

# Schaeffler E-Axle RepSystem-G

Part No. 761 0001 10

Repair Solution for E-Axles

Disassembly/Assembly

VW, OMD gearbox, transmission code RYG



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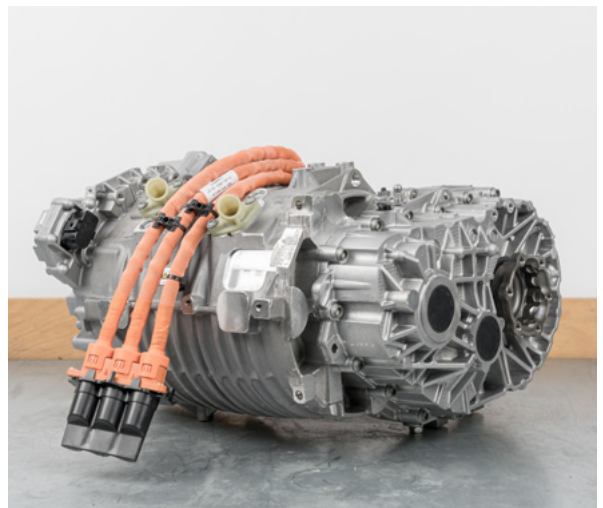
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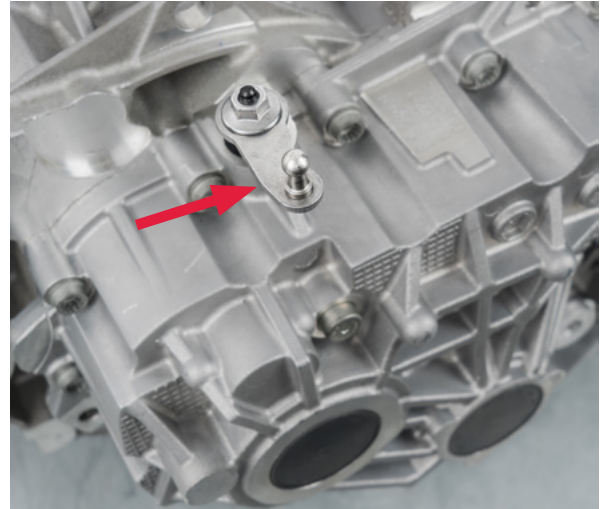
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## Disassembly and assembly VW, OMD gearbox, transmission code RYG

- When removing and installing the drive unit, the specifications and safety instructions of the vehicle manufacturer must be observed
  - Work on electric vehicles may only be carried out in compliance with the country-specific legal regulations
  - Repairs may only be carried out by qualified personnel and with suitable workshop equipment
  - The bearing seats and the seats of the oil seals must be cleaned
  - The bearing races and rolling elements must not be interchanged
  - Cleanliness must be ensured throughout the repair work
- 
- Drain the transmission oil
  - Tighten the oil drain plug to 45 Nm
  - Remove the drive unit according to the vehicle manufacturers specifications



- Engage the parking lock by actuating the lever in the direction of the arrow



- Remove both drive shaft flanges



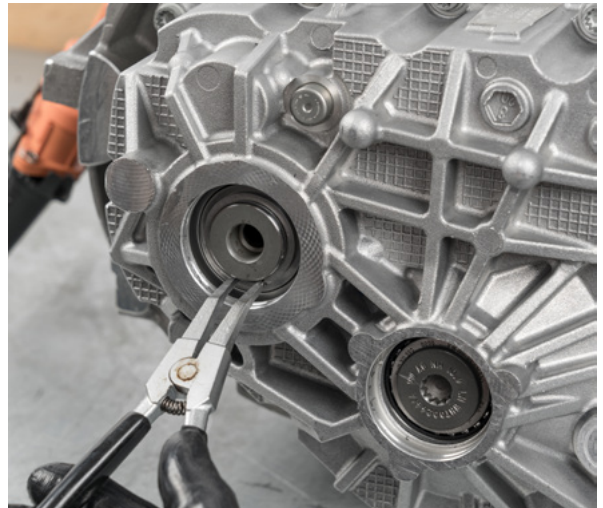
- Remove the oil seal on the motor side for the drive shaft flange



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

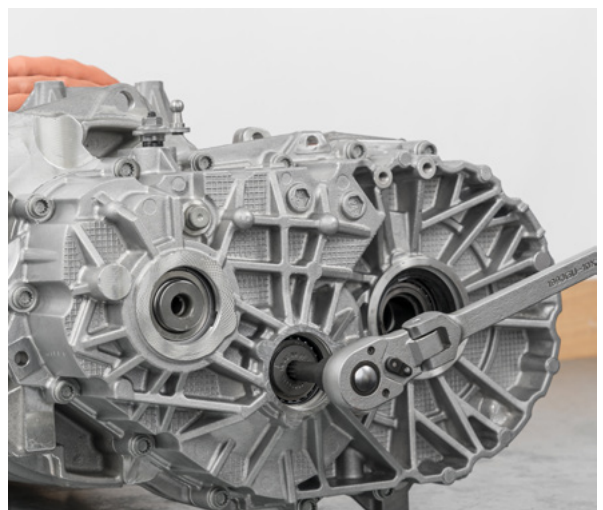


- Remove the snap ring from the input shaft

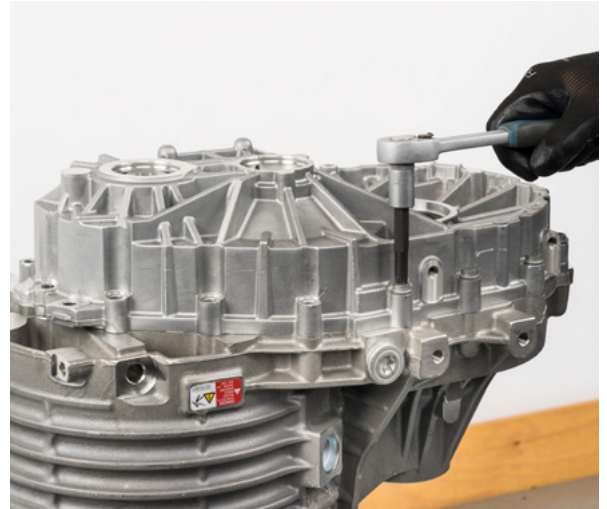


- Remove the output shaft bolt

**Note:**  
Left-hand thread



- Position the drive unit as shown in the picture.
- Remove gearbox housing bolts



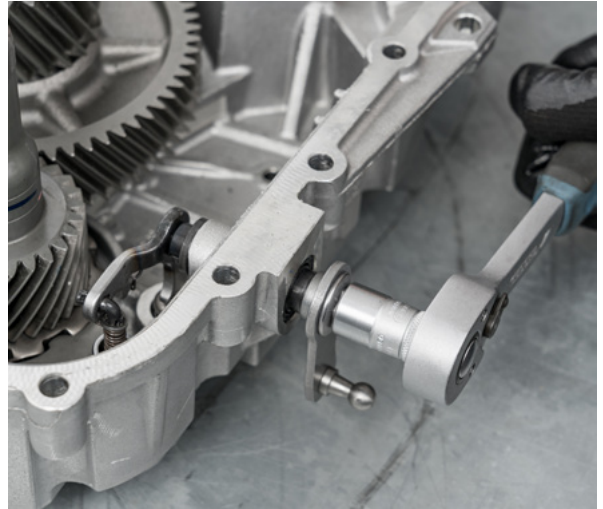
- Lift gear housing evenly upwards, using the appropriate tools (e.g. lever)



- Remove and clean magnet
- Remove oil collector
- Remove the differential gear from the housing



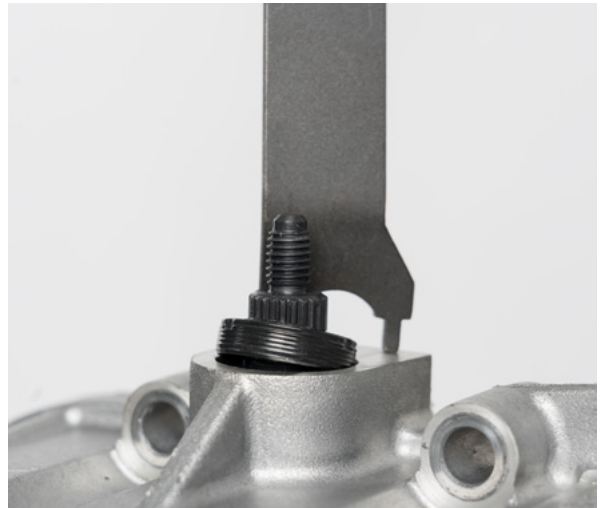
- Remove the parking lock lever



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

**Note:**

Observe the installation depth of the oil seal



- Mount new oil seal with suitable sleeve to previous installation depth





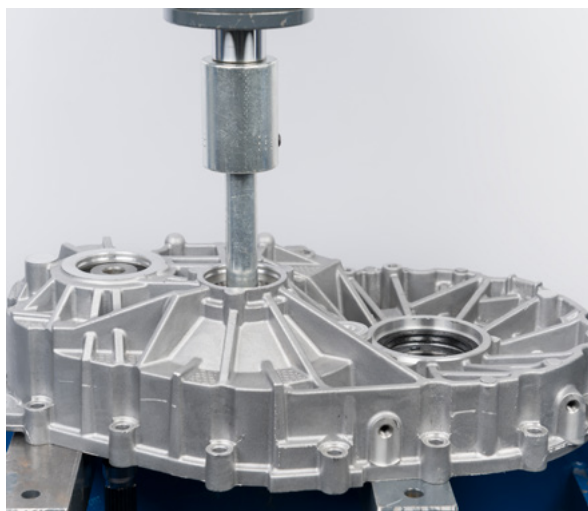
- Install parking lock lever
- Hold the lever in place while tightening
- Tighten nut to 20 Nm

**Note:**

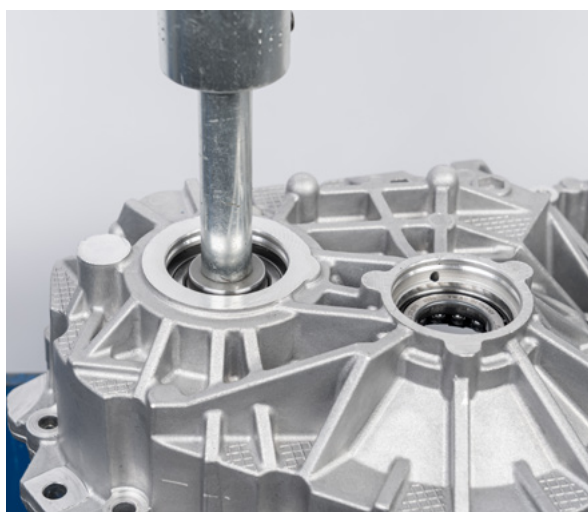
The vehicle manufacturer recommends the use of a new nut, the corresponding part number can be found in the appendix



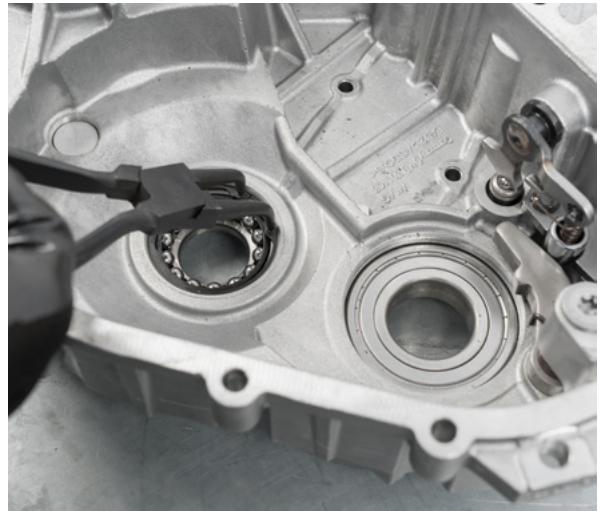
- Press out the output shaft from gearbox housing



- Press out the input shaft from gearbox housing



- Remove the snap rings for the input and output shaft bearings



- Press out the output shaft angular contact ball bearing from the gearbox housing



- Press out the input shaft ball bearing from the gearbox housing



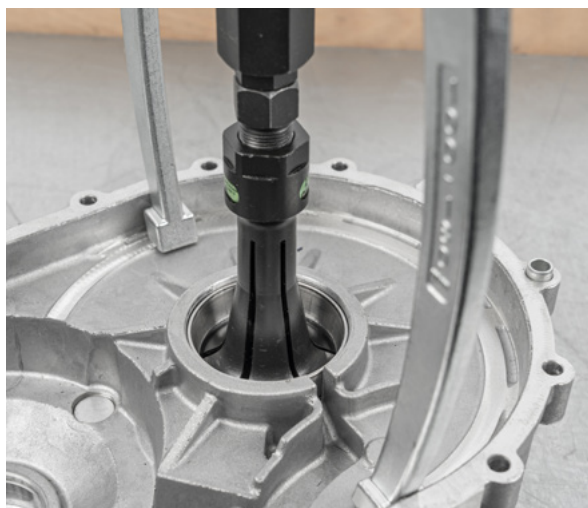
- Remove the drive shaft flange oil seal from the gearbox side



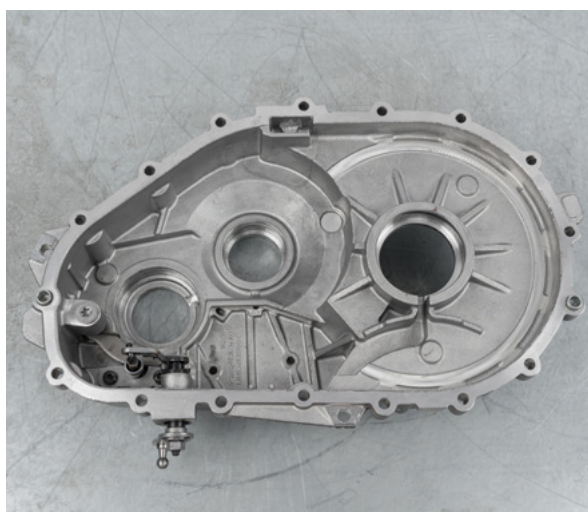
- Remove the bearing outer race from the gearbox side using a suitable internal extractor

**Note:**

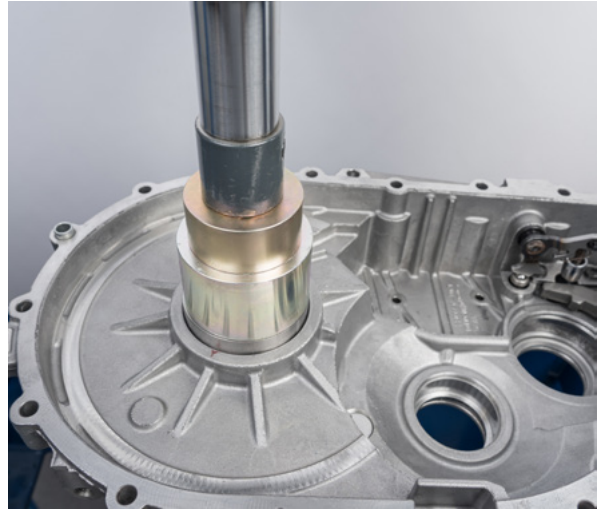
There is an adjusting shim under the bearing outer race.



- Clean off all old residual sealant
- Clean gearbox housing



- Place the old adjusting shim in the gearbox housing
- Press new bearing outer race of the differential gear into the housing



- Press the new oil seal on the gearbox side of the differential into the gearbox housing



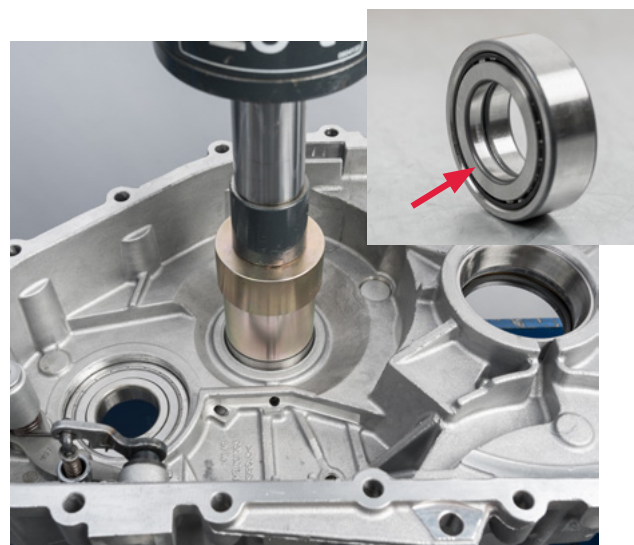
- Press new ball bearing of the input shaft into the gearbox housing



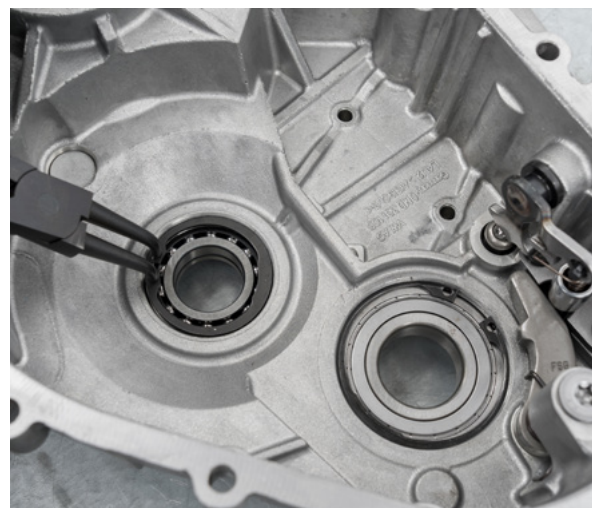
- Press new angular contact ball bearing of the output shaft into the gearbox housing

**Note:**

Press in the bearing with the narrower inner race facing downwards



- Mount both snap rings



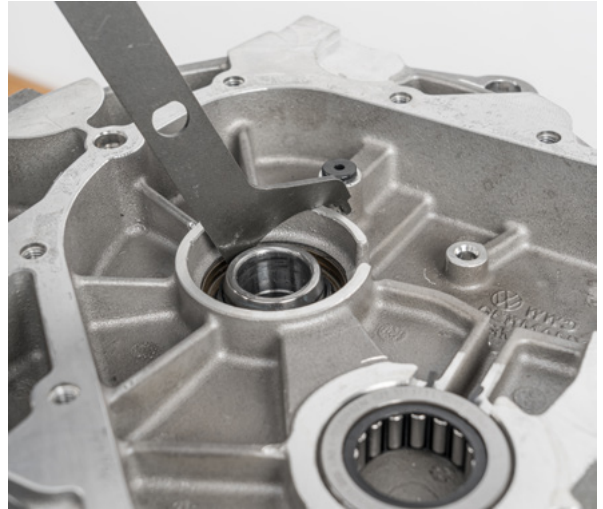
- Remove the old sealer residue
- Clean motor side housing



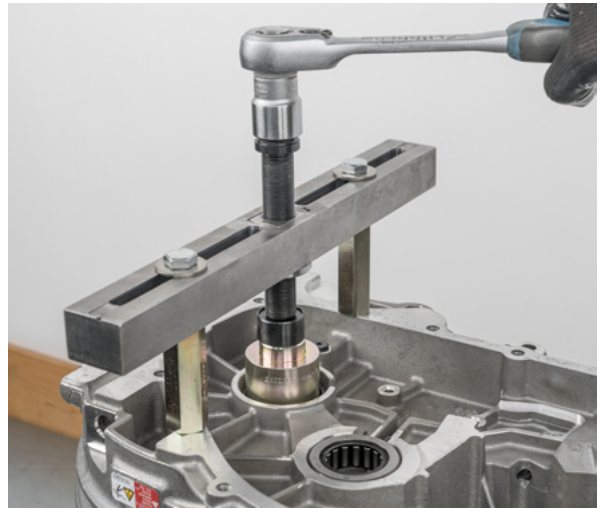
- Remove the shaft oil seal of the rotor shaft

**Note:**

Observe the rotor shaft oil seal installation depth



- Press in new rotor shaft oil seal to previous installation depth



- Remove the motor side bearing of output shaft with suitable internal extractor

**Note:**

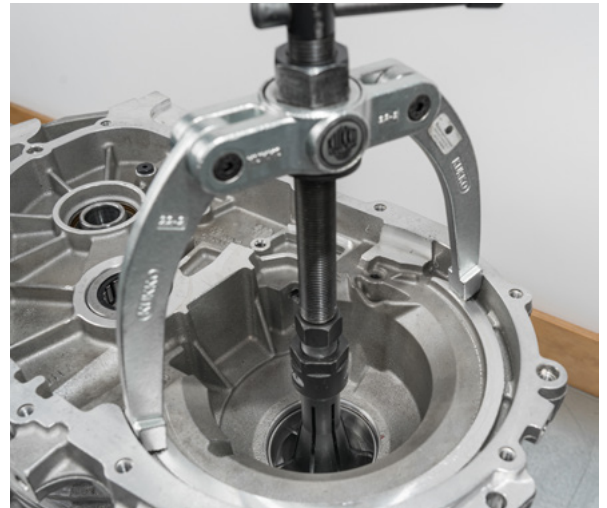
Note snap ring



- Press in new motor side bearing of the output shaft



- Remove the outer bearing race of the differential gear on the motor side using a suitable internal extractor.
- Remove the adjusting shim



- Press in new motor side bearing outer race of the differential gear **without** the adjusting shim

**Important:**

The correct adjusting shim will only be determined in a later work step and then mounted



- Remove the tapered roller bearing of the differential gear on the motor side



- Remove the tapered roller bearing of the differential gear on the gearbox side



- Press a new tapered roller bearing on the gearbox side of the differential





- Press a new tapered roller bearing on the motor side of the differential



- Insert the differential gear into the housing



- Place the gearbox housing in position without the input and output shafts
- Tighten the bolts around the differential gear with 15 Nm



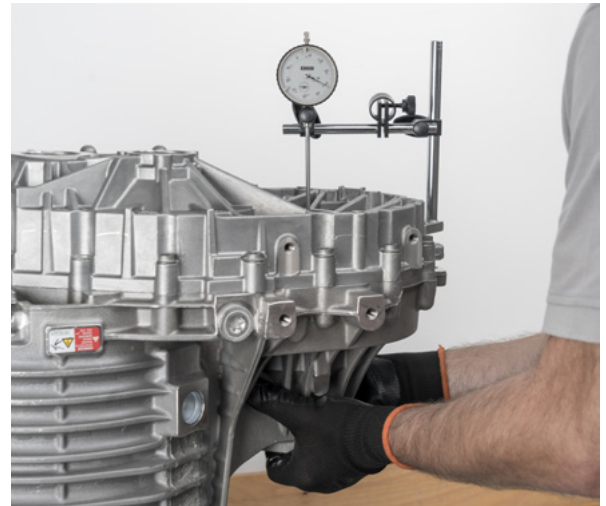
- Mount the dial gauge as shown and ensure that the measuring tip is pretensioned

**Note:**

Place the measuring tip on the differential bearing inner race



- Press the differential gear on the opposite side upwards by hand until it stops and read the measured value



- The required bearing preload is 0.25 to 0.30 mm

- To determine the adjusting shim

Measured value in mm

+ required bearing preload (0.25 to 0.30 mm)

= thickness of adjusting shim in mm

**Example:** Measured value = 0.53 mm

0.53 mm

+ 0.25 to 0.30 mm

= 0.78 to 0.83 mm

- Note down the calculated value



- Remove the gearbox housing
- Remove the differential gear from the motor housing



- Remove again the outer bearing race on the motor side of the differential gear



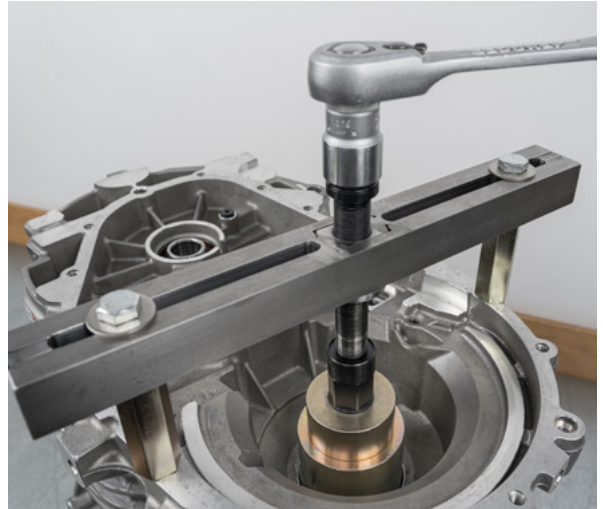
- Insert the previously calculated adjusting shim (e.g. 0.80 mm) into the bearing seat

**Note:**

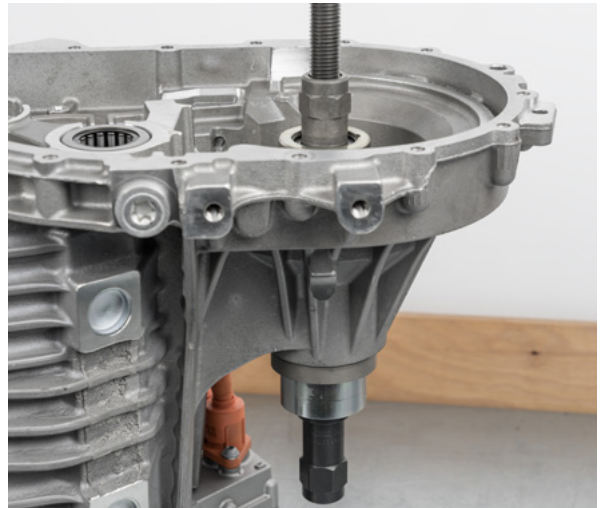
The shim setting table with the part numbers can be found in the appendix



- Press in the new bearing outer race of the differential gear on the motor side



- Press in new shaft oil seal of the differential gear on the motor side



- Remove the bearing inner race on the gearbox side of the output shaft using a suitable inner race puller



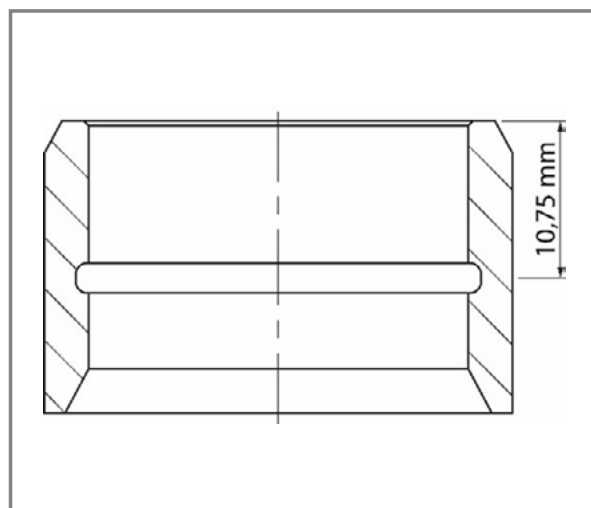
- Remove the motor side bearing inner ring on the output shaft as described in the next step

**Note:**

The bearing inner ring is fixed with an internal retaining ring and cannot be pulled off



- Cut open the bearing inner ring at the level of the internal groove using a suitable tool and remove the individual parts from the output shaft



- Mount new internal retaining ring



- Press the inner race onto the output shaft with the inner chamfer facing downwards until the retaining ring engages in the groove



- Set the selector pawl to unlocked position
- Press the input shaft into the gearbox housing

**Note:**

Support the bearing inner race from below with suitable sleeve



Press the output shaft into the gearbox housing

**Note:**

Support the bearing inner race from below with suitable sleeve



- Insert the differential gear into the motor housing



- Clean the oil collector pan and make sure that the oil ways are clear
- Insert the oil collector into the motor housing
- Insert the magnet



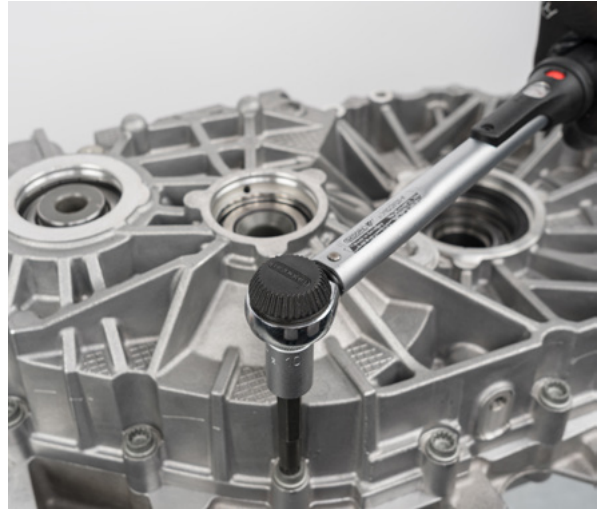
- Clean sealing surfaces with a suitable cleaner, e.g. Loctite SF 7063
- Apply suitable sealant, e.g. Loctite 510, to the motor housing
- Mount gearbox housing

**Note:**

Make sure that the guide dowels are correctly positioned in the housing



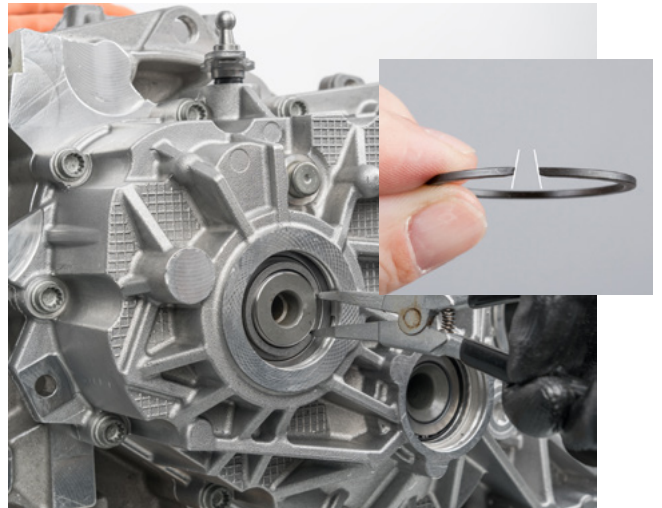
- Insert bolts and tighten to 25 Nm



- Install input shaft snap ring

**Note:**

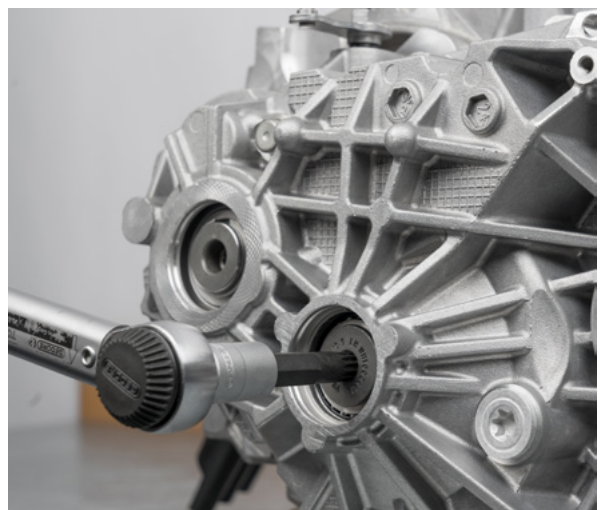
The side of the snap ring where the opening is smaller faces outwards



- Engage parking lock
- Insert the new output shaft bolt and tighten to 70 Nm + 90°

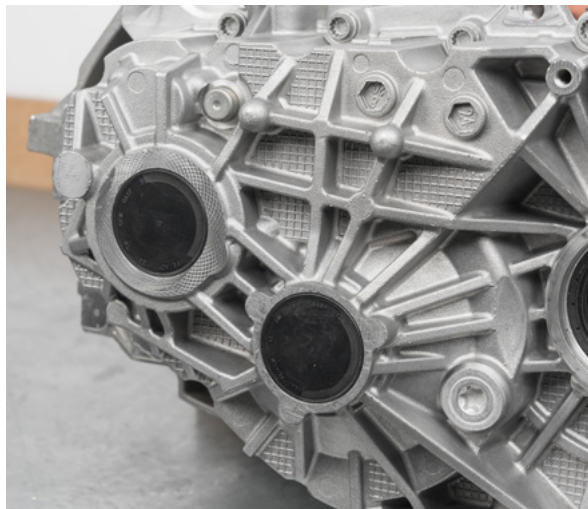
**Note:**

The vehicle manufacturer recommends the use of a new bolt, the corresponding part number can be found in the appendix

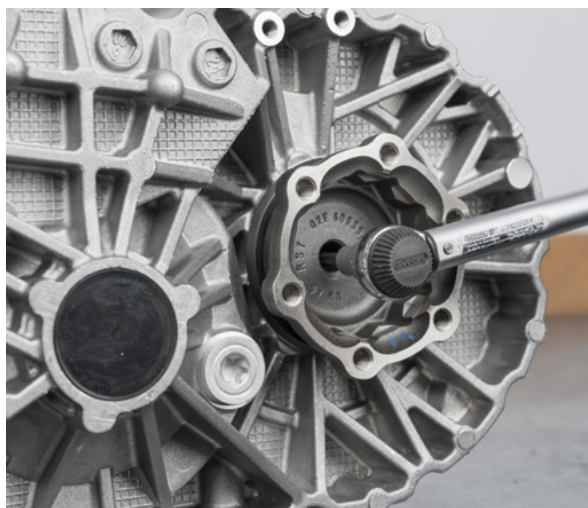




- Install new sealing caps aligned with the surface



- Install both drive shaft flanges and tighten bolts to 30 Nm



- Replace the seal o-ring on the gearbox breather

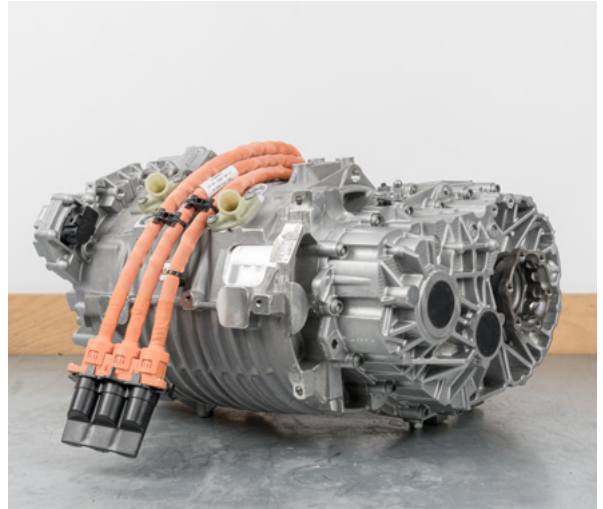


- Reinstall drive unit according to vehicle manufacturer's specifications

Gear oil quantity: 0.8 liters

Oil OEM part number: VW G 052 527 A2

Tightening torque of oil check plug: 45 Nm



## Appendix

The following spare parts can be obtained from the VW spare parts trade

### 1. Adjusting shims for the differential bearings

VW- Article number	Thickness in mm
02B 409 210	0,65
02B 409 210 A	0,70
02B 409 210 B	0,75
02B 409 210 C	0,80
02B 409 210 D	0,85
02B 409 210 E	0,90
02B 409 210 F	0,95
02B 409 210 G	1,00
02B 409 210 H	1,05
02B 409 210 J	1,10
02B 409 210 K	1,15
02B 409 210 L	1,20
02B 409 210 M	1,25

If required, 2 adjusting shims can be combined

### 2. Output shaft bolt

Expansion screw, left-hand thread, VW article number WHT 002 661 A

### 3. Parking selector nut

Self-locking nut, M8, VW article number N 907 611 03

