9
-Bolt	-	23
ATF Filter 6 Cylinder		
ATF Filter Cover to Filter Housing	-	8
ATF Return Pipe ⁵		
	-	9
	-	20
Filter Housing to Transmission	-	10
ATF Pipe Filter 6 Cylinder		
ATF Pipe Filter to Transmission	-	20
ATF Pipe - Hose Line - Return to Transmission		
-Bolt	-	20
-Union Nut	-	29
ATF Pipe - Hose Line - Supply to ATF Cooler ¹		
-Bolts	-	5
-Bolts	-	9
-Union Nut	-	29

- ¹ For bolt tightening clarification, refer to **ATF COOLER, ATF PIPES, ATF PIPE FILTER OVERVIEW** and see items -6, 8, 9 and 14-
- ² For bolt tightening clarification, refer to **ATF COOLER, ATF PIPES AND ATF PIPE FILTER OVERVIEW** and see items -4 and 5-
- ³ For bolt tightening clarification, refer to **ATF COOLER, ATF PIPES AND ATF PIPE FILTER OVERVIEW** and see items -7 and 14-
- ⁴ For bolt tightening clarification, refer to **ATF COOLER, ATF PIPES AND ATF PIPE FILTER OVERVIEW** and see items -12 and 22-
- ⁵ For bolt tightening clarification, refer to **ATF COOLER, ATF PIPES AND ATF FILTER OVERVIEW** and see items -12 and 14-

Air Guide -A-

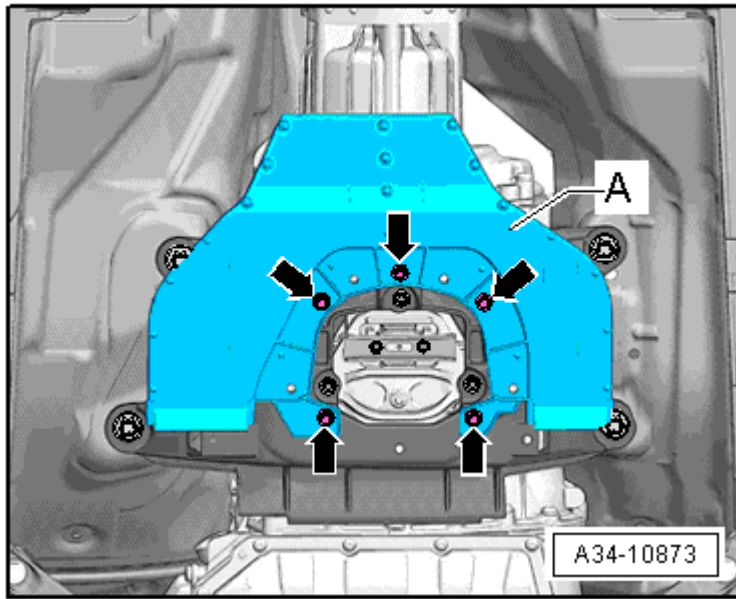


Fig. 58: Air Guide -A-
 Courtesy of AUDI OF AMERICA, LLC

- Bolt tightening specification -arrows-, 3 Nm

Driveshaft Heat Shield - Tightening Specification

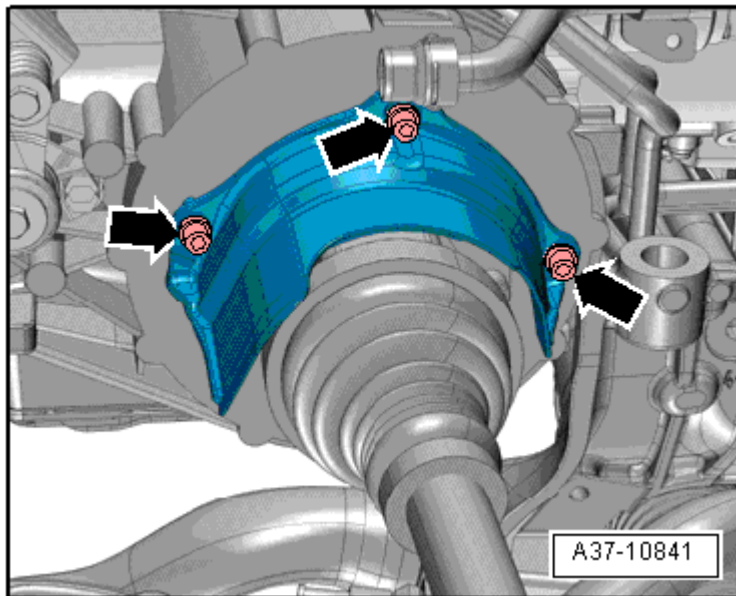


Fig. 59: Driveshaft Heat Shield - Tightening Specification
 Courtesy of AUDI OF AMERICA, LLC

-- Tighten the heat shield bolts -arrows- to 23 Nm.

S-Tronic Transmission to 6-Cylinder Gasoline Engine

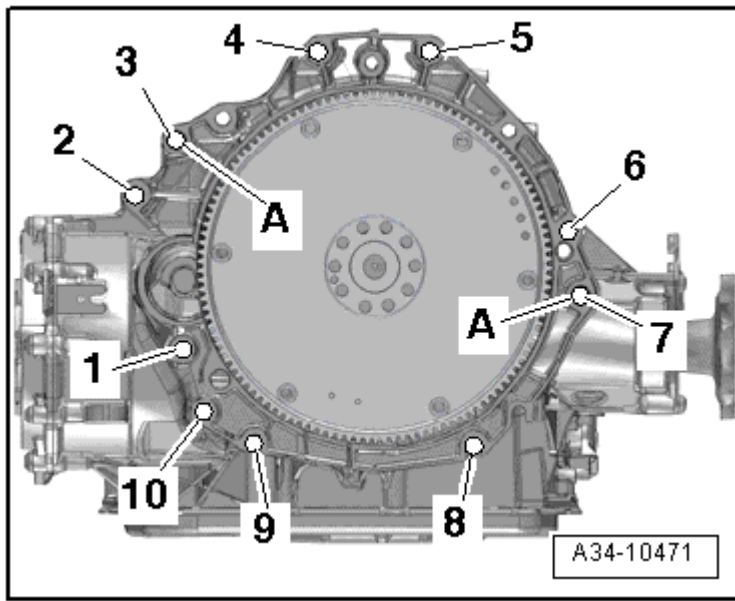


Fig. 60: S-Tronic Transmission To 6-Cylinder Gasoline Engine
 Courtesy of AUDI OF AMERICA, LLC

Item	Bolt	Nm
1 ¹⁾	M10 x 50 ²⁾	65
2 ¹⁾ , 4 ... 6	M12 x 100 ³⁾	30 + 90°
7	M12 x 125 ³⁾	30 + 90°
8	M10 x 60 ³⁾	15 + 90°
9, 10	M10 x 95 ³⁾	15 + 90°
A	Alignment sleeves for centering	
• ¹⁾ Also secures the starter • ²⁾ Bolt strength rating 10.9. There is no limit to the number of times steel bolts may be used. • ³⁾ The bolts may be used 2 times <u>TRANSMISSION, INSTALLING.</u>		

S-Tronic Transmission to the 8-Cylinder Gasoline Engine (RS 5)

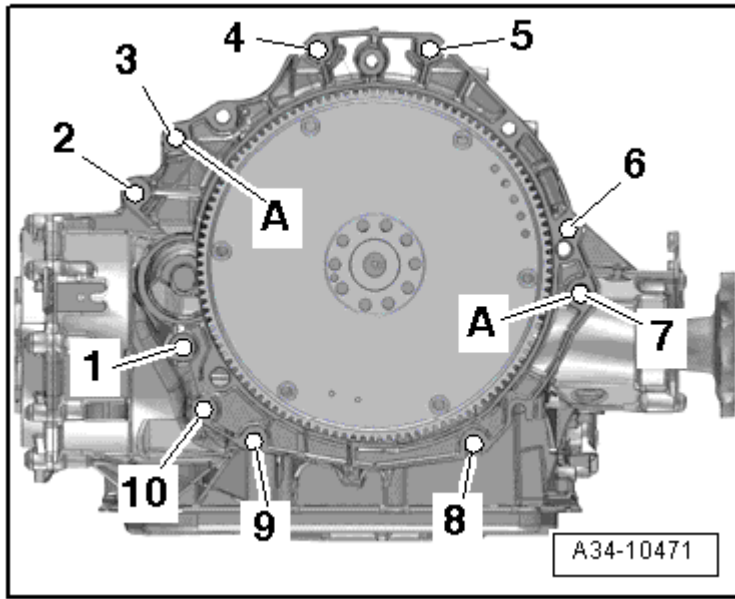


Fig. 61: S-Tronic Transmission To The 8-Cylinder Gasoline Engine (Rs 5)
 Courtesy of AUDI OF AMERICA, LLC

Item	Bolt	Nm
1 ¹⁾	M10 x 50 ²⁾	65
2 ¹⁾ , 3, 4, 5, 6	M12 x 100 ³⁾	30 + 90°
7	M12 x 175 ³⁾	30 + 90°
8, 9, 10	M10 x 60 ³⁾	15 + 90°
A	Alignment sleeves for centering	
• ¹⁾ Also secures the starter. • ²⁾ Bolt strength rating 10.9. There is no limit to the number of times the steel bolt can be used again. • ³⁾ Aluminum bolts may be used two times <u>TRANSMISSION, INSTALLING.</u>		

DIAGNOSIS AND TESTING

SELECTOR MECHANISM, CHECKING

Overview

- 1. Selector mechanism function test **1. SELECTOR MECHANISM FUNCTION TEST**
- 2. Check the ignition key lock **2. CHECK THE IGNITION KEY LOCK.**
- 3. Selector lever handle locking button, checking **3. CHECK LOCKING BUTTON IN THE SELECTOR LEVER HANDLE**

1. SELECTOR MECHANISM FUNCTION TEST

- The starter does not work when the selector lever is in "S", "D", "R" or in the "tiptronic gate".
- If the selector lever position "N" is selected at speeds greater than 5 km/h, the shift lock solenoid must not engage and block the selector lever. The selector lever can be moved into another gear.
- For speeds below 2 km/h (almost standstill) and shifting into selector lever position "N", the shift lock solenoid must only engage after approximately 1 second. The selector lever can be moved out of "N" only when the brake pedal is pressed.

Selector lever in "P" :

-- Press the button on the parking brake to activate it.

-- Do not press the brake pedal.

-- Press the key briefly in the ignition lock to reach the "ignition on" position.

-- Do not press the brake pedal.

- Selector lever is locked and cannot be shifted out of position "P" while locking button on selector lever handle is pressed. The shift lock solenoid -N110- locks the selector lever.

-- Press the brake pedal and hold it down.

- The shift lock solenoid unlocks the selector lever. It is possible to shift into a gear. Press the button in the selector lever handle and slowly move the selector lever from "P" and through "R, N, D, S". While doing this, make sure the transmission range display -Y6- inside the instrument cluster matches the actual position of the selector lever.

The selector lever is in "N" and the ignition is turned on:

-- Do not press the brake pedal.

- After a short waiting period: The selector lever is locked and cannot be moved out of "N" position despite pressing locking button on selector lever handle. The shift lock solenoid locks the selector lever.

-- Press the brake pedal.

- The shift lock solenoid unlocks the selector lever. It is possible to shift into "D".

The selector lever is in "D" and the ignition is turned on:

-- Move the selector lever into the "tiptronic gate".

- The "D" in the selector lever transmission range position display unit -Y26- must turn off and the "+" and "-" symbols must turn on.
- The transmission range display inside the instrument cluster must change from "D" to "M1" when the selector lever is moved into the "tiptronic gate".

- Press **Guided Fault Finding** on the vehicle diagnosis tester if the specified value is not reached.
- Adjust the selector lever cable. Refer to **SELECTOR LEVER CABLE, ADJUSTING**.
- Locking button on selector lever handle, checking **3. CHECK LOCKING BUTTON IN THE SELECTOR LEVER HANDLE**.

-- Check the ignition key lock.

2. CHECK THE IGNITION KEY LOCK.

- Press the button for the parking brake to lock the electro-mechanical brake.
- Do not press the brake pedal.
- Press the key briefly in the ignition lock to reach the "ignition on" position.
- Press the brake pedal and hold it down.
 - It must be possible to move the selector lever out of "P" without "getting stuck" when the locking button in the selector lever handle is pressed.
- Turn off the ignition.
 - It should not be possible to remove the ignition key when the selector lever is in any other position than "P".
- Move the selector lever into "P".
- Remove the key.
 - It should be possible to remove the key only when the selector lever is in "P".
 - The selector lever does not move out of "P" even though both the locking button and the brake pedal are pressed.

Select **Guided Fault Finding** on the vehicle diagnosis tester if the key lock does not function as described.

3. CHECK LOCKING BUTTON IN THE SELECTOR LEVER HANDLE

Make sure the locking button moves easily.

- It must be possible to press the locking button without using great force.
 - After releasing, the locking button must come all the way back out by itself.
- Check the selector lever handle for correct installation if the specified values are not reached. Refer to **SELECTOR LEVER HANDLE**.

-- Make sure the selector lever is not bent.

Function test:

- The ignition is turned on.

The locking button on the selector lever handle must be pressed for the following shifts. If it is not pressed, the selector lever cannot be shifted into the specified position.

- Move the selector lever from "P" into "R" and press the brake pedal at the same time.
- "D" into "S"
- "N" into "R" ; stationary, press the brake pedal after waiting longer
- "R" into "P"

-- Check the selector lever handle for correct installation if the specified values are not reached. Refer to **SELECTOR LEVER HANDLE**.

-- Perform **Guided Fault Finding** on the vehicle diagnosis tester and check the shift lock solenoid.

-- Adjust the selector lever cable. Refer to **SELECTOR LEVER CABLE, ADJUSTING**.

REMOVAL AND INSTALLATION**ATF FILTER****Special tools and workshop equipment required**

- Used Oil Collection and Extraction Device V.A.G 1782

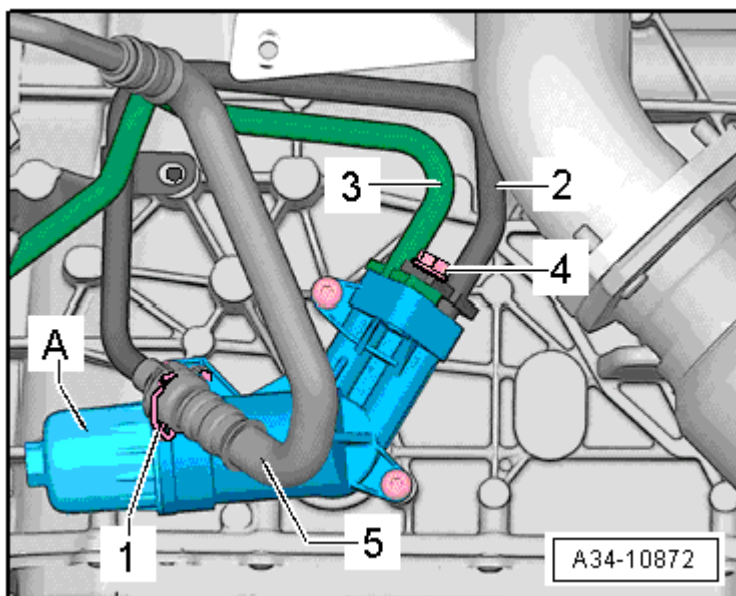


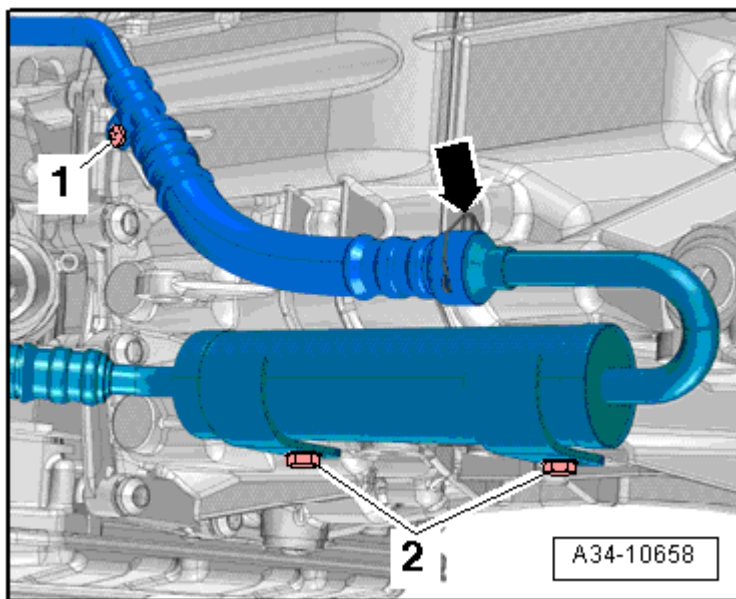
Fig. 62: Locating ATF Filter

Courtesy of AUDI OF AMERICA, LLC

NOTE: There are 2 different ATF filter versions depending on the engine and the date of manufacture.

The ATF filter -A- must be changed each time the ATF is changed.

Replace the ATF pipe filter -arrow- only when replacing a transmission, refer to **ATF PIPE FILTER**.

**Fig. 63: Identifying ATF Pipe Filter**
Courtesy of AUDI OF AMERICA, LLC

Removing the ATF Filter

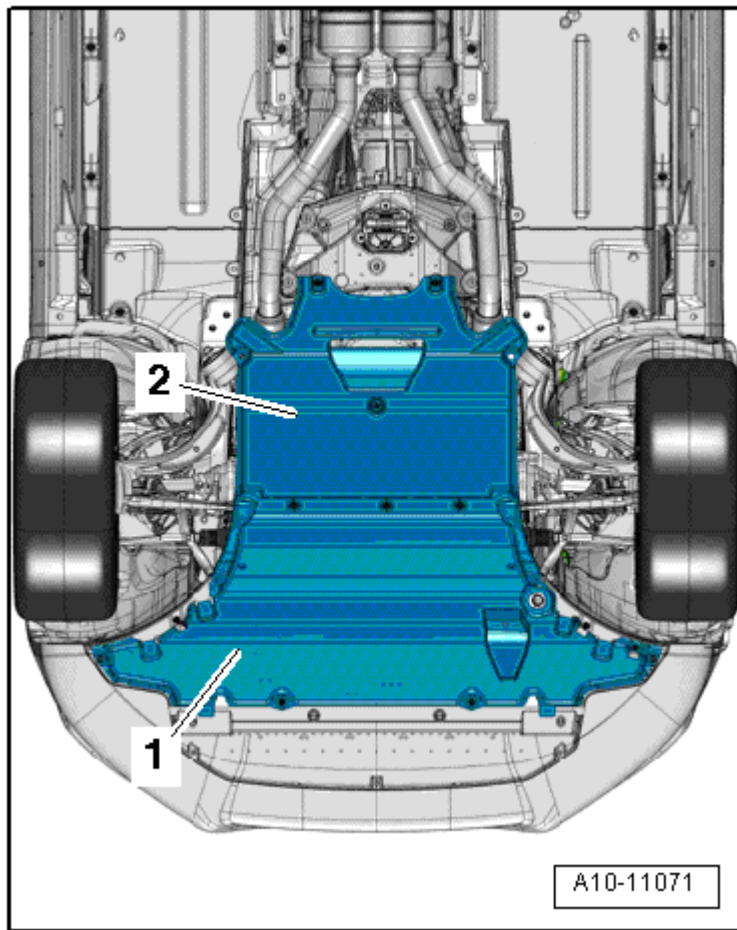


Fig. 64: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

NOTE: CLEANLINESS WORKING CONDITIONS

Replace the ATF filter each time the ATF is changed.

Always clean the ATF pipes and ATF cooler with compressed air (maximum 10 bar) and then flush with ATF before installing a replacement transmission.

- Remove the noise insulation -1 and 2-. Refer to Description and Operation .
- Draining the ATF. Refer to ATF, DRAINING AND FILLING.
- Remove the left bolts -arrows- and remove the heat shield -1-, if equipped.

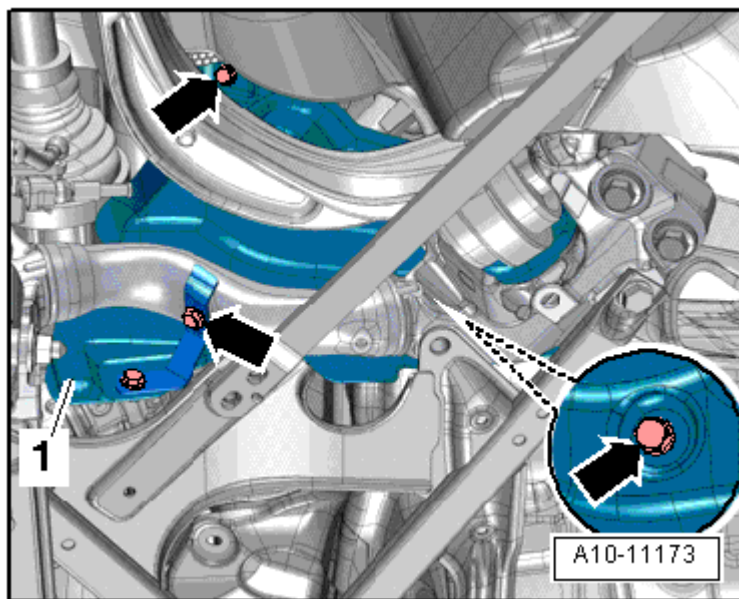


Fig. 65: Locating Left Bolts & Heat Shield
Courtesy of AUDI OF AMERICA, LLC

-- Place the V.A.G 1782 under the separating points.

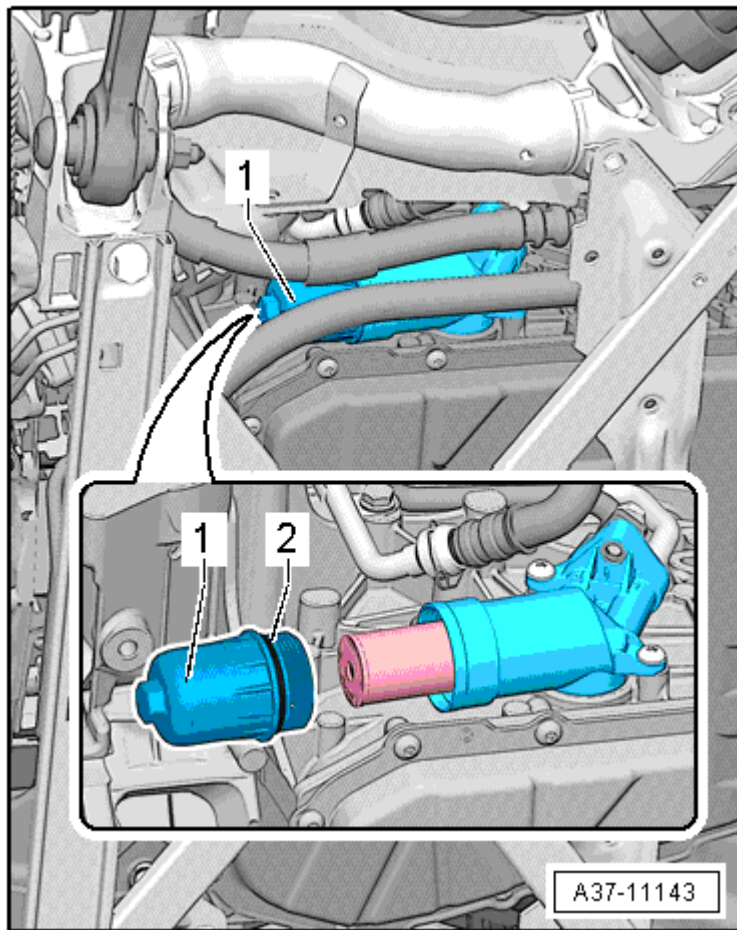


Fig. 66: Removing ATF Filter Cover

Courtesy of AUDI OF AMERICA, LLC

- Remove the cover for the ATF filter -1- and drain the ATF.
- Place the ATF filter cover -1- forward on the crossbrace.

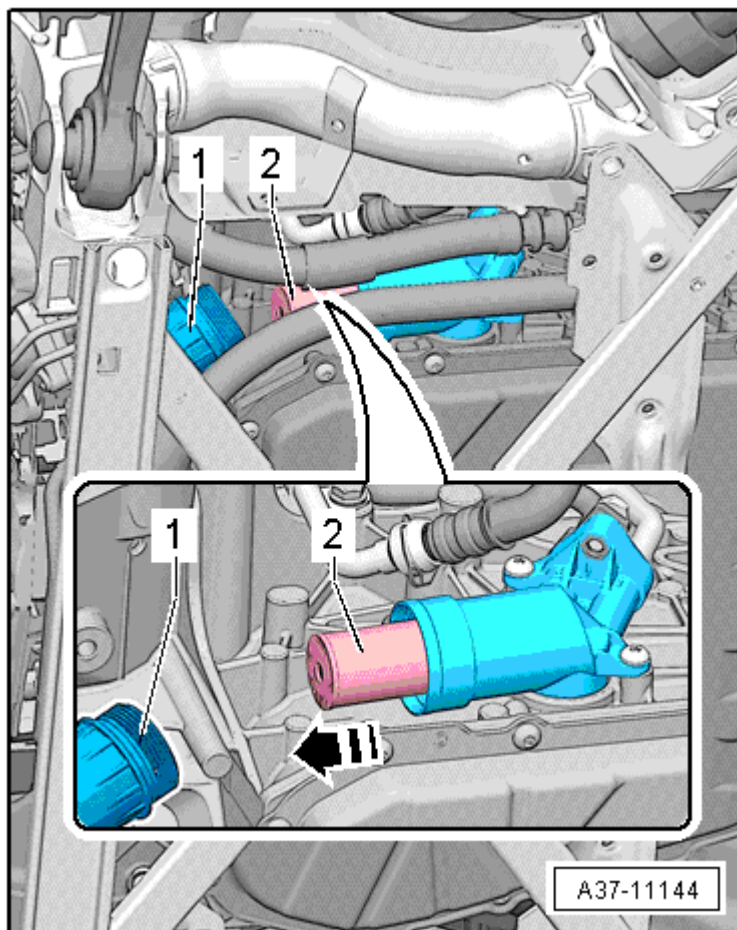


Fig. 67: Identifying ATF Filter -2-

Courtesy of AUDI OF AMERICA, LLC

-- Remove the ATF filter -2- in direction of -arrow-.

-- Remove the ATF filter -1- downward.

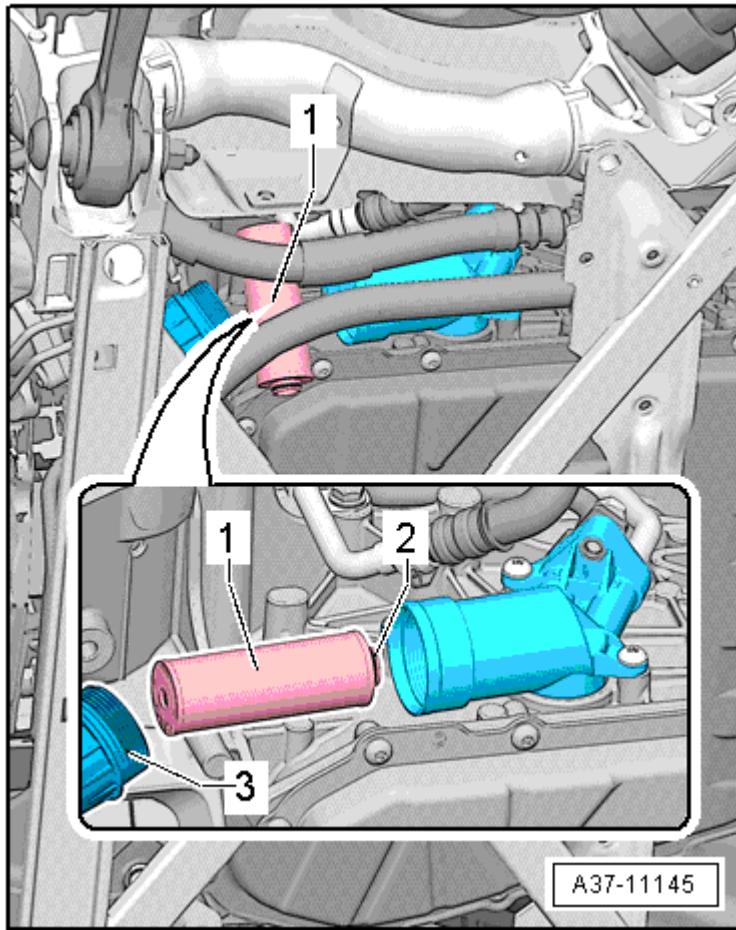


Fig. 68: Removing ATF Filter

Courtesy of AUDI OF AMERICA, LLC

-- Remove the cover for the ATF filter -3- downward.

Installing

Install in reverse order of removal. Note the following:

- Tightening specifications, refer to **ATF COOLER, ATF PIPES AND ATF FILTER OVERVIEW.**

NOTE: Replace the O-ring on the ATF filter cover.

Replace the ATF filter.

CAUTION: There is a risk of damaging the transmission.

The new ATF filter -1- must not come in contact with water. Even the smallest amount of water, such as a drip of water from the engine compartment or moisture from hands will cause the surface of the ATF

filter to swell up. Small paper particles from the filter can come loose and contaminate the Mechatronic.

- Place the ATF filter cover -3- with a new O-ring forward on the crossbrace.
- Coat the O-ring -2- on the new ATF filter -1- with ATF before installing.
- Coat the O-ring -2- on the ATF filter cover -1- with ATF.

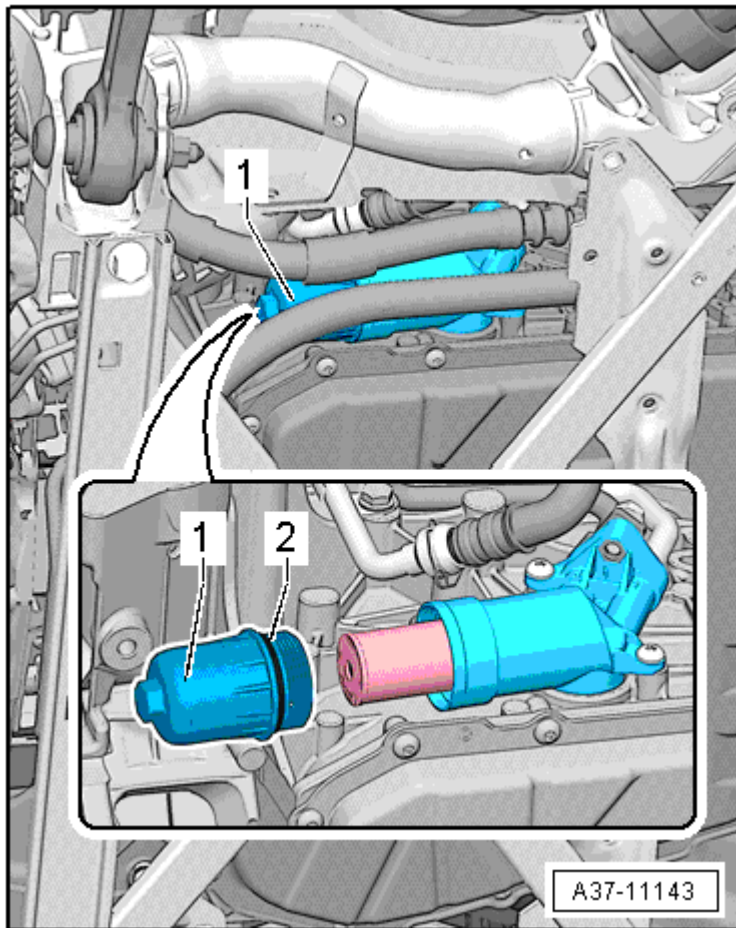


Fig. 69: Removing ATF Filter Cover
Courtesy of AUDI OF AMERICA, LLC

- Tighten the ATF filter cover -1- to the tightening specification.
- Clean the transmission, the steering gear hydraulic lines and crossbrace.
- Fill with ATF. Refer to **ATF, DRAINING AND FILLING.**

ATF PIPE FILTER

Special tools and workshop equipment required

- Used Oil Collection and Extraction Device V.A.G 1782
- Engine Bung Set VAS 6122

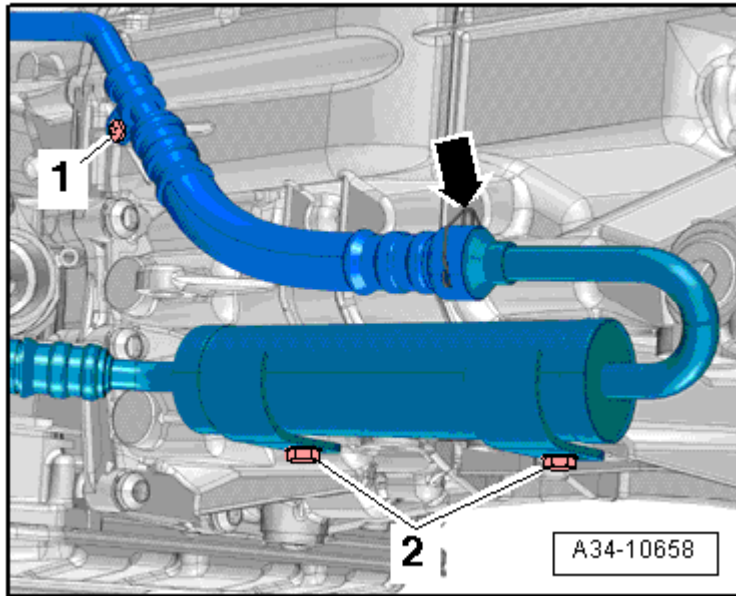


Fig. 70: Identifying ATF Pipe Filter
Courtesy of AUDI OF AMERICA, LLC

NOTE: There are 2 different ATF filter versions depending on the engine and the date of manufacture.

ATF pipe filter -arrow-

ATF Filter -A-, removing and installing, refer to ATF FILTER.

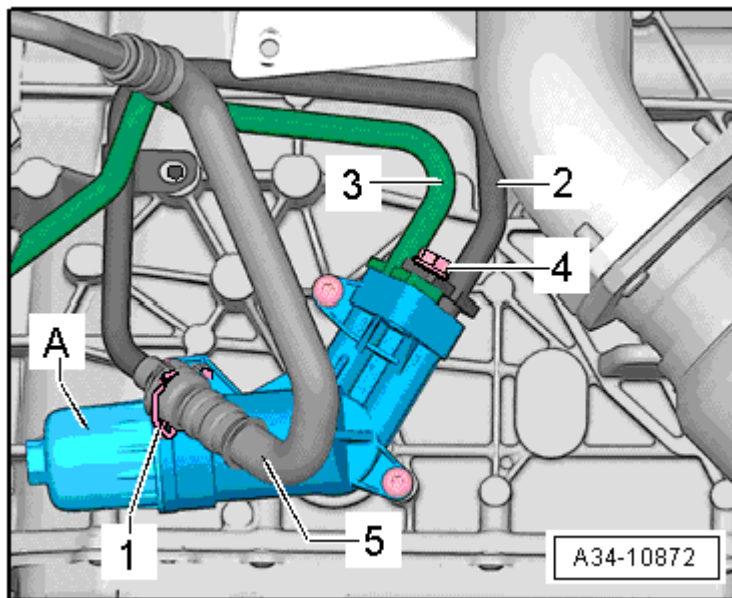


Fig. 71: Locating ATF Filter
Courtesy of AUDI OF AMERICA, LLC

Removing the ATF Pipe Filter

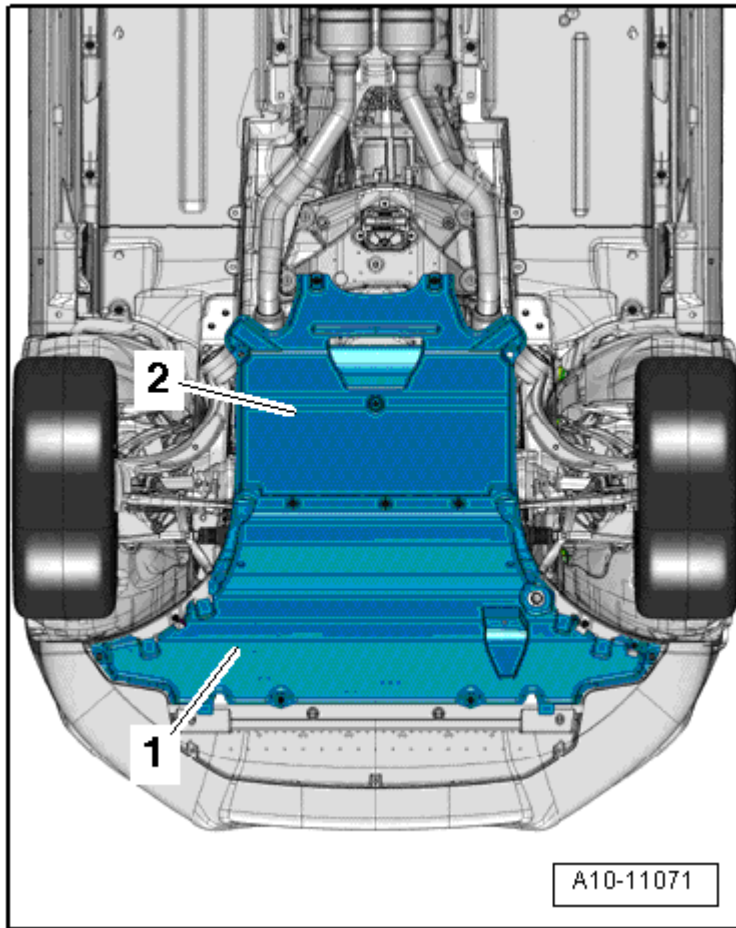


Fig. 72: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

NOTE: CLEANLINESS WORKING CONDITIONS .

Always replace the ATF pipe filter before installing a new replacement transmission and clean the ATF pipes and ATF cooler with compressed air (maximum 10 bar) and flush with ATF if the ATF is very dirty.

-- Remove the noise insulation -1 and 2-. Refer to Description and Operation .

-- Remove the left bolts -arrows- and remove the heat shield -1-, if equipped.

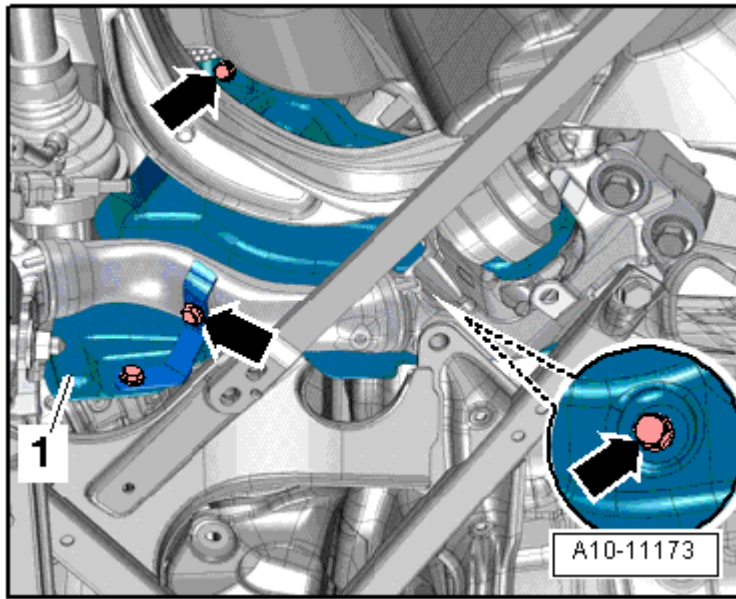


Fig. 73: Locating Left Bolts & Heat Shield
 Courtesy of AUDI OF AMERICA, LLC

-- Place the V.A.G 1782 under the separating points.

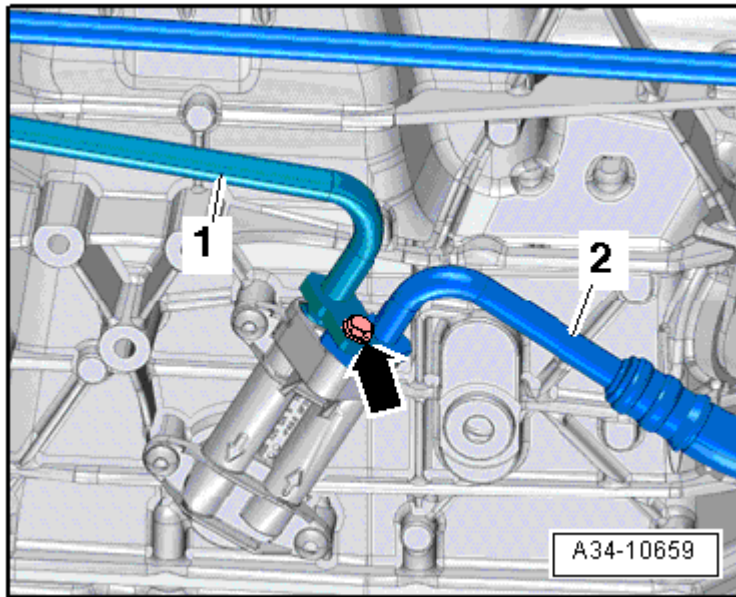


Fig. 74: Identifying ATF Pipe -1- & Bolt -Arrow-
 Courtesy of AUDI OF AMERICA, LLC

- Remove the bolt -arrow-, pull the ATF pipes -1 and 2- off the transmission and move them to the side.
- Seal any open lines and connections with a clean plug taken from the VAS 6122.
- Remove the circlip -arrow- and separate the ATF pipe from the ATF pipe filter.

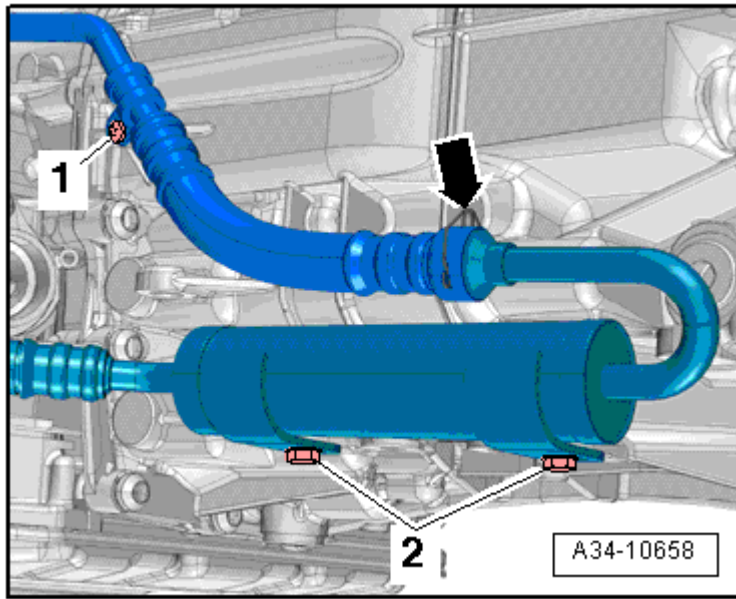


Fig. 75: Identifying ATF Pipe Filter
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -2- and the ATF pipe filter.

NOTE: Ignore -1-.

-- Seal any open lines and connections with a clean plug taken from the VAS 6122.

Installing

Install in reverse order of removal. Note the following:

- Tightening specifications, refer to ATF COOLER, ATF PIPES AND ATF FILTER OVERVIEW or ATF COOLER, ATF PIPES AND ATF FILTER OVERVIEW.

NOTE: Replace the O-rings.

CAUTION: There is a risk of damaging the transmission.

- When disassembling, remove all the plugs, which were taken from the VAS 6122, and the ATF pipes and from the transmission.
- The ATF cooling function will not work and the transmission will be damaged if the plugs are forgotten.

-- Install the ATF pipes all the way into the transmission by hand and then tighten them.

-- Press the circlip onto the connection between the ATF pie and the ATF pipe filter and then pull on it to make sure it is secure.

-- Check the ATF level and correct if necessary. Refer to **ATF, CHECKING LEVEL AND CORRECTING.**

ATF PIPES - ENGINE CODE(S): CCBA & CGXC

Special tools and workshop equipment required

- Used Oil Collection and Extraction Device V.A.G 1782
- Engine Bung Set VAS 6122

Removing

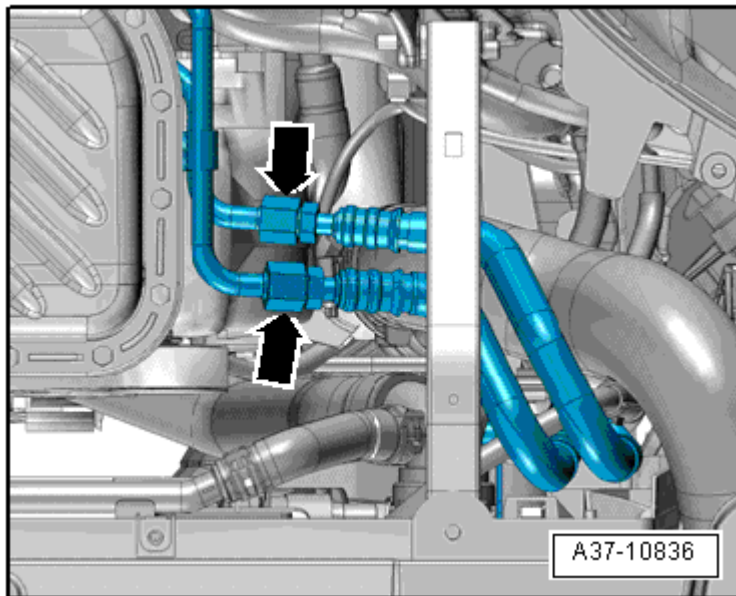


Fig. 76: Identifying Union Nuts -Arrows-
Courtesy of AUDI OF AMERICA, LLC

NOTE: **CLEANLINESS WORKING CONDITIONS .**

The ATF pipes can only be removed and installed when the transmission is removed.

- Transmission removed, refer to **TRANSMISSION, REMOVING.**

-- Place the V.A.G 1782 under the separating point.

-- Remove the union nuts -arrows-.

-- Seal any open lines and connections with a clean plug taken from the VAS 6122.

-- Remove the ATF pipe.

Installing

Install in reverse order of removal. Note the following:

- Tightening specifications, refer to **ATF COOLER, ATF PIPES AND ATF FILTER OVERVIEW** or **ATF COOLER, ATF PIPES AND ATF FILTER OVERVIEW**.

NOTE: **Replace the O-rings.**

CAUTION: There is a risk of damaging the transmission.

- When disassembling, remove all the plugs, which were taken from the VAS 6122, and the ATF pipes and from the transmission.
- The ATF cooling function will not work and the transmission will be damaged if the plugs are forgotten.

-- First insert the ATF pipes into the transmission and radiator by hand as far as the stop and then bolt them on.

-- Check the ATF level after installing the transmission. Refer to **ATF, CHECKING LEVEL AND CORRECTING**.

ATF PIPES - ENGINE CODE(S): CFSA

Special tools and workshop equipment required

- Engine Support Bridge 10 - 222 A
- Spindles 10 - 222 A /11
- Engine/Transmission Jack V.A.G 1383 A
- Used Oil Collection and Extraction Device V.A.G 1782
- Engine Bung Set VAS 6122
- Engine Support Supplement Set T40093
- Adapters T40093/6

Removing

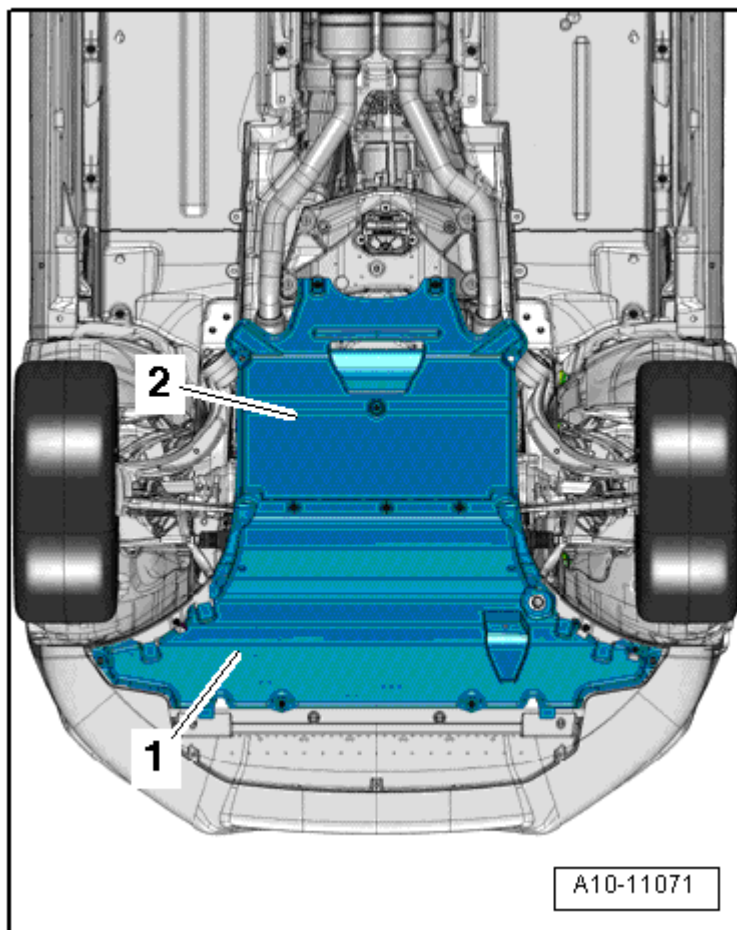


Fig. 77: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

NOTE: CLEANLINESS WORKING CONDITIONS .

-- Remove the noise insulation -1 and 2-. Refer to Description and Operation .

-- If applicable, remove the left and right bolts -arrows- and the heat shield -1-.

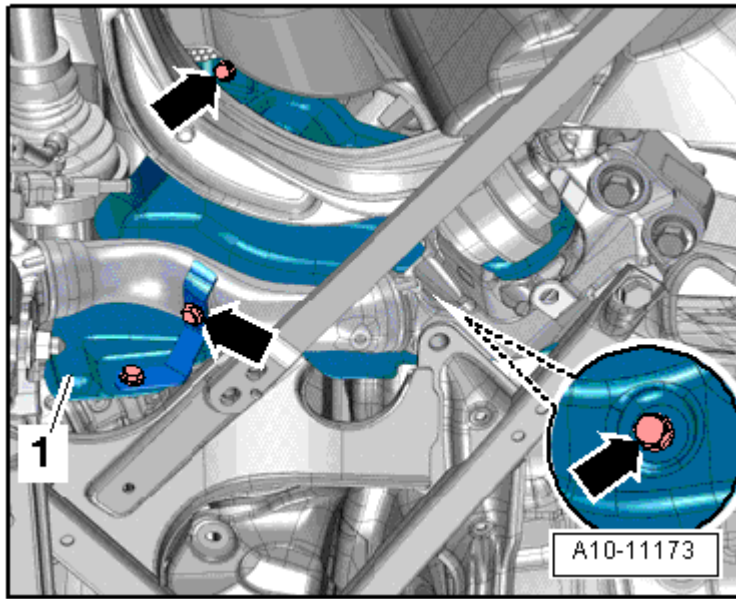


Fig. 78: Locating Left Bolts & Heat Shield
Courtesy of AUDI OF AMERICA, LLC

-- Remove the left and right front wheels.

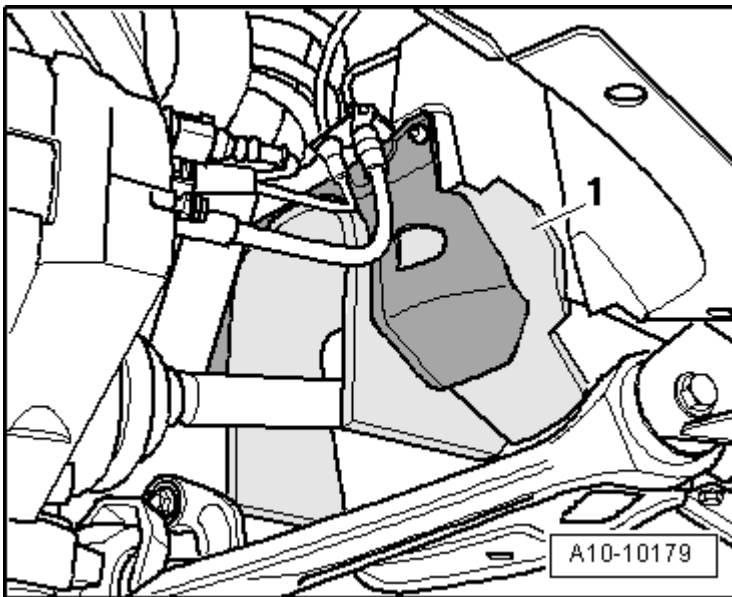


Fig. 79: Removing Right Drive Axle Cover
Courtesy of AUDI OF AMERICA, LLC

-- Remove the left and right drive axle cover -1- inside the wheel housing.

-- Remove the lock carrier cover. Refer to **Removal and Installation** .

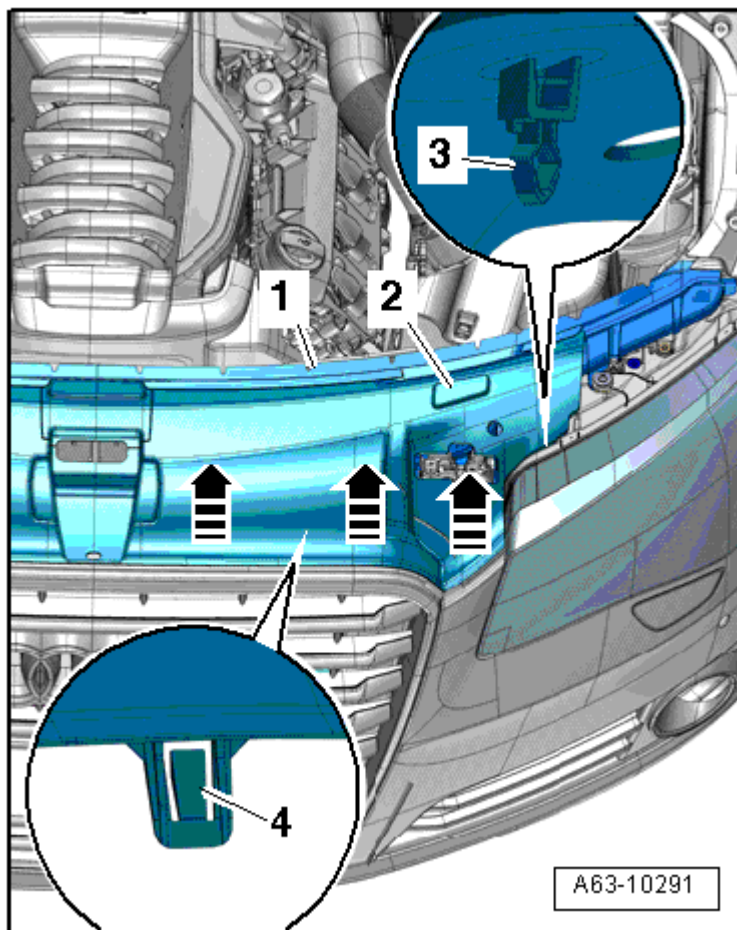


Fig. 80: Removing Bolts And Pull Air Guide Off Air Filter Housing
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -arrows- and pull the air guide -1- off the air filter housing.

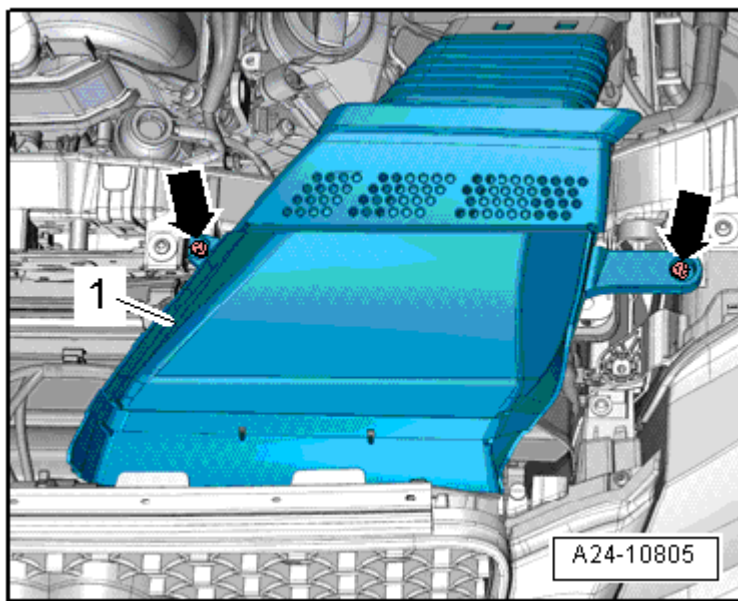


Fig. 81: Pulling Air Guide Off Air Filter Housing
Courtesy of AUDI OF AMERICA, LLC

-- Place the V.A.G 1782 under the separating point.

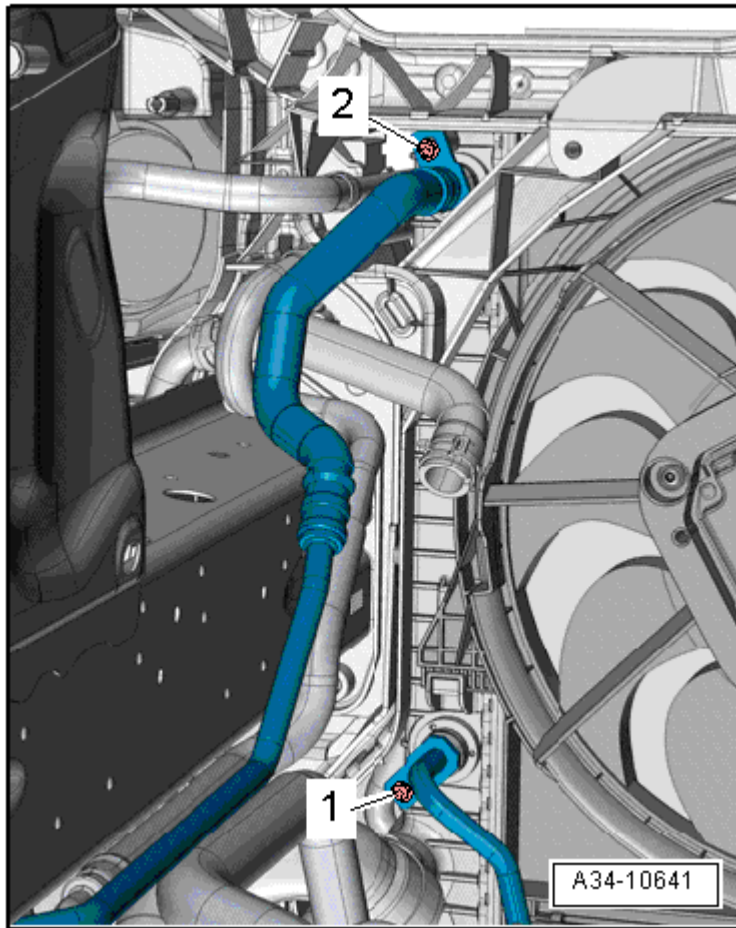


Fig. 82: Removing Bolt And ATF Pipe
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolt -2- and the ATF pipe.

-- Seal any open lines and connections with a clean plug from the VAS 6122.

NOTE: **The illustration shows the installation position with the engine removed.**
Ignore -1-.

-- Remove the bolt -arrow- from the ATF pipes.

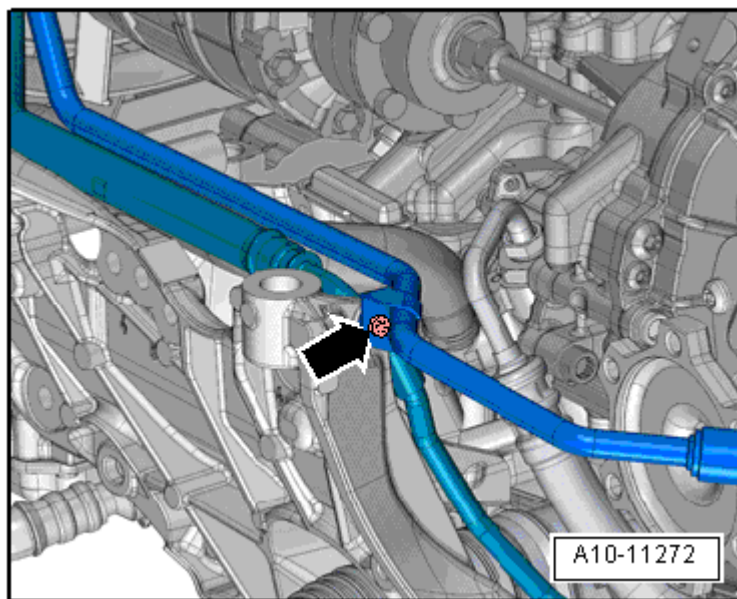


Fig. 83: Removing Bolt From ATF Pipes
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -2- and -arrows- and then remove the tab with the spring.

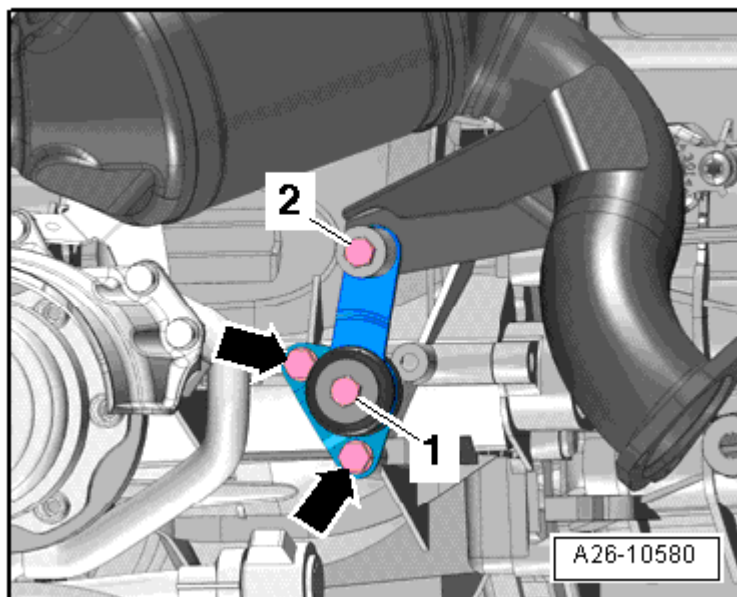


Fig. 84: Removing Bolts And Removing Tab With Spring
Courtesy of AUDI OF AMERICA, LLC

NOTE: The bolt -upper arrow- also attaches the ATF supply pipe to the transmission.
Ignore -1-.

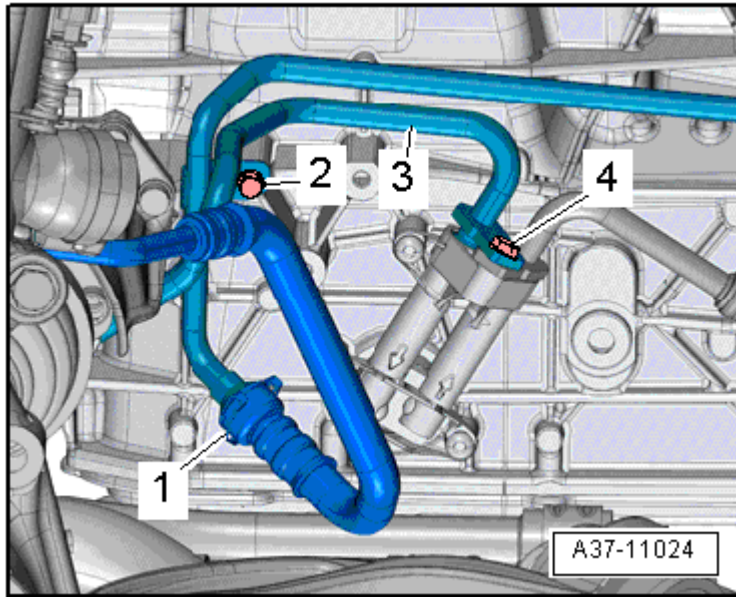
Vehicles with an ATF pipe filter:

Fig. 85: Identifying ATF Pipe
Courtesy of AUDI OF AMERICA, LLC

- Place the V.A.G 1782 under the separating point.
- Remove the clamp -1-, disconnect the ATF pipe and remove it.
- Remove the bolts -2 and 4- and pull the ATF pipe -3- off the transmission.
- Seal any open lines and connections with a clean plug from the VAS 6122.
- Remove the bolt -1-.

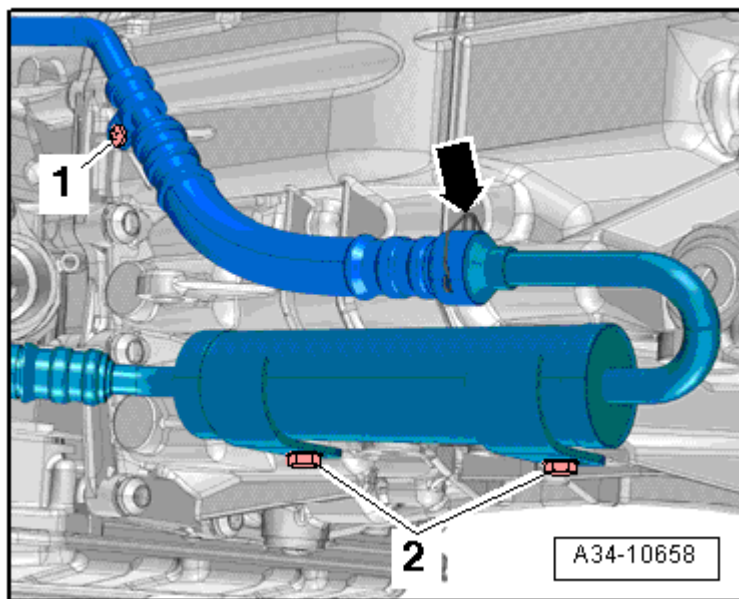


Fig. 86: Identifying ATF Pipe Filter

Courtesy of AUDI OF AMERICA, LLC

NOTE: Catch any leaking ATF with a cloth.

-- Remove the circlip -arrow- and remove the ATF pipe/hose line.

NOTE: Ignore -2- if the ATF pipe filter is not being removed.

Vehicles with an ATF filter -A- :

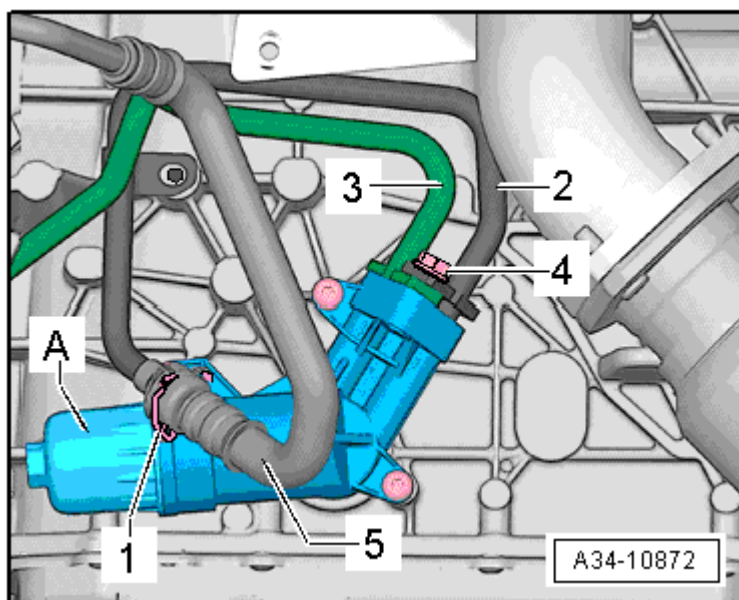


Fig. 87: Locating ATF Filter

Courtesy of AUDI OF AMERICA, LLC

- Place the V.A.G 1782 under the separating point.
- Remove the clamp -1- and the ATF supply pipe/hose/line assembly -5-.
- Remove the bolt -4- and pull the ATF supply pipe -2- off the transmission.
- Remove the ATF return pipe -3- from the transmission.
- Seal any open lines and connections with a clean plug from the VAS 6122.

All Vehicles

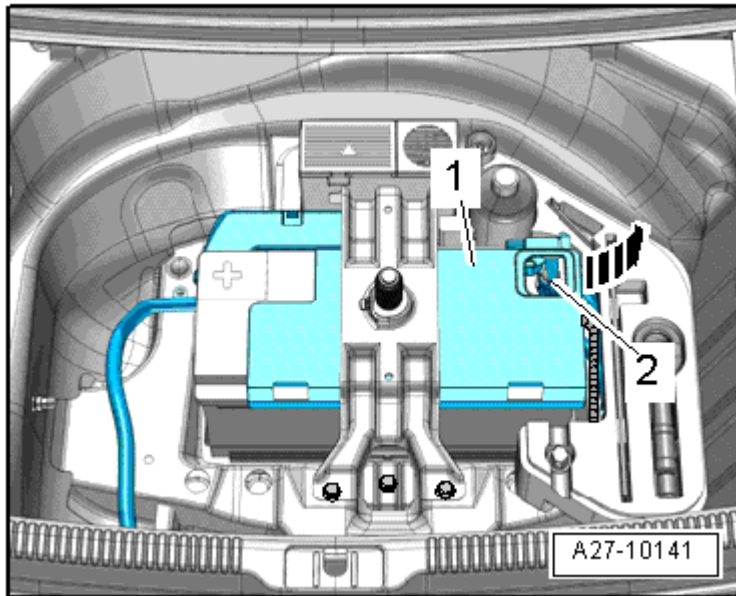


Fig. 88: Identifying Battery

Courtesy of AUDI OF AMERICA, LLC

- Turn off the ignition and remove the key.
- Disconnect the battery Ground (GND) cable -2-. Refer to **[For engine(s) CAEB, CALA, CCBA] Removal and Installation** .
- Remove the engine cover -arrows-.

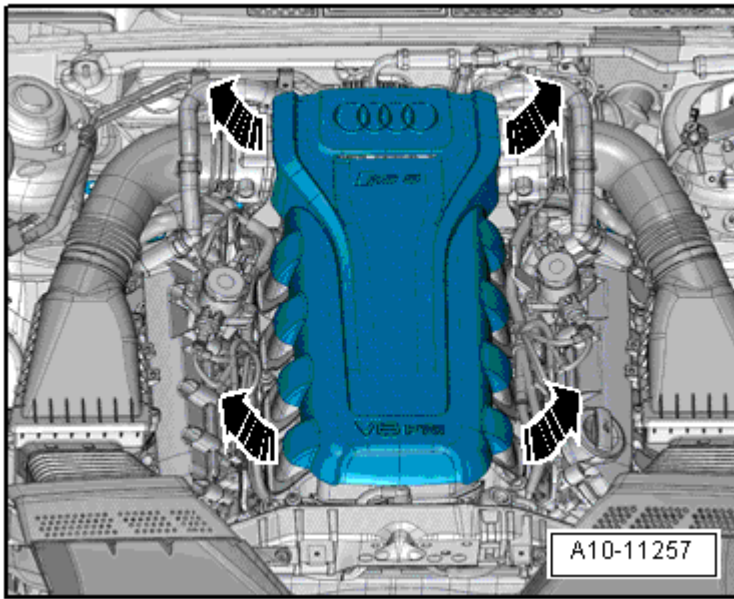


Fig. 89: Removing Engine Cover
Courtesy of AUDI OF AMERICA, LLC

-- Mount the 10 - 222 A with the T40093/6 on the left and right suspension strut towers, as illustrated.

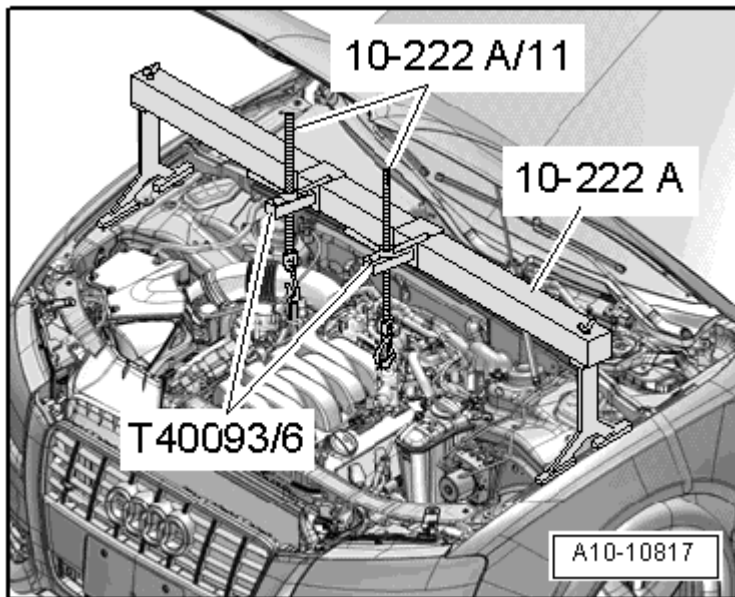


Fig. 90: Mounting 10 - 222 A With T40093/6 On Left And Right Suspension Strut Towers
Courtesy of AUDI OF AMERICA, LLC

- Attach the 10 - 222 A /11 to the engine lifting eyes.
- Slightly tension the engine with the spindles.
- Remove the nuts -arrow- on the right longitudinal member and free up the GND wires.

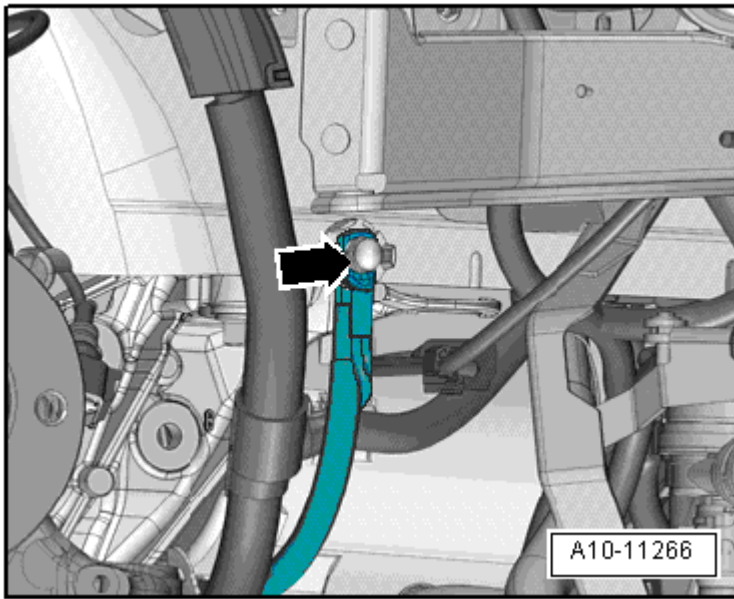


Fig. 91: Removing Nuts -Arrow- On Right Longitudinal Member And Free Up GND Wires
Courtesy of AUDI OF AMERICA, LLC

-- Disconnect the connector -1- from headlamp range control sensor 1 -G233- and free up the wire -arrow-.

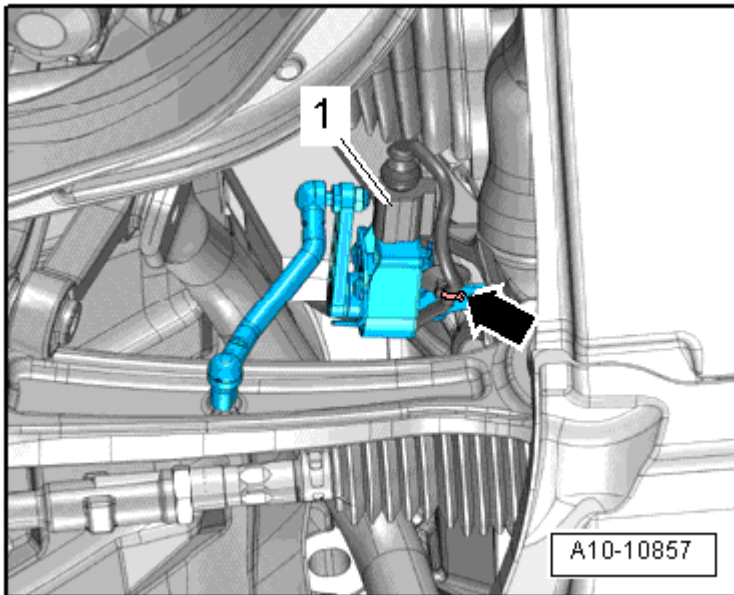


Fig. 92: Disconnecting Electrical Connector On Left Front Level Control System Sensor
Courtesy of AUDI OF AMERICA, LLC

-- Remove the left and right bolts -1- from the stabilizer bar.

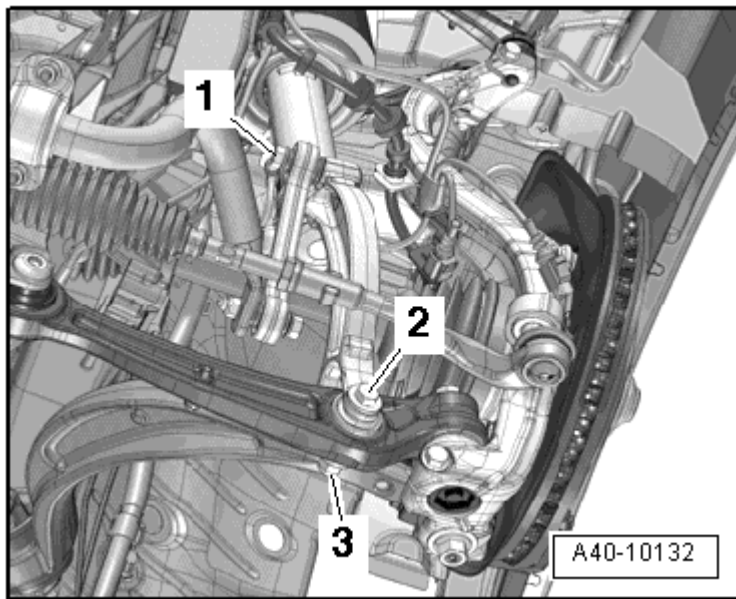


Fig. 93: Removing Left And Right Stabilizer Bar Bolt
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2 and 3-.

Vehicles with Hydraulic Power Steering

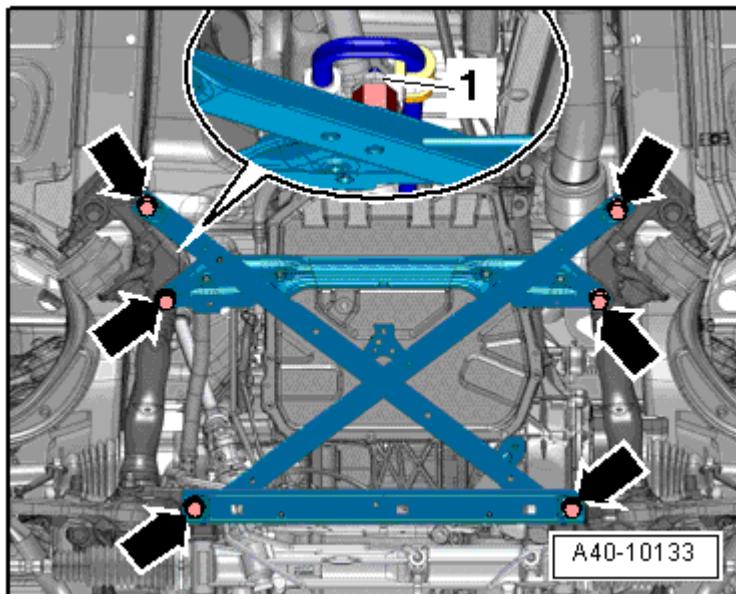


Fig. 94: Locating Power Steering Hydraulic Line
Courtesy of AUDI OF AMERICA, LLC

-- Remove the nut -1- from the power steering hydraulic line.

NOTE: Ignore -arrows-.

-- Disconnect the connector -1- from the servotronic solenoid valve -N119- and then free up the electric wire.

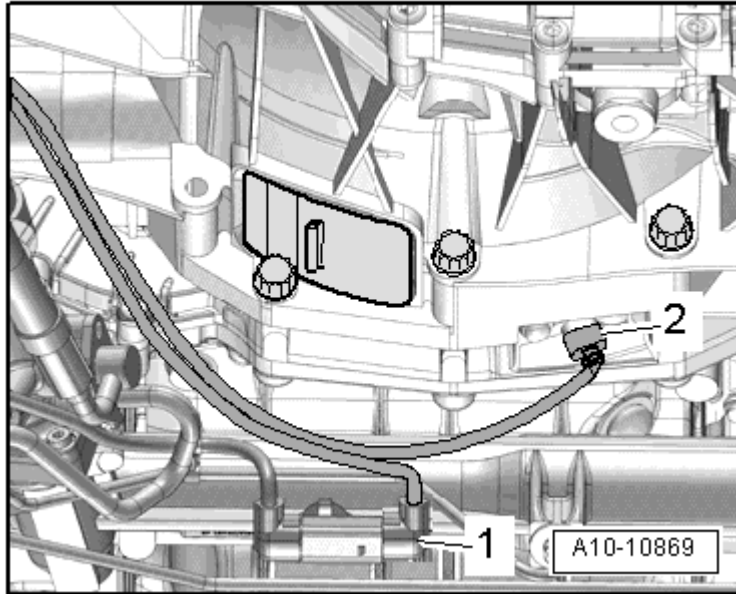


Fig. 95: Disconnecting Connector From Servotronic Solenoid Valve
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2-.

-- Free up the power steering hydraulic fluid hose on the left side of the subframe.

All Vehicles

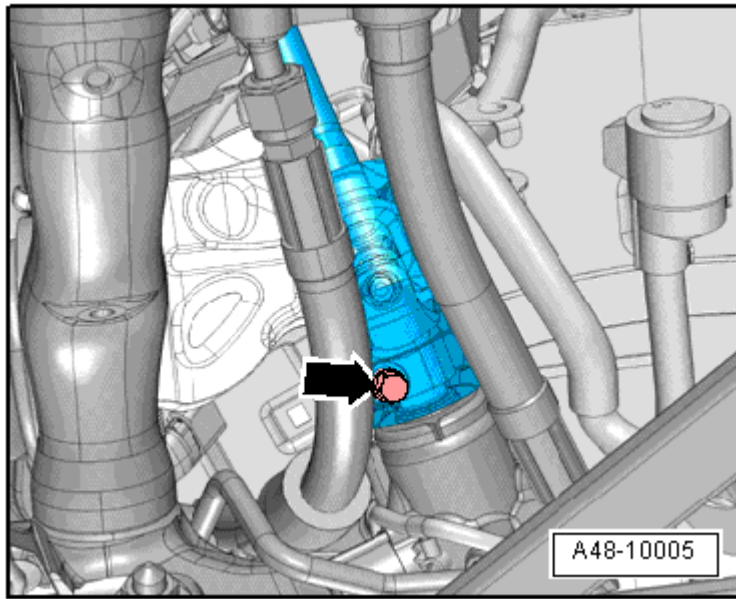


Fig. 96: Locating Universal Joint Bolt
 Courtesy of AUDI OF AMERICA, LLC

- Remove the steering intermediate shaft bolt -arrow- and shaft from the steering gear and push them both upward. Refer to **[For engine(s) CAEB, CALA, CCBA] Removal and Installation** .
- Free up the electric wires on the right side of the subframe.
- Disconnect the connector -1- from the left electrohydraulic engine mount solenoid valve -N144-.

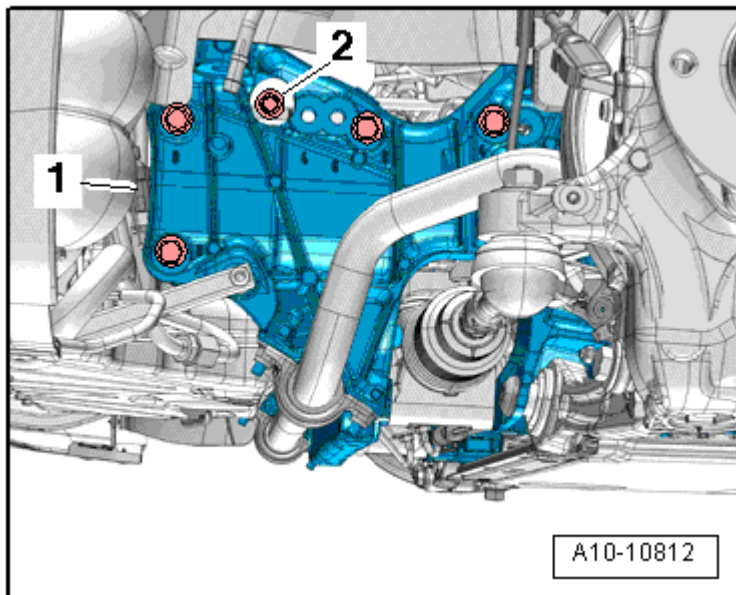


Fig. 97: Disconnecting Connector From Left Electrohydraulic Engine Mount Solenoid Valve
 Courtesy of AUDI OF AMERICA, LLC

- Remove the left bolt -2- from the engine mount.
- Disconnect the connector -2- from the right electrohydraulic engine mount solenoid valve -N145-.

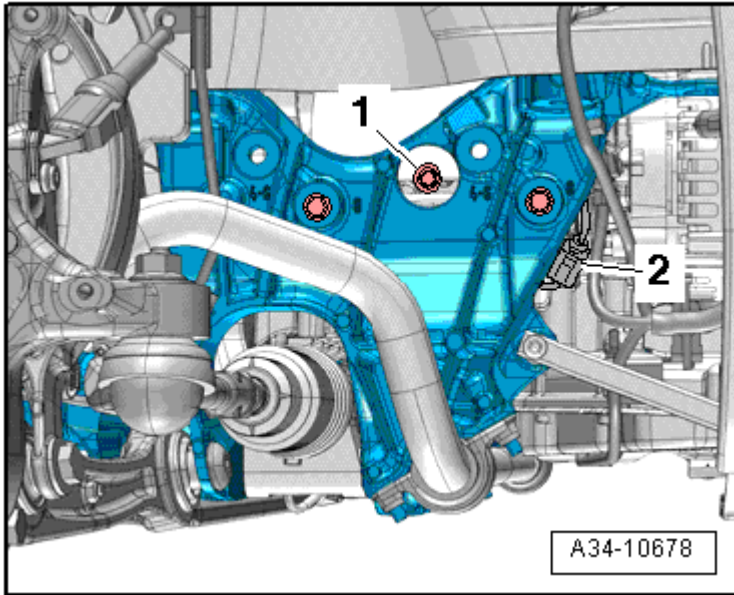


Fig. 98: Disconnecting Connector From Right Electrohydraulic Engine Mount Solenoid Valve
Courtesy of AUDI OF AMERICA, LLC

- Remove the right bolt -1- from the engine mount.
- Place the V.A.G 1782 under the separating point.

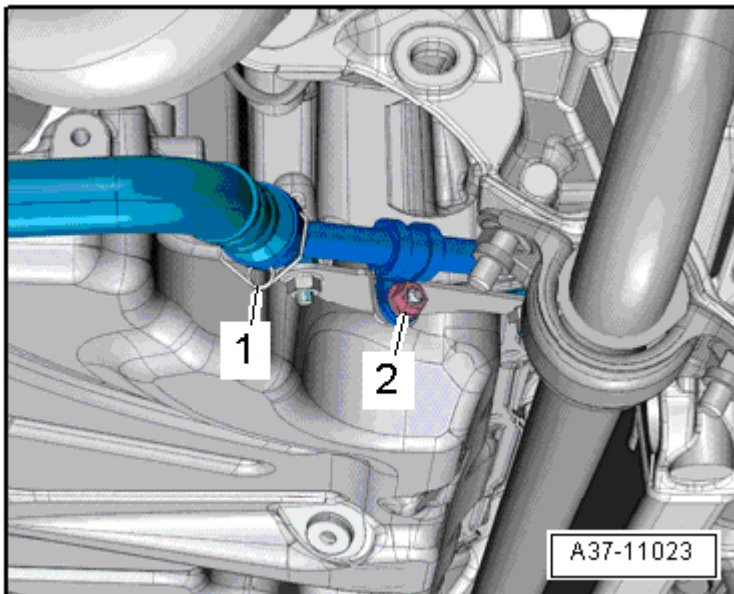


Fig. 99: Removing Nut
Courtesy of AUDI OF AMERICA, LLC

- Remove the circlip -1- and disconnect the ATF pipe.
- Seal any open lines and connections with a clean plug from the VAS 6122.
- Remove the nut -2-.
- Support the subframe using V.A.G 1383 A, as illustrated.

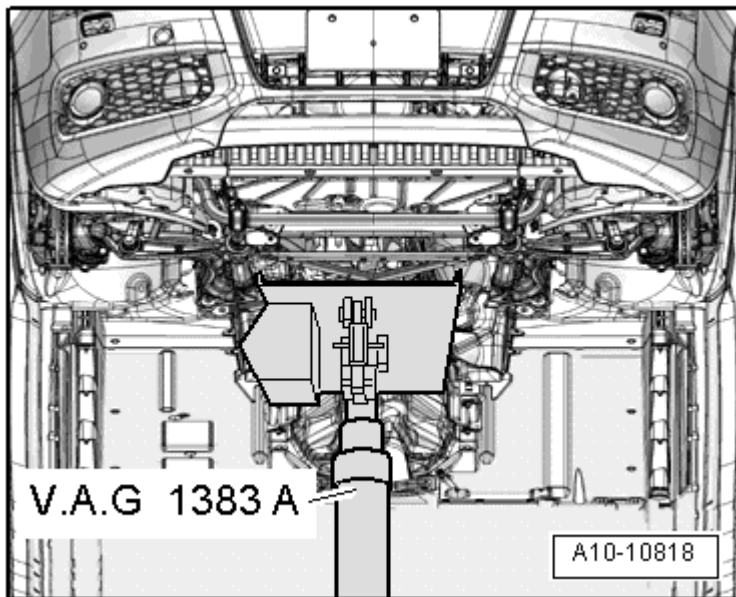


Fig. 100: Support Subframe Using V.A.G 1383
Courtesy of AUDI OF AMERICA, LLC

- Mark the installed position of the subframe on the longitudinal members with a felt-tip pen.

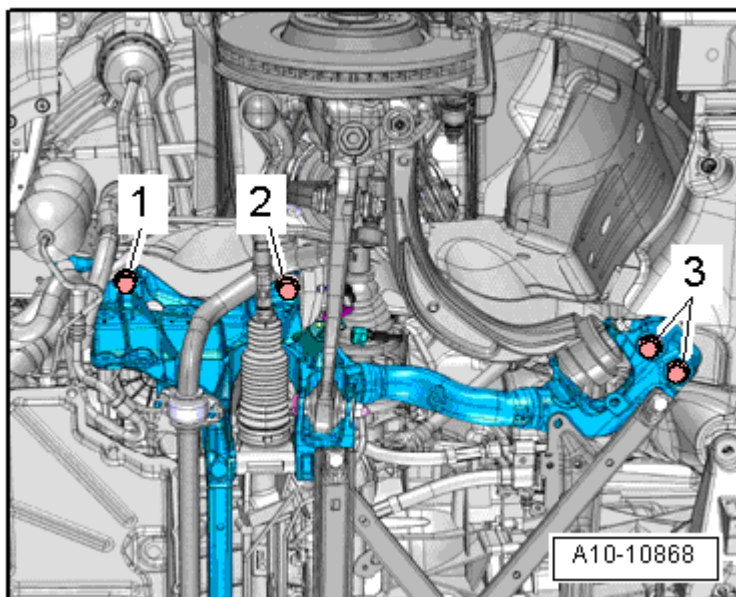


Fig. 101: Removing Left And Right Bolts -1, 2 And 3- Diagonally From Subframe And In Steps
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the left and right bolts -1, 2 and 3- diagonally from the subframe and in steps.

CAUTION: The suspension components could be damaged.

- Do not rest the vehicle on its wheels if the subframe mount, the steering gear or the subframe crossbrace are not installed correctly.

-- Lower the subframe using the V.A.G 1383 A just far enough until it is possible to remove the lower ATF pipe. Make sure there is enough room for the hydraulic hoses on the left side and the electric wires on the right side.

Installing

Install in reverse order of removal. Note the following:

- Tightening specifications, refer to ATF COOLER, ATF PIPES AND ATF FILTER OVERVIEW or ATF COOLER, ATF PIPES AND ATF FILTER OVERVIEW.

NOTE: Replace the O-rings.

CAUTION: There is a risk of damaging the transmission.

- When disassembling, remove all the plugs, which were taken from the VAS 6122, and the ATF pipes and from the transmission.
- The ATF cooling function will not work and the transmission will be damaged if the plugs are forgotten.

-- First insert the ATF pipes into the transmission and radiator by hand as far as the stop and then bolt them on.

-- Push on the circlips on the ATF line connections and then pull on them to make sure they are secure.

-- Check the ATF level and correct if necessary. Refer to ATF, CHECKING LEVEL AND CORRECTING.

-- Align the subframe with the markings on the longitudinal members made earlier during removal.

-- Tighten the subframe bolts to the tightening specification. Do not tighten them any further (tighten the bolts only after performing an axle alignment). Refer to [For engine(s) CAEB, CALA, CCBA] Specifications.

WARNING: Risk of accident if the bolts are loose.

- Do not drive the vehicle if the subframe bolts have not been tightened to the final specification.

- Install the stabilizer bar. Refer to **[For engine(s) CAEB, CALA, CCBA] Removal and Installation** .
- Install the electric wires.
- Complete the steps required after connecting the battery. Refer to **[For engine(s) CAEB, CALA, CCBA] Removal and Installation** .
- Attach the steering intermediate shaft to the steering gear. Refer to **[For engine(s) CAEB, CALA, CCBA] Removal and Installation** .

Vehicles with Hydraulic Power Steering

- Install the power steering hydraulic line. Refer to **[For engine(s) CAEB, CALA, CCBA] Description and Operation** .

All Vehicles

- Install the wheel housing liners. Refer to **Description and Operation** .
- Mount the front wheels and perform an axle alignment. Refer to **Removal and Installation** .

WARNING: Risk of accident if the bolts are loose.

- **Tighten the subframe bolts to the final tightening specification after performing the axle alignment.**

- Install the noise insulation. Refer to **Description and Operation** .

DISCONNECTING SELECTOR LEVER BOOT FROM SELECTOR LEVER HANDLE

Removing

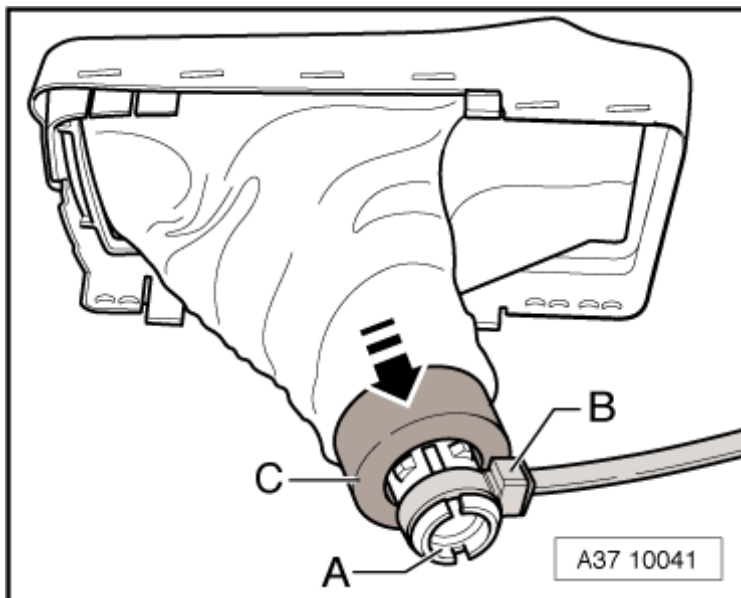


Fig. 102: Removing Selector Lever Boot From Selector Lever Handle
 Courtesy of AUDI OF AMERICA, LLC

- Remove the selector lever handle. Refer to **SELECTOR LEVER HANDLE**.
- Bind the selector lever handle spring tabs -A- together with cable ties -B-, as shown in the illustration.
- Slide the selector lever boot sleeve -C- over the tabs on the spring tab -arrow-.
- Remove the cable ties and the selector lever boot and sleeve from the selector lever.

Installing

Install in reverse order of removal. Note the following:

- Installed position: The longer side of the selector lever boot frame faces the driver side.

- Install the selector lever handle. Refer to **SELECTOR LEVER HANDLE**.

SELECTOR LEVER CABLE

Special tools and workshop equipment required

- Pry Lever - Rmv Outside Mirror 80 - 200
- Trim Removal Wedge 3409
- Engine/Transmission Jack V.A.G 1383 A
- Gearbox Support T10337
- Socket and Key T40031

Removing



- cardiagn.com

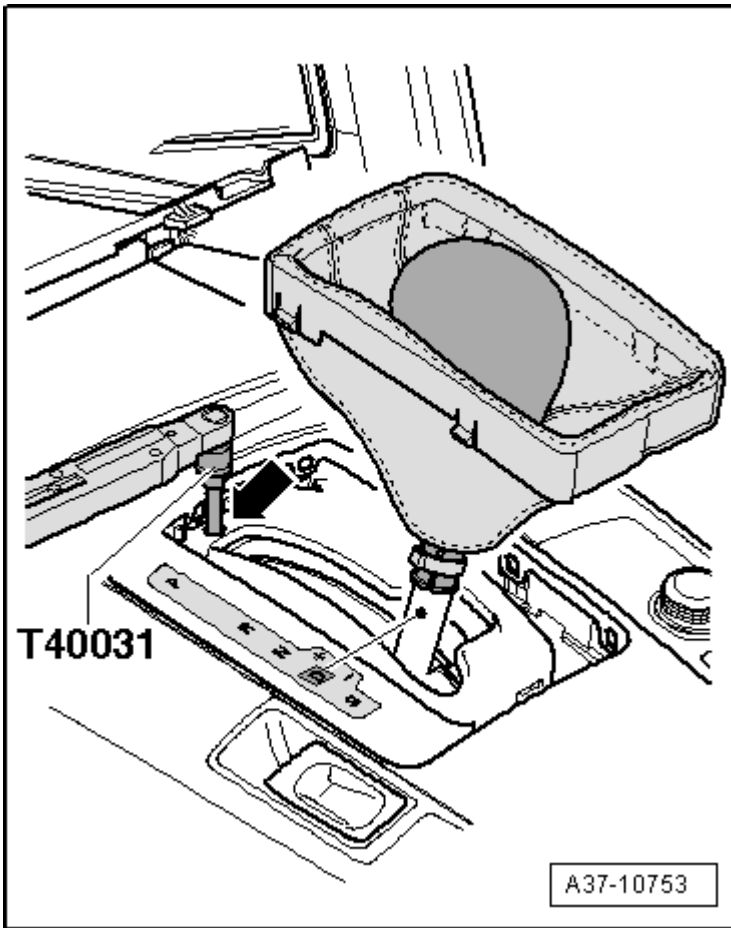


Fig. 104: Loosening Bolt On Selector Lever Cable One Turn Using Socket T40031
Courtesy of AUDI OF AMERICA, LLC

NOTE: Only loosen the clamping screw - do not remove it.

The clamping screw is only accessible when the selector lever is in "D".

The selector lever must remain in "D" when the clamping screw is loose.

-- Remove the noise insulation -1 and 2-. Refer to **Description and Operation** .

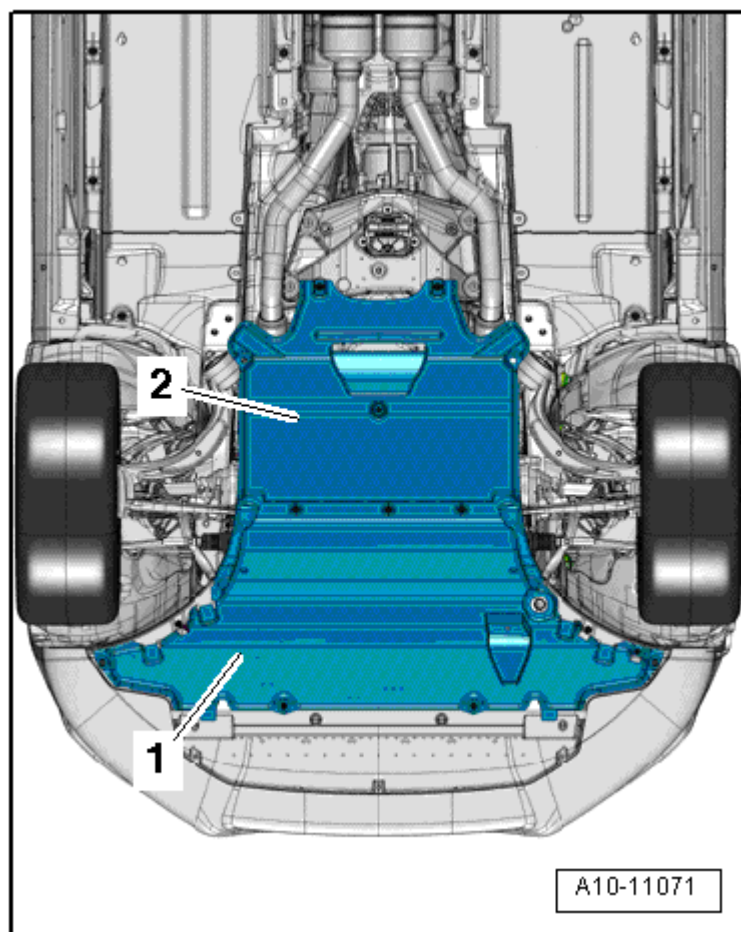


Fig. 105: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

A5 Cabriolet

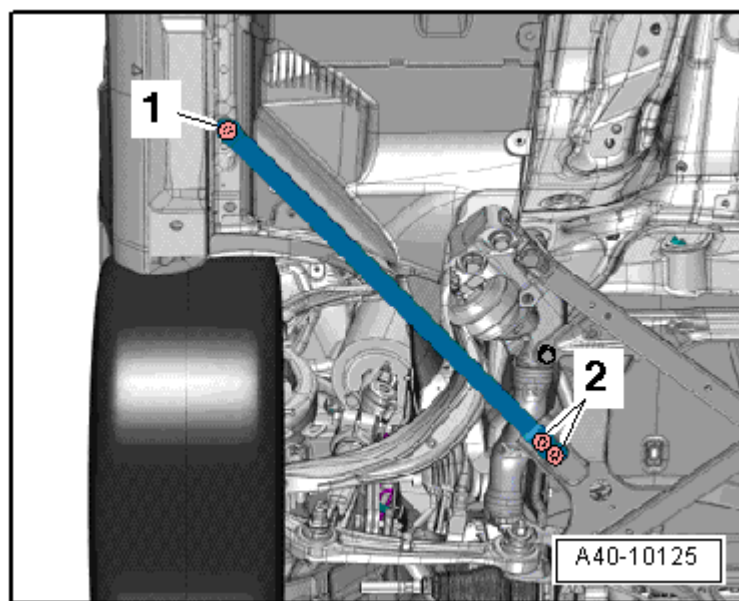


Fig. 106: Identifying Clamping Sleeve
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the left and right diagonal braces. Refer to **Removal and Installation** .

All Vehicles

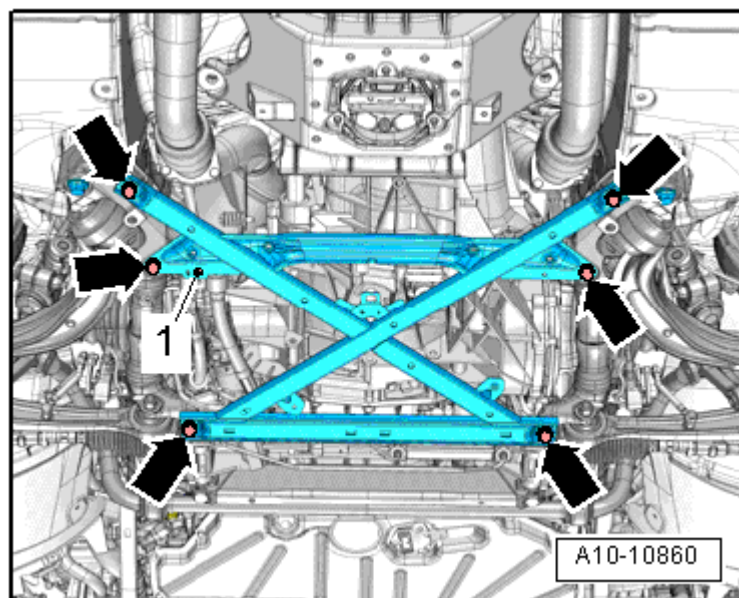


Fig. 107: Removing Subframe Crossbrace
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the subframe crossbrace. Refer to **Removal and Installation** .

CAUTION: The suspension components could be damaged.

- Do not rest the vehicle on its wheels if the subframe mount, steering gear or subframe crossbrace are not installed correctly.

NOTE: The following procedure makes it easier to access.

Vehicles with Single Exhaust System

-- Remove the front exhaust pipe/front muffler. Refer to Removal and Installation .

Vehicles with Dual Exhaust System

-- Remove the left and right front mufflers. Refer to Removal and Installation .

All Vehicles

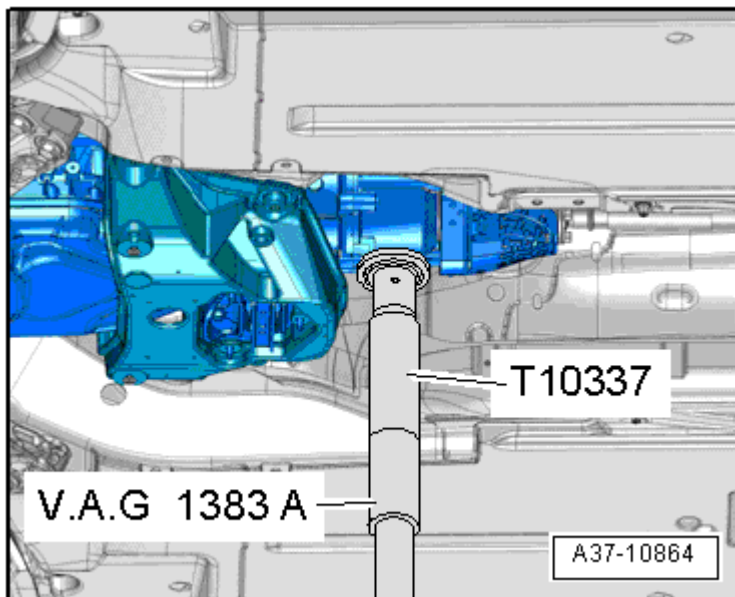


Fig. 108: Mounting T10337 On V.A.G 1383 A And Then Attach It To Bottom Of Transmission
Courtesy of AUDI OF AMERICA, LLC

- Mount the T10337 on the V.A.G 1383 A and then attach it to the bottom of the transmission.
- Raise the transmission slightly.

WARNING: There is the risk of an accident.

- Do not lower V.A.G 1383 A during assembly and do not leave it under the vehicle unsupervised.

-- Remove the bolts from the tunnel crossmember -arrows-.

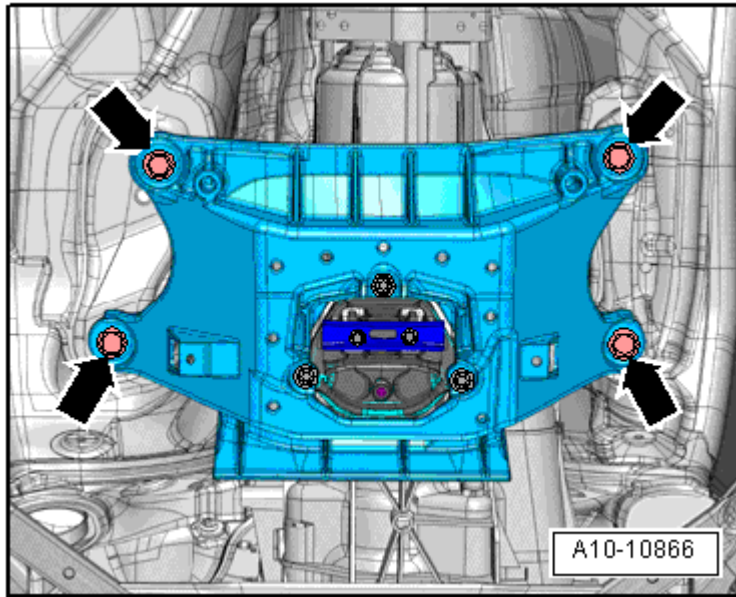


Fig. 109: Transmission Support Overview
Courtesy of AUDI OF AMERICA, LLC

-- Lower the transmission to dimension -a- using V.A.G 1383 A.

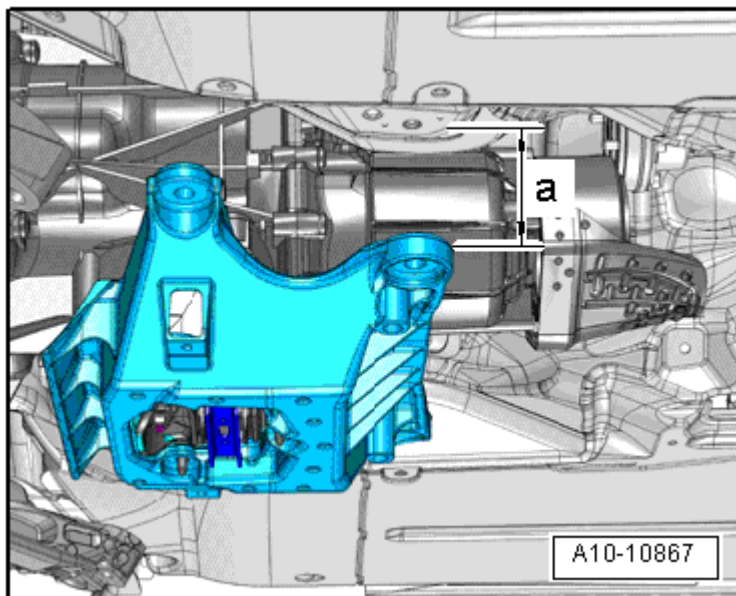


Fig. 110: Lowering Transmission
Courtesy of AUDI OF AMERICA, LLC

- Dimension -a- = 70 mm maximum.

-- Remove the nuts -arrows- (if equipped).

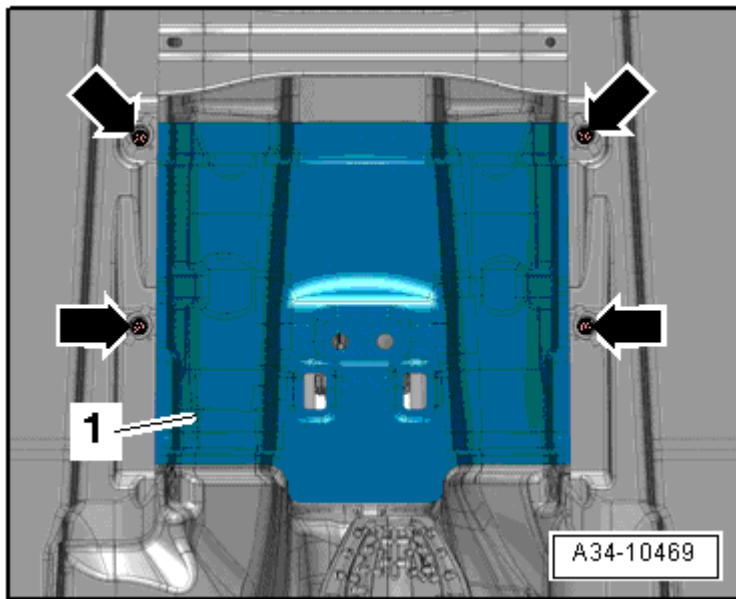


Fig. 111: Removing Nuts

Courtesy of AUDI OF AMERICA, LLC

-- Lower the underbody cover on the inner side just enough until the heat shield -1- for the center tunnel can be removed.

-- Remove the lock washers -1- (if equipped) from the noise insulation -2-.

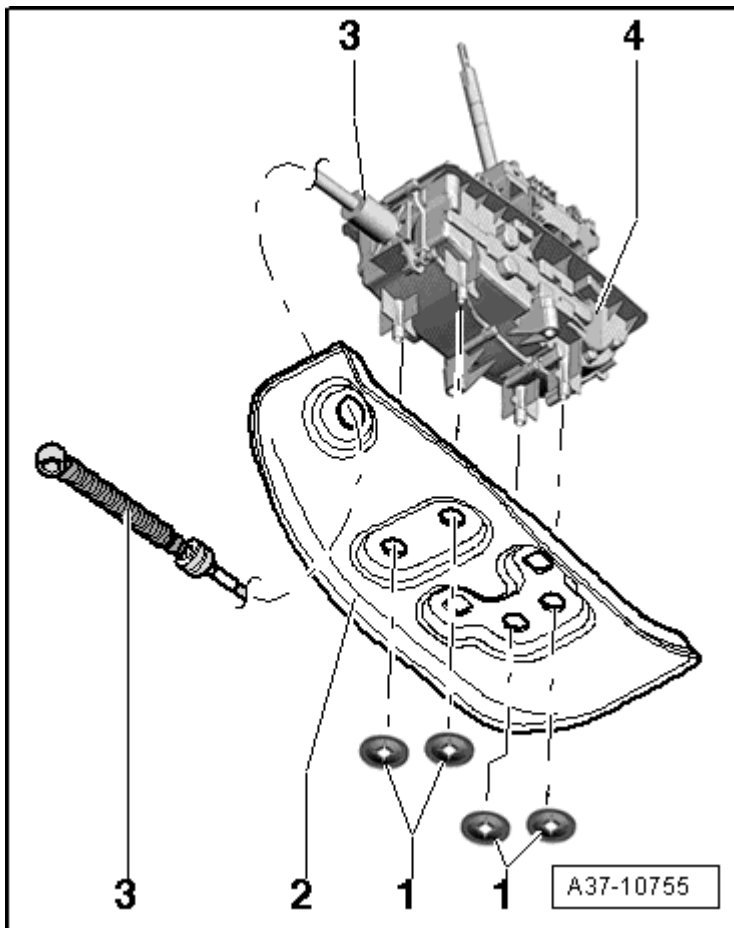


Fig. 112: Sound Insulation And Lock Washers

Courtesy of AUDI OF AMERICA, LLC

-- Pull the noise insulation off the function unit -4- for the selector lever cable -3- and push it forward.

-- Pry the selector lever cable ball socket -2- off the selector lever using 80 - 200.

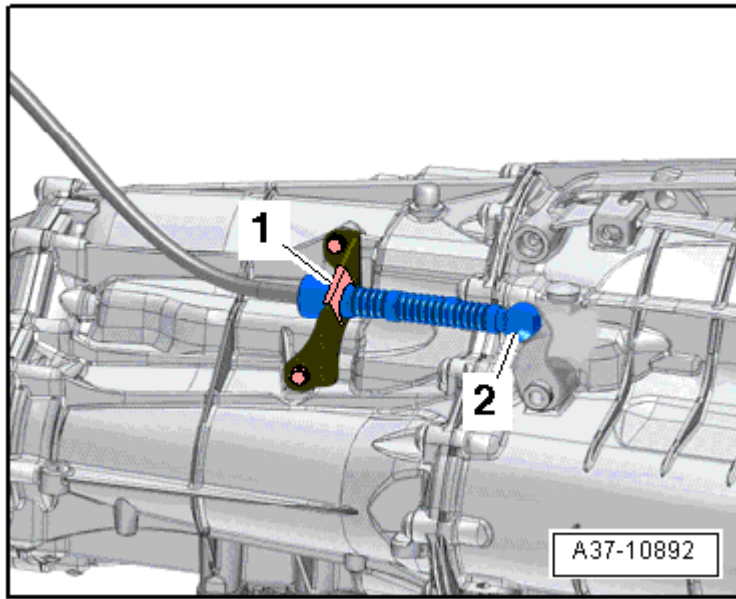


Fig. 113: Selector Lever Cable

Courtesy of AUDI OF AMERICA, LLC

-- Press the securing clips -1- off and remove the selector lever cable from the transmission.

NOTE: Do not bend or kink the selector lever cable.

-- Remove the selector lever cable clip -1- sideways.

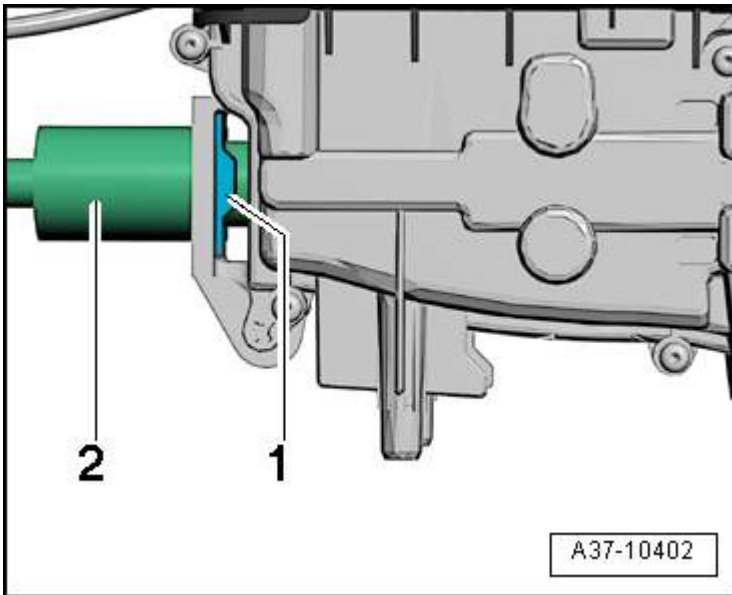


Fig. 114: Removing Selector Lever Cable Retaining Clip Sideways & Selector Lever Cable From Shift Mechanism

Courtesy of AUDI OF AMERICA, LLC

-- Remove the selector lever cable -2- from the selector mechanism.

Installing

Install in reverse order of removal. Note the following:

- Tightening specifications, refer to **SELECTOR LEVER CABLE OVERVIEW**.

NOTE: Replace the O-ring on the selector lever cable.

Replace the lock washers for the noise insulation.

Lubricate the cable eye and the ball socket on the selector lever cable with polycarbamide grease G 052 142 A2 before installing.

-- Install the O-ring -1- on the selector lever cable.

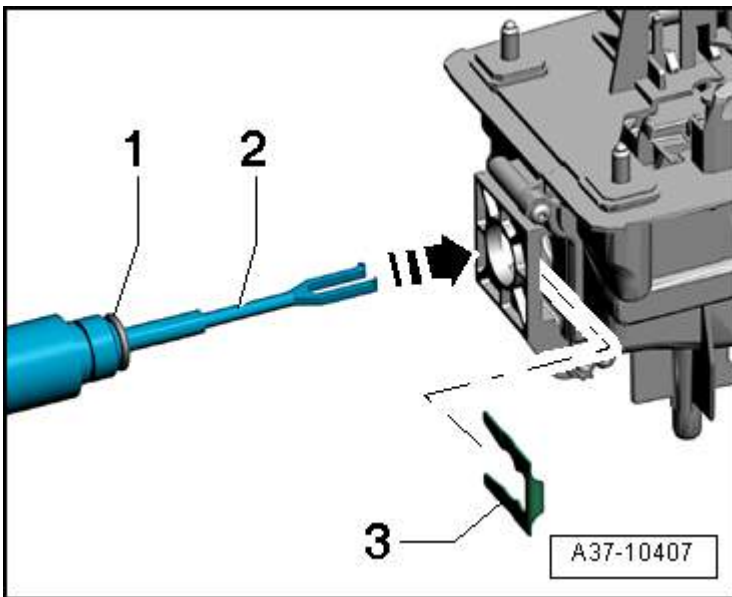


Fig. 115: Replacing O-ring On Selector Lever Cable & Slide Selector Lever Cable Into Shift Mechanism
Courtesy of AUDI OF AMERICA, LLC

-- Install the selector lever cable -2- into the gearshift mechanism function unit -arrow-.

-- Secure the selector lever cable -2- with the clip -3-.

- Installed position: The angled end of the clip -1- faces the shift mechanism.

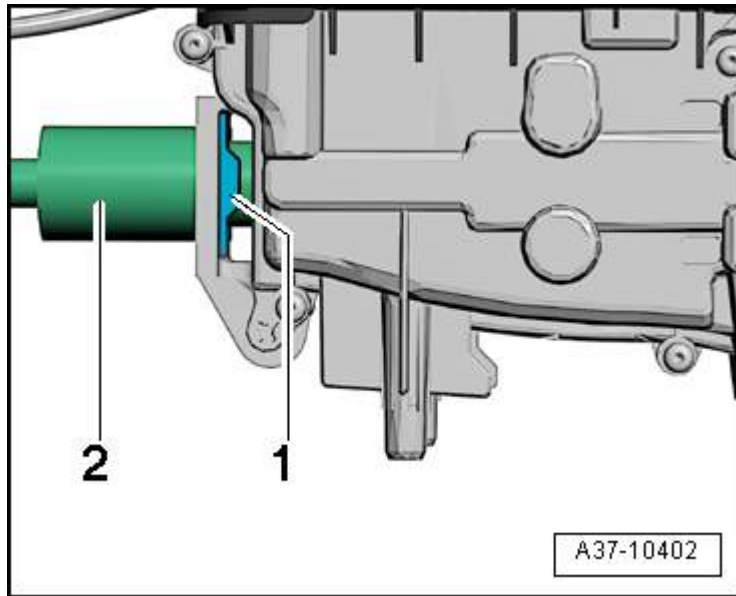


Fig. 116: Removing Selector Lever Cable Retaining Clip Sideways & Selector Lever Cable From Shift Mechanism

Courtesy of AUDI OF AMERICA, LLC

-- Push the selector lever -1- on the transmission all the way to the back -arrow- until the parking lock locks into place.

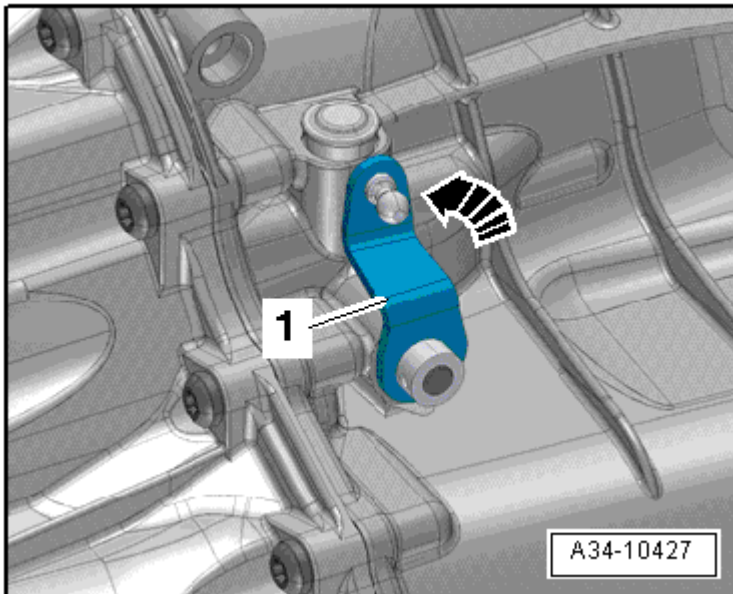


Fig. 117: Pushing Selector Shaft Lever On Transmission All Way To Back Until Parking Lock Locks Into Place

Courtesy of AUDI OF AMERICA, LLC

NOTE: When parking lock is engaged, it must not be possible to turn the front wheels.

- Push the selector lever into "D".
- Make sure the selector lever inside the vehicle is also in "D".
- Carefully press the selector lever cable ball socket -2- in this position onto the selector shaft lever.

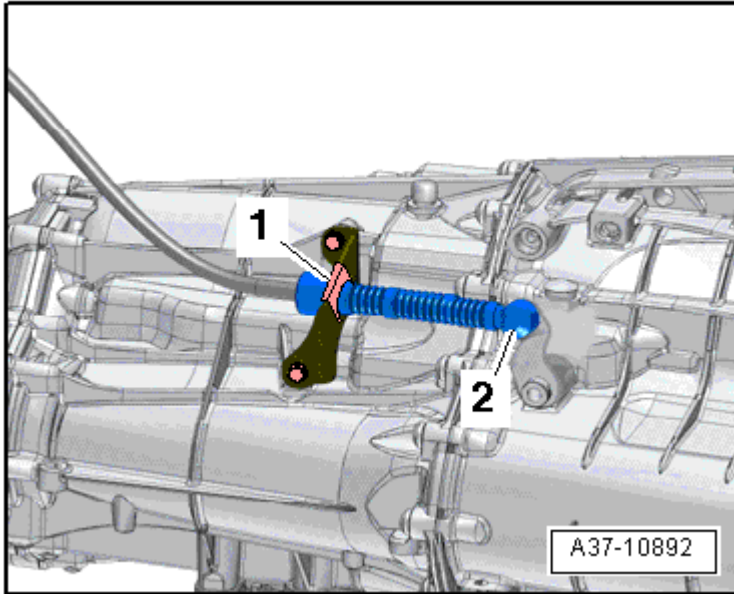


Fig. 118: Selector Lever Cable

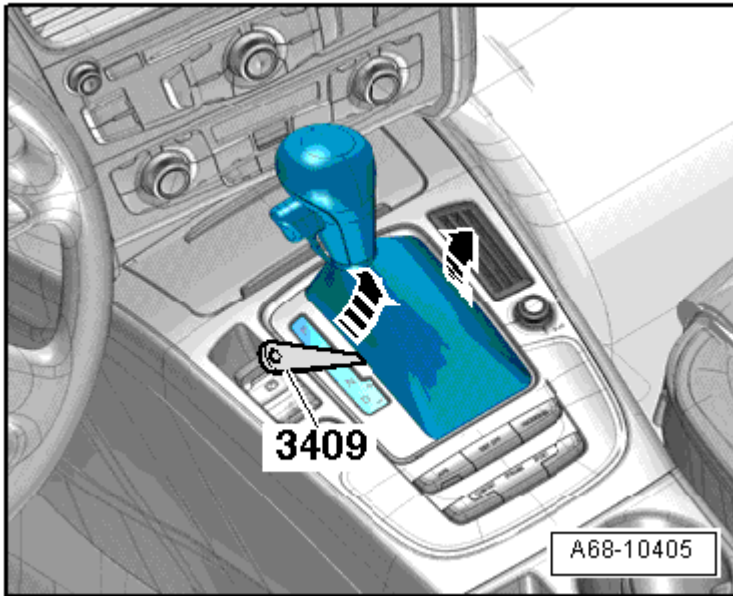
Courtesy of AUDI OF AMERICA, LLC

NOTE: Do not bend selector shaft lever when pressing on, otherwise shift mechanism can no longer be adjusted exactly.

- Secure the selector lever cable with the clip -1-.

NOTE: Do not bend or kink the selector lever cable.

- Adjust the selector lever cable. Refer to SELECTOR LEVER CABLE, ADJUSTING.
- Install tunnel crossmember. Refer to TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW.
- Selector mechanism, checking. Refer to SELECTOR MECHANISM, CHECKING.
- Install the exhaust system free of tension. Refer to Description and Operation.
- Install the subframe crossbrace. Refer to Removal and Installation.
- Install the diagonal brace. Refer to Removal and Installation.



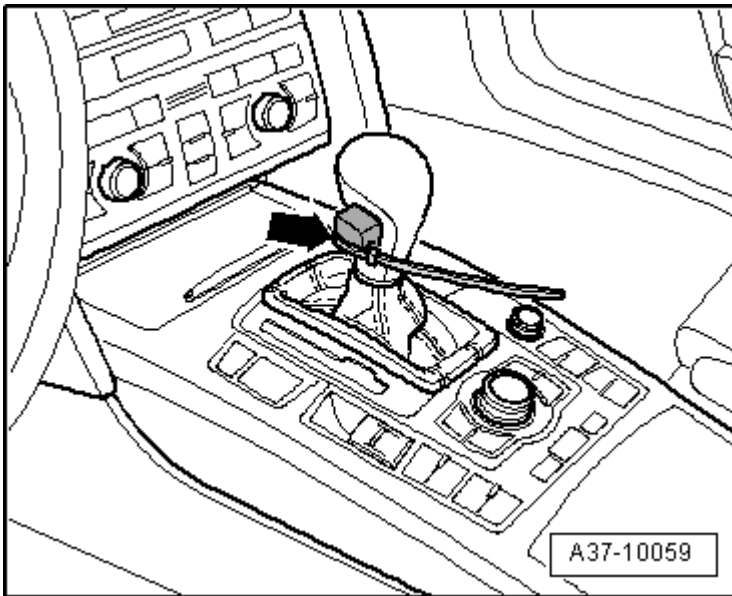


Fig. 120: Securing Interlock Button In Pulled-Out Position Using A Cable
Courtesy of AUDI OF AMERICA, LLC

-- Fold the selector lever boot -1- upward and over the selector lever handle -2-.

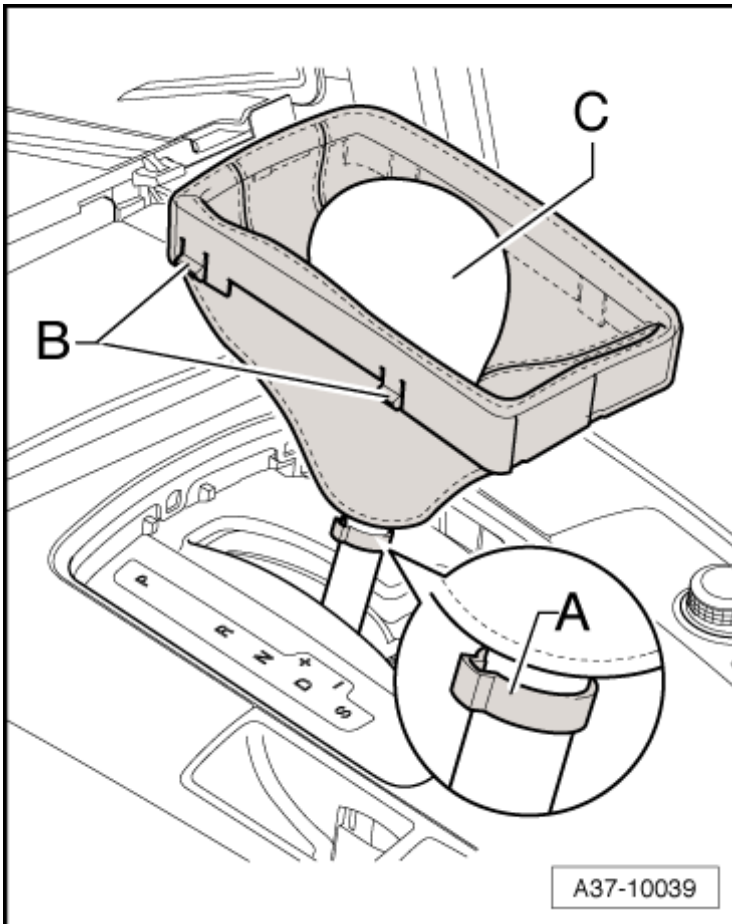
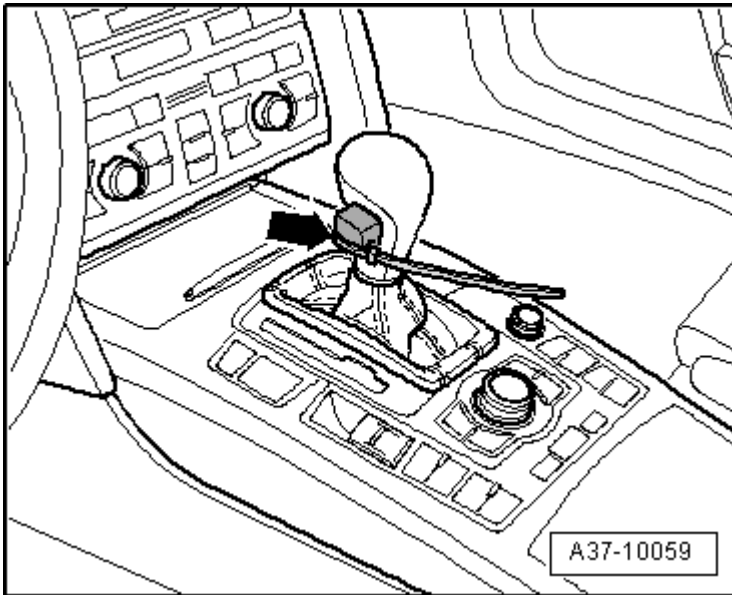


Fig. 121: Selector Lever Boot, Selector Lever Handle And Clamp

Courtesy of AUDI OF AMERICA, LLC

-- Open the clamps -arrow- and remove the selector lever handle along with the selector lever boot, without pressing the locking button.

Installing**Fig. 122: Securing Interlock Button In Pulled-Out Position Using A Cable**

Courtesy of AUDI OF AMERICA, LLC

NOTE: In order to install the selector lever handle, the locking button must be pulled out all the way and secured either with a cable tie -arrow- or with the assembly tool supplied with a new handle.

Do not use mechanical aids or tools to remove from the selector lever handle if the locking button was unintentionally left unsecured. Position the compressed air gun under the handle and press the locking button out with compressed air.

-- Clamp on the new clamps -arrow- onto the selector lever handle.

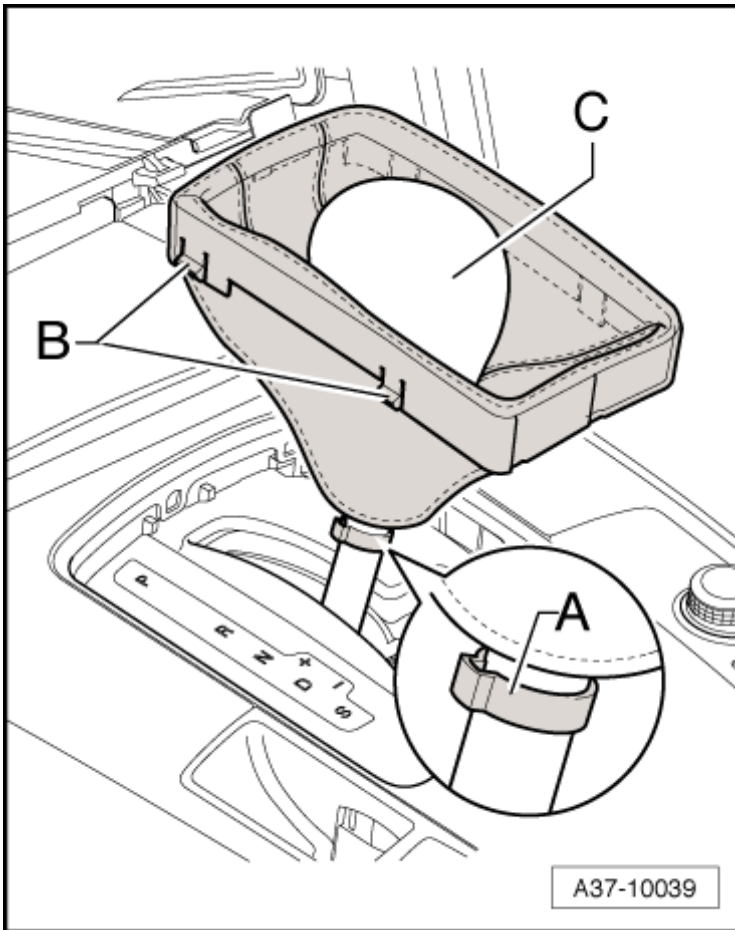


Fig. 123: Selector Lever Boot, Selector Lever Handle And Clamp
 Courtesy of AUDI OF AMERICA, LLC

-- Insert the selector lever handle completely into the selector lever - the locking button faces the driver.

- The handle must lock into the selector lever ring groove.

-- Remove cable ties or assembly tools. The locking button mechanism will engage in the vertical groove on the selector lever. If necessary, press the locking button into the selector lever handle.

-- Move the button mechanism through "R" and "S" to perform the function test.

- If the selector lever positions cannot be reached, remove the handle again. Refer to **SELECTOR LEVER HANDLE**.

-- Use the V.A.G 1275 to clamp the selector lever handle -2- and clamp -arrow- to the selector lever.

-- Install the selector lever boot frame -1- to the center console.

SELECTOR LEVER SENSOR SYSTEM CONTROL MODULE -J587-

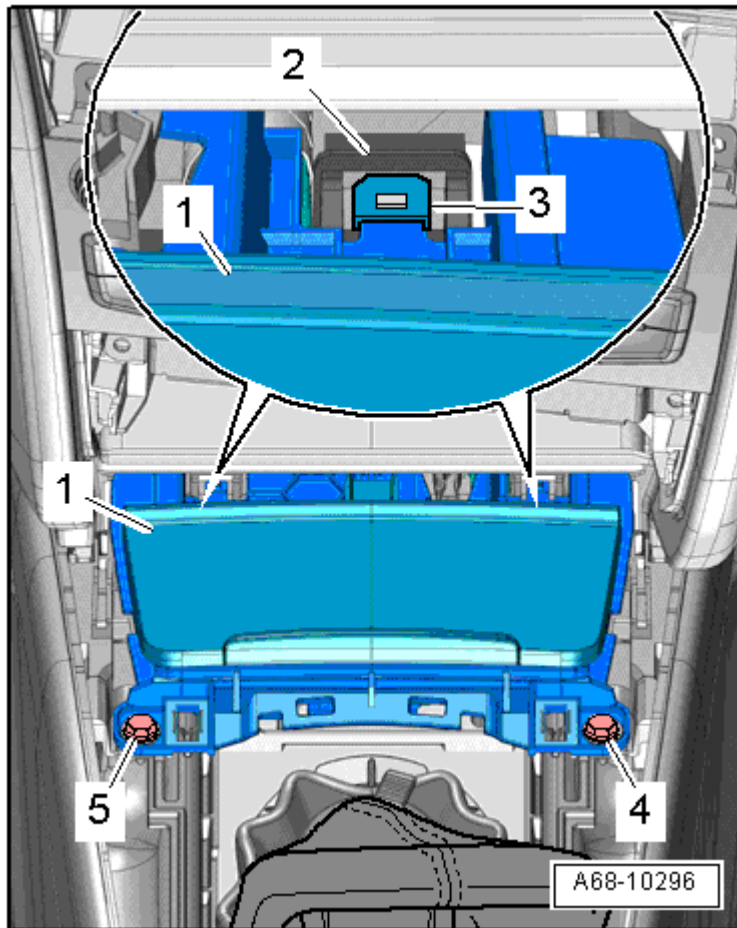
Removing

Fig. 124: Removing Ashtray
Courtesy of AUDI OF AMERICA, LLC

- Remove the selector lever handle. Refer to **SELECTOR LEVER HANDLE**.
- Remove the multimedia system control head -E380-. Refer to **Removal and Installation** .
- Remove the front ashtray. Refer to **Removal and Installation** .
- Disconnect the connector -1-.

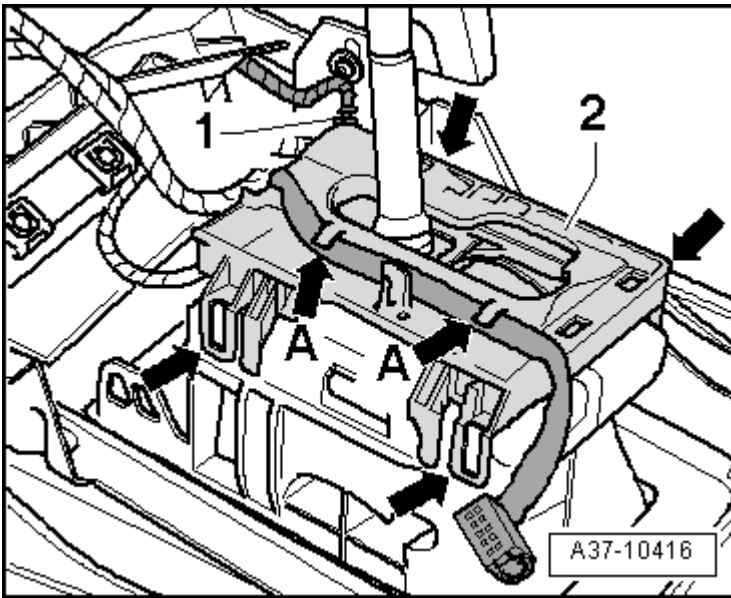


Fig. 125: Selector Lever Sensor System Control Module J587 And Tiptronic Switch F189
 Courtesy of AUDI OF AMERICA, LLC

-- Release the 4 tabs -arrows- and remove the selector lever sensor system control module.

NOTE: Ignore -arrows A-.

Installing

Install in reverse order of removal. Note the following:

- Lock the selector lever sensor system control module with the 4 tabs -arrows-.
- Connect the electric wire to the selector lever transmission range position display unit -Y26- -arrows-.
- Install the front ashtray. Refer to **Removal and Installation** .
- Install the multimedia system control head. Refer to **Removal and Installation** .
- Install the selector lever handle. Refer to **SELECTOR LEVER HANDLE**.

SELECTOR LEVER TRANSMISSION RANGE POSITION DISPLAY UNIT -Y26-

Removing

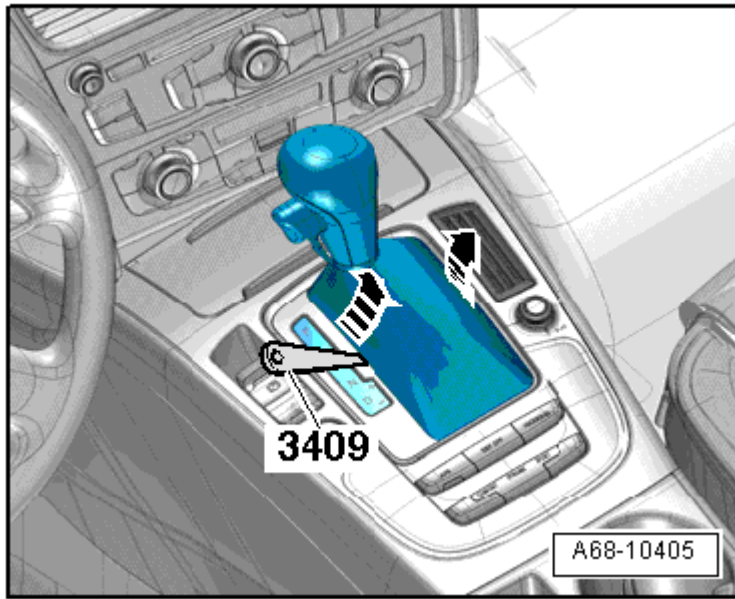


Fig. 126: Removing Selector Lever Boot
 Courtesy of AUDI OF AMERICA, LLC

- Press the button on the parking brake to activate it.
- Move the selector lever into "S".
- Carefully pry out the selector lever boot on the side using the 3409 -arrows- and fold it upward.
- Release the spring -2- and remove the lever transmission range position display unit -1- -arrow-.

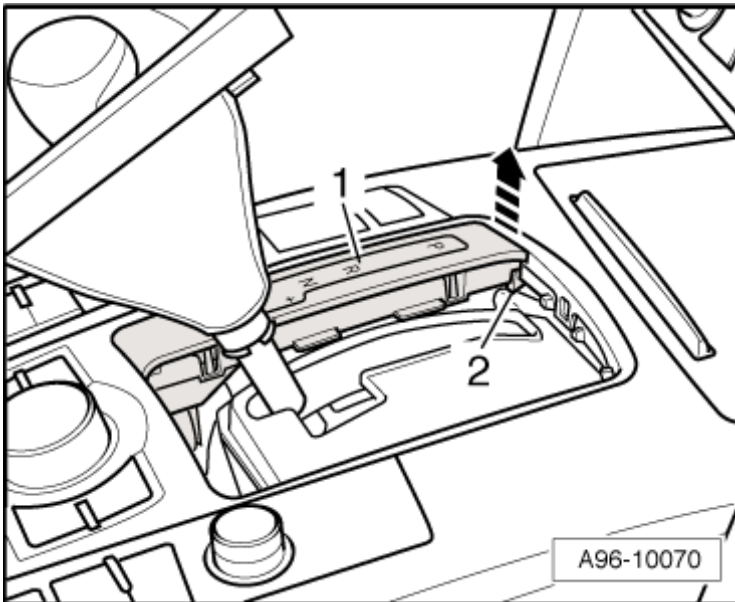


Fig. 127: Releasing Retaining Spring And Removing Selector Lever Transmission Range (TR) Position Display Y26 Upward

Courtesy of AUDI OF AMERICA, LLC

-- Disconnect the connector.

Installing

Install in reverse order of removal.

SHIFT LOCK SOLENOID -N110-

Removing

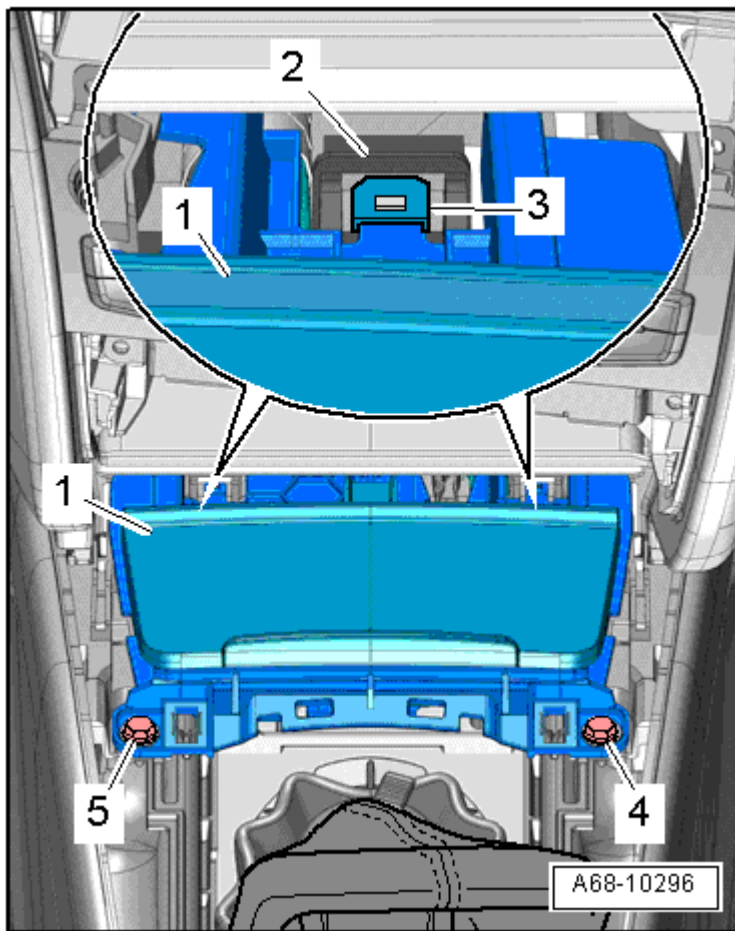


Fig. 128: Removing Ashtray

Courtesy of AUDI OF AMERICA, LLC

-- Move the selector lever into "P".

-- Remove the multimedia system control head -E380-. Refer to **Removal and Installation** .

-- Remove the front ashtray. Refer to **Removal and Installation** .

-- Loosen the nuts -1, 3, 5 and 6- a few turns but do not remove them completely.

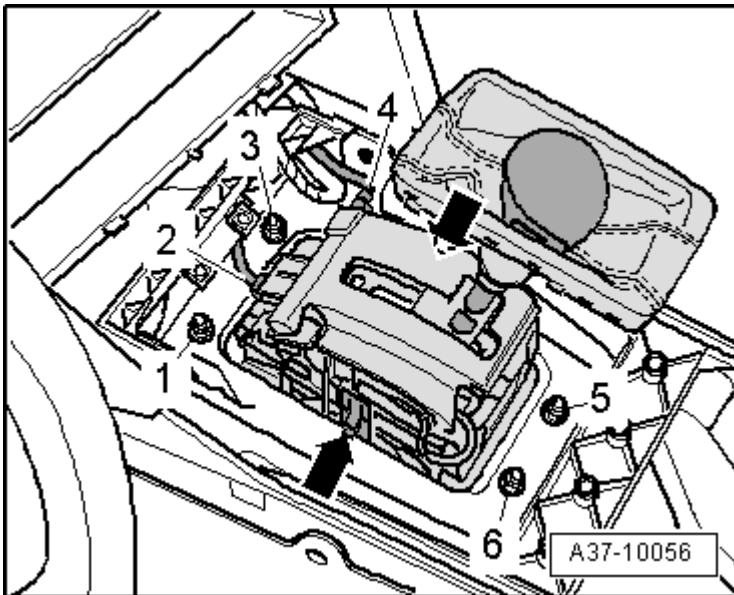


Fig. 129: Disconnecting Selector Mechanism Electrical Connectors And Removing Bolts
Courtesy of AUDI OF AMERICA, LLC

NOTE: This lowers the shift mechanism function unit slightly for better accessibility.

CAUTION: The shift mechanism can be destroyed by broken clips, tabs or other objects.

- Make sure no components or other objects fall into the shift mechanism. The shift mechanism must be replaced if that happens.

-- Open the retaining tabs -2 and 3- in the direction of the -arrow-, slightly raise the front of the sealing cap -A- and hold it in that position.

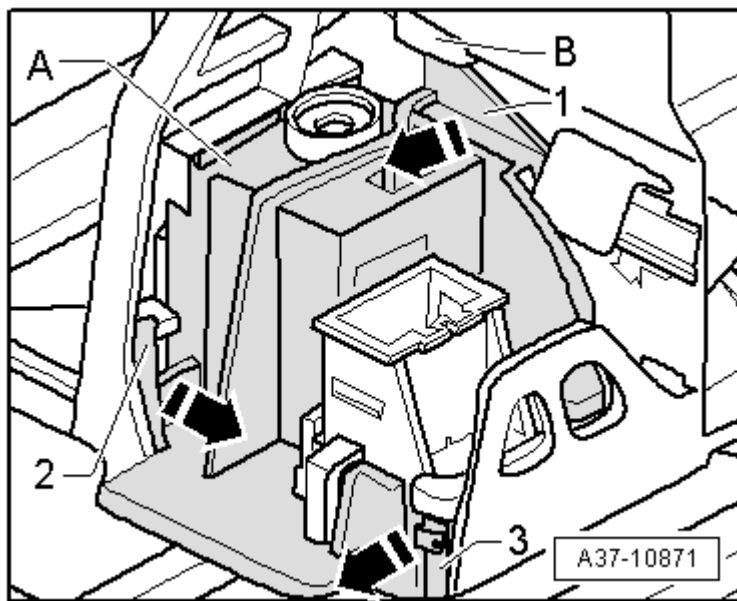


Fig. 130: Identifying Shift Mechanism
Courtesy of AUDI OF AMERICA, LLC

NOTE: This prevents the retaining tabs from engaging again.

- Open the upper tab -1- in direction of -arrow- above the bracket -B- and remove the cap -A-.
- Disconnect the connector from the shift lock solenoid.

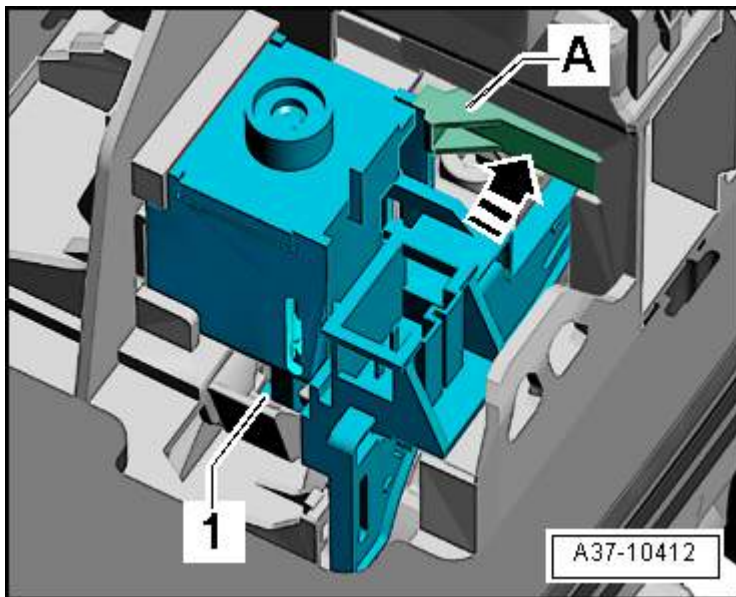


Fig. 131: Pressing Retaining Hooks Into Shift Mechanism
Courtesy of AUDI OF AMERICA, LLC

- Push the hook -A- in direction of -arrow- and hold it in this position.

NOTE: Replace the selector mechanism function unit if any of the hooks -A- are broken off.

-- Tilt the shift lock solenoid in direction of -arrow- so that the ball head -1- disengages from the lever on the selector mechanism.

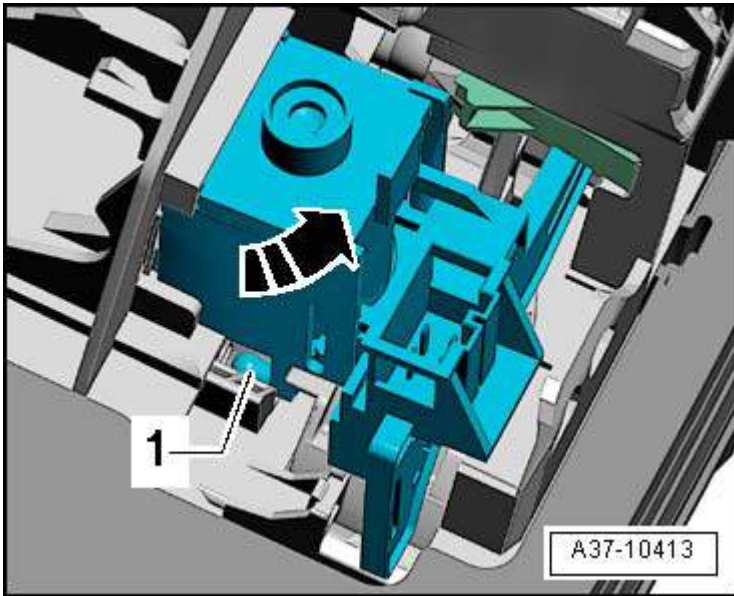


Fig. 132: Shift Lock Solenoid N110
Courtesy of AUDI OF AMERICA, LLC

-- Remove the shift lock solenoid.

Installing

Install in reverse order of removal. Note the following:

- Tightening specification, refer to **SELECTOR MECHANISM OVERVIEW**.

-- Turn the ball head -1- into the correct installed position.

-- Install the shift lock solenoid into the selector mechanism at an angle and then tilt it opposite the direction of -arrow-.

- The ball head -1- must engage completely in the operating lever on the shift mechanism. Press it down using a small screwdriver if necessary.

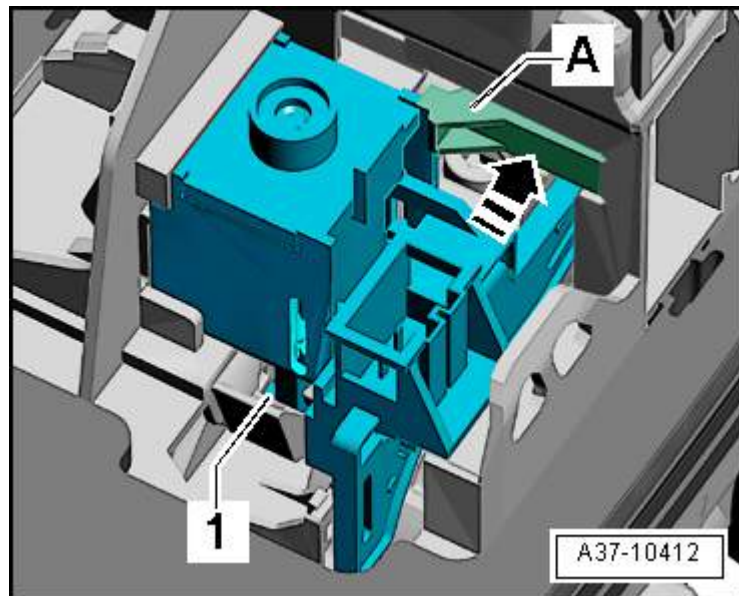


Fig. 133: Pressing Retaining Hooks Into Shift Mechanism
Courtesy of AUDI OF AMERICA, LLC

- Attach the shift lock solenoid to the locking bracket -A-.
- Place the cover -A- over the shift lock solenoid and carefully lock it into place -1 to 3-.

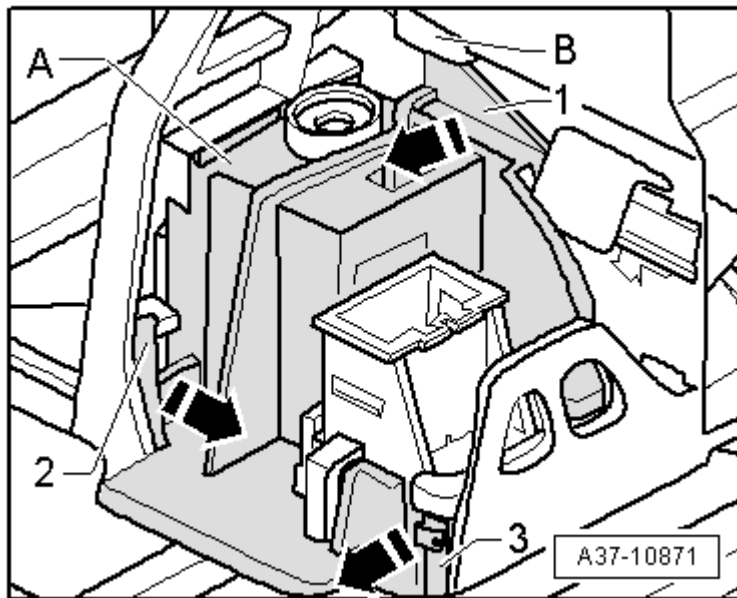


Fig. 134: Identifying Shift Mechanism
Courtesy of AUDI OF AMERICA, LLC

- Connect the electrical connectors.
- Check the shift mechanism function before completing assembly. Refer to **SELECTOR MECHANISM**.

CHECKING.

- Install the front ashtray. Refer to **Removal and Installation** .
- Install the multimedia system control head -E380-. Refer to **Removal and Installation** .

SHIFT MECHANISM FUNCTION UNIT**Special tools and workshop equipment required**

- Pry Lever - Rmv Outside Mirror 80 - 200
- Engine/Transmission Jack V.A.G 1383 A
- Counterhold Tool Touareg V10 T10172 with Adapter T10172/5
- Gearbox Support T10337

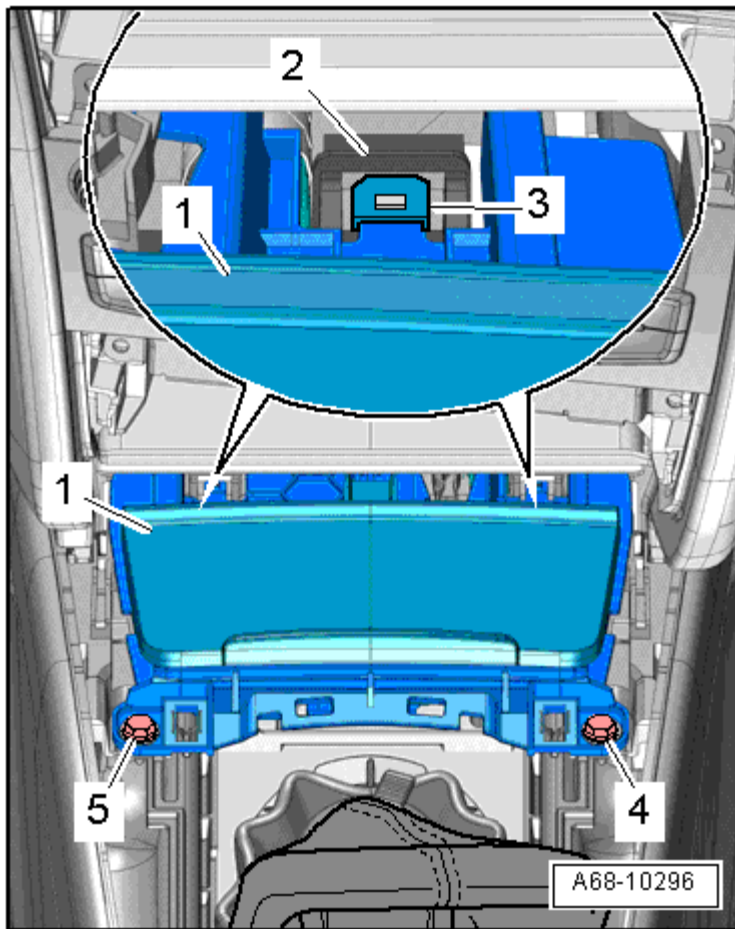
Removing

Fig. 135: Removing Ashtray
Courtesy of AUDI OF AMERICA, LLC

- Remove the front ashtray. Refer to **Removal and Installation** .
- Disconnect the connectors -2 and 4-

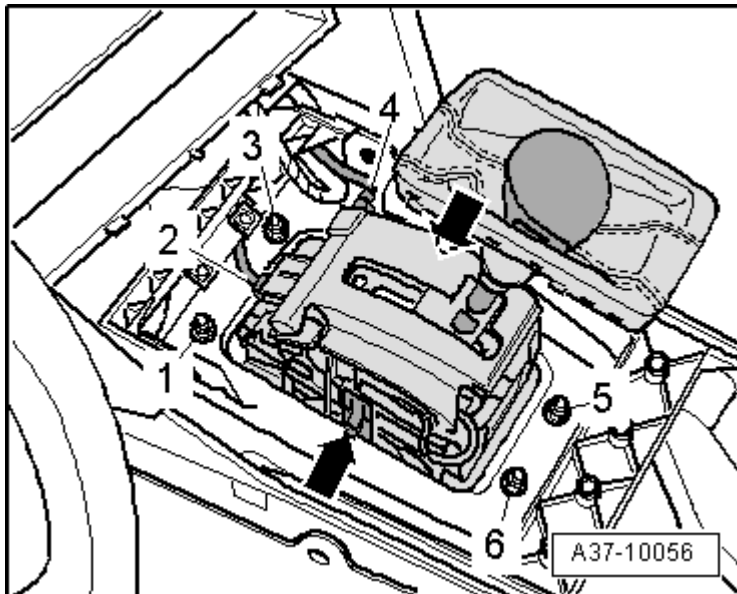


Fig. 136: Disconnecting Selector Mechanism Electrical Connectors And Removing Bolts
Courtesy of AUDI OF AMERICA, LLC

NOTE: The illustration does not show the insulation mat.

A second technician is required when detaching shift mechanism below vehicle.

- Remove the insulation mat over the shift mechanism.
- Remove the bolts -1, 3, 5 and 6-
- Remove the noise insulation -1 and 2-. Refer to **Description and Operation** .

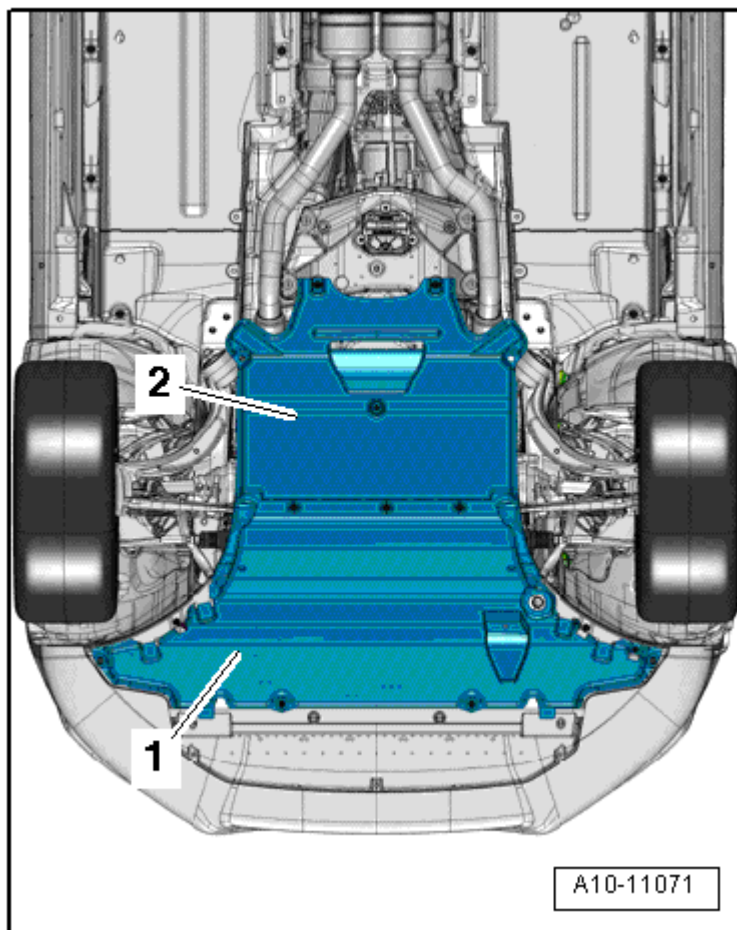


Fig. 137: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

-- Remove the right front muffler. Refer to **Removal and Installation** .

A5 Cabriolet

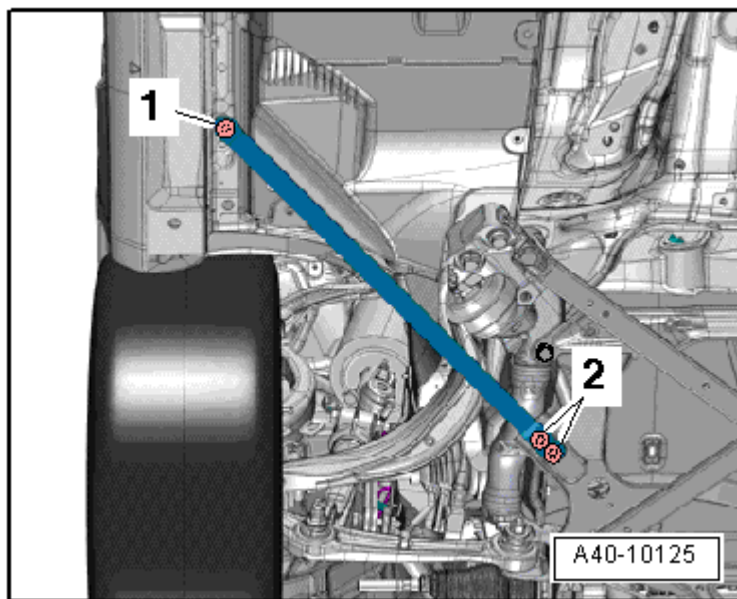


Fig. 138: Identifying Clamping Sleeve
Courtesy of AUDI OF AMERICA, LLC

-- Remove the left and right diagonal braces. Refer to **Removal and Installation** .

All Vehicles

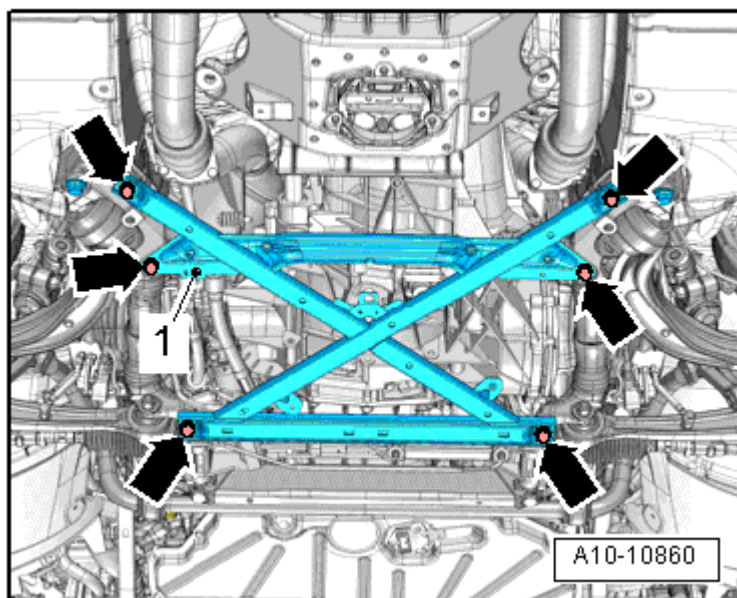


Fig. 139: Removing Subframe Crossbrace
Courtesy of AUDI OF AMERICA, LLC

-- Remove the subframe crossbrace. Refer to **Removal and Installation** .

CAUTION: The suspension components could be damaged.

- Do not rest the vehicle on its wheels if the subframe mount, steering gear or subframe crossbrace are not installed correctly.

-- Remove the bolts -arrows- and the driveshaft heat shield -1-, if applicable.

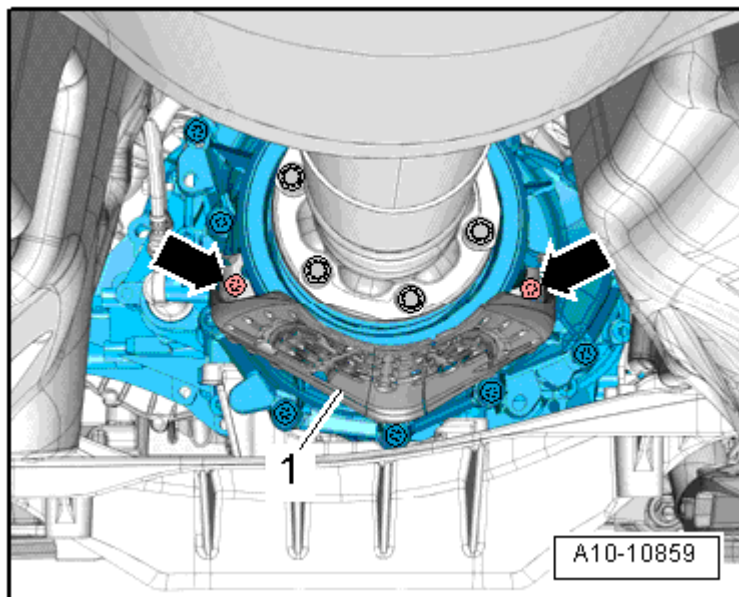


Fig. 140: Driveshaft Heat Shield - Tightening Specification
Courtesy of AUDI OF AMERICA, LLC

Vehicles with a Bolted Driveshaft

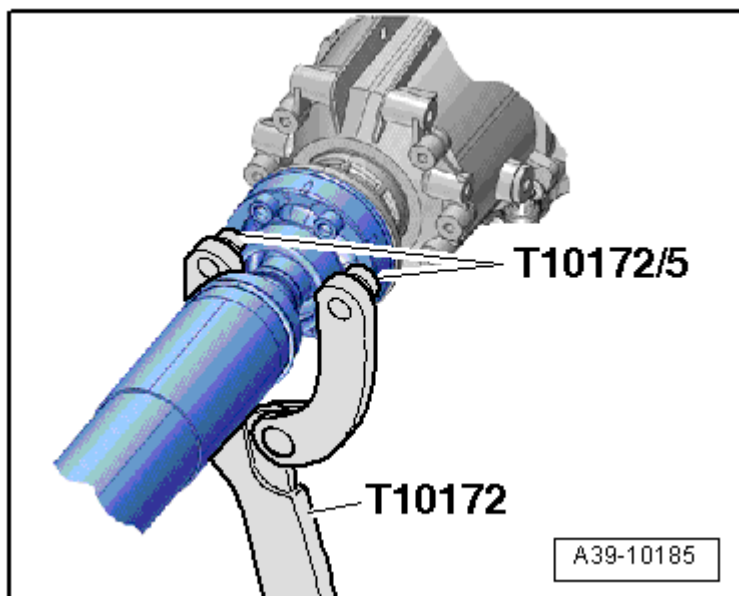


Fig. 141: Holding Driveshaft Using T10172

Courtesy of AUDI OF AMERICA, LLC

- Counter hold using T10172 and T10172/5 and remove the bolts attaching the driveshaft to the transmission.
- Slide the driveshaft toward the rear final drive; the CV joints can move axially.
- Place the driveshaft on the front crossmember.

Vehicles with an Attached Driveshaft

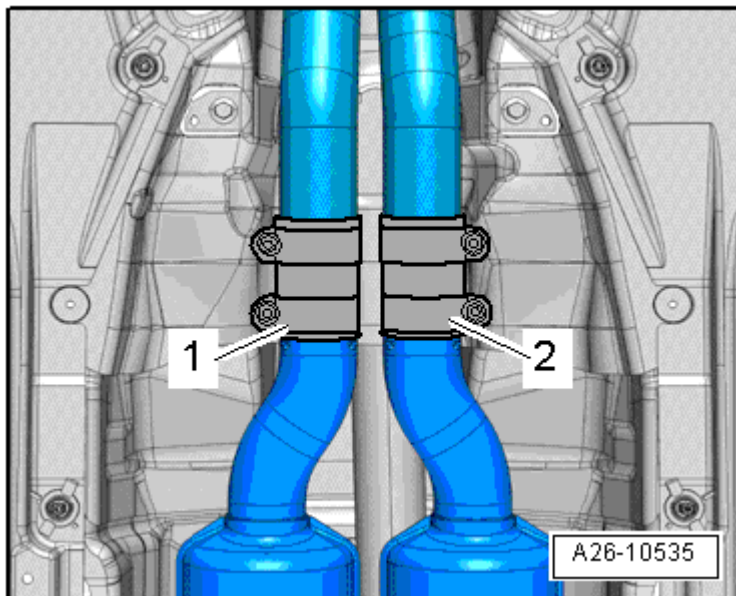
NOTE: Check the vehicle data label or the designation on the rear final drive itself to determine which one is installed in the vehicle. Then select the correct rear final drive repair information.

- Remove the driveshaft (attached). Refer to Removal and Installation or Removal and Installation.

CAUTION: The decoupling elements in the front muffler could be damaged.

- Do not bend decoupling element in front muffler more than 10°.

- Loosen the clamping sleeve -1-, slide to the rear and then tie it to the left front muffler.

**Fig. 142: Loosening Bolts Vehicles With Dual Exhaust System**

Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2-.

All Vehicles

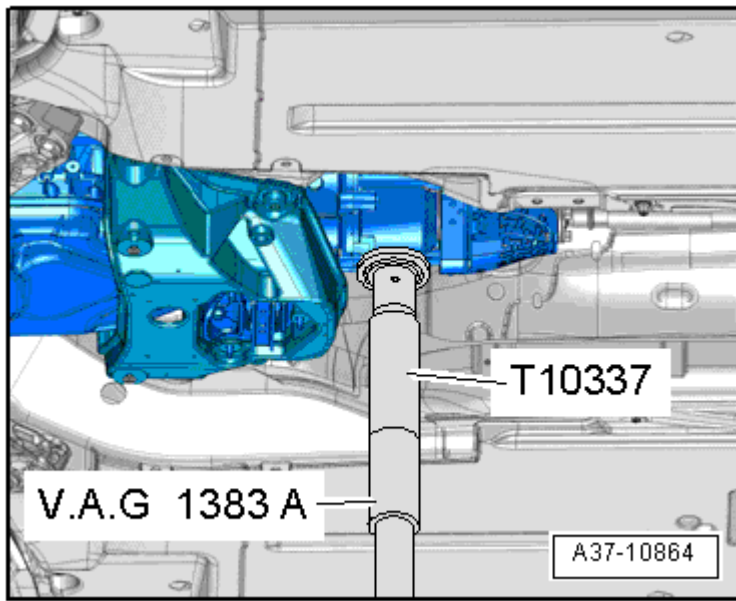


Fig. 143: Mounting T10337 On V.A.G 1383 A And Then Attach It To Bottom Of Transmission
Courtesy of AUDI OF AMERICA, LLC

- Mount the T10337 on the V.A.G 1383 A and then attach it to the bottom of the transmission.
- Raise the transmission slightly.

WARNING: There is the risk of an accident.

- Do not lower the V.A.G 1383 A during assembly and do not leave it under the vehicle unsupervised.

- Remove the bolts from the tunnel crossmember -arrows-.

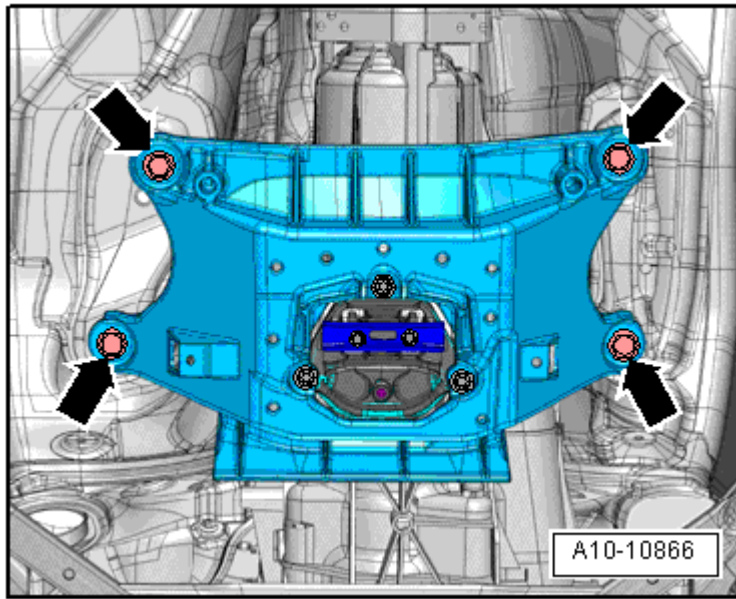


Fig. 144: Transmission Support Overview
Courtesy of AUDI OF AMERICA, LLC

-- Lower the transmission to dimension -a- using V.A.G 1383 A.

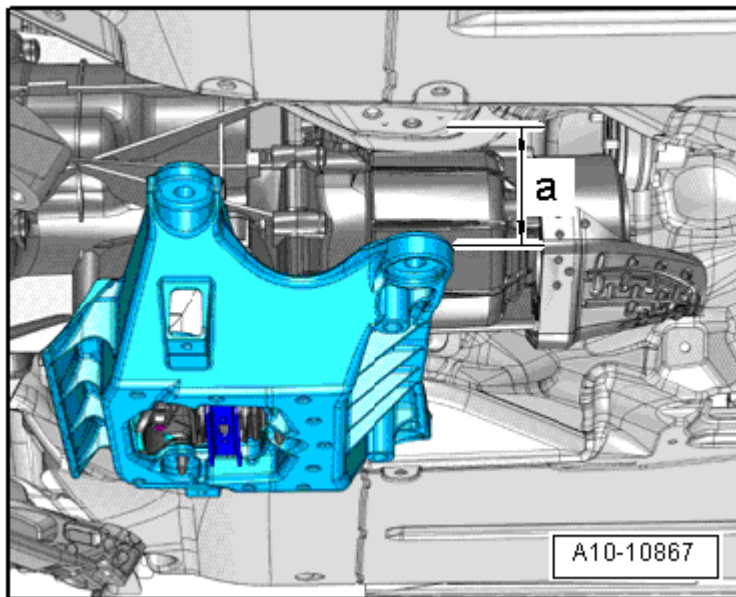


Fig. 145: Lowering Transmission
Courtesy of AUDI OF AMERICA, LLC

- Dimension -a- = 70 mm maximum.

-- Pry the selector lever cable ball socket -2- off the selector lever using 80 - 200.

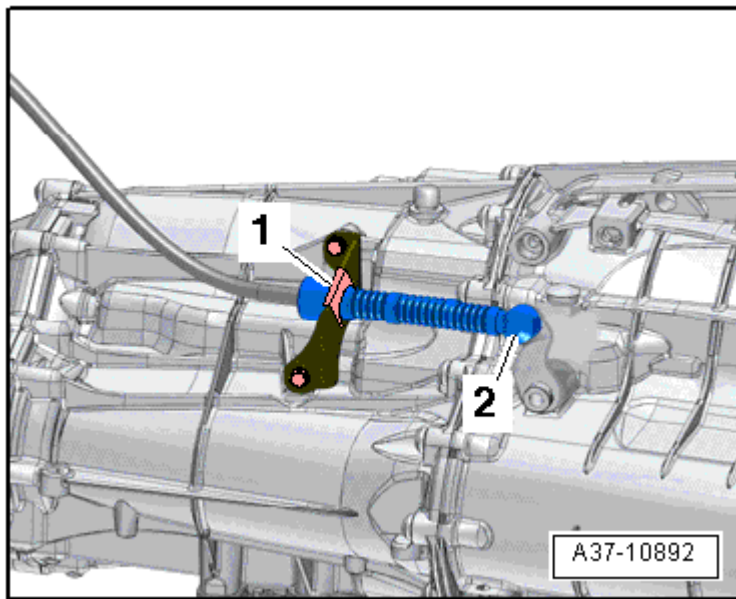


Fig. 146: Selector Lever Cable

Courtesy of AUDI OF AMERICA, LLC

-- Press the securing clips -1- off and remove the selector lever cable from the transmission.

NOTE: Do not bend or kink the selector lever cable.

-- Remove the nuts -arrows- (if equipped).

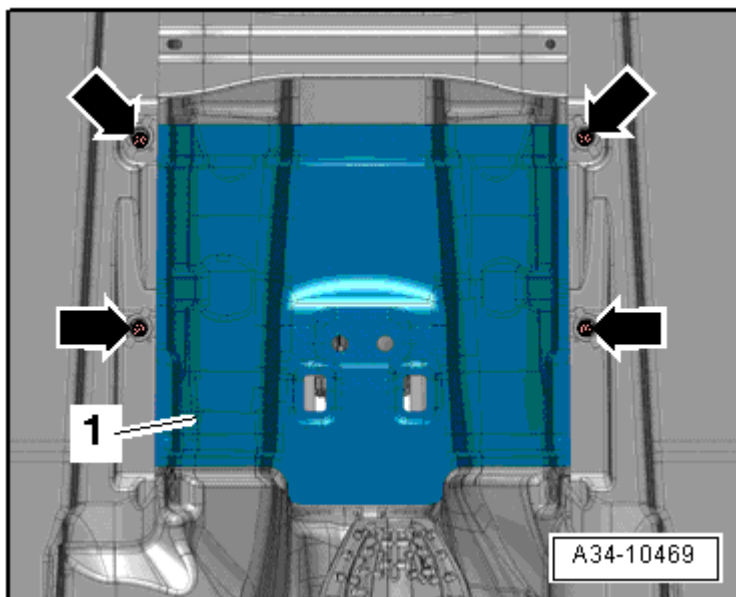


Fig. 147: Removing Nuts

Courtesy of AUDI OF AMERICA, LLC

-- Lower the underbody cover on the inner side just enough until the heat shield -1- for the center tunnel can be removed.

-- Remove the selector mechanism.

Installing

Install in reverse order of removal. Note the following:

- Tightening specifications, refer to **SELECTOR MECHANISM OVERVIEW**.

NOTE: **Lubricate the ball socket on the selector lever cable with polycarbamide grease G 052 142 A2 before installing.**

Do not bend or kink the selector lever cable.

-- Adjust the selector lever cable. Refer to **SELECTOR LEVER CABLE, ADJUSTING**.

-- Install the noise insulation. Refer to **Description and Operation** .

-- Install the tunnel crossmember. Refer to **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW**.

-- Selector mechanism, checking, refer to **SELECTOR MECHANISM, CHECKING**.

NOTE: **Check the vehicle data label or the designation on the rear final drive itself to determine which one is installed in the vehicle. Then select the correct rear final drive repair information.**

-- Install the driveshaft. Refer to **Removal and Installation** or **Removal and Installation** .

-- Install the exhaust system free of tension. Refer to **Description and Operation** .

-- Install the subframe crossbrace. Refer to **Removal and Installation** .

-- Install the diagonal brace. Refer to **Removal and Installation** .

-- Install the rear noise insulation. Refer to **Description and Operation** .

-- Install the front ashtray. Refer to **Removal and Installation** .

- Perform "Guided Functions" using the vehicle diagnosis tester after removing and installing the selector mechanism function unit. Refer to **TRANSMISSION GUIDED FUNCTIONS**.

TRANSMISSION PARK SELECTOR SWITCH -F305-

- Installed location: The transmission park selector switch, which consists of two microswitches -1 and 2-,

is installed on the circuit board -B- on the shift lock solenoid -N110- -A-.

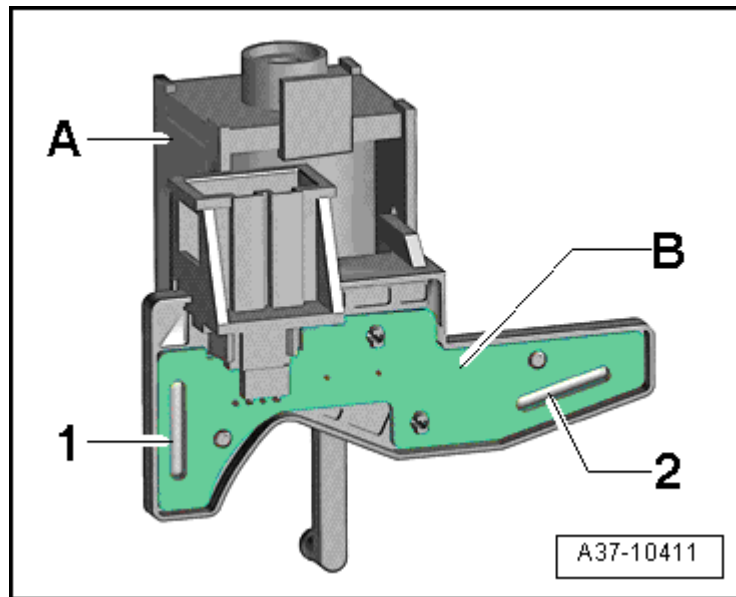


Fig. 148: Transmission Park Selector Switch F305

Courtesy of AUDI OF AMERICA, LLC

The transmission park selector switch can only be replaced together with the shift lock solenoid. Refer to **Shift Lock Solenoid -N110-**.

TRANSMISSION, REMOVING - ENGINE CODE(S): CCBA & CGXC

Special tools and workshop equipment required

- Pry Lever - Rmv Outside Mirror 80 - 200
- Engine Support Bridge 10 - 222 A
- Spindles 10 - 222 A /11
- Engine/Transmission Jack V.A.G 1383 A
- Used Oil Collection and Extraction Device V.A.G 1782
- Engine Bung Set VAS 6122
- Counterhold Tool Touareg V10 T10172 with Adapter T10172/5
- Socket T40058
- Gearbox Support T40173
- Adapter T40093/6
- Attachment T40091/3

Preparing T40173

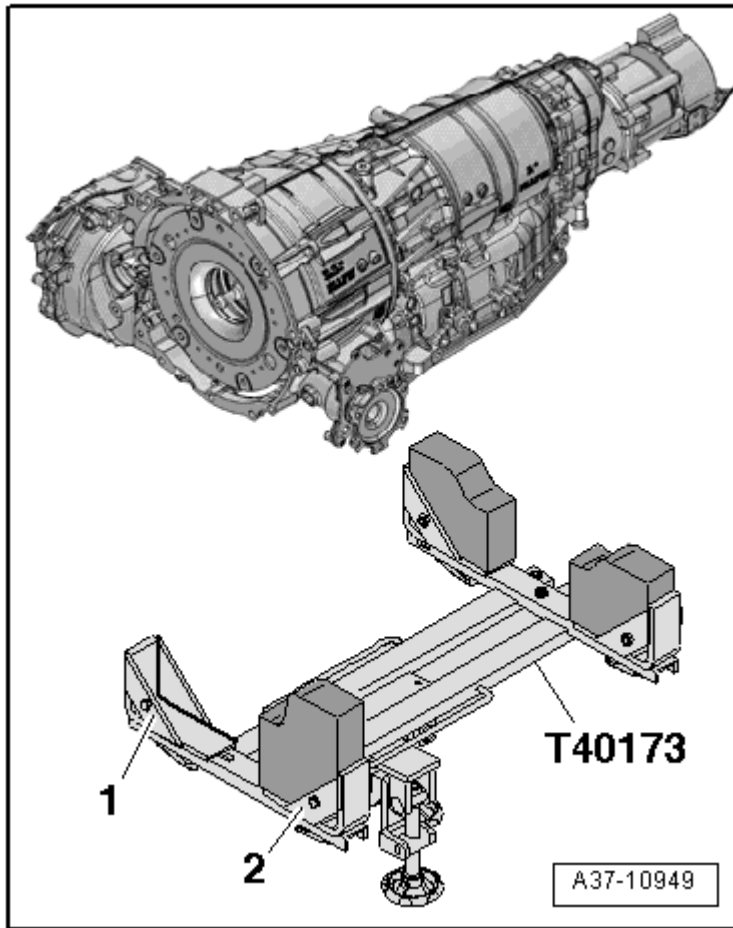


Fig. 149: Identifying Bracket Attached To -1- Must Be Removed & Bracket -2- Must Be Turned So That Longer Side Faces Up

Courtesy of AUDI OF AMERICA, LLC

- The bracket attached to -1- must be removed.
- The bracket -2- must be turned so that the longer side faces up as illustrated.

Removing

CAUTION: Danger of causing damage to other electronic components when disconnecting the battery.

- Complete the steps for disconnecting the battery.

- Position the front wheels so they are straight.
- Turn off the ignition and remove the key.

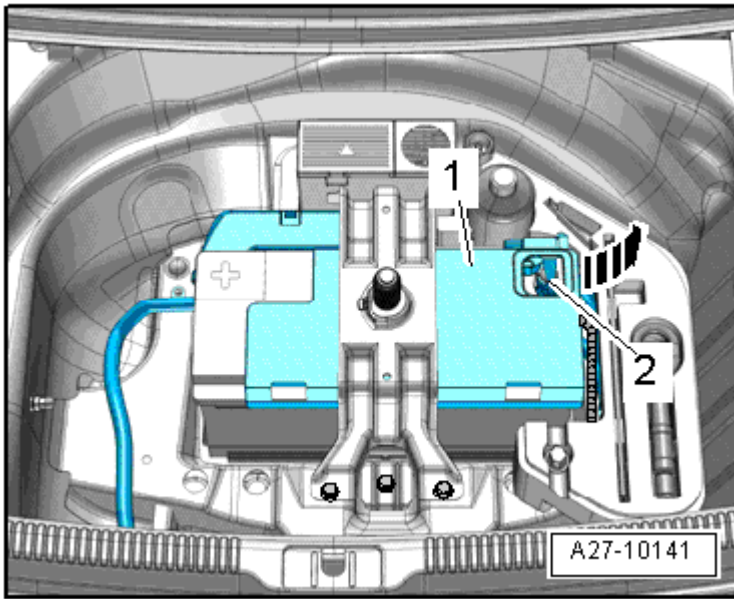


Fig. 150: Identifying Battery

Courtesy of AUDI OF AMERICA, LLC

-- Disconnect the battery Ground (GND) cable -2-. Refer to **Removal and Installation** .

Vehicles with Hydraulic Power Steering

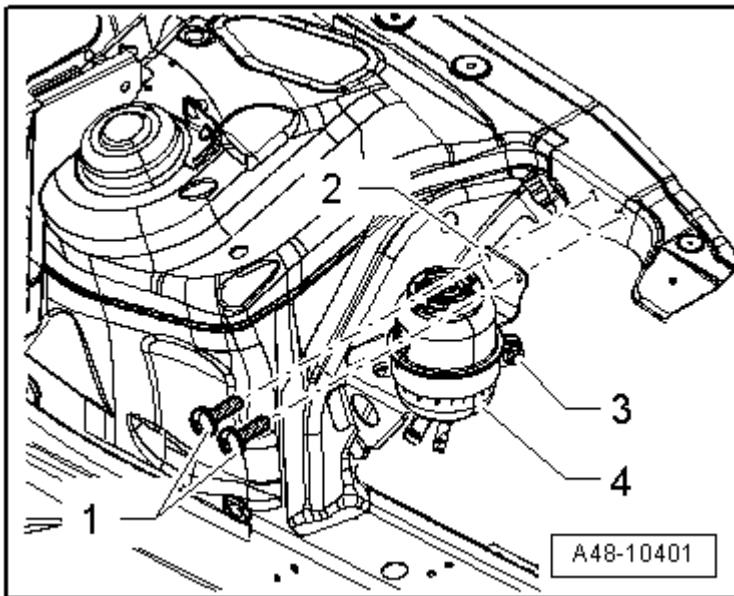


Fig. 151: Reservoir Bracket to the Body

Courtesy of AUDI OF AMERICA, LLC

-- Extract the power steering fluid from the power steering reservoir -3- using V.A.G 1782.

NOTE: Ignore -1, 2 and 4-

Vehicles with 3.0L TFSI Engine

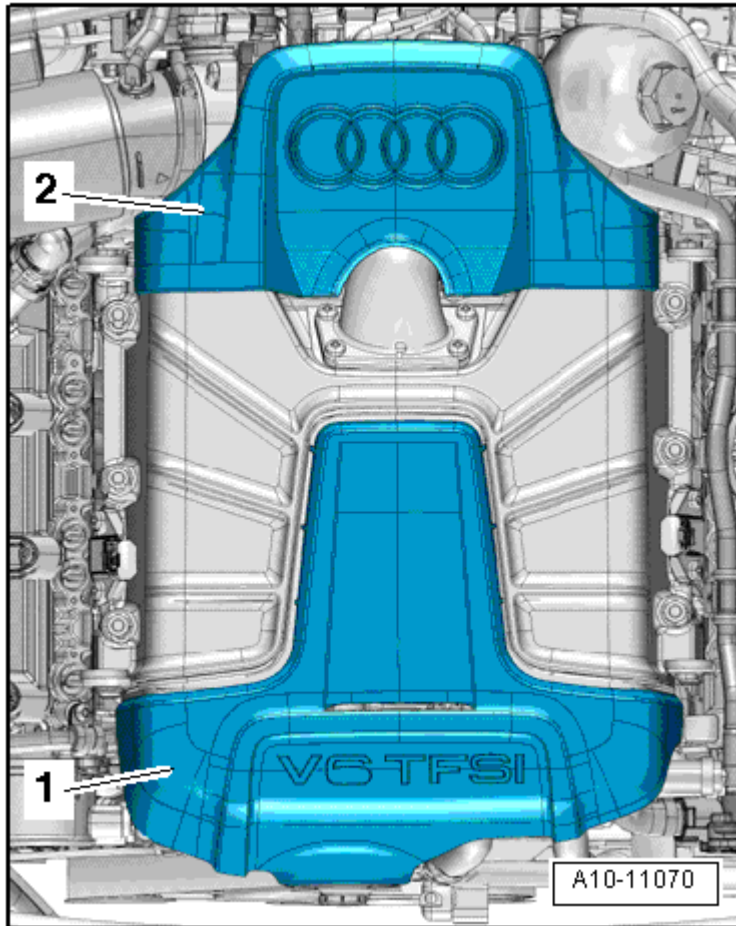


Fig. 152: Engine Cover -1- and -2-
Courtesy of AUDI OF AMERICA, LLC

-- Remove the engine covers -1 and 2- upward.

All Vehicles

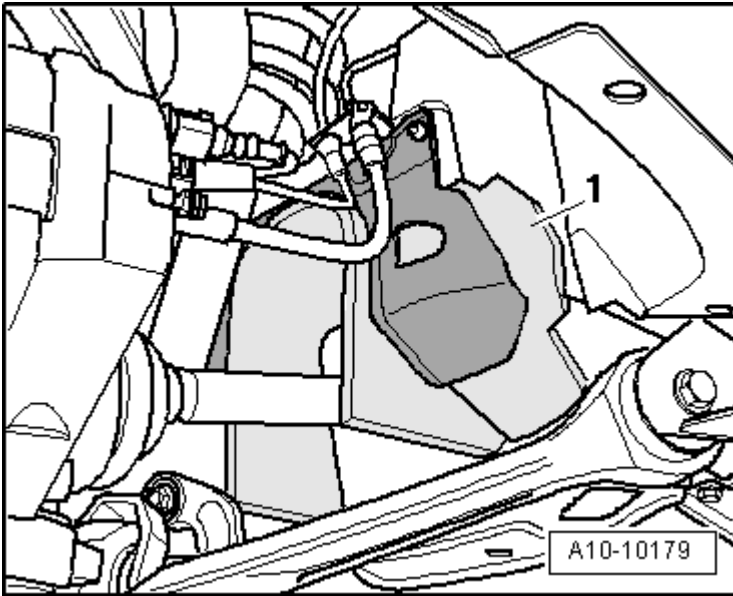


Fig. 153: Removing Right Drive Axle Cover
Courtesy of AUDI OF AMERICA, LLC

- Remove the left and right front wheels.
- Remove the left and right drive axle cover -1- inside the wheel housing.
- Remove the noise insulation -1 and 2-. Refer to **Description and Operation** .

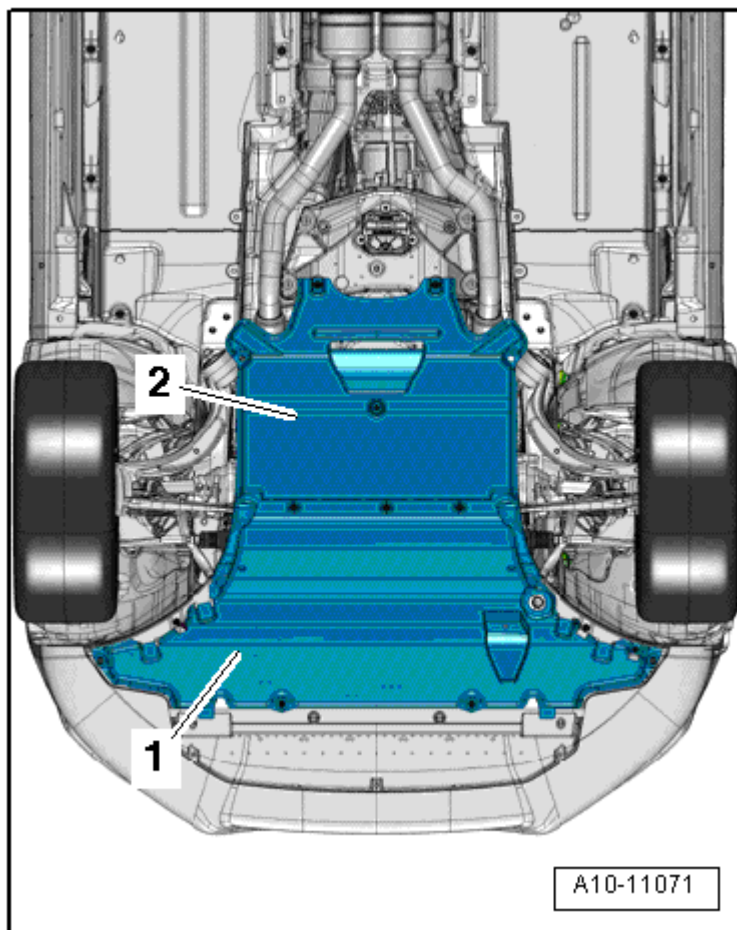


Fig. 154: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

-- Remove the left and right front mufflers. Refer to **Removal and Installation** .

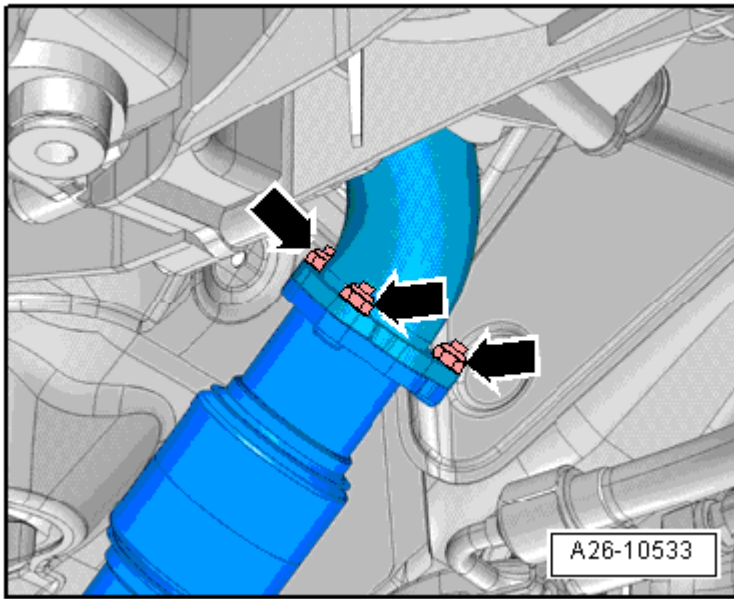


Fig. 155: Removing Left Front Muffler Nuts
Courtesy of AUDI OF AMERICA, LLC

-- Remove the nuts -arrows- and bolt -1-. Remove the right catalytic converter from the exhaust manifold and move it toward the right.

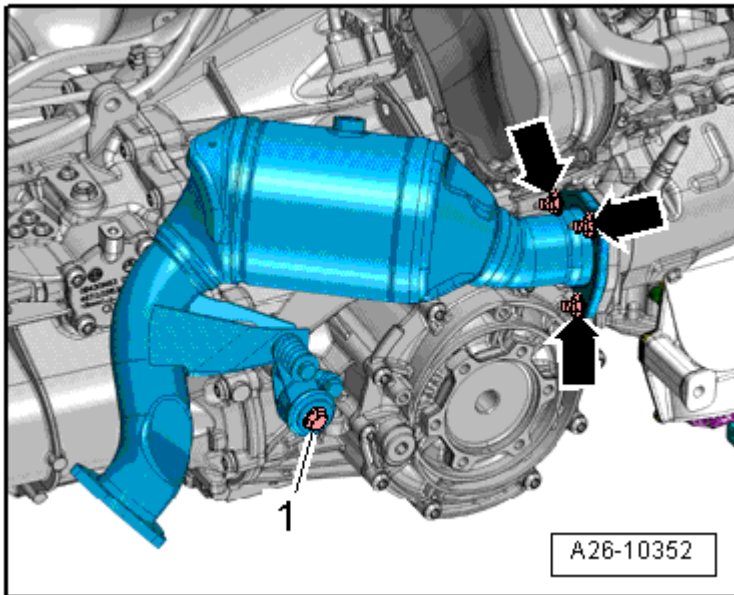


Fig. 156: Removing Nuts And Bolts And Remove Right Catalytic Converter From Exhaust
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolt -arrow- from the ATF pipes.

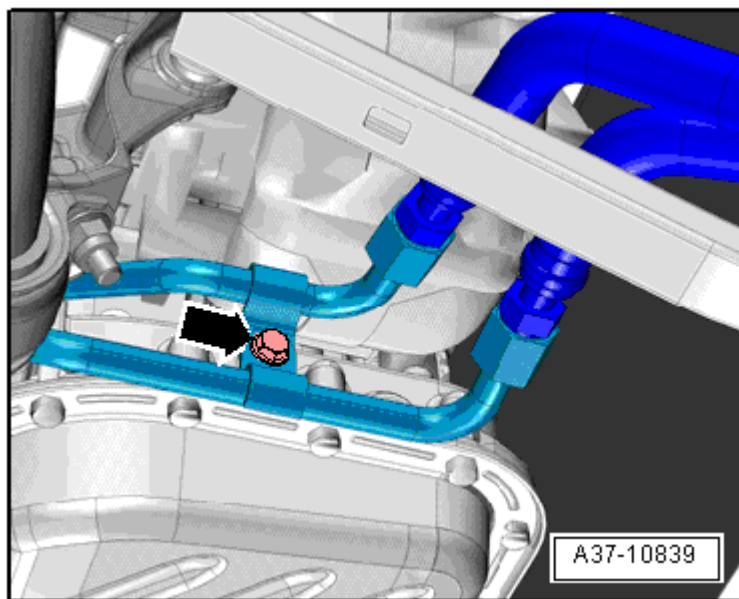


Fig. 157: Removing Bolt For ATF Line Bracket
Courtesy of AUDI OF AMERICA, LLC

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

Vehicles with an ATF Pipe Filter

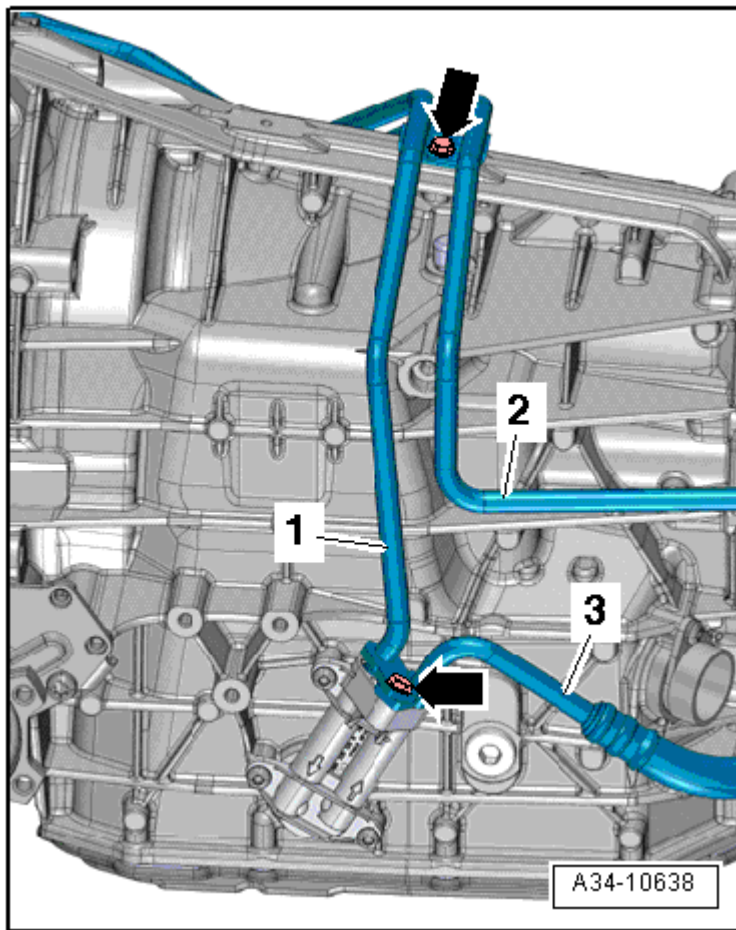


Fig. 158: Identifying Bolts -Arrows- And Pull ATF Pipe -1- Off Transmission
Courtesy of AUDI OF AMERICA, LLC

NOTE: Place a clean cloth under the separating point to catch the escaping ATF.

-- Remove the bolts -arrows- and pull the ATF pipe -1- off the transmission.

NOTE: Ignore -2 and 3-.

-- Remove the bolt -1-.

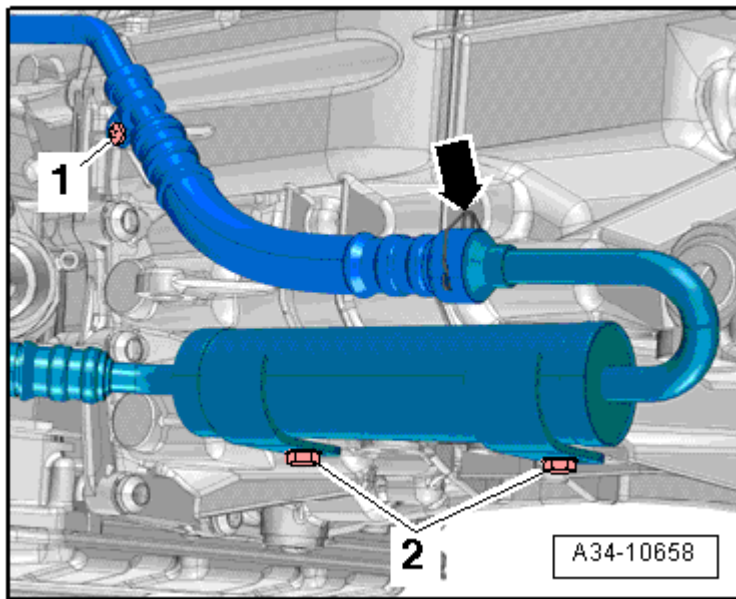


Fig. 159: Identifying ATF Pipe Filter

Courtesy of AUDI OF AMERICA, LLC

-- Remove the circlip -arrow- and separate the ATF pipe from the ATF pipe filter.

NOTE: Ignore -2-.

-- Tie up the ATF pipes -1 and 2-.

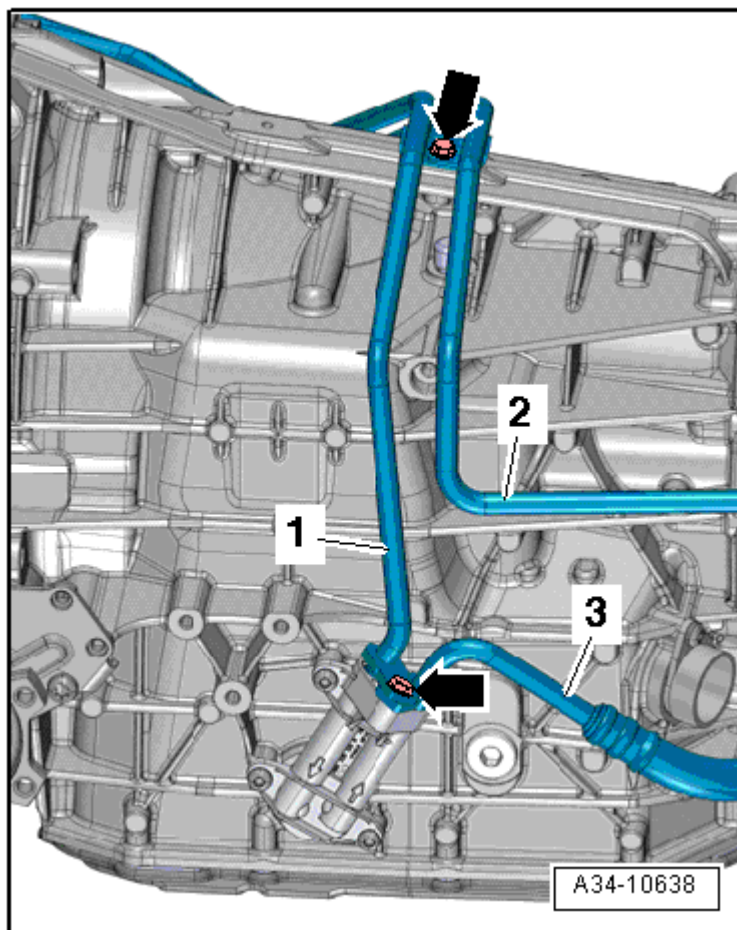


Fig. 160: Identifying ATF Pipes -1 And 2-
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -3-.

-- Seal any open lines and connections with a clean plug from the VAS 6122.

Vehicles with an ATF Filter

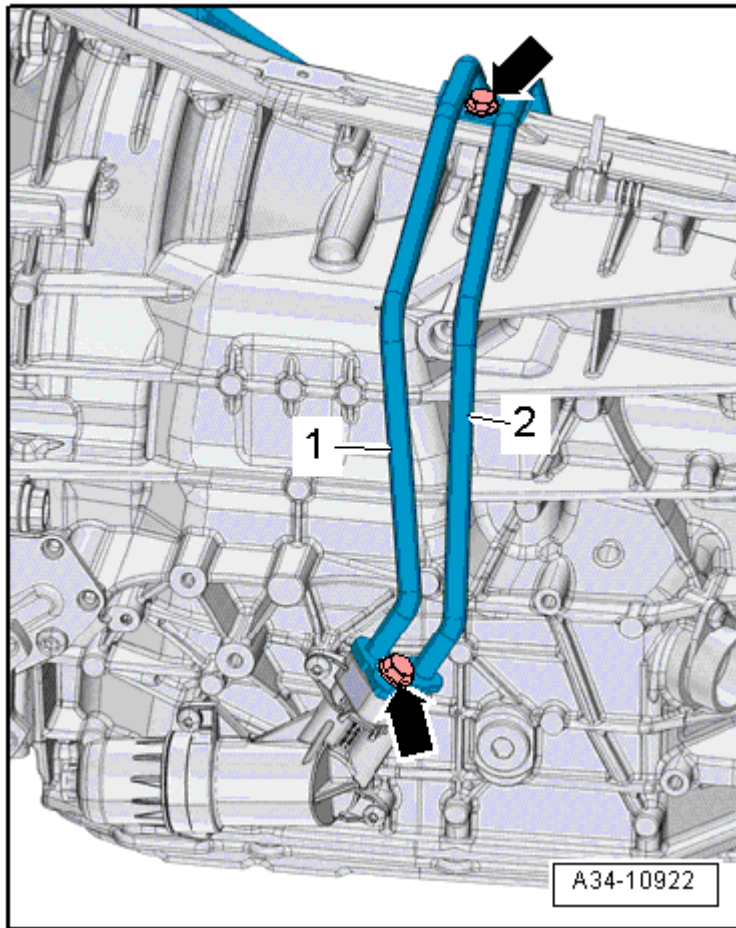


Fig. 161: Removing Bolts -Arrows-, Pull ATF Pipes -1 And 2- Off ATF Filter Housing
Courtesy of AUDI OF AMERICA, LLC

NOTE: Place a clean cloth under the separating point to catch the escaping ATF.

- Remove the bolts -arrows-, pull the ATF pipes -1 and 2- off the ATF filter housing and tie them up.
- Seal any open lines and connections with a clean plug from the VAS 6122.

All Vehicles

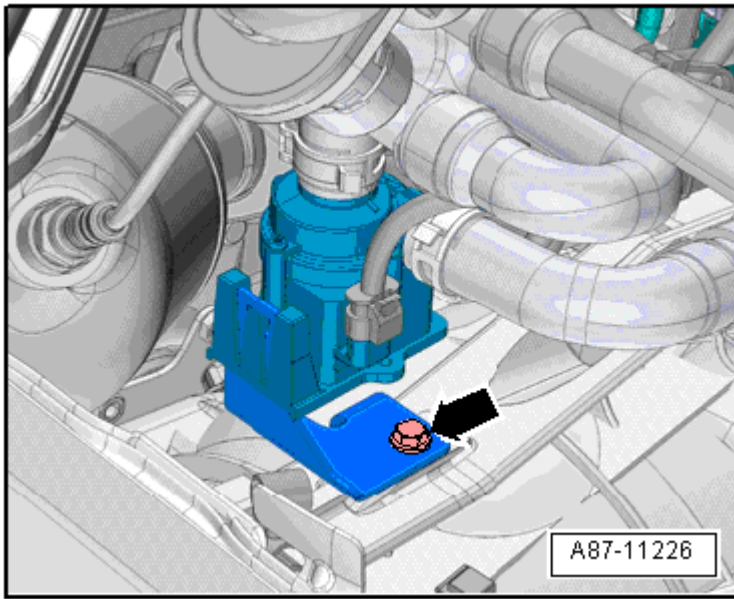


Fig. 162: Removing Bolt (If Equipped) And Move Coolant Recirculation Pump
Courtesy of AUDI OF AMERICA, LLC

- Remove the bolt -arrow- (if equipped) and move the coolant recirculation pump -V50- to the side.
- Remove the ball socket -2- on the selector lever cable from the selector shaft lever using the 80 - 200.

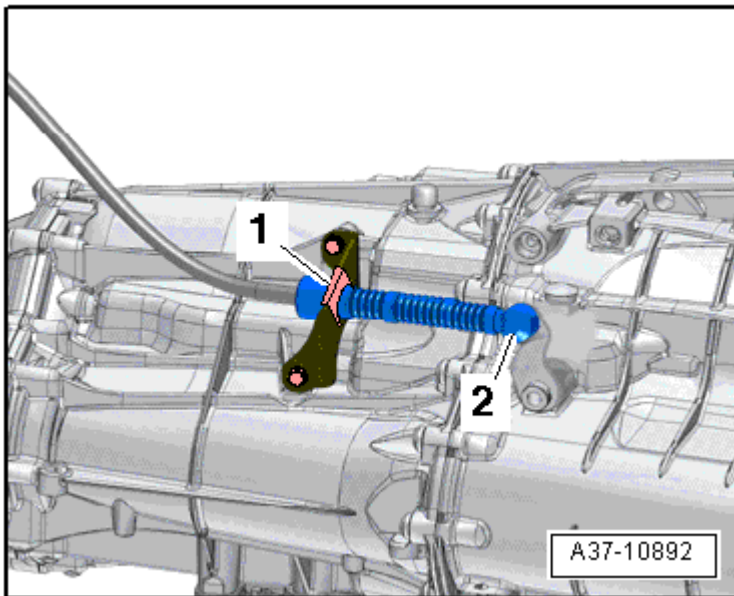


Fig. 163: Selector Lever Cable
Courtesy of AUDI OF AMERICA, LLC

- Remove the circlip -1- and free up the selector lever cable.

NOTE: Do not bend or kink the selector lever cable.

-- Remove the bolts -2 through 5- connecting the engine to transmission. They are accessible from above.

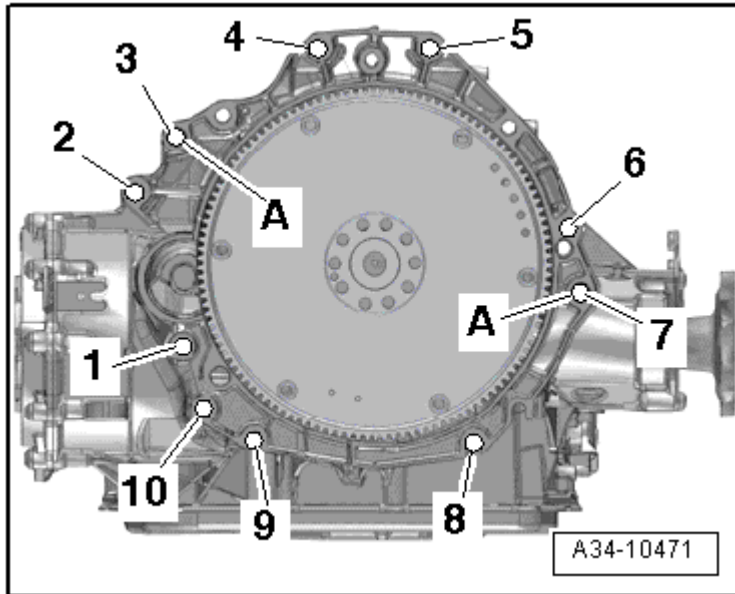


Fig. 164: Removing Bolts -2 Through 5- Connecting Engine To Transmission
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -A-.

-- Secure the right catalytic converter loosely using a nut so it does not fall down.

Vehicles with 3.0L TFSI Engine

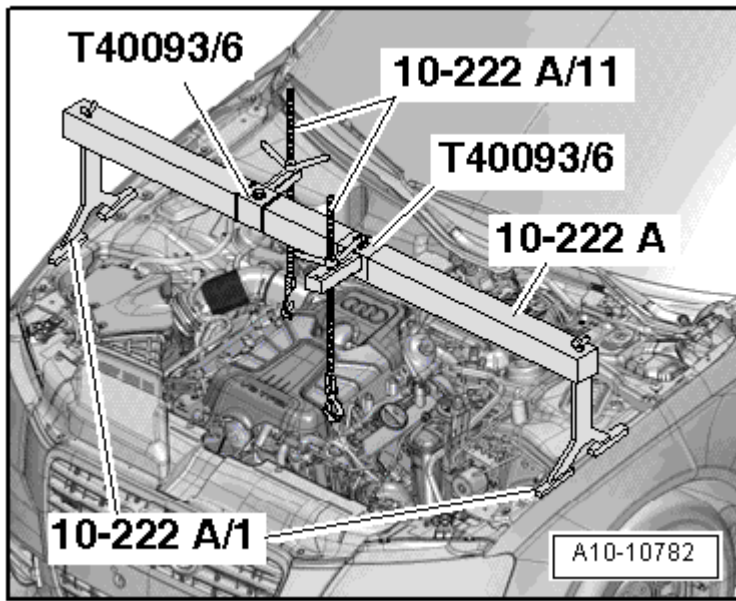


Fig. 165: Mounting 10 - 222 A With T40093/6 On Left And Right Suspension Strut Towers
 Courtesy of AUDI OF AMERICA, LLC

- Mount the 10 - 222 A with the T40093/6 on the left and right suspension strut towers, as illustrated.
- Secure the 10 - 222 A /11 in the left and right engine lifting eyes.
- Slightly pretension the engine with the spindles.

A5 Cabriolet

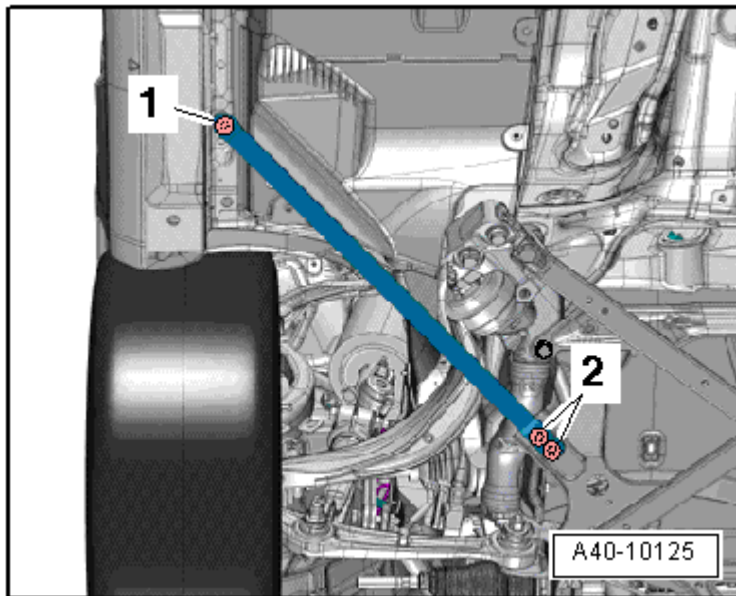


Fig. 166: Identifying Clamping Sleeve
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the left and right diagonal braces. Refer to Removal and Installation .

All Vehicles

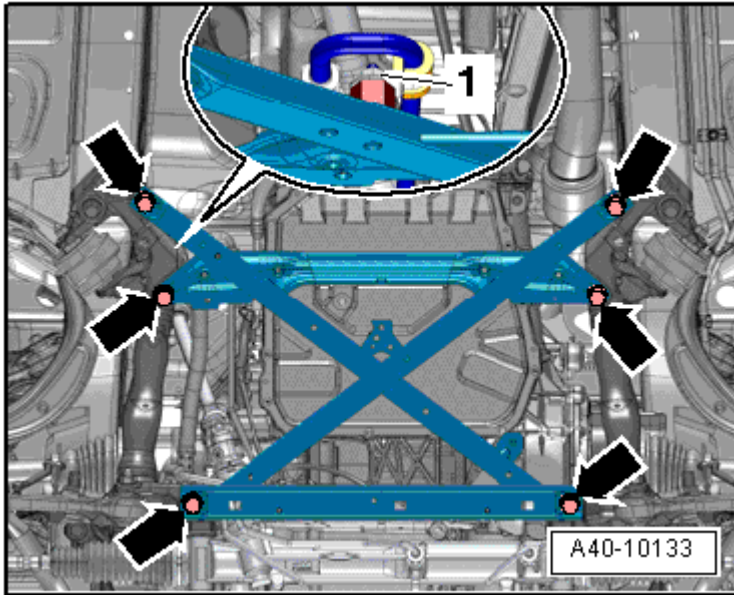


Fig. 167: Locating Power Steering Hydraulic Line
Courtesy of AUDI OF AMERICA, LLC

-- Remove the subframe crossbrace. Refer to Removal and Installation .

CAUTION: The suspension components could be damaged.

- Do not rest the vehicle on its wheels if the subframe mount, the steering gear or the subframe crossbrace are not installed correctly.

Vehicles with Electro-Mechanical Power Steering

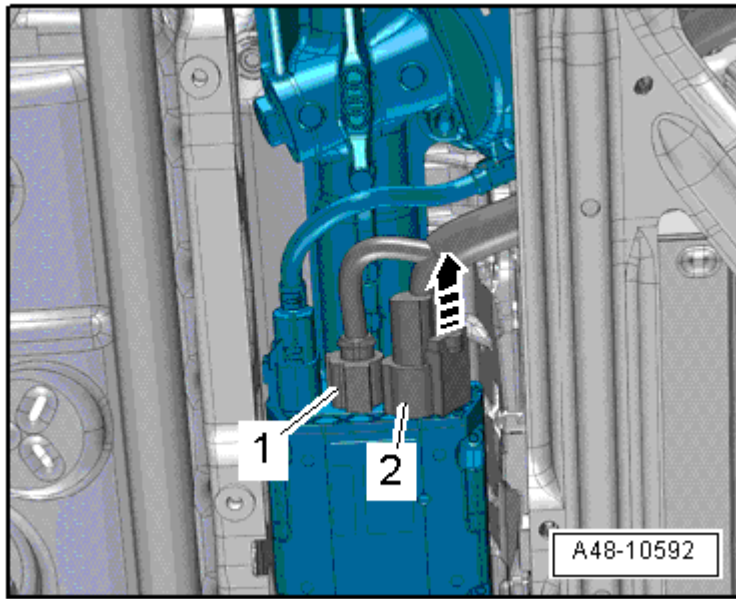


Fig. 168: Power Steering Control Module
Courtesy of AUDI OF AMERICA, LLC

- Loosen the retainer -arrow-, push the release downward and disconnect the connector -2- from the power steering control module -J500-.
- Disconnect the connector -1- from the power steering control module.
- Free up the wiring harness.

All Vehicles

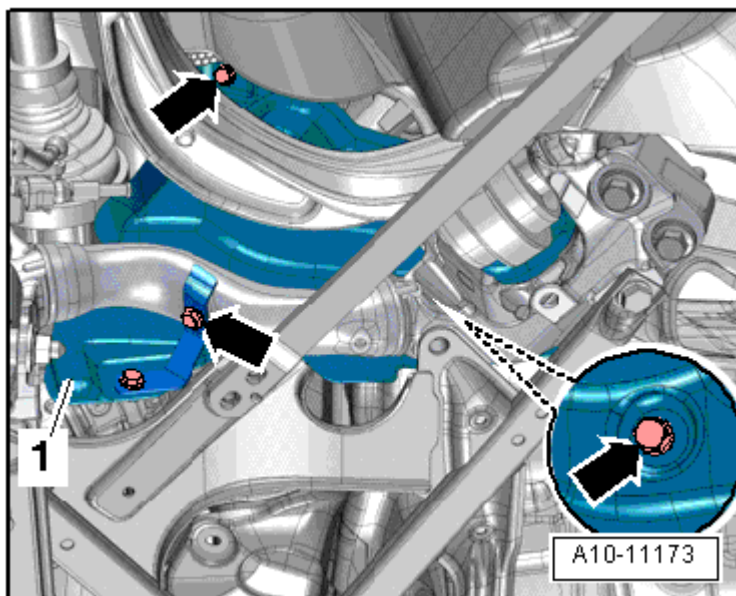


Fig. 169: Locating Left Bolts & Heat Shield

Courtesy of AUDI OF AMERICA, LLC

- Remove the left and right bolts -arrows- and the heat shield -1-.
- Remove the bolts -arrows- and then remove the heat shield from the right drive axle.

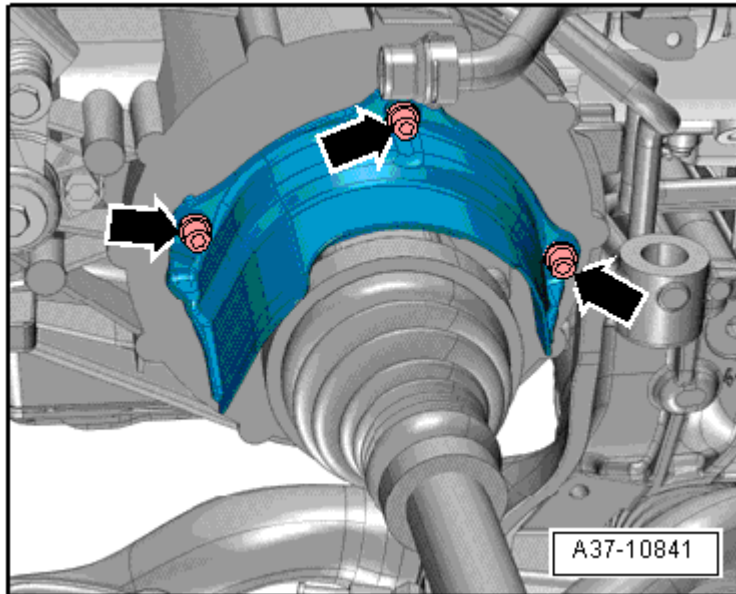


Fig. 170: Driveshaft Heat Shield - Tightening Specification
Courtesy of AUDI OF AMERICA, LLC

- Remove the bolts -arrows- and the left drive axle heat shield.

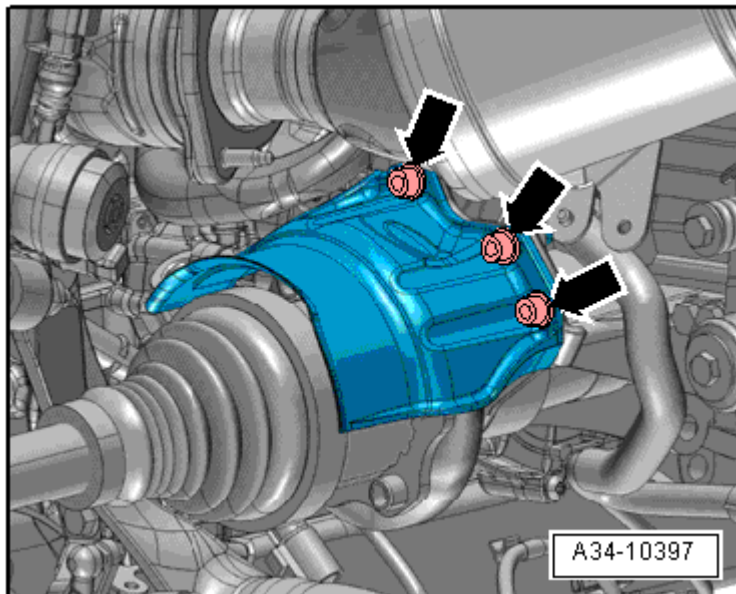


Fig. 171: Removing Bolts And Left Drive Axle Heat Shield
Courtesy of AUDI OF AMERICA, LLC

- Remove left and right drive axles from transmission flange shafts.
- Remove the bolts -arrows- and remove the driveshaft heat shield -1- (if equipped).

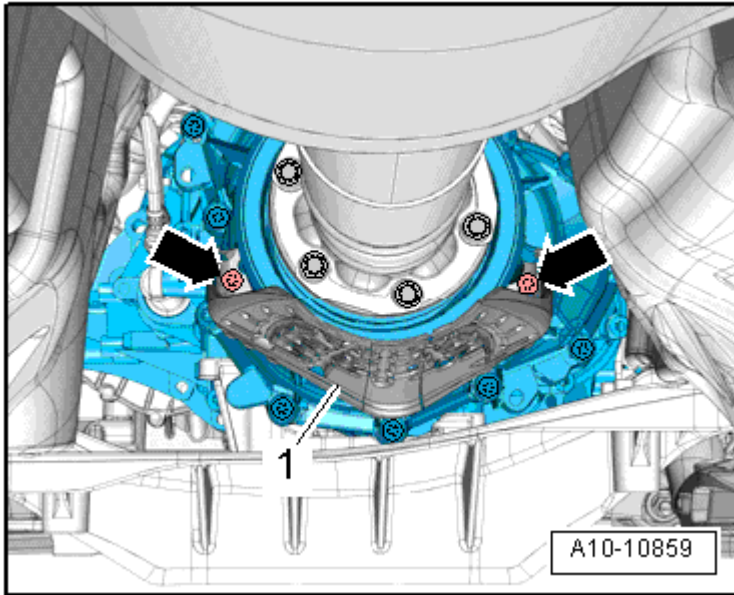


Fig. 172: Driveshaft Heat Shield - Tightening Specification
 Courtesy of AUDI OF AMERICA, LLC

Vehicles with a Bolted Driveshaft

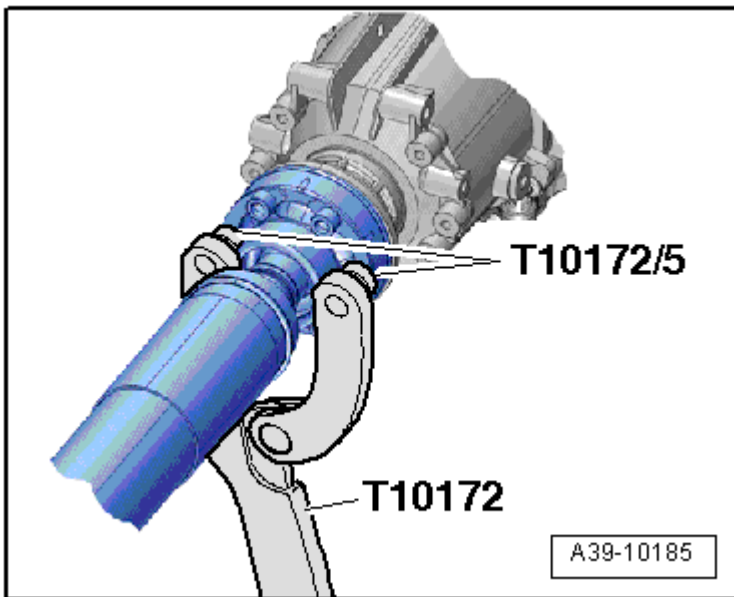


Fig. 173: Holding Driveshaft Using T10172
 Courtesy of AUDI OF AMERICA, LLC

- Counter hold the driveshaft using T10172 with T10172/5 and remove the bolts attaching the driveshaft to the

transmission.

- Press the driveshaft together with the rear final drive; the universal joint is able to slide axially.
- Secure the driveshaft to the side.

Vehicles with an Attached Driveshaft

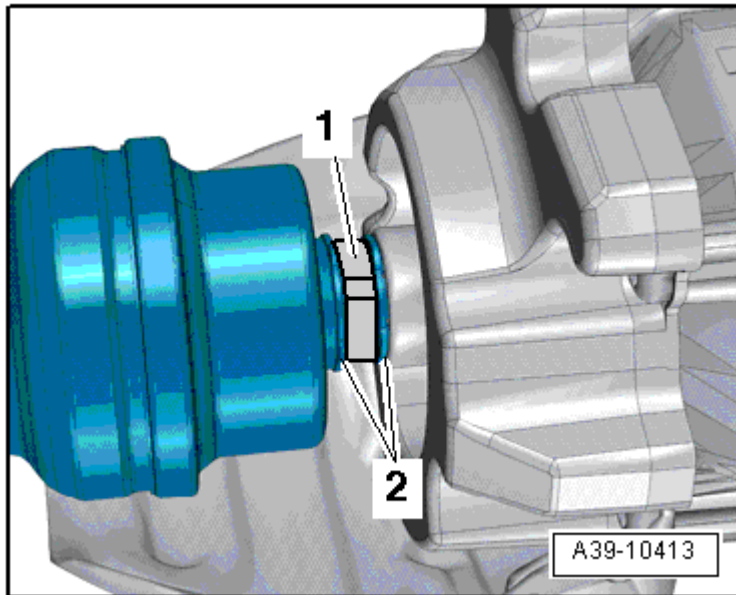


Fig. 174: Driveshaft Boot Hose Clamp
Courtesy of AUDI OF AMERICA, LLC

NOTE: Check the vehicle data label or the designation on the rear final drive itself to determine which one is installed in the vehicle. Then select the correct rear final drive repair information.

- Remove the driveshaft. Refer to **Removal and Installation** or **Removal and Installation** .

All Vehicles

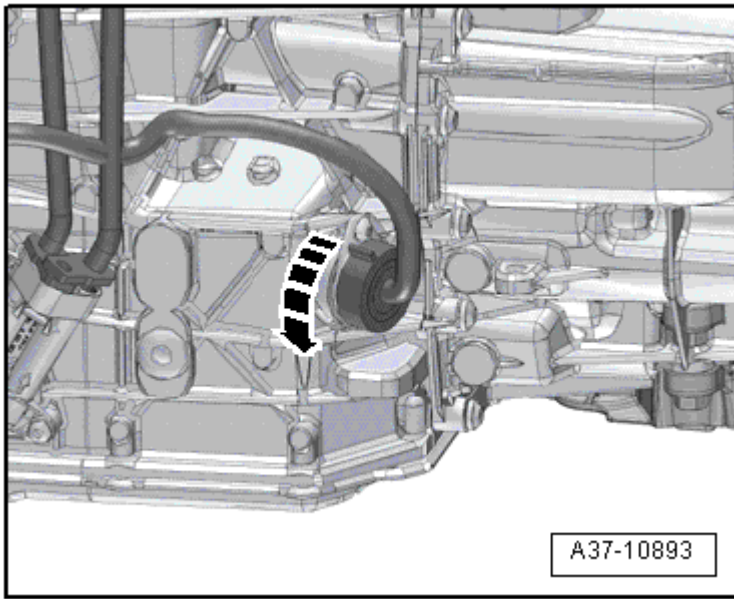


Fig. 175: Moving Selector Lever Into "P"
Courtesy of AUDI OF AMERICA, LLC

CAUTION: There is a risk of destroying the transmission control module (Mechatronic) with static discharge.

- Always "discharge" the static electricity. Do this by touching a grounded object, for example vehicle ground, the vehicle or the hoist.
- Do not touch contacts in the transmission connector with hands.

-- Disconnect the connector on the transmission by rotating screw connections counter-clockwise -arrow-.

-- Disconnect the connector -2- from the Engine Speed (RPM) sensor -G28- and free up the wire on the transmission.

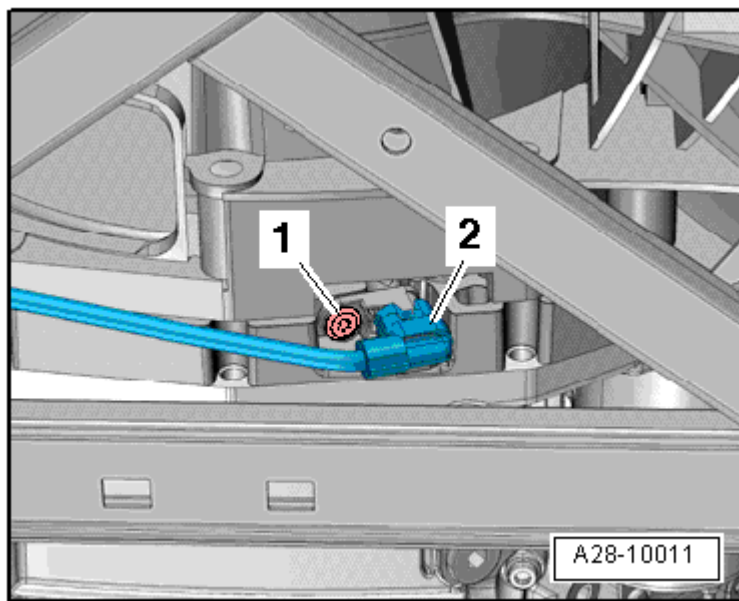


Fig. 176: Location Engine Speed (RPM) Sensor -G28-
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -1-.

-- Remove the steering intermediate shaft from the steering gear and push them both upward. Refer to **Removal and Installation** .

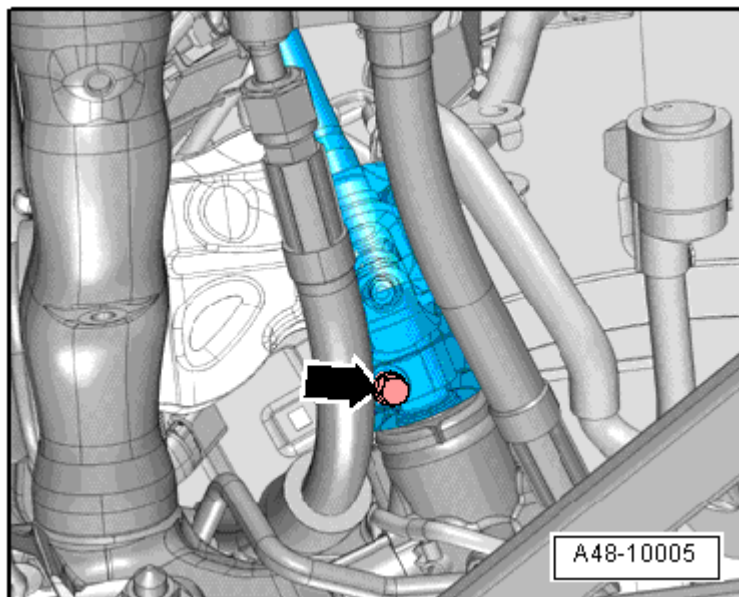


Fig. 177: Locating Universal Joint Bolt
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolt -1- press the retaining tab off the transmission and tilt it back -arrow-.

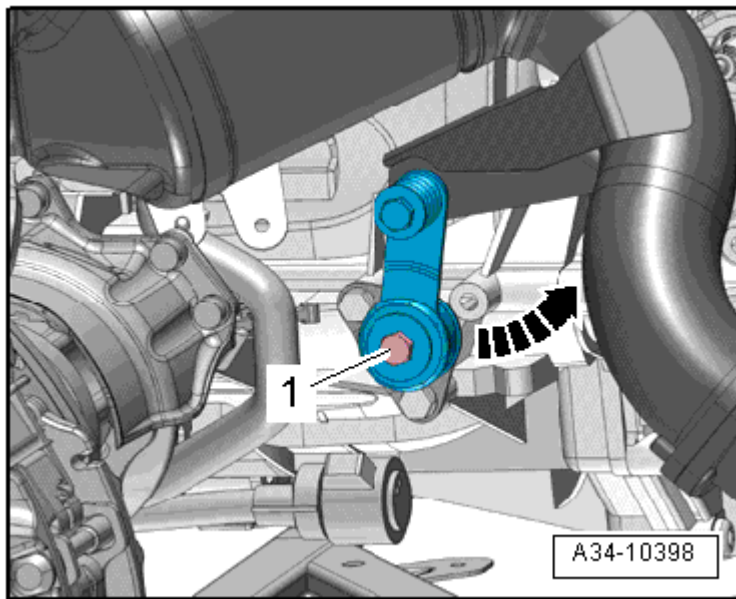


Fig. 178: Removing Bolt Press Retaining Tab Off Transmission And Tilt It Back
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the lower cover -1- from the transmission -arrow-.

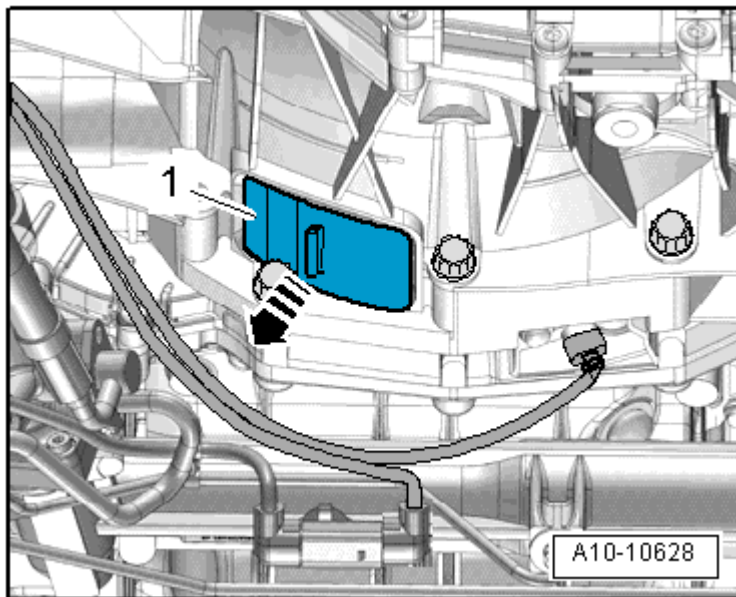


Fig. 179: Identifying Transmission Lower Cover
 Courtesy of AUDI OF AMERICA, LLC

-- Insert the T40058 guide pins as follows:

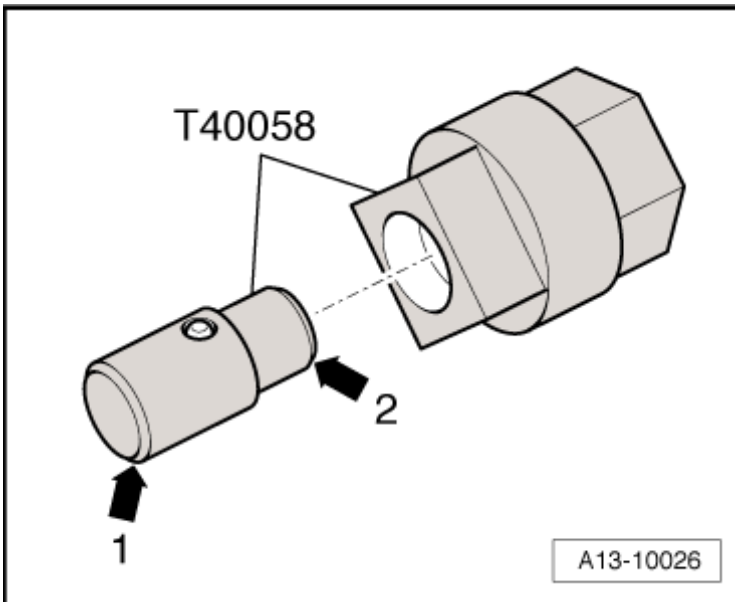


Fig. 180: Identifying Guide Pin And Adapter T40058
Courtesy of AUDI OF AMERICA, LLC

- The large diameter -arrow 1- faces the engine.
- The small diameter -arrow 2- faces the adapter.

-- Counter hold the crankshaft with the T40058 and an offset wrench and loosen the drive plate bolts.

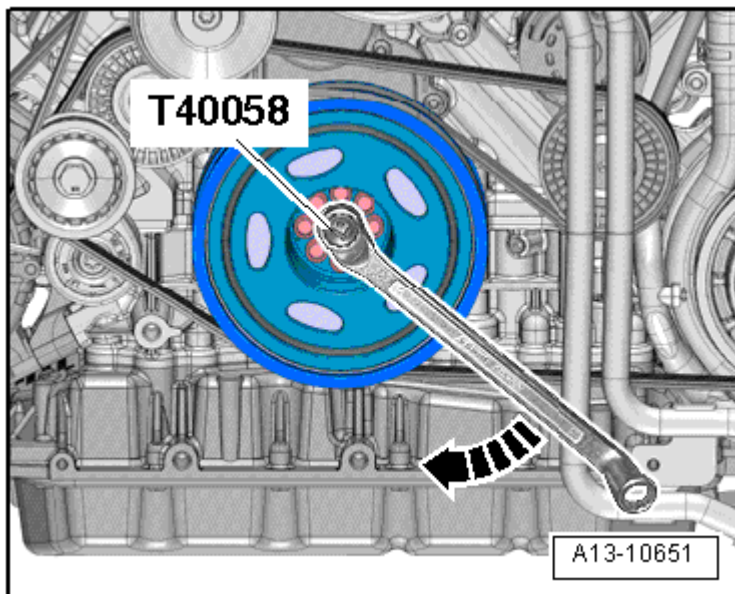


Fig. 181: Counter Hold Crankshaft Using Socket T40058
Courtesy of AUDI OF AMERICA, LLC

NOTE: When mounting, turn the crankshaft only in the direction of engine rotation - arrow-.

The illustration shows the step as performed on a 3.0L TFSI engine.

-- Remove the 6 flywheel bolts -arrow- while turning the crankshaft 60° further in the direction of engine rotation.

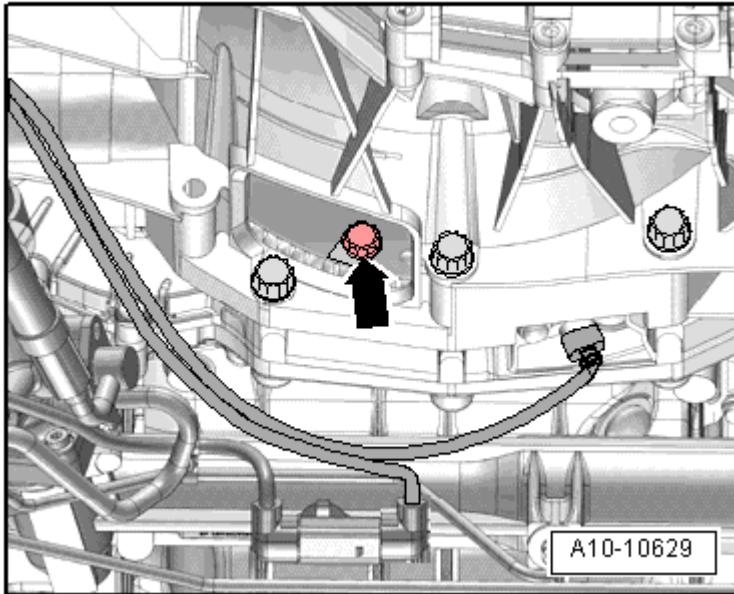


Fig. 182: Identifying Clutch Module First Bolt Installation Location (2 Of 2)
Courtesy of AUDI OF AMERICA, LLC

Vehicles with Hydraulic Power Steering

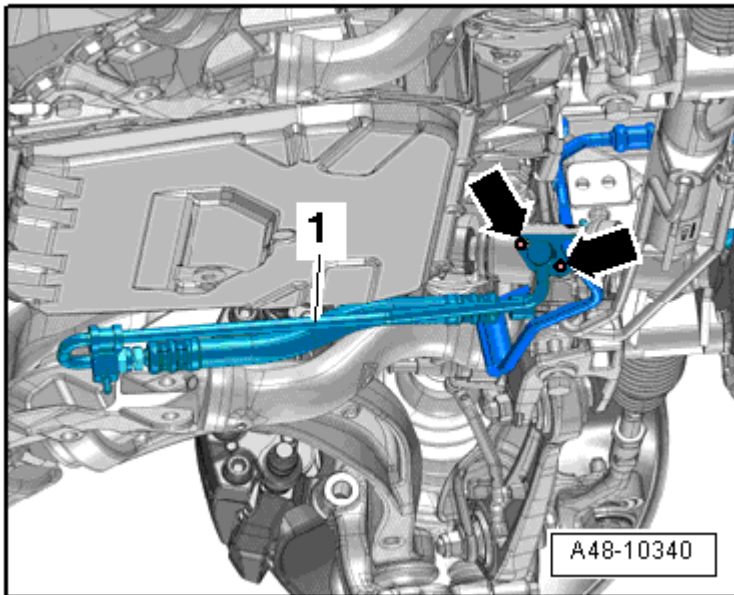


Fig. 183: Place V.A.G 1782 Under Separating Point

Courtesy of AUDI OF AMERICA, LLC

- Place the V.A.G 1782 under the separating point.
- Remove the bolts -arrows-, disconnect the hydraulic line -1- from the steering gear and move it to the side.
- Seal any open lines and connections with a clean plug from the VAS 6122.

All Vehicles

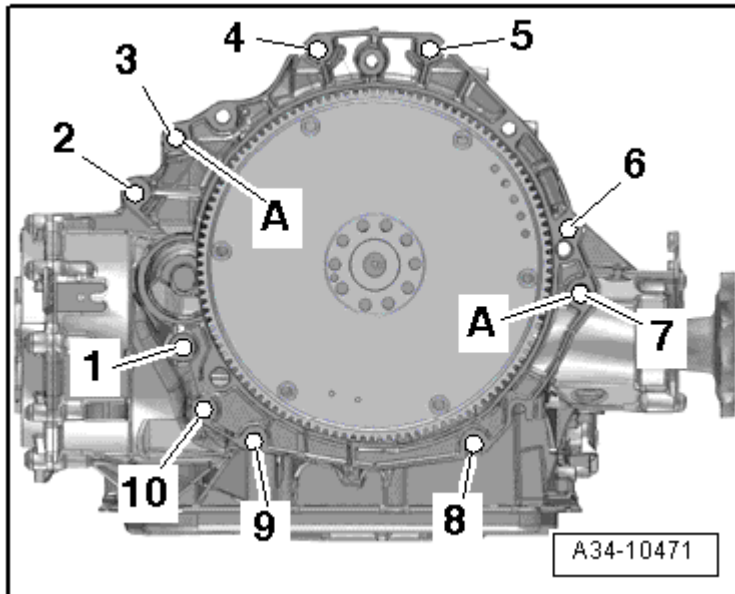


Fig. 184: Removing Bolt From Starter

Courtesy of AUDI OF AMERICA, LLC

- Remove the bolt -1- from the starter.
- Remove the starter from the transmission and leave it in the installation position.
- Remove remaining transmission to the engine connecting bolts -6 through 10-.

NOTE: Ignore -A-.

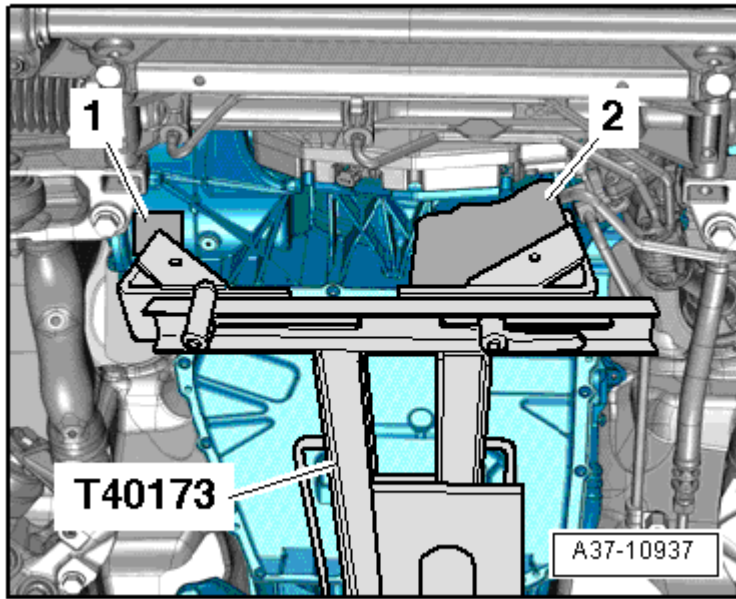


Fig. 185: Mounting V.A.G 1383 A With Prepared T40173 To Bottom Of Transmission
 Courtesy of AUDI OF AMERICA, LLC

CAUTION: Danger of leaks in the ATF pan.

- Do not set the T40173 on the ATF pan.

-- Mount the V.A.G 1383 A with the prepared T40173 to the bottom of the transmission.

The transmission support must be placed at the front as follows:

- The bracket -2- fits into the flywheel on the transmission housing on the left side of the transmission.
- The transmission mount is positioned on the differential housing on the right side of the transmission. Insert a flat piece of rubber -1- in between to protect the housing.

-- Secure the transmission with a tensioning strap -1-.

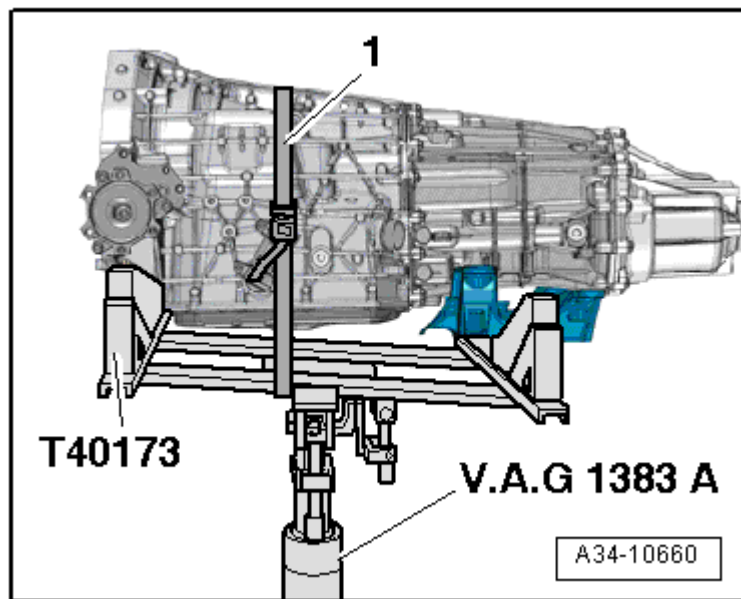


Fig. 186: Securing Transmission With A Tensioning Strap
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts from the tunnel crossmember -arrows-.

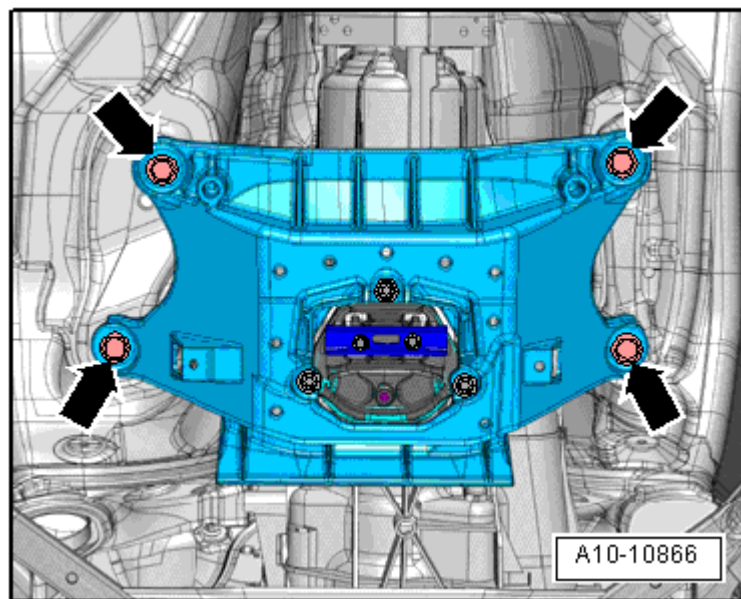


Fig. 187: Transmission Support Overview
 Courtesy of AUDI OF AMERICA, LLC

NOTE: The V.A.G 1383 A is not shown in the illustration.

-- Press the transmission off the engine and lower it carefully using the V.A.G 1383 A.

TRANSMISSION, REMOVING - ENGINE CODE(S): CFSA**Special tools and workshop equipment required**

- Pry Lever - Rmv Outside Mirror 80 - 200
- Engine/Transmission Jack V.A.G 1383 A
- Used Oil Collection and Extraction Device V.A.G 1782
- Engine Bung Set VAS 6122
- Counterhold Tool Touareg V10 T10172 with Adapter T10172/5
- Gearbox Support T40173

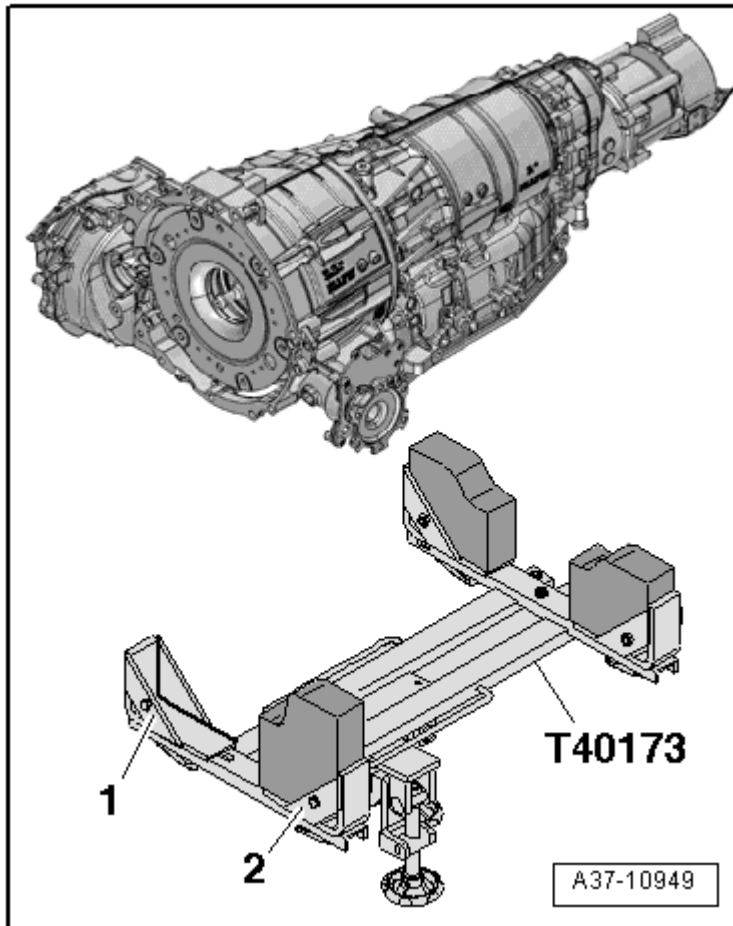
Preparing the T40173

Fig. 188: Identifying Bracket Attached To -1- Must Be Removed & Bracket -2- Must Be Turned So That Longer Side Faces Up

Courtesy of AUDI OF AMERICA, LLC

-- The bracket attached to -1- must be removed.

-- The bracket -2- must be turned so that the longer side faces up as illustrated.

Removing

CAUTION: Risk of damaging electronic components when disconnecting the battery.

- Complete the steps for disconnecting the battery.

-- Position the front wheels so they are straight.

-- Turn off the ignition and remove the key.

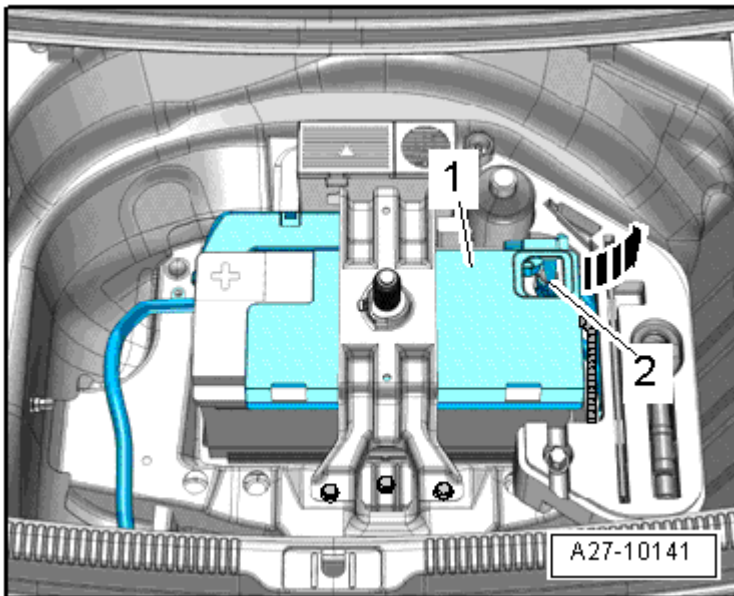


Fig. 189: Identifying Battery

Courtesy of AUDI OF AMERICA, LLC

-- Disconnect the battery Ground (GND) cable -2-. Refer to [For engine(s) CAEB, CALA, CCBA] Removal and Installation .

Vehicles with Hydraulic Power Steering

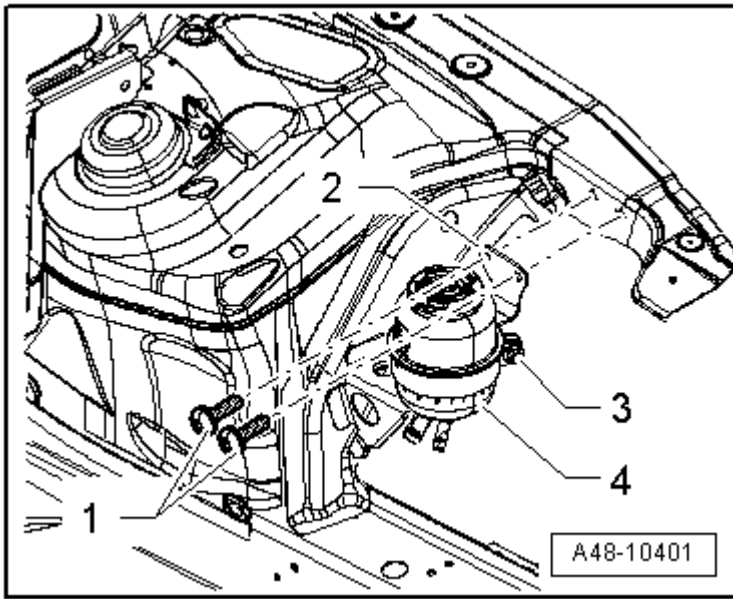


Fig. 190: Reservoir Bracket to the Body
Courtesy of AUDI OF AMERICA, LLC

-- Extract the power steering hydraulic oil from the reservoir -3- using the V.A.G 1782.

NOTE: Ignore -1, 2 and 4-.

All Vehicles

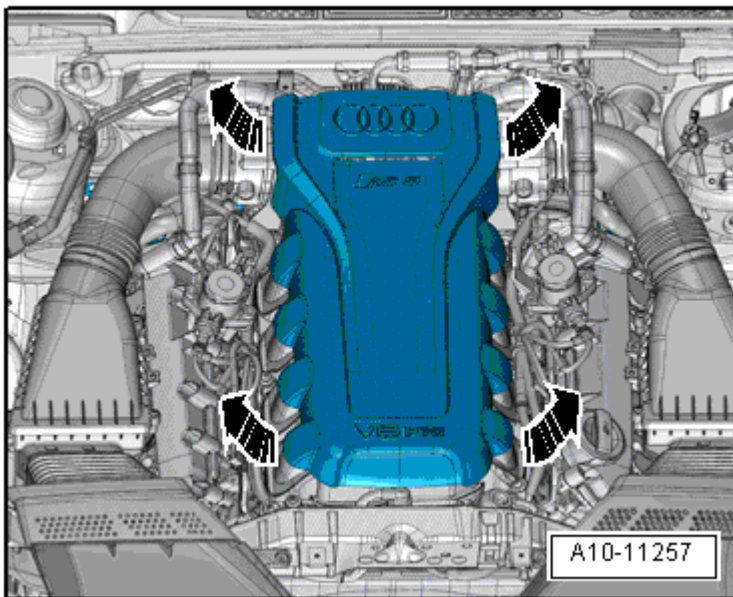


Fig. 191: Removing Engine Cover
Courtesy of AUDI OF AMERICA, LLC

- Remove the engine cover -arrows-.
- Remove the plenum chamber bulkhead. Refer to **Description and Operation** .
- Remove the ball socket -2- on the selector lever cable from the selector shaft lever using the 80 - 200.

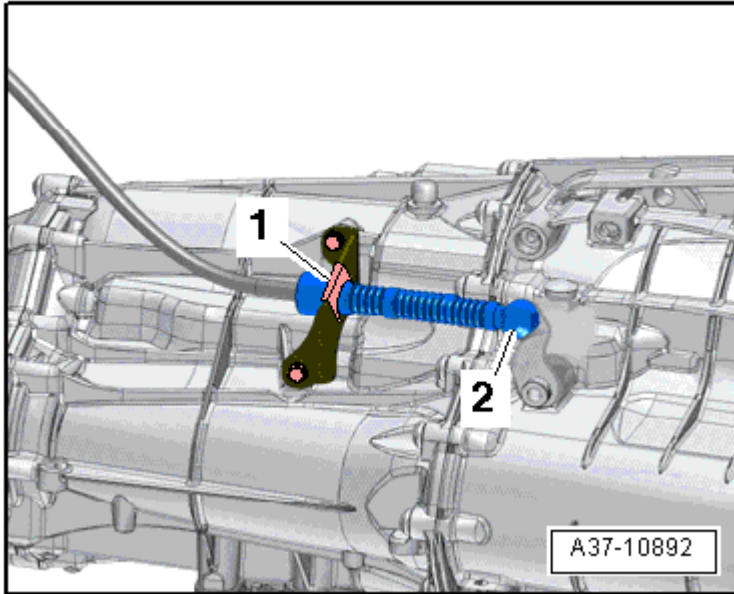


Fig. 192: Selector Lever Cable
Courtesy of AUDI OF AMERICA, LLC

- Remove the circlip -1- and free up the selector lever cable.

NOTE: **Do not bend or kink the selector lever cable.**

- Remove the bolts -2 through 5- connecting the engine to transmission. They are accessible from above.

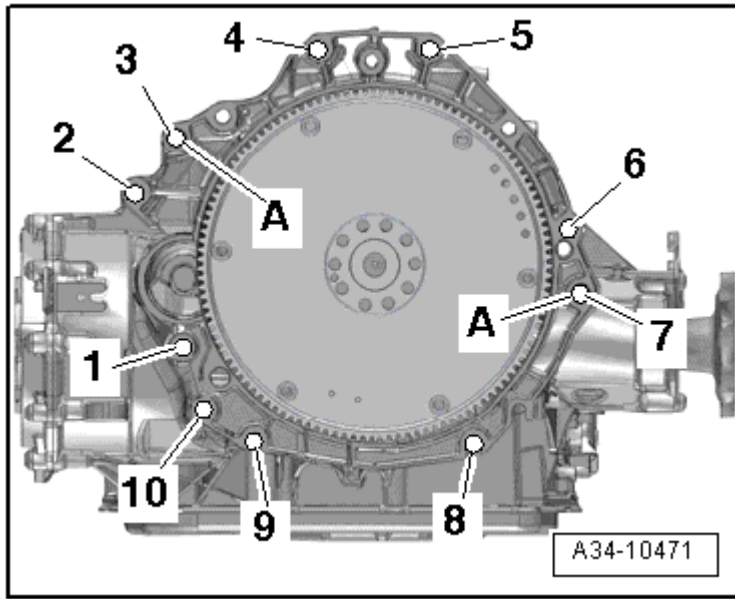


Fig. 193: Removing Bolts-2 Through 5-Connecting Engine To Transmission
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -A-.

- Free up the upper wiring harness on the transmission.
- Remove the left and right front wheels.

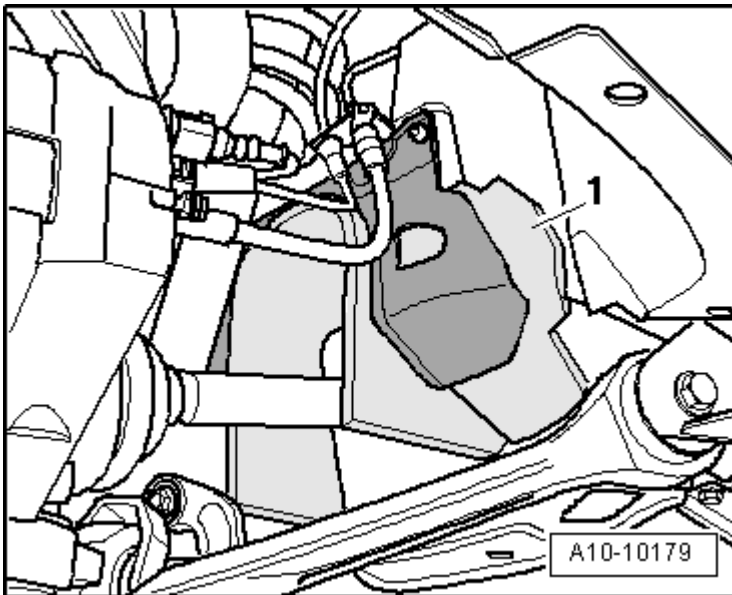


Fig. 194: Removing Right Drive Axle Cover
Courtesy of AUDI OF AMERICA, LLC

- Remove the left and right drive axle cover -1- inside the wheel housing.

-- Remove the noise insulation -1 and 2-. Refer to Description and Operation .

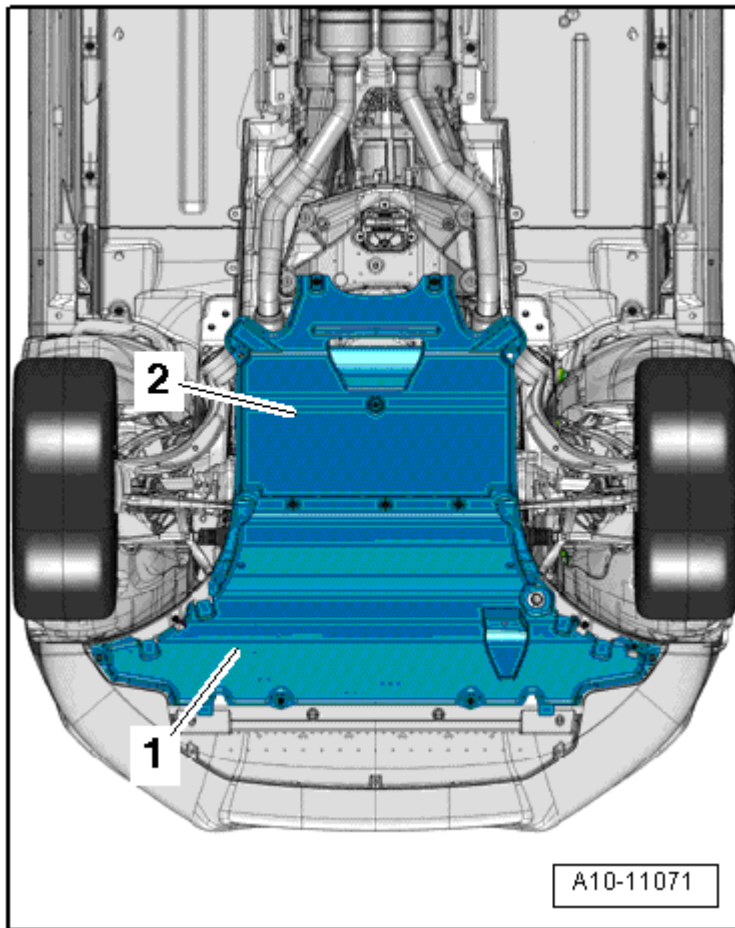


Fig. 195: Removing Noise Insulation
Courtesy of AUDI OF AMERICA, LLC

-- Remove the left and right front mufflers. Refer to [For engine(s) CCBA] Removal and Installation .

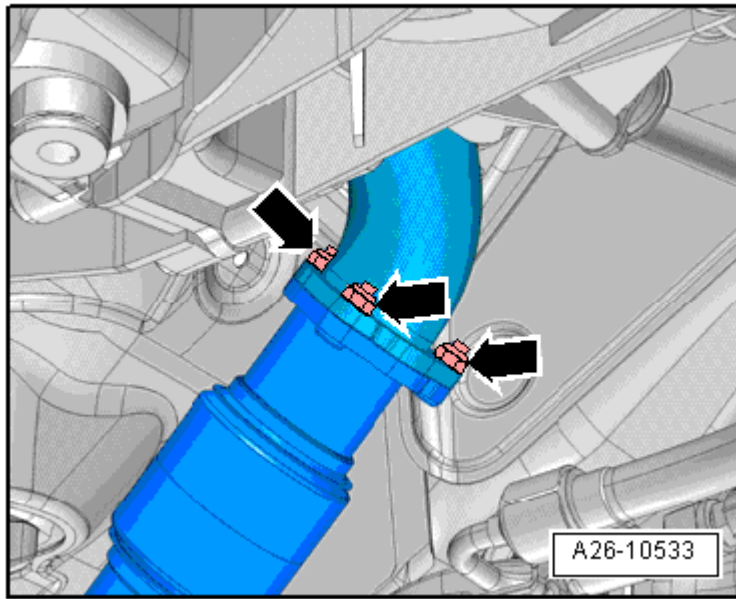


Fig. 196: Removing Left Front Muffler Nuts
Courtesy of AUDI OF AMERICA, LLC

NOTE: Check the vehicle data label or the designation on the rear final drive itself to determine which one is installed in the vehicle. Then select the correct rear final drive repair information.

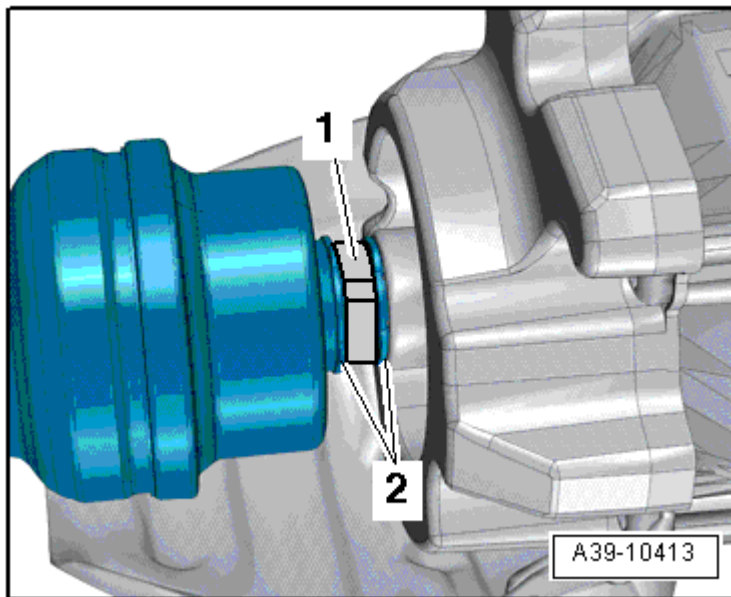


Fig. 197: Driveshaft Boot Hose Clamp
Courtesy of AUDI OF AMERICA, LLC

-- Remove the driveshaft. Refer to Removal and Installation or Removal and Installation .

-- Remove the subframe crossbrace. Refer to **[For engine(s) CAEB, CALA, CCBA] Removal and Installation** .

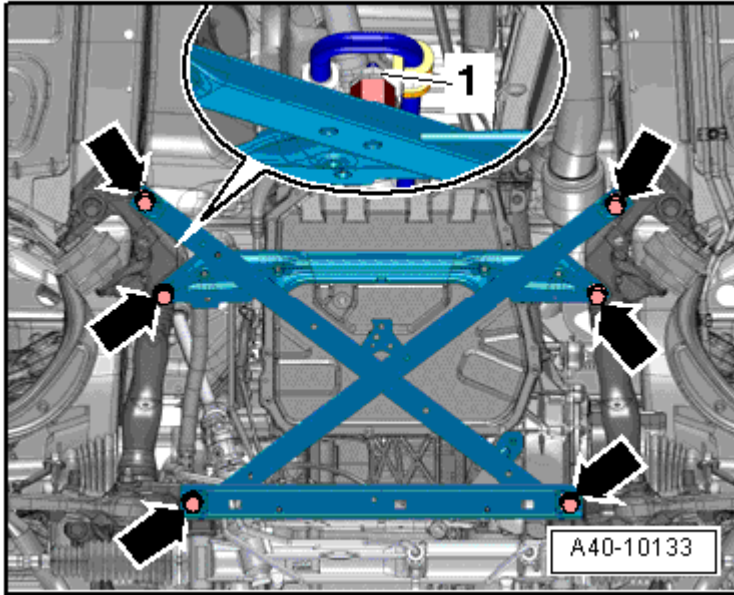


Fig. 198: Locating Power Steering Hydraulic Line
Courtesy of AUDI OF AMERICA, LLC

CAUTION: The suspension components could be damaged.

- Do not rest the vehicle on its wheels if the subframe mount, the steering gear or the subframe crossbrace are not installed correctly.

-- Remove the left and right bolts -arrows- and the heat shield -1-.

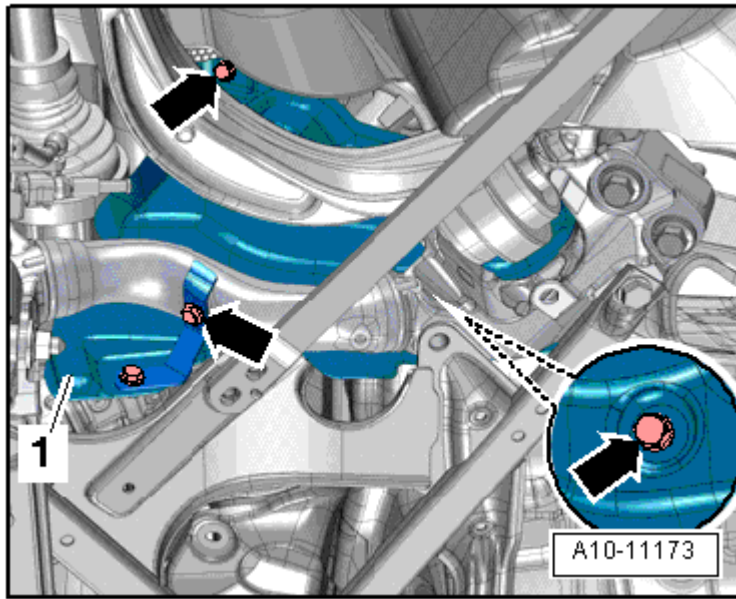


Fig. 199: Locating Left Bolts & Heat Shield
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -arrows- and then remove the heat shield from the right drive axle.

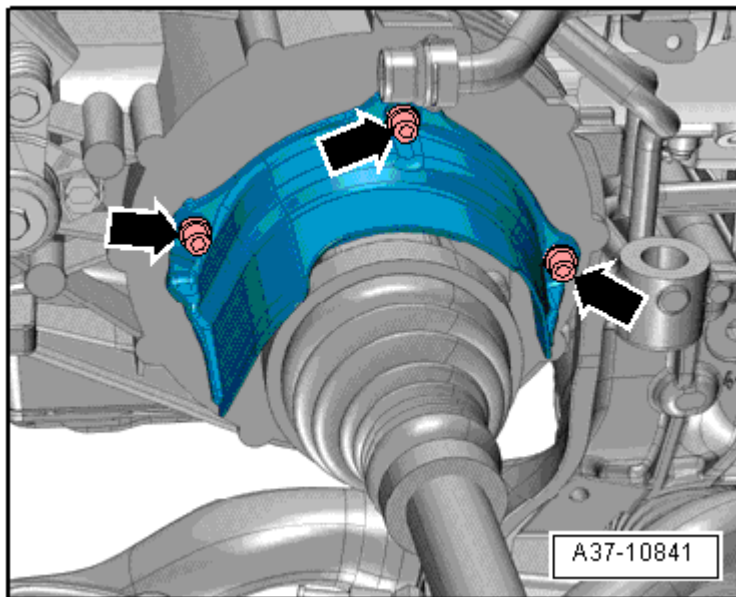


Fig. 200: Driveshaft Heat Shield - Tightening Specification
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -arrows- and the left drive axle heat shield.

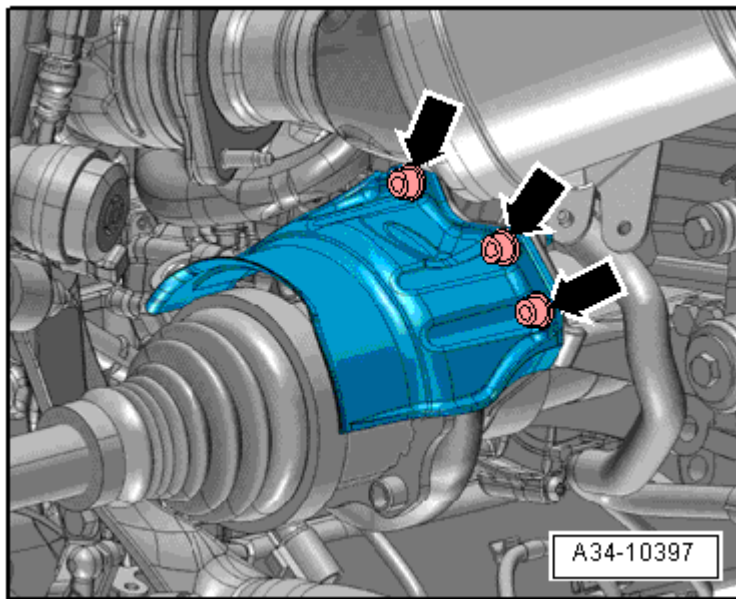


Fig. 201: Removing Bolts And Left Drive Axle Heat Shield
Courtesy of AUDI OF AMERICA, LLC

- Remove left and right drive axles from transmission flange shafts.
- Remove the nut -2-.

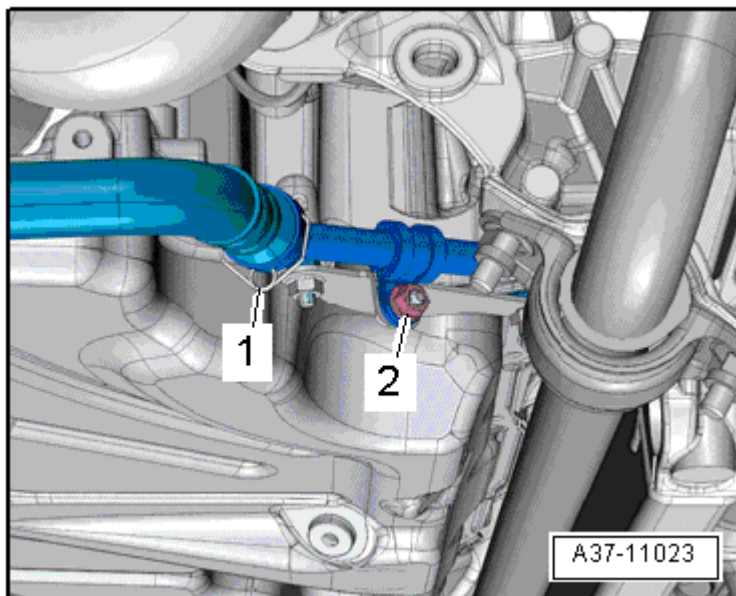
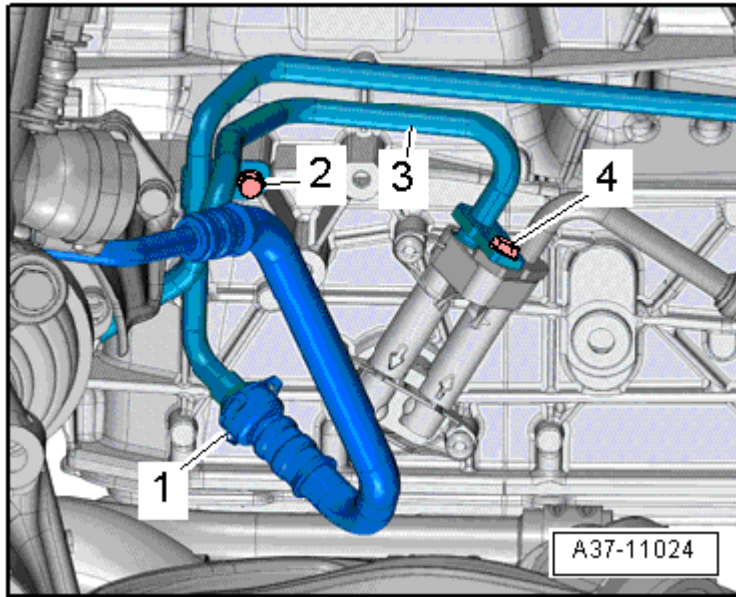


Fig. 202: Removing Nuts
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -1-.

Vehicles with an ATF Pipe Filter**Fig. 203: Identifying ATF Pipe**

Courtesy of AUDI OF AMERICA, LLC

- Place the V.A.G 1782 under the transmission.
- Remove the clamp -1- and separate the ATF pipe.
- Remove the bolt -4-, pull the ATF pipe -3- off the transmission and move it to the side.
- Seal any open lines and connections with a clean plug from the VAS 6122.

NOTE: Ignore -2-.

- Remove the bolt -1-.

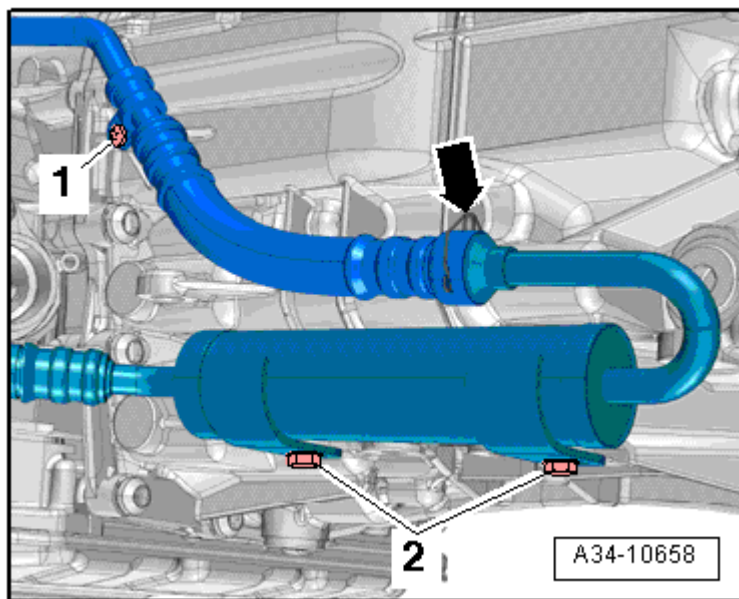


Fig. 204: Identifying ATF Pipe Filter
 Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2- and -arrow-.

Vehicles with an ATF Filter

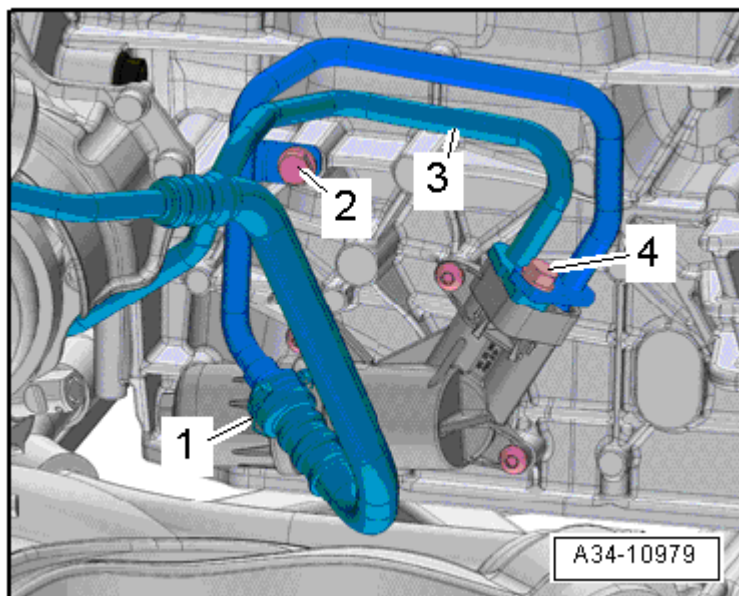


Fig. 205: Placing V.A.G 1782 Under Transmission
 Courtesy of AUDI OF AMERICA, LLC

-- Place the V.A.G 1782 under the transmission.

- Remove the clamp -1- and separate the ATF pipe.
- Remove the bolt -4-, pull the ATF pipe -3- off the transmission and move it to the side.
- Seal any open lines and connections with a clean plug from the VAS 6122.

NOTE: Ignore -2-.

All Vehicles

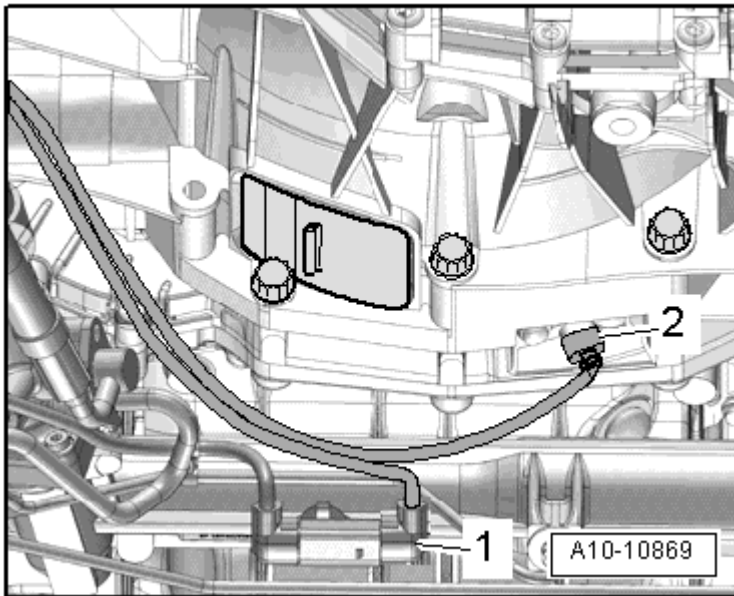


Fig. 206: Disconnecting Connector From Servotronic Solenoid Valve
Courtesy of AUDI OF AMERICA, LLC

- Disconnect the connectors and free up the electric wires.
1. Servotronic solenoid valve -N119- (vehicles with hydraulic power steering)
 2. On the Engine Speed (RPM) sensor -G28-

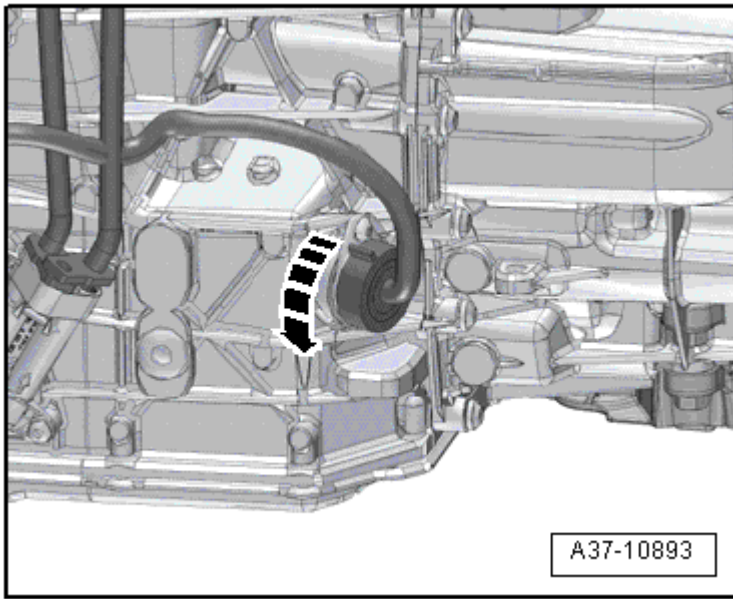


Fig. 207: Moving Selector Lever Into "P"
Courtesy of AUDI OF AMERICA, LLC

CAUTION: There is a risk of destroying the transmission control module (Mechatronic) with static discharge.

- Do not touch contacts in transmission connector with hands.

- To discharge static electricity, touch the transmission housing (without wearing gloves).
- Disconnect the connector on the transmission by rotating screw connections counter-clockwise -arrow-.
- Free up the wiring harness.
- Remove the steering intermediate shaft from the steering gear and push them both upward. Refer to [For engine(s) CAEB, CALA, CCBA] Removal and Installation .

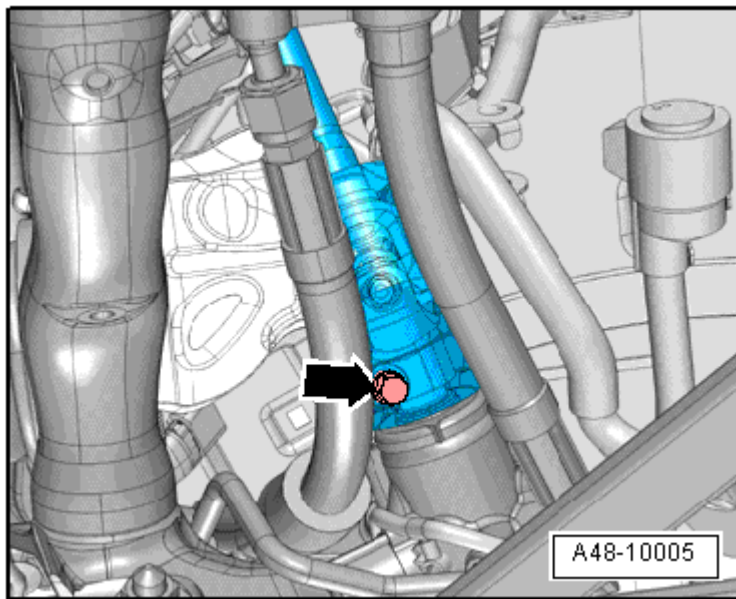


Fig. 208: Locating Universal Joint Bolt
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolt -1-.

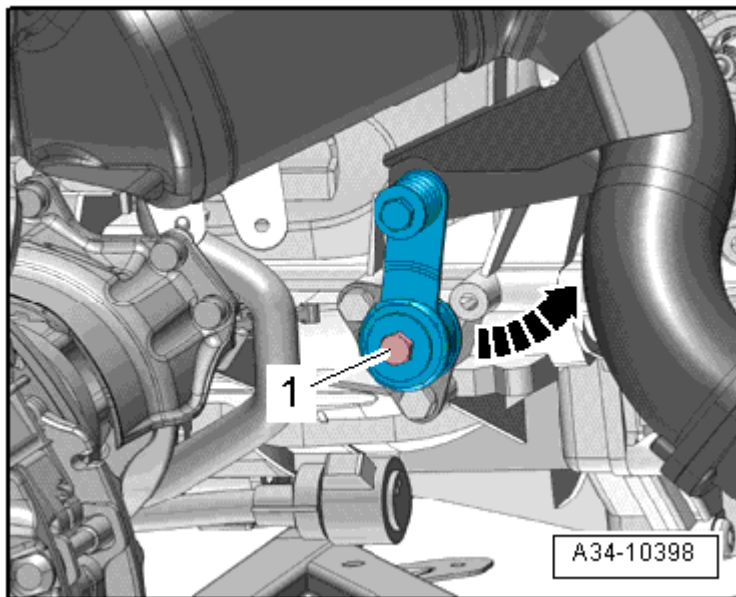


Fig. 209: Removing Bolt
 Courtesy of AUDI OF AMERICA, LLC

-- Push the lug off the transmission and swing it to the rear -arrow-.

-- Remove the bolt -1-.

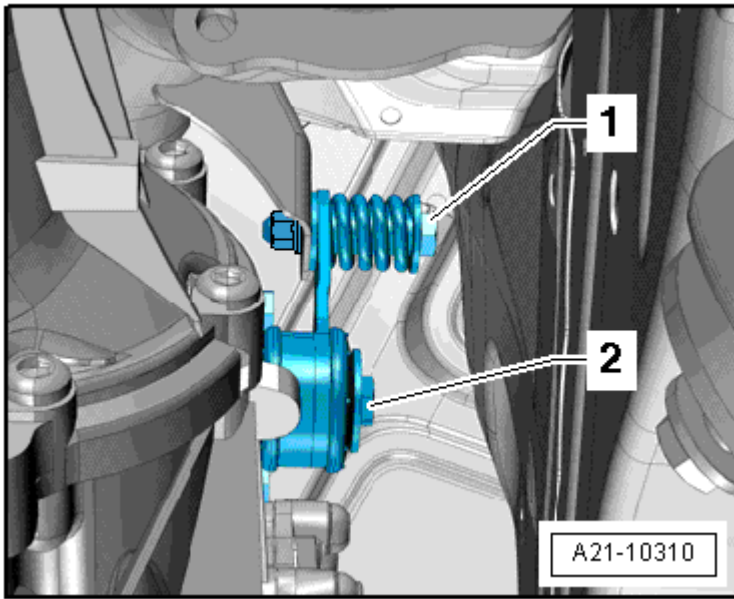


Fig. 210: Identifying Catalytic Converter
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2-.

-- Remove the lower cover -1- from the transmission -arrow-.

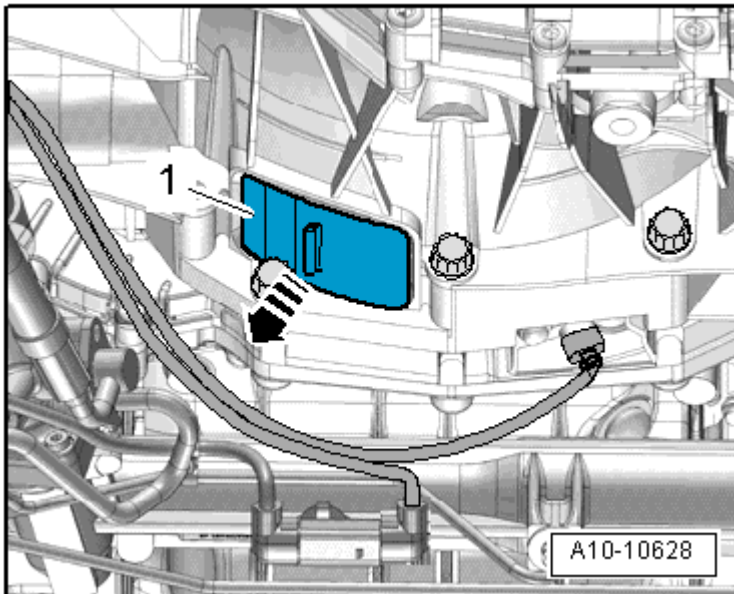


Fig. 211: Identifying Transmission Lower Cover
Courtesy of AUDI OF AMERICA, LLC

-- Counter hold the crankshaft with the T10172 with T10172/7 to loosen the flywheel bolts.

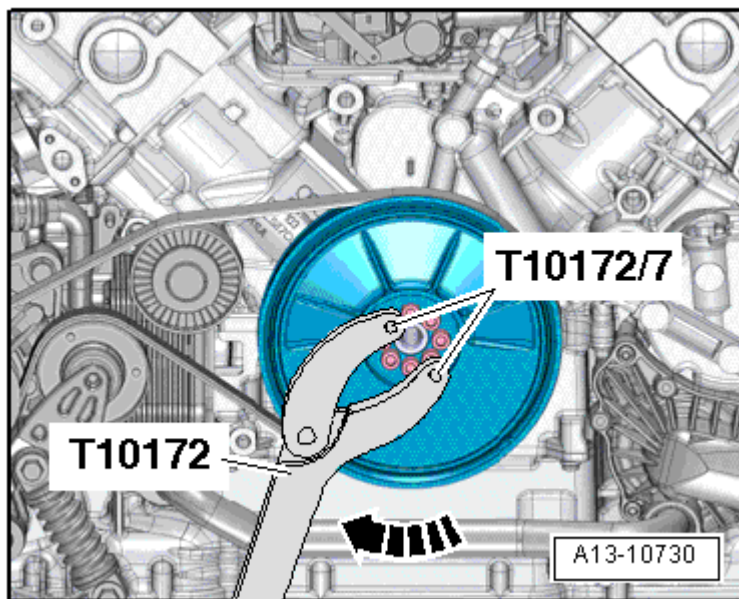


Fig. 212: Counter Hold Crankshaft With T10172 With T10172/7 To Loosen Flywheel Bolts
Courtesy of AUDI OF AMERICA, LLC

NOTE: When mounting, turn the crankshaft only in the direction of engine rotation - arrow-.

-- Remove the 6 flywheel bolts -arrow- while turning the crankshaft 60° further in the direction of engine rotation.

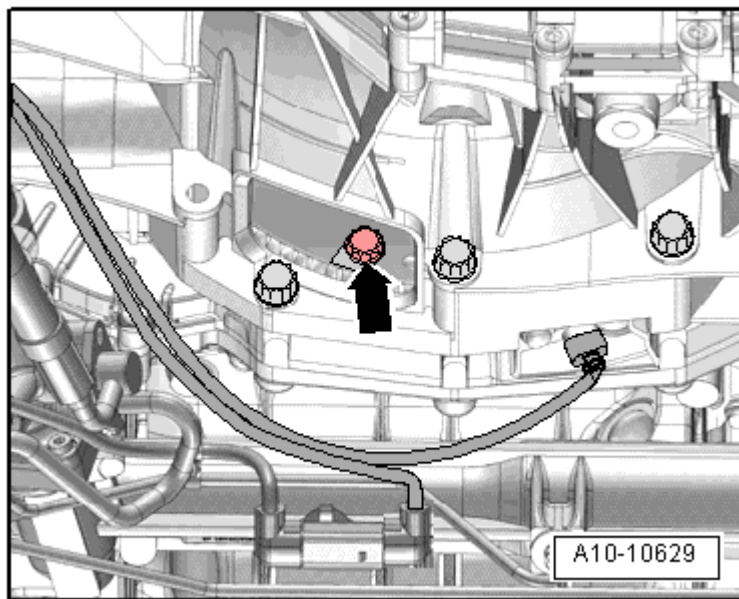


Fig. 213: Identifying Clutch Module First Bolt Installation Location (2 Of 2)
Courtesy of AUDI OF AMERICA, LLC

Vehicles with Hydraulic Power Steering

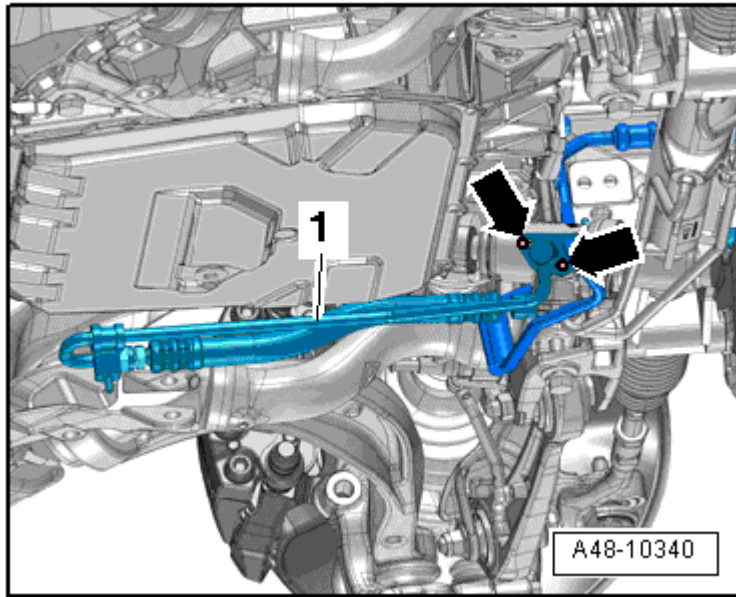


Fig. 214: Placing V.A.G 1782 Under Separating Point
Courtesy of AUDI OF AMERICA, LLC

- Place the V.A.G 1782 under the separating point.
- Remove the bolts -arrows-, disconnect the hydraulic line -1- from the steering gear and move it to the side.
- Seal any open lines and connections with a clean plug from the VAS 6122.

All Vehicles

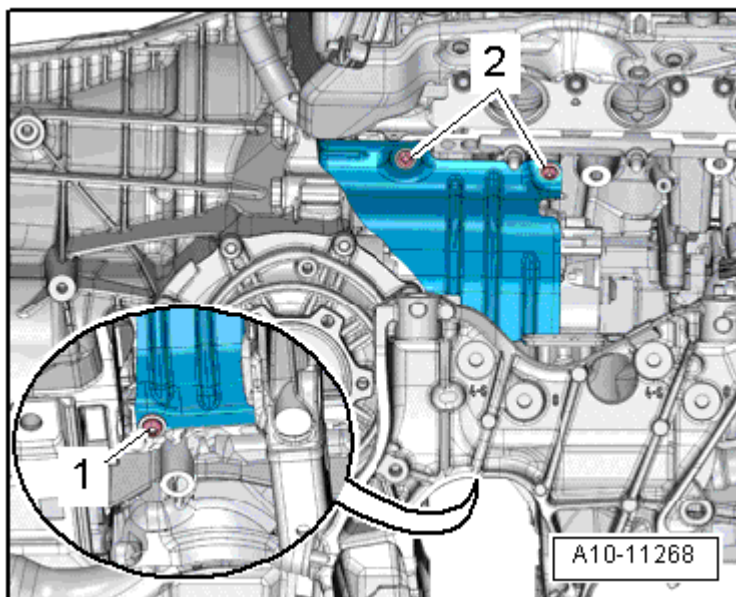


Fig. 215: Removing Bolt And Push Starter Heat Shield To Side
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolt -1- and push the starter heat shield slightly to the side.

NOTE: Ignore -2-.

-- Remove the bolt -1- from the starter.

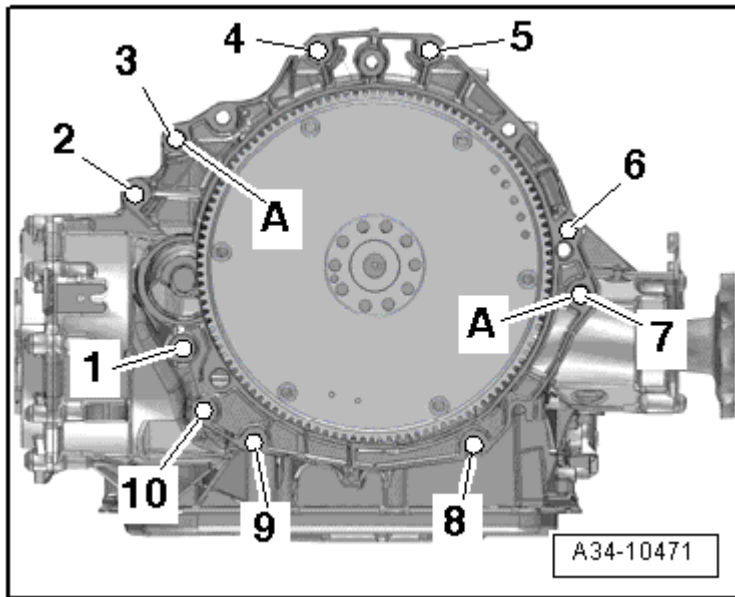


Fig. 216: Removing Bolt From Starter
Courtesy of AUDI OF AMERICA, LLC

-- Remove the starter from the transmission and leave it in the installation position.

-- Remove remaining transmission to engine connecting bolts -6 through 10-.

NOTE: Ignore -A-.

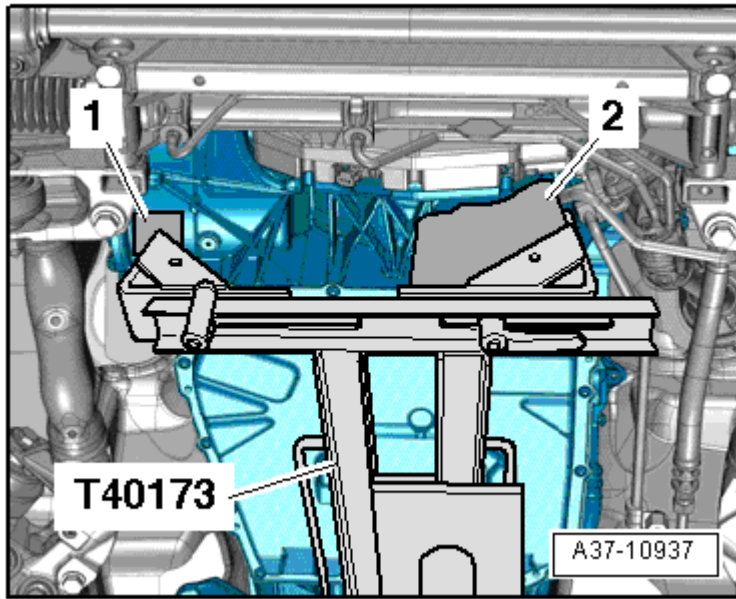


Fig. 217: Mounting V.A.G 1383 A With Prepared T40173 To Bottom Of Transmission
Courtesy of AUDI OF AMERICA, LLC

CAUTION: Danger of leaks in the ATF pan.

- **Do not set the T40173 on the ATF pan.**

-- Mount the V.A.G 1383 A with the prepared T40173 to the bottom of the transmission.

The transmission support must be placed at the front as follows:

- The bracket -2- fits into the flywheel on the transmission housing on the left side of the transmission.
- The transmission mount is positioned on the differential housing on the right side of the transmission. Insert a flat piece of rubber -1- in between to protect the housing.

-- Secure the transmission with a tensioning strap -1-.

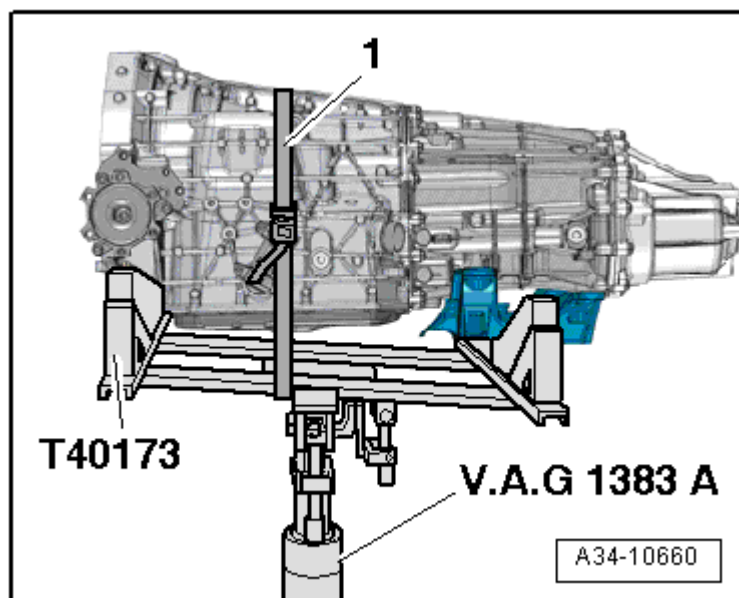


Fig. 218: Securing Transmission With A Tensioning Strap
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts from the tunnel crossmember -arrows-.

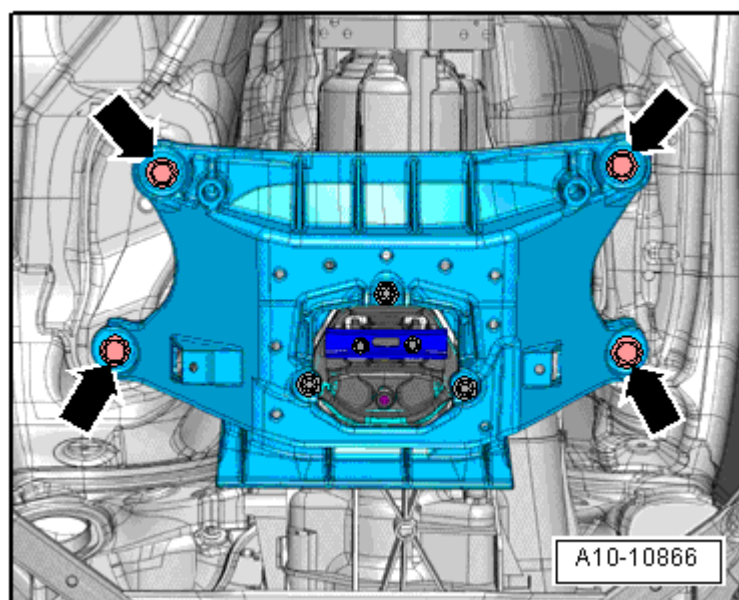


Fig. 219: Transmission Support Overview
 Courtesy of AUDI OF AMERICA, LLC

NOTE: The V.A.G 1383 A is not shown in the illustration.

-- Press the transmission off the engine and lower it carefully using the V.A.G 1383 A.

TRANSMISSION, TRANSPORTING**Special tools and workshop equipment required**

- Shop Crane -Load Cap=700-1200kg VAS 6100
- Hook and Support Tool T40197

Procedure

- Transmission removed.

CAUTION: Transmission components could be damaged if they are not set down correctly.

- Do not set the transmission on the ATF pan.

-- Engage the T40197 in the holes on the right side of the transmission and secure it to the left side of the transmission with the knurled bolt -arrow-.

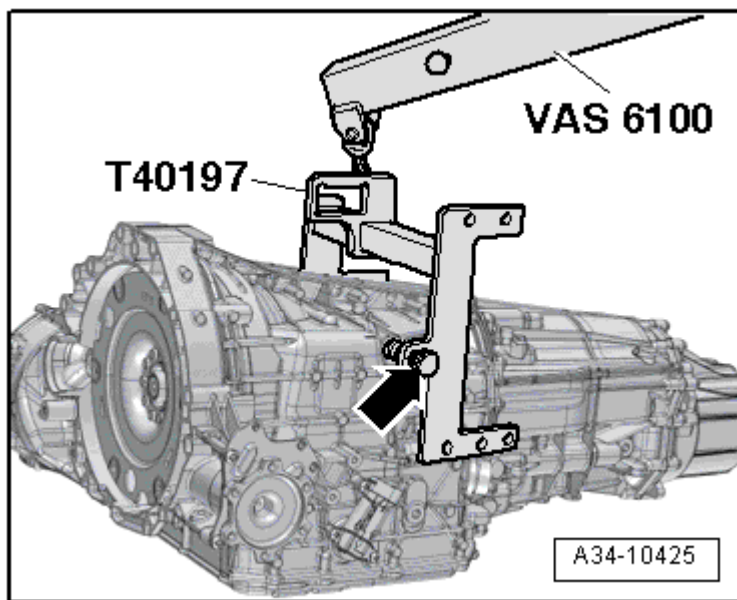


Fig. 220: Installing Special Tool T40197

Courtesy of AUDI OF AMERICA, LLC

-- Lift and transport the transmission with the VAS 6100.

TRANSMISSION, SECURING IN ENGINE/TRANSMISSION HOLDER**Special tools and workshop equipment required**

- Holding Plate VW 309

- Hook and Support Tool T40197
- Engine and Transmission Holder VAS 6095

Procedure

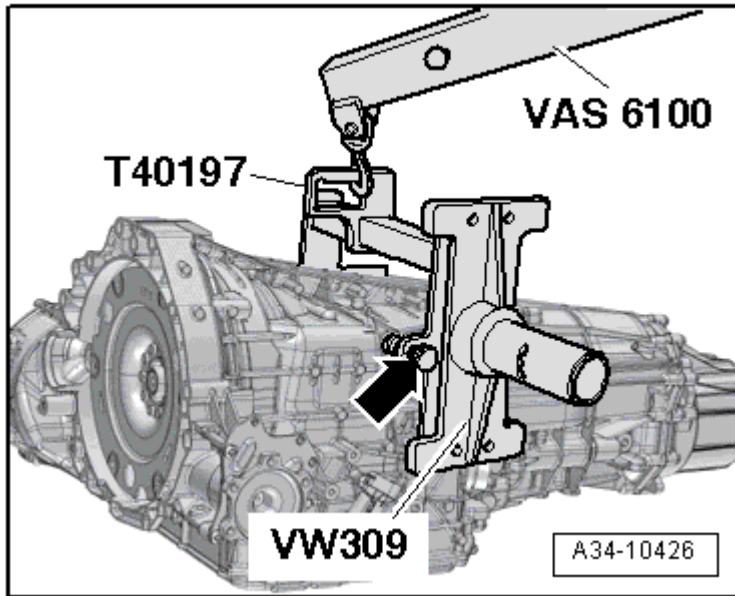


Fig. 221: Identifying Transmission Holding Fixture Setup
 Courtesy of AUDI OF AMERICA, LLC

- Hold the transmission with the VAS 6100. Refer to TRANSMISSION, TRANSPORTING.

-- Attach the VW 309 to the T40197.

-- Place the transmission into the VAS 6095 using VAS 6100.

NOTE: The vents for the transmission housing and final drive must be closed before turning a filled transmission with oil pan upward on the engine and transmission holder.

TRANSMISSION, INSTALLING

Special tools and workshop equipment required

- Ring Spanner Insert AF 16 V.A.G 1332/14
- Assembly Aid T40169
- Transportation Lock T40170

Transmission installation tightening specifications: TIGHTENING SPECIFICATIONS

Procedure

NOTE: Replace bolts that are tightened to the specification.

Replace self-locking nuts and bolts and seals, gaskets and O-rings.

The hose connections as well as the air guide pipes and hoses must be free of oil and grease before installing.

Secure all hose connections with hose clamps of the same type as those equipped by the factory.

To secure the air guide hoses on their connections, spray the clamps used previously with rust remover before installing.

When installing, bring all cable ties back to same positions.

There are 2 different ATF filter versions depending on the engine and the date of manufacture. ATF pipe filter -5- and ATF filter -10-.

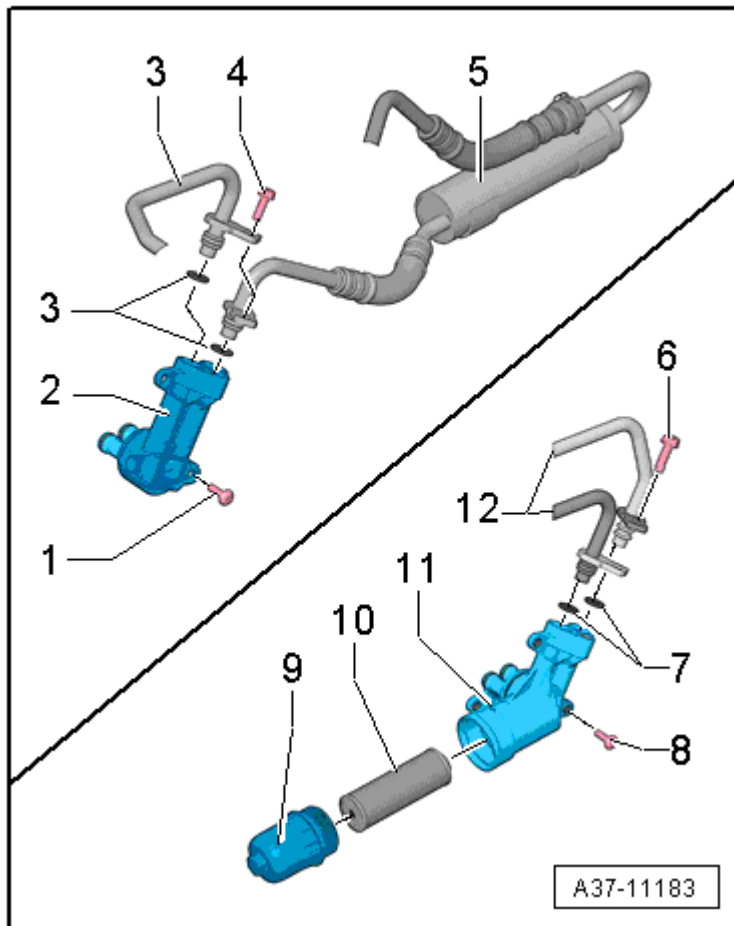


Fig. 222: Identifying 2 Different ATF Filter Versions ATF Pipe Filter -5- And ATF Filter -10-
 Courtesy of AUDI OF AMERICA, LLC

- ATF filter -10-, must be replaced at every ATF change or whenever a repair is made to the transmission.
- ATF pipe filter -5-, must be replaced whenever the transmission is replaced or if the ATF is very dirty. for removing and installing, refer to ATF PIPE FILTER.

CAUTION: Danger of damaging the components.

If a transmission with an ATF pipe filter -5- is replaced by a transmission with an ATF filter -10-.

- If the supply and return ATF pipe must be replaced, refer to ATF PIPES. The ATF pipes are NOT the same. The ATF lines will leak or get damaged if they are not replaced.
- The ATF filter -10- must be changed at every ATF change in the future. Enter these in the vehicle data and in the repair history. The ATF filter change is not always automatically displayed in the Maintenance schedule.

-- Clean the ATF pipe and the ATF cooler after replacing the transmission or after repairing the transmission. Refer to ATF PIPES AND ATF COOLER, CLEANING.

-- Always clean the threaded holes for the engine/transmission bolts in the cylinder block before assembling the transmission using a thread cutter.

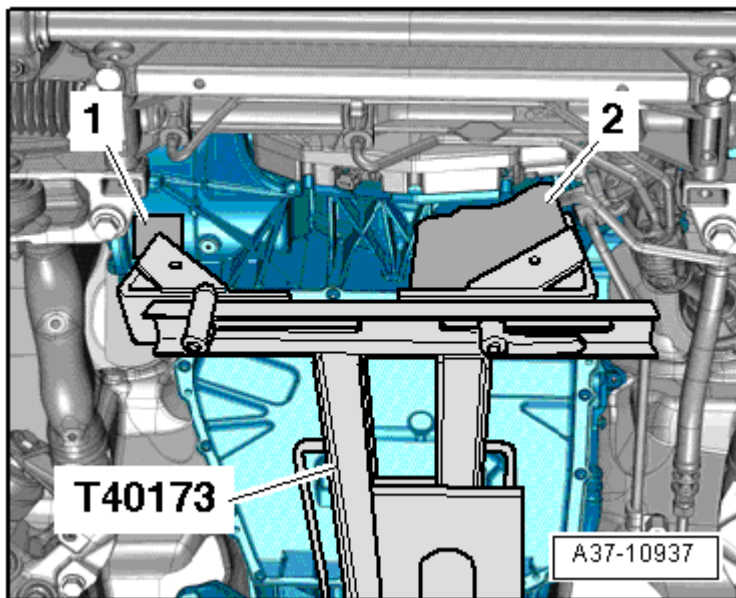


Fig. 223: Mounting V.A.G 1383 A With Prepared T40173 To Bottom Of Transmission
Courtesy of AUDI OF AMERICA, LLC

CAUTION: Danger of leaks in the ATF pan.

- **Do not set the T40173 on the ATF pan.**

-- Mount the V.A.G 1383 A with the prepared T40173 to the bottom of the transmission.

The transmission support must be placed at the front as follows:

- The bracket -2- fits into the flywheel on the transmission housing on the left side of the transmission.
- The transmission support is installed with an elastic washer -1- on the center differential housing on the right side of the transmission.

-- Secure the transmission with a tensioning strap -1-.

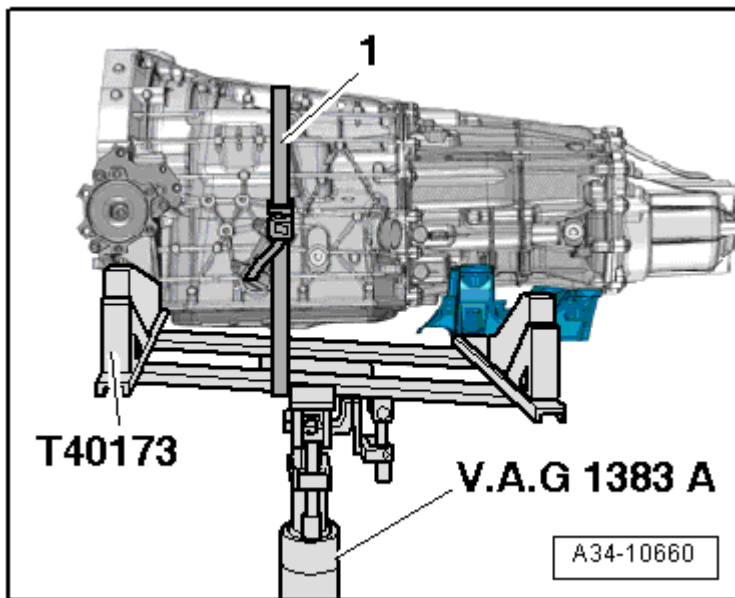


Fig. 224: Securing Transmission With A Tensioning Strap
Courtesy of AUDI OF AMERICA, LLC

-- The following preparations must be made before connecting the engine and transmission:

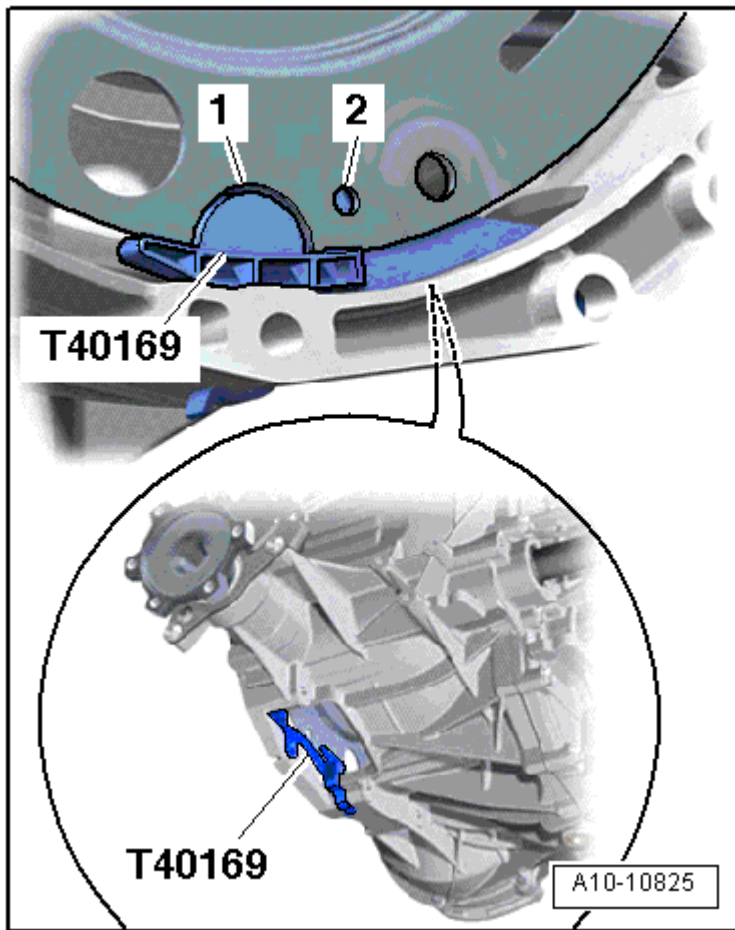


Fig. 225: Inserting Assembly Aid T40169 Into Transmission Housing And Flywheel From Below
 Courtesy of AUDI OF AMERICA, LLC

-- Insert the T40169 in the transmission housing and the clutch module from below, as illustrated.

- The assembly tool must engage in the semi-circular opening -1- and into the check hole -2-.

NOTE: **There is only 1 inspection opening on the circumference. Rotate the flywheel as needed.**

-- Install the bolts from the assembly device into the holes on the transmission housing.

-- Insert the T40170 into the transmission housing from underneath and clamp it secure to the flange shaft -1-.

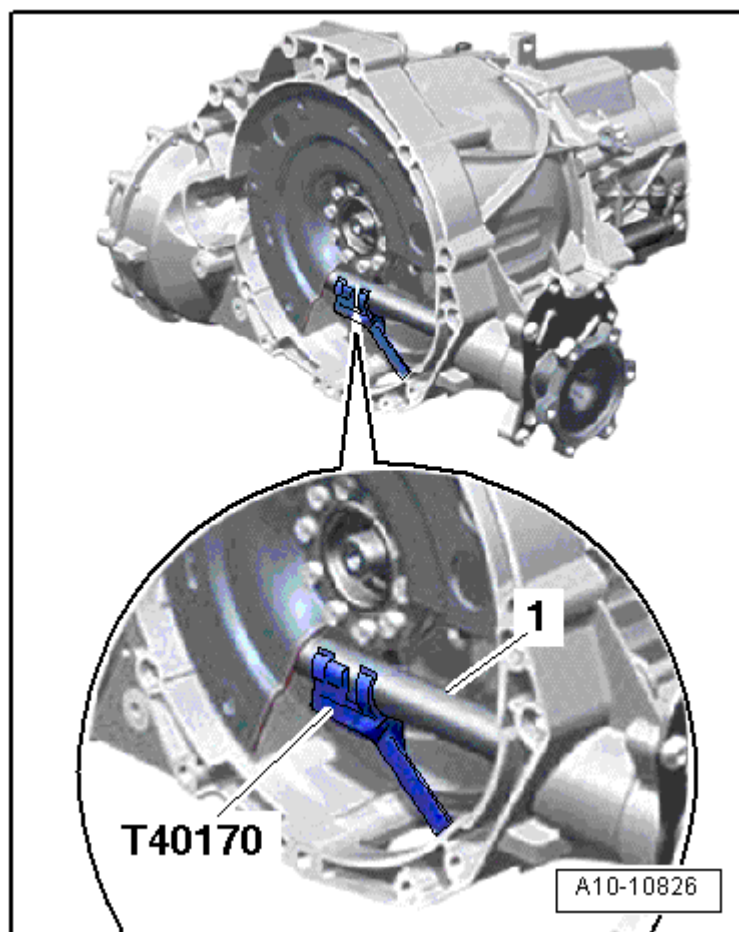


Fig. 226: Identifying Transportation Lock T40170

Courtesy of AUDI OF AMERICA, LLC

-- Inspect the aluminum bolts used to connect the engine to the transmission to see if they can be used again and mark them, if necessary **TRANSMISSION, INSTALLING**.

-- Check if the alignment sleeves -A- for centering the engine/transmission are in the cylinder block and insert them if they are not.

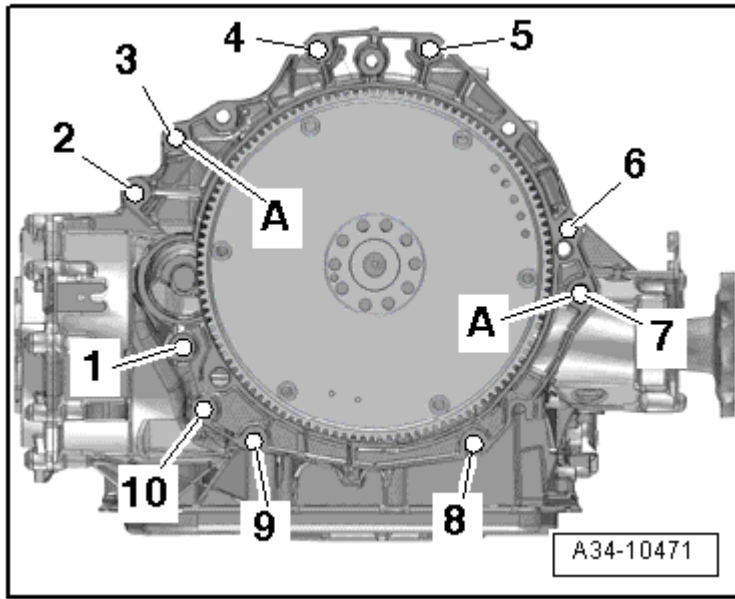


Fig. 227: Connecting Transmission To Engine And Tighten Engine/Transmission Connecting Bolts
 Courtesy of AUDI OF AMERICA, LLC

-- Connect the transmission to the engine and then tighten the engine/transmission connecting bolts -6 and 7-.

-- Install the tunnel crossmember. Refer to **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW.**

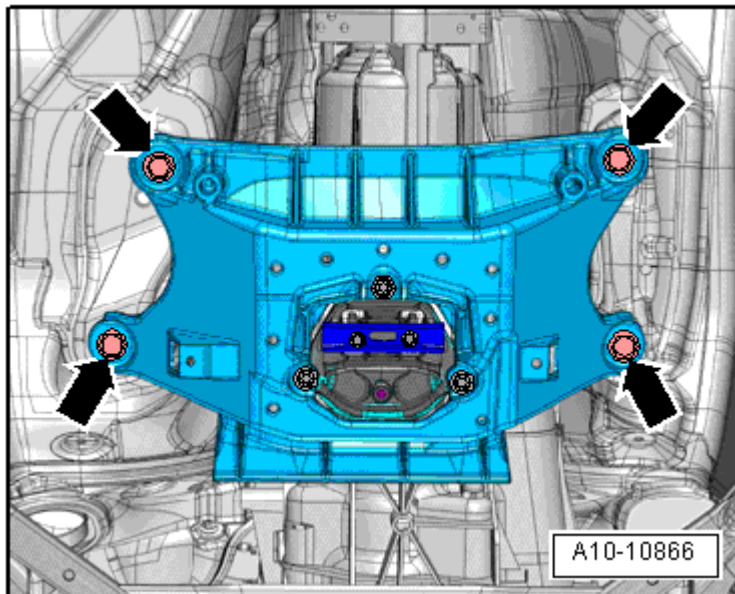


Fig. 228: Transmission Support Overview
 Courtesy of AUDI OF AMERICA, LLC

NOTE: The V.A.G 1383 A is not shown in the illustration.

- Lower the V.A.G 1383 A with the T40173 and move it to the side.
- Tighten then engine bolts to the transmission accessible from underneath.
- Remove the T40170 and T40169.

NOTE: The following step is necessary to make sure the flywheel rests on the drive plate evenly and is not tilted.

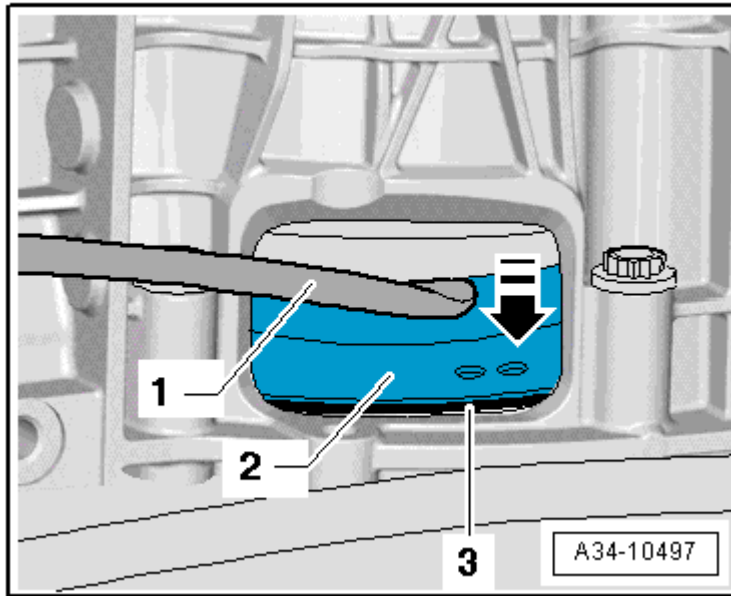


Fig. 229: Pressing Torque Converter
Courtesy of AUDI OF AMERICA, LLC

- Push the flywheel slightly against the drive plate -3- -arrow- -2- using a pry bar -1-.

Vehicles with 6-Cylinder Engine

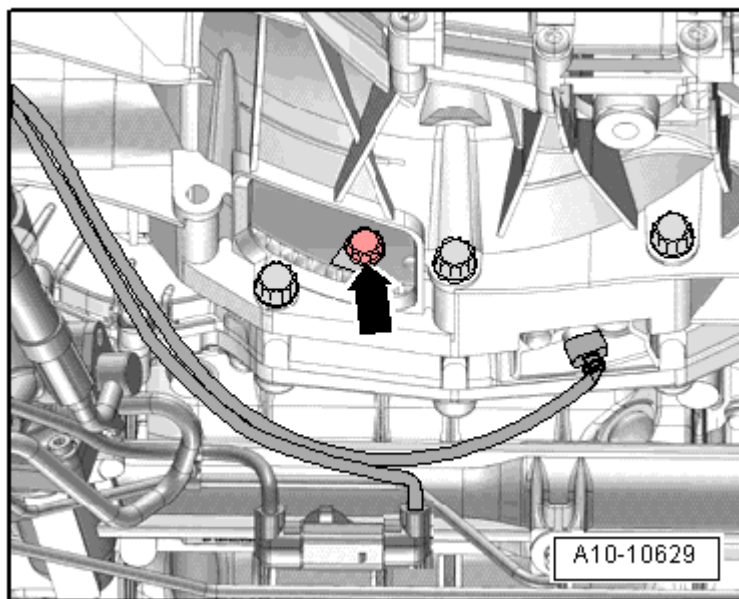


Fig. 230: Identifying Clutch Module First Bolt Installation Location (2 Of 2)
Courtesy of AUDI OF AMERICA, LLC

NOTE: Tighten the bolts with the V.A.G 1332/14.

- Tighten the flywheel to the drive plate as follows:
- Install the first bolt -arrow- and tighten by hand (2 Nm).
- Insert the T40058 guide pins as follows:

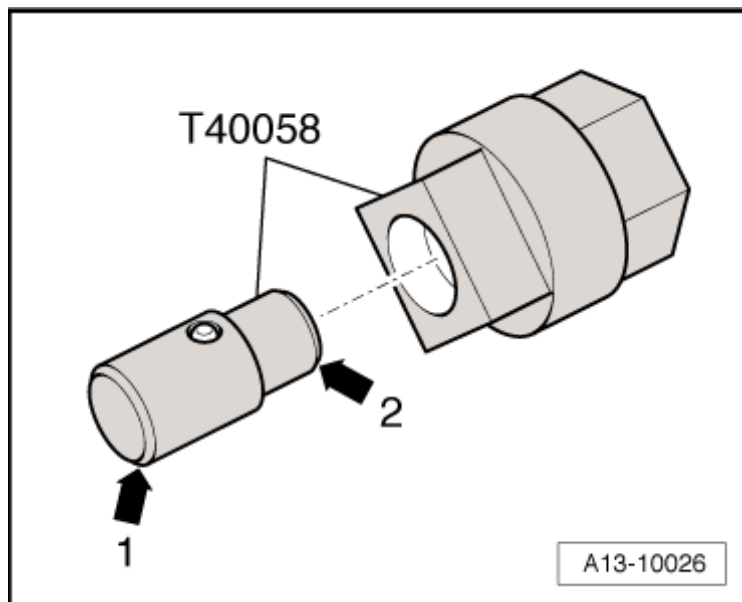


Fig. 231: Identifying Guide Pin And Adapter T40058
Courtesy of AUDI OF AMERICA, LLC

- The large diameter -arrow 1- faces the engine.
- The small diameter -arrow 2- faces the adapter.

-- Continue turning the crankshaft on the vibration damper 180° in the direction of the engine rotation -arrow- using the T40058.

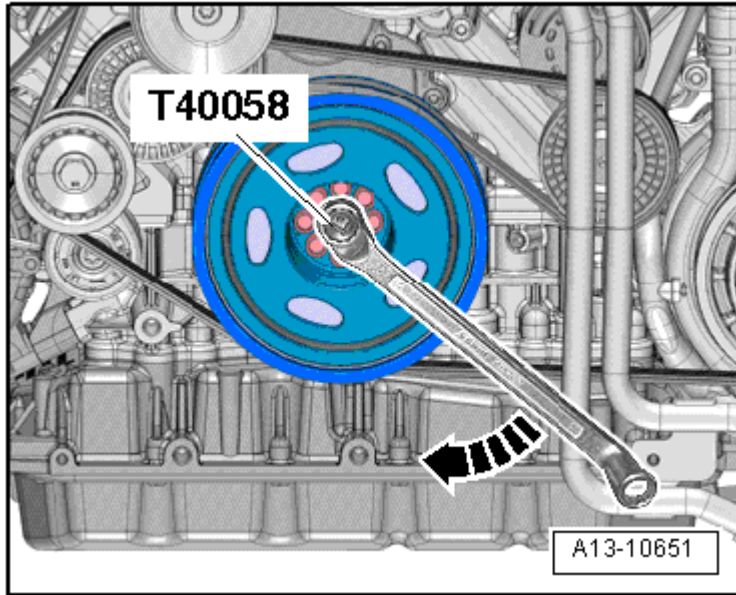


Fig. 232: Counter Hold Crankshaft Using Socket T40058
Courtesy of AUDI OF AMERICA, LLC

-- Tighten the bolt with the crankshaft in this position. Refer to **DUAL MASS FLYWHEEL AND DUAL CLUTCH OVERVIEW** .

-- Continue turning the crankshaft 60° and tighten the remaining 5 bolts to the tightening specification. Refer to **DUAL MASS FLYWHEEL AND DUAL CLUTCH OVERVIEW** .

Vehicles with 8-Cylinder Engine

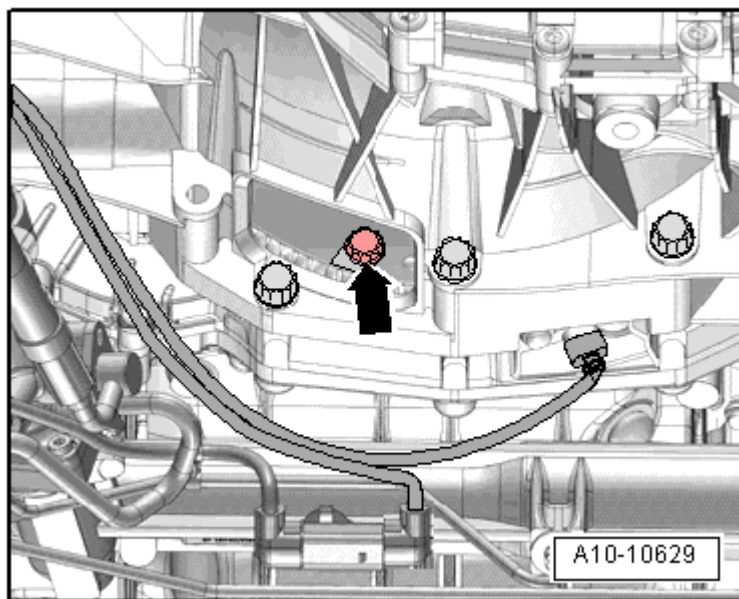


Fig. 233: Identifying Clutch Module First Bolt Installation Location (2 Of 2)
Courtesy of AUDI OF AMERICA, LLC

NOTE: Tighten the bolts with the V.A.G 1332/14.

-- Tighten the flywheel to the drive plate as follows:

-- Install the first bolt -arrow- and tighten by hand (2 Nm).

-- Turn the crankshaft on the vibration damper 180° in direction of engine rotation -arrow- using T10172 with T10172/7.

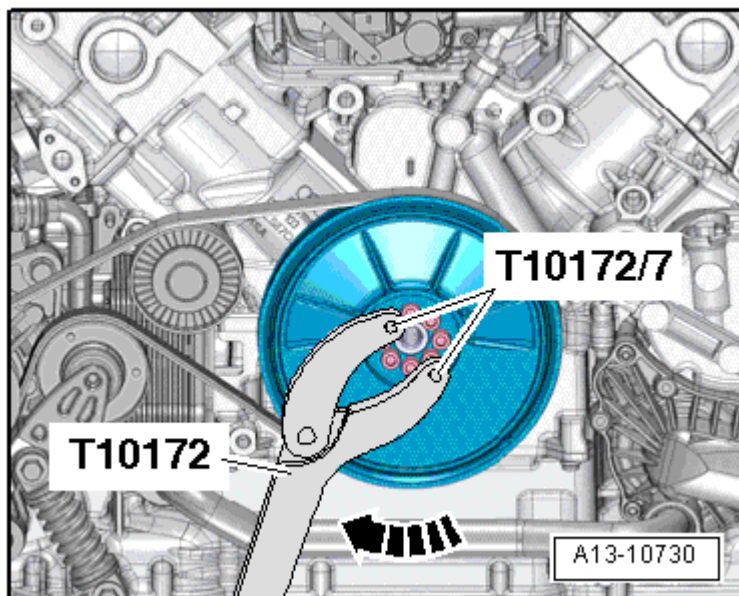


Fig. 234: Turning Crankshaft On Vibration Damper 180° In Direction Of Engine Rotation
Courtesy of AUDI OF AMERICA, LLC

- Tighten the bolt with the crankshaft in this position. refer to **DUAL MASS FLYWHEEL AND DUAL CLUTCH OVERVIEW** .
- Continue turning the crankshaft 60° and tighten the remaining 5 bolts to the tightening specification. Refer to **DUAL MASS FLYWHEEL AND DUAL CLUTCH OVERVIEW** .

All Vehicles

Install in reverse order of removal. Note the following:

- Attach the steering intermediate shaft to the steering gear. Refer to **Removal and Installation** .
- Install selector lever cable. Refer to **SELECTOR LEVER CABLE**.
- Install the ATF pipes. Refer to 6-cylinder engine **ATF PIPES** or 8-cylinder engine **ATF PIPES**.
- Attach the left and right drive axles to the transmission flange shafts. Refer to **Removal and Installation** .
- Install the drives axle heat shield. Refer to **Fig. 236**.

NOTE: Check the vehicle data label or the designation on the rear final drive itself to determine which one is installed in the vehicle. Then select the correct rear final drive repair information.

- Install the driveshaft. Refer to **Removal and Installation** or **Removal and Installation** .
- Install the starter. Refer to **Removal and Installation** .
- Tighten the remaining engine/transmission connecting bolts -3 through 5-.

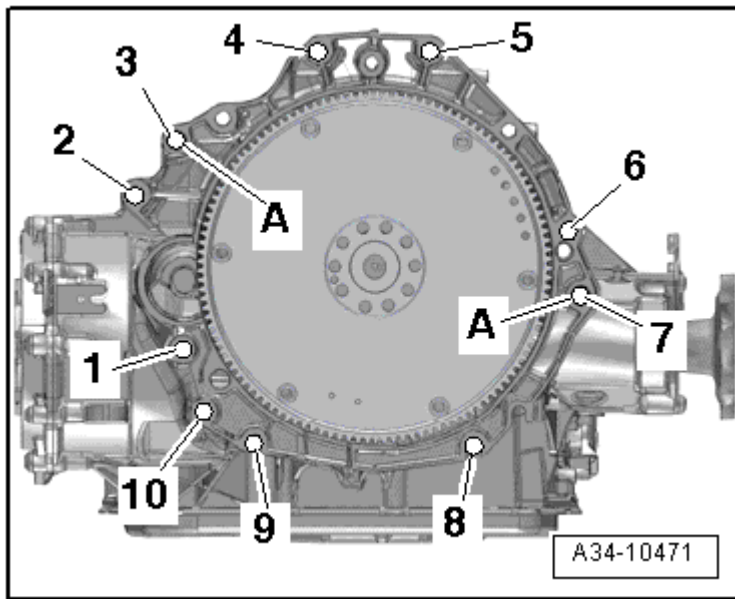


Fig. 235: Tightening Remaining Engine/Transmission Connecting Bolts
 Courtesy of AUDI OF AMERICA, LLC

- Install the exhaust system and align it free of tension. Refer to Description and Operation .
- Install the plenum chamber bulkhead. Refer to Description and Operation .

Vehicles with Hydraulic Power Steering

- Install the power steering hydraulic lines. Refer to Description and Operation .

All Vehicles

- Install the subframe crossbrace. Refer to Removal and Installation .
- Install the diagonal braces. Refer to Removal and Installation .
- Install the drive axle covers and noise insulation. Refer to Description and Operation .
- Complete the steps required after connecting the battery. Refer to Removal and Installation .

CAUTION: Danger of causing damage to the control modules due to the excess voltage.

- **Do not use a charger to jump start!**

- Check the selector lever cable and adjust if necessary. Refer to SELECTOR LEVER CABLE, ADJUSTING.

Vehicles with Hydraulic Power Steering

-- Fill the power steering fluid. Refer to **General Information** .

All Vehicles

-- **ATF, CHECKING LEVEL AND CORRECTING**

-- **TRANSMISSION FLUID LEVEL, CHECKING AND FILLING**

TIGHTENING SPECIFICATIONS

NOTE: The tightening specifications apply only to lightly greased, oiled, phosphated or blackened nuts and bolts.

Additional lubricant such as engine oil or transmission fluid may be used, but do not use graphite lubricant.

Do not use any ungreased parts.

Tightening specification tolerance +/- 15%.

Component		Nm
Bolts and nuts	M6	9
	M7	15
	M8	20
	M10	40
	M12	65

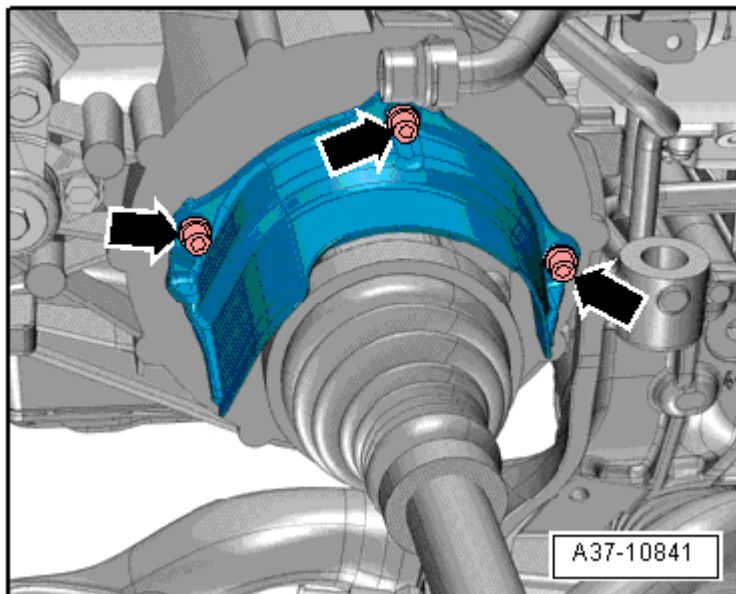
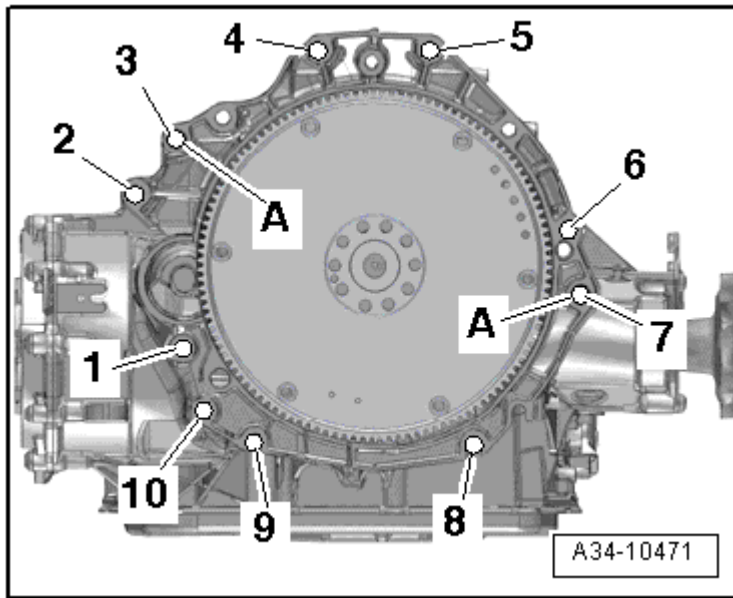


Fig. 236: Driveshaft Heat Shield - Tightening Specification

Courtesy of AUDI OF AMERICA, LLC

-- Tighten the heat shield bolts -arrows- to 23 Nm.

S-Tronic Transmission To 6-Cylinder Gasoline Engine**Fig. 237: S-Tronic Transmission To 6-Cylinder Gasoline Engine**

Courtesy of AUDI OF AMERICA, LLC

Item	Bolt	Nm
1 ¹⁾	M10 x 50 ²⁾	65
2 ¹⁾ , 4 ... 6	M12 x 100 ³⁾	30 + 90°
7	M12 x 125 ³⁾	30 + 90°
8	M10 x 60 ³⁾	15 + 90°
9, 10	M10 x 95 ³⁾	15 + 90°
A	Alignment sleeves for centering	
• ¹⁾ Also secures the starter • ²⁾ Bolt strength rating 10.9. There is no limit to the number of times steel bolts may be used. • ³⁾ The bolts may be used 2 times <u>TRANSMISSION, INSTALLING.</u>		

S-Tronic Transmission to the 8-Cylinder Gasoline Engine (RS 5)

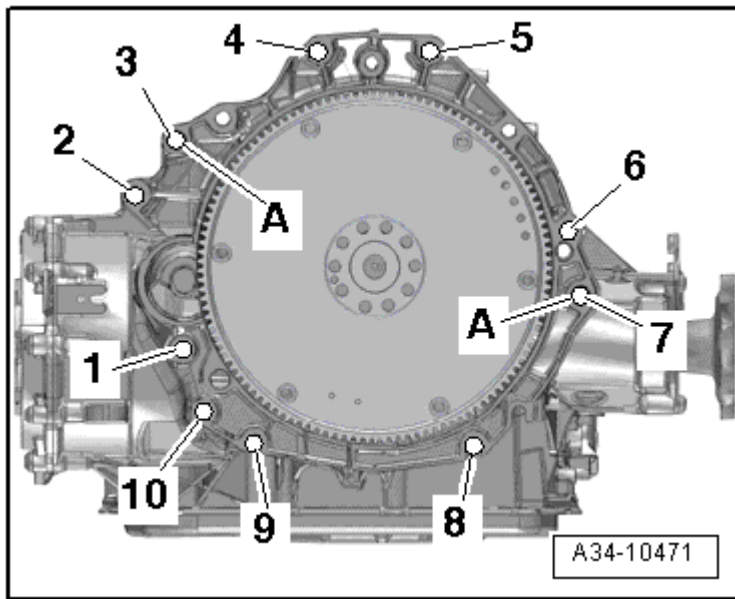


Fig. 238: S-Tronic Transmission To The 8-Cylinder Gasoline Engine (Rs 5)
 Courtesy of AUDI OF AMERICA, LLC

Item	Bolt	Nm
1 ¹⁾	M10 x 50 ²⁾	65
2 ¹⁾ , 3, 4, 5, 6	M12 x 100 ³⁾	30 + 90°
7	M12 x 175 ³⁾	30 + 90°
8, 9, 10	M10 x 60 ³⁾	15 + 90°
A	Alignment sleeves for centering	
• ¹⁾ Also secures the starter. • ²⁾ Bolt strength rating 10.9. There is no limit to the number of times the steel bolt can be used again. • ³⁾ Aluminum bolts may be used two times <u>TRANSMISSION, INSTALLING.</u>		
(1) To prevent damaging the bolts when marking them, do not clamp them in a vise. Insert the bolt using a 14 mm socket with a 1/2 drive, which is inserted in to the vise, as illustrated.		

- The aluminum bolts -2 through 10- can be used 2 times. Therefore, the bolts must be marked with two notches "X" made by a chisel after they have been used the first time -arrow-.

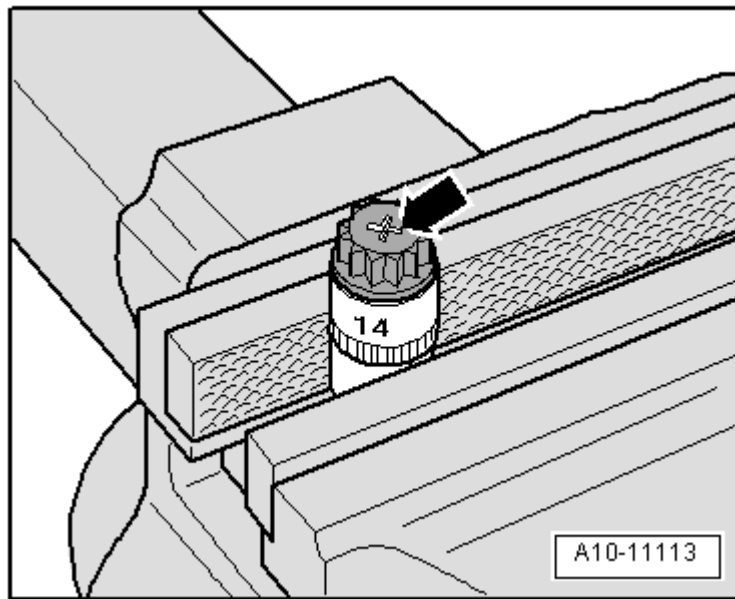


Fig. 239: Identifying Bolts Marked With An "X" May Not Be Used Again
Courtesy of AUDI OF AMERICA, LLC

- Bolts marked with an "X" may not be used again.

TRANSMISSION SUPPORT WITH TRANSMISSION MOUNT

Removing

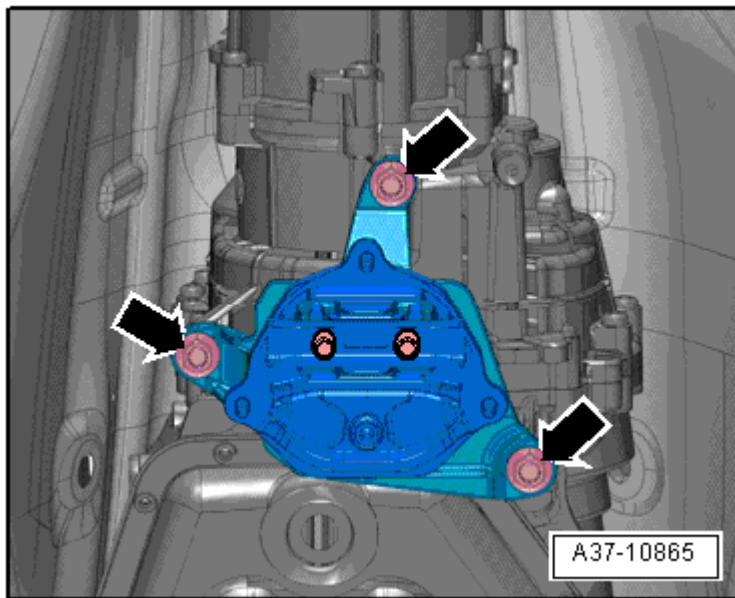


Fig. 240: Transmission Support With Transmission Mount
Courtesy of AUDI OF AMERICA, LLC

-- Remove the tunnel crossmember. Refer to **TUNNEL CROSSMEMBER**.

-- Remove the bolts -arrows- and the transmission support with the transmission mount from the transmission.

Installing

Install in reverse order of removal. Note the following:

- Tightening specifications, refer to **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW**.

-- Install tunnel crossmember. Refer to **TUNNEL CROSSMEMBER**.

TRANSMISSION MOUNT

Removing

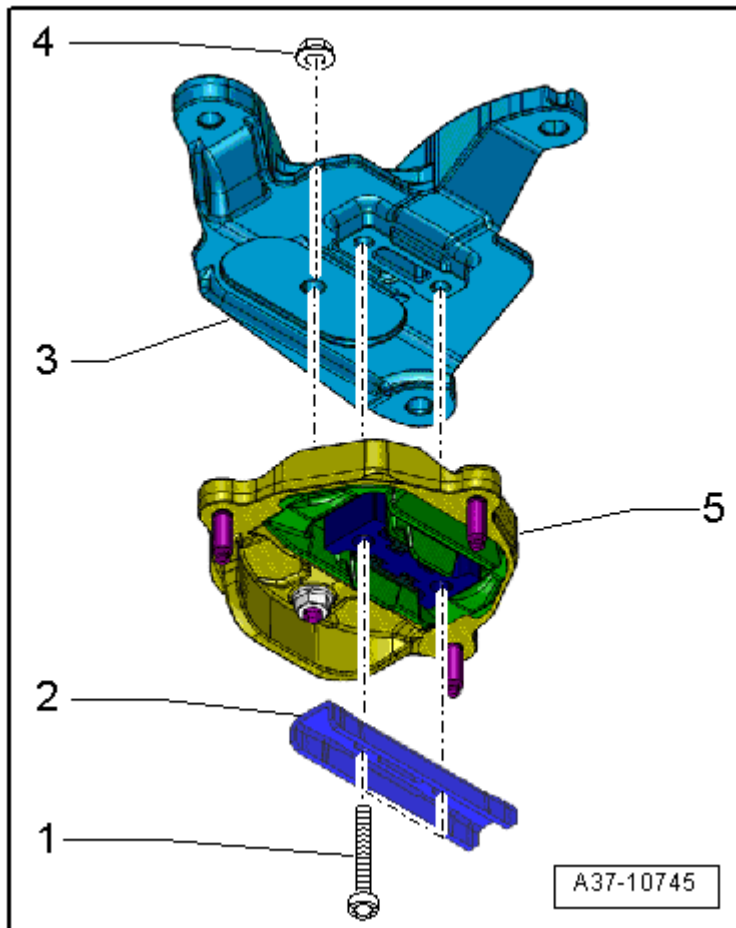


Fig. 241: Transmission Mount

Courtesy of AUDI OF AMERICA, LLC

-- Remove the transmission support with the transmission mount. Refer to **TRANSMISSION SUPPORT WITH TRANSMISSION MOUNT**.

- Remove the bolts -1- and remove the lower stop -2- for the transmission mount.
- Remove the nut -4- and remove the transmission mount -5- from the transmission support -3-.

Installing

Install in reverse order of removal. Note the following:

- Tightening specifications, refer to **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW**.

- Mount the transmission support -3- on the transmission mount -5-.
- Tighten the nut -4- hand-tight.
- Tighten the bolts -1- for the lower stop -2-.
- Tighten the nut -4-.
- Install the transmission support and transmission mount **TRANSMISSION SUPPORT WITH TRANSMISSION MOUNT**.

TUNNEL CROSSMEMBER**Special tools and workshop equipment required**

- Engine/Transmission Jack V.A.G 1383 A
- Gearbox Support T10337

Removing

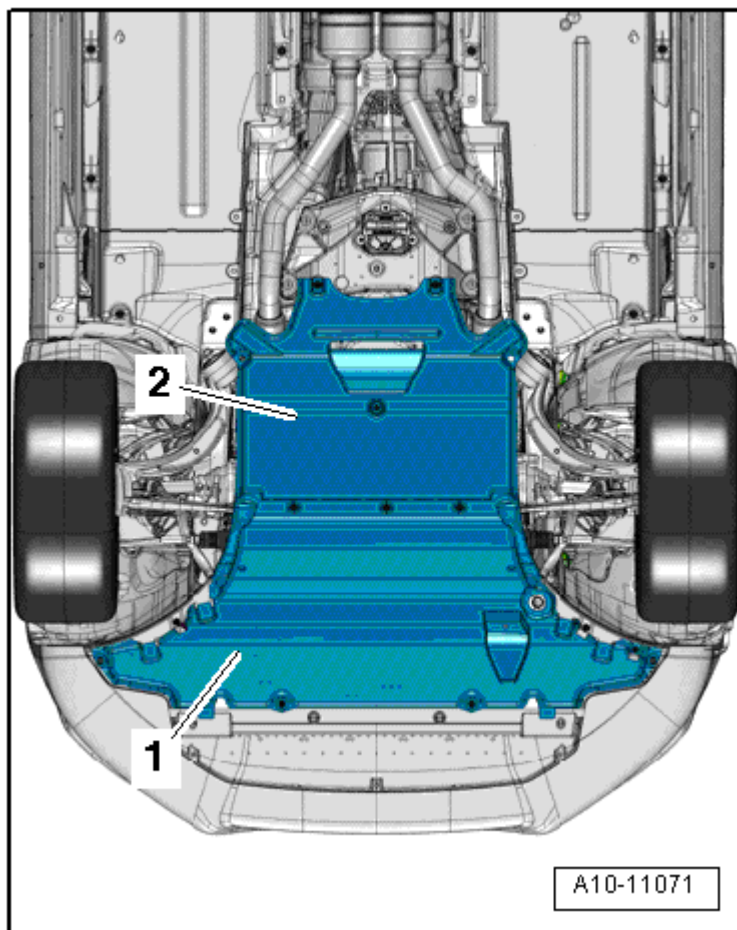


Fig. 242: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

-- Remove the rear noise insulation -2-. Refer to **Description and Operation** .

Audi RS 5

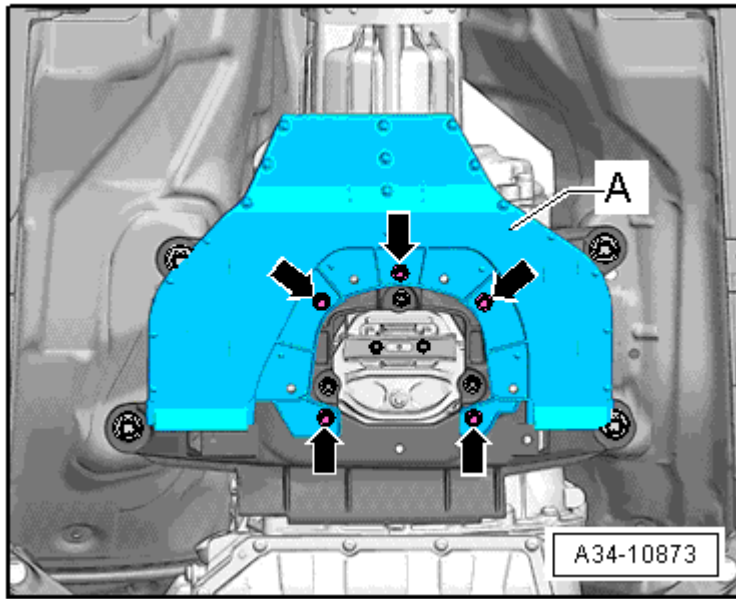


Fig. 243: Air Guide -A-
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -arrows- and air guide -A-.

All Vehicles

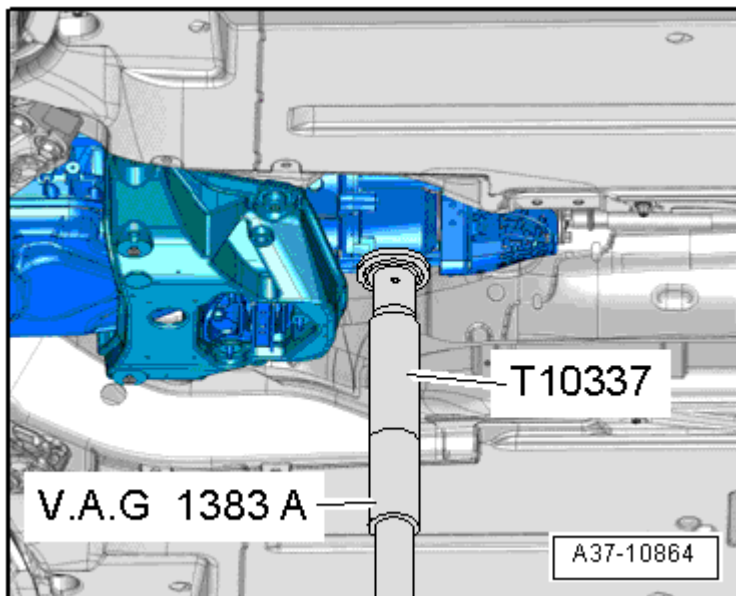


Fig. 244: Mounting T10337 On V.A.G 1383 A And Then Attach It To Bottom Of Transmission
Courtesy of AUDI OF AMERICA, LLC

-- Mount the T10337 on the V.A.G 1383 A and attach it to the bottom of the transmission.

-- Raise the transmission slightly.

NOTE: If the tunnel crossmember was removed in order to check or add transmission fluid, then it is necessary to bring the transmission back into its installed position after removing the tunnel crossmember. This is the only way the transmission fluid level can be adjusted correctly. Refer to TRANSMISSION FLUID LEVEL, CHECKING AND FILLING .

WARNING: There is the risk of an accident.

- The V.A.G 1383 A may only be used during assembly and must not sit unsupervised under the vehicle.

-- Remove the bolts from the tunnel crossmember -arrows-.

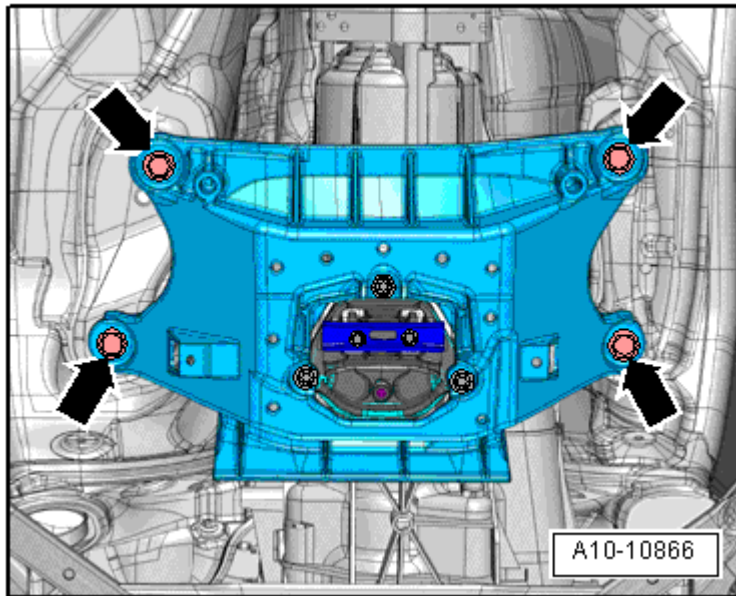


Fig. 245: Transmission Support Overview
Courtesy of AUDI OF AMERICA, LLC

-- Remove the nuts -arrow- and the tunnel crossmember.

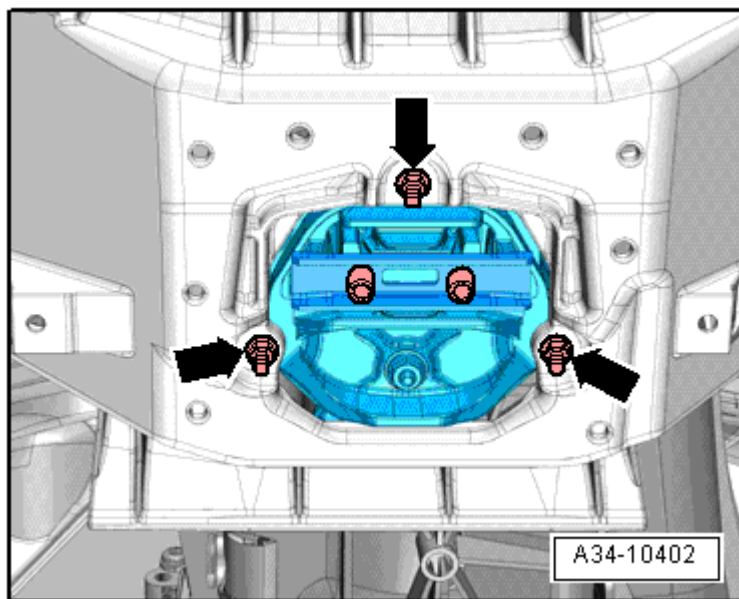


Fig. 246: Removing Nuts And Tunnel Crossmember
Courtesy of AUDI OF AMERICA, LLC

Installing

Install in reverse order of removal. Note the following:

- Tightening specifications, refer to **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW.**

-- Install the noise insulation. Refer to **Description and Operation** .

SPECIAL TOOLS

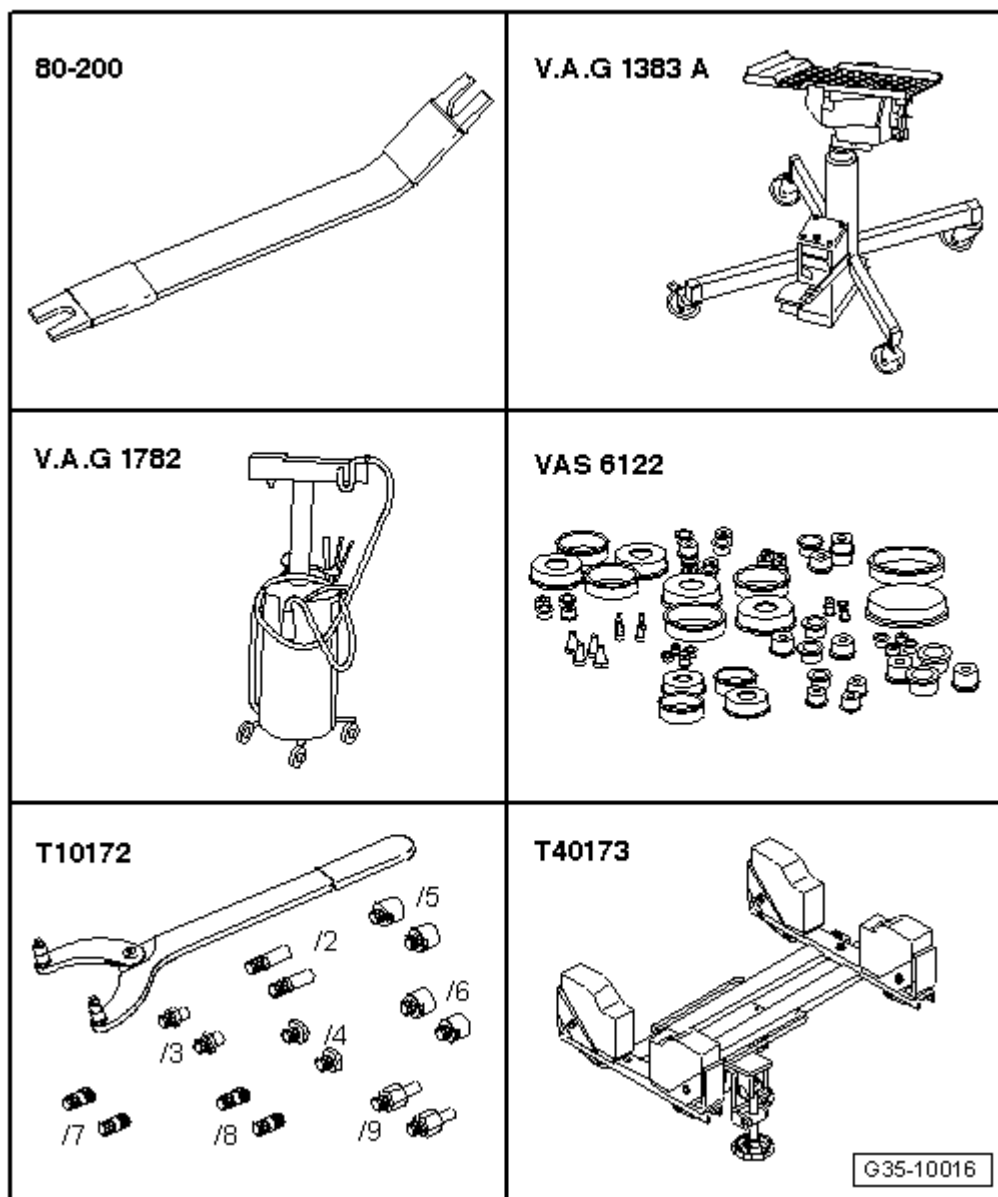


Fig. 247: Identifying Special Tools

Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Pry Lever - Rmv Outside Mirror 80 - 200
- Engine/Transmission Jack V.A.G 1383 A
- Used Oil Collection and Extraction Device V.A.G 1782
- Engine Bung Set VAS 6122
- Counterhold Tool Touareg V10 T10172 with Adapter T10172/5
- Gearbox Support T40173

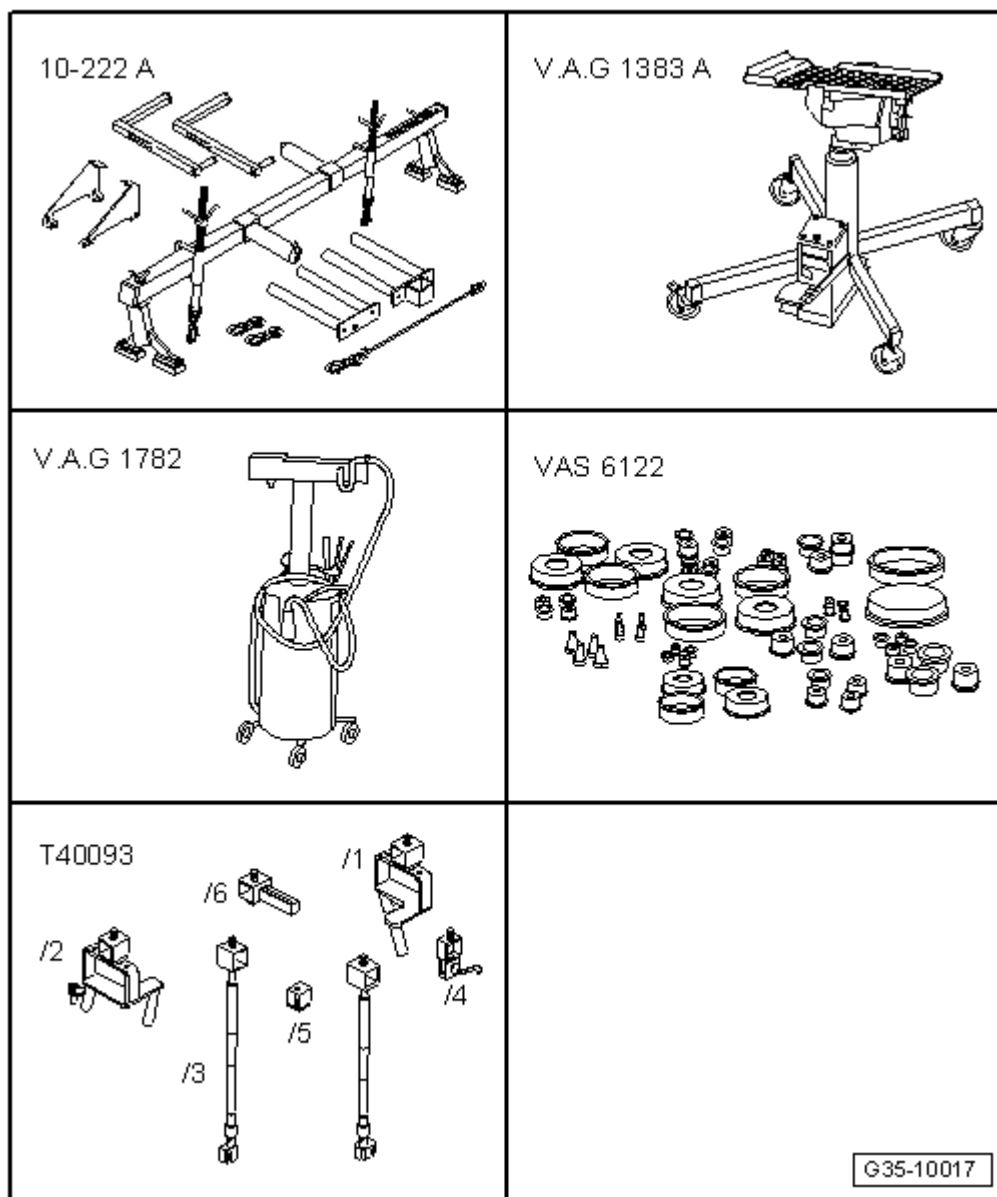


Fig. 248: Identifying Special Tools
 Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Engine Support Bridge 10 - 222 A
- Engine/Transmission Jack V.A.G 1383 A
- Used Oil Collection and Extraction Device V.A.G 1782
- Engine Bung Set VAS 6122
- Engine Support Supplement Set T40093

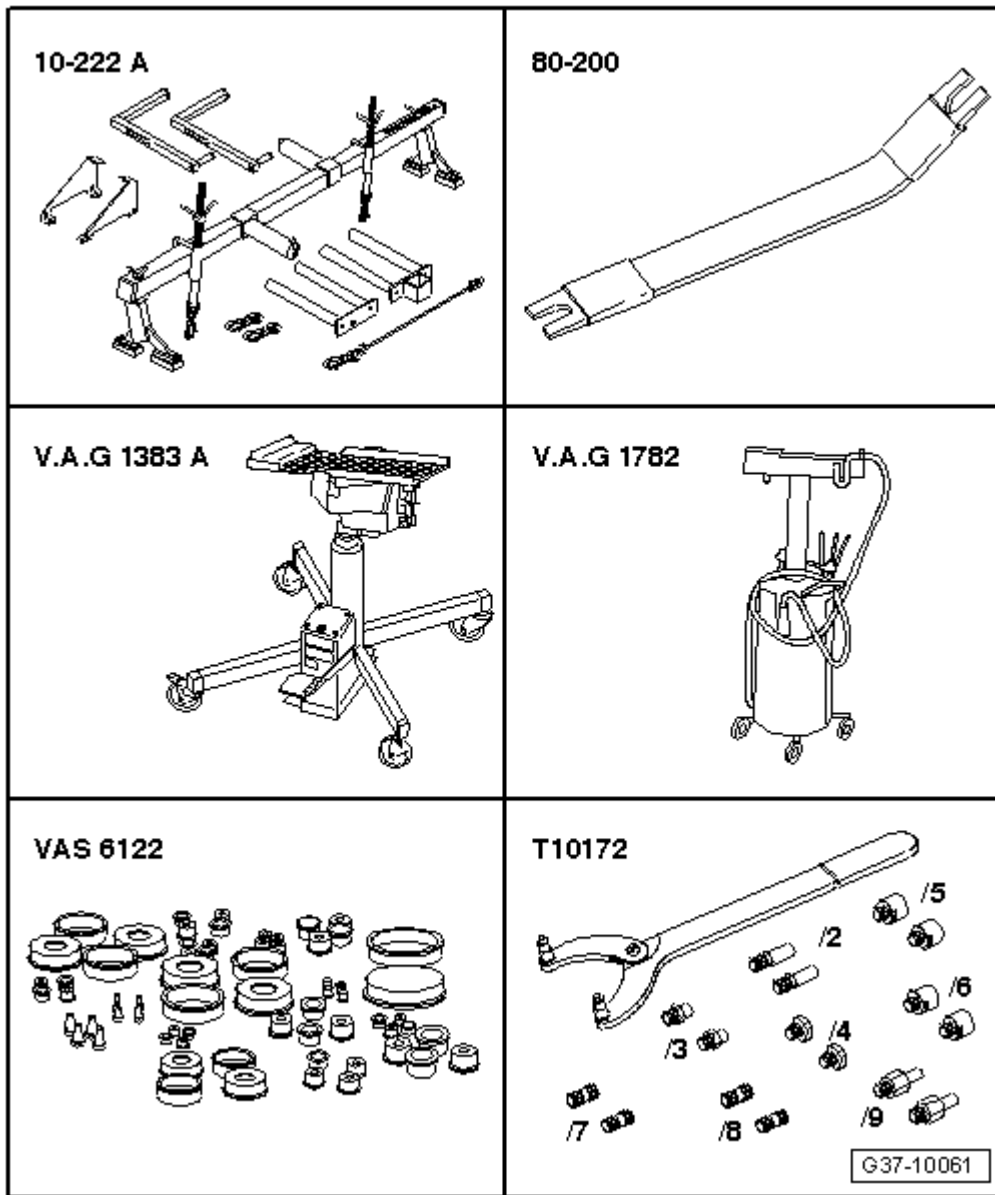


Fig. 249: Identifying Special Tools
 Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Pry Lever - Rmv Outside Mirror 80 - 200
- Engine Support Bridge 10 - 222 A
- Engine/Transmission Jack V.A.G 1383 A
- Used Oil Collection and Extraction Device V.A.G 1782
- Engine Bung Set VAS 6122
- Counterhold Tool Touareg V10 T10172 with Adapter T10172/5

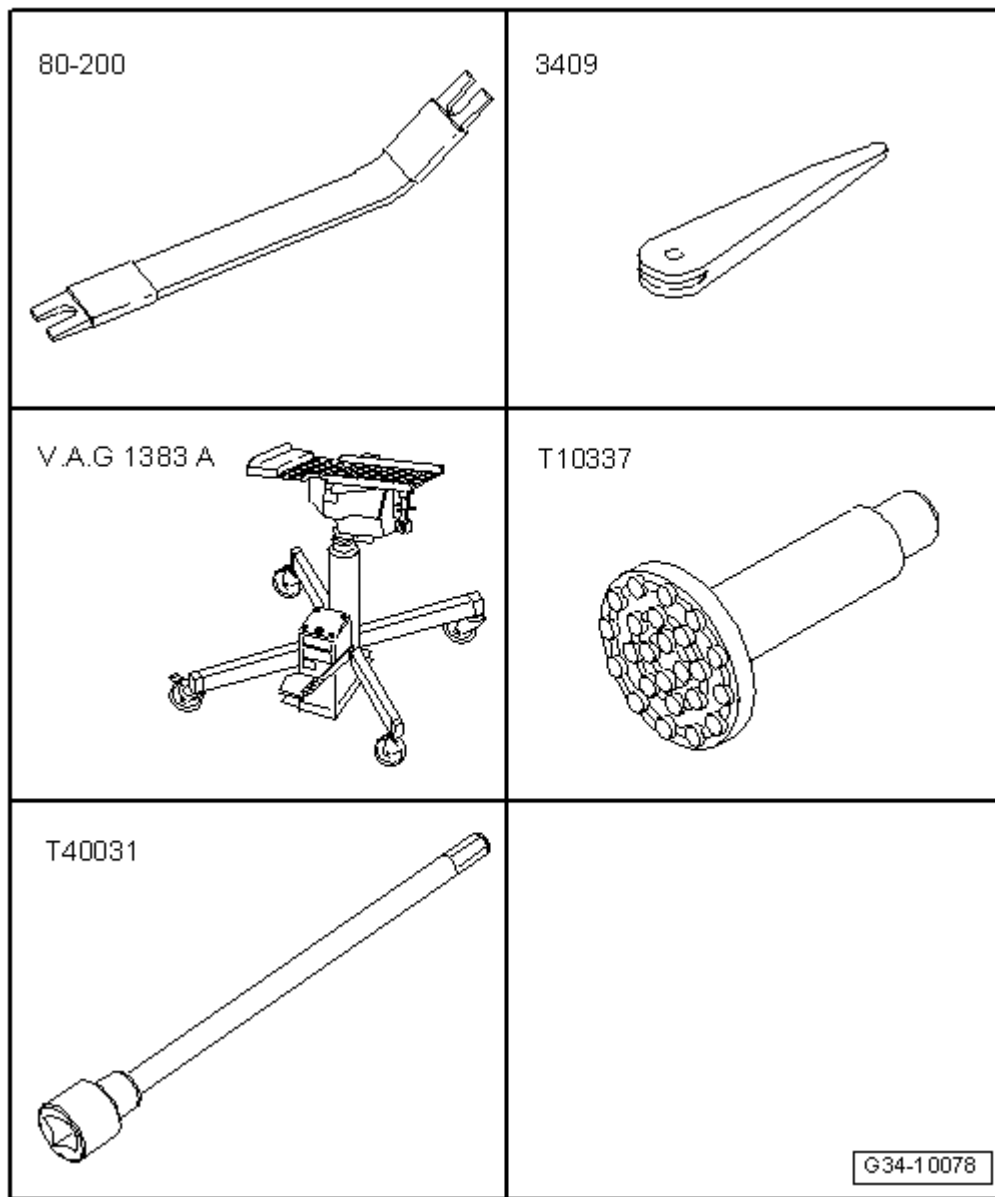


Fig. 250: Identifying Special Tools

Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Pry Lever - Rmv Outside Mirror 80 - 200
- Trim Removal Wedge 3409
- Engine/Transmission Jack V.A.G 1383 A
- Gearbox Support T10337
- Socket and Key T40031

Special tools and workshop equipment required

- Socket T40058

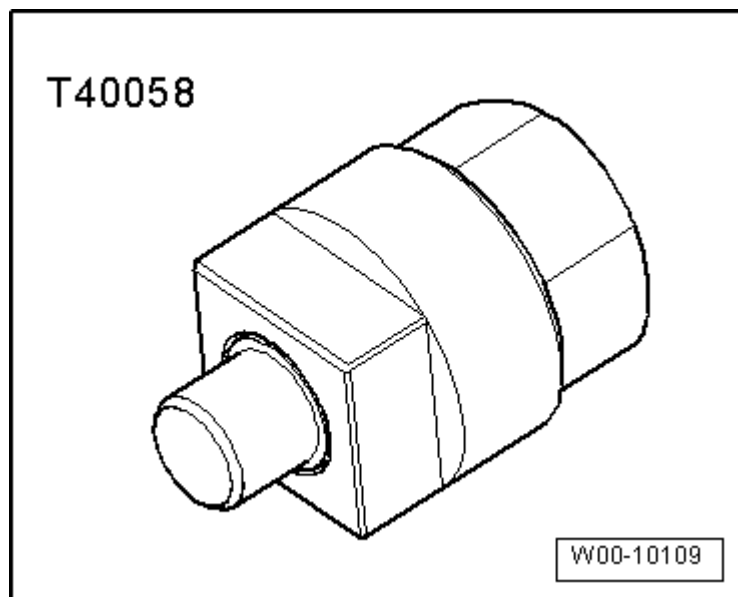


Fig. 251: Adapter T40058

Courtesy of AUDI OF AMERICA, LLC

- Assembly Aid T40169

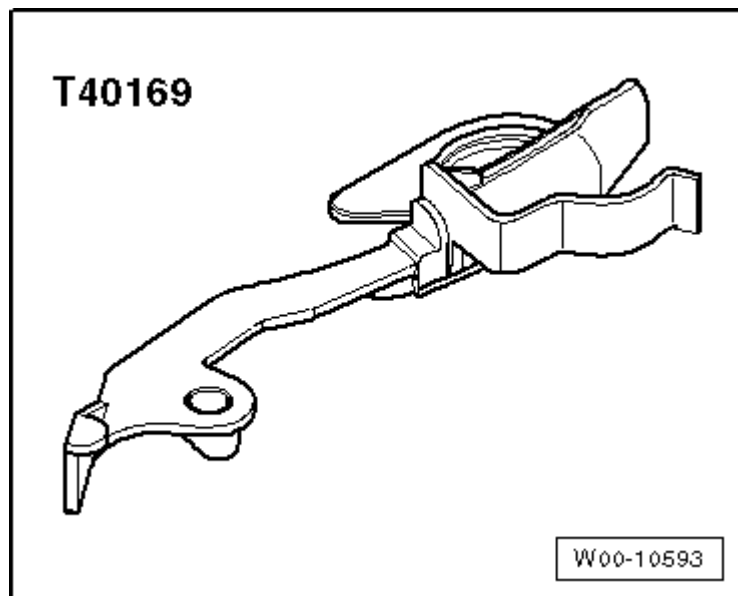


Fig. 252: Assembly Aid T40169

Courtesy of AUDI OF AMERICA, LLC

- Transportation Lock T40170

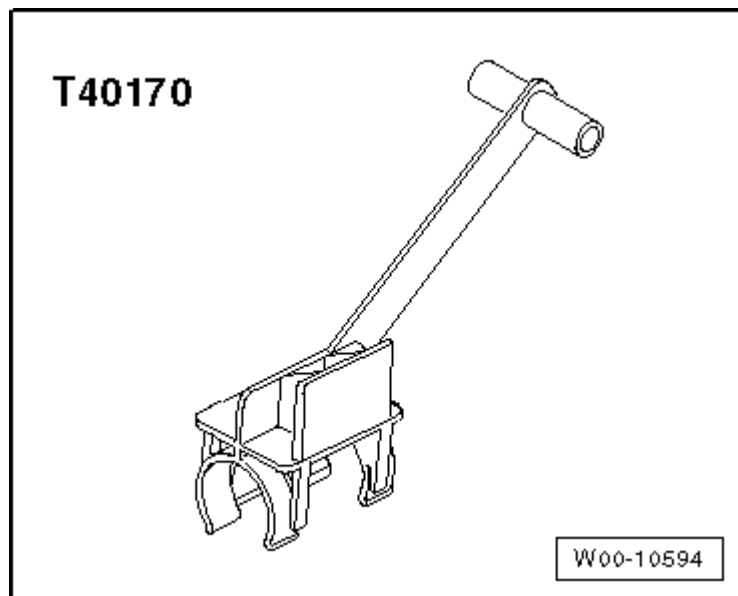


Fig. 253: Transportation Lock T40170
Courtesy of AUDI OF AMERICA, LLC

- Gearbox Support T40173

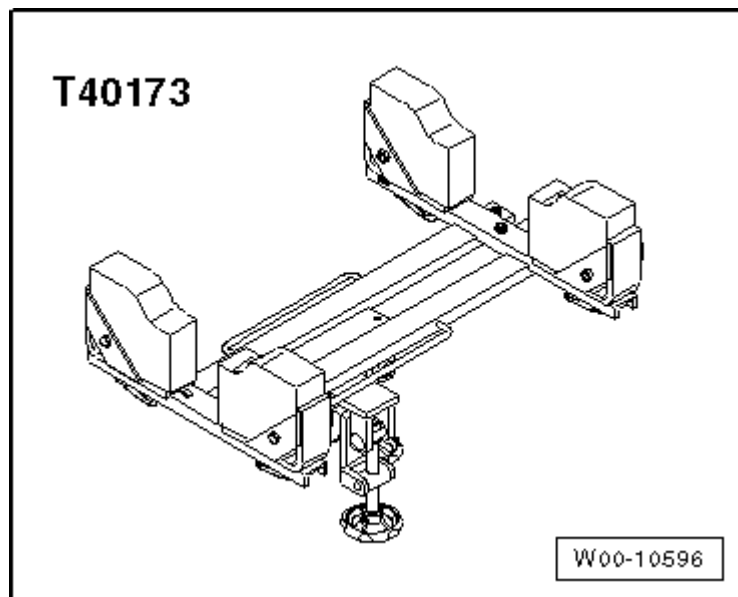


Fig. 254: Gearbox Support T40173
Courtesy of AUDI OF AMERICA, LLC

- Hook and Support Tool T40197

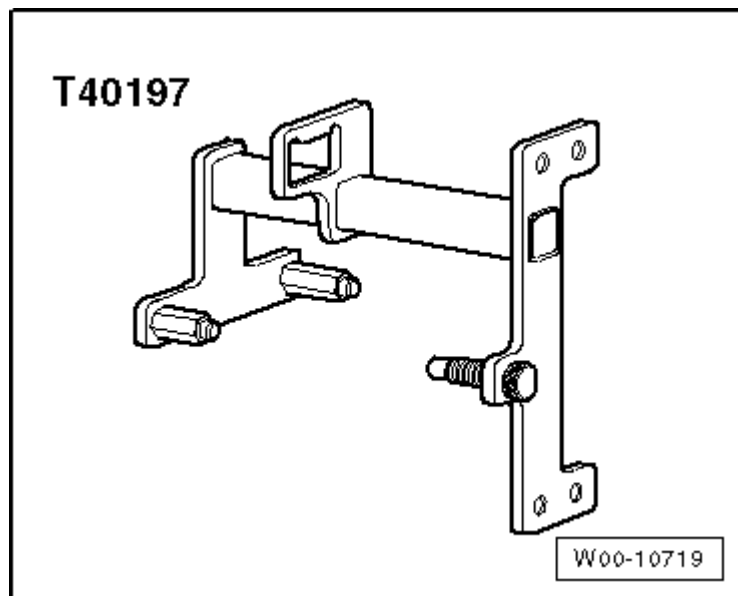


Fig. 255: Identifying Hook and Support Tool T40197
Courtesy of AUDI OF AMERICA, LLC

- Hose Clamp Pliers V.A.G 1275

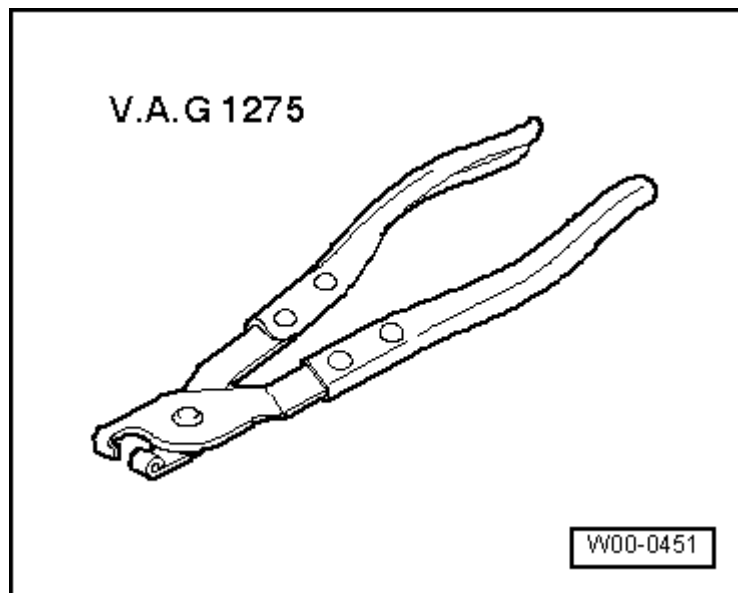


Fig. 256: Hose Clamp Pliers V.A.G 1275
Courtesy of AUDI OF AMERICA, LLC

- Ring Spanner Insert AF 16 V.A.G 1332/14

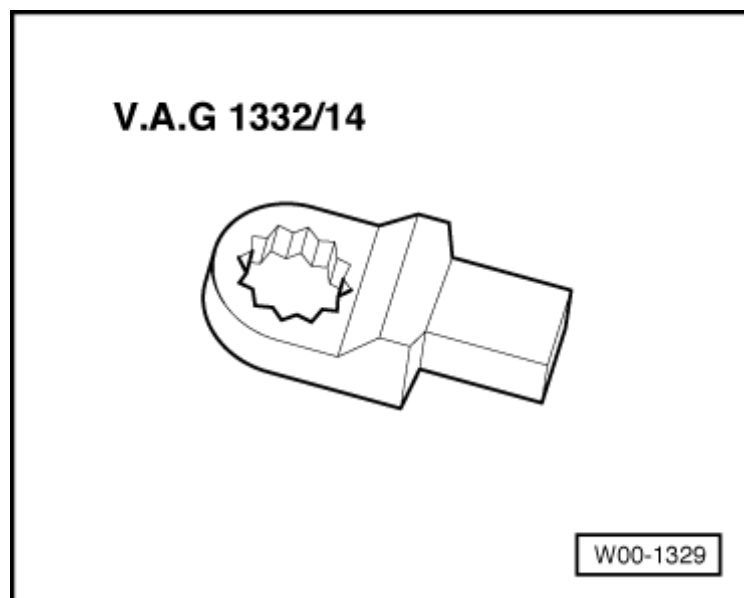


Fig. 257: Socket AF 16 mm V.A.G 1332/14
Courtesy of AUDI OF AMERICA, LLC

- ATF Filler Tool V.A.G 1924

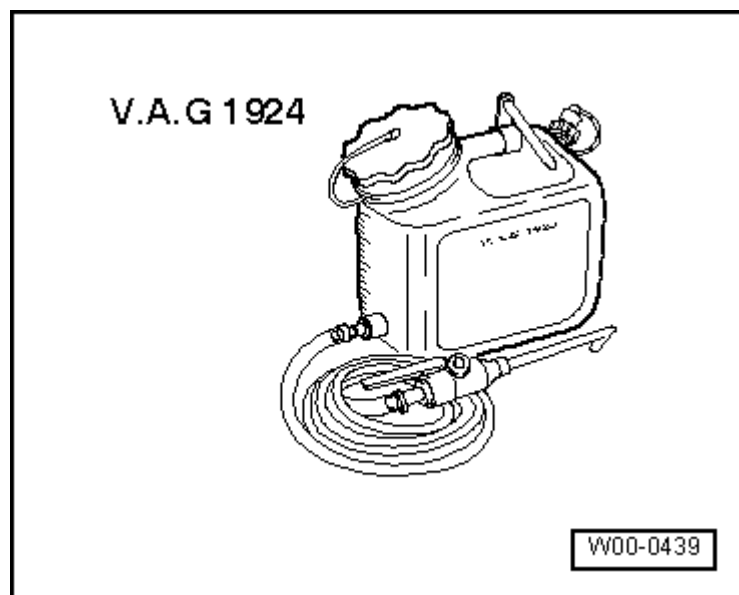


Fig. 258: ATF Filler Tool V.A.G 1924
Courtesy of AUDI OF AMERICA, LLC

- Engine and Transmission Holder VAS 6095

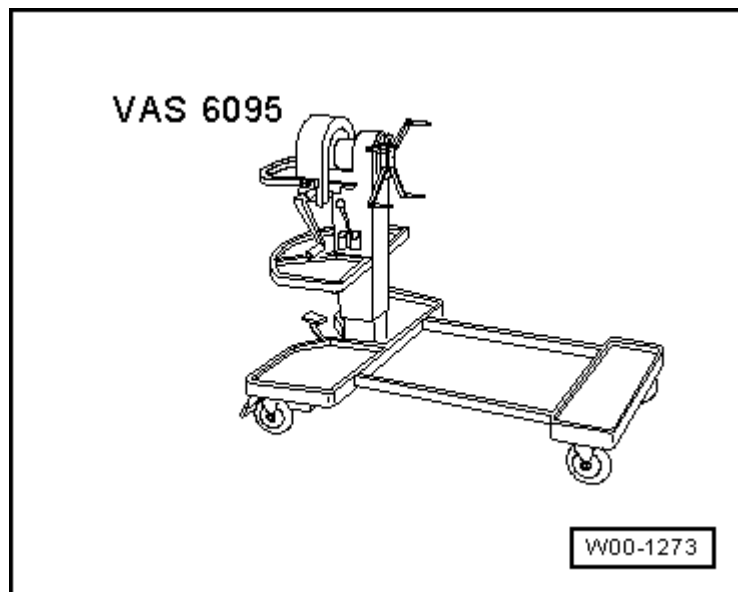


Fig. 259: Engine And Transmission Holder VAS 6095
Courtesy of AUDI OF AMERICA, LLC

- Shop Crane -Load Cap=700-1200kg VAS 6100

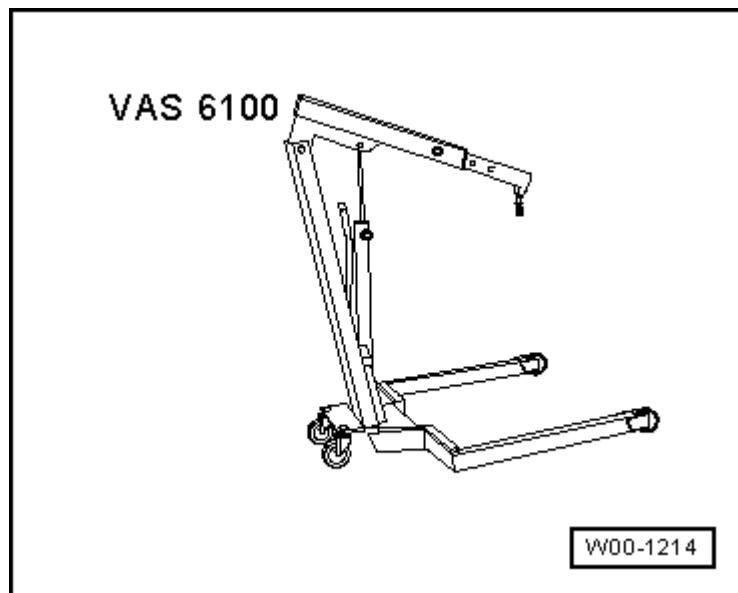


Fig. 260: Identifying Shop Crane VAS 6100
Courtesy of AUDI OF AMERICA, LLC

- Holding Plate VW 309

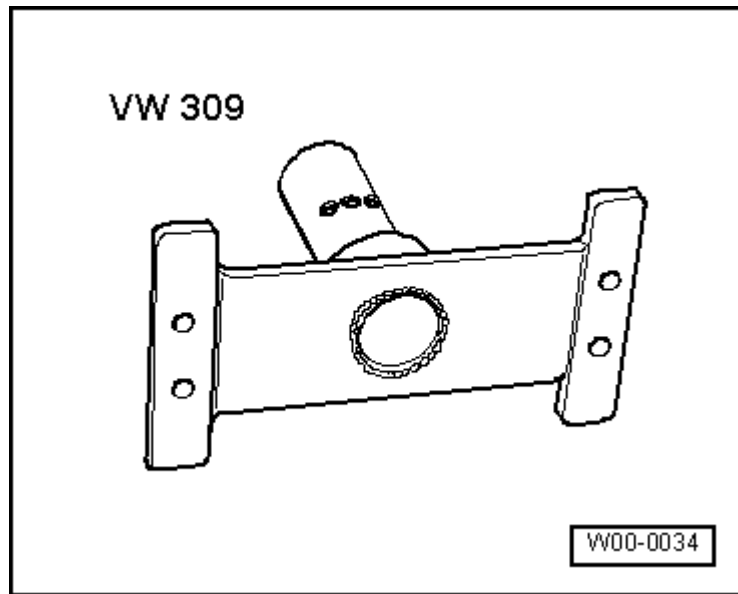


Fig. 261: Holding Plate VW 309

Courtesy of AUDI OF AMERICA, LLC

- Not illustrated:
- Spindles 10 - 222 A /11
- Attachment T40091/3
- Adapters T40093/6