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Schaeffler E-Axle RepSystem-G

Part no. 761 0004 10
Repair solution for e-axle disassembly/assembly

VW, 0CZ transmission, transmission code PYW

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Disassembly and assembly
VW, 0CZ transmission, transmission code PYW

- The vehicle manufacturer's specifications and safety instructions must be observed when removing and installing the drive unit
- Work on electric vehicles may only be carried out in compliance with country-specific legal regulations
- Repairs may only be carried out by specialist staff and using suitable garage equipment
- The bearing seats and the seats of the rotary shaft seals need to be cleaned
- The bearing outer rings and the inner rings/rolling elements must not be interchanged
- Cleanliness must be ensured throughout the entire repair process

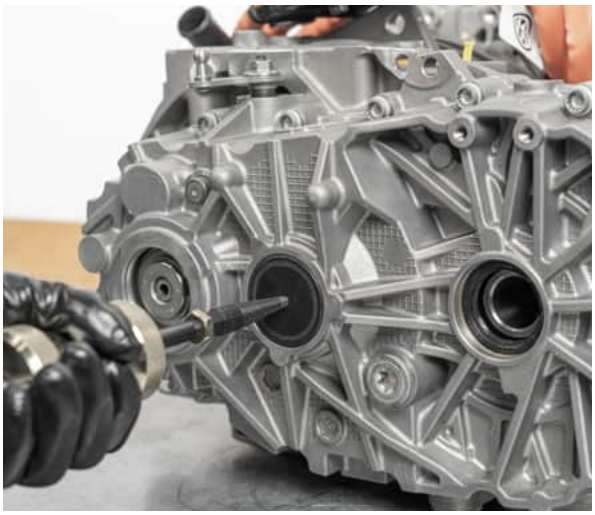
- Drain the transmission oil
- Tighten the oil drain screw to 45 Nm
- Remove the drive unit in accordance with the vehicle manufacturer's specifications

- Remove the engine-side shaft seal of the drive shaft

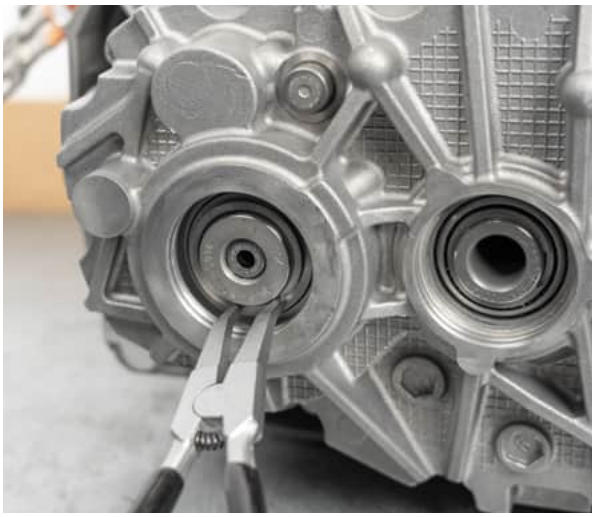
Note:
Note the installation depth of the shaft seal ring

Do not damage the baffle plate under the shaft seal

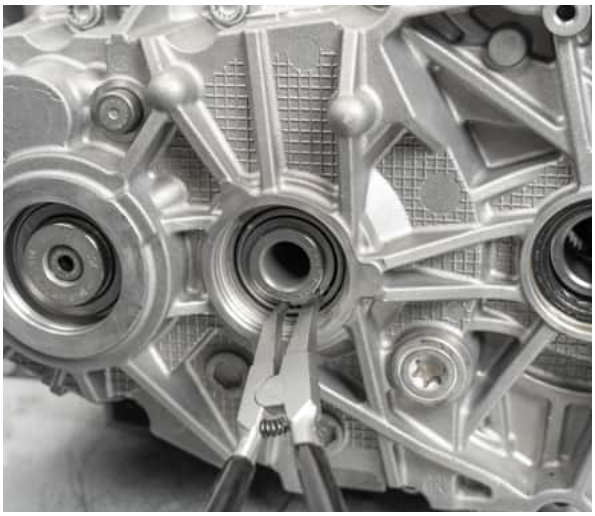
- Remove both sealing covers using a suitable tool e.g. Gedore Automotive KL-0369-59



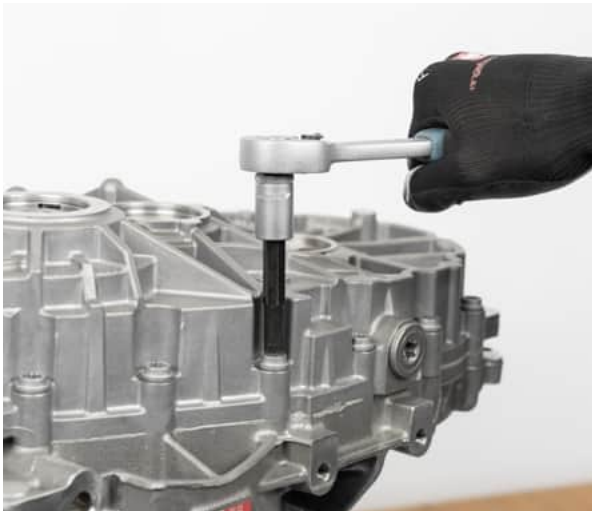
- Remove the snap ring from the input shaft



- Remove the snap ring from the output shaft



- Install the drive unit
- Remove the transmission housing screws



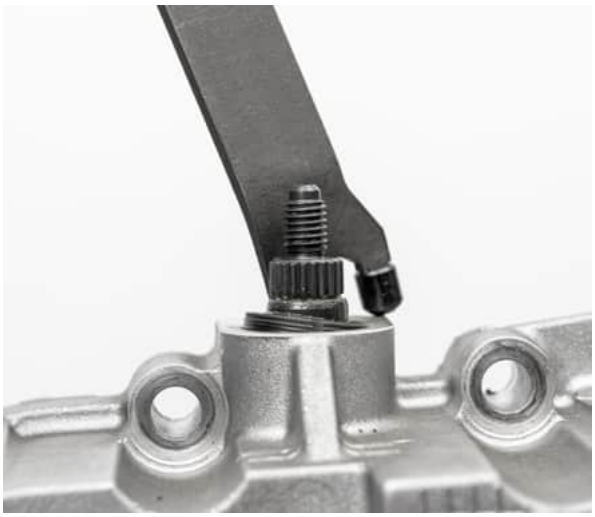
- Lift the transmission housing evenly up and off using a suitable tool (e.g. mounting lever)

- Remove and clean the magnet
- Remove the oil drip pan
- Remove the output shaft and differential gear from the housing

- Remove the parking lock lever

- Remove shaft seal ring from the selector shaft using a suitable tool

Note:
Note the installation depth of the shaft seal ring



- Mount the new shaft seal to the previous installation depth using a suitable sleeve.

- Mount the parking lock lever
- Hold in place when tightening the screw nut
- Tighten the screw nut to 20 Nm

Note:
The vehicle manufacturer recommends using a new screw nut; the corresponding item number is listed in the appendix

- Place the detent in the unlocked position
- Press the input shaft out of the transmission housing
- Clean the input shaft

- Remove the snap ring

- Press the ball bearing of the input shaft out of the transmission housing

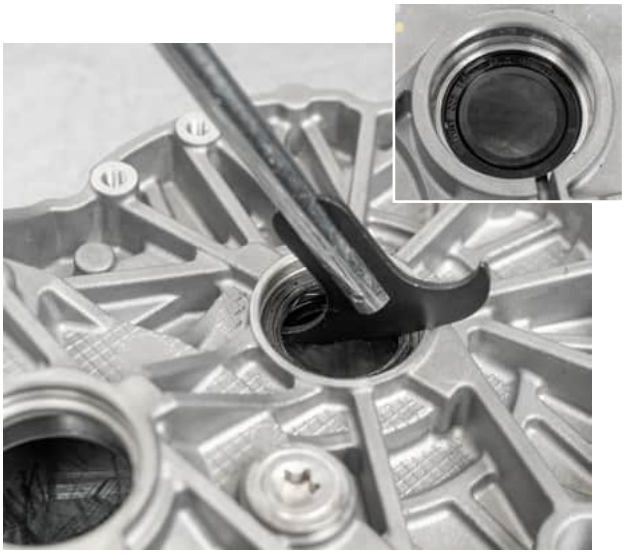
- Press the bearing outer ring of the output shaft out of the transmission housing

Note:
An adjusting washer is located under the bearing outer ring

- Remove the transmission-side shaft seal of the differential gear

Note:
Note the installation depth of the shaft seal ring

Do not damage the baffle plate under the shaft seal



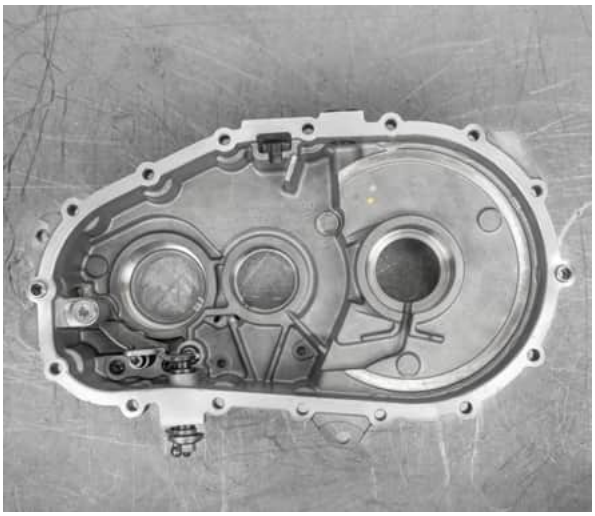
- Remove the transmission-side bearing outer ring using a suitable internal extractor

Note:
An adjusting washer is located under the bearing outer ring

Do not damage the baffle plate under the bearing outer ring

- Remove the baffle plate

- Remove the sealing residue
- Clean the transmission housing



- Insert the baffle plate

- Place the old adjusting washer for the differential gear in the transmission housing
- Press the new bearing outer ring into the housing

- Press in the new transmission-side shaft seal of the differential gear to the previous installation depth

- Press the new ball bearing of the input shaft into the transmission housing

- Insert the snap ring

- Place the adjusting washer for the output shaft in the transmission housing
- Press the new bearing outer ring of the output shaft into the housing

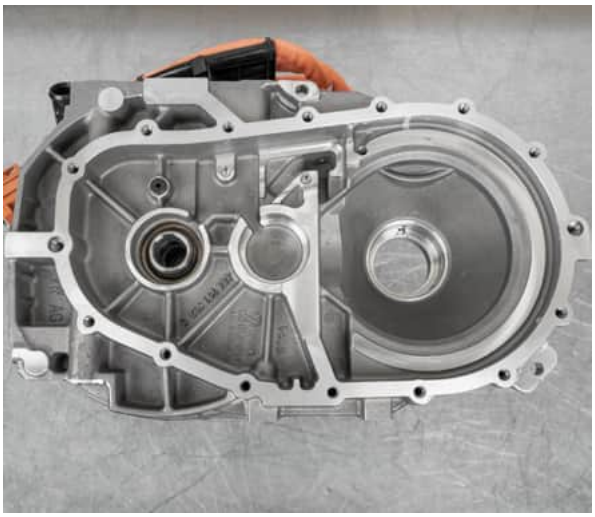
- Remove the engine-side bearing outer ring on the output shaft using a suitable internal extractoren
- Remove the adjusting washer

- Remove the engine-side bearing outer ring of the differential gear using a suitable internal extractor
- Remove the adjusting washer

Note:
Do not damage the baffle plate under the shaft seal

- Remove the baffle plate

- Remove the sealing residue
- Clean the engine-side housing



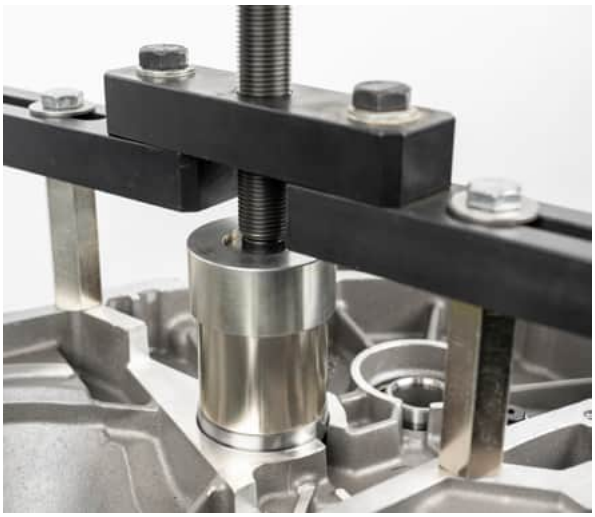
- Remove the shaft seal on the rotor shaft

Note:
Note the installation depth of the shaft seal ring

- Press in the new shaft seal of the rotor shaft to the previous installation depth

- Press in the new engine-side bearing outer ring of the output shaft **without** adjusting washer

Important:
The correct adjusting washer is not determined until a later work step and is then mounted



- Insert the baffle plate

- Press in the new engine-side bearing outer ring of the differential gear **without** adjusting washer

Important:
The correct adjusting washer is not determined until a later work step and is then mounted

- Remove the engine-side taper roller bearing of the differential gear

- Remove the transmission-side taper roller bearing of the differential gear
- Clean the differential gear

- Press the new transmission-side taper roller bearing onto the differential gear

- Press the new engine-side taper roller bearing onto the differential gear

- Cut open the cage on the engine-side taper roller bearing of the output shaft and remove the rolling elements
- Remove the inner ring

- Press the transmission-side taper roller bearing off of the output shaft
- Clean the output shaft

- Press the new transmission-side taper roller bearing onto the output shaft

- Press the new engine-side taper roller bearing onto the output shaft

- Insert the differential gear into the housing

- To be able to measure the axial clearance of the output shaft, a suitable lifting device, such as a threaded rod with a welded-on washer, is required

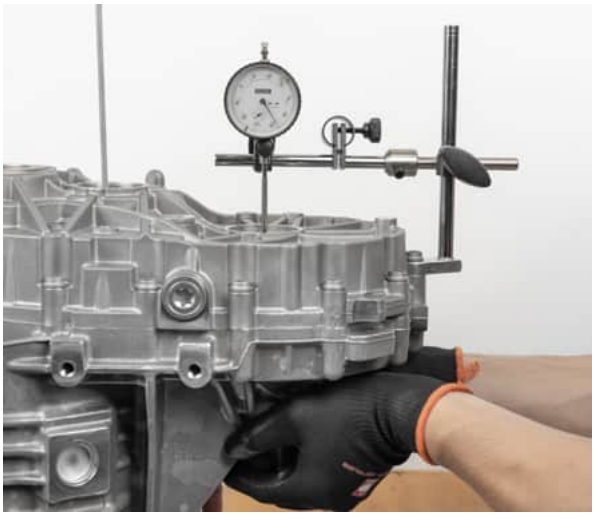
- Insert the lifting device with the output shaft into the housing

- Mount the prepared transmission housing without the input shaft
- Tighten the screws to 15 Nm

- Mount the dial gauge as shown and ensure that the measuring tip is pre-loaded

Note:
The measuring tip should rest on the differential gear

- With your hand, press the differential gear upward on the opposite side so that it is up against the stopper and read the measured value



- The required bearing preload is **0.30 to 0.35 mm**

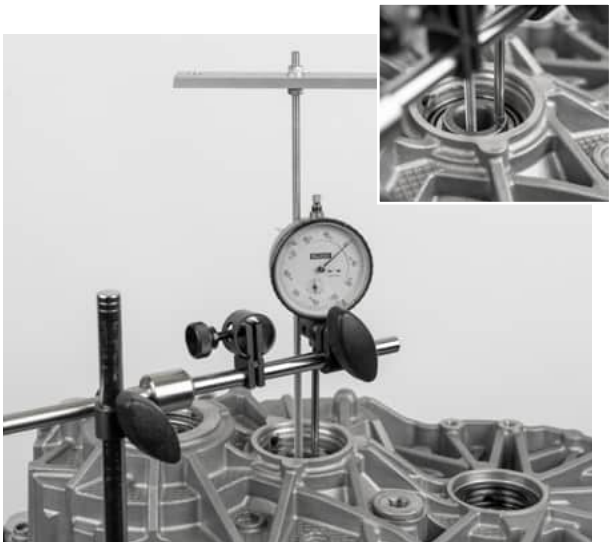
- Determining the adjusting washer:
  Measured value in mm
+ 0.30 to 0.35 mm preload
= Thickness of adjusting washer in mm

Example: Measured value = 0.57 mm

  0.57 mm
+ 0.30 to 0.35
= 0.87 to 0.92 mm

- Note the value

- Mount the dial gauge as shown and ensure that the measuring tip is pre-loaded



Note:
The measuring tip should rest on the output shaft

- Using the lifting device, pull the output shaft upward so that it is against the stopper and read the measured value

The required bearing preload is
0.25 to 0.30 mm

Determining the adjusting washer:
Measured value in mm
+ 0.25 to 0.30 mm preload
= Thickness of adjusting washer in mm

Example: measured value = 0.95 mm
0.95 mm
+ 0.25 to 0.30 mm
= 1.20 to 1.25 mm

- Note the value

- Remove the transmission housing cover
- Remove the output shaft from the engine housing using the lifting device

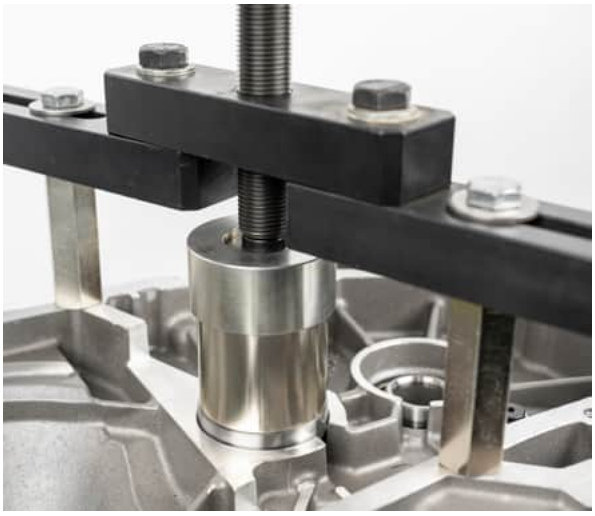
- Take the differential gear out of the engine housing

- Remove the engine-side outer ring of the output shaft again

- Insert the previously determined adjusting washer (e.g. 1.20 mm) into the bearing seat

Note:
The adjusting washer table with part numbers can be found in the appendix

- Press the new engine-side outer bearing ring for the output shaft back into place



- Remove the engine-side outer ring of the differential gear

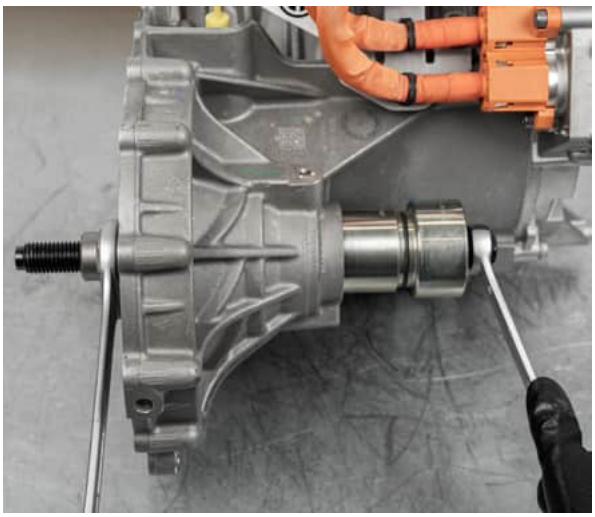
Note:
Do not damage the baffle plate under the shaft seal

- Insert the previously determined adjusting washer (e.g. 0.90 mm) into the bearing seat

Note:
The adjusting washer table with part numbers can be found in the appendix

- Press in the new engine-side bearing outer ring of the differential gear

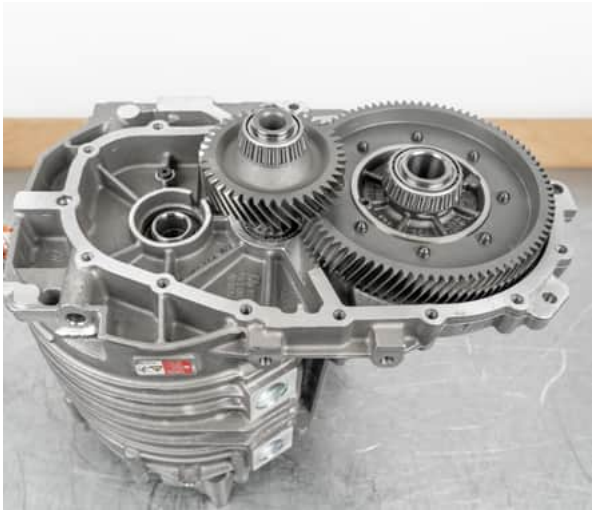
- Press in the new engine-side shaft seal of the differential gear to the previous installation depth



- Place the detent in the unlocked position
- Press the input shaft into the transmission housing

Note:
Support the inner ring of the bearing from below with a suitable sleeve

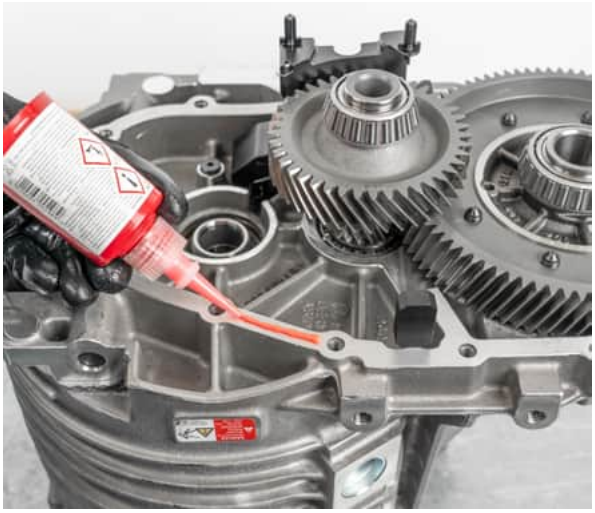
- Insert the differential gear and the output 0shaft into the engine housing



- Clean the oil drip pan and make sure that the oil holes are clear
- Insert the oil drip pan into the engine housing
- Position the magnet

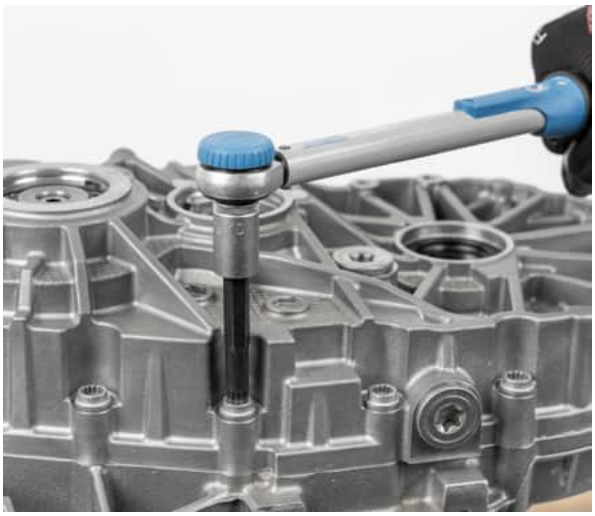
- Clean the sealing surfaces using a suitable cleaning agent, e.g. Loctite SF 7063
- Apply a suitable sealant, such as Loctite 510, to the engine housing
- Mount the transmission housing

Note:
Ensure that the guide sleeves are correctly positioned in the housing



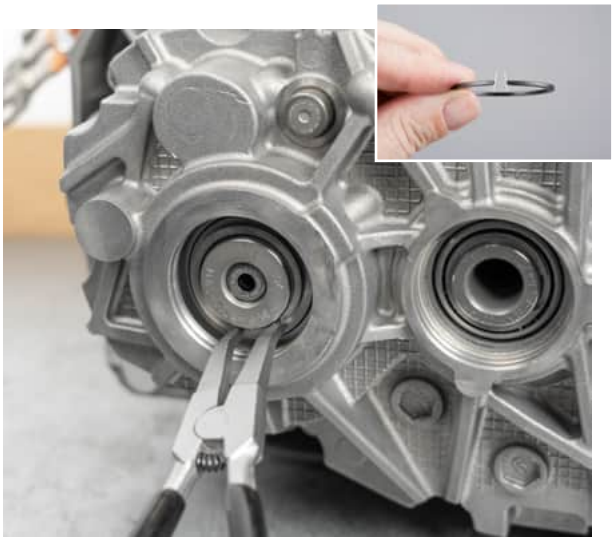
- Insert the screws and tighten to 20 Nm + 45°

Note:
It is recommended to use new screws; the corresponding part number can be found in the appendix



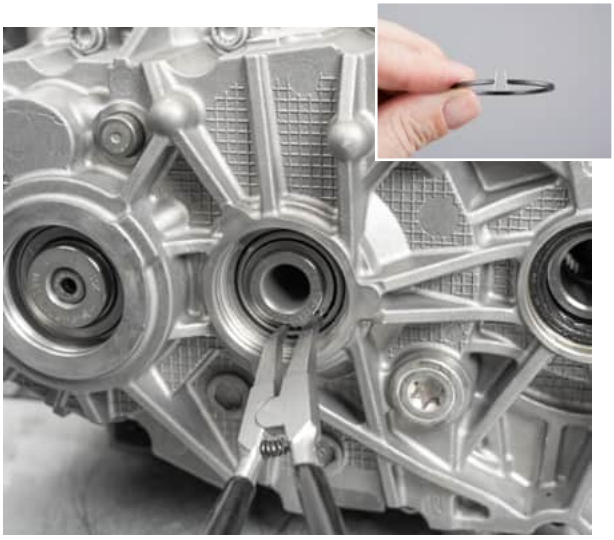
- Mount the snap ring of the input shaft

Note:
The side of the snap ring on which the opening is smaller faces outward.

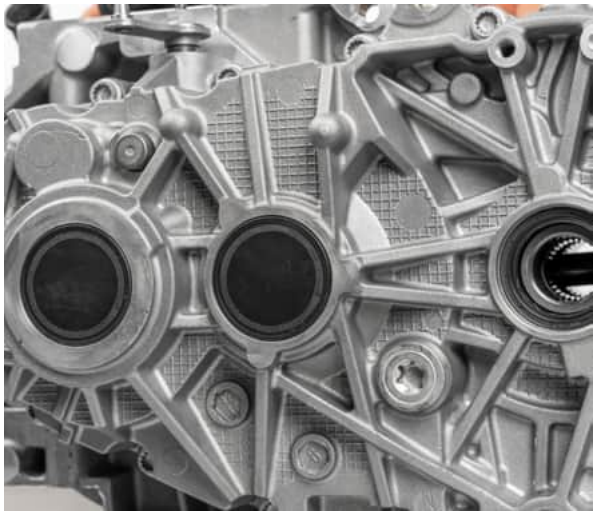


- Mount the snap ring of the output shaft

Note:
The side of the snap ring on which the opening is smaller faces outward.



- Mount new sealing caps flush with the surface



- Replace the sealing ring of the transmission housing vent

- Reinstall the drive unit, observing the vehicle manufacturer's instructions

  Transmission oil quantity: 0.7 liters Oil specification: VW G 052 527 A2 Tightening torque for oil checking screw: 45 Nm

APPENDIX

Adjusting washers for the differential gear bearing
Part number: 464 0030 10

Washer thickness:
0.65 mm
0.70 mm
0.75 mm
0.80 mm
0.85 mm
0.90 mm
0.95 mm
1.00 mm
1.05 mm
1.10 mm
1.15 mm
1.20 mm
1.25 mm

If necessary, two adjusting washers can be used in combination.

Adjusting washers for output shaft bearing
Part number: 464 0028 10

Washer thickness:
0.65 mm
0.70 mm
0.75 mm
0.80 mm
0.85 mm
0.90 mm
0.95 mm
1.00 mm
1.05 mm
1.10 mm
1.15 mm
1.20 mm
1.25 mm
1.30 mm
1.35 mm
1.40 mm
1.45 mm
1.50 mm

If necessary, two adjusting washers can be used in combination.

If individual adjusting washers are required to supplement the set, they can be ordered at **https://www.repxpert.com/en/repsystem-g-shims.**

APPENDIX

The following spare parts can be ordered from VW spare parts dealers.

1. Screw nut for parking lock lever
self-locking screw nut, M8,
VW part number N 907 611 033

2. Transmission housing screws
M8 x 45-mm screw,
VW part number N 911 021 01