

### Bevel gear, replacing

#### Special tools:

[999 7057](#)

**Note!** As the illustrations in this service information are used for different model years and / or models, some variation may occur. However, the essential information is always correct.

#### Removal

#### Preparations

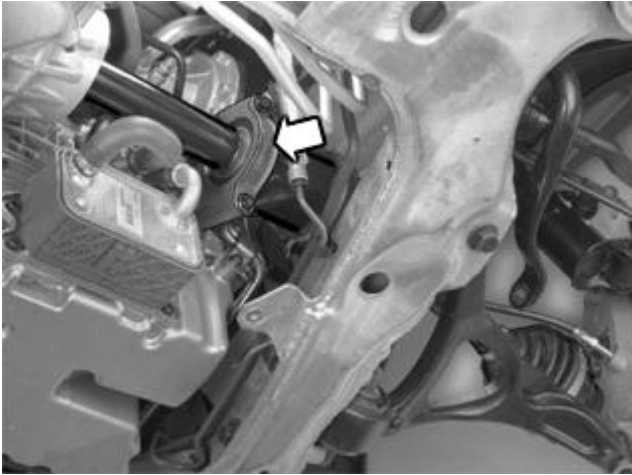
To remove the drive shaft from the wheel hub, see [Replacing the front right drive shaft](#) .

#### Removing the splash guard

Remove the engine splash guard.

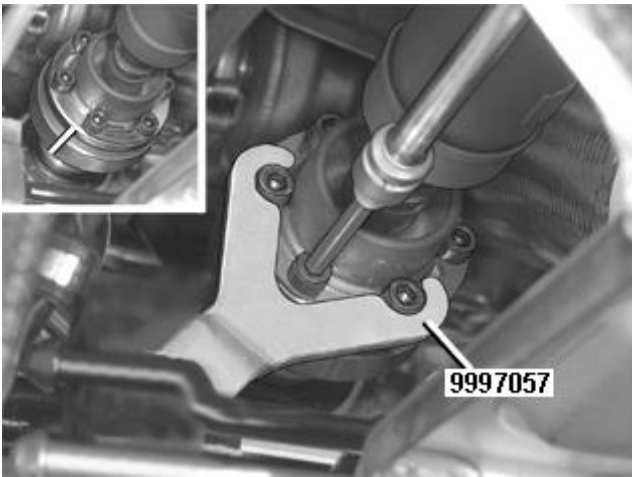


#### Removing the drive shaft bearing cap



Remove the bearing cap for the drive shaft.  
Hold down the spring strut. Pull out the drive shaft.

#### Removing the propeller shaft

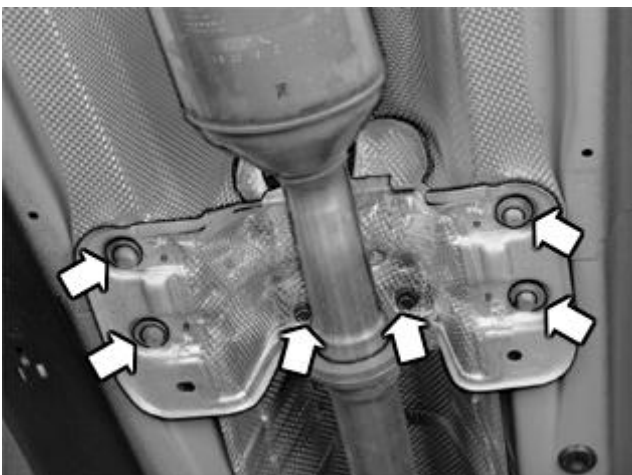


When removing the bevel gear but not replacing:  
Mark the propeller shaft CV joint in relation to the bevel gear flange.  
Remove the propeller shaft screws. Use counterhold [999 7057](#) .

#### Removing the mounting for the center bearing for the propeller shaft

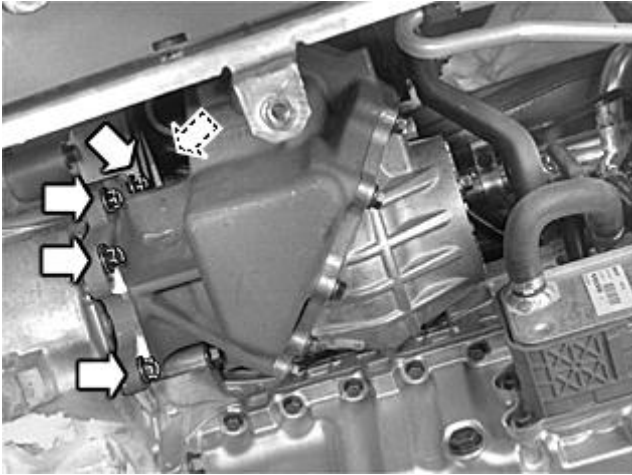
Remove:

- the screws for the bearing for the propeller shaft in the center bearing member
- the screws for the center bearing member. Let the member rest on the exhaust system.



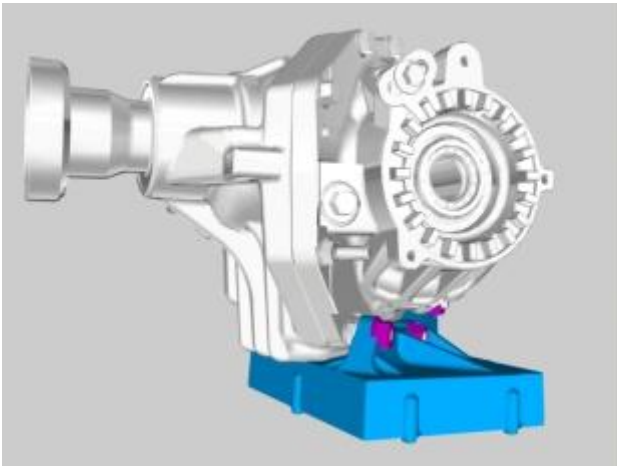
Press the propeller shaft CV joints together. Angle the axle so that it can be removed from the bevel gear.

#### Removing bevel gear

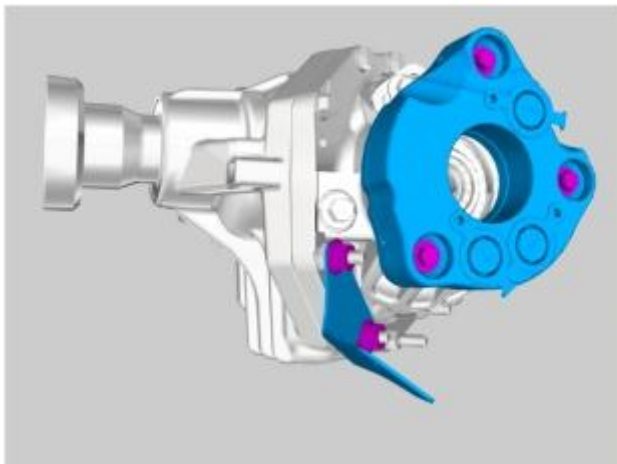


Fold down the tab on the sub-frame to create a space to remove the bevel gear. Remove the 5 bolts holding the bevel gear and pull it straight out from the transmission.

### Transferring components



There are two different types of vibration damper (see this and the next step). When replacing the bevel gear, transfer the vibration damper to the new bevel gear.



When replacing the bevel gear, transfer the vibration damper to the new bevel gear. In certain markets there is a bracket for an engine block heater. This bracket must also be transferred. Install two washers between the bevel gear and bracket on the lower stud (see spare parts catalogue).

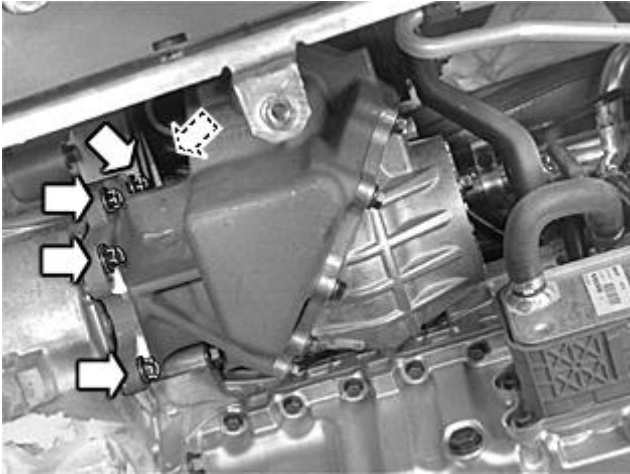
### Installation

**Note!** For tightening torques, see: [Tightening torque](#) .

**Note!** Before installing the bevel gear, lubricate the spline joint between the transmission and the bevel

gear using grease. See:  
[Splines greasing](#) .

#### Installing the bevel gear



Check that there is no oil leakage between the bevel gear's connecting sleeve and the sealing ring on the transmission, and that the sleeve is not generally damaged and is seated correctly.

To replace the connecting sleeve and seal, see: [Sealing ring connecting socket drive shaft/differential, replacing](#) .

Make sure that the mating surfaces on the transmission and bevel gear are clean and not damaged.

Install the bevel gear. Use **new** screws. Tighten the screws alternately to light contact.

Refer to: [Tightening torque](#)

Fold the tab back into place on the sub-frame.

#### Installing the propeller shaft on the bevel gear



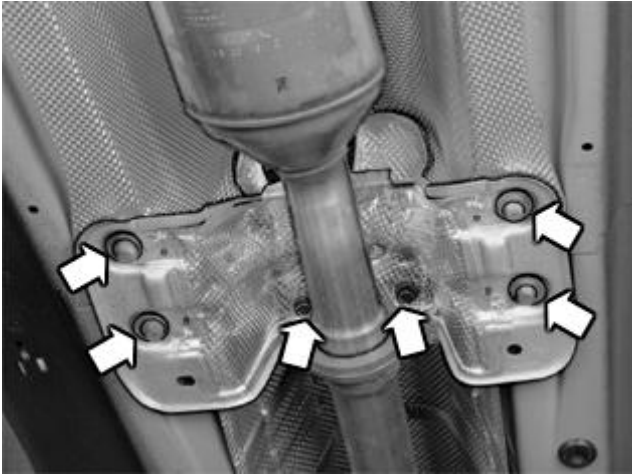
Check carefully that the mating surfaces on the propeller shaft CV joint and flange are clean.

Install the propeller shaft according to the previous marking, only if the bevel gear has been removed for any reason other than for replacement.

**Tightening the propeller shaft CV joint**  
Use new screws. See [Tightening torque:Summary of tightening torques for specific components](#)

Use a counterhold [999 7057](#) .

#### Installing the center bearing and member for the propeller shaft

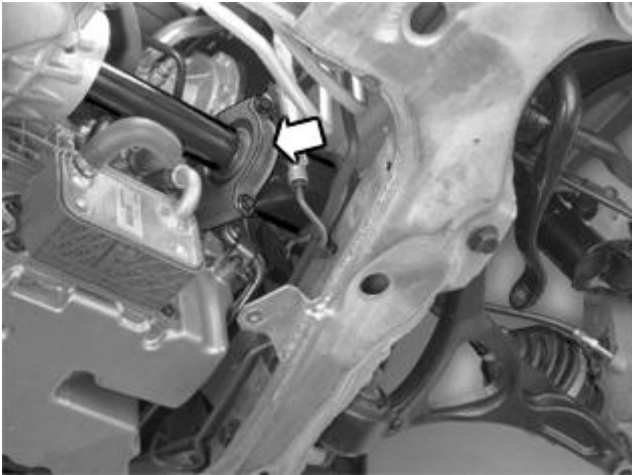


Install:

- the 4 M8 screws for the support for the center bearing. Tighten
- the 2 M8 screws for the propeller shaft bearing in the support for the center bearing. Tighten. See [Tightening torque:Summary of tightening torques for specific components](#).

#### Installing the drive shaft

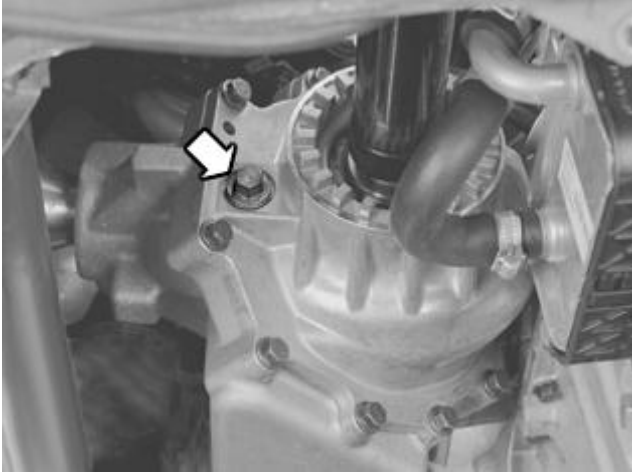
Install the drive shaft on the bevel gear and on the support bearing with the cap, 2 M8 screws. Tighten.



#### Finishing

Install the drive shaft to the wheel hub. See [Replacing the front right drive shaft](#).  
Fill the transmission with oil. See [Transmission fluid, changing](#).

Checking the oil level in the bevel gear



Check the oil level in the bevel gear  
Use the right oil. See: [Lubrication transmission](#) .  
Correct volume 650 ml.  
Fill with oil up to the filling plug. Draw out 0.1 l oil.  
Tighten the filling plug. See [Tightening torque](#) .

#### Installing the splash guard

Install the splashguard under the engine.



#### Fitting the wheel

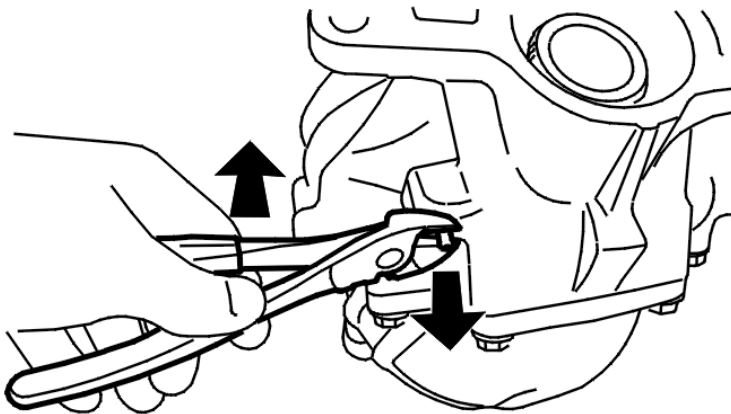
Install the wheel. See [Installing wheels](#) .

Bleed valve bevel gear,  
replacing

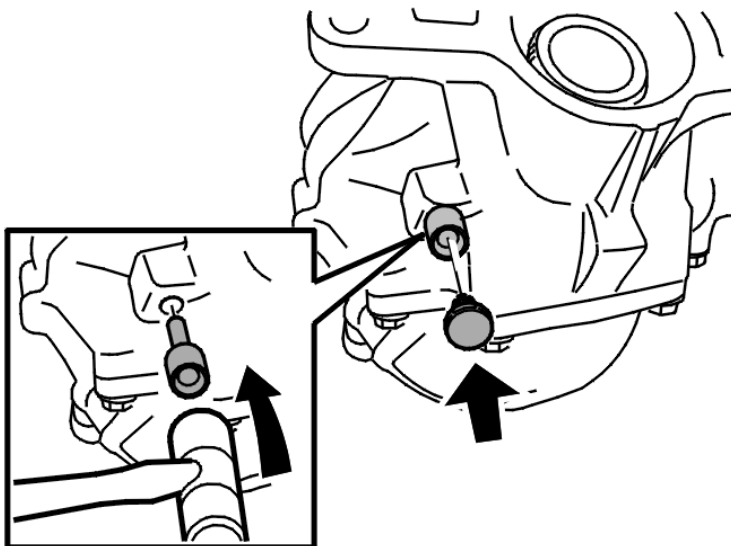
Removing the brass pipe

Remove the bevel gear. See:  
[Bevel gear, replacing](#) .

Pull out the brass pipe using  
cutting nippers.



Tap in the nipple using a rubber  
mallet.  
Install the filter on the nipple.



Filling with oil

Position the bevel gear so that  
it is standing on the oil pan (as  
it is located in the car).  
Remove the level plug. Fill  
with oil (P/N 1161648) until

the oil runs out of the level plug hole.

**Caution!** Then drain 0.2 l of oil.

Install the level plug. Tighten to: [Tightening torque](#) .

Install the bevel gear. See: [Bevel gear, replacing](#) .



466: Drive shaft, CV joint, D5244T, AW50/51 AWD



 **PRINT**

Sealing ring connecting socket  
drive shaft/differential,  
replacing

**Special tools:**

[999 2615](#)

[999 5575](#)

[999 5576](#)

[999 5777](#)

[999 5778](#)

[999 5779](#)

[999 5780](#)

**Preparatory work**

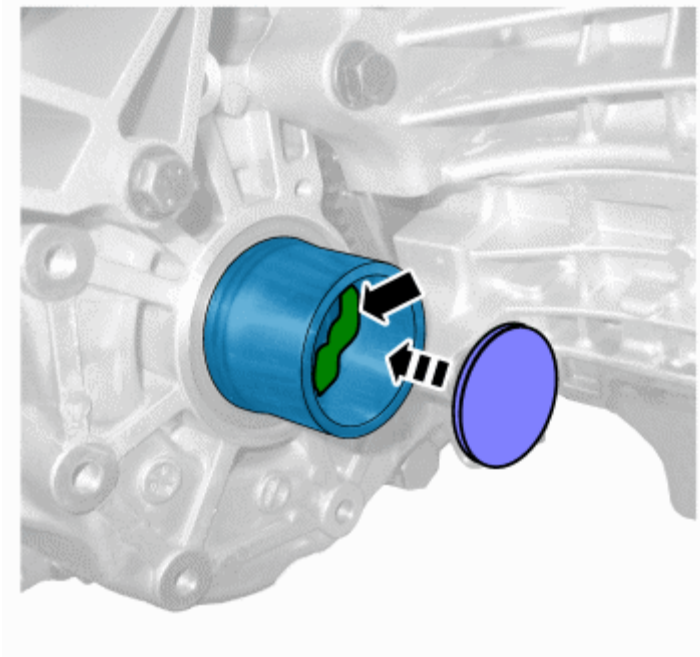
Remove:

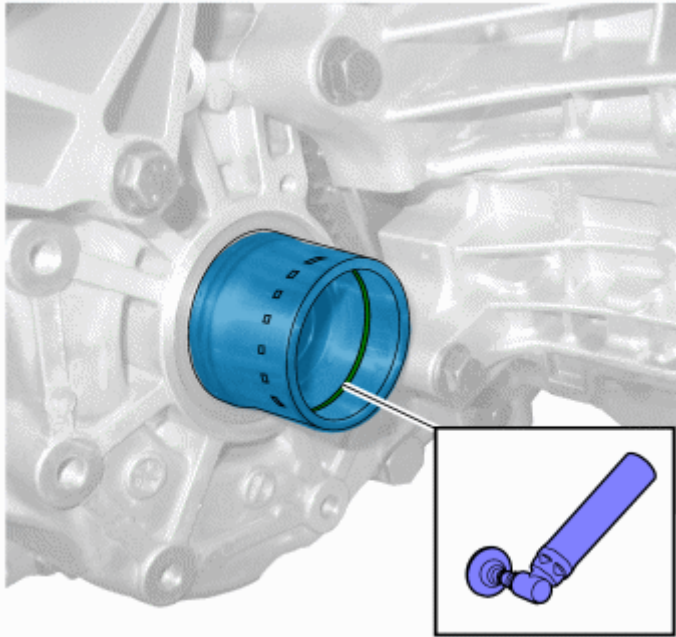
- the bevel gear according to [Bevel gear, replacing](#)
- the circlip in the connecting socket.



**Carry out corrective action at  
worn splines in the sleeve**

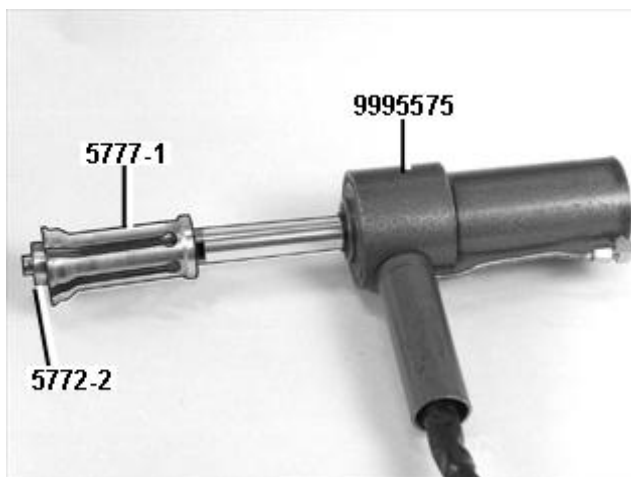
Cut out a  $\varnothing 40$  mm cardboard disc and use it to prevent swarf entering the gearbox. Apply a thick bead of grease or petroleum jelly on the seal in the sleeve. Press the cardboard disc against the seal.





Grind a groove in the inside of the sleeve to enable the expander [999 5777](#) to get a hold. The sleeve can also be heated using a hot air gun or induction heater.

#### Installing tool



Install expander 5777-1 and connecting rod 5772-2 (these are included in extractor 999 5777) on the puller cylinder. Puller cylinder [999 5575](#) is used together with hydraulic pump [999 5576](#) (foot-operated). Alternatively tool [999 2615](#) can be used, which consists of a puller cylinder and a compressed-air driven hydraulic pump.

#### Removing the connecting socket



Place a container underneath the gearbox. Ensure that the piston rod in the puller cylinder is in the outer position. Position sleeve [999 5777](#) between the puller cylinder and the transmission. Press in the expander so that it enters the groove on the connecting sleeve. Apply the puller cylinder. Check that the socket between the gearbox and the puller cylinder is in contact with its support surfaces. Remove the socket.

### Removing the sealing ring from the gearbox



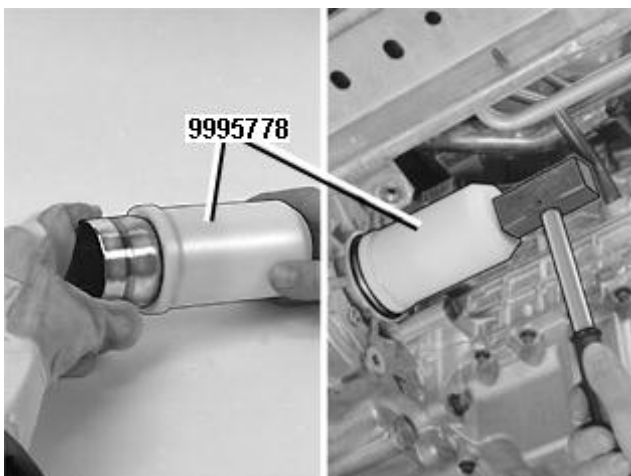
Use a screwdriver to pry out the seal. Position drift [999 5779](#) on the end of the differential to protect the sealing face from damage when removing the seal. Do not damage the surfaces in the transmission housing.

### Removing the sealing ring from the connecting socket



Use a screwdriver to tap the sealing ring out of the socket. Check the mating surface for the connecting socket. The socket must be replaced if there are signs of grooves or corrosion.

### Installing the connecting socket



Heat the sleeve to 150°-175°C in an oven and place the sleeve in drift [999 5778](#) . Set it against the transmission and tap in the sleeve until contacts the differential. The above operation must be carried out quickly to prevent the heat spreading to the differential and causing the differential to expand. Control measurement: the distance from the end of the connecting socket to the flat surface outside the sealing ring seat on the gearbox housing must be approximately 41 mm.

**Note! Use protective gloves when handling the heated socket. Care must be also taken to prevent burns in the**

**remaining operations.**

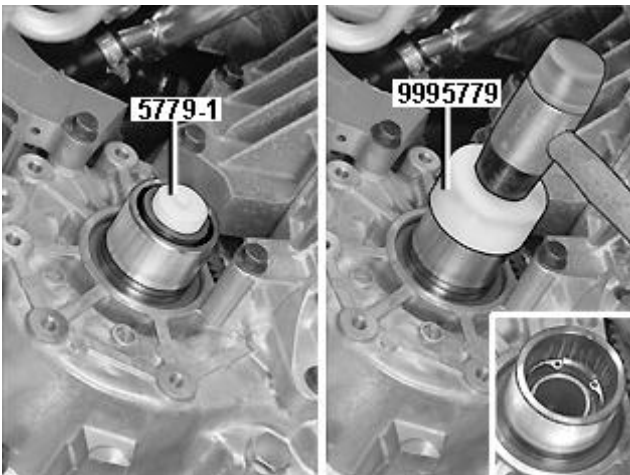
#### **Installing the sealing ring for the connecting socket**



Lubricate the sealing ring lip and the mating surface on the socket. Use ATF fluid.

Insert the seal ring to the sleeve. Tap the sleeve into place with drift [999 5780](#) . Tap in the drift until it contacts the transmission housing.

#### **Installing the sealing ring for the differential**



Position locating pin 5779-1 in the end of the differential. Lubricate the sealing ring lip and the locating pin using ATF oil. Tap in the seal using drift [999 5779](#) . Tap the drift in until it is contact with the end of the connecting sleeve. Install the circlip for the connecting socket.

#### **Finishing**

Install the bevel gear according to [Bevel gear, replacing](#)  
Check the gearbox oil level according to [Oil level, checking](#)