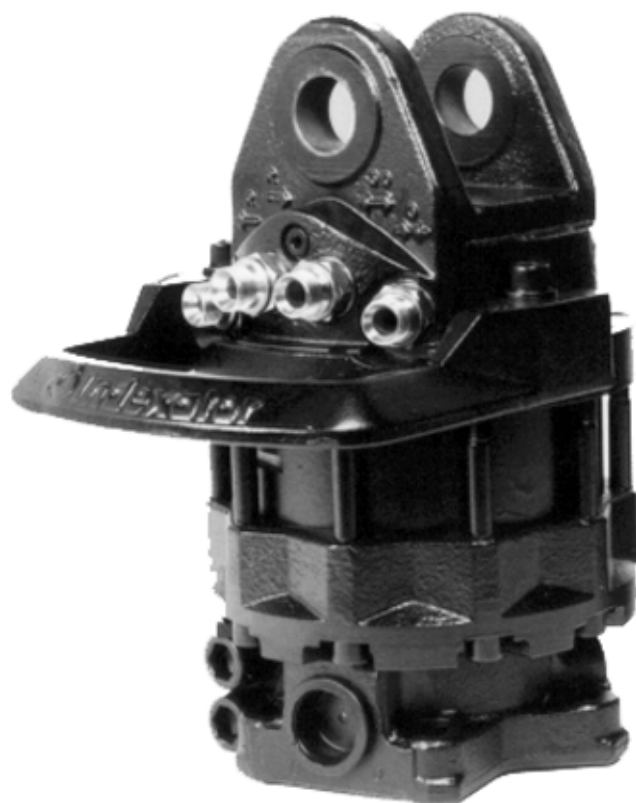


REPAIRS MANUAL

GV 124, GV/AV 12, GV/AV 14, GV/AV 17



2005 01 05 Art no 1025 824

This series of figures shows how to change all the seals, the thrust bearing and how to secure that correct shim thickness is installed. If major service is necessary, contact well-informed personal.

Cleanliness:

We recommend that rotators mounted on harvesters, are object to service inspection every 2000 hours. Thrust bearings should be replaced.

To increase a rotators lifetime:

- 1) Inspect magnetic plug every 1000 hours. (See fig. 18.)
- 2) Every 40 hours of operation, at end of shift.

For rotators with unlimited rotation. Run the rotator at least 10 turns clockwise.

For rotators with limited rotation. Run the rotator against the rotation stop, or grab an object and run the clockwise function of the rotator for at least 3 minutes.

We also recommend that the locking screws retightens after about 100 hours of operation.

Check the following if the rotator tends to bind in one direction or if its action is not smooth.

- 1) Throttle valves/adapters; see fig 16 and 31.
- 2) Correct pressure and flow. (Normal values are shown by the graph, fig 32.)

This series of figures shows GV 12. These instructions apply also in principle for AV models and other GV models.

During service, part list with explosion view could be of hand.

There is another manual to rotator models GV 3, GV 4 and GV 6.

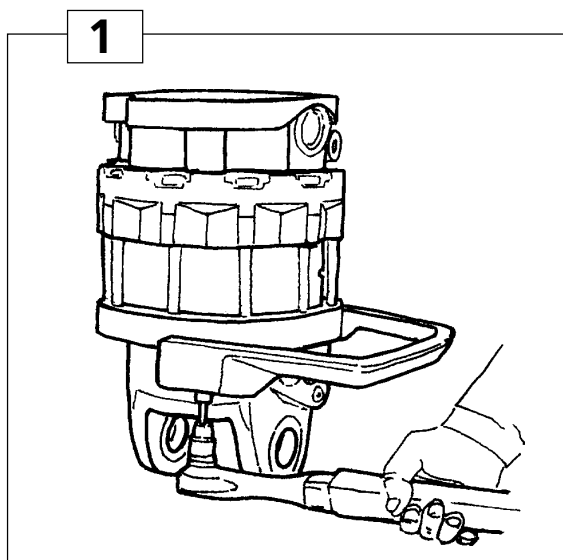


Fig. 1

Turn the rotator upside down and secure. Start by unscrewing and removing the nipple guard, etc.

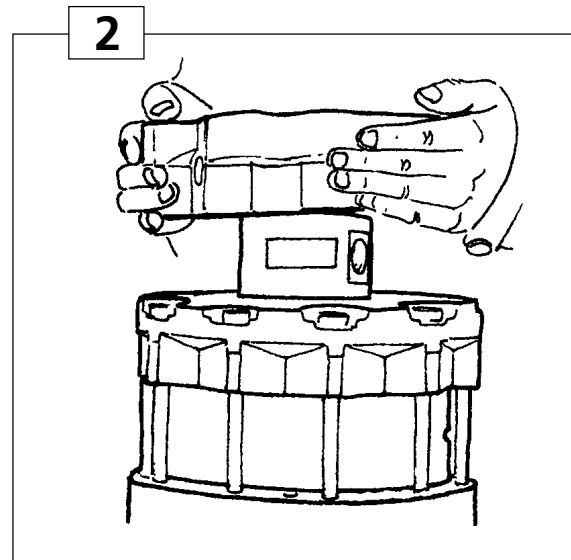


Fig. 2

Remove the R3/4" locking screw. Lift out the cup springs assemblies. Remove the mechanical joint by unscrewing the two screws M20. Tap out the wedge using the tool art. no. 5010 132.

Make sure that the tool faces the right way, so that the shaft is not damaged when tapping. Remove the radial connections or the plugs, and lift off the link.

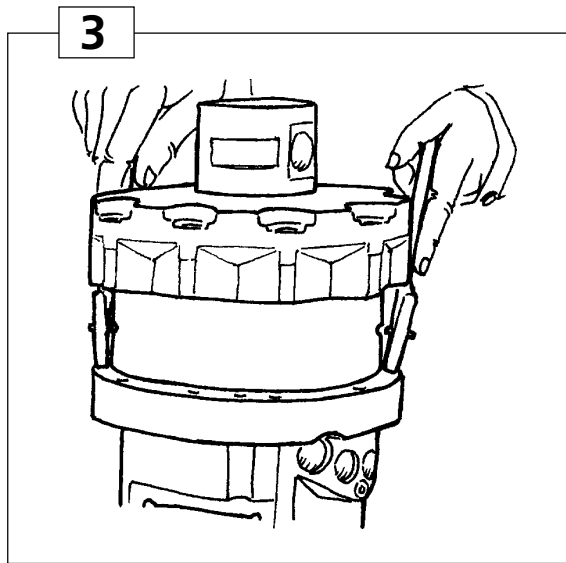


Fig. 3

Lift off the wiper/dust seal. Unscrew the bolted joint for the lower stator plate. Using a suitable tool, lift the lower plate from its guides.

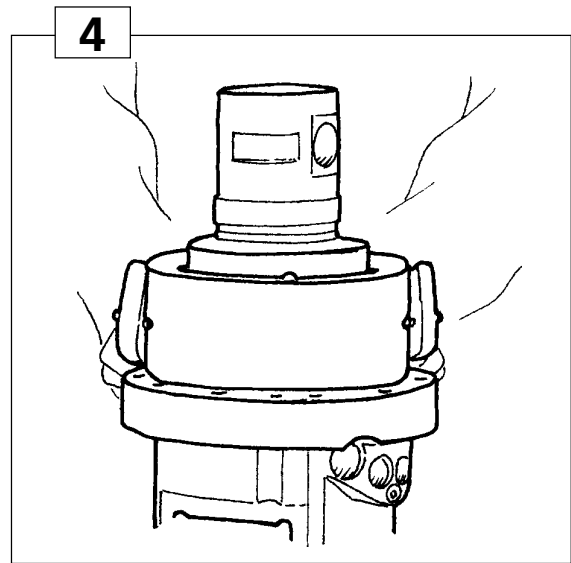


Fig. 4

Remove the shim and the thrust bearing. Use a suitable tool to lift the stator frame from its guides.

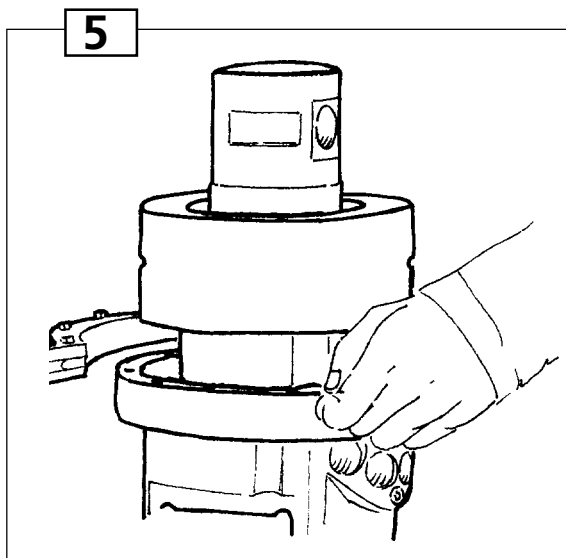


Fig. 5

Carefully lift the stator frame a little so that the vane mounting tool can be applied. Lock the tool so that the spring loaded vanes are retained in their inner position. Lift off the stator frame. Disassemble the restrictors from the stator frame.

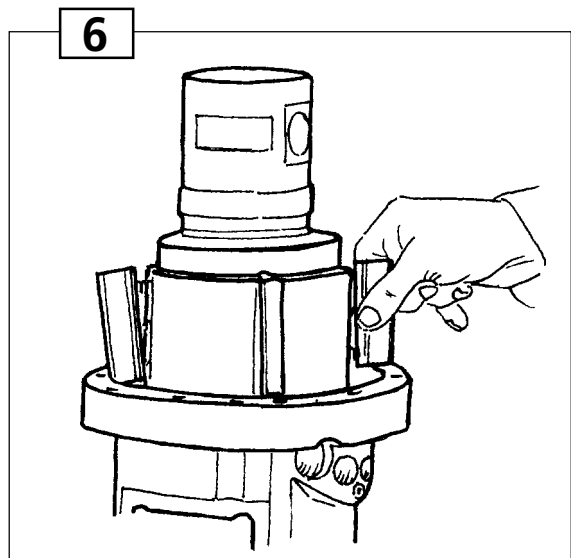


Fig. 6

Carefully loosen the mounting tool. Lift out the vanes and the vane springs.

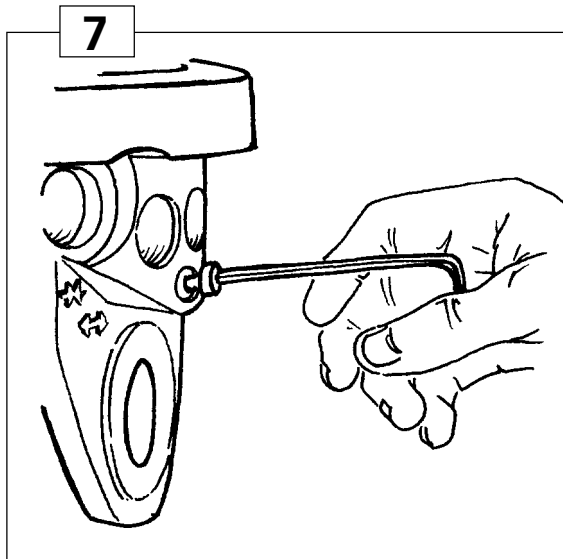


Fig. 7
Unscrew the plug.

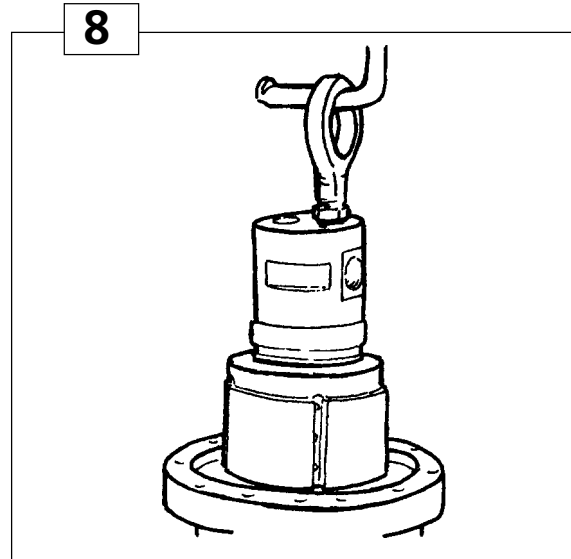


Fig. 8
Lift up the shaft out of the upper stator plate.

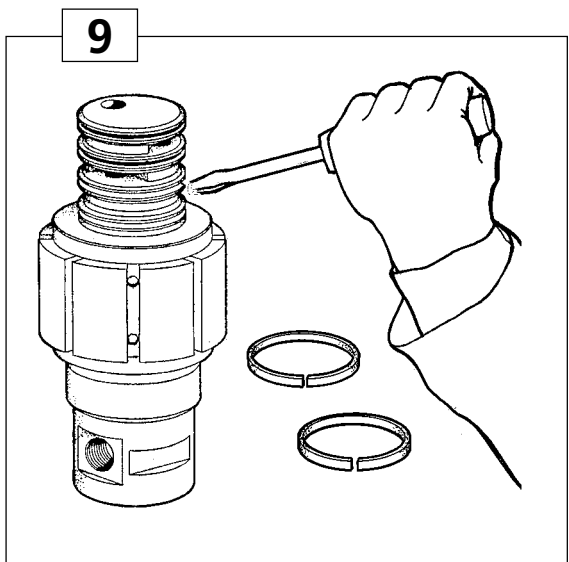


Fig. 9
Remove the sliding O-rings. If a screwdriver or similar tool must be used to cut the sliding sleeves, very great care must be taken not to damage the sealing surfaces.
Important: Clean all the parts from oil and other dirt carefully. If possible use a washing machine and air to clean all the parts, in the oilchannels and other places where dirt can remain.

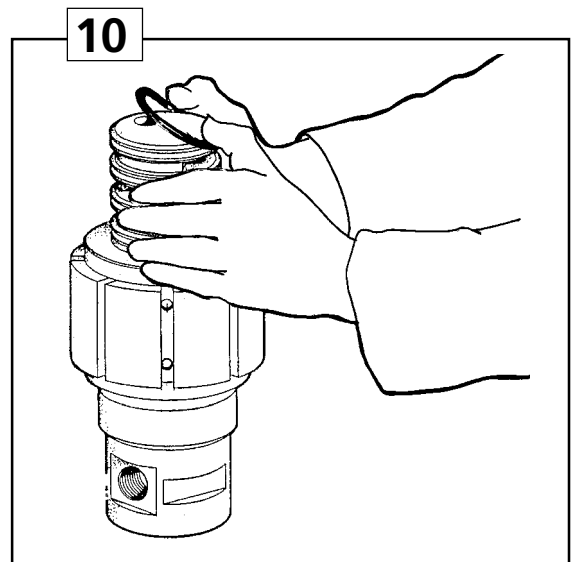


Fig. 10
Fit the O-rings.

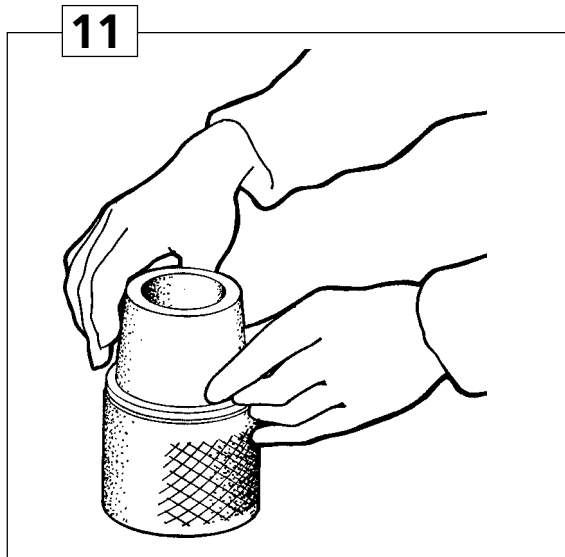


Fig. 11

Expand the sliding sleeves using the mounting tool.

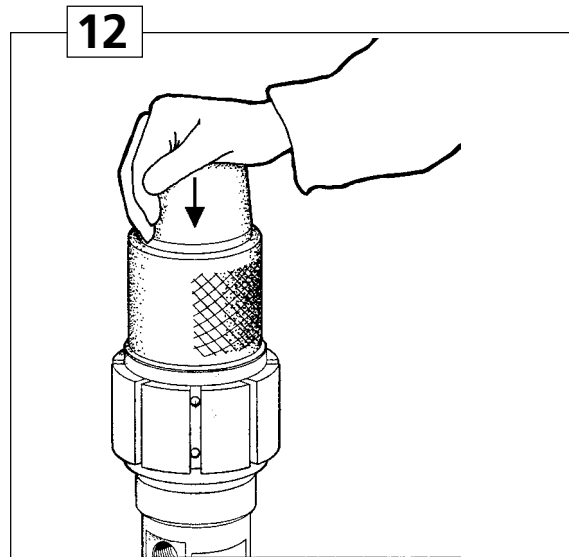


Fig. 12

The sliding sleeves must be compressed after having been mounted. This is also accomplished using the mounting tool.

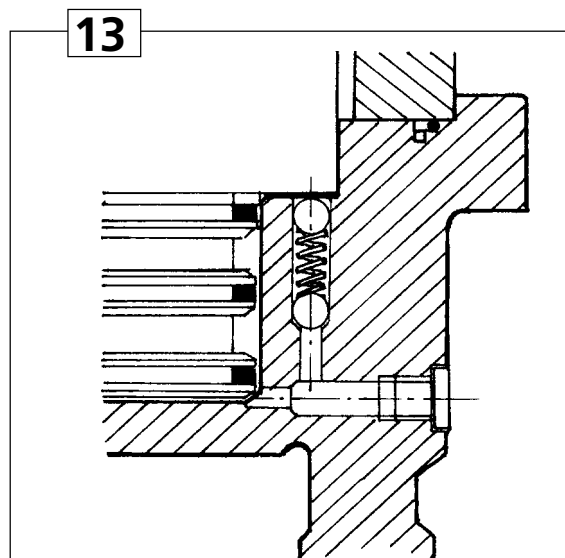


Fig. 13

Fit the check valve (ball, spring, ball). Lubricate the swivel chamber with oil, and then fit the shaft and a new O-ring in the upper stator plate.

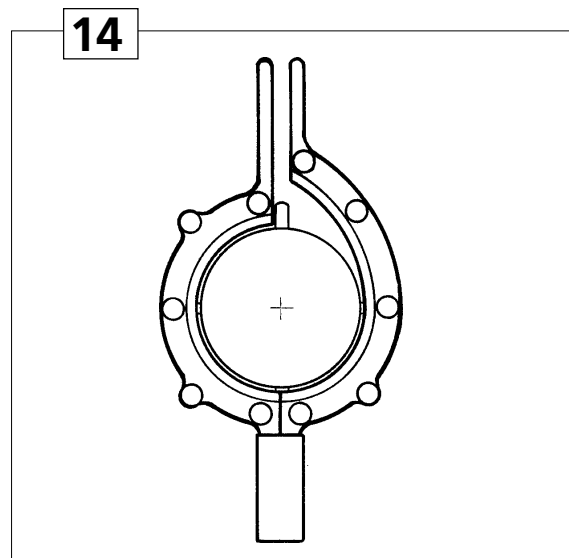


Fig. 14

When fitting the vanes, ensure that the vane springs engage properly in their spring seats. Use the correct vane mounting tool to compress the vane assembly. Push the vanes into the grooves in the rotator shaft as the tool is rotated.

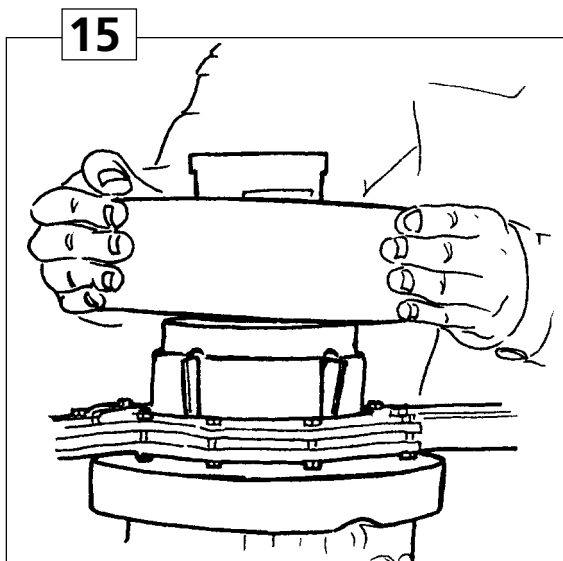


Fig. 15

Lubricate the inside of the stator frame with oil before installing it. Ensure that the o-ring in the upper stator plate is in its proper groove and that the guide in the upper stator engages in the appropriate hole in the stator frame. Then tap down the stator frame carefully using a rubber mallet.

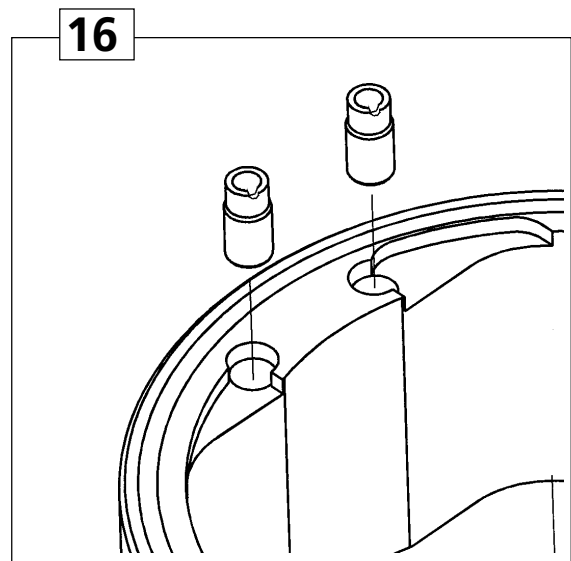


Fig. 16

Clean the restrictors from dirt. Mount the restrictors as shown in the above illustration.

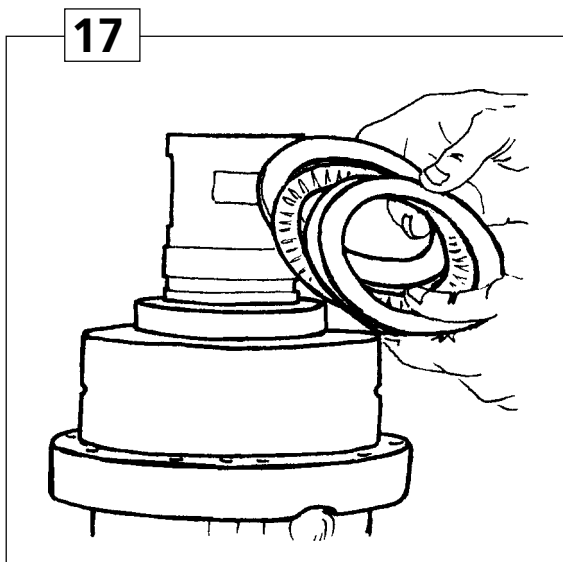


Fig. 17

Carefully inspect the axial bearing and its washers. At even the smallest damage of these parts a complete new set of axial bearing has to be assembled. Place the axial assembly on the rotator shaft, put some oil on a new o-ring and mount it on the stator frame. Then install the shim and the axial seal.

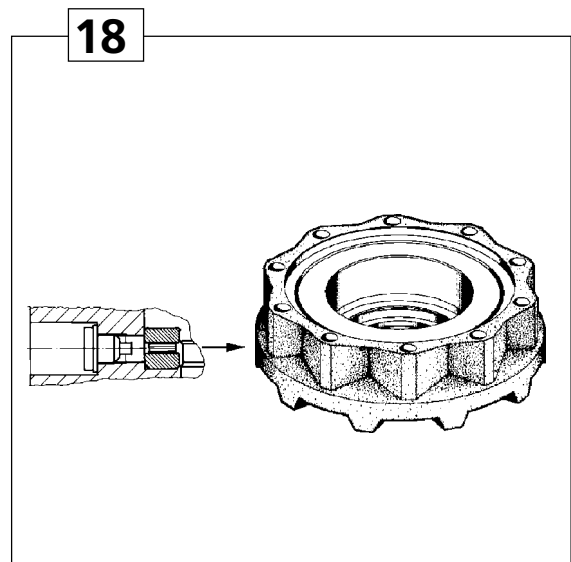


Fig. 18

Disassembly the magnetic plug. Clean the plug from contamination and tighten it in the lower stator plate with a torque of about 20 Nm (15 lbf-ft).

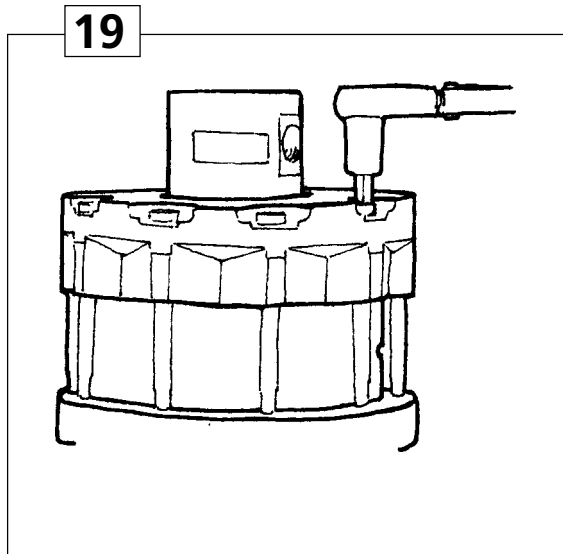


Fig. 19

Take care to ensure that the shim and the thrust bearing are not displaced when installing the lower stator plate. Tighten the bolts in a crisscross pattern, with 120 Nm. (88 lbf x ft).



Fig. 20

It is essential to check the shimming effect very carefully if the shaft, stator frame, lower/upper stator plate or thrust bearing has been replaced. (If you don't have the proper equipment to test the right thickness of the shim by hydraulic pressure, see fig. 25-26). Start by mounting test nipple part no. 5011 136 (see above illustration).



Fig. 21

Connect oil to the test nipple. Use a hand pump or a hydraulic system. Pump up the pressure to 220 Bar (3190 psi).



Fig. 22

When enough pressure reached, try to rotate the shaft with a suitable tool. You must be able to rotate the shaft at stated pressure as well as at no pressure.

23



Fig. 23

If the shaft is stuck or refuses to rotate, the size of the shim has to be changed as below:
 You can't move the shaft at recommended pressure; Change to a thicker shim.
 You can't move the shaft at no pressure; Change to a thinner shim.

24



Fig 24

Try to rotate the shaft again. When correct shim size has been installed, continue the assembly with fig. 27.

25

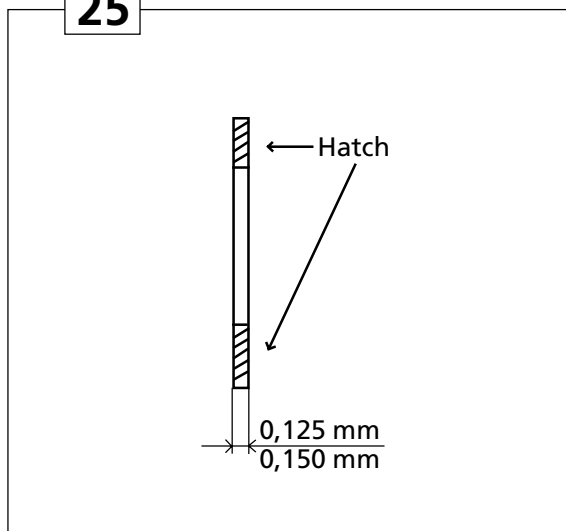


Fig 25

How to test the correct shim size without hydraulic pressure. Install a shim 0,125 or 0,150 mm. Tighten the lower stator plate as shown in fig. 19. Try to rotate the shaft with a suitable tool.

26



Fig 26

If you feel that the shaft is too easily moved, a thicker shim should be installed, and in the opposite way, if the shaft is stuck, you should switch to a thinner shim. As this test is completed and the correct size of shim installed, continue to fig.27.

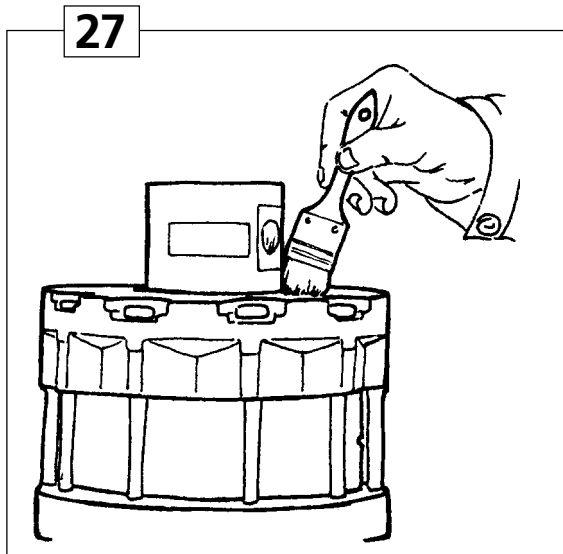


Fig 27
Protect the lower stator plate against corrosion using Dinitrol, grease or similar medium.

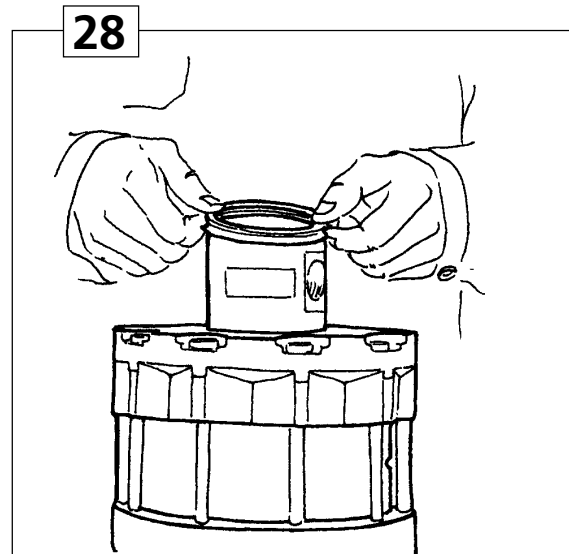


Fig 28
Fit the wiper /dust seal. (Not applicable to

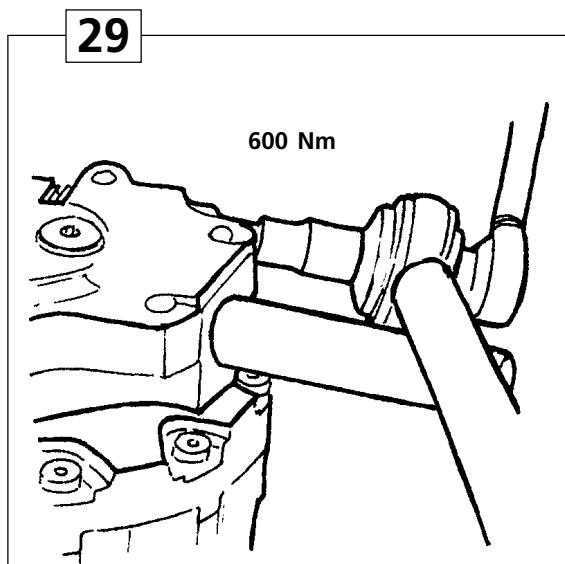


Fig 29
Install the lower link so that the wedge slot in the shaft aligns with the corresponding slot in the lower link. Install the wedge and the locking screw loosely in the wedge slot to locate the lower link in its "home" position. Tighten the 2 bolts M20 to a torque of 600 Nm (443 lbf·ft). Use a calibrated torque amplifier to secure the mechanical joint. Fit any radial sockets or plugs in the radial outlets. See also fig. 34.

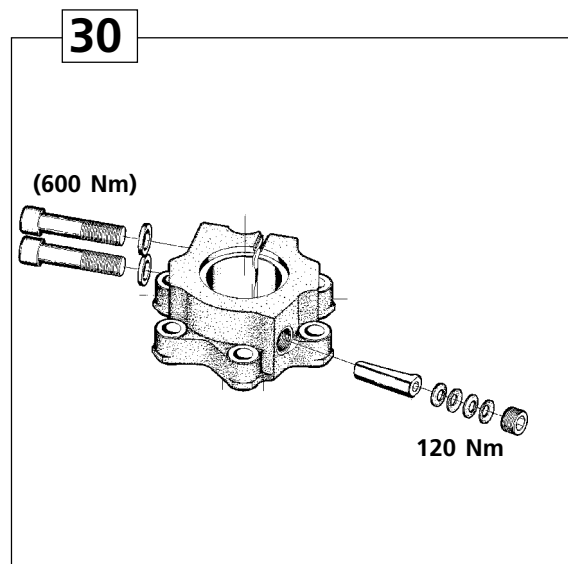


Fig 30
Fit the spring washers (cone to cone/cup to cup) and the locking screw behind the wedge. Use medium Loctite (orange). Tighten the locking screw with torque 120 Nm (89 lbf·ft).

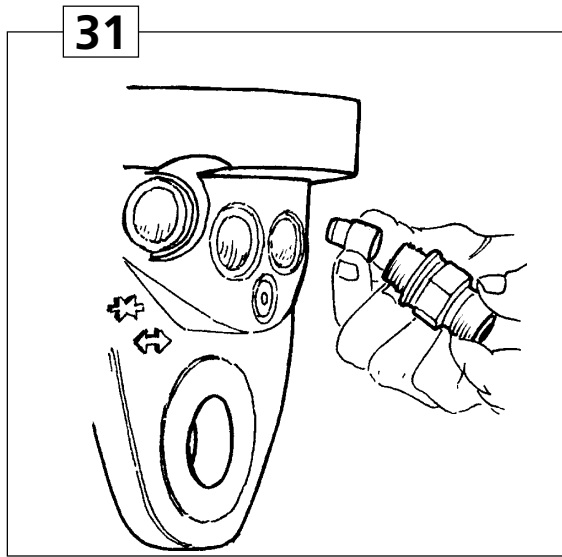


Fig 31

Check that the adapter are free from contamination.

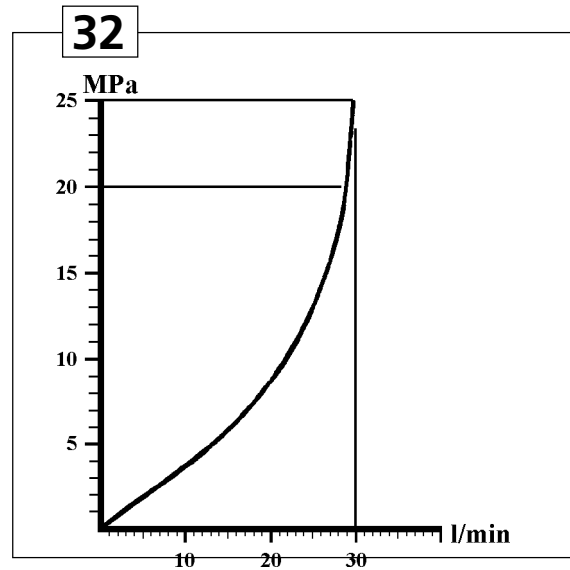


Fig 32

Maximum operating pressure, generally 20 Mpa (2900 psi) . A maximum operating pressure of 25 Mpa (3650 psi) is acceptable for GV/AV 11, GV/AV 12 and GV 15S if the flow is limited to a maximum of 30 l/min by means of a throttle or a volume restricting slide valve.

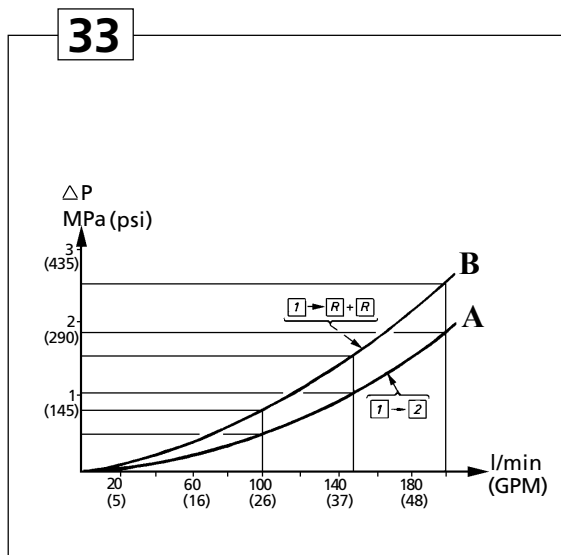


Fig 33