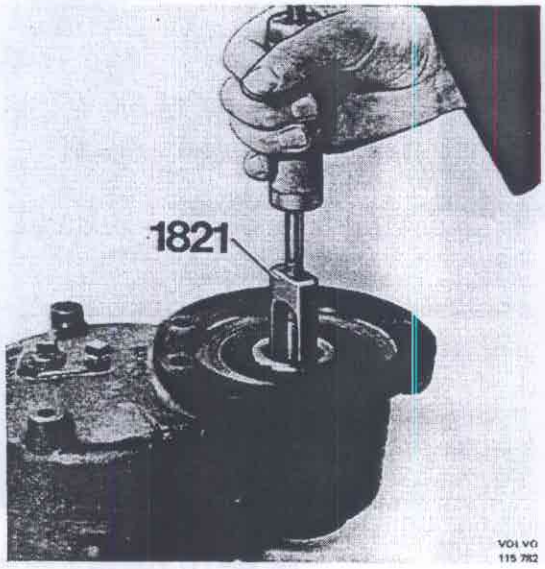

Fig. 46–119. Removing the wear ring

3. Remove the sealing wear ring with 1821, Fig. 46–119.
4. Remove the seal with 2097, Fig. 46–120.
5. Remove the nuts securing the wheel hub housing to the wheel carrier housing. Remove the plug on the wheel carrier housing. Fit and pull in the dismantling bolt 6141, Fig. 46–121. Remove the hub when it loosens from the wheel carrier. Remove the bolt 6141.

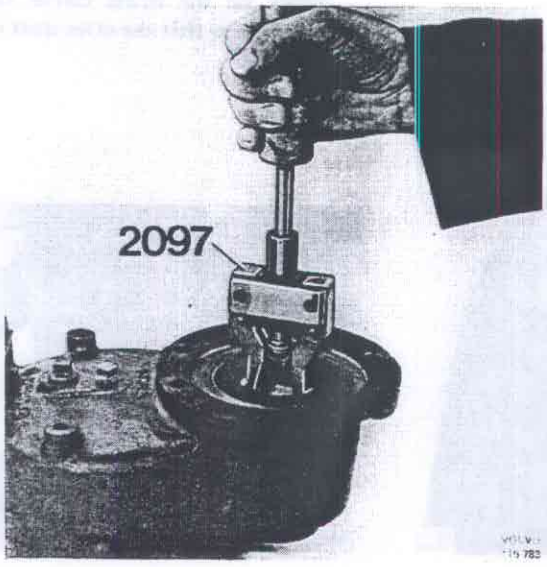

Fig. 46–120. Removing the seal

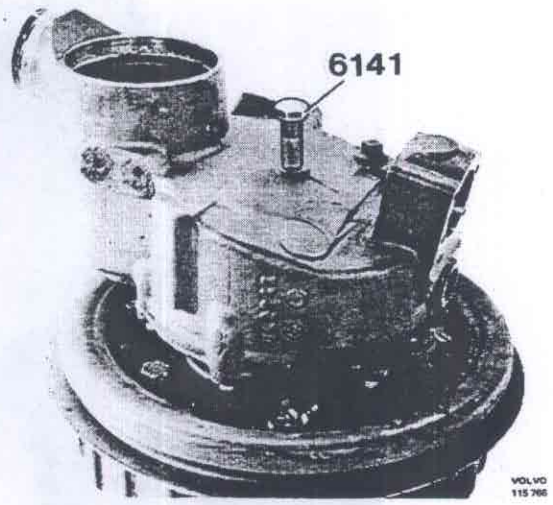

Fig. 46–121. Pressing housing apart

6. Remove the bearing circlip from the housing.
7. Place the wheel carrier in a press and press out the gear wheel, bearing and needle bearing at the same time with 2413, Fig. 46–122.
8. Remove the circlip on the gear wheel and press off the bearing with 2413, Fig. 46–123.

Checking and replacing parts

Wash all parts and clean the contact surfaces thoroughly. Replace the ball and needle bearings. Check the teeth on the gear wheel and if they are damaged the gear wheel should be replaced. With replacement, the wheel hub for the gear wheel should also be replaced, see special instructions under "Wheel and hub", Part 6. Replace the sealing in the housing like the X-ring on the drive shaft. Also check the wear ring for the sealing. If the wear ring is damaged, it should be replaced.

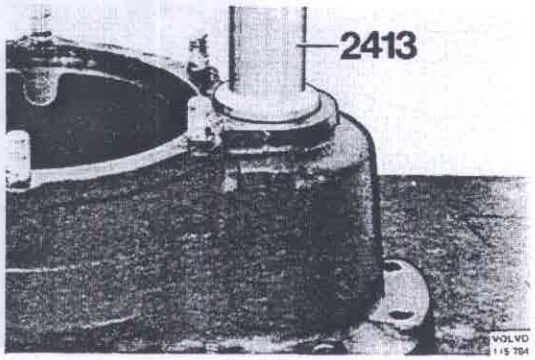

Fig. 46–122. Pressing out gear wheel

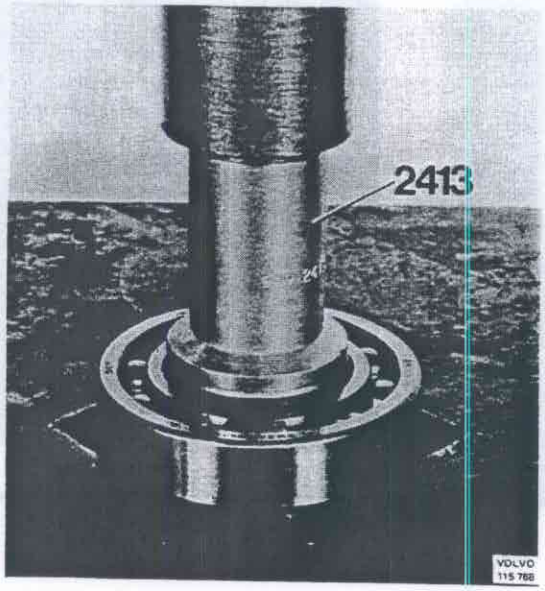

Fig. 46–123. Removing the bearing

Assembling

Special fools: 2022, 2132, 2413, 2584.

1. Press the ball bearing on the gear wheel with 2022, Fig. 46–124. Fit the circlip.
2. Press the gear wheel into the wheel carrier housing using 2584, Fig. 46–125. Fit the circlip.
3. Oil the needle bearing. Press the bearing into the housing and rotate the gear wheel at the same time to make sure that the bearing is fitted properly. Use 2413, see Fig. 46–126. Press down the bearing so that it comes flush with the edge.
4. Press the wear ring into the gear wheel, Fig. 46–127. Grease the sealing ring surfaces. Press down the seal with 2132, Fig. 46–128.

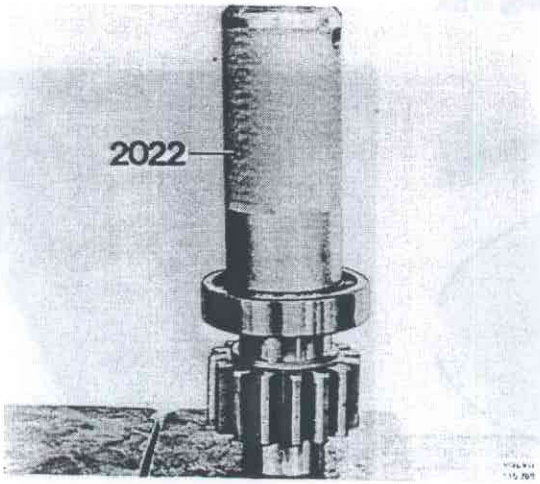

Fig. 46–124. Pressing on the bearing

Fig. 46–125. Pressing in the gear wheel

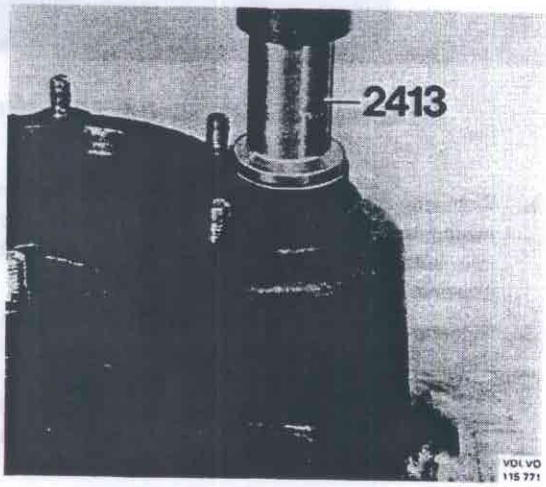

Fig. 46–126. Pressing in the needle bearing

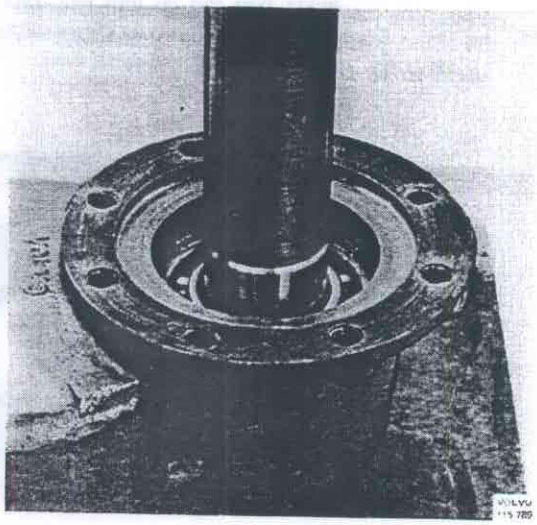

Fig. 46–127. Pressing in the wear ring

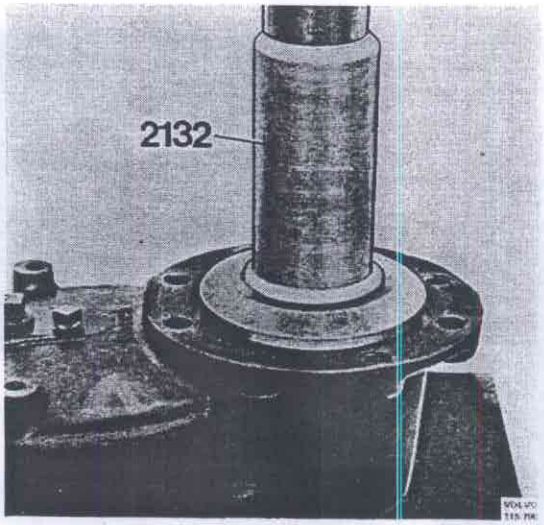

Fig. 46–128. Pressing in the seal

5. Coat the contact surface against the hub with sealing agent. Place the hub on the housing. Fit the nuts and tighten the hub and housing together.
6. Replace the circlip and X-ring on the drive shaft. Grease the circlip and splines. Fit the shaft in the gear wheel and drive it down so that the circlip grips the gear wheel. Grease the X-ring, Fig. 46–129, and press it down into the wear ring.

Installing the wheel carrier

1. Clean the contact surface on the rear axle casing and coat it with sealing agent.
2. Fit the two guide pins 6131 in the lower holes in the wheel carrier housing, Fig. 46–130. Place the housing on a jack. Jack up the carrier so that the guide pins can go into rear axle casing. Rotate the differential carrier flange while pushing in the wheel carrier at the same time.

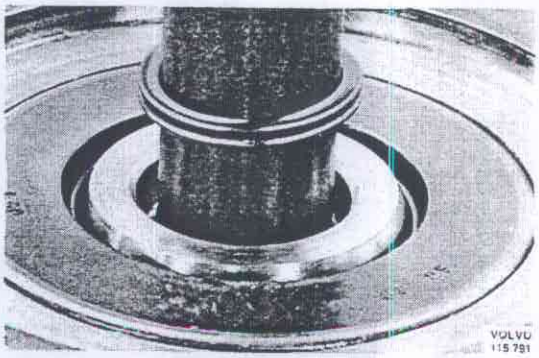

Fig. 46–129. Installing the X-ring

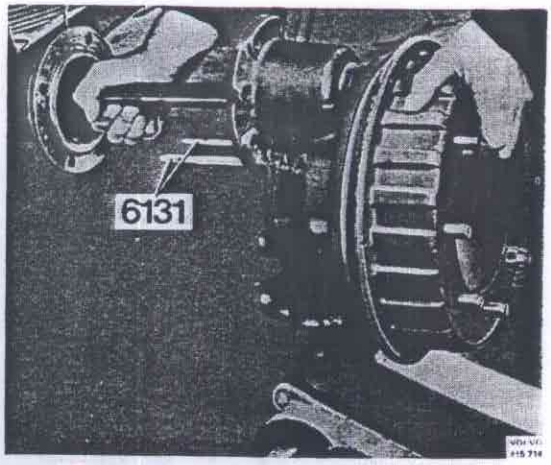

Fig. 46–130. Installing the wheel carrier

3. Fit the bolts round the casing. Remove the guide pins. Tighten the bolts to a torque of 100–120 Nm (10–12 kpm = 72–87 lbftf). Use 6135, see Fig. 46–134. Remove the jack.
4. Fit the shock absorber and the brake pipe.
5. Bleed the wheel cylinders. The pressure difference contact should be removed before bleeding, see Fig. 46–132. If a bleeder unit is used, the working pressure should be 0.2 MPa (2 kp/cm^2 = 28 lbf/in^2). For more detailed instructions about bleeding, see Part 5.

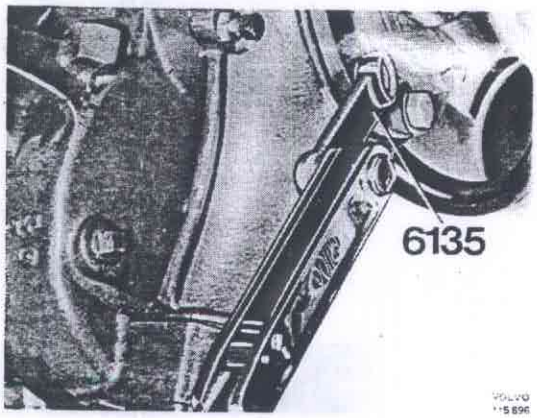

Fig. 46–131. Tighten the bolts

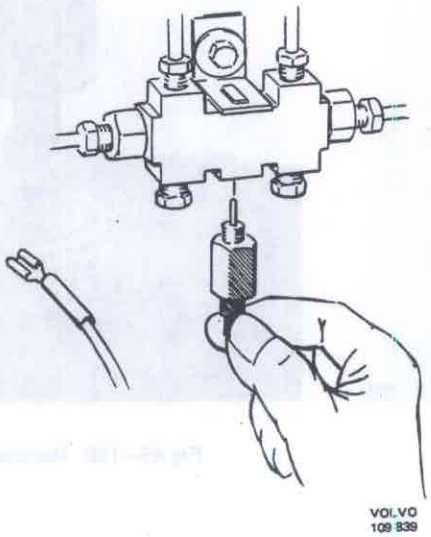

Fig. 46–132. Removing the contact

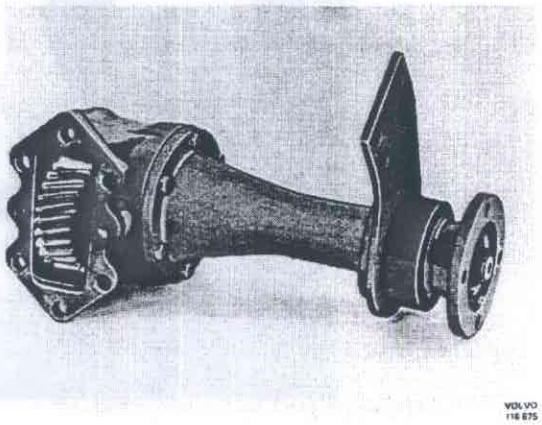

Fig 46–134 Power take-off

6. Fit the wheel.
7. Lower the vehicle. Tighten the wheel nuts to a torque of 210 Nm (21 kpm = 152 lbftf).
8. Fill the wheel carrier with oil. Concerning quantity and quality, see under "Data".
   Power take-off rear differential carrier.

POWER TAKE-OFF

Removing the power take-off from the rear differential carrier

1. Remove the propeller shaft.
2. Remove the nuts securing the power- take-off to the rear differential carrier, see Fig. 46–133.
3. Remove the bolts securing the power take-off to the rear axle casing. Remove the power take-off.

Servicing the power take-off (removed)

Disassembling

Special fools: 1801, 2261, 2490, 2837, 4030, 6122

1. Clean the power take-off.
2. Fit it in a vice. Fit counterhold 2837 on the flange, see Fig. 46–135.
   Remove the flange nut.
3. Remove the counterhold. Remove the flange with 2261, see Fig. 46–136.

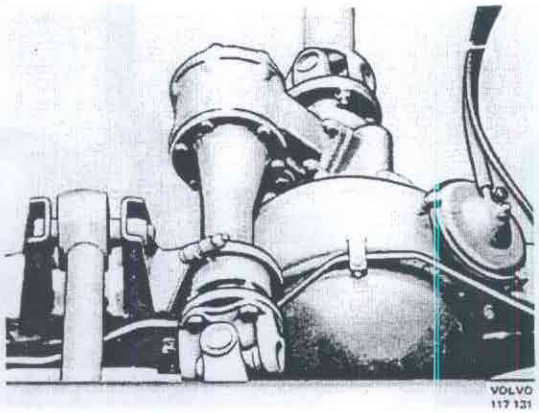

Fig 46–133 Power take-off on the differential carrier

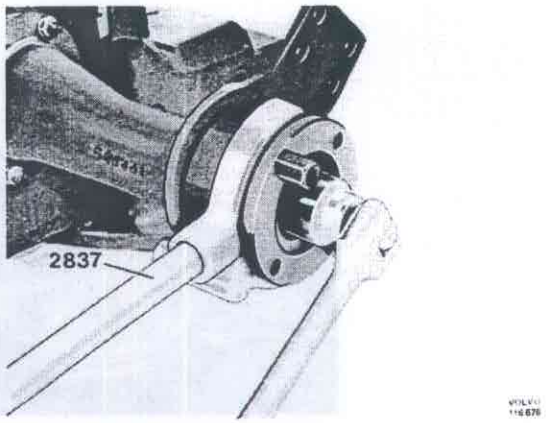

Fig. 46–135. Removing the nut

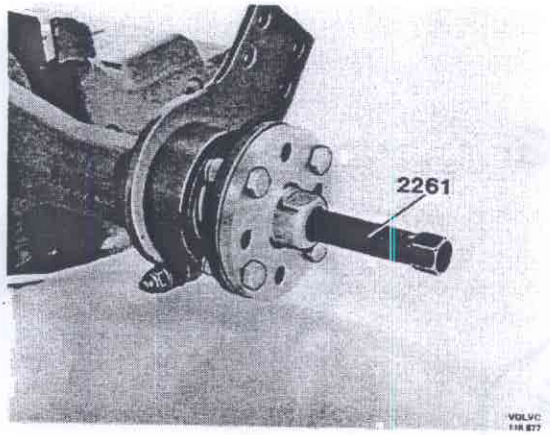

Fig 46–136 Removing the flange

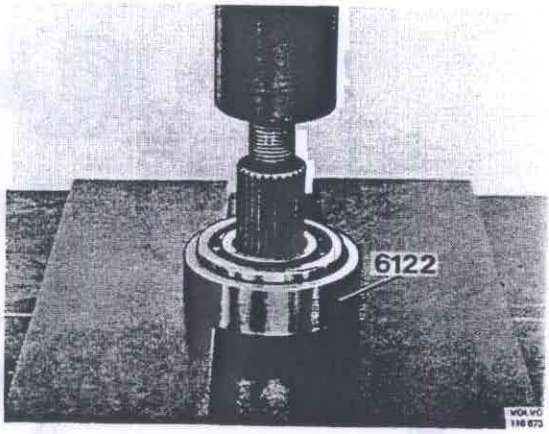

Fig 46–139 Removing the bearing

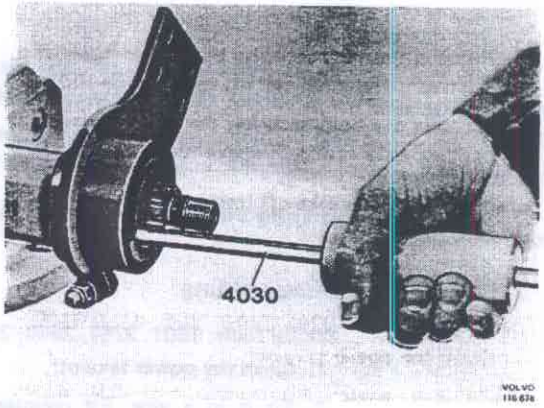

Fig. 46–137 Removing the seal

4. Remove the sealing rings with 4030, Fig. 46–137.
5. Remove the circlip holding the bearing in the housing.
6. Remove the cover on the housing for the gears. Place the power take-off in a press and press out the drive with a suitable drift, Fig. 46–138.
7. Place the drive shaft in 6122, Fig. 46–139, and press off the bearing.
8. Mark up the locating of the housing in relation to each other. Remove the bolts holding the housing together and separate the housing.
9. Remove the bolt securing the drive gear shaft. Press out the shaft with a suitable drift, Fig. 46–140. Remove the drive gear.

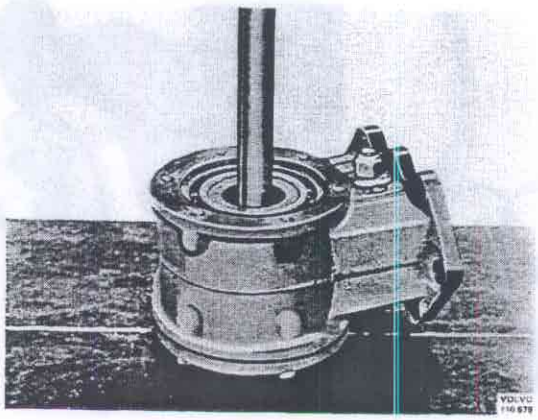

Fig 46–138 Removing the drive

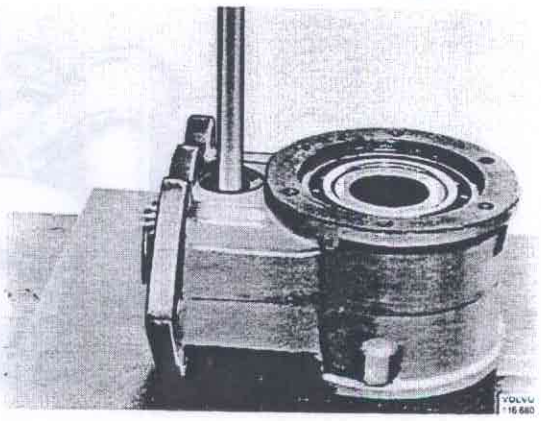

Fig 46–140 Removing the shaft

Fig 46—141 Removing the races

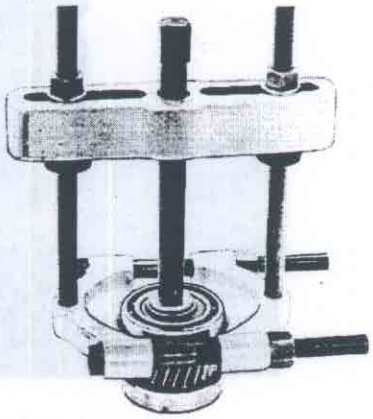

Fig 46—143 Removing the bearing

10. Remove the roller bearings and the shims from the gear. If necessary pull out the outer races with a standard puller, Fig. 46—141.
11. Press out the gear and bearing from the housing with 2490 and 1801, see Fig. 46—142.
12. Pull the ball bearings from the gear with a bearing extractor, Fig. 46—143.

Checking and replacing parts

Clean all parts and check for damage and wear. All damaged or worn parts must be replaced. As far as seals and O-rings are concerned, they must always be replaced. When replacing a gear because of wear, always check the gear on the rear differential carrier.

Assembling

Special fools: 2022, 2267, 2762, 6110, 6122

1. Press one of the ball bearings onto the gear with 2022, Fig. 46—144.
2. Press the gear into the housing with 2022, Fig. 46—145:

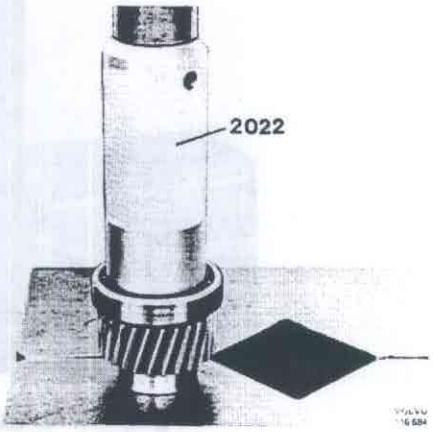

Fig 46—144 Pressing on the bearing

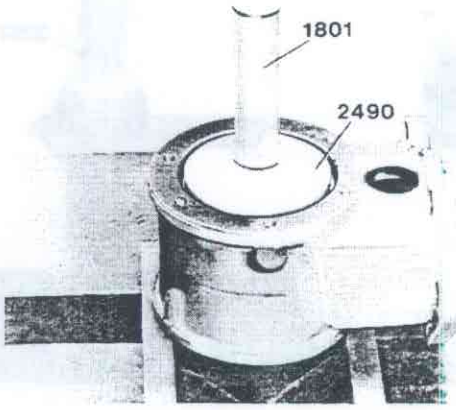

Fig 46—142 Removing the bearing

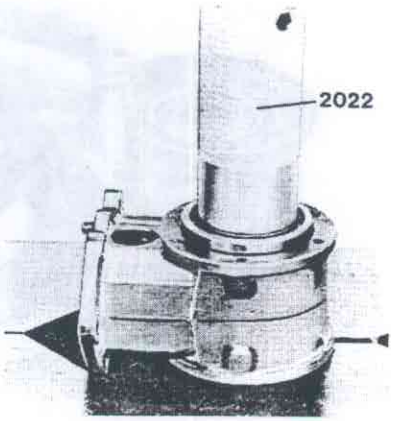

Fig 46—145 Pressing in the bearing

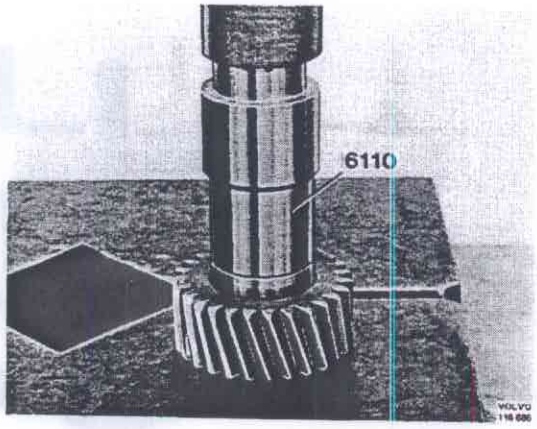

Fig 46—146 Pressing in the bearing

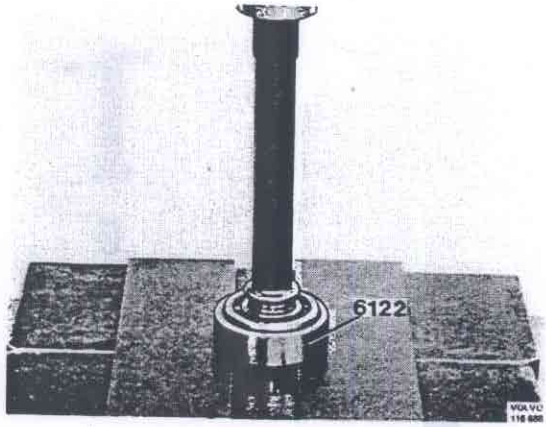

Fig 46—149 Pressing on the bearing

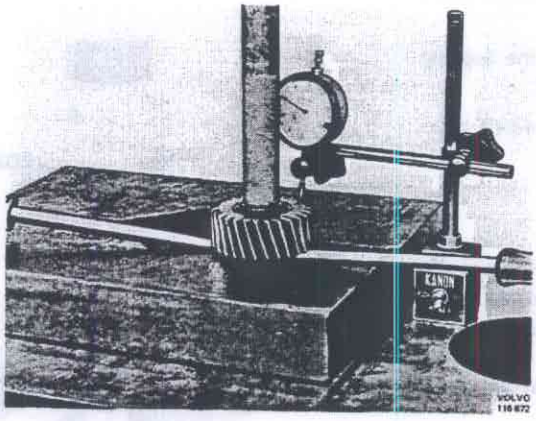

Fig 46—147 Checking the gearsaxial

3. Turn the housing and press the other bearings onto the gear.
4. Press the outer rings into the drive gear with 6110, Fig. 46—146.
5. Place the inner rings with the old shims in the drive gear.
6. Place the drive gear in a press, Fig. 46—147. Press the bearings together with a pressure of about 1 ton. Place a dial indicator with measuring point against the flat surface of the gear, see Fig. Check the gear axial clearance with the help of screwdrivers. The clearance must be 0.03—0.08 mm (0.012—0.032"), which is adjusted by means of shims from the following sizes: 1.25; 1.30; 1.35; 1.40; 1.60; 1.65; 1.85; 1.90; 1.95; 2.00 mm.
7. Fit new O-rings on the drive shaft.
8. Oil the drive gear bearings and place the drive gear in the housing, Fig. 46—148, and fit the shaft in position. Press in the shaft.

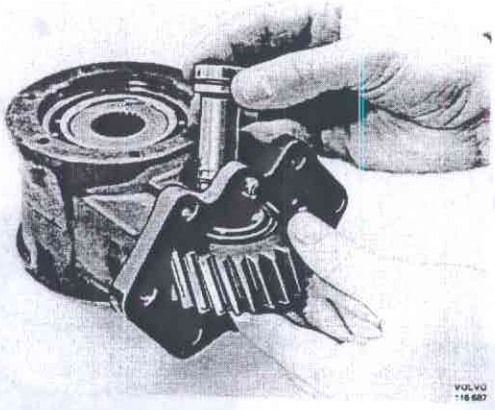

Fig 46—148 Fitting the gear

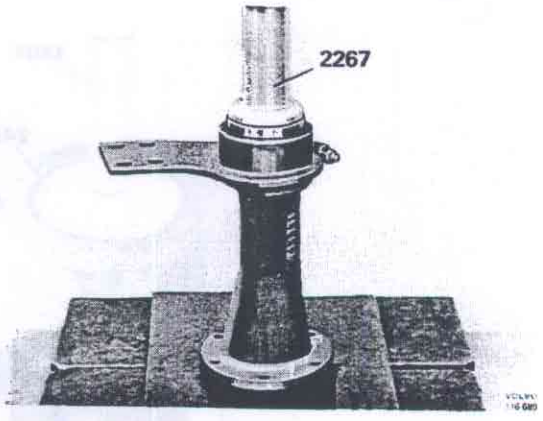

Fig. 46—150 Pressing in the drive shaft

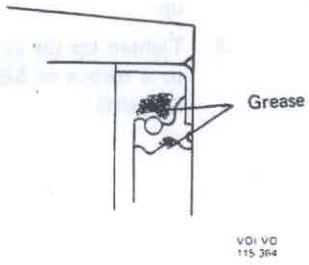

Fig 46–151 Placing grease

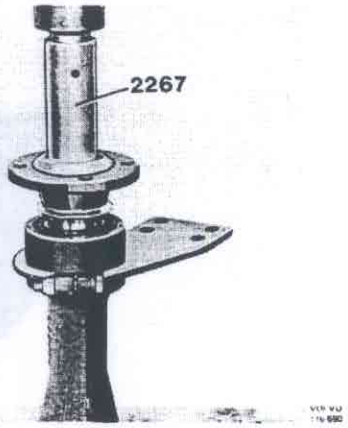

Fig 46–153 Pressing on the flange

9. Coat the sealing surface of the housing cover with sealing agent and fit the cover.
10. Press the bearing onto the shaft with 6122, Fig. 46–149.
11. Press the drive shaft into the housing with, 2267, Fig. 46–150. Fit the circlip.
12. Fill the space between the flange seal lips to 1/4th with grease, see Fig. 46–151. Press in the seal with 2267.
13. Fit a new seal on the flange, Fig. 46–152. Grease the sealing lip. Press the flange onto the shaft with 2267, Fig. 46–153.
14. Fit counterhold 2837 on the flange and fit the nut and washer. Tighten the nut to a torque of 41–51 Nm (4,1–5,1 kpm = 30–37 lbftf).
15. Coat the sealing surface on the drive shaft housing with a sealnt. Place the housing and gears in the press, Fig. 46–154, and fit the drive shaft housing in position. Press the housing together. Fit the bolts and tighten up.
16. Coat the bolt head, on the bolt for the drive gear shaft, with sealing agent. Place the bolt in the shaft, and note from the flange side, see Fig. 46–155. Coat the washer with sealing agent and fit it in position. Fit the nut and toghten it to a torque of 20–25 Nm (2,0–2,5 kpm = 14–18 lbftf).

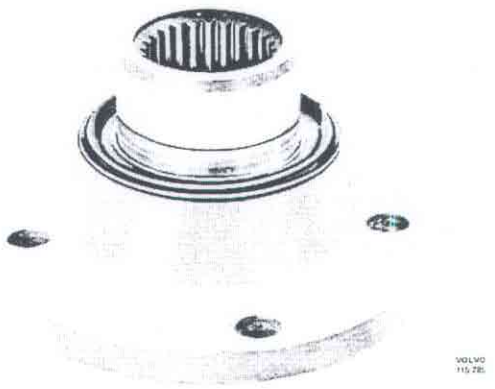

Fig 46–152 Flange seal

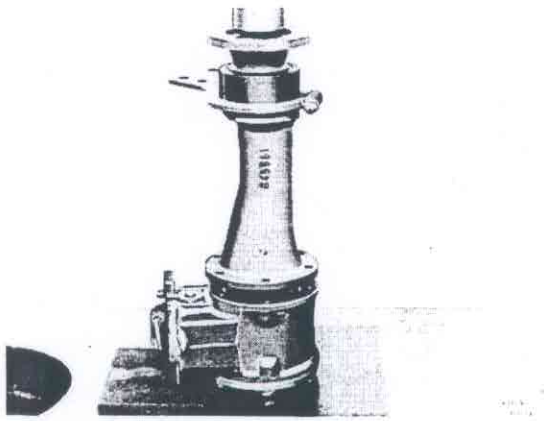

Fig 46–154 Pressing together the hosing

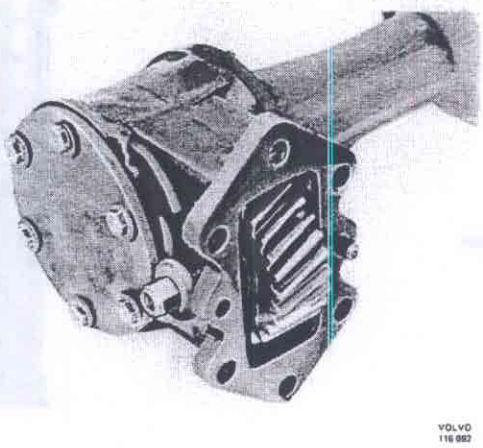

Fig. 46—155 Placing the bolt

Installing the power take-off

1. Clean the contact surface on the rear differential carrier and coat it with sealing agent.
2. Place the power take-off in position and tighten up.
3. Tighten up the propeller shaft. Tighten the bolts to a torque of 56—65 Nm (5.5—6.5 kpm = 40—48 lbftf).

Illustration 46-A. Differential carriers

Differential carriers

1. Pinion
2. Shims
3. Roller bearing, inner ring
4. Outer ring
5. Housing
6. Spacer ring
7. Shims
8. Outer ring
9. Roller bearing, inner ring
10. Oil deflector plate
11. Seal
12. Flange seal
13. Nut
14. Differential gear, large
15. Roller bearing, inner ring
16. Outer ring
17. Sleeve
18. Adjusting nut
19. Washer
20. Circlip
21. Flange sleeve
22. Bolt
23. Lock washer
24. Bearing cap
25. Differential housing
26. Bolt
27. Crown wheel
28. Thrust washer
29. Thrust washer
30. Differential gear, small
31. Shaft