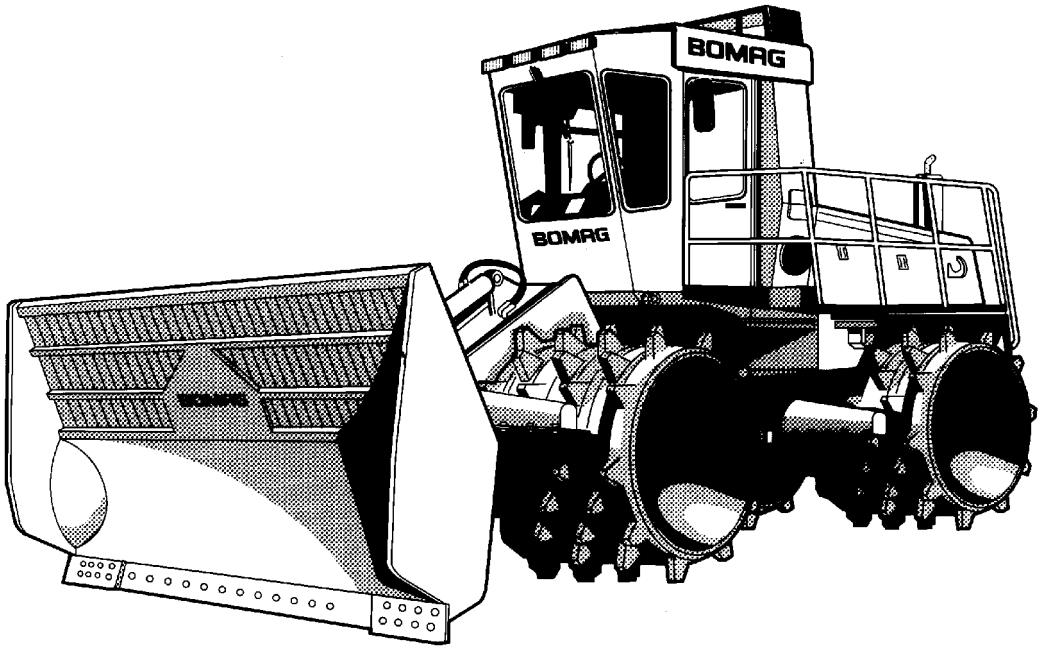
BOMAG

Instructions for repair

BC 672 RB / BC 772 RB



Sanitary landfill compactor

Catalogue number
008 912 65

08/2002

Tightening torques

- Tighten fastening screws and nuts according to the table of tightening torques.
- Tightening torques deviating from the ones in the table are specially mentioned in the repair instructions.

⚠ Caution

Self-locking nuts must be generally renewed.

Tightening torques for screws with metric unified thread

Screw dimension	Tightening torque Nm* (ft-lb)		
	8.8	10.9	12.9
M4	3 (2)	5 (4)	5 (4)
M5	6 (4)	9 (7)	10 (7)
M6	10 (7)	15 (11)	18 (13)
M8	25 (18)	35 (26)	45 (33)
M10	50 (37)	75 (55)	83 (61)
M12	88 (65)	123 (91)	147 (108)
M14	137 (101)	196 (145)	235 (173)
M16	211 (156)	300 (221)	358 (264)
M18	290 (213)	412 (303)	490 (361)
M20	412 (304)	578 (426)	696 (513)
M22	560 (413)	785 (559)	942 (695)
M24	711 (524)	1000 (738)	1200 (885)
M27	1050 (774)	1480 (1092)	1774 (1308)
M30	1420 (1047)	2010 (1482)	2400 (1770)

Tightening torques for screws with metric fine thread

Screw dimension	Tightening torques Nm* (ft-lb)		
	8.8	10.9	12.9
M8 x 1	26 (19)	37 (27)	48 (35)
M10 x 1.25	52 (38)	76 (56)	88 (65)
M12 x 1.25	98 (72)	137 (101)	126 (119)
M12 x 1.5	93 (69)	127 (94)	152 (112)
M14 x 1.5	152 (112)	216 (159)	255 (188)
M16 x 1.5	225 (166)	318 (235)	383 (282)
M18 x 1.5	324 (239)	466 (344)	554 (409)
M20 x 1.5	461 (340)	628 (463)	775 (572)
M22 x 1.5	618 (456)	863 (636)	1058 (780)
M24 x 2	780 (575)	1098 (808)	1294 (1416)
M27 x2	1147 (846)	1578 (1164)	1920 (1416)
M30 x 2	1568 (1156)	2254 (1662)	2695 (1988)

* Strength classes for screws with untreated, non-lubricated surface.

The values result in a 90% utilization of the screw's yield point at a coefficient of friction μ total = 0,14.

Compliance with the tightening torques is checked with torque wrenches.

Tightening torques deviating from the ones mentioned in the table are specially mentioned in these descriptions.

The values specified in the table apply for screws black, oiled and with surface protection A4C.

The quality designation of the screws is stamped on the screw heads.

*		BC 672 RB	BC 672 RB
Voltage supply	V	12	12
Battery	V/AH	12/180	12/180
Generator	V/AH	Deutz 24/55	Deutz 24/55
Starter	V/kW	Deutz 24/6.6	Deutz 24/6.6
Travel pump			
Number of pumps		4	4
Manufacturer		Hydromatik	Hydromatik
Type front		A4VG 71 DA	A4VG 71 DA
Type rear		A4VG 71 DG	A4VG 71 DG
System		Axial piston/ swash plate	Axial piston/ swash plate
Displacement	cm^3/rev.	71	71
Pressure override valve	bar	430 +10/–20	430 +10/–20
High pressure limitation	bar	480 –20	480 –20
Charge pressure limitation	bar	30 ±2	30 ±2
Travel pressure at control start	bar	50 at 950 ±50 rpm	50 at 950 ±50 rpm
Max. deviation travel pressure left/right	bar	1750 ±75/rpm	1750 ±75/rpm
Travel motor			
Manufacturer		Hydromatik	Hydomatik
Type		A6VM 160 HA 2T	A6VM 160 HA 2T
System		Axial piston – bent axle	Axial piston – bent axle
Displacement stage 1	cm^3/rev.	160	160
Displacement stage 2	cm^3/rev.	50	50
Control start	bar	280	280
Control end	bar	380	380
Brakes			
Service brake		hydrostatic	hydrostatic
Parking brake		Multi-disc, spring accumulator	Multi-disc, spring accumulator
Brake releasing pressure	bar	18...20	18...20
Steering			
Type of steering		Oscill.-articul.	Oscill.-articul.
Steering operation		hydrostatic	hydrostatic
Oscillation angle	±	15	15
Steering angle	±	30	30
Steering/working pump			
Manufacturer		Brüninghaus	Brüninghaus
Type		A10VO 71 DFR	A10VO 71 DFR
System		Axial piston – swash plate	Axial piston – swash plate
Displacement	cm^3/rev.	71	71
Dozer blade pressure	bar	230 ±10	230 ±10
Steering pressure	bar	200 ±10	200 ±10
Stand-by pressure	bar	30 ±10	30 ±10
LS-signal	bar	respective high pressure	respective high pressure
Working/steering valve			
Manufacturer		Rexroth	Rexroth

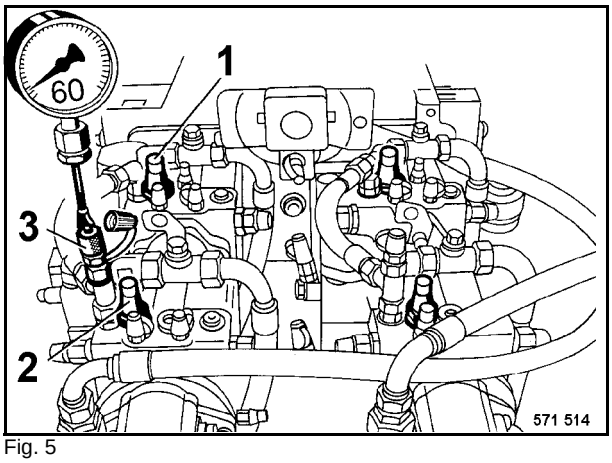


Fig. 5

2.7 Checking charge pressure

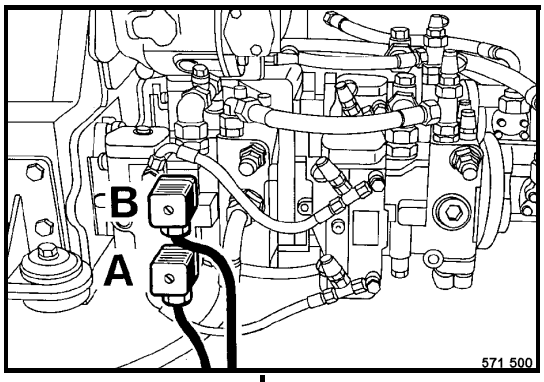
1. Run the machine until operating temperature is achieved, then shut down the engine.
2. Block the front charge pressure relief valve 1 (Fig. 1) on a tandem pump, turn the setscrew completely in to do so.
3. Connect a 60 bar pressure gauge to the charge pressure test port (3).
4. Start the engine and run it with half speed.
5. Set the rear charge pressure relief valve (2) to 30 bar.
6. Run the engine with maximum speed (the charge pressure increases).
7. Loosen the blocked valve until the charge pressure of 30 bar is reached again.
8. Check the charge pressure again at idle speed.

   Nominal value:

   min. 28 +/- 2 bar
9. Should the pressure of 28 bar not be reached, repeat the basic adjustment with a pressure higher than 30 bar, but on both valves identical.
10. Check and adjust the other tandem pump accordingly.

3.2 Trouble shooting diagram

The machine drives with the travel lever in „NEUTRAL“



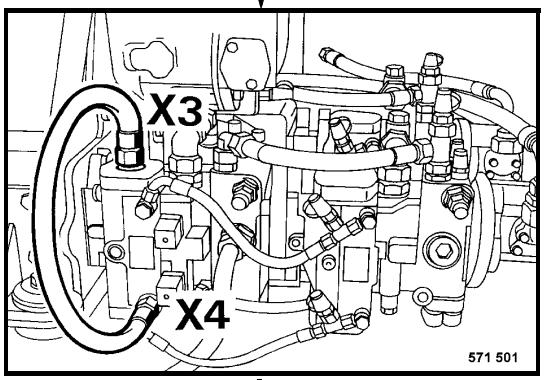
Check the control current to the solenoids

- Pull the plugs off the magnets of the control, one after the other

Machine stops?

yes → Perform trouble shooting in electric system

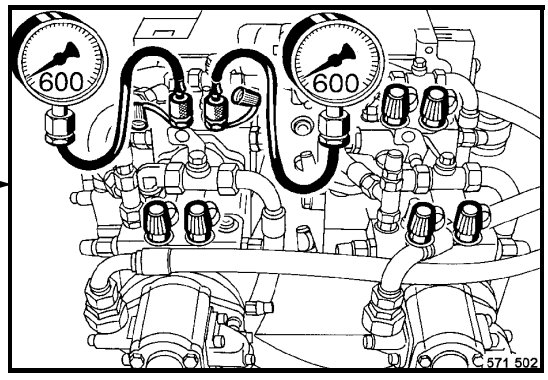
no



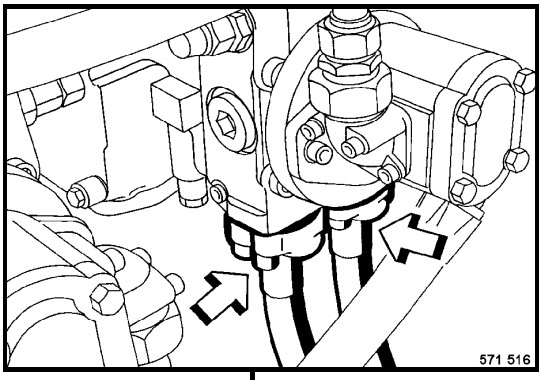
Check the zero position of the pump

- Connect control chamber ports X3 and X4 on one pump with a hose
- Start the engine
- Repeat this test on all pumps

Machine stops?

no → 

yes



Check the individual components

- Disconnect the high pressure hoses from one pump
- Close the pump ports with plugs
- Repeat the pressure test
- Perform this test also on the other pump

Charge pressure

yes

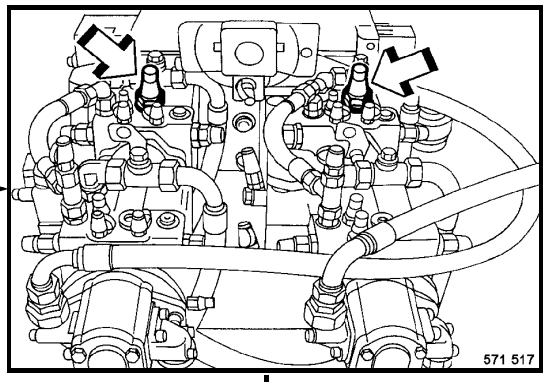
Replace/repair the corresponding travel motor

no

Replace/repair the corresponding travel pump

Pilot pressure OK?

no



yes

Check and adjust the DA-control valve

- Unscrew and check the DA-control valve, replace it if necessary
- Adjust the DA-control valve

Nominal value:
1220 rpm engine speed
150 bar high pressure
1890 rpm engine speed
390 bar high pressure
Pilot pressure evenly increasing

Pilot pressure OK?

no

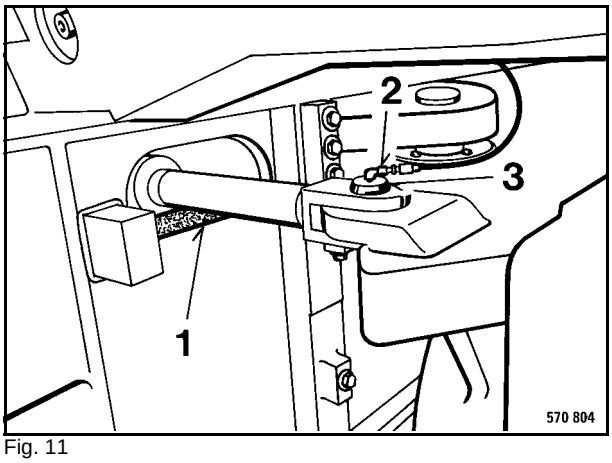


Fig. 11

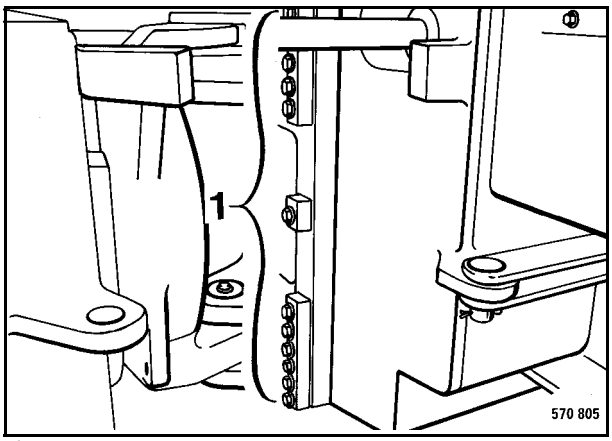


Fig. 12

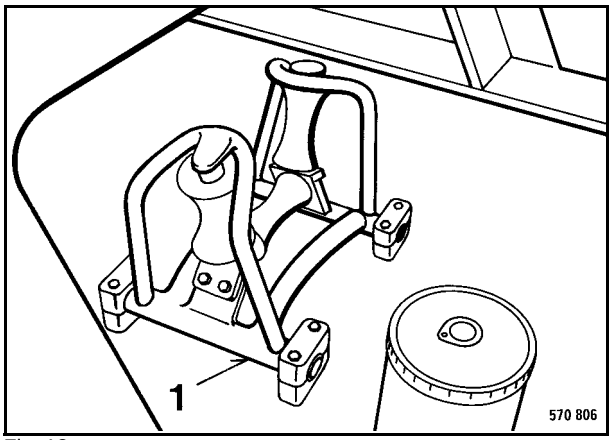


Fig. 13

18. Place a plastic pad 1 (Fig. 11) under the steering cylinder rod.
19. Disconnect the lubrication hoses from connections (2).
20. Remove the bars and knock out the bolts (3).

i Note
Grease the parts.

21. Unscrew all hexagon screws 1 (Fig. 12) from the console

i Note
Cover the threads with copper paste.

Tightening torque: 418 Nm

22. Move the front frame carefully forward for approx. 2 m, until the oscillating articulated joint is free.

⚠ Danger
Secure dozer blade or front frame against turning over.
Danger of squashing!
Do not step or work under suspended loads.
Danger of squashing!

23. Support front frame and dozer blade in a safe manner.
24. Disassemble roller guide 1 (Fig. 13) from the tank
25. Attach the lifting tackle to the fuel tank.

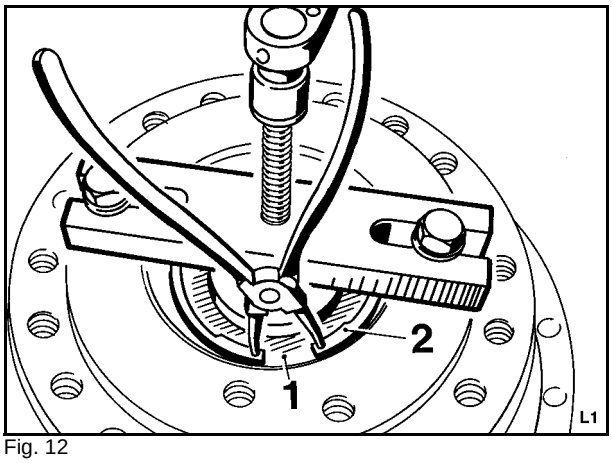


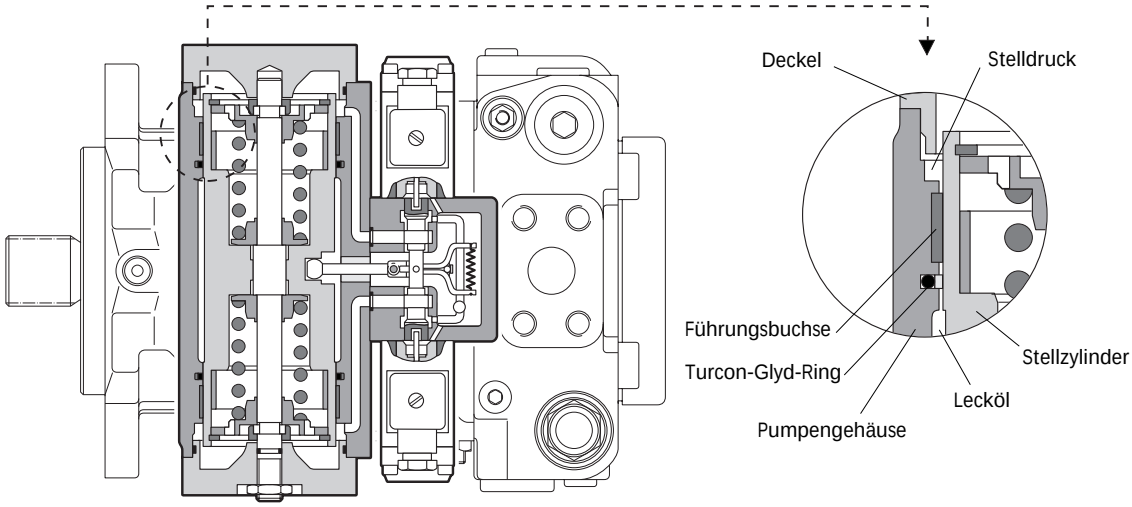
Fig. 12

10. Press shim 1 (Fig. 12) down with the clamping device until circlip (2) can be installed.

⚠ Caution

Make sure that the circlip is correctly mounted.

11. Remove the clamping device, vent the brake several times with the manual hydraulic press (pmax = 50 bar) and check for leaks (pressure drop).



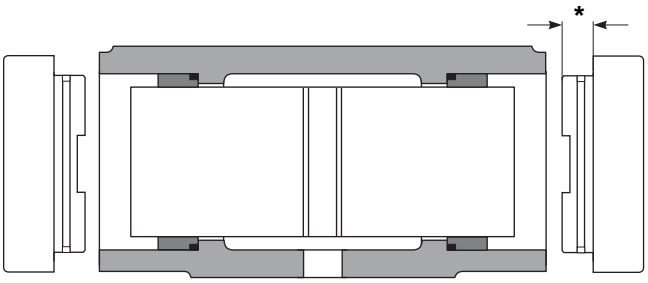
Bei den Verstellpumpen A4VG erfolgt zur Zeit die Umstellung der Verstellung auf Turcon-Dichtungen.
Die Stückliste der kompletten Einheit erhält dabei eine neue Ident.- Nummer.
Typenschlüssel, Typnummer und Außenabmeßungen bleiben dabei unverändert. (Pumpengehäuse ändert sich nur im Bereich vom Stellkolben. Stellkolben ändert sich in eine angefaste Ausführung).

⚠ Alten Stellkolben nicht bei Turcon-Dichtung verwenden (scharfkantig - Dichtungen werden beschädigt).

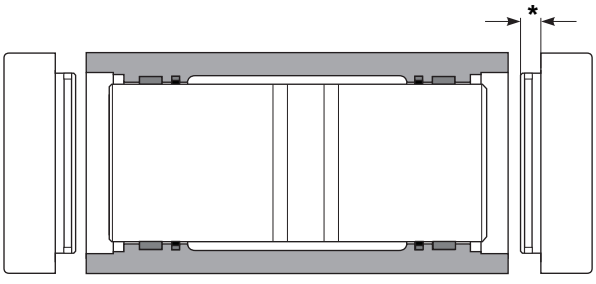
At present the change of the control into Turcon seal is made for A4VG.
The parts list of the complete unit will receive a new identification number.
Type reference and outside dimensions remain unchanged (pump housing will change at the area of the positioning piston. Positioning piston will change into chamfering design).

⚠ Do not use old positioning piston with Turcon seal (sharp edged - seal will be damaged)

Pumpengehäuse / Pump housing
mit Lagerbuchse / with bush **ALT / OLD**



Pumpengehäuse / Pump housing
mit Turcon-Dichtung / with Turcon seal **NEU / NEW**

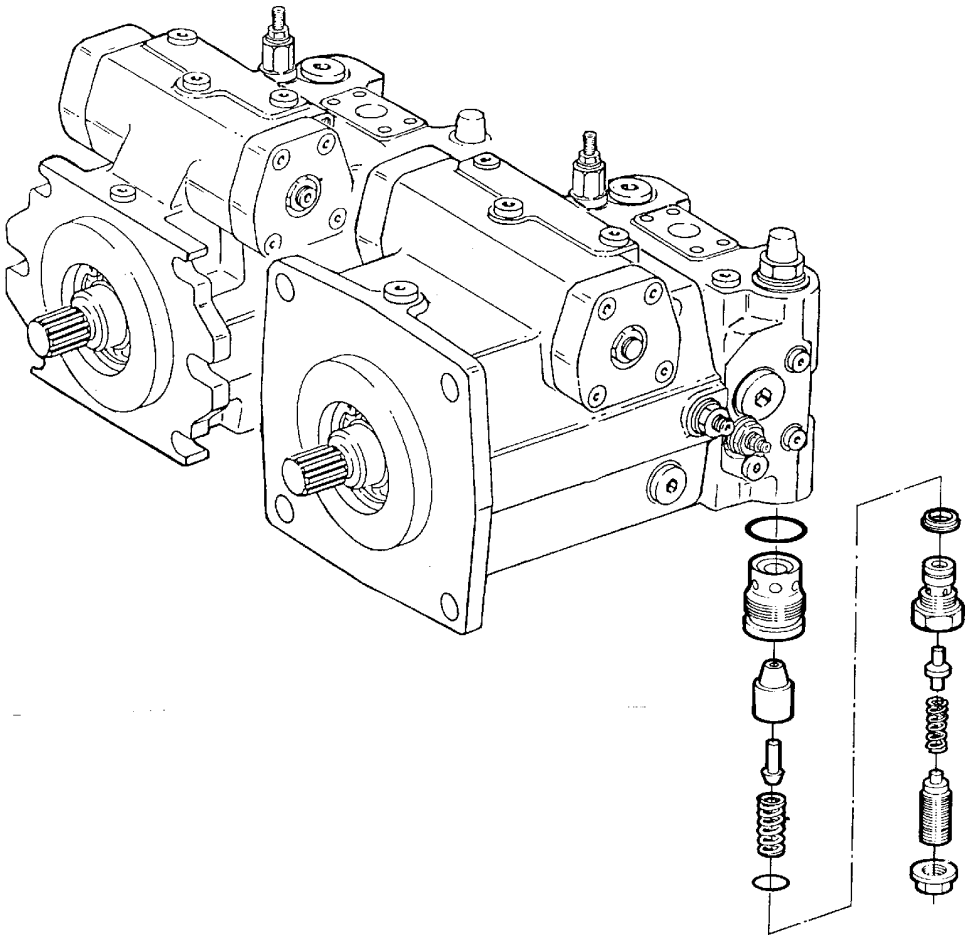


⚠ Die Umstellung der Verstellung auf Turcon-Dichtung ist im allgemeinen mit einer Funktionsverbesserung verbunden (DA-Verhalten, geringerer Temperatureinfluß auf Stellzeiten).

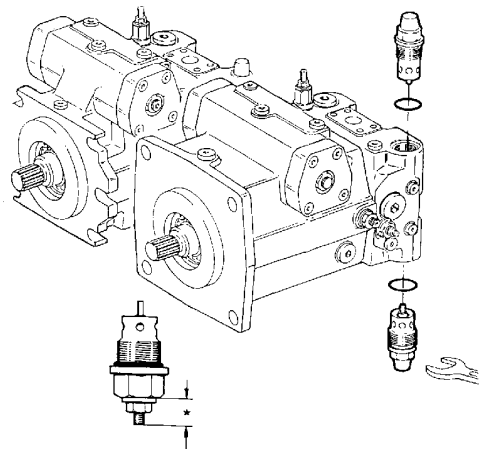
⚠ Bei gleicher Düsenbestückung können sich die Stellzeiten geringfügig verändern.

⚠ The change of the control into Turcon seal design improves in general the function (DA-behaviour, lower temperature-influence on control times).

⚠ The control times will slightly change with the same throttle sections. Therefore our customers have to be informed about this change.



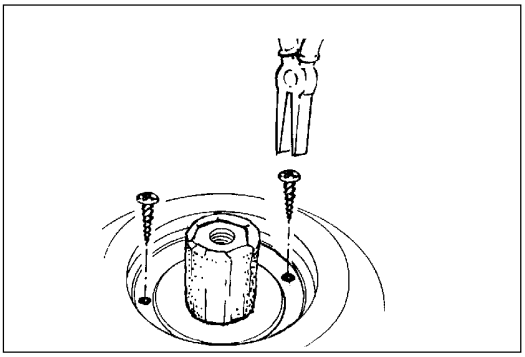
30



31

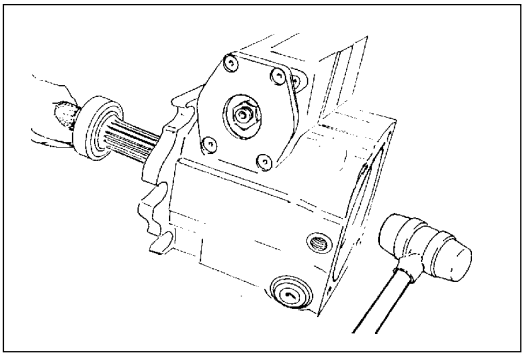
Ventil komplett ausbauen.
Kontrolle: O-Ring, Gehäuse.
Wechsel der Dichtmutter - Einstellmaß (*) festhalten.
Achtung!
Nach Einbau "Ventileinstellung" überprüfen.

Remove valve completely.
Control: O-ring, housing.
Replacement of the tightening nut, record measure (*).
Attention!
After assembly check "valve setting".



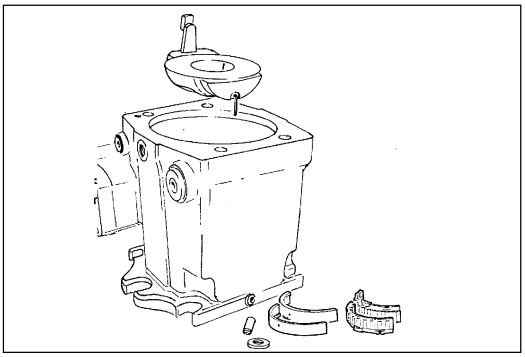
54 Seegerring / WDR ausbauen.

Remove retaining ring and radial seal ring.



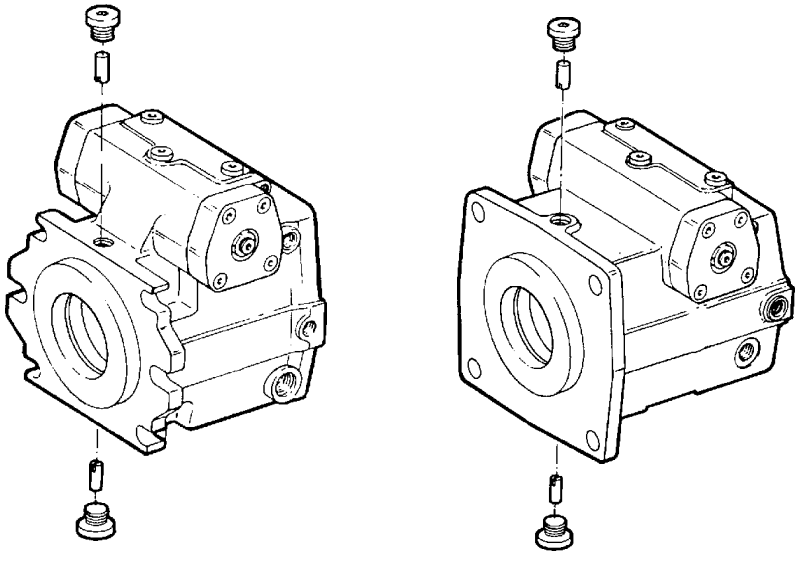
55 Triebwelle mit leichten Hammerschlägen austreiben.

Remove drive shaft with slide hammer strokes.



56 Schwenkwiege / Lager komplett ausbauen.

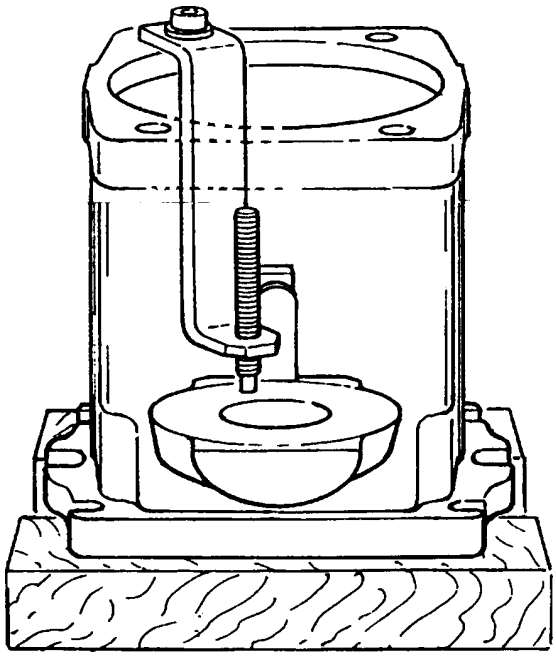
Remove swash plate / bearing cups.



Gelenkstift ausbauen.

Remove joint pin.

57



Haltevorrichtung montieren.
Mit Gewindestift Schwenkwiege festhalten.

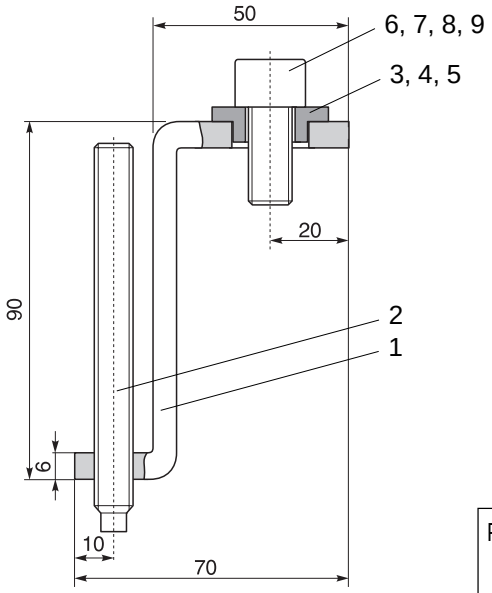
⚠ Keine Gewaltanwendung.

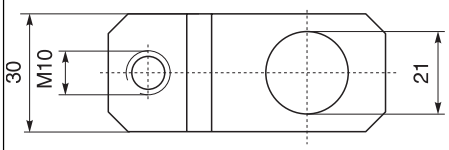
Fit holding device.
Hold swash plate in position utilising the set screw.

⚠ Do not use force.

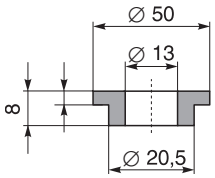
86

Haltevorrichtung "Schwenkwiege" A4V
Holding device "swivel cradle" A4V

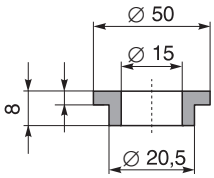




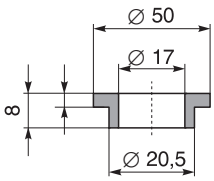
Teil/Part 3



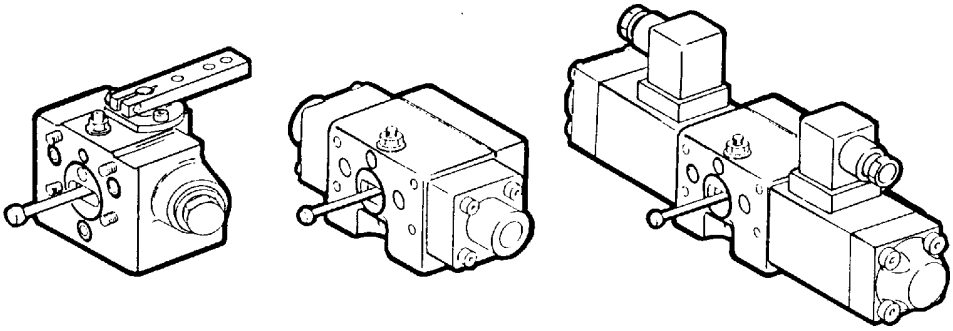
Teil/Part 4



Teil/Part 5



Pos./Item	Benennung/Designation	Stck./Qty.
1	Winkel/Angle	2
2	Gewindestift/Threaded pin	2
3	Scheibe/Shim	2
4	Scheibe/Shim	2
5	Scheibe/Shim	2
6	Zyl. Schraube/Cyl. screw M12 x 25 DIN 912	2
7	Zyl. Schraube/Cyl. screw M14 x 25 DIN 912	2
8	Zyl. Schraube/Cyl. screw M16 x 30 DIN 912	2
9	Zyl. Schraube/Cyl. screw M20 x 35 DIN 912	2

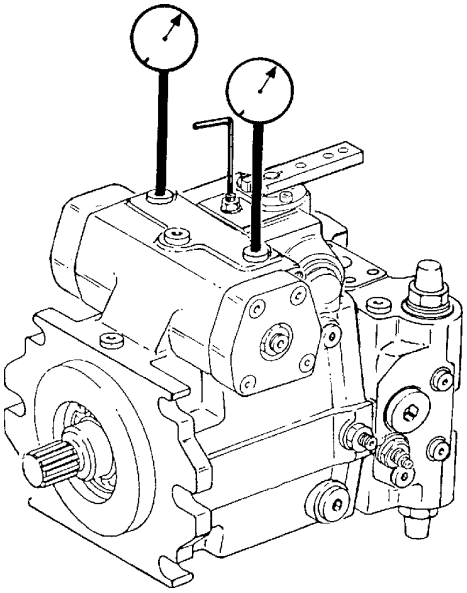


HW **HD** **EP**

Achtung!
Sicherheitsbestimmungen beachten!

Attention!
Observe safety regulations!

108



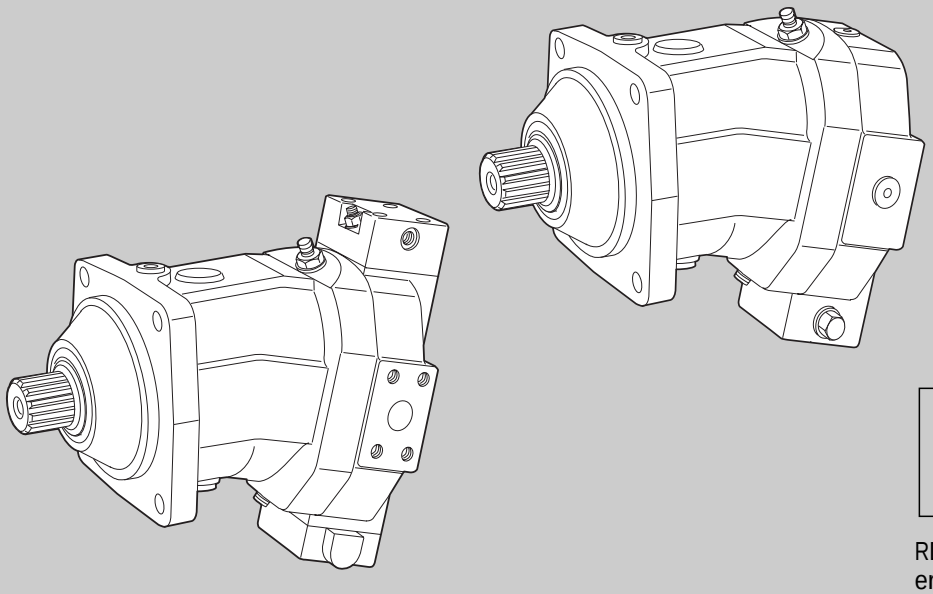
Manometer an X_1 und X_2 anschließen.
Nullage so einstellen, daß bei blockiertem Antrieb beide Manometer auf gleichem Druckwert stehen.
Hinweis:
Excenterjustierung
- nicht über ±90° verdrehen.

Connect manometer to X_1 and X_2.
Adjust zero position so that at blocked drive both manometer indicate the same pressure value.
Note:
Eccentric adjusting
- Do not turn over ±90°.

109

Rexroth
Bosch Group

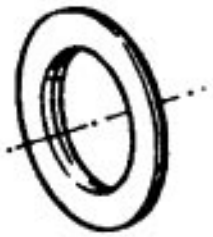
Reparaturanleitung / Repair instructions
A6VM 28...200 / 63



R

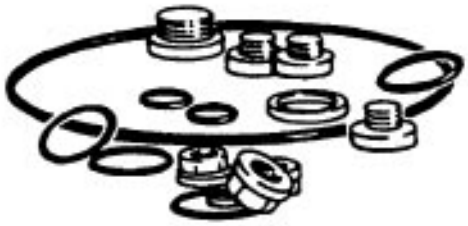
RDE 91604-01-R/08.01
ersetzt / replaces
RDE 91604-01-R/08.99

Mobile Hydraulics



Dichtsatz für Triebwelle.

Seal kit for drive shaft.

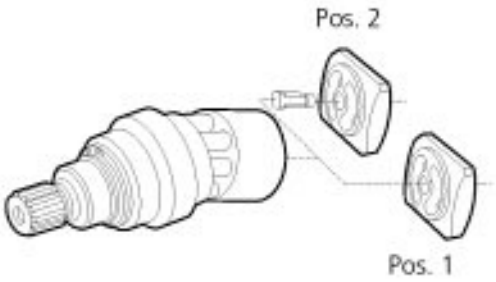


Äußerer Dichtsatz.

External seal kit.

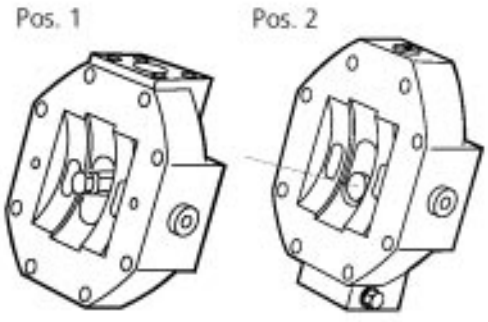
Gehäuse

Housing



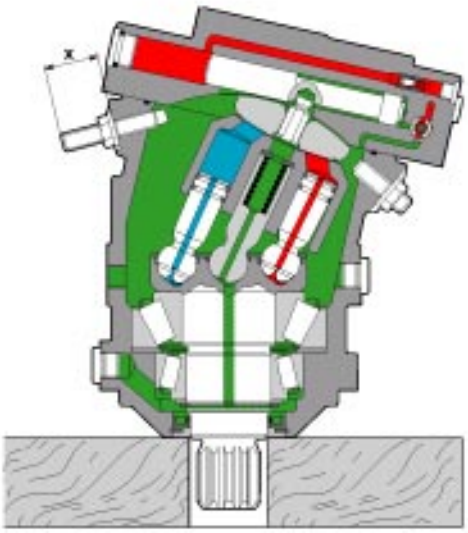
Triebwerk komplett
Hinweis: Pos. 1 - Für Anschlußplatte mit Differentialkolben
Pos. 2 - Für Anschlußplatte mit Gleich gangkolben

Complete rotary group
Note: Pos. 1 - For port plate with differential piston
Pos. 2 - For port plate with synchronizing piston



Anschlußplatte mit Stellkolben
Hinweis: Pos. 1 - Für Anschlußplatte mit Differentialkolben
Pos. 2 - Für Anschlußplatte mit Gleich gangkolben

Port plate with control piston
Note: Pos. 1 - For port plate with differential piston
Pos. 2 - For port plate with synchronizing piston



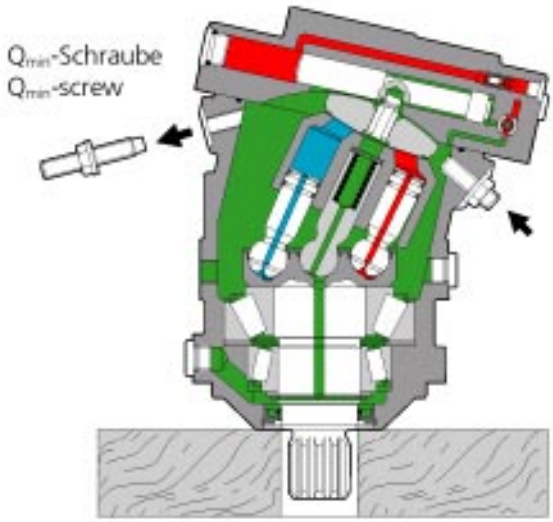
Gleichgangkolben:
Maß X festhalten.

Synchronizing piston:
Note dimension x.

⚠

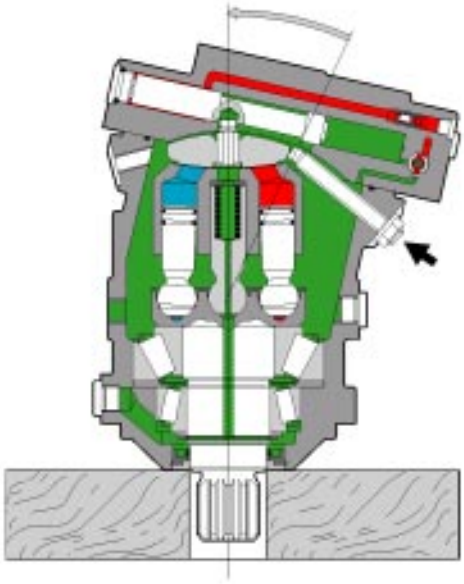
Bei "Demontage" der Anschlußplatte "Triebwerk" immer auf Null schwenken. Kolbenringe hängen aus der Zylinderbohrung aus.

For disassembly of the port plate, swivel always rotary group to zero position. Piston rings to hang out of the cylinder boring.



Q_{min}-Schraube und Verschlußschraube ausbauen.

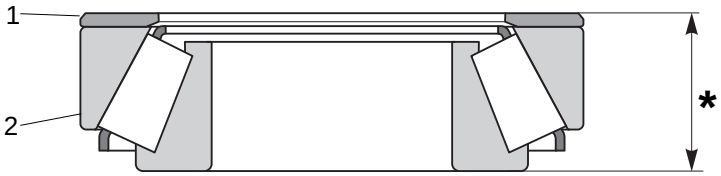
Remove Q_{min}-screw and plug.



Mit Schraube Q_{min} Triebwerk auf 0° schwenken.

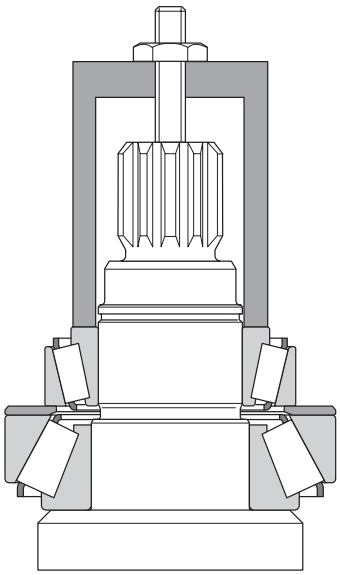
Swivel rotary group to zero position with screw Q_{min} .

Triebwelle: mechanischer Teil
Rotary group: mechanical part



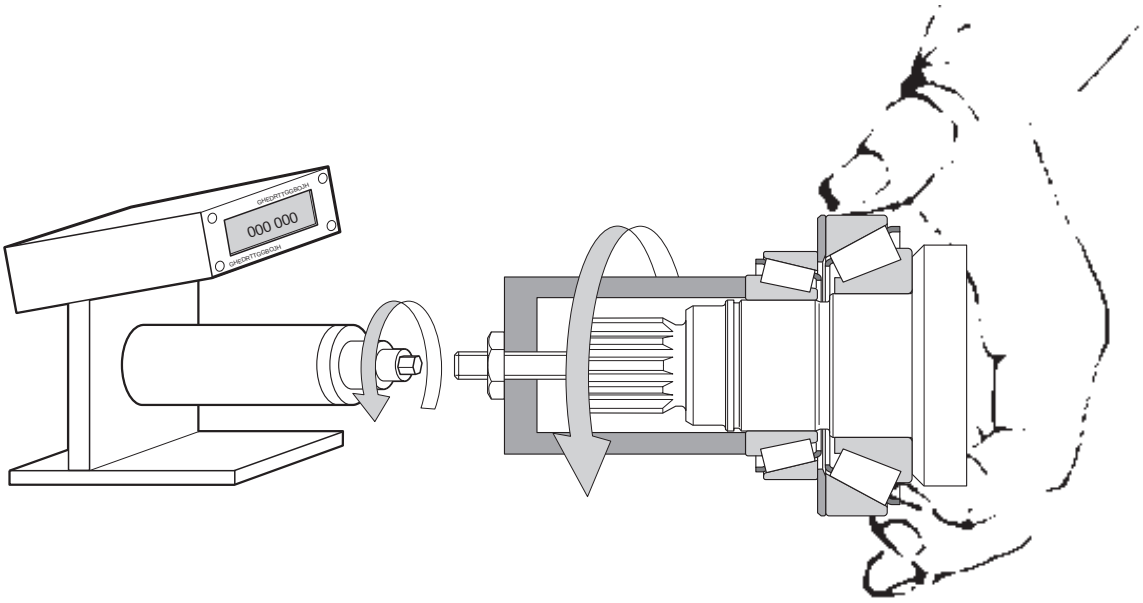
Abstimmung Maß *****
und Lagerdrehmomente
siehe Serviceinfo.

Adjustment dimension *****
and bearing torque
see service infoprmation.



Lager aufpressen.
Beim Aufpressen Lager-
drehmoment nicht überschreiten.

Press on bearing.
Do not exeed bearing torque
during press-on.

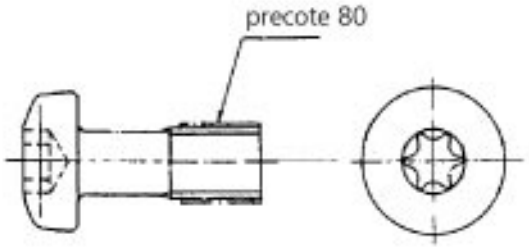


Lager mit Montagehülse vorspannen und laufende Drehmomentenkontrolle.

Preload bearing with assembly sleeve and steady control of the torque.

7. Linsenschrauben mit Innen-TORX, Gewindevorbeschichtung mit "precote 80" (nach N 02.119)

7. Oval head screw with inner TORX, thread precoated with "precote 80" (to N 02.119)



Gewinde / Thread	Festigkeitsklasse / Tensile strength class	
	10.9	11.9
	Anziehdrehmoment M_A in Nm Tightening torque M_A in Nm	
M3	2,1	--
M4	4,7	--
M5	9,1	9,5
M6	15,8	--
M8	37,7	--

6. SEAL-LOCK-Dichtmuttern (nach N 02.100)

6. SEAL-LOCK - sealing nuts (to N 02.100)

Gewinde / Thread	Anziehdrehmoment M_A in Nm Tightening torque M_A in Nm
M6	10
M6 x 0,5	11
M8	22
M8 x 1	24
M10	40
M10 x 1	44
M12	69
M12 x 1,5	72
M14	110
M14 x 1,5	120
M16	170
M16 x 1,5	180