

TRANSMISSION**Controls, Housing - Manual Transmission 0B4 AWD (Sedan)****34 CONTROLS, HOUSING****GENERAL INFORMATION****SHIFT MECHANISM INSTALLATION POSITION**

-Arrow A- Gearshift Lever Movement

-Arrow B- Selector Lever Movement

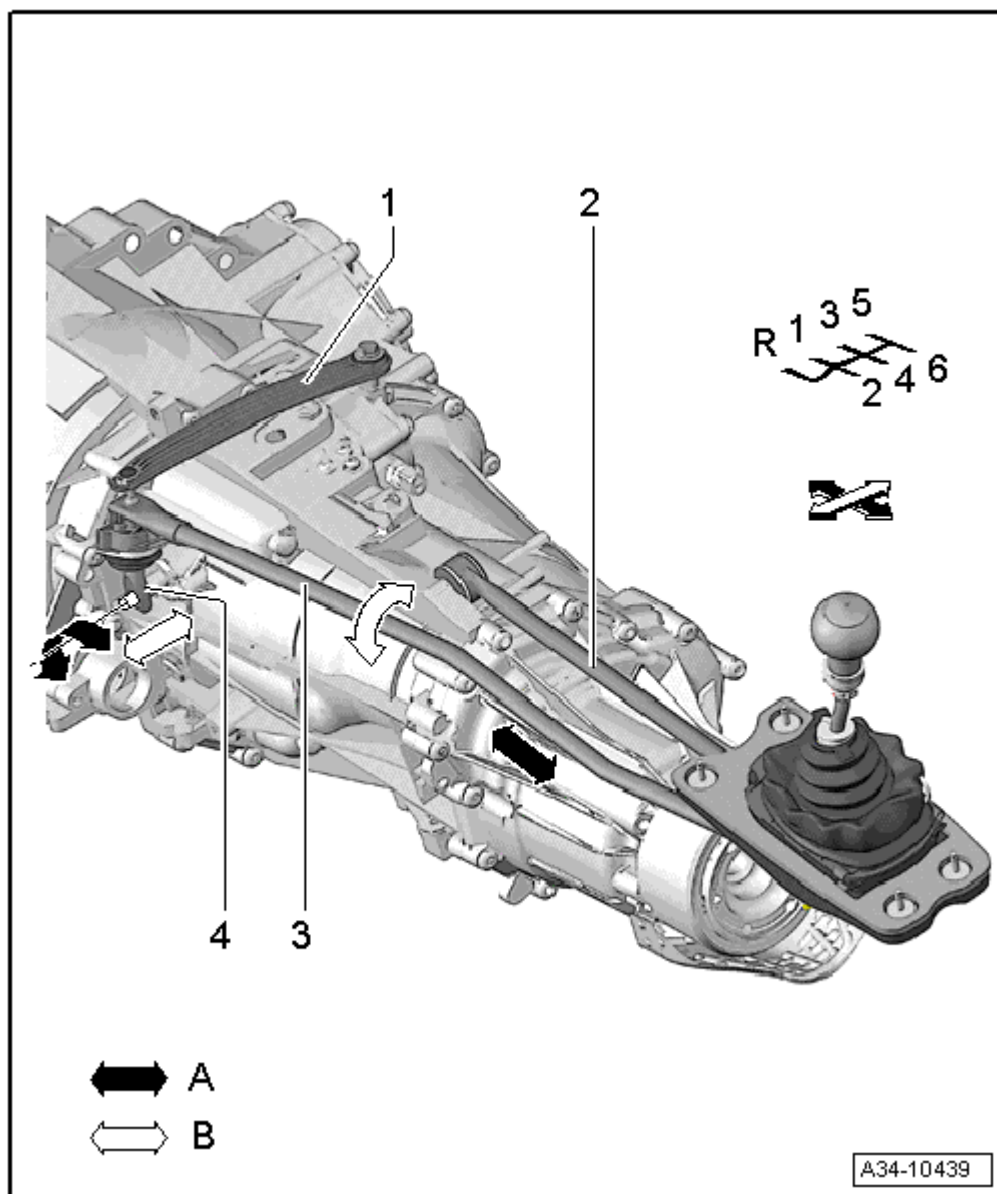


Fig. 1: Identifying Gearshift Mechanism

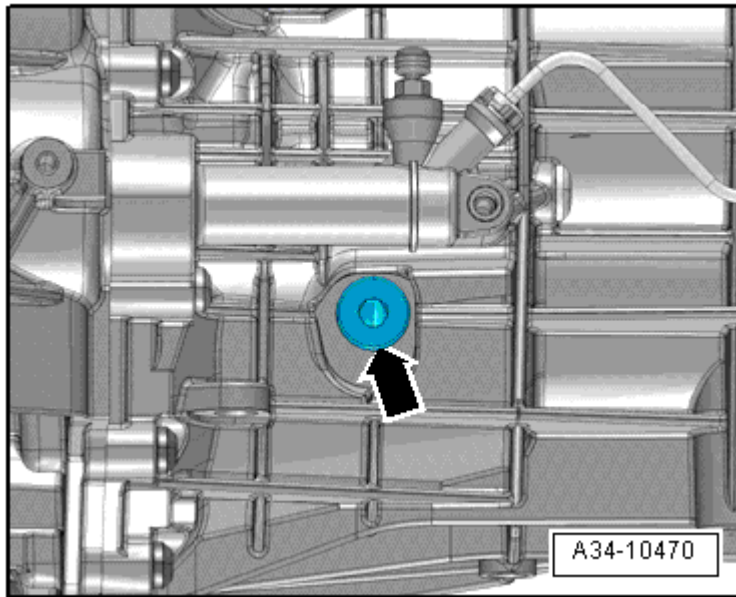
Courtesy of AUDI OF AMERICA, LLC

1. Connecting Rod
2. Push Rod
3. Gearshift Rod
4. Gearshift Lever

MANUAL TRANSMISSION, CHECKING TRANSMISSION FLUID LEVEL**Procedure**

- The vehicle must be level when checking the transmission fluid level.

-- Remove the transmission fluid filler plug -arrow- to check the transmission fluid.

**Fig. 2: Removing Transmission Fluid Filler Plug**

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- Specified value: The level is correct when the transmission fluid comes up to the bottom edge of the oil filler hole.

-- Add transmission fluid, if necessary, for specifications.

-- Install the transmission fluid filler plug.

Tightening Specifications

Component	Nm
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Transmission fluid filler plug	40
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DESCRIPTION AND OPERATION

GEARSHIFT KNOB WITH GEARSHIFT LEVER BOOT OVERVIEW

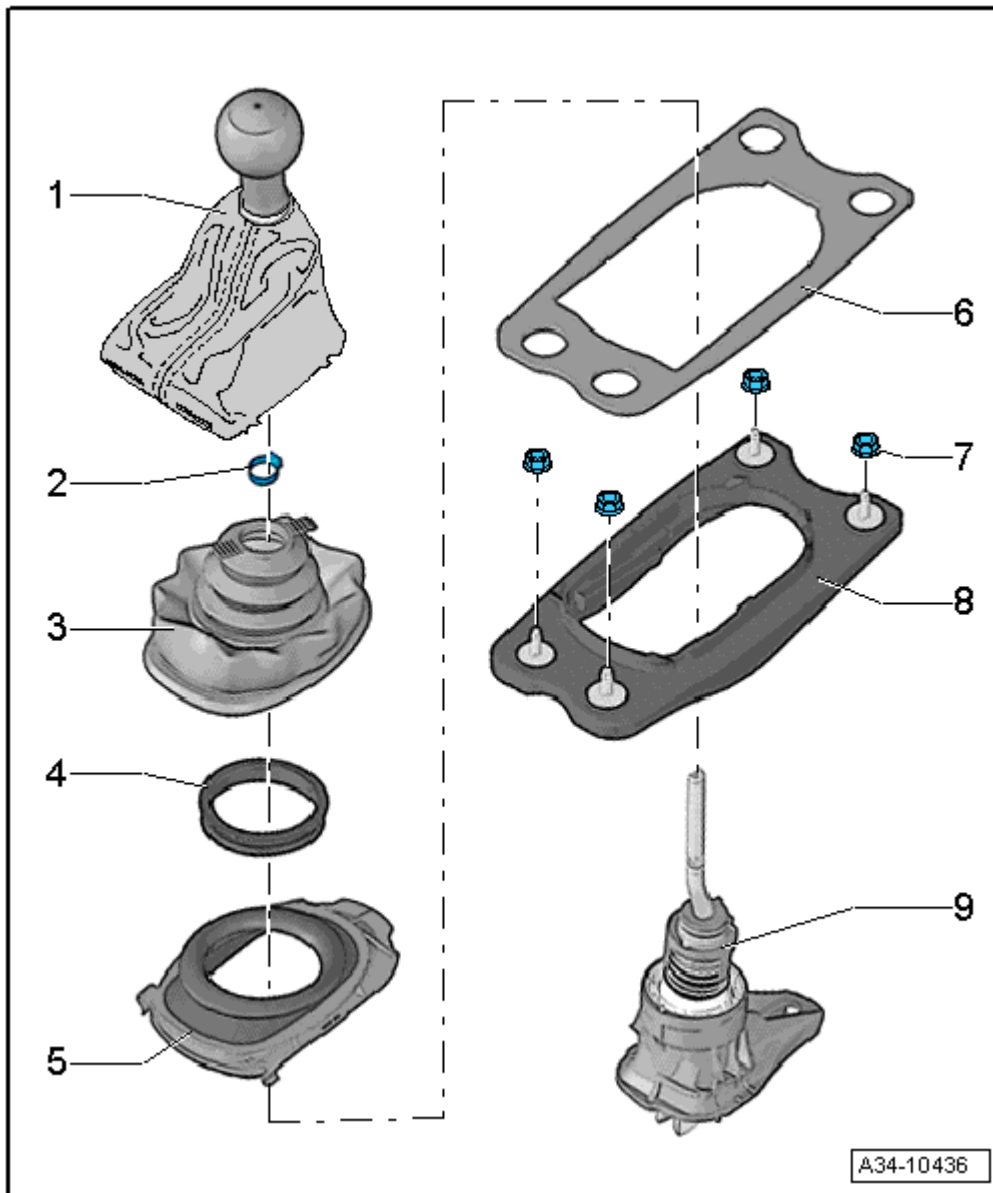


Fig. 3: Identifying Gearshift Knob With Gearshift Lever Boot
Courtesy of AUDI OF AMERICA, LLC

1. Gearshift Knob
 - With shift lever boot

- Removing and installing, refer to **SHIFT KNOB WITH SHIFT LEVER BOOT**
- 2. Clamp
 - Secures the shift lever knob to the shift lever
 - Attach using hose clamp pliers V.A.G 1275
- 3. Boot
 - Available only together with the support ring **GEARSHIFT KNOB WITH GEARSHIFT LEVER BOOT OVERVIEW**
 - Remove and install together with the noise insulation **GEARSHIFT KNOB WITH GEARSHIFT LEVER BOOT OVERVIEW NOISE INSULATION**
- 4. Support Ring
 - Available only together with the boot **GEARSHIFT KNOB WITH GEARSHIFT LEVER BOOT OVERVIEW**
- 5. Noise Insulation
 - Removing and installing, refer to **NOISE INSULATION**
- 6. Gasket
- 7. Nut
 - 8 Nm
- 8. Mount
 - For the shift lever support
- 9. Shift Lever with Shift Lever Support

SELECTOR MECHANISM OVERVIEW

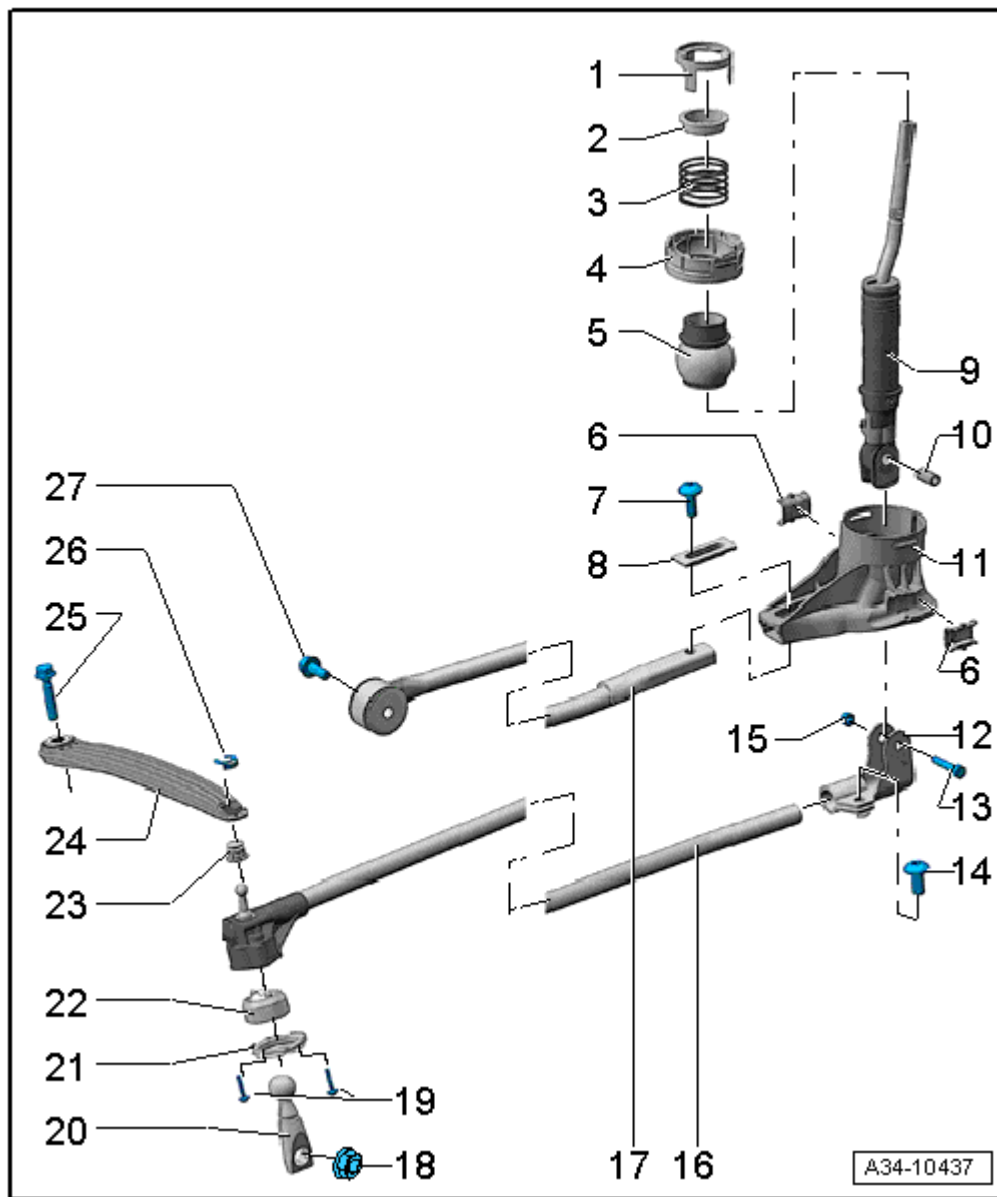


Fig. 4: Identifying Selector Mechanism
 Courtesy of AUDI OF AMERICA, LLC

1. Locking Ring
 - Remove ball when removing
2. Spacer
3. Pressure Spring
4. Ball Guide
 - Do not lubricate
5. Ball
 - Do not lubricate
6. Insulation

- For the shift lever support **SHIFT MECHANISM, ADJUSTING**
 - Do not lubricate
7. Bolt
 - 23 Nm
 8. Clamping Plate
 - Do not lubricate
 9. Gearshift Lever
 - Offset faces toward rear
 - Lubricate the guide and the gearshift lever stops; for the correct grease.
 - Lubricate the contact surfaces for the joint **SHIFT MECHANISM, ADJUSTING**; for the correct grease.
 10. Spacer Tube
 - Lubricate the outer circumference; for the correct grease.
 11. Shift Lever Support
 - Removing and installing, refer to **SELECTOR MECHANISM**
 - Do not lubricate
 12. Joint Piece
 - Between the selector rod and shift lever
 - Lubricate the contact surfaces for the gearshift lever; for the correct grease.
 13. Bolt
 - For the joint piece **SHIFT MECHANISM, ADJUSTING**
 14. Bolt
 - 23 Nm
 15. Nut
 - 10 Nm
 16. Gearshift Rod
 17. Push Rod
 - With bolt and washers
 18. Nut
 - Always replace
 - 20 Nm
 19. Bolt
 - 4 Nm
 20. Gearshift Lever
 - Insert so that master spline aligns with shift rod
 - Lubricate if needed; for the correct grease.
 21. Sealing Boot
 22. Ball Socket

- Lubricate; for the correct grease.
23. Bearing Bushing
- To remove, remove clip **SHIFT MECHANISM, ADJUSTING**
24. Connecting Rod
- To remove, remove clip **SHIFT MECHANISM, ADJUSTING**
25. Bolt
- 20 Nm
26. Clip
27. Bolt
- 20 Nm

SHIFT MECHANISM, ADJUSTING

The following is important to make sure the gearshift adjustment is correct:

NOTE: **Operating and transfer elements of shift mechanism must be in proper condition.**

Shift mechanism must move freely.

The transmission, clutch and clutch mechanism must also be in proper condition.

Transmission in neutral.

Procedure

- Remove shift knob with cover. Refer to **SHIFT KNOB WITH SHIFT LEVER BOOT**.
- Remove the front ashtray -1-. Refer to **Removal and Installation** .

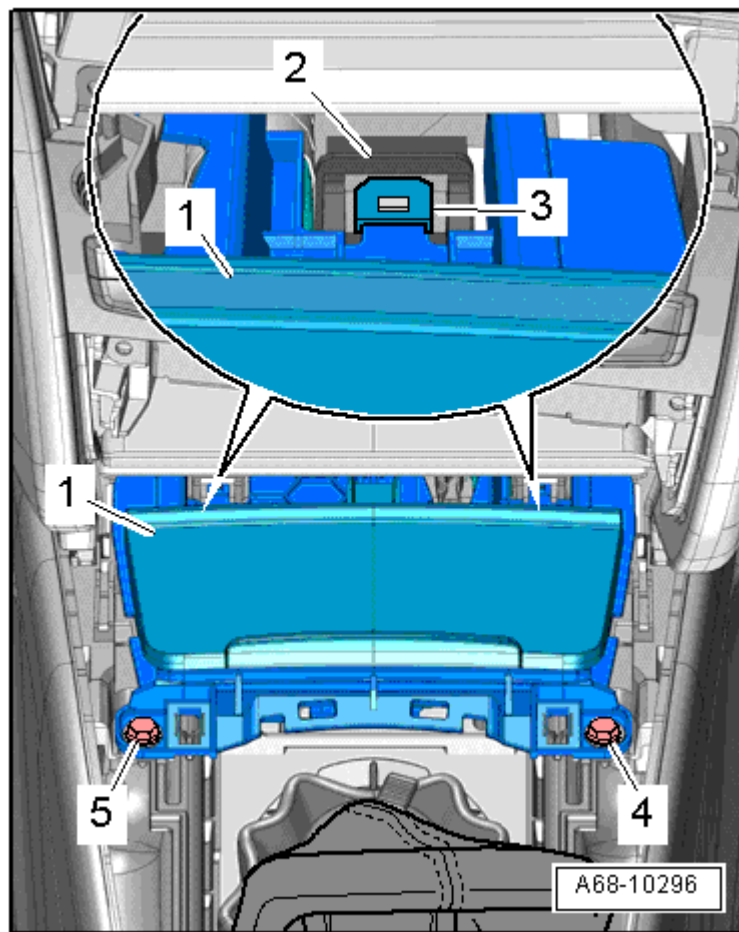


Fig. 5: Removing Ashtray

Courtesy of AUDI OF AMERICA, LLC

-- Remove the noise insulation over the shift mechanism. Refer to **NOISE INSULATION**.

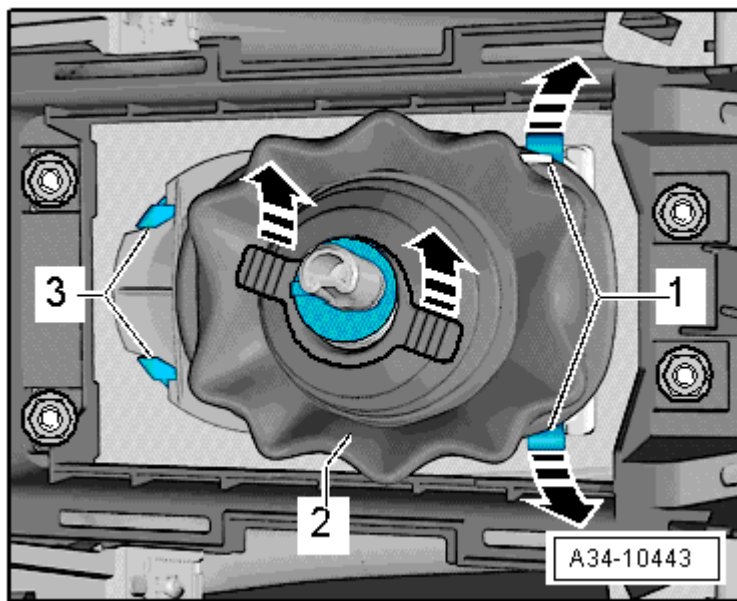


Fig. 6: Removing Noise Insulation Over Shift Mechanism
Courtesy of AUDI OF AMERICA, LLC

-- Check the push rod adjustment dimension -x-.

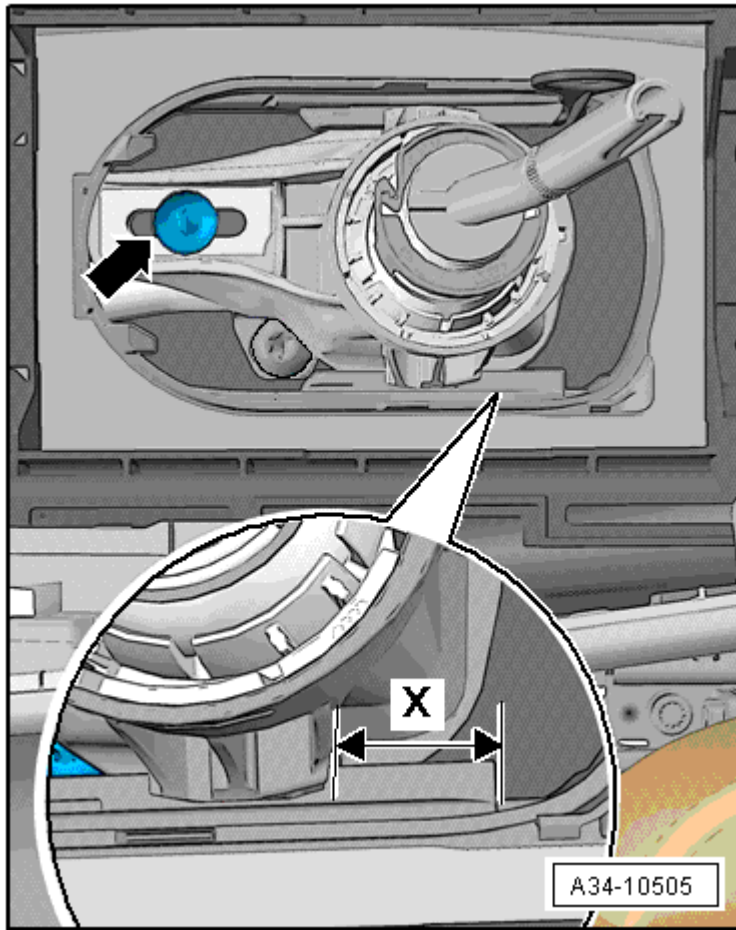


Fig. 7: Checking Push Rod

Courtesy of AUDI OF AMERICA, LLC

- Specified value: $-x- = 25 \text{ mm}$

-- If this is not the case, adjust distance $-x-$ as follows:

-- Loosen the push rod bolt -arrow-.

- You must be able to move shift lever support back and forth lightly on sliding piece.

-- Adjust $-x-$ by moving the selector lever bearing.

-- Tighten the push rod bolt -arrow- in this position. Tightening specification **SHIFT MECHANISM, ADJUSTING.**

-- Loosen the push rod bolt -arrow-.

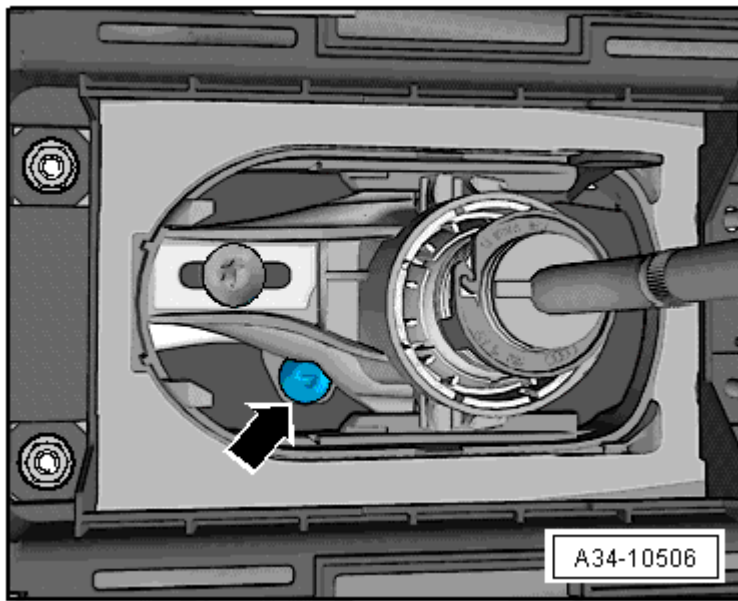


Fig. 8: Identifying Push Rod Bolt
Courtesy of AUDI OF AMERICA, LLC

- The connection between gearshift rod and selector mechanism must move freely.

Align Shift Lever as Follows:

-- Center bottom of shift lever in middle of shift lever support.

- Distance from shift lever support to bottom of shift lever -arrows- must be equal at all places.

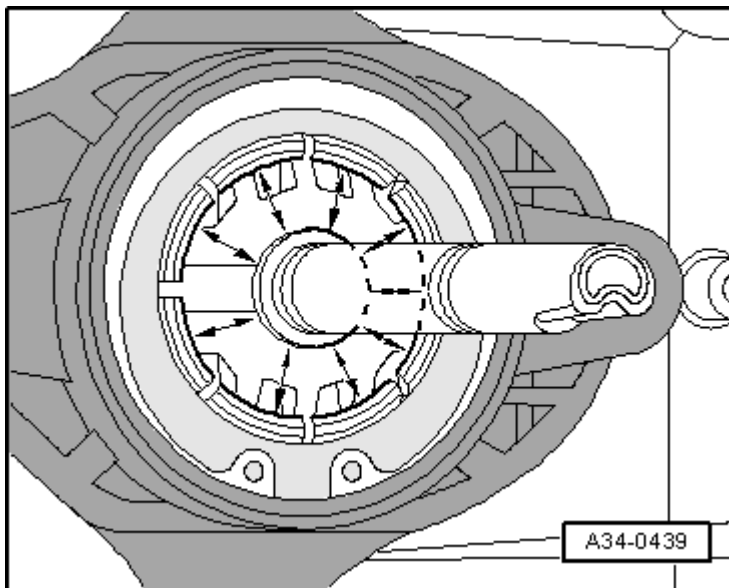


Fig. 9: Centering Bottom Of Shift Lever Centered In Ball Housing
Courtesy of AUDI OF AMERICA, LLC

-- Align shift lever so that it points in direction of travel and faces only very slightly (3.5°) toward right.

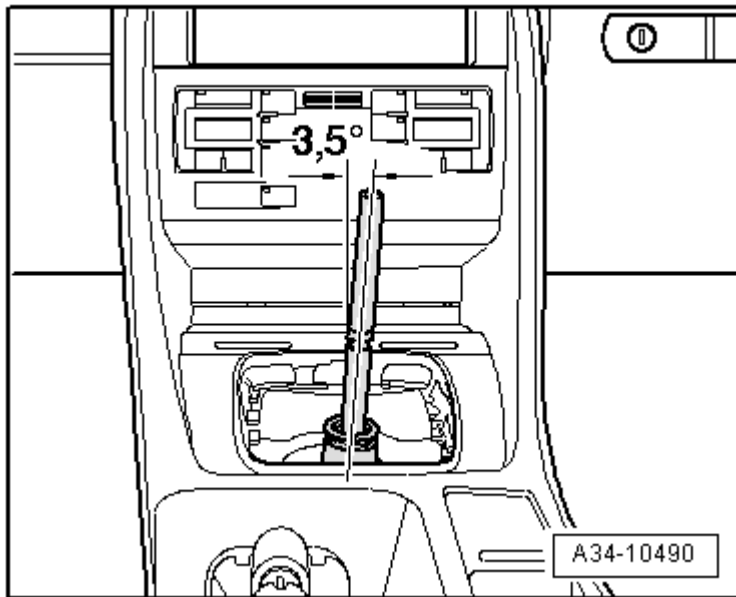


Fig. 10: Aligning Shift Lever So That It Points In Direction Of Travel
Courtesy of AUDI OF AMERICA, LLC

-- Hold shift lever in this position.

-- Tighten the push rod bolt -arrow-. Tightening specification, refer to item 14.

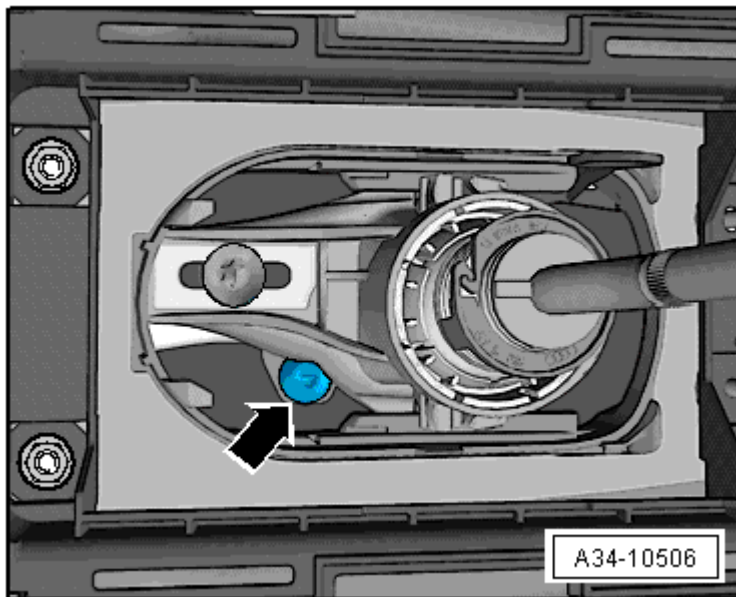


Fig. 11: Identifying Push Rod Bolt
Courtesy of AUDI OF AMERICA, LLC

NOTE: Shift lever position must not change after tightening bolt.

Checking the Gearshift Lever Adjustment

- Start the engine.
- Press the clutch.
- Shift through all the gears several times.
- Operate reverse gear lock (push shift lever down) and move shift lever all the way left in reverse gear gate.
- Then push shift lever forward to engage reverse gear.

NOTE: You must not exert any left or right force on selector lever when doing this.

- Make sure reverse gear was selected and not 1st gear.
 - If 1st gear was selected instead of reverse, shift lever is too far left. Correct adjustment **SHIFT MECHANISM, ADJUSTING**.
- Take it back out of reverse gear.
- Now, with greater side force toward left on shift lever, shift into 2nd gear.
 - If shift lever catches when engaging 2nd gear, shift lever is too far right. Correct adjustment **SHIFT MECHANISM, ADJUSTING**.

NOTE: Engage reverse gear only after operating the reverse gear lock.

The shift lever must move from the reverse gear gate into the 3rd/4th gear selector lever gate on its own.

Should a gear fail to engage smoothly after repeated selection, then repeat the selector adjustment SHIFT MECHANISM, ADJUSTING.

- Install the noise insulation cover. Refer to **NOISE INSULATION**.
- Install the front ashtray. Refer to **Removal and Installation**.
- Install the shift knob with cover **SHIFT KNOB WITH SHIFT LEVER BOOT**.

TRANSMISSION, TRANSPORTING

Special tools and workshop equipment required

- Transmission Lift Hook T40013
- Shop Crane VAS 6100

Procedure

- Install the T40013 into transmission lifting eye and secure.
- Engage VAS 6100 hooks in 3rd mount -arrow- of the T40013.

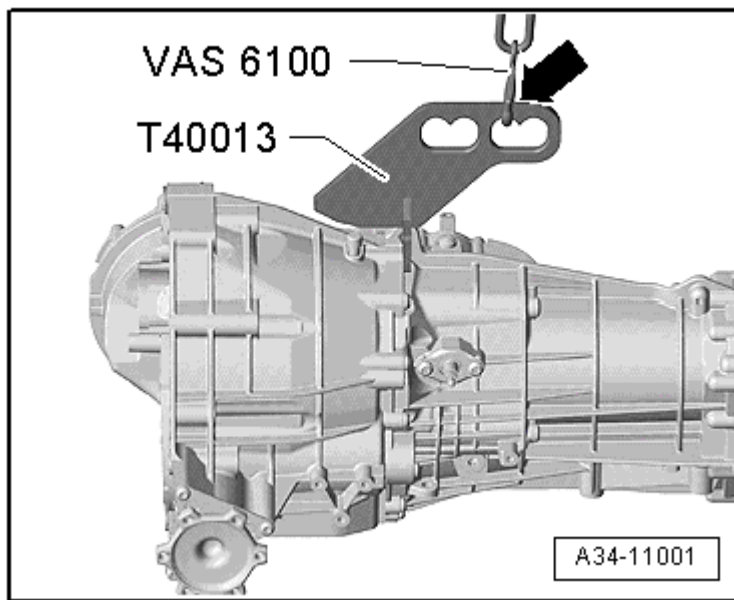


Fig. 12: Engaging VAS 6100 Hooks In 3RD Mount Of T40013

Courtesy of AUDI OF AMERICA, LLC

- Lift transmission with the VAS 6100 and T40013.

TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW

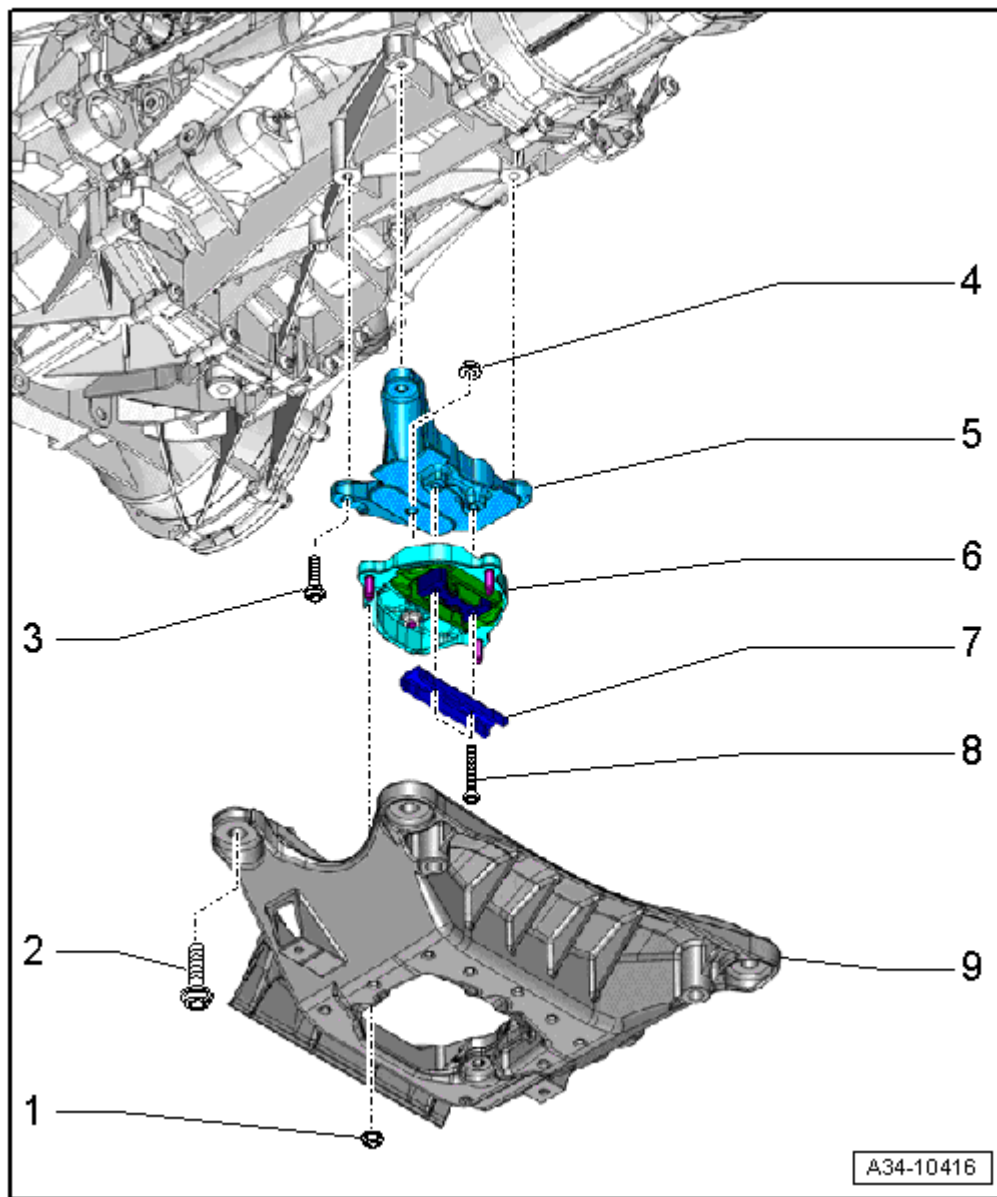


Fig. 13: Identifying Tunnel Crossmember, Transmission Mount And Transmission Support Overview
 Courtesy of AUDI OF AMERICA, LLC

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
 - Replace
 - 20 Nm plus an additional 90° turn
 9. Tunnel Crossmember
 - Removing and installing, refer to **TUNNEL CROSSMEMBER**

CENTER DIFFERENTIAL AND CENTER DIFFERENTIAL HOUSING OVERVIEW

The center differential housing can also be removed and installed with the transmission installed. Refer to **CENTER DIFFERENTIAL HOUSING AND CENTER DIFFERENTIAL WITH TRANSMISSION INSTALLED**.

- Servicing, refer to **Description and Operation**

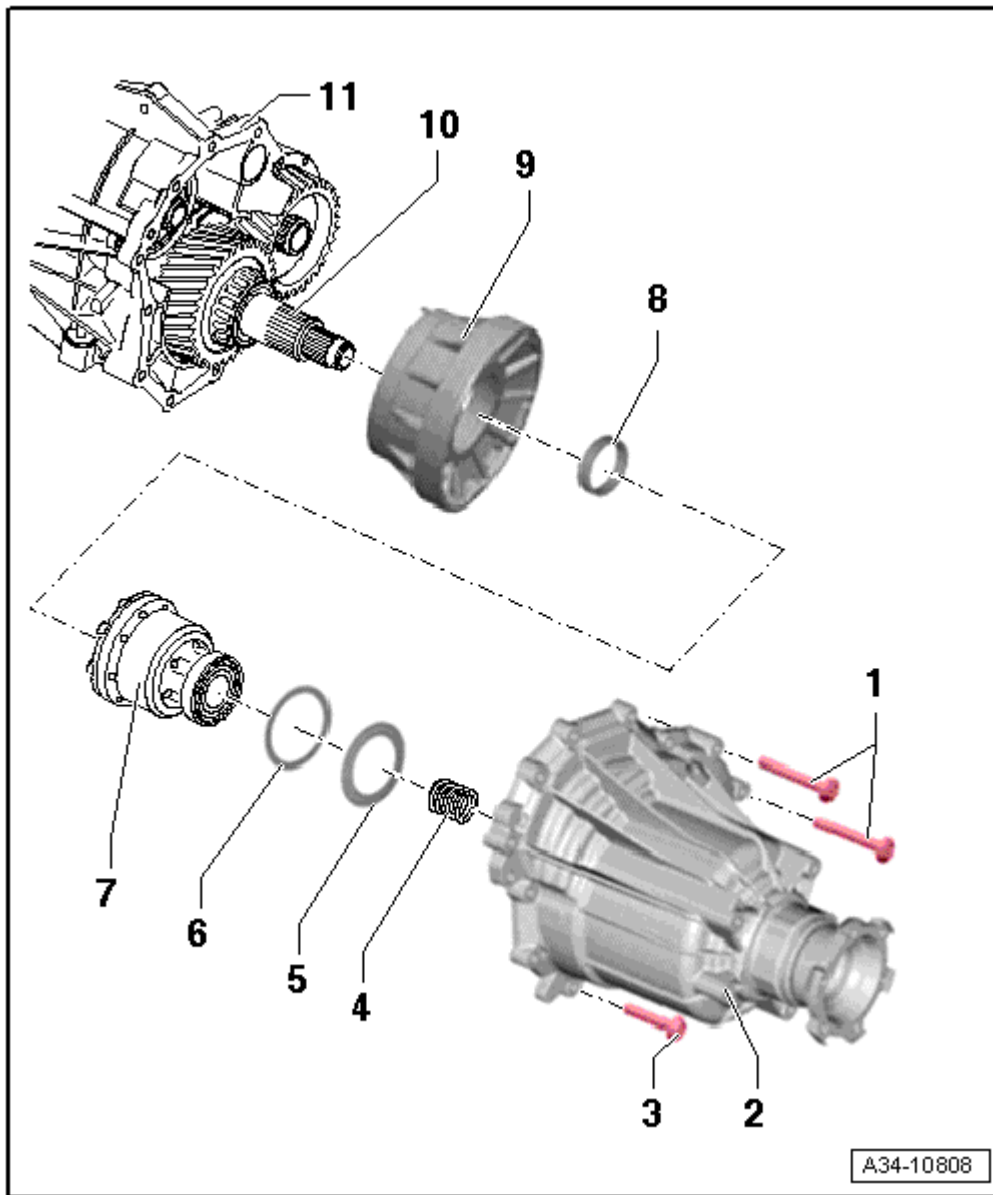


Fig. 14: Identifying Center Differential Housing And Center Differential Overview
 Courtesy of AUDI OF AMERICA, LLC

1. Bolt
 - 24 Nm
 - Steel bolts
 - Quantity: 2
2. Center Differential Housing
 - With or without vibration dampener, depending on version
 - Removing and installing with transmission installed, refer to **CENTER DIFFERENTIAL HOUSING AND CENTER DIFFERENTIAL WITH TRANSMISSION INSTALLED**
 - Refer to **REAR FLANGE SHAFT SEAL ON THE TRANSMISSION**

- Refer to **TRANSMISSION OUTPUT SHAFT SEAL, VEHICLES WITHOUT VIBRATION DAMPER ON THE TRANSMISSION OUTPUT SHAFT**
- Refer to **TRANSMISSION OUTPUT SHAFT SEAL WITH SPLINES, REMOVING - VEHICLES WITH VIBRATION DAMPER ON THE TRANSMISSION OUTPUT SHAFT**

- Servicing, refer to **Description and Operation**

3. Bolt

- Always replace
- 10 Nm plus an additional 90° turn
- Aluminum bolts

4. Pressure Spring

5. Plate Spring

- Installed position: The camber on the inner diameter faces toward the flange shaft

6. Adjusting Shim

7. Center Differential

- Servicing only by the manufacturer
- Replace the bearing for the center differential. Refer to **Removal and Installation**
- Removing and installing with transmission installed, refer to **CENTER DIFFERENTIAL HOUSING AND CENTER DIFFERENTIAL WITH TRANSMISSION INSTALLED**

8. Spacer Sleeve

9. Gear Carrier

- Pay attention to the installed position to the transmission cover **INSTALLING THE CENTER DIFFERENTIAL AND HOUSING**

10. Drive Wheel/Spur Pinion

11. Transmission Cover/Transmission

SPECIFICATIONS**FASTENER TIGHTENING SPECIFICATIONS**

Component	Bolt Size	Nm
Base Block for the Shift Lever Support Nut	-	8
Center Differential Housing ¹		
-Aluminum Bolts ²	-	10 + 90°
-Steel Bolts	-	24
Clamping Plate	-	23
Connecting Rod	-	20
Driveshaft Heat Shield to Center Differential Housing	-	25
Gearshift Lever ²	-	20
Joint Piece between the Selector Rod and Shift Lever		
Nut	-	10

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TRANSMISSION Controls, Housing - Manual Transmission 0B4 AWD (Sedan)

Bolt	-	23
Lower Stop for the Transmission Mount ²	-	20 + 90°
Mount for the Shift Lever Support, Nut	-	8
Transmission Support		
Nut	-	20
Bolt	-	40
Oil Filler Plug	-	40
Push Rod	-	20
Sealing Boot	-	4
Shift Lever Support	-	23
Transmission Fluid Filler Plug	-	40
Transmission Range Gear Recognition Switch -F208- to the Transmission	-	20
Transmission Shift Lever Nut	-	20
Selector Shaft Cover	-	24
Tunnel Crossmember		
Nut	-	20
Bolt	-	70
Bolts and Nuts		
	M6	9
	M7	15
	M8	20
	M10	40
	M12	65
¹ For bolt tightening clarification, refer to <u>CENTER DIFFERENTIAL AND CENTER DIFFERENTIAL HOUSING OVERVIEW</u> and see items -1 and 3- ² Always replace		

Mounting 3.0L TFSI engine on Manual Transmission

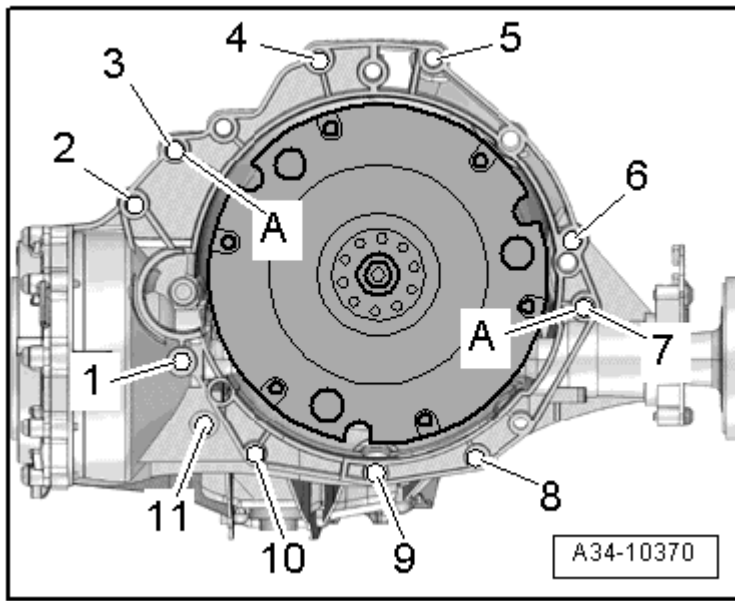


Fig. 15: Removing Starter Off Transmission And Leave It In Installation Position
 Courtesy of AUDI OF AMERICA, LLC

Item	Bolt	Nm
1 ¹⁾	M10 x 50 ²⁾	65
2 ¹⁾	M12 x 100 ³⁾⁴⁾	30 + 90°
3 to 6	M12 x 100 ³⁾⁴⁾	30 + 90°
7	M12 x 125 ³⁾⁴⁾	30 + 90°
8, 11	M10 x 60 ³⁾⁴⁾	15 + 90°
9, 10	M10 x 95 ³⁾⁴⁾	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⁾ Audi A4 through VIN 8K-9-066499, Audi A5 through VIN 8T-9-007999: Replace the aluminum bolts.
- ⁴⁾ Audi A4 from VIN 8K-9-066500, Audi A5 from VIN 8T-9-008000: The aluminum bolts may be used twice.
- Check the aluminum bolts -2 through 11- to see whether they can be reused **CHECK THE ALUMINUM BOLTS -2 THROUGH 11- TO SEE WHETHER THEY CAN BE REUSED.**

Mounting 4.2L FSI Engine on Manual Transmission

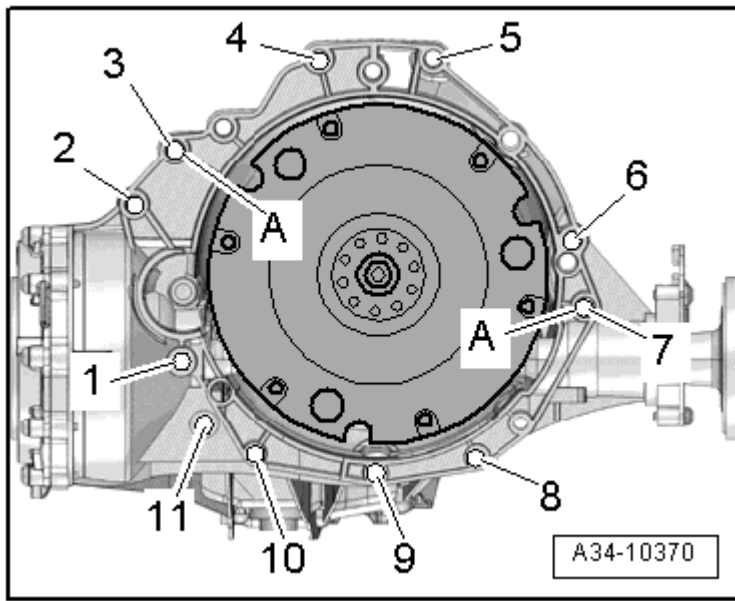


Fig. 16: Removing Starter Off Transmission And Leave It In Installation Position
 Courtesy of AUDI OF AMERICA, LLC

Item	Bolt	Nm
1 ¹⁾	M10 x 50 ²⁾	65
2 ¹⁾	M12 x 100 ³⁾	30 + 90°
3 to 6	M12 x 100 ³⁾	30 + 90°
7	M12 x 175 ³⁾	30 + 90°
8, 11	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⁾ Steel bolt - do not replace • ³⁾ Check whether the aluminum bolts can be reused. Replace them if necessary. <u>CHECK THE ALUMINUM BOLTS -2 THROUGH 11- TO SEE WHETHER THEY CAN BE REUSED.</u>		

REMOVAL AND INSTALLATION

SHIFT KNOB WITH SHIFT LEVER BOOT

NOTE: The gearshift knob is removed together with the gearshift lever boot.

Special tools and workshop equipment required

- Trim Removal Wedge 3409

- Hose Clip Pliers V.A.G 1275

Removing

-- Remove the gearshift lever boot using the 3409 -arrows-.

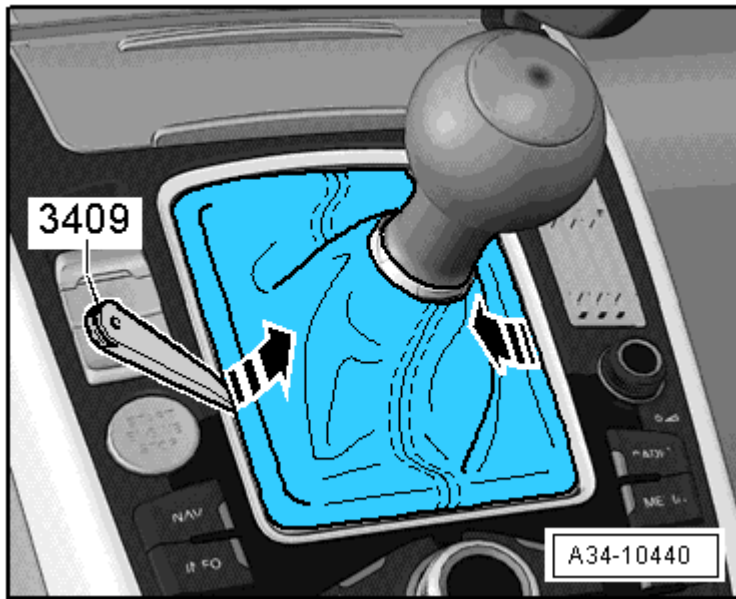


Fig. 17: Removing Gearshift Lever Boot Using 3409
Courtesy of AUDI OF AMERICA, LLC

-- Fold the shift lever boot up and over the shift lever knob.

-- Open the clamp -arrow- and remove the gearshift lever knob with the shift lever boot.

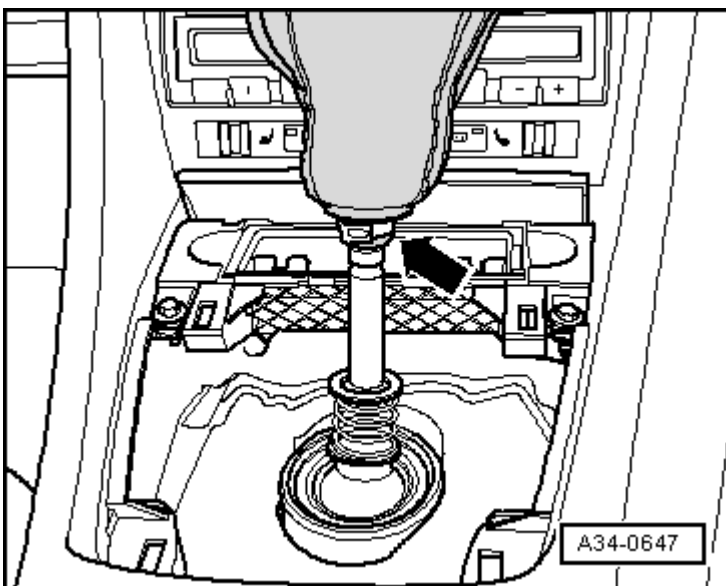


Fig. 18: Locating Clip And Pulling Off Gear Lever Knob Together With Boot
Courtesy of AUDI OF AMERICA, LLC

Installing

Install in reverse order of removal.

-- Secure the clamp -arrow- using the V.A.G 1275.

NOISE INSULATION

Removing

-- Turn off the ignition.

-- Remove the shift lever knob with the shift lever boot **SHIFT KNOB WITH SHIFT LEVER BOOT**.

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

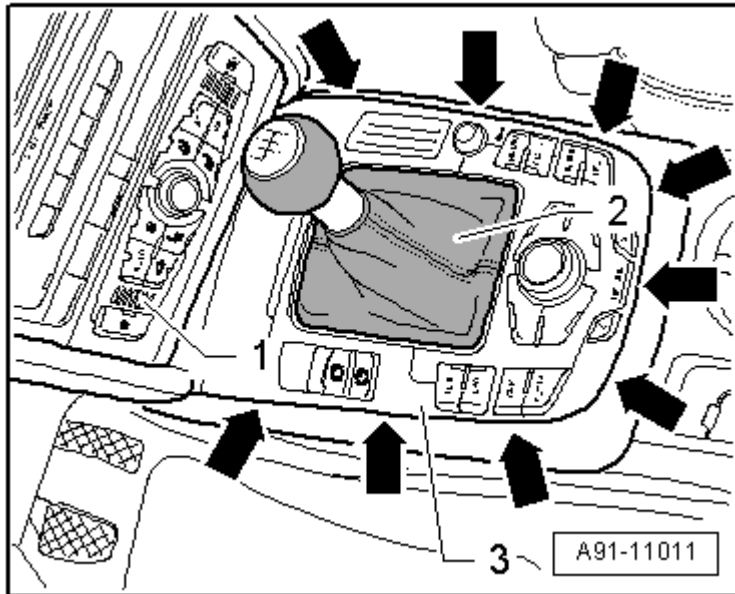


Fig. 19: Unlocking Springs With The 3409 And Lift Multimedia Control Head Upward
Courtesy of AUDI OF AMERICA, LLC

-- Release the tabs -1- in direction of -arrows-. Raise the rear noise insulation when doing this.

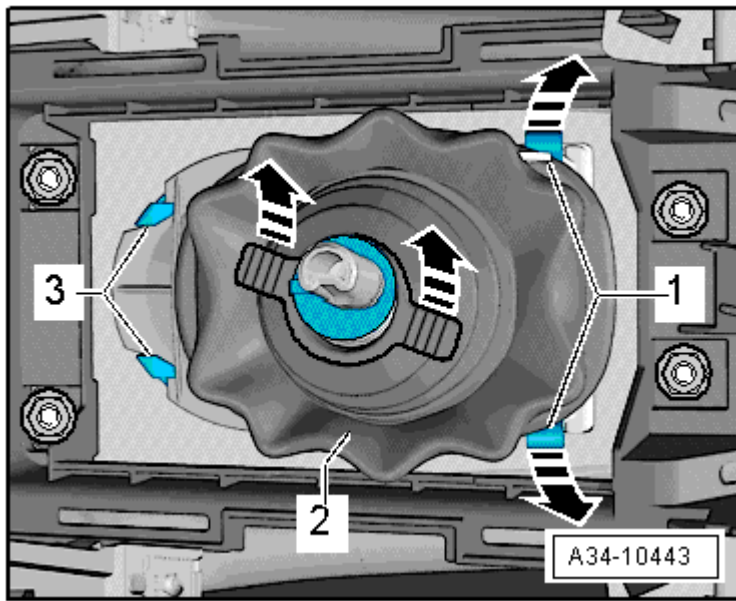


Fig. 20: Removing Noise Insulation Over Shift Mechanism
 Courtesy of AUDI OF AMERICA, LLC

- Pull the noise insulation off the tabs -3-.
- Pull the boot -2- off the gearshift lever in direction of -arrow-.

Installing

- Mount the noise insulation on the tabs -1- and then push down on it until the tabs -2- lock.

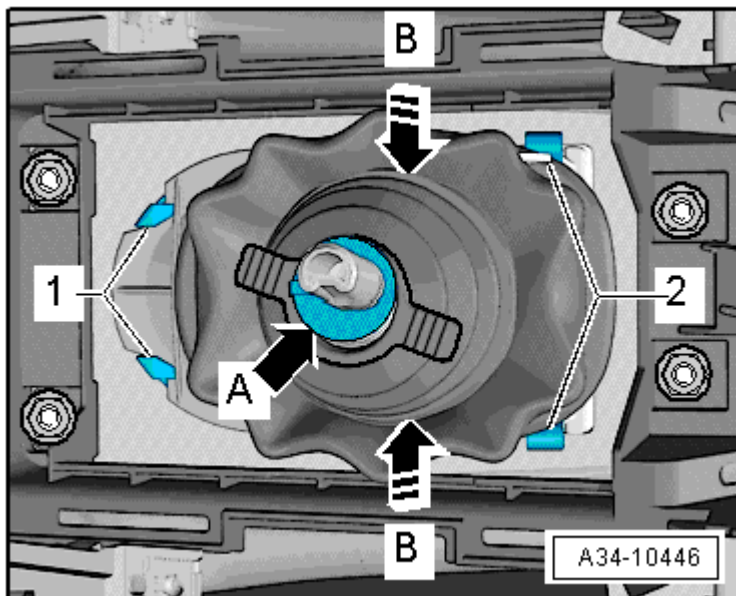


Fig. 21: Mounting Noise Insulation On Tabs And Then Push Down On It Until Tabs Lock
 Courtesy of AUDI OF AMERICA, LLC

-- Stretch the boot over the shift lever into the rounded groove -arrow A-.

-- Press the support ring into the boot over the shift lever support in the direction of -arrow B- as far as the stop.

Install in reverse order of removal paying attention to the following:

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

-- Install the shift lever knob with the shift lever boot. Refer to **SHIFT KNOB WITH SHIFT LEVER BOOT**.

SELECTOR MECHANISM

Special tools and workshop equipment required

- Engine/Transmission Jack V.A.G 1383 A
- Transmission Support T10337
- Puller for Gear Shaft Linkage T40160

Removing

-- Turn off the ignition.

-- Remove the shift lever knob with the shift lever boot. Refer to **SHIFT KNOB WITH SHIFT LEVER BOOT**.

-- Remove the A/C system control head. Refer to **Removal and Installation** .

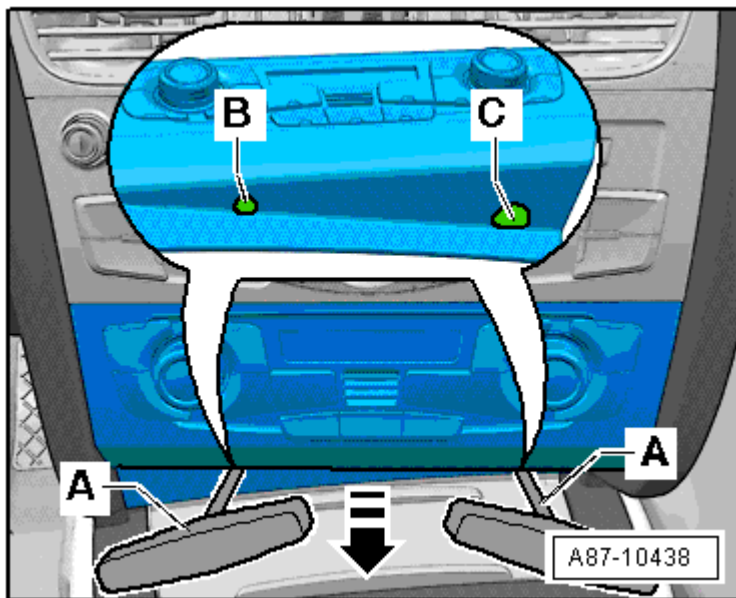


Fig. 22: Carefully Pull Climatronic Control Module In Direction Of Arrow Out Of Center Console
Courtesy of AUDI OF AMERICA, LLC

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

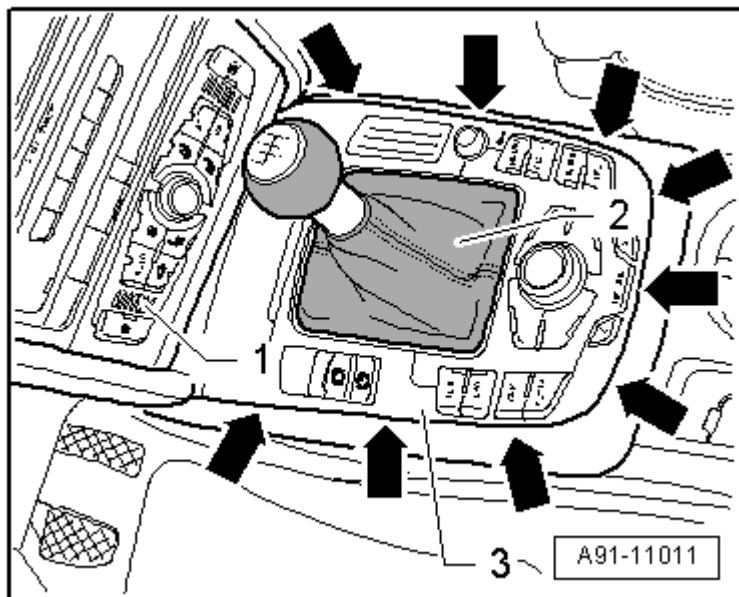


Fig. 23: Unlocking Springs With The 3409 And Lift Multimedia Control Head Upward
Courtesy of AUDI OF AMERICA, LLC

-- Remove the front ashtray -1-. Refer to **Removal and Installation** .

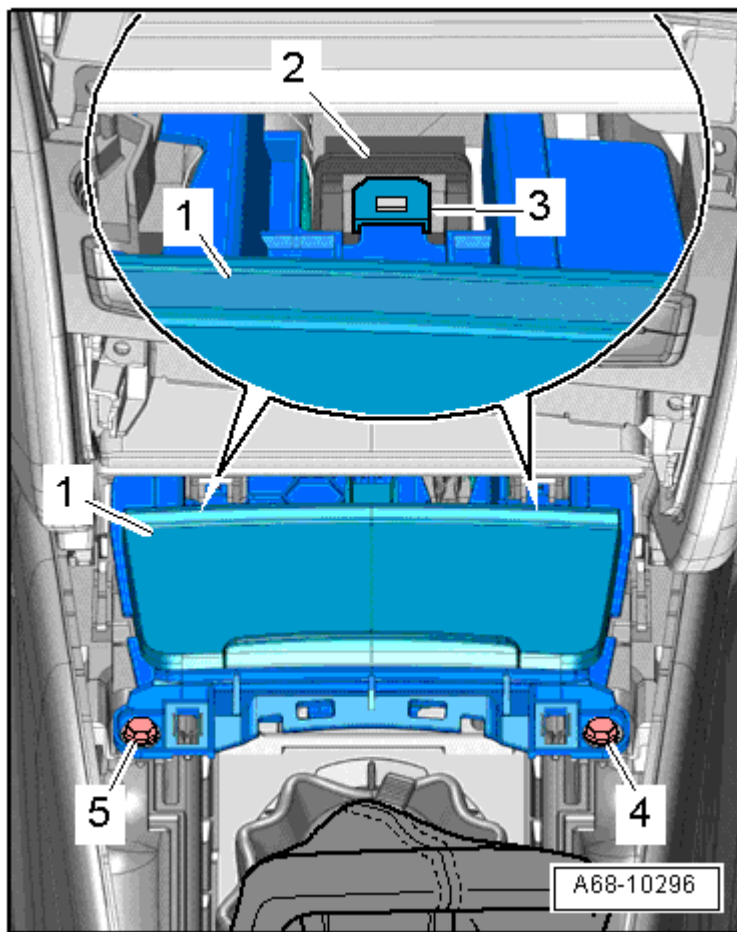


Fig. 24: Removing Ashtray

Courtesy of AUDI OF AMERICA, LLC

-- Remove the noise insulation over the shift mechanism. Refer to **NOISE INSULATION**.

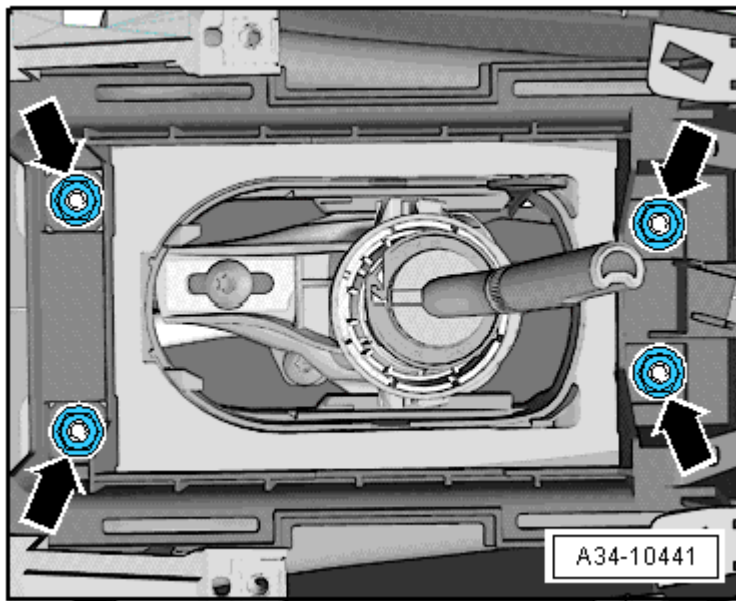


Fig. 25: Removing Noise Insulation Over Shift Mechanism
Courtesy of AUDI OF AMERICA, LLC

-- Remove nuts -arrows-.

-- Remove the rear noise insulation by loosening the fasteners -2- and -3-.

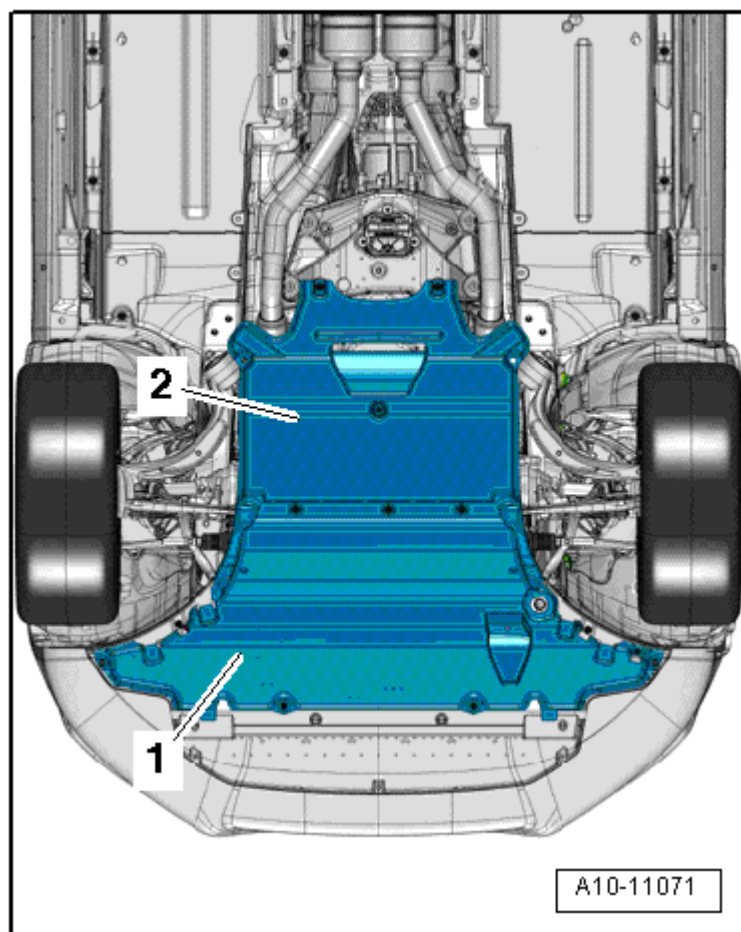


Fig. 26: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

NOTE: Do not bend the flex joint in the front exhaust pipe more than 10° or it will be damaged.

-- Disconnect the exhaust system at clamping sleeve(s) -arrows-.

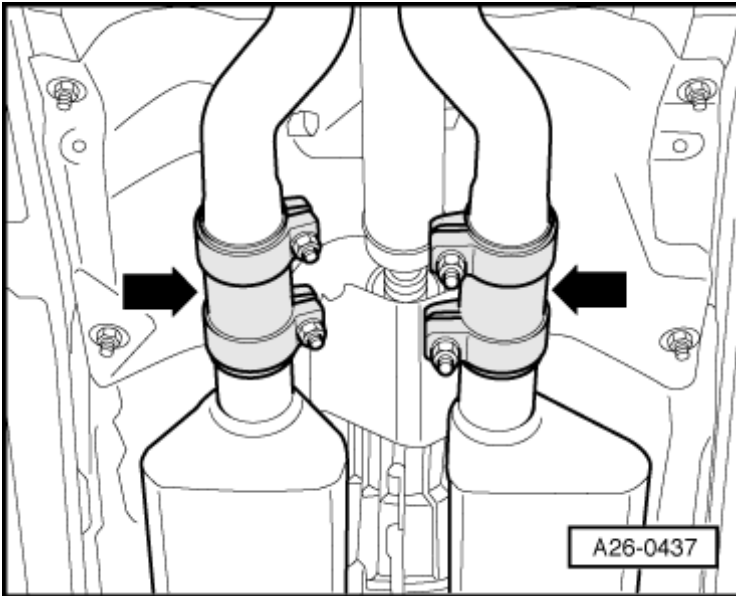


Fig. 27: Disconnecting Exhaust System At Double Clamps
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -arrows- and remove the driveshaft heat shield -A- (if equipped).

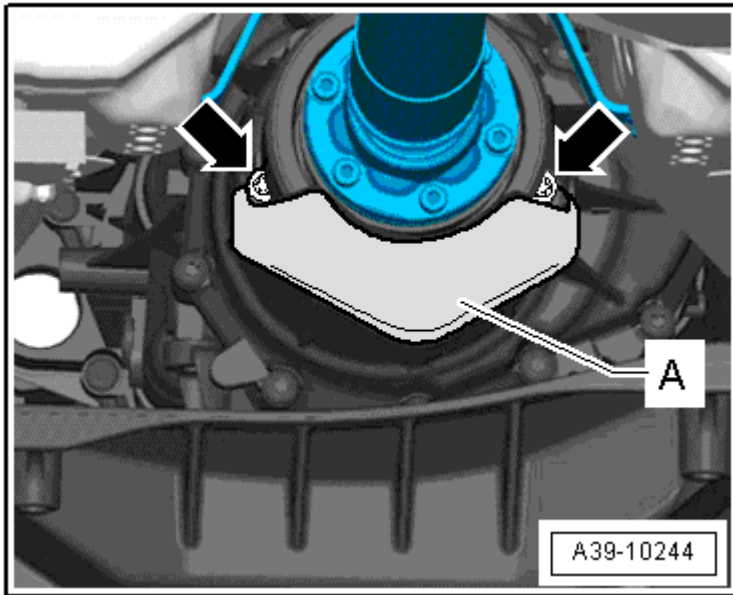


Fig. 28: Transmission Heat Shield
Courtesy of AUDI OF AMERICA, LLC

Driveshaft Bolted on the Transmission Side:

-- Remove the bolts that connect the driveshaft to the transmission by counter holding them with the T10172 and T10172/5.

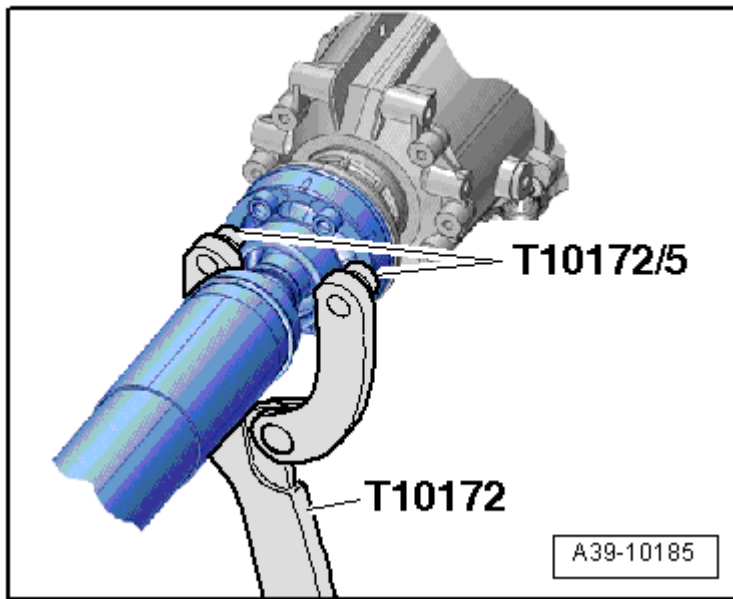


Fig. 29: Holding Driveshaft Using T10172
Courtesy of AUDI OF AMERICA, LLC

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

Driveshaft Mounted on the Transmission Side:

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

For All Vehicles

- Remove the bolts -4- and remove the crossbrace -3-.

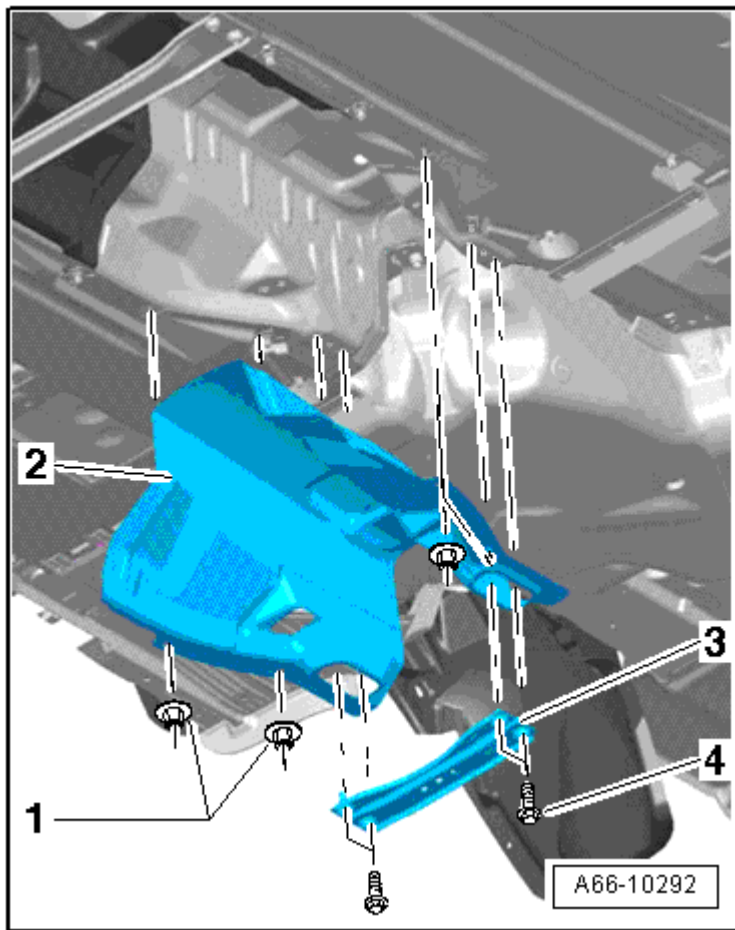


Fig. 30: Removing Bolts And Remove Crossbrace
Courtesy of AUDI OF AMERICA, LLC

- Remove the nuts -1- and remove the heat shield -2-.
- Support the transmission using the V.A.G 1383 A with the T10337 attached.

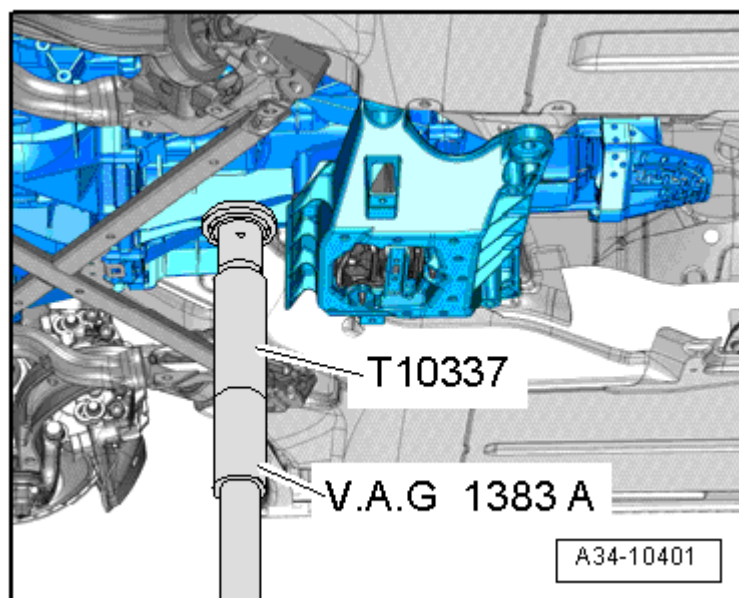


Fig. 31: Supporting Transmission With V.A.G 1383
Courtesy of AUDI OF AMERICA, LLC

-- Lift the transmission slightly using the V.A.G 1383 A.

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-.

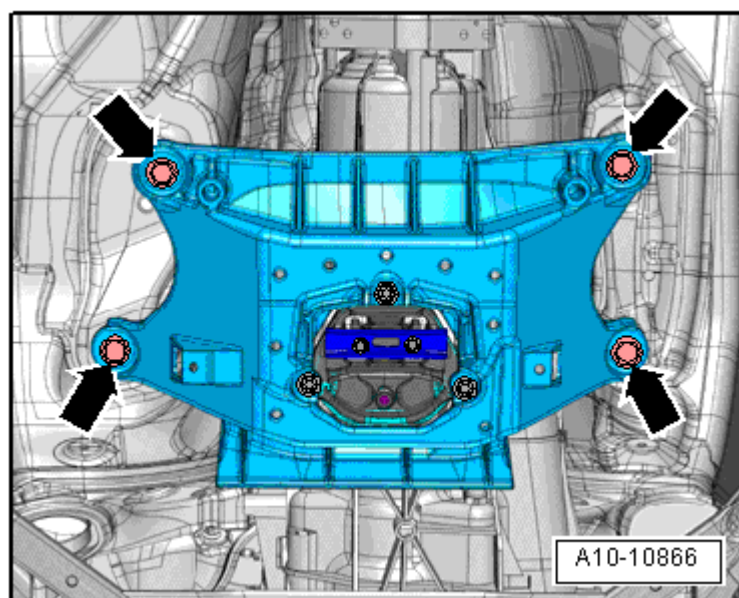


Fig. 32: Transmission Support Overview
 Courtesy of AUDI OF AMERICA, LLC

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

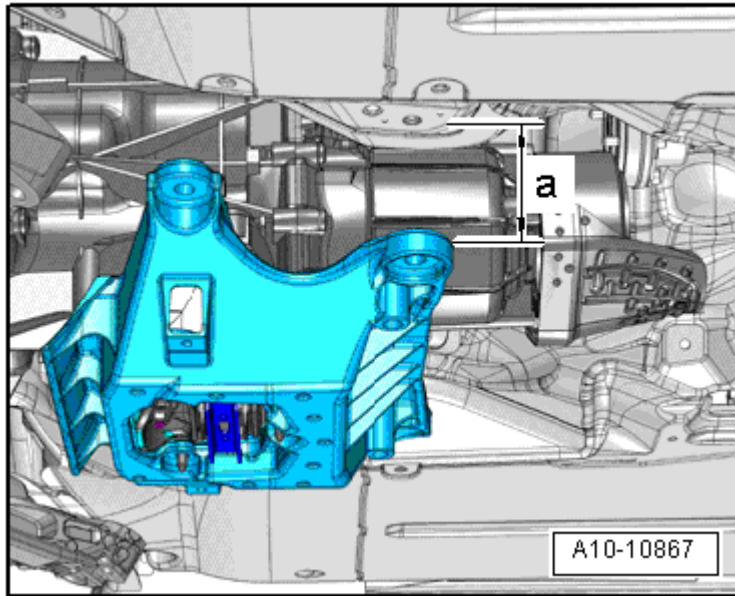


Fig. 33: Lowering Transmission
 Courtesy of AUDI OF AMERICA, LLC

- Dimension -a- = maximum 70 mm.

-- Remove the bolt for the push rod -1- and for the connecting rod -3-.

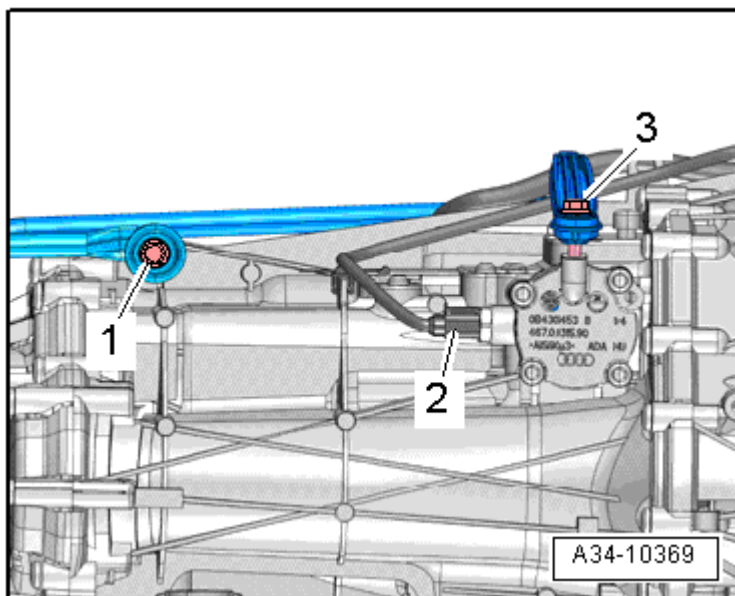


Fig. 34: Removing Bolts And For Selector Rod And Push Rod

Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2-.

-- Remove the nut -1-.

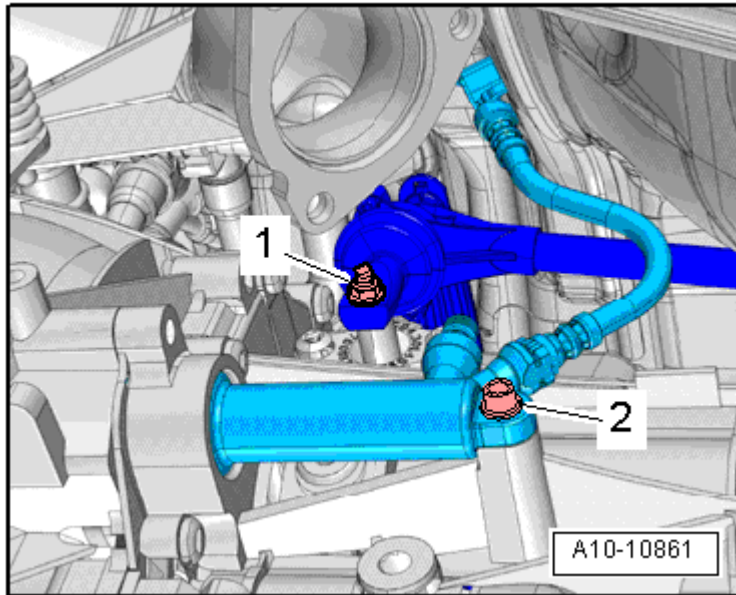


Fig. 35: Removing Bolt And Secure Clutch Slave Cylinder Sideways In Engine Compartment
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2-.

CAUTION: Danger of causing damage to the gearshift shaft inside the transmission.

- Do not pry off the transmission shift lever -1- using a pry bar or hit it with a hammer.

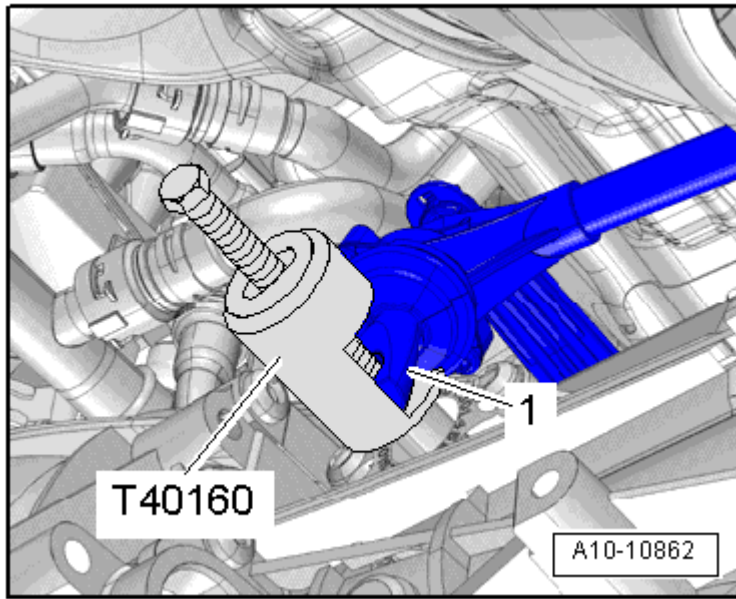


Fig. 36: Positioning Puller T40160 And Remove Selector Rod
Courtesy of AUDI OF AMERICA, LLC

- Install the T40160 and remove the transmission shift lever -1-.
- Remove the heat shield under the shift mechanism. Refer to **Removal and Installation** .
- Remove the shift mechanism downward.

Installing

Installation is performed in the reverse order of removal while observing the following:

Tightening specifications, refer to **SELECTOR MECHANISM OVERVIEW** and **GEARSHIFT KNOB WITH GEARSHIFT LEVER BOOT OVERVIEW**.

NOTE: **Seals and self-locking nuts must be replaced.**

- Install the tunnel crossmember. Refer to **TUNNEL CROSSMEMBER**.
- Install the heat shield under the shift mechanism. Refer to **Removal and Installation** .
- Mount or install the driveshaft on the transmission. Refer to **Removal and Installation** or **Removal and Installation** .
- Reconnect exhaust system making sure it is not under stress. Refer to **Removal and Installation** .
- Install the rear noise insulation. Refer to **Removal and Installation** .
- Install the gearshift mechanism. Refer to **SHIFT MECHANISM, ADJUSTING**.

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

-- Install the A/C system control head. Refer to **Removal and Installation** .

TRANSMISSION, REMOVING

Special tools and workshop equipment required

- Engine Support Bridge 10 - 222 A
- Ring Spanner Insert AF 16 V.A.G 1332/14
- Engine/Transmission Jack V.A.G 1383 A
- Step Ladder VAS 5085
- Puller for Gear Shaft Linkage T40160
- Transmission Support T40173
- Pry Lever - Rmv Outside Mirror 80 - 200
- Counterhold Tool Touareg V10 T10172 with Adapter T10172/5
- Socket T40058
- Engine Support Supplement Set T40093
- Release Tool f/ Rev. Light Switch Conn. T40138
- Jointed Socket, 12 mm T40220
- Extractor T40176
- Engine Bung Set VAS 6122
- Used Oil Collection and Extraction Device V.A.G 1782
- Bolt M8 x 35 and washer outside dia. 25 mm

Removing

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

- **Observe measures for disconnecting battery.**

-- Position the front wheels so they are straight.

-- Turn off the ignition and remove the key.

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

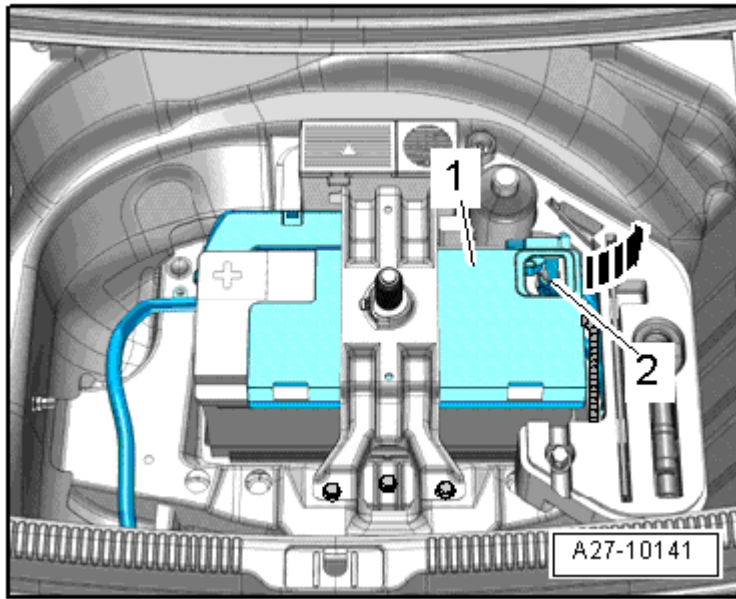


Fig. 37: Identifying Battery

Courtesy of AUDI OF AMERICA, LLC

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

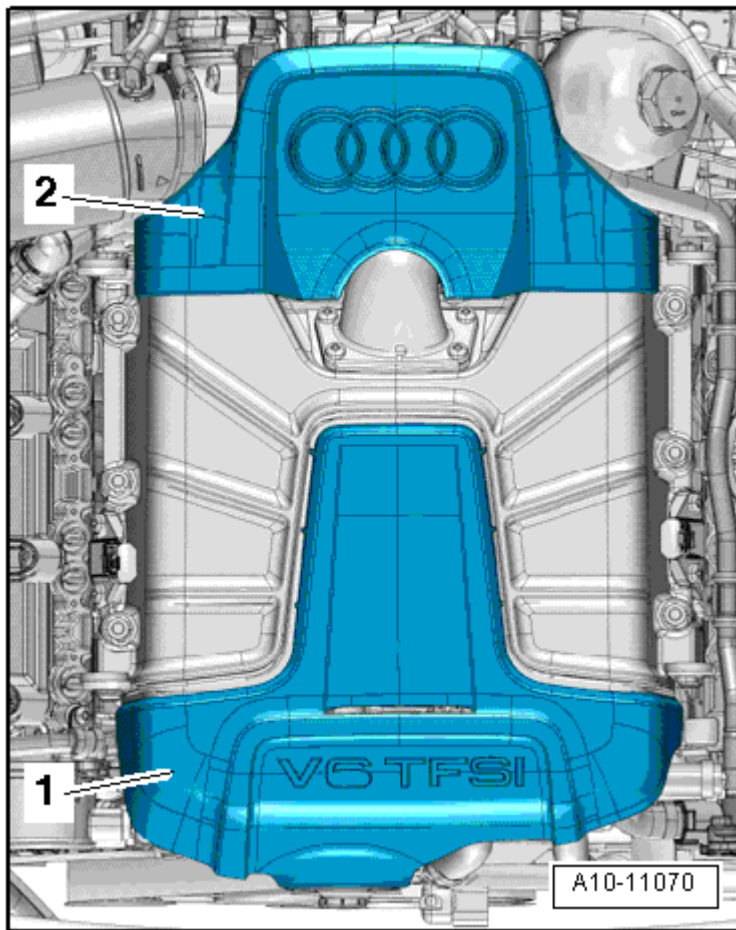


Fig. 38: Engine Cover -1- and -2-
Courtesy of AUDI OF AMERICA, LLC

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

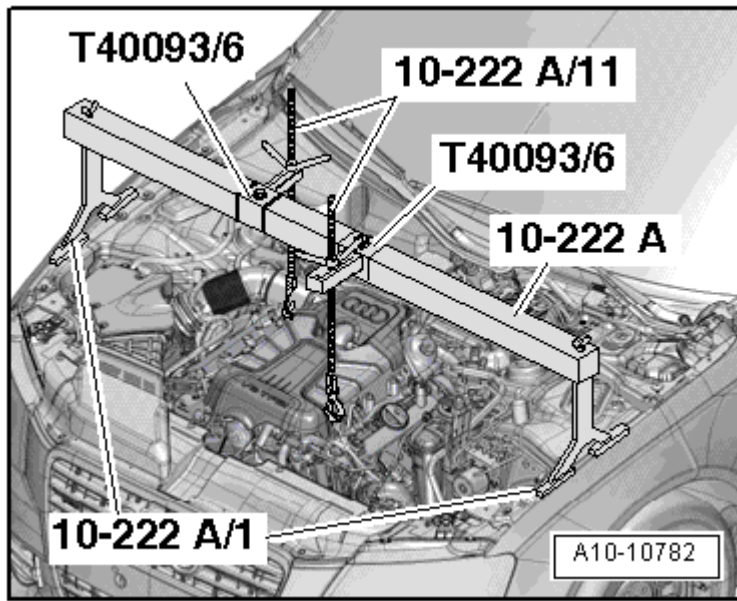


Fig. 39: Mounting 10 - 222 A With T40093/6 On Left And Right Suspension Strut Towers, As Illustrated
Courtesy of AUDI OF AMERICA, LLC

- Secure the spindles 10 - 222 A /11 in the left and right engine lifting eyes.
- Tension the engine slightly using the spindles.
- Remove the left and right front wheels.
- Remove the left and right noise insulation -1- inside the wheel housing.

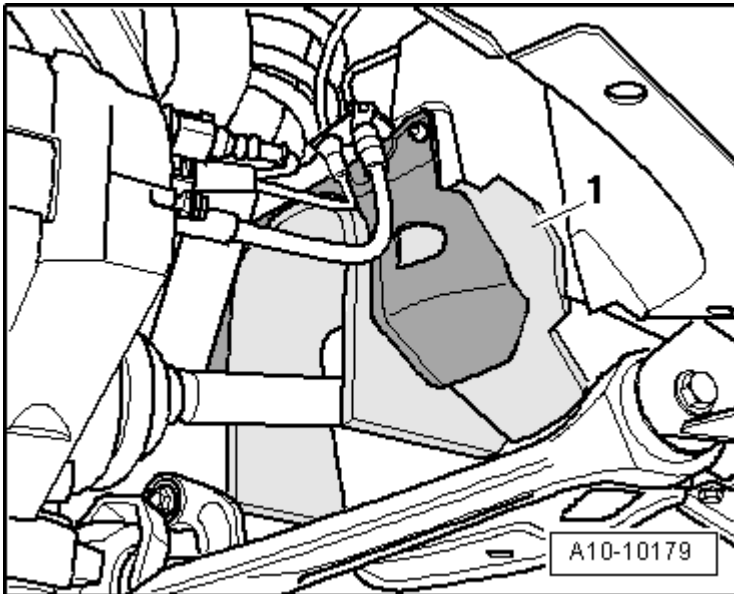


Fig. 40: Removing Right Drive Axle Cover
Courtesy of AUDI OF AMERICA, LLC

-- Remove the noise insulation by loosening the fasteners -1 through 3-.

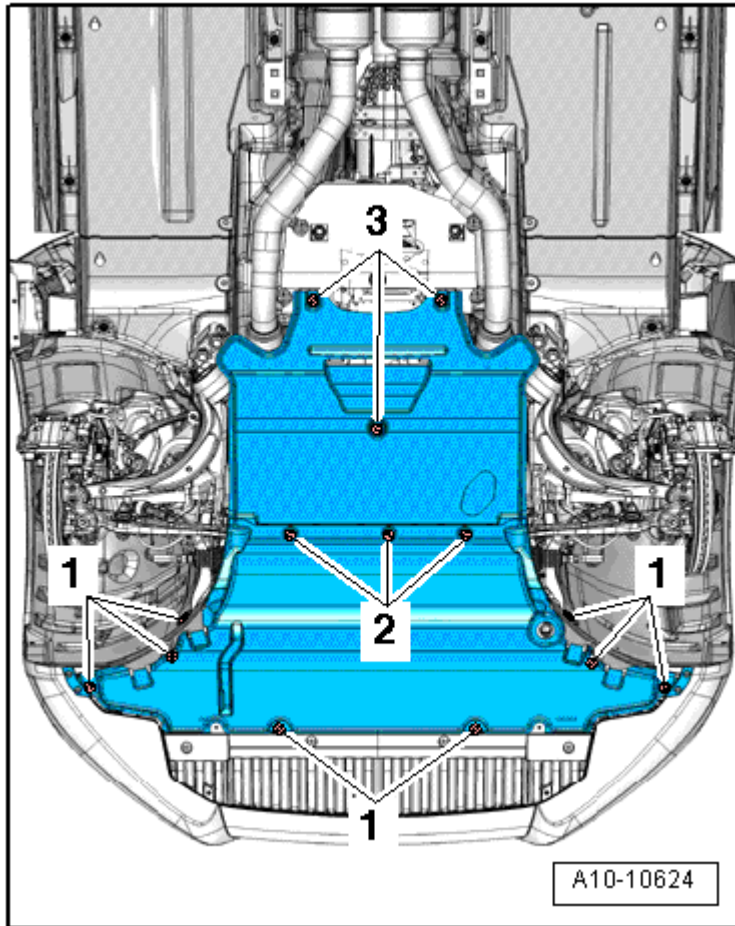


Fig. 41: Identifying Noise Insulation Components
Courtesy of AUDI OF AMERICA, LLC

CAUTION: The suspension components could be damaged.

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

Do not support the vehicle on the subframe or on the subframe crossbrace (for example using a floor jack or something similar).

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

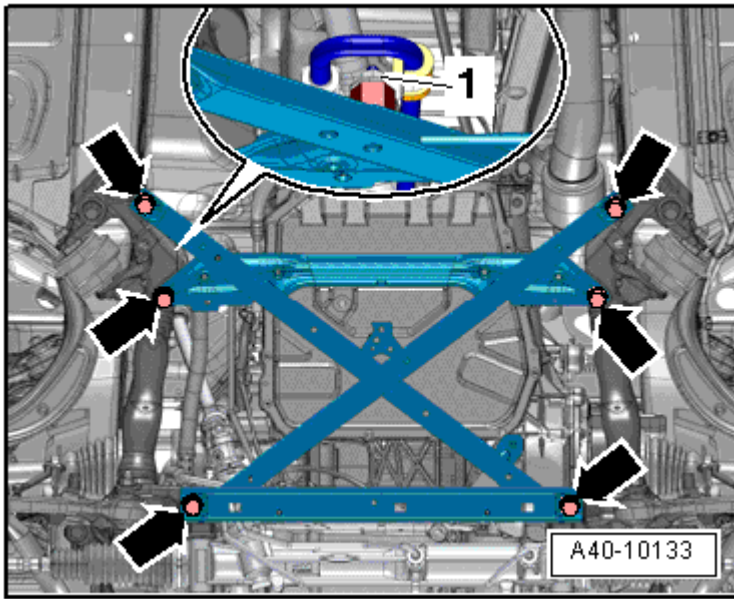


Fig. 42: Locating Power Steering Hydraulic Line
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -arrows- and remove the subframe crossbrace.

NOTE: The illustration shows the installed position in a vehicle with dynamic steering.

-- Remove right and left subframe shield -1-. Do this by removing the bolts -arrows- and then removing the shield toward the inside.

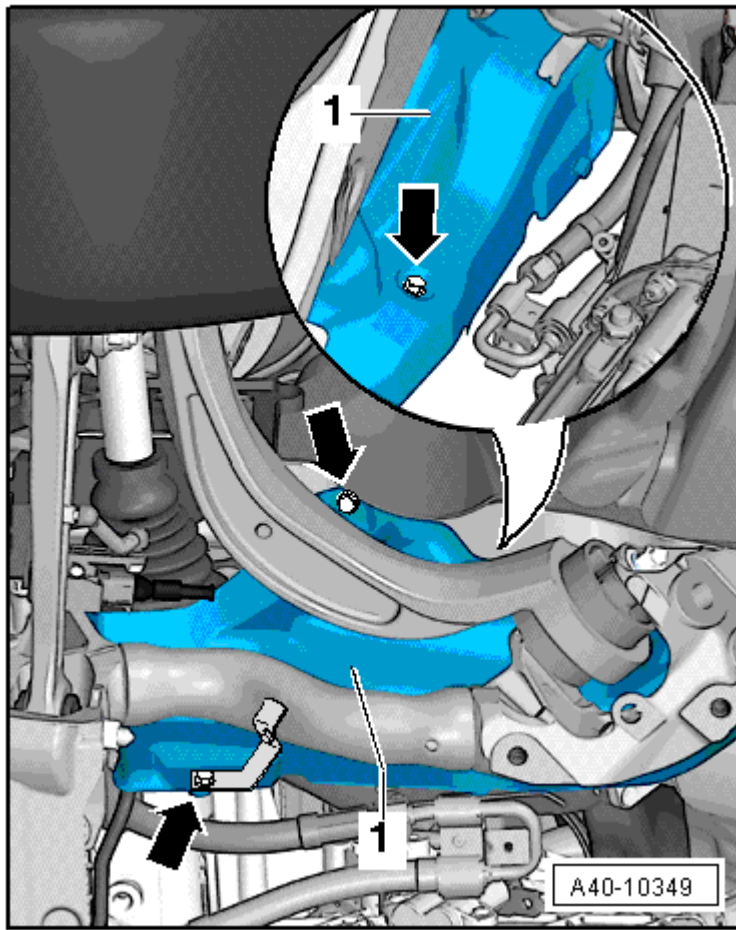


Fig. 43: Removing Subframe Heat Shield
Courtesy of AUDI OF AMERICA, LLC

-- Remove the nuts -arrows- for the left front muffler.

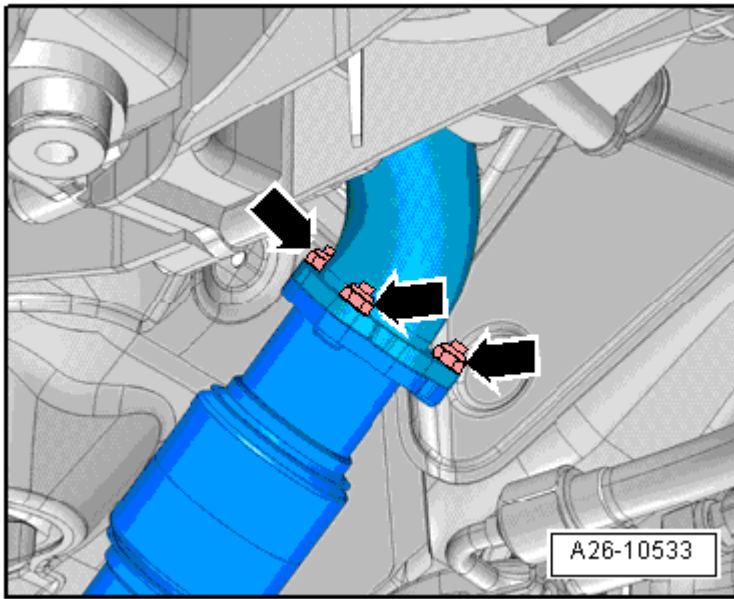


Fig. 44: Removing Left Front Muffler Nuts
Courtesy of AUDI OF AMERICA, LLC

-- Remove the nuts -arrows- for the right front muffler.

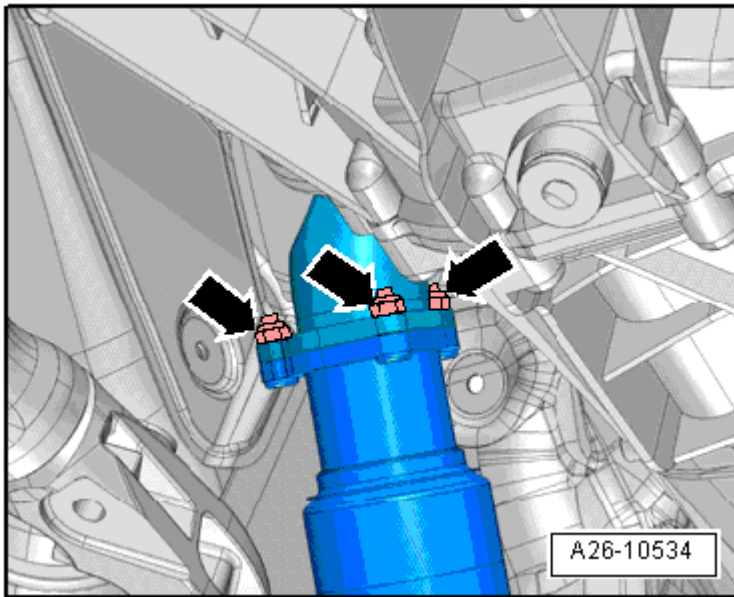


Fig. 45: Removing Right Front Muffler Nuts
Courtesy of AUDI OF AMERICA, LLC

CAUTION: Danger of damaging the flex joint in the front muffler.

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

-- Loosen the clamping sleeves -1- and -2-, push toward the rear, and remove the left and right front muffler.

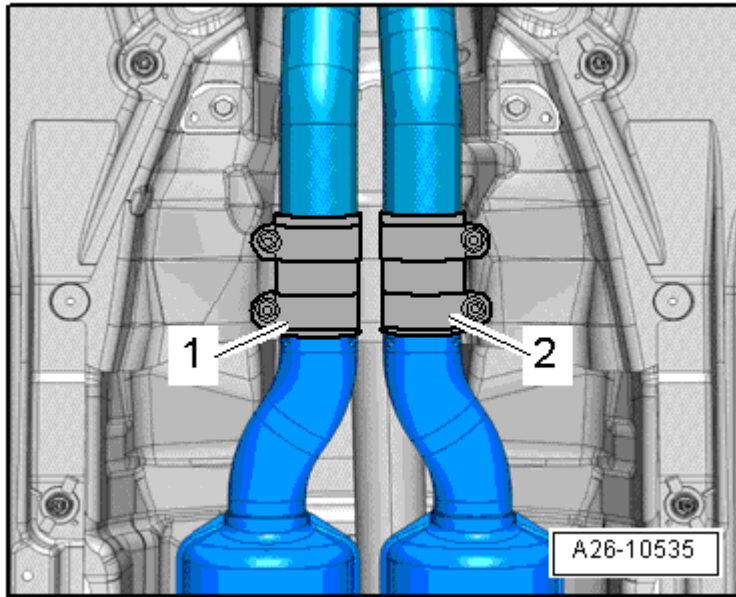


Fig. 46: Loosening Bolts Vehicles With Dual Exhaust System
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -arrows-, and remove the driveshaft heat shield -A- (if equipped).

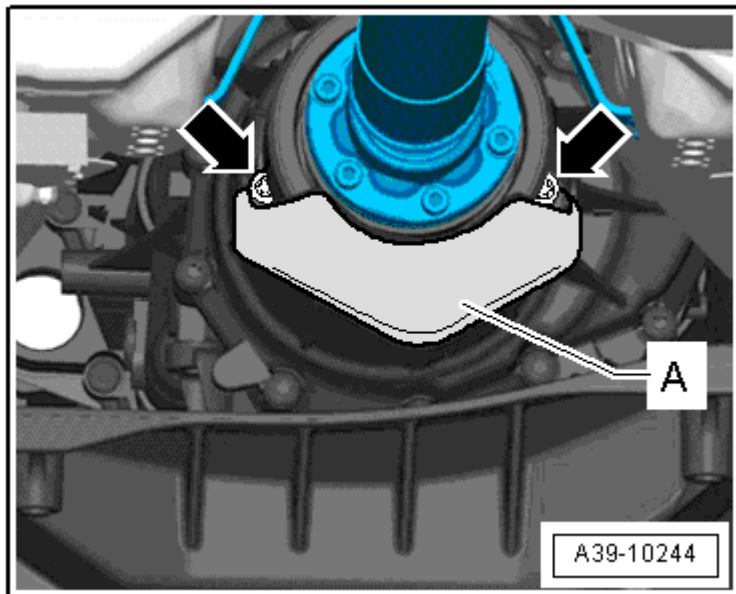


Fig. 47: Transmission Heat Shield
 Courtesy of AUDI OF AMERICA, LLC

Driveshaft Bolted on the Transmission Side:

-- Remove the bolts that connect the driveshaft to the transmission by counter holding them with the T10172

and T10172/5.

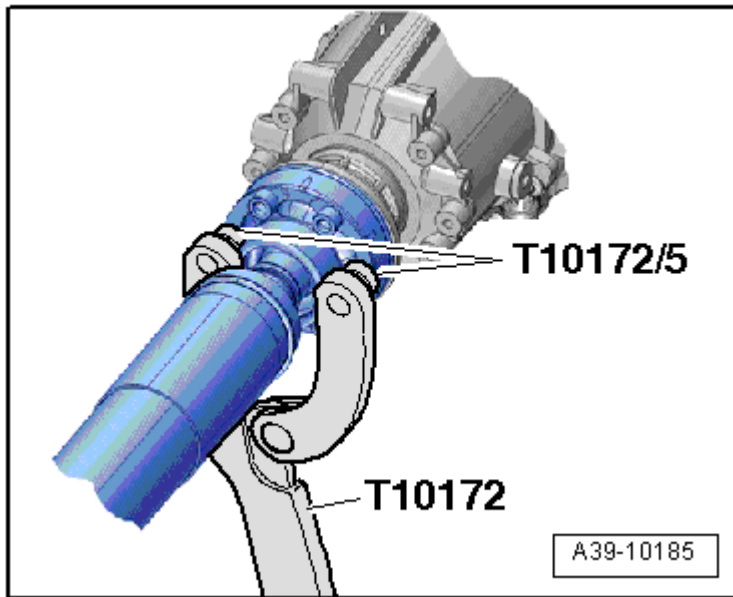


Fig. 48: Holding Driveshaft Using T10172

Courtesy of AUDI OF AMERICA, LLC

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

Driveshaft Mounted on the Transmission Side:

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

For All Vehicles

- Disconnect the connector -2- from the engine speed sensor -G28- and free up the wire.

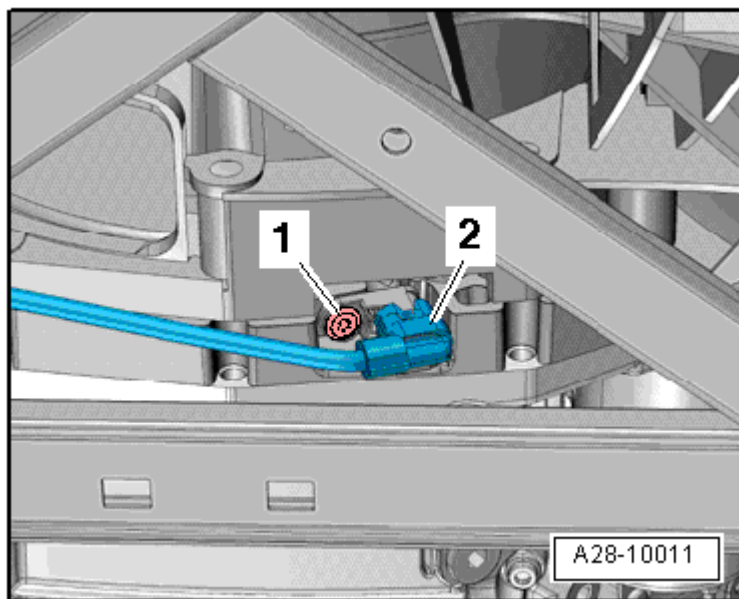


Fig. 49: Location Engine Speed (RPM) Sensor -G28-
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -1-.

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

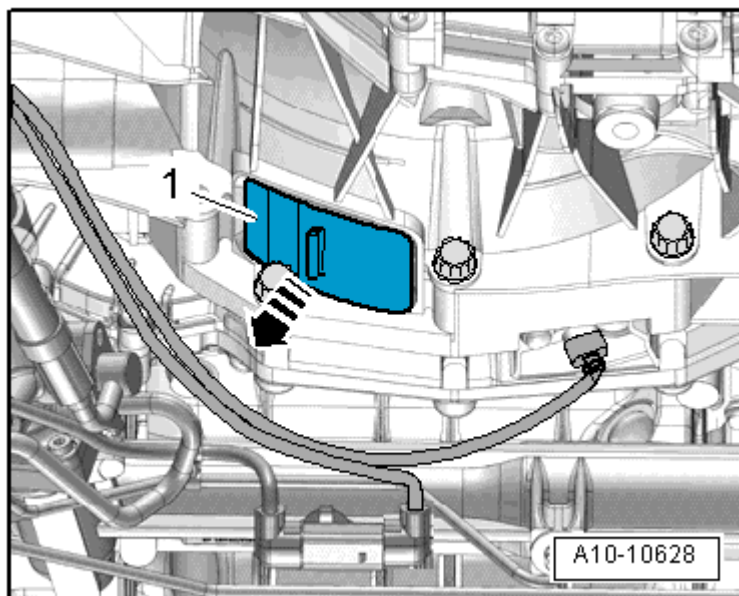


Fig. 50: Identifying Transmission Lower Cover
Courtesy of AUDI OF AMERICA, LLC

-- Insert the T40058 guide pins as follows:

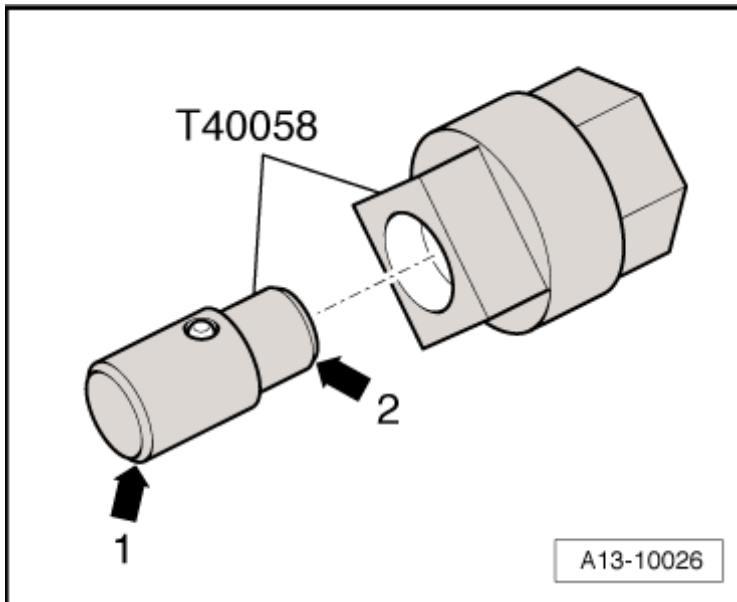


Fig. 51: Identifying Guide Pin And Adapter T40058
Courtesy of AUDI OF AMERICA, LLC

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

-- Counterhold the crankshaft with the T40058 and an angled box wrench to loosen the torque converter bolts for the clutch module at the drive plate.

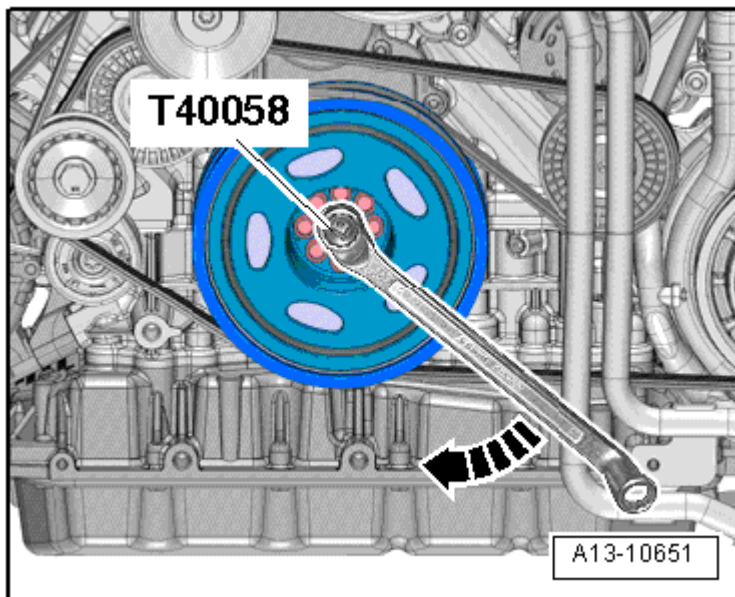


Fig. 52: Counter Hold Crankshaft Using Socket T40058
Courtesy of AUDI OF AMERICA, LLC

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

arrow-.

-- Turn the clutch module over both front wheels 60° in direction of engine rotation and remove the six drive plate bolts -arrow- for the clutch module on the drive plate.

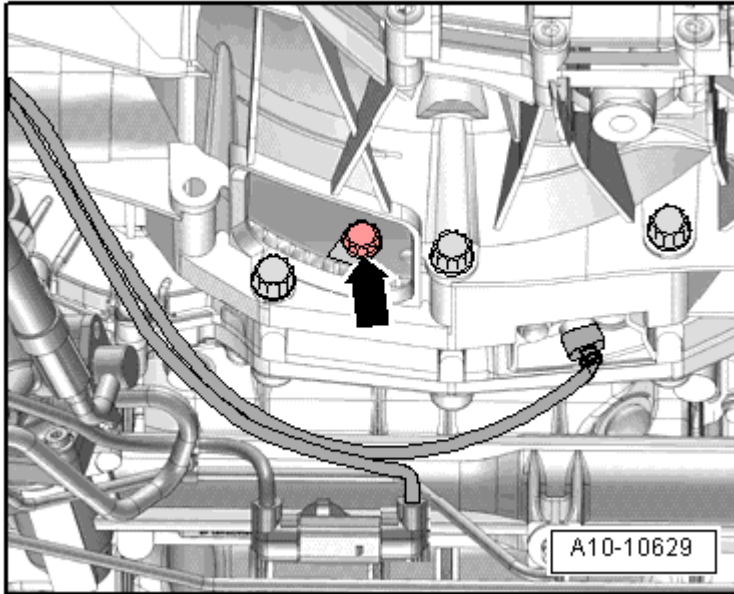


Fig. 53: Identifying Clutch Module First Bolt Installation Location
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the engine/transmission connecting bolts -7 to 11-.

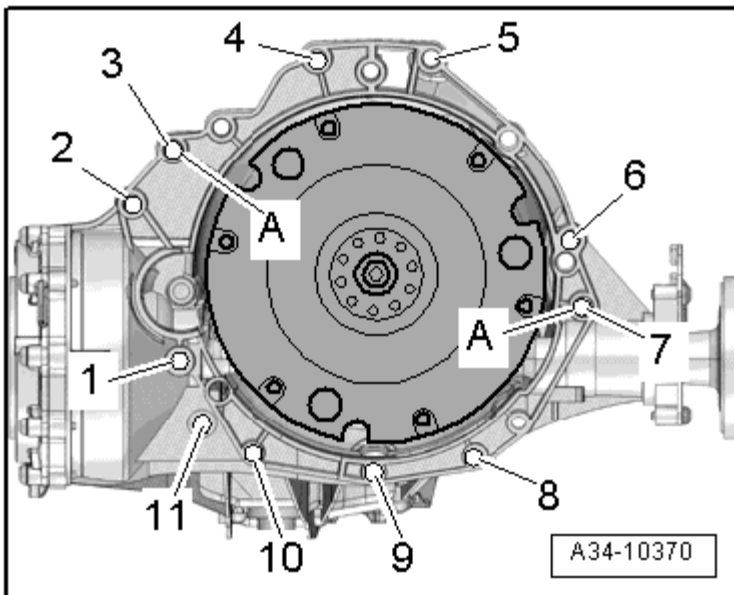


Fig. 54: Removing Starter Off Transmission And Leave It In Installation Position
 Courtesy of AUDI OF AMERICA, LLC

CAUTION: The airbag spiral spring could be damaged.

- Only disconnect universal joint from steering gear if front wheels are in straight-ahead position.
- Do not change the steering wheel and steering gear position. Secure the steering wheel, for example using adhesive tape.

-- Remove the universal joint bolt -arrow-. Refer to **Removal and Installation** .

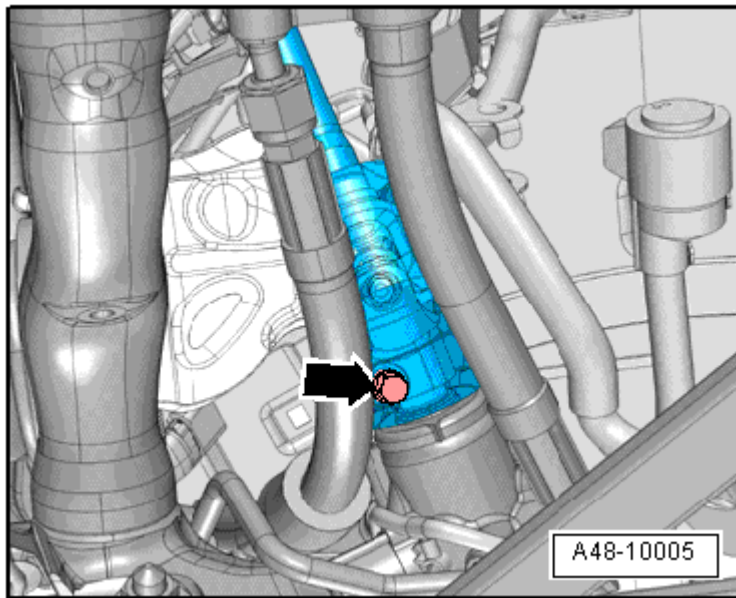


Fig. 55: Locating Universal Joint Bolt
Courtesy of AUDI OF AMERICA, LLC

-- Press the universal joint off the steering gear and slide it all the way up.

-- Place the V.A.G 1782 under the hydraulic oil line's separating point -1- on the steering gear.

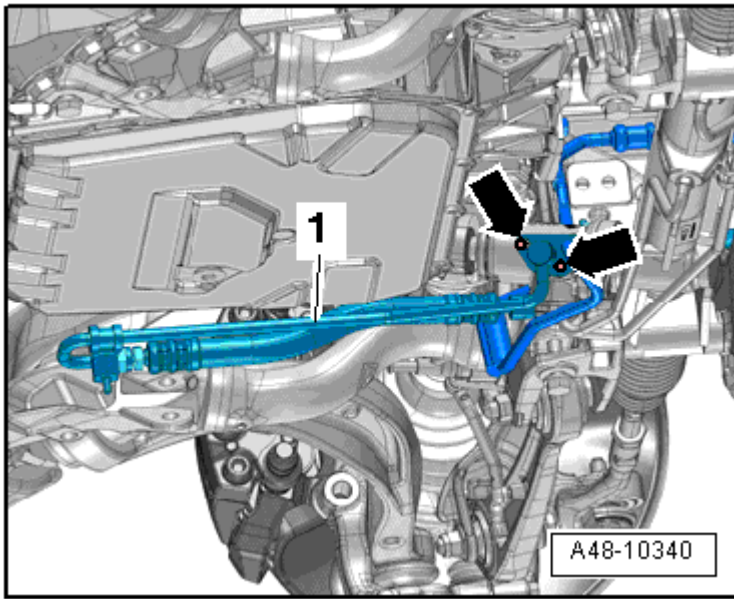


Fig. 56: Placing V.A.G 1782 Under Separating Point
 Courtesy of AUDI OF AMERICA, LLC

- Remove the bolts -arrows-, disconnect the hydraulic oil 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.
- Remove the bolt -1- press the retaining tab off the transmission and tilt it back -arrow-.

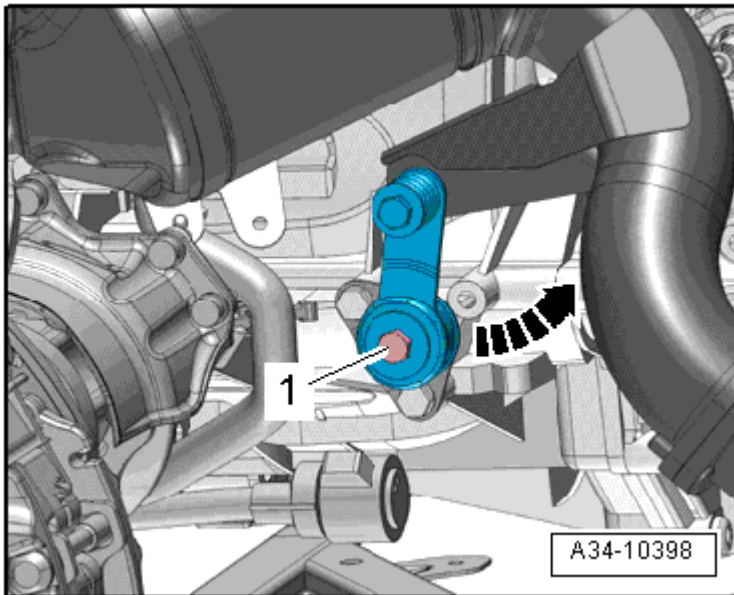


Fig. 57: Removing Bolt Press Retaining Tab Off Transmission And Tilt It Back
 Courtesy of AUDI OF AMERICA, LLC

- Remove the bolt -2- and secure the clutch slave cylinder sideways in the engine compartment.

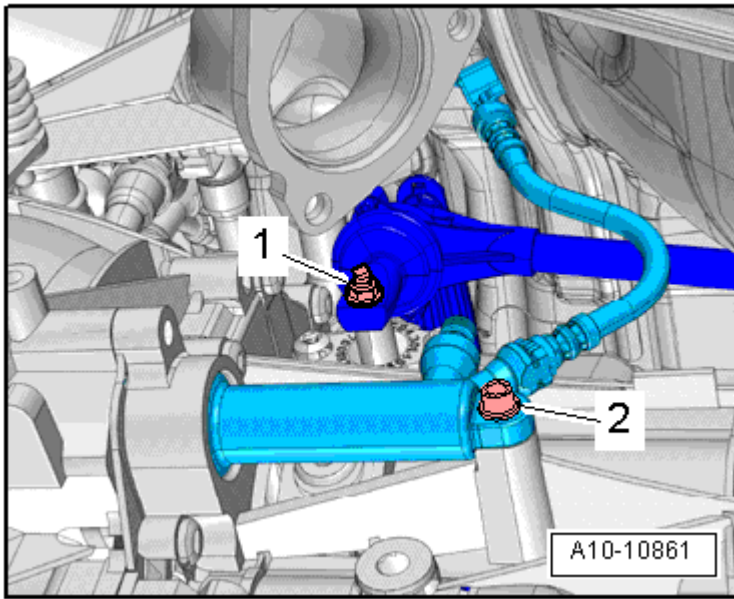


Fig. 58: Removing Bolt And Secure Clutch Slave Cylinder Sideways In Engine Compartment
Courtesy of AUDI OF AMERICA, LLC

CAUTION: The clutch slave cylinder could be damaged.

- Do not activate the clutch pedal after the clutch slave cylinder has been removed.

-- Remove the selector rod nut -1-.

CAUTION: Danger of causing damage to the gearshift shaft inside the transmission.

- Do not pry off the transmission shift lever -1- using a pry bar or hit it with a hammer.

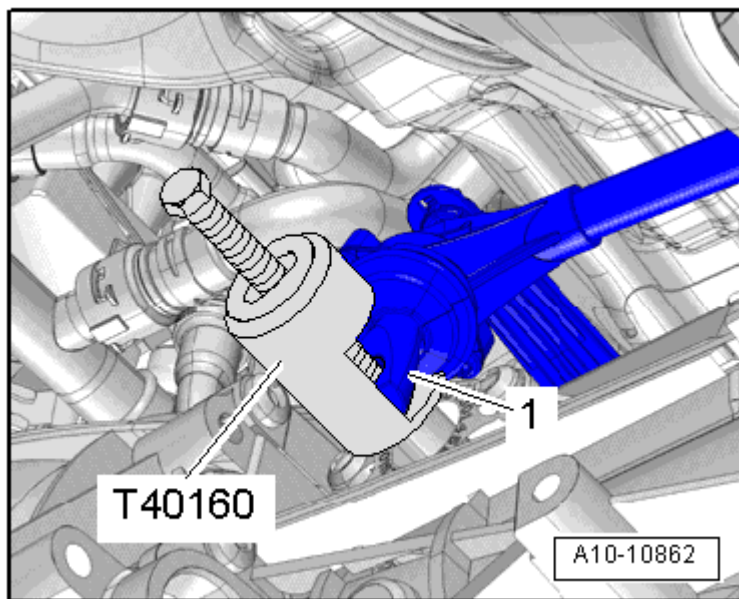


Fig. 59: Positioning Puller T40160 And Remove Selector Rod
 Courtesy of AUDI OF AMERICA, LLC

-- Install the T40160 and remove the transmission shift lever -1-.

-- Position the V.A.G 1383 A and the T40173 under the transmission and secure it with the tensioning strap -1- as illustrated.

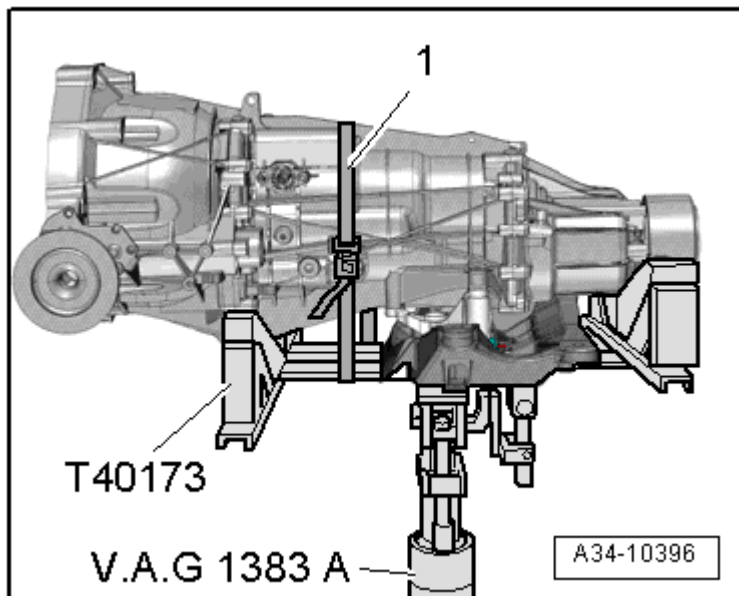


Fig. 60: Identifying Transmission Holding Fixture
 Courtesy of AUDI OF AMERICA, LLC

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

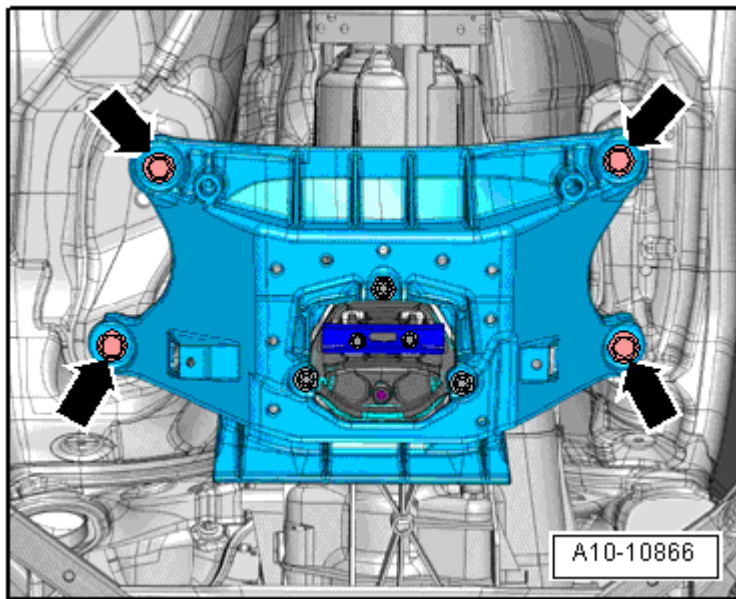


Fig. 61: Transmission Support Overview
Courtesy of AUDI OF AMERICA, LLC

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

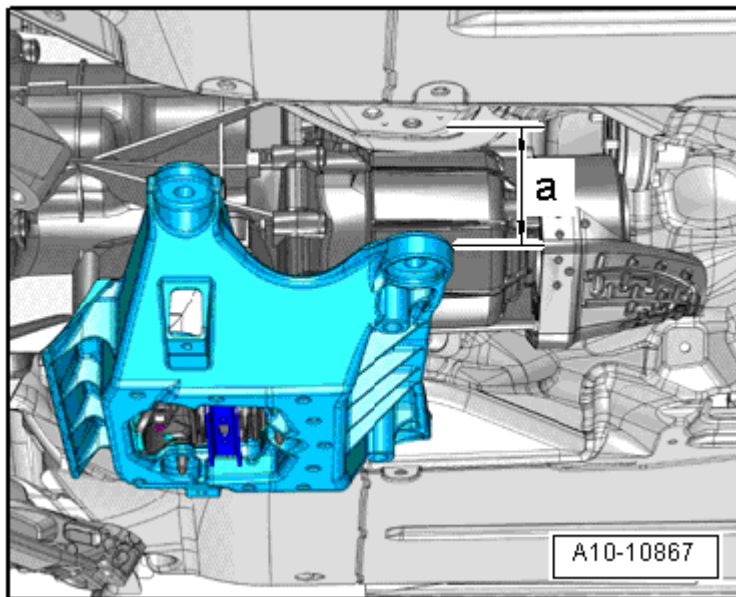


Fig. 62: Lowering Transmission
Courtesy of AUDI OF AMERICA, LLC

- Dimension -a- = maximum 100 mm.

-- Tension the 10 - 222 A spindles 10 - 222 A /11 slightly.

NOTE: Use the VAS 5085 to get to 10 - 222 A /11 on the hoisted vehicle.

-- Remove the electrical connector -1- on the transmission range gear recognition switch -F208- using the T40138.

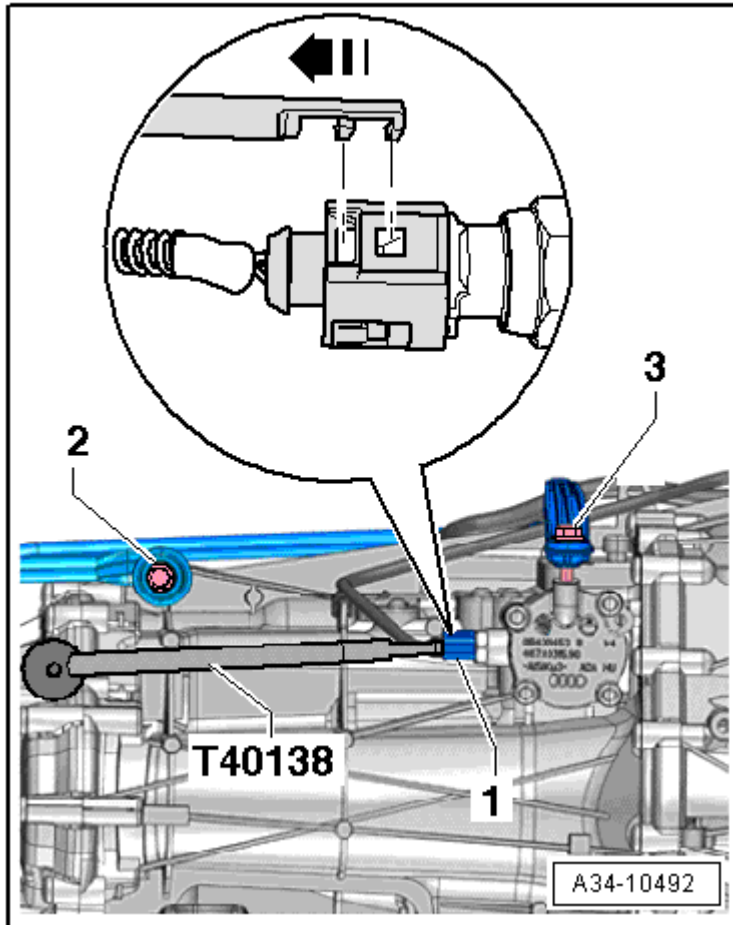


Fig. 63: Disconnecting Connector
Courtesy of AUDI OF AMERICA, LLC

- Remove the push rod bolt -2-.
- Remove the connecting rod bolt -3-.
- Remove the bolts -arrows- and remove the heat shield from the right drive axle.

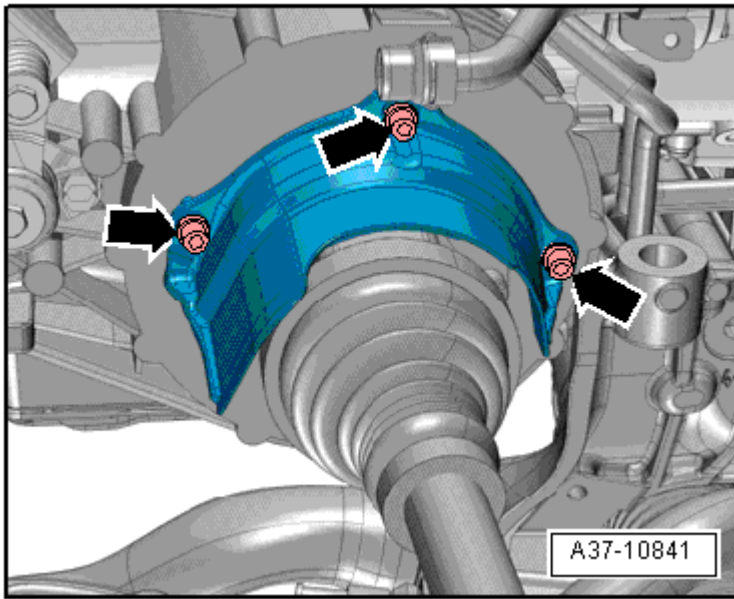


Fig. 64: Driveshaft Heat Shield - Tightening Specification
 Courtesy of AUDI OF AMERICA, LLC

NOTE: The illustration shows the installation position with the transmission removed.

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

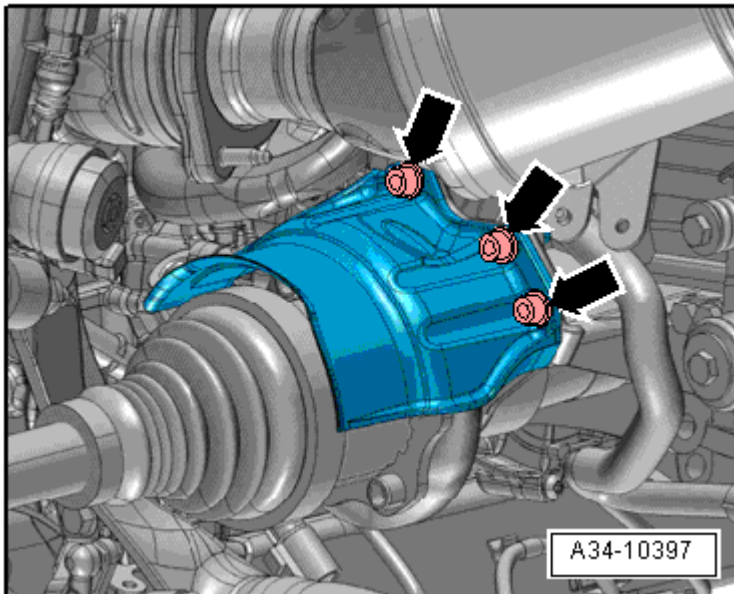


Fig. 65: Removing Bolts And Left Drive Axle Heat Shield
 Courtesy of AUDI OF AMERICA, LLC

NOTE: The illustration shows the installation position with the transmission removed.

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

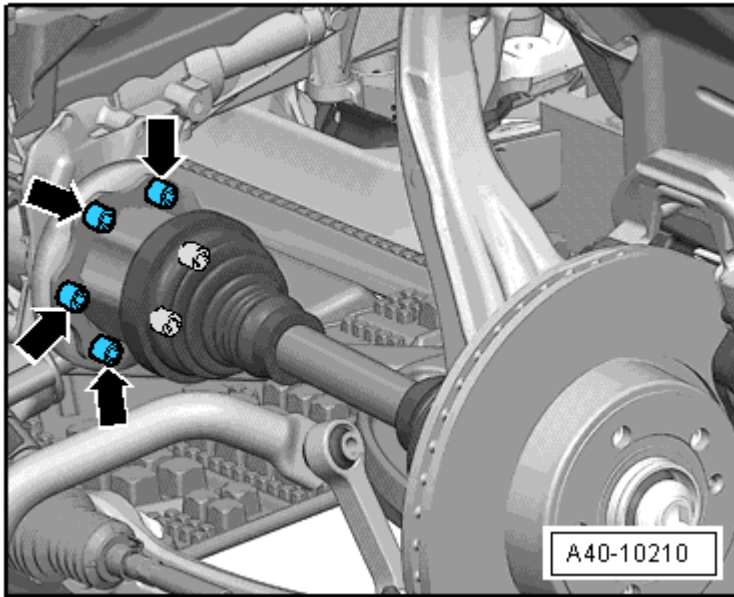


Fig. 66: Removing Left And Right Drive Axles
Courtesy of AUDI OF AMERICA, LLC

-- Remove the nuts -arrows- and the bolt -1-, and push the right catalytic converter to the right side and secure.

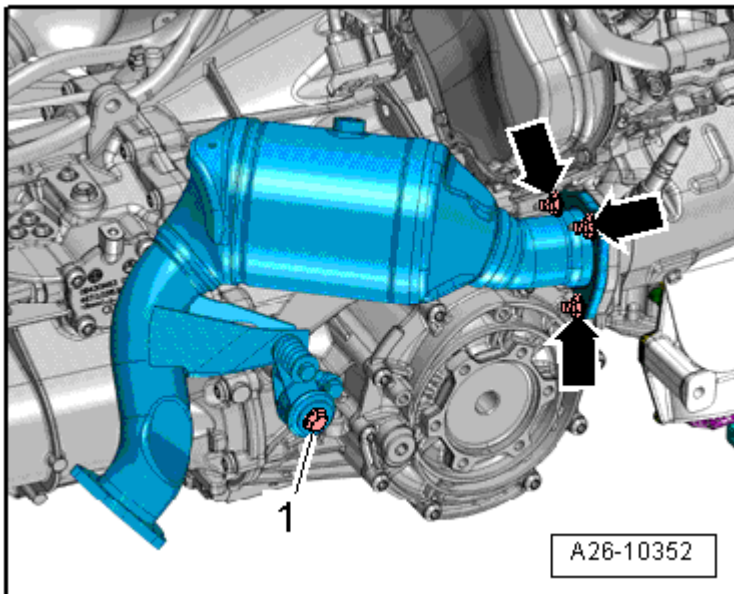


Fig. 67: Removing Nuts And Bolts And Remove Right Catalytic Converter From Exhaust
Courtesy of AUDI OF AMERICA, LLC

NOTE: The illustration shows the installation position with the engine removed.

Use the T40220 to loosen the nuts -arrow-, right catalytic converter -A- on the exhaust manifold.

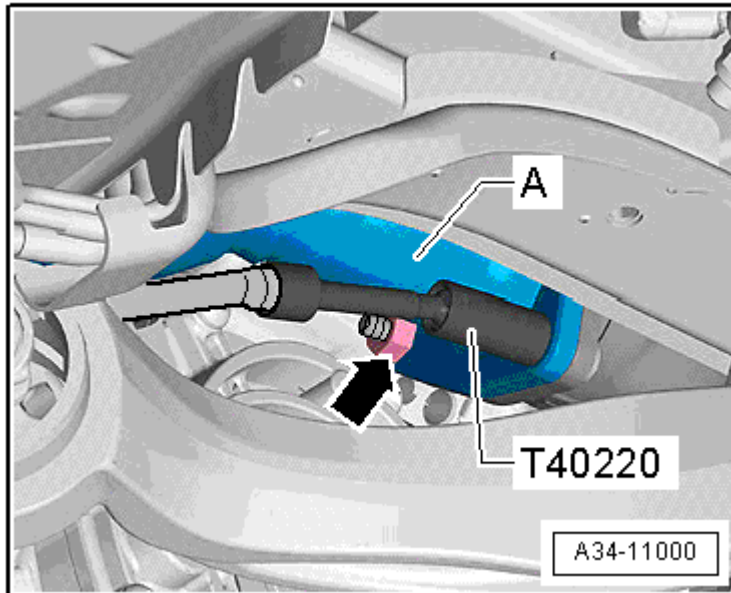


Fig. 68: Using T40220 To Loosen Nuts
Courtesy of AUDI OF AMERICA, LLC

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

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

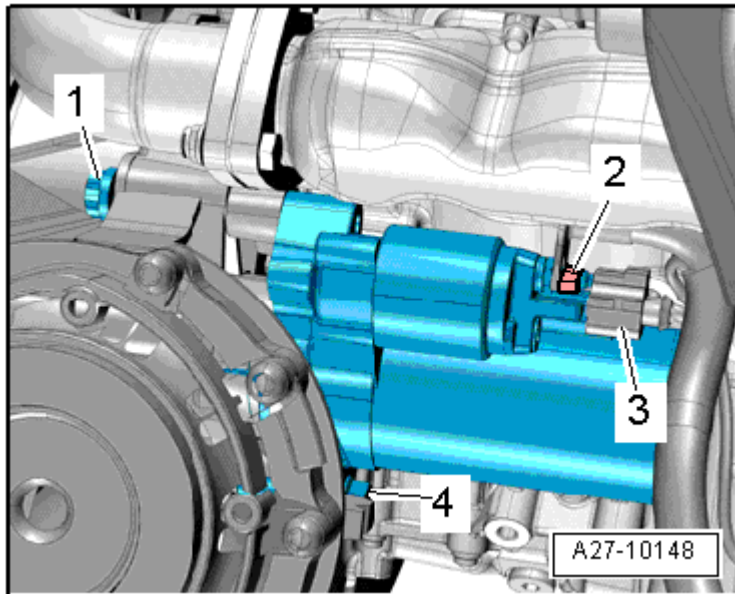


Fig. 69: Disconnecting Starter Electrical Connector
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolt -4- and leave the starter in the installed position.

NOTE: Ignore -2 through 3-.

-- Remove the remaining bolts -3 through 6- that attach the engine to the transmission.

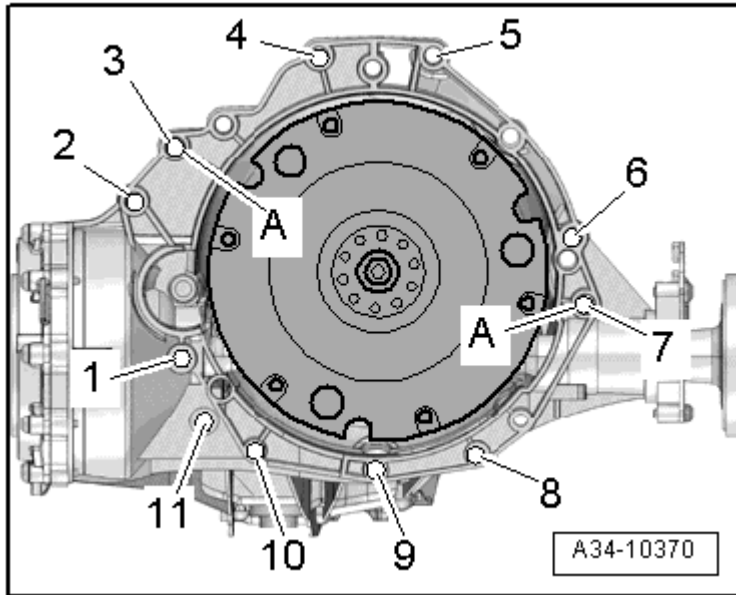


Fig. 70: Removing Starter Off Transmission And Leave It In Installation Position
Courtesy of AUDI OF AMERICA, LLC

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

If the transmission removed is being replaced, then the following components must be changed:

- Right and left bracket -1- for the exhaust system. Refer to **Removal and Installation** .

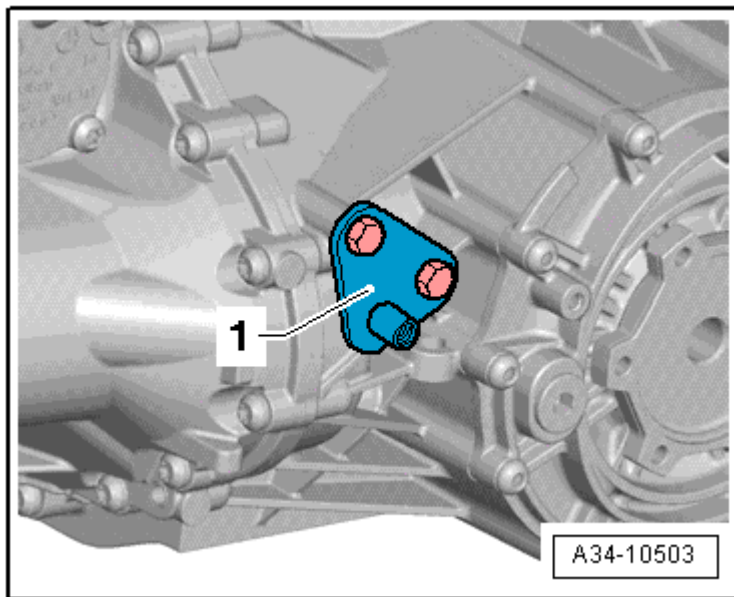


Fig. 71: Attaching Exhaust System Retaining Strap Bracket To New Transmission
Courtesy of AUDI OF AMERICA, LLC

- Tunnel crossmember with the transmission mount and transmission support. Refer to **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW.**
- Remove the clutch module if necessary. Refer to **Removal and Installation** .

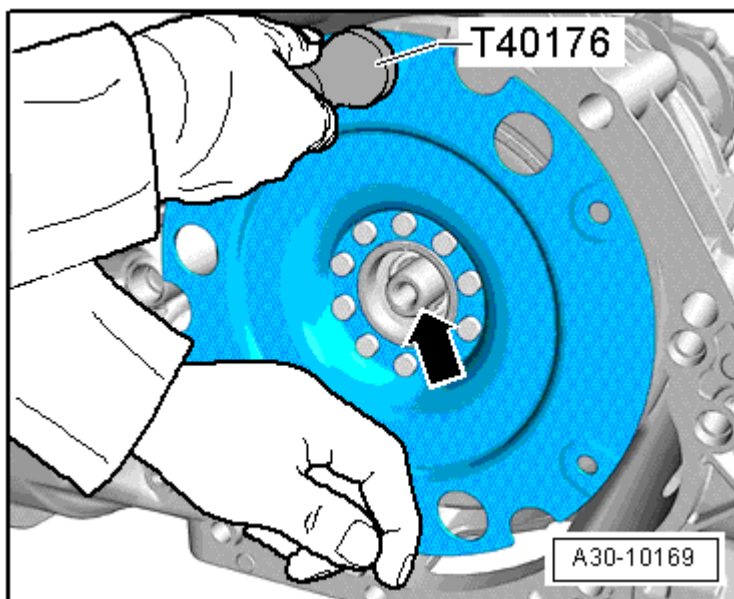


Fig. 72: Sliding Torque Converter Carefully Onto Input Shaft
Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Assembly Aid T40169
- Transportation Lock T40170
- Ring Spanner Insert AF 16 V.A.G 1332/14
- Transmission Support T40173
- Engine/Transmission Jack V.A.G 1383 A
- Engine Support Bridge 10 - 222 A
- Ring Spanner Insert AF 16 V.A.G 1332/14

Installing

NOTE: Replace bolts that are tightened to the specification. The aluminum bolts for attaching the engine to the manual transmission may be used two times.

Replace bolts that are tightened to the specification.

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

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

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

Check the input shaft near the bearing in the drive plate -arrow- for scoring. Replace the needle bearing in the drive plate, if necessary. Refer to Removal and Installation .

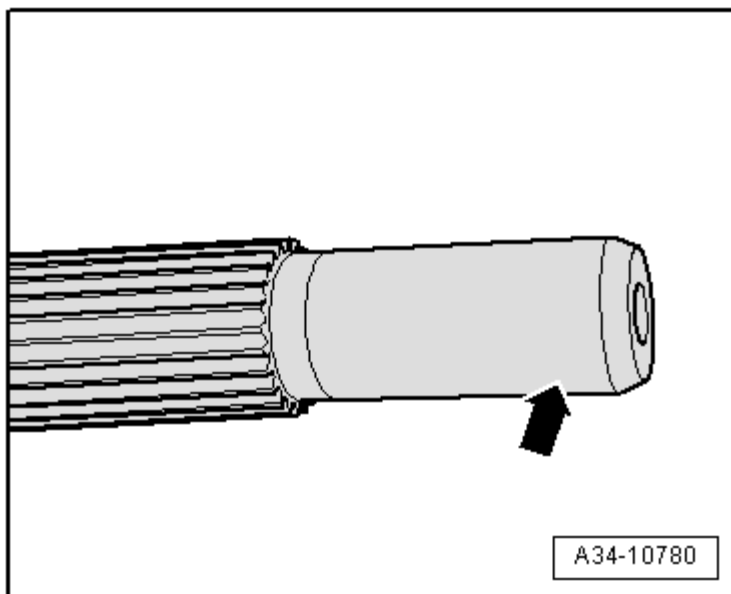


Fig. 73: Checking Input Shaft For Wear
Courtesy of AUDI OF AMERICA, LLC

Transmission Installation Tightening Specifications: **TIGHTENING SPECIFICATIONS**

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

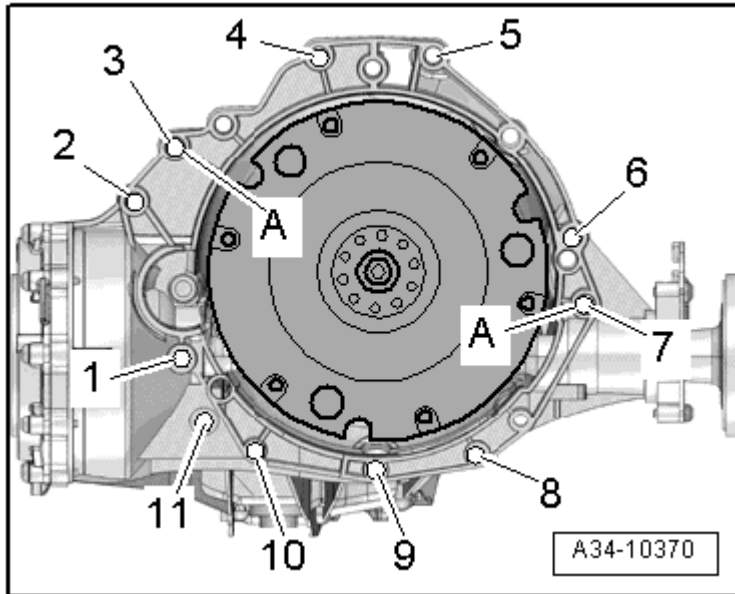


Fig. 74: Removing Starter Off Transmission And Leave It In Installation Position
Courtesy of AUDI OF AMERICA, LLC

- See if it is possible to use the aluminum bolts -2 through 11- again and mark them, if necessary. **CHECK THE ALUMINUM BOLTS -2 THROUGH 11- TO SEE WHETHER THEY CAN BE REUSED.**

-- Install the clutch module, if necessary. Refer to **Removal and Installation** .

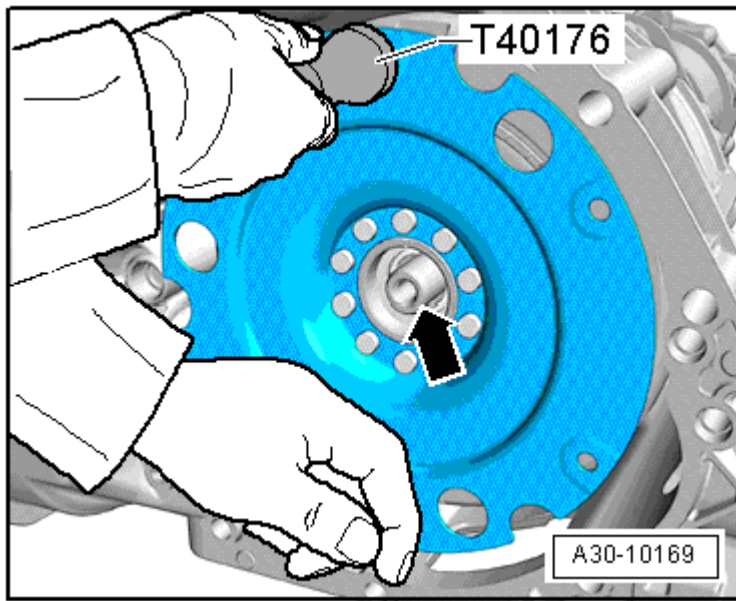


Fig. 75: Sliding Torque Converter Carefully Onto Input Shaft
 Courtesy of AUDI OF AMERICA, LLC

-- Mount the transmission onto the T40173 and secure it using the tension strap -1- as illustrated.

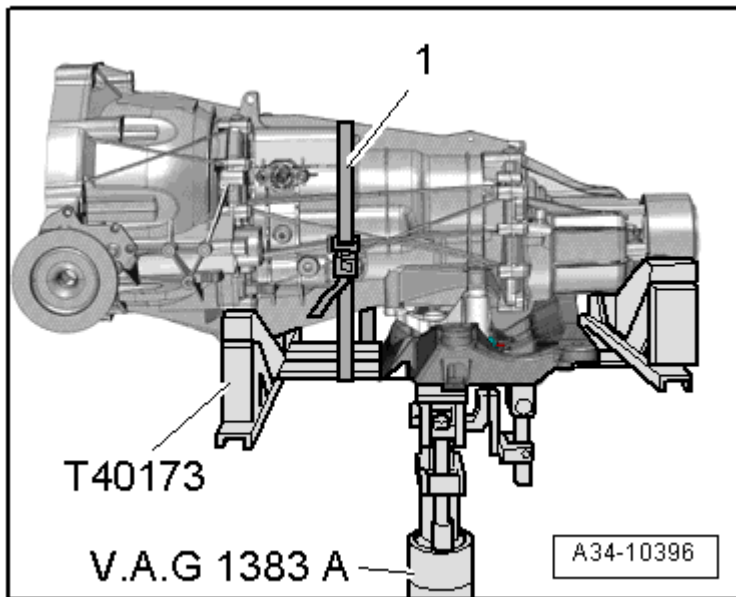


Fig. 76: Identifying Transmission Holding Fixture
 Courtesy of AUDI OF AMERICA, LLC

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

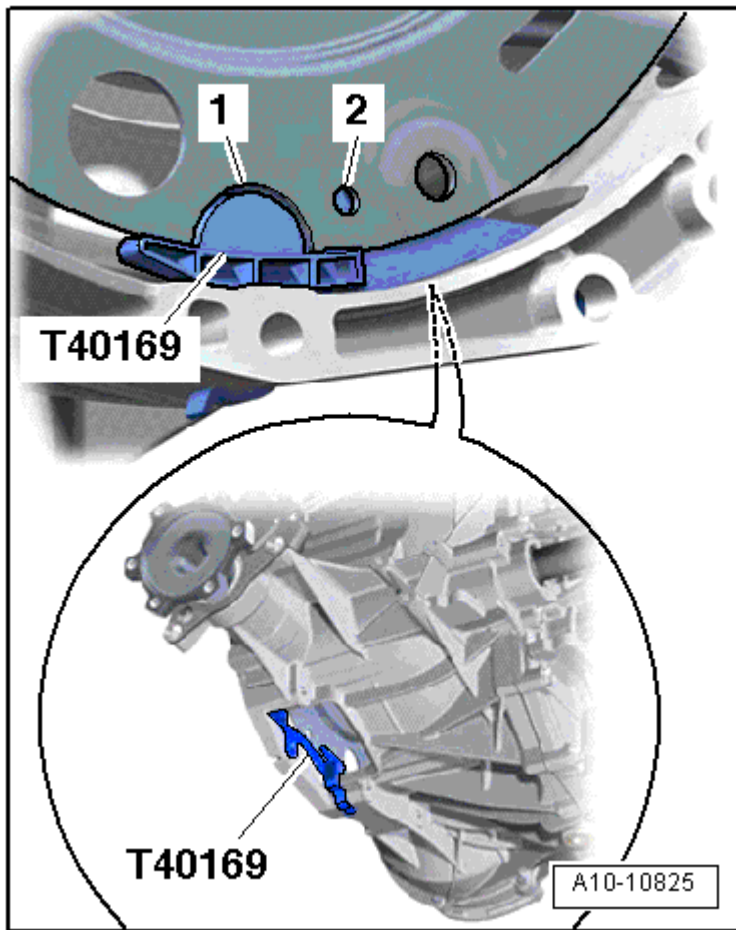


Fig. 77: Inserting Assembly Aid T40169 Into Transmission Housing And Flywheel From Below
Courtesy of AUDI OF AMERICA, LLC

-- Insert the T40169 in the transmission housing and the clutch module from below as shown in the illustration.

- The T40169 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 clutch module as needed.**

-- Install the bolts from the T40169 into the holes on the transmission housing.

-- Insert the T40170 in the transmission housing from below and secure it on the flange shaft -1-.

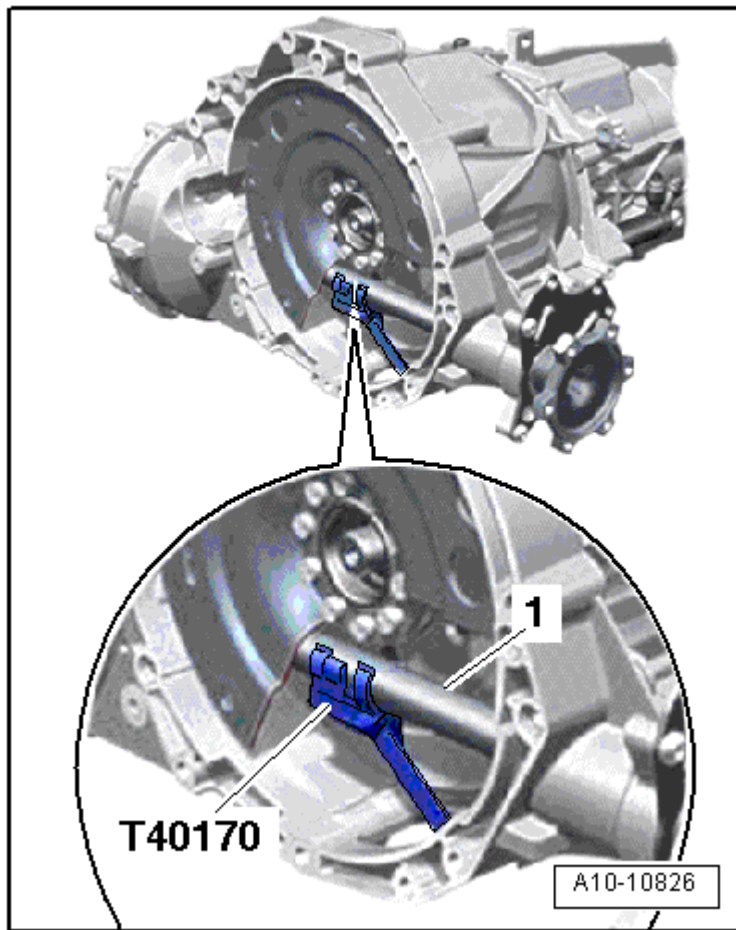


Fig. 78: Identifying Transportation Lock T40170

Courtesy of AUDI OF AMERICA, LLC

-- Raise the transmission straight up until the clutch slave cylinder can be inserted.

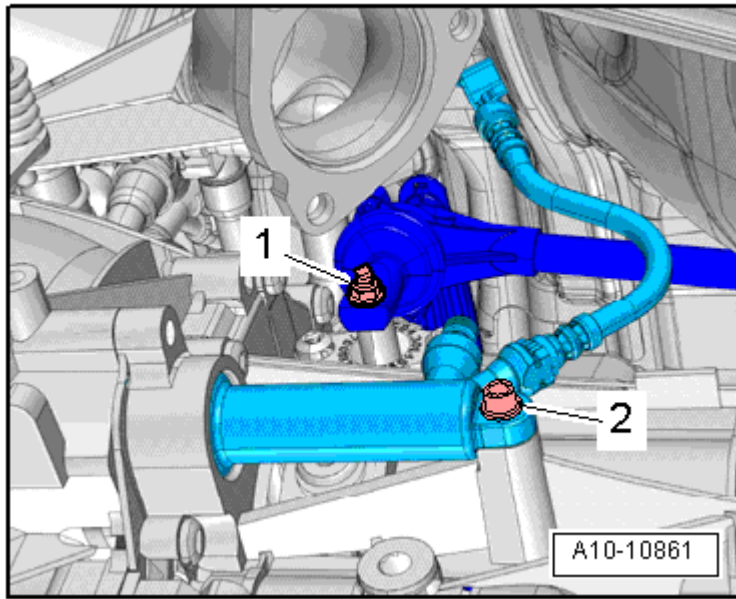


Fig. 79: Removing Bolt And Secure Clutch Slave Cylinder Sideways In Engine Compartment
 Courtesy of AUDI OF AMERICA, LLC

-- Tighten the bolt -2-. Tightening specification **CLUTCH HYDRAULICS OVERVIEW** .

NOTE: The next step is only necessary if a drive plate with alignment pins -2- is installed.

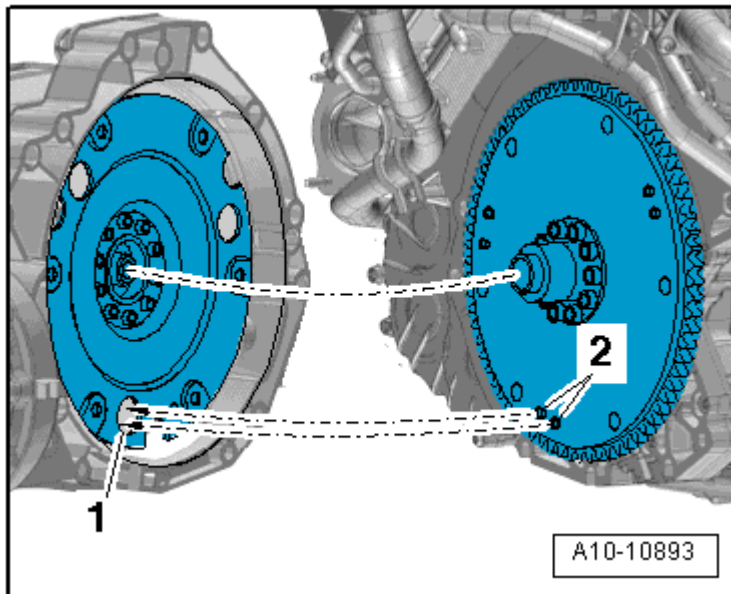


Fig. 80: Aligning Drive Plate To Clutch Module
 Courtesy of AUDI OF AMERICA, LLC

-- Also align the drive plate to the clutch module so the alignment pins -2- on the drive plate (if applicable) can

engage in the larger holes -1- on the clutch module.

CAUTION: The clutch will not function properly if it is not installed correctly.

- The clutch may have noticeable function problems if the alignment pins for the drive plate -2- are not in the holes in the clutch module -1-.

-- Attach the transmission to the engine and tighten the bolts -3 through 11-. For the correct tightening specifications, refer to **TIGHTENING SPECIFICATIONS**.

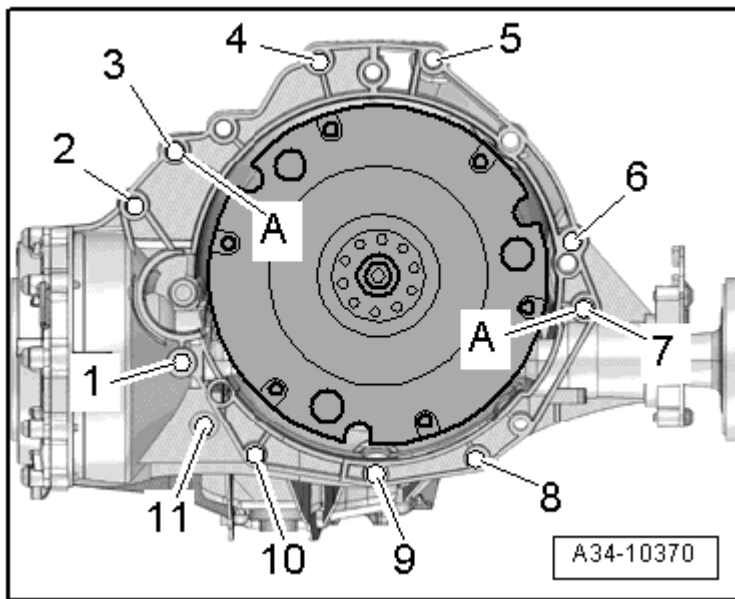


Fig. 81: Removing Starter Off Transmission And Leave It In Installation Position

Courtesy of AUDI OF AMERICA, LLC

-- Raise the transmission using the V.A.G 1383 A until dimension -a- is reached between the subframe and the body.

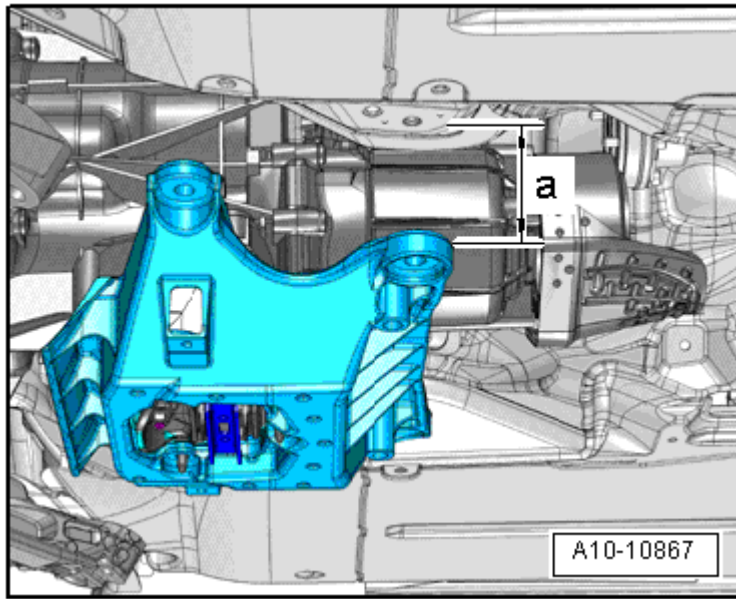


Fig. 82: Lowering Transmission

Courtesy of AUDI OF AMERICA, LLC

- Dimension -a- = maximum 100 mm.

-- Install the starter and tighten the bolts -1- and -4-. Tightening specification **TIGHTENING SPECIFICATIONS.**

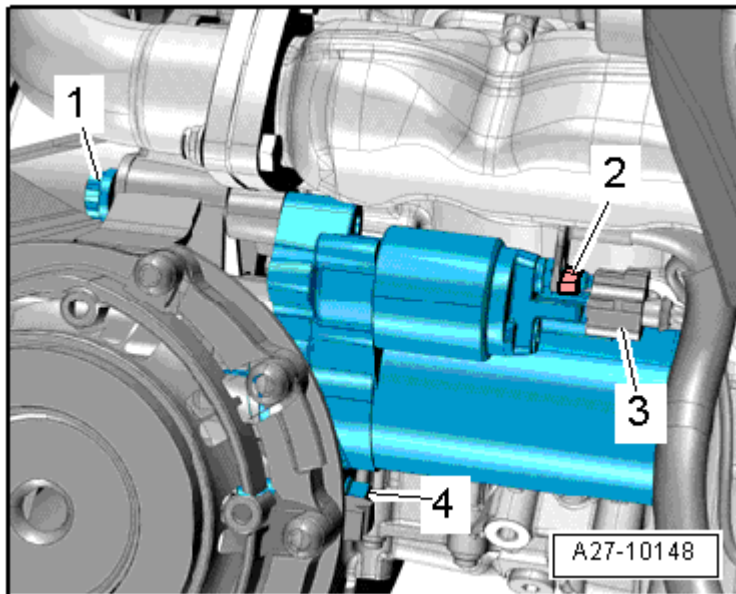


Fig. 83: Disconnecting Starter Electrical Connector

Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2 through 3-.

- Tighten the right catalytic converter. Refer to **Removal and Installation** .
- Attach the push rod -1- **SELECTOR MECHANISM OVERVIEW**.

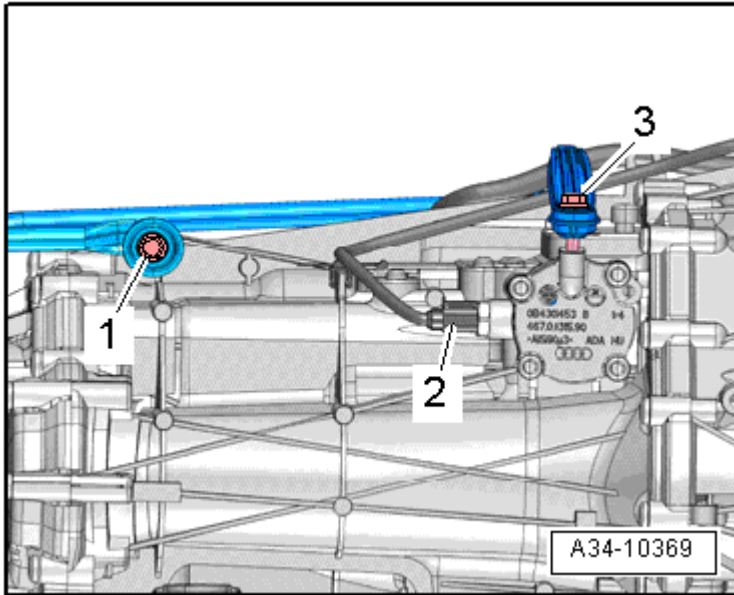


Fig. 84: Removing Bolts And For Selector Rod And Push Rod
Courtesy of AUDI OF AMERICA, LLC

- Attach the connecting rod -3-. Tightening specification **SELECTOR MECHANISM OVERVIEW**.
- Connect the connector -2- to the transmission range gear recognition switch -F208-.
- Attach the connector to the engine speed sensor -G28-.
- Install the transmission shift lever -2- as follows:

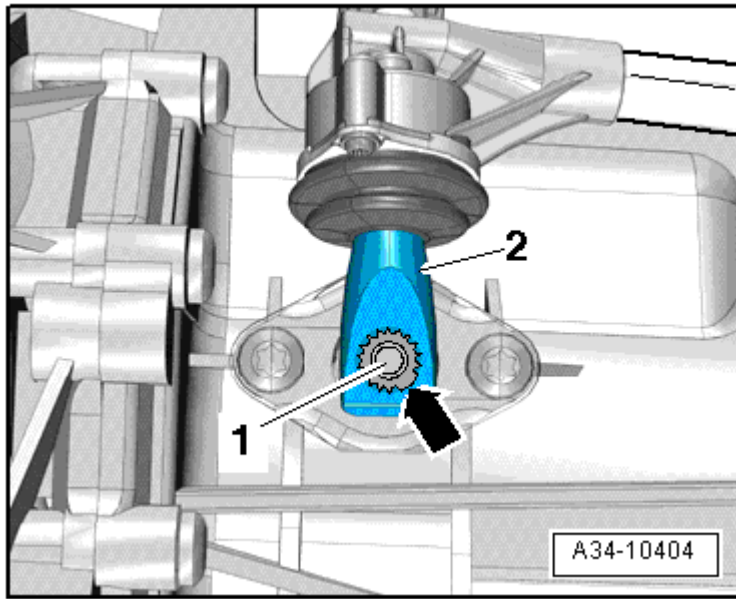


Fig. 85: Installing Transmission Shift Lever
 Courtesy of AUDI OF AMERICA, LLC

- The gearshift lever -2- can be attached to the gearshift shaft -1- in only one position (gap in the splines - arrow-).

-- Attach the transmission shift lever -2-. Tightening specification **SELECTOR MECHANISM OVERVIEW**.

-- Install the left and right drive axles on the transmission flange shafts. Refer to **Removal and Installation** .

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

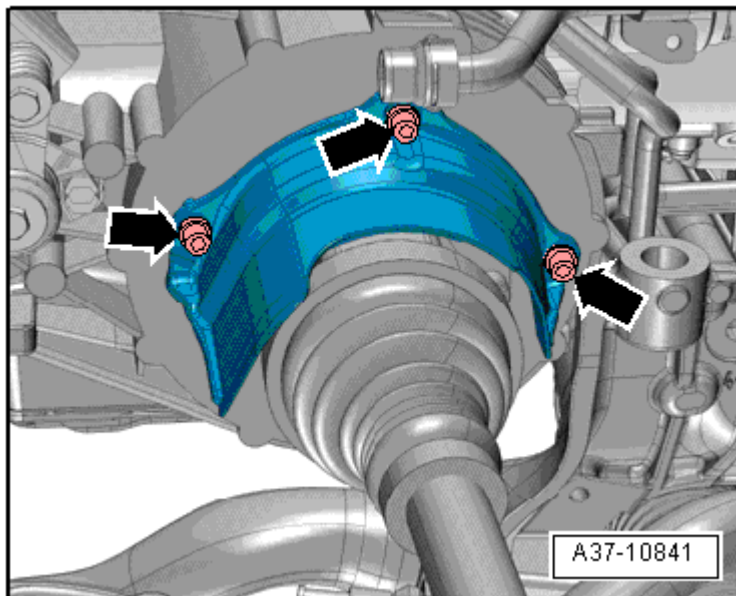


Fig. 86: Driveshaft Heat Shield - Tightening Specification

Courtesy of AUDI OF AMERICA, LLC

-- Loosen the 10 - 222 A spindles.

-- Lift the transmission and tighten the tunnel crossmember bolts -arrows-. For the correct tightening specifications, refer to **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW**.

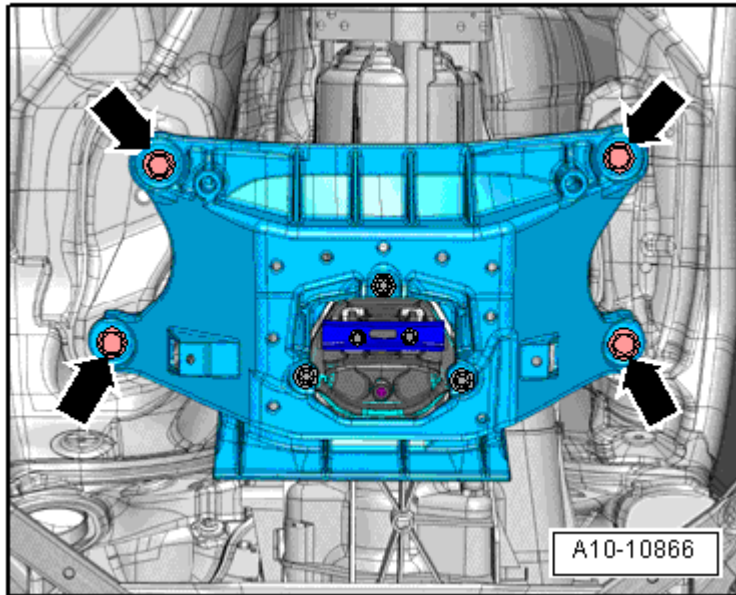


Fig. 87: Transmission Support Overview
Courtesy of AUDI OF AMERICA, LLC

-- Remove the V.A.G 1383 A and the T40173 from the transmission.

-- Remove the 10 - 222 A.

-- Mount or install the driveshaft on the transmission. Refer to **Removal and Installation** or **Removal and Installation** .

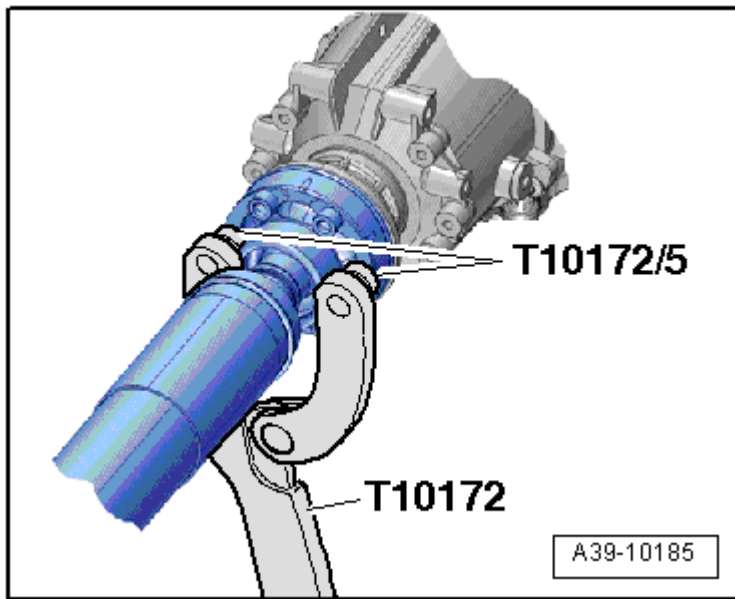


Fig. 88: Holding Driveshaft Using T10172
 Courtesy of AUDI OF AMERICA, LLC

-- Re-assemble the exhaust system and ensure it is not under stress. Refer to **Removal and Installation** .

Tightening Sequence - Clutch Module to the Drive Plate

-- Remove the T40169 and T40170.

-- Put in sixth gear; to do this, move the gearshift shaft -1-, push the gearshift lever -2- forward in direction of - arrow-.

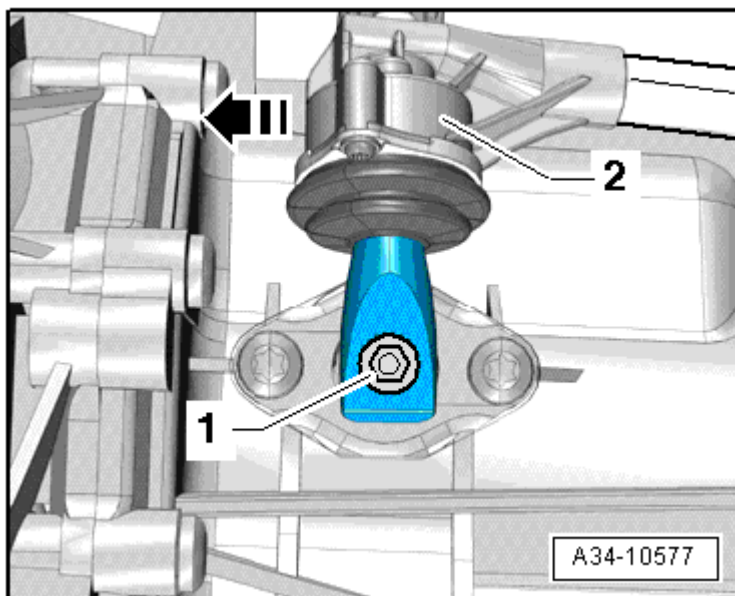


Fig. 89: Identifying Gearshift Assembly

Courtesy of AUDI OF AMERICA, LLC

-- Mount both front wheels.

Use the T10172 and adapter T10172/5 to block the driveshaft to keep it from turning, too.

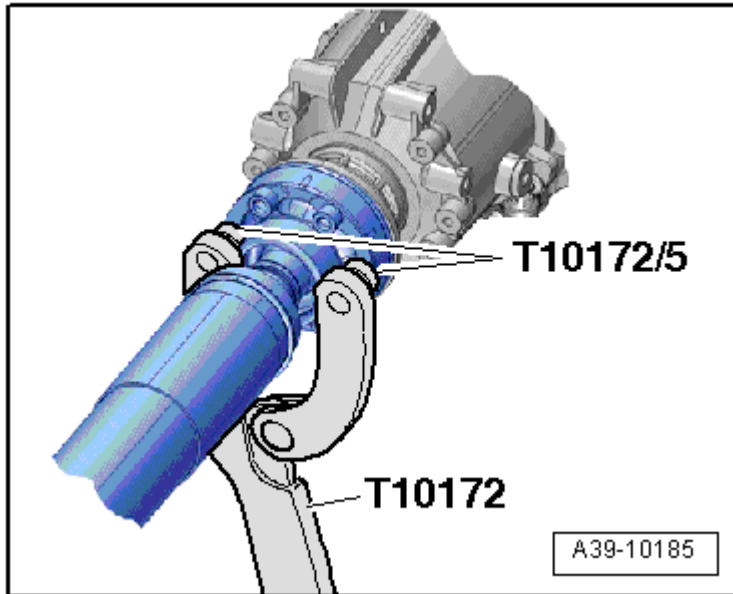


Fig. 90: Holding Driveshaft Using T10172

Courtesy of AUDI OF AMERICA, LLC

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

-- Turn both front wheels together in one direction until the clutch module turns one complete turn (360°).

- The check hole -arrow- must be visible in the transmission housing cut-out.

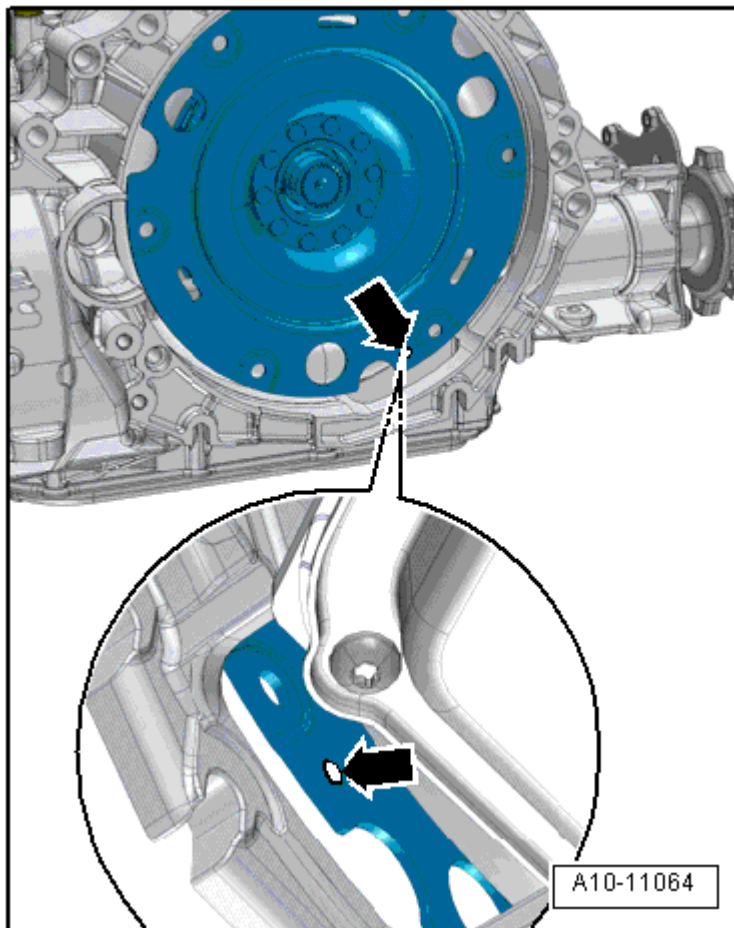


Fig. 91: Locating Transmission Housing Check Hole
Courtesy of AUDI OF AMERICA, LLC

Tighten the clutch module to the drive plate as follows:

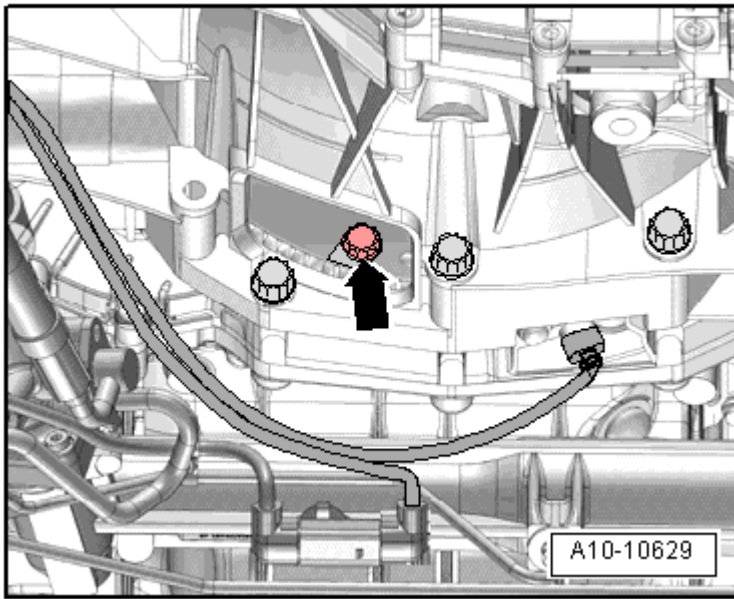


Fig. 92: Identifying Clutch Module First Bolt Installation Location
Courtesy of AUDI OF AMERICA, LLC

- Use new bolts.
- Tightening specification **CLUTCH MODULE OVERVIEW** .
- Tighten the bolts using the V.A.G 1332/14.

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

-- Continue turning the clutch module/drive plate 180° via the front wheels.

-- Insert the second bolt and tighten it to the specification **CLUTCH MODULE OVERVIEW** .

-- Insert the remaining connecting bolts connecting the clutch module to the drive plate and tighten them to the specification immediately (including the first bolt installed) **CLUTCH MODULE OVERVIEW** .

-- Tighten the universal joint -arrow- to the steering gear. Refer to **Removal and Installation** .

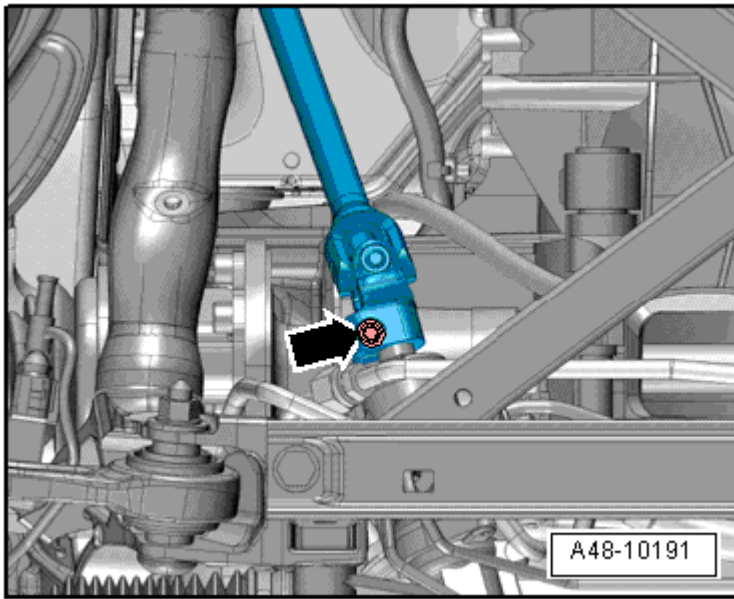


Fig. 93: Pressing Cv Joint Off Steering Gear And Slide It Up
Courtesy of AUDI OF AMERICA, LLC

- Install the power steering hydraulic oil lines. Refer to Description and Operation .
- Install the subframe crossbrace. Refer to Removal and Installation .
- Fill the power steering with hydraulic oil. Refer to General Information .
- Gear oil level in manual transmission, checking. Refer to MANUAL TRANSMISSION, CHECKING TRANSMISSION FLUID LEVEL .
- Tighten down both front wheels using tightening torque. Refer to Specifications .
- Observe measures after connecting the battery. Refer to Removal and Installation .

CAUTION: There is a risk of destroying control modules with excess voltage.

- Do not use a charger as a starting aid.

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.

2012 Audi S4

TRANSMISSION Controls, Housing - Manual Transmission 0B4 AWD (Sedan)

Tightening specification tolerance +/- 15%.

Component		Nm
Bolts and nuts	M6	9
	M7	15
	M8	20
	M10	40
	M12	65
Except for the following:		

Mounting 3.0L TFSI engine on Manual Transmission

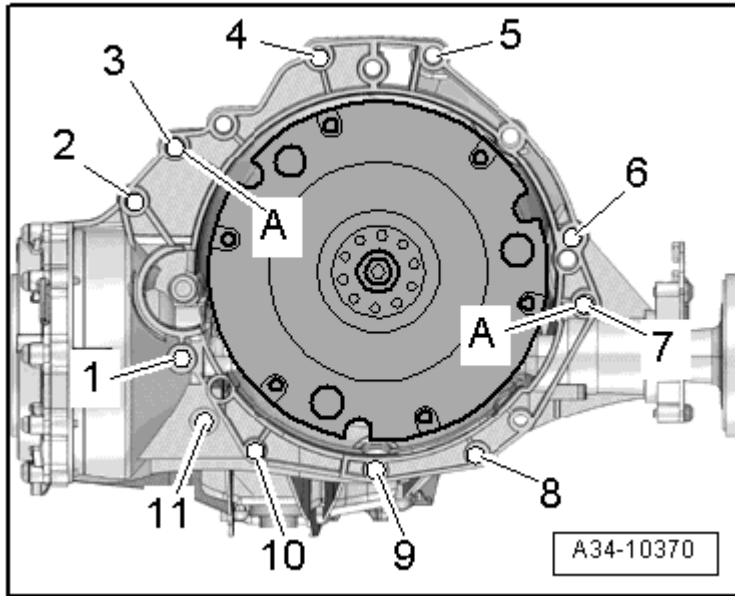


Fig. 94: Removing Starter Off Transmission And Leave It In Installation Position

Courtesy of AUDI OF AMERICA, LLC

Item	Bolt	Nm
1 ¹⁾	M10 x 50 ²⁾	65
2 ¹⁾	M12 x 100 ³⁾⁴⁾	30 + 90°
3 ... 6	M12 x 100 ³⁾⁴⁾	30 + 90°
7	M12 x 125 ³⁾⁴⁾	30 + 90°
8, 11	M10 x 60 ³⁾⁴⁾	15 + 90°
9, 10	M10 x 95 ³⁾⁴⁾	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) Audi A4 through VIN 8K-9-066499, Audi A5 through VIN 8T-9-007999: Replace the aluminum bolts.
- 4) Audi A4 from VIN 8K-9-066500, Audi A5 from VIN 8T-9-008000: The aluminum bolts may be used twice.
- Check the aluminum bolts -2 ... 11- to see whether they can be reused **CHECK THE ALUMINUM BOLTS -2 THROUGH 11- TO SEE WHETHER THEY CAN BE REUSED.**

CHECK THE ALUMINUM BOLTS -2 THROUGH 11- TO SEE WHETHER THEY CAN BE REUSED

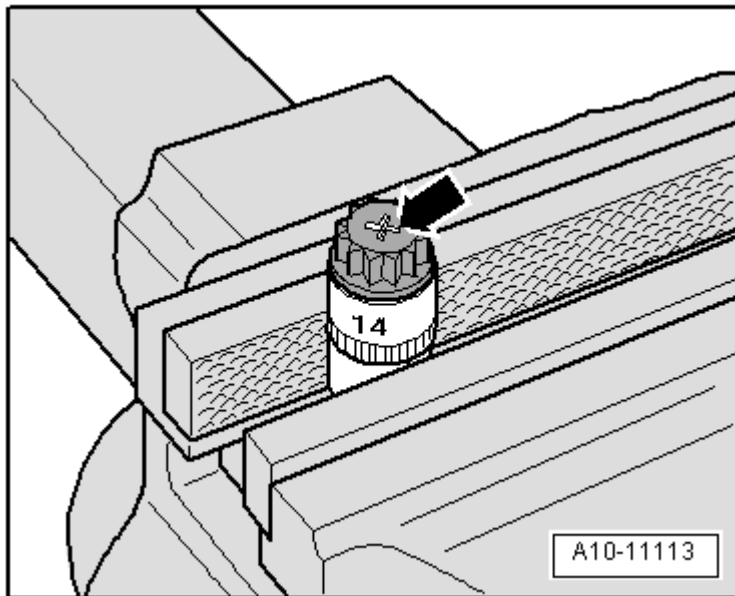


Fig. 95: Identifying Bolts Marked With An "X" May Not Be Used Again
 Courtesy of AUDI OF AMERICA, LLC

- Audi A4 from VIN 8K-9-066500, Audi A5 from VIN 8T-9-008000: The aluminum bolts (refer to figure) may be used twice. Therefore, the bolts must be marked with two notches "X" made by a chisel after they have been used the first time -arrow-.
- 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 $1 \frac{1}{2}$ drive, which is inserted in to the vise, as illustrated.
- Bolts marked with an "X" may not be used again.
- Audi A4 through VIN 8K-9-066499: Always replace the aluminum bolts.
- Audi A5 through VIN 8T-9-007999: Always replace the aluminum bolts.
- There is no limit to the number of times the steel bolt can be used again.

TRANSMISSION, REMOVING

CAUTION: Remove Audi A5, 4.2L FSI transmission

- Through VIN 8T-8A-023117, the Audi A5, 4.2L FSI engine's

transmission can only be removed together with the engine. Refer to [For engine(s) CCBA] Removal and Installation

Special tools and workshop equipment required

- Counterhold Tool Touareg V10 T10172 with Adapter T10172/5
- Release Tool f/ Rev. Light Switch Conn. T40138
- Puller for Gear Shaft Linkage T40160
- Transmission Support T40173
- Jointed Socket, 12 mm T40220
- Engine/Transmission Jack V.A.G 1383 A
- Extractor T40176

Removing

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

- **Observe measures for disconnecting battery.**

-- Position the front wheels so they are straight.

-- Turn off the ignition and remove the key.

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

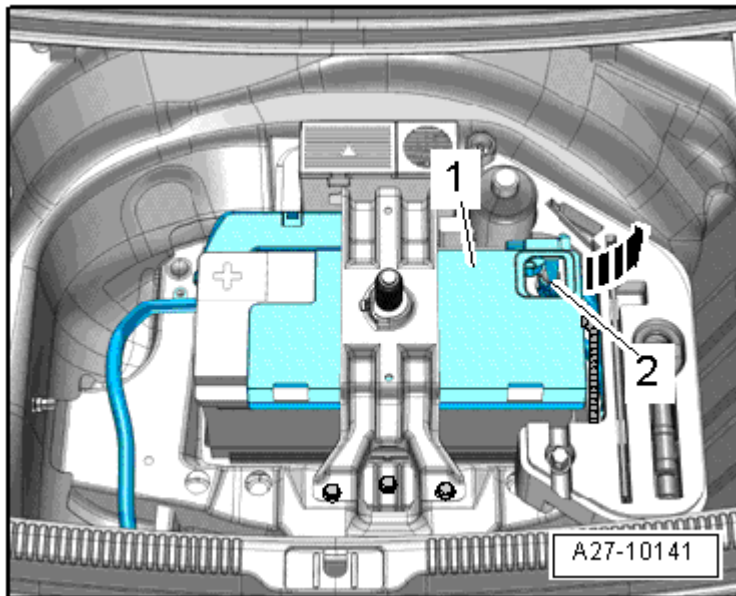


Fig. 96: Identifying Battery

Courtesy of AUDI OF AMERICA, LLC

-- Remove the engine cover -arrows-.

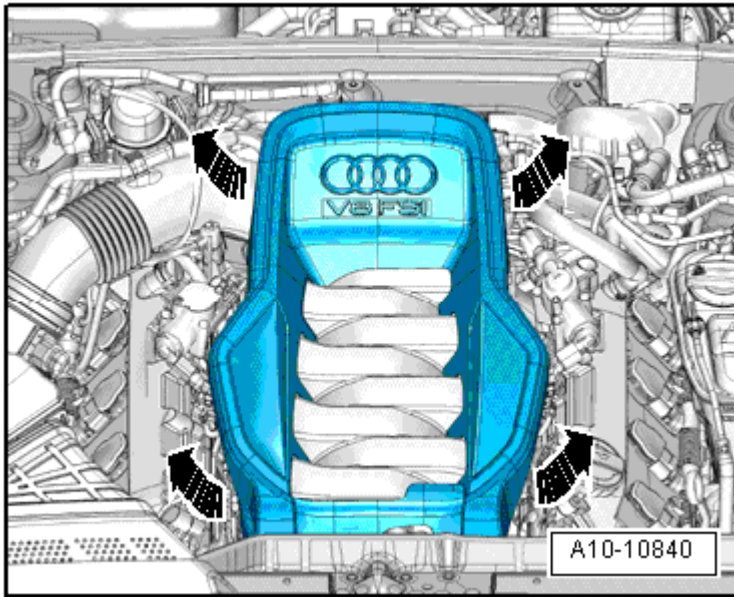


Fig. 97: Removing Engine Cover

Courtesy of AUDI OF AMERICA, LLC

-- Just loosen the wheel bolts on the front wheels; do not remove the wheels.

-- Lift the vehicle.

-- Remove the noise insulation by loosening the fasteners -1 through 3-.

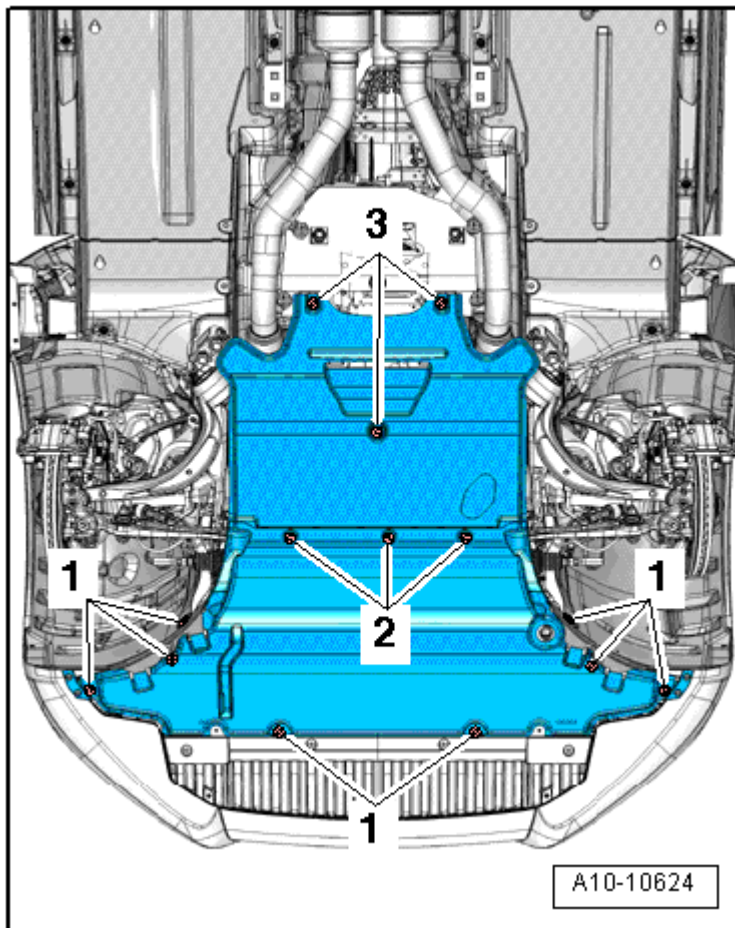


Fig. 98: Identifying Noise Insulation Components

Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolt -1- for the power steering hydraulic fluid line.

CAUTION: The suspension components could be damaged.

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

Do not support the vehicle on the subframe or on the subframe crossbrace (for example using a floor jack or something similar).

-- Remove the bolts -arrows- and remove the subframe crossbrace.

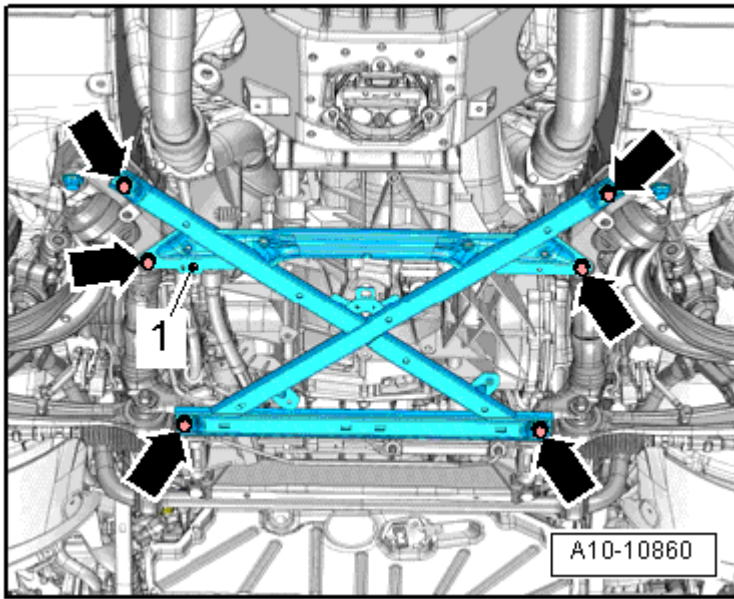


Fig. 99: Removing Subframe Crossbrace
Courtesy of AUDI OF AMERICA, LLC

-- Remove the nuts -arrows- for the left front muffler.

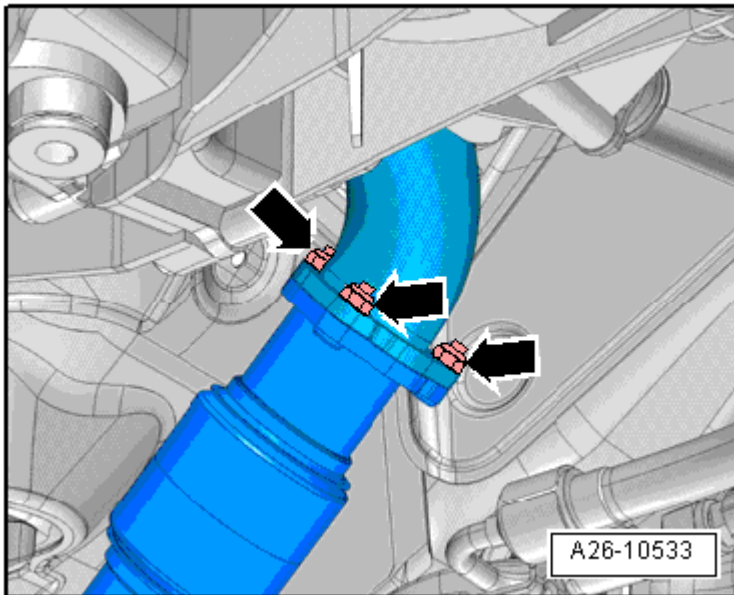


Fig. 100: Removing Left Front Muffler Nuts
Courtesy of AUDI OF AMERICA, LLC

-- Remove the nuts -arrows- for the right front muffler.

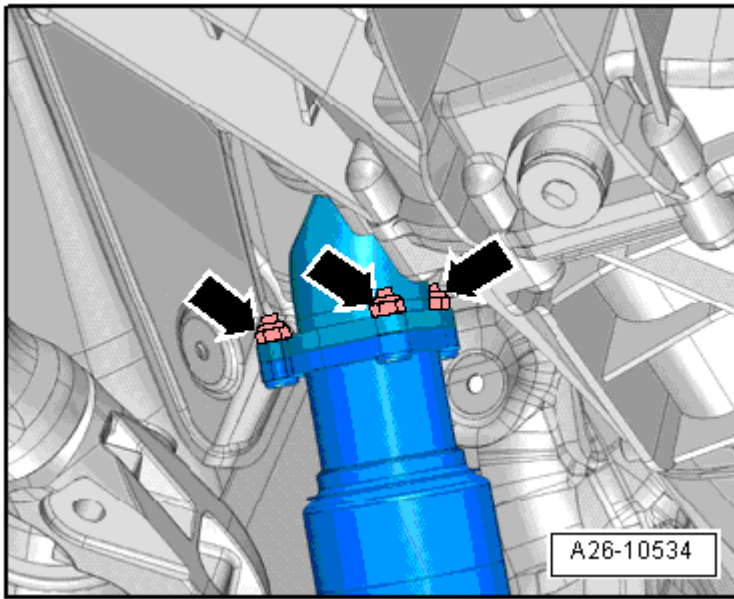


Fig. 101: Removing Right Front Muffler Nuts
Courtesy of AUDI OF AMERICA, LLC

CAUTION: Danger of damaging the flex joint in the front muffler.

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

-- Loosen the clamping sleeves -1- and -2-, push toward the rear, and remove the left and right front muffler.

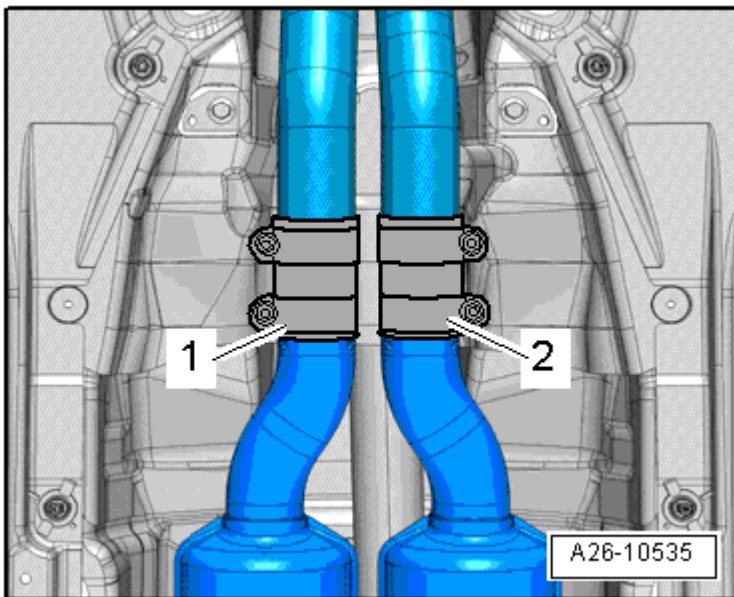


Fig. 102: Loosening Bolts Vehicles With Dual Exhaust System
Courtesy of AUDI OF AMERICA, LLC

-- Disconnect the connectors -1- from the steering gear and -2- from the engine speed sensor -G28-.

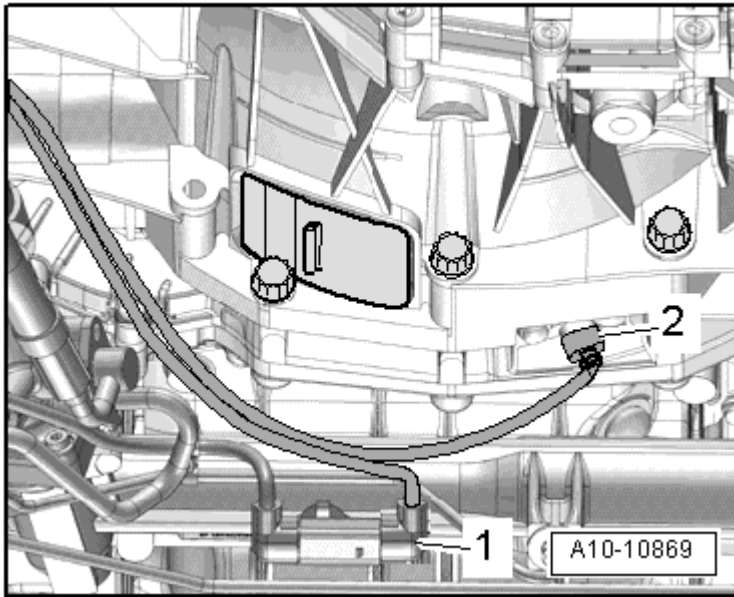


Fig. 103: Disconnecting Connectors And Free Up Electric Wires
Courtesy of AUDI OF AMERICA, LLC

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

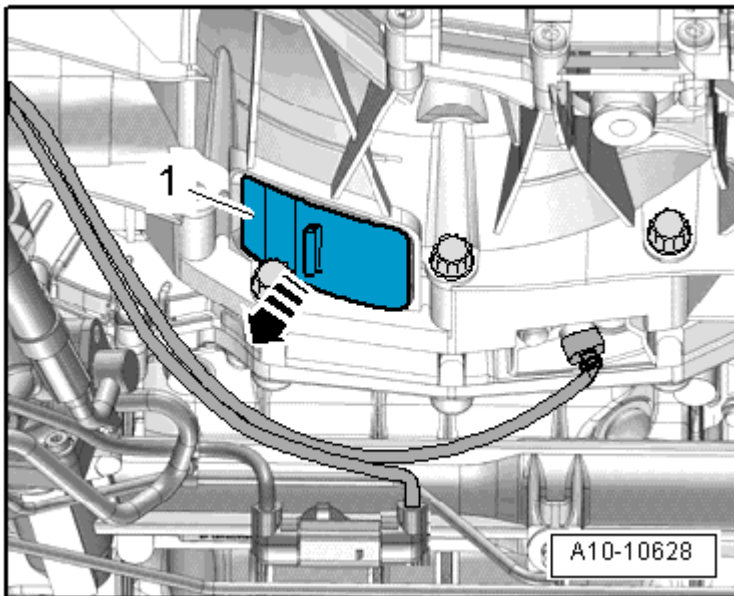


Fig. 104: Identifying Transmission Lower Cover
Courtesy of AUDI OF AMERICA, LLC

- Put in sixth gear; to do this, move the gearshift shaft -1-, push the gearshift lever -2- forward in direction of -arrow-.

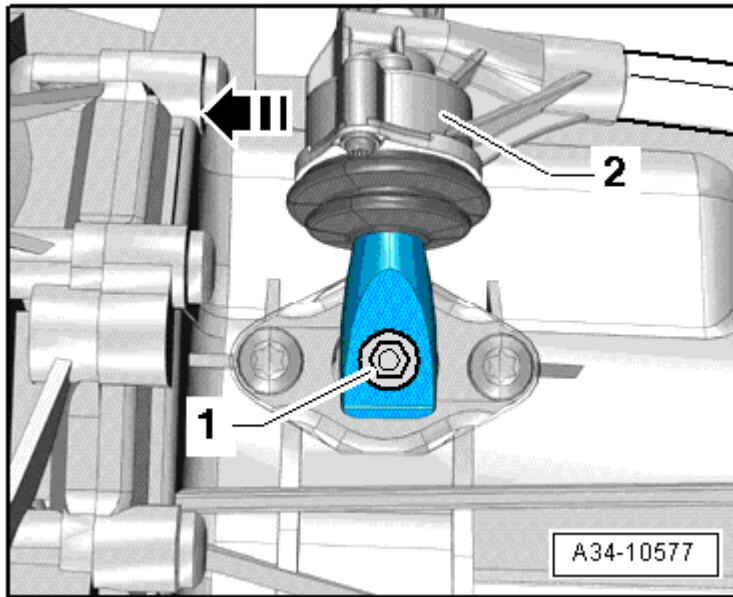


Fig. 105: Identifying Gearshift Assembly
 Courtesy of AUDI OF AMERICA, LLC

Use the T10172 and T10172/5 to block the driveshaft to keep it from turning, too.

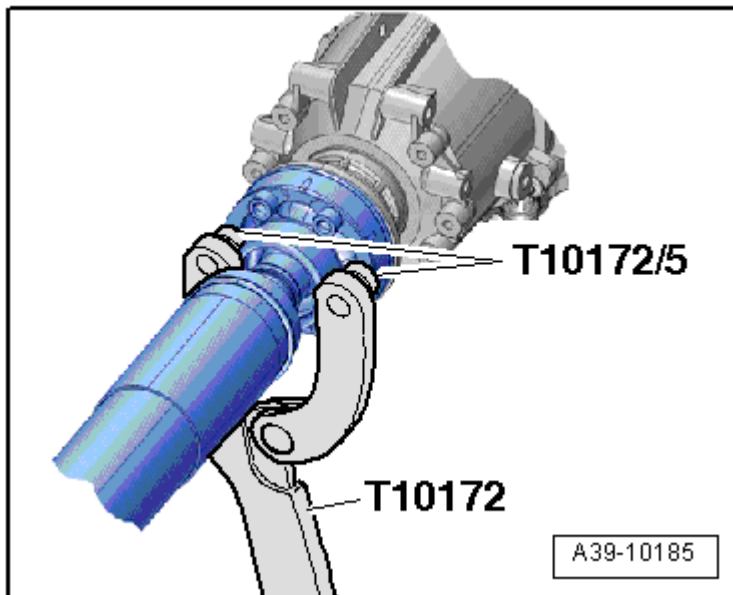


Fig. 106: Holding Driveshaft Using T10172
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the 6 bolts -arrow- from the drive plate. Do this by continuing to rotate the clutch module over both front wheels 60° each.

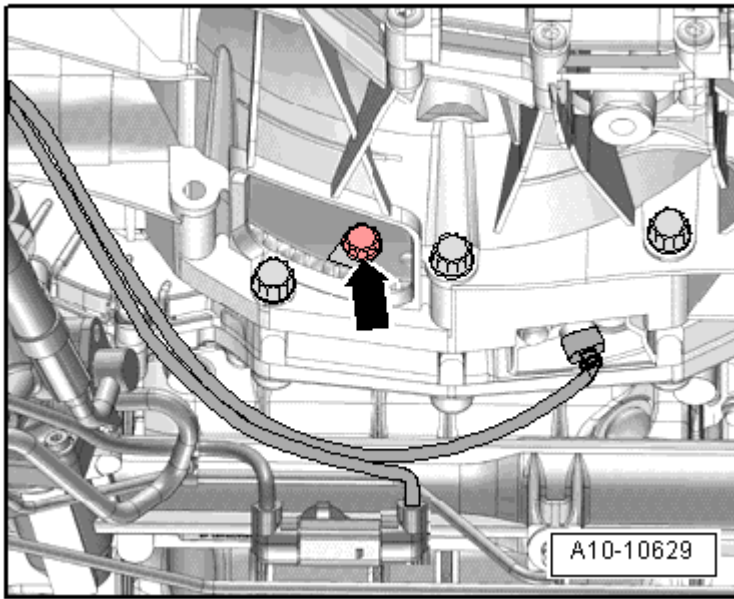


Fig. 107: Identifying Clutch Module First Bolt Installation Location
 Courtesy of AUDI OF AMERICA, LLC

- Remove the front wheels.
- Remove the left and right noise insulation -1- inside the wheel housing.

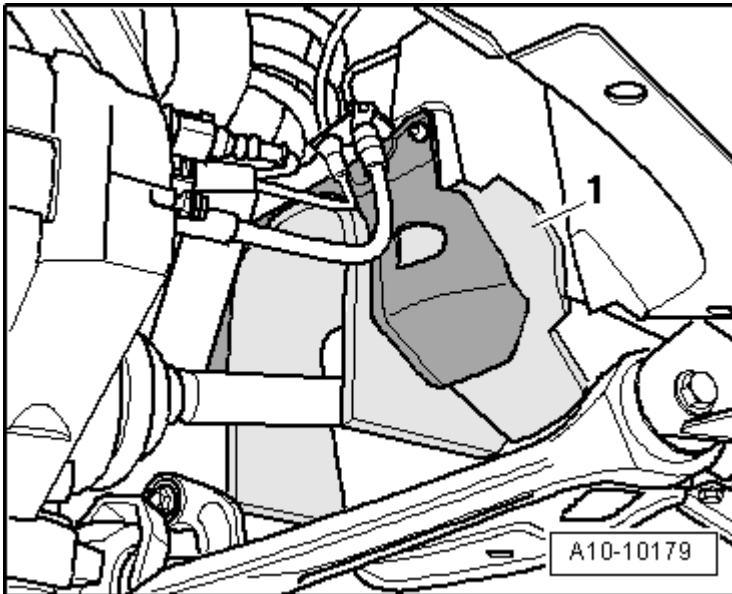


Fig. 108: Removing Right Drive Axle Cover
 Courtesy of AUDI OF AMERICA, LLC

- Remove right and left subframe shield -1- (if equipped). Do this by removing the bolts -arrows- and then removing the shield toward the inside.

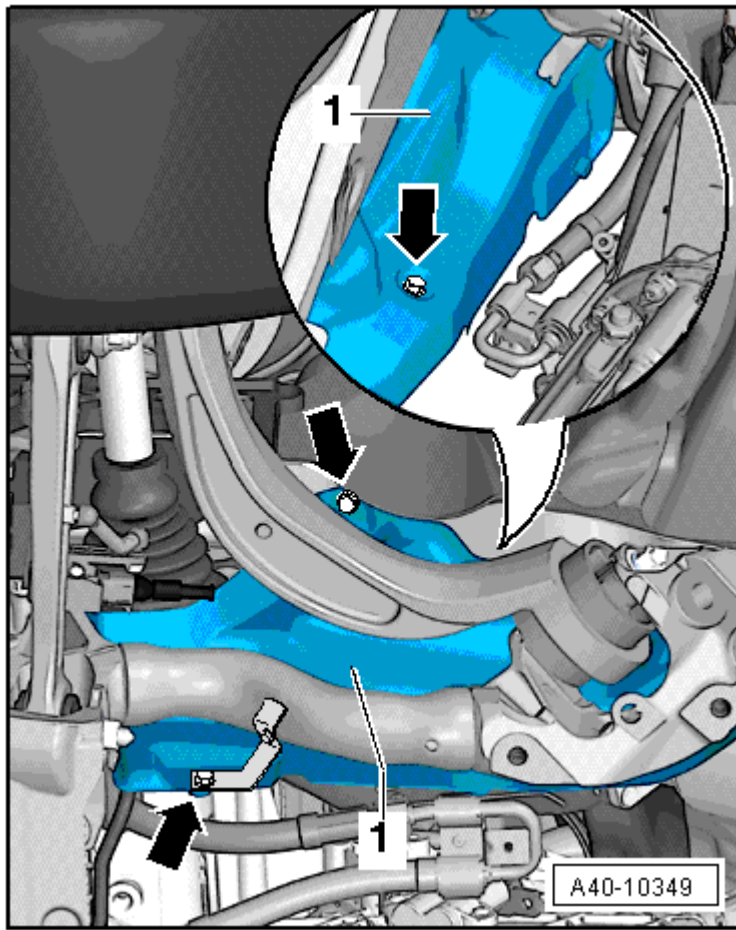


Fig. 109: Removing Subframe Heat Shield
Courtesy of AUDI OF AMERICA, LLC

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

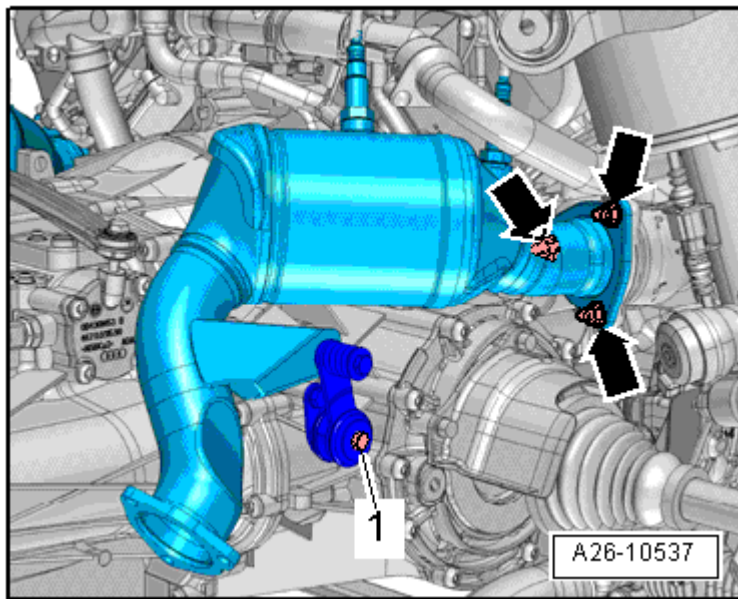


Fig. 110: Removing Nuts And Bolt Pushing Catalytic Converter To Right Side
 Courtesy of AUDI OF AMERICA, LLC

NOTE: The illustration shows the installation position with the engine removed.

Use the T40220 to loosen the nuts -arrow-, right catalytic converter -A- on the exhaust manifold.

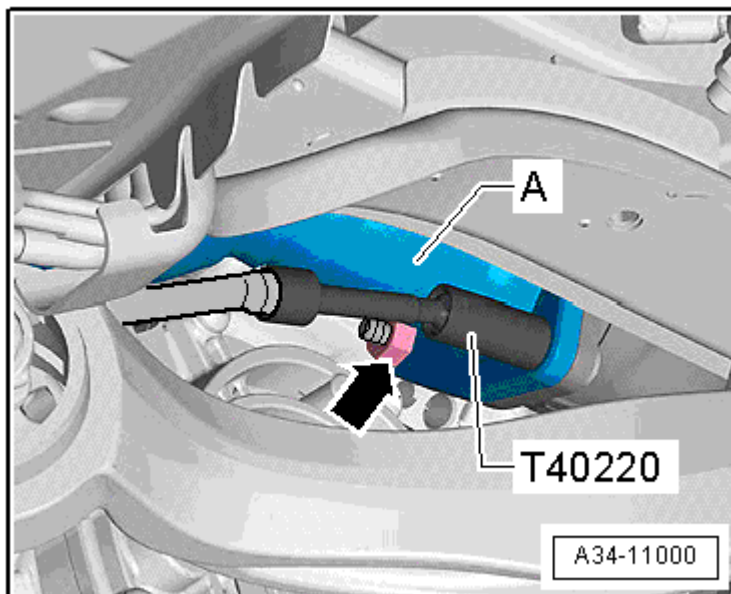


Fig. 111: Using T40220 To Loosen Nuts
 Courtesy of AUDI OF AMERICA, LLC

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

- Remove the rear coolant pipe. Refer to **[For engine(s) CCBA] Removal and Installation** .
- Remove the air duct -arrow-.

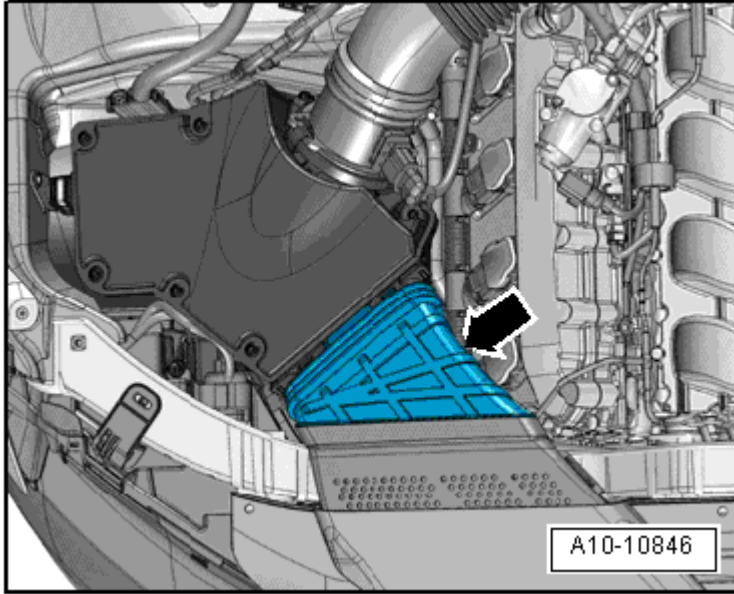


Fig. 112: Removing Air Duct
Courtesy of AUDI OF AMERICA, LLC

- Disconnect the connector -1- on the Mass Airflow (MAF) Sensor -G70-.

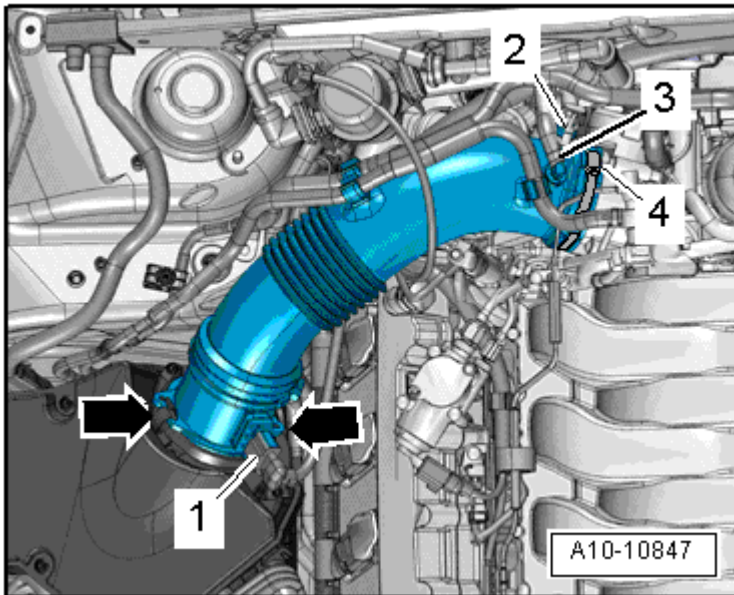


Fig. 113: Disconnecting Connector On Mass Airflow (MAF) Sensor
Courtesy of AUDI OF AMERICA, LLC

- Remove the vacuum hose -3- to the air duct pipe.

CAUTION: There is a risk of violating emissions regulations.

- **Do not open the hose connection -2- !**

-- Lay aside the air guide hose with the crankcase ventilation hose connected -2- by loosening the hose clamps -4- and opening the clips -arrows-.

-- Disconnect the vacuum line -1-.

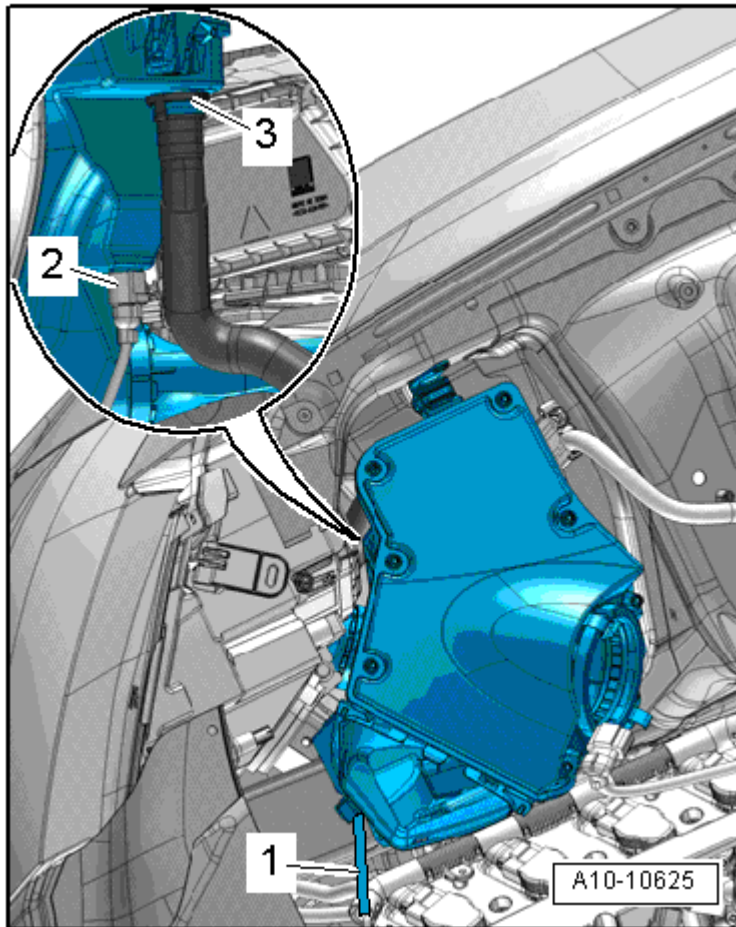


Fig. 114: Intake Air Switch-Over Valve -N335- -2-
Courtesy of AUDI OF AMERICA, LLC

-- Remove the air filter housing lower section and disconnect the electrical connector -2- on the intake air switch-over valve -N335- on the back.

-- Disconnect the hose -3- to the secondary air injection pump.

-- Remove the coolant hose from the radiator -2- and from the right coolant pipe -1-.

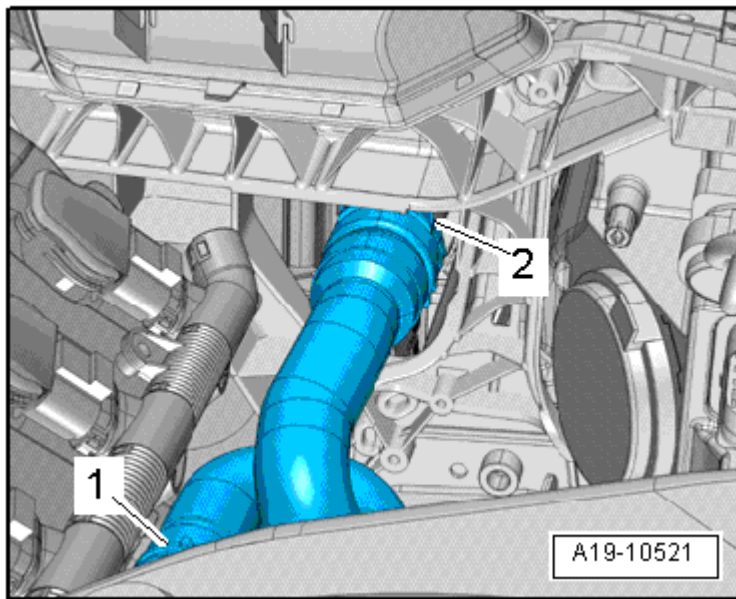


Fig. 115: Removing Coolant Hose From Radiator And Right Coolant Pipe
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -1- and -2- and the coolant hose -arrow-.

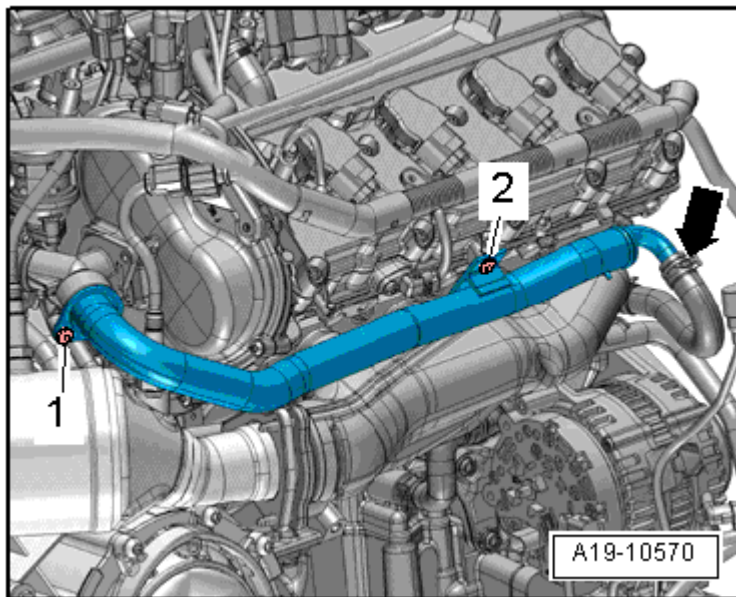


Fig. 116: Removing Bolts And Coolant Hose
Courtesy of AUDI OF AMERICA, LLC

-- Remove the right coolant pipe from the connection and lay it aside.

-- Remove the bolts -1- and -2- and the coolant connection.

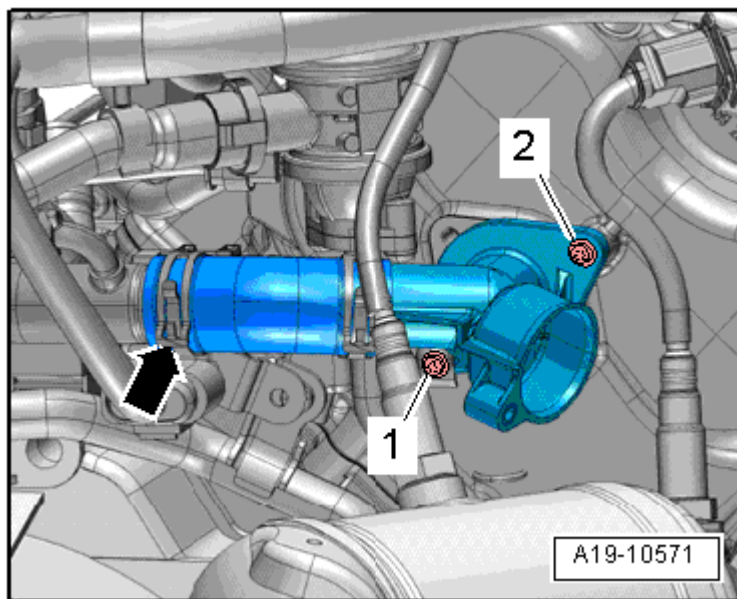


Fig. 117: Removing Bolts And Coolant Connection
 Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -arrow-.

-- Remove the connecting rod bolt -3- from the top.

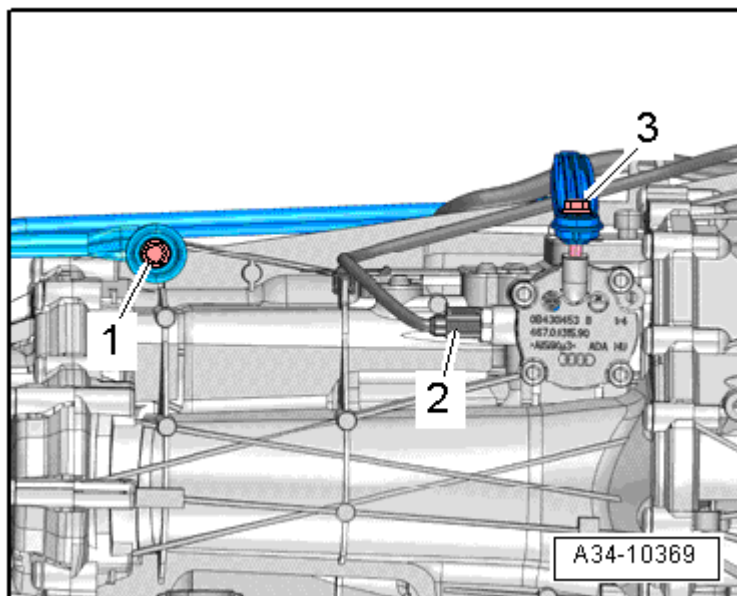


Fig. 118: Removing Bolts And For Selector Rod And Push Rod
 Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -1 through 2-.

-- Remove the bolts -2 through 6- connecting the engine to transmission. They are accessible from above.

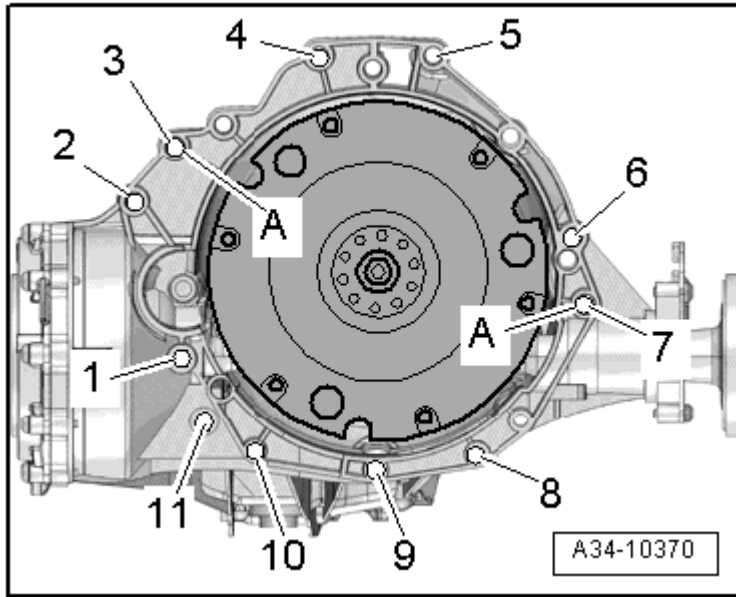


Fig. 119: Removing Starter Off Transmission And Leave It In Installation Position
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -arrows-, and remove the driveshaft heat shield -A- (if equipped).

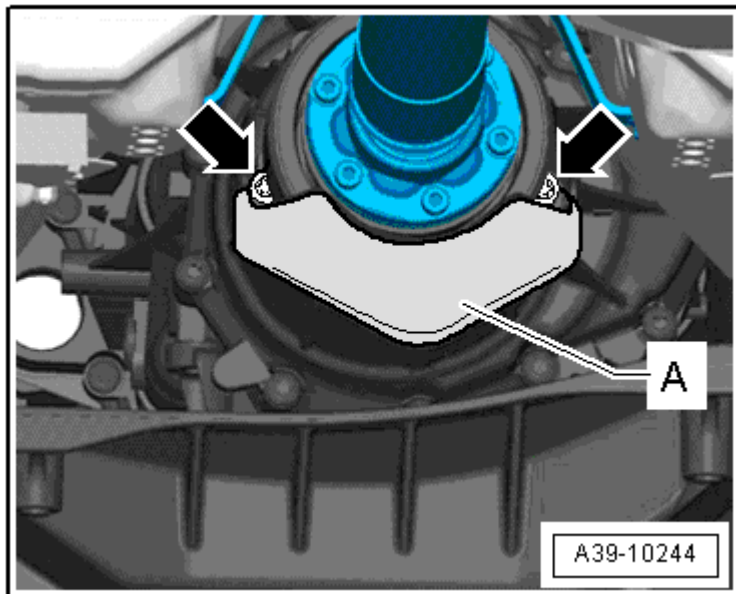


Fig. 120: Transmission Heat Shield
 Courtesy of AUDI OF AMERICA, LLC

Driveshaft Bolted on the Transmission Side:

-- Remove the bolts that connect the driveshaft to the transmission by counterholding them with the T10172 and

T10172/5.

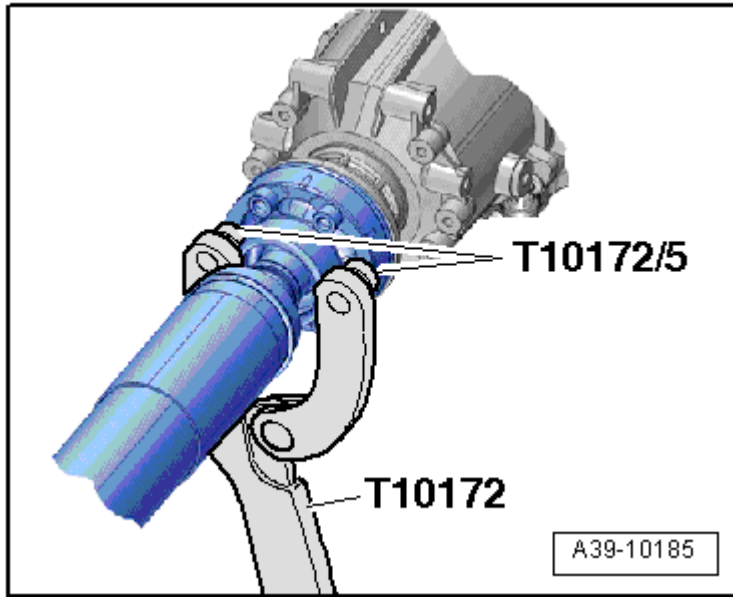


Fig. 121: Holding Driveshaft Using T10172

Courtesy of AUDI OF AMERICA, LLC

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

Driveshaft Mounted on the Transmission Side:

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

All Vehicles:

- Remove the bolt -2- and secure the clutch slave cylinder sideways in the engine compartment.

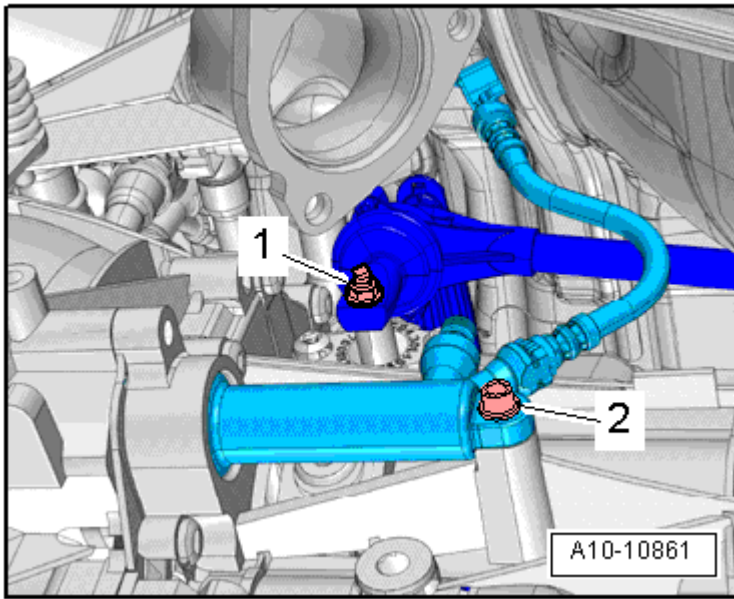


Fig. 122: Removing Bolt And Secure Clutch Slave Cylinder Sideways In Engine Compartment
Courtesy of AUDI OF AMERICA, LLC

CAUTION: The clutch slave cylinder could be damaged.

- Do not press the clutch pedal after the clutch slave cylinder has been removed.

-- Remove the nut -1-.

CAUTION: Danger of causing damage to the gearshift shaft inside the transmission.

- Do not pry off the transmission shift lever -1- using a pry bar or hit it with a hammer.

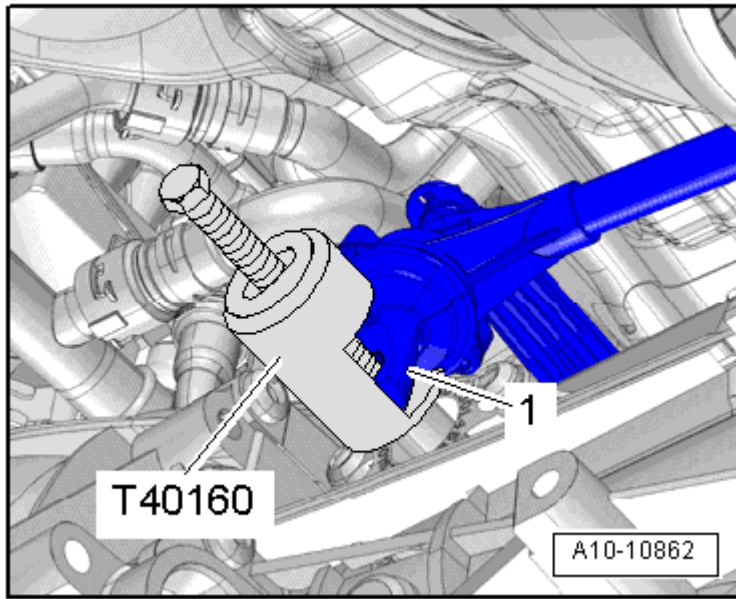


Fig. 123: Positioning Puller T40160 And Remove Selector Rod
Courtesy of AUDI OF AMERICA, LLC

-- Install the T40160 and remove the transmission shift lever -1-.

CAUTION: The airbag spiral spring could be damaged.

- Only disconnect universal joint from steering gear if front wheels are in straight-ahead position.
- Do not change the steering wheel and steering gear position. Secure the steering wheel, for example using adhesive tape.

-- Remove the universal joint bolt -arrow-. Refer to [For engine(s) CAEB, CALA, CCBA] Removal and Installation .

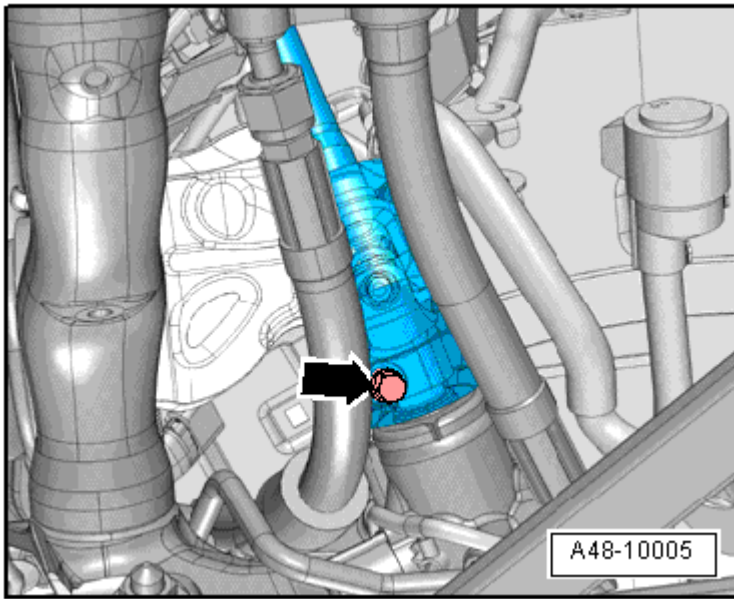


Fig. 124: Locating Universal Joint Bolt
Courtesy of AUDI OF AMERICA, LLC

- Press the universal joint off the steering gear and slide it all the way up.
- Remove the bolt -1- press the retaining tab off the transmission and tilt it back -arrow-.

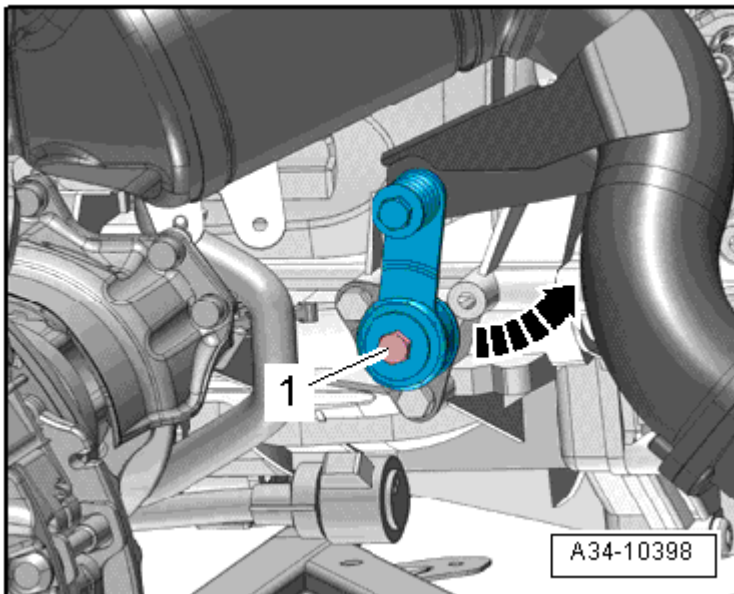


Fig. 125: Removing Bolt Press The Retaining Tab Off Transmission And Tilt It Back
Courtesy of AUDI OF AMERICA, LLC

- Remove the bolt -1- from the starter.

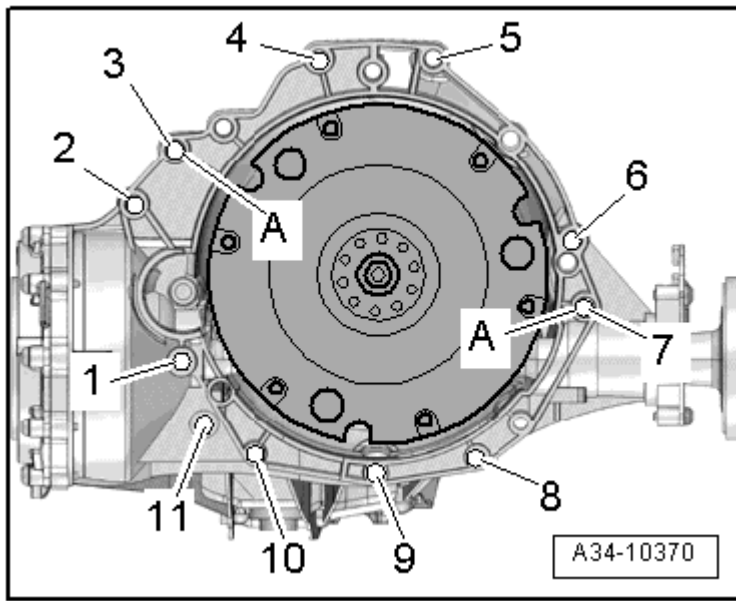


Fig. 126: Removing Starter Off Transmission And Leave It In Installation Position
 Courtesy of AUDI OF AMERICA, LLC

- Remove the starter from the transmission and leave it in the installation position.
- Remove the remaining bolts -7 through 11- that attach the engine to the transmission.
- Position the V.A.G 1383 A and the T40173 under the transmission and secure it with the tensioning strap -1- as illustrated.

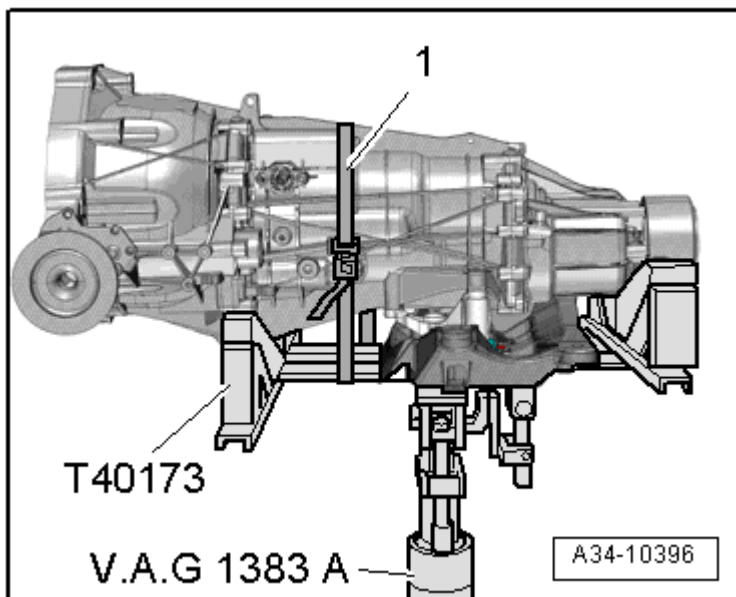


Fig. 127: Identifying Transmission Holding Fixture
 Courtesy of AUDI OF AMERICA, LLC

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

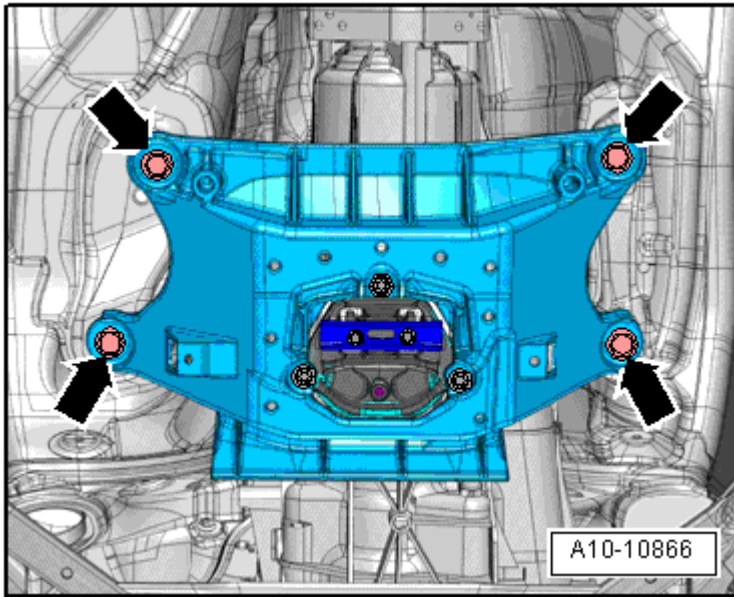


Fig. 128: Transmission Support Overview
Courtesy of AUDI OF AMERICA, LLC

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

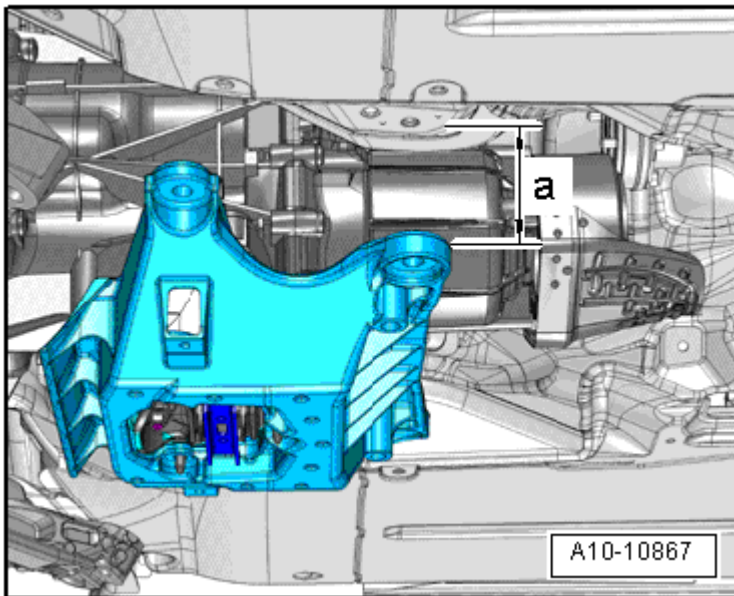


Fig. 129: Lowering Transmission
Courtesy of AUDI OF AMERICA, LLC

- Dimension -a- = maximum 100 mm.

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

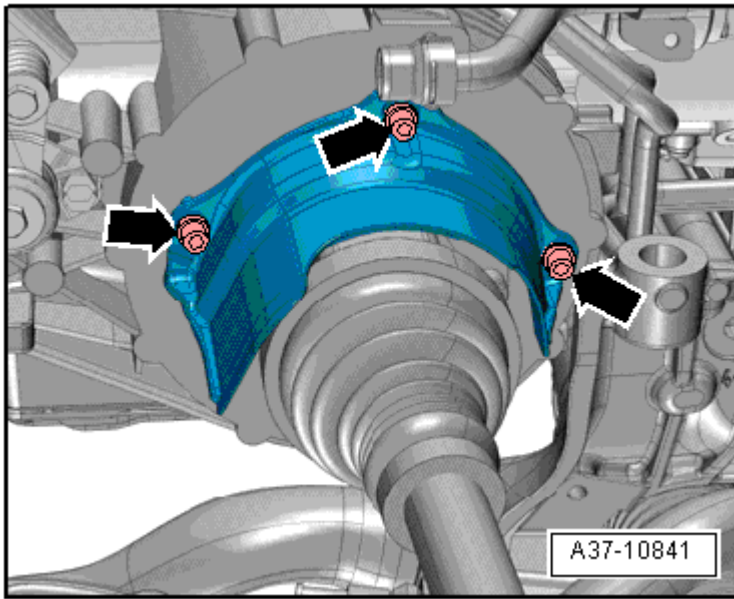


Fig. 130: Driveshaft Heat Shield - Tightening Specification
Courtesy of AUDI OF AMERICA, LLC

NOTE: The illustration shows the installation position with the transmission removed.

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

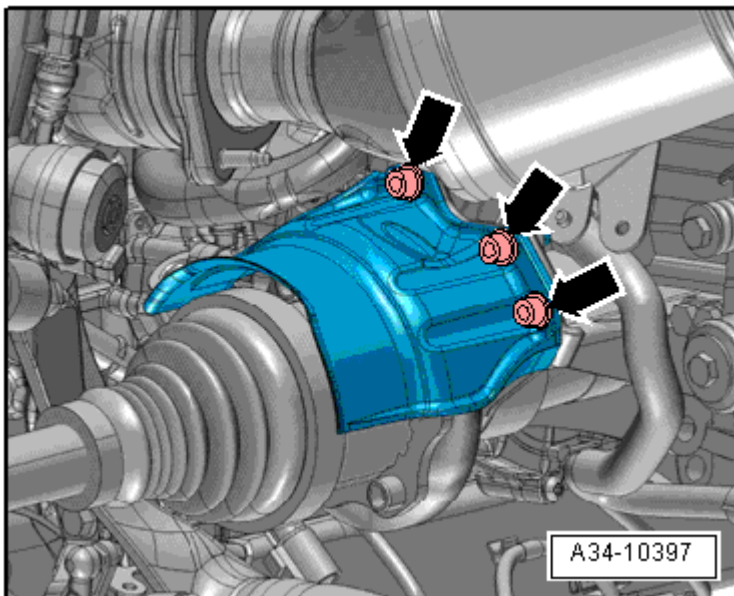


Fig. 131: Removing Bolts And Left Drive Axle Heat Shield
Courtesy of AUDI OF AMERICA, LLC

NOTE: The illustration shows the installation position with the transmission removed.

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

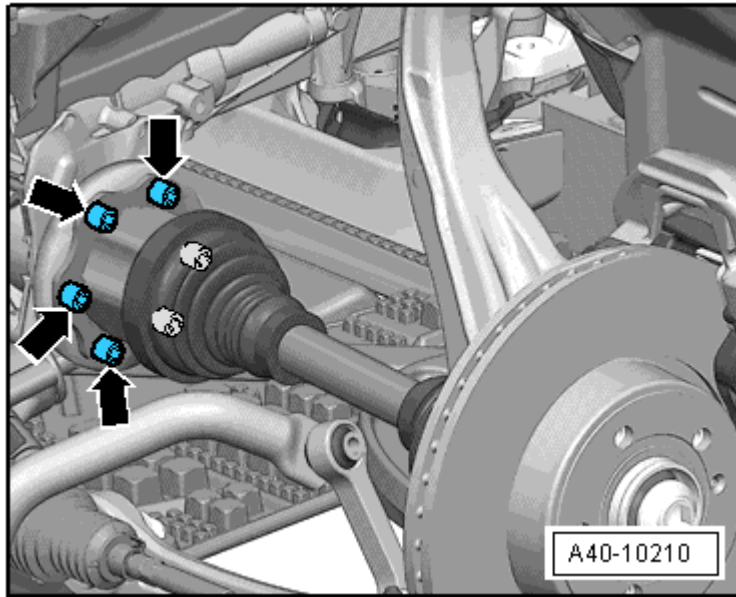


Fig. 132: Removing Left And Right Drive Axles
Courtesy of AUDI OF AMERICA, LLC

-- Remove the electrical connector -1- on the transmission range gear recognition switch -F208- using the T40138.

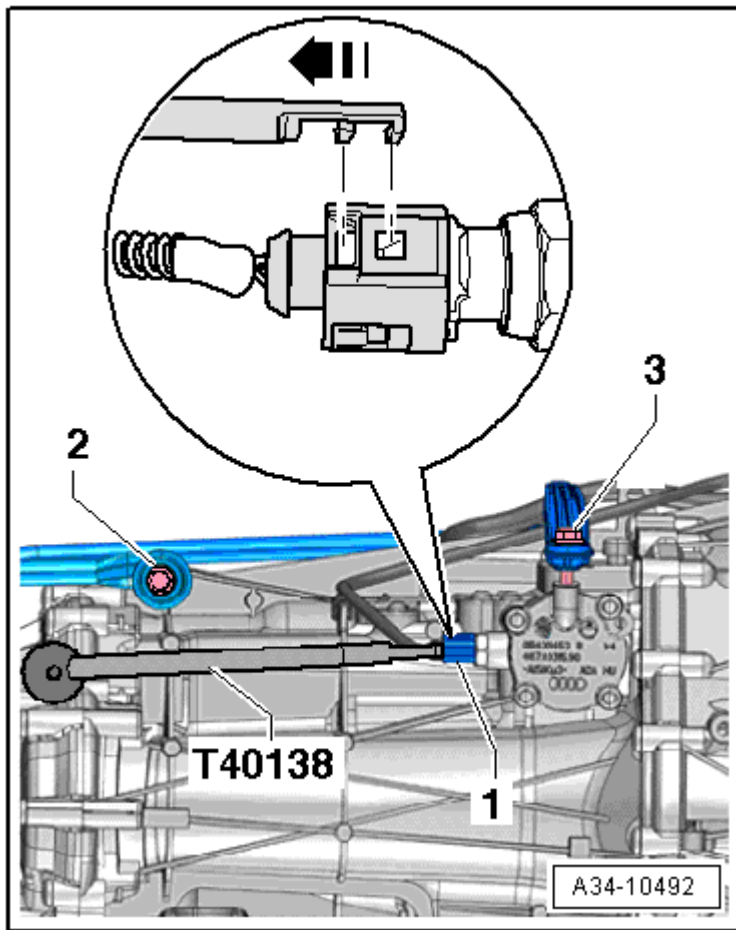


Fig. 133: Disconnecting Connector

Courtesy of AUDI OF AMERICA, LLC

-- Remove the push rod bolt -2-.

NOTE: Ignore -3-.

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

If the transmission removed is being replaced, then the following components must be changed:

- Right and left bracket -1- for the exhaust system. Refer to **[For engine(s) CCBA] Removal and Installation**.

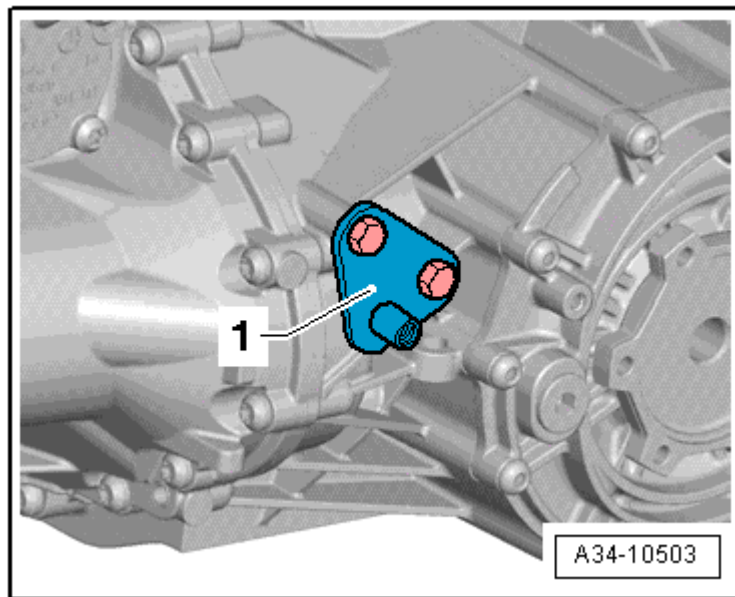


Fig. 134: Attaching Exhaust System Retaining Strap Bracket To New Transmission
Courtesy of AUDI OF AMERICA, LLC

- Tunnel crossmember with the transmission mount and transmission support. Refer to **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW.**
- Remove the clutch module if necessary. Refer to **Removal and Installation** .

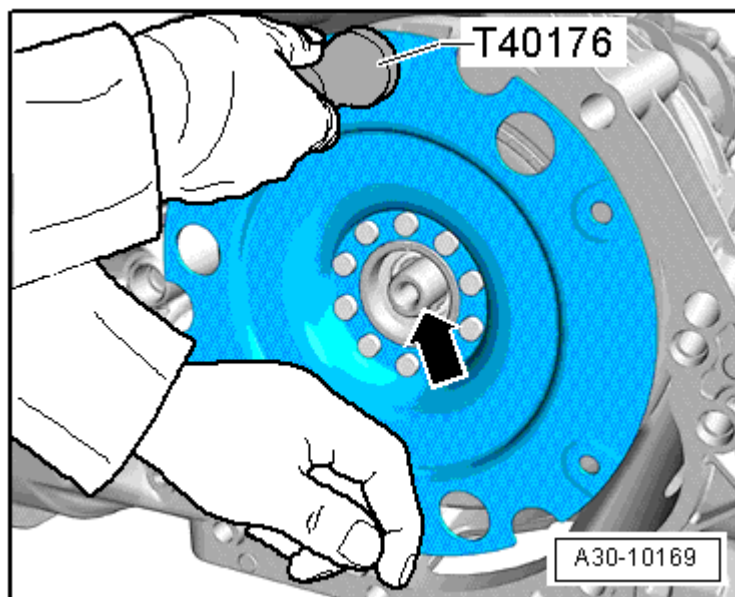


Fig. 135: Sliding Torque Converter Carefully Onto Input Shaft
Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Assembly Aid T40169
- Transportation Lock T40170
- Ring Spanner Insert AF16 V.A.G 1332/14
- Transmission Support T40173
- Engine/Transmission Jack V.A.G 1383 A
- Counterhold Tool Touareg V10 T10172 with Adapter T10172/5
- Engine Support Bridge 10 - 222 A
- Ring Spanner Insert AF 16 V.A.G 1332/14

Procedure

NOTE: Replace bolts that are tightened to the specification. The aluminum bolts for attaching the engine to the manual transmission may be used two times.

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.

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

Check the input shaft near the bearing in the drive plate -arrow- for scoring. Replace the needle bearing in the drive plate, if necessary. Refer to [For engine (s) CCBA] Removal and Installation .

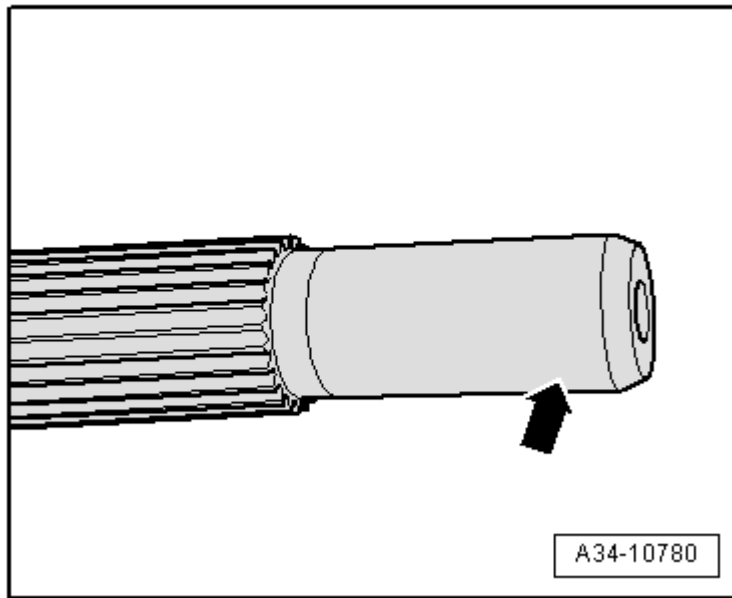


Fig. 136: Checking Input Shaft For Wear
 Courtesy of AUDI OF AMERICA, LLC

Transmission Installation Tightening Specifications: **TIGHTENING SPECIFICATIONS**

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

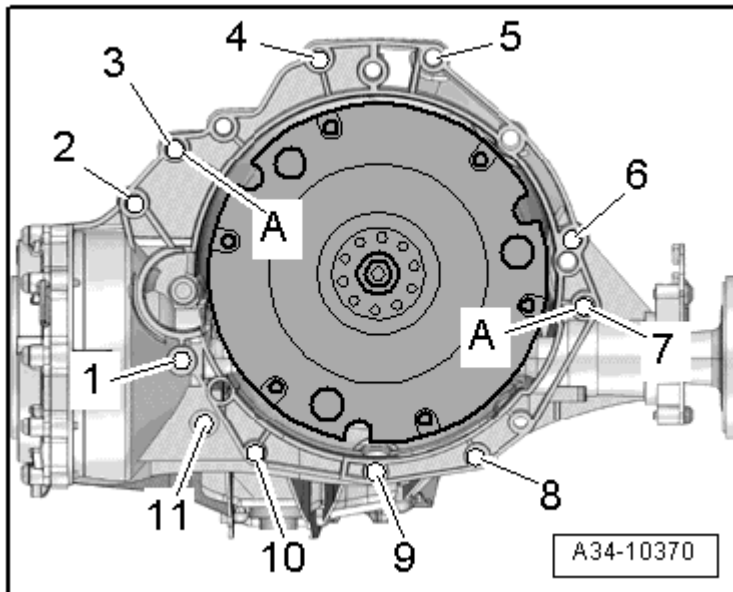


Fig. 137: Removing Starter Off Transmission And Leave It In Installation Position
 Courtesy of AUDI OF AMERICA, LLC

- See if it is possible to use the aluminum bolts -2 through 11- again and mark them, if necessary. **CHECK**

THE ALUMINUM BOLTS -2 THROUGH 11- TO SEE WHETHER THEY CAN BE REUSED..

-- Install the clutch module, if necessary. Refer to **Removal and Installation** .

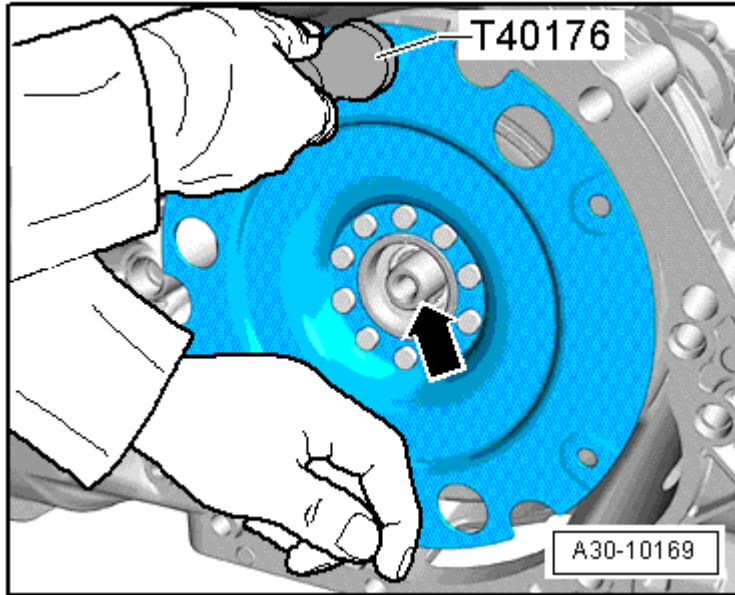


Fig. 138: Sliding Torque Converter Carefully Onto Input Shaft
 Courtesy of AUDI OF AMERICA, LLC

-- Mount the transmission onto the T40173 and secure it using the tension strap -1- as illustrated.

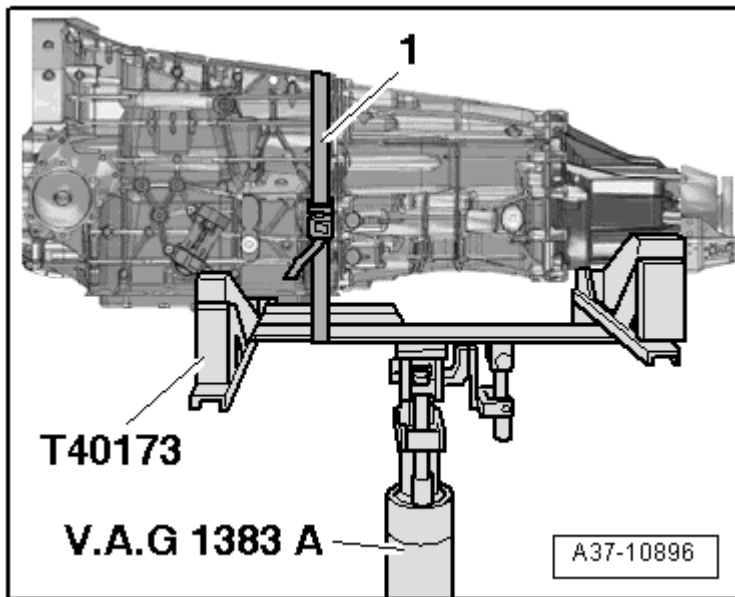


Fig. 139: Mounting Transmission Onto T40173 And Secure It Using Tension Strap
 Courtesy of AUDI OF AMERICA, LLC

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

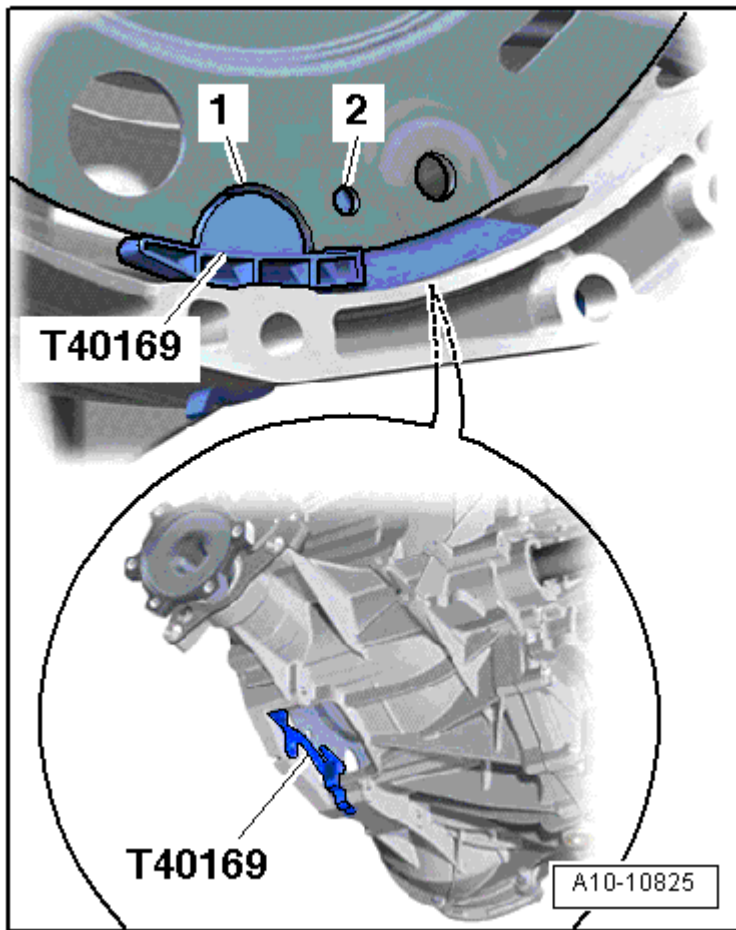


Fig. 140: Inserting Assembly Aid T40169 Into Transmission Housing And Flywheel From Below
Courtesy of AUDI OF AMERICA, LLC

-- Insert the T40169 in the transmission housing and the clutch module from below as shown in the illustration.

- The T40169 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 clutch module as needed.**

-- Install the bolts from the T40169 into the holes on the transmission housing.

-- Insert the T40170 in the transmission housing from below and secure it on the flange shaft -1-.

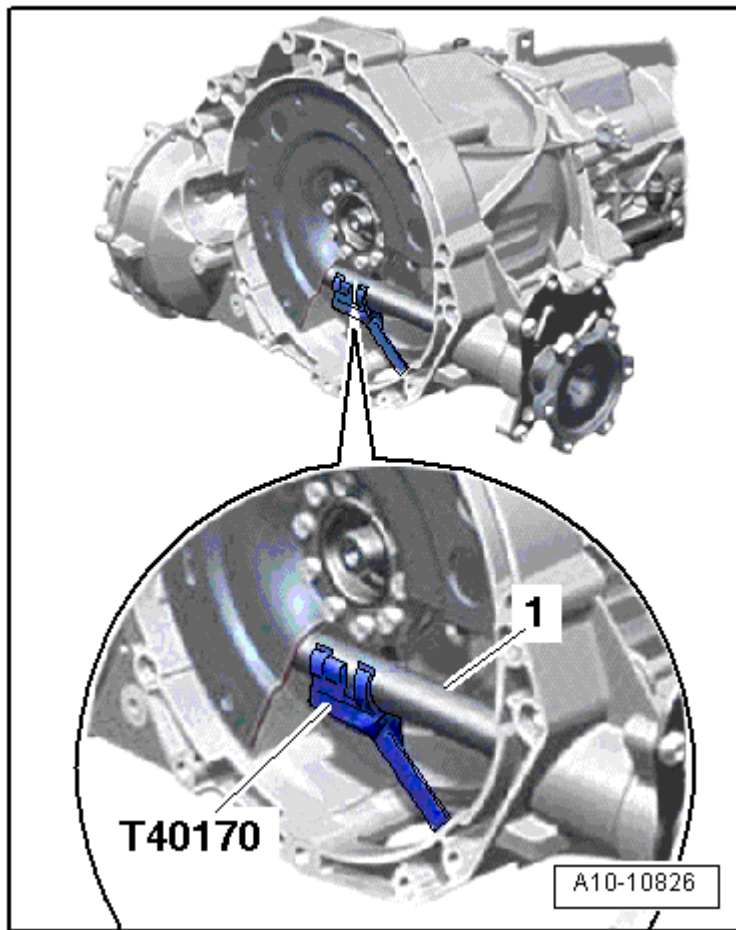


Fig. 141: Identifying Transportation Lock T40170
Courtesy of AUDI OF AMERICA, LLC

-- Raise the transmission straight up until the clutch slave cylinder can be inserted.

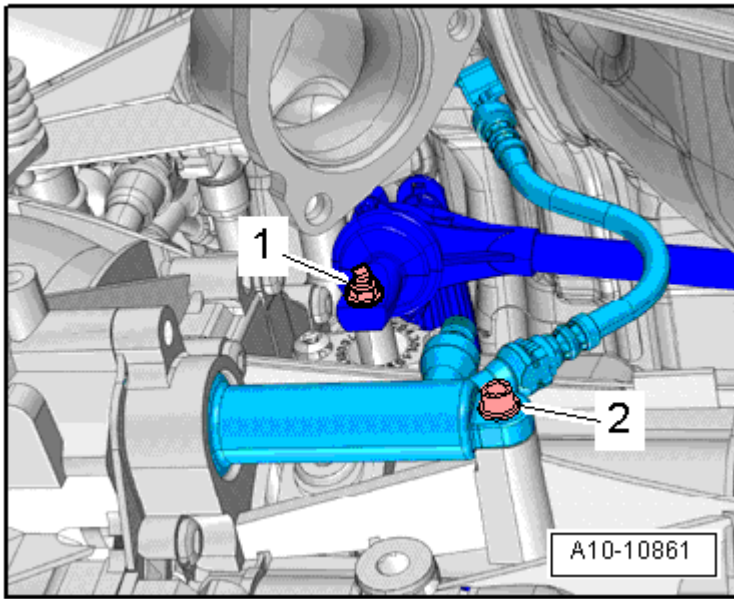


Fig. 142: Removing Bolt And Secure Clutch Slave Cylinder Sideways In Engine Compartment
 Courtesy of AUDI OF AMERICA, LLC

-- Tighten the bolt -2-. Tightening specification **CLUTCH HYDRAULICS OVERVIEW** .

NOTE: The next step is only necessary if a drive plate with alignment pins -2- are installed.

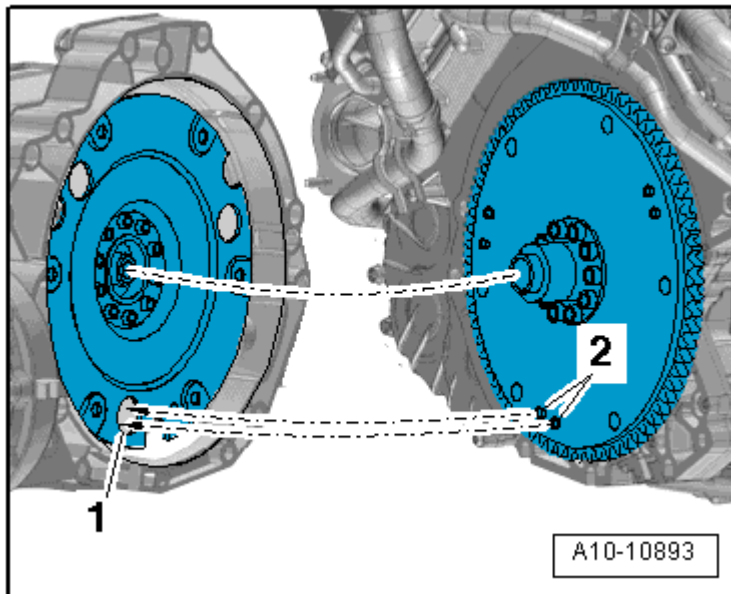


Fig. 143: Aligning Drive Plate To Clutch Module
 Courtesy of AUDI OF AMERICA, LLC

-- Also align the drive plate to the clutch module so the alignment pins -2- on the drive plate (if applicable) can

engage in the larger holes -1- on the clutch module.

CAUTION: The clutch will not function properly if it is not installed correctly.

- The clutch may have noticeable function problems if the alignment pins for the drive plate -2- are not in the holes in the clutch module -1-.

-- Attach the transmission to the engine and tighten the bolts -3 through 11-. For the correct tightening specifications, refer to **TIGHTENING SPECIFICATIONS**.

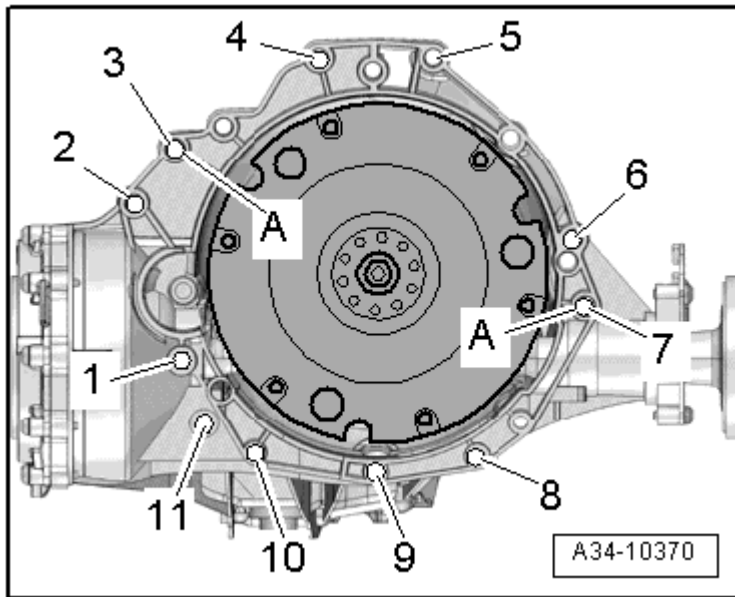


Fig. 144: Removing Starter Off Transmission And Leave It In Installation Position

Courtesy of AUDI OF AMERICA, LLC

-- Install the starter and tighten the bolt -1- from the engine side. Tightening specification **TIGHTENING SPECIFICATIONS**.

-- Next, use tightening torque **TIGHTENING SPECIFICATIONS** to tighten the bolt -2- from the transmission side.

-- Raise the transmission using the V.A.G 1383 A until dimension -a- is reached between the subframe and the body.

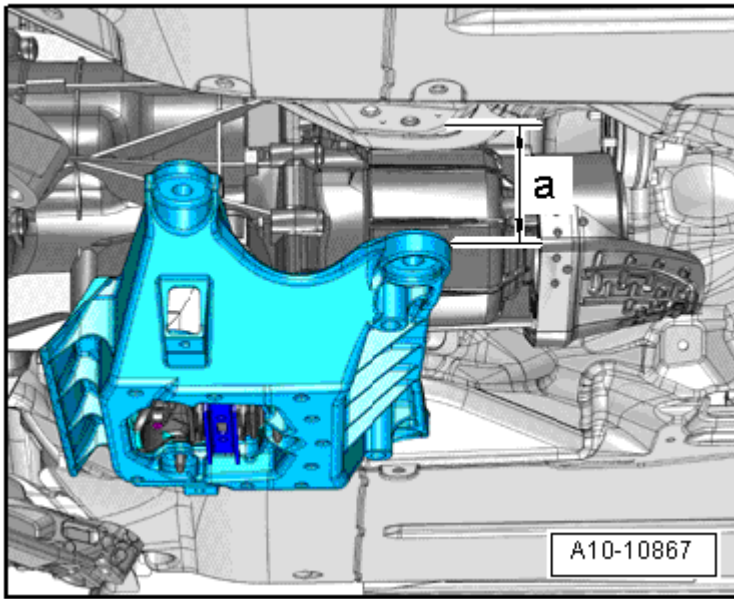


Fig. 145: Lowering Transmission
Courtesy of AUDI OF AMERICA, LLC

- -a- = minimum 100 mm

-- Install the left and right drive axles on the transmission flange shafts. Refer to **[For engine(s) CAEB, CALA, CCBA] Removal and Installation** .

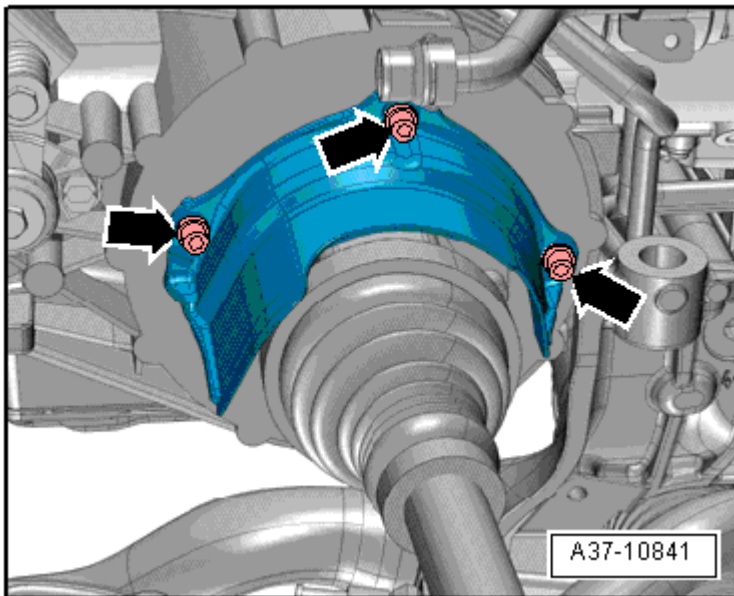


Fig. 146: Driveshaft Heat Shield - Tightening Specification
Courtesy of AUDI OF AMERICA, LLC

-- Install the drive axle heat shield and tighten the bolts -arrows- to 23 Nm.

-- Tighten the push rod -1-. Tightening specification SELECTOR MECHANISM OVERVIEW.

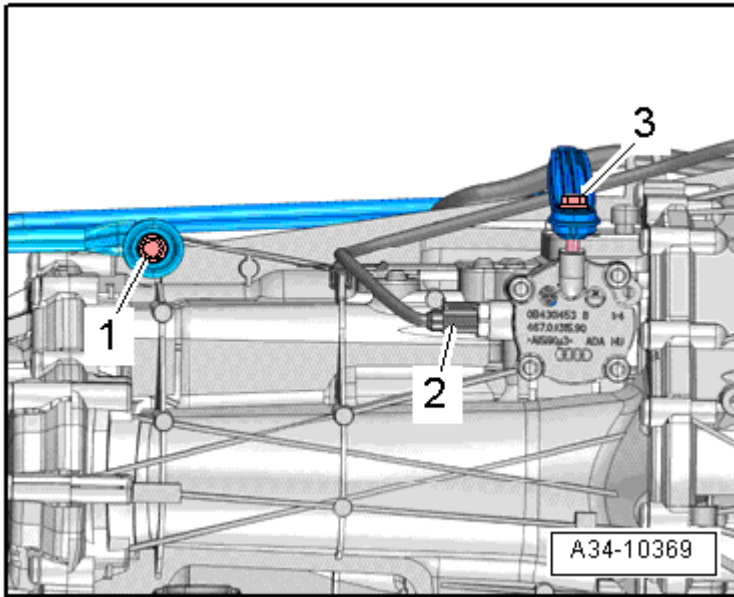


Fig. 147: Removing Bolts And For Selector Rod And Push Rod
Courtesy of AUDI OF AMERICA, LLC

-- Connect the connector -2- to the transmission range gear recognition switch -F208-.

-- Attach the connecting rod -3-. Tightening specification SELECTOR MECHANISM OVERVIEW.

-- Install the transmission shift lever -2- as follows:

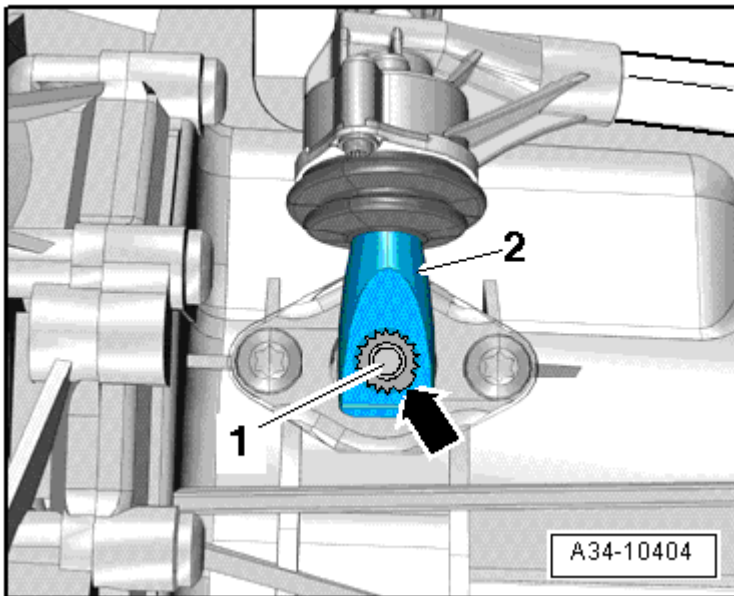


Fig. 148: Installing Transmission Shift Lever
Courtesy of AUDI OF AMERICA, LLC

- The gearshift lever -2- can be attached to the gearshift shaft -1- in only one position (gap in the splines - arrow-).

-- Attach the transmission shift lever -2-. Tightening specification **SELECTOR MECHANISM OVERVIEW**.

-- Lift the transmission and tighten the tunnel crossmember bolts -arrows-. For the correct tightening specifications, refer to **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW**.

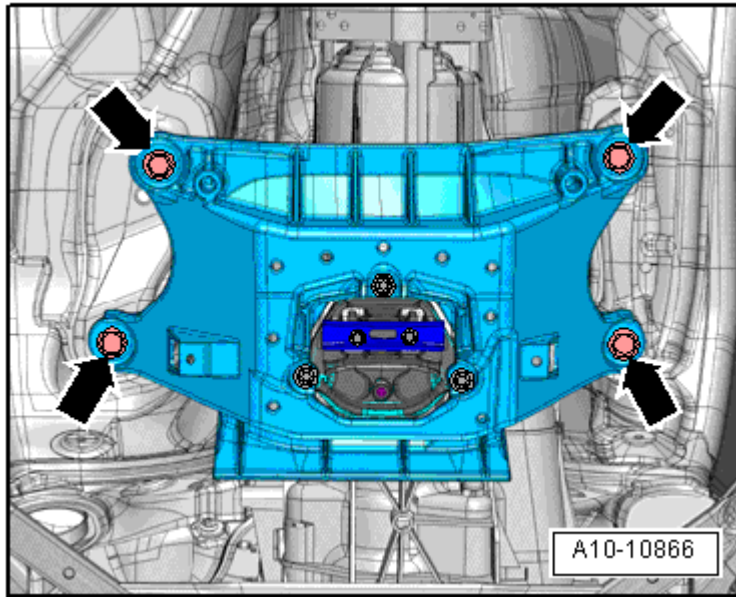


Fig. 149: Transmission Support Overview
Courtesy of AUDI OF AMERICA, LLC

-- Remove the V.A.G 1383 A and T40173.

-- Mount or install the driveshaft on the transmission. Refer to **Removal and Installation** or **Removal and Installation** .

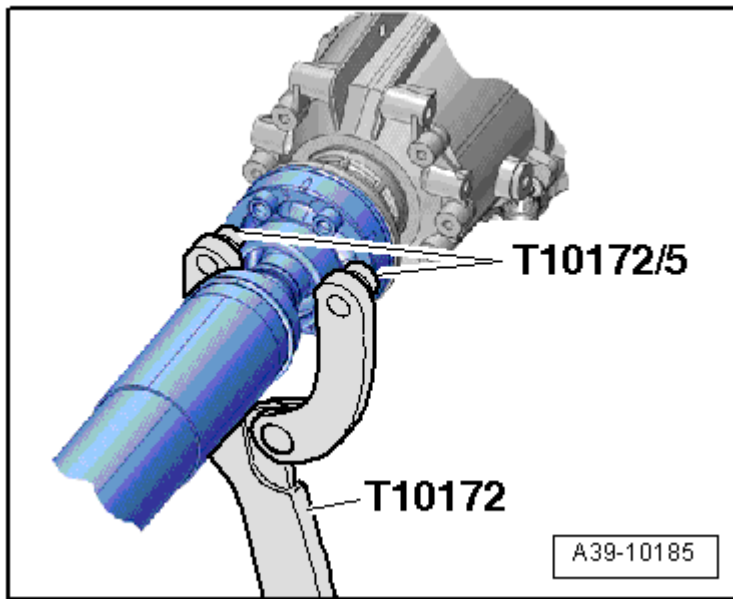


Fig. 150: Holding Driveshaft Using T10172
Courtesy of AUDI OF AMERICA, LLC

Tightening Sequence - Clutch Module to the Drive Plate

-- Remove the T40169 and T40170.

-- Put in sixth gear; to do this, move the gearshift shaft -1-, push the gearshift lever -2- forward in direction of -arrow-.

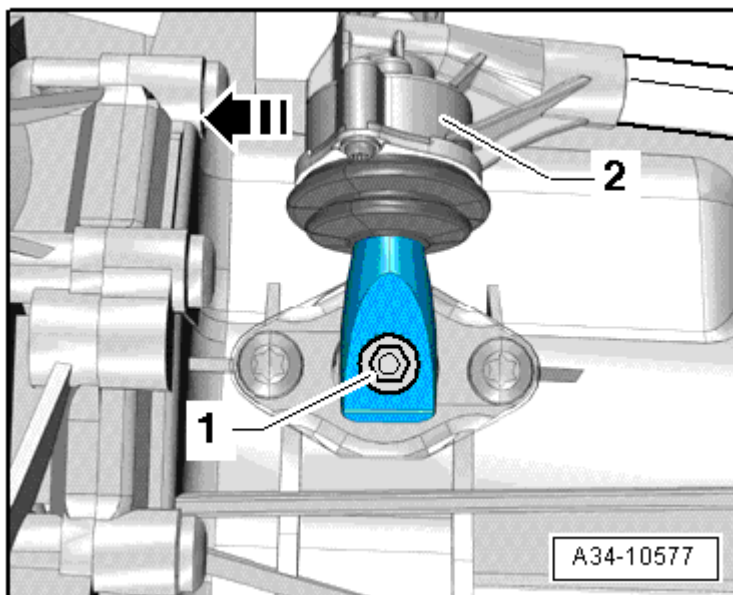


Fig. 151: Identifying Gearshift Assembly
Courtesy of AUDI OF AMERICA, LLC

-- Mount both front wheels.

Use the T10172 and T10172/5 to block the driveshaft to keep it from turning, too.

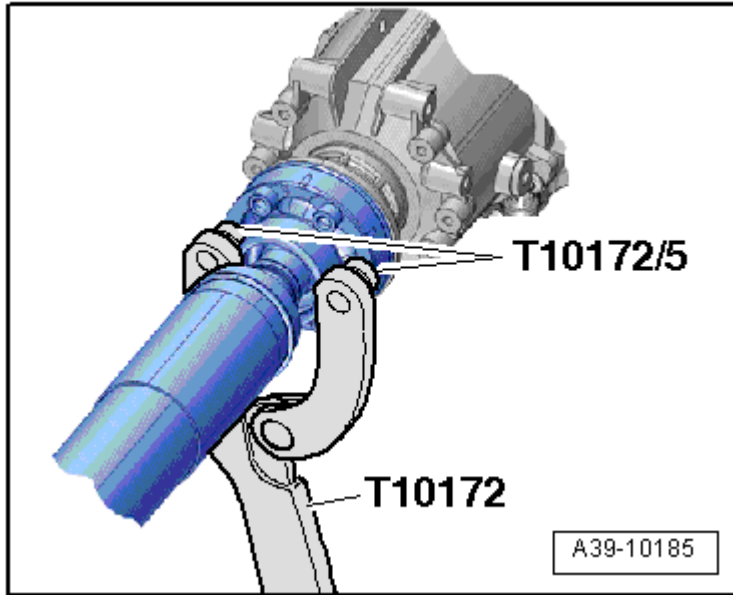


Fig. 152: Holding Driveshaft Using T10172

Courtesy of AUDI OF AMERICA, LLC

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

-- Turn both front wheels together in one direction until the clutch module turns one complete turn (360°).

- The check hole -arrow- must be visible in the transmission housing cut-out.

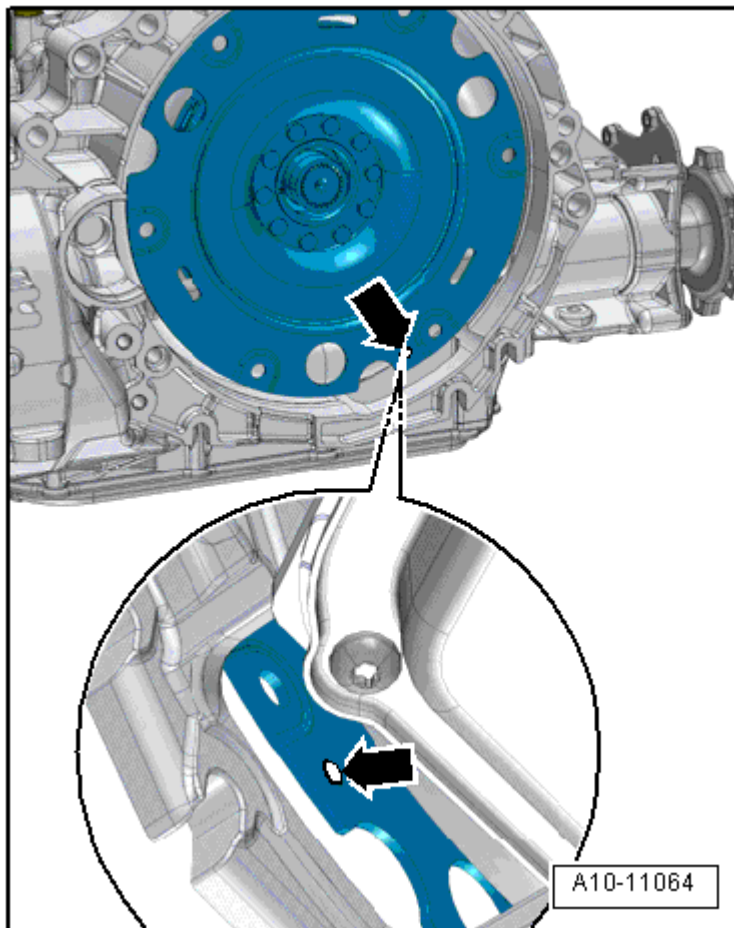


Fig. 153: Locating Transmission Housing Check Hole
Courtesy of AUDI OF AMERICA, LLC

Tighten the clutch module to the drive plate as follows:

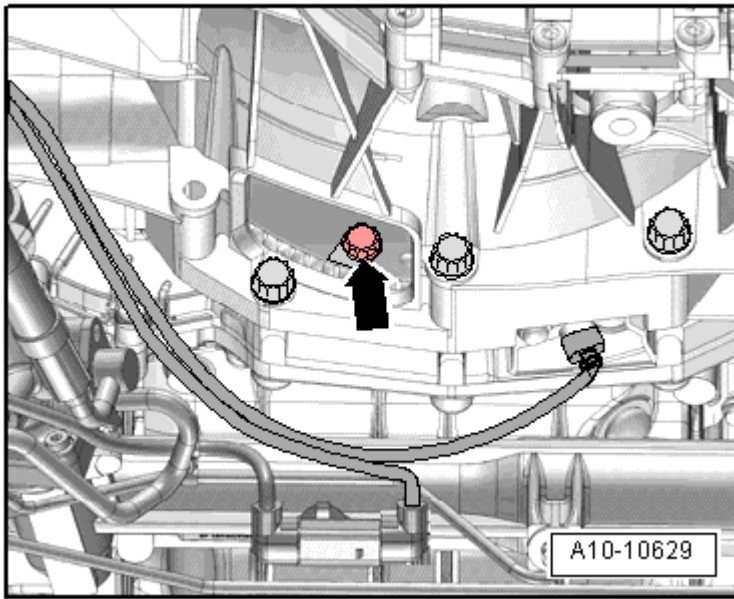


Fig. 154: Identifying Clutch Module First Bolt Installation Location (2 Of 2)
Courtesy of AUDI OF AMERICA, LLC

- Use new bolts.
- Tightening specification **CLUTCH MODULE OVERVIEW** .
- Tighten the bolts using the V.A.G 1332/14.

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

-- Continue turning the clutch module/drive plate 180° via the front wheels.

-- Insert the second bolt and tighten it to the specification **CLUTCH MODULE OVERVIEW** .

-- Insert the remaining connecting bolts connecting the clutch module to the drive plate and tighten them to the specification immediately (including the first bolt installed) **CLUTCH MODULE OVERVIEW** .

Install in reverse order of removal paying attention to the following:

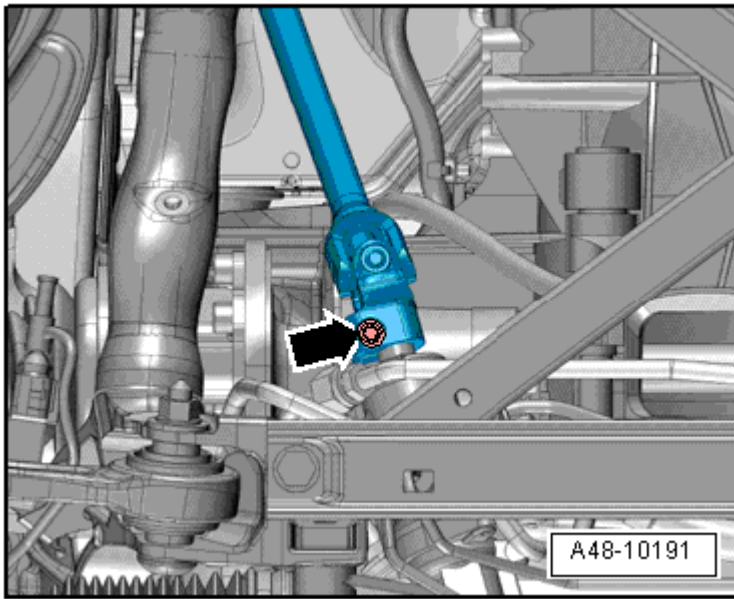


Fig. 155: Pressing Cv Joint Off Steering Gear And Slide It Up
Courtesy of AUDI OF AMERICA, LLC

- Tighten the universal joint on the steering gear. Refer to [For engine(s) CAEB, CALA, CCBA] Removal and Installation .
- Mount the right catalytic converter to the exhaust manifold. Refer to [For engine(s) CCBA] Removal and Installation .
- Install the left and right front muffler. Refer to [For engine(s) CCBA] Removal and Installation .
- Install the exhaust system so that it is free of tension. Refer to [For engine(s) CCBA] Removal and Installation .
- Install the subframe crossbrace. Refer to [For engine(s) CAEB, CALA, CCBA] Removal and Installation .
- Install the coolant connection. Refer to [For engine(s) CCBA] Removal and Installation .
- Install right coolant pipe. Refer to [For engine(s) CCBA] Removal and Installation .
- Install the rear coolant pipe. Refer to [For engine(s) CCBA] Removal and Installation .
- Gear oil level in manual transmission, checking. Refer to MANUAL TRANSMISSION, CHECKING TRANSMISSION FLUID LEVEL.
- Fill with coolant. Refer to [For engine(s) CCBA] General Information .
- Tighten down both front wheels using tightening torque. Refer to Specifications .
- Install the noise insulation. Refer to Removal and Installation .

2012 Audi S4

TRANSMISSION Controls, Housing - Manual Transmission 0B4 AWD (Sedan)

-- Observe measures after connecting the battery. Refer to **[For engine(s) CAEB, CALA, CCBA] Removal and Installation** .

CAUTION: There is a risk of destroying control modules with excess voltage.

- Do not use a charger as a starting aid.

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

Mounting 4.2L FSI Engine on Manual Transmission

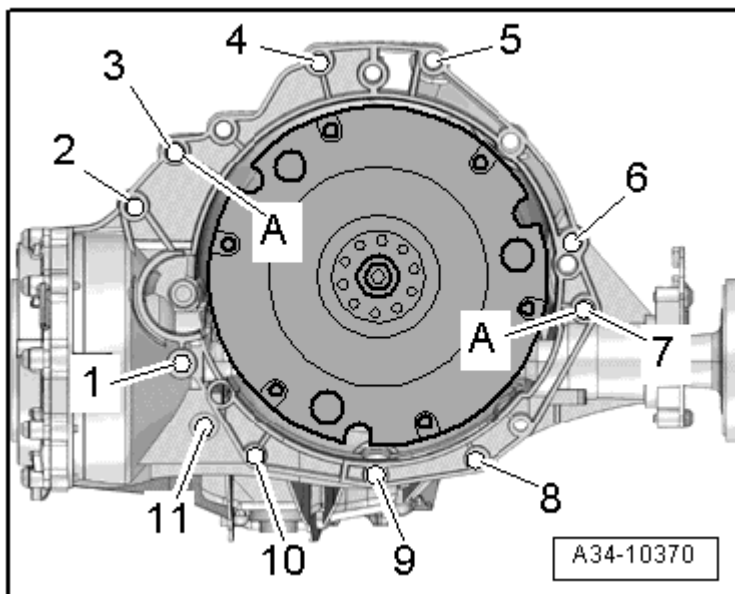
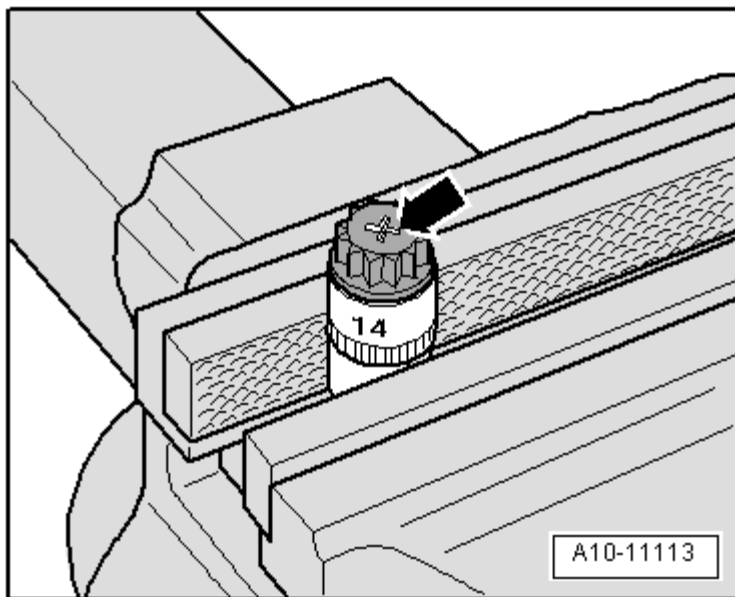


Fig. 156: Removing Starter Off Transmission And Leave It In Installation Position

Courtesy of AUDI OF AMERICA, LLC

Item	Bolt	Nm
1 ¹⁾	M10 x 50 ²⁾	65
2 ¹⁾	M12 x 100 ³⁾	30 + 90°
3 to 6	M12 x 100 ³⁾	30 + 90°
7	M12 x 175 ³⁾	30 + 90°
8, 11	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⁾ Steel bolt - do not replace • ³⁾ Check whether the aluminum bolts can be reused. Replace them if necessary.<u>CHECK THE ALUMINUM BOLTS -2 THROUGH 11- TO SEE WHETHER THEY CAN BE REUSED.</u>		

CHECK THE ALUMINUM BOLTS -2 THROUGH 11- TO SEE WHETHER THEY CAN BE REUSED.**Fig. 157: Identifying Bolts Marked With An "X" May Not Be Used Again**

Courtesy of AUDI OF AMERICA, LLC

- Audi A4 from VIN 8K-9-066500, Audi A5 from VIN 8T-9-008000: The aluminum bolts may be used twice. Therefore, a chisel must be used to mark the bolts with two notches that form an "X" after they have been used the first time -arrow-.
- 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 $1\frac{1}{2}$ drive, which is inserted in to the vise, as illustrated.

- Bolts marked with an "X" may not be used again.
- Audi A4 through VIN 8K-9-066499: Always replace the aluminum bolts.
- Audi A5 through VIN 8T-9-007999: Always replace the aluminum bolts.
- There is no limit to the number of times the steel bolt can be used again.

TUNNEL CROSSMEMBER

Special tools and workshop equipment required

- Engine/Transmission Jack V.A.G 1383 A
- Transmission Support T10337

Removing

Proceed as follows:

-- Remove the rear noise insulation by loosening the fasteners -2- and -3-

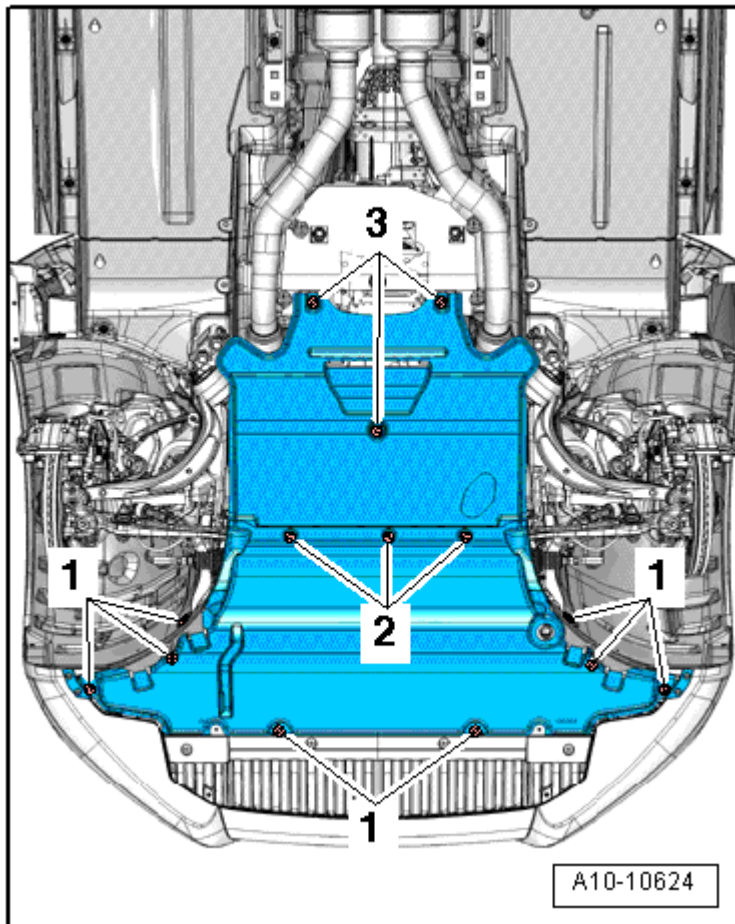


Fig. 158: Identifying Noise Insulation Components

Courtesy of AUDI OF AMERICA, LLC

-- Support the transmission using the V.A.G 1383 A with the T10337 attached.

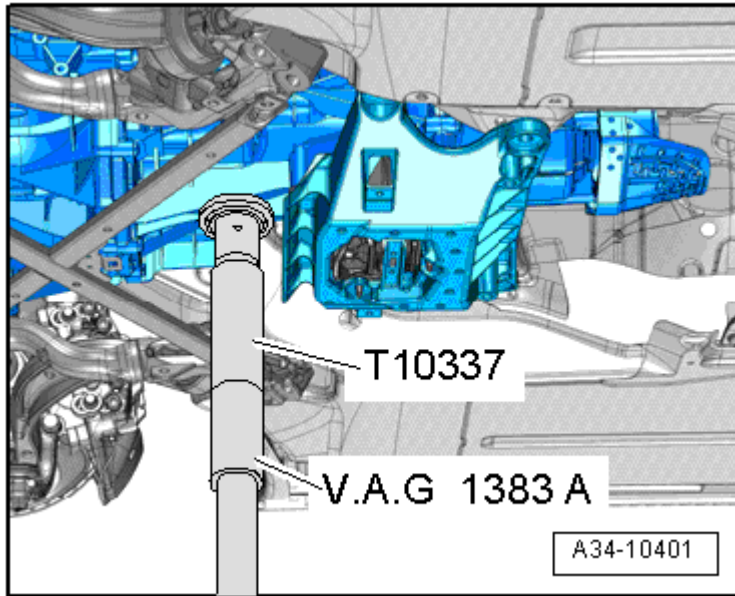


Fig. 159: Supporting Transmission With V.A.G 1383

Courtesy of AUDI OF AMERICA, LLC

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-.

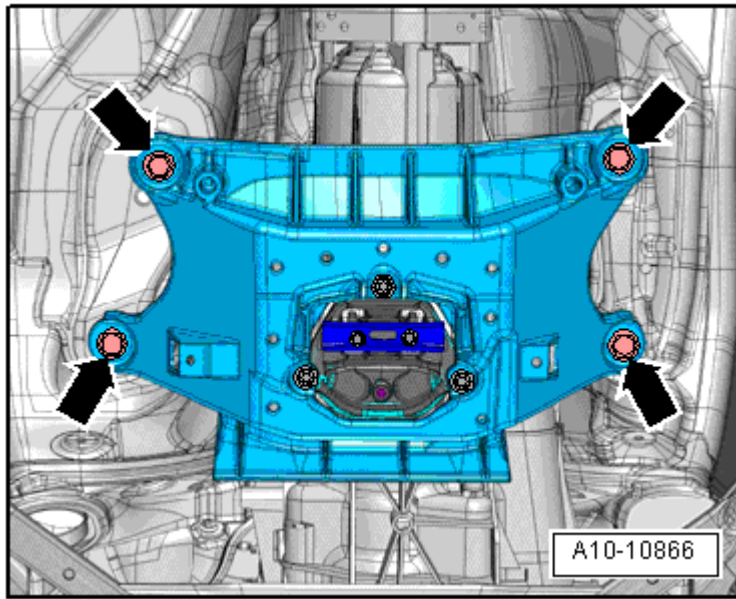


Fig. 160: Transmission Support Overview
Courtesy of AUDI OF AMERICA, LLC

-- Remove the nuts -arrow- and the tunnel crossmember.

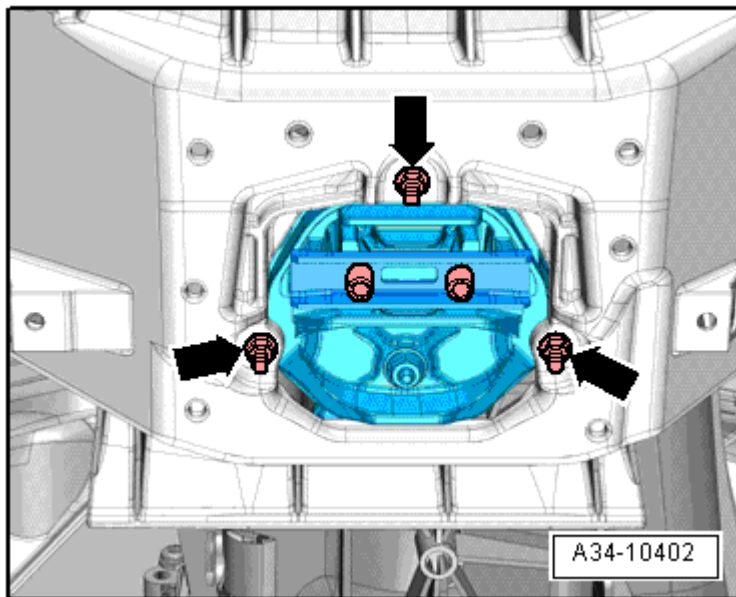


Fig. 161: Removing Nuts And Tunnel Crossmember
Courtesy of AUDI OF AMERICA, LLC

Installing

- For the correct tightening specifications, refer to **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW.**

Install in reverse order of removal.

TRANSMISSION SUPPORT WITH TRANSMISSION MOUNT

Removing

- Remove the tunnel crossmember. Refer to **TUNNEL CROSSMEMBER**.
- Remove the bolts -arrows- and the transmission support with the transmission mount from the transmission.

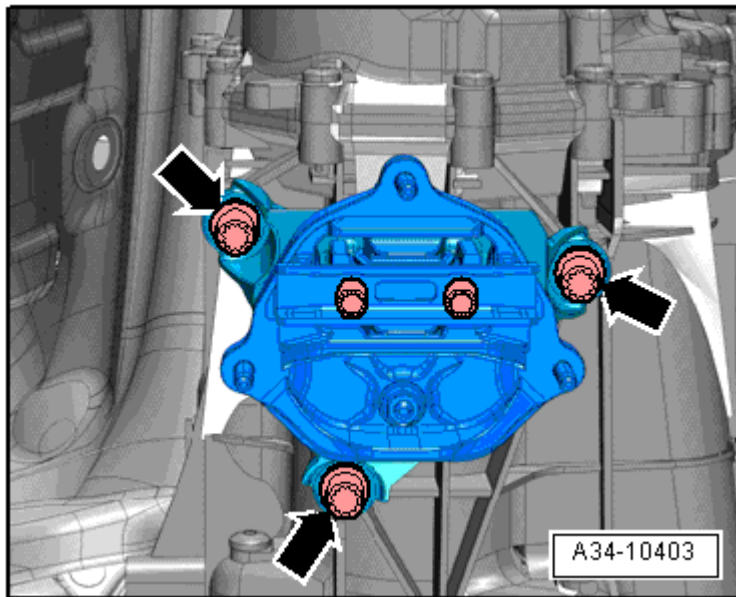


Fig. 162: Removing Bolts And Transmission Support With Transmission Mount From Transmission
Courtesy of AUDI OF AMERICA, LLC

Installing

- Tighten the transmission support with the transmission mount on the transmission -arrows-. Tightening specification **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW**.
- Install tunnel crossmember. Refer to **TUNNEL CROSSMEMBER**.

TRANSMISSION MOUNT

Removing

- 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.

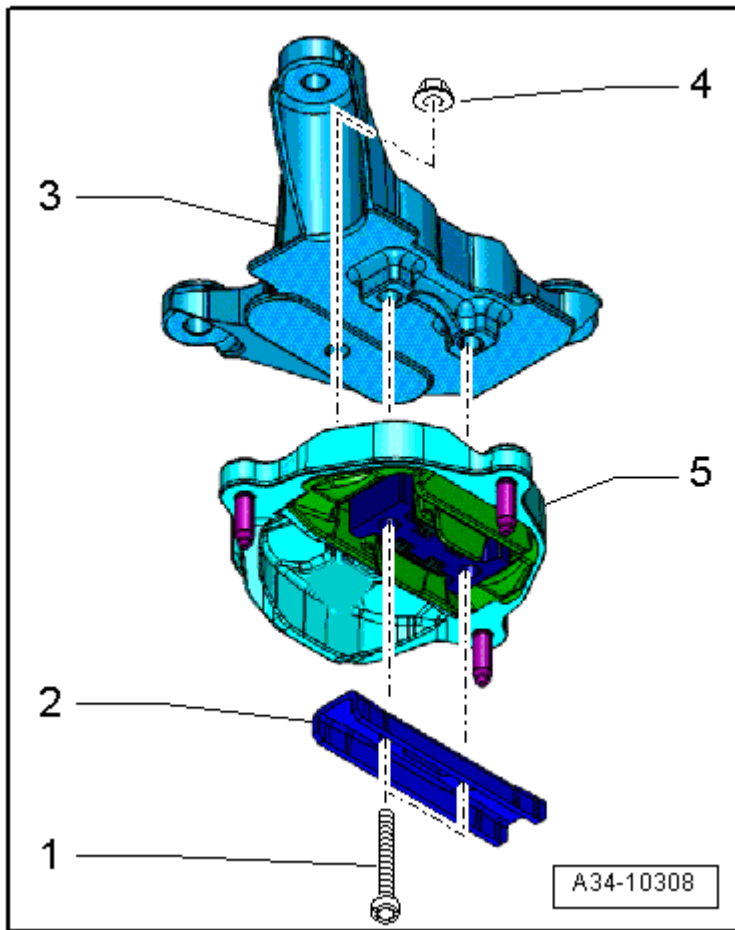


Fig. 163: Removing Bolts And Remove Lower Stop
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the nut -4- and remove the transmission mount -5- from the transmission support -3-.

Installing

- For the correct tightening specifications, refer to **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW.**

-- Mount the transmission support -3- on the transmission mount -5- and tighten the nut -4- hand-tight.

-- Tighten the lower stop -2- with the bolts -1-.

-- Tighten the nut -4-.

-- Install the transmission support and transmission mount. Refer to **TRANSMISSION SUPPORT WITH TRANSMISSION MOUNT.**

TRANSMISSION RANGE GEAR RECOGNITION SWITCH -F208-, TRANSMISSION INSTALLED

Special tools and workshop equipment required

- Engine/Transmission Jack V.A.G 1383 A
- Transmission Support T10337
- Torque Wrench 5-50 Nm V.A.G 1331
- Release Tool f/ Rev. Light Switch Conn. T40138

Removing

-- Remove the rear noise insulation by loosening the fasteners -2- and -3-

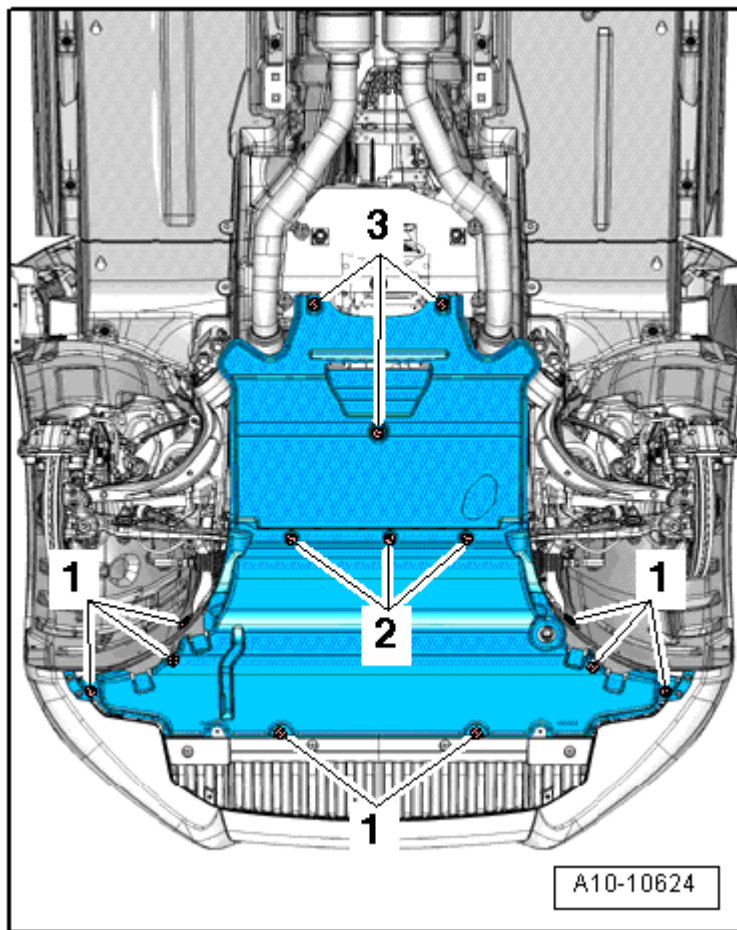


Fig. 164: Identifying Noise Insulation Components
Courtesy of AUDI OF AMERICA, LLC

NOTE: Do not bend the flex joint in the front exhaust pipe by more than 10° or it will be damaged.

-- Disconnect the exhaust system at clamping sleeve(s) -arrows-.

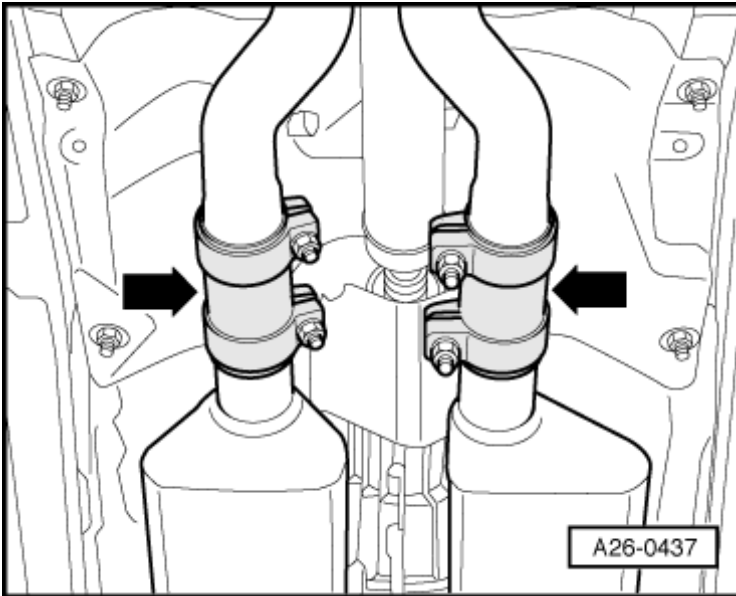


Fig. 165: Disconnecting Exhaust System At Double Clamps
 Courtesy of AUDI OF AMERICA, LLC

- Move the front exhaust pipe to the side and secure it on the rear section of the exhaust system (clamping sleeve) with wire.
- Support the transmission using the V.A.G 1383 A with the T10337 attached.

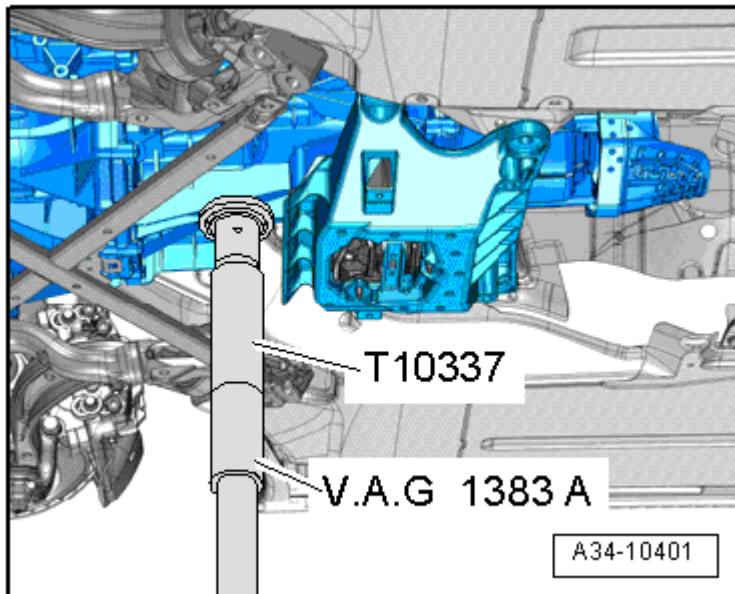


Fig. 166: Supporting Transmission With V.A.G 1383
 Courtesy of AUDI OF AMERICA, LLC

- Lift the transmission slightly using the V.A.G 1383 A.

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-.

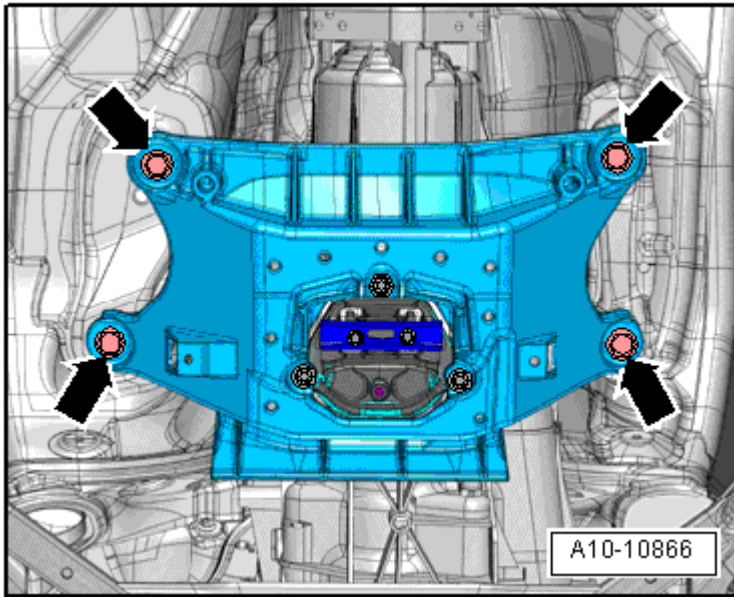


Fig. 167: Transmission Support Overview
Courtesy of AUDI OF AMERICA, LLC

-- Lower the transmission using the V.A.G 1383 A until dimension -a- is reached between the subframe and the body.

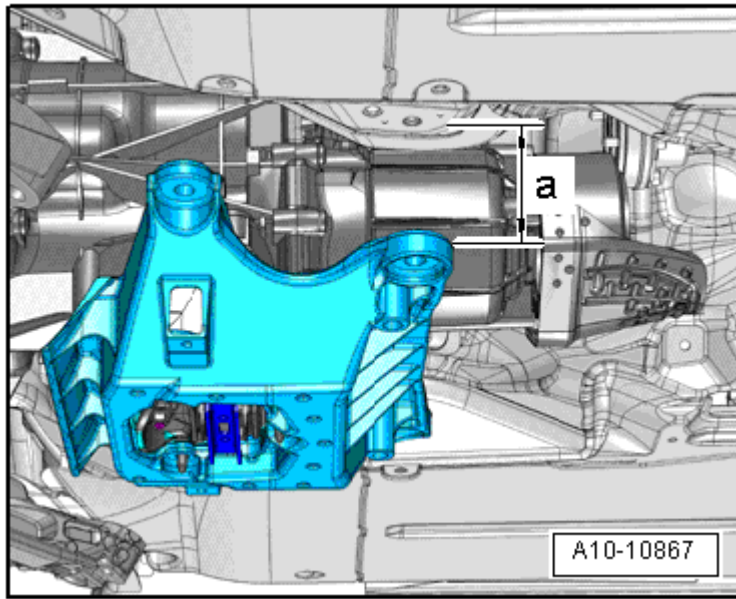


Fig. 168: Lowering Transmission
Courtesy of AUDI OF AMERICA, LLC

- -a- = minimum 70 mm

-- Remove the electrical connector -1- on the transmission range gear recognition switch using the T40138.

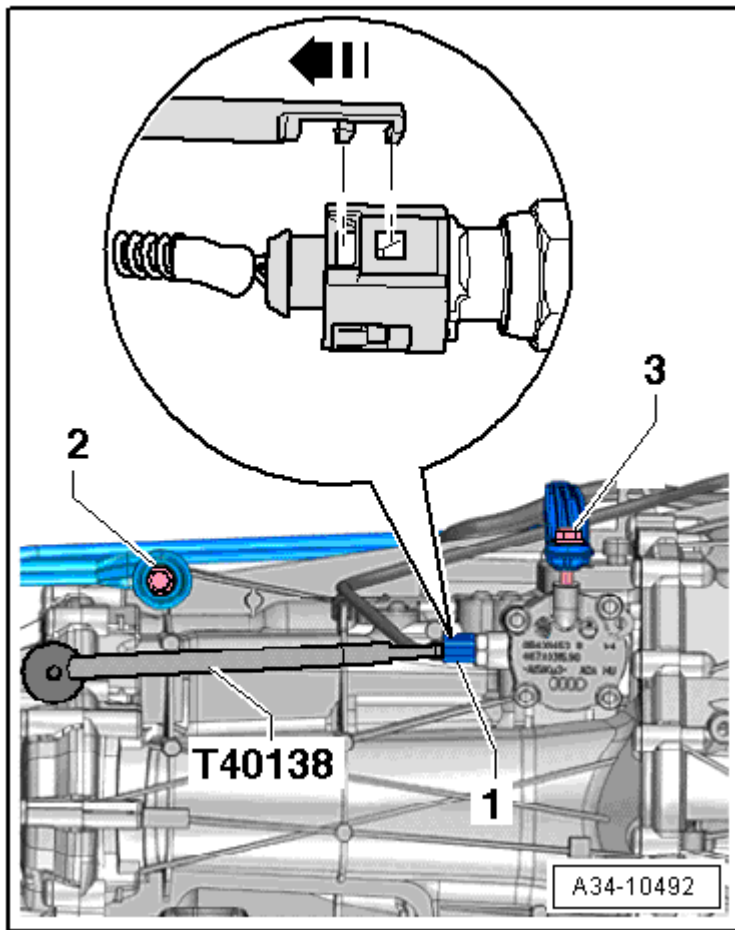


Fig. 169: Disconnecting Connector

Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2- and -3-.

-- Remove the transmission range gear recognition switch from the selector shaft cover.

Installing

-- Install the transmission range gear recognition switch in the selector shaft cover. Tightening specification **Tightening Specification**.

-- Connect the connector -2- to the transmission range gear recognition switch.

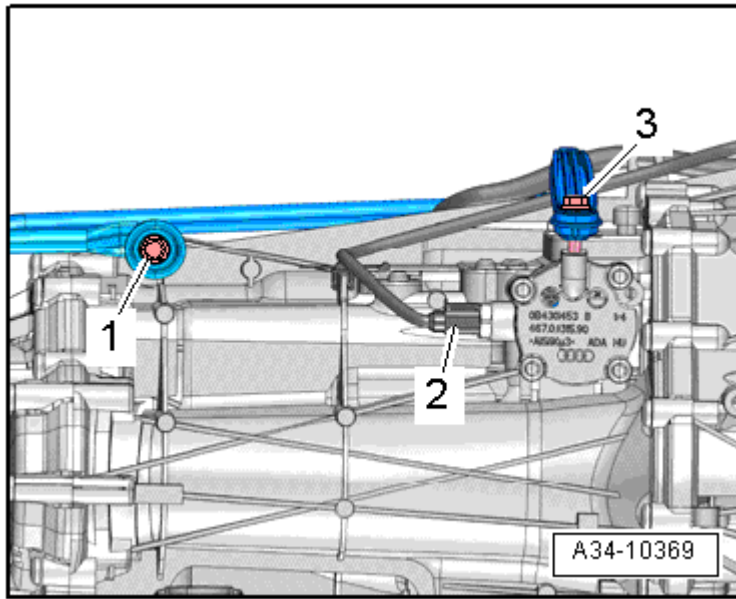


Fig. 170: Removing Bolts And For Selector Rod And Push Rod
 Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -1- and -3-.

-- Tighten the tunnel crossmember bolts -arrows-. Tightening specification **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW.**

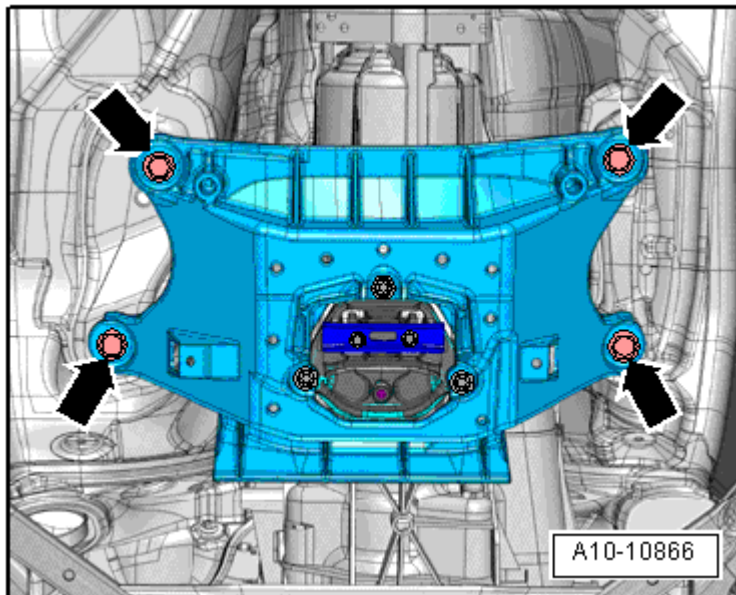


Fig. 171: Transmission Support Overview
 Courtesy of AUDI OF AMERICA, LLC

-- Re-assemble the exhaust system and ensure it is not under stress. Refer to **Removal and Installation** .

2012 Audi S4

TRANSMISSION Controls, Housing - Manual Transmission 0B4 AWD (Sedan)

-- Install the rear noise insulation. Refer to **Removal and Installation** .

TIGHTENING SPECIFICATION

Component	Nm
Transmission Range Gear Recognition Switch to the Transmission	20

SELECTOR SHAFT SEAL, TRANSMISSION INSTALLED

Special tools and workshop equipment required

- Pulling Hook T20143/1
- Shock Absorber Set T10001/1
- Puller for Gear Shaft Linkage T40160
- Sealing grease G 052 128 A1

Removing

-- Select 1st gear.

-- Remove the rear noise insulation by loosening the fasteners -2- and -3-

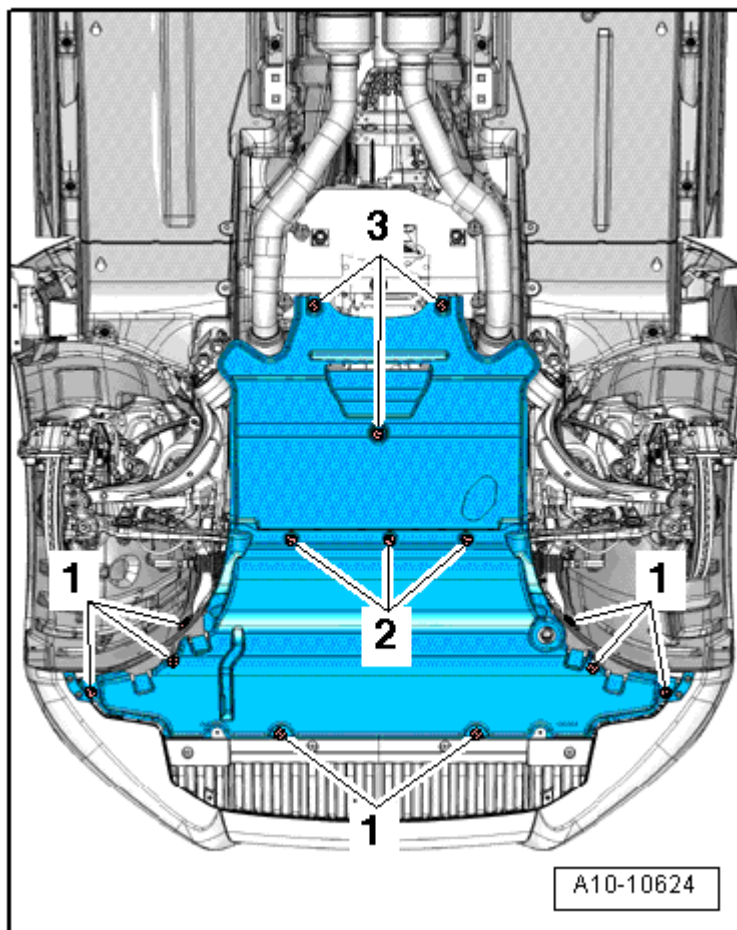


Fig. 172: Identifying Noise Insulation Components
Courtesy of AUDI OF AMERICA, LLC

-- Remove the nut -1-.

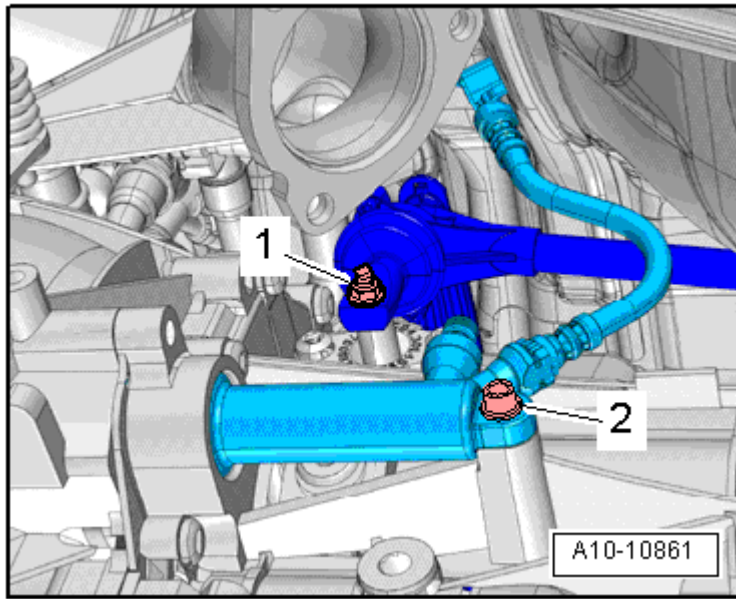


Fig. 173: Removing Bolt And Secure Clutch Slave Cylinder Sideways In Engine Compartment
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2-.

CAUTION: Danger of causing damage to the gearshift shaft inside the transmission.

- Do not pry off the transmission shift lever -1- using a pry bar or hit it with a hammer.

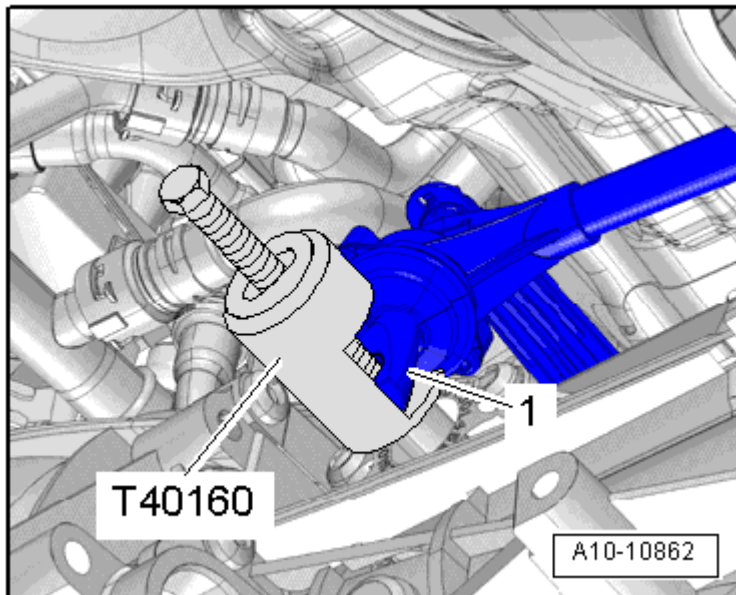


Fig. 174: Positioning Puller T40160 And Remove Selector Rod
Courtesy of AUDI OF AMERICA, LLC

-- Install the T40160 and remove the transmission shift lever -1-.

-- Pry out the shaft seal using the T20143/1.

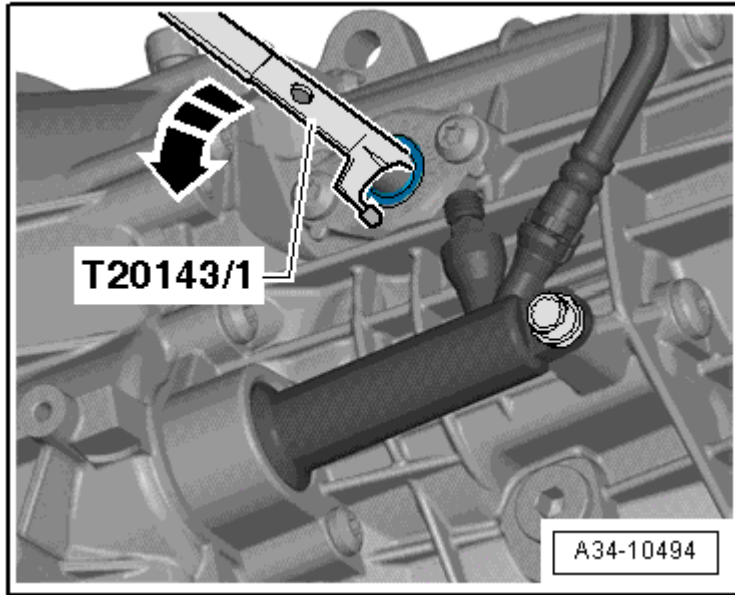


Fig. 175: Prying Out Shaft Seal Using T20143/1
Courtesy of AUDI OF AMERICA, LLC

- Check the selector shaft for damage.

Installing

-- Lightly coat the outer circumference of the shaft seal with oil.

-- Fill the space between the sealing and dust lip half way with sealing grease G 052 128 A1.

-- Install the shaft seal with T10001/1.

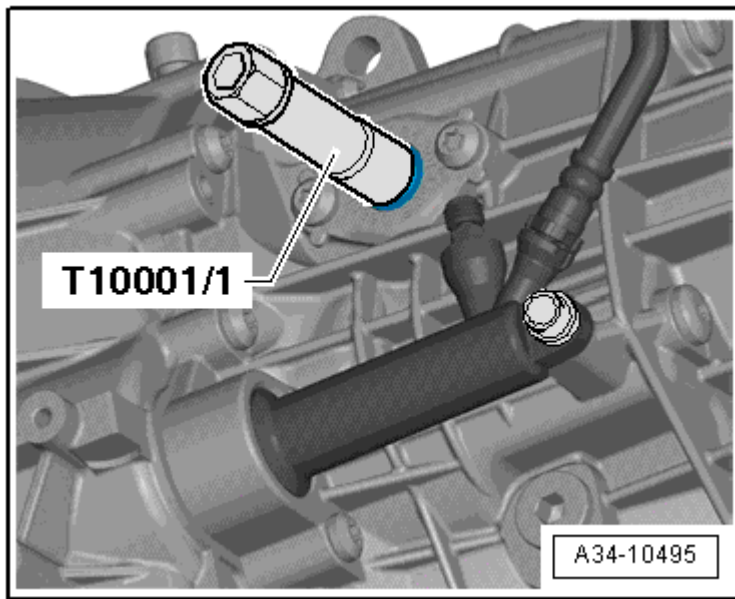


Fig. 176: Gearshift Shaft Seal, Removing and Installing
 Courtesy of AUDI OF AMERICA, LLC

- Installed dimension: 2 mm below the housing outside edge

-- Install the selector lever as follows:

- The gearshift lever -2- can be attached to the gearshift shaft -1- in only one position (gap in the splines - arrow-).

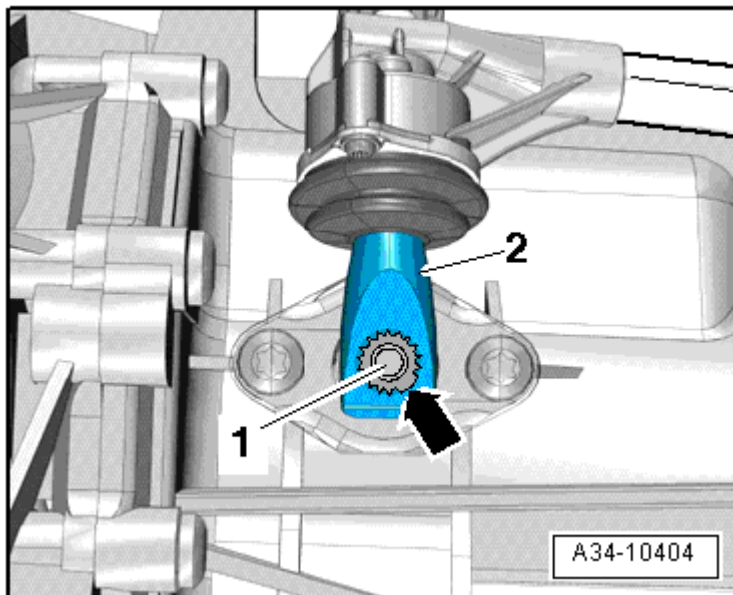


Fig. 177: Installing Transmission Shift Lever
 Courtesy of AUDI OF AMERICA, LLC

-- Tighten the selector lever. Tightening specification SELECTOR MECHANISM OVERVIEW.

-- Install the rear noise insulation. Refer to Removal and Installation .

CENTER DIFFERENTIAL HOUSING AND CENTER DIFFERENTIAL WITH TRANSMISSION INSTALLED

Special tools and workshop equipment required

- Engine/Transmission Jack V.A.G 1383 A
- Transmission Support T10337
- Counterhold Tool Touareg V10 T10172 with Adapter T10172/5
- Used Oil Collecting and Extracting Device V.A.G 1782

Removing

-- Remove the rear noise insulation by loosening the fasteners -2- and -3-

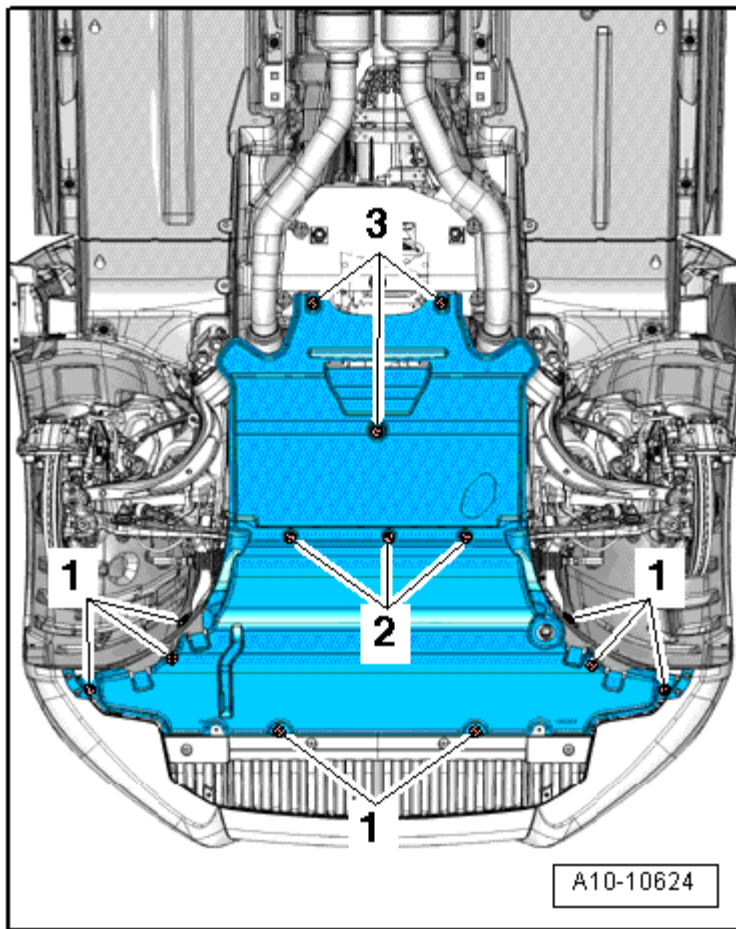


Fig. 178: Identifying Noise Insulation Components
Courtesy of AUDI OF AMERICA, LLC

NOTE: Do not bend the flex joint in the front exhaust pipe by more than 10° or it will be damaged.

-- Disconnect the exhaust system at clamping sleeve(s) -arrows-.

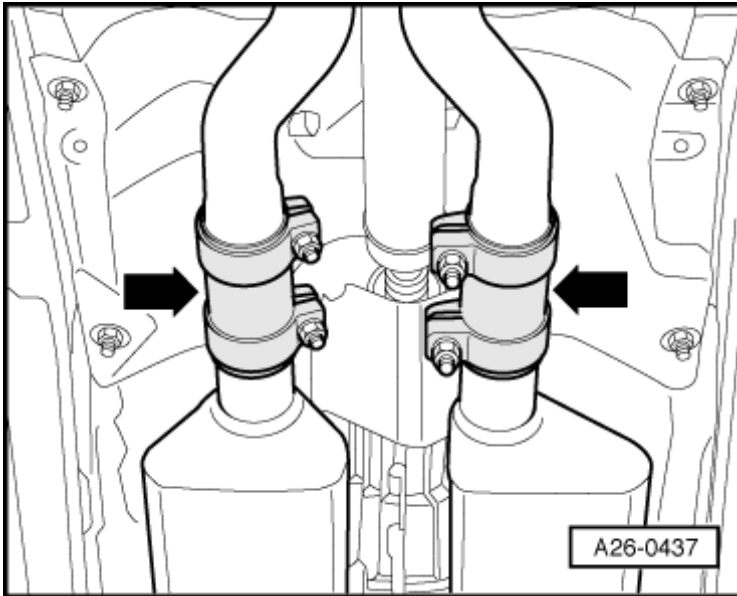


Fig. 179: Disconnecting Exhaust System At Double Clamps
Courtesy of AUDI OF AMERICA, LLC

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

-- Remove the plug -arrow- and drain the transmission fluid.

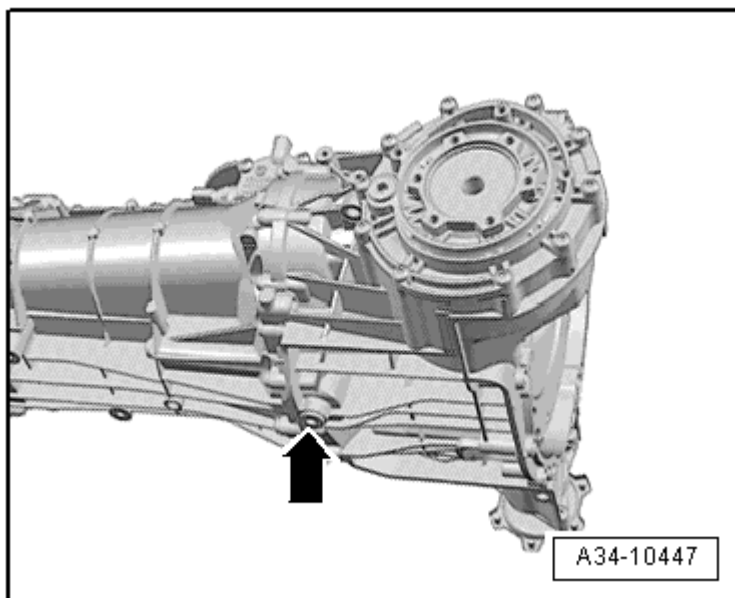


Fig. 180: Locating Transmission Fluid Drain Plug

Courtesy of AUDI OF AMERICA, LLC

- Install the plug -arrow- and tighten it to 40 Nm.
- Remove the bolts -arrows-, and remove the driveshaft heat shield -A- (if equipped).

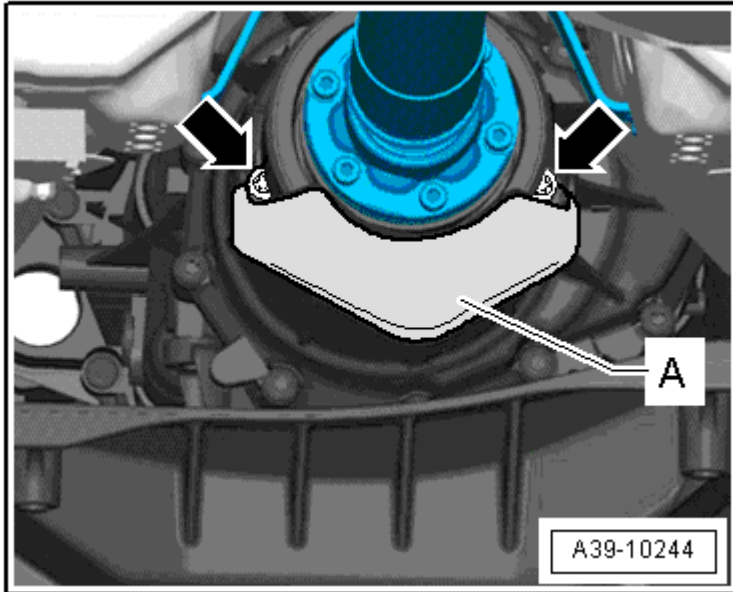


Fig. 181: Transmission Heat Shield

Courtesy of AUDI OF AMERICA, LLC

Driveshaft Bolted on the Transmission Side:

- Remove the bolts that connect the driveshaft to the transmission by counterholding them with the T10172 and T10172/5.

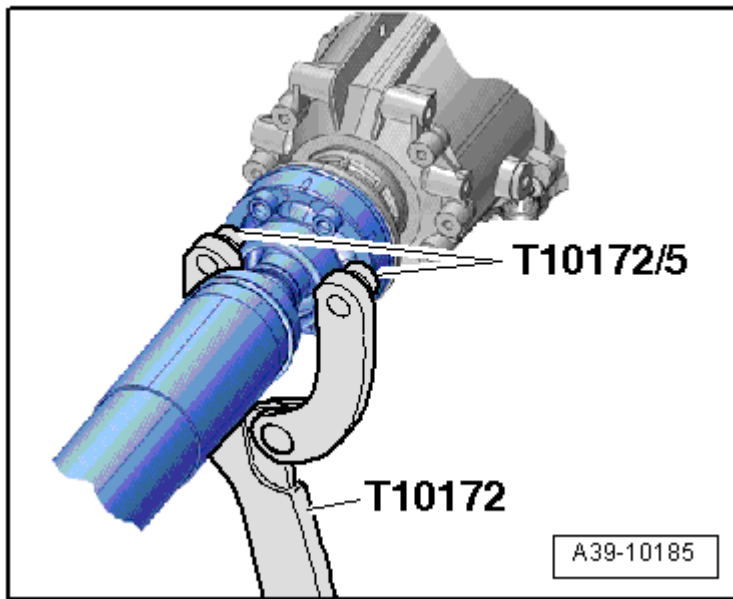


Fig. 182: Holding Driveshaft Using T10172
Courtesy of AUDI OF AMERICA, LLC

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

Driveshaft Mounted on the Transmission Side:

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

All Vehicles:

- Support the transmission using the V.A.G 1383 A with the T10337 attached.

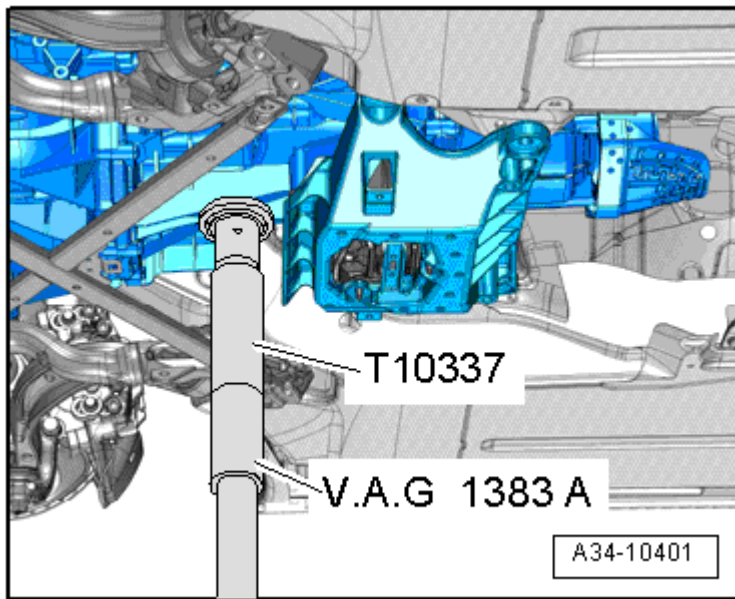


Fig. 183: Supporting Transmission With V.A.G 1383
Courtesy of AUDI OF AMERICA, LLC

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 cross member -arrows-.

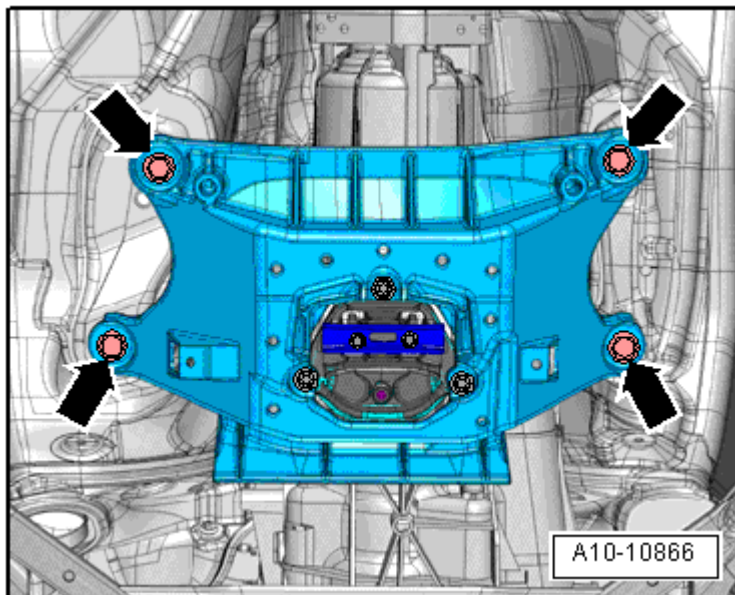


Fig. 184: Transmission Support Overview
Courtesy of AUDI OF AMERICA, LLC

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

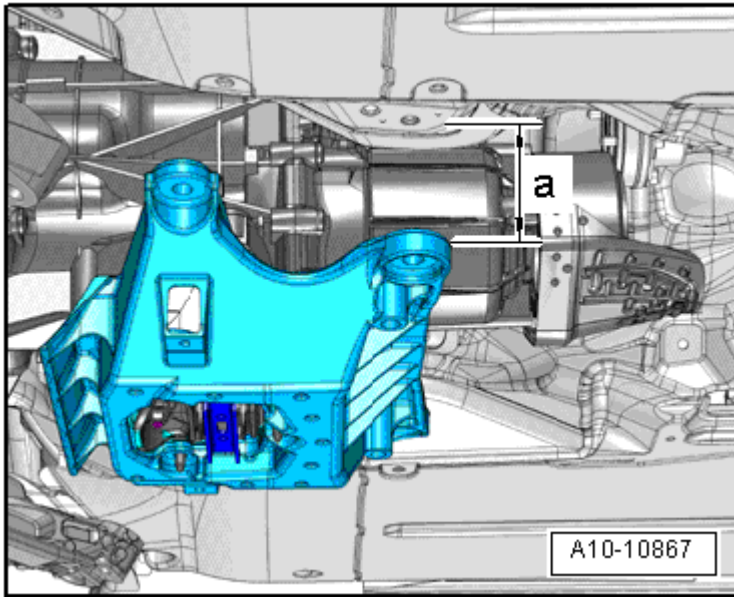


Fig. 185: Lowering Transmission
Courtesy of AUDI OF AMERICA, LLC

- Dimension -a- = maximum 70 mm.

-- Remove the nuts -arrow- and the tunnel cross member.

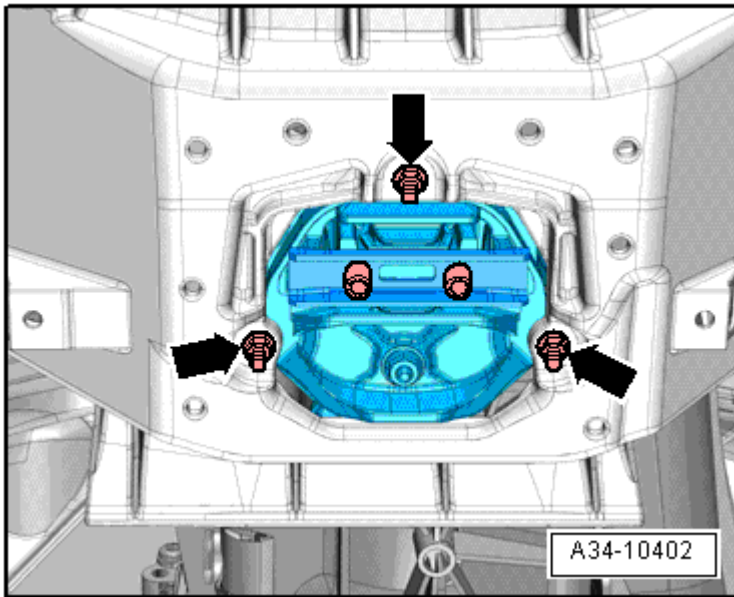


Fig. 186: Removing Nuts And Tunnel Crossmember
Courtesy of AUDI OF AMERICA, LLC

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

CAUTION: Danger of damaging the center differential.

- Carefully and slowly pull center differential housing off of transmission toward rear. Otherwise the center differential can fall out of the transmission.
- A center differential that has fallen onto the floor must not be installed again. Any center differential that has fallen out must be replaced.

-- Remove the bolts -A- and -arrows- for the center differential housing -B- to the transmission.

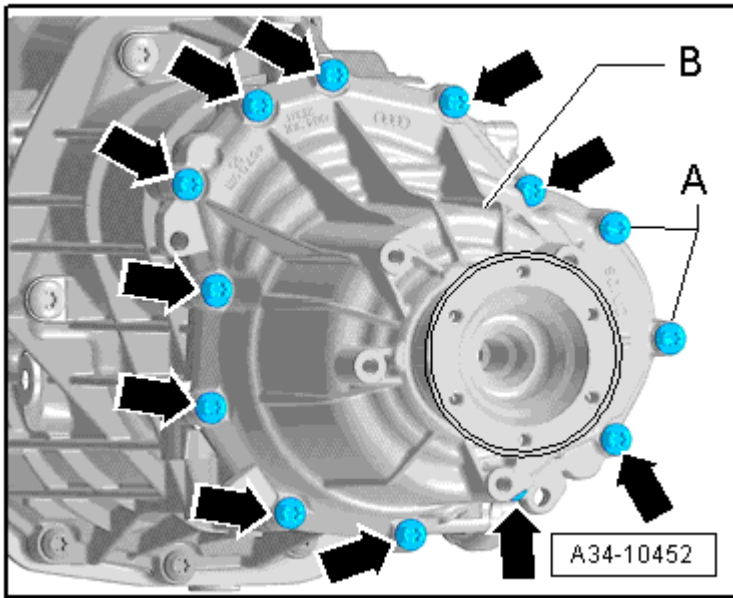


Fig. 187: Locating Center Differential Housing Bolts
Courtesy of AUDI OF AMERICA, LLC

-- Carefully remove the center differential housing -6-, the pressure spring -3-, the adjusting shim -4- and the plate spring -5-.

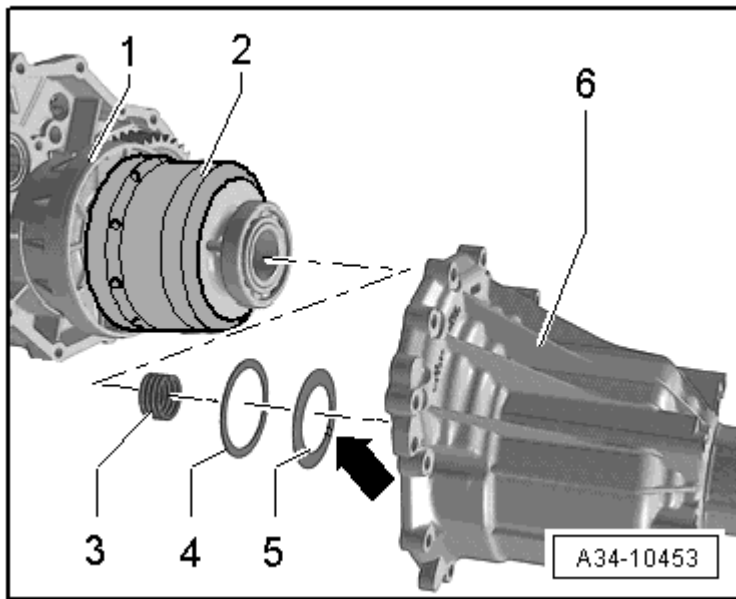
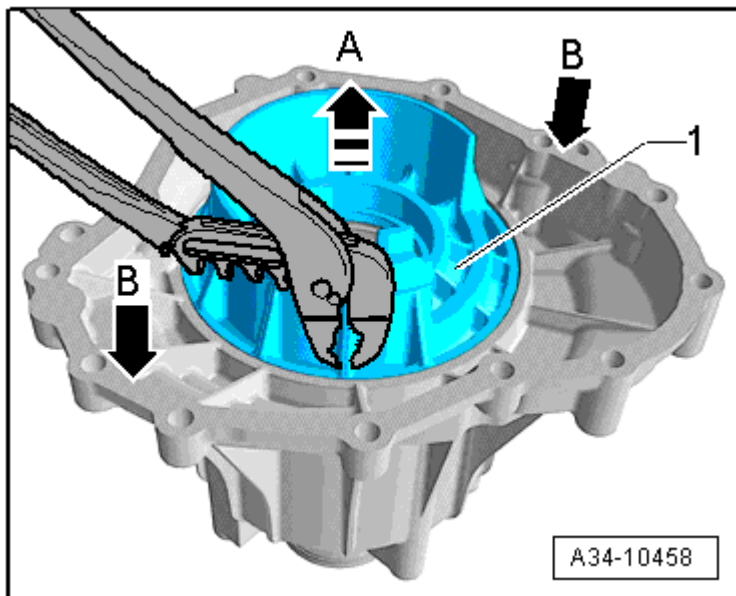


Fig. 188: Placing Center Differential On Transmission
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the center differential -2- and the gear carrier -1-.

If the gear carrier -1- remains in the center differential housing, proceed as follows:



**Fig. 189: Holding Gear Carrier -1- By One Of Side Ribs With Pliers And Remove It In Direction Of -
 Arrow A-**
 Courtesy of AUDI OF AMERICA, LLC

-- Hold the gear carrier -1- by one of the side ribs with pliers and remove it in direction of -arrow A-.

-- At the same time, carefully hit housing -arrow B- alternating from one side to the other using a rubber hammer.

CAUTION: Danger of damaging the sealing surface on the center differential housing.

- Use a hammer to hit the housing on several places.
- Do not damage sealing surfaces when doing this.

-- Remove the center differential.

INSTALLING THE CENTER DIFFERENTIAL AND HOUSING

Tightening specifications, refer to CENTER DIFFERENTIAL AND CENTER DIFFERENTIAL HOUSING OVERVIEW

-- Thoroughly clean both housing joint surfaces.

Install the gear carrier on the transmission as follows:

- Installed position: The tab on the gear carrier -arrow A- must be inserted into the opening -arrow B- in the transmission housing.

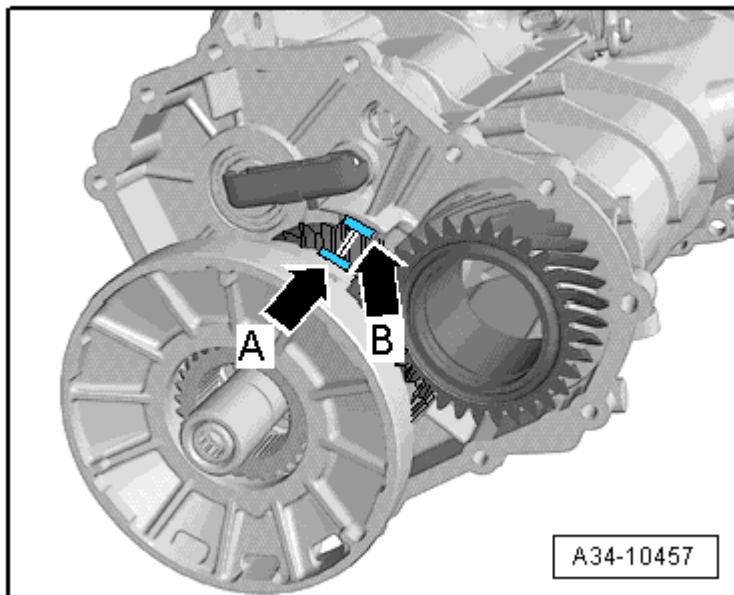


Fig. 190: Coating Both Surfaces On Gear Carrier Slightly With Transmission Fluid
Courtesy of AUDI OF AMERICA, LLC

-- Slide the center differential -2- all the way in direction of the gear carrier -1-.

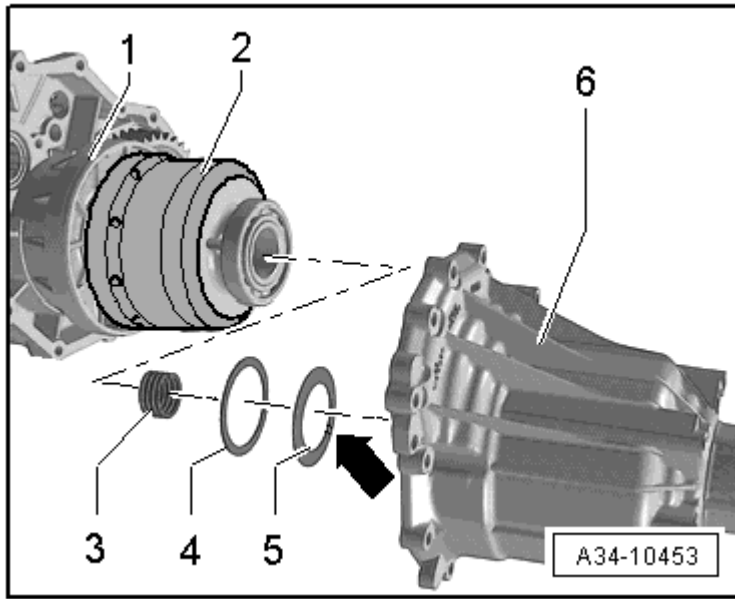


Fig. 191: Placing Center Differential On Transmission
Courtesy of AUDI OF AMERICA, LLC

-- Install the plate spring -5-, the adjusting shim(s) -4- and the pressure spring -3- in the center differential housing -6-.

- Plate spring installation location -5- : The camber on the inner diameter -arrow- faces toward the center differential housing -6-.

-- Apply sealing paste AMV 188 001 02 evenly and not too thick.

-- Then position the center differential housing -6- on the transmission.

-- Press the center differential housing -B- on until it makes contact with the transmission housing and hold it securely.

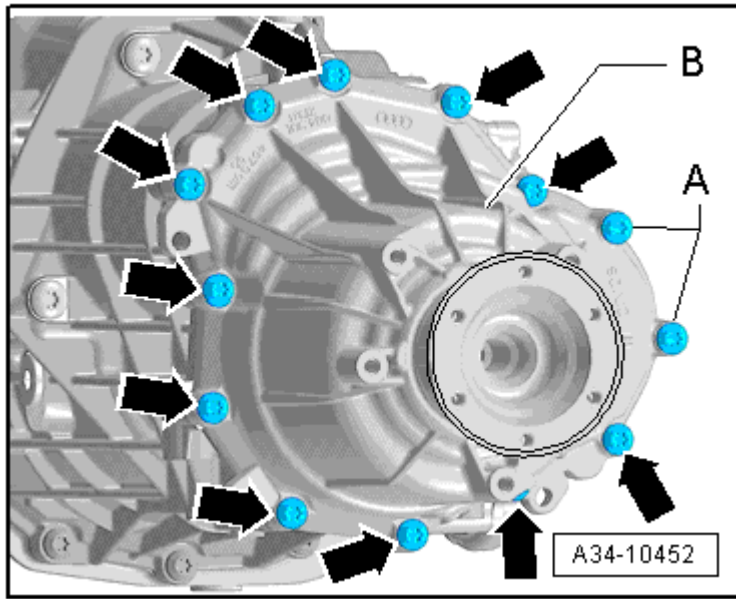


Fig. 192: Locating Center Differential Housing Bolts
 Courtesy of AUDI OF AMERICA, LLC

-- Install and tighten the new bolts -arrows-. Tightening specification **CENTER DIFFERENTIAL AND CENTER DIFFERENTIAL HOUSING OVERVIEW.**

-- Tighten the bolts -A-. Tightening specification **CENTER DIFFERENTIAL AND CENTER DIFFERENTIAL HOUSING OVERVIEW.**

-- Tighten the tunnel cross member on the transmission mount -arrows-. Tightening specification **TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT OVERVIEW.**

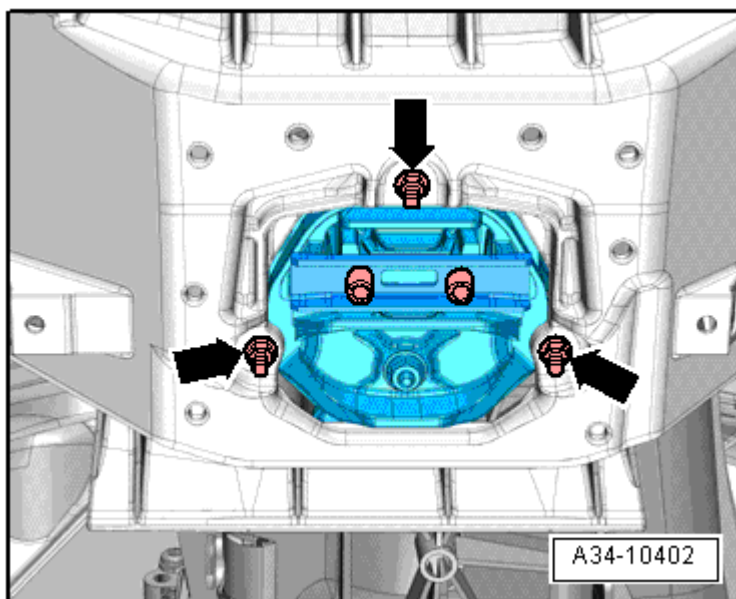


Fig. 193: Removing Nuts And Tunnel Crossmember

Courtesy of AUDI OF AMERICA, LLC

-- Hoist the transmission and tighten the tunnel cross member bolts -arrows-. Tightening specification
**TUNNEL CROSSMEMBER, TRANSMISSION MOUNT AND TRANSMISSION SUPPORT
OVERVIEW.**

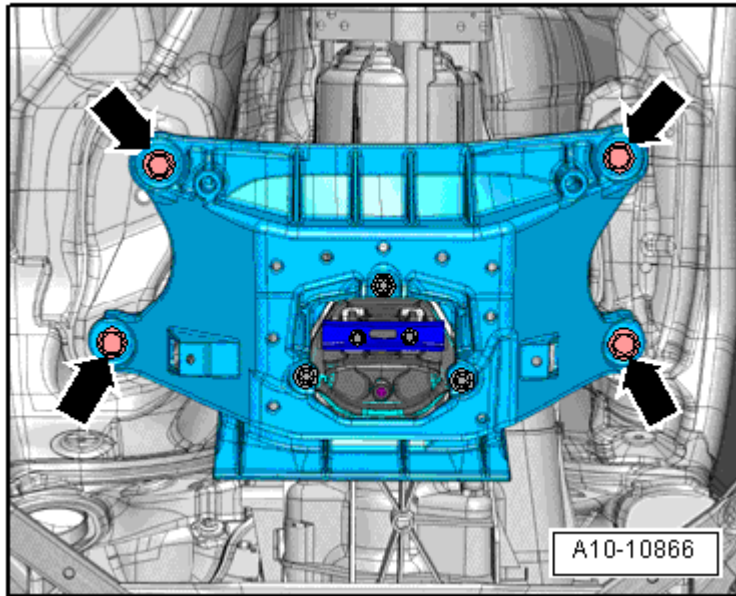


Fig. 194: Transmission Support Overview
Courtesy of AUDI OF AMERICA, LLC

-- Mount or install the driveshaft on the transmission. Refer to **Removal and Installation** or **Removal and Installation** .

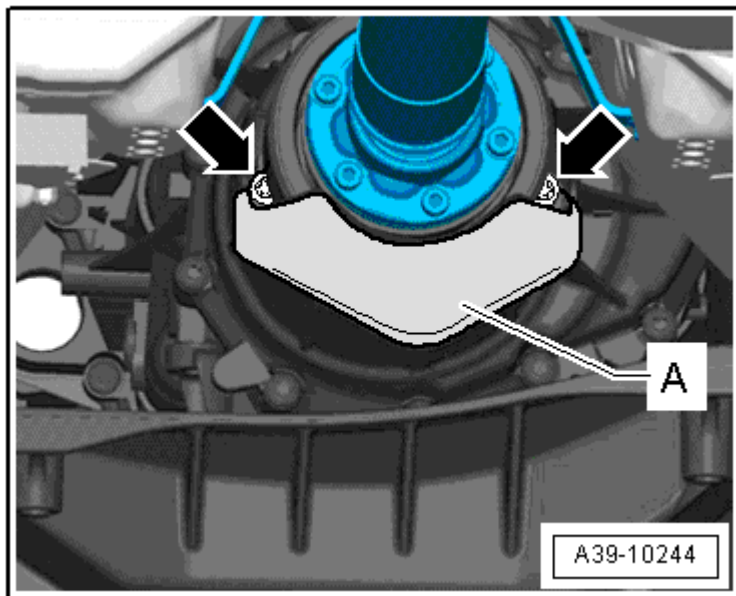


Fig. 195: Transmission Heat Shield

Courtesy of AUDI OF AMERICA, LLC

- Install the driveshaft heat shield -A- and tighten the bolts -arrows- to tightening specification.
- Fill transmission oil and check oil level. Refer to **MANUAL TRANSMISSION, CHECKING TRANSMISSION FLUID LEVEL**.
- Install the exhaust system and align it without tension. Refer to **Removal and Installation** .
- Install the rear noise insulation. Refer to **Removal and Installation** .

Tightening Specifications

Component	Nm
Driveshaft heat shield to center differential housing	25

REAR FLANGE SHAFT SEAL ON THE TRANSMISSION**Special tools and workshop equipment required**

- Thrust Plate VW 401
- Thrust Plate VW 402
- Thrust Disc VW 412
- Press Tube 30 - 100
- Thrust Piece for Final Drive at Gearbox T40165

Removing

Remove the center differential housing -B-. Refer to **CENTER DIFFERENTIAL HOUSING AND CENTER DIFFERENTIAL WITH TRANSMISSION INSTALLED**.

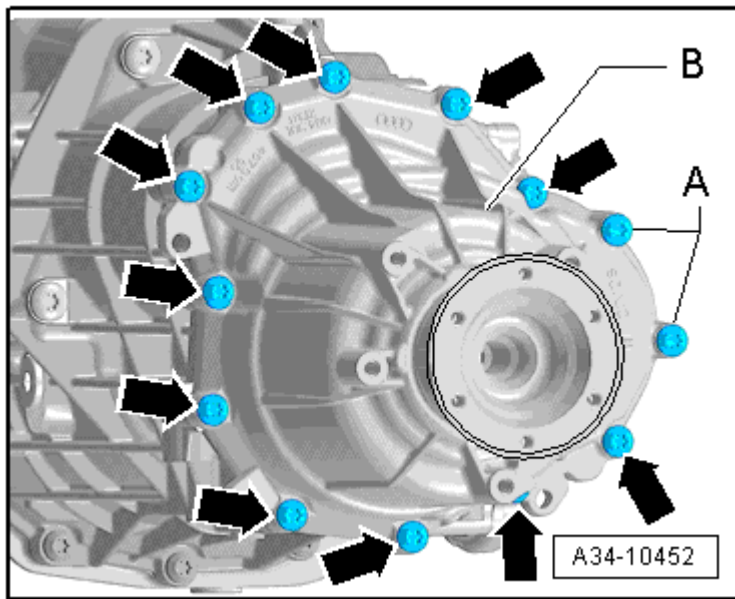


Fig. 196: Locating Center Differential Housing Bolts
 Courtesy of AUDI OF AMERICA, LLC

Remove the circlip -arrow-.

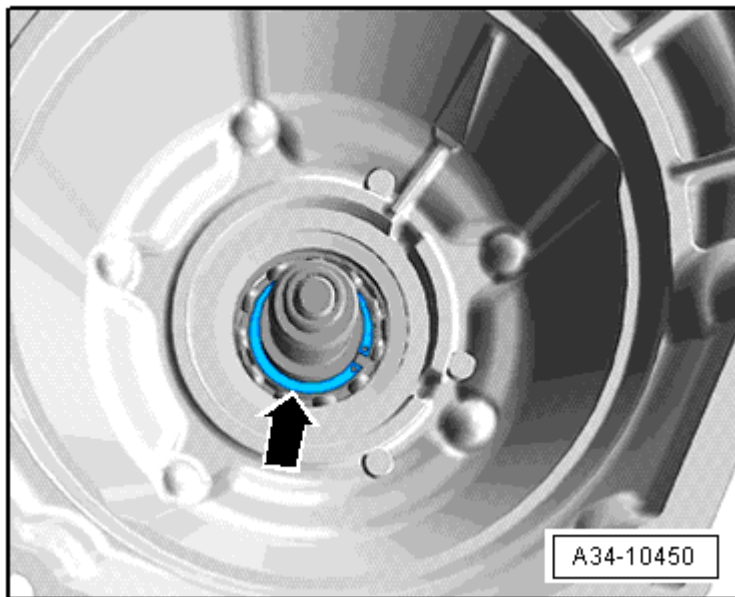


Fig. 197: Removing Locking Ring -Arrow-
 Courtesy of AUDI OF AMERICA, LLC

Remove the flange shaft

-- Position the center differential housing so the flange shaft does not come into contact with the VW 401 and VW 402 when pressing it off.

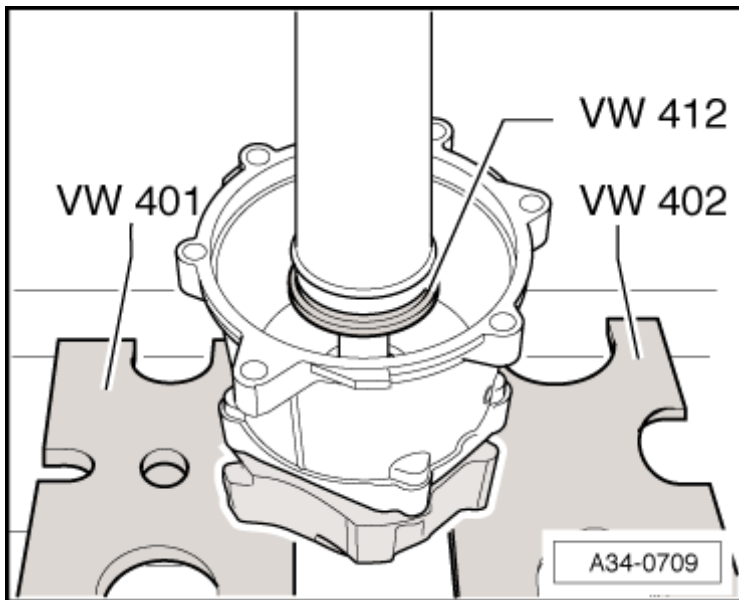


Fig. 198: Pressing Out Flange Shaft
Courtesy of AUDI OF AMERICA, LLC

Pry out the shaft seal -1-.

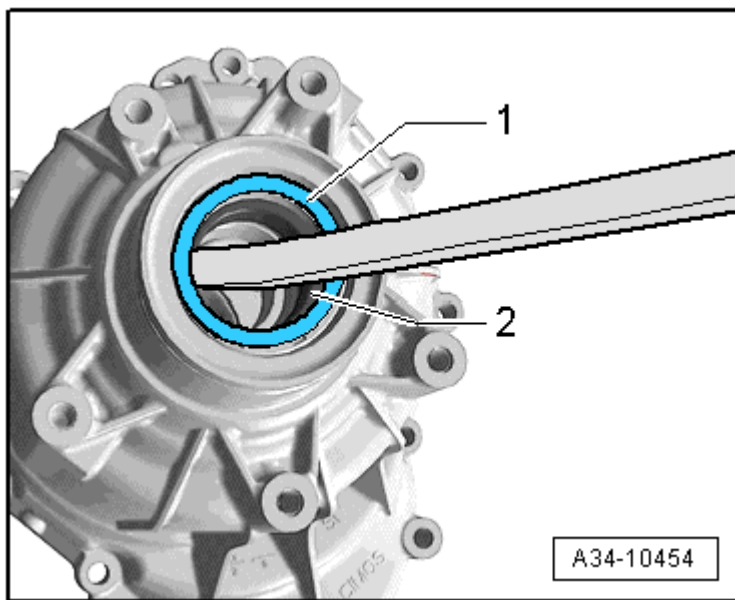


Fig. 199: Prying Out Shaft Seal -1-
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2-.

Installing

Lightly coat the shaft seal on the outer circumference with oil and then install it. Do not bend the seal.

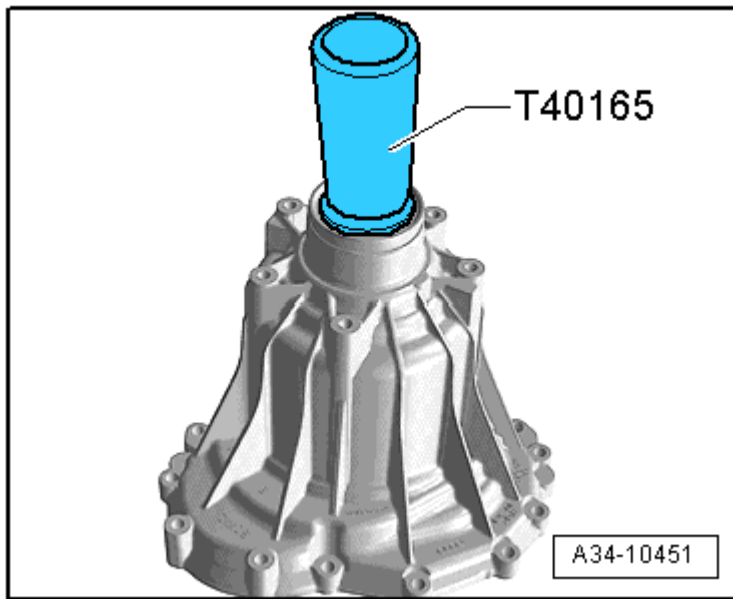


Fig. 200: Installing Seal For Rear Flange Shaft
Courtesy of AUDI OF AMERICA, LLC

-- Fill the space between the sealing and dust lip half way with sealing grease G 052 128 A1.

Install the flange shaft.

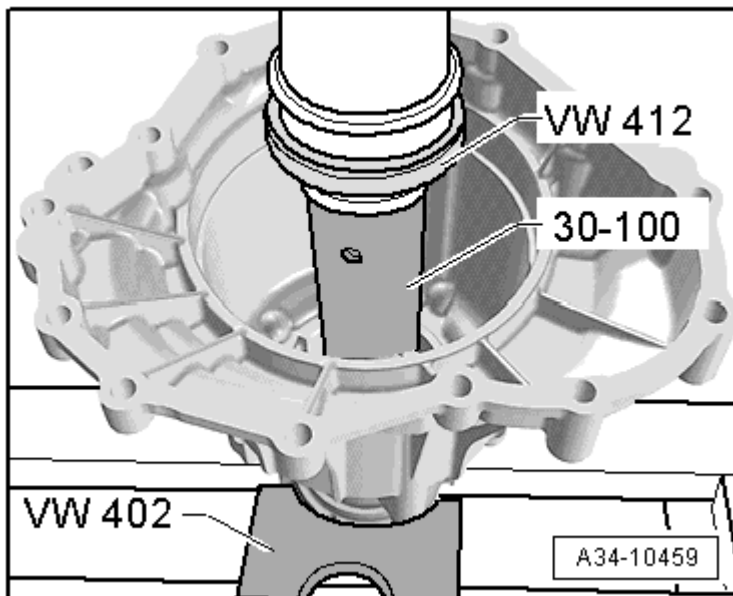


Fig. 201: Installing Flange Shaft
Courtesy of AUDI OF AMERICA, LLC

- The flange shaft ball bearing is installed.
- When installing, the 30 - 100 presses on the inner race of the ball bearing.

-- Tighten the vibration damper down on the center differential housing, if equipped. Tightening specification

Description and Operation .

-- Mount the flange shaft seal -arrow-.

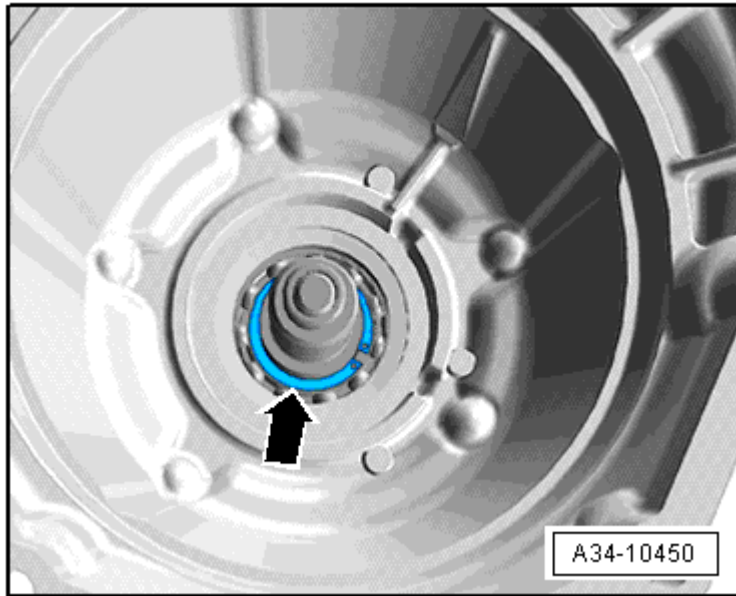


Fig. 202: Removing Locking Ring -Arrow-

Courtesy of AUDI OF AMERICA, LLC

-- Install the center differential and housing **INSTALLING THE CENTER DIFFERENTIAL AND HOUSING**.

TRANSMISSION OUTPUT SHAFT SEAL, VEHICLES WITHOUT VIBRATION DAMPER ON THE TRANSMISSION OUTPUT SHAFT

Special tools and workshop equipment required

- Pulling Hook T20143
- Oil Seal Installing Tool T40239
- Sealing grease G 052 128 A1

Procedure

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

-- Pry off the dust ring -1-.

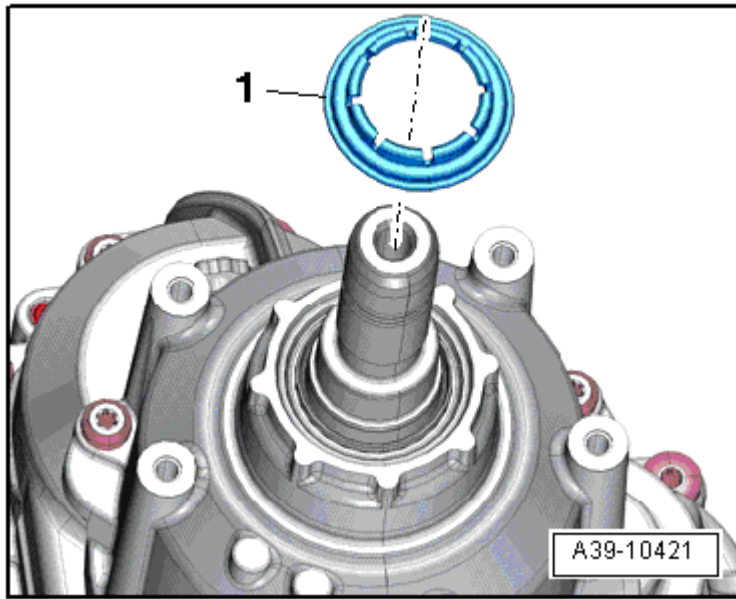


Fig. 203: Prying Out Dust Ring

Courtesy of AUDI OF AMERICA, LLC

NOTE: The dust ring cannot be removed without destroying it.

-- Shaft seal, transmission output shaft with splines, removing.

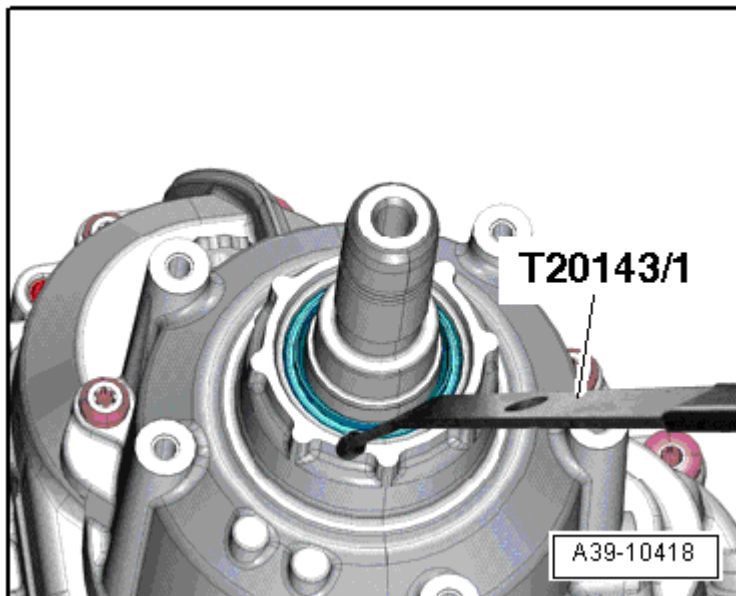


Fig. 204: Dust Ring Cannot Be Removed Without Destroying It

Courtesy of AUDI OF AMERICA, LLC

-- Clean the running and sealing surface.

- Coat the outer edge of the shaft seal with transmission fluid.
- Mount the guide sleeve T40239/1, -1- on the transmission output shaft.

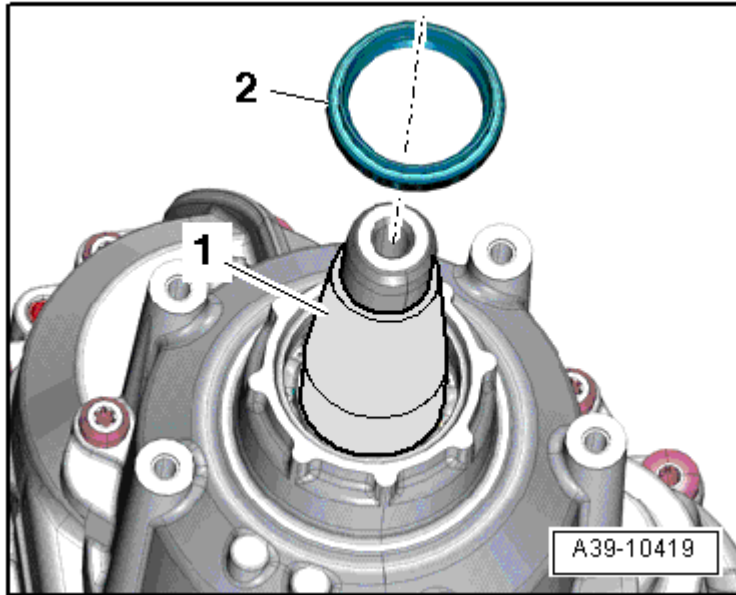


Fig. 205: Installing Oil Seal

Courtesy of AUDI OF AMERICA, LLC

- Fill the space between the sealing and dust lip half way with sealing grease G 052 128 A1.
- Install the shaft seal -2- over the guide sleeve -1- and onto the transmission output shaft.
 - Installed position: The open side of the seal faces the transmission housing.
- Install the shaft seal using the T40239, -1- of the T40239 until you hit the stop. Do not bend the seal.

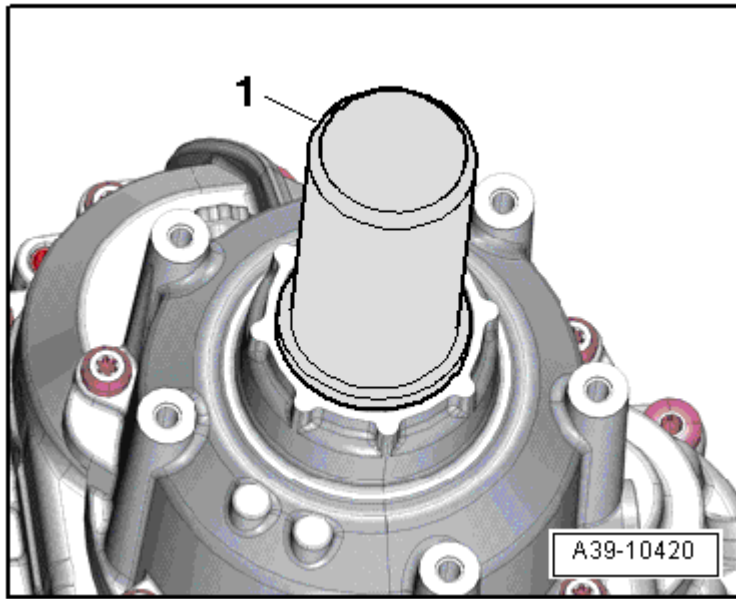


Fig. 206: Installing Shaft Seal Using T40239
Courtesy of AUDI OF AMERICA, LLC

NOTE: Remove the guide sleeve T40239/1 from the shaft seal carefully so that the sealing lip does not fold over.

-- Install a new dust ring -1-.

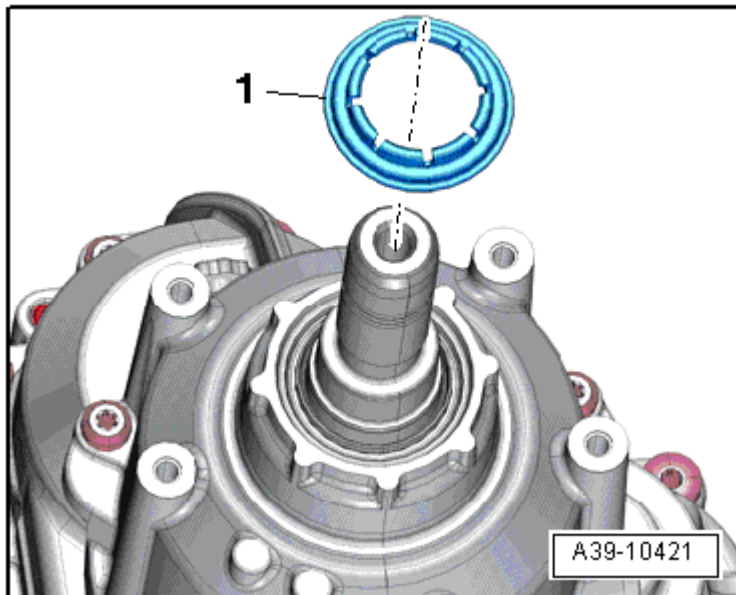


Fig. 207: Prying Out Dust Ring
Courtesy of AUDI OF AMERICA, LLC

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

-- Transmission oil level, checking. Refer to **MANUAL TRANSMISSION, CHECKING TRANSMISSION FLUID LEVEL.**

TRANSMISSION OUTPUT SHAFT SEAL WITH SPLINES, REMOVING - VEHICLES WITH VIBRATION DAMPER ON THE TRANSMISSION OUTPUT SHAFT

Special tools and workshop equipment required

- Thrust Plate VW 402
- Thrust Disc VW 412
- Press Tube 30 - 100
- Pulling Hook T20143
- Oil Seal Installing Tool T40239
- Sealing grease G 052 128 A1

Removing

-- Remove the center differential housing. Refer to **CENTER DIFFERENTIAL HOUSING AND CENTER DIFFERENTIAL WITH TRANSMISSION INSTALLED.**

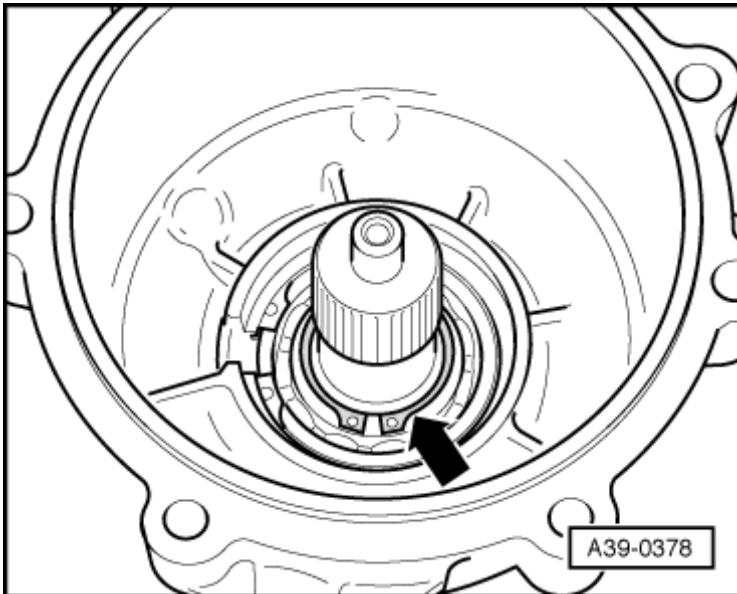


Fig. 208: Removing/Installing Circlip On Inner Side Of Cover
Courtesy of AUDI OF AMERICA, LLC

-- Remove the circlip -arrow- on the inside of the housing.

NOTE: **The circlip secures the transmission output shaft to the bearing in the housing.**

-- Carefully remove the transmission output shaft from the center differential housing using a copper mandrel.

NOTE: To remove the transmission output shaft, secure the center differential housing in a vise or have a 2nd technician hold it tight.

-- Pry out the shaft seal -1-.

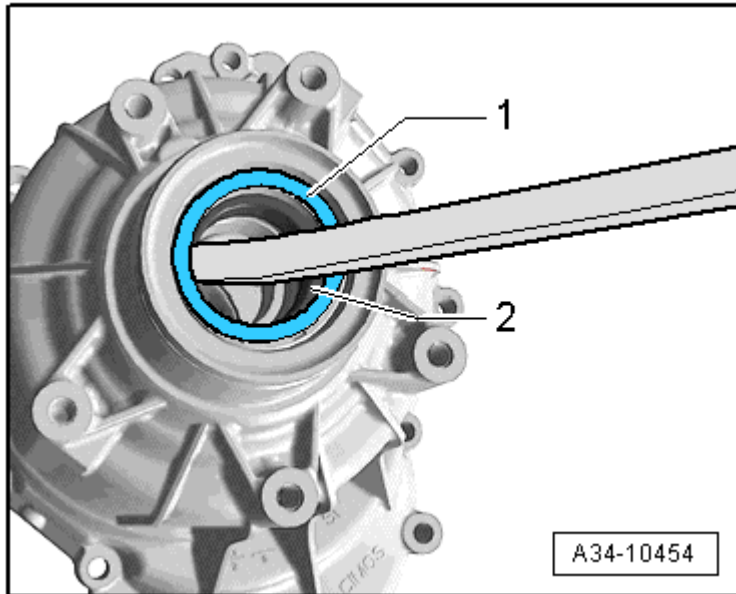


Fig. 209: Prying Out Shaft Seal -1-
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2-.

Installing

-- Coat the outer edge of the shaft seal with transmission fluid.

- Installed position: The open side of the seal faces the housing.

-- Install the shaft seal using the thrust piece, -1- of the assembly tool until you hit the stop. Do not bend the seal.

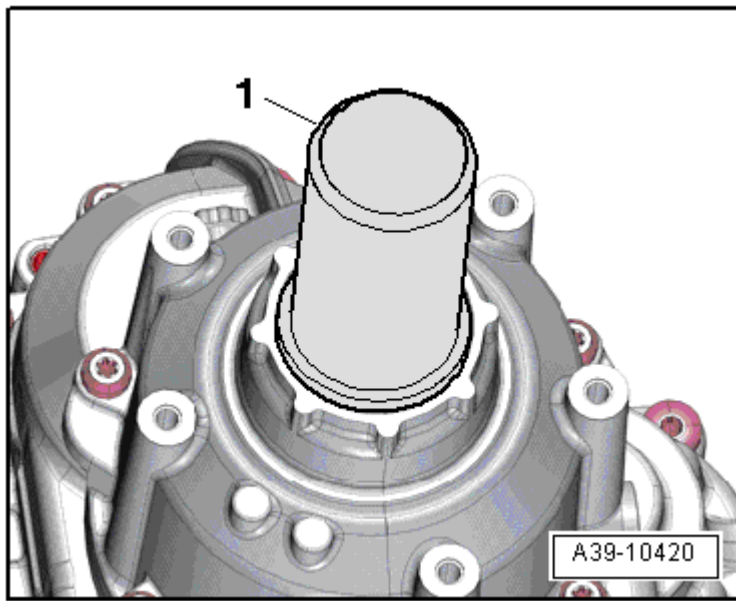


Fig. 210: Installing Shaft Seal Using T40239
 Courtesy of AUDI OF AMERICA, LLC

- Fill the space between the sealing and dust lip half way with sealing grease G 052 128 A1.
- Install the transmission output shaft into the center differential housing as follows:

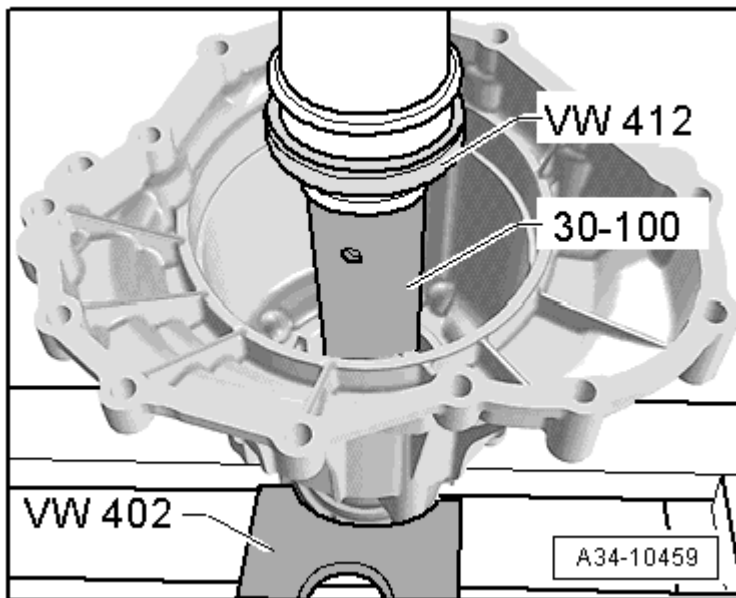


Fig. 211: Installing Flange Shaft
 Courtesy of AUDI OF AMERICA, LLC

- Install the transmission output shaft into the center differential housing from underneath.
- Position the housing and transmission output shaft on the VW 402 under the shop press.

- Mount the 30 - 100 on the ball bearing inner race.
- Install the transmission output shaft.
- Install the locking ring -arrow- into the groove on the transmission output shaft.

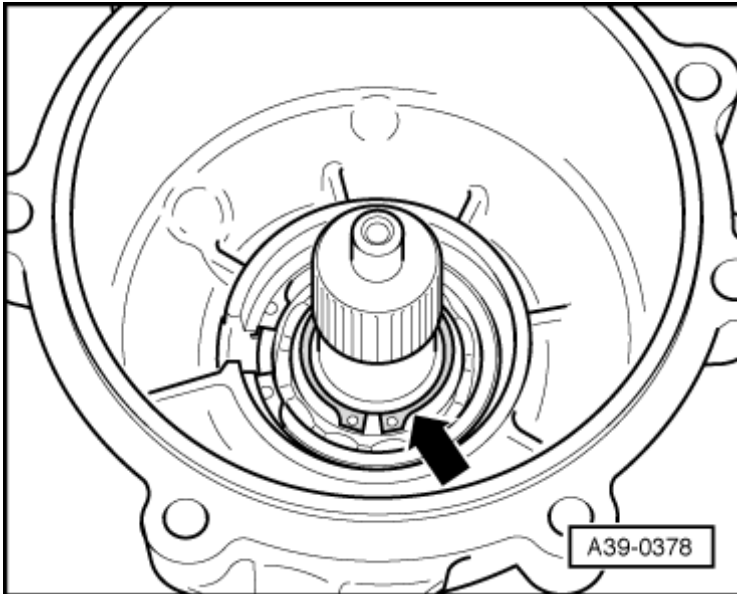


Fig. 212: Removing/Installing Circlip On Inner Side Of Cover
Courtesy of AUDI OF AMERICA, LLC

- Install the center differential housing **INSTALLING THE CENTER DIFFERENTIAL AND HOUSING.**

DISASSEMBLY AND ASSEMBLY

TRANSMISSION, DISASSEMBLING AND ASSEMBLING

Transmission, Disassembling and Assembling

Refer to the proper description in the repair manual: **Disassembly and Assembly** .

SPECIAL TOOLS

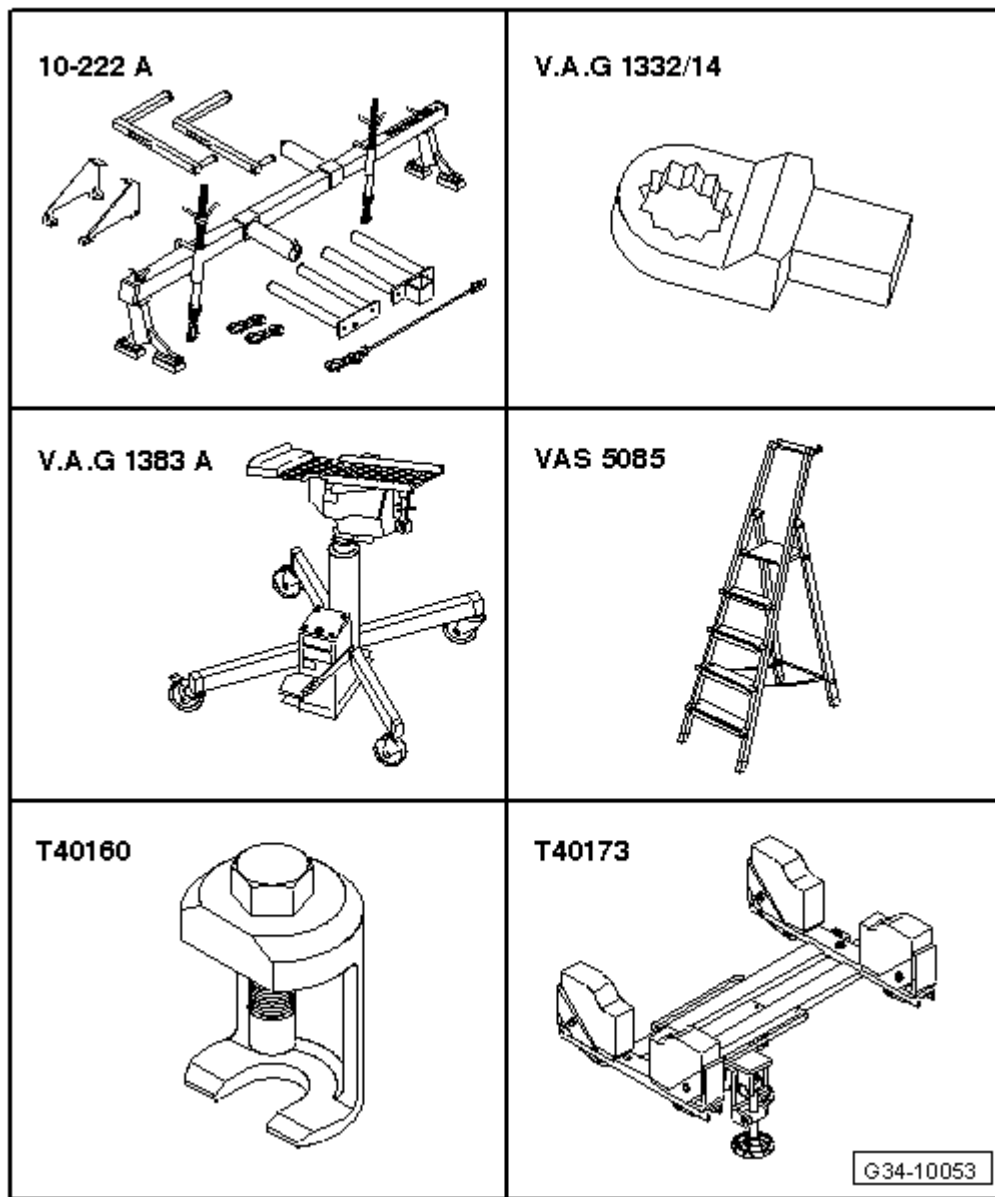


Fig. 213: Identifying Special Tools

Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Engine Support Bridge 10 - 222 A
- Ring Spanner Insert AF 16 V.A.G 1332/14
- Engine/Transmission Jack V.A.G 1383 A
- Step Ladder VAS 5085
- Puller for Gear Shaft Linkage T40160
- Transmission Support T40173

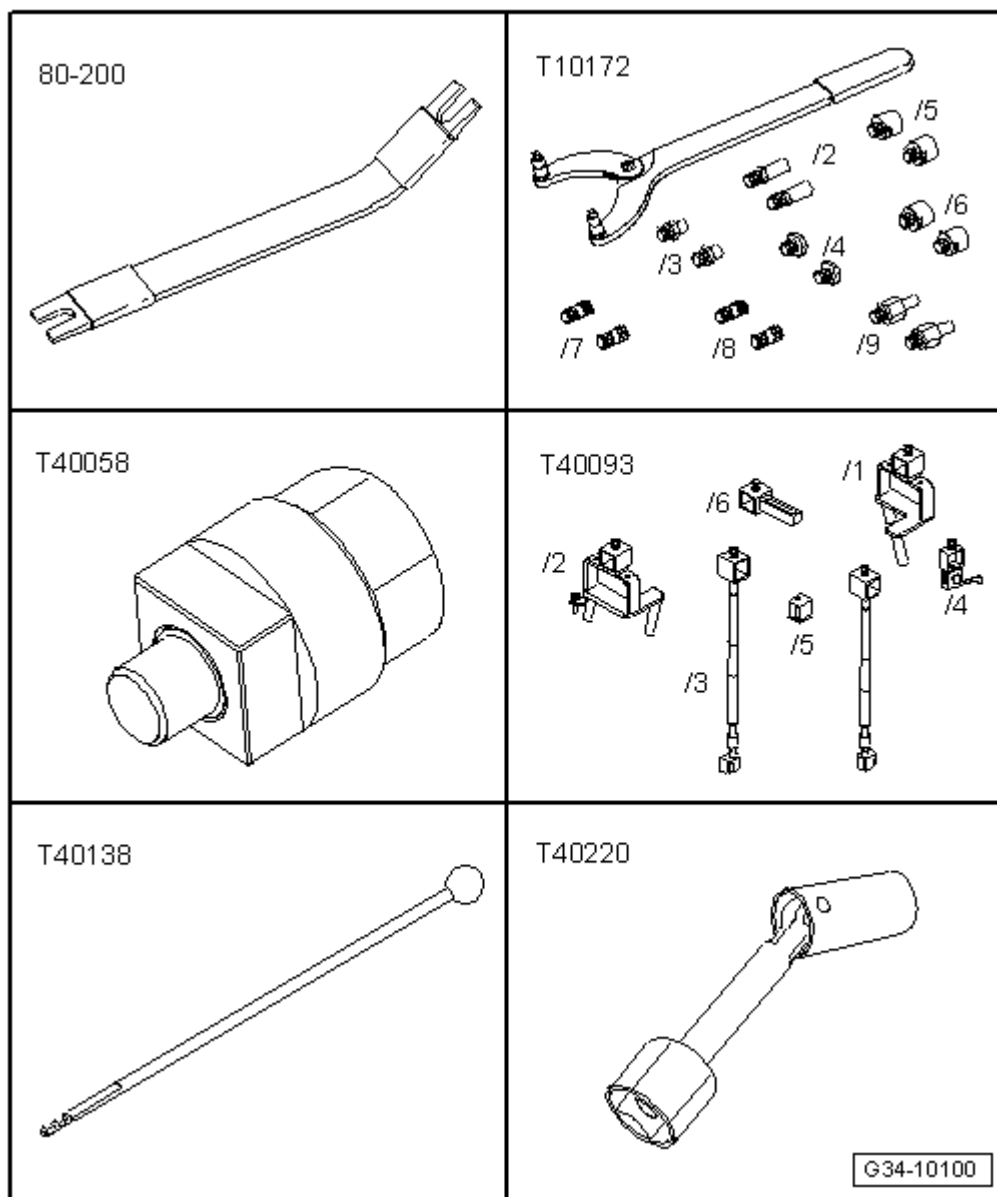


Fig. 214: Identifying Special Tools

Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Pry Lever - Rmv Outside Mirror 80 - 200
- Counterhold Tool Touareg V10 T10172 with Adapter T10172/5
- Socket T40058
- Engine Support Supplement Set T40093
- Release Tool f/ Rev. Light Switch Conn. T40138
- Jointed Socket, 12 mm T40220

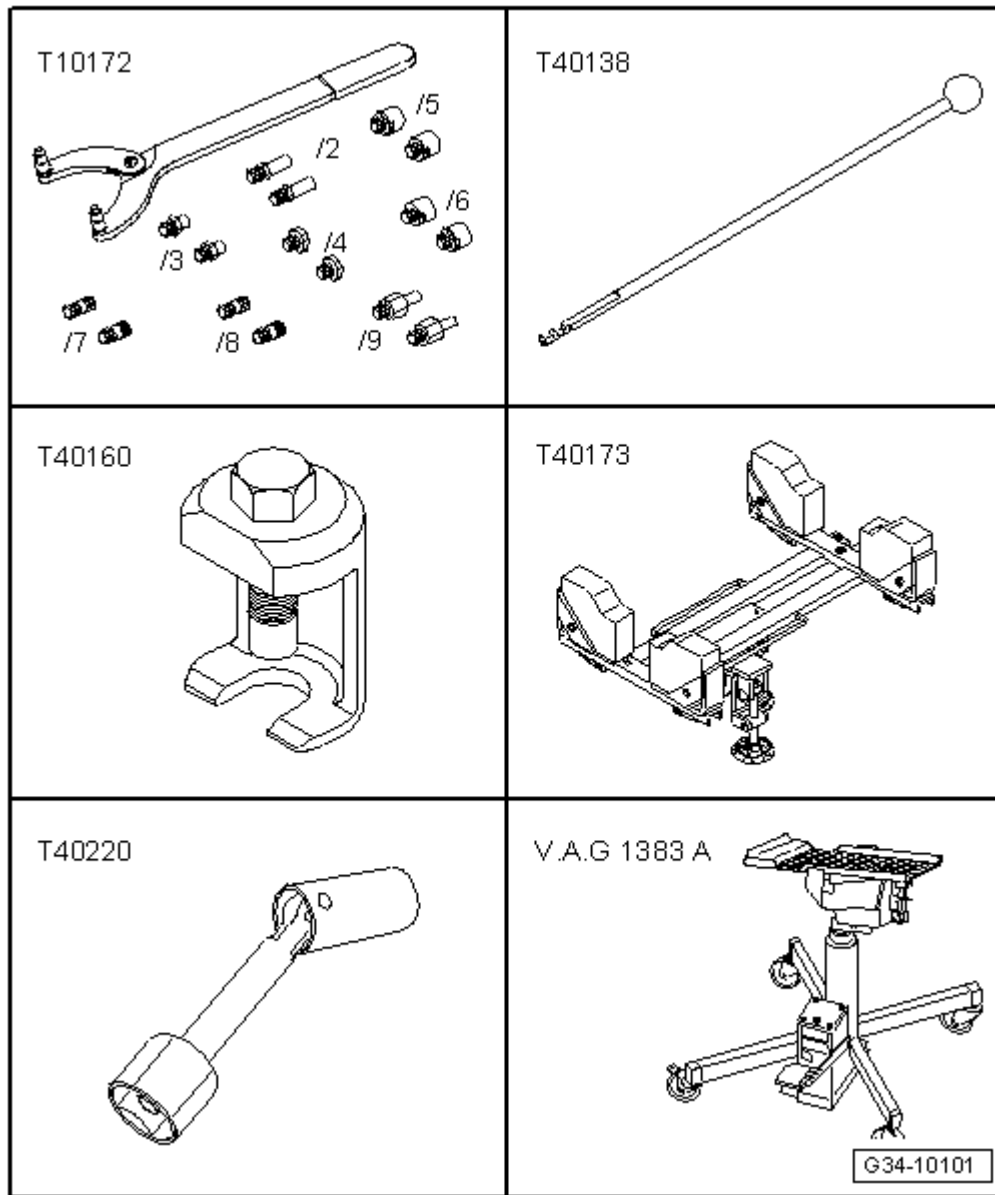


Fig. 215: Identifying Special Tools
 Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Counterhold Tool Touareg V10 T10172 with Adapter T10172/5
- Release Tool f/ Rev. Light Switch Conn. T40138
- Puller for Gear Shaft Linkage T40160
- Transmission Support T40173
- Jointed Socket, 12 mm T40220
- Engine/Transmission Jack V.A.G 1383 A

Special tools and workshop equipment required

- Transmission Lift Hook T40013

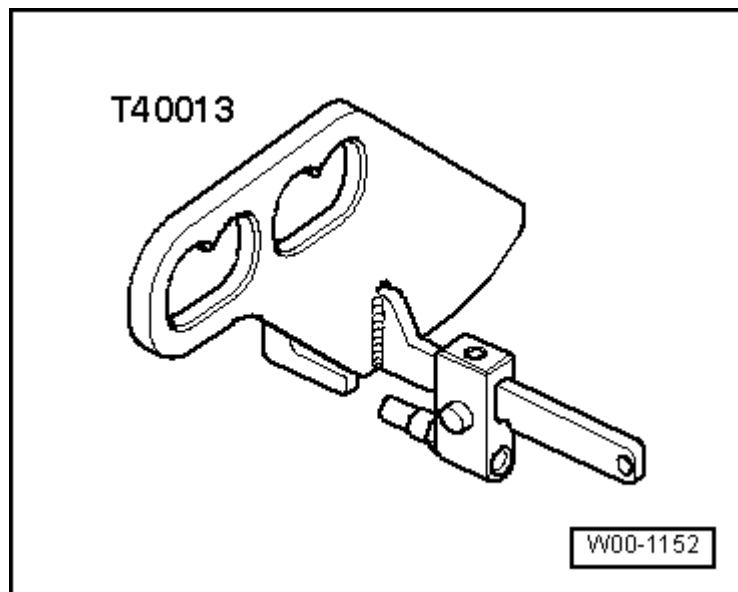


Fig. 216: Lifting Aid T40013
Courtesy of AUDI OF AMERICA, LLC

- Shop Crane VAS 6100

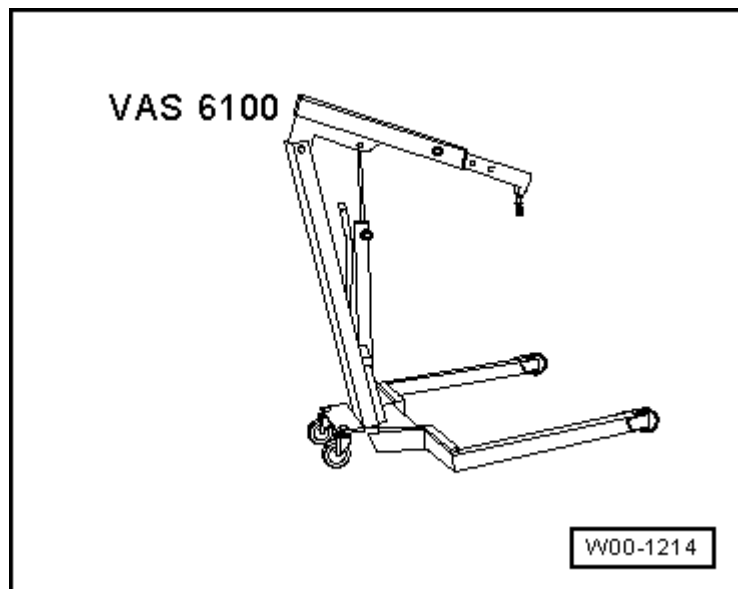


Fig. 217: Identifying Shop Crane VAS 6100
Courtesy of AUDI OF AMERICA, LLC

- Trim Removal Wedge 3409

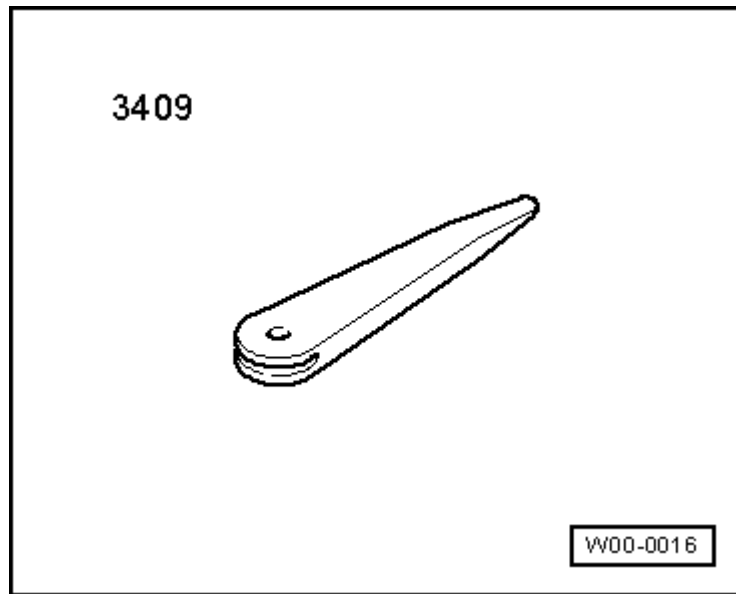


Fig. 218: 3409 Wedge
Courtesy of AUDI OF AMERICA, LLC

- Hose Clip Pliers V.A.G 1275

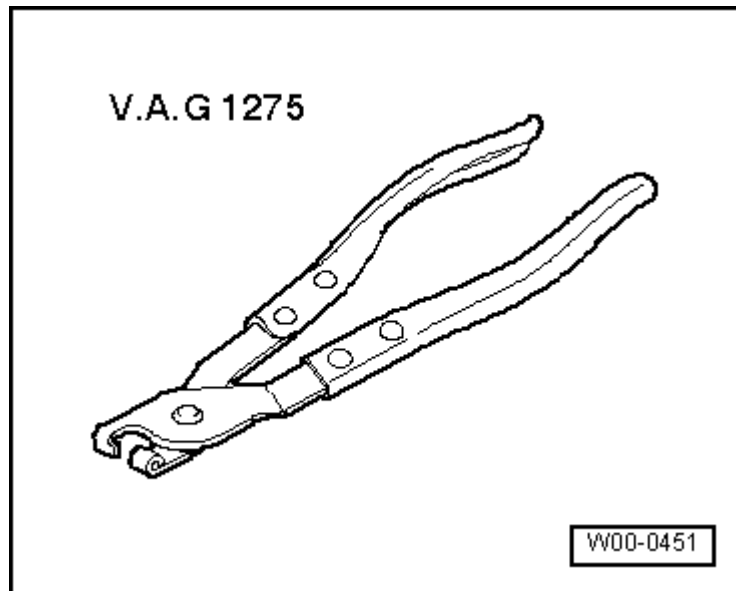


Fig. 219: Hose Clamp Pliers V.A.G 1275
Courtesy of AUDI OF AMERICA, LLC

- Transmission Support T10337

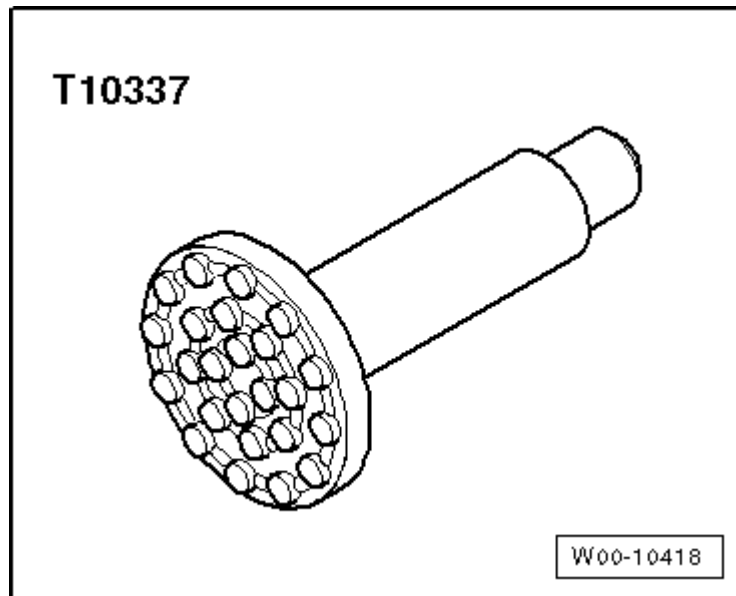


Fig. 220: Identifying Gearbox Support T10337
Courtesy of AUDI OF AMERICA, LLC

- Puller for Gear Shaft Linkage T40160

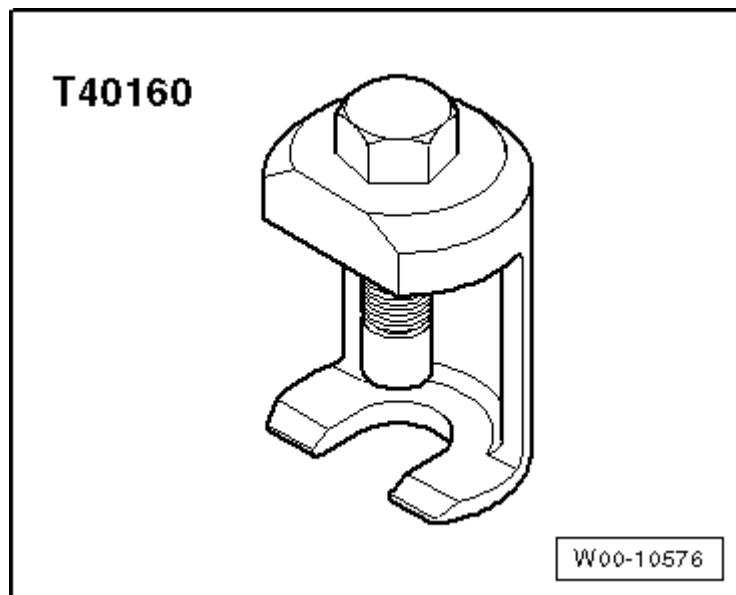


Fig. 221: Puller T40160
Courtesy of AUDI OF AMERICA, LLC

- Extractor T40176

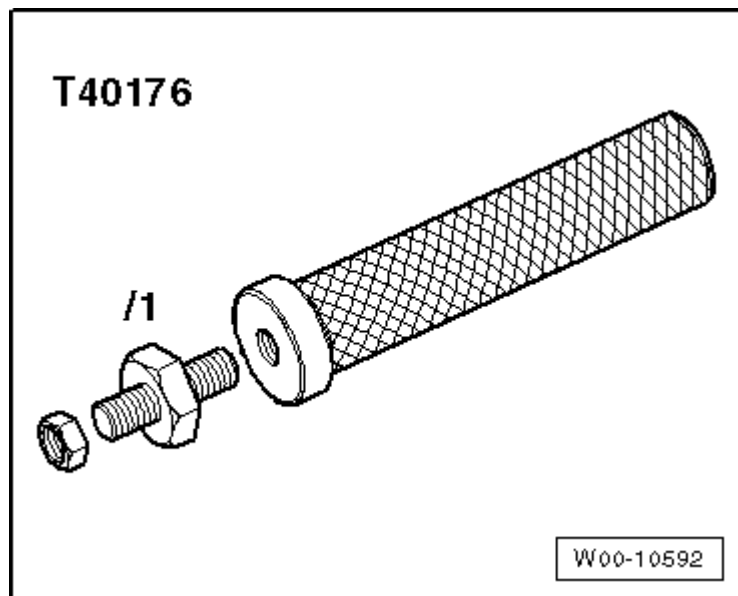


Fig. 222: Extractor T40176

Courtesy of AUDI OF AMERICA, LLC

- Engine Bung Set VAS 6122

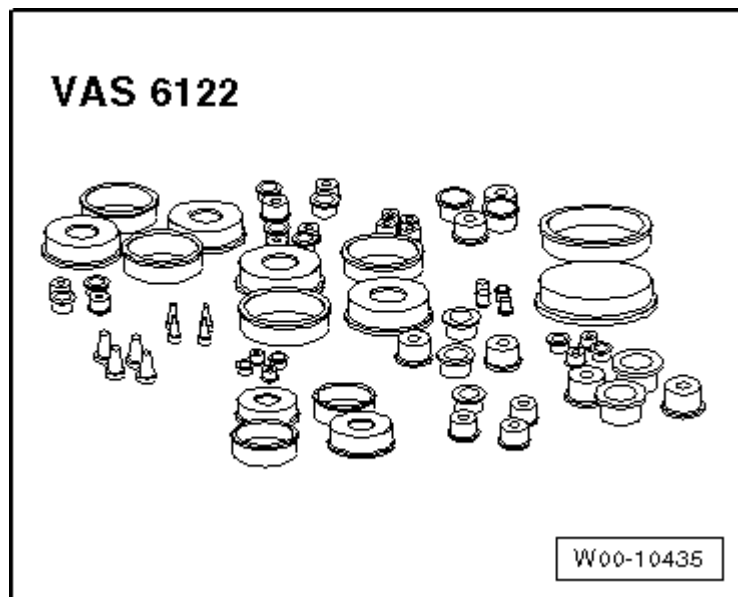


Fig. 223: Engine Bung Set Plugs VAS 6122

Courtesy of AUDI OF AMERICA, LLC

- Assembly Aid T40169

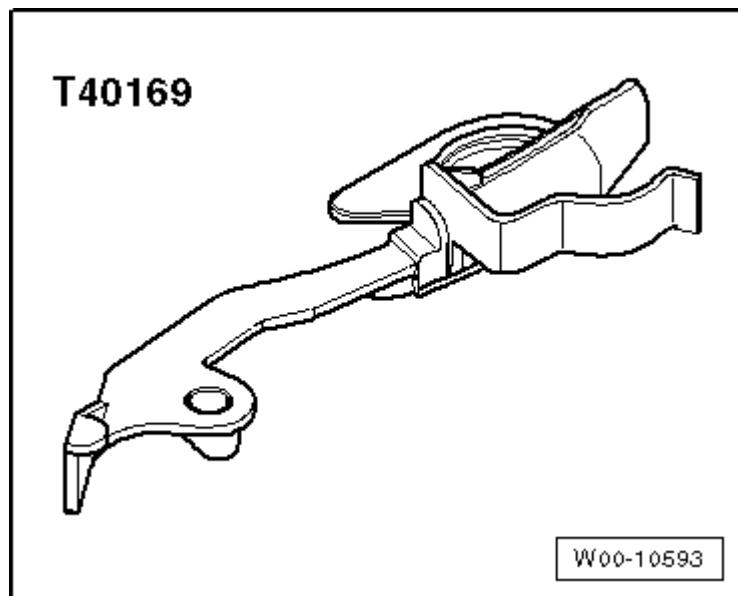


Fig. 224: Assembly Aid T40169
Courtesy of AUDI OF AMERICA, LLC

- Transportation Lock T40170

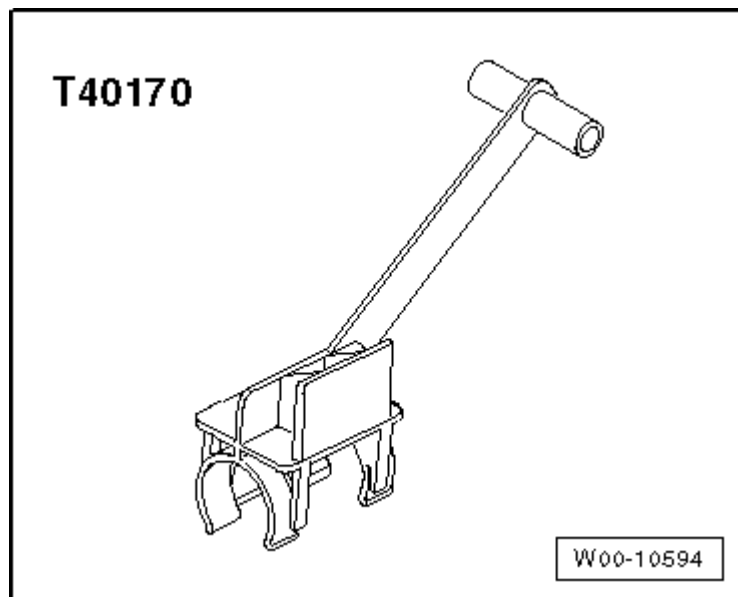


Fig. 225: Transportation Lock T40170
Courtesy of AUDI OF AMERICA, LLC

- Torque Wrench 5-50 Nm V.A.G 1331

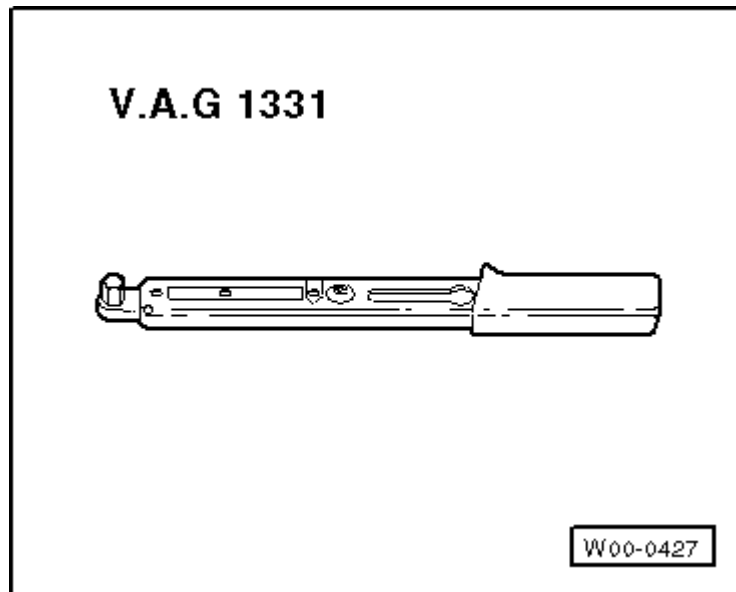


Fig. 226: Identifying Torque Wrench (5 To 50 Nm) V.A.G 1331
Courtesy of AUDI OF AMERICA, LLC

- Pulling Hook T20143/1

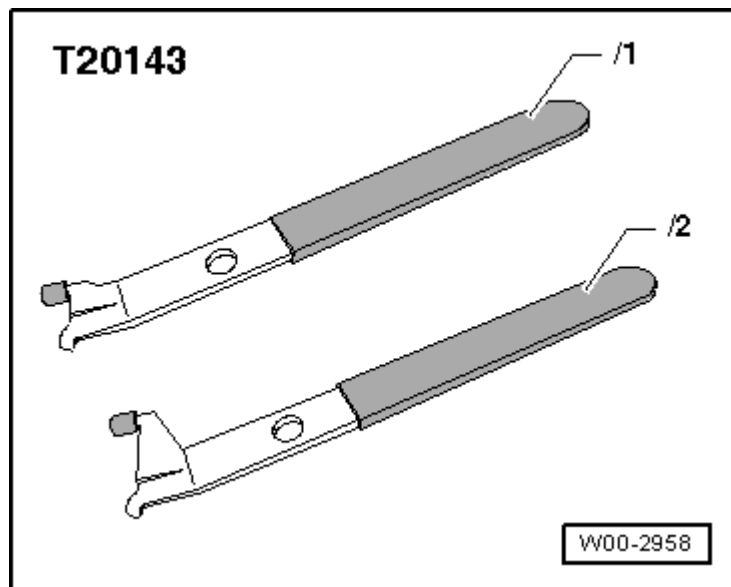


Fig. 227: Extractor Hook T20143
Courtesy of AUDI OF AMERICA, LLC

- Shock Absorber Set T10001/1

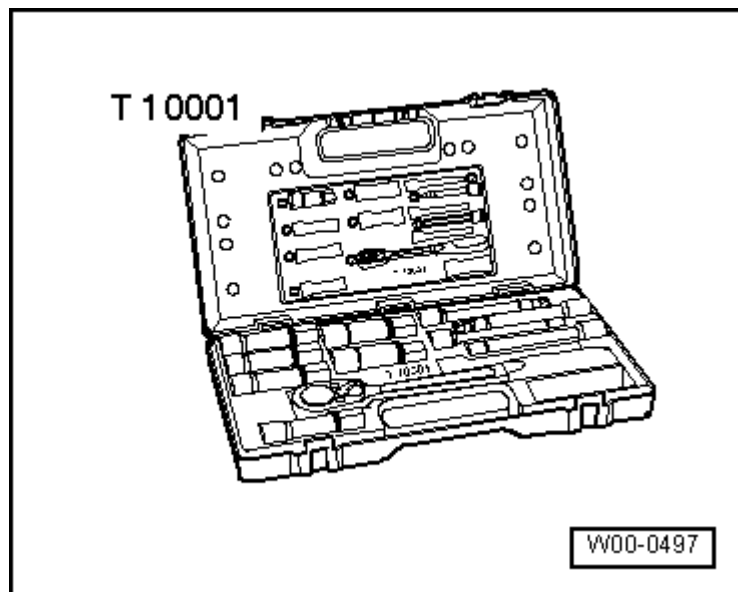


Fig. 228: Identifying Shock Absorber Set T10001
Courtesy of AUDI OF AMERICA, LLC

- Used Oil Collecting and Extracting Device V.A.G 1782

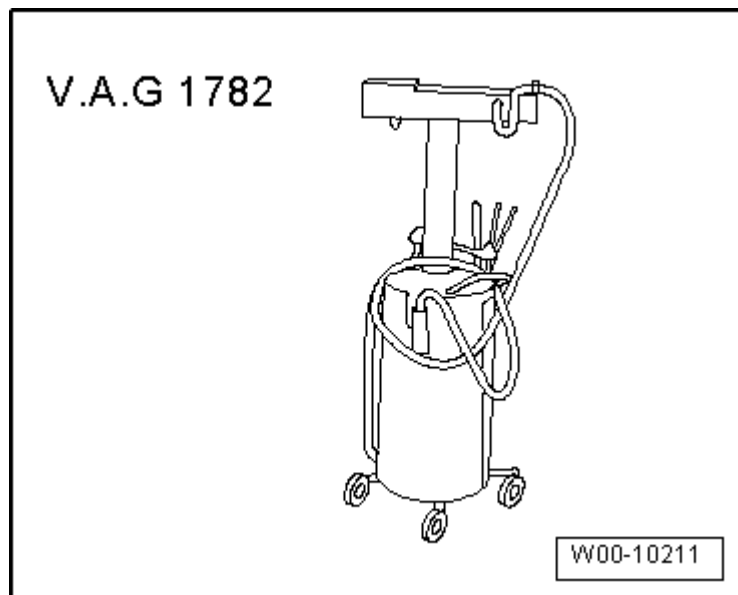


Fig. 229: Identifying Oil Extractor V.A.G 1782
Courtesy of AUDI OF AMERICA, LLC

- Thrust Plate VW 401

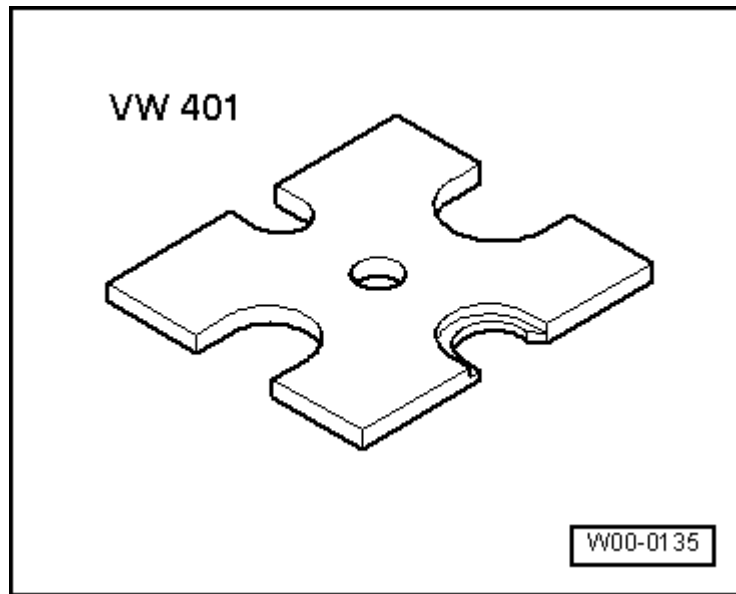


Fig. 230: Thrust Plate VW 401
Courtesy of AUDI OF AMERICA, LLC

- Thrust Plate VW 402

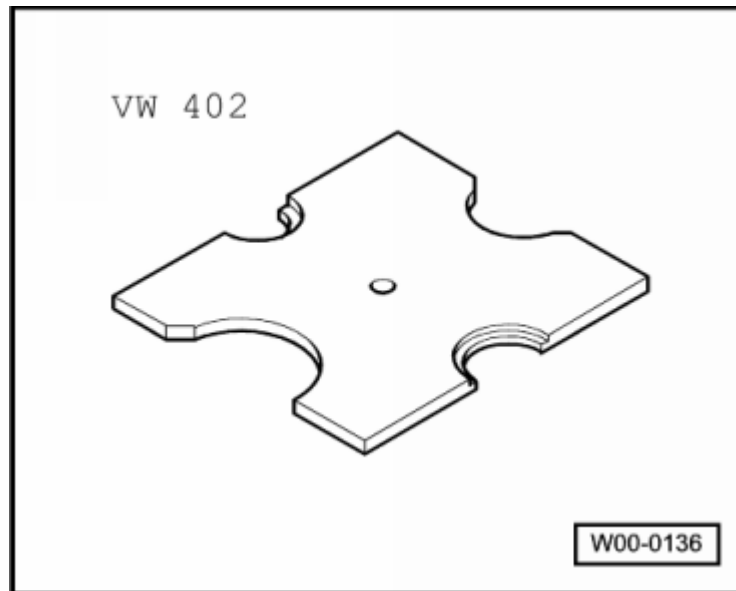


Fig. 231: Thrust Plate VW 402
Courtesy of AUDI OF AMERICA, LLC

- Thrust Disc VW 412

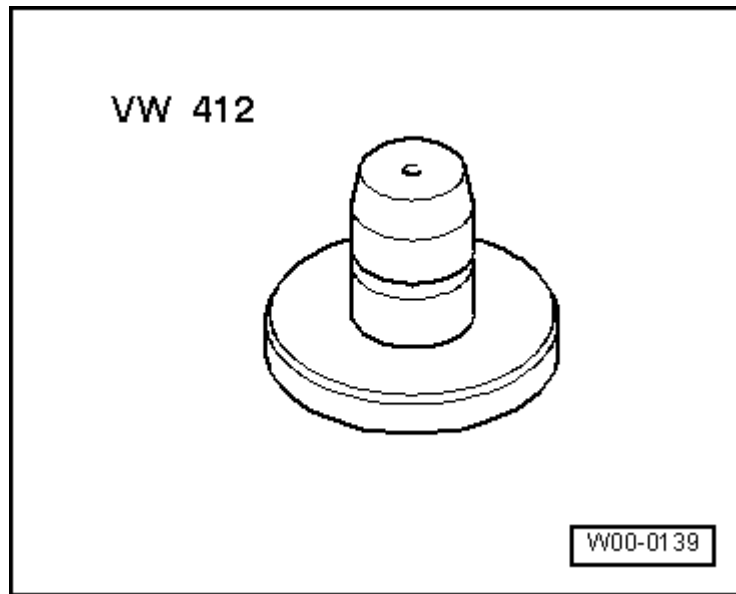


Fig. 232: Punch VW 412
Courtesy of AUDI OF AMERICA, LLC

- Press Tube 30 - 100

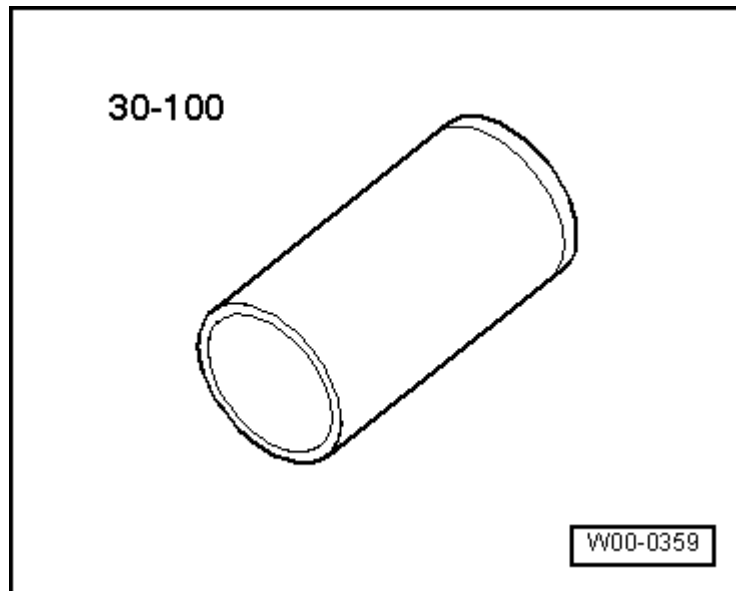


Fig. 233: Press Tube 30 - 100
Courtesy of AUDI OF AMERICA, LLC

- Thrust Piece for Final Drive at Gearbox T40165

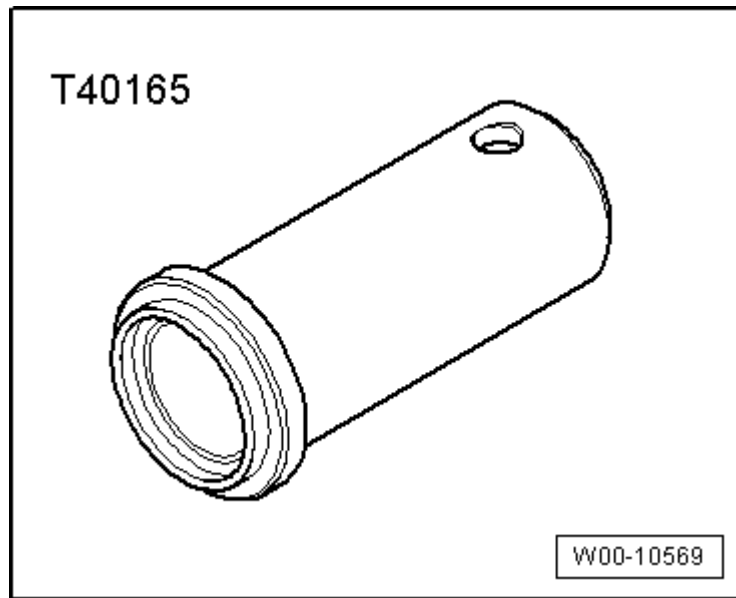


Fig. 234: Thrust Piece for Final Drive at Gearbox T40165
Courtesy of AUDI OF AMERICA, LLC

- Oil Seal Installing Tool T40239

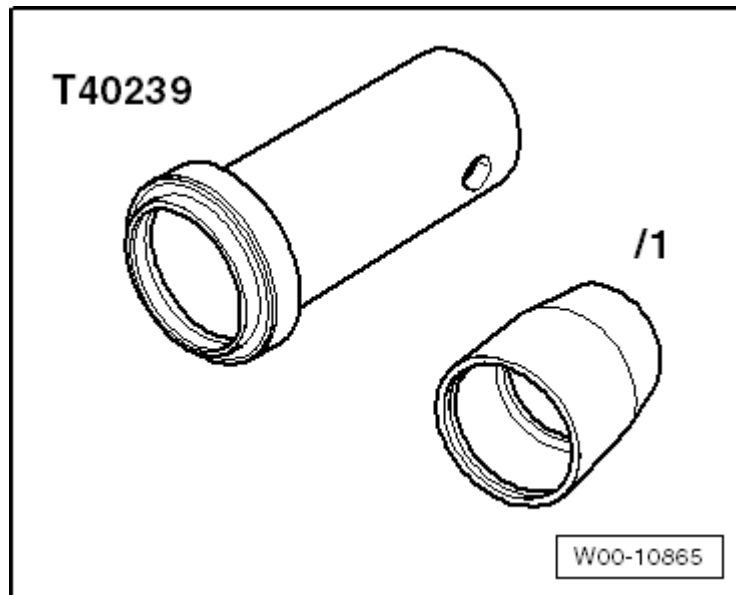


Fig. 235: Subframe Support Assembling Device T40239
Courtesy of AUDI OF AMERICA, LLC

- Not illustrated:
- Used Oil Collection and Extraction Device V.A.G 1782