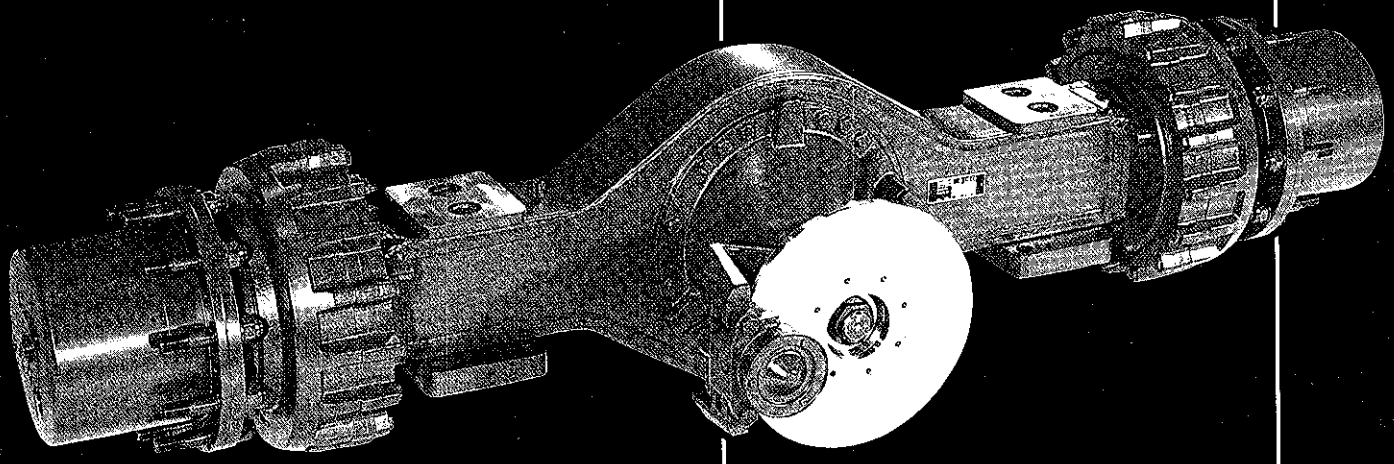
KESSLER+CO



KESSLER ACHSEN

SERVICE MANUAL

Schmiervorschriften und Wartungshinweise

Lubrication intervals and maintenance instructions

Allgemeine Hinweise zur fachgerechten Montage und Demontage Kundendienstwerkzeuge

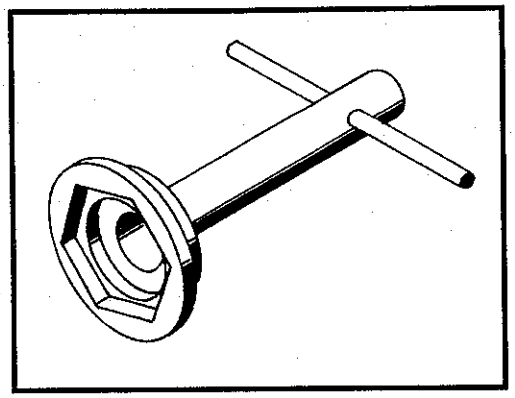
General instructions for correct assembly and disassembly Service tools

Kundendienstwerkzeuge

Service tools

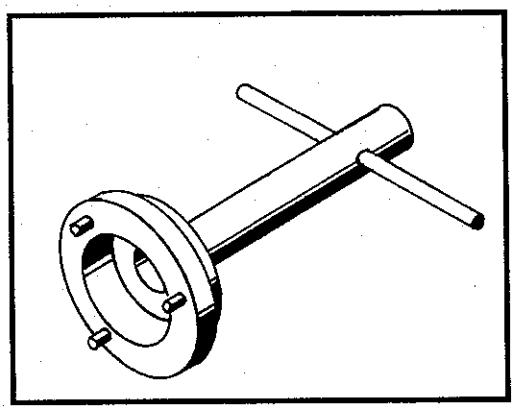
Bei Bestellung von Kundendienstwerkzeugen bitten wir um Angabe der Sach - Nummer (Nr. der Einbauzeichnung) , bzw. Fabrikations - Nummer → siehe Typenschild . (Die Abbildungen sind für die Ausführung nicht verbindlich) .

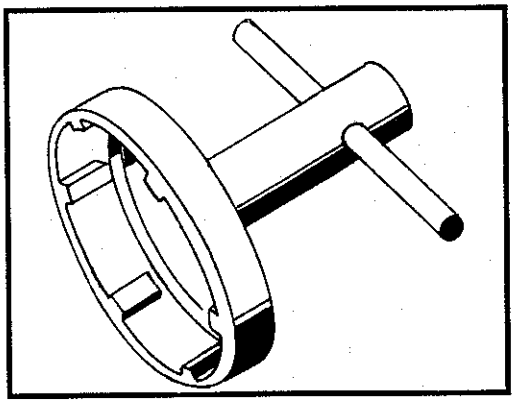
When ordering service tools please provide order number (installation drawing no.) , resp. fabrication number → see identification plate . (The illustrations are not binding for the design) .



Schlüssel für Radsicherungsmutter

Spanner for wheel safety nut

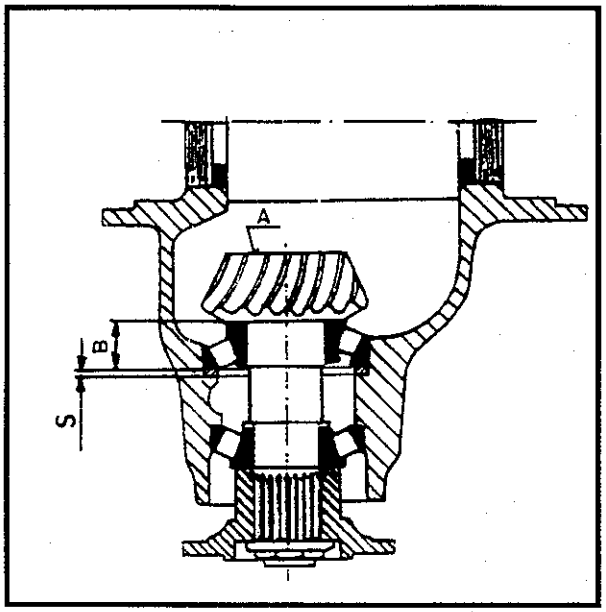




Schlüssel für Nutmutter (Radseite)

Spanner for splined nut (hub assembly)

Tragbildeinstellung



Zur Erzielung eines richtigen Flankentragens muß die axiale Lage des Kegelritzels mittels der Einstellscheibe korrigiert werden . Die erforderliche Dicke wird durch Ausmessen ermittelt .

Achsantrieb Drive assembly	D 41	D 51
theor. S	3	3
theor. B	36,5	38

A = Einstellmaß für Ritzellagerung . Dieses Maß ist in 1 / 100 mm auf der Ritzelstirnfläche aufgeschrieben . Es gibt die Abweichung vom theoretischen Abstandsmaß an .

B = Breite des Kegelrollenlagers

Berechnungsbeispiel zur Ermittlung der Scheibendicke S :

A = 10 ; B = 37,95

S = 3,00 mm (theor.)
+ 0,05 mm → B = 0,05 mm kleiner als theor. B
= 3,05 mm
- 0,10 mm → Ritzelstirnfläche Maß A
= **2,95 mm** → erforderliche Scheibendicke

Entsprechende Scheibe einsetzen und Lageraußenringe einpressen .

Assembly of the drive pinion bearing

1. Install the thrust plate and insert the two outer rings of the taper roller bearings into the pinion housing .

2. Calculate the thickness C of the spacer ring .

   a) Place the two inner rings of the taper roller bearings in their outer rings . Measure A .

   b) Measure the dimension B of the drive pinion .

   c) Thickness of the spacer ring C = A - B .

3. Heat the drive pinion side taper roller bearing to about 100 ° C and install it on the drive pinion shaft . (Drive on completely after it cools) .

4. Install the spacer ring on the pinion shaft .

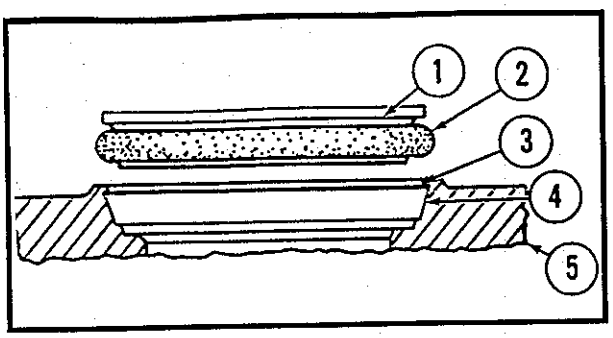
5. Install the pinion housing onto the drive pinion . Heat the taper roller bearing inner ring at undersize to about 100 ° C and install it with a tube onto the drive pinion shaft .

6. Install the drive flange onto the drive pinion shaft . Tighten the safety nut by turning the pinion housing according sheet 3.5 . For tightening , place the drive pinion in a vice using soft jaws or clamp the drive flange with the fork support in the vice .

Montage Radseite

Assembly hub assembly

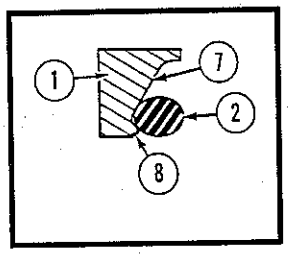
Assembly of the face seal



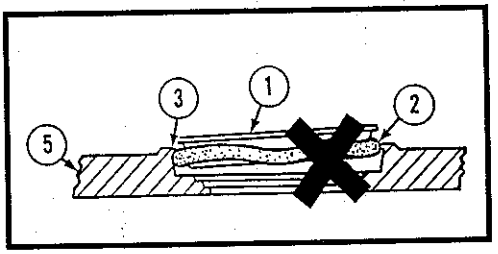
1 . Seal ring
2 . Rubber toric ring
3 . Housing retaining lip
4 . Housing ramp
5 . Seal ring housing

Seal rings , torics , and housings must be clean and free of any oil film , dust , or other foreign matter . Use a solvent that evaporates quickly , leaves no residue , and is compatible with the rubber toric rings . The recommended solvent is Isopropanol . Ring and housings should be wiped with a solvent - soaked lint free cloth or paper towel .

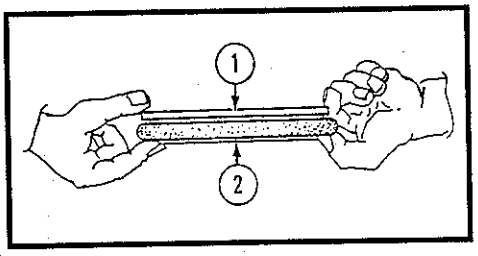
After all components have been wiped clean , the torics should be installed on the metal seal rings so that they rest in the radius on the tail of the metal ring . Insure that the torics are not twisted by inspecting the mold flash line on the outside diameter of the toric for true circumferential tracking around the seal . Twisted torics will cause nonuniform face load that can result in leckage of lubricant and pumping of debris past the toric . If a twist is apparent , it can be eliminated by gently pulling a section of the toric radially away from the metal seal ring and letting it „ snap „ back . Repeating this in several places around the ring will eliminate any twist in the toric ring .



Put the toric ring (2) on seal ring (1) , at the bottom of the seal ring ramp (7) and against the retaining lip (8) .



The toric ring (2) can twist if it is not wet all around during in - stallation or if there are burrs or fins on the retaining lip (3) of the housing (5) .



Eliminate toric twist by gently pulling a section of the toric (2) rapidly away from the seal ring (1) and letting it „ snap „ back .

Prepare the ring gear and the ring gear carrier

Heat the taper roller bearing inner ring with cage (1) to about 100 ° C and install it onto the ring gear carrier (2) . Place the ring gear (3) onto the ring gear carrier . Bolt the retainer (5) with the screws (4) , secure the screws with Loctite 270 .

Assembly of the ring gear carrier

Install the ring gear carrier (2) with ring gear (3) into the wheel hub resp. onto the steering knuckle resp. axle spindle . The oil compensating hole in the ring gear carrier must be on the bottom . Subsequent adjust wheel bearings (see chapter 5.7) .

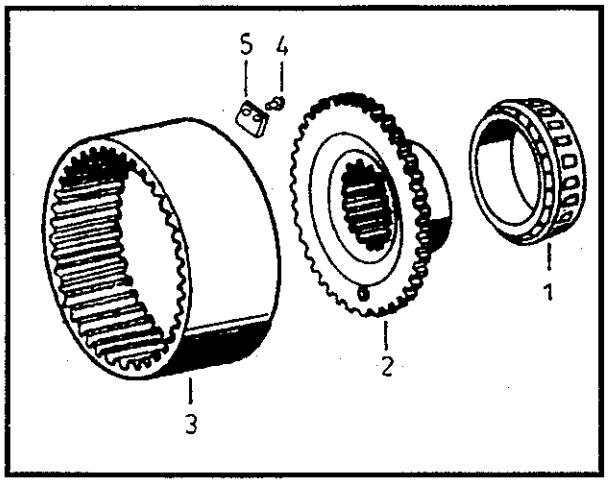
Assembly of the thrust ring

Press the thrust ring (6) into the steering knuckle resp. axle spindle . Secure with Loctite 270 .

Assembly of the sun gear

Slip the sun gear (7) onto the universal joint resp. axle shaft , install the circlip (9) and push the universal joint resp. axle shaft towards the inside until the circlip contacts to the sun gear and the sun gear contacts to the thrust ring .

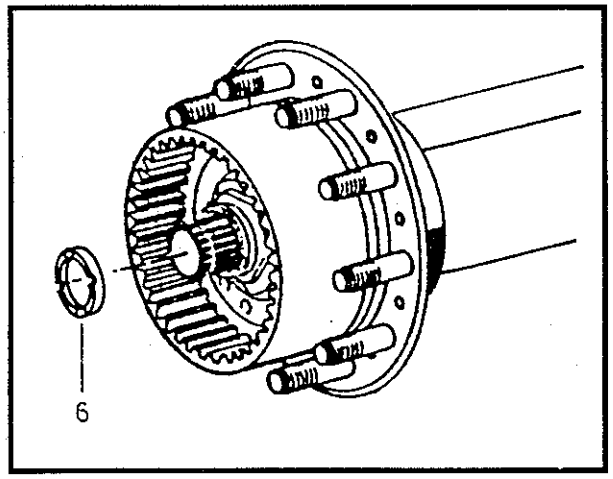
Hohlrad mit Hohlradträger vorbereiten



Kegelrollenlager - Innenring mit Käfig (1) auf ca. 100 ° C erwärmen und bis zum Anliegen auf den Hohlradträger (2) aufschieben . Hohlrad (3) auf den Hohlradträger aufsetzen . Mit Schrauben (4) Halterung (5) verschrauben , Schraubensicherung mit Loctite 270 .

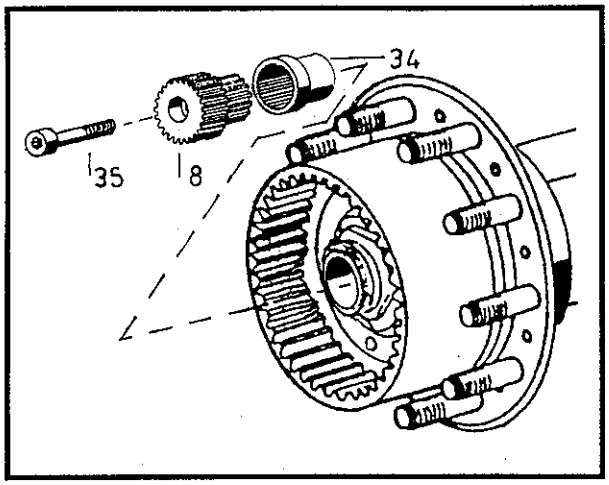
Hohlradträger montieren

Vormontierte Hohlradträger (2) mit Hohlrad (3) in die Radnabe bzw. auf den Achstrichter bzw. Achsschenkel aufschieben . Ölausgleichsbohrung im Hohlradträger muß nach unten weisen . Anschließend Radlager einstellen (siehe Kapitel 5.7) .



Montage Anlaufring

Anlaufring (6) in Achsschenkel bzw. Achstrichter einpressen . Sicherung mit Loctite 270 .

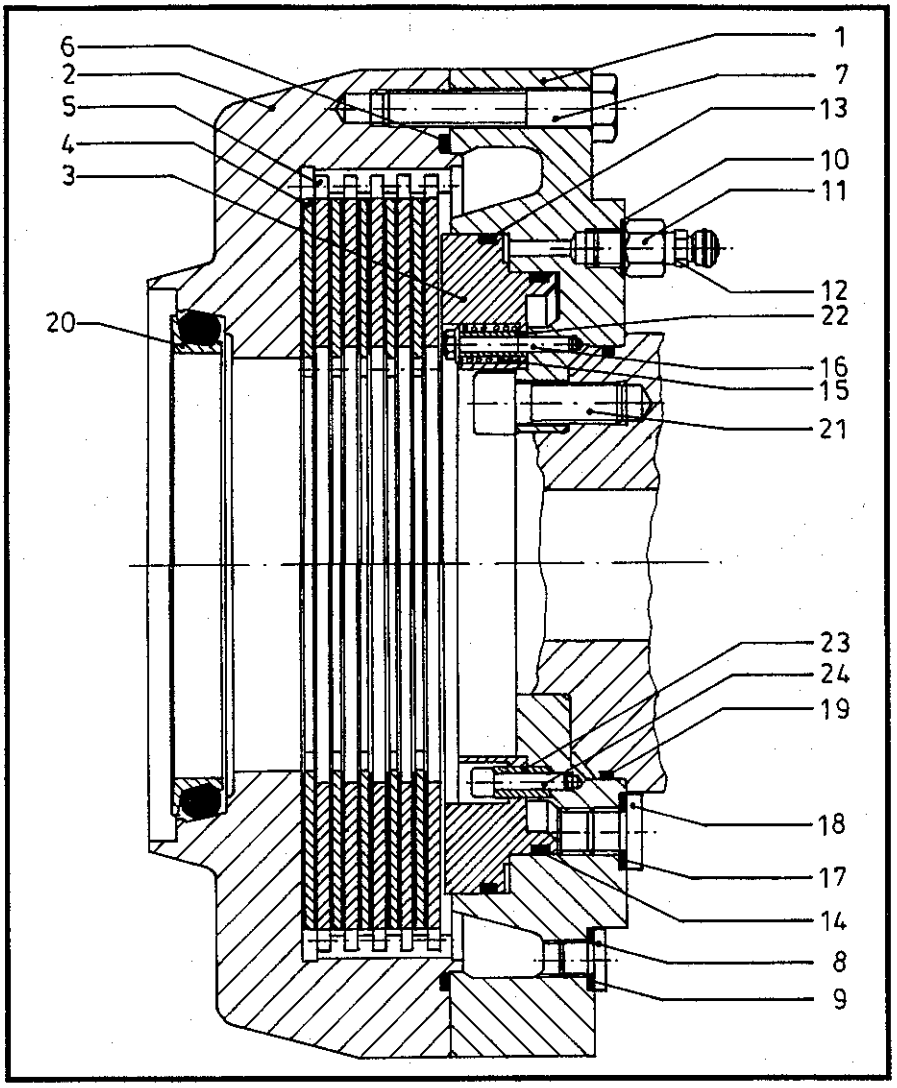


Montage Sonnenrad mit Muffe

Muffe (34) auf Doppelgelenkwelle bzw. Steckachse aufschieben . Sonnenrad (8) in Muffe einschieben und mit Schraube (35) mit der Doppelgelenkwelle bzw. Steckachse verschrauben , Schraubensicherung mit Loctite 262 . Doppelgelenkwelle bzw. Steckachse nach innen schieben bis Sonnenrad an Muffe und Muffe am Anlaufring anliegt .

Montage Nasse Lamellenbremse

Assembly of the wet disk brake



1. Bremsenträger	Brake carrier	13. Dichtsatz	Sealing ring
2. Bremsengehäuse	Brake housing	14. Dichtsatz	Sealing ring
3. Kolben	Piston	15. Feder	Spring
4. Innenlamelle	Inner disk	16. Schraube	Screw
5. Außenlamelle	Outer disk	17. Dichtring	Seal ring
6. O - Ring	O - ring	18. Verschlußschraube	Screw plug
7. Schraube	Screw	19. O - Ring	O - ring
8. Verschlußschraube	Screw plug	20. Gleitringdichtung	Face seal
9. Dichtring	Seal ring	21. Schraube	Screw
10. Dichtring	Seal ring	22. Rohr	Tube
11. Stutzen	Connection piece	23. Buchse	Bushing
12. Entlüfter	Breather	24. Schraube	Screw

Tightness checking instruction for brake hydraulic system and cooling oil room

Check brake hydraulic system for leaks

Before conducting the test , bleed the brake hydraulic system .

The pressure drop after applying 120 bar for a period of 15 minutes must not exceed 2% (leaving 117,5 bar) .

Test medium : Motor oil SAE 10 W corresponding to MIL - L 2104 .

Check cooling oil room for leaks

Brake with external cooling :

After assembly of the wheel hub with the face seal and adjusting of the wheel bearings check the tightness of the cooling oil room .

Install a air pressure gauge with shutoff valve .

Beload the hub assembly with 1,5 bar pressure air .

Turn the hub assembly several times .

The pressure drop after a period of 10 minutes must not exceed 0,1 bar .

Brake without external cooling :

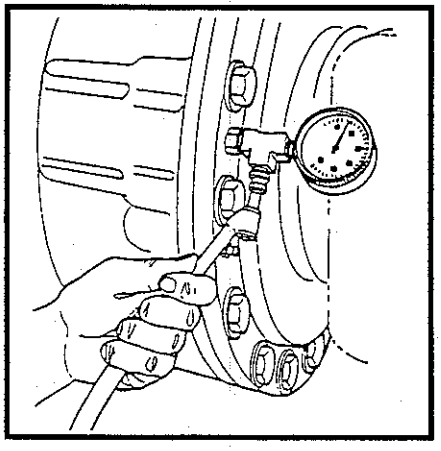
After assembly of the planetary gear drive check the tightness of the cooling oil room .

Install a air pressure gauge with shutoff valve .

Beload the hub assembly with 0,5 bar pressure air .

Turn the hub assembly several times .

The pressure drop after a period of 15 minutes must not exceed 0,1 bar .



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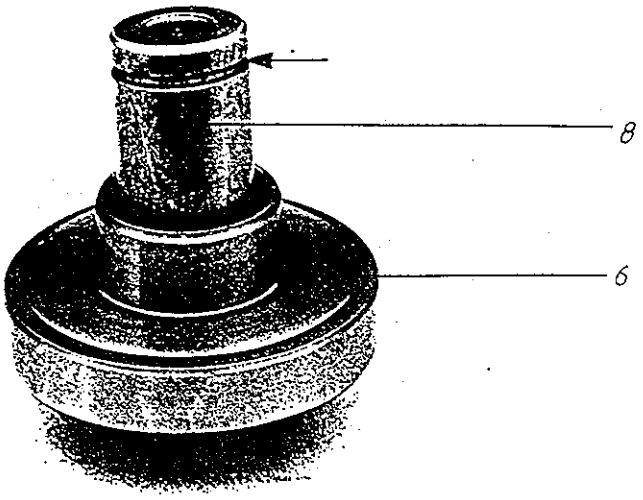
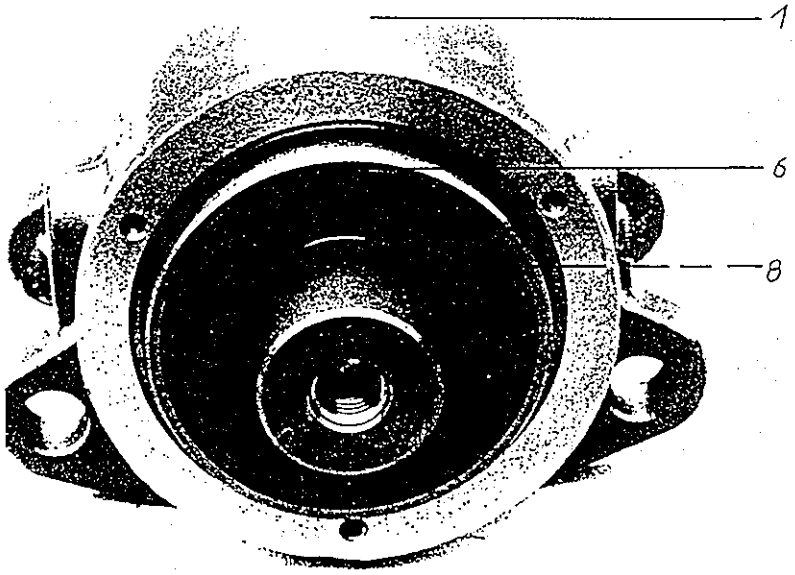
Picture 7



- The push rod (8) has to be assembled with the piston (6) thus the groove - see arrow - is outside the piston .

Picture 8



- Press piston (6) which is assembled with the push rod (8) into the brake caliper (1)

Note :

Grease the piston , because it slides easier through the sealing ring (12) ; see also picture 5 .