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Schaeffler E-Axle RepSystem-G

Art. no. 761 0003 10
Repair solution for e-axle
disassembly/assembly

VW, 0CZ Transmission, transmission code letter QMS

Schaeffler Automotive Aftermarket GmbH & Co. KG
August 2024

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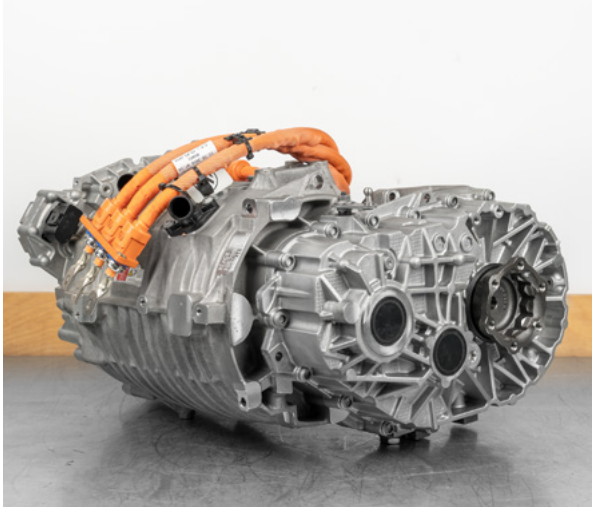
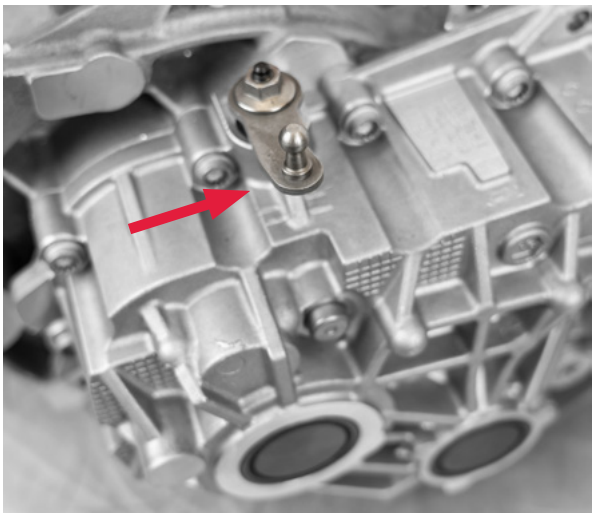
Disassembly and assembly VW, 0CZ Transmission, transmission code letter QMS

- 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 the 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 shaft seals need to be cleaned
- The inner and outer bearing races must not be interchanged
- Cleanliness must be ensured throughout the entire repair process

- Drain the transmission oil
- Tighten the oil drain plug to 45 Nm
- Remove the gearbox in accordance with the vehicle manufacturer's specifications



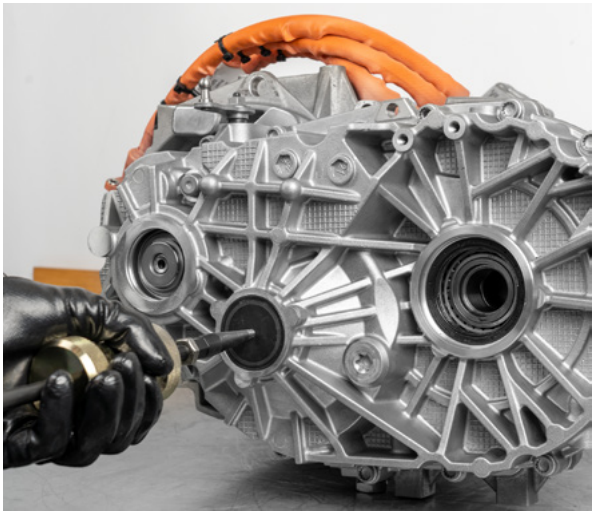
- Engage the parking lock by pressing the lever in the direction of the arrow



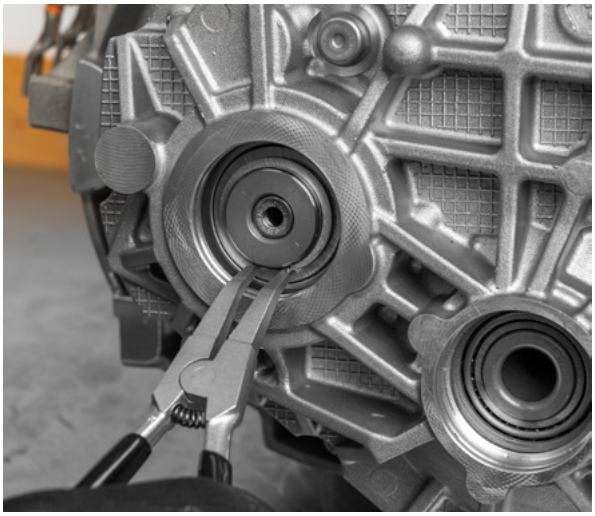
- Remove both drive shaft flanges

- Remove the shaft seal ring on the engine side of the drive shaft flange

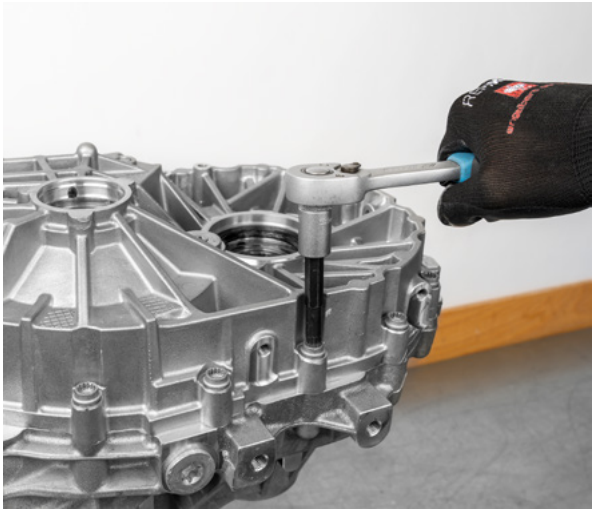
- Remove both sealing covers using a suitable tool, e.g. Gedore Automotive KL-0369-59



- Remove the input shaft circlip



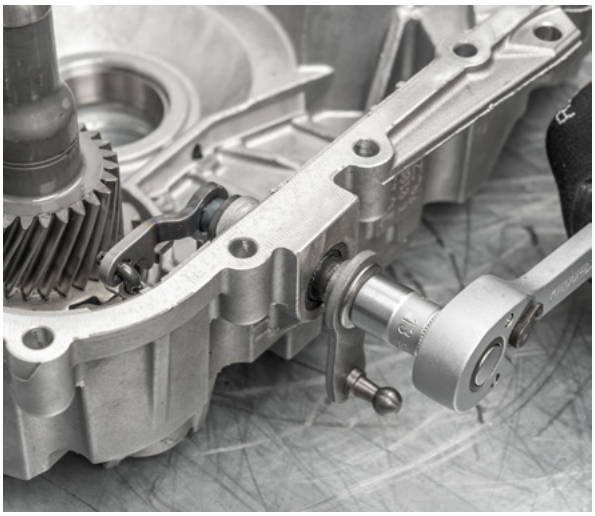
- Set up drive unit
- Dismantling the gearbox housing bolts



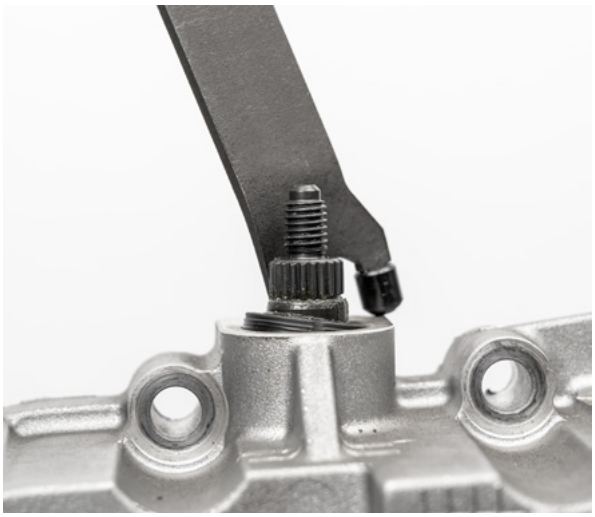
- Lift the gearbox housing evenly upwards using a suitable tool (e.g. mounting lever)

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

- Removing the parking lock lever

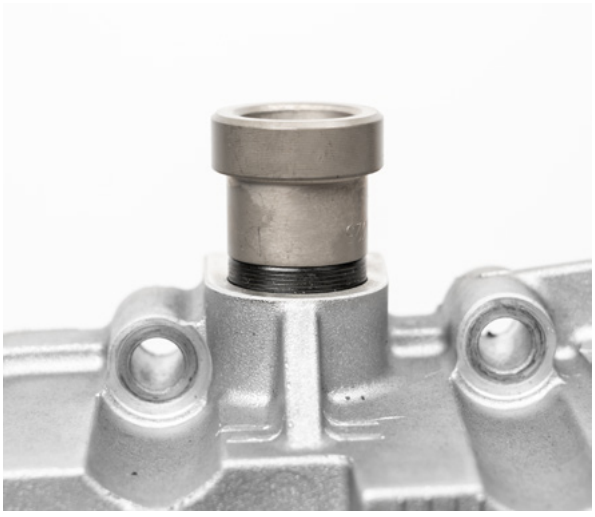


- Remove the shaft seal of the selector shaft using a suitable tool



Note:
Note the installation depth of the shaft seal

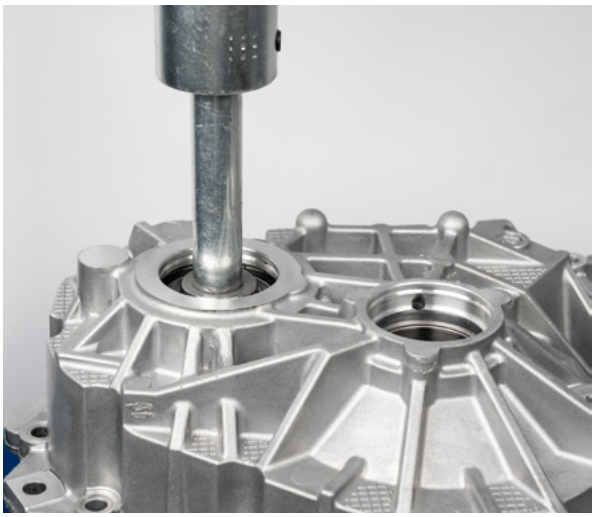
- Fit a new oil seal with a suitable sleeve to the previous installation depth.



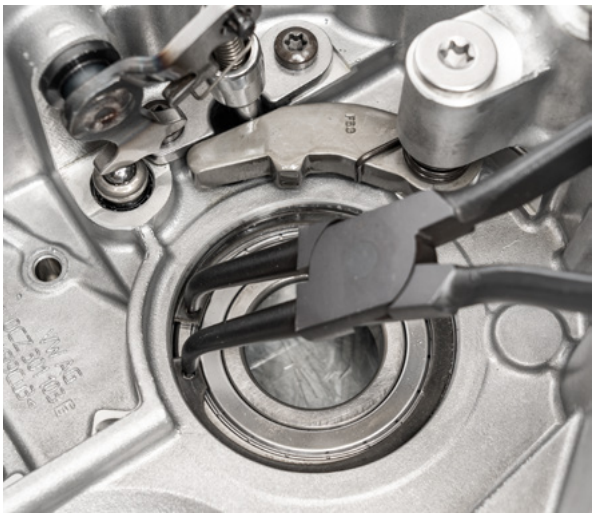
- Fitting the parking lock lever
- Hold against the nut when tightening
- Tighten nut to 20 Nm

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

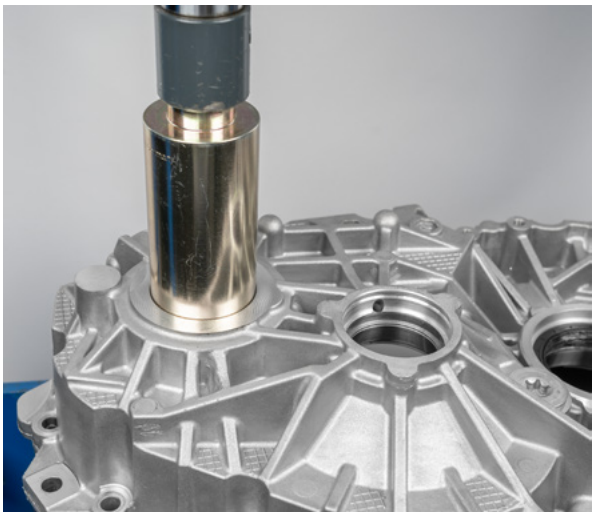
- Press the input shaft out of the gearbox housing



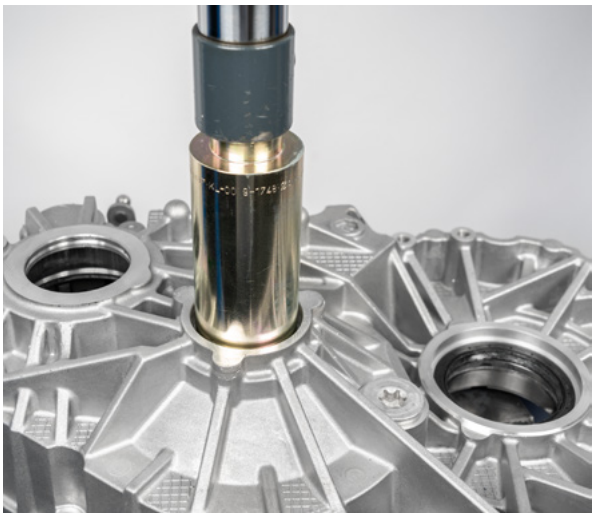
- Remove the retaining ring of the input shaft bearing



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



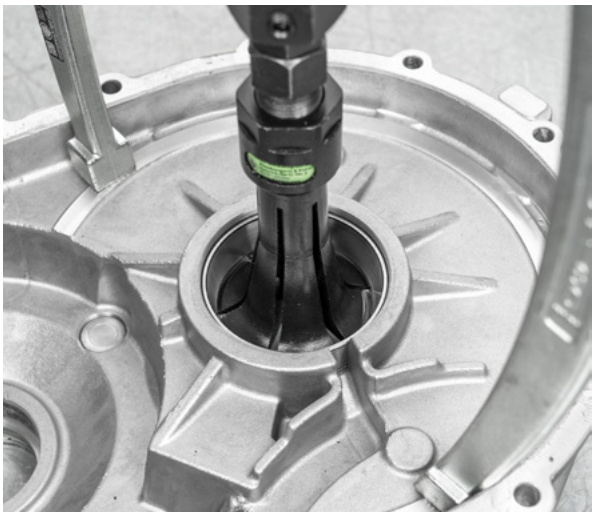
- Press out the bearing outer ring of the output shaft from the gearbox housing



Note:
A setting disc is located under the bearing outer ring

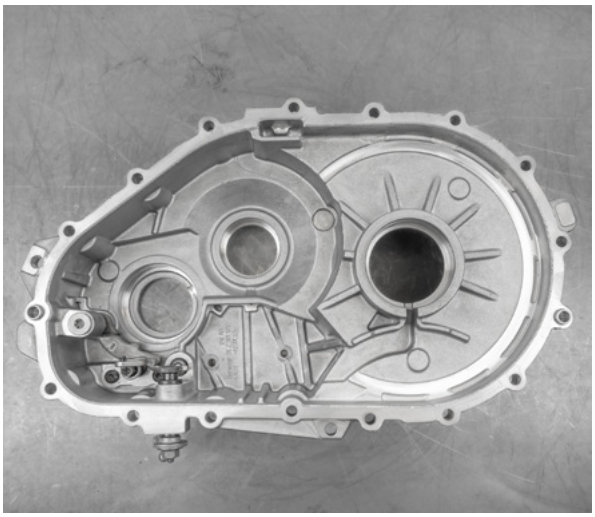
- Remove the shaft seal ring on the gearbox side of the differential

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



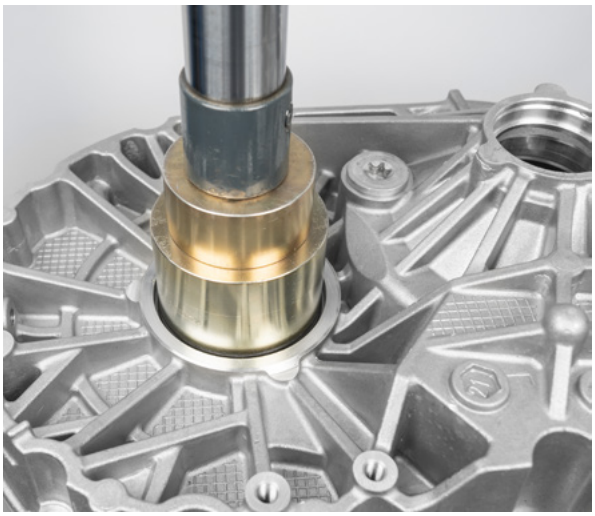
Note:
A setting disc is located under the bearing outer ring

- Remove the sealing residue
- Clean gearbox housing



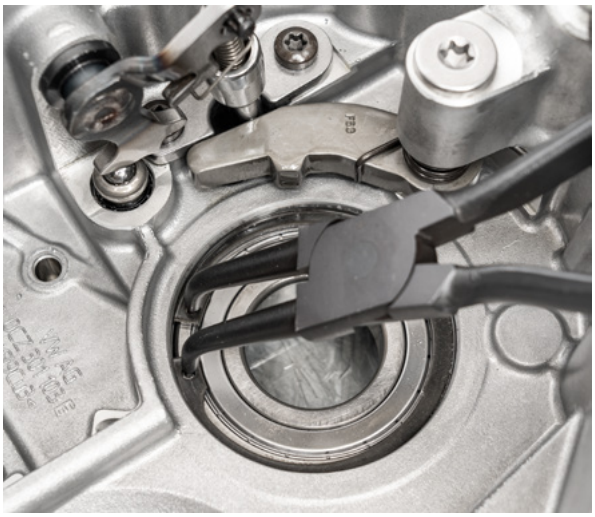
- Place the old setting disc of the differential in the gearbox housing
- Press the new bearing outer ring into the housing

- Press a new shaft seal ring on the gearbox side of the differential into the gearbox housing



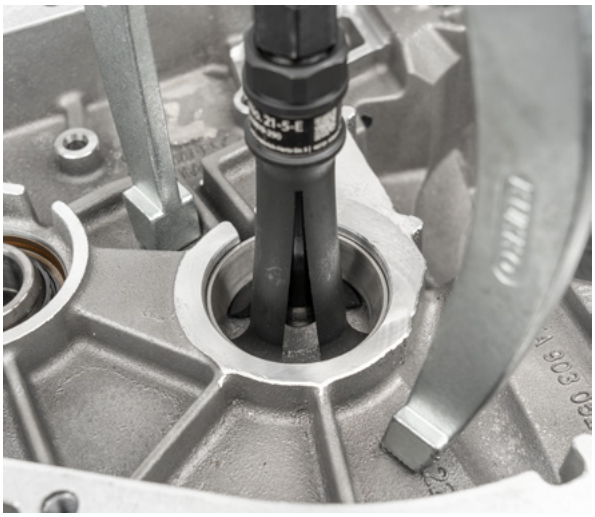
- Press the new ball bearing of the input shaft into the gearbox housing

- Fitting the circlip

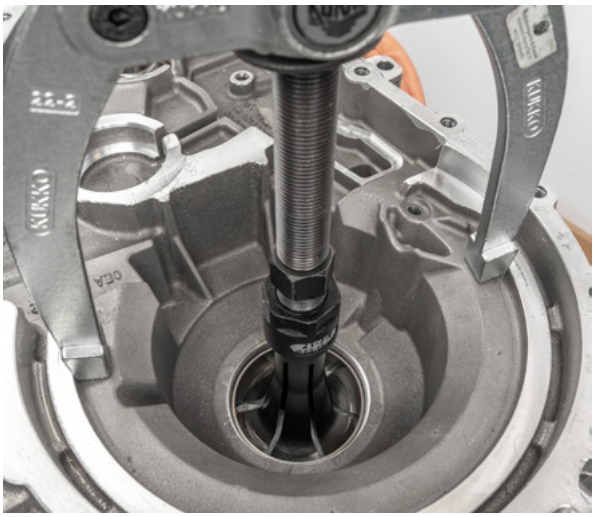


- Place the old adjusting disc of the output shaft in the gearbox housing
- Press the new bearing outer ring of the output shaft into the housing

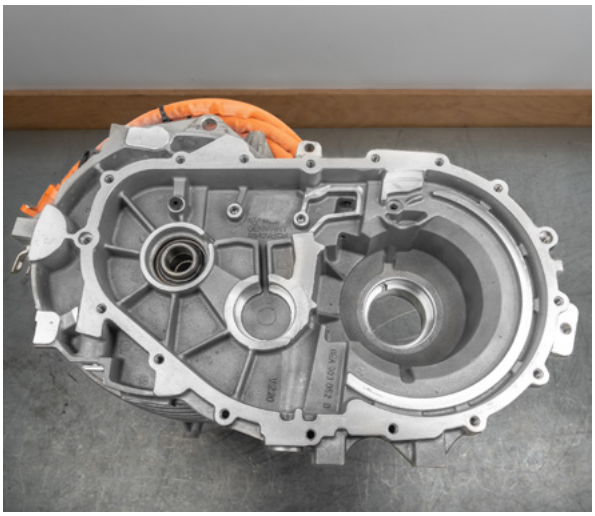
- Remove the bearing outer ring on the motor side of the output shaft using a suitable internal extractor
- Remove the adjusting disc



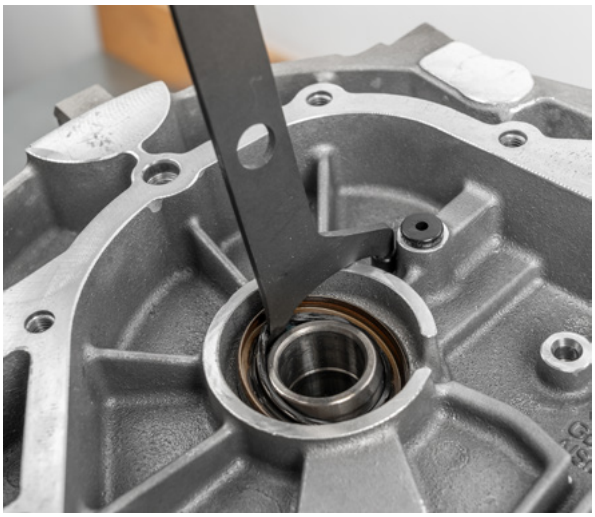
- Remove the motor-side bearing outer ring of the differential using a suitable internal extractor
- Remove the adjusting disc



- Remove sealing residue
- Clean the motor housing

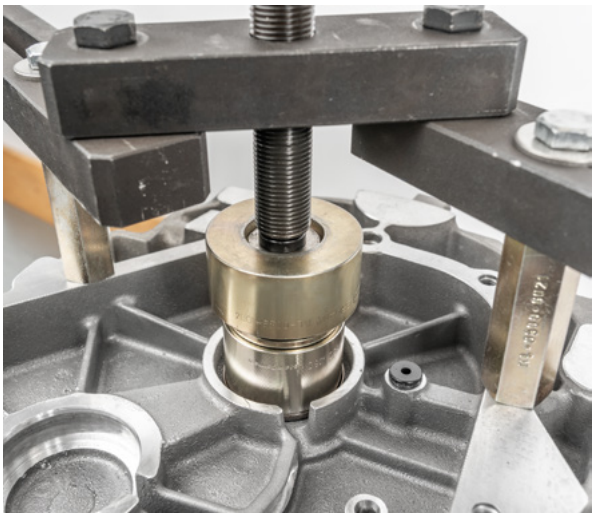


- Remove the shaft seal of the rotor shaft

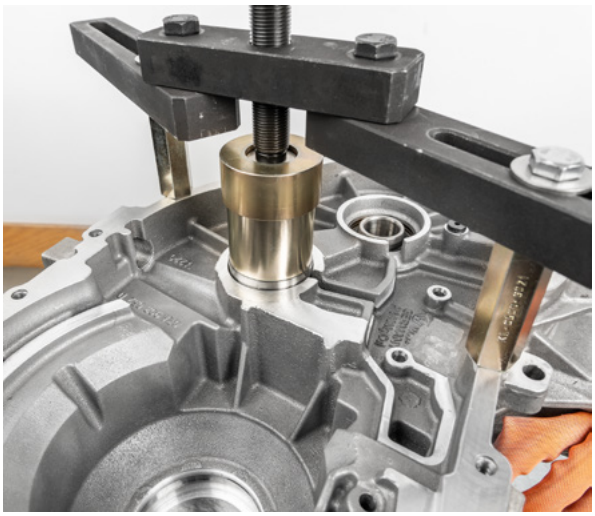


Note:
Note the installation depth of the shaft seal

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

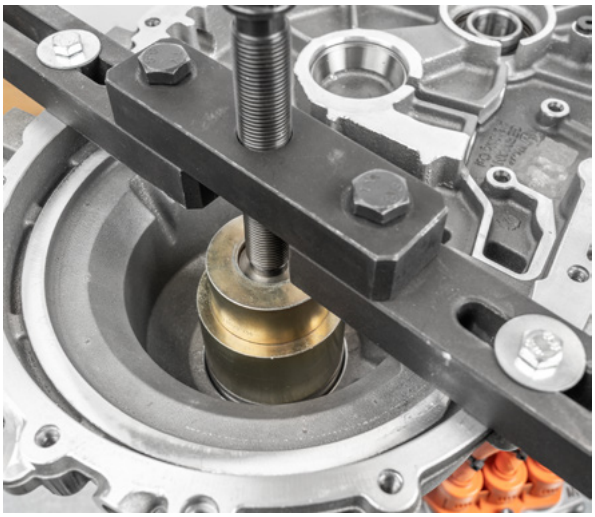


- Press in new motor-side bearing outer ring of the output shaft **without** adjusting disc



Important:
The correct adjusting disc is only determined in a later work step and then fitted

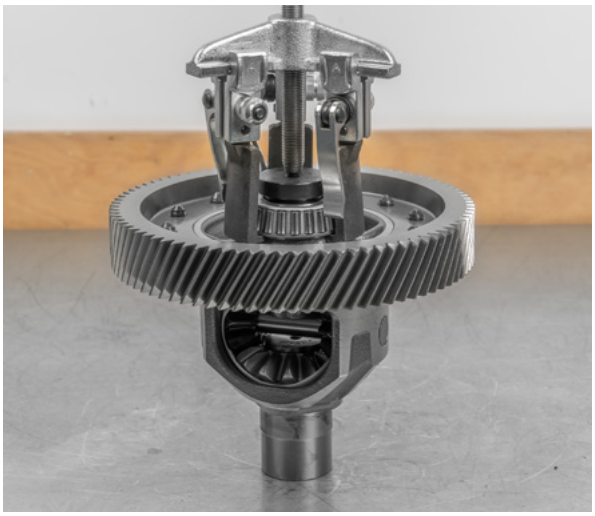
- Press in new motor-side bearing outer ring of the differential **without** adjusting disc



Important:
The correct adjusting disc is only determined in a later work step and then fitted

- The tapered roller bearing on the motor side of the equalising gearbox

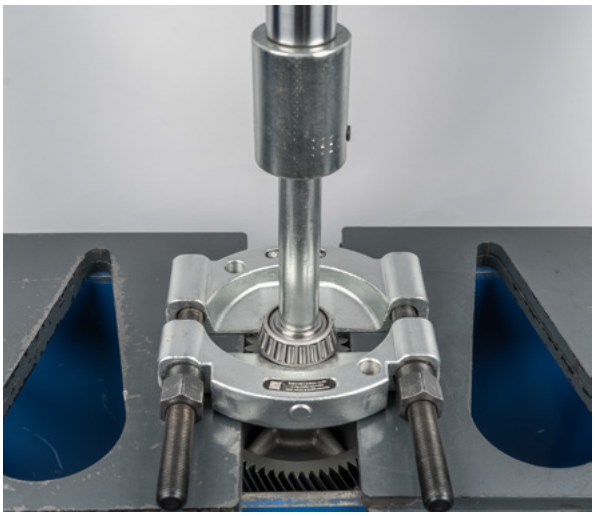
- The tapered roller bearing on the gearbox side of the equalising gearbox



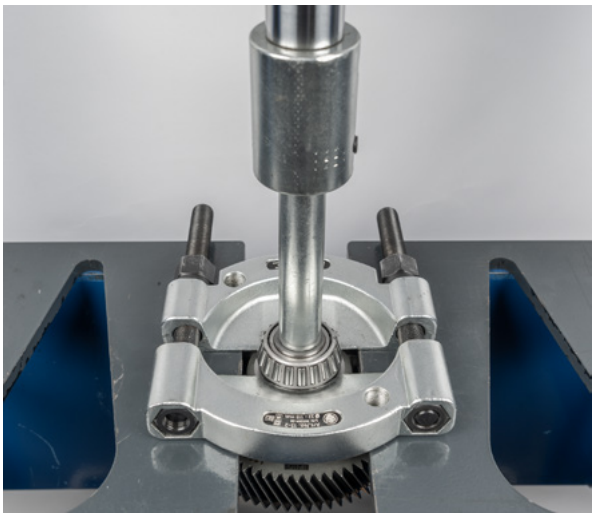
- Press a new tapered roller bearing on the gearbox side onto the differential gear

- Press the new motor-side tapered roller bearing onto the differential gearbox

- Press off the tapered roller bearing on the motor side of the output shaft



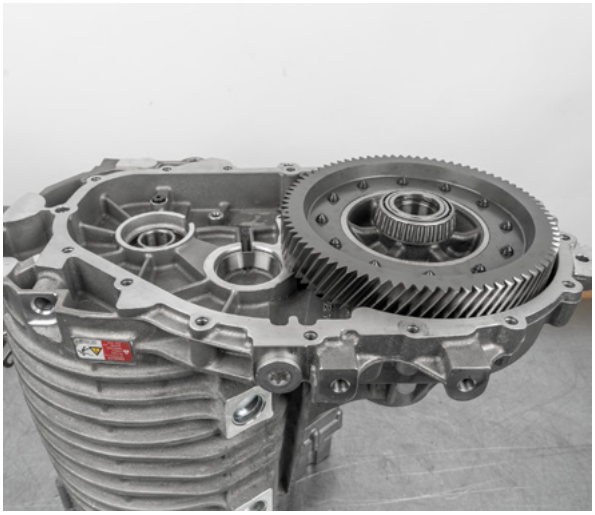
- Press off the tapered roller bearing on the gearbox side of the output shaft



- Press a new tapered roller bearing on the gearbox side onto the output shaft

- Press the new motor-side tapered roller bearing onto the output shaft

- Insert equalising gear in the housing

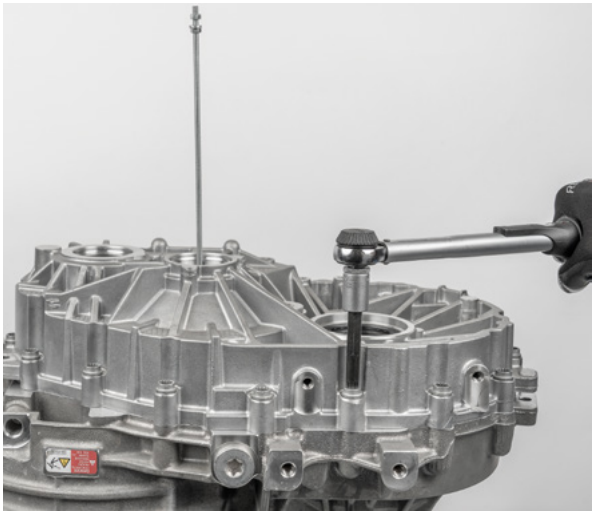


- In order to measure the axial play of the output shaft, a suitable lifting device such as a threaded rod with a welded-on shim is required

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

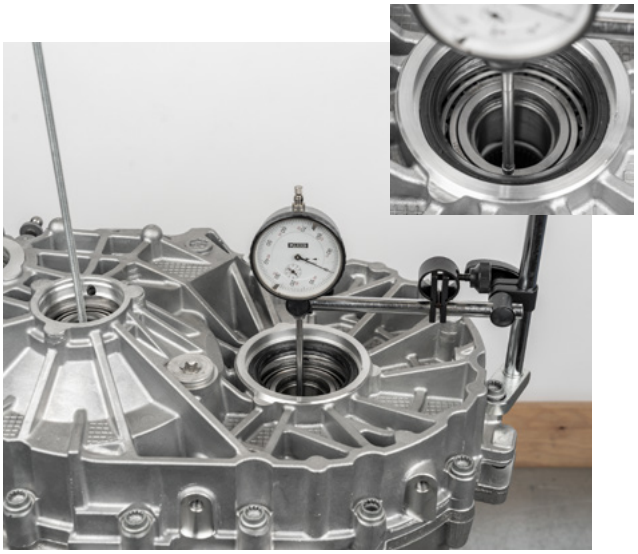
- Fit the prepared gearbox housing without the drive shaft

- Tighten screws to 15 Nm

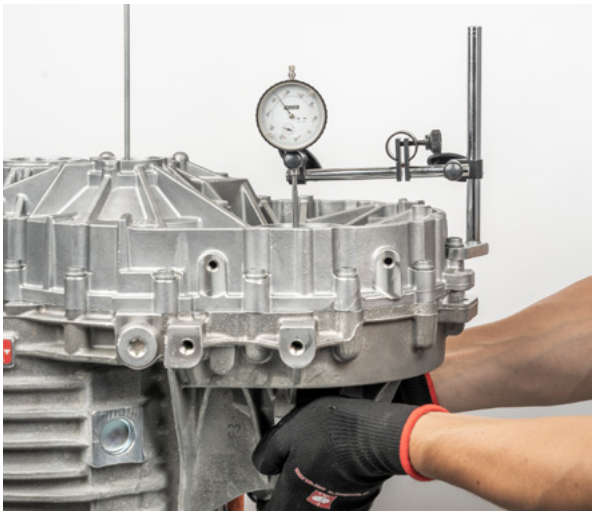


- To determine the differential setting disc, mount the dial gauge as shown and ensure that the measuring tip is preloaded

Note:
The measuring tip should sit on the equalising gear



- Press the equalising gear on the opposite side upwards by hand against the stop and read off the measured value



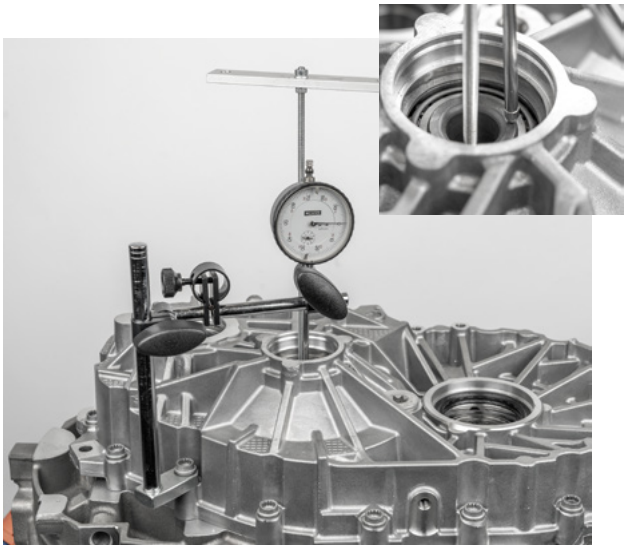
- The required bearing preload is **0,25 to 0,30 mm**

- Determine the setting disc:
  Measured value in mm
  + required bearing preload (0.25 to 0.30 mm)
  = Thickness of the adjusting disc in mm

Example: Measured value = 0,53 mm
0,53 mm
+ 0,25 bis 0,30 mm
= 0,78 bis 0,83 mm

- Note value

- To determine the output shaft setting disc, mount the dial gauge as shown and ensure that the measuring tip is preloaded



Note:
The measuring tip should sit on the output shaft

- Pull the output shaft with the lifting device upwards against the stop and read off the measured value

- The required bearing preload is **0,25 to 0,30 mm**

- Determine the setting disc:
  Measured value in mm
  + required bearing preload (0.25 to 0.30 mm)
  = Thickness of the adjusting disc in mm

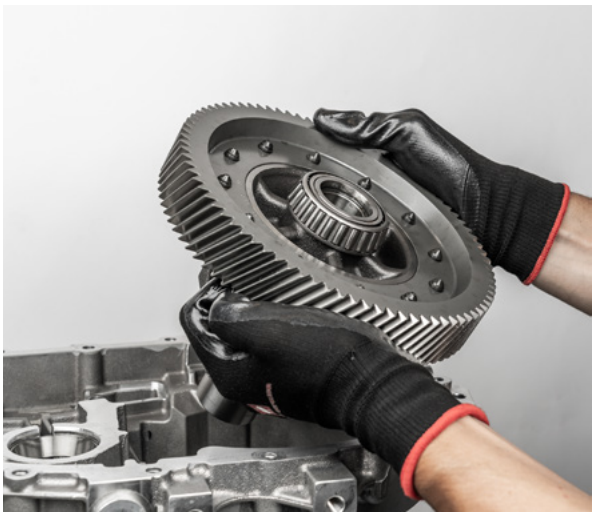
> **Example:** Measured value = 1,08 mm
> 1,08 mm
> + 0,25 bis 0,30 mm
> = 1,33 bis 1,38 mm

- Note value

- Dismantling the gearbox cover

- Remove the output shaft from the motor housing using the lifting device

- Remove the differential gear from the motor housing



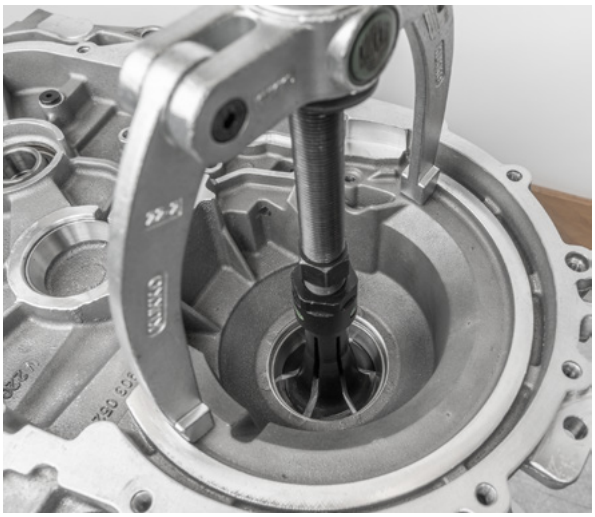
- The motor-side bearing outer ring of the output shaft again

- Insert the previously determined adjusting disc (e.g. 1.35 mm) into the bearing seat

Note:
The adjusting disc table with the article numbers can be found in the appendix

- Press in the new motor-side bearing outer ring of the output shaft again

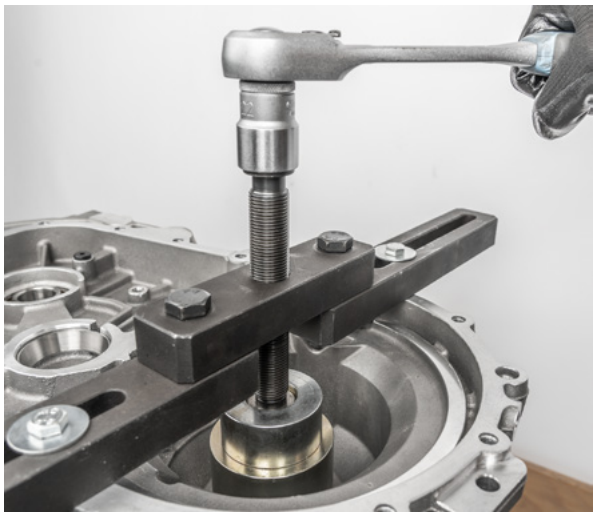
- The motor-side bearing outer ring of the differential again



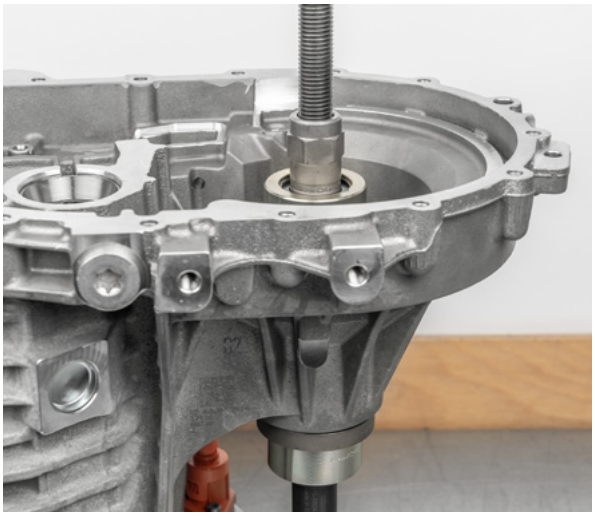
- Insert the previously determined adjusting disc (e.g. 0.80 mm) into the bearing seat

Note:
The adjusting disc table with the article numbers can be found in the appendix

- Press in the new motor-side bearing outer ring of the differential again



- Press in a new shaft seal ring on the motor side of the differential gearbox

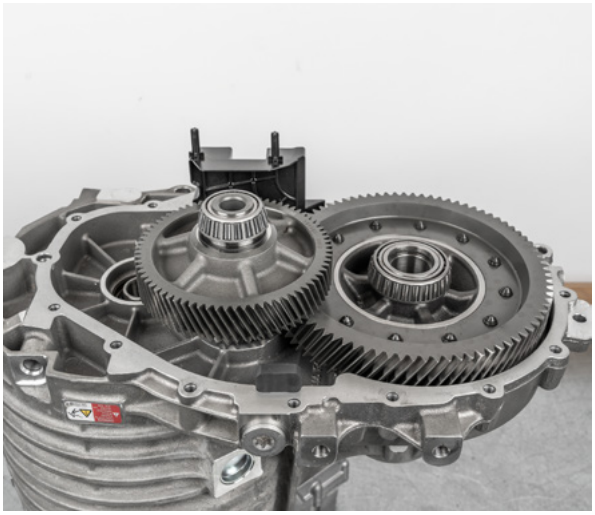


- Set pawl to unlocked position
- Press the input shaft into the gearbox housing

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

- Insert the differential gear and the output shaft into the motor housing

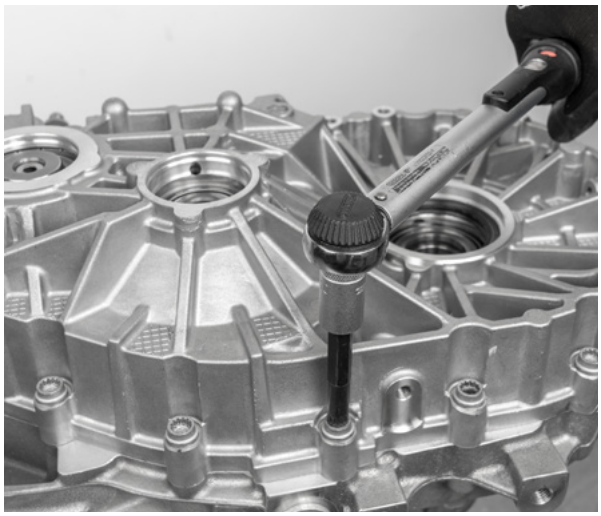
- Clean the oil drip tray and ensure that the oil holes are clear
- Insert the oil drip tray into the motor housing
- Place magnet



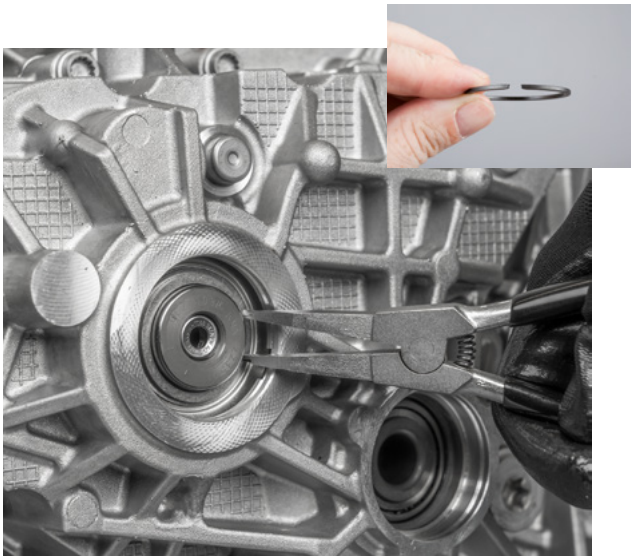
- Clean the sealing surfaces with a suitable cleaner, e.g. Loctite SF 7063
- Apply a suitable sealant, e.g. Loctite 510, to the motor housing
- Fitting the gearbox housing

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

- Insert screws and tighten to 27 Nm

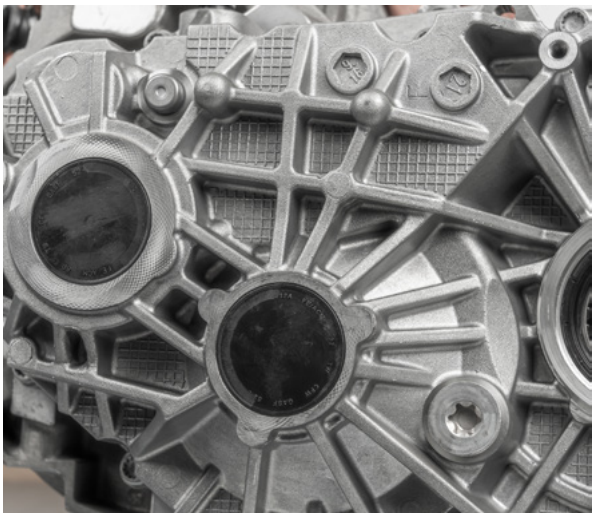


- Fitting the drive shaft circlip

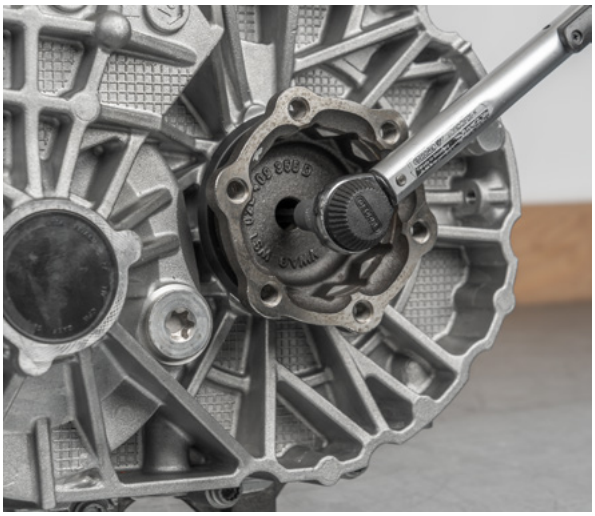


Note:
The side of the retaining ring where the opening is smaller faces outwards.

- Install new sealing caps flush with the surface



- Install both drive shaft flanges and tighten
- the screws to 30 Nm



Note:
The vehicle manufacturer recommends the use of new screws, the corresponding article numbers can be found in the appendix

- Replace the sealing ring of the gearbox housing breather

- Reinstall the drive unit according to the vehicle manufacturer's specifications

Gear oil quantity: 0.8 litres
Oil specification: VW G 052 527 A2 Tightening torque of oil control screw: 45 Nm

ATTACHMENT

1. Adjusting discs for differential bearing

Item number	Thickness in mm
464 0029 10	0.65
	0.70
	0.75
	0.80
	0.85
	0.90
	0.95
	1.00
	1.05
	1.10
	1.15
	1.20
	1.25
	1.30
	1.35
	1.40
	1.45
	1.50

2. Adjusting discs output shaft bearing

Item number	Thickness in mm
464 0028 10	0.65
	0.70
	0.75
	0.80
	0.85
	0.90
	0.95
	1.00
	1.05
	1.10
	1.15
	1.20
	1.25
	1.30
	1.35
	1.40
	1.45
	1.50

If required, 2 adjusting discs can also be combined.

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

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

1. Parking lock lever nut

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

2. Bolts Drive shaft flanges

Until 06/2019: 2 pieces VW article number 02E 409 359 (M8 x 45,9 mm)

From 06/2019: 1 piece VW article number 02E 409 359 (M8 x 45,9 mm)
1 piece VW part number 02J 409 359 (M8 x 83,2 mm)