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Service guide

PAH pumps

PAH 50-100

Disassembling and assembling



Service guide | Disassembling and assembling PAH 50-100

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Introduction

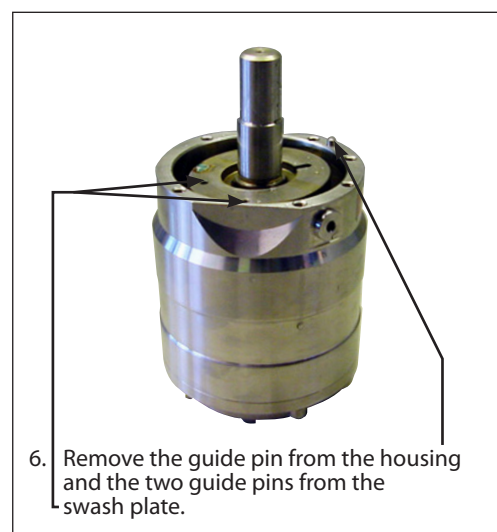
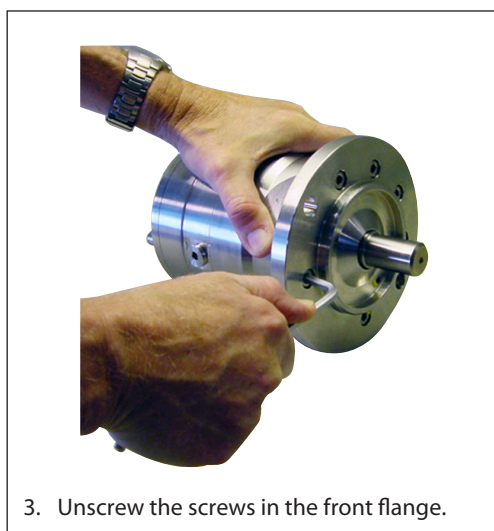
NOTE: If the pump is disassembled within the warranty period, the pump is no longer covered by the warranty.

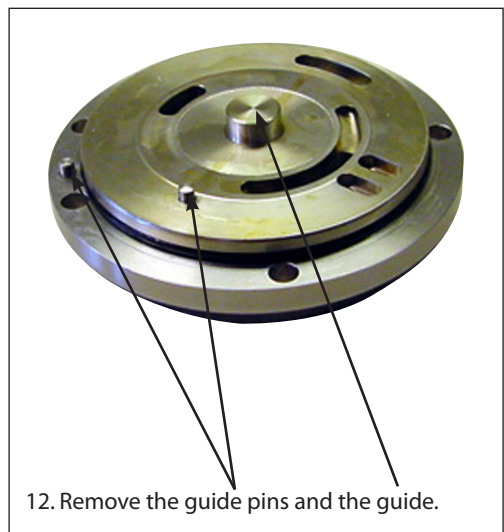
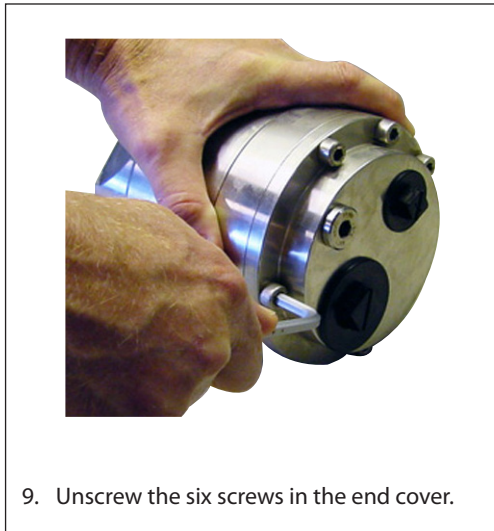
This document covers the instructions for disassembling and assembling the axial piston pumps **PAH 50-100**



Service guide | Disassembling and assembling PAH 50-100

1. Disassembling the pump







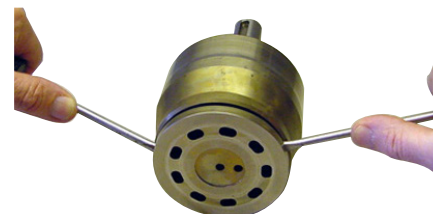
13 Remove the pistons.



14. Remove the retaining plate.



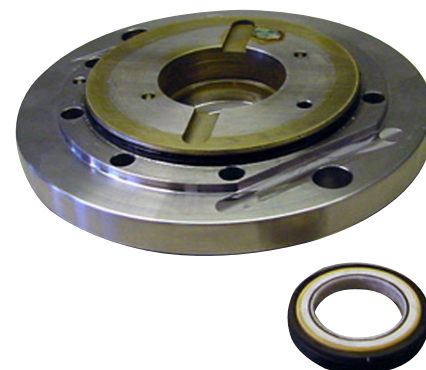
15.Remove the retaining ball.



16. Remove the the thrust plate using two screwdrivers.



17. Remove shaft sealing from front flange.



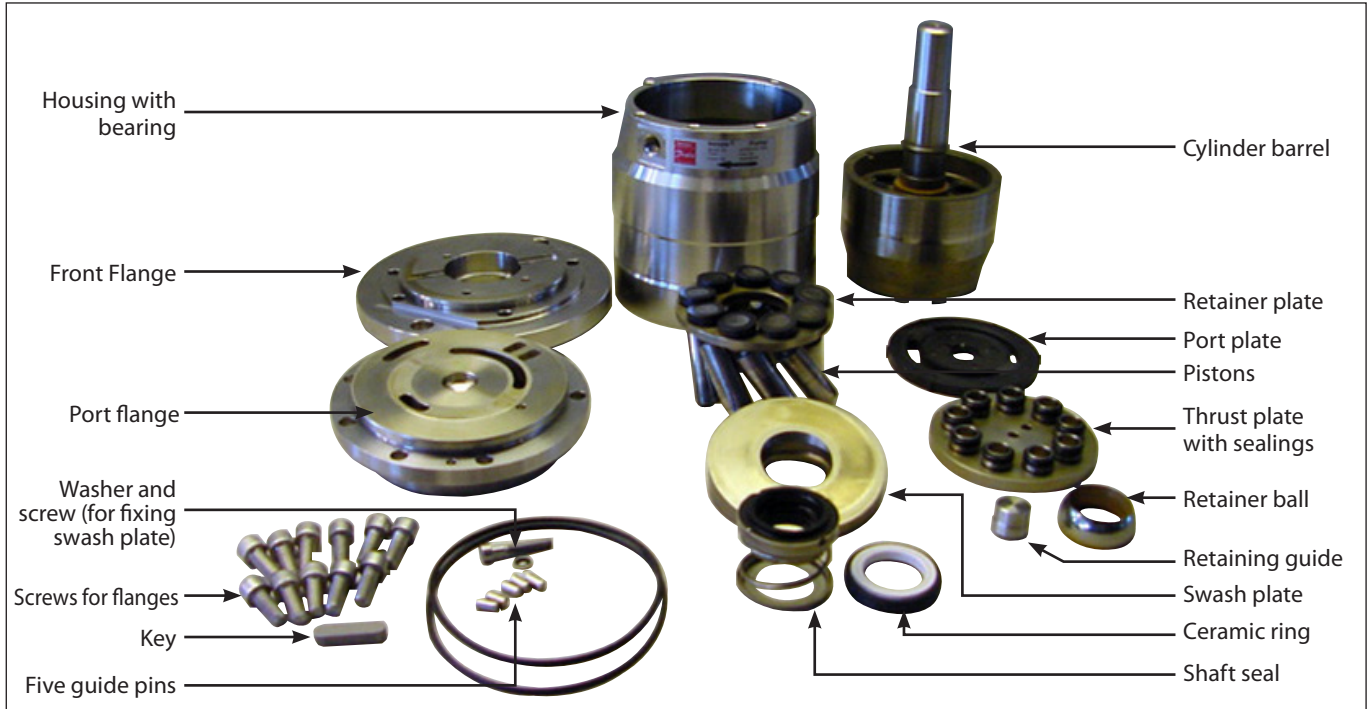
18. The ceramic ring removed from the front flange.

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19. Wash all parts and replace all seals (inclusive shaft seal).

20. Inspect all parts carefully (see "Inspection") and replace any worn parts.

21. If the pump has failed, the reason for the failure must be found and fixed before the repaired pump is re-installed.

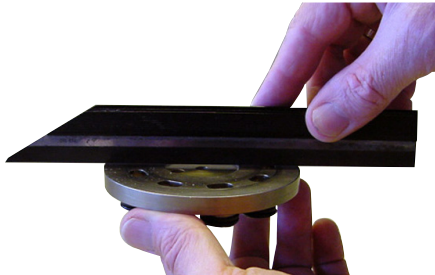


2. Inspection

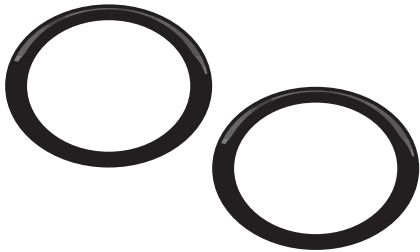
2.1. Port plate and thrust plate



1. Neither port plate nor thrust plate must show any sign of wear.



2. Hold a ruler against the surface of the plates and check the tightness against a light source.




3. Check that both O-rings and back-up rings are not broken and do not show severe wear.

2.2. Pistons



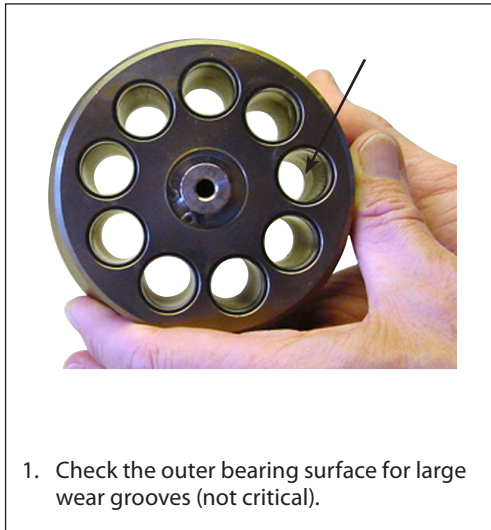
1. The play in the ball and socket joint must not exceed 0.1 mm.
2. The thickness of the piston shoes must be at least 4.3 mm.



3. Hold a ruler against the surfaces of the piston shoes to check that the surfaces are even and smooth and without any scratches.

4. It is acceptable that the (black) treated surfaces of the pistons are partly worn.

2.3. Cylinder barrel

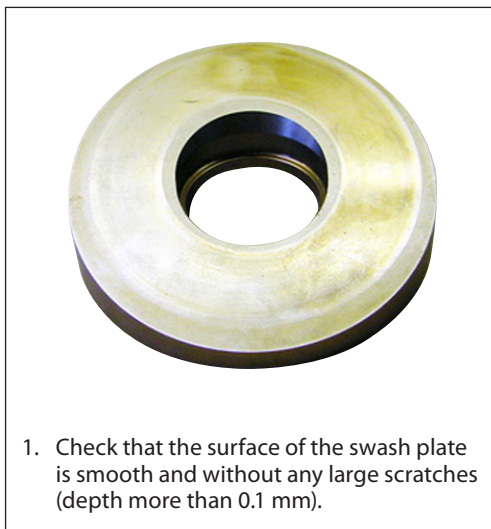


2. Check that the bushings are free from seizure and large scratches.
3. Ensure that the pistons can move freely in the bushings.

2.4. Housing



2.5. Swash plate



3. Assembling

WARNING:
Do not use silicone when assembling the pump. Do not reuse disassembled O-rings; they might be damaged. Always use new O-rings.

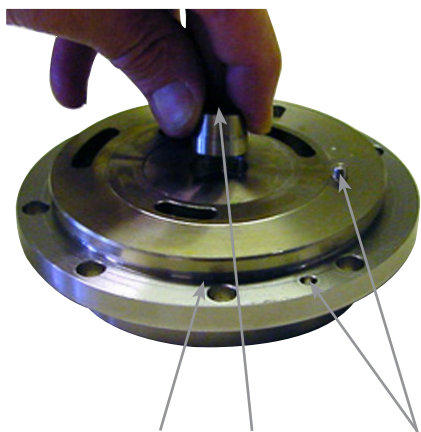
Important:
It is essential that the pump is serviced in conditions of absolute cleanliness. All parts must be absolute clean before mounting.



1. Lubrication:
- To prevent seizing-up, lubricate all threads with PTFE lubrication type.
 - O-rings inside pump may be lubricated only with clean filtered water.
 - O-rings for port flange, mounting flange and flushing valve must be lubricated.
 - It is important to lubricate ALL parts to be assembled with clean filtered water (Especially all PEEK parts).



2. Parts and tools required for assembly. Check that all parts are OK. Replace all seals.

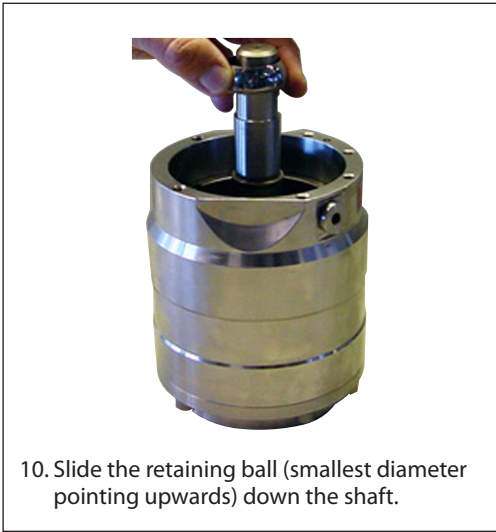
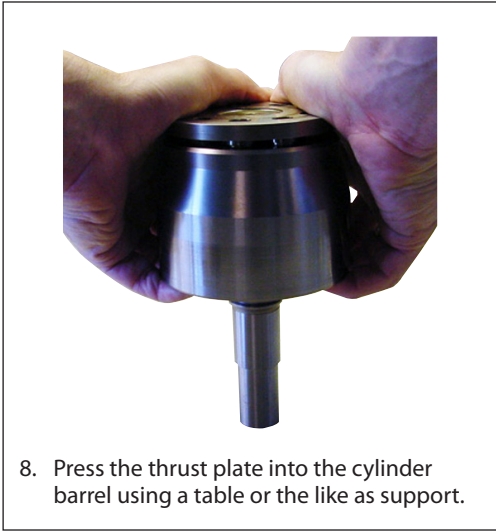


3. Mount the O-ring, the guide and the guide pins on the port flange.



Guide pin

4. Mount the valve plate in its right position using the pin as guide.

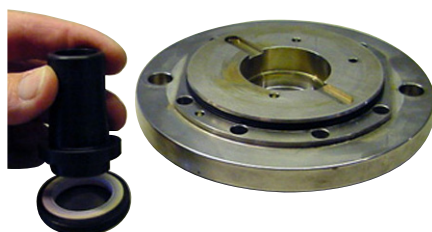




11. Mount the retaining plate (smallest centre diameter pointing upwards).



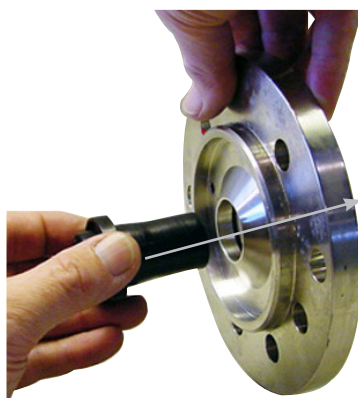
12. Mount the pistons.



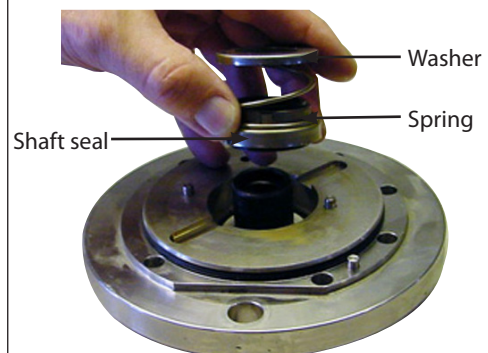
13. Mount the ceramic ring on the tool.



14. Mount the ceramic ring by pressing the tool as far down in the front flange as possible.



15. Push the tool through the front flange.



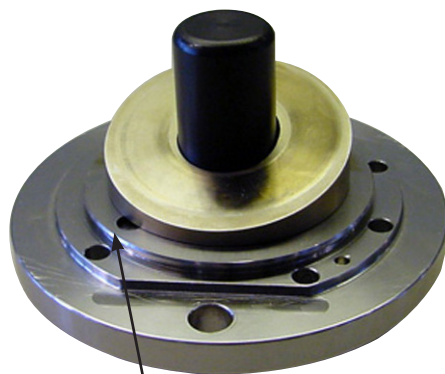
16. Mount the shaft seal (carbon surface pointing downwards), the spring, and the washer (edge pointing downwards) by sliding them over the tool.



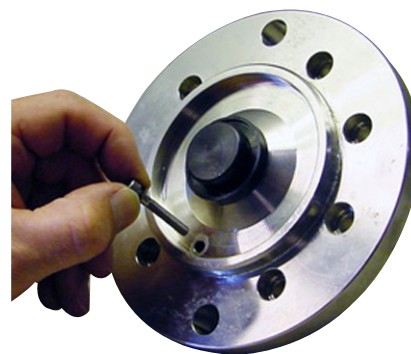
17. Mount the swash plate on the front flange using the pins as guide.



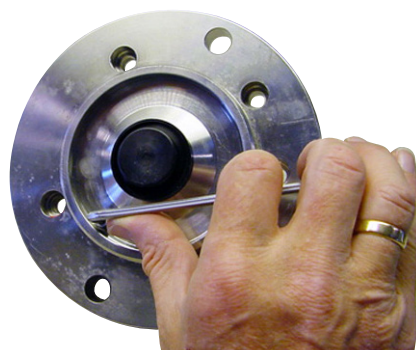
18. Press the swash plate against the flange and screw the tools together.



19. Mount the O-ring on the front flange.



20. Mount the washer and the screw in the front flange to fix the swash plate.



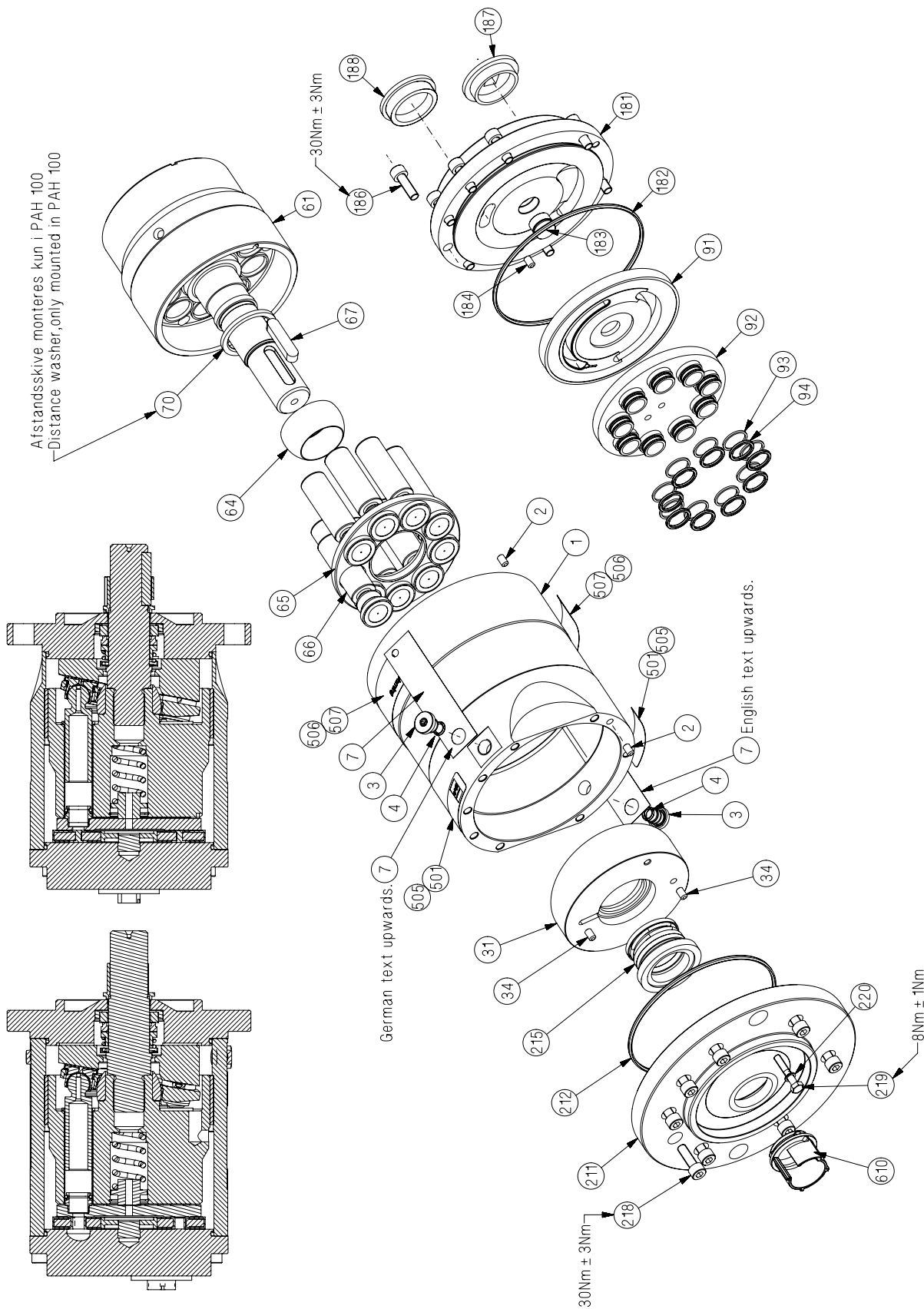
21. Tighten the screw to a torque of 8 Nm and remove the tool.



22. Mount the tool over the shaft.



5. Exploded view
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