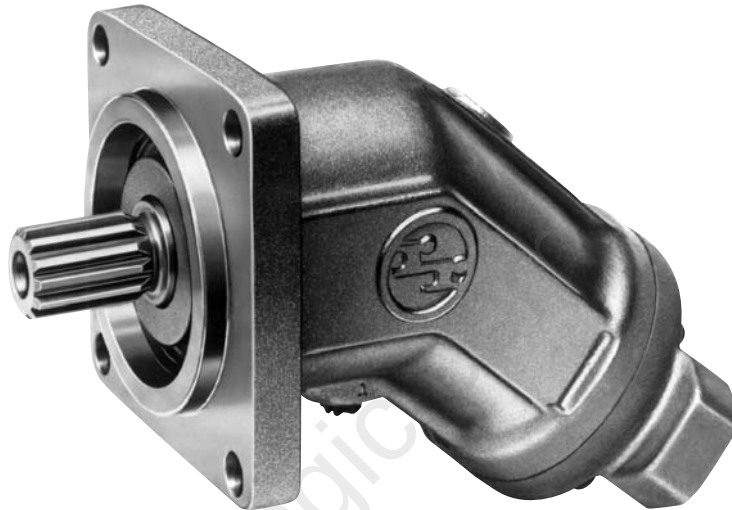


**MANNESMANN
REXROTH**

Brueninghaus Hydromatik

Fixed Displacement Motor AA2FM (A2FM)Series 6, for Open and Closed Circuits
Axial Piston, Bent Axis Design**RA
91 001/08.97**Replaces: RA 91001/07.95
RA 91003/05.95
RA 91025/05.95

Sizes 5...1000	Nominal Pressure up to 5800 psi (400 bar)	Peak Pressure up to 6500 psi (450 bar)
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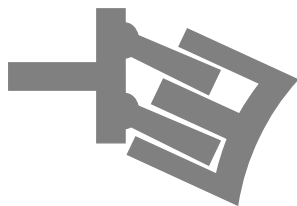
The fixed displacement motors AA2FM (A2FM) of axial piston, bent axis design is made suitable for hydrostatic drives in open and closed circuits.

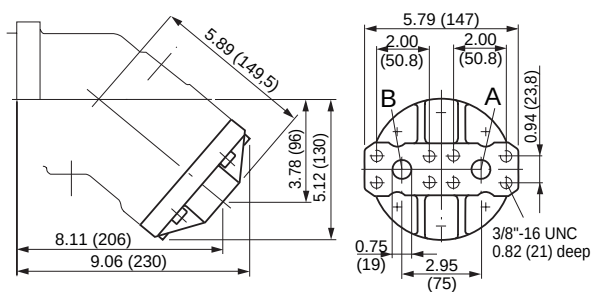
Output speed is proportional to input flow and inversely proportional to displacement. Drive torque increases with the pressure drop across the unit.

The motor is suitable for use in mobile and industrial applications.

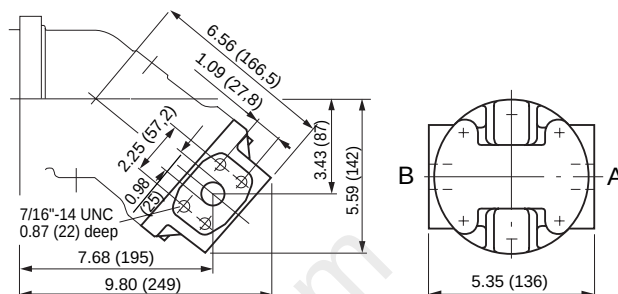
Careful selection of the displacements offered, permit sizes to be matched to practically every application.

- Favourable power / weight ratio
- Compact and economic design
- Optimum efficiency
- One piece pistons with piston rings
- Patented cylinder block drive system



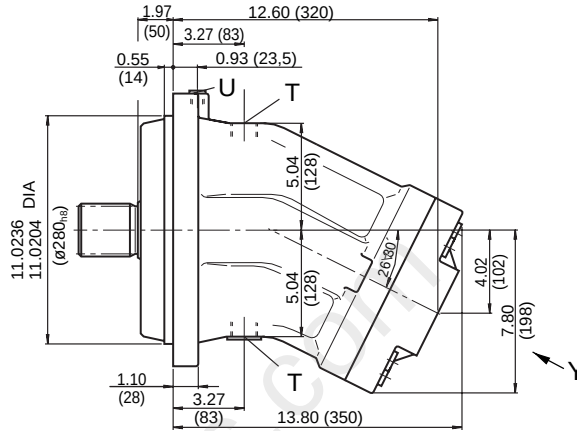
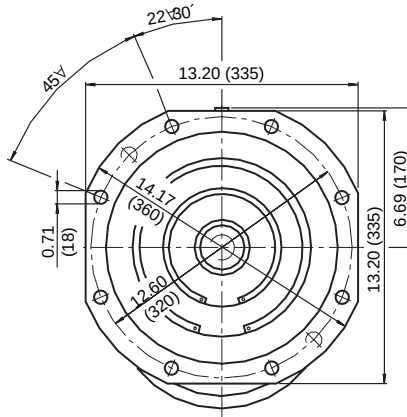
Unit Dimensions, Sizes 56, 63**Port plates****51**

A, B Service line ports
SAE 3/4"; 6000 psi (420 bar) high pressure series

52

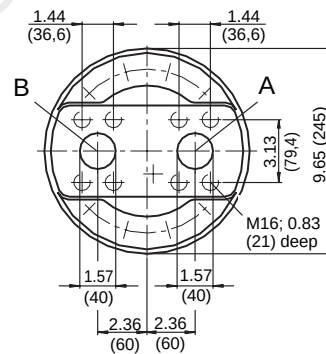
A, B Service line ports
SAE 1"; 6000 psi (420 bar) high pressure series

Unit Dimensions, Size 355 ISO Design



Port plate 01

View Y

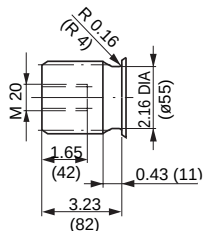


Connections

A, B	Service line ports	SAE 1 1/2"
	6000 psi (420 bar) high pressure series	
T	Drain port (1 port plugged)	M 33x2 (thread metric)
U	Port for bearing flushing (plugged)	M 14x1,5 (thread metric)

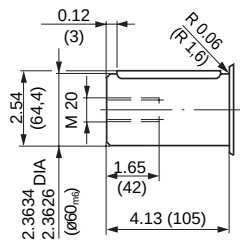
Shaft ends

"Z" Splined Shaft, DIN 5480
W 60x2x30x28x9g

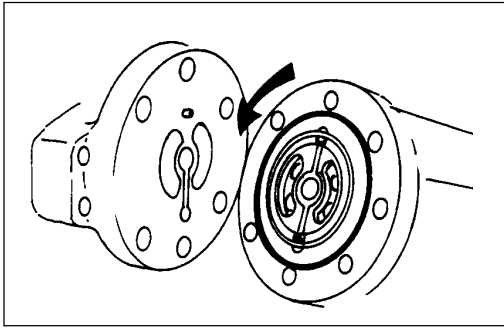


Nominal pressure
 $p_N = 5100 \text{ psi (350 bar)}$

"P" Parallel Shaft with key
AS 18x11x100mm, DIN 6885

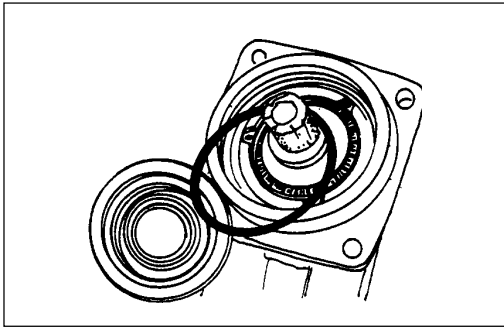


Nominal pressure
 $p_N = 5100 \text{ psi (350 bar)}$



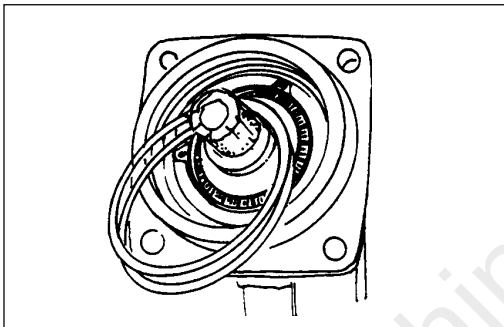
- 25 Demontage der Anschlußplatte (Seite 8). Steuerplatte drehend abheben.

Remove cover plate (page 8). Rotate control plate to remove.



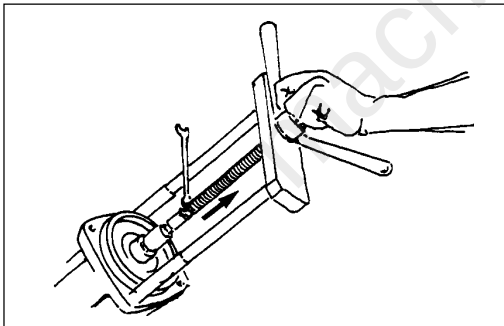
- 26 Demontage des Verschlußringes (Seite 6, 7).

Remove front cover (page 6, 7).



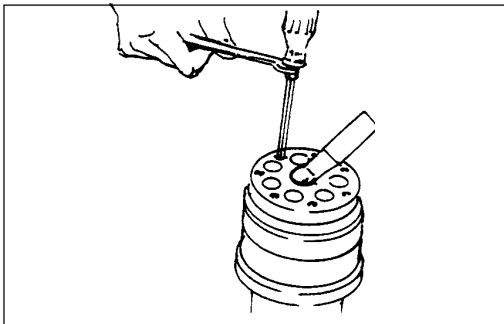
- 27 Paßscheibe(n) entnehmen.

Remove shim(s).



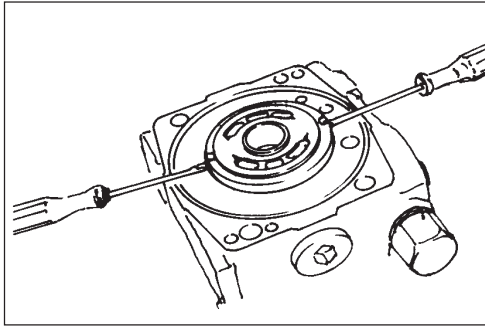
- 28 Triebwerk mit Vorrichtung ausbauen. Vorrichtung Bild 54.

Remove rotary group with extractor. (See fig.54).



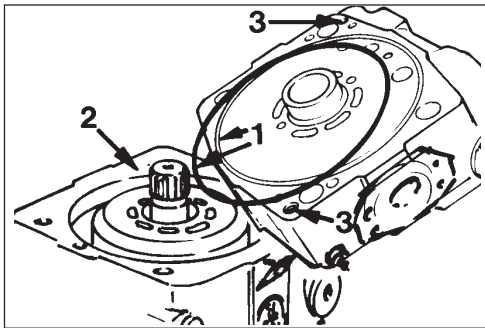
- 29 Rückzugplatte demontieren, Schrauben sind eingeklebt. Hinweis: Schrauben erwärmen.

Remove retaining plate. The screws are held by Loctite. Note: Warm up screws.



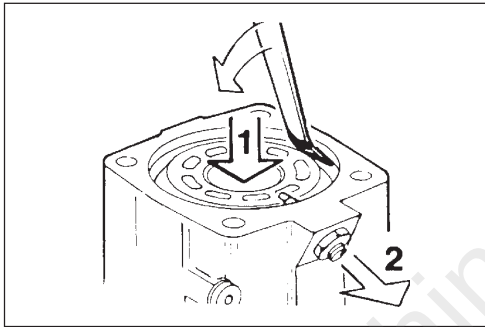
49 Steuerplatte abdrücken.
Lage notieren.

Lift off control plate.
Note position.



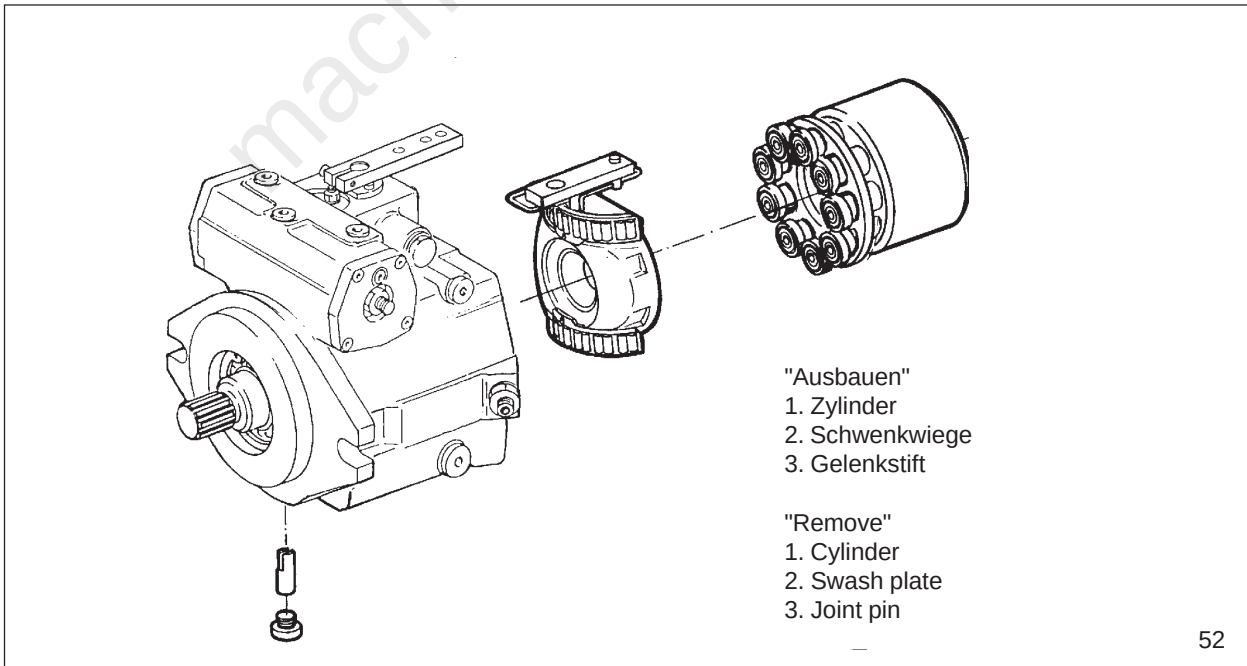
50 Kontrolle!
O-Ring mit Nut (1), Gehäuse (2), Quad-Ring und
Quad-Ring Nut (3).

Check!
O-ring and groove (1), housing (2), Quad-ring
and groove (3).



51 Zylinder nach unten drücken (1).
Verdrillschraube herausdrehen (2).
Triebwerk ausheben (3).

Press the cylinder to the bottom (1).
Remove timing indexing screw (2).
Lift out rotary group (3).

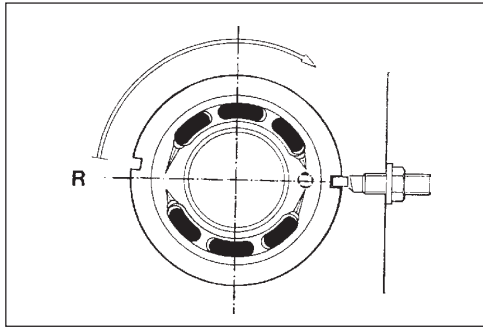


"Ausbauen"

1. Zylinder
2. Schwenkwiege
3. Gelenkstift

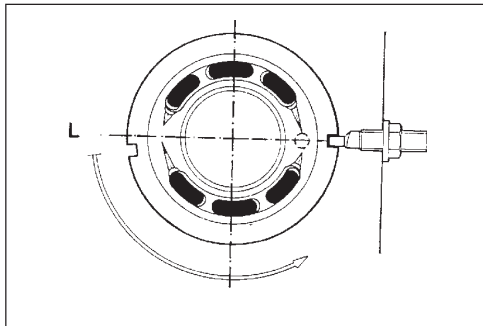
"Remove"

1. Cylinder
2. Swash plate
3. Joint pin



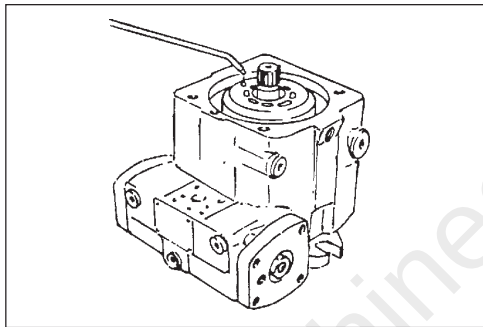
- 87 Steuerplatte Rechtslauf - in Drehrichtung verdreht.
Achtung!
Geräuschkerben sind drehrichtungsbezogen eingeschliffen.

Control plate clockwise rotation - indexed in the direction of rotation.
Note!
Noise grooves are machined - in based on direction of rotation.



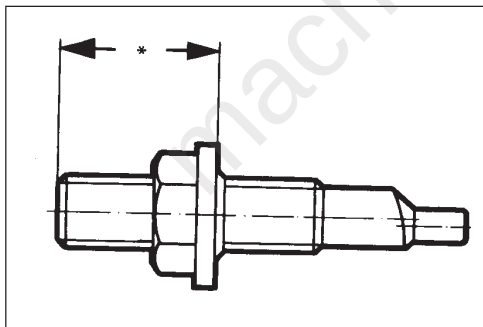
- 88 Steuerplatte Linkslauf - in Drehrichtung verdreht.
Achtung!
Geräuschkerben sind drehrichtungsbezogen eingeschliffen.

Control plate counter clockwise rotation - indexed in the direction of rotation.
Note!
Noise grooves are machined - in based on direction of rotation.



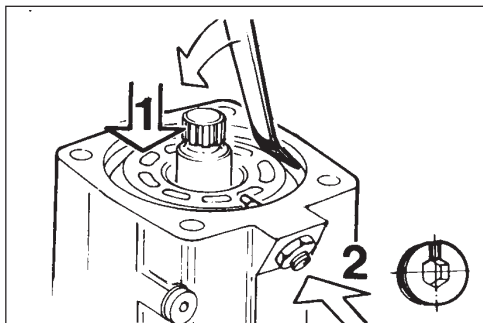
- 89 Zylinderflächen und DU-Lager einölen, neue O-Ringe mit Fett einreiben und einsetzen.

Oil the running surfaces of the cylinder barrel and the DU- bearing. Grease the O-rings and insert in grooves.



- 90 Grundeinstellung - Verdrillschraube
A4VG...40 * = $24 \pm 0,75$ mm.
A4VG...56 * = $21 \pm 0,75$ mm.

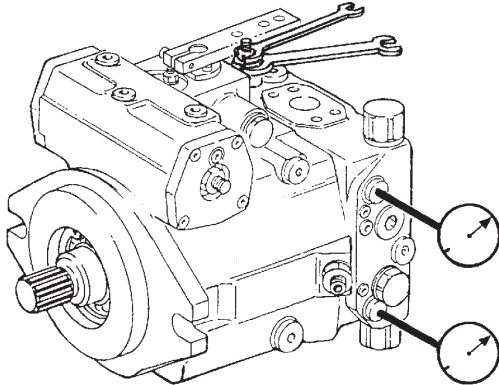
Basic setting - indexing screw
A4VG...40 * = $24 \pm 0,75$ mm.
A4VG...56 * = $21 \pm 0,75$ mm.



- 91 Zylinder nach unten drücken (1).
Verdrillschraube einbauen (2).
Kerbe in Montageposition.

Press the cylinder to the bottom (1).
Screw in the indexing screw (2).
Groove in mounting position.

Druckabschneidung
Pressure cut-off



103

Achtung!
Sicherheitsbestimmungen beachten!

HD-Ventil ohne Bypass

1. HD- Ventile sind immer 10% höher eingestellt als die Druckabschneidung.
Bei Veränderung eines Einstellwertes immer beide kontrollieren.
2. Nachjustierung nur bei Betriebstemperatur

Manometer an M_A und M_B anschließen.
Druckabschneidung: Maß X Einstellschrauben notieren!
Einstellschraube auf Block drehen.

HD- Ventile: Mit geringer Pumpenmenge über Ventile fahren. Einstellwert kontrollieren.
(Nur kurzzeitig "Temperatur".)
Drucklos "Einstellwert" verändern - Kontrolle

Druckabschneidung:
Einstellschraube auf Maß (*) zurückdrehen.
Druckwert kontrollieren bzw. nachjustieren.
Achtung! Differenz von 10% HD- Ventile und Druckabschneidung beachten!
Hinweis: Einstelldaten nach Werksauftrag.

Attention!
Observe safety regulations.

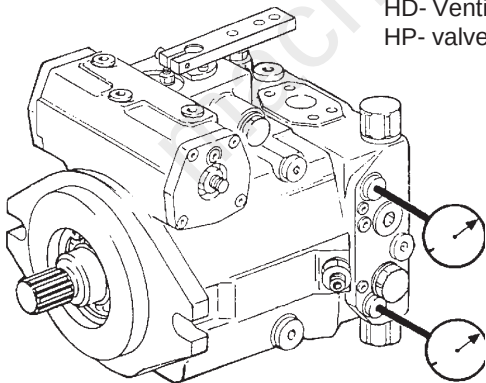
HP valve without bypass-function

1. HP valves are always adjusted 10% higher than the pressure cut-off.
If one setting value is changed, always check both values.
2. Readjusting only at operating temperature.

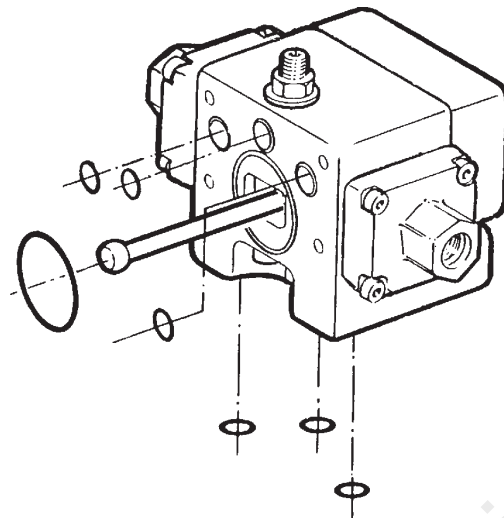
Connect manometer M_A and M_B .
Pressure cut-off: Note measure X setting screw! Turn setting screw on block.
HP valves: Operate valves with small pump flow volume.
Check setting value. ("temperature" only for a short time).
Change "setting value" - check.

Pressure cut-off:
Turn back setting screw to measure (*).
Check pressure value and readjust.
Attention! Observe 10% pressure difference HP valves and pressure cut-off!

HD- Ventile
HP- valves



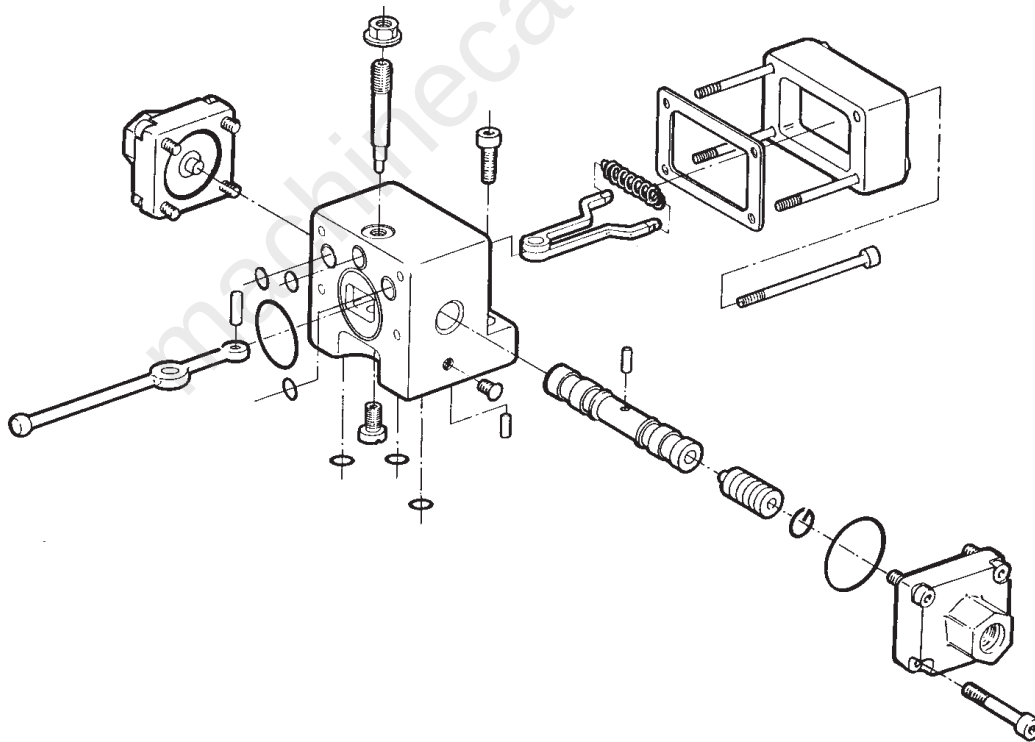
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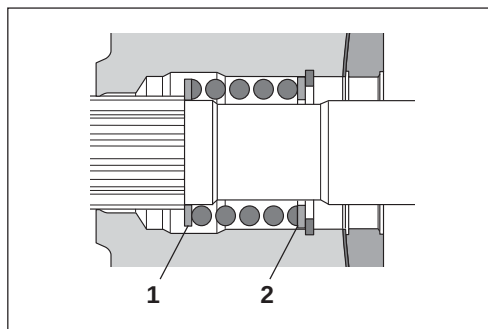
Kontrolle:
O-Ringe

Check:
O-rings

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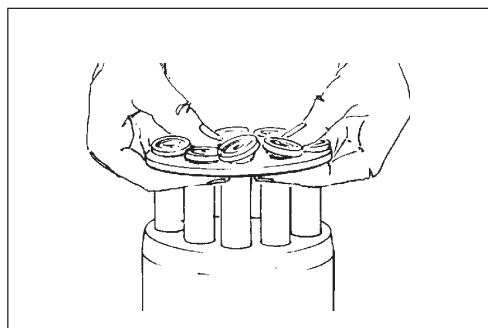


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88 Scheibe 1, 2

Disc 1, 2



89 Kolben mit Rückzugeinrichtung montieren.

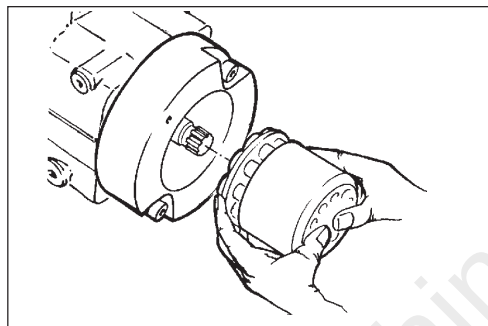
Hinweis:

Kolben, Gleitschuhe einölen.

Assemble piston with retaining plate.

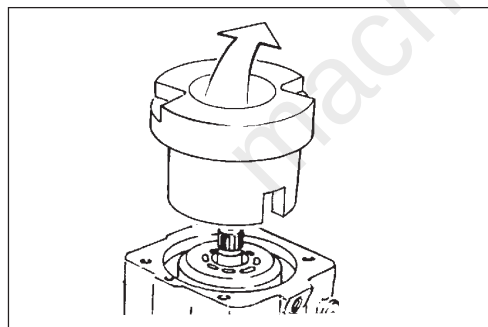
Note:

Oil piston and piston pad.



90 Zylinder komplett einbauen.

Assemble cylinder completely.



91 Vorrichtung ausbauen.

Remove assembly device.

Full Version Available

Bosch Rexroth A4VG + AA2FM Hydraulic Motor Service Manual

Bosch Rexroth A4VG, AA2FM hydraulic motor service manual with repair, adjustment and troubleshooting procedures. 134-page PDF. Instant PDF download.

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