

TRANSMISSION

Final Drive, Differential - S-Tronic Transmission 0B5 AWD (Sedan)

39 FINAL DRIVE, DIFFERENTIAL

GENERAL INFORMATION

TRANSMISSION FLUID LEVEL, CHECKING AND FILLING

Special tools and workshop equipment required

- Used Oil Collection and Extraction Device V.A.G 1782
- Engine/Transmission Jack V.A.G 1383 A
- Gearbox Support T10337
- Pressurized Gearbox Oil Filler VAS 6617
- Protective goggles

Procedure

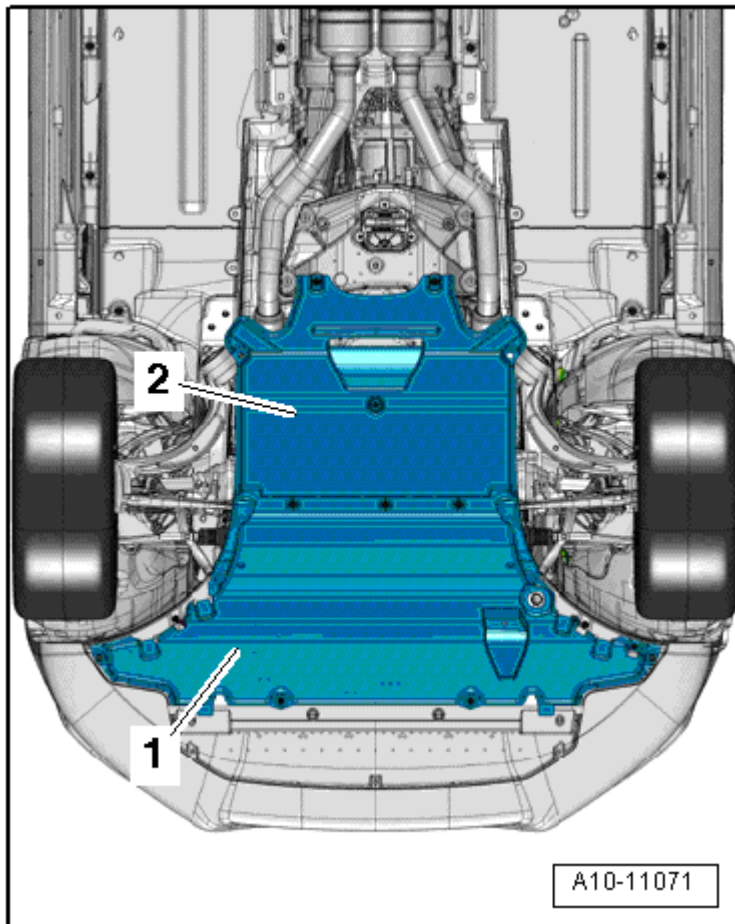


Fig. 1: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

NOTE: REPAIR INFORMATION

CLEANLINESS WORKING CONDITIONS

Do not confuse the transmission (mtf) chamber with the atf chamber.

- Gear oil at about 20 °C (68 °F) (room temperature).
- Move the vehicle onto a four-pillar shop hoist or over a work pit so that it is absolutely horizontal.
- The VAS 6617 must be clean. Flush it with transmission fluid (MTF), if necessary. Do not mix other transmission fluids.
- The transmission must be still for at least 15 minutes to make sure the oil settles internally.

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

Vehicles with an ATF pipe filter -arrow- on the back of the transmission on the left side

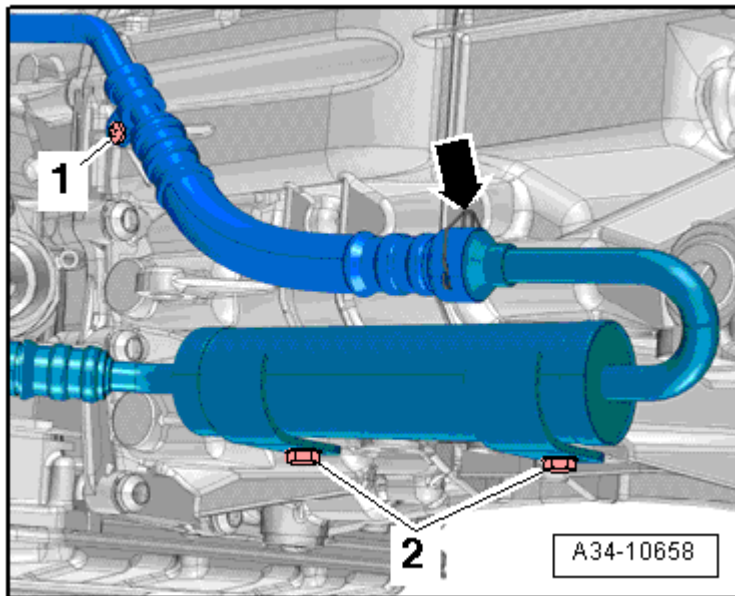


Fig. 2: Identifying ATF Pipe Filter

Courtesy of AUDI OF AMERICA, LLC

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

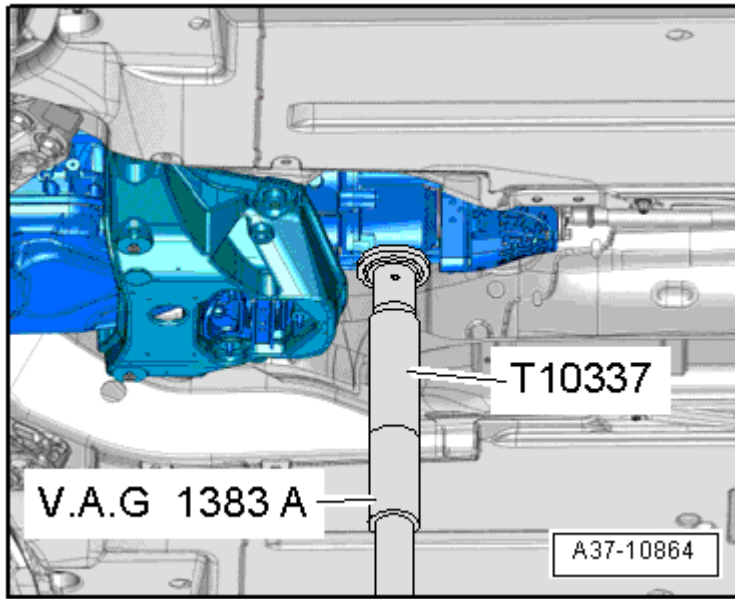


Fig. 3: Mounting T10337 On V.A.G 1383 A And Attach It To The Bottom Of Transmission
Courtesy of AUDI OF AMERICA, LLC

-- Raise the transmission slightly.

NOTE: If the tunnel crossmember was removed in or to check or add transmission fluid, then it is necessary to bring the transmission back into its installed position after removing the tunnel crossmember. This is the only way the transmission fluid level can be adjusted correctly.

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

-- Remove the two bolts -2- and push the ATF pipe filter to the side.

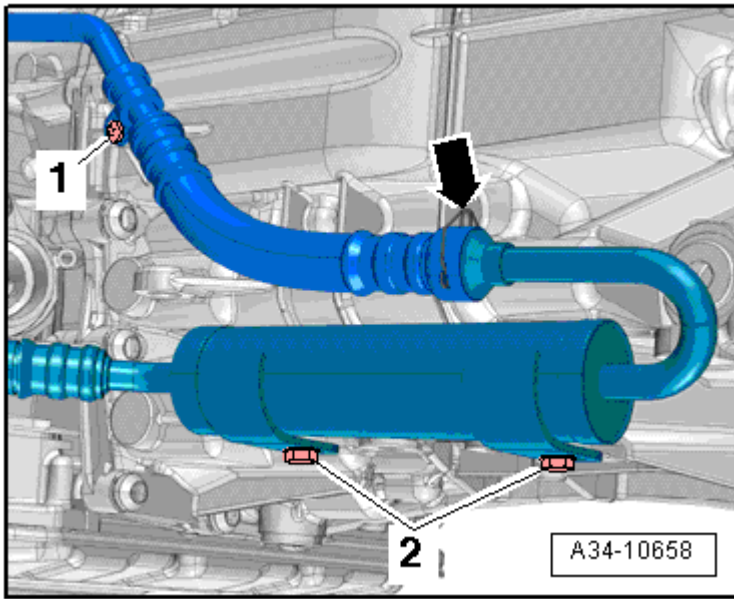


Fig. 4: Identifying ATF Pipe Filter

Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -1- and -arrow-.

Move the ATF pipe filter to the side. The fill and check plug for the transmission fluid (MFT) is not accessible.

Vehicles without an ATF pipe filter on the back of the transmission on the left side:

NOTE: It is not necessary to remove the tunnel crossmember if the vehicle does not have an ATF pipe filter on the back of the transmission on the left side.

Place a cloth over the tunnel crossmember to prevent transmission fluid (MTF) from getting into the cast pockets on the top.

-- Place a cloth over the tunnel crossmember.

All Vehicles

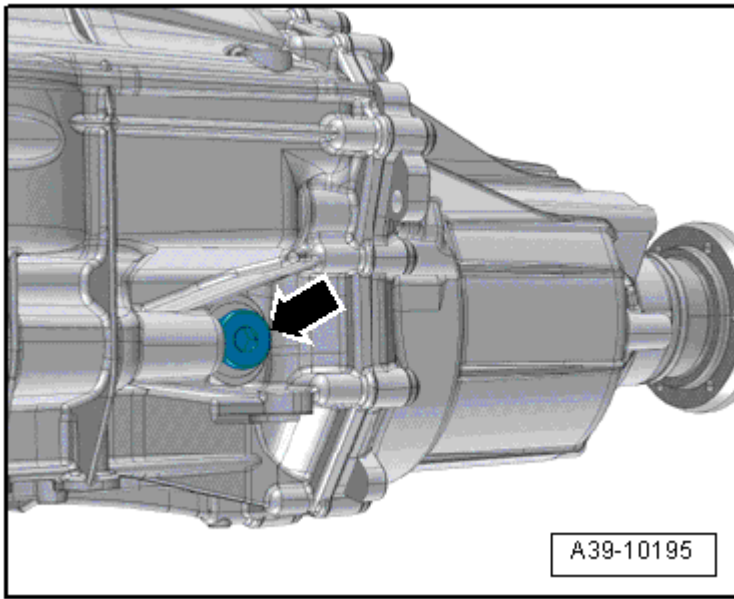


Fig. 5: Identifying Fill And Check Plug
Courtesy of AUDI OF AMERICA, LLC

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

WARNING: Danger of eye injury.

- **Wear protective goggles.**

-- Remove the fill and check plug -arrow- on the side of the transmission housing.

- The transmission fluid (MTF) must be up to the lower edge of the check and fill hole.

If the transmission fluid (MTF) is below the lower edge of the check and fill hole:

-- Fill the transmission fluid (MTF) slowly using VAS 6617 until it starts to run out of the check and fill hole.

- Transmission fluid (MTF) specification.

-- Repeat the process every 15 seconds until it is not possible to add any more transmission fluid (MTF).

NOTE: **It is important to follow the waiting period to make sure the various oil spaces in the transmission are filled equally.**

-- Tighten the plug.

- Tightening specification, refer to **MANUAL TRANSMISSION FLUID DRAIN AND CHECK PLUGS OVERVIEW**

Install in reverse order, paying attention to the following:

Vehicles with an ATF pipe filter -arrow- on the back of the transmission on the left side

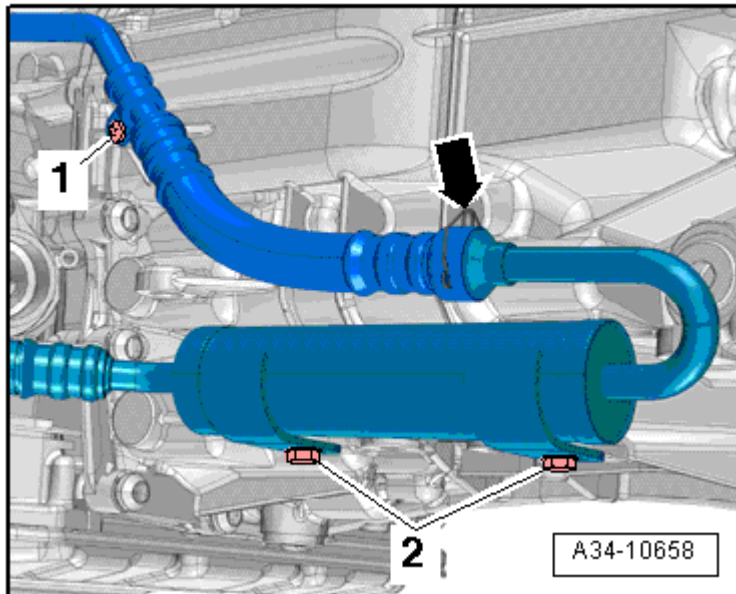


Fig. 6: Identifying ATF Pipe Filter
Courtesy of AUDI OF AMERICA, LLC

-- Install the bolts -2-.

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

-- Install tunnel crossmember. Refer to TUNNEL CROSSMEMBER .

Vehicles without an ATF pipe filter on the back of the transmission on the left side

NOTE: It is not necessary to clean the tunnel crossmember if the vehicle does not have an ATF pipe filter on the back of the transmission on the left side.

All the transmission fluid (MTF) must be removed completely if any transmission fluid (MTF) has gotten into the cast pockets on the top of the tunnel crossmember.

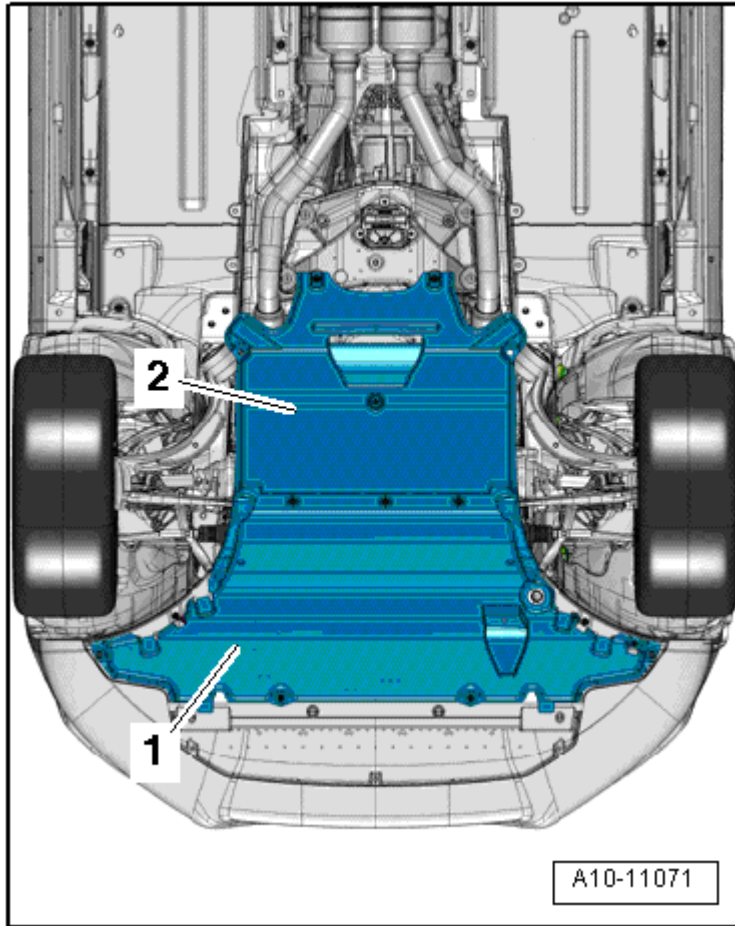
-- Remove the cloth from the tunnel crossmember.

-- Clean the tunnel crossmember and wipe off any remaining transmission fluid.

MANUAL TRANSMISSION FLUID, DRAINING

Special tools and workshop equipment required

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

Procedure**Fig. 7: Removing Noise Insulation**

Courtesy of AUDI OF AMERICA, LLC

NOTE: REPAIR INFORMATION**CLEANLINESS WORKING CONDITIONS**

- Gear oil at about 20 °C (68 °F) (room temperature).
- Move vehicle onto a four-pillar shop hoist or over a work pit so that it is absolutely horizontal.

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

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

WARNING: Danger of eye injury.

- Wear protective goggles.

NOTE: Place a cloth over the tunnel crossmember to prevent transmission fluid (MTF) from getting into the cast pockets on the top.

-- Place a cloth over the tunnel crossmember.

Vehicles with a Transmission Fluid (MTF) Drain Plug -arrow-

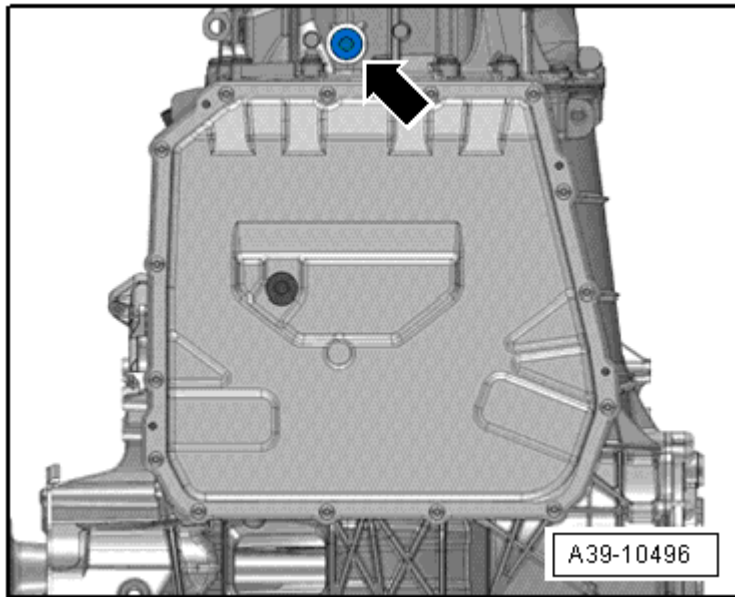


Fig. 8: Locating (MTF) Drain Plug
Courtesy of AUDI OF AMERICA, LLC

NOTE: The transmission fluid (MTF) drain plug is located behind the tunnel crossmember.

-- Remove the transmission fluid (MFT) drain plug -arrow- on the bottom of the transmission housing.

-- Drain the transmission fluid (MTF).

-- Tighten the transmission fluid drain plug (MTF) -arrow-.

- Tightening specification, transmission fluid drain plug (MTF), refer to **MANUAL TRANSMISSION FLUID DRAIN AND CHECK PLUGS OVERVIEW**

Vehicles with Transmission Fluid Temperature Sensor 2 -G754- -1- instead of a Transmission Fluid (MTF) Drain Plug

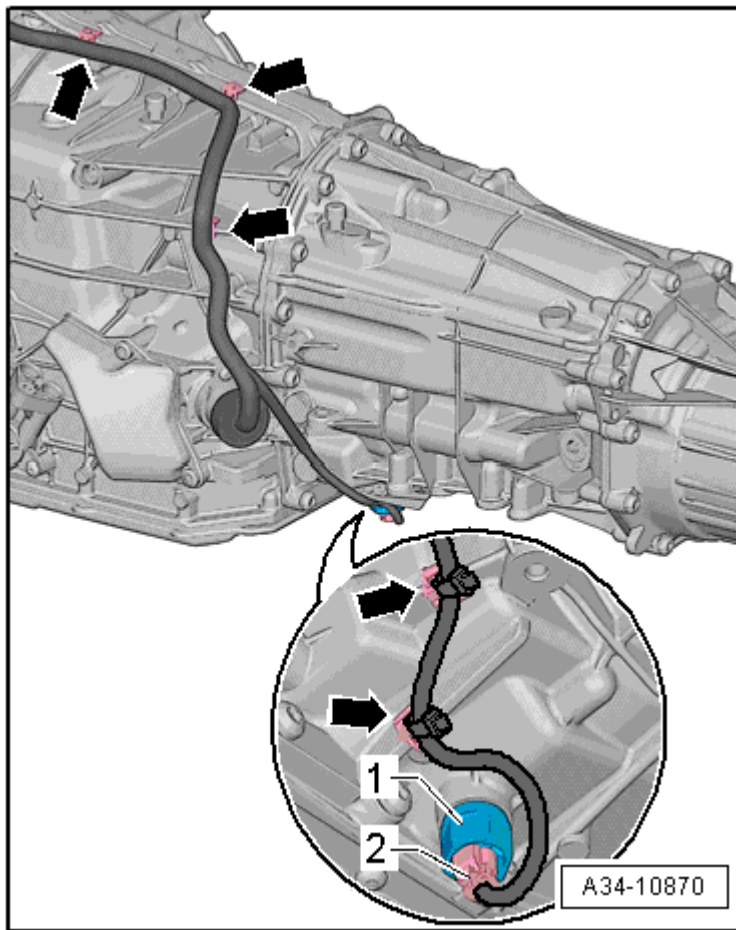


Fig. 9: Transmission Fluid Temperature Sensor

Courtesy of AUDI OF AMERICA, LLC

-- Turn off the ignition.

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

-- Disconnect the connector -2- from the transmission fluid temperature sensor 2 and tie it up.

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

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

-- Drain the transmission fluid (MTF).

-- Tighten transmission fluid temperature sensor 2 -1- and connect the connector -2-.

- Tightening specification, transmission fluid temperature sensor 2, refer to **Transmission Fluid Temperature Sensor 2 -G754-, REMOVING AND INSTALLING**

All Vehicles

CAUTION: There is a risk of damaging the transmission.

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

- **Do not start the engine and**
- **Do not tow the vehicle**

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

MANUAL TRANSMISSION FLUID, FILLING

Special tools and workshop equipment required

- Used Oil Collection and Extraction Device V.A.G 1782
- Engine/Transmission Jack V.A.G 1383 A
- Gearbox Support T10337
- Pressurized Gearbox Oil Filler VAS 6617
- Protective goggles

Procedure

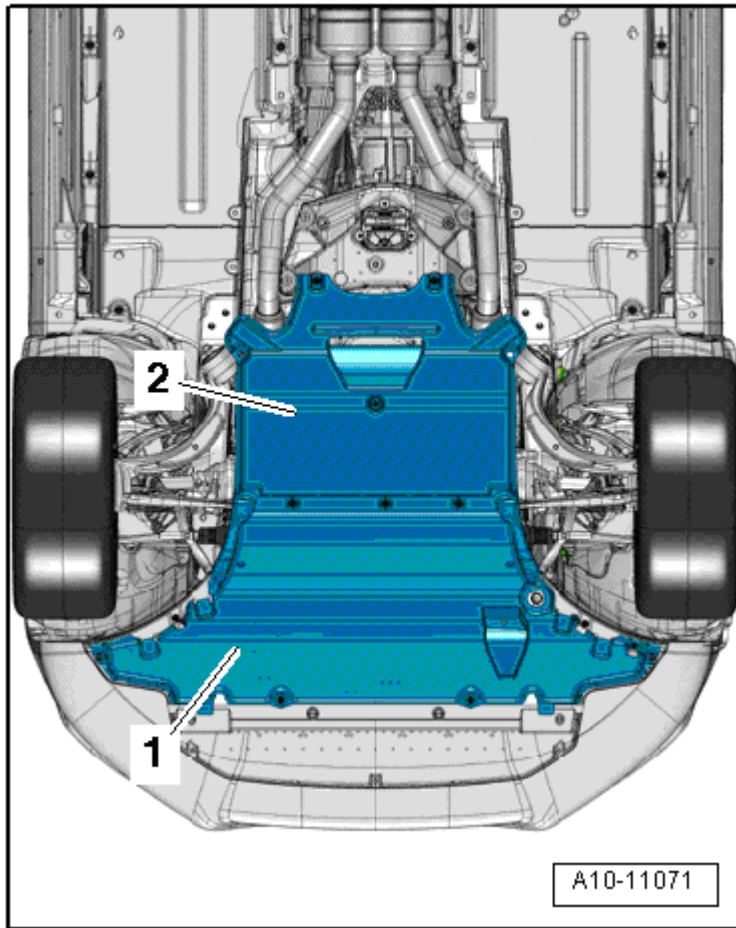


Fig. 10: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

NOTE: **REPAIR INFORMATION**

CLEANLINESS WORKING CONDITIONS

- Gear oil at about 20 °C (68°F) (room temperature).
- Move the vehicle onto a four-pillar shop hoist or over a work pit so that it is absolutely horizontal.
- The VAS 6617 must be clean. Flush it with transmission fluid (MTF), if necessary. Do not mix other transmission fluids.
- The transmission must be still for at least 15 minutes to make sure the oil settles internally.

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

Vehicles with an ATF pipe filter -arrow- on the back of the transmission on the left side

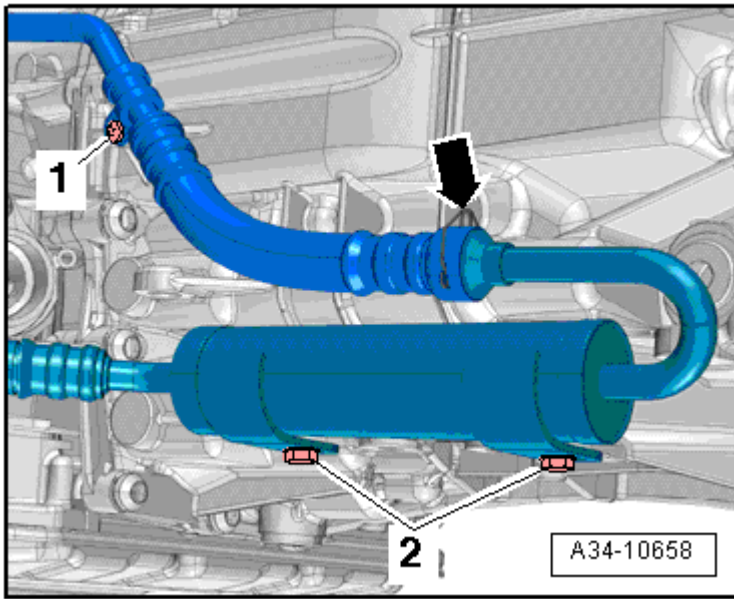


Fig. 11: Identifying ATF Pipe Filter
Courtesy of AUDI OF AMERICA, LLC

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

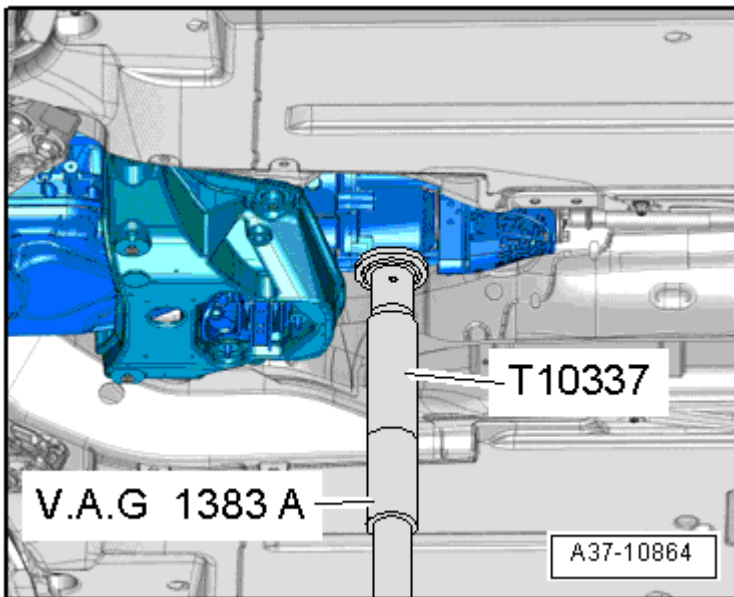


Fig. 12: Mounting T10337 On V.A.G 1383 A And Attach It To The Bottom Of Transmission
Courtesy of AUDI OF AMERICA, LLC

-- Raise the transmission slightly.

NOTE: If the tunnel crossmember was removed in or to check or add transmission fluid, then it is necessary to bring the transmission back into its installed

position after removing the tunnel crossmember. This is the only way the transmission fluid level can be adjusted correctly.

- Remove the tunnel crossmember. Refer to **TUNNEL CROSSMEMBER** .
- Remove the two bolts -2- and push the ATF pipe filter to the side.

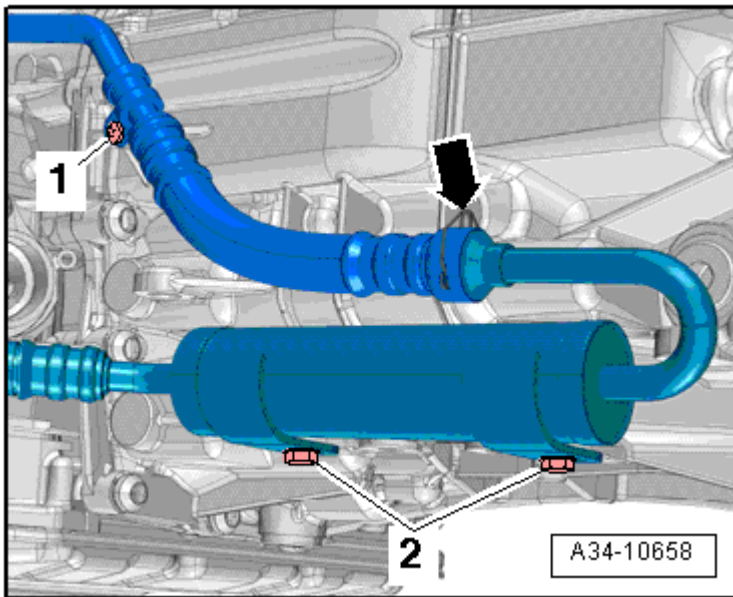


Fig. 13: Identifying ATF Pipe Filter
 Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -1- and -arrow-.

Move the ATF pipe filter to the side. The fill and check plug for the transmission fluid (MFT) is not accessible.

Vehicles without an vehicles on the back of the transmission on the left side

NOTE: It is not necessary to remove the tunnel crossmember if the vehicle does not have an ATF pipe filter on the back of the transmission on the left side.

Place a cloth over the tunnel crossmember to prevent transmission fluid (MTF) from getting into the cast pockets on the top.

- Place a cloth over the tunnel crossmember.

All Vehicles

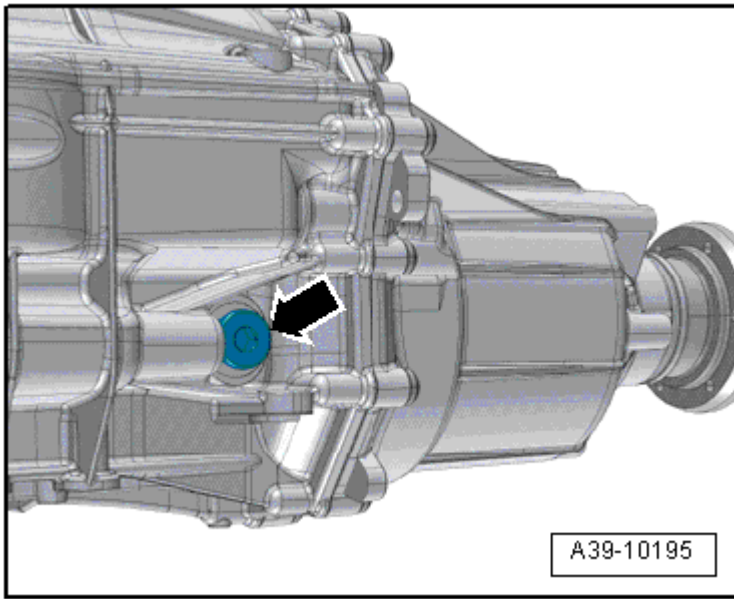


Fig. 14: Identifying Fill And Check Plug
Courtesy of AUDI OF AMERICA, LLC

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

WARNING: Danger of eye injury.

- **Wear protective goggles.**

-- Remove the fill and check plug -arrow- on the side of the transmission housing.

-- Fill the transmission fluid (MTF) using VAS 6617 until it starts to run out of the check and fill hole.

- Transmission fluid (MTF) specification.

-- Perform this process every 15 seconds with 50 ml of transmission fluid (MTF) until the transmission is full.

NOTE: **It is important to follow the waiting period to make sure the various oil spaces in the transmission are filled equally.**

- The transmission fluid (MTF) must be up to the lower edge of the check and fill hole.

-- Tighten the plug.

- Tightening specification, refer to **MANUAL TRANSMISSION FLUID DRAIN AND CHECK PLUGS OVERVIEW**

NOTE: **It is not necessary to check the oil level again at this stage.**

Install in reverse order, paying attention to the following:

Vehicles with an ATF pipe filter -arrow- on the back of the transmission on the left side

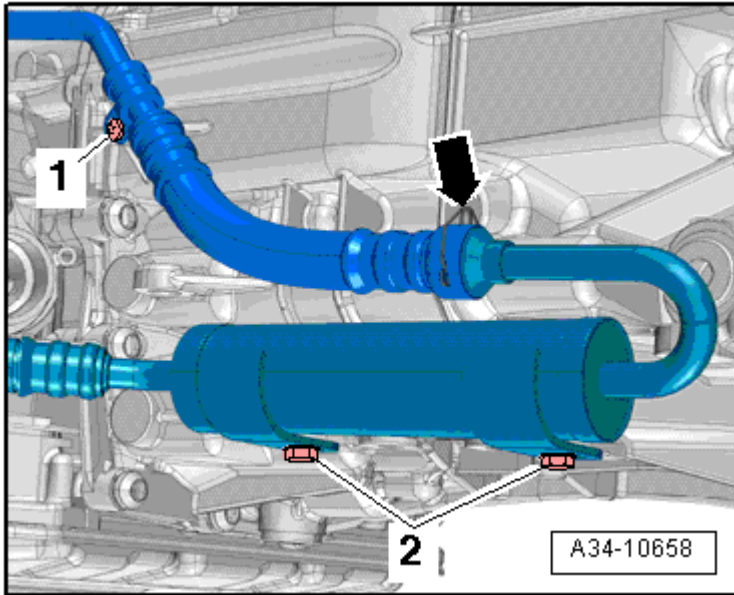


Fig. 15: Identifying ATF Pipe Filter
Courtesy of AUDI OF AMERICA, LLC

-- Install the bolts -2-.

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

-- Install tunnel crossmember. Refer to TUNNEL CROSSMEMBER .

Vehicles without an vehicles on the back of the transmission on the left side

NOTE: It is not necessary to clean the tunnel crossmember if the vehicle does not have an ATF pipe filter on the back of the transmission on the left side.

All the transmission fluid (MTF) must be removed completely if any transmission fluid (MTF) has gotten into the cast pockets on the top of the tunnel crossmember.

-- Remove the cloth from the tunnel crossmember.

-- Clean the tunnel crossmember and wipe off any remaining transmission fluid.

Only for vehicles with transmission fluid temperature sensor 2 -G754- -1-

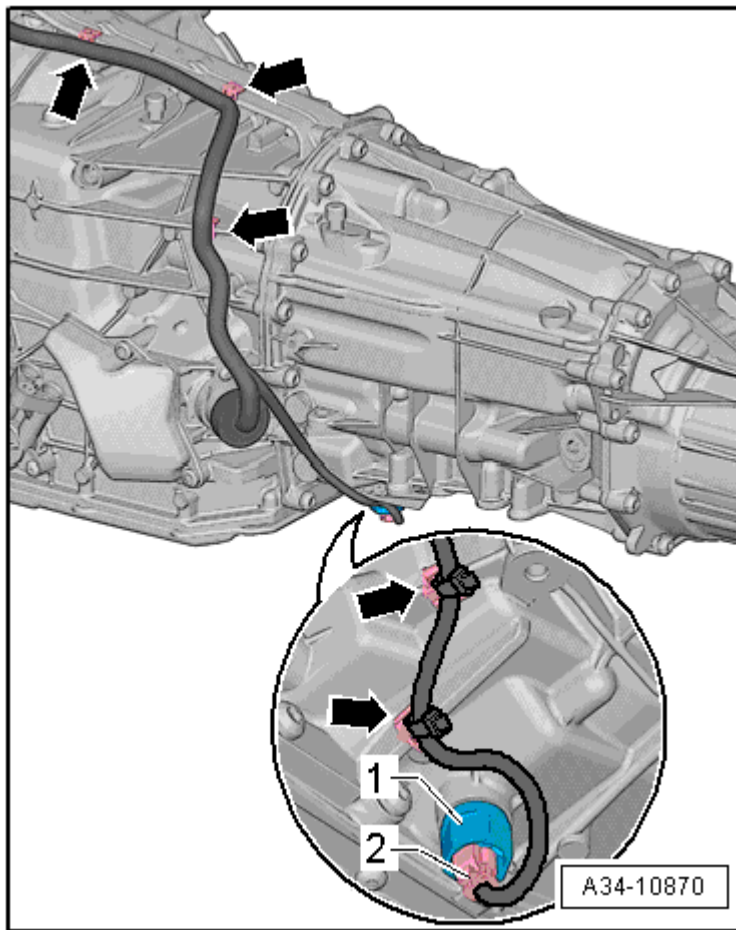


Fig. 16: Transmission Fluid Temperature Sensor

Courtesy of AUDI OF AMERICA, LLC

-- Perform "Guided Function" **02 - Reset Transmission Fluid Temperature Sensor 2 (G754)** on the vehicle diagnosis tester after changing the transmission fluid. Refer to **TRANSMISSION GUIDED FUNCTIONS** .

DESCRIPTION AND OPERATION

MANUAL TRANSMISSION FLUID DRAIN AND CHECK PLUGS OVERVIEW

The manual transmission, the manual transmission and the transfer case in the DSG transmission 0B5 share a common transmission fluid chamber, which is checked and filled by a single plug.

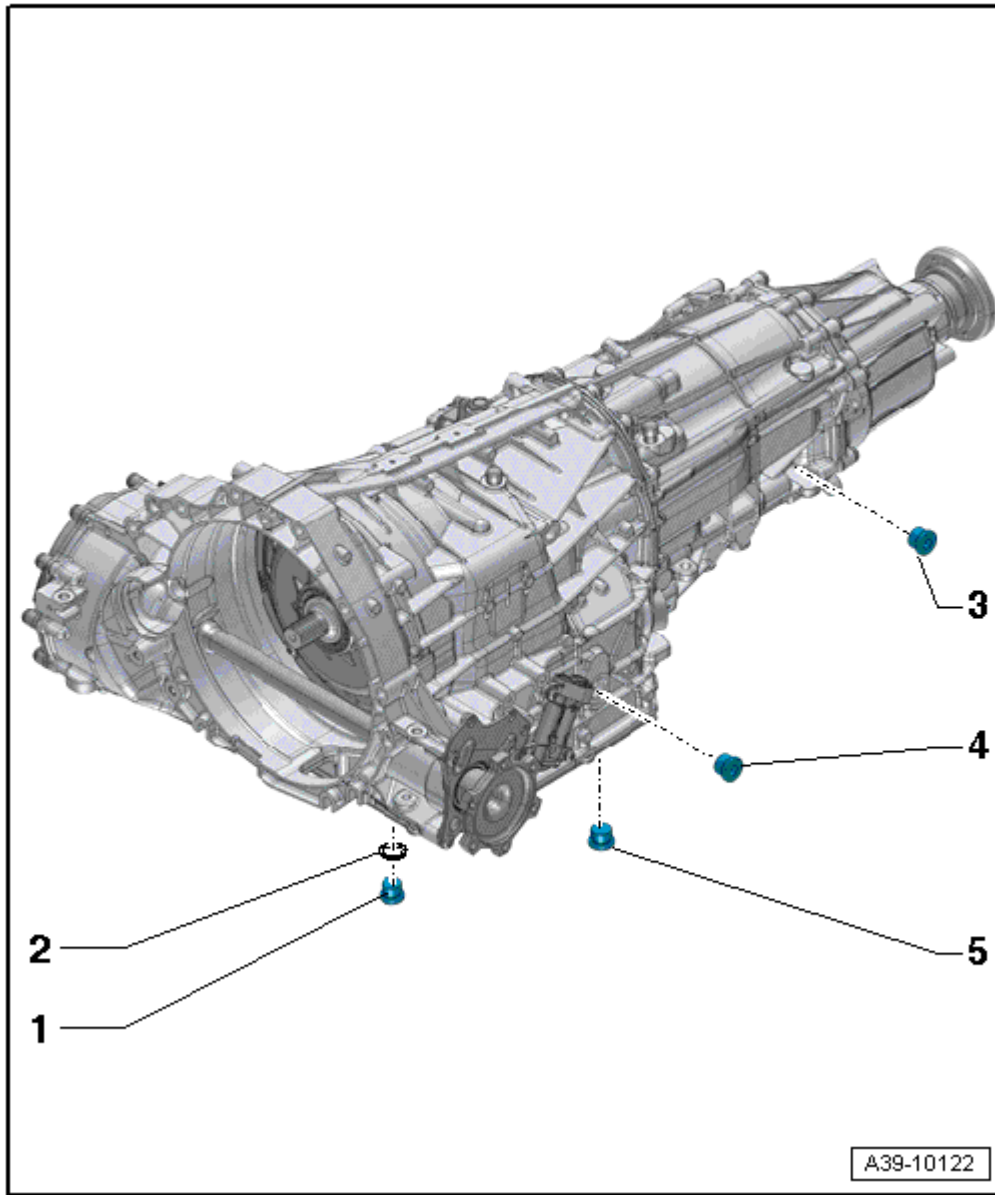


Fig. 17: ATF Drain, Fill And Check Plugs Assembly Overview
 Courtesy of AUDI OF AMERICA, LLC

1. ATF Drain Plug
 - Tightening specification -item 1- **ATF DRAIN, FILL AND CHECK PLUGS ASSEMBLY OVERVIEW**
2. Seal
 - For the ATF drain plug
 - Replace
3. Transmission Fluid (MTF) Fill and Check Plug
 - 45 Nm
 - Inside the manual transmission, front final drive and transfer case

4. ATF fill and Check Plug

- Tightening specification -item 4- **ATF DRAIN, FILL AND CHECK PLUGS ASSEMBLY OVERVIEW**

5. Transmission Fluid (MTF) Drain Plug

- 45 Nm
- Inside the manual transmission, front final drive and transfer case
- Depending on the date of manufacture, transmission fluid temperature sensor 2 -G754- may also serve as the transmission fluid drain plug; tightening specification for removing and installing, refer to **Transmission Fluid Temperature Sensor 2 -G754-, REMOVING AND INSTALLING** .

CENTER DIFFERENTIAL HOUSING OVERVIEW, ATTACHED DRIVESHAFT

NOTE: **REPAIR INFORMATION**

CLEANLINESS WORKING CONDITIONS

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

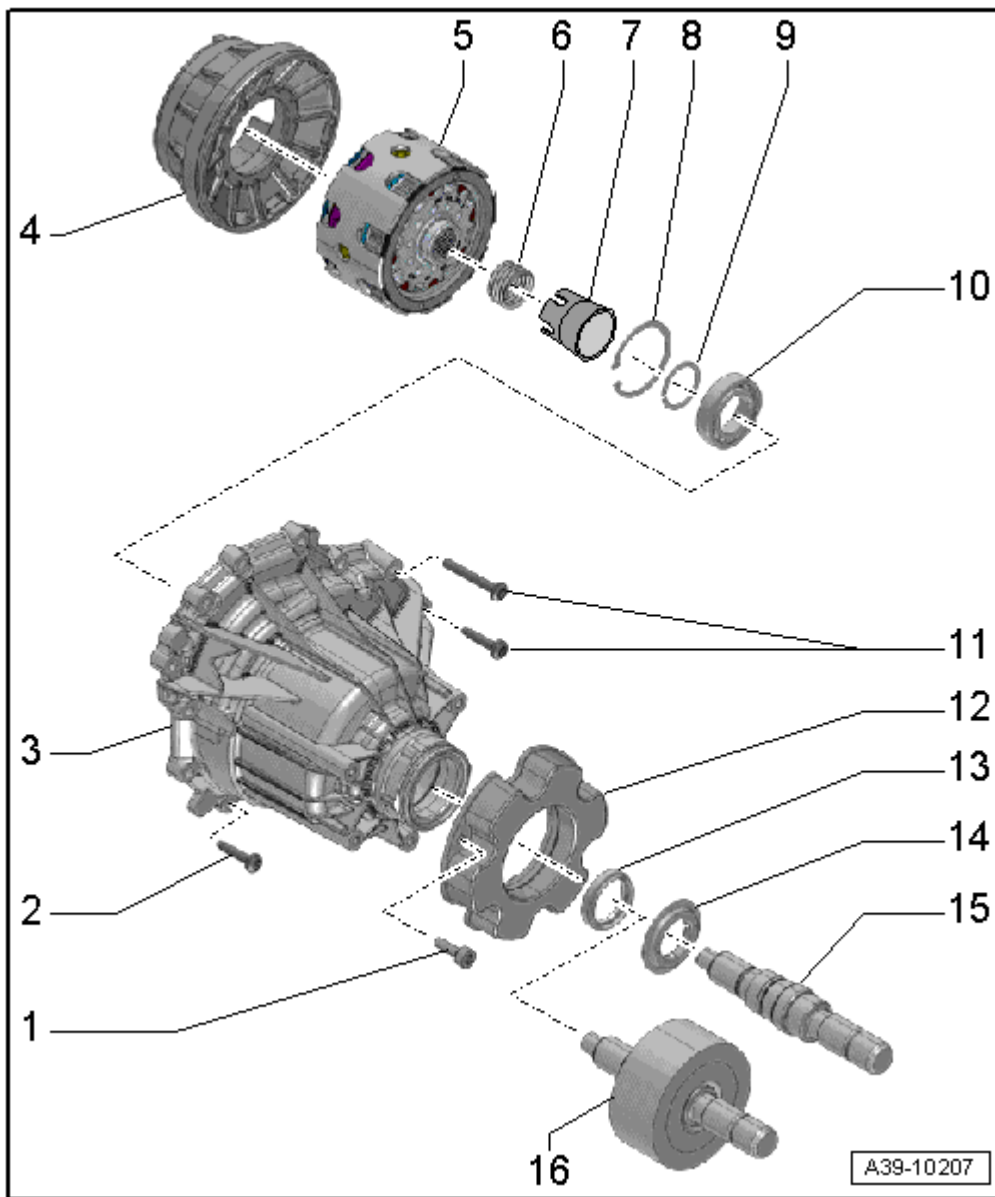


Fig. 18: Center Differential Housing

Courtesy of AUDI OF AMERICA, LLC

1. Bolt
 - 20 Nm + 90° turn
 - Replace
2. Bolt
 - Aluminum bolts
 - Quantity: 11
 - Replace
 - Tightening specification and sequence, refer to **Fig. 19**
3. Housing

- For the center differential
 - Removing and installing, refer to **CENTER DIFFERENTIAL HOUSING, INSTALLED TRANSMISSION AND ATTACHED DRIVESHAFT**
4. Gear Carrier
 - Installed position: The tab must fit into the cut-out in the transmission housing.
 5. Center Differential
 6. Pressure Spring
 7. Guide Sleeve
 - Does not have to be installed again
 8. Locking Ring
 - For the transmission output shaft ball bearing with splines
 - Removing and installing, refer to **TRANSMISSION OUTPUT SHAFT WITH SPLINES, TRANSMISSION OUTPUT SHAFT BALL BEARING WITH SPINES**
 9. Locking Ring
 - For the transmission output shaft with splines
 - Removing and installing, refer to **TRANSMISSION OUTPUT SHAFT WITH SPLINES, TRANSMISSION OUTPUT SHAFT BALL BEARING WITH SPINES**
 10. Ball Bearing
 - For the transmission output shaft with splines
 - Removing and installing, refer to **TRANSMISSION OUTPUT SHAFT WITH SPLINES, TRANSMISSION OUTPUT SHAFT BALL BEARING WITH SPINES**
 11. Bolt
 - Steel bolts
 - Quantity: 2
 - Replace
 - Tightening specification and sequence, refer to **Fig. 19**
 12. Balance Weight
 - Installed depending on the version
 13. Shaft Seal
 - Replace on vehicles with vibration damper, refer to **TRANSMISSION OUTPUT SHAFT WITH SPLINES, TRANSMISSION OUTPUT SHAFT BALL BEARING WITH SPINES**
 - Replace on vehicles without vibration damper, refer to **TRANSMISSION OUTPUT SHAFT WITH SPLINES, VEHICLES WITHOUT VIBRATION DAMPER**
 14. Dust Ring
 - Replace after removing
 15. Transmission Output Shaft with Splines
 - Without vibration damper
 - For the correct allocation.
 - Removing and installing, refer to **TRANSMISSION OUTPUT SHAFT WITH SPLINES,**

TRANSMISSION OUTPUT SHAFT BALL BEARING WITH SPINES

16. Transmission Output Shaft with Splines

- With vibration damper
- For the correct allocation.
- Removing and installing, refer to **REAR FLANGE SHAFT AND REAR FLANGE SHAFT SEAL AND BALL BEARING**
- **VIBRATION DAMPER, INSTALLING ON TRANSMISSION OUTPUT SHAFT WITH SPLINES**

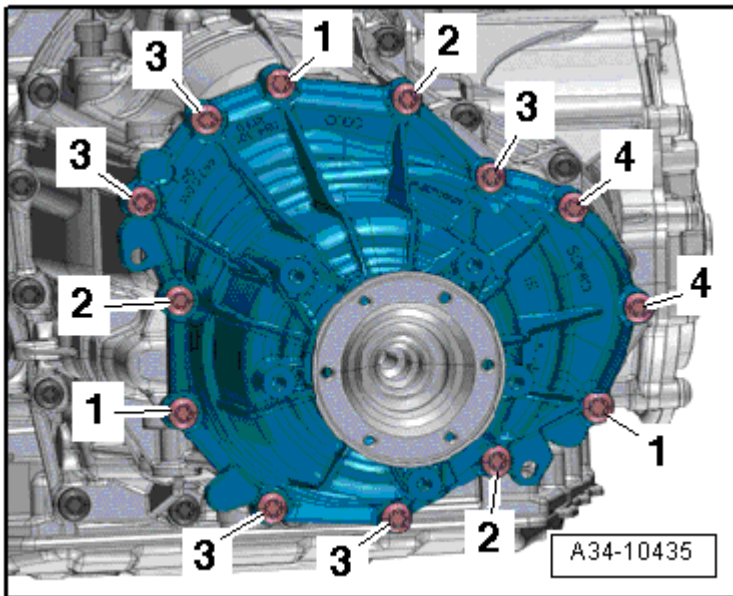


Fig. 19: Tightening Specification And Sequence, Center Differential Housing - Attached Driveshaft
 Courtesy of AUDI OF AMERICA, LLC

-- Tighten bolts in 8 stages as follows:

Stage	Bolts	Tightening Specification/Additional Turn
1.	Aluminum bolts -1-	8 Nm
2.	Aluminum bolts -2-	Tighten the bolt hand-tight.
3.	Aluminum bolts -1-	Loosen again and then install all the way hand-tight
4.	Aluminum bolts -3-	Tighten the bolt hand-tight.
5.	Steel bolts -4-	Tighten the bolt hand-tight.

2012 Audi S4

TRANSMISSION Final Drive, Differential - S-Tronic Transmission 0B5 AWD (Sedan)

6.	-1, 2, 3, 4-	10 Nm diagonally
7.	Steel bolts -4-	15 Nm
8.	-1, 2, 3, 4-	90° additional turn, diagonally

CENTER DIFFERENTIAL HOUSING OVERVIEW, BOLTED DRIVESHAFT**NOTE:** **REPAIR INFORMATION****CLEANLINESS WORKING CONDITIONS**

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

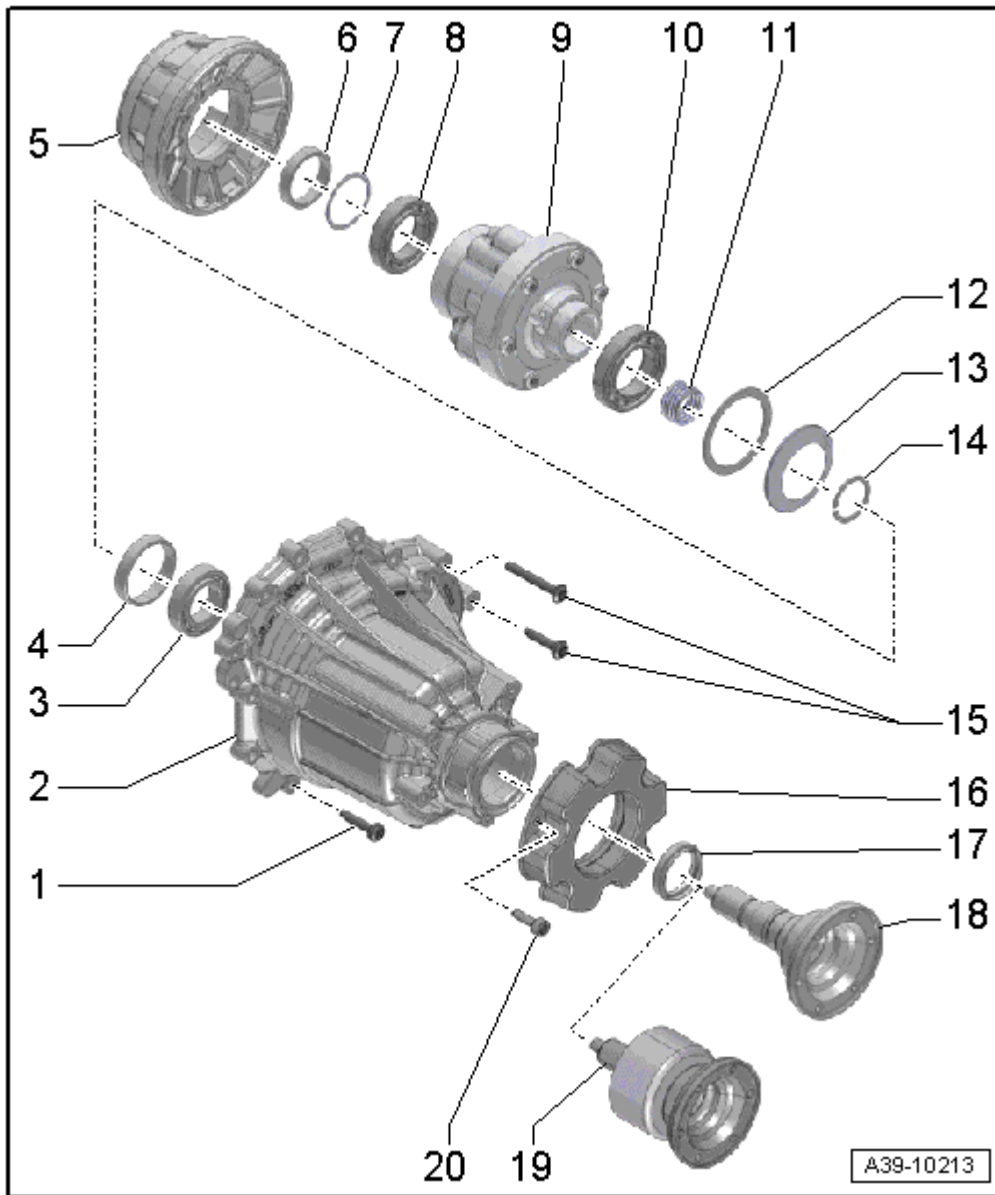


Fig. 20: Center Differential Housing

Courtesy of AUDI OF AMERICA, LLC

1. Bolt

- Aluminum bolts
- Quantity: 11
- Replace
- Tightening specification and sequence, refer to **Fig. 21**

2. Housing

- For the center differential
- Removing and installing, refer to **CENTER DIFFERENTIAL HOUSING, INSTALLED TRANSMISSION AND BOLTED DRIVESHAFT**

3. Ball Bearing
 - For the rear flange shaft
 - Removing and installing, refer to **REAR FLANGE SHAFT AND REAR FLANGE SHAFT SEAL AND BALL BEARING**
4. Spacer Sleeve
 - Removing and installing, refer to **REAR FLANGE SHAFT AND REAR FLANGE SHAFT SEAL AND BALL BEARING**
5. Gear Carrier
 - Installed position: The tab must fit into the cut-out in the transmission housing
6. Spacer Sleeve
7. Adjusting Shim
8. Ball Bearing
 - For the center differential
9. Center Differential
10. Ball Bearing
 - For the center differential
11. Pressure Spring
12. Adjusting Shim
13. Plate Spring
 - Installed position: The side curved outward faces the shaft seal -17-
14. Locking Ring
 - For the rear flange shaft
 - Removing and installing, refer to **REAR FLANGE SHAFT AND REAR FLANGE SHAFT SEAL AND BALL BEARING**
15. Bolt
 - Steel bolts
 - Quantity: 2
 - Replace
 - Tightening specification and sequence, refer to **Fig. 21**
16. Balance Weight
 - Installed depending on the version
17. Shaft Seal
 - Removing and installing, refer to **REAR FLANGE SHAFT AND REAR FLANGE SHAFT SEAL AND BALL BEARING**
18. Rear Flange Shaft
 - Without vibration damper
 - For the correct allocation.
 - Removing and installing, refer to **REAR FLANGE SHAFT AND REAR FLANGE SHAFT SEAL AND BALL BEARING**

19. Rear Flange Shaft

- With vibration damper
- For the correct allocation.
- Removing and installing, refer to **REAR FLANGE SHAFT AND REAR FLANGE SHAFT SEAL AND BALL BEARING**

20. Bolt

- 20 Nm + 90° turn
- Replace

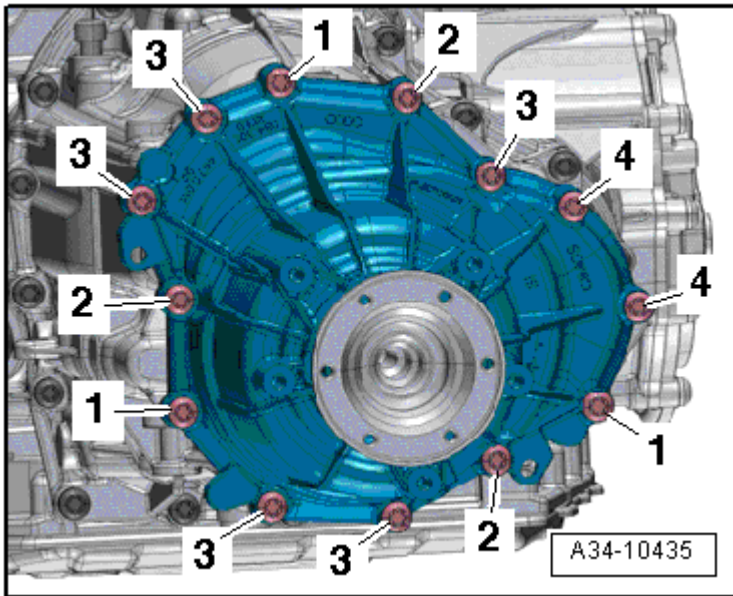


Fig. 21: Tightening Specification And Sequence, Center Differential Housing - Attached Driveshaft
 Courtesy of AUDI OF AMERICA, LLC

-- Tighten bolts in 8 stages as follows:

Stage	Bolts	Tightening Specification/Additional Turn
1.	Aluminum bolts -1-	8 Nm
2.	Aluminum bolts -2-	Tighten the bolt hand-tight.
3.	Aluminum bolts -1-	Loosen again and then install all the way hand-tight
4.	Aluminum bolts -3-	Tighten the bolt hand-tight.
5.	Steel bolts	Tighten the bolt hand-

2012 Audi S4

TRANSMISSION Final Drive, Differential - S-Tronic Transmission 0B5 AWD (Sedan)

	-4-	tight.
6.	-1, 2, 3, 4-	10 Nm diagonally
7.	Steel bolts -4-	15 Nm
8.	-1, 2, 3, 4-	90° additional turn, diagonally

FRONT FINAL DRIVE SEALING RINGS OVERVIEW

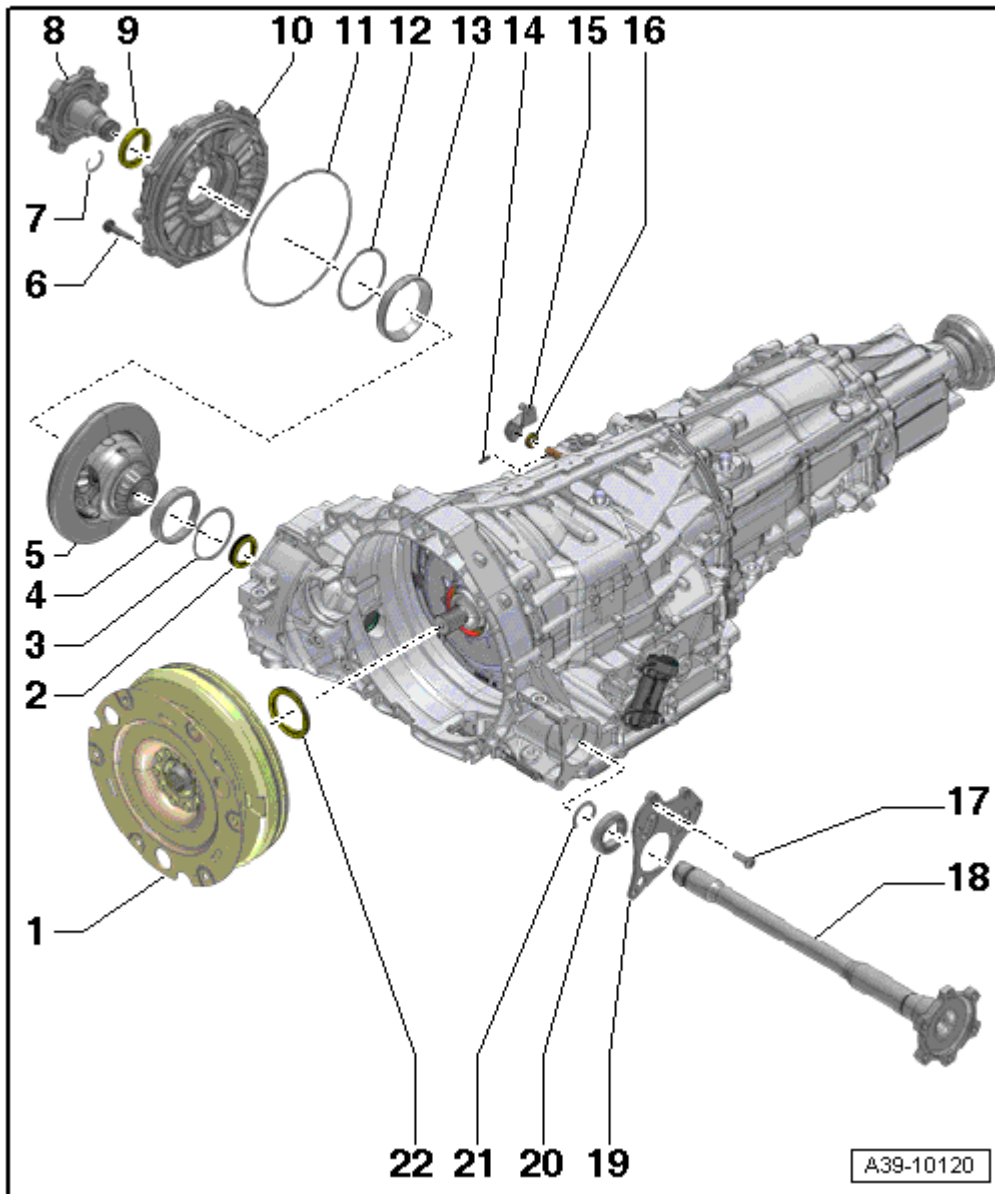


Fig. 22: Front Final Drive Sealing Rings Overview
Courtesy of AUDI OF AMERICA, LLC

1. Dual Mass Flywheel

- Removing and installing, refer to **DUAL MASS FLYWHEEL**
- 2. Left Flange Shaft Seal
 - Between the final drive and the transmission housing
 - Removing and installing, refer to **LEFT FLANGE SHAFT SEAL**
- 3. Adjusting Shim
 - Behind the taper roller bearing outer race
- 4. Taper Roller Bearing Outer Race
- 5. Differential
- 6. Bolt
 - Quantity: 10
 - Tightening specification and sequence, refer to **Fig. 23**
- 7. Locking Ring
 - Replace
- 8. Right Flange Shaft
 - Removing and installing, refer to **RIGHT FLANGE SHAFT**
- 9. Right Flange Shaft Seal
 - Removing and installing, refer to **RIGHT FLANGE SHAFT SEAL**
- 10. Front Final Drive Cover
 - Removing and installing, refer to **LEFT FLANGE SHAFT SEAL**
- 11. O-ring
 - On the front final drive cover
 - Replace
- 12. Adjusting Shim
 - Behind the taper roller bearing outer race
- 13. Taper Roller Bearing Outer Race
- 14. Spring Pin
- 15. Selector Lever
- 16. Selector Shaft Seal
 - Removing and installing, refer to **SELECTOR SHAFT SEAL**
- 17. Bolt
 - 10 Nm + 45° turn
 - Quantity: 3
- 18. Left Flange Shaft
 - Removing and installing, refer to **LEFT FLANGE SHAFT**
- 19. Bearing Bracket
 - Attached to the left flange shaft with the bearing -20- and the circlip -21-
 - Check for traces of wear on the bearing bracket and check the pre-tension on the ball bearing for the left flange shaft, refer to **LEFT FLANGE SHAFT BALL BEARING PRE-TENSION**,

CHECKING

20. Bearings

- For the left flange shaft
- Pressed on to the left flange shaft

21. Locking Ring

- For the left flange shaft bearing
- Replace

22. Input Shaft Seal

- Removing and installing, refer to **INPUT SHAFT SEAL**

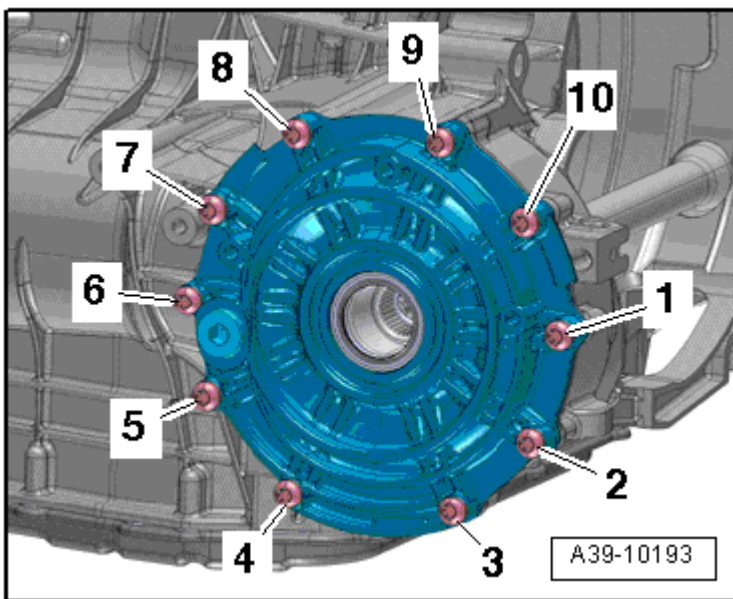


Fig. 23: Tightening Specification And Sequence, Front Final Drive Cover
 Courtesy of AUDI OF AMERICA, LLC

NOTE: Replace the front final drive cover bolts.

-- Tighten the bolts in 3 steps in the following sequence: -1 through 10- :

-- Pre-tighten to 3 Nm.

-- Tighten to 20 Nm.

-- Tighten 90° further.

SPECIFICATIONS**FASTENER TIGHTENING SPECIFICATIONS**

--	--	--

2012 Audi S4

TRANSMISSION Final Drive, Differential - S-Tronic Transmission 0B5 AWD (Sedan)

Component	Fastener Size	Nm
ATF Drain Plug	-	45
ATF Fill and Check Plug	-	45
Balance Weight to Center Differential Housing ¹	-	20 + 90°
Bearing Bracket	-	10 + 45°
Transmission Fluid (MTF) Drain Plug	-	45
Transmission Fluid (MTF) Fill and Check Plug	-	45
• ¹ Replace		

Tightening Specification and Sequence, Center Differential Housing

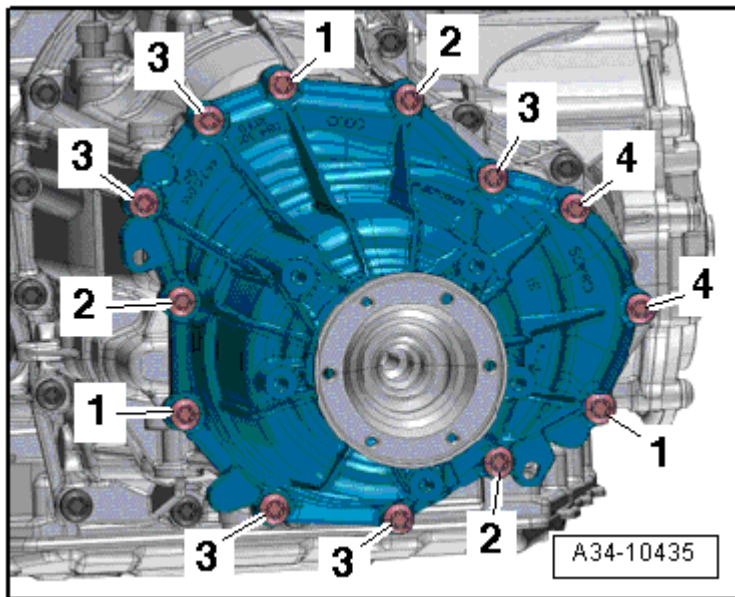


Fig. 24: Tightening Specification And Sequence, Center Differential Housing - Attached Driveshaft
Courtesy of AUDI OF AMERICA, LLC

-- Tighten bolts in 8 stages as follows:

Stage	Bolts	Tightening Specification/Additional Turn
1.	Aluminum bolts -1-	8 Nm
2.	Aluminum bolts -2-	Tighten the bolt hand-tight.
3.	Aluminum bolts -1-	Loosen again and then install all the way hand-tight
4.	Aluminum	Tighten the bolt hand-

2012 Audi S4

TRANSMISSION Final Drive, Differential - S-Tronic Transmission 0B5 AWD (Sedan)

	bolts -3-	tight.
5.	Steel bolts -4-	Tighten the bolt hand-tight.
6.	-1, 2, 3, 4-	10 Nm diagonally
7.	Steel bolts -4-	15 Nm
8.	-1, 2, 3, 4-	90° additional turn, diagonally

Tightening Specification and Sequence, Front Final Drive Cover

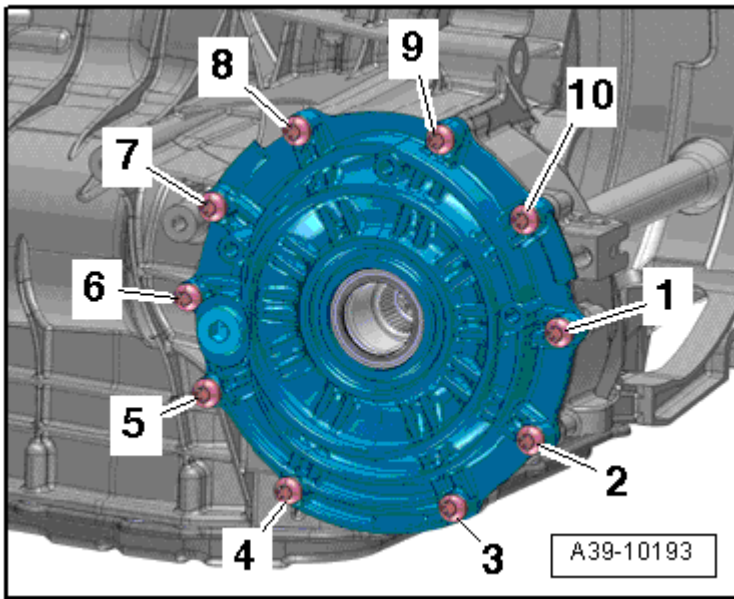


Fig. 25: Tightening Specification And Sequence, Front Final Drive Cover
Courtesy of AUDI OF AMERICA, LLC

NOTE: Replace the front final drive cover bolts.

- Tighten the bolts in 3 steps in the following sequence: -1 through 10- :
- Pre-tighten to 3 Nm.
- Tighten to 20 Nm.
- Tighten 90° further.

DIAGNOSIS AND TESTING

LEFT FLANGE SHAFT BALL BEARING PRE-TENSION, CHECKING

Check the ball bearing pre-tension using the wear pattern on the bearing bracket -arrow-.

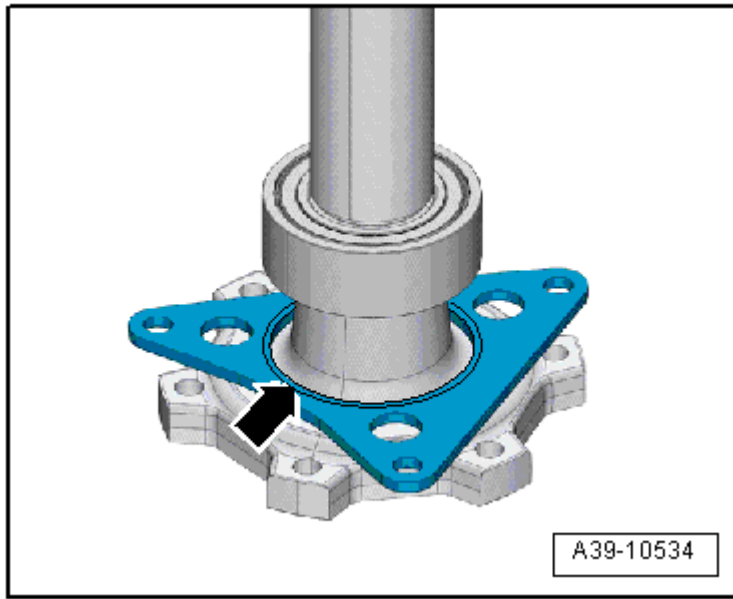


Fig. 26: Left Flange Shaft Ball Bearing Pre-Tension, Checking
Courtesy of AUDI OF AMERICA, LLC

NOTE: The pre-tension on the left flange shaft ball bearing must be checked only on certain vehicles. Refer to the chart under LEFT FLANGE SHAFT for a list of the vehicles.

This is not necessary on vehicles built later because they have been redesigned.

- Left flange shaft removed, refer to LEFT FLANGE SHAFT.

Wear Pattern "A"

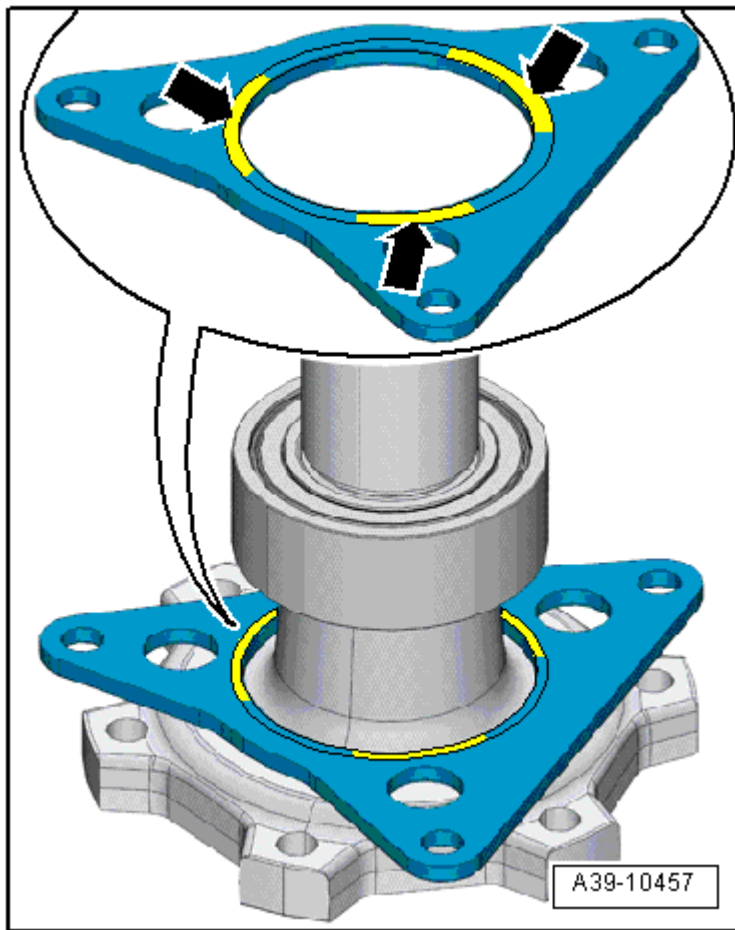


Fig. 27: Wear Pattern A

Courtesy of AUDI OF AMERICA, LLC

- Small indentations near the hole on the bearing bracket -arrows-.
- No trace of wear or material erosion.

-- Optimize the pre-tension on the ball bearing for the left flange shaft, refer to **PRE-TENSION ON BALL BEARING, OPTIMIZING, LEFT FLANGE SHAFT.**

Wear pattern "B"

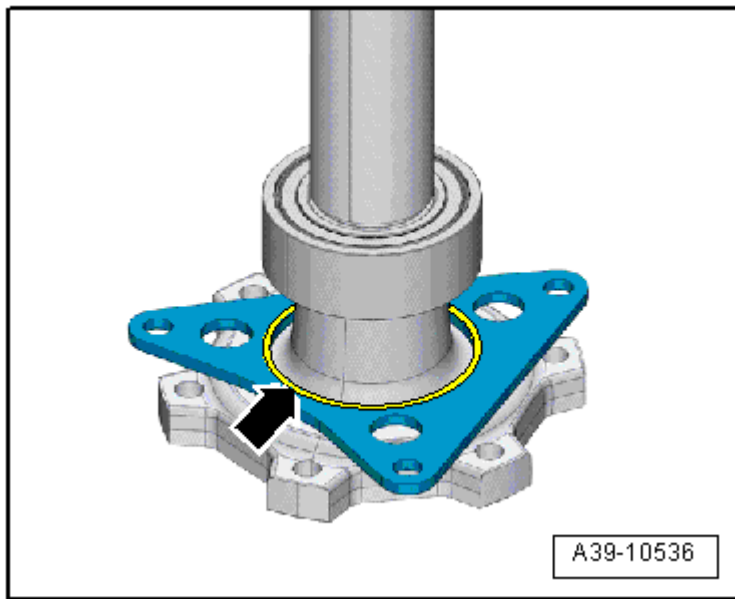


Fig. 28: Wear Pattern "B"

Courtesy of AUDI OF AMERICA, LLC

- Traces of wear, if necessary, with material erosion all around the hole on the bearing bracket -arrow-.

-- Adjust the pre-tension on the left flange shaft bearing. Refer to **PRE-TENSION ON BALL BEARING, ADJUSTING, LEFT FLANGE SHAFT**.

-- Replace the bearing bracket, the ball bearing and the circlip. Refer to **LEFT FLANGE SHAFT BALL BEARING MOUNTING BRACKET**.

PRE-TENSION ON BALL BEARING, OPTIMIZING, LEFT FLANGE SHAFT

NOTE: The pre-tension on the left flange shaft ball bearing must be optimized only on certain vehicles..

This is not necessary on vehicles built later because they have been redesigned.

Procedure

- Left flange shaft removed, refer to 1**LEFT FLANGE SHAFT**.

Conditions for optimizing:

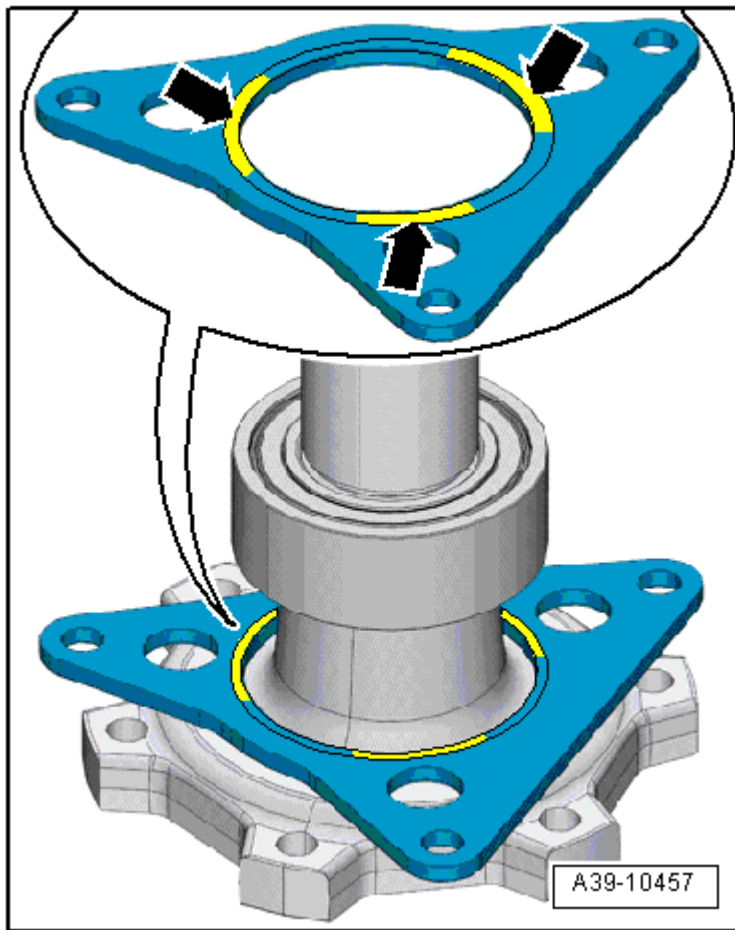


Fig. 29: Wear Pattern A

Courtesy of AUDI OF AMERICA, LLC

- The bearing bracket does not show any traces of wear or material erosion.
- Small indentations near the hole on the bearing bracket -arrows- are permissible.
- Bearing bracket with wear pattern "A" (the bearing bracket does not show any traces of wear or material erosion). Refer to **Wear Pattern "A"**

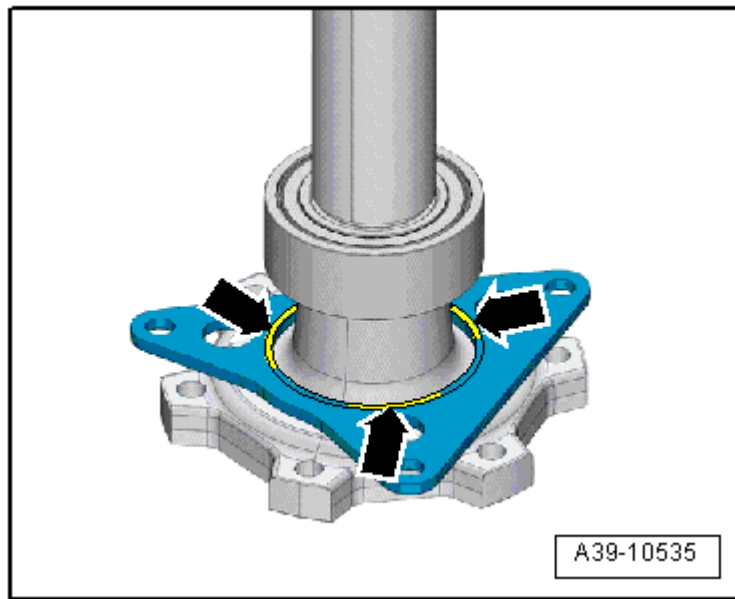


Fig. 30: Bearing Bracket With Wear Pattern "A"
 Courtesy of AUDI OF AMERICA, LLC

- A shim is inserted into the bearing seat on the transmission to optimize the pre-tension on the ball bearing.

-- Insert a shim 0B4 409 227 -1- into the bearing seat on the transmission before installing the flange shaft to improve the pre-tension.

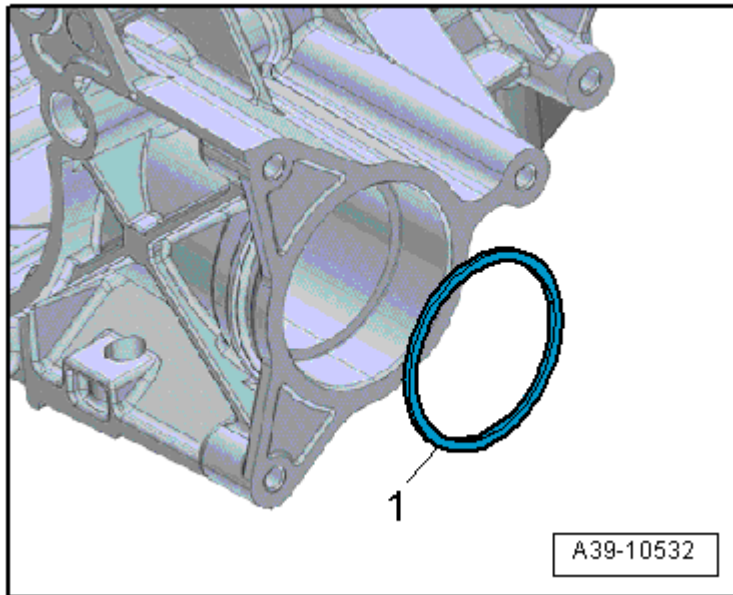


Fig. 31: Inserting A Shim 0B4 409 227 Into Bearing Seat On Transmission Before Installing Flange Shaft
 Courtesy of AUDI OF AMERICA, LLC

-- Install the left flange shaft. Refer to LEFT FLANGE SHAFT.

PRE-TENSION ON BALL BEARING, ADJUSTING, LEFT FLANGE SHAFT

NOTE: The pre-tension on the left flange shaft ball bearing must be optimized only on certain vehicles. LEFT FLANGE SHAFT.

This is not necessary on vehicles built later because they have been redesigned.

- Left flange shaft removed, refer to LEFT FLANGE SHAFT.
- Bearing bracket with wear pattern "B" (traces of wear if necessary with material erosion all around the hole). Refer to Wear pattern "B"

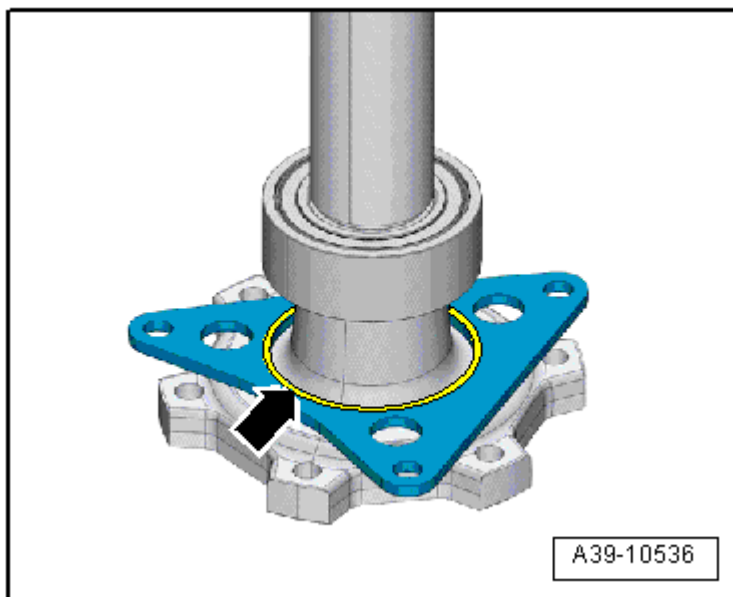


Fig. 32: Wear Pattern "B"

Courtesy of AUDI OF AMERICA, LLC

- The bearing bracket and ball bearing must be replaced. Refer to LEFT FLANGE SHAFT BALL BEARING MOUNTING BRACKET

Procedure

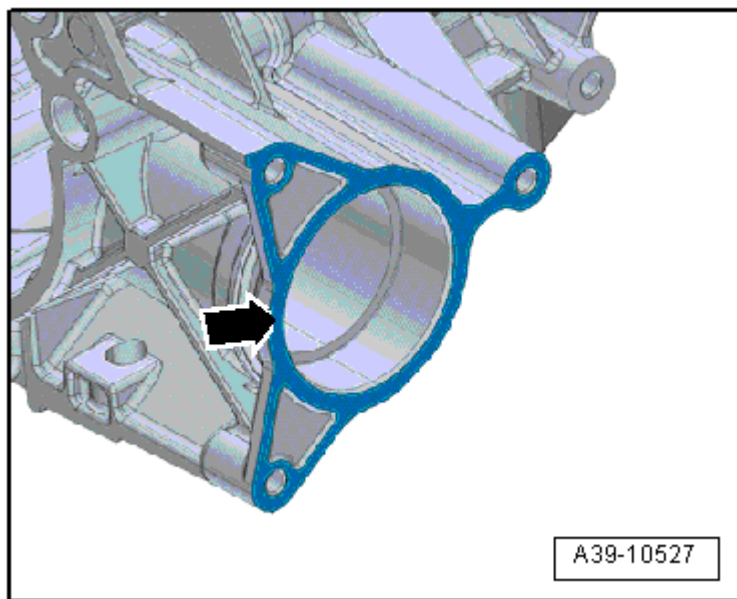


Fig. 33: Clean Off Any Dirt And Corrosion From Contact Surface
Courtesy of AUDI OF AMERICA, LLC

-- Clean off any dirt and corrosion from the contact surface -arrow- using 150 grain sand paper.

NOTE: **It is not necessary to sand the contact surfaces all the way down to bare metal.
It is enough to just remove any dirt and corrosion.**

-- Clean the contact surface and bearing seat.

-- Install the new left flange shaft ball bearing -arrow- into the bearing seat.

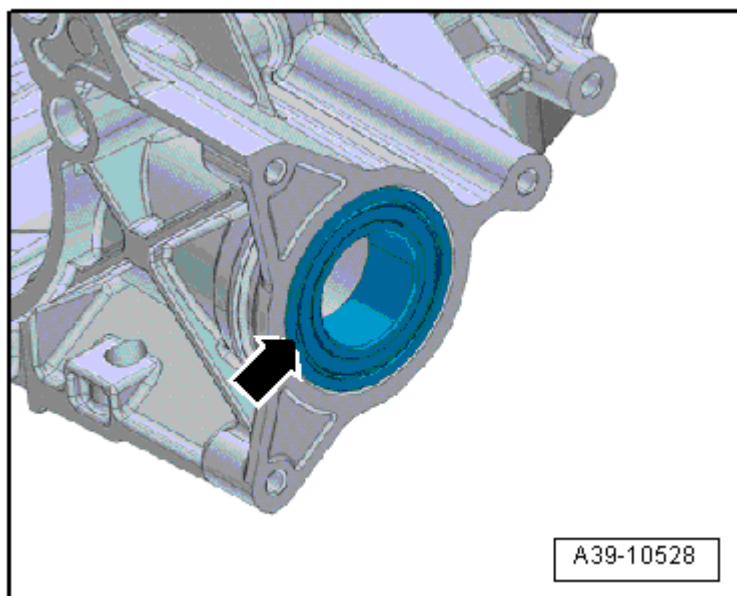


Fig. 34: Install New Left Flange Shaft Ball Bearing
 Courtesy of AUDI OF AMERICA, LLC

Next procedure

- By bearing oversize (the bearing sticks out slightly above the contact surface) **Procedure if there is Bearing Oversize**
- With bearing undersize (the bearing sits deeper than the contact surface)

Procedure if there is Bearing Oversize

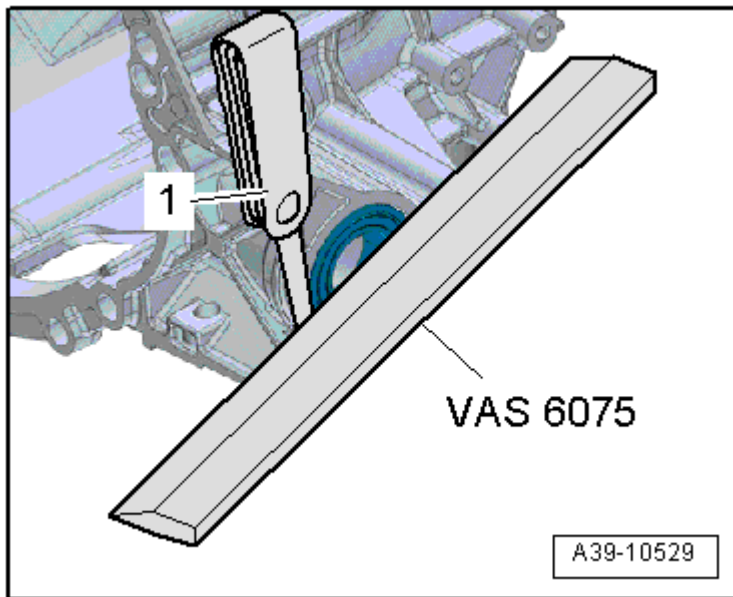


Fig. 35: Measure Value
 Courtesy of AUDI OF AMERICA, LLC

-- Place straight edge 500 mm VAS 6075 straight across the bearing and determine the distance to the contact surface on the transmission housing on both sides with the feeler gauge.

-- Write down the measured value.

-- Place the straight edge 90° offset across the bearing and determine the distance to the contact surface on the transmission housing on both sides with the feeler gauge.

-- Write down the measured value.

Selecting the shim(s):

NOTE: Use the smallest value take from the four values to select the shim(s).

- Specified value, bearing oversize = 0.5 to 0.8 mm

2012 Audi S4

TRANSMISSION Final Drive, Differential - S-Tronic Transmission 0B5 AWD (Sedan)

	Smallest bearing oversize (example = 0.1 mm)
+	Shim(s) thickness, (thickness = 0.3 mm)
=	Bearing pre-load, (specified value = 0.5 to 0.8 mm)

Example:

1 shim:

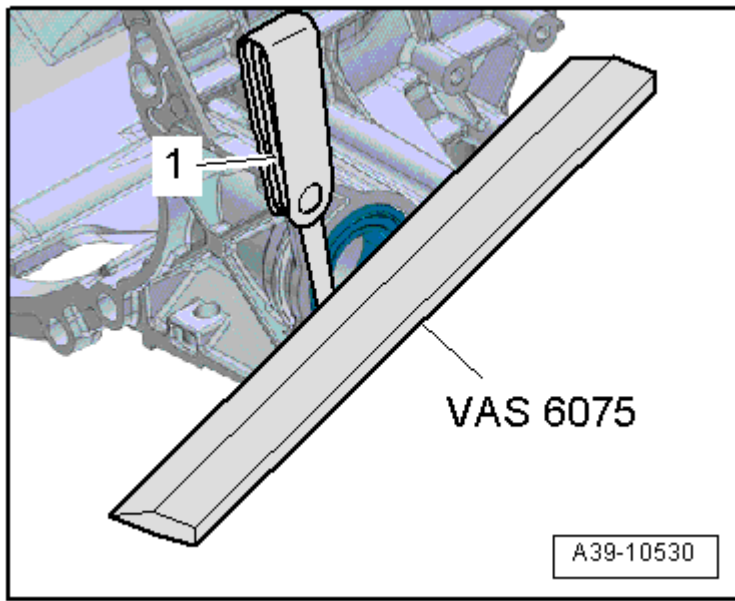
$0.1 \text{ mm} + 0.3 \text{ mm} = 0.4 \text{ mm}$, "bearing pre-load is too small"

2 shims:

$0.1 \text{ mm} + 0.3 \text{ mm} + 0.3 \text{ mm} = 0.7 \text{ mm}$, "bearing pre-load is in the specified range"

- Result: Insert two 0.3 mm shims to reach the bearing pre-load = 0.7 mm within the 0.5 to 0.8 mm specified value.

Procedure if there is Bearing Undersize

**Fig. 36: Measured Value**

Courtesy of AUDI OF AMERICA, LLC

NOTE: The bearing undersize can only be determined in the described procedure.

-- Place a straight edge 50 mm VAS 6075 straight across the contact surface on the transmission housing and measure the distance to the bearing on both sides with a feeler gauge.

-- Write down the measured value.

-- Place the straight edge 50 mm offset across the contact surface on the transmission housing and measure the distance to the bearing on both sides with a feeler gauge.

-- Write down the measured value.

Selecting the shim(s):

NOTE: Use the largest value take from the four values to select the shim(s).

Enter the measured bearing under size as negative value ("-") into the calculation.

- Specified value, bearing oversize = 0.5 to 0.8 mm

-	Larger determined bearing undersize (example -
---	--

2012 Audi S4

TRANSMISSION Final Drive, Differential - S-Tronic Transmission 0B5 AWD (Sedan)

	0.15 mm)
+	Shim(s) thickness, (thickness = 0.3 mm)
=	Bearing pre-load (specified value = 0.5 to 0.8 mm)

Example:

1 shim:

$-0.15 \text{ mm} + 0.3 \text{ mm} = 0.15 \text{ mm}$, "bearing pre-load is too small"

3 shims:

$-0.15 \text{ mm} + 0.3 \text{ mm} + 0.3 \text{ mm} + 0.3 \text{ mm} = 0.75 \text{ mm}$, "bearing pre-load is in the specified range"

- Result: A 0.75 mm bearing pre-load within the specified value of 0.5 to 0.8 mm is reached by installing three 0.3 mm shims.

Continuation for All

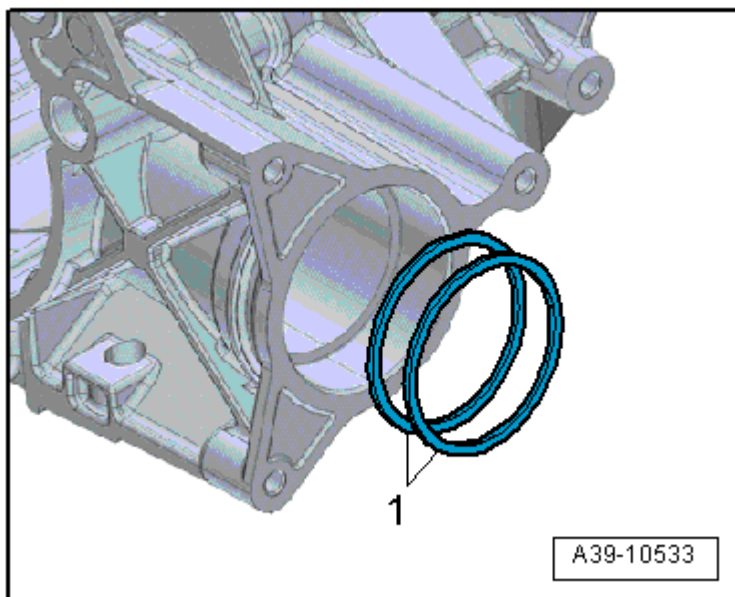


Fig. 37: Insert Determined Number Of Shims
Courtesy of AUDI OF AMERICA, LLC

-- Replace the bearing bracket, the ball bearing and the circlip. Refer to **LEFT FLANGE SHAFT BALL BEARING MOUNTING BRACKET**.

-- Insert the determined number of shims 0B4 409 227 -1- into the bearing seat on the transmission before installing the flange shaft.

-- Install the left flange shaft. Refer to **LEFT FLANGE SHAFT**.

REMOVAL AND INSTALLATION

LEFT FLANGE SHAFT

Special tools and workshop equipment required

- Engine and Transmission Holder VAS 6095
- Grease.

Removing

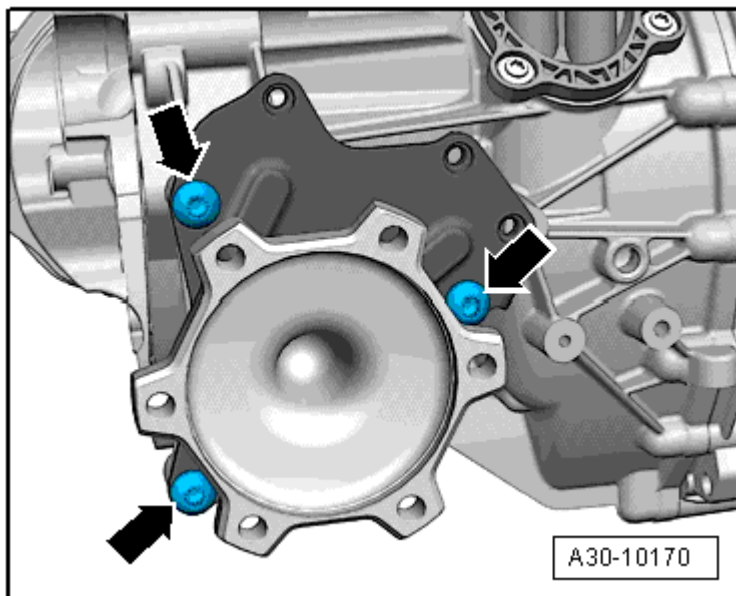


Fig. 38: Removing Bolts -Arrows- From Flange Shaft Mounting Bracket

Courtesy of AUDI OF AMERICA, LLC

- Secure the transmission to the VAS 6095. Refer to **TRANSMISSION, SECURING IN ENGINE/TRANSMISSION HOLDER** .

-- Tilt the transmission back on the VAS 6095 so the transmission fluid (MTF) does not drain out.

-- Remove the bolts -arrows- from the flange shaft mounting bracket.

-- Remove the left flange shaft -2- from the transmission -arrow A-.

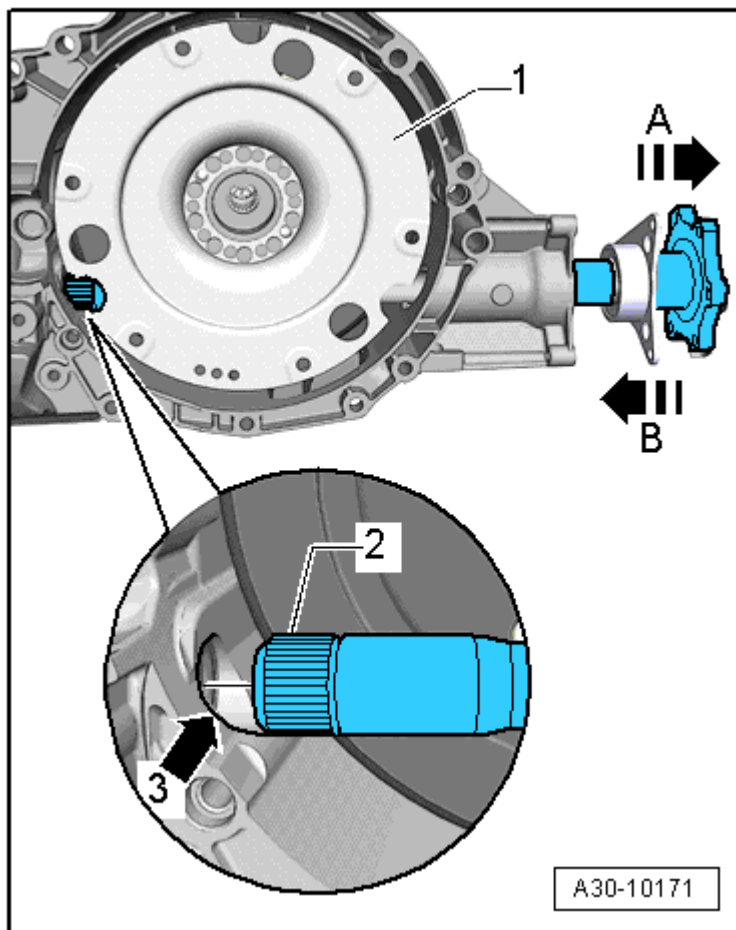


Fig. 39: Removing/installing Left Flange Shaft
 Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -1- and -arrow 3, B-.

-- Remove the flywheel. Refer to DUAL MASS FLYWHEEL .

Installing

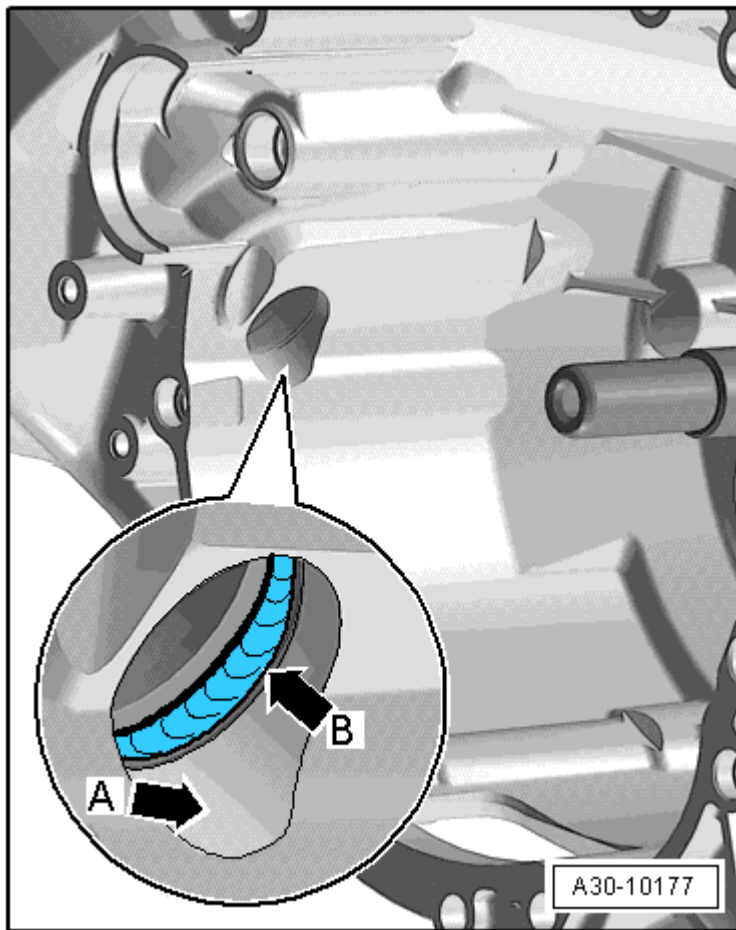


Fig. 40: Identifying Areas To Clean Where Differential Is Accessed -Arrow A- And Shaft Seal -Arrow B-
Courtesy of AUDI OF AMERICA, LLC

Install in reverse order of removal. Note the following:

- **Tightening specification** , refer to **FRONT FINAL DRIVE SEALING RINGS OVERVIEW**.

-- Always clean the left flange shaft, the transmission housing in the area where the differential is accessed - arrow A- and the shaft seal -arrow B-.

NOTE: **Replace the shaft seal between the differential and transmission housing -arrow B- if it is damaged. Refer to LEFT FLANGE SHAFT SEAL.**

-- Fill the space between the sealing and dust lip half way with sealing grease; for the correct sealing grease.

The following work must be performed on the listed vehicle types up to the specified VIN:

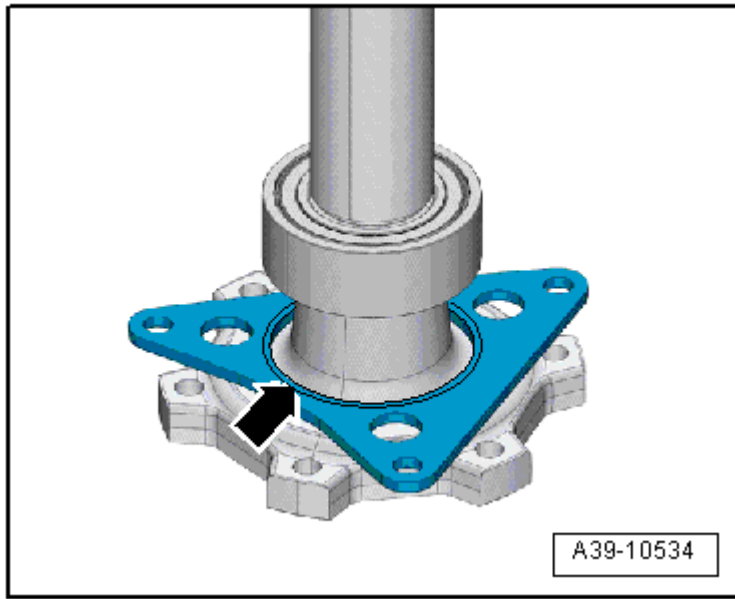


Fig. 41: Left Flange Shaft Ball Bearing Pre-Tension, Checking
 Courtesy of AUDI OF AMERICA, LLC

Vehicle Model	VIN	Factory
Audi A4 MY 08	Through WAUZZZ8K9BN034383	Germany, Neckarsulm
Audi A4 MY 08	Through WAUZZZ8KXBA082742	Germany, Ingolstadt
Audi A5 Cabriolet MY 2008	Through WAUVGAFH3BN009542	Germany, Neckarsulm
Audi A5 Coupe MY 08	Through WAUZZZ8T9BA902081	Germany, Ingolstadt

-- Check the pre-tension on the ball bearing for the left flange shaft based on the wear pattern on the bearing bracket -arrow-. Refer to **LEFT FLANGE SHAFT BALL BEARING PRE-TENSION, CHECKING**.

- Optimize the pre-tension on the ball bearing for the left flange shaft if necessary. Refer to **PRE-TENSION ON BALL BEARING, OPTIMIZING, LEFT FLANGE SHAFT**.
- Adjust the pre-tension on the ball bearing for the left flange shaft if necessary. Refer to **PRE-TENSION ON BALL BEARING, ADJUSTING, LEFT FLANGE SHAFT**.

All Vehicles

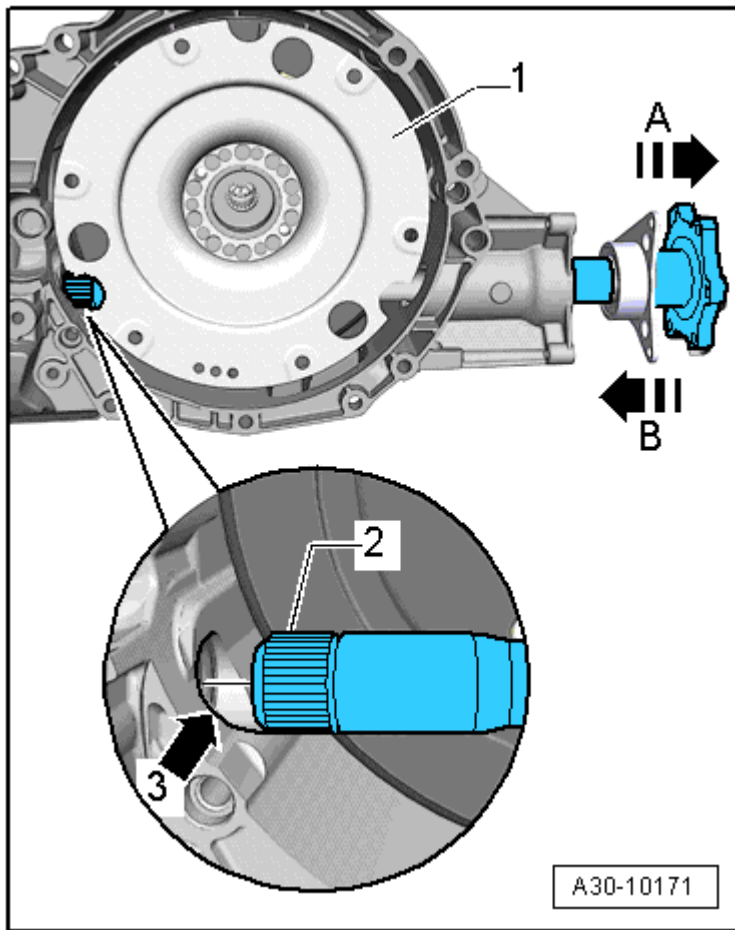


Fig. 42: Removing/installing Left Flange Shaft

Courtesy of AUDI OF AMERICA, LLC

-- Install the flywheel. Refer to **DUAL MASS FLYWHEEL** .

-- Rotate the flywheel -1- until the opening to the differential -arrow 3- is seen.

-- Install the left flange shaft -2- into the transmission -arrow B-. When doing this, insert the flange shaft centrally into the shaft seal on the front differential -arrow 3-.

NOTE: If the flange shaft is not centered, the flange shaft splines -2- will damage the shaft seal between the final drive and the transmission housing.

The shaft seal must be replaced if it is damaged.

Ignore -arrow A-.

-- Install the bolts -arrows- for the flange shaft mounting bracket.

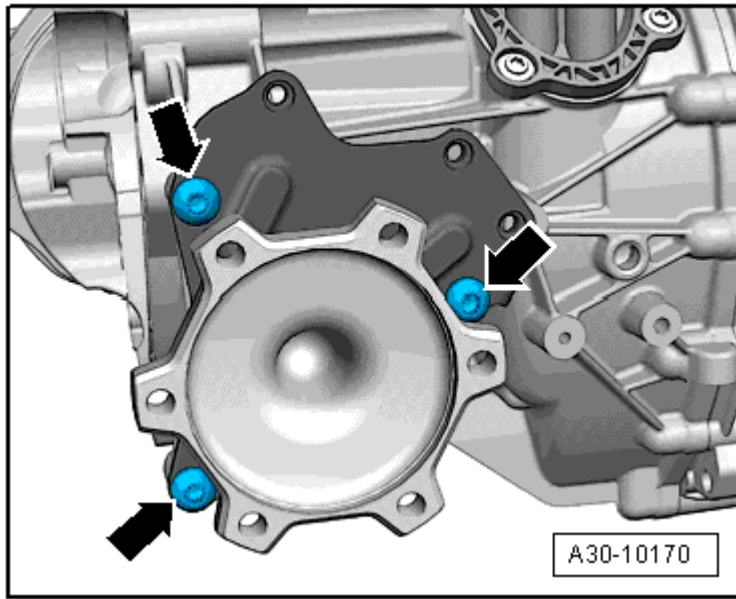


Fig. 43: Removing Bolts -Arrows- From Flange Shaft Mounting Bracket
Courtesy of AUDI OF AMERICA, LLC

-- Refer to **TRANSMISSION FLUID LEVEL, CHECKING AND FILLING** after installing the transmission.

RIGHT FLANGE SHAFT

Special tools and workshop equipment required

- Needle Bearing Drift VW 295
- Slide Hammer-Complete Set VW 771
- Pulling Hook VW 771/13
- Lifting Eyebolt 3368
- Used Oil Collection and Extraction Device V.A.G 1782
- Grease.
- M10 nut, quantity: 2

Removing

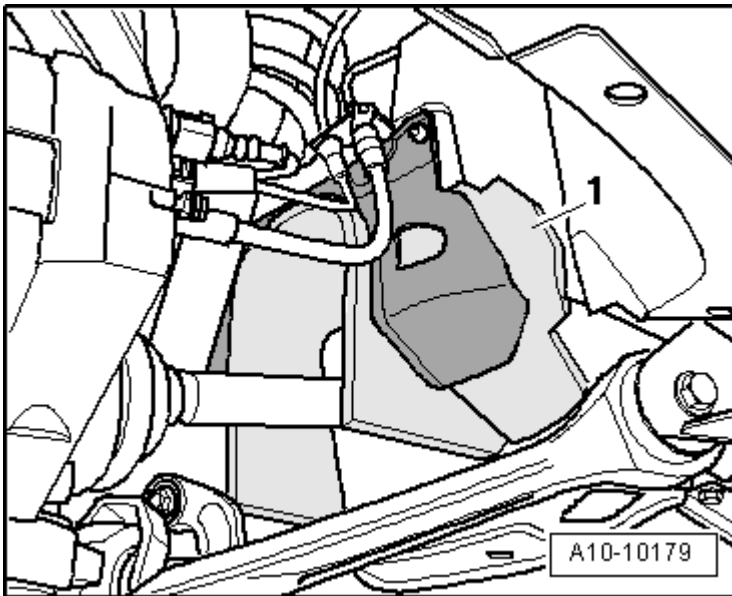


Fig. 44: Removing Right Drive Axle Cover
Courtesy of AUDI OF AMERICA, LLC

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

6-Cylinder Vehicles Engine

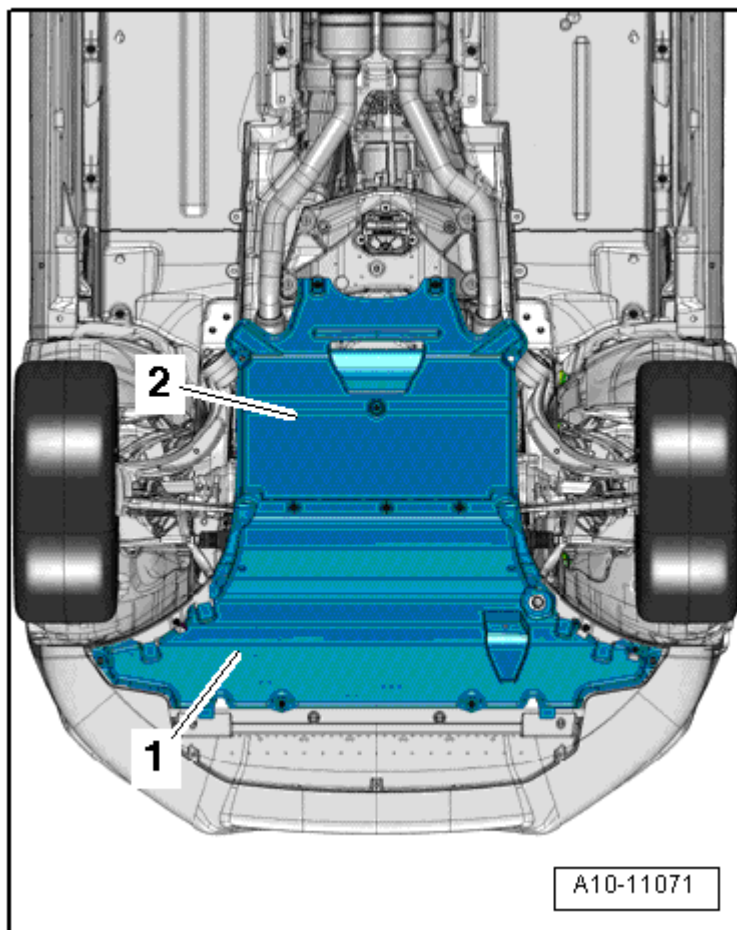


Fig. 45: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

- Remove the rear noise insulation -2-. Refer to **Description and Operation** .
- Remove the bolts -arrows- and the right heat shield -1-.

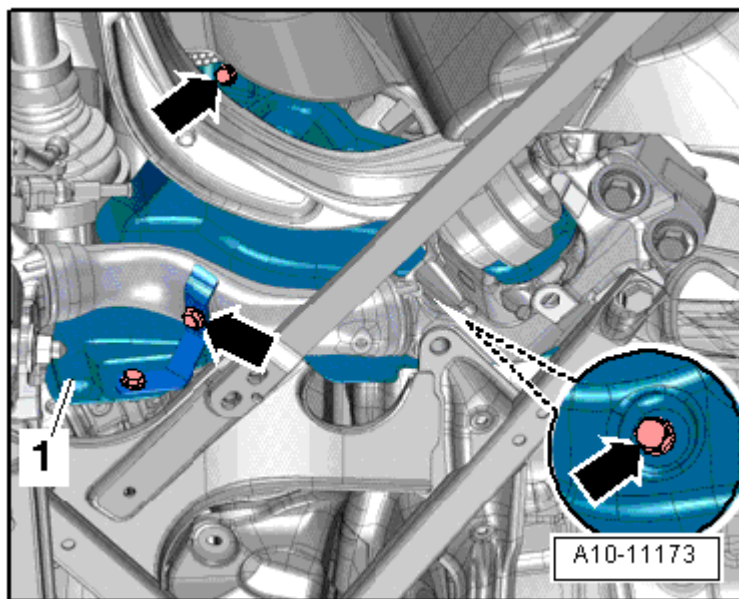


Fig. 46: Locating Left Bolts & Heat Shield
Courtesy of AUDI OF AMERICA, LLC

All Vehicles

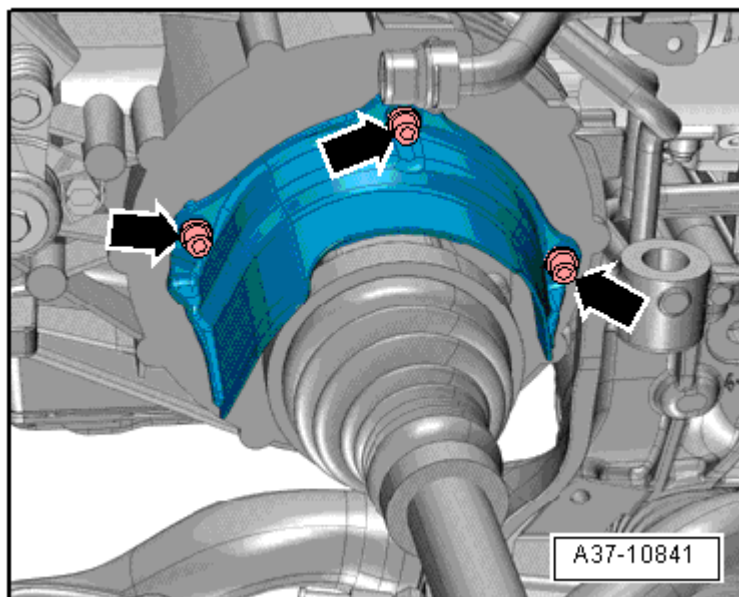


Fig. 47: Driveshaft Heat Shield - Tightening Specification
Courtesy of AUDI OF AMERICA, LLC

- Remove the bolts -arrows- and then remove the heat shield from the right drive axle.
- Remove the right drive axle from the transmission flange shaft and move it back.
- Place the V.A.G 1782 under the transmission.

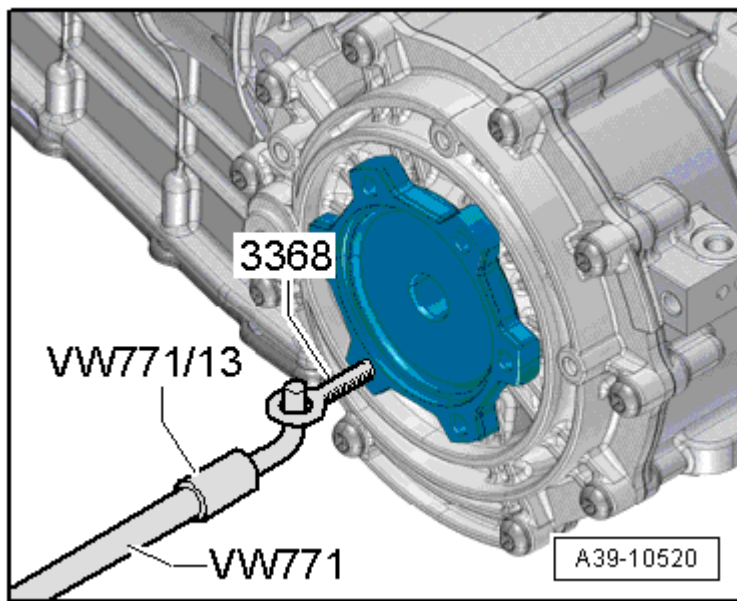


Fig. 48: Place V.A.G 1782 Under Transmission
Courtesy of AUDI OF AMERICA, LLC

- Install the 3368 into a threaded hole in the right flange shaft.
- Mount the VW 771 with VW 771/13 on the 3368 and remove the flange shaft.

Installing

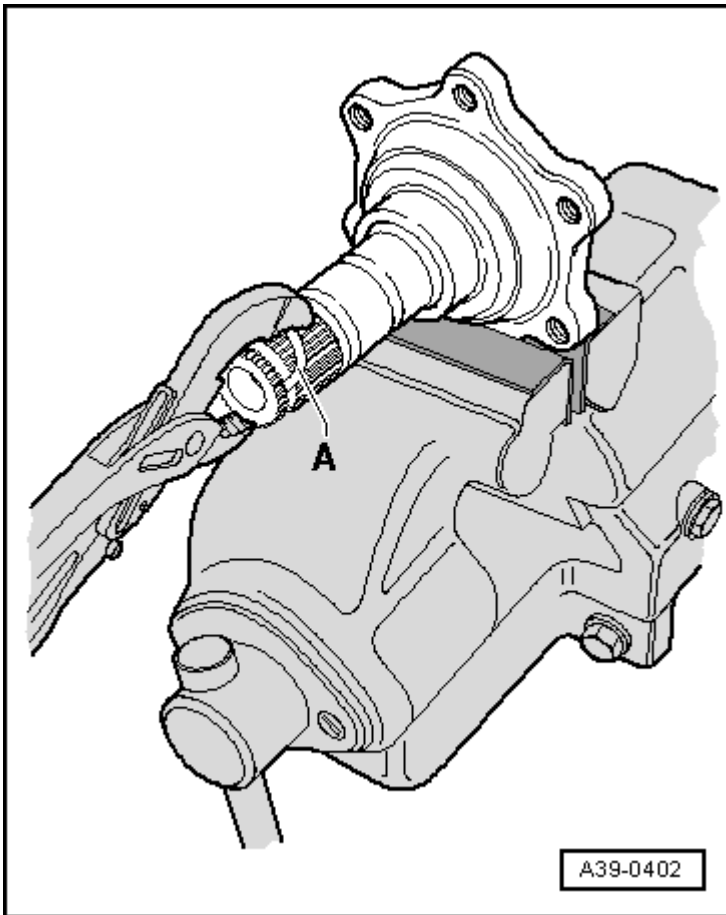


Fig. 49: Identifying Flange Shaft Clamped In Vise And Using New Circlip To Press Old Circlip Out Of Groove In Flange Shaft

Courtesy of AUDI OF AMERICA, LLC

Install in reverse order of removal. Note the following:

NOTE: **Replace the circlip on the right flange shaft.**

-- Clamp the flange shaft in a vise with jaw protectors. Remove the old circlip from the groove in the flange shaft using the new circlip -A-.

-- Fill the space between the sealing and dust lip half way with sealing grease; for the correct sealing grease.

-- Install the right flange shaft using VW 295.

-- Check the transmission oil level in the final drive and fill if necessary. Refer to **TRANSMISSION FLUID LEVEL, CHECKING AND FILLING**.

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

LEFT FLANGE SHAFT SEAL

Special tools and workshop equipment required

- Used Oil Collection and Extraction Device V.A.G 1782
- Engine and Transmission Holder VAS 6095
- Thrust Piece for Final Drive at Gearbox T40164
- Grease.

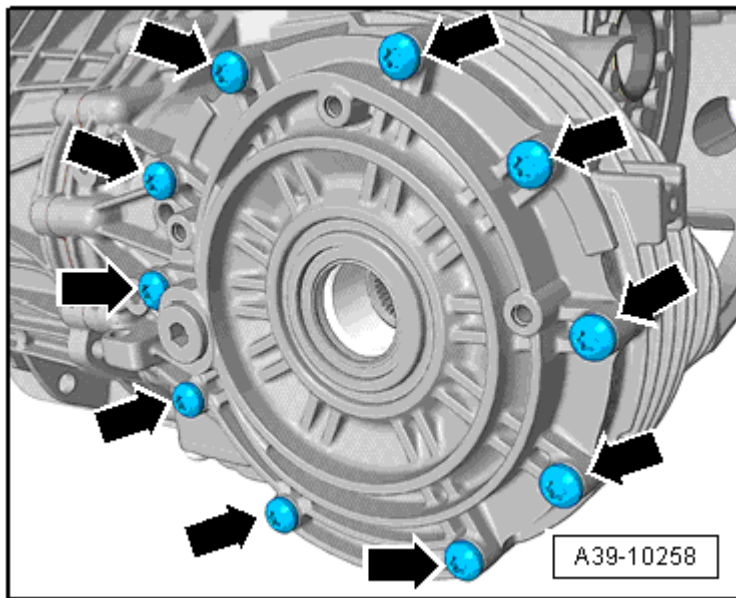
Procedure

Fig. 50: Left Flange Shaft Seal

Courtesy of AUDI OF AMERICA, LLC

- Secure the transmission to the VAS 6095. Refer to **TRANSMISSION, SECURING IN ENGINE/TRANSMISSION HOLDER** .

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

-- Remove the right flange shaft. Refer to **RIGHT FLANGE SHAFT**.

-- Remove the bolts -arrows-.

-- Carefully remove the front final drive cover; when doing this, the transmission fluid (MTF) will drain out.

CAUTION: Danger of causing damage to the differential.

- **Slowly and carefully remove front final driver cover from the transmission housing. Otherwise differential can fall out of the transmission.**
- **A differential that has fallen out can no longer be installed. If**

differential falls out, transmission must be replaced.

- Make sure the differential bearing inner race and adjustment shims do not fall out of the transmission housing and front final drive cover.
- Bearing inner races and adjustments that have fallen out cannot be allocated with shop equipment.

-- Carefully remove the differential -arrow- and lay it on a soft support.

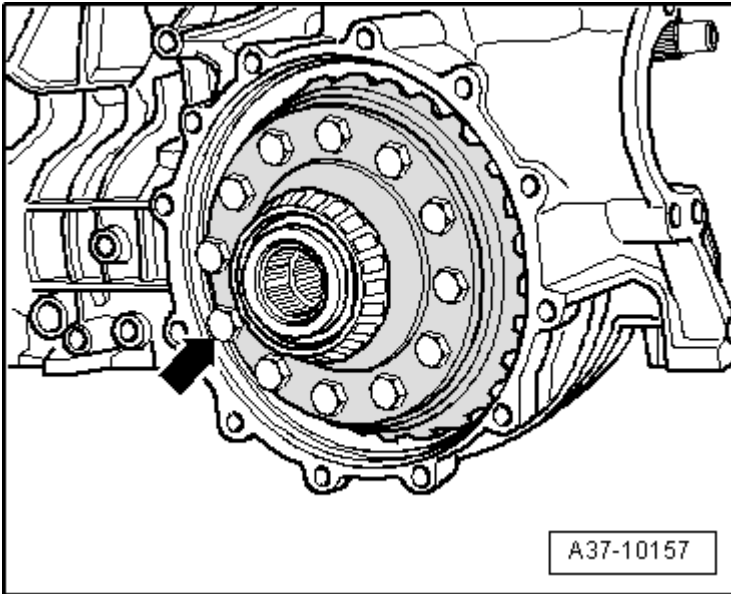


Fig. 51: Removing/Installing Differential
 Courtesy of AUDI OF AMERICA, LLC

-- Remove the left flange shaft. Refer to **LEFT FLANGE SHAFT**.

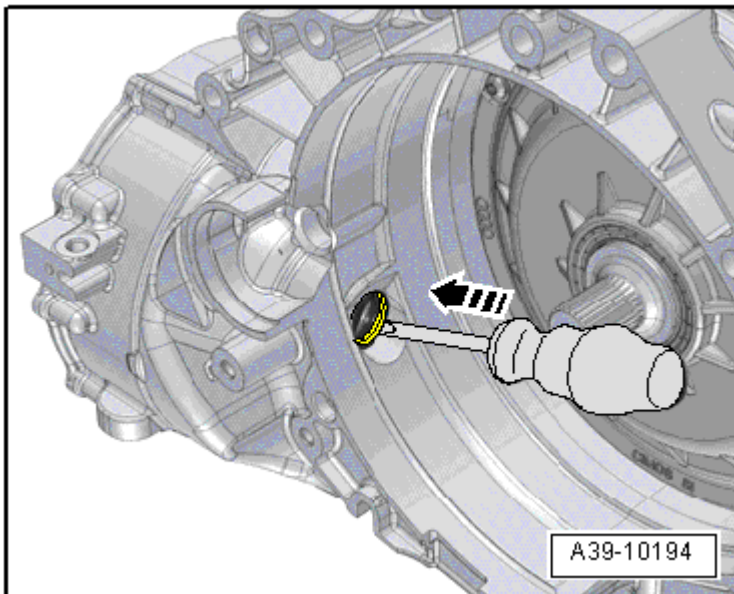


Fig. 52: Prying Out Seal From Back

Courtesy of AUDI OF AMERICA, LLC

CAUTION: Danger of damaging the seating surface in the transmission housing.

- Position the screwdriver.

-- Pry out the seal from the back.

-- Lightly coat the new seal on the outside with oil and install it using the T40164.

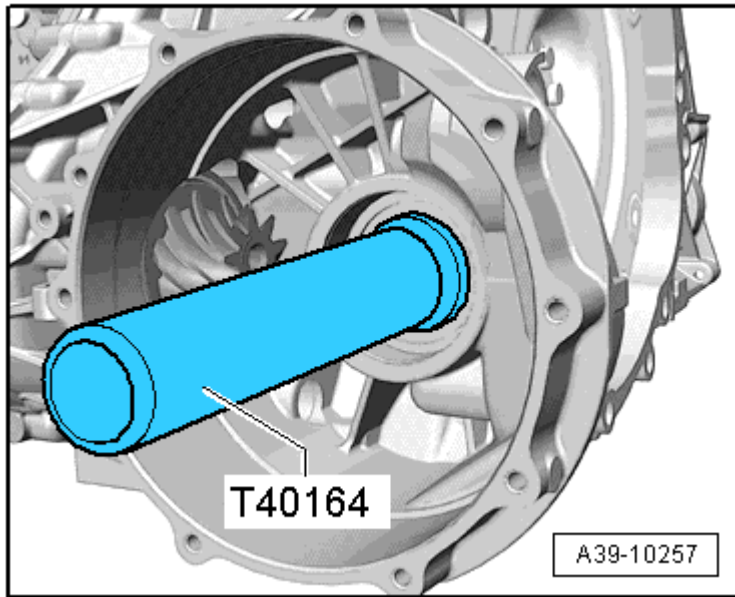


Fig. 53: Installing Seal Using The T40164

Courtesy of AUDI OF AMERICA, LLC

- The open side of the seal faces the T40164.

-- Install the shaft seal for the left flange shaft using the T40164 all the way; when doing this, do not bend it.

-- Fill the space between the sealing and dust lip half way with sealing grease; for the correct sealing grease.

-- Install the differential.

-- Install the front final drive cover with a new O-ring and tighten the bolts. Refer to **Fig. 23**.

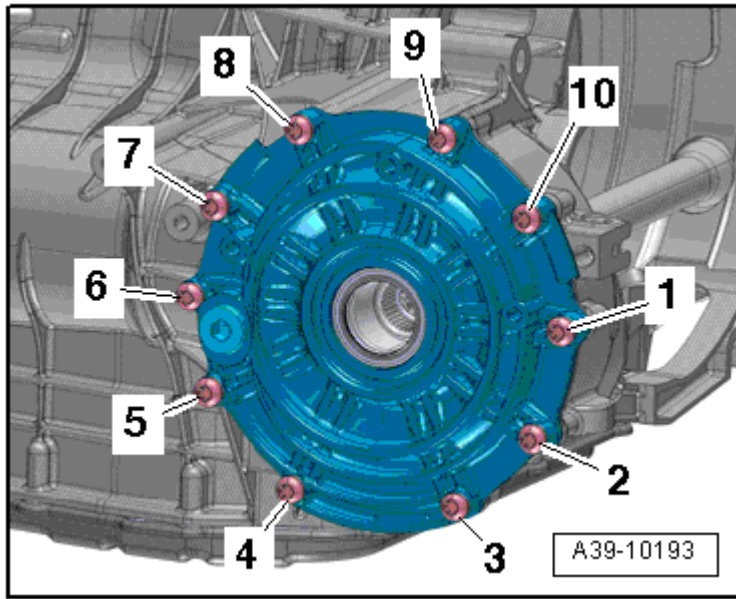


Fig. 54: Tightening Specification And Sequence, Front Final Drive Cover
Courtesy of AUDI OF AMERICA, LLC

- Install the left flange shaft. Refer to **LEFT FLANGE SHAFT**.
- Install the right flange shaft. Refer to **RIGHT FLANGE SHAFT**.
- Refer to **MANUAL TRANSMISSION FLUID, FILLING** after installing the transmission.

RIGHT FLANGE SHAFT SEAL

Special tools and workshop equipment required

- Thrust Piece T40163
- Pry lever
- Grease.

Procedure

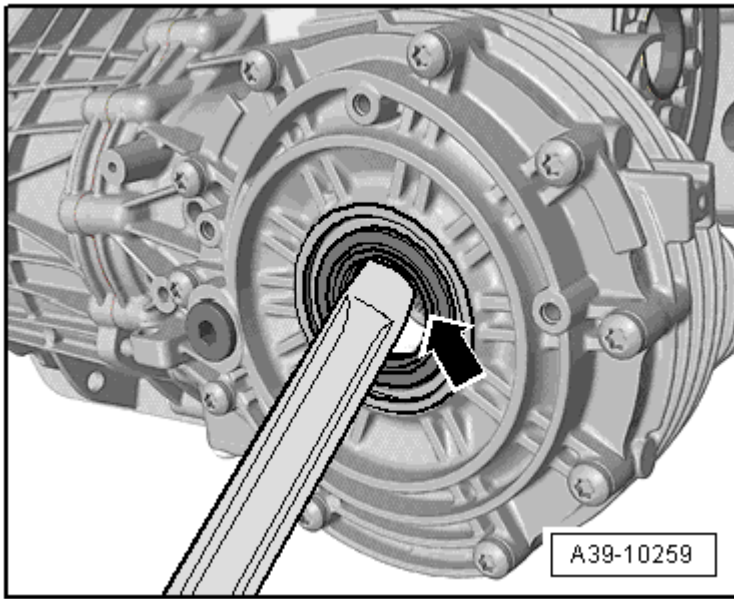


Fig. 55: Prying Out Flange Shaft Sealing Ring
Courtesy of AUDI OF AMERICA, LLC

- Remove the right flange shaft. Refer to **RIGHT FLANGE SHAFT**.
- Pry out the flange shaft sealing ring -arrow-.
- Lightly coat the outer circumference of the new shaft seal with oil.
- Install the shaft seal for the right flange shaft all the way in using T40163. Be careful not to bend it while installing.

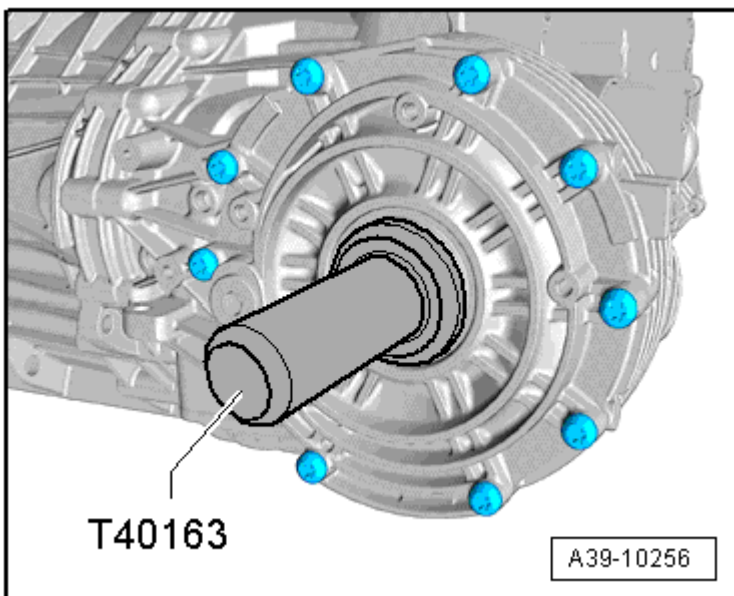


Fig. 56: Installing Shaft Seal

Courtesy of AUDI OF AMERICA, LLC

- Fill the space between the sealing and dust lip half way with sealing grease; for the correct sealing grease.
- Install the right flange shaft. Refer to **RIGHT FLANGE SHAFT**.

SELECTOR SHAFT SEAL

Special tools and workshop equipment required

- Pry Lever - Rmv Outside Mirror 80 - 200
- Thrust Piece T10135

Procedure

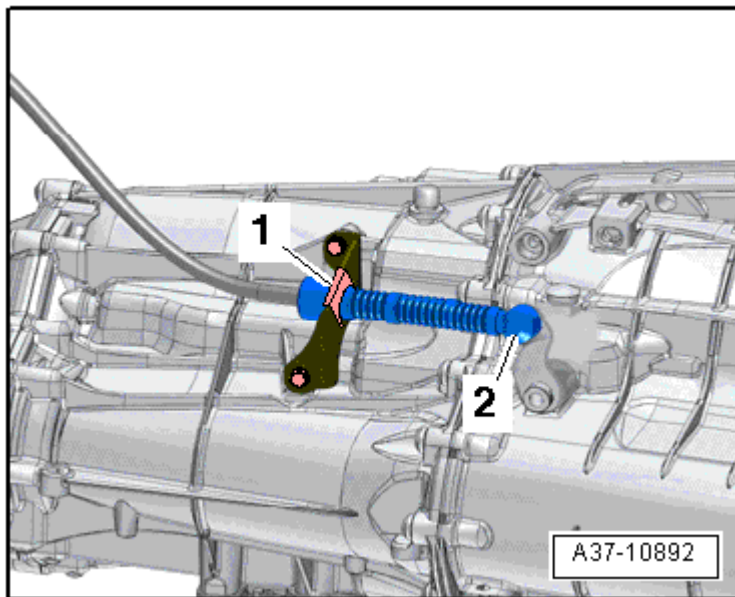


Fig. 57: Selector Lever Cable

Courtesy of AUDI OF AMERICA, LLC

- Remove the plenum chamber bulkhead. Refer to **Description and Operation** .
- Remove the front exhaust pipe/front muffler or front exhaust pipe or right front muffler. Refer to **Removal and Installation** .
- Remove the ball socket -2- on the selector lever cable from the selector shaft lever using the 80 - 200.
- Remove the clip -1- and remove the selector lever cable from the transmission.

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

-- Remove the spring pin -1- on the selector shaft lever -2- -arrow- until it is possible to remove the lever from the shaft.

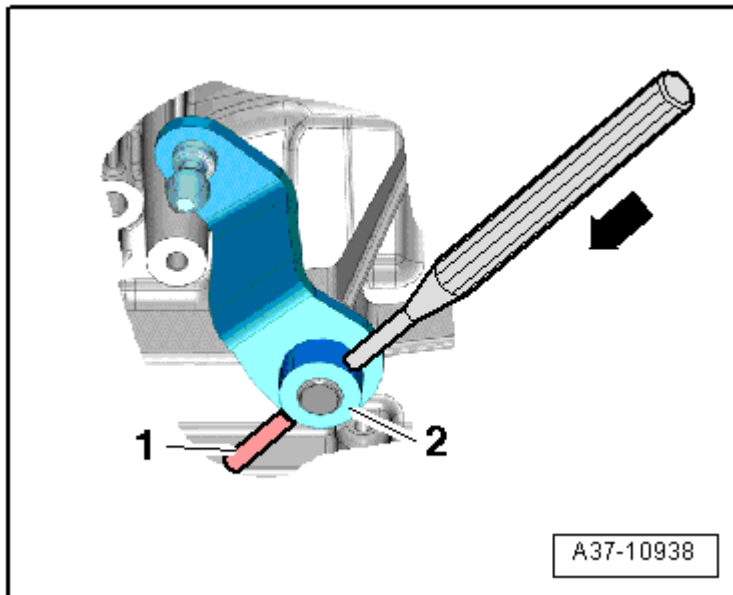


Fig. 58: Removing Spring Pin
Courtesy of AUDI OF AMERICA, LLC

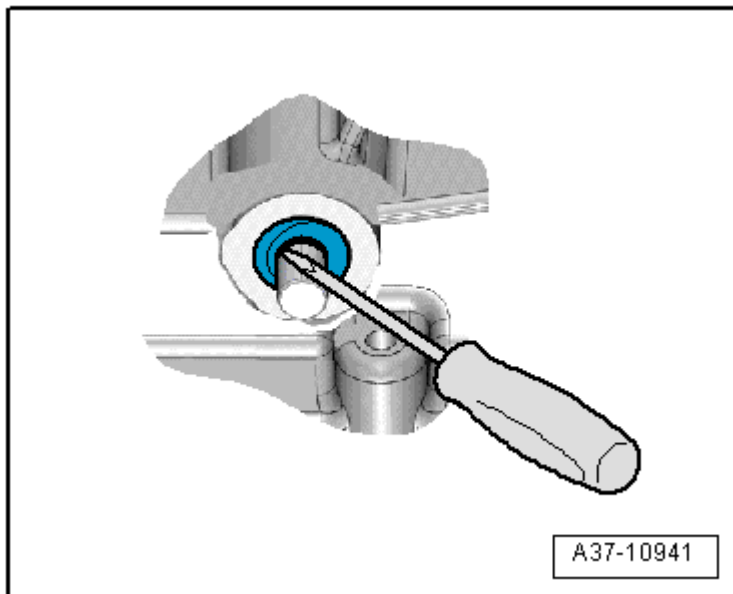


Fig. 59: Pulling Out Shaft Seal With A Small Screwdriver
Courtesy of AUDI OF AMERICA, LLC

CAUTION: The selector shaft running surface could get damaged.

- Position the screwdriver.

- Pierce shaft seal with a small screwdriver and pull out.
- Apply ATF to the circumference and the space between the sealing lips of the new shaft seal.
 - Installed position: Open side of shaft seal faces transmission.
- Slide the shaft seal onto the selector shaft.
- Install the shaft seal all the way in using T10135. Do not tilt it while installing.

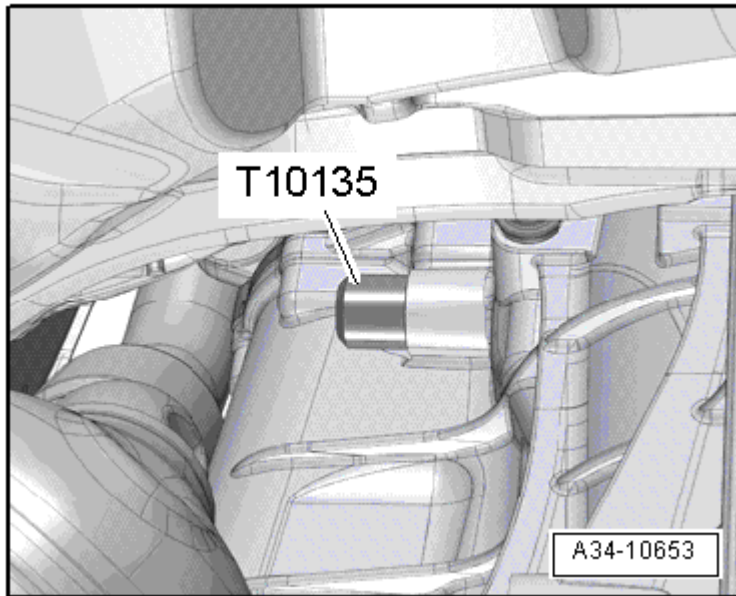


Fig. 60: Installing Shaft Seal Using T10135
Courtesy of AUDI OF AMERICA, LLC

- Install the spring pin on the selector shaft lever while it is still removed.
- Slide the lever onto the selector shaft and install the spring pin.
- Install the exhaust system and align it free of tension. Refer to **Description and Operation** .
- Install the plenum chamber bulkhead. Refer to **Description and Operation** .

INPUT SHAFT SEAL

Special tools and workshop equipment required

- Pulling Hook T20143/2
- Assembly Tool T40198
- Guide Sleeve T40198/1
- Engine and Transmission Holder VAS 6095

- Grease.

Procedure

- Secure the transmission to the Engine and Transmission Holder VAS 6095. Refer to **TRANSMISSION, SECURING IN ENGINE/TRANSMISSION HOLDER** .

-- Remove the flywheel. Refer to **DUAL MASS FLYWHEEL** .

-- Remove the input shaft seal using the T20143/2.

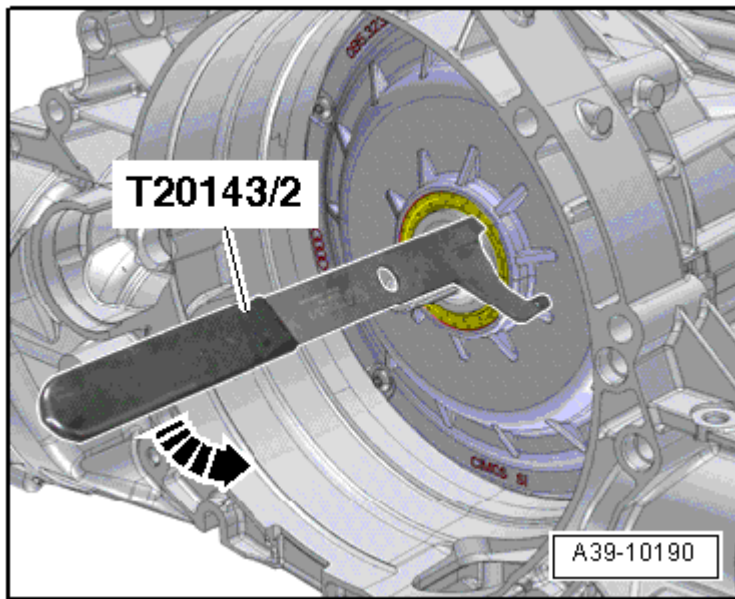


Fig. 61: Removing Input Shaft Seal Using T20143/2.
Courtesy of AUDI OF AMERICA, LLC

-- Install the T40198/1 on the input shaft.

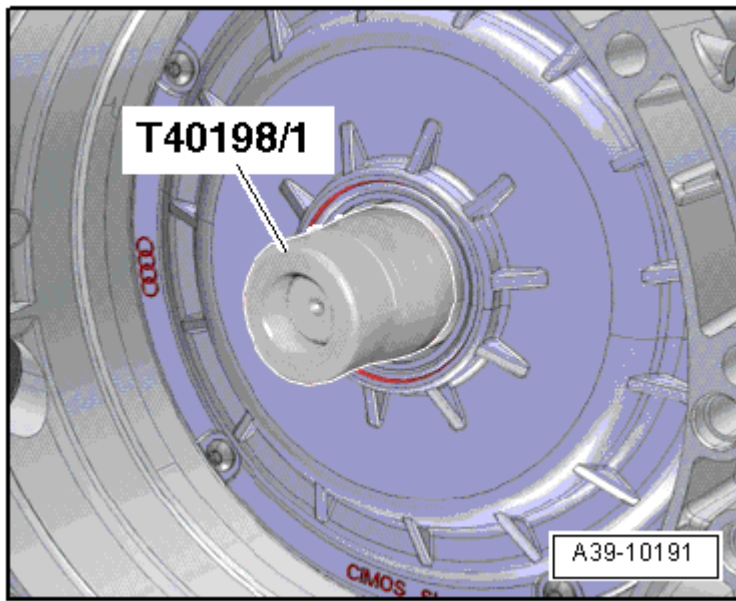


Fig. 62: Installing T40198/1 On Input Shaft
Courtesy of AUDI OF AMERICA, LLC

- Lightly coat the outer circumference of the new shaft seal with oil.
- Fill the space between the sealing and dust lip half way with sealing grease; for the correct sealing grease.
- Install the shaft seal on the guide sleeve.
 - Installed position: Open side of shaft seal faces transmission.
- Install the shaft seal all the way in using T40198. Do not tilt it while installing.

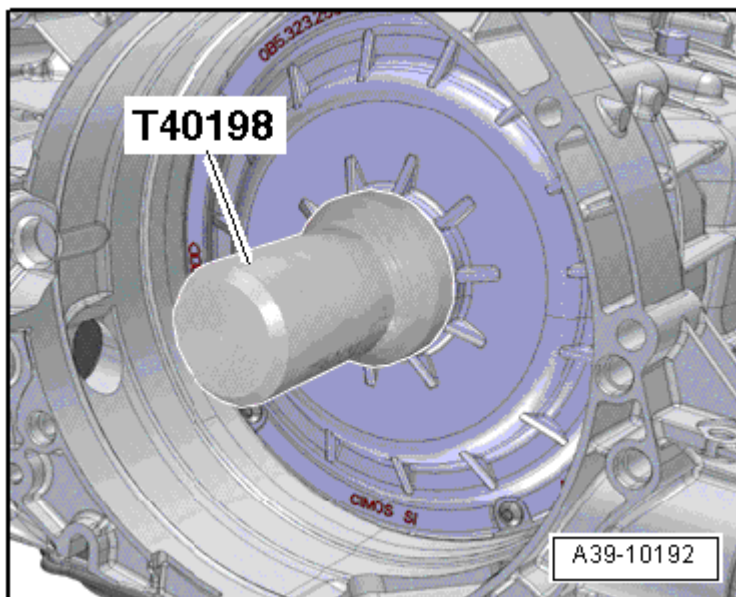


Fig. 63: Installing Shaft Seal All Way In, Do Not Tilt It While Installing
Courtesy of AUDI OF AMERICA, LLC

-- Install the flywheel. Refer to **DUAL MASS FLYWHEEL** .

CENTER DIFFERENTIAL HOUSING, INSTALLED TRANSMISSION AND ATTACHED DRIVESHAFT

Special tools and workshop equipment required

- Engine/Transmission Jack V.A.G 1383 A
- Used Oil Collection and Extraction Device V.A.G 1782
- Gearbox Support T10337
- Sealant.

Removing

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

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

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

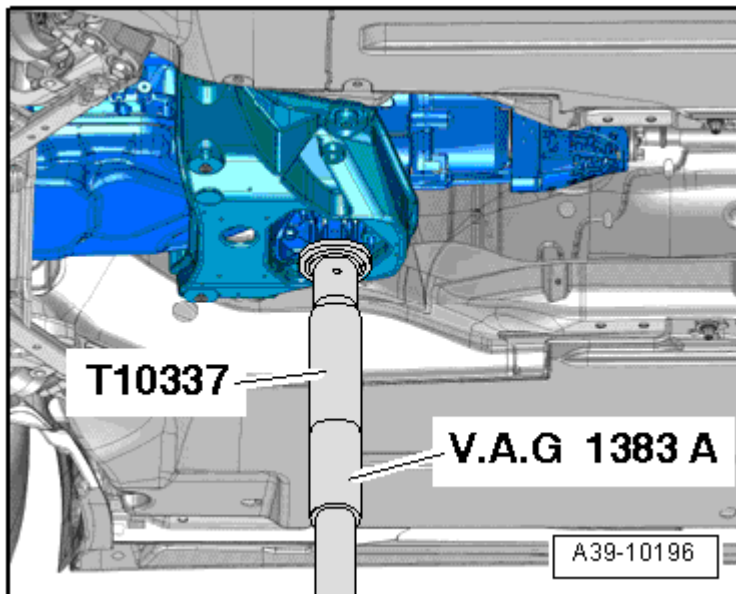


Fig. 64: Mounting T10337 On V.A.G 1383 A And Attach It To Bottom Of Transmission Mount
Courtesy of AUDI OF AMERICA, LLC

-- 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-.

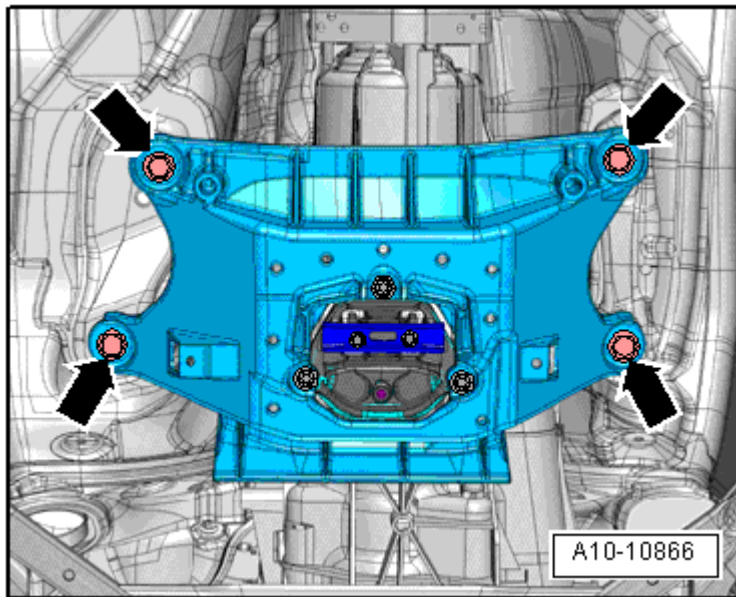


Fig. 65: Removing Bolts From Tunnel Crossmember
Courtesy of AUDI OF AMERICA, LLC

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

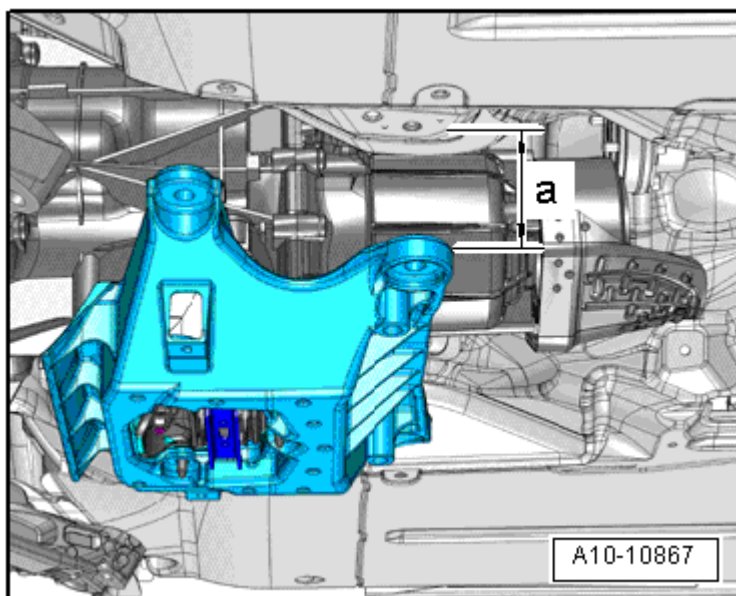
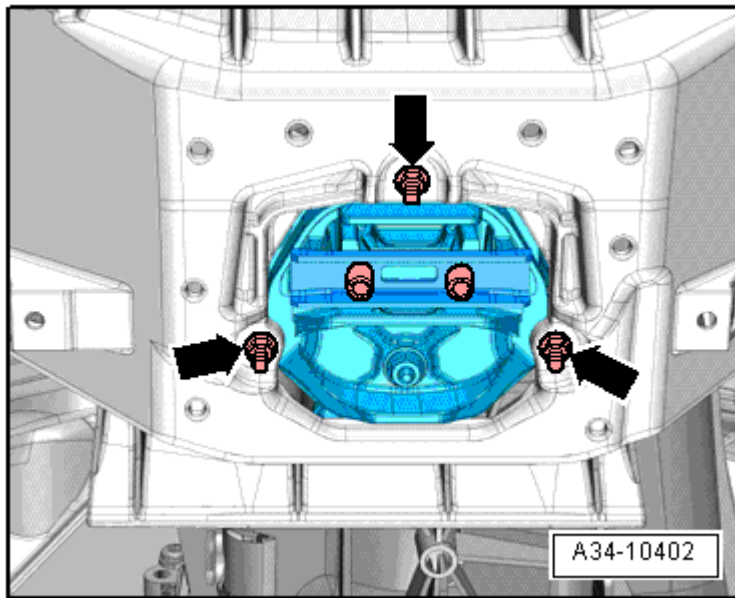


Fig. 66: Lowering Transmission

Courtesy of AUDI OF AMERICA, LLC

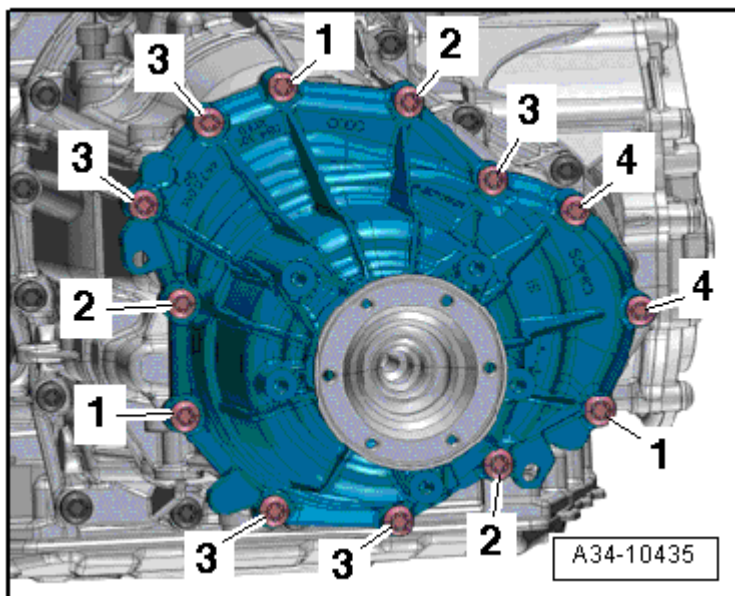
- Dimension -a- = maximum 100 mm.

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

**Fig. 67: Removing Nuts**

Courtesy of AUDI OF AMERICA, LLC

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

**Fig. 68: Tightening Specification And Sequence, Center Differential Housing - Attached Driveshaft**

Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -1- through 4- and carefully remove the center differential housing. The transmission fluid (MTF) will leak out while doing this.

CAUTION: Danger of damaging the center differential.

- Carefully and slowly pull center differential housing off of the transmission toward rear. Otherwise the center differential can fall out of the transmission.
- A center differential that has fallen out may not be installed.

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

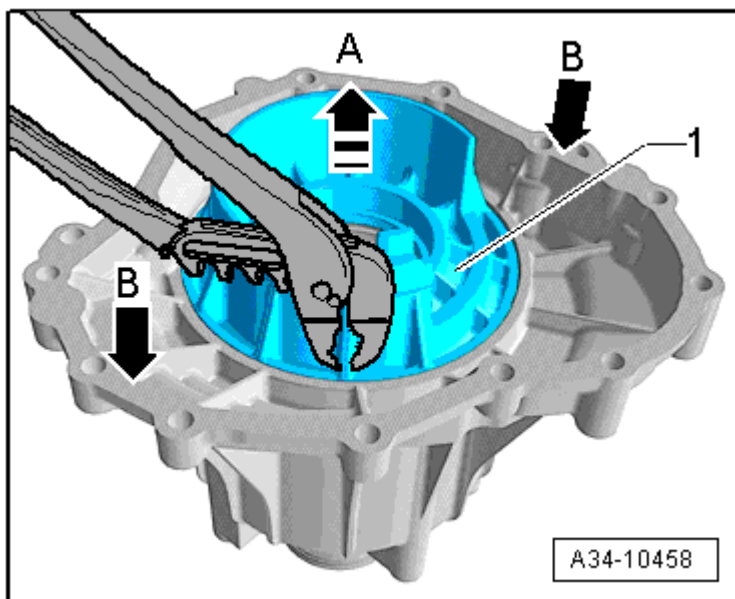


Fig. 69: Holding Gear Carrier -1- By One Of Side Ribs With Pliers And Remove It In Direction Of - Arrow A-

Courtesy of AUDI OF AMERICA, LLC

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

- Use a hammer to hit the housing carefully on several places.

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

-- Using a rubber hammer, tap the housing on alternating sides -arrows B-.

Installing

Install in reverse order of removal. Note the following:

- Tightening specifications, refer to **CENTER DIFFERENTIAL HOUSING OVERVIEW, ATTACHED DRIVESHAFT.**

NOTE: Replace the bolts for the center differential housing.

- Clean both housing separating surfaces thoroughly. They must be free of oil and grease.
- Apply a sealant bead -arrow 1- evenly and not too thick on the housing surfaces; sealant.

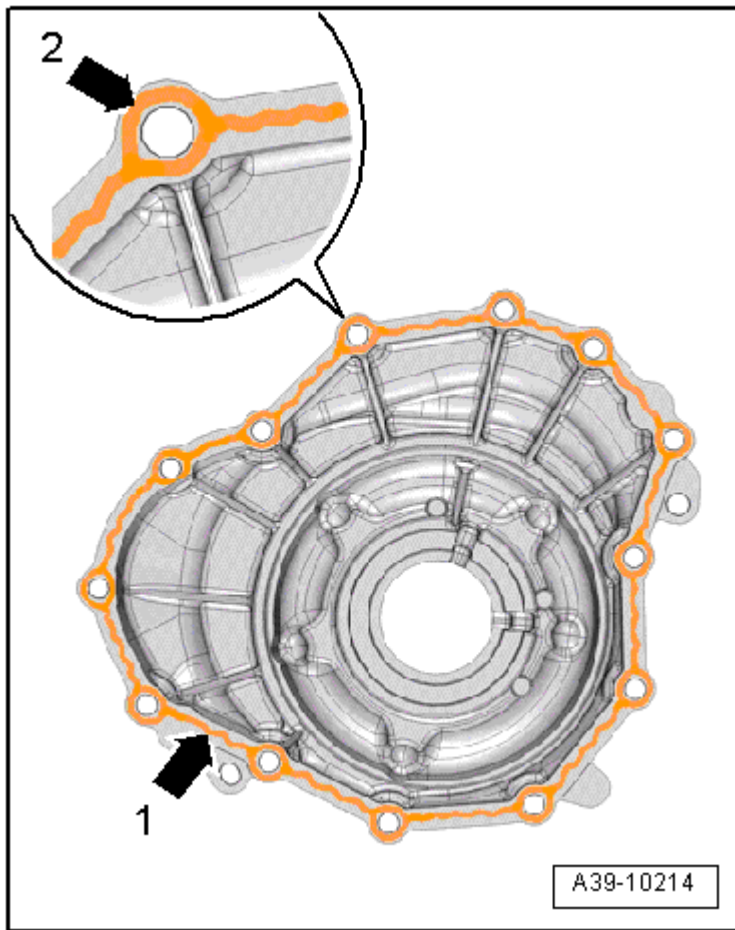


Fig. 70: Applying A Sealant Bead On Housing Surface
Courtesy of AUDI OF AMERICA, LLC

- Place a sealing ring round each bolt hole to prevent contact corrosion -arrow 2-.
- Coat the gear carrier surfaces with transmission fluid (MTF).
- Coat both outer ring surfaces on the gear carrier slightly with transmission fluid (MTF).

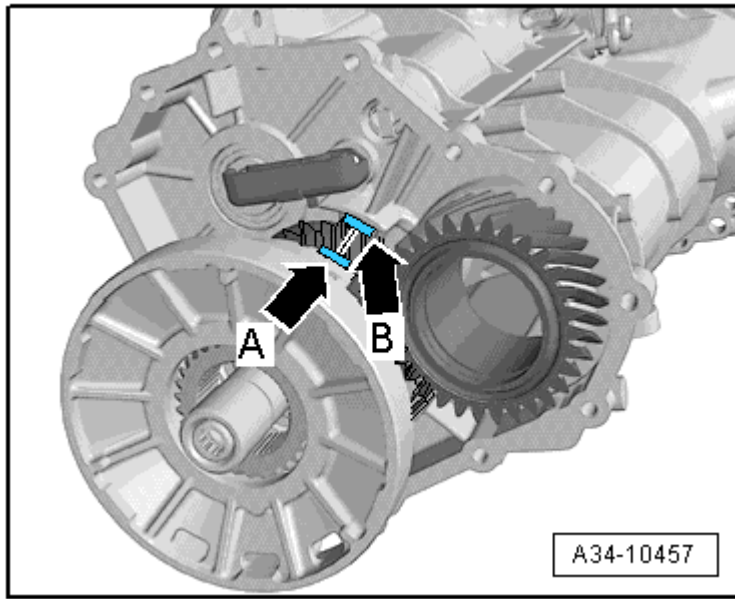


Fig. 71: Coating Both Surfaces On Gear Carrier Slightly With Transmission Fluid
Courtesy of AUDI OF AMERICA, LLC

-- Insert the gear carrier.

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

-- Place the center differential -2- on the transmission -1-.

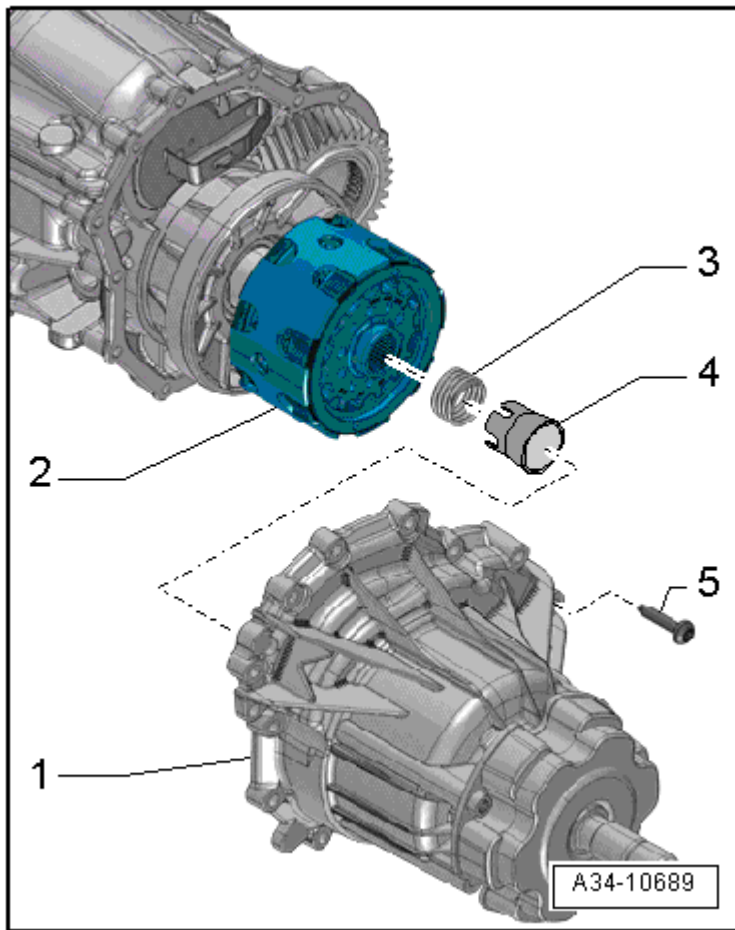


Fig. 72: Center Differential

Courtesy of AUDI OF AMERICA, LLC

- Mount the guide sleeve -4- on the center differential.
- Install the pressure spring -3- into the center differential.
- Press the center differential housing centrally on until it makes contact with the transmission housing and hold it securely.

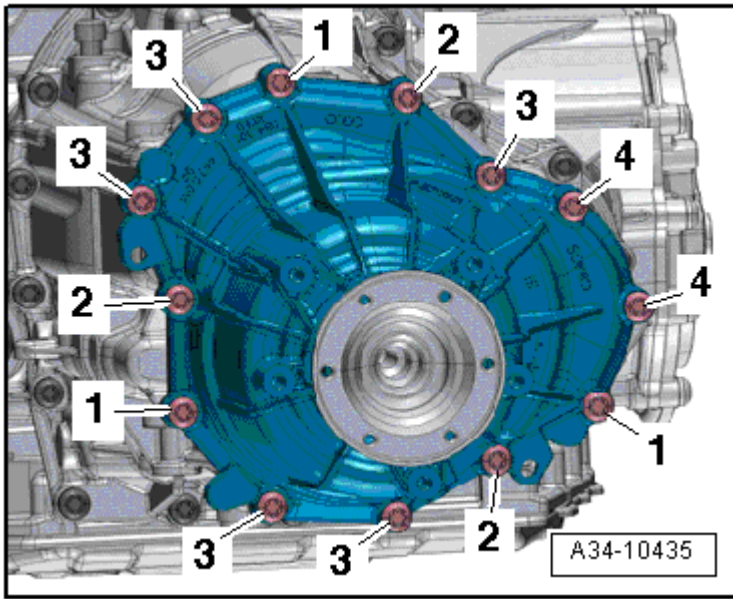


Fig. 73: Tightening Specification And Sequence, Center Differential Housing - Attached Driveshaft
 Courtesy of AUDI OF AMERICA, LLC

-- Tighten the center differential housing bolts. Refer to **Fig. 21**.

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

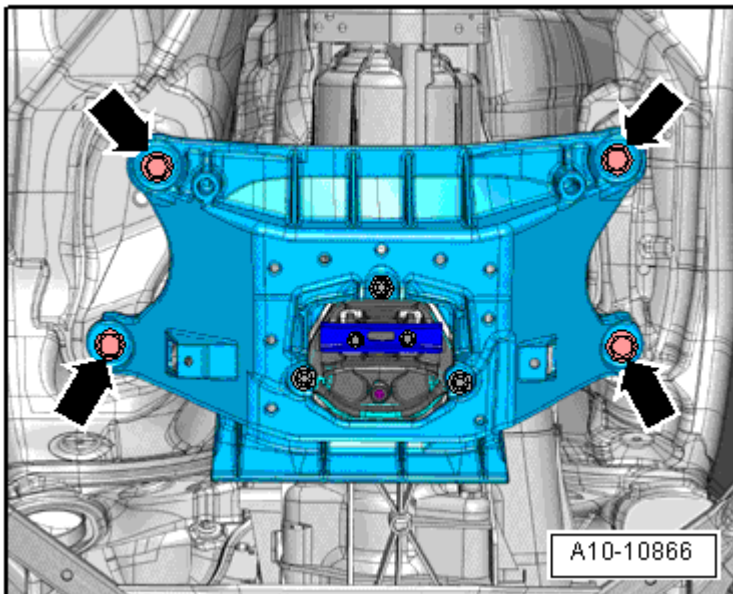


Fig. 74: Removing Bolts From Tunnel Crossmember
 Courtesy of AUDI OF AMERICA, LLC

NOTE: Check the vehicle data label or the designation on the rear final drive itself to

determine which one is installed in the vehicle. Then select the correct rear final drive repair manual.

- Install the driveshaft. Refer to **Removal and Installation** or **Removal and Installation** .
- **MANUAL TRANSMISSION FLUID, FILLING.**
- Install the exhaust system and align it free of tension. Refer to **Description and Operation** .
- Install the subframe crossbrace. Refer to **Removal and Installation** .
- Install the noise insulation. Refer to **Description and Operation** .

CENTER DIFFERENTIAL HOUSING, INSTALLED TRANSMISSION AND BOLTED DRIVESHAFT

Special tools and workshop equipment required

- Engine/Transmission Jack V.A.G 1383 A
- Used Oil Collection and Extraction Device V.A.G 1782
- Counterhold Tool Touareg V10T10172 with Adapter T10172/5
- Gearbox Support T10337
- Sealant.

Removing

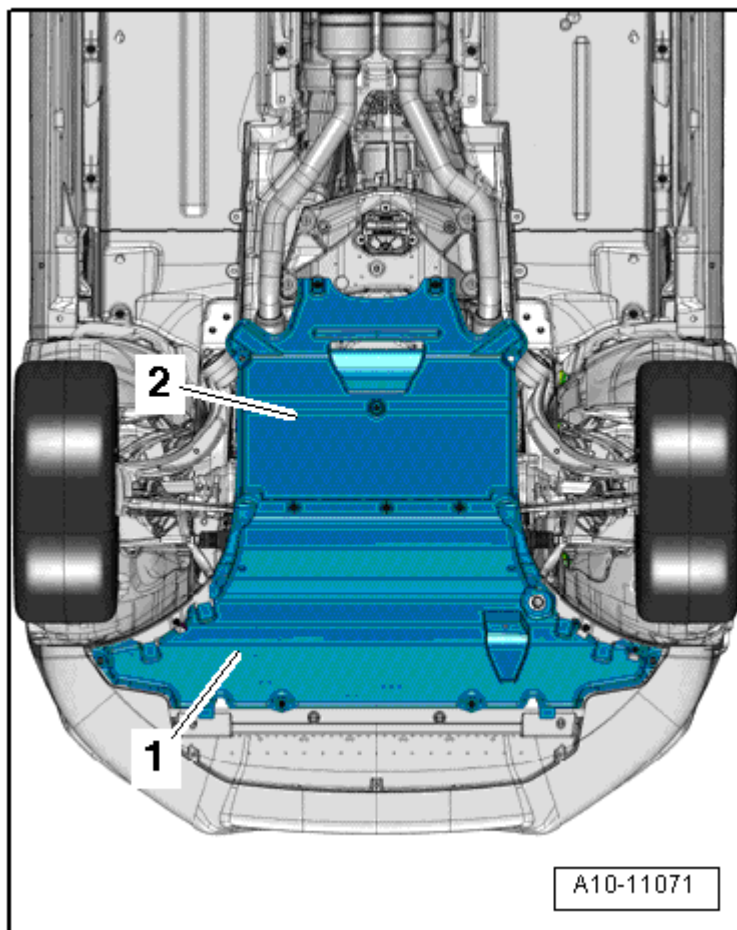


Fig. 75: Removing Noise Insulation

Courtesy of AUDI OF AMERICA, LLC

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

Vehicles with a Single Exhaust System

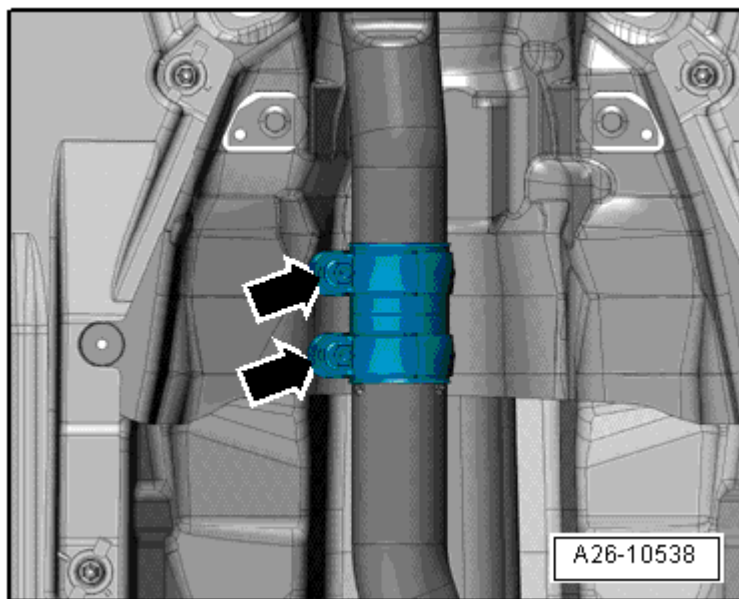


Fig. 76: Clamping Sleeve Threaded Connections

Courtesy of AUDI OF AMERICA, LLC

CAUTION: The decoupling element in the front exhaust pipe could be damaged.

- Do not bend the decoupling elements in the front exhaust pipe more than 10°.

-- Loosen the bolts -arrows-, slide the sleeve to the rear and tie up the front exhaust pipe to the body.

Vehicles with Dual Exhaust System

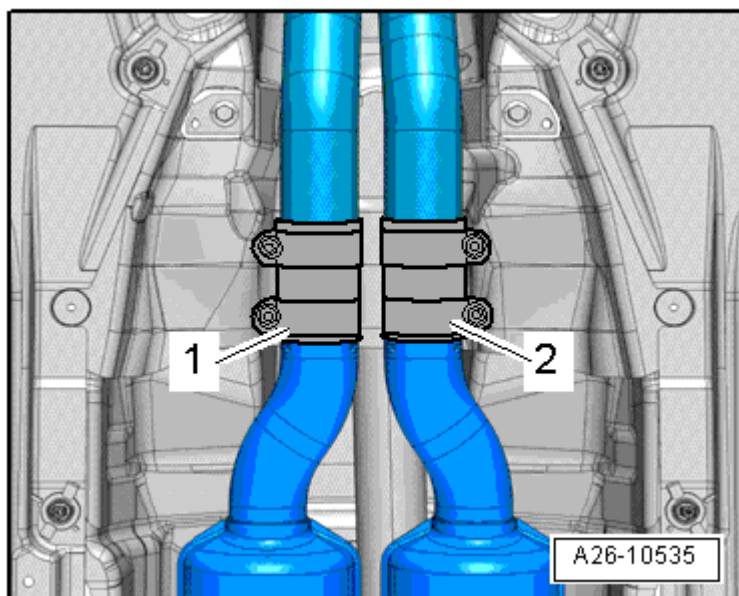


Fig. 77: Identifying Bolts Vehicles With Dual Exhaust System

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 sleeve -1 and 2-, slide it to the rear and tie it up to the body.

A5 Cabriolet

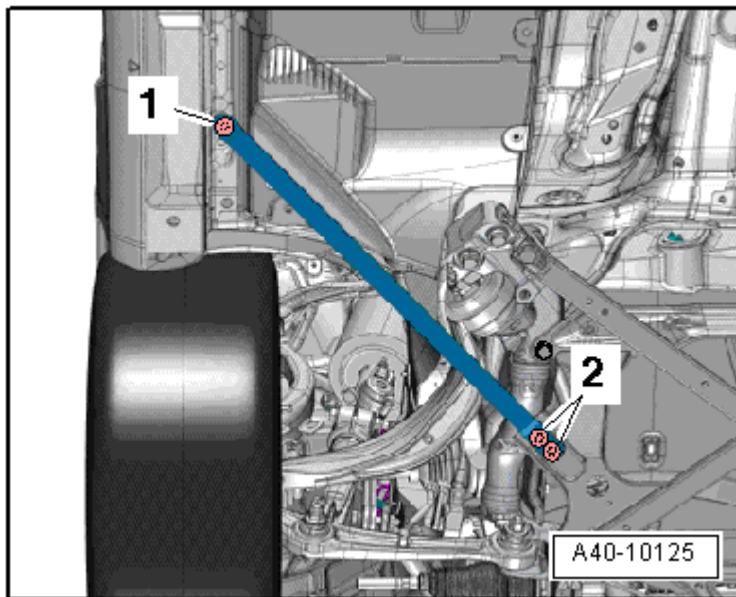


Fig. 78: Loosening Clamping Sleeve

Courtesy of AUDI OF AMERICA, LLC

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

All Vehicles

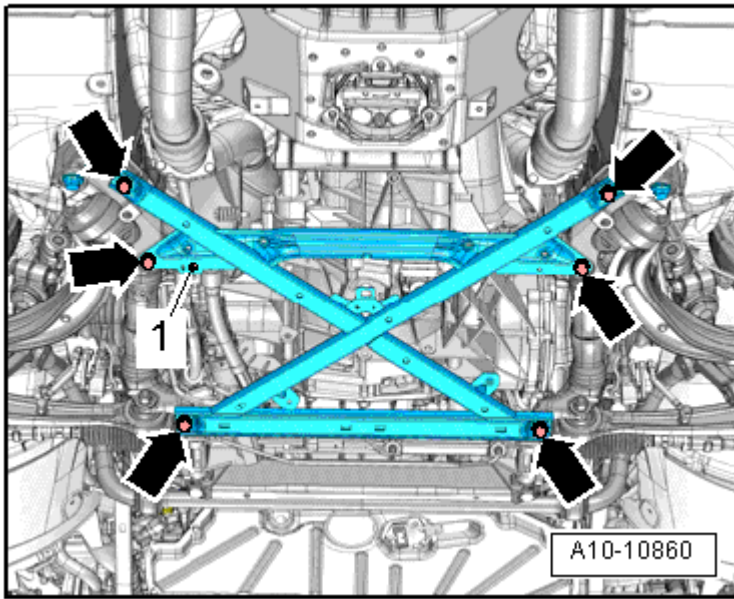


Fig. 79: Removing Subframe Crossbrace
Courtesy of AUDI OF AMERICA, LLC

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

CAUTION: The suspension components could be damaged.

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

-- Remove the bolts -arrows- and remove the driveshaft heat shield -1- (if equipped).

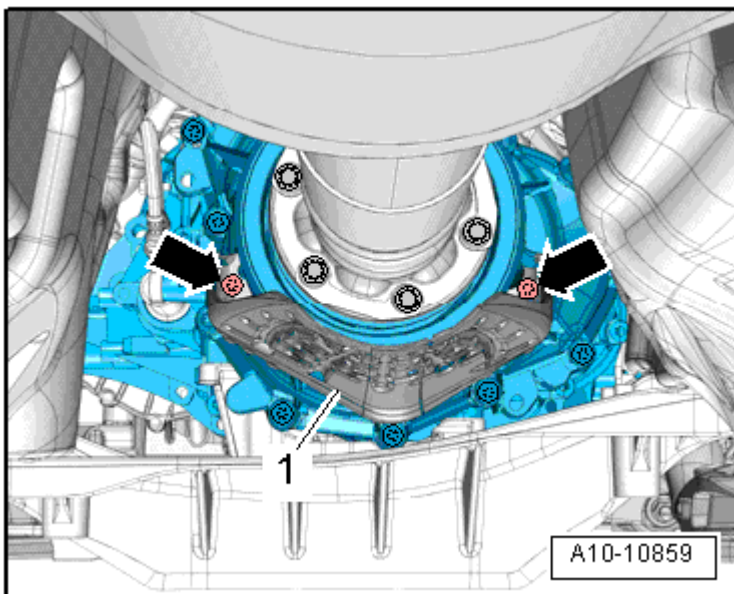
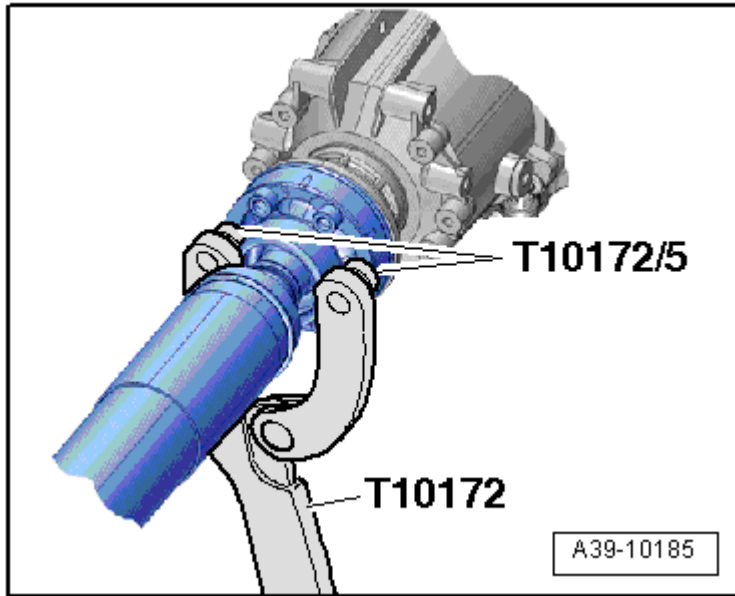


Fig. 80: Driveshaft Heat Shield - Tightening Specification

Courtesy of AUDI OF AMERICA, LLC

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

**Fig. 81: 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.
- Tie the driveshaft to the underbody.
- Mount the T10337 on the V.A.G 1383 A and attach it to the bottom of the transmission mount.

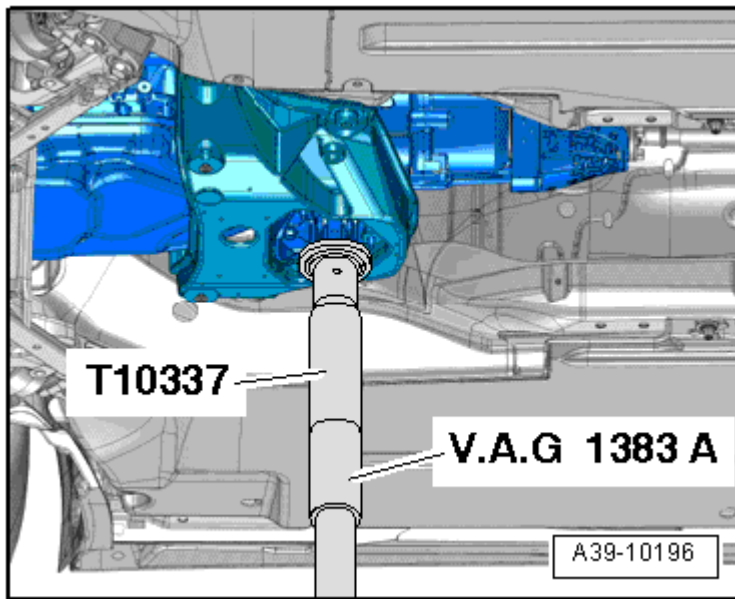


Fig. 82: Mounting T10337 On V.A.G 1383 A And Attach It To Bottom Of Transmission Mount
 Courtesy of AUDI OF AMERICA, LLC

-- 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-.

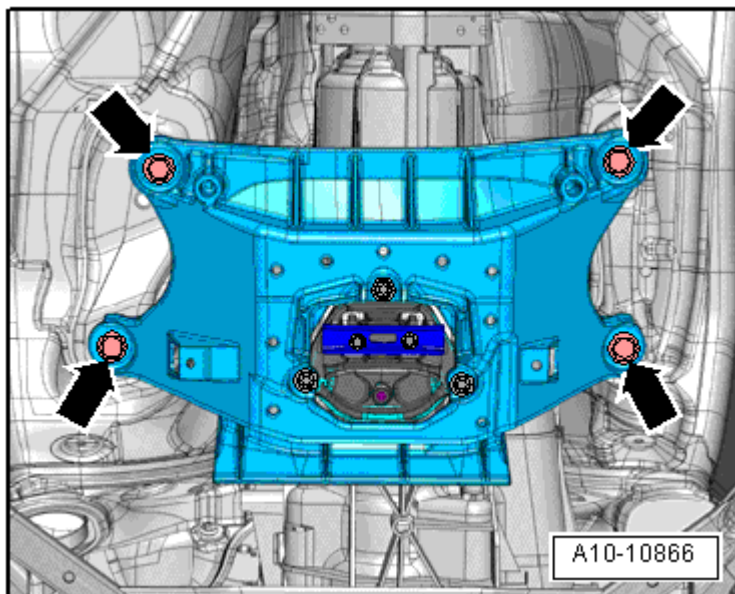
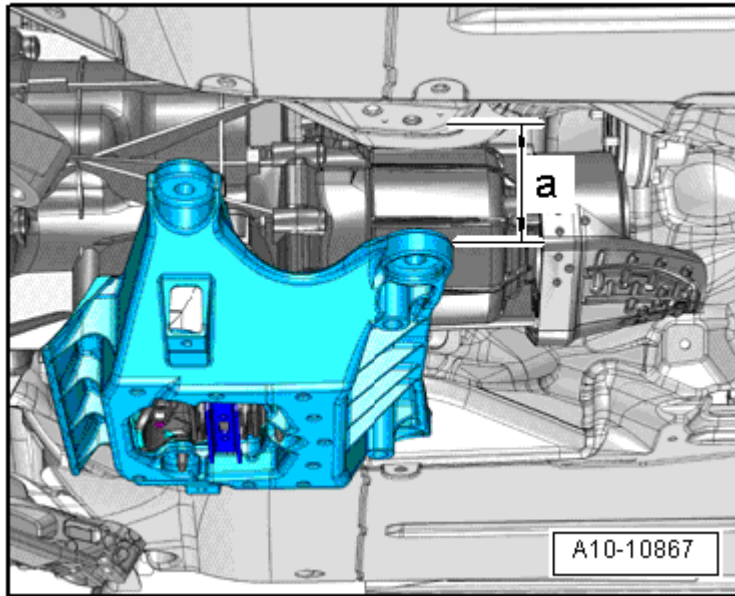


Fig. 83: Removing Bolts From Tunnel Crossmember

Courtesy of AUDI OF AMERICA, LLC

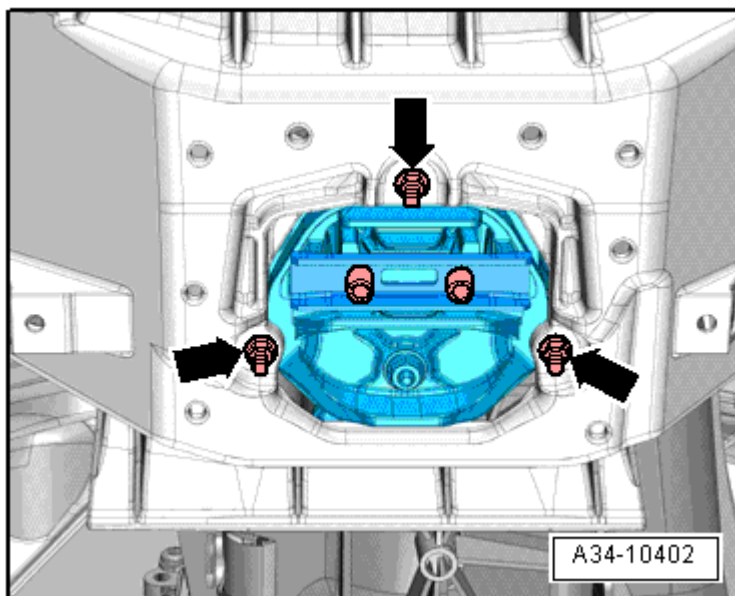
-- Lower the transmission to dimension -a- using V.A.G 1383 A.

**Fig. 84: Lowering Transmission**

Courtesy of AUDI OF AMERICA, LLC

- Dimension -a- = maximum 100 mm.

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

**Fig. 85: Removing Nuts**

Courtesy of AUDI OF AMERICA, LLC

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

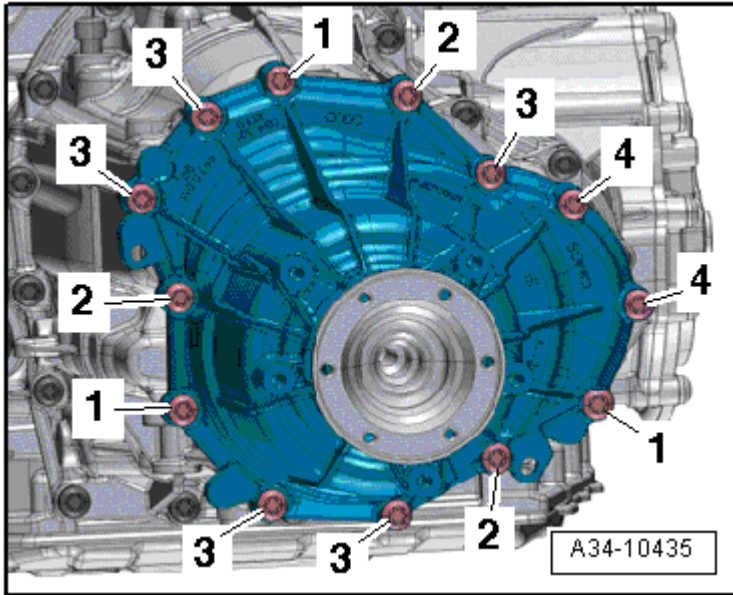


Fig. 86: Tightening Specification And Sequence, Center Differential Housing - Attached Driveshaft
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -1 through 4- and carefully remove the center differential housing. The transmission fluid (MTF) will leak out while doing this.

CAUTION: Danger of damaging the center differential.

- Carefully and slowly pull center differential housing off of the transmission toward the rear. Otherwise the center differential can fall out of the transmission.
- A center differential that has fallen out may not be installed.

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

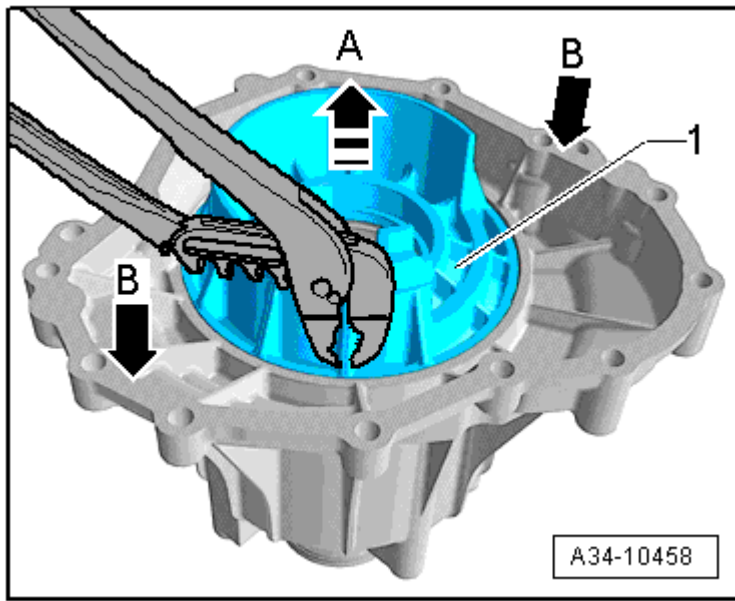


Fig. 87: Holding Gear Carrier -1- By One Of Side Ribs With Pliers And Remove It In Direction Of - Arrow A-

Courtesy of AUDI OF AMERICA, LLC

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

- Use a hammer to hit the housing carefully on several places.

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

-- Using a rubber hammer, tap the housing on alternating sides -arrows B-.

Installing

Install in reverse order of removal. Note the following:

- Tightening specifications , refer to **CENTER DIFFERENTIAL HOUSING OVERVIEW, BOLTED DRIVESHAFT.**

NOTE: Replace the bolts for the center differential housing.

-- Clean both housing separating surfaces thoroughly. They must be free of oil and grease.

-- Apply a bead sealant -arrow 1- evenly and not too thick on the housing surfaces; sealant.

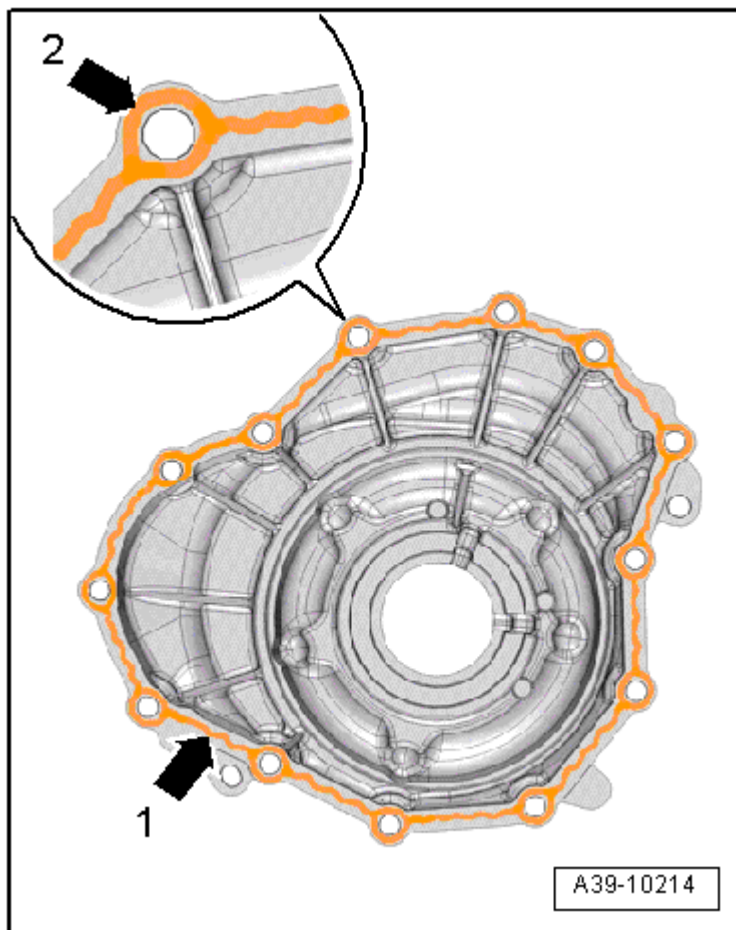


Fig. 88: Applying A Sealant Bead On Housing Surface
Courtesy of AUDI OF AMERICA, LLC

- Place a sealing ring round each bolt hole to prevent contact corrosion -arrow 2-.
- Coat the gear carrier surfaces with transmission fluid (MTF).
- Make sure the spacer sleeve -2- and the shim -1- are mounted on the output shaft.

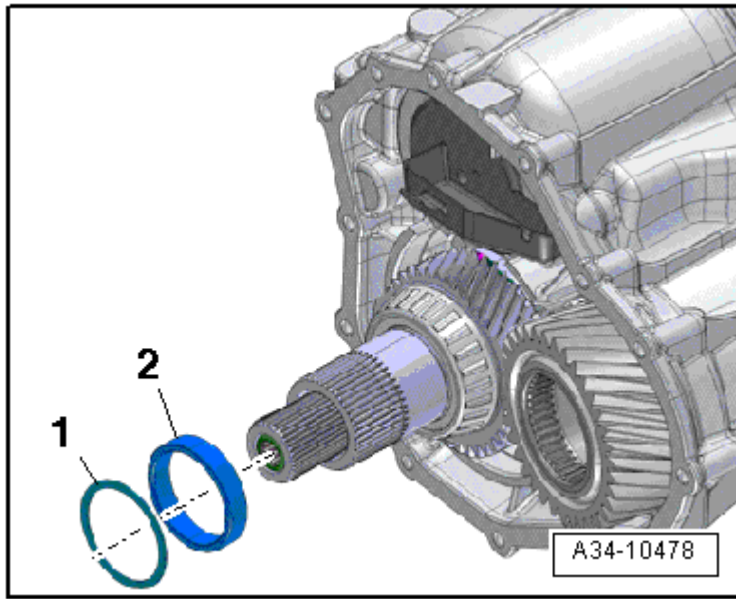


Fig. 89: Make Sure Spacer Sleeve And Shim Are Mounted On Output Shaft
 Courtesy of AUDI OF AMERICA, LLC

-- Coat both outer ring surfaces on the gear carrier slightly with the transmission fluid (MTF).

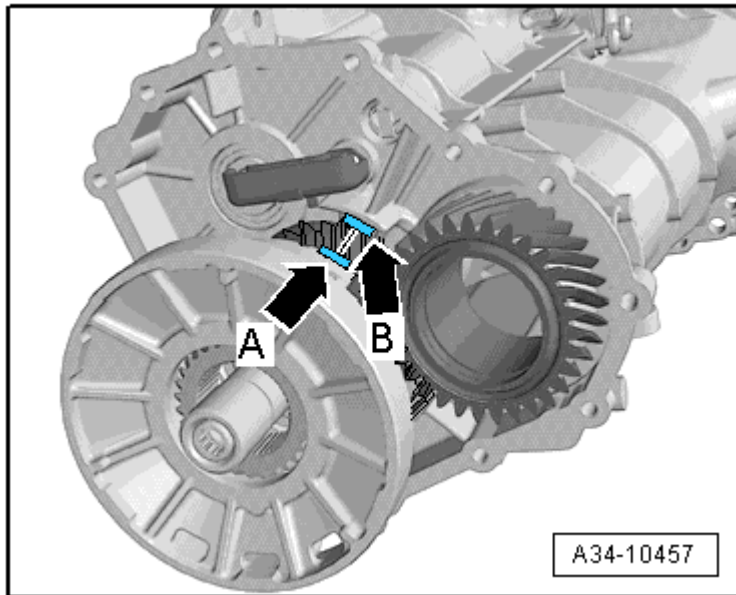


Fig. 90: Coating Both Surfaces On Gear Carrier Slightly With Transmission Fluid
 Courtesy of AUDI OF AMERICA, LLC

-- Insert the gear carrier.

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

-- Place the center differential -2- on the transmission -1-.

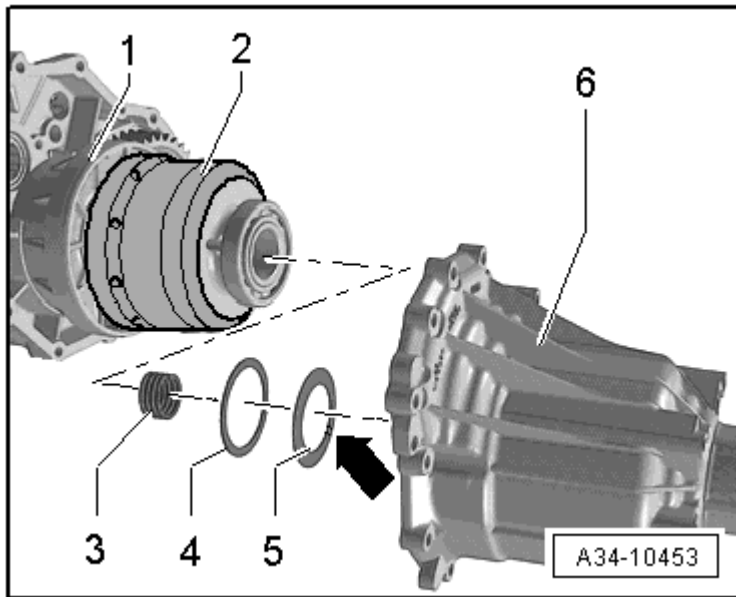


Fig. 91: Placing Center Differential On Transmission
Courtesy of AUDI OF AMERICA, LLC

-- Install the pressure spring -3- into the center differential.

-- Attach the plate spring -5- and shim(s) -4- in the center differential housing -6- with a little grease.

- Plate spring installation location: The side rounded on the outside faces the rear flange shaft.

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

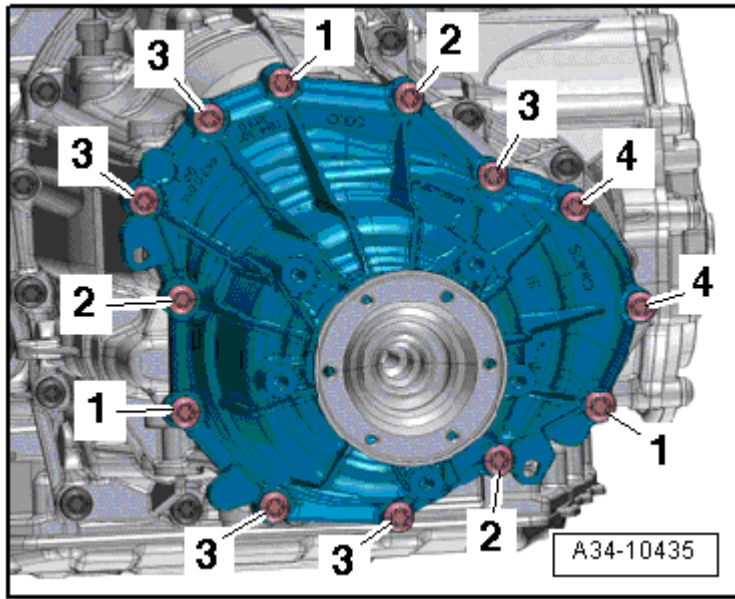


Fig. 92: Tightening Specification And Sequence, Center Differential Housing - Attached Driveshaft
 Courtesy of AUDI OF AMERICA, LLC

-- Tighten the center differential housing bolts. Refer to **Fig. 21**.

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

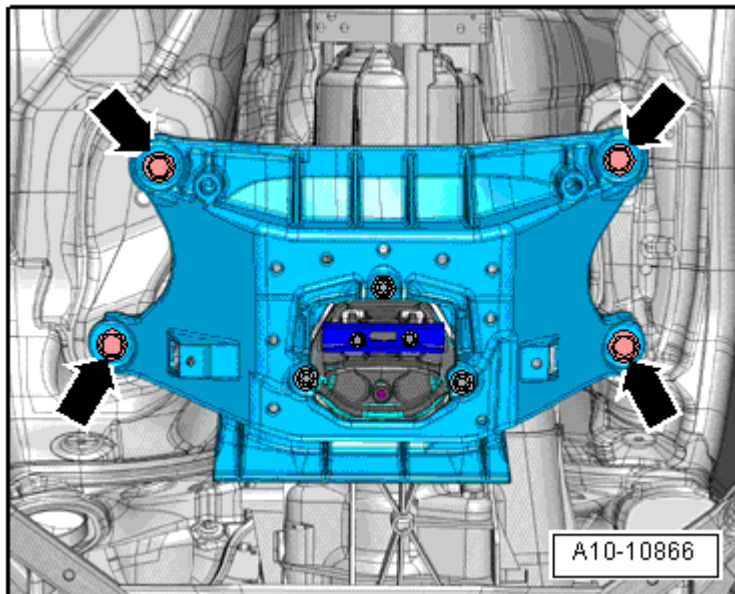


Fig. 93: Removing Bolts From Tunnel Crossmember
 Courtesy of AUDI OF AMERICA, LLC

NOTE: Check the vehicle data label or the designation on the rear final drive itself to

determine which one is installed in the vehicle. Then select the correct rear final drive repair manual.

-- Attach the driveshaft to the transmission. Refer to Removal and Installation or Removal and Installation .

-- MANUAL TRANSMISSION FLUID, FILLING.

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

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

-- Install the diagonal braces. Refer to Removal and Installation .

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

LEFT FLANGE SHAFT BALL BEARING MOUNTING BRACKET

Special tools and workshop equipment required

- Thrust Plate VW 401
- Thrust Plate VW 402
- Thrust Disc VW 412
- Tube 42 mm Dia. VW 516

-- Remove the left flange shaft. Refer to LEFT FLANGE SHAFT.

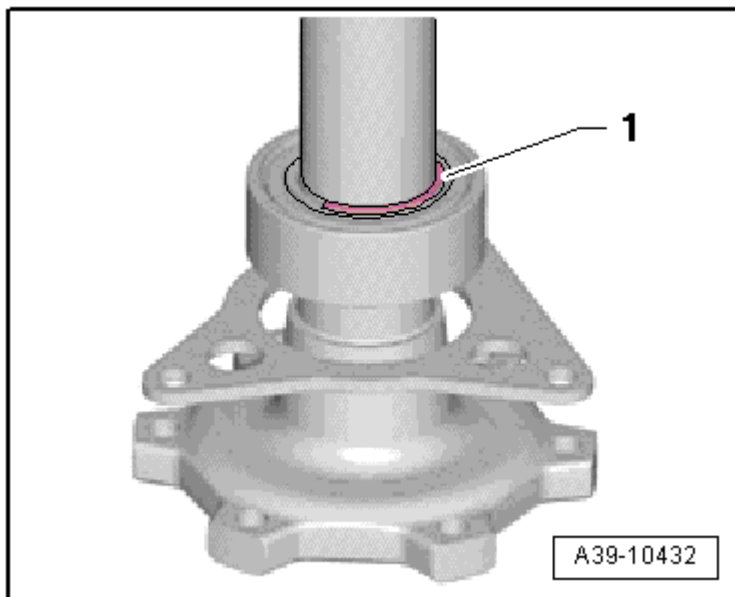


Fig. 94: Removing Left Flange Shaft
Courtesy of AUDI OF AMERICA, LLC

-- Remove the locking ring -1- from the flange shaft.

-- Remove the ball bearing -A- from the flange shaft

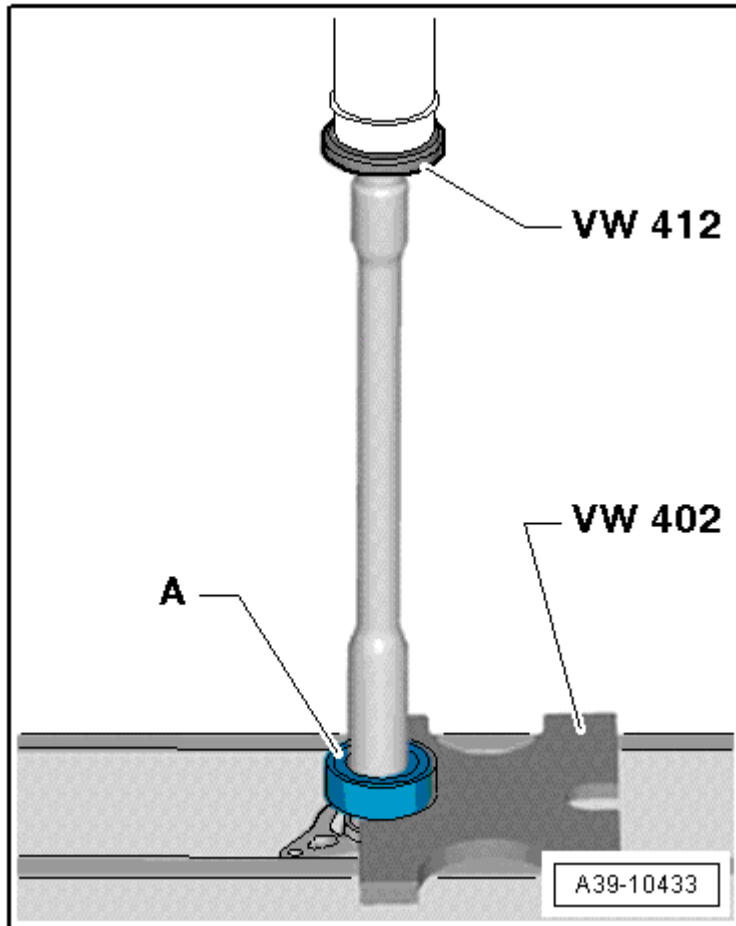


Fig. 95: Removing Locking Ring, Remove Ball Bearing
Courtesy of AUDI OF AMERICA, LLC

-- Install the new bearing bracket -1-.

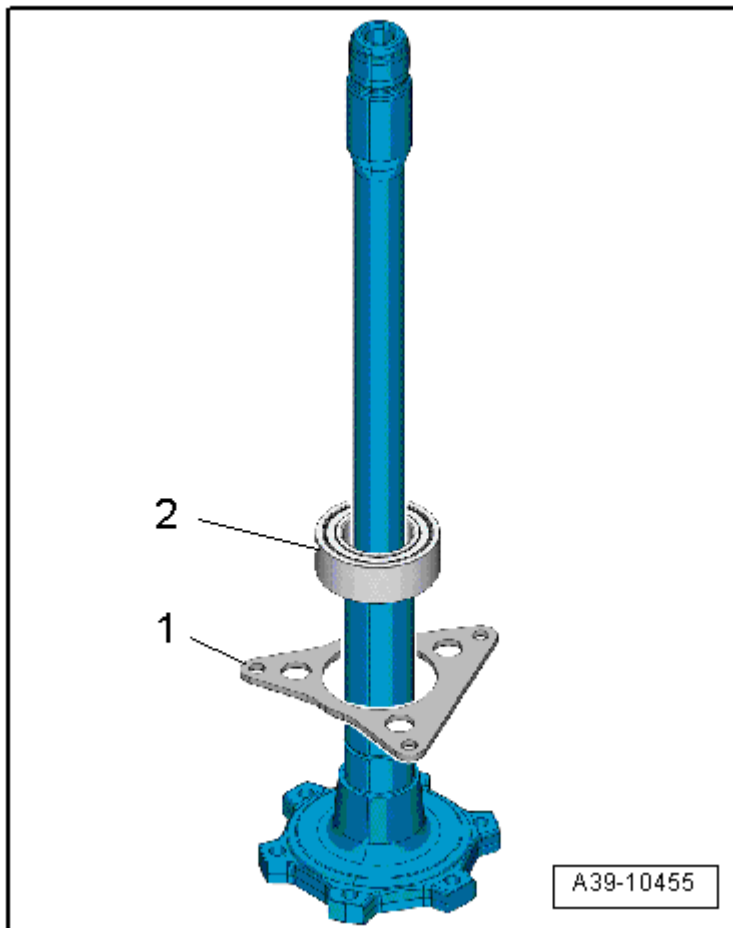


Fig. 96: Installing New Bearing Bracket
Courtesy of AUDI OF AMERICA, LLC

- Installed position: the printed side faces the driveshaft flange
- Install the new ball bearing -2-.
- Install the ball bearing -A- all the way on with the bearing bracket -B- installed.

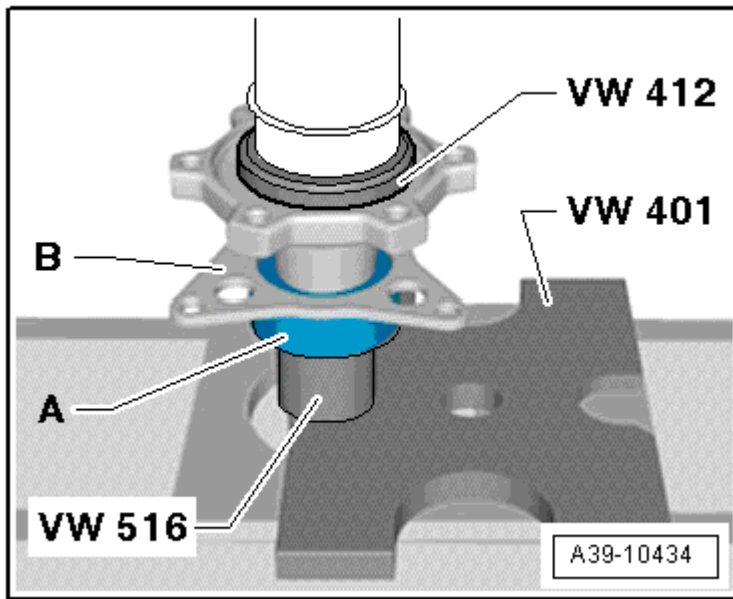


Fig. 97: Installing Ball Bearing
Courtesy of AUDI OF AMERICA, LLC

-- Install the circlip -1- in the flange shaft groove.

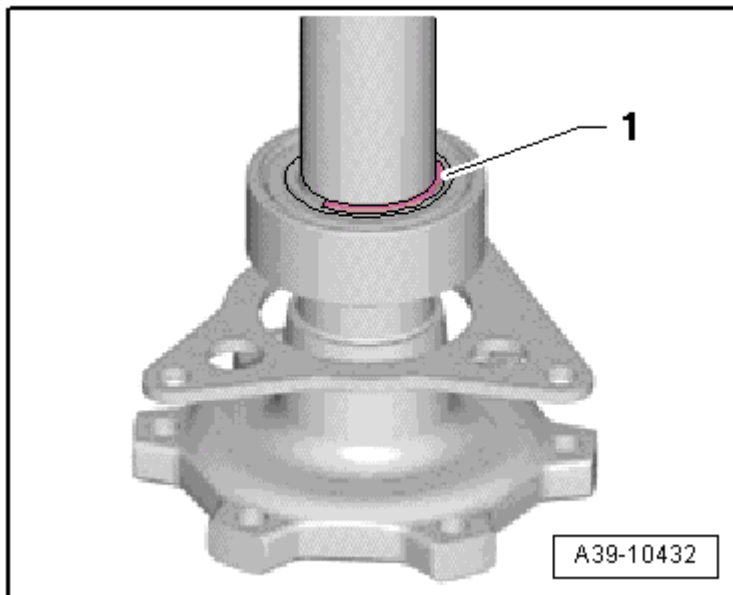


Fig. 98: Installing Circlip
Courtesy of AUDI OF AMERICA, LLC

REAR FLANGE SHAFT AND REAR FLANGE SHAFT SEAL AND BALL BEARING

Special tools and workshop equipment required

- Thrust Plate VW 401

- Thrust Plate VW 402
- Thrust Disc VW 412
- Tube 60 mm Diameter VW 415 A
- Tube 42 mm Dia. VW 516
- Press Tube 30 - 100
- Press Tube 2040
- Thrust Piece for Final Drive at Gearbox T40165
- Grease.

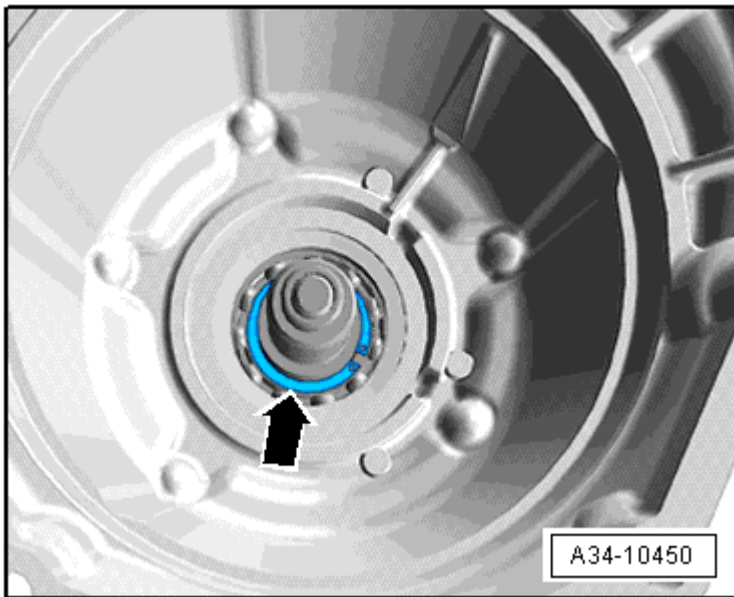
Procedure

Fig. 99: Identifying Locking Ring -Arrow-

Courtesy of AUDI OF AMERICA, LLC

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

-- Remove the circlip -arrow-.

-- Remove the flange shaft by positioning the center differential housing so the flange shaft does not touch the VW 401 and VW 402.

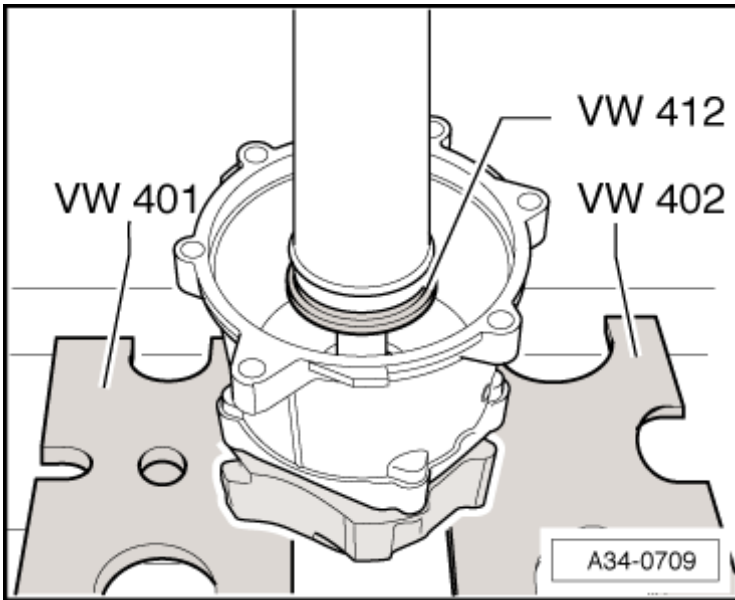


Fig. 100: Pressing Out Flange Shaft
Courtesy of AUDI OF AMERICA, LLC

- Remove the flange shaft using a suitable drift.
- Pry out the shaft seal -1-.

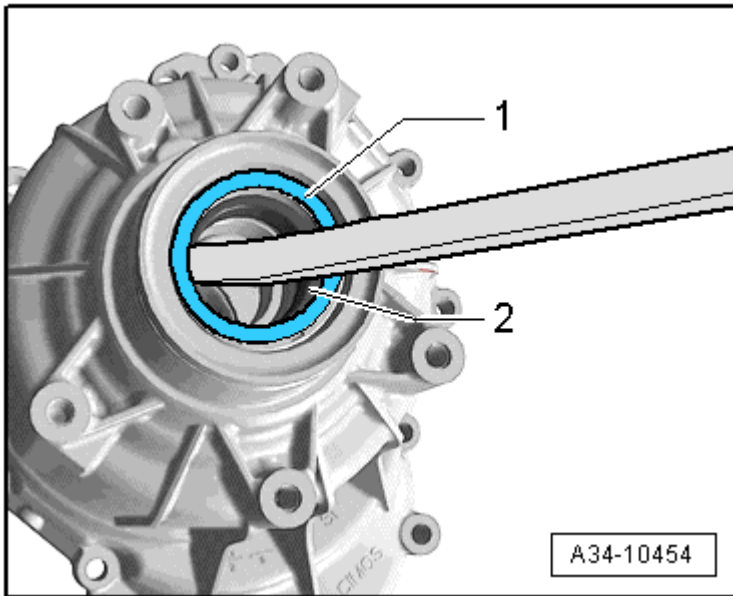


Fig. 101: Prying Out Shaft Seal -1-
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2-.

- Remove the flange shaft ball bearing and spacer sleeve if necessary.

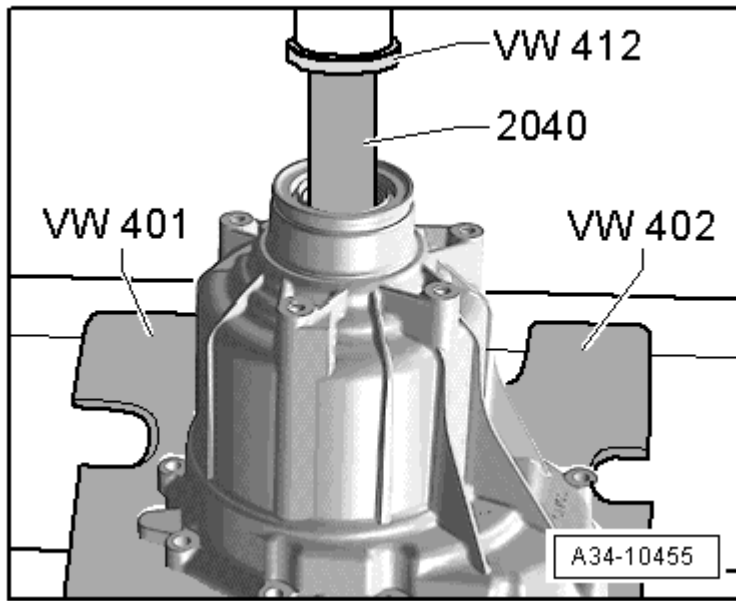


Fig. 102: Removing Flange Shaft Ball Bearing And Spacer Sleeve
Courtesy of AUDI OF AMERICA, LLC

-- Installing the flange shaft ball bearing.

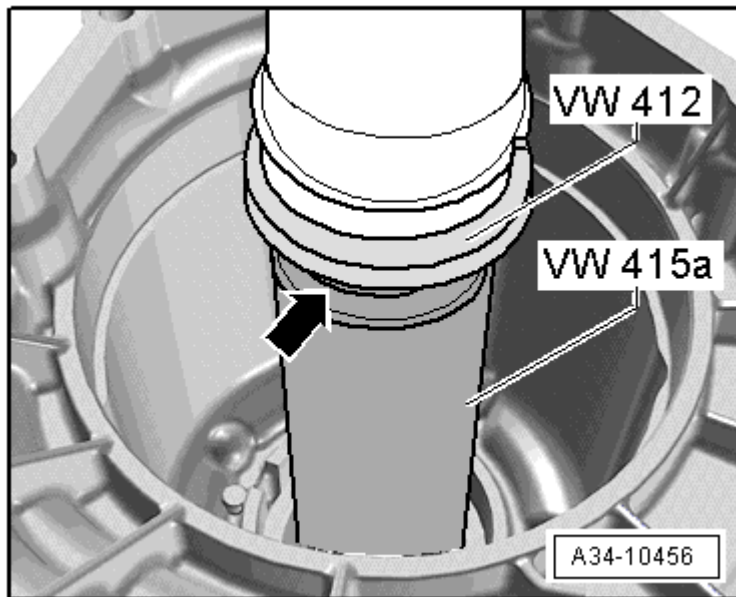


Fig. 103: Installing Flange Shaft Ball Bearing
Courtesy of AUDI OF AMERICA, LLC

- The collar on the VW 415 A -arrow- faces the VW 412.

-- Install the spacer sleeve -item 4- **REAR FLANGE SHAFT AND REAR FLANGE SHAFT SEAL AND BALL BEARING** using VW 415 A.

-- Lightly oil the outer circumference on the shaft seal and then install it all the way using the T40165.

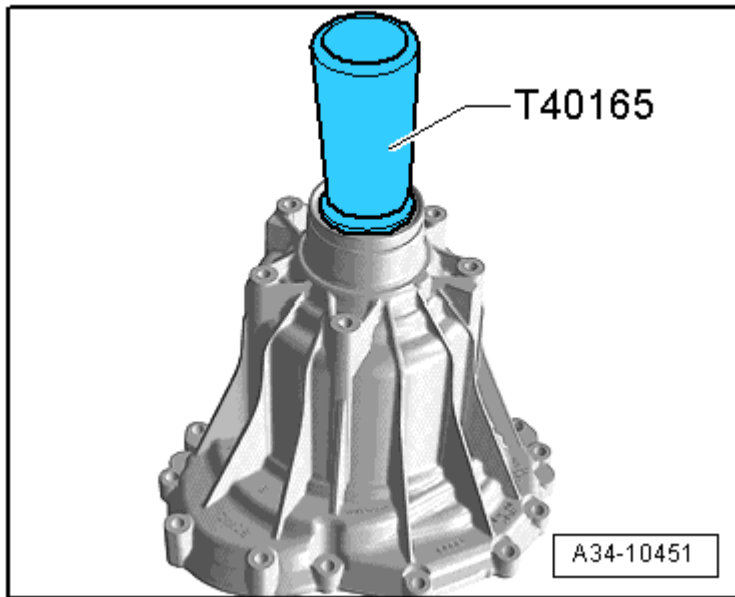


Fig. 104: Installing Shaft Seal Using T40165

Courtesy of AUDI OF AMERICA, LLC

- Installed position: Open side of shaft seal faces transmission.

-- Fill the space between the sealing and dust lip half way with sealing grease; for the correct sealing grease.

-- Install the flange shaft.

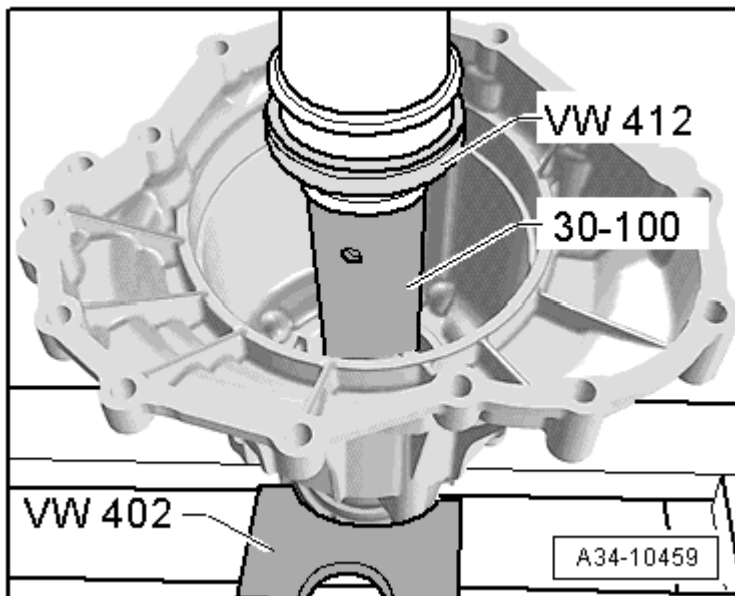


Fig. 105: Installing Flange Shaft

Courtesy of AUDI OF AMERICA, LLC

- Install the flange shaft into the center differential housing from underneath.
- Position the housing and flange shaft on the VW 402 under the shop press.
- Install the inner bearing race using the 30 - 100 on the flange shaft.
- Install a new circlip -arrow- on the flange shaft.

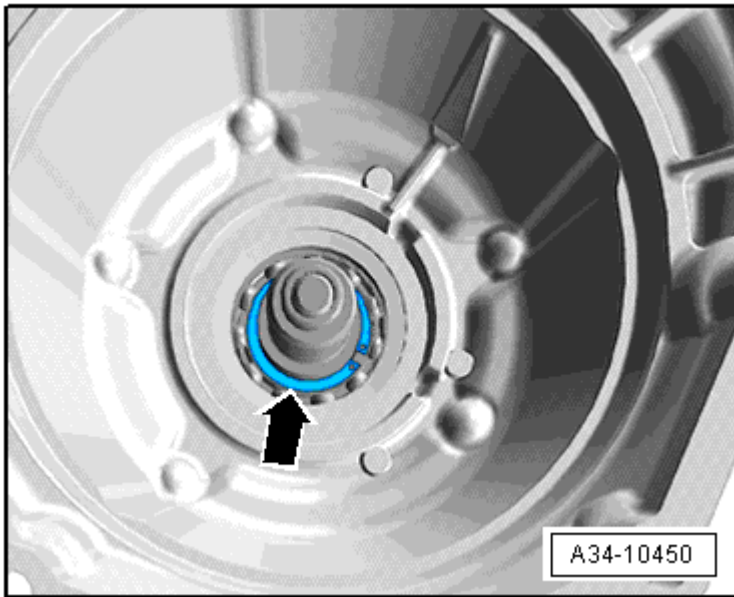


Fig. 106: Identifying Locking Ring -Arrow-
Courtesy of AUDI OF AMERICA, LLC

-- Install the center differential housing. Refer to **CENTER DIFFERENTIAL HOUSING, INSTALLED TRANSMISSION AND BOLTED DRIVESHAFT.**

TRANSMISSION OUTPUT SHAFT WITH SPLINES, TRANSMISSION OUTPUT SHAFT BALL BEARING WITH SPINES

Special tools and workshop equipment required

- Thrust Plate VW 401
- Thrust Plate VW 402
- Thrust Disc VW 412
- Tube 60 mm Diameter VW 415 A
- Press Tube 30 - 100
- Press Tube 2040
- Assembly Tool T40238
- Grease.

Procedure

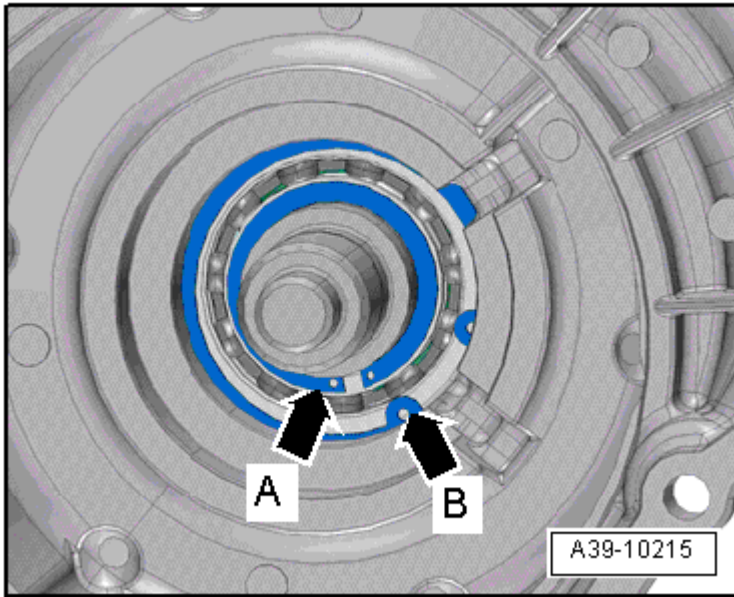


Fig. 107: Removing Circlip

Courtesy of AUDI OF AMERICA, LLC

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

-- Remove the circlip -arrow A-.

-- Remove the locking ring -arrow B- as well as if the ball bearing is also being removed.

-- Transmission output shaft with splines without vibration damper: pry out the dust ring -1-.

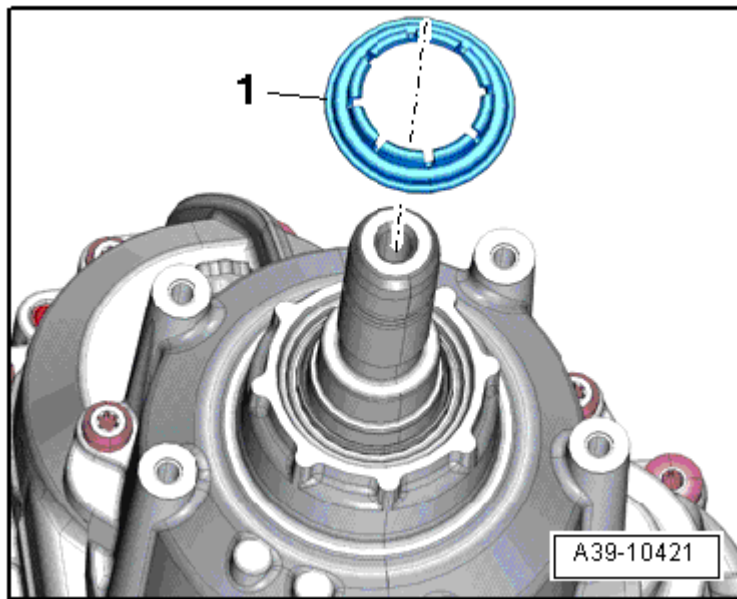


Fig. 108: Prying Out Dust Ring

Courtesy of AUDI OF AMERICA, LLC

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

-- Position the center differential housing so that the transmission output shaft with splines does not touch the VW 401 and VW 402 and remove the transmission output shaft with splines.

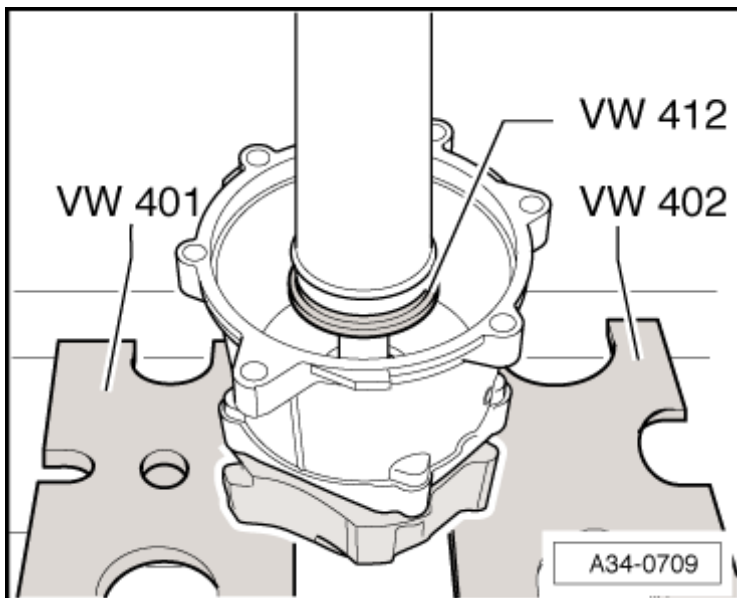


Fig. 109: Pressing Out Flange Shaft

Courtesy of AUDI OF AMERICA, LLC

-- Remove the transmission output shaft with spline using a suitable mandrel.

-- Pry out the shaft seal -1-.

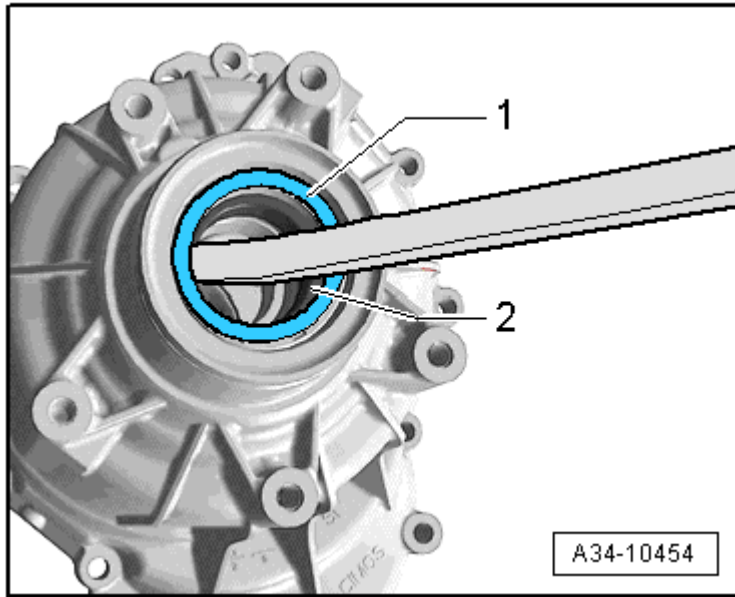


Fig. 110: Prying Out Shaft Seal -1-
Courtesy of AUDI OF AMERICA, LLC

NOTE: Ignore -2-.

-- Remove the transmission output shaft ball bearing with splines, if necessary.

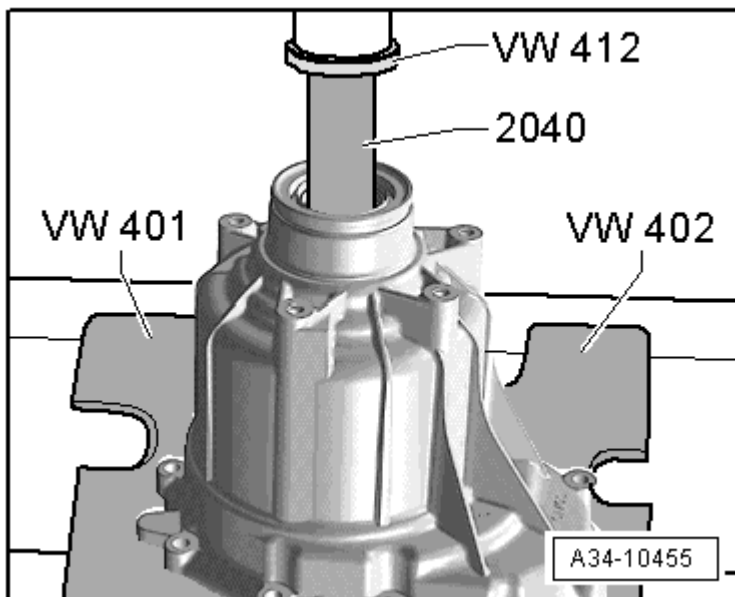


Fig. 111: Removing Flange Shaft Ball Bearing And Spacer Sleeve
Courtesy of AUDI OF AMERICA, LLC

-- Ball Bearing, Transmission Output Shaft With Splines, Installing

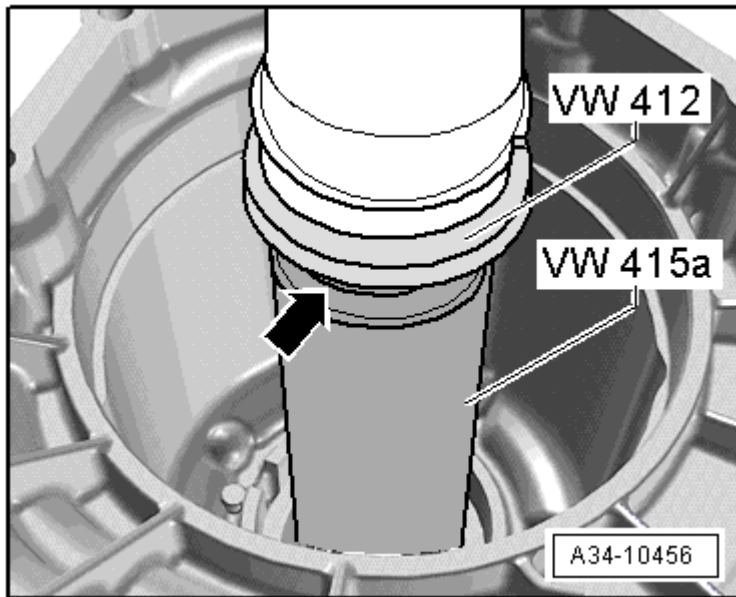


Fig. 112: Removing Flange Shaft Ball Bearing And Spacer Sleeve
Courtesy of AUDI OF AMERICA, LLC

- The collar on the VW 415 A -arrow- faces the VW 412.

-- Coat the seal on the outer circumference lightly with oil and then install it all the way in using T40238.

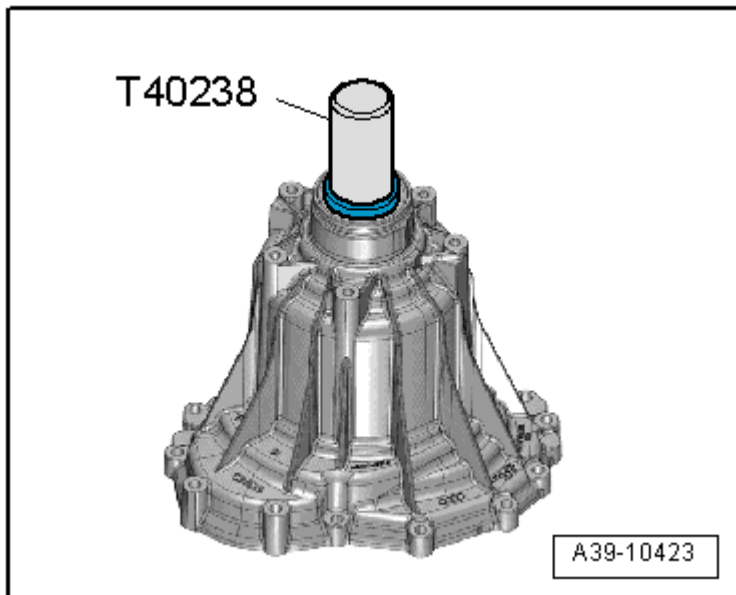


Fig. 113: Coating Seal On Outer Circumference Lightly With Oil And Then Install It All Way In Using T40238

Courtesy of AUDI OF AMERICA, LLC

- Installed position: Open side of shaft seal faces transmission.
- Fill the space between the sealing and dust lip half way with sealing grease; for the correct sealing grease.
- Install the transmission output shaft with splines into the center differential housing from underneath.

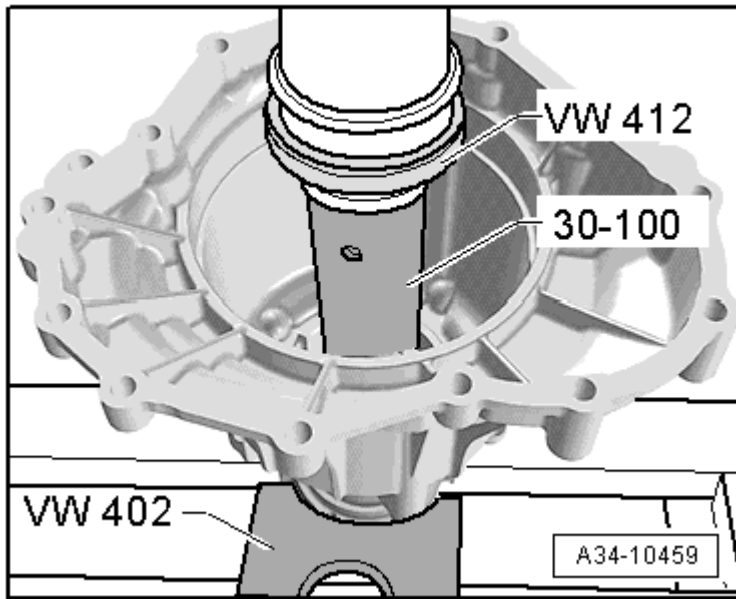


Fig. 114: Installing Flange Shaft
Courtesy of AUDI OF AMERICA, LLC

- Install the transmission output shaft with splines.
- Place the housing with the transmission output shaft with splines on the VW 402 under the shop press.
- Install the bearing inner race on the transmission output shaft with splines using 30 - 100.
- Mount the new locking ring -arrow A- for the transmission output shaft with splines and -arrow B- for the ball bearing.

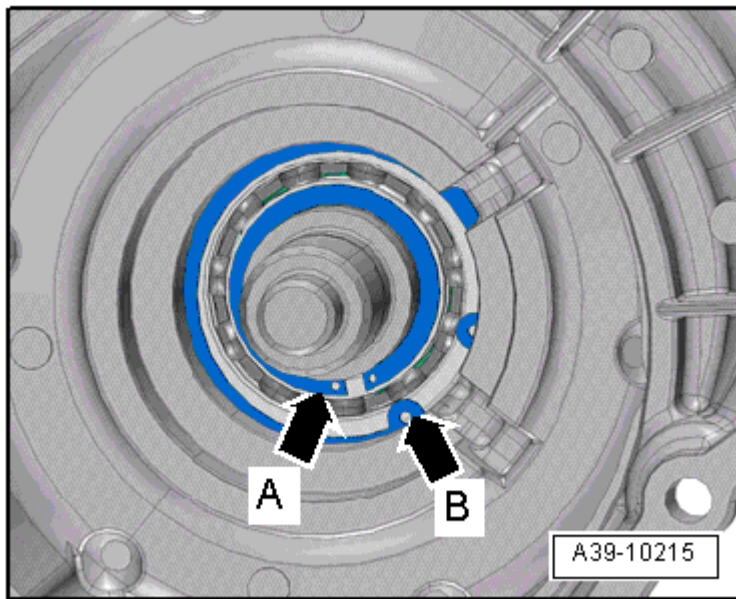


Fig. 115: Mounting Locking Ring

Courtesy of AUDI OF AMERICA, LLC

-- Transmission output shaft with splines without vibration damper: install the new dust ring -1-.

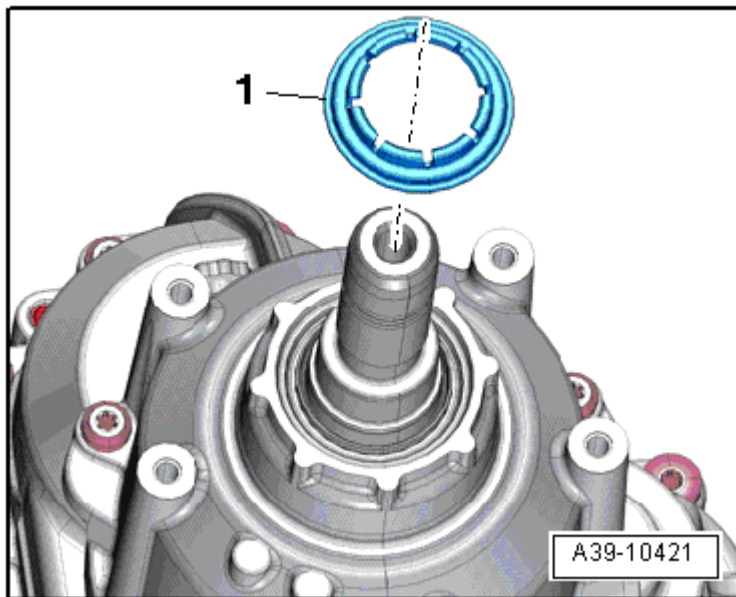


Fig. 116: Installing Dust Ring

Courtesy of AUDI OF AMERICA, LLC

-- Install the center differential housing. Refer to **CENTER DIFFERENTIAL HOUSING, INSTALLED TRANSMISSION AND ATTACHED DRIVESHAFT**.

TRANSMISSION OUTPUT SHAFT WITH SPLINES, VEHICLES WITH VIBRATION DAMPER

The transmission output shaft with splines on vehicles with a vibration damper must be removed in order to replace the transmission output shaft seal with splines.

Refer to **TRANSMISSION OUTPUT SHAFT WITH SPLINES, TRANSMISSION OUTPUT SHAFT BALL BEARING WITH SPINES**.

TRANSMISSION OUTPUT SHAFT WITH SPLINES, VEHICLES WITHOUT VIBRATION DAMPER

Special tools and workshop equipment required

- Pulling Hook T20143/1
- Assembly Tool T40238
- Grease.

Procedure

NOTE: **REPAIR INFORMATION** .

CLEANLINESS WORKING CONDITIONS .

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

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

-- Pry off the dust ring -1-.

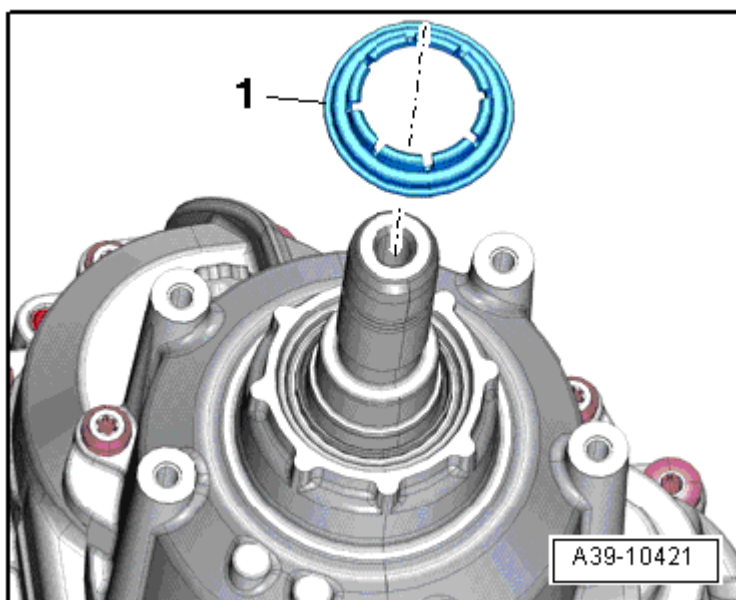


Fig. 117: Prying Out Dust Ring

Courtesy of AUDI OF AMERICA, LLC

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

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

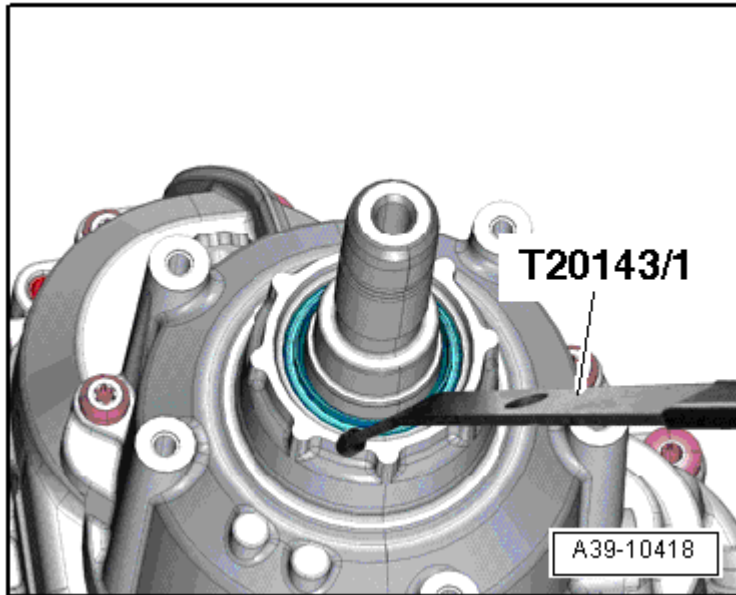


Fig. 118: Mounting Pulling Sleeve T40238/1 -1-
Courtesy of AUDI OF AMERICA, LLC

- Clean the running and sealing surface.
- Coat outer edge of the seal with gear oil.
- Mount the pulling sleeve T40238/1 -1- on the transmission output shaft with splines.

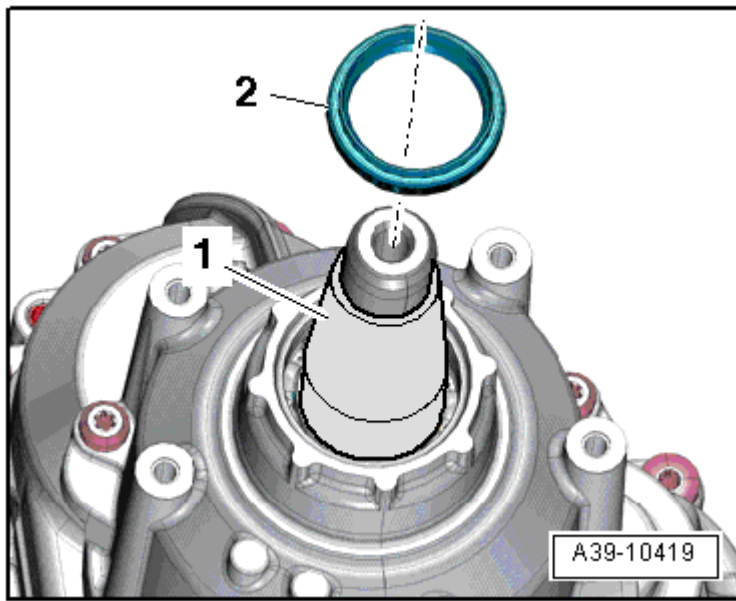


Fig. 119: Installing Oil Seal

Courtesy of AUDI OF AMERICA, LLC

-- Fill the space between the sealing- and dust lip half way with sealing grease; for the correct sealing grease.

-- Install the shaft seal -2-.

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

-- Install the shaft seal all the way around evenly using T40238 Do not bend the seal.

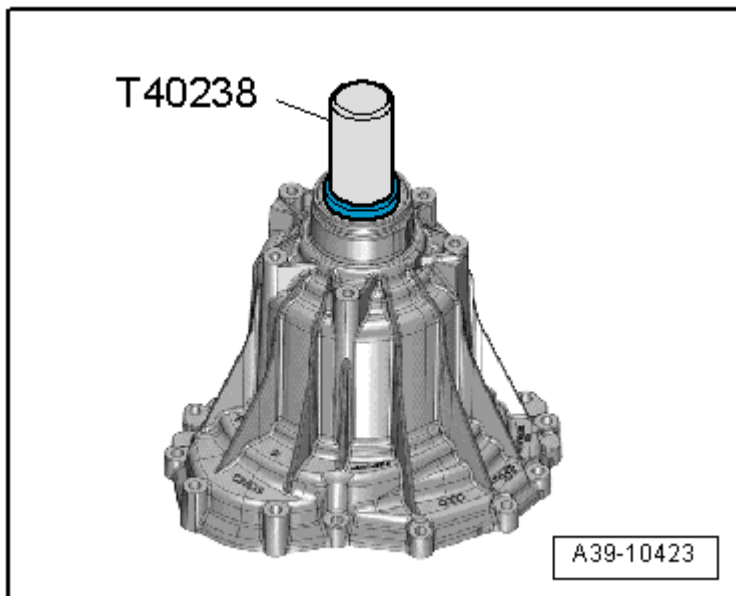


Fig. 120: Installing Shaft Seal

Courtesy of AUDI OF AMERICA, LLC

-- Install a new dust ring -1-.

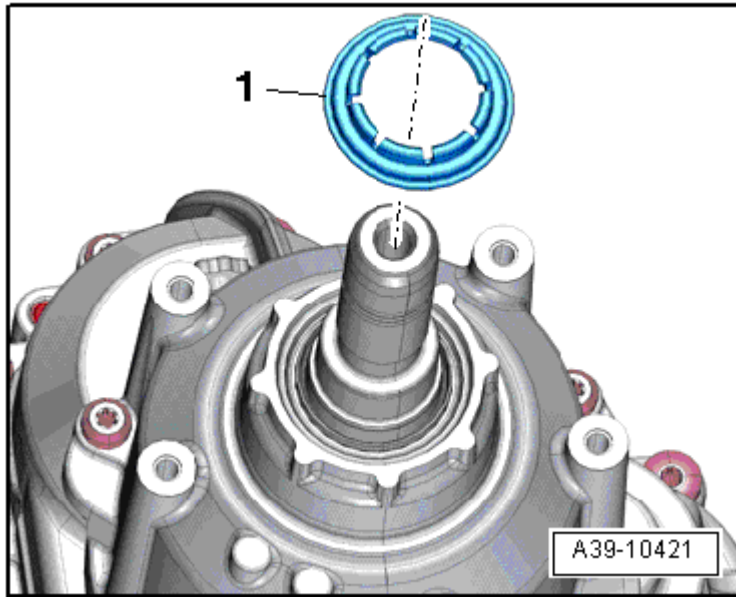


Fig. 121: Installing Dust Ring

Courtesy of AUDI OF AMERICA, LLC

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

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

VIBRATION DAMPER, INSTALLING ON TRANSMISSION OUTPUT SHAFT WITH SPLINES

Special tools and workshop equipment required

- Sleeve VW 284/1 from Driver Sleeve VW 284
- Thrust Tube VW 455
- Tube T40104/2 from Assembly Tool T40104
- Thrust Plate VW 402

Requirements

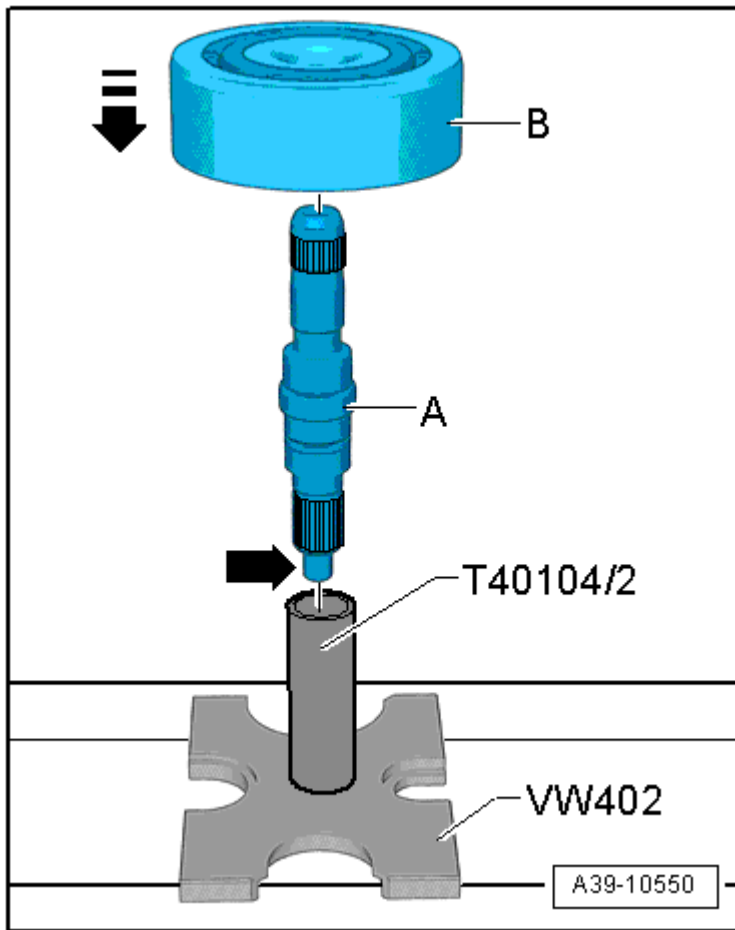


Fig. 122: Vibration Damper Must Be Pressed Onto Transmission Output Shaft With Splines
Courtesy of AUDI OF AMERICA, LLC

If the transmission output shaft with vibration damper is being replaced, it is possible the transmission output shaft -A- may be delivered separated from the vibration damper -B- if order.

ONLY in this case, the vibration damper must be pressed onto the transmission output shaft with splines.

CAUTION: Danger of damaging the components.

- Do not remove the vibration damper from the transmission output shaft with splines and cannot be used again. Using the vibration damper again does not assure that the transmission output shaft is attached securely. The vibration damper will come loose off the transmission output shaft and damage the transmission and other components.

Procedure

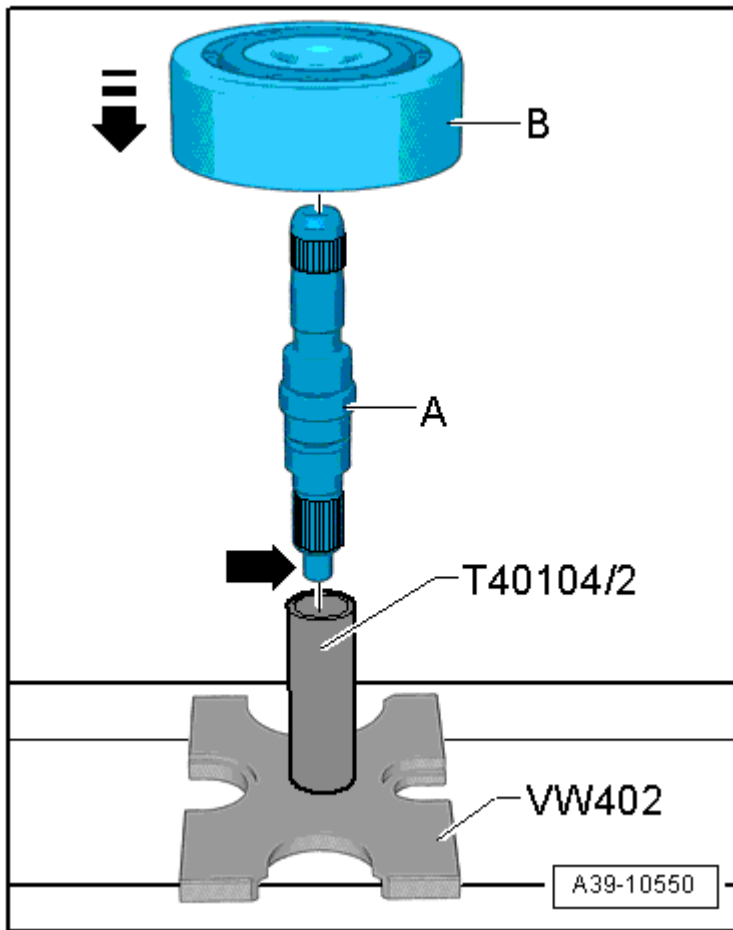


Fig. 123: Vibration Damper Must Be Pressed Onto Transmission Output Shaft With Splines
Courtesy of AUDI OF AMERICA, LLC

- Place the T40104/2 on the VW 402 with the opening facing upward.
- Place the new transmission output shaft with splines -A- into the T40104/2 with the thin guide -arrow-.
- Install the new vibration damper -B-.
- Install the vibration damper -B- all the way with VW 455 and VW 284/1.

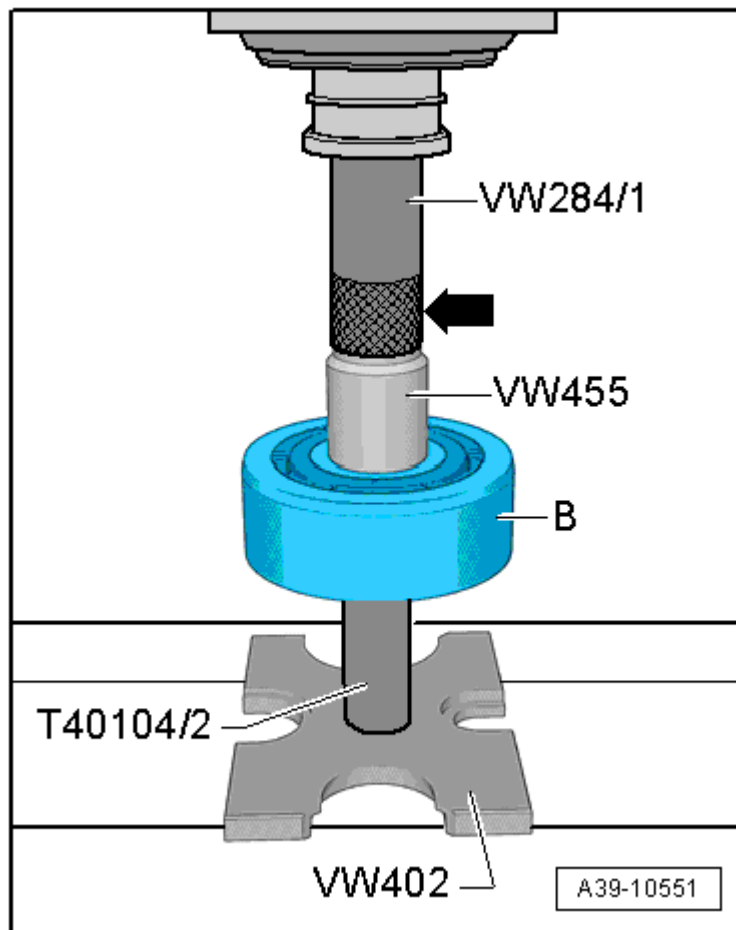


Fig. 124: Installing Vibration Damper
Courtesy of AUDI OF AMERICA, LLC

NOTE: Installed position VW 284/1: The corrugation -arrow- faces down.

SPECIAL TOOLS

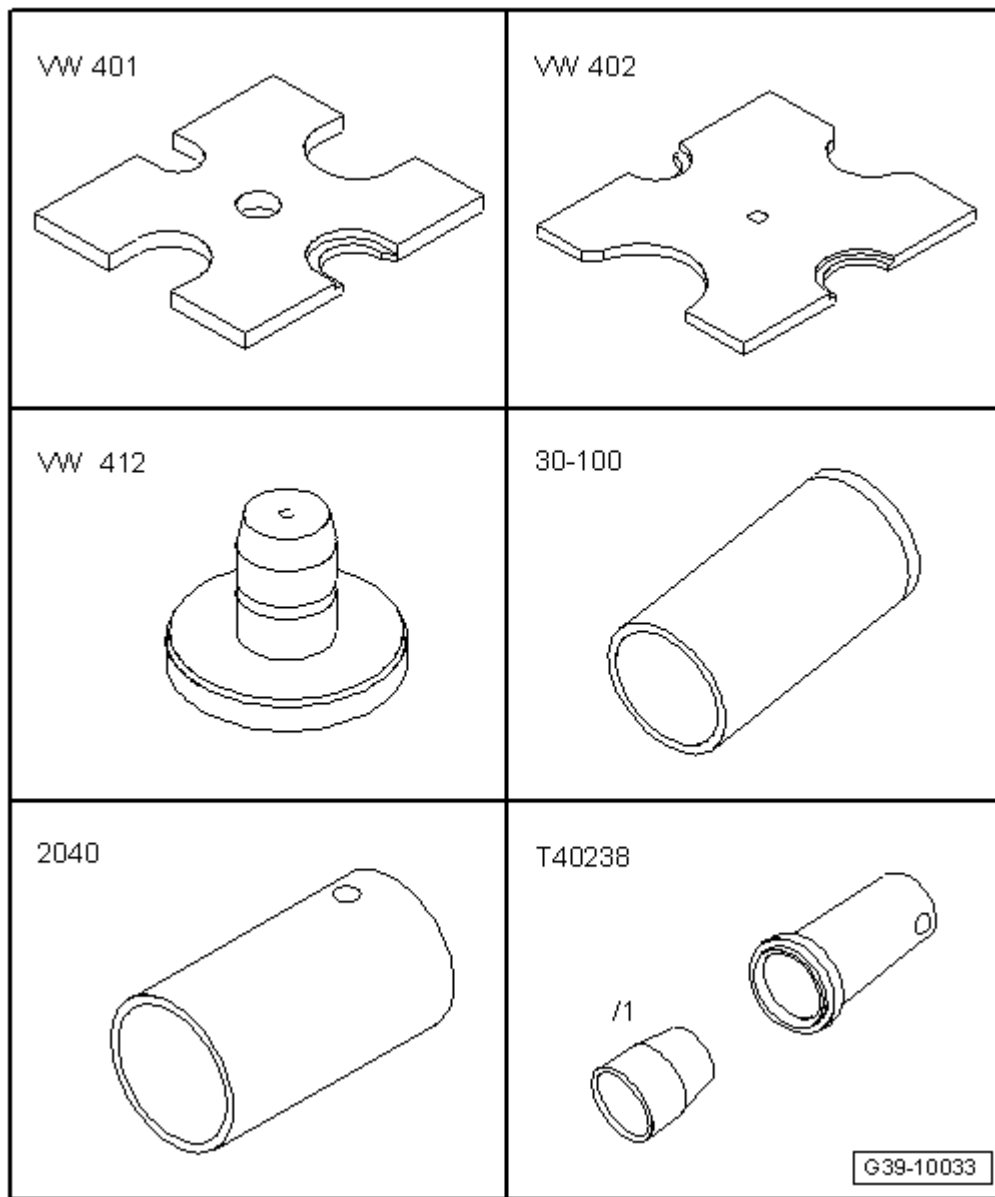


Fig. 125: Special Tools Overview

Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Thrust Plate VW 401
- Thrust Plate VW 402
- Thrust Disc VW 412
- Press Tube 30 - 100
- Press Tube 2040
- Assembly Tool T40238

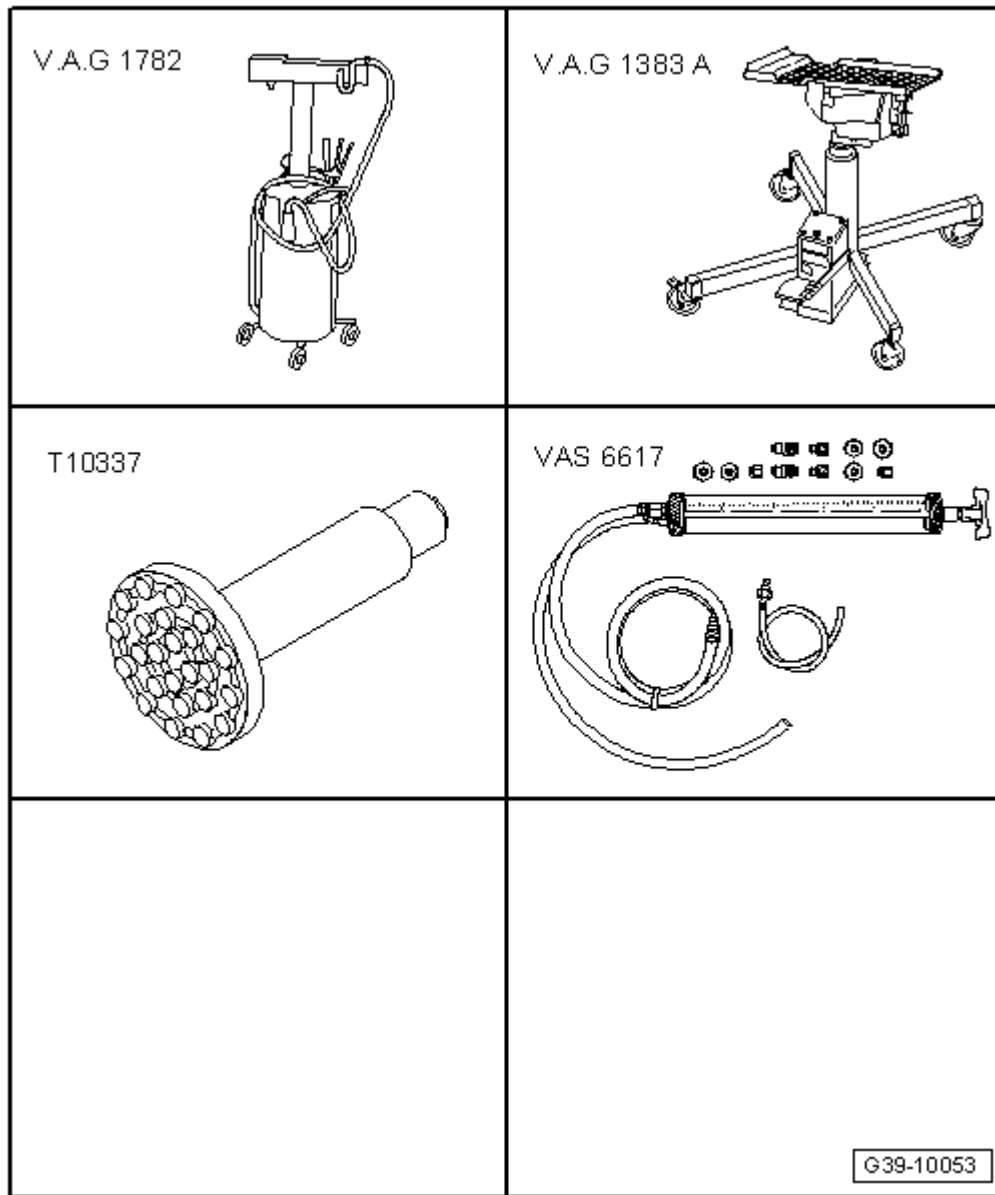


Fig. 126: Special Tools Overview

Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Used Oil Collection and Extraction Device V.A.G 1782
- Engine/Transmission Jack V.A.G 1383 A
- Gearbox Support T10337
- Pressurized Gearbox Oil Filler VAS 6617

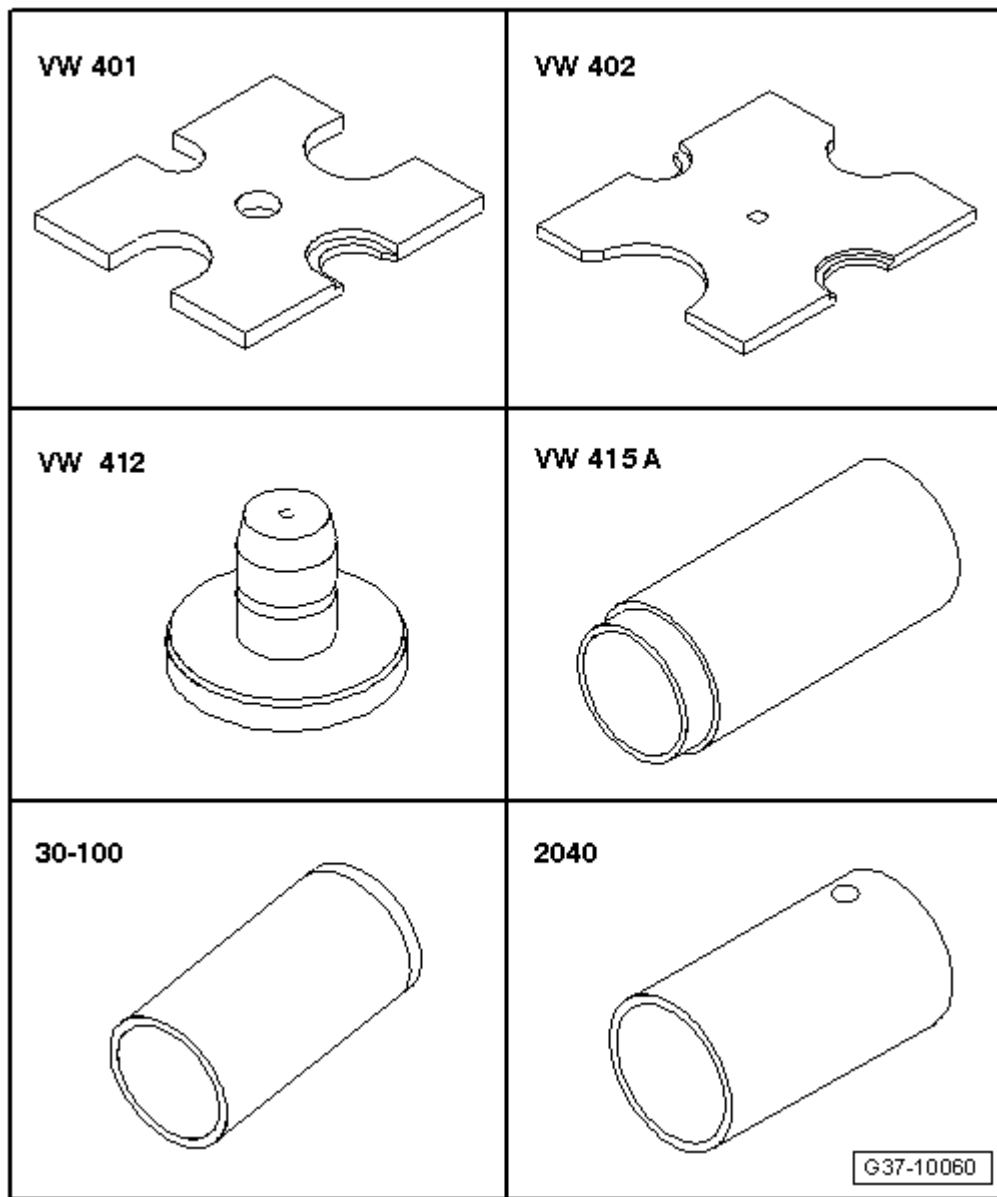


Fig. 127: Special Tools Overview

Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Thrust Plate VW 401
- Thrust Plate VW 402
- Thrust Disc VW 412
- Tube 42 mm Dia. VW 516
- Press Tube 30 - 100
- Press Tube 2040

Special tools and workshop equipment required

- Pry Lever - Rmv Outside Mirror 80 - 200

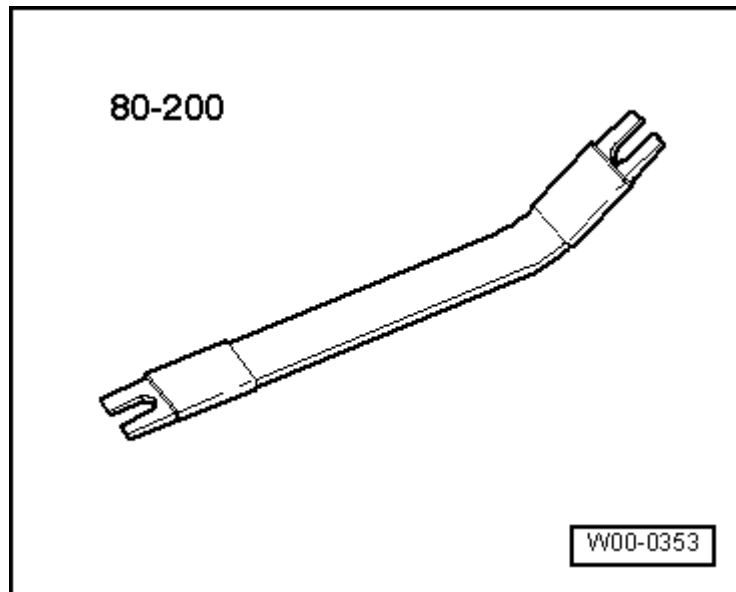


Fig. 128: 80-200 Pry Lever
Courtesy of AUDI OF AMERICA, LLC

- Lifting Eyebolt 3368

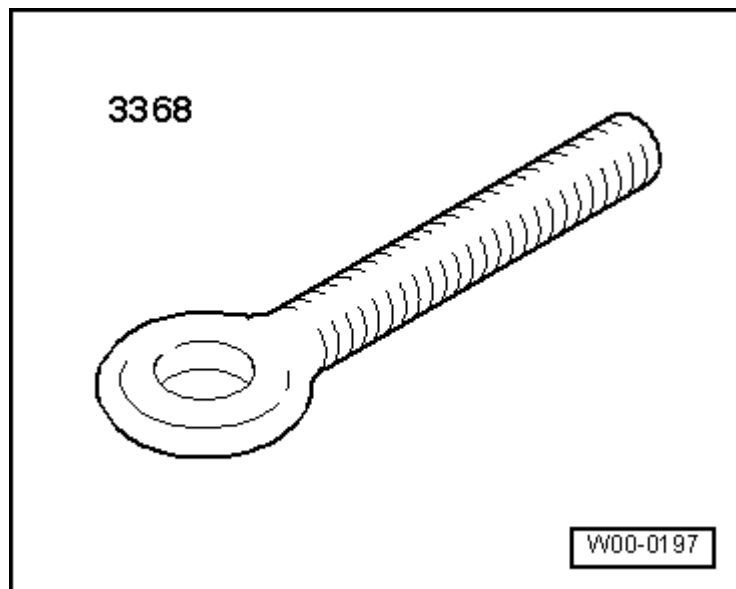


Fig. 129: Lifting Eyebolt 3368
Courtesy of AUDI OF AMERICA, LLC

- Thrust Piece T10135

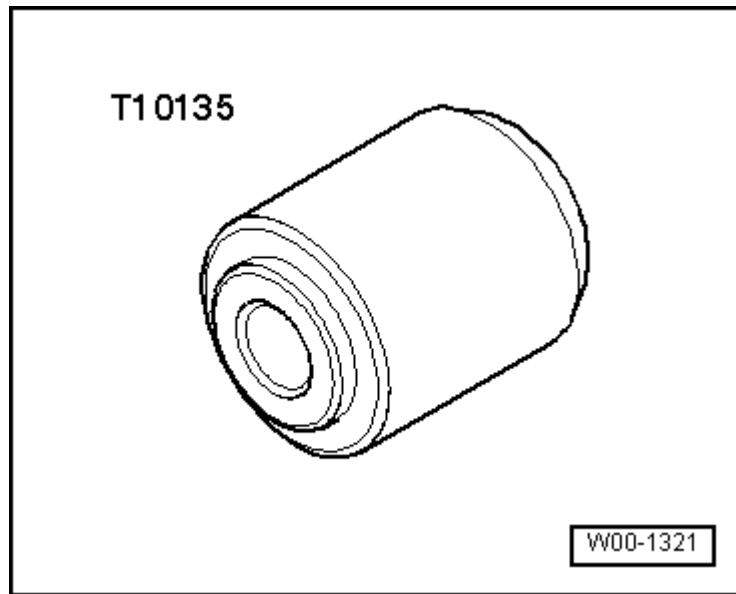


Fig. 130: Thrust Piece T10135
Courtesy of AUDI OF AMERICA, LLC

- Pulling Hook T20143/2

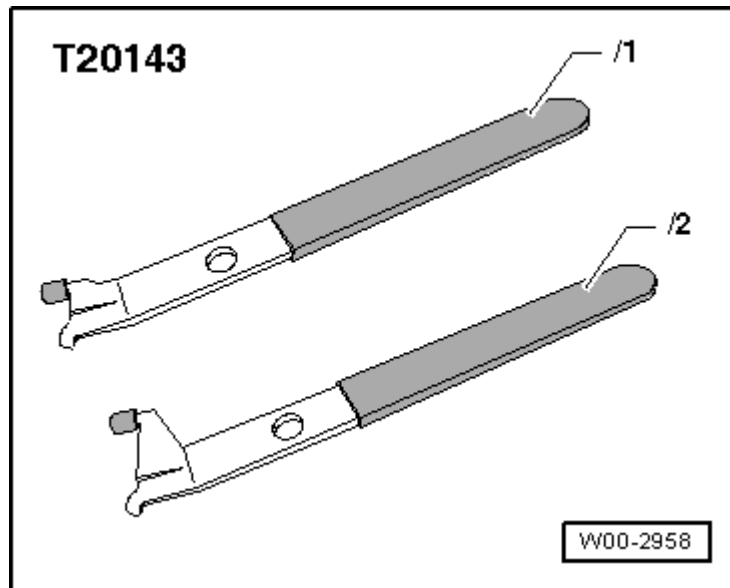


Fig. 131: Extractor Hook T20143
Courtesy of AUDI OF AMERICA, LLC

- Thrust Piece T40163

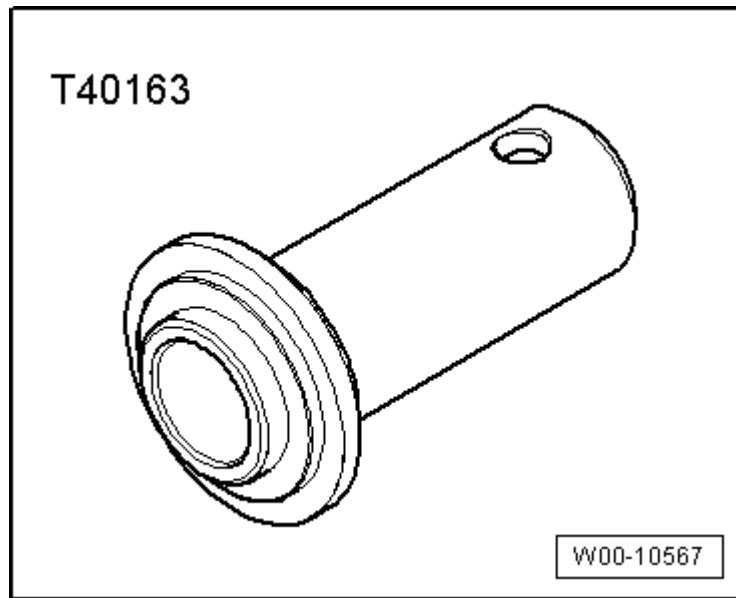


Fig. 132: Thrust Piece T40163
Courtesy of AUDI OF AMERICA, LLC

- Thrust Piece for Final Drive at Gearbox T40164

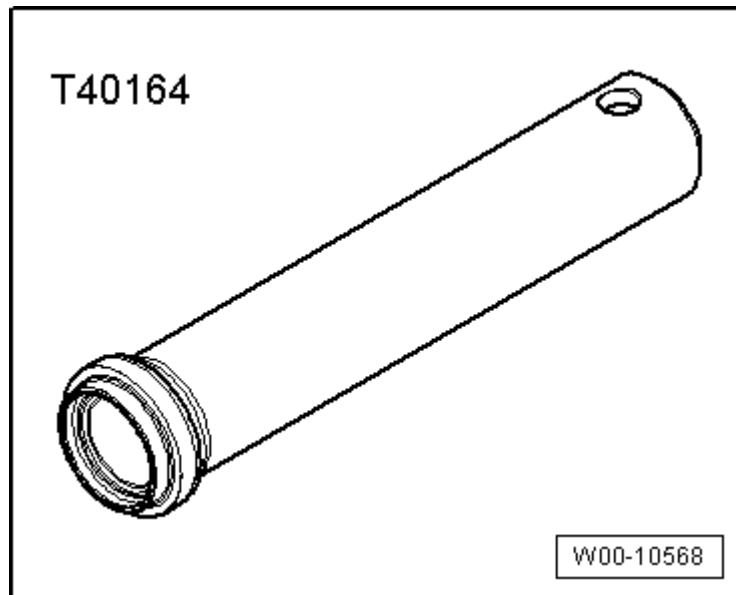


Fig. 133: Thrust Piece for Final Drive at Gearbox T40164
Courtesy of AUDI OF AMERICA, LLC

- Thrust Piece for Final Drive at Gearbox T40165

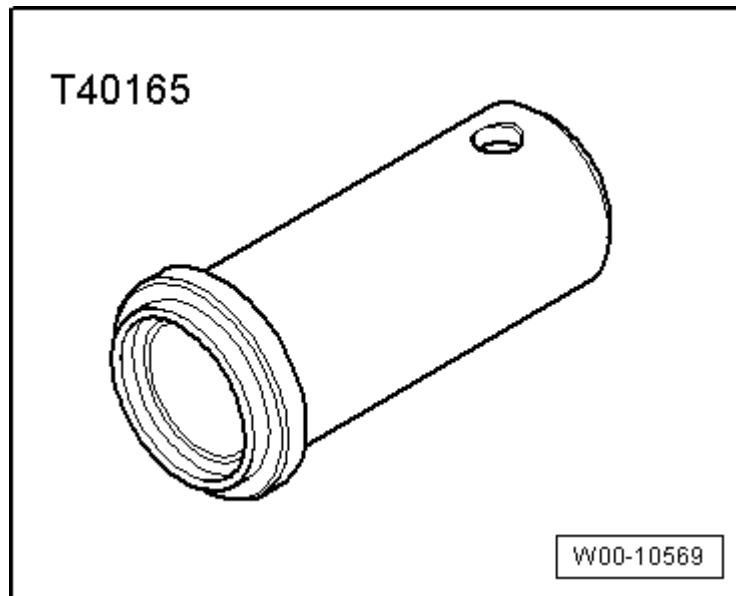


Fig. 134: Thrust Piece for Final Drive at Gearbox T40165
Courtesy of AUDI OF AMERICA, LLC

- Assembly Tool T40198

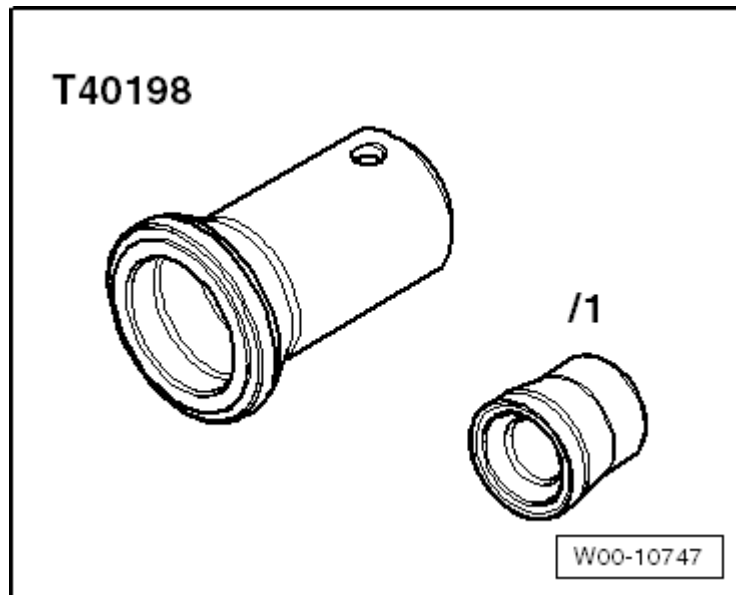


Fig. 135: Assembly Tool T40198
Courtesy of AUDI OF AMERICA, LLC

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

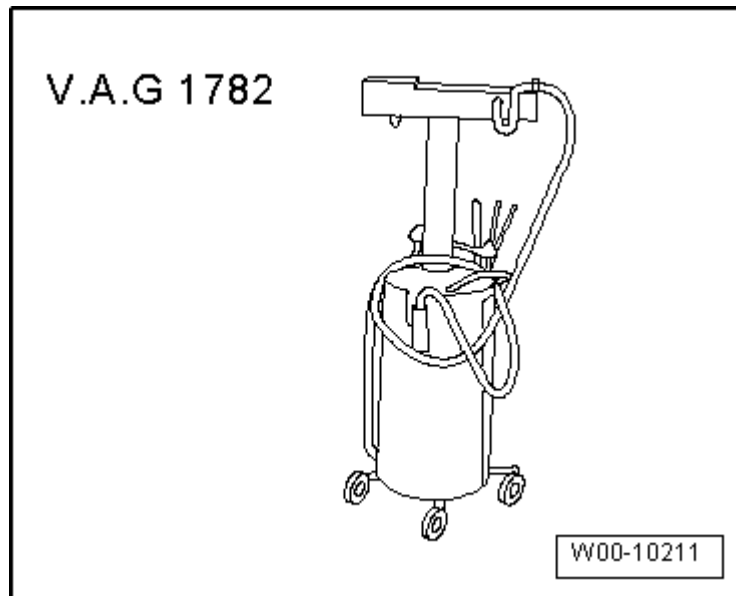


Fig. 136: Identifying Oil Extractor V.A.G 1782
Courtesy of AUDI OF AMERICA, LLC

- Needle Bearing Drift VW 295

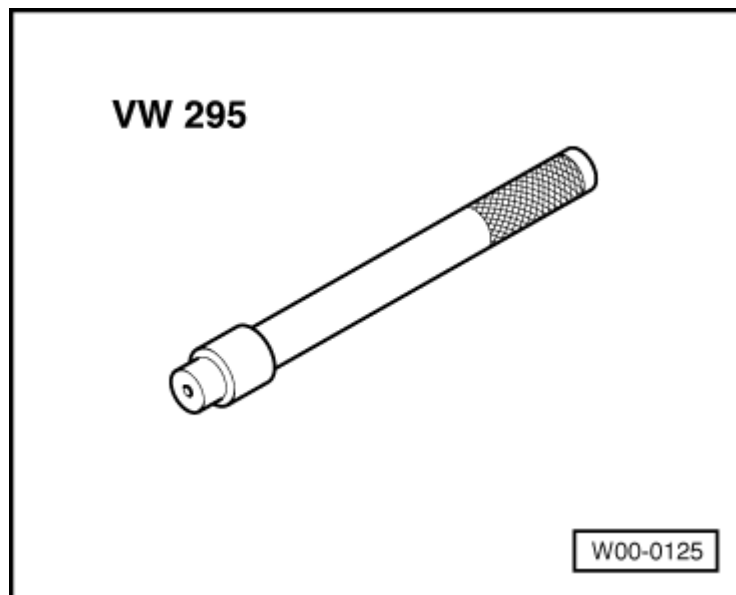


Fig. 137: Drift VW 295
Courtesy of AUDI OF AMERICA, LLC

- Thrust Plate VW 401

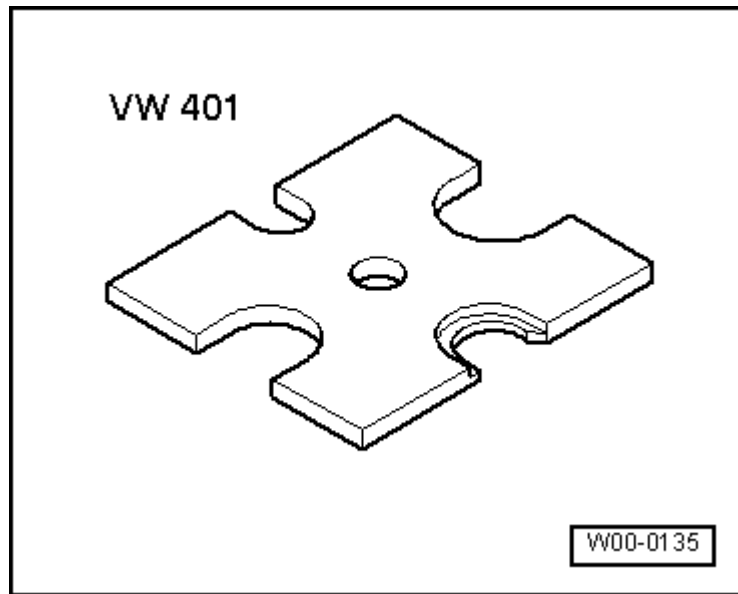


Fig. 138: Thrust Plate VW 401
Courtesy of AUDI OF AMERICA, LLC

- Thrust Plate VW 402

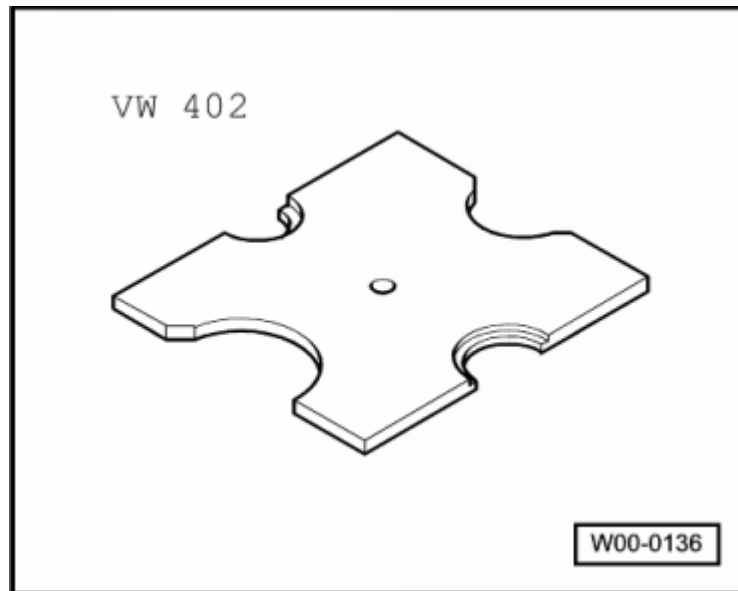


Fig. 139: Thrust Plate VW 402
Courtesy of AUDI OF AMERICA, LLC

- Thrust Disc VW 412

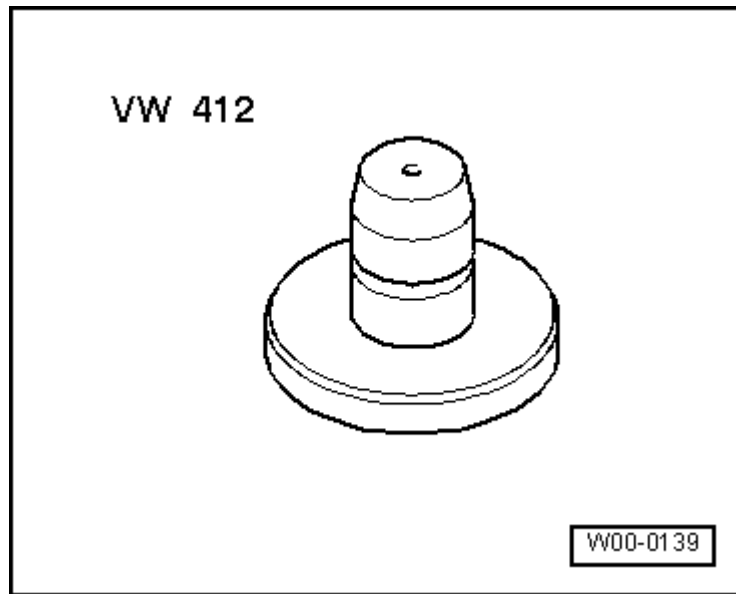


Fig. 140: Punch VW 412
Courtesy of AUDI OF AMERICA, LLC

- Tube 42 mm Dia VW 516

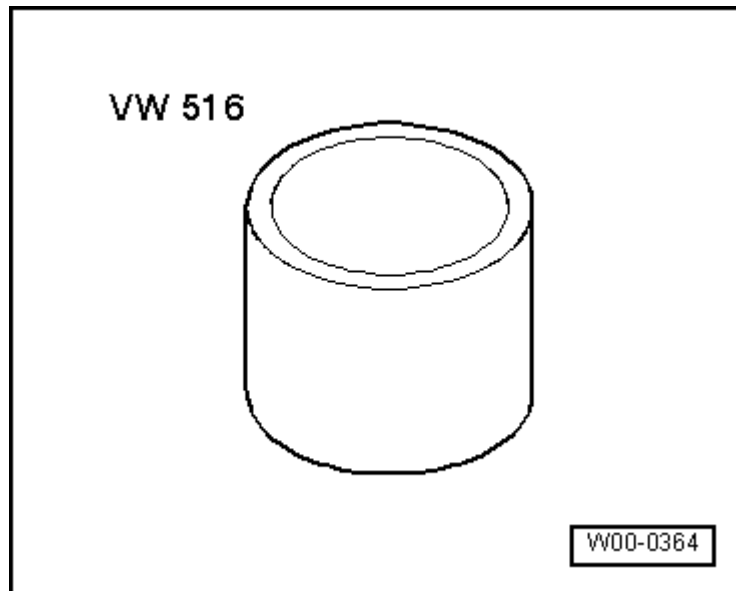


Fig. 141: Tube 42 mm Dia VW 516
Courtesy of AUDI OF AMERICA, LLC

- Slide Hammer-Complete Set VW 771

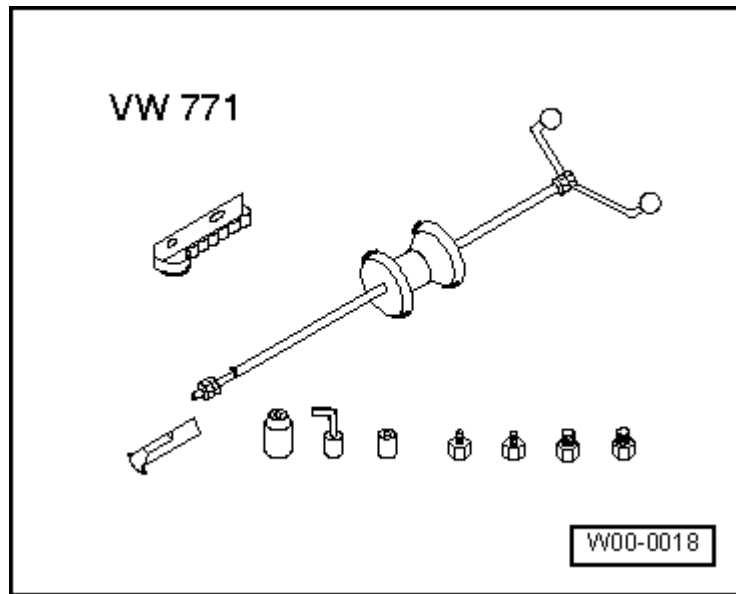


Fig. 142: Identifying Slide Hammer VW 771
Courtesy of AUDI OF AMERICA, LLC

- Not illustrated:
- Guide Sleeve T40198/1
- Straight Edge 500 mm VAS 6075
- Engine and Transmission Holder VAS 6095
- Sleeve VW 284/1 from Driver Sleeve VW 284
- Tube 60 mm Diameter VW 415 A
- Tube T40104/2 from Assembly Tool T40104
- Thrust Tube VW 455
- Pulling Hook VW 771/13

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