

TRANSMISSION**Clutch - Manual Transmission Internal Components 0B4 AWD (Sedan)****30 CLUTCH****DESCRIPTION AND OPERATION****CLUTCH, SERVICING**

NOTE: Repair the clutch mechanism and clutch hydraulic system. Refer to [For engine (s) CCBA] Description and Operation

It is necessary to remove the transmission in order to work on the clutch. Refer to [For engine(s) CCBA] Removal and Installation .

To avoid damaging the SAC pressure plate (a self-adjusting clutch pressure plate) when removing or installing, follow the installation procedure for the SAC pressure plate; refer to CLUTCH PRESSURE PLATE AND CLUTCH PLATE, LUK, SINGLE-DISC CLUTCH or CLUTCH PRESSURE PLATE AND CLUTCH DISK FOR THE DUAL-DISK CLUTCH.

On vehicles with an SAC pressure plate, an adjusting ring must be reset if only the clutch plate is being replaced; refer to CLUTCH PRESSURE PLATE ADJUSTING RING, LUK, RESETTING, SINGLE-DISC CLUTCH.

Check the clutch pressure plate for deformation; refer to Fig. 7.

Replace clutch plates and clutch pressure plates that have damaged or loose rivets.

For the correct pressure plate and clutch pressure plate according to the engine codes.

The clutch pressure plates are corrosion-protected and greased. With the exception of the friction surface on the clutch plate, do not clean the clutch pressure plate. This will shorten the service life of the clutch considerably.

The friction surfaces on the clutch pressure plate and on the dual mass flywheel must be cleaned thoroughly (degreased).

To reduce odor caused by a burnt clutch, thoroughly clean the transmission housing around the clutch as well as the engine on the transmission side.

Only use compressed air to clean the clutch module.

If the surface of the input shaft is visibly damaged near the needle bearing in

the dual mass flywheel -arrow-, then replace both the input shaft and the needle bearing. Refer to DUAL MASS FLYWHEEL NEEDLE BEARING.

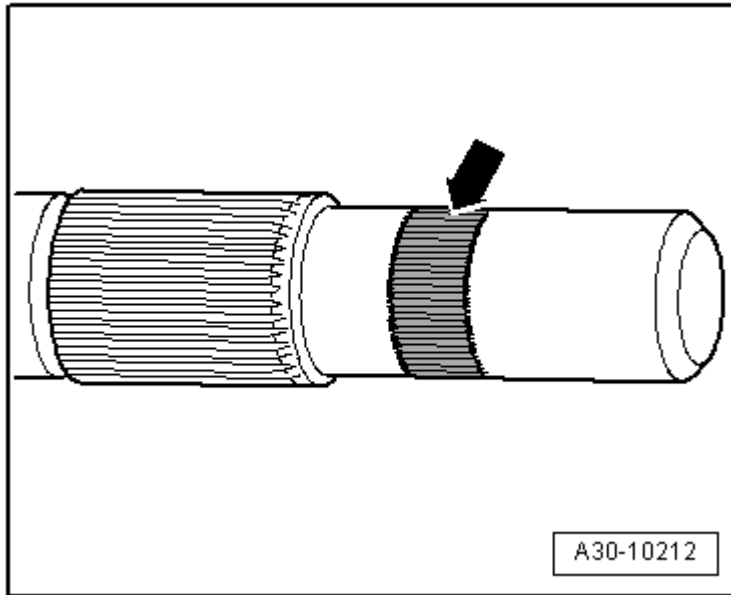


Fig. 1: Checking Input Shaft For Wear
Courtesy of AUDI OF AMERICA, LLC

Replace the driveshaft. Refer to TRANSMISSION .

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 transmission(s) 0AW] [For engine(s) CALA] Removal and Installation or refer to [For engine(s) CCBA] Removal and Installation .

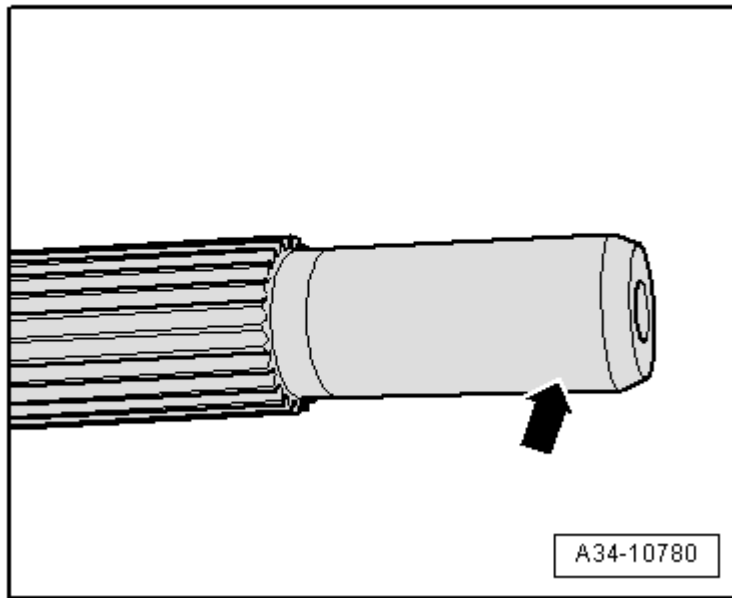


Fig. 2: Checking Input Shaft For Wear

Courtesy of AUDI OF AMERICA, LLC

Clean input shaft splines and (in case of used clutch plates) clean the hub splines, remove corrosion and apply only a very thin coating of lubricant G 000 100 on splines. Then move the clutch plate back and forth on the input shaft until the hub moves freely on the shaft. Remove any excess grease.

Remove the grease on the pivot pin up to the splines.

-Rattling noises- can occur when pressing the clutch if there is not enough grease on the release bearings -arrows-.

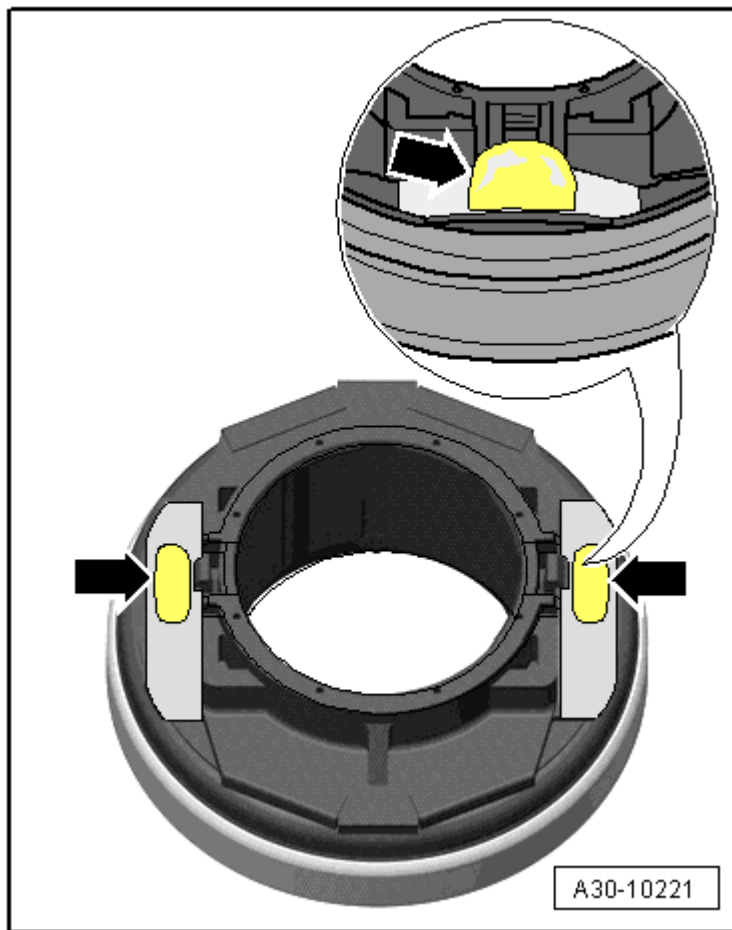


Fig. 3: Lubricating Release Bearing
 Courtesy of AUDI OF AMERICA, LLC

Lubricate the bearing areas -arrows- with adhesive lubricating paste G 000 150.

Do not lay the clutch module on one side on the transfer plate -arrow-.

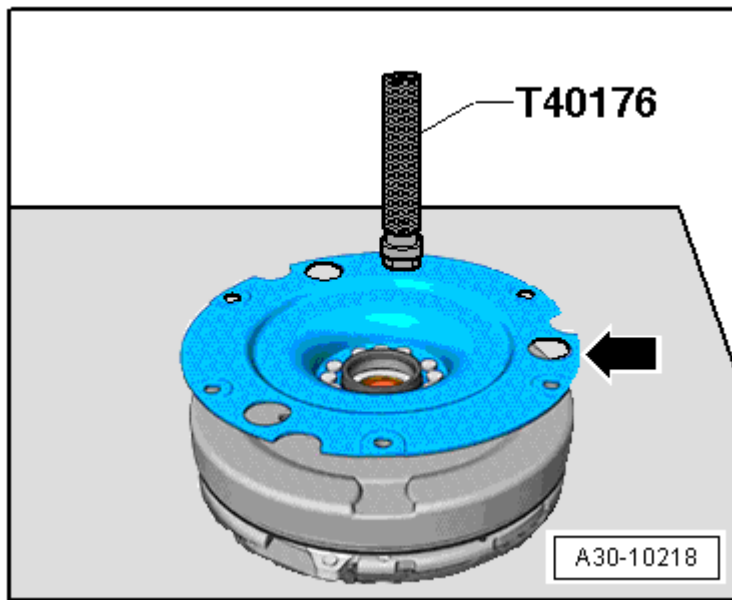


Fig. 4: Identifying Transfer Plate
Courtesy of AUDI OF AMERICA, LLC

This could bend the transfer plate -arrow-, which will then lead to functionality problems.

Refer to:

CLUTCH MODULE

CLUTCH, LUK OVERVIEW, SINGLE-DISK CLUTCH

CLUTCH PRESSURE PLATE AND CLUTCH PLATE, LUK, SINGLE-DISK CLUTCH

CLUTCH PRESSURE PLATE ADJUSTING RING, LUK, RESETTING, SINGLE-DISK CLUTCH

DUAL-DISK CLUTCH OVERVIEW

CLUTCH PRESSURE PLATE AND CLUTCH DISK FOR THE DUAL-DISK CLUTCH

DUAL MASS FLYWHEEL NEEDLE BEARING

CLUTCH, LUK OVERVIEW, SINGLE-DISK CLUTCH

NOTE: Clutch "LuK" equipped with SAC pressure plate.

"SAC" stands for Self-Adjusting Clutch and means that it is "self-adjusting".

Clutch information, refer to **CLUTCH, SERVICING**.

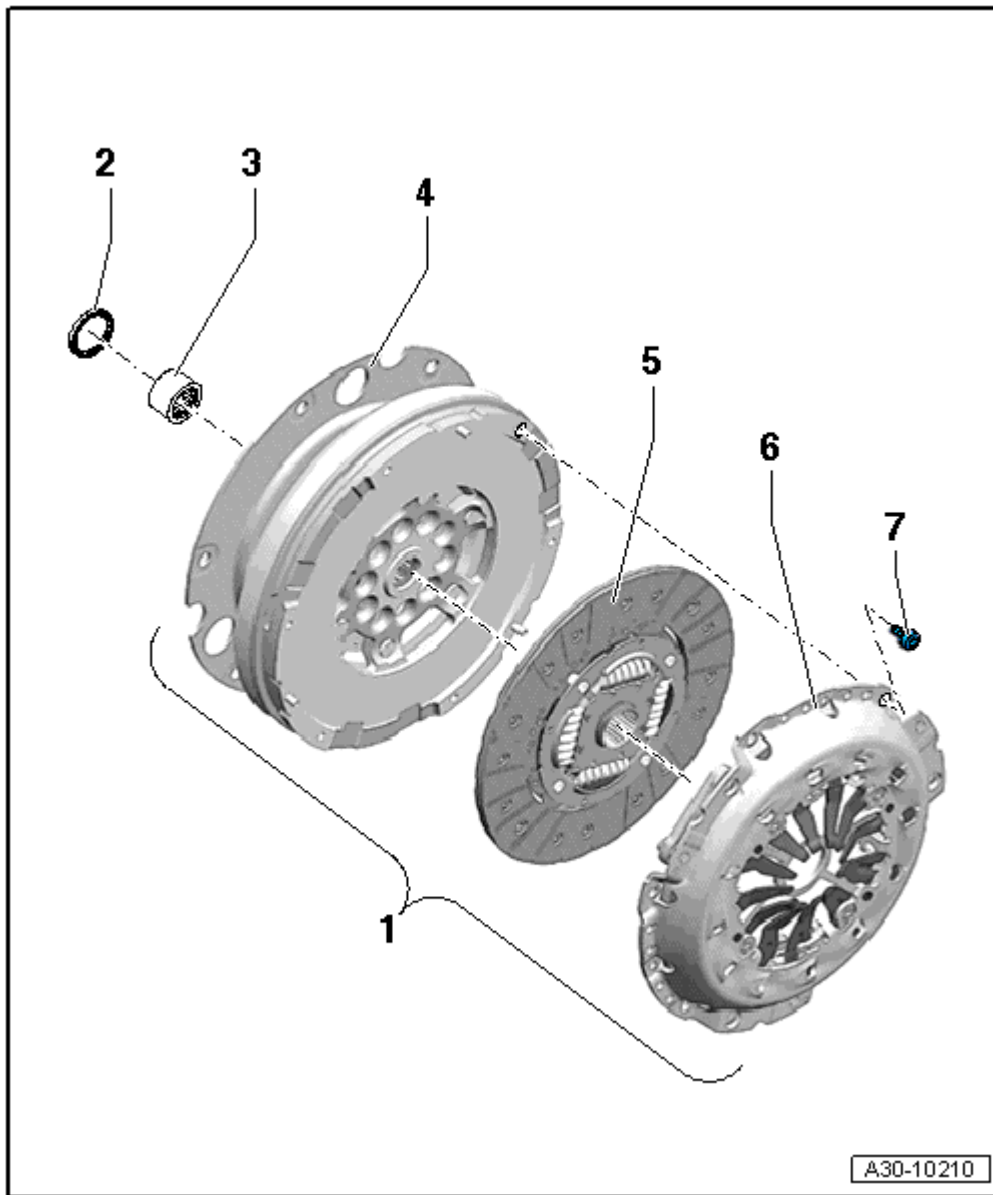


Fig. 5: Identifying Clutch, Luk Assembly Overview
Courtesy of AUDI OF AMERICA, LLC

1. Clutch Module
 - Removing and installing, refer to **CLUTCH MODULE**
2. Shaft Seal
 - For the dual mass flywheel
 - Removing, refer to **Fig. 39**
 - Installing, refer to **Fig. 42**
3. Needle Bearing
 - For the dual mass flywheel
 - Different versions, refer to **Fig. 6**

- Checking and replacing if necessary, refer to **Fig. 6**
- Removing, refer to **Fig. 40**
- Installing, refer to **Fig. 41**

NOTE: Always replace the needle bearing if the input shaft is damaged
DUAL MASS FLYWHEEL NEEDLE BEARING.

Depending on the version of the needle bearing installed that have rollers or needle bearings missing every 4th roller. This does not mean that the needle bearing is faulty.

4. Dual Mass Flywheel

- With transfer plate
- Make sure it fits securely on the centering pins
- Keep the clutch lining contact surface free of grooves, oil and grease.
- Removing and installing, refer to **CLUTCH PRESSURE PLATE AND CLUTCH PLATE, LUK, SINGLE-DISC CLUTCH**

5. Clutch Plate

- Removing and installing, refer to **CLUTCH PRESSURE PLATE AND CLUTCH PLATE, LUK, SINGLE-DISC CLUTCH**
- Allocation.
- Installed position: The label, ""Getriebeseite" (transmission side)," faces the pressure plate
- The spring pack (coil springs), if equipped, to the pressure plate

6. SAC Pressure Plate

- Allocation.
- Removing and installing, refer to **CLUTCH PRESSURE PLATE AND CLUTCH PLATE, LUK, SINGLE-DISC CLUTCH**
- Adjusting ring, resetting, refer to **CLUTCH PRESSURE PLATE ADJUSTING RING, LUK, RESETTING, SINGLE-DISC CLUTCH**
- Check the ends of the diaphragm spring, refer to **Fig. 8**
- Pressure plate, checking for distortion, refer to **Fig. 7**
- Check the pull-spring and rivet connections, refer to **Fig. 9**
- Keep the clutch lining contact surface free of grooves, oil and grease.

7. Bolt

- Always replace
- 22 Nm plus an additional 90° turn
- Mount the pressure plate to the dual mass flywheel
- Loosen or tighten according to assembly instructions, refer to **CLUTCH PRESSURE PLATE AND CLUTCH PLATE, LUK, SINGLE-DISC CLUTCH**

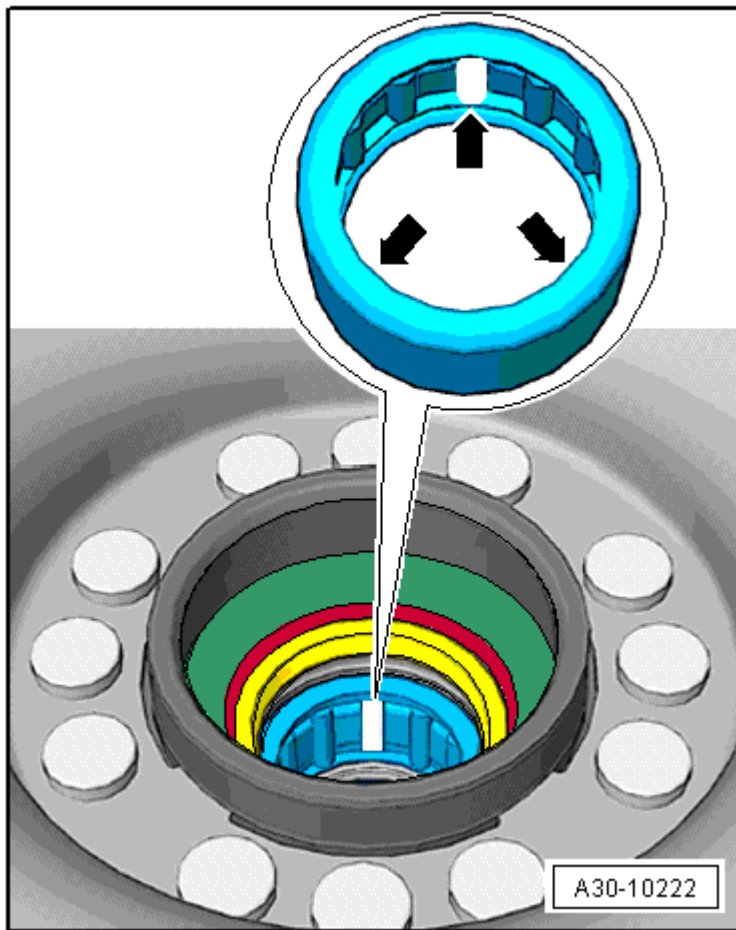


Fig. 6: Checking Needle Bearing Inside Dual Mass Flywheel
Courtesy of AUDI OF AMERICA, LLC

Depending on the version, there are different needle bearings installed in the dual mass flywheel.

- Needle bearings, that have every 4th roller missing -arrows- does not mean the needle bearing is faulty.
- Needle bearing that have rollers
- New needle bearings are equipped with rollers.

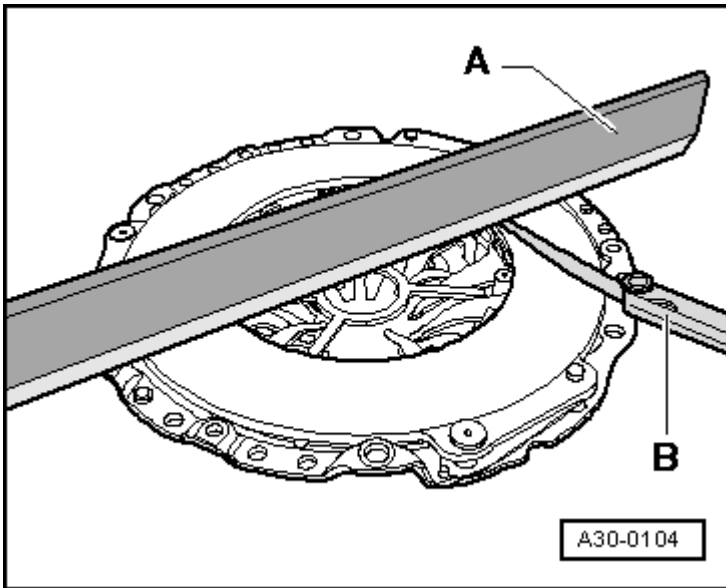


Fig. 7: Checking SAC Pressure Plate For Warpage, Cracks And Burns
Courtesy of AUDI OF AMERICA, LLC

A - Ruler

B - Feeler gauge

- Pressure plate deformation up to 0.8 mm is permitted.

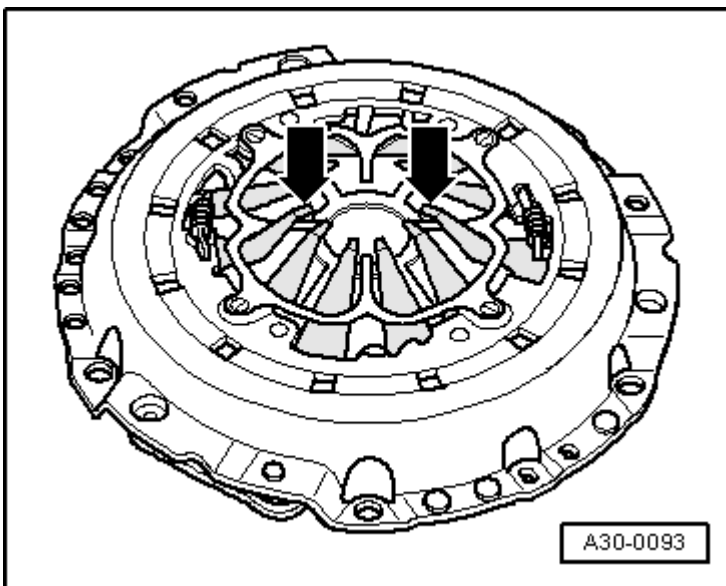


Fig. 8: Checking Ends Of Diaphragm Spring
Courtesy of AUDI OF AMERICA, LLC

- Wear up to maximum 0.3 mm is permitted.

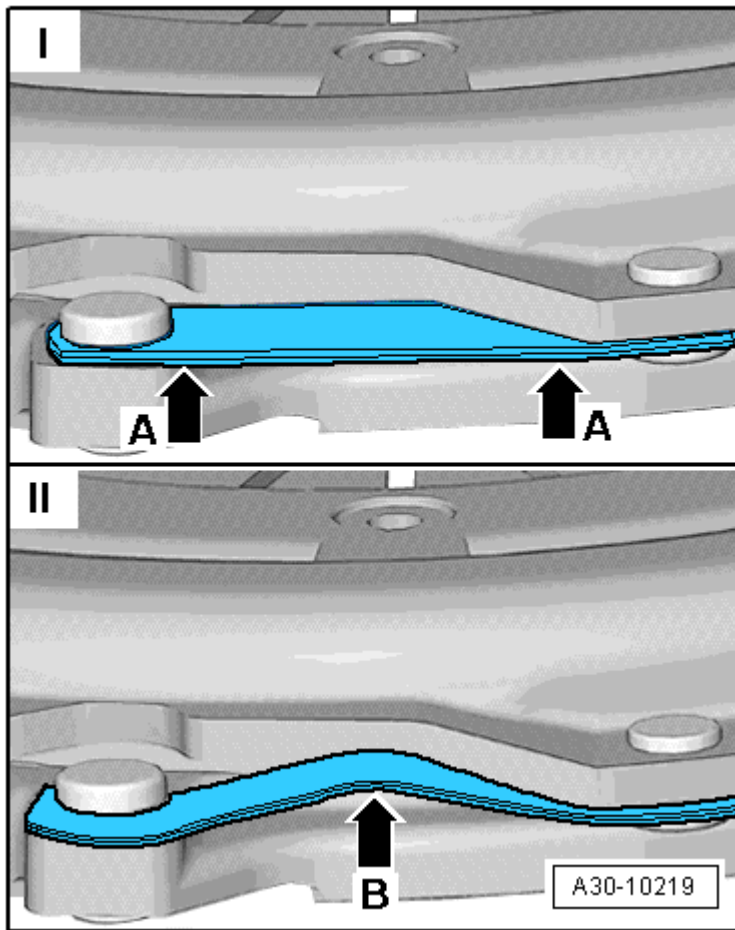


Fig. 9: Checking Pull-Springs And Rivet Connection
Courtesy of AUDI OF AMERICA, LLC

I - Pull-springs OK

- Slight offset in the outer area -arrows A-.

II - Pull-springs damaged

- The pressure plate must be replaced if the pull-spring is bent or broken off -arrow B-.

-- Make sure the rivet connections -arrows B- fit correctly on all pull-springs -A-.

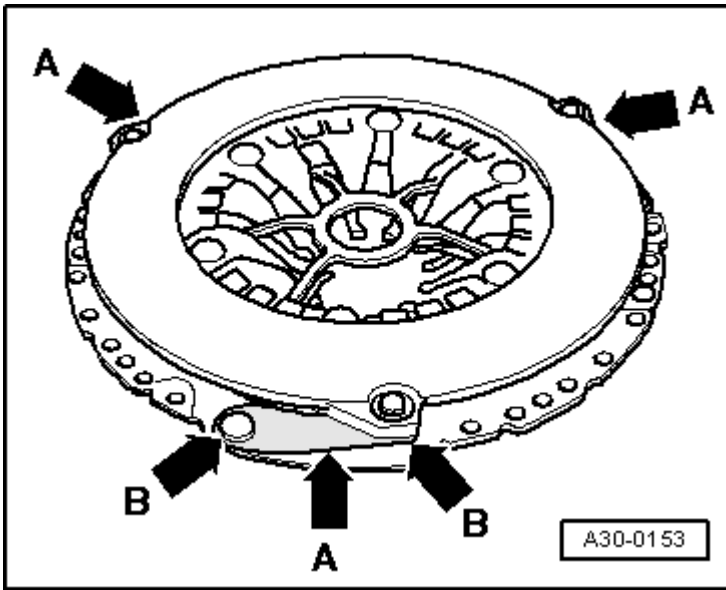


Fig. 10: Checking Connections Of Springs And Rivet Connections
 Courtesy of AUDI OF AMERICA, LLC

- Replace any pressure plates that have loose rivet connections -arrow B-.

CLUTCH PRESSURE PLATE ADJUSTING RING, LUK, RESETTING, SINGLE-DISC CLUTCH

NOTE: The adjusting ring on the clutch pressure plate must only be turned back to the stop if installing a new clutch plate with a used clutch pressure plate. If clutch pressure plate adjusting ring does not turn back, clutch pressure plate is functioning with reduced release pressure which causes greater wear to the clutch, especially the clutch plate (clutch slips).

If the clutch plate is not replaced, the adjusting ring should also not be reset.

New clutch pressure plates are pre-adjusted and resetting is therefore not necessary.

Special tools and workshop equipment required

- Thrust Disc VW 412
- Thrust Pad 3062

Self-Adjusting Clutch

-- Install the 3 clutch pressure plate bolts -A- offset 120° ($\frac{1}{3}$ rotation) in clutch pressure plate securing holes, as illustrated.

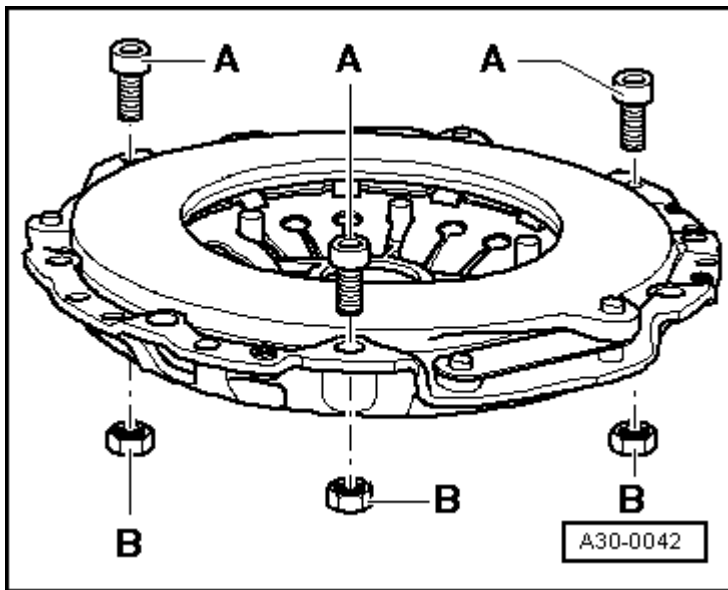


Fig. 11: Inserting Securing Bolts Into Mounting Holes On Pressure Plate
 Courtesy of AUDI OF AMERICA, LLC

- Install 3 M8 nuts -B- on the bolts -A- and tighten the nuts slightly.
- Place the clutch pressure plate on the press so that only the 3 bolt heads -arrows- touch the surface.

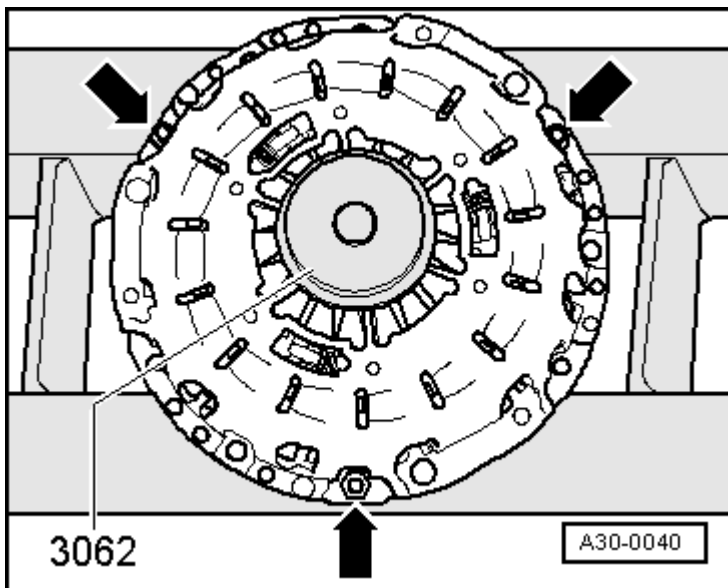


Fig. 12: Placing SAC Pressure Plate Onto Press
 Courtesy of AUDI OF AMERICA, LLC

- Center the 3062 on the middle of the clutch pressure plate.

Do not use excessive force for the following procedure, otherwise the adjusting ring forks may break off.

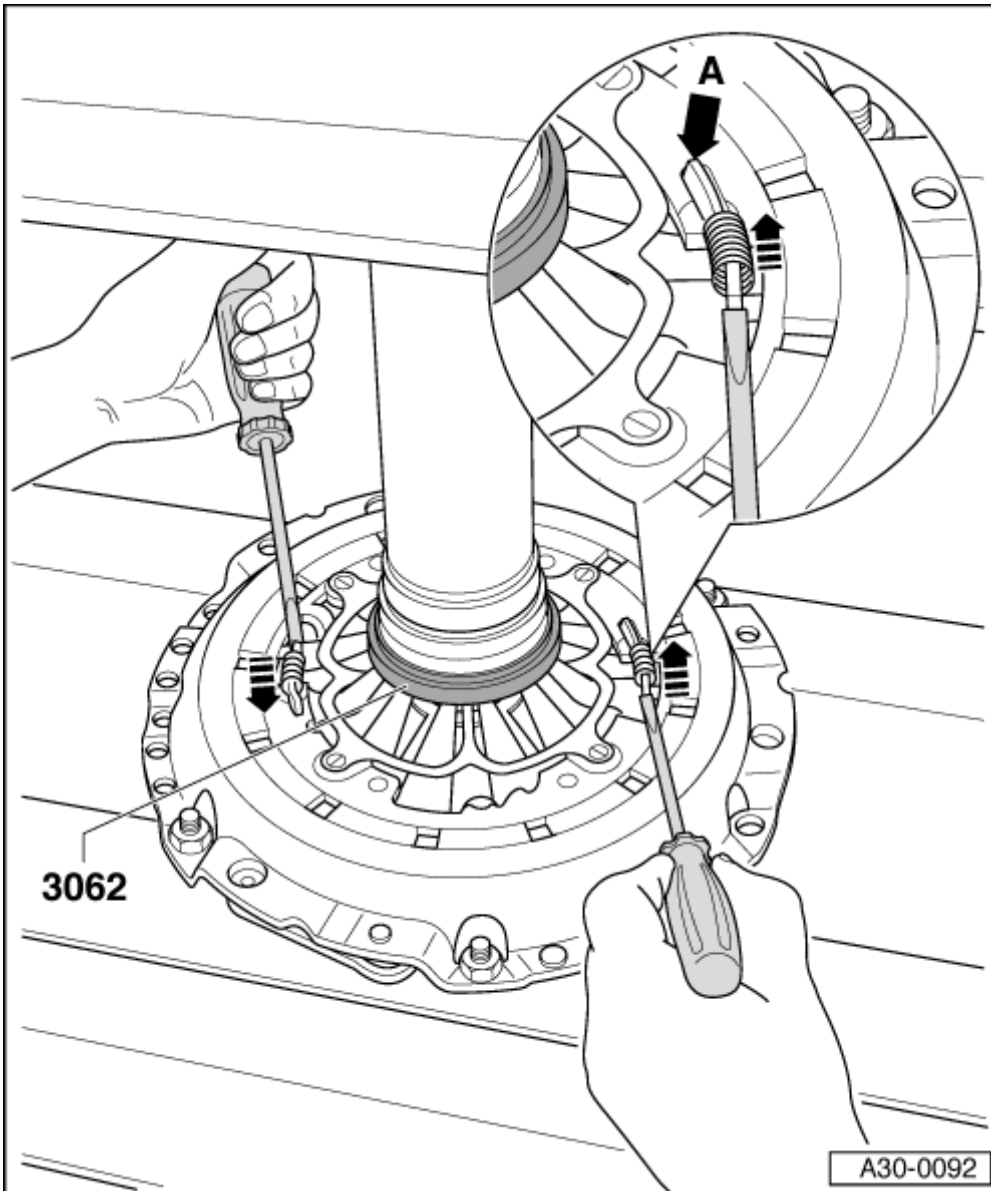


Fig. 13: Turning Adjuster Ring Evenly Using Both Screwdrivers Until It Reaches Limit Stop
 Courtesy of AUDI OF AMERICA, LLC

- Position two screwdrivers on the adjusting ring forks. Press down on the clutch pressure plate with the press until the adjusting ring can just be moved.
- Turn back adjusting ring evenly with both screwdrivers in direction of -arrow - to stop -arrow A-.
- Hold the adjusting ring down on the end stop while letting up on the pressure on the press to keep the adjusting ring in this position.

DUAL-DISK CLUTCH OVERVIEW

NOTE: Both clutch discs and the SAC pressure plate are one unit and can only be

replaced together.

One of the two clutch discs is integrated in the pressure plate. It is not possible to remove it to check it.

Clutch information, refer to CLUTCH, SERVICING.

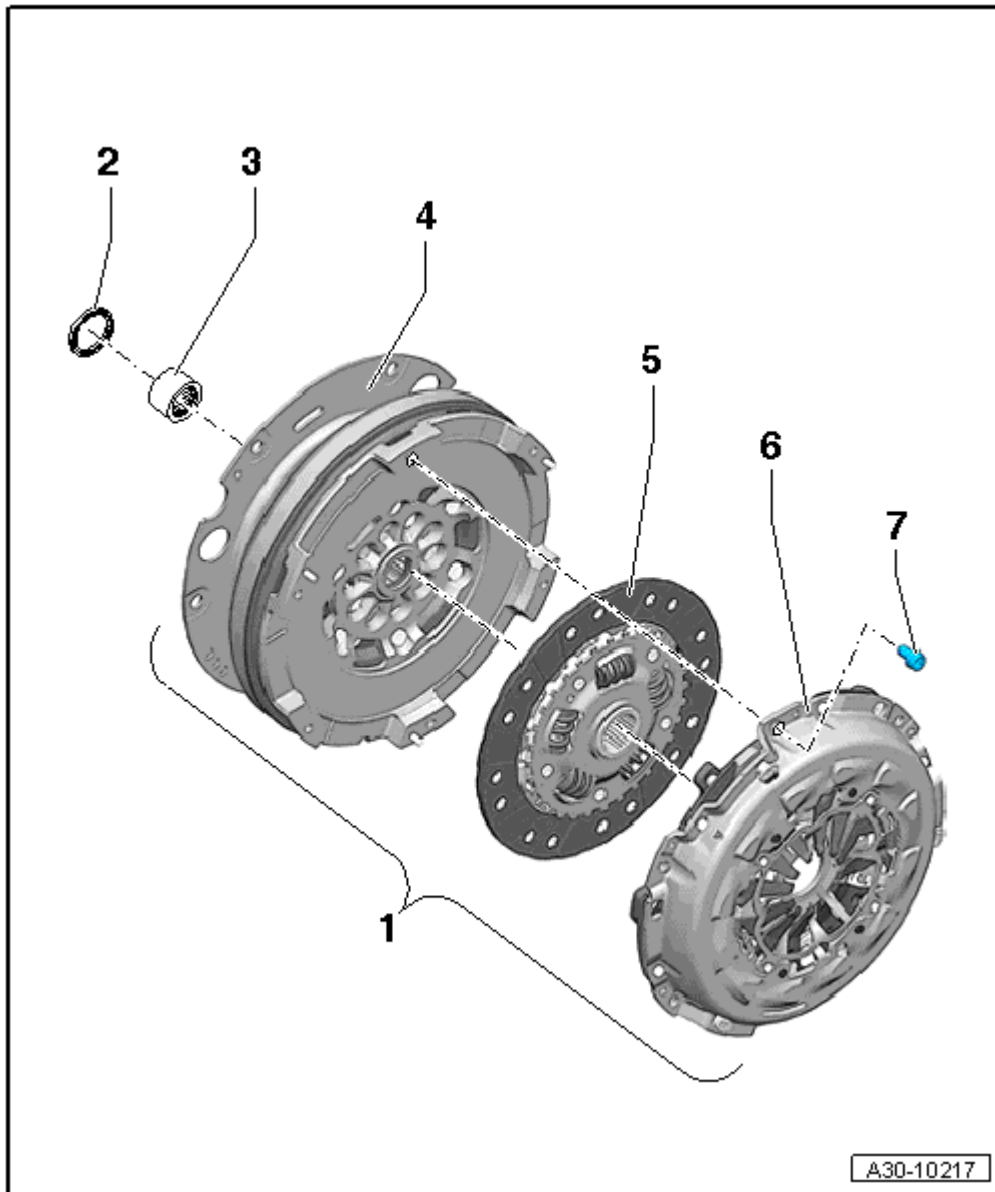


Fig. 14: Identifying Dual-Disk Clutch Overview

Courtesy of AUDI OF AMERICA, LLC

1. Clutch Module

- Removing and installing, refer to CLUTCH MODULE

2. Shaft Seal

- For the dual mass flywheel
- Removing; refer to **Fig. 39**
- Installing; refer to **Fig. 42**

3. Needle Bearing

- For the dual mass flywheel
- Different versions, refer to **Fig. 6**
- Checking and replacing if necessary, refer to **Fig. 6**
- Removing; refer to **Fig. 40**
- Installing; refer to **Fig. 41**

NOTE: Always replace the needle bearing if the input shaft is damaged
DUAL MASS FLYWHEEL NEEDLE BEARING.

Depending on the version of the needle bearing installed that have rollers or needle bearings missing every 4th roller. This does not mean that the needle bearing is faulty.

4. Dual Mass Flywheel

- With transfer plate
- Make sure it fits securely on the centering pins
- Keep the clutch lining contact surface free of grooves, oil and grease.
- Removing and installing, refer to **CLUTCH PRESSURE PLATE AND CLUTCH DISK FOR THE DUAL-DISK CLUTCH**

5. Clutch Plate

- Can only be replaced with the pressure plate **DUAL-DISK CLUTCH OVERVIEW.**
- Removing and installing, refer to **CLUTCH PRESSURE PLATE AND CLUTCH DISK FOR THE DUAL-DISK CLUTCH**
- Allocation.
- Installed position: The clutch plate lining must lie directly against the flywheel
- The marking, "Getriebeseite (transmission side)", if present, faces the pressure plate or the transmission

6. SAC Pressure Plate

- The second clutch disc is installed in the pressure plate
- Can only be replaced with the clutch disc **DUAL-DISK CLUTCH OVERVIEW.**
- Allocation.
- Removing and installing, refer to **CLUTCH PRESSURE PLATE AND CLUTCH DISK FOR THE DUAL-DISK CLUTCH**
- Check the ends of the diaphragm spring, refer to **Fig. 8**
- Pressure plate, checking for distortion, refer to **Fig. 7**
- Check the pull-spring and rivet connections, refer to **Fig. 9**

- Keep the clutch lining contact surface free of grooves, oil and grease.

7. Bolt

- Always replace
- 22 Nm plus an additional 90° turn
- Mount the pressure plate to the dual mass flywheel
- Loosen or tighten according to assembly instructions, refer to **CLUTCH PRESSURE PLATE AND CLUTCH DISK FOR THE DUAL-DISK CLUTCH**

CLUTCH RELEASE MECHANISM OVERVIEW

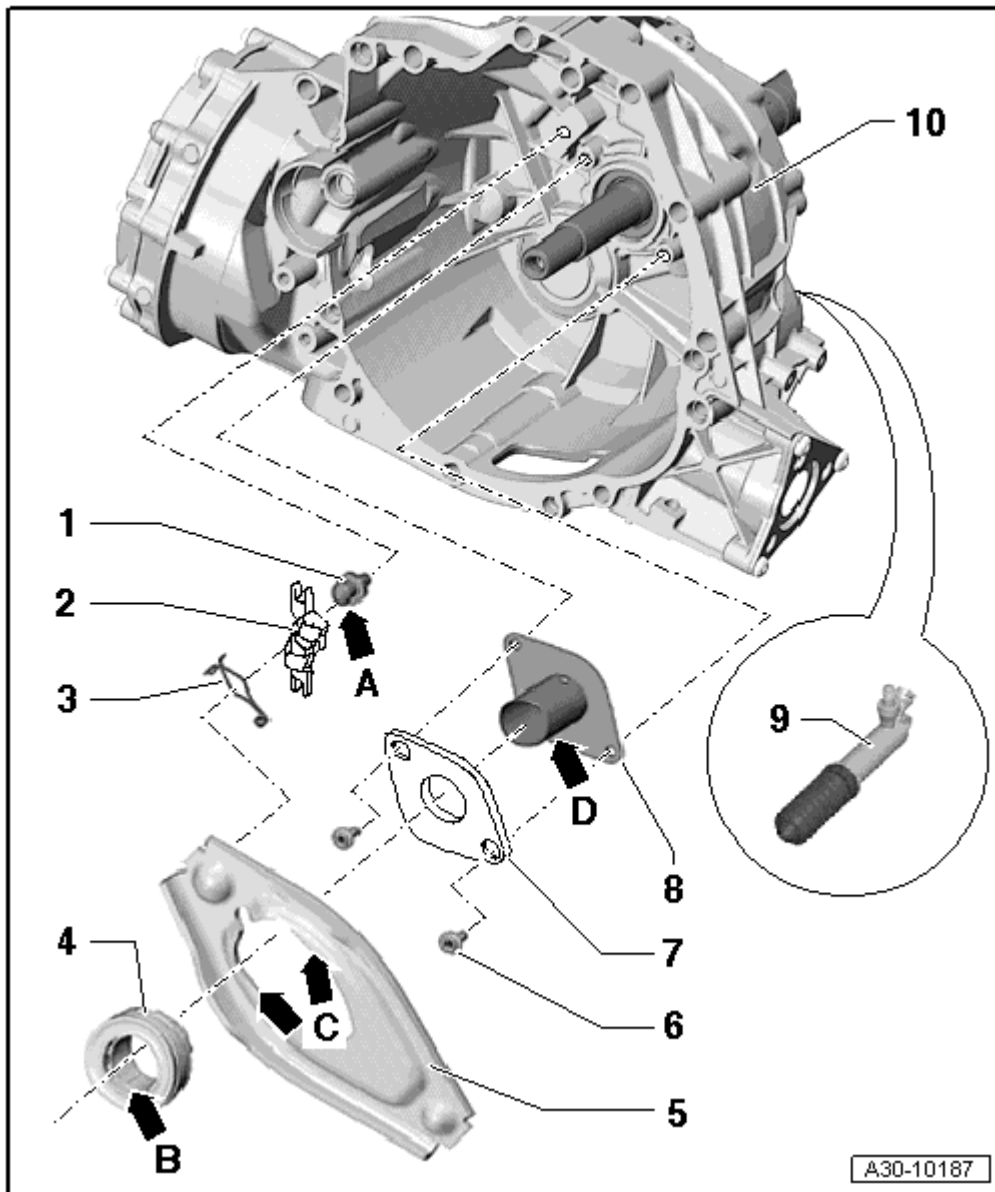


Fig. 15: Identifying Clutch Release Mechanism Assembly Overview
Courtesy of AUDI OF AMERICA, LLC

1. Ball Studs

- 25 Nm
- Lubricate the clutch release lever bearing surface -arrow A- with grease for clutch disc shaft splines G 000 100.

2. Intermediate Piece

- Replace if damaged

3. Spring

- Engage in the clutch release lever

4. Release Bearing

- Different versions
- Allocation.
- Do not wash it, just wipe it off.
- Replace loud bearings

NOTE: Coat the clutch release lever bearing area with adhesive lubricating paste G 000 150, refer to Fig. 18

If equipped, remove any grease inside the bearing area for the guide sleeve -arrow B- mounting for the release bearing on the guide sleeve must be free of grease

- Let the securing tangs on the release bearing lock in place on the release lever
- Removing and installing, refer to **CLUTCH RELEASE LEVER WITH RELEASE BEARING AND GUIDE SLEEVE**

Release Bearing through 02.2008

- Inner diameter -arrow B- : 34 mm
- Release bearing, checking, refer to Fig. 16

Release Bearing with pressure ring - from February 2008

- Inner diameter -arrow B- : 36 mm
- Check the release bearing with the pressure ring, refer to Fig. 17

5. Clutch Release Lever

- Different versions
- Allocation.
- Remove the old grease from the release lever.
- Lubricate the release lever bearing surface -arrow C- with adhesive lubricating paste G 000 150.
- Removing and installing, refer to **CLUTCH RELEASE LEVER WITH RELEASE BEARING AND GUIDE SLEEVE**

6. Bolt

- 8 Nm
- Different bolt lengths
- Allocation.
- Quantity: 2
- Insert with locking fluid AMV 185 101 A1

7. Securing Plate

- For guide sleeve

NOTE: Deleted from 02.2008

Also deleted when installing a new guide sleeve CLUTCH RELEASE LEVER WITH RELEASE BEARING AND GUIDE SLEEVE.

Allocation.

8. Guide Sleeve

- Different versions
- Allocation.
- Remove any grease on the guide sleeve -arrow D-

Guide Sleeve through 02.2008

- Diameter -arrow D- : 34 mm
- When replacing, install without the locking plate **CLUTCH RELEASE LEVER WITH RELEASE BEARING AND GUIDE SLEEVE.**

Guide Sleeve from 02.2008

- Installed on the release bearing with pressure ring, refer to **Fig. 17**
- Diameter -arrow D- : 36 mm
- Installed with the locking plate; refer to **CLUTCH RELEASE LEVER WITH RELEASE BEARING AND GUIDE SLEEVE.**

9. Clutch Slave Cylinder

- Removing and installing, refer to **[For engine(s) CCBA] Removal and Installation**
- Do not actuate after removing the clutch pedal
- Pay attention to the work sequence when bleeding; refer to **[For engine(s) CCBA] General Information**
- When inserting, push in so far until the bolt can be installed.

10. Transmission

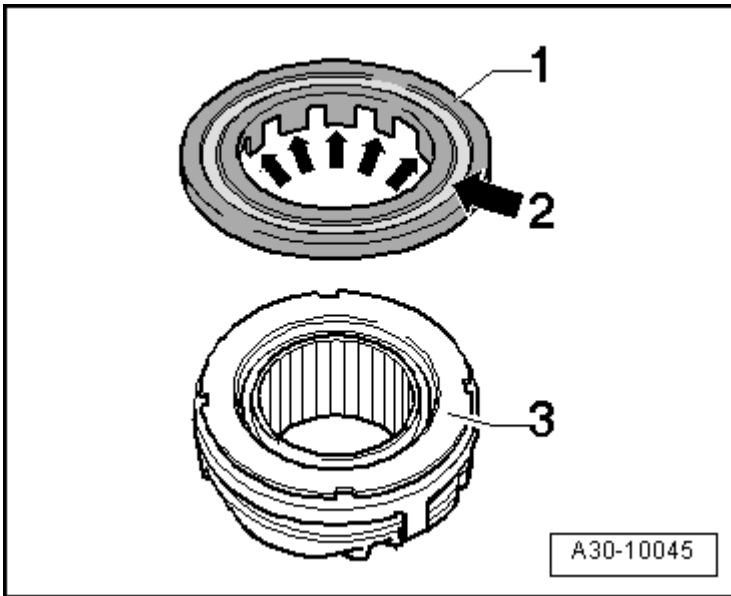


Fig. 16: Checking Release Bearing With Plastic Ring Attached
Courtesy of AUDI OF AMERICA, LLC

- Release bearing with worn-down plastic ring -1- has to be replaced.
- If the running surface -arrow 2- on the plastic ring -1- is worn deeper than 0.8 mm, the release bearing -3- must be replaced.

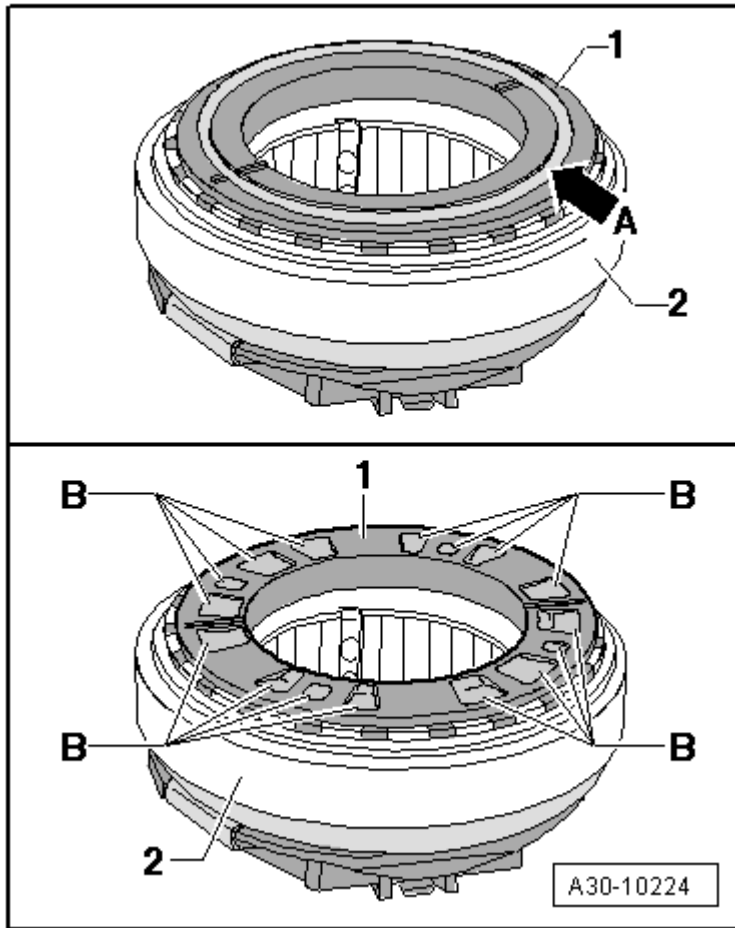


Fig. 17: Checking Release Bearing With Pressure Ring - From February 2008
 Courtesy of AUDI OF AMERICA, LLC

Different Versions:

- Pressure ring -1- with surrounding running surface -Arrow A-
- Pressure ring -1- without running surface in new condition
- Pressure ring -1- with discrete indentations -B- from release bearing running on it

Check:

- The pressure ring for the release bearing -1- may have axial and radial play.
- The pressure ring -1- can tip on all sides inside the release bearing -2-.
- If the running surface -Arrow A- or the indentations -B- on the pressure ring -1- are worn deeper than 0.8 mm, then the release bearing must be replaced.
- The pressure ring is almost loose when the release bearing is not touching the clutch.

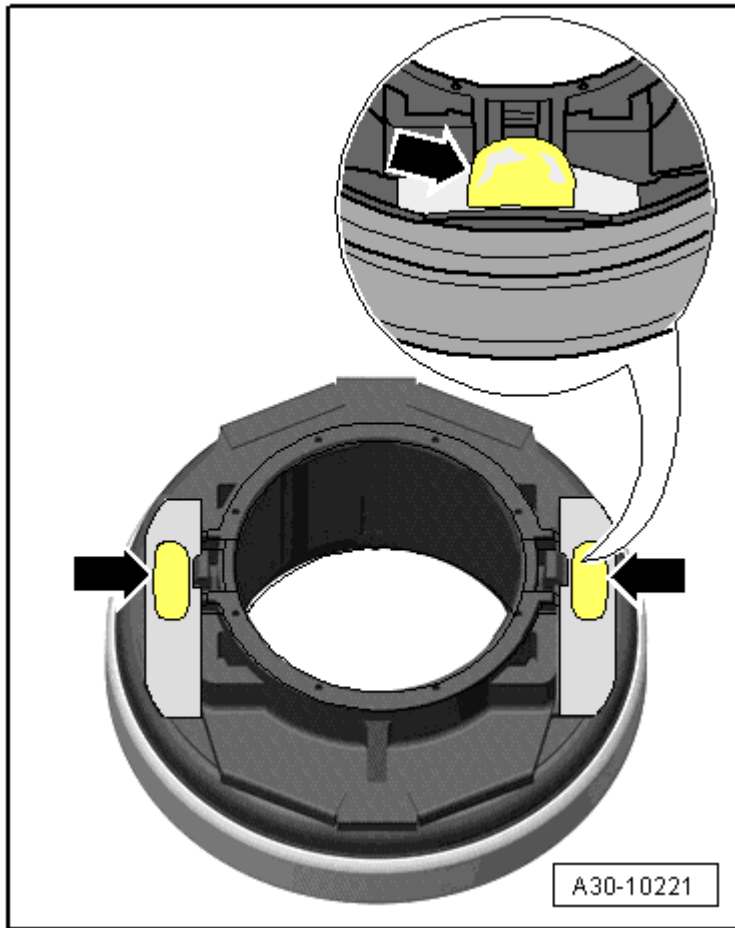


Fig. 18: Lubricating Release Bearing

Courtesy of AUDI OF AMERICA, LLC

CAUTION:

- Rattling noises when using the clutch
- -Rattling noises- can occur when pressing the clutch if there is not enough grease on the release bearings -arrows-.
- Lubricate the release bearings -arrows- generously with adhesive lubricating paste G 000 150.
- Remove any grease still in the guide sleeve bearing area.

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Component	Bolt Size	Nm
Ball Studs	-	25
SAC Pressure Plate ¹	-	22 + 90°
Securing Plate for Guide Sleeve ²	-	8

- ¹ Always replace
- ² Different bolt lengths

REMOVAL AND INSTALLATION

CLUTCH MODULE

Special tools and workshop equipment required

- Extractor T40176
- Puller T10037
- Slide Hammer VW 771/1
- Grease for clutch disc shaft splines G 000 100
- Sealing grease G 052 128 A1

REMOVING

-- Remove the transmission and secure it on the transmission support T40173 using the tensioning strap -1-. Refer to [For engine(s) CCBA] Removal and Installation .

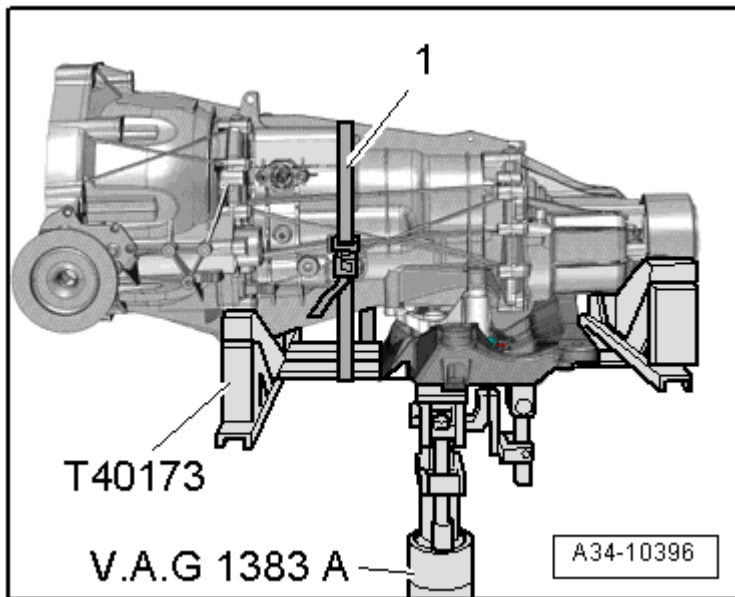


Fig. 19: Identifying Transmission Holding Fixture
Courtesy of AUDI OF AMERICA, LLC

- Tilt the transmission back slightly to prevent the transmission fluid from leaking when removing the left flange shaft.

-- Remove bolts -arrows- on left flange shaft mounting bracket.

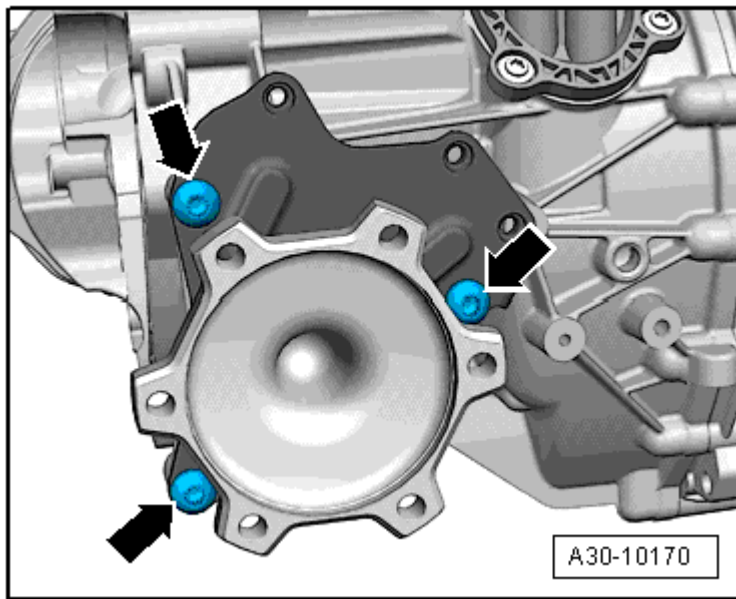


Fig. 20: Locating Flange Shaft Mounting Bracket Bolts
Courtesy of AUDI OF AMERICA, LLC

-- Remove the flange shaft from the transmission in the direction of -arrow A-. Keep the end of the shaft -2- centered on the front final drive opening -arrow 3-.

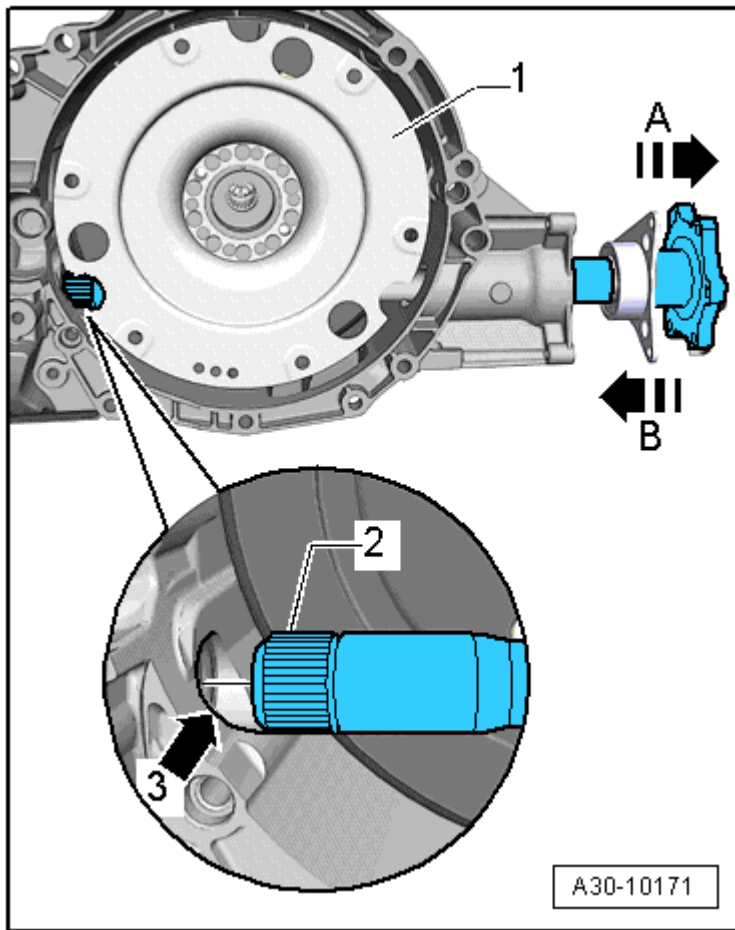


Fig. 21: Identifying Left Flange Shaft

Courtesy of AUDI OF AMERICA, LLC

CAUTION: Danger of damaging the shaft seal.

- If the shaft is not centered when removing, the shaft splines -2- fall onto the inner shaft seal -arrow 3- between the final drive and the transmission housing.
- Always replace a damaged shaft seal. Refer to LEFT FLANGE SHAFT SEAL WITH TRANSMISSION REMOVED .

NOTE: If it is not possible to remove the left flange shaft by hand, then use the VW 771 to remove it.

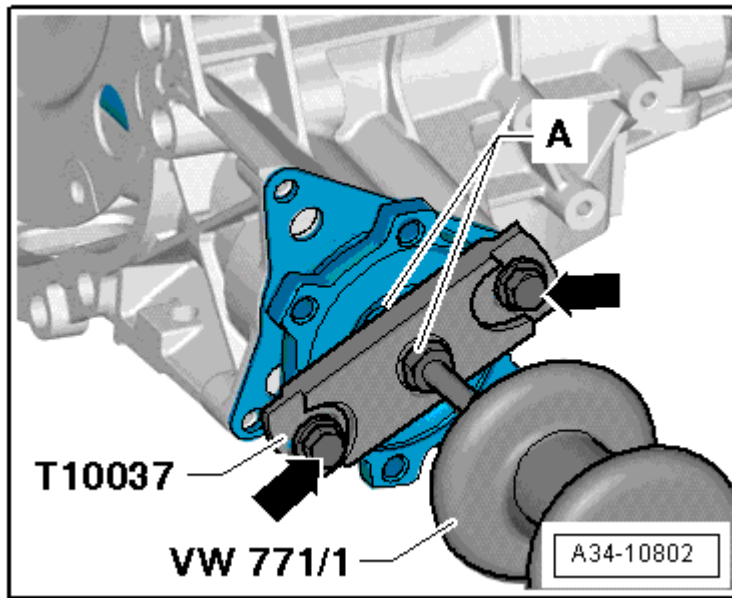


Fig. 22: Identifying T10037 Installed On Flange
 Courtesy of AUDI OF AMERICA, LLC

-- Attach the plate from the T10037 to the flange shaft -arrows- and attach the spindle from the VW 771 (nuts - A-).

-- Secure the T40176 to the clutch module -A- with the nut -B- -arrow-.

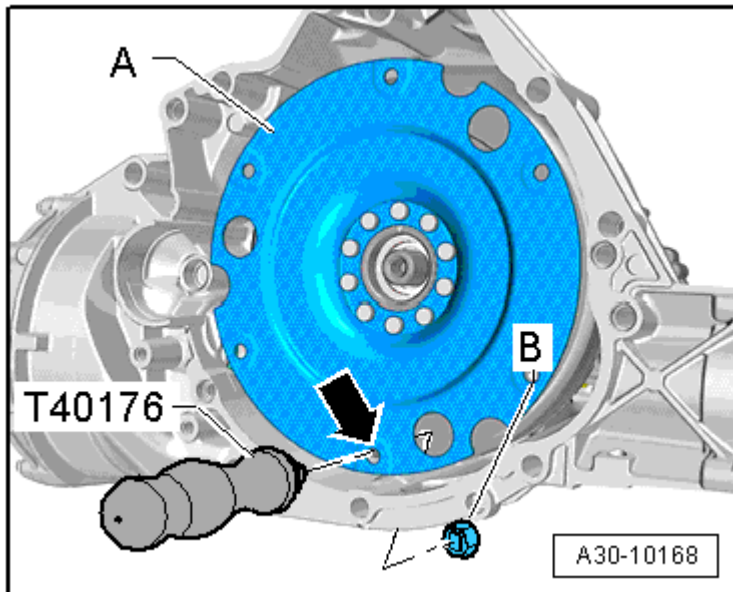


Fig. 23: Identifying T40176, Torque Converter -A-, And Nut -B-
 Courtesy of AUDI OF AMERICA, LLC

-- Rotate the T40176 upward.

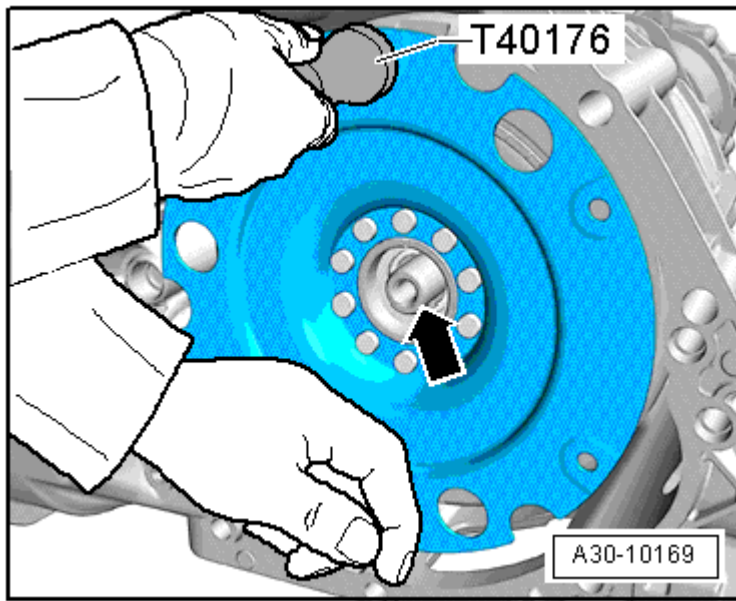


Fig. 24: Sliding Torque Converter Carefully Onto Input Shaft
Courtesy of AUDI OF AMERICA, LLC

CAUTION: Danger of damaging the shaft seals and the needle bearings in the dual mass flywheel.

- The clutch module weighs approximately 20 kg.
- To prevent the clutch module from tipping, counter hold it at the bottom as shown in the illustration.
- When removing and installing the clutch module, make sure the shaft seals and the needle bearing in the dual mass flywheel -arrow- are not damaged.
- Replace the damaged shaft seals or needle bearings. Refer to DUAL MASS FLYWHEEL NEEDLE BEARING.

-- Remove the clutch module without tilting the input shaft -arrow-.

CAUTION: Danger of causing damage to the transfer plate on the dual mass flywheel.

- Do not lay the clutch module on one side on the transfer plate -arrow-.
- This could bend the transfer plate -arrow-, which will then lead to functionality problems.

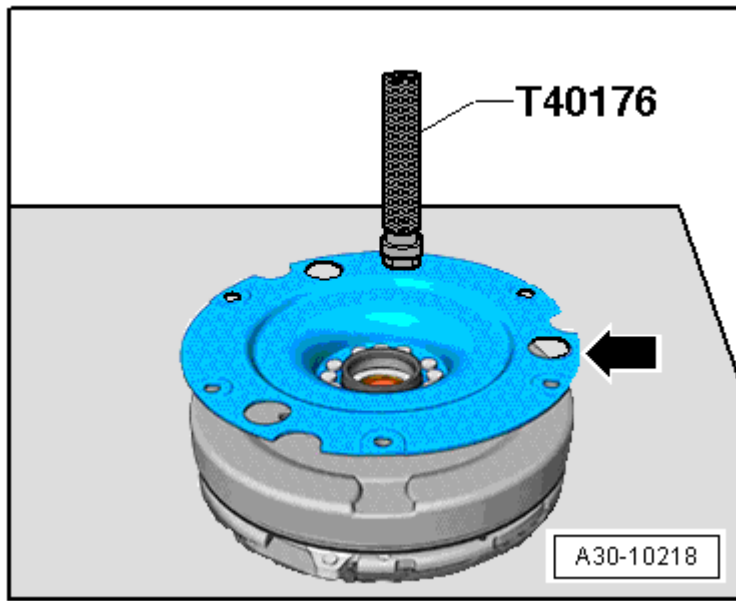


Fig. 25: Identifying Transfer Plate

Courtesy of AUDI OF AMERICA, LLC

-- Lay the clutch module on a work bench with the clutch pressure plate facing down.

INSTALLING

Install in reverse order, paying attention to the following:

- Lubricate the release bearing according to the specification. Refer to **Fig. 18**.
- 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-.

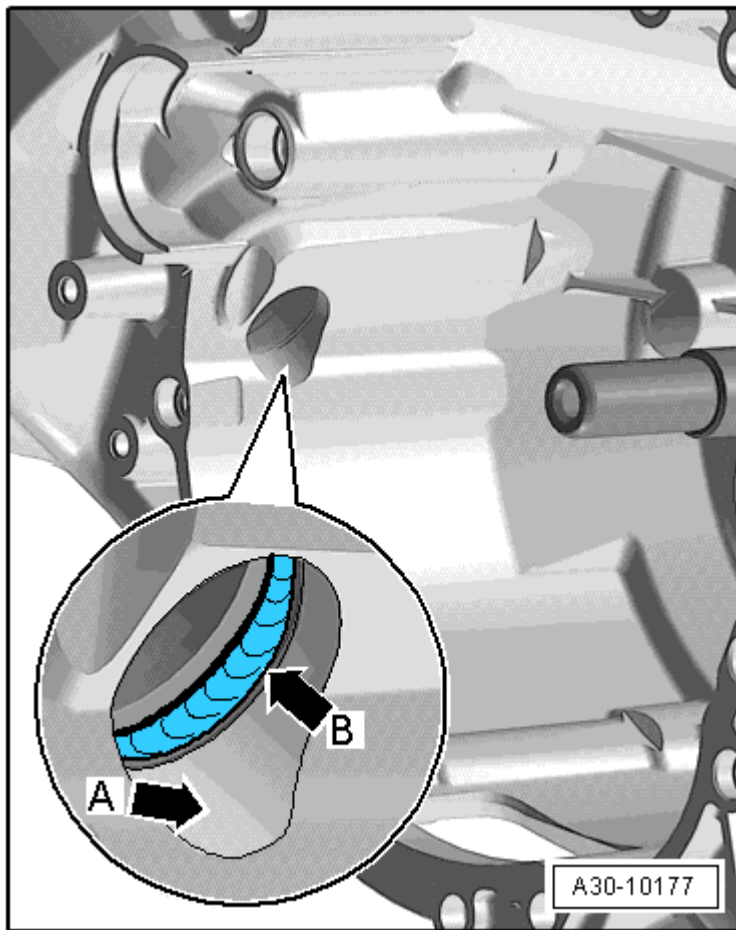


Fig. 26: Replacing Shaft Seal Between Differential And Transmission Housing

Courtesy of AUDI OF AMERICA, LLC

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

- Fill the area between the sealing lip and dust lip -Arrow B- halfway with sealing grease G 052 128 A1.
- Clean the input shaft -arrow-.

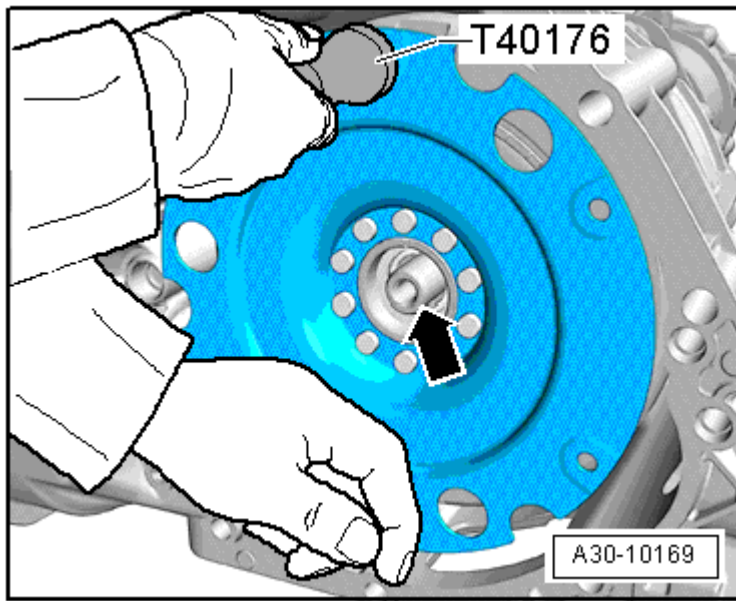


Fig. 27: Sliding Torque Converter Carefully Onto Input Shaft
Courtesy of AUDI OF AMERICA, LLC

-- Lightly grease the input shaft splines with grease for clutch disc shaft splines G 000 100.

CAUTION: Remove any grease on the pivot pin on the input shaft -arrow- all the way up to the splines before installation.

-- Slide the clutch module onto the input shaft carefully without tilting it.

-- Remove the T40176 from the clutch module.

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

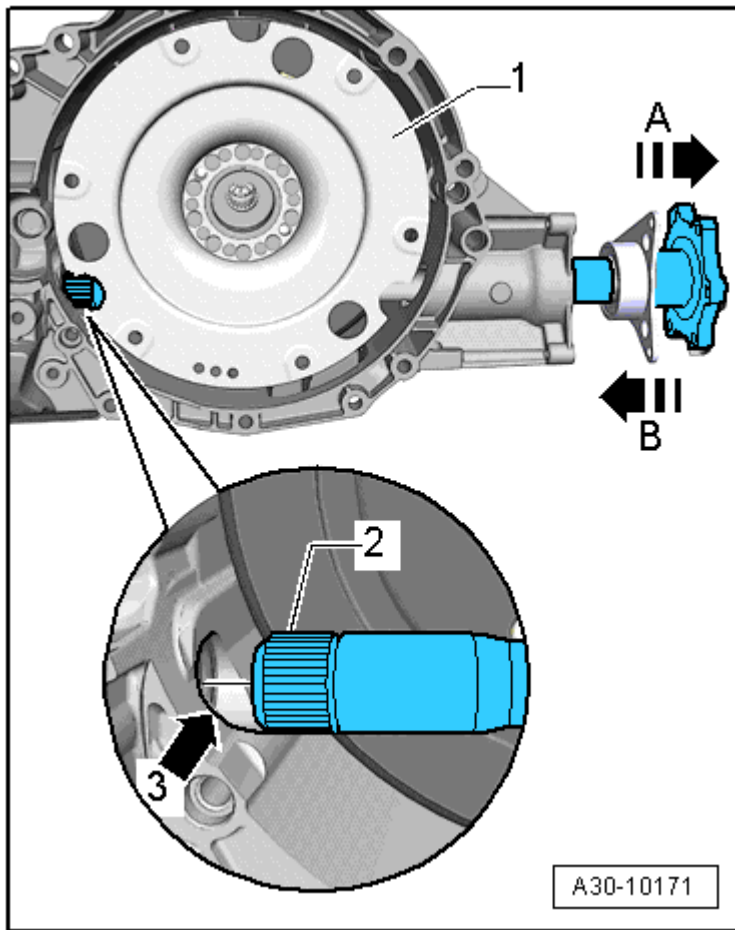


Fig. 28: Identifying Left Flange Shaft

Courtesy of AUDI OF AMERICA, LLC

-- Insert the left flange shaft into the transmission in the direction of -arrow B- and guide the end of the shaft -2- into the shaft seal on the front differential -arrow 3-, keeping the shaft centered.

CAUTION: Danger of damaging the shaft seal.

- If the shaft is not centered, the shaft splines -2- will damage the shaft seal -arrow 3- between the differential and transmission housing.
- Always replace a damaged shaft seal. Refer to LEFT FLANGE SHAFT SEAL WITH TRANSMISSION REMOVED .

-- Tighten the left flange shaft mounting bracket -arrows-. Tightening specification, refer to item 29: LEFT FLANGE SHAFT, CLUTCH MODULE, SPUR GEARS, GEARSHIFT SHAFT AND TRANSMISSION COVER OVERVIEW .

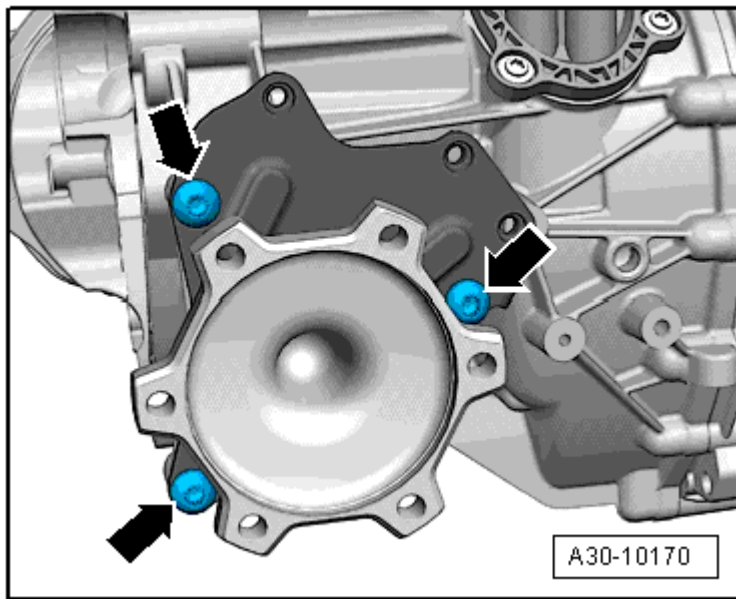


Fig. 29: Locating Flange Shaft Mounting Bracket Bolts
Courtesy of AUDI OF AMERICA, LLC

CLUTCH PRESSURE PLATE AND CLUTCH PLATE, LUK, SINGLE-DISC CLUTCH

Special tools and workshop equipment required

- Thrust Plate VW 402
- Thrust Disc VW 412
- Thrust Pad VW 510
- Assembly Tool T10254
- Thrust Piece T40089
- Thrust Piece T40171

Removing

-- Remove the clutch module. Refer to **CLUTCH MODULE**.

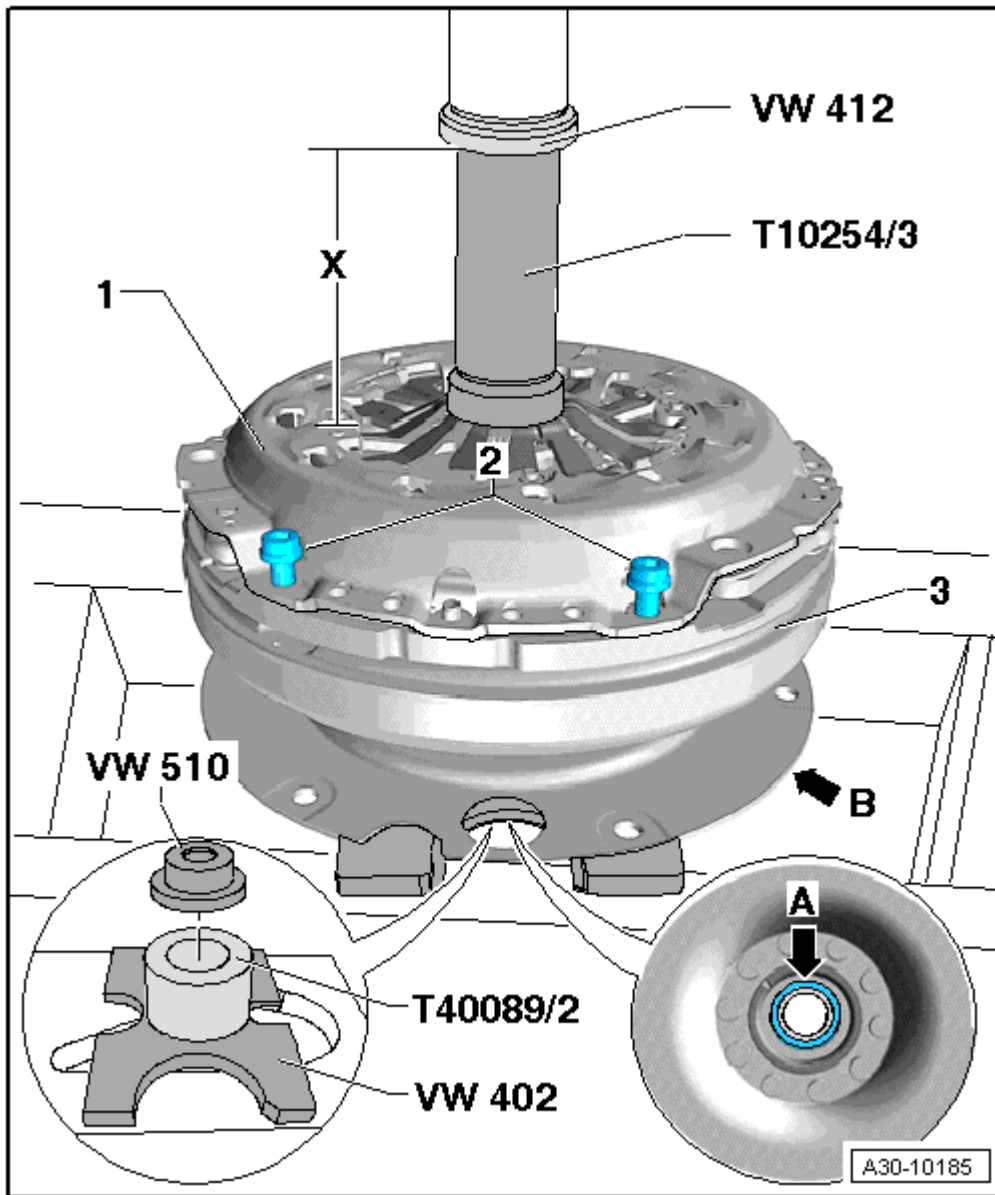


Fig. 30: Identifying Clutch Module Special Tools
 Courtesy of AUDI OF AMERICA, LLC

1. 1 - Clutch Pressure Plate

CAUTION: Danger of causing damage to the clutch pressure plate and the dual mass flywheel.

- Only remove and install the clutch pressure plate -1- when it is tensioned.
- Clutch pressure plates that are not tensioned will distort when loosening or tightening the bolts -2- and that leads to shuddering when accelerating.

- The dual mass flywheel -3- must only be supported by the sliding washer -arrow A- when tightening the clutch pressure plate -1- in the hydraulic press.
- If the dual mass flywheel is supported on the transfer plate - arrow B-, it will distort and be damaged. The dual mass flywheel must then be replaced.

-- Position the clutch module so the VW 510 rests on the sliding washer -arrow A- in the dual mass flywheel.

-- Place the assembly tool T10254/3 on the clutch pressure plate spring tabs -1- and press it using the press.

- Pressing distance dimension -x- 8 - 9 mm

NOTE: **A second technician is needed for the following step.**

-- Remove all 6 bolts -2- and release the tension on the press.

-- Remove the clutch pressure plate -1- and clutch disc.

Installing

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

NOTE: **Check the clutch pressure plate for distortion. Refer to Fig. 7.**

The adjusting ring on the clutch pressure plate must be reset before installing, if the clutch plate is being replaced. Refer to CLUTCH PRESSURE PLATE ADJUSTING RING, LUK, RESETTNG, SINGLE-DISC CLUTCH.

-- Center the clutch disc using the T40171.

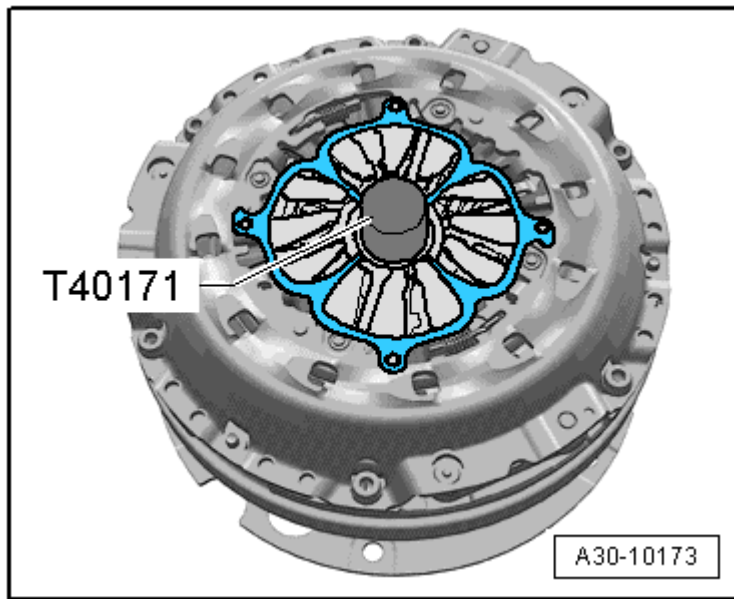


Fig. 31: Identifying Clutch Disc Special Tool T40171
Courtesy of AUDI OF AMERICA, LLC

- Clutch plate installed location: The spring pack (coil springs) or "Getriebeseite (transmission side)" must face the clutch pressure plate.

-- Install the clutch pressure plate on the centering pins.

-- Position the clutch module so the VW 510 rests on the sliding washer -arrow A- in the dual mass flywheel.

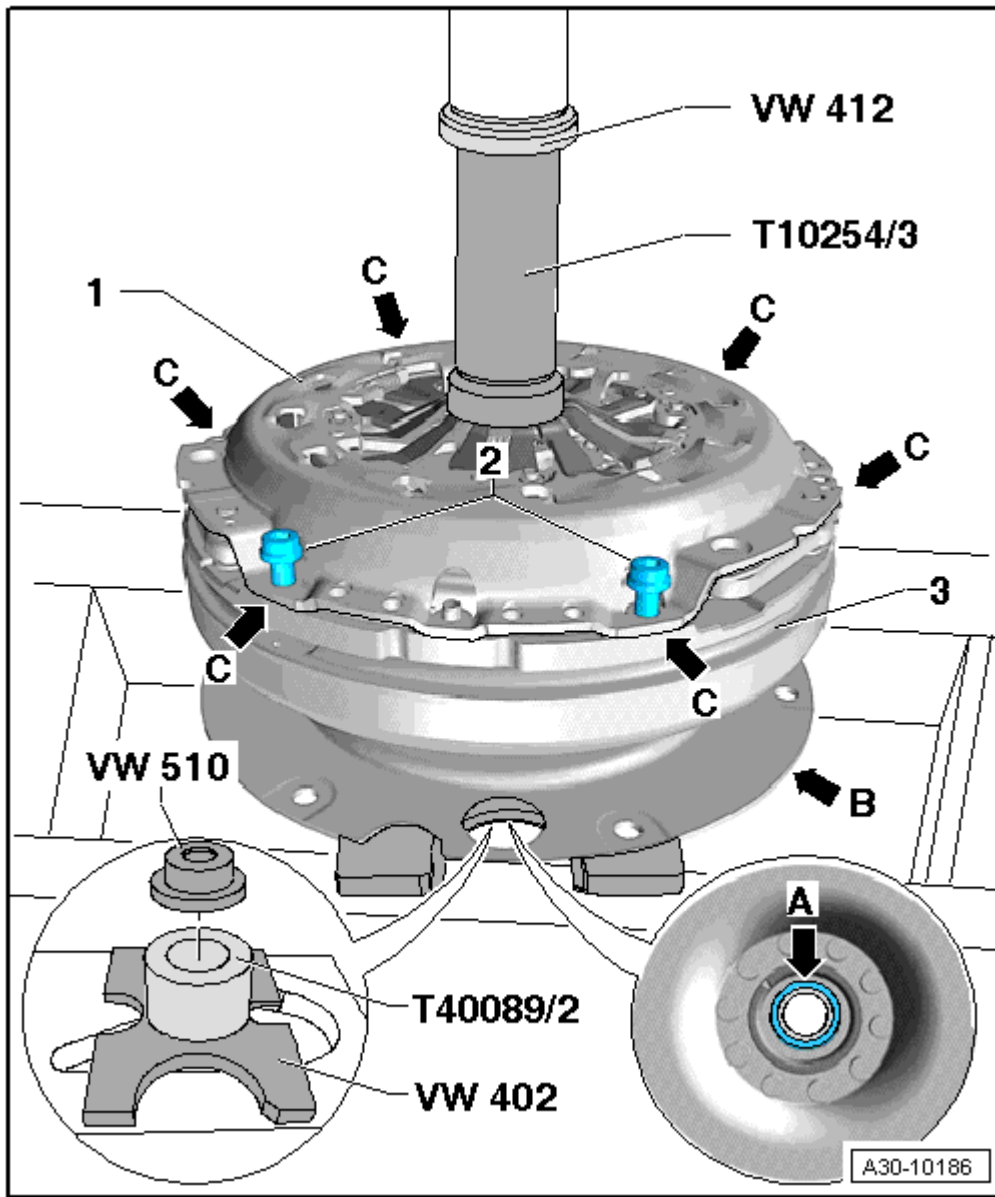


Fig. 32: Identifying Clutch Module Components
 Courtesy of AUDI OF AMERICA, LLC

1. 1 - Clutch Pressure Plate

CAUTION: The dual mass flywheel could be damaged.

- The dual mass flywheel -3- must only be supported by the sliding washer -arrow A- when tightening the clutch pressure plate -1- in the hydraulic press.
- If the dual mass flywheel is supported on the transfer plate -arrow B-, it will distort and be damaged. The dual mass flywheel must then be replaced.

-- Place the T10254/3 over the T40171.

-- Press the press straight until the clutch pressure plate -1- comes into contact with the dual mass flywheel -3- -C arrows-.

NOTE: **A second technician is needed for the following step.**

-- Install all 6 bolts -2- one after another and tighten to the final specification. Refer to item 7: 7.

-- Release the tension on the press.

-- Install the clutch module. Refer to **CLUTCH MODULE**.

CLUTCH PRESSURE PLATE AND CLUTCH DISK FOR THE DUAL-DISK CLUTCH

Special tools and workshop equipment required

- Thrust Plate VW 402
- Thrust Disc VW 412
- Thrust Pad VW 510
- Assembly Tool T10254
- Thrust Piece T40089
- Thrust Piece T40171

Removing

-- Remove the clutch module. Refer to **CLUTCH MODULE**.

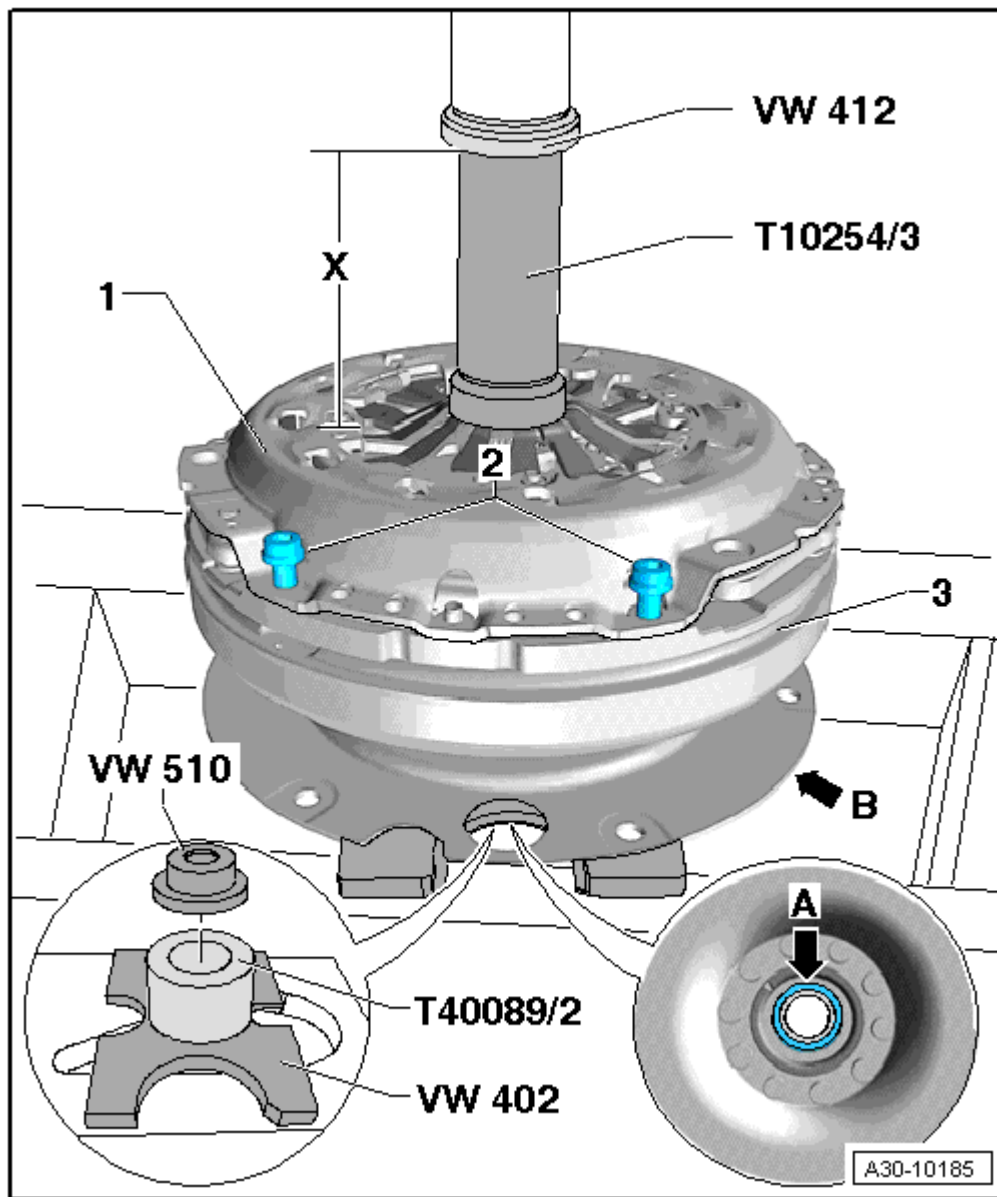


Fig. 33: Identifying Clutch Module Special Tools

Courtesy of AUDI OF AMERICA, LLC

1. 1 - Clutch Pressure Plate

CAUTION: Danger of causing damage to the clutch pressure plate and the dual mass flywheel.

- Only remove and install the clutch pressure plate -1- when it is pre-tensioned.
- Clutch pressure plates that are not pre-tensioned will distort when loosening or tightening the bolts -2- and that leads to shuddering when accelerating.

- The dual mass flywheel -3- must only be supported by the sliding washer -arrow A- when tightening the clutch pressure plate -1- in the hydraulic press.
- If the dual mass flywheel is supported on the transfer plate - arrow B-, it will distort and be damaged. The dual mass flywheel must then be replaced.

-- Position the clutch module so the VW 510 rests on the sliding washer -arrow A- in the dual mass flywheel.

-- Place the assembly tool T10254/3 on the clutch pressure plate spring tabs -1- and press it using the press.

- Pressing distance dimension -x- 8 - 9 mm

NOTE: **A second technician is needed for the following step.**

-- Remove all 6 bolts -2- and release the tension on the press.

-- Remove the clutch pressure plate -1- and clutch disc.

Installing

Install in reverse order, paying attention to the following:

CAUTION: The clutch disc -1- and pressure plate -2- could be damaged.

- The teeth -arrows A- on the clutch disc -1- must engage in the openings -arrows B-.
- When the pressure plate -2- is positioned properly, the centering pins -arrow C- must be flush with it.

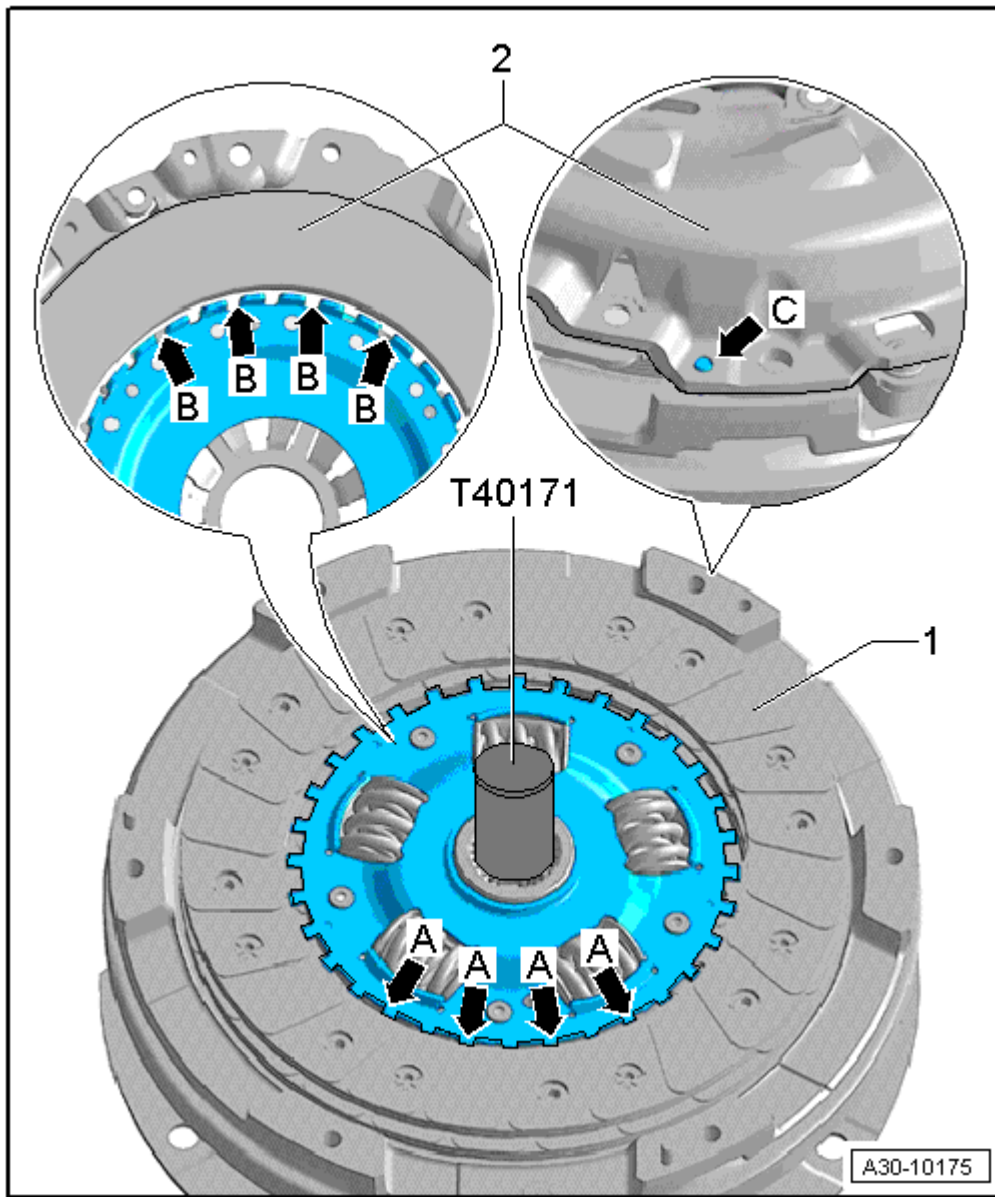


Fig. 34: Using T40171 To Center Clutch Disc -1-
 Courtesy of AUDI OF AMERICA, LLC

-- Center the clutch disc -1- using the T40171.

- Clutch plate installed location: The toothed disc -arrows A- must face toward the pressure plate -2-.

-- Position the pressure plate -2- on the centering pins -arrow C-. The center pins -arrow C- must be flush in the pressure plate.

CAUTION: The dual mass flywheel could be damaged.

- The dual mass flywheel -3- must only be supported by the sliding

washer -arrow A- when tightening the pressure plate -1- in the hydraulic press.

- If the dual mass flywheel is supported on the transfer plate -arrow B-, it will distort and be damaged. The dual mass flywheel must then be replaced.

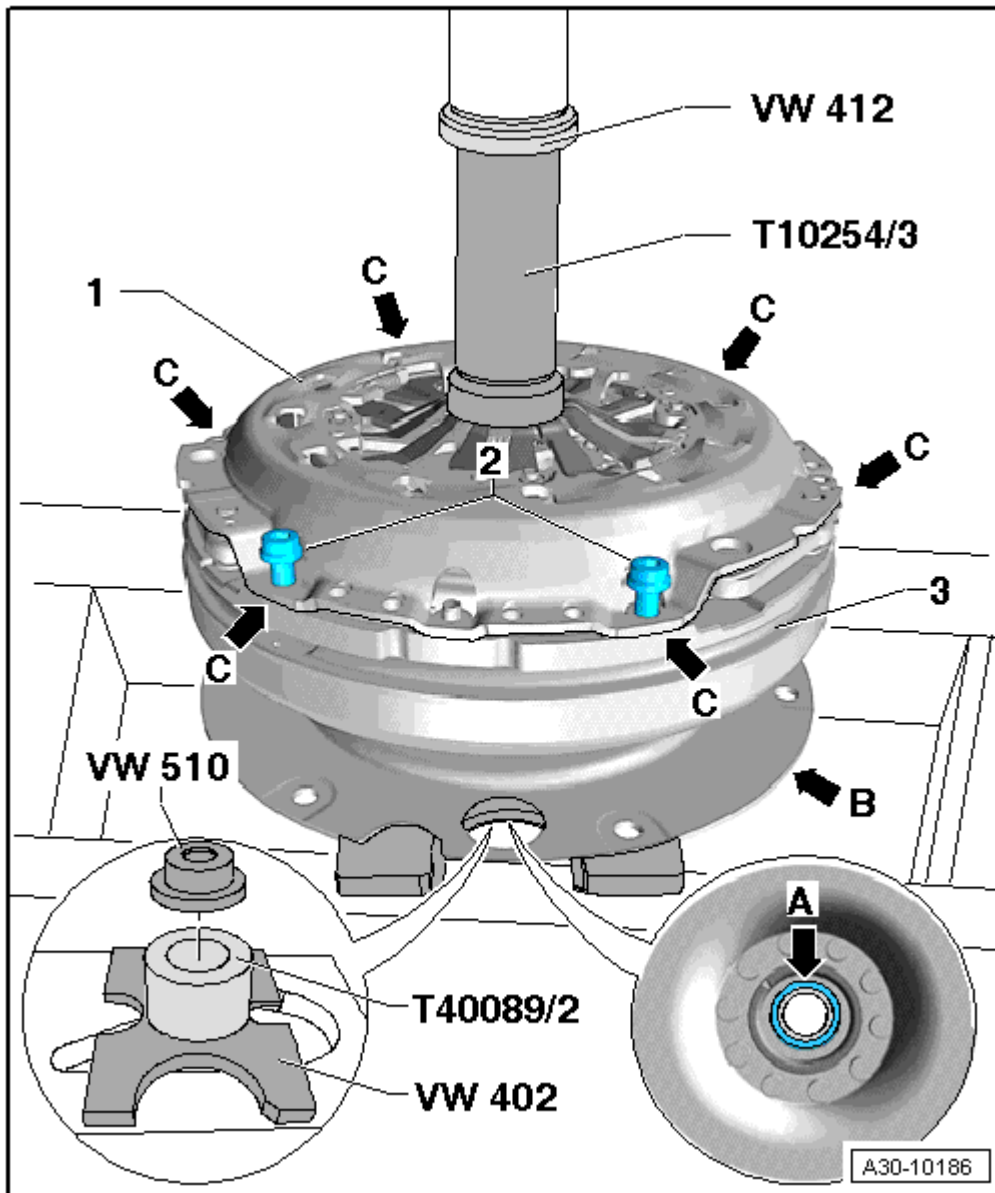


Fig. 35: Identifying Clutch Module Components

Courtesy of AUDI OF AMERICA, LLC

-- Position the clutch module so the VW 510 rests on the sliding washer -arrow A- in the dual mass flywheel.

-- Place the T10254/3 over the T40171.

-- Press the press straight until the pressure plate -1- comes into contact with the dual mass flywheel -3- -arrows C-.

NOTE: A second technician is needed for the following step.

-- Install all 6 bolts -2- one after another and tighten to the final specification. Tightening specification **DUAL-DISK CLUTCH OVERVIEW.**

-- Release the tension on the press.

-- Install the clutch module **CLUTCH, SERVICING.**

CLUTCH RELEASE LEVER WITH RELEASE BEARING AND GUIDE SLEEVE

Removing

-- Remove the clutch release lever -1- together with the release bearing -2- and the spring -3-.

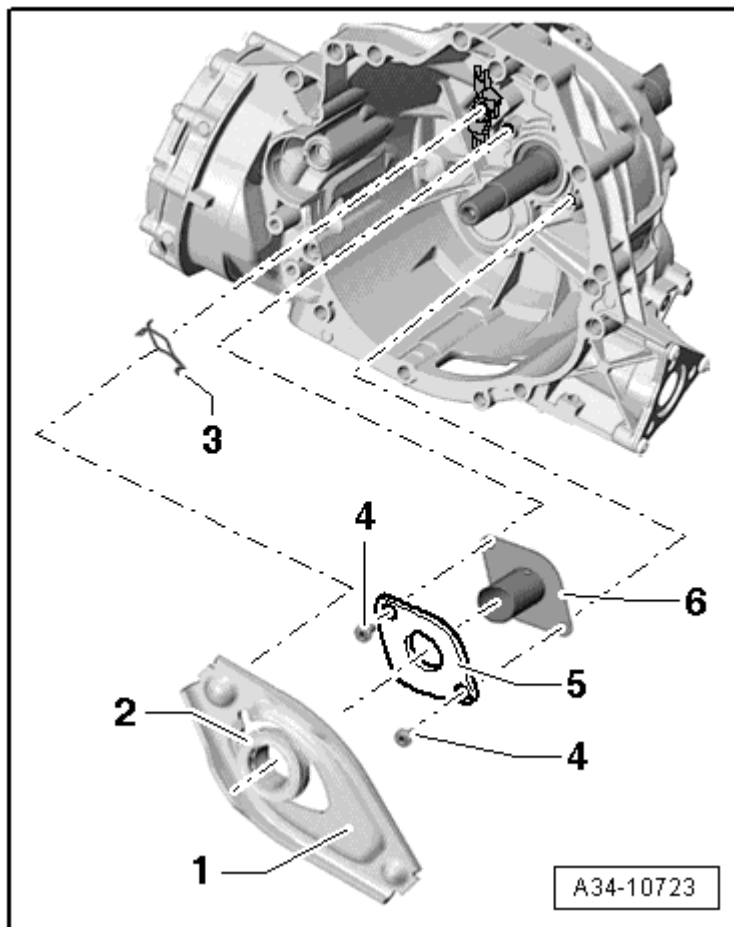


Fig. 36: Identifying Clutch Release Lever Components
Courtesy of AUDI OF AMERICA, LLC

-- Remove the bolts -4-, the locking plate -5- (if equipped) and the guide sleeve -6-.

-- If equipped, remove any old grease on the clutch release lever -1-, on the release bearing -2- and on the guide sleeve -6-.

Installing

-- Clean the guide sleeve -6- and install together with the locking plate -5-.

-- Clean the bolt threads -4- with a wire brush. Use locking fluid AMV 185 101 A1 to install the bolts. Tightening specification **CLUTCH RELEASE MECHANISM OVERVIEW**.

CAUTION: Rattling noises when using the clutch

- Lubricate the bearing areas on the clutch release lever with adhesive lubricating paste G 000 150; refer to **CLUTCH RELEASE MECHANISM OVERVIEW**.

-- Engage the release bearing -2- and the spring -3- into the clutch release lever -1- and install them both.

DUAL MASS FLYWHEEL NEEDLE BEARING

Special tools and workshop equipment required

- Tube 37 mm Dia. VW 416B
- Thrust Pad VW 511
- Arbor Thrust Piece VW 554
- Thrust Pad 30-11
- Press Tube 30-23
- Press Tool 3345
- Internal Puller Kukko 21/4
- Internal Puller Kukko 21/5

NOTE: If the surface of the input shaft is visibly damaged near the needle bearing in the dual mass flywheel -arrow-, then replace both the input shaft and the needle bearing.

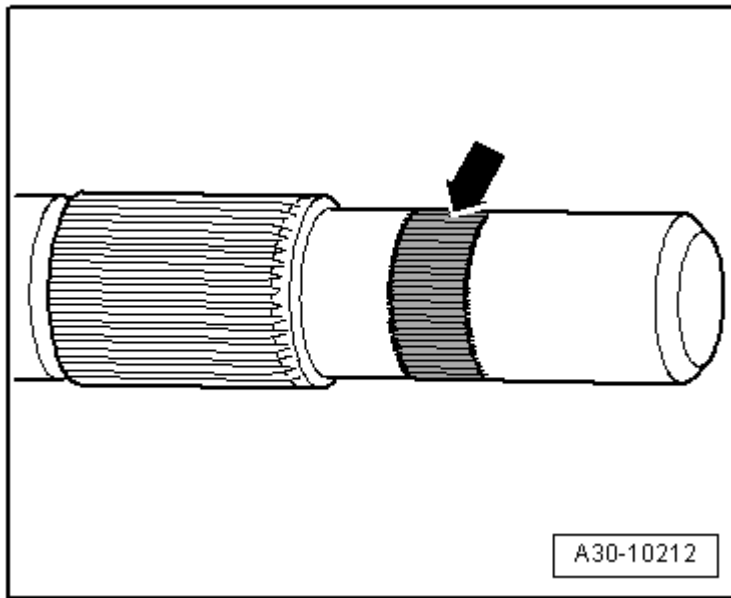


Fig. 37: Checking Input Shaft For Wear
Courtesy of AUDI OF AMERICA, LLC

Replace the driveshaft, refer to TRANSMISSION .

Depending on the version, there are different needle bearings installed in the dual mass flywheel.

- Needle bearing that have rollers
- Needle bearings, that have every 4th roller missing -arrows- does not mean the needle bearing is faulty.

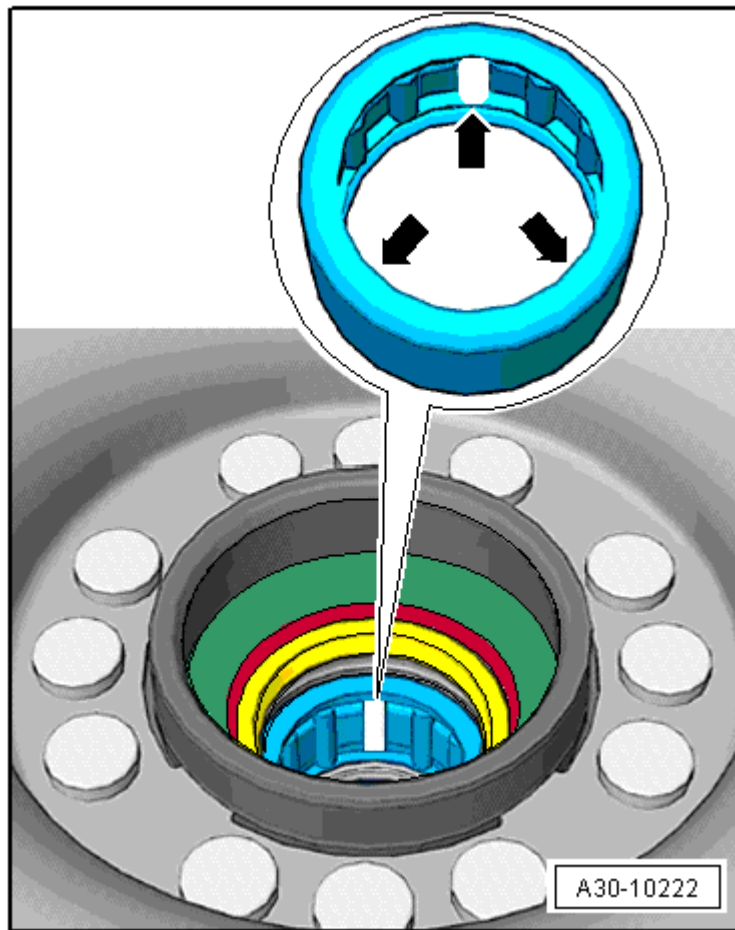


Fig. 38: Checking Needle Bearing Inside Dual Mass Flywheel
Courtesy of AUDI OF AMERICA, LLC

- New needle bearings are equipped with rollers.

Removing

- The clutch pressure plate and clutch plate are removed from the dual mass flywheel. Refer to **CLUTCH PRESSURE PLATE AND CLUTCH PLATE, LUK, SINGLE-DISC CLUTCH** or **CLUTCH PRESSURE PLATE AND CLUTCH DISK FOR THE DUAL-DISK CLUTCH**.

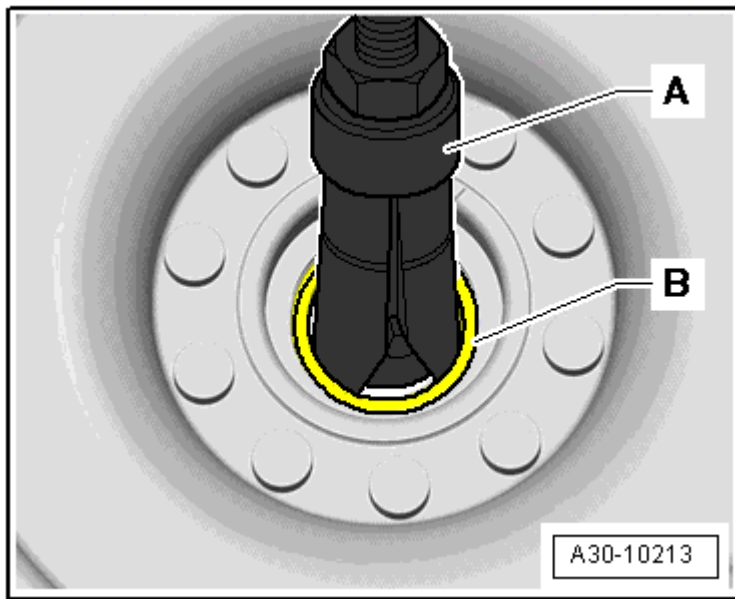


Fig. 39: Identifying Shaft Seal from the Dual Mass Flywheel, Removal
Courtesy of AUDI OF AMERICA, LLC

-- Tension the internal puller -A- behind the sealing lip on the shaft seal -B- and pry out the seal.

A - Internal puller 30 to 37 mm, for example, Kukko 21/5

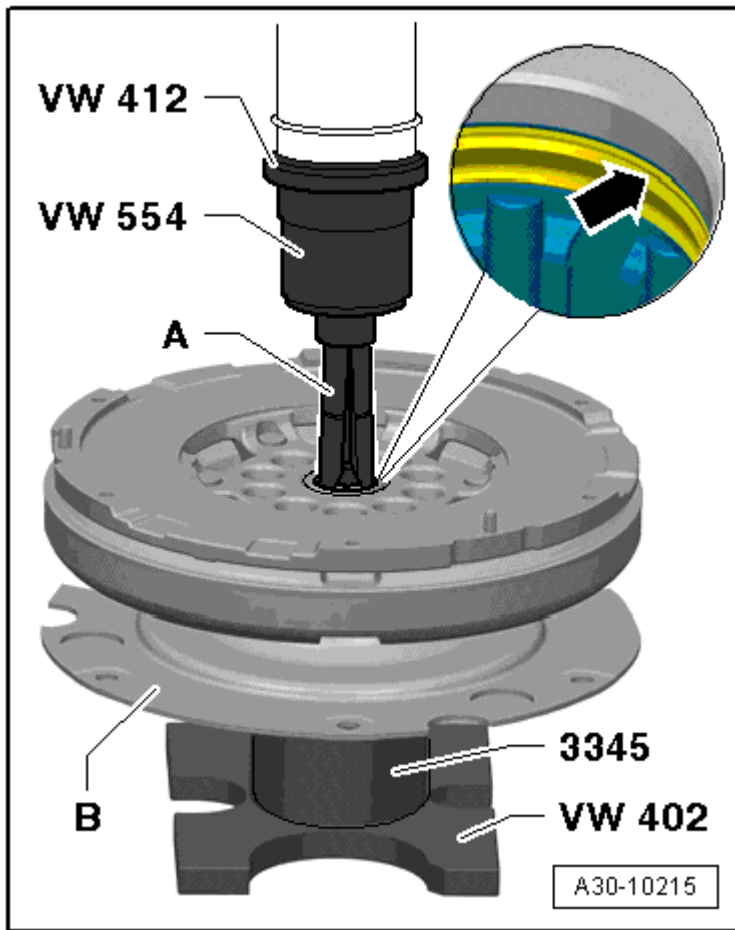


Fig. 40: Identifying Needle Bearing from the Dual Mass Flywheel, Removal
 Courtesy of AUDI OF AMERICA, LLC

CAUTION: The dual mass flywheel could be damaged.

- If the dual mass flywheel is supported on the transfer plate -B-, it will distort and be damaged. The dual mass flywheel must then be replaced.
 - Always replace the needle bearing after removing from the dual mass flywheel
- Remove the shaft seal from the dual mass flywheel. Refer to **Fig. 39**.
- Install the internal puller -A- near the seal -arrow- in the needle bearing and tighten it down.
- A - Internal puller 23.5 to 30 mm, for example, Kukko 21/4
- Install the thrust piece on the internal puller and remove the needle bearing.

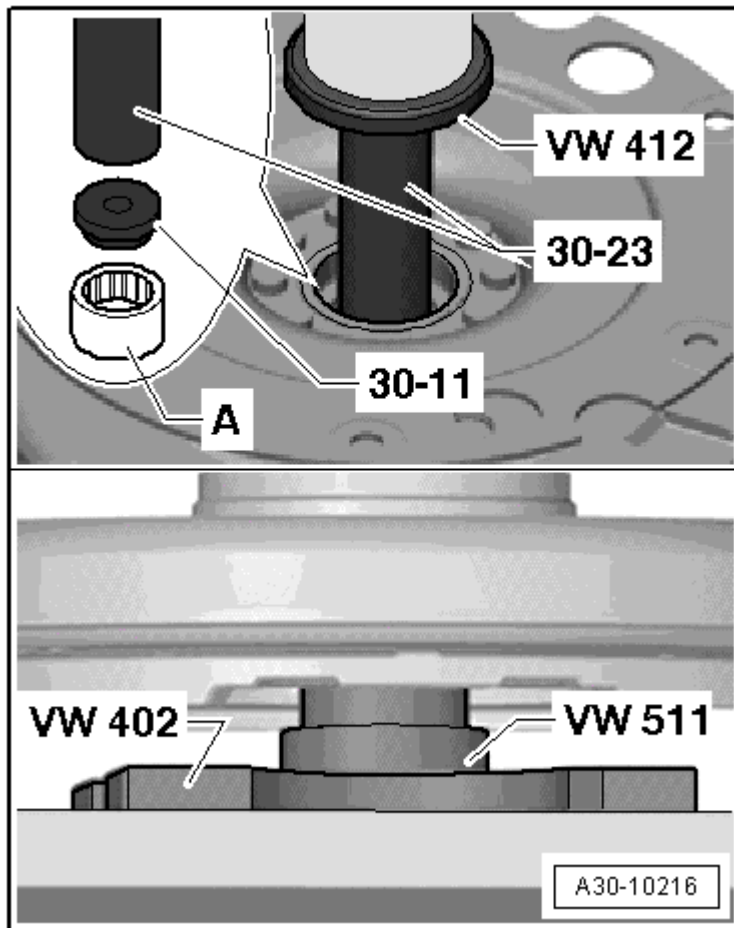


Fig. 41: Using VW 511 To Install Dual Mass Flywheel Needle Bearing
 Courtesy of AUDI OF AMERICA, LLC

CAUTION: The dual mass flywheel could be damaged.

- The centering pins on the dual mass flywheel could get damaged when installing the needle bearing.
- The dual mass flywheel may be supported only in the center under the needle bearing mount.

-- Remove any grease still on the hole for the needle bearing inside the dual mass flywheel using a dry towel.

NOTE: Do not use any cleaning solution to clean the hole!

-- Support the dual mass flywheel directly beneath bearing mount using VW 511.

-- Install the 30-11 with the small diameter into the needle bearing -A-. The side of the needle bearing with the writing (the larger metal thickness) faces the thrust pad.

-- Carefully install the needle bearing all the way in.

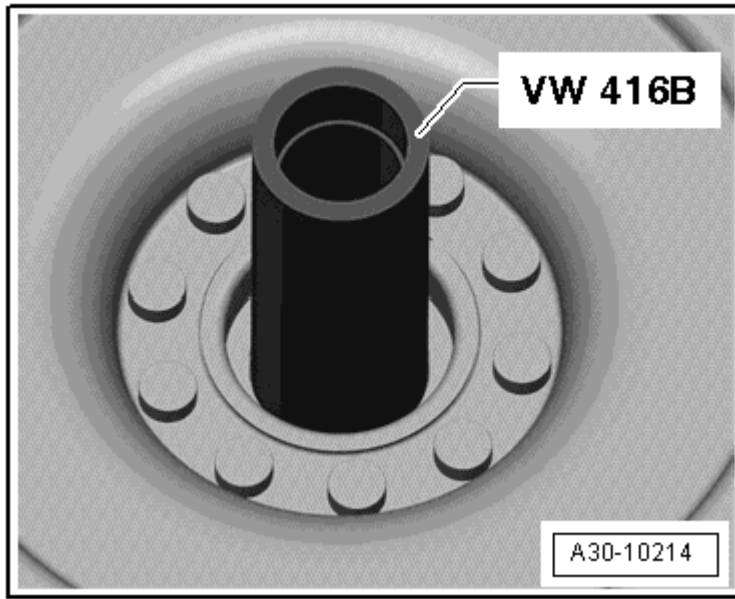


Fig. 42: Using Tube 37 mm Dia. VW 416B To Install Shaft Seal Into Dual Mass Flywheel
Courtesy of AUDI OF AMERICA, LLC

- The needle bearing is installed inside the dual mass flywheel.
- The open side of the shaft seal faces the transmission.
- Attach the clutch pressure plate with the clutch plate to the dual mass flywheel. Refer to **CLUTCH PRESSURE PLATE AND CLUTCH PLATE, LUK, SINGLE-DISC CLUTCH** or **CLUTCH PRESSURE PLATE AND CLUTCH DISK FOR THE DUAL-DISK CLUTCH**.

SPECIAL TOOLS

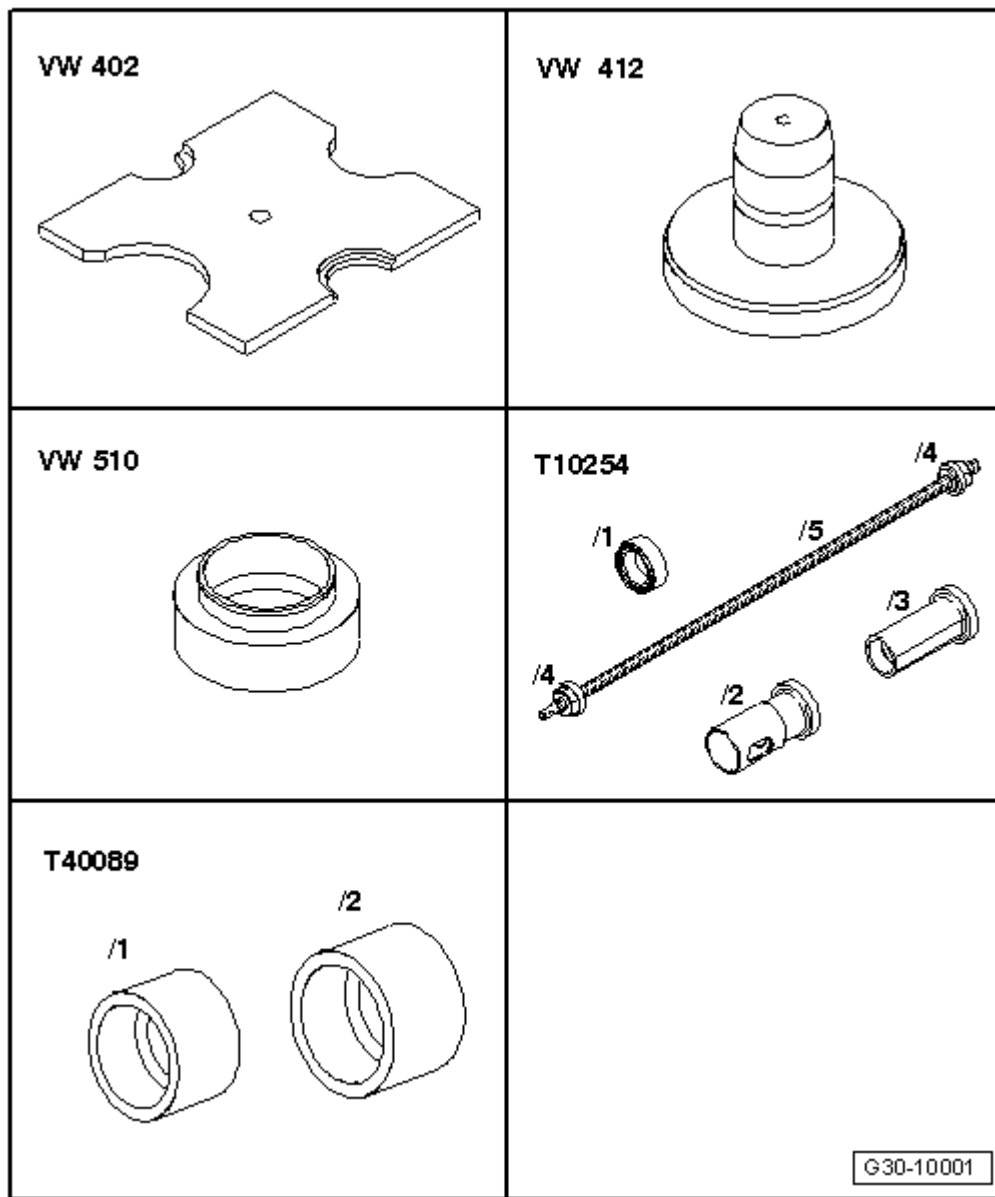


Fig. 43: Identifying Special Thrust Bearing Tools
 Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Thrust Plate VW 402
- Thrust Disc VW 412
- Thrust Pad VW 510
- Assembly Tool T10254
- Thrust Piece T40089

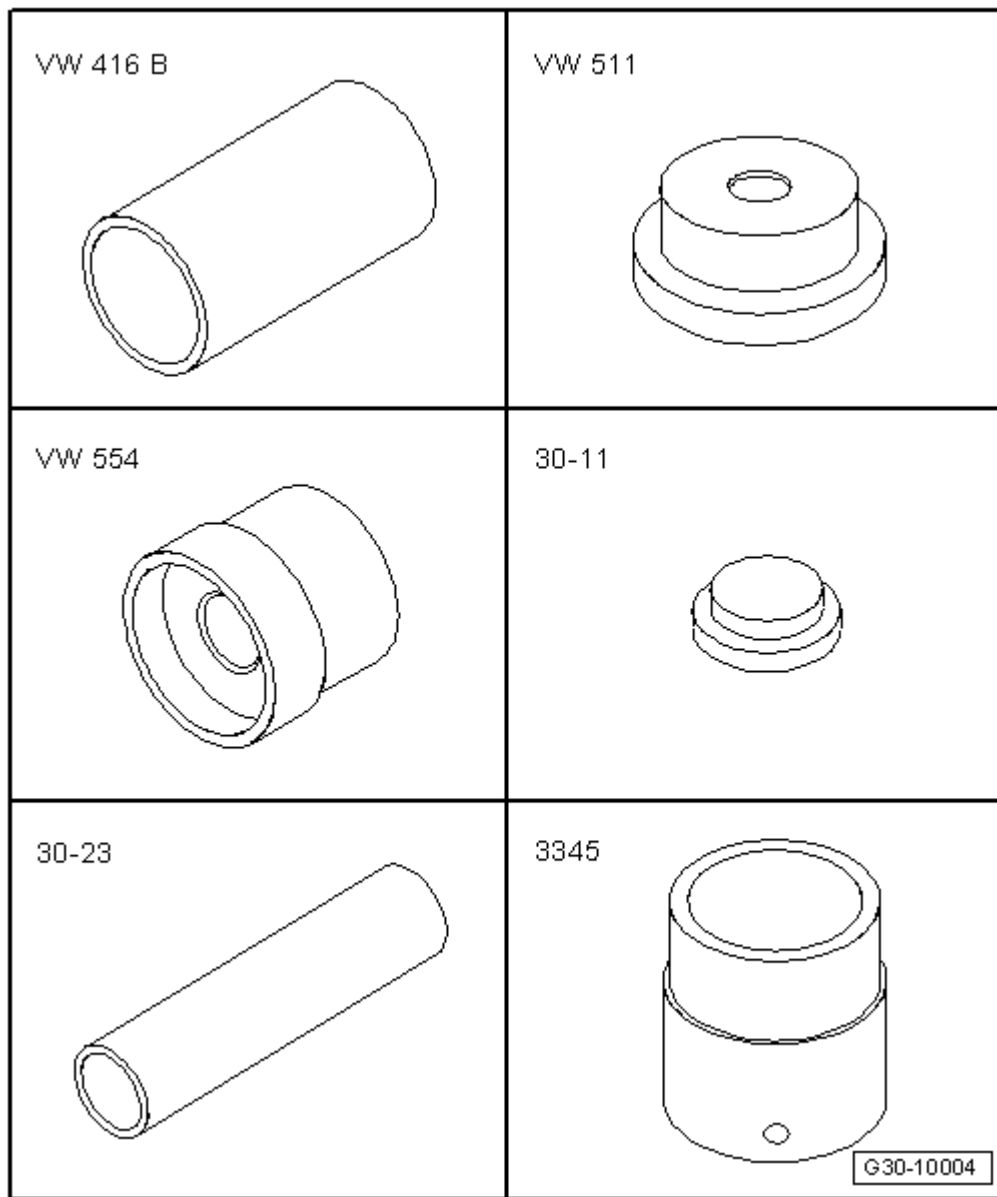


Fig. 44: Identifying Special Press Tools
Courtesy of AUDI OF AMERICA, LLC

Special tools and workshop equipment required

- Tube 37 mm Dia. VW 416B
- Thrust Pad VW 511
- Arbor Thrust Piece VW 554
- Thrust Pad 30-11
- Press Tube 30-23
- Press Tool 3345

Special tools and workshop equipment required

- Thrust Disc VW 412

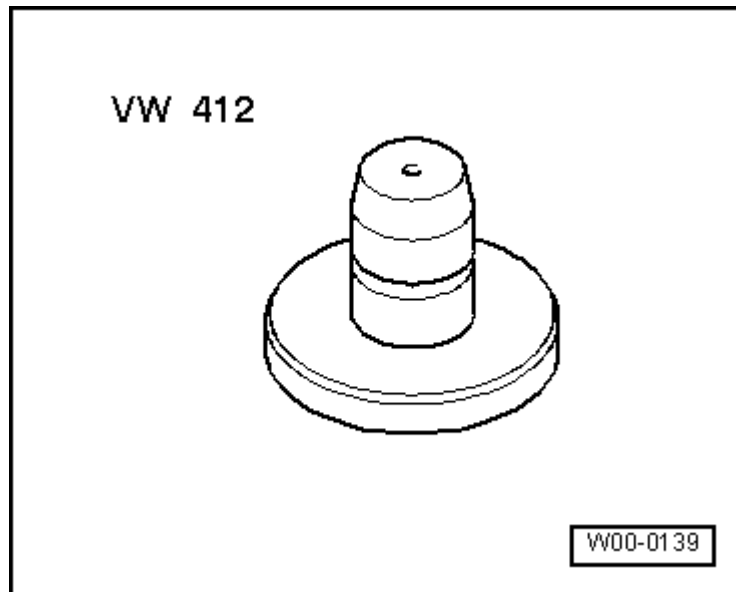


Fig. 45: Identifying Punch VW 412
Courtesy of AUDI OF AMERICA, LLC

- Thrust Pad 3062

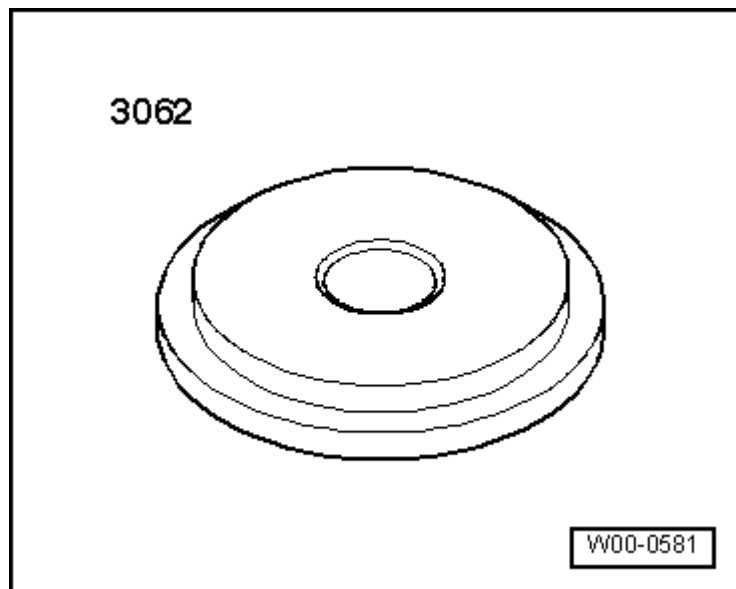


Fig. 46: Identifying Thrust Pad 3062
Courtesy of AUDI OF AMERICA, LLC

- Extractor T40176

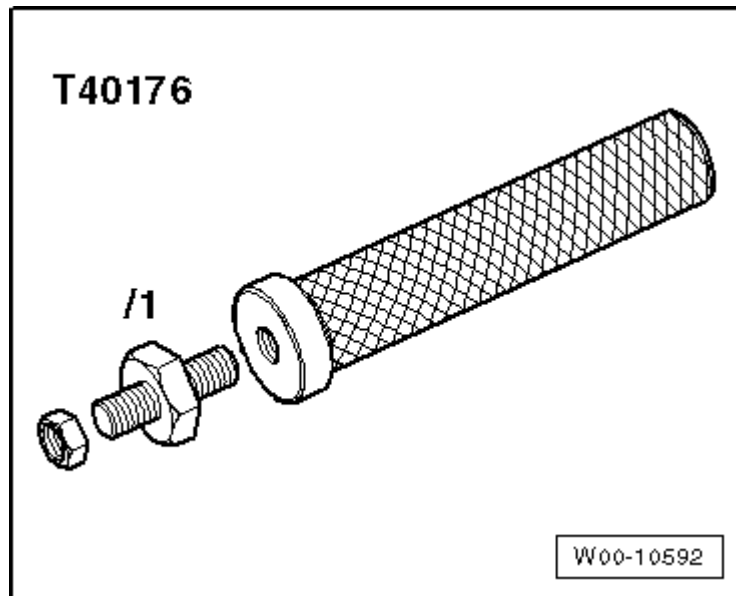


Fig. 47: Identifying Extractor T40176
Courtesy of AUDI OF AMERICA, LLC

- Puller T10037

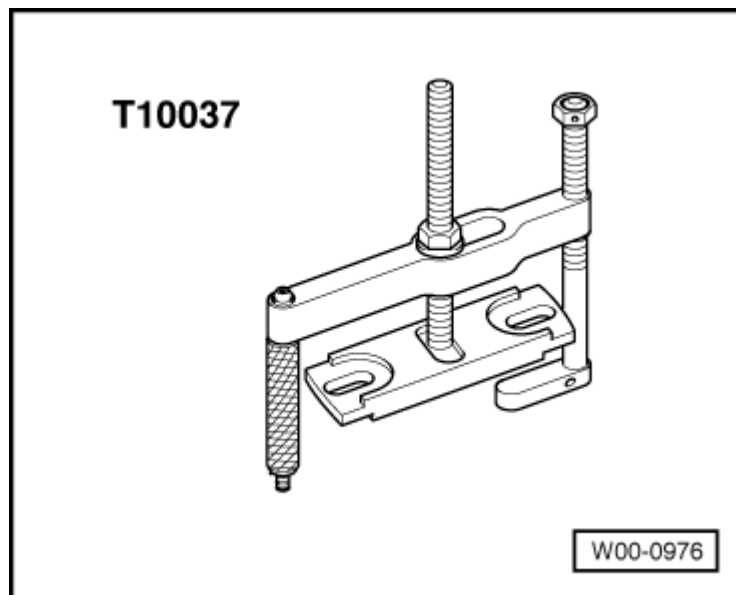


Fig. 48: Identifying Puller T10037
Courtesy of AUDI OF AMERICA, LLC

- Slide Hammer VW 771/1

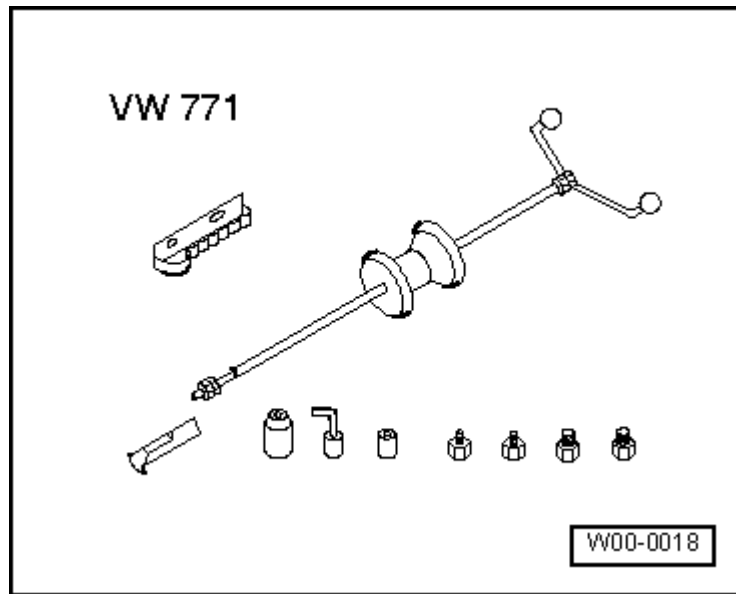


Fig. 49: Identifying Slide Hammer VW 771
Courtesy of AUDI OF AMERICA, LLC

- Thrust Piece T40171

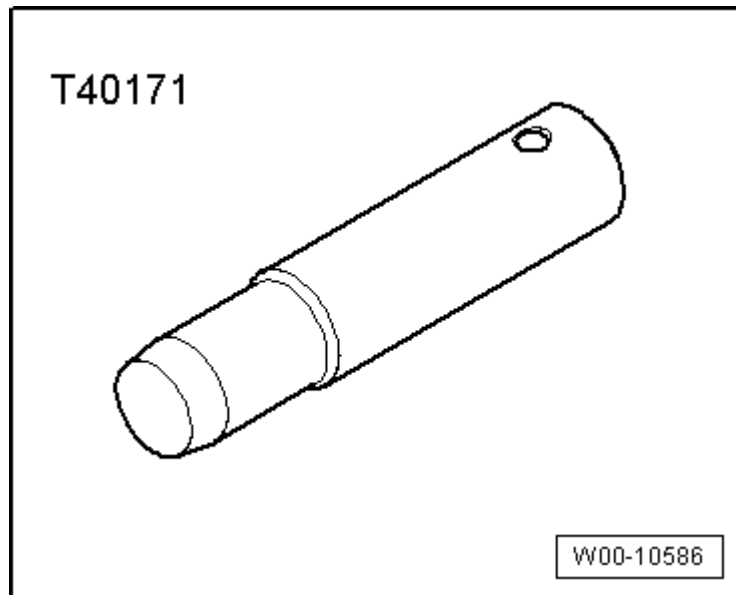


Fig. 50: Identifying Locking Pin T40171
Courtesy of AUDI OF AMERICA, LLC

- -1- Internal Puller Kukko 21/4

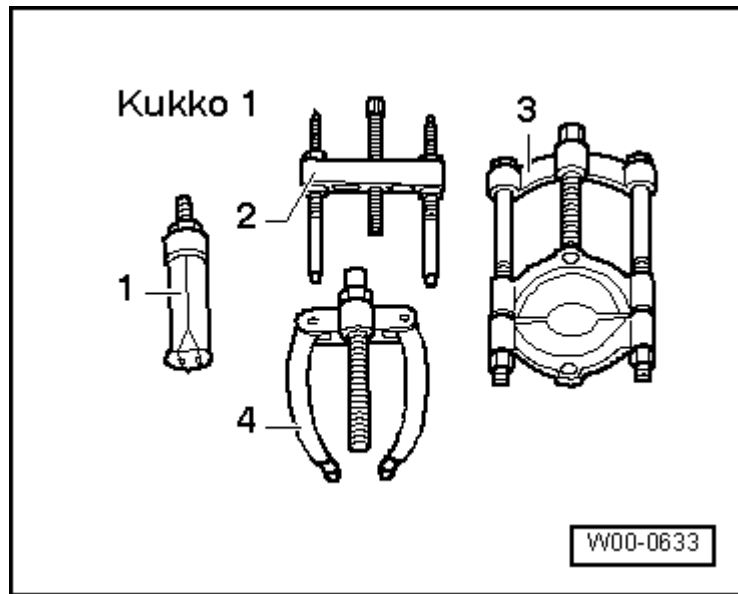


Fig. 51: Identifying Kukko Tools
Courtesy of AUDI OF AMERICA, LLC

- -1- Internal Puller Kukko 21/5