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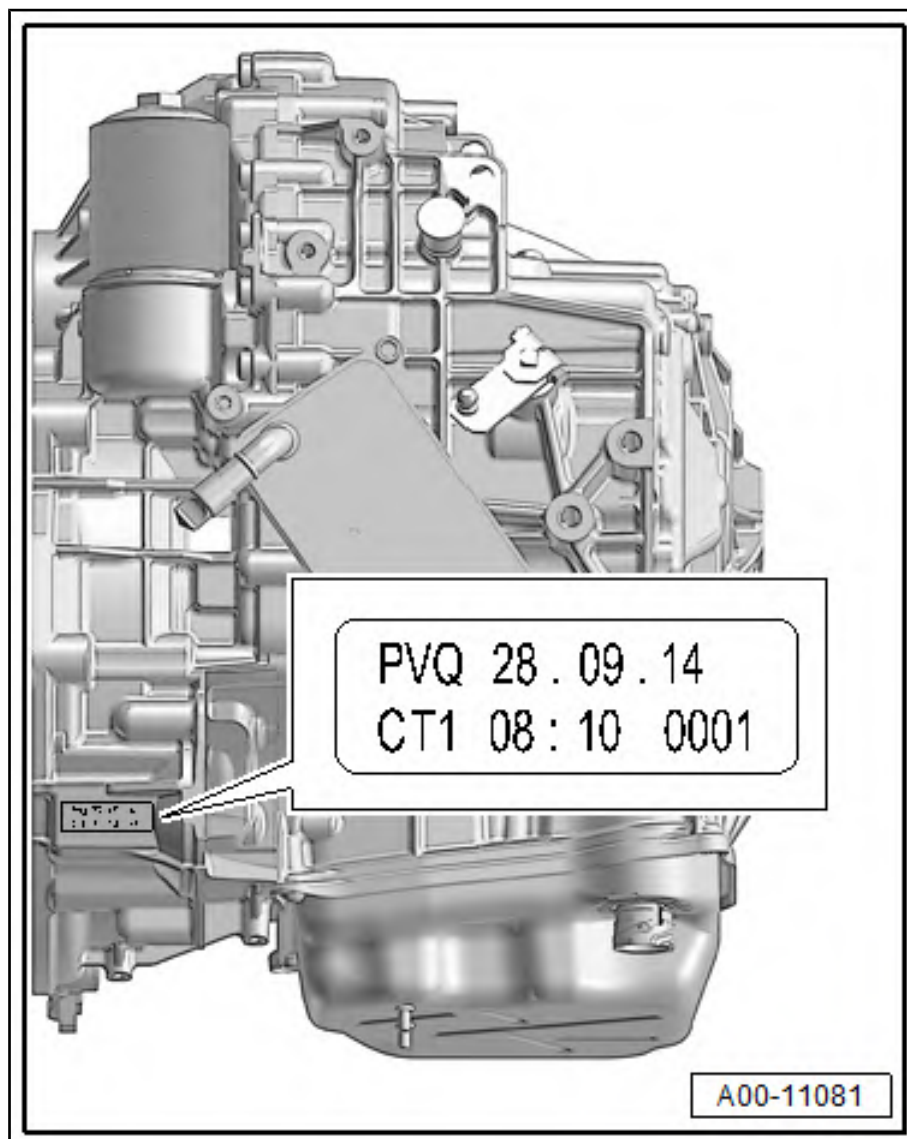
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## 2 Identification

### 2.1 Gearbox identification

The gearbox code can be found on top of the gearbox, near the starter.



The gearbox codes can be found on top of the gearbox.

#### Example

- ◆ PVQ = gearbox code.
- ◆ 28.09.14 = production date 28 September 2014.
- ◆ The remaining data are production-specific.

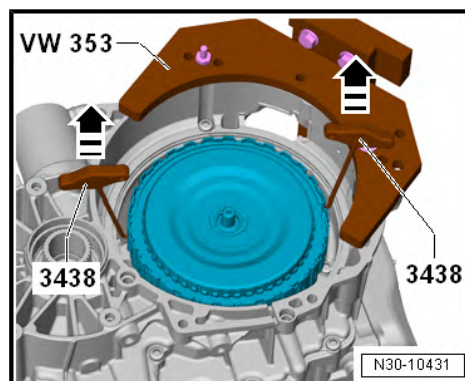


#### Note

*The gearbox code is also indicated on the vehicle data stickers.*



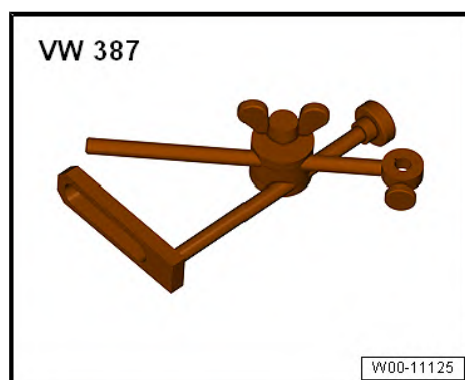
- Remove dual clutch using hooks - 3438- .



## 1.4 Installing dual clutch

### Special tools and workshop equipment required

- ◆ Universal dial gauge holder - VW 387-



- ◆ Dial gauge - VAS 6079-



- ◆ Retaining pins - T10524-



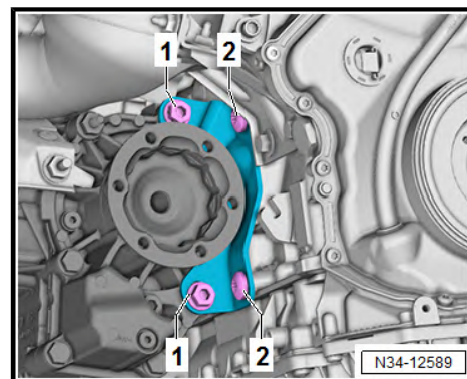


## Vehicles with petrol engine

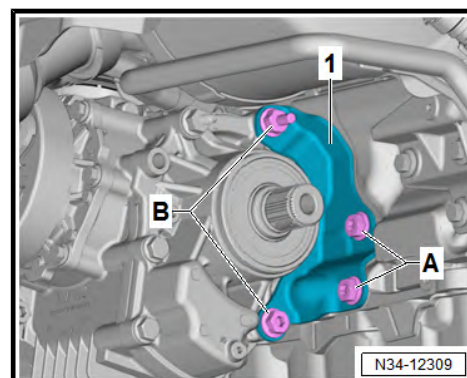


### Note

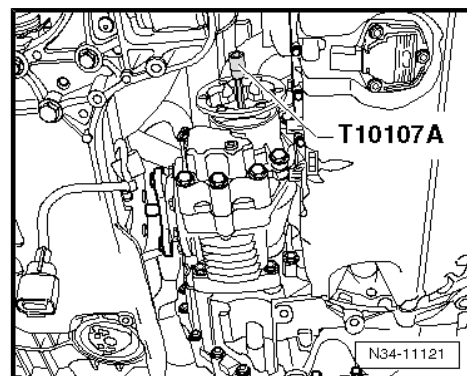
*The next figure shows the bevel box with a splined shaft instead of a flange shaft.*



## Vehicles with diesel engine

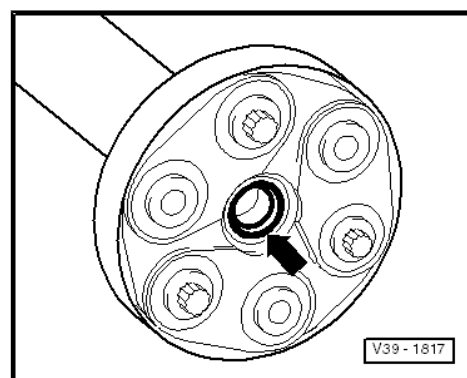


- Secure flange shaft with new countersunk bolt. Specified torque: ➔ [Item 1 \(page 34\)](#)
- Fit propshaft on bevel box.



### Note

*When removing and installing the bevel box, do not damage the seal in the propshaft flange -arrow-. Renew propshaft if damaged.*





- Remove bracket -A- if present.
- Remove nuts -arrows- inside vehicle.
- Remove selector mechanism -B- together with selector housing downwards.

### Installing

Install in reverse order of removal. Observe the following when doing this:



### Note

- ◆ *Do not bend or kink gear selector cable.*
- ◆ *Do not grease selector lever cable.*
- ◆ *Following installation of selector mechanism, selector lever cable must be checked for ease of movement and be adjusted.*
- Selector lever on selector mechanism must be set to position "N".
- Insert cable into selector mechanism, attach to selector lever and fit new securing clip.
- Install heat shield below selector mechanism ⇒ General body repairs, exterior; Rep. gr. 66 ; Mouldings/trim/ extensions; Removing and installing floor heat shield .
- If featured, install footwell air duct ⇒ Heating, air conditioning; Rep. gr. 87 ; Air duct; Assembly overview - air routing and air distribution in passenger compartment .
- Install centre console ⇒ General body repairs, interior; Rep. gr. 68 ; Centre console; Removing and installing centre console .
- Install selector lever handle ⇒ [page 49](#) .
- Adjust selector lever cable ⇒ [page 65](#) .
- Check selector mechanism ⇒ [page 64](#) .

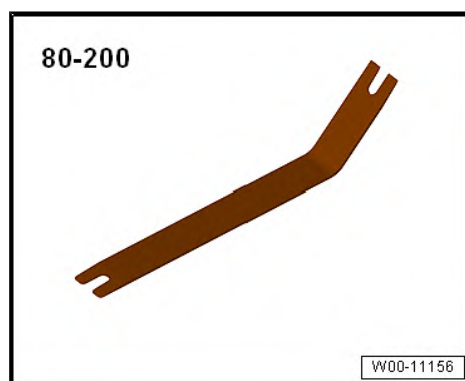
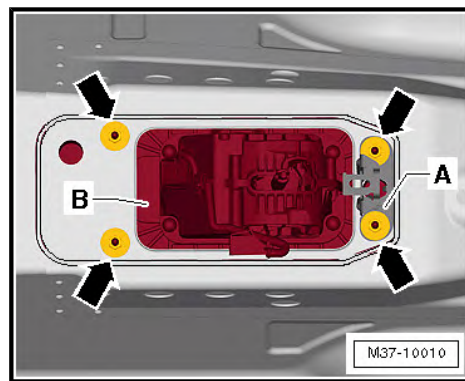
### Specified torques

- ◆ Selector housing to body ⇒ [page 46](#)

## 3.6 Removing and installing gear selector cable

### Special tools and workshop equipment required

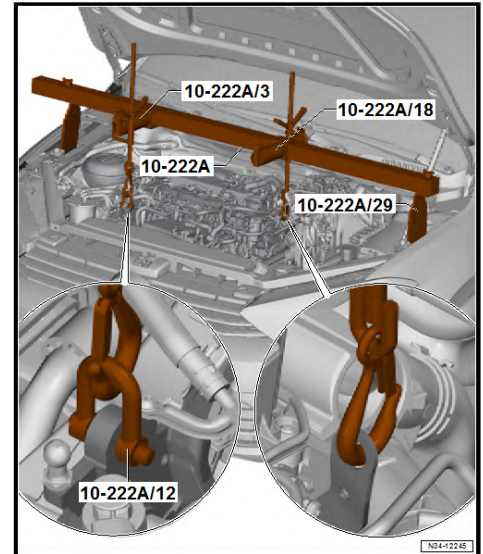
- ◆ Release lever - 80-200-



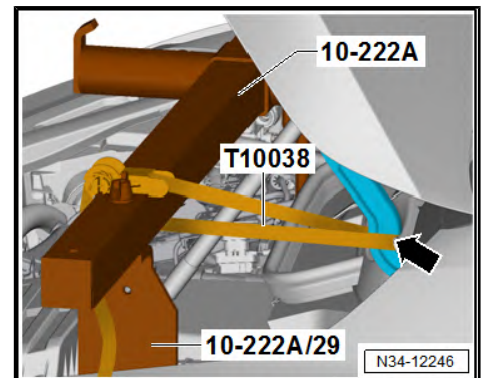




- Push adapter - 10 - 222 A /18- and adapter - 10 - 222 A /3- onto support bracket - 10-222 A- .
- Secure support bracket - 10-222 A- to adapters - 10 - 222 A / 29- .



- Secure both adapters - 10 - 222 A /29- with tensioning straps - T10038- .
- The tensioning strap - T10038- must be attached in recess -arrow- in bonnet hinge.
- Then, attach spindles in engine lifting eyes.
- Take up weight of engine/gearbox assembly and support bracket on spindles .
- Remove noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Removing and installing noise insulation .
- Remove lower part of front left wheel housing liner ⇒ General body repairs, exterior; Rep. gr. 66 ; Wheel housing liner; Assembly overview - front wheel housing liner .



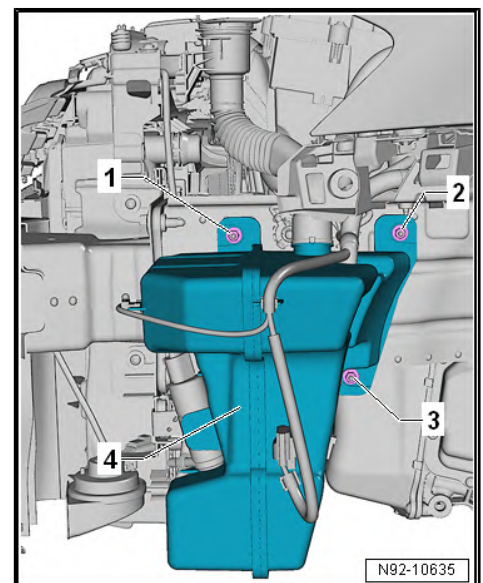
#### Vehicles with window washer system:

- Detach nut -3- from washer fluid reservoir -4- ⇒ Electrical system; Rep. gr. 92 ; Windscreen washer system; Removing and installing washer fluid reservoir .

This will allow for pushing washer fluid reservoir aside slightly at a later stage when removing the gearbox.

1) Disregard bolts -1 and 2-.

#### Continuation for all:





- Unscrew upper engine/gearbox connecting bolts using insert tool 18 mm - T10179- or insert tool 18 mm - T10509- .



A bolt is located in the starter motor hole -arrow-. This bolt can be removed using socket - T10061- .

- Remove fuel filter and lay to side. Do not open pipe/hose system ⇒ Rep. gr. 20 ; Fuel filter; Assembly overview - fuel filter .
- If there are hoses and cable connections in area of engine support eye for support bracket - 10 - 222 A- , remove these now.
- Install support bracket - 10-222 A- as follows:

Required material:

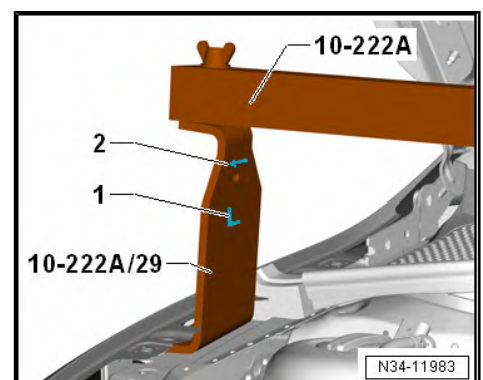
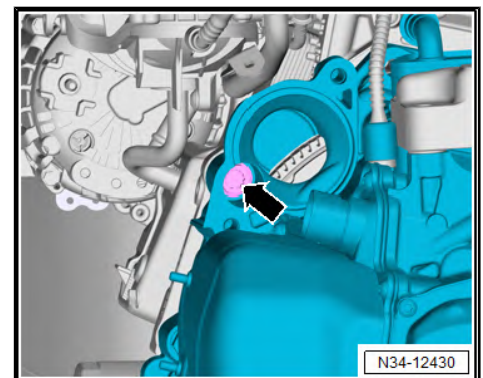
- ◆ Adapter - 10 - 222 A /3-
  - ◆ Shackle - 10 - 222 A /12- (required when spindle of engine support bracket cannot be hooked into lifting eye of engine).
  - ◆ Adapter - 10 - 222 A /29- , qty. 2
  - ◆ Square tube - T40091/1-
  - ◆ Connector - T40091/3-
  - ◆ Spindle - T40093 /3-
  - ◆ Check adapter - T40093/3-6- and modify as necessary  
⇒ [page 88](#)
  - ◆ or adapter - T40093/3-6A-
- On both sides of vehicle, insert adapters - 10 - 222 A /29- between wing mounting flange and sheet metal for mounting wing underneath it.

◆ Installation position:

“L” = -1- adapter is used on “right-hand” side of vehicle.

“R” (not shown in figure) adapter is to be inserted on “left” side of vehicle.

Arrow -2- always points in direction of travel.







- ◆ Engine and gearbox jack - VAS 6931-



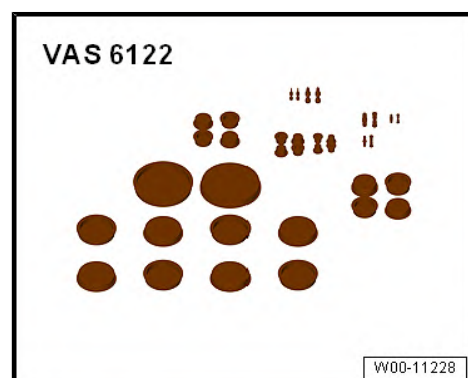
- ◆ Hose clamps to 25 mm - 3094-



- ◆ Tensioning strap - T10038-



- ◆ Engine bung set - VAS 6122-





## 5 Assembly mountings

⇒ ["5.1 Assembly overview - assembly mountings", page 153](#)

### 5.1 Assembly overview - assembly mountings

#### 1 - Engine support

- ☐ ⇒ Rep. gr. 10 ; Assembly mountings; Assembly overview - assembly mountings

#### 2 - Engine mounting

- ☐ ⇒ Rep. gr. 10 ; Assembly mountings; Assembly overview - assembly mountings

#### 3, 4, 5 - Bolt

- ☐ Specified torque ⇒ Rep. gr. 10 ; Assembly mountings; Assembly overview - assembly mountings

#### 6 - Bracket

- ☐ Version

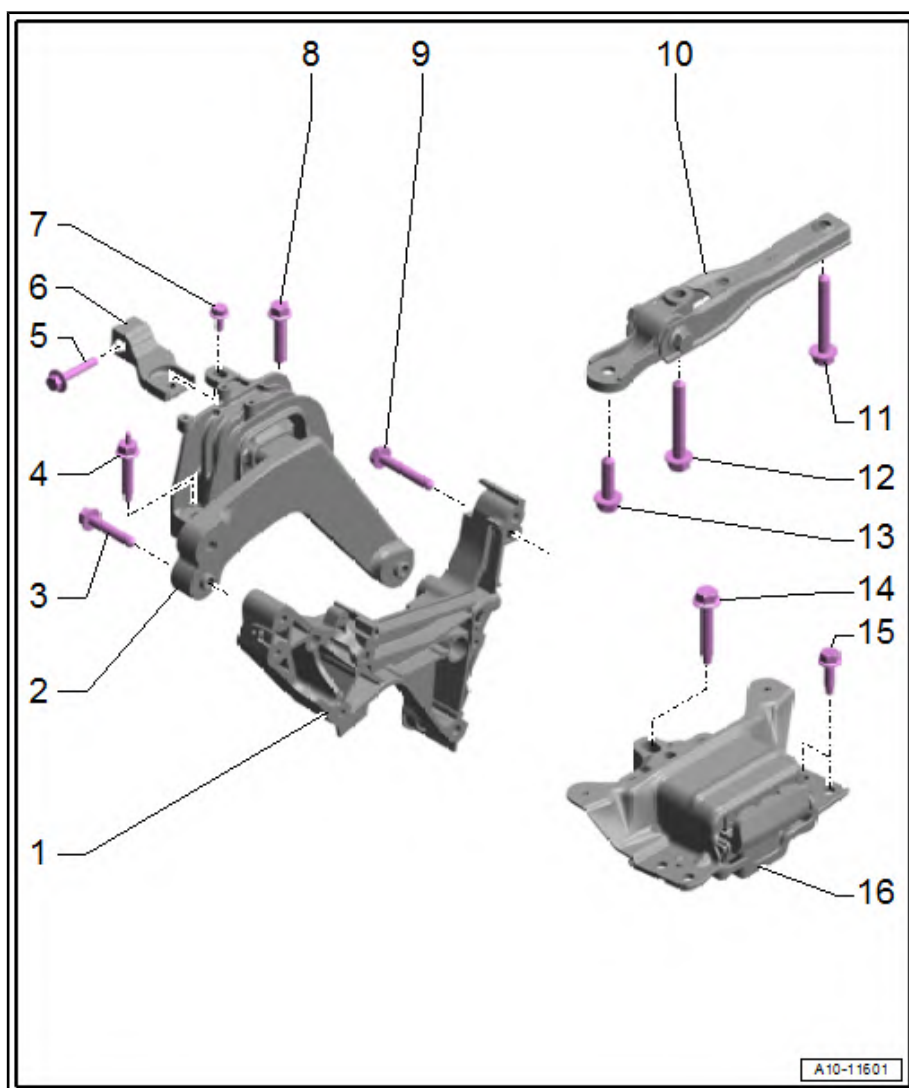
#### 7, 8, 9 - Bolt

- ☐ Specified torque ⇒ Rep. gr. 10 ; Assembly mountings; Assembly overview - assembly mountings

#### 10 - Pendulum support

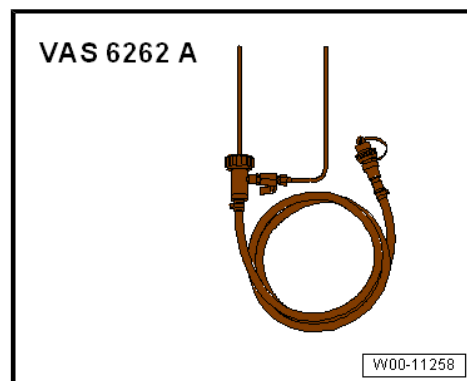
#### 11 - Bolt

- ☐ For pendulum support to subframe
- ☐ Renew after removal
- ☐ Specified torque ⇒ Rep. gr. 10 ; Assembly mountings; Assembly overview - assembly

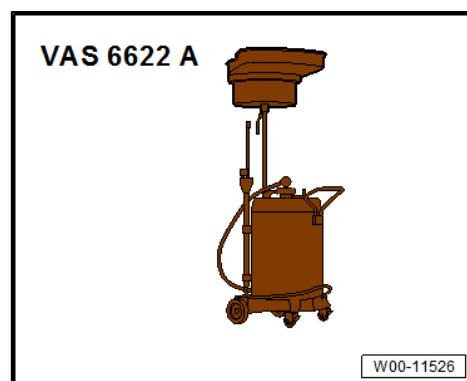




- ◆ Oil filling adapter - VAS 6262 A- with adapter - VAS 6262/1-



- ◆ Used oil collector and extractor - VAS 6622A-



- ◆ If necessary: adapter - VAS 6262/6- or adapter - VAS 6262/7-



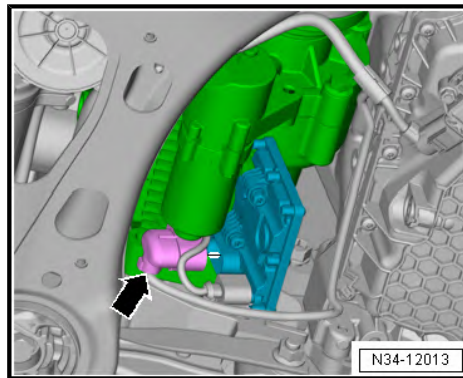
- ◆ Genuine 1 litre oil bottle, dual clutch gearbox oil; part number  
⇒ Electronic Parts Catalogue



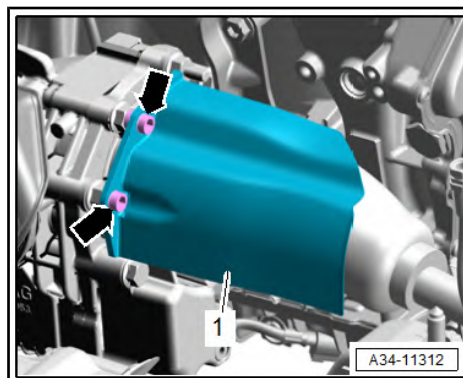
- ◆ Vehicle diagnostic tester
- ◆ Safety glasses
- ◆ Acid-resistant protective gloves



- Connect connector -arrow- to transverse lock-up control unit - J647- .



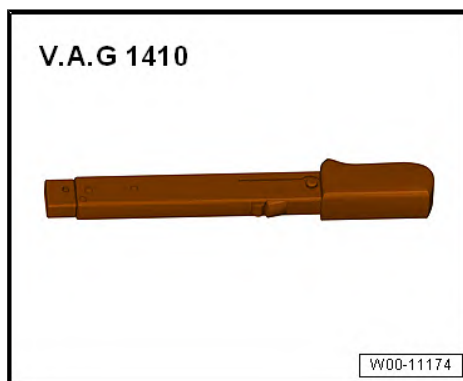
- Install right drive shaft ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft; Removing and installing drive shaft .
- If present, install heat shield -1- for drive shaft -arrows- ⇒ Running gear, axles, steering; Rep. gr. 40 ; Drive shaft .
- Top up gear oil in front differential lock ⇒ [page 189](#) .
- Assemble exhaust system ⇒ Rep. gr. 26 ; Exhaust pipes/ silencers; Assembly overview - silencer .
- Install noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview - noise insulation .



## 10.4 Removing and installing differential lock control unit - J647-

### Special tools and workshop equipment required

- ♦ Torque wrench - V.A.G 1410-



### Removing

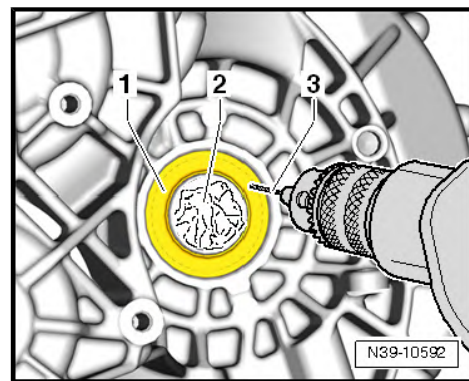
- Switch off ignition.

Depending on equipment version, the axle differential lock control unit - J647- is covered by the noise insulation on some vehicles.

- In this case, remove noise insulation ⇒ General body repairs, exterior; Rep. gr. 66 ; Noise insulation; Assembly overview – noise insulation .



- Grease drill bit -3- so that metal chips adhere to it.
- Seal drive shaft aperture on transmission with a clean cloth -2-.
- Carefully drill a hole with a drill bit -3- (diameter 2 to 4 mm) into outer sheet metal ring -1- of oil seal.

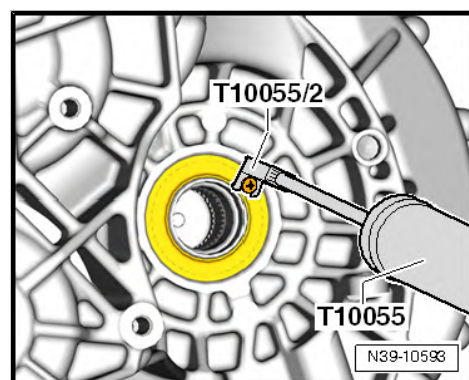


- Screw a self-tapping screw, approx. 4 mm in diameter, into hole drilled in oil seal. Do not screw in sheet metal screw too far to avoid damaging bearing behind it.
- Place drip tray for workshop hoist - VAS 6208- below gearbox.
- Pull out oil seal using puller - T10055- and adapter - T10055/2- .

**Make sure no metal chips get into gearbox and into opening for drive shaft. Vacuum out metal chips first if necessary.**

- Carefully remove cloths and make sure that no metal chips get into gearbox.
- Carefully clean gearbox and opening for drive shaft.

If only the sheet metal ring could be pulled out, carefully lever out rest of seal with a screwdriver.



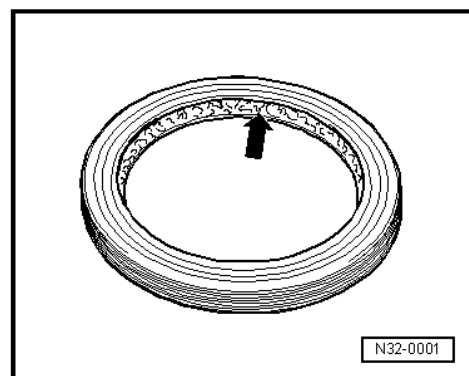
### Installing

Install in reverse order of removal. Observe the following when doing this:

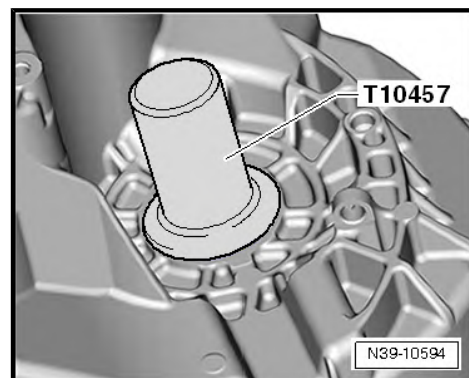
Before installing the seal, apply sealing grease for oil seal - G 052 128 A1- to sealing lips and cavity, and apply oil to outer circumference.

Installation position:

Open side of oil seal faces gearbox.



- Drive oil seal in to stop with thrust piece - T10457- . Do not cant oil seal in the process.

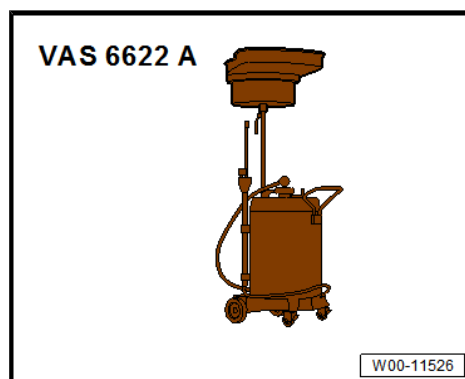




### 3.3.2 Renewing right oil seal - all-wheel drive vehicles

#### Special tools and workshop equipment required

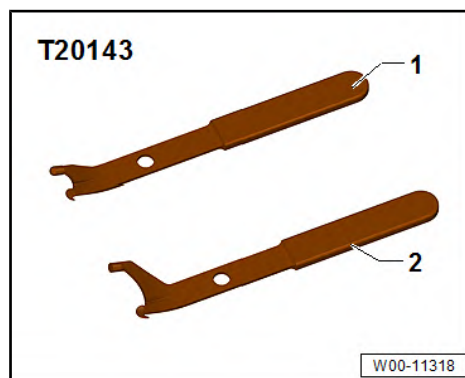
- ◆ Used oil collector and extractor - VAS 6622A-



- ◆ Thrust piece - T10049-



- ◆ Extractor hook - T20143-



- ◆ Sealing grease - G 052 128 A1-

#### Sequence of operations

- Remove bevel box ➔ [page 35](#) .
- Place used oil collection and extraction unit - VAS 6622A- below gearbox.





## 7 - Cap

- ☐ To vent bevel box

## 8 - Breather pipe

- ☐ Allocation ⇒ Electronic parts catalogue (ETKA)

10 Nm

## 9 - Bolt

- ☐ 5 Nm

## 10 - Shield

- ☐ Not fitted in all bevel boxes
- ☐ The outline may differ from that shown in the diagram.
- ☐ Allocation ⇒ Electronic parts catalogue (ETKA)

## 11 - Right flange shaft

- ☐ Removing and installing ⇒ Rep. gr. 39 ; Oil seals; Renewing right oil seal

## 12 - Seal

- ☐ Renew after removal
- ☐ To renew, remove needle bearings (polygon bearings) ⇒ Rep. gr. 39 ; Components of bevel box

## 13 - Needle bearing (polygon bearing)

- ☐ Needle bearing (polygon bearing) is difficult to turn with flange shaft removed The fact it is difficult to move does not mean that the bearing is defective. An acoustic test can only be performed with the bearings installed.
- ☐ Inspect for signs of damage to bearings, such as cracking in outer race, and renew if necessary.
- ☐ Renewing ⇒ Rep. gr. 39 ; Components of bevel box

## 14 - Locking ring

- ☐ Renew after removal
- ☐ For needle roller bearing (polygon bearing)
- ☐ Insert in circumferential groove in stub shaft

## 15 - Hexagon nut

- ☐ Renew after removal
- ☐ Removing ⇒ [page 226](#)
- ☐ Install using locking fluid - D 000 600-
- ☐ Installing ⇒ [page 232](#)
- ☐ 480 Nm

## 16 - Output flange

- ☐ Renewing ⇒ [page 241](#)

## 17 - Cover

- ☐ Not fitted in all bevel boxes
- ☐ Renew if damaged
- ☐ Allocation ⇒ Electronic parts catalogue (ETKA)
- ☐ Engage with output flange

## 18 - Shim

- ☐ Redetermine if output flange is renewed ⇒ [page 241](#) .

## 19 - Seal

- ☐ Renew after removal
- ☐ For output flange
- ☐ Replace only with bevel box removed ⇒ [page 220](#)

## 20 - Tapered roller bearing inner race

- ☐ No replacement part available for this component