

NOTE: Disassembly of the pump within the warranty period will void the warranty.

DISASSEMBLY

1. Tools required for dismantling PAHF 20-40



2. Loosen and remove 6 screws



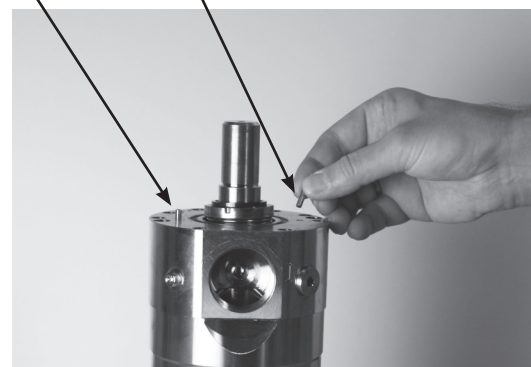
3. Remove mounting flange



4. Remove O-ring



5. Remove 2 guide pins



6. Remove shaft sealing



7. Remove spring



8. Remove washer for shaft seal



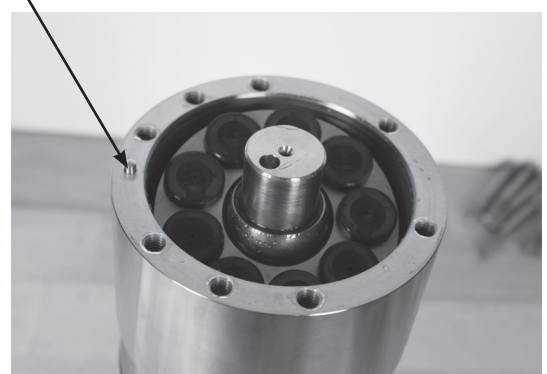
12. Remove cover



9. Loosen flange (2 screws). **Don't remove yet.**



13. Remove pin



10. Turn pump upside down



14. Remove pistons and retainer plate



11. Loosen and remove 8 screws



15. Remove retainer ball



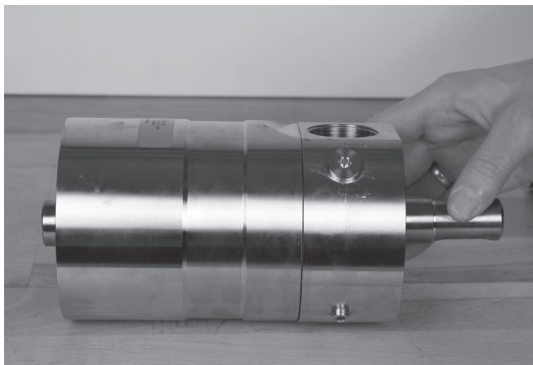
16. Remove bush



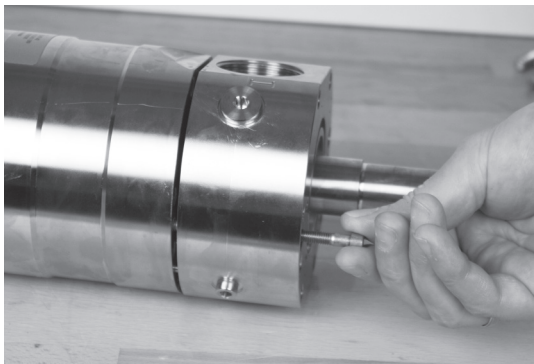
17. Remove spring



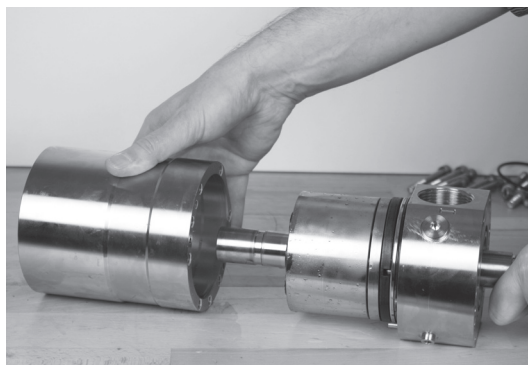
18. Place pump horizontally



19. Remove 2 screws



20. Remove pump housing from rest of the pump



21. Raise pump to vertical position and remove 1 guide pin



22. Remove cylinder barrel



23. Remove valve plate



24. Remove 1 guide pin



25. Remove O-ring from port flange



26. Loosen thrust plate from cylinder barrel



27. Remove thrust plate



28. Remove O-rings from thrust plate



29. Remove back-up rings from thrust plate



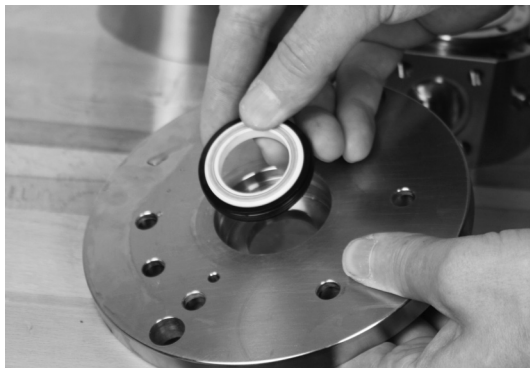
30. Remove O-ring from end cover plate



31. Remove shaft sealing from mounting flange



- 32.



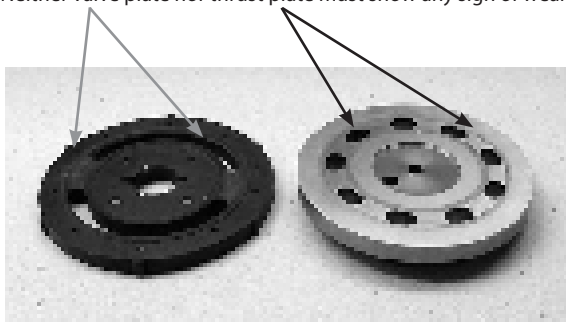
33. Pump disassembled



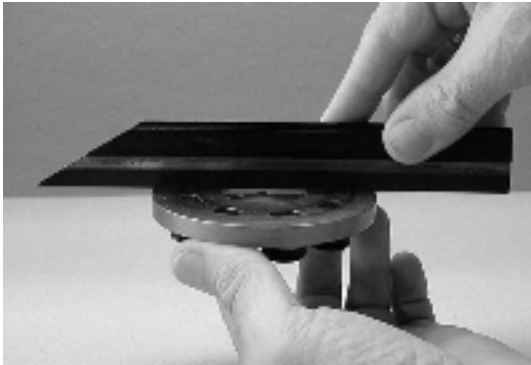
INSPECTION:

Valve and thrust plate

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



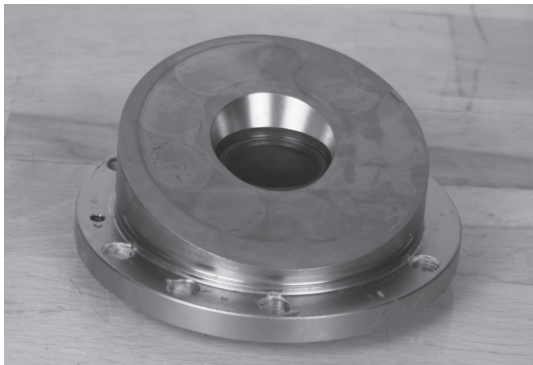
2. Hold a ruler against surface of plate and check tightness against a light source.



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

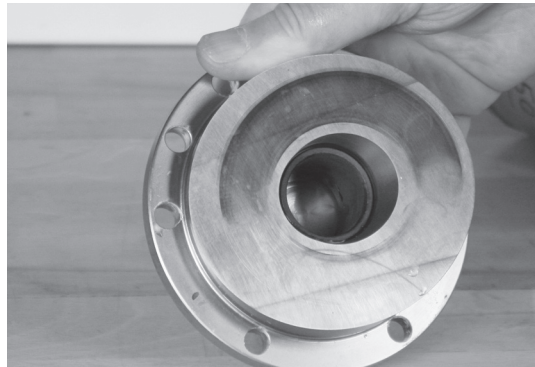
Swash plate:

1. Check that surface of swash plate is smooth and without any large scratches (depth more than 0.1 mm).

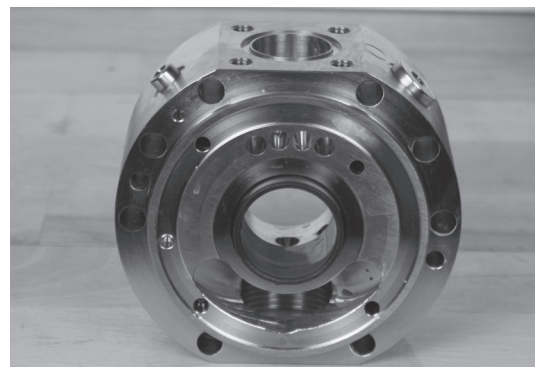


Bearings

1. Check bearing in swash plate for wear and scratches

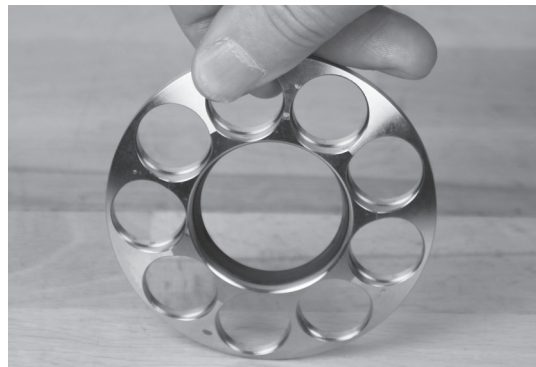


2. Check bearing in port flange for wear and scratches



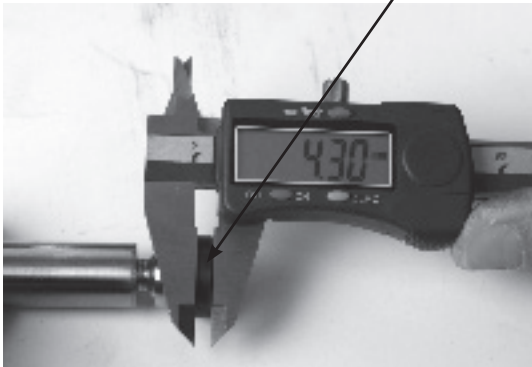
Retainer cone:

1. Check the retainer cone for scratches



Pistons

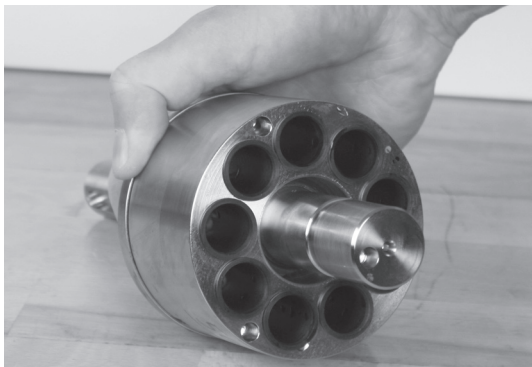
1. Clearance in ball and socket joint must not exceed 0.1 mm.
2. Thickness of piston shoes must be at least 4.1 mm.



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



4. Check bushes in cylinder barrel for wear and scratches



ASSEMBLY

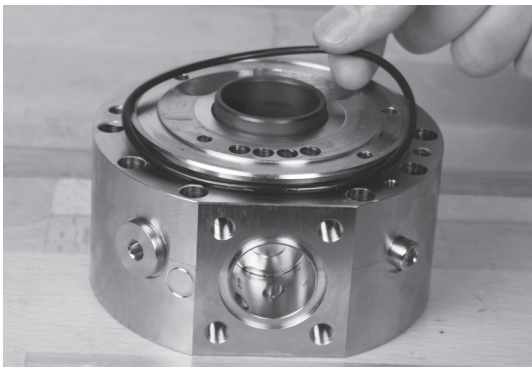
1. Tools required for assembly of PAHF 20-40



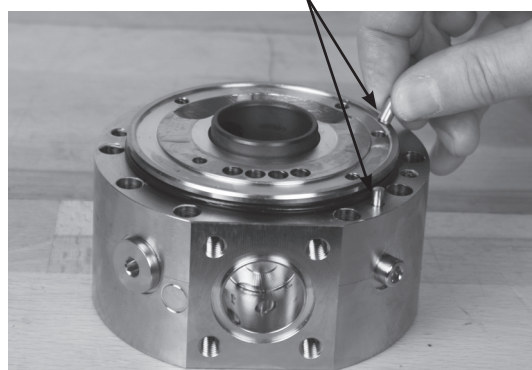
2. Parts needed for assembly of PAHF 20-40



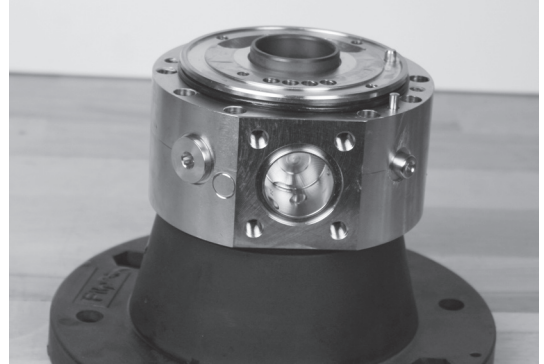
3. Mount O-ring in port flange



4. Mount 1 guide pin in port flange



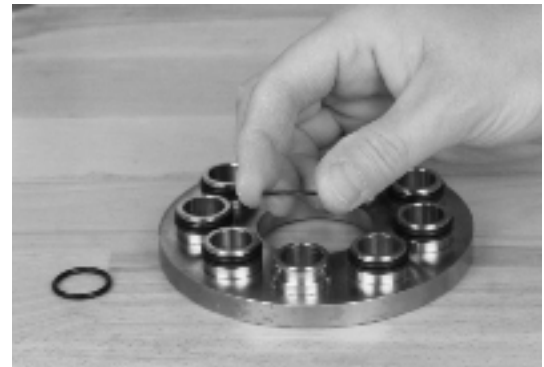
5. Place the port flange on a support (eg. a coupling housing)



6. Mount valve plate. Be aware of orientation/guide pin



7. Mount back-up rings on thrust plate



8. Mount O-rings on thrust plate



9. Spray water on cylinder barrel and thrust plate



10. Mount thrust plate on cylinder barrel



11. Press thrust plate into cylinder barrel



12. Spray water on valve plate



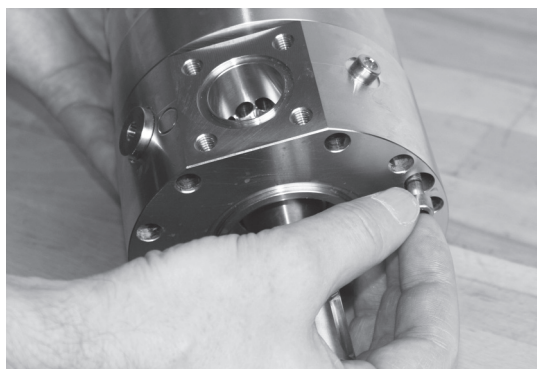
13. Mount cylinder in flange



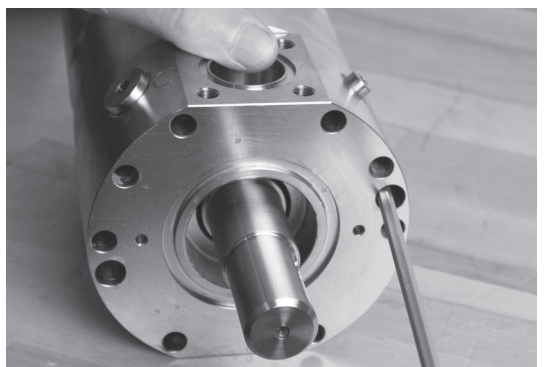
14. Mount pump housing



15. Mount 2 x screws in the bottom



16. Tighten with tool



17. Mount spring



21. Take out 2 pistons as showed



18. Mount bushing



22. Mount pistons in housing



19. Mount retainer ball on top of the spring



23. Mount the 2 last pistons



20. Spray with water



24. Mount 1 guide pin in pump housing



25. Mount O-ring on end cover plate



29. Turn pump around and tighten 2 screws with 10 Nm



26. Mount end cover plate in pump housing



30. Mount the 2 guide pins



27. Mount and cross-tighten 3 screws as showed. Then mount the last 5 screws.



31. Mount the O-ring



28. Tighten with 30Nm



32. Place special tool on shaft



33. Mount the washer



37. Press in place with special tool



34. Mount the spring



38. Mount flange on shaft (remember to spray with water)



35. Mount the shaft seal (smallest diameter pointing down)



39. Mount the 6 screws.



36. Mount shaft seal in flange



40. Tighten with 30 Nm



Service kit list for PAHF 20-40

Pos.	Qty.	Unit	Designation	Material						
					Shaft seal kit PAHF 20-40 180B4066	Valve plate kit PAHF 20-40 180B4067	Piston kit PAHF 20-40 180B4068	Cylinder barrel PAHF 20-40 180B4069	Shaft seal tool set PAHT/F 20-32 180Z0236	Screw and O-rings kit PAHF 20-40 180B4070
-	1		Shaft bush, torpedo	-					X	
-	1		Press tool 1	-					X	
-	1		Press tool 2	-					X	
1	1	Pc.	Housing	AISI316						
2	2	Pcs.	Pin 4 x 14	AISI304						X
32	8	Pcs.	Screw M8 x 20	AISI 304						X
35	1	Pc.	Bearing	PEEK						
36	1	Pc.	O-ring Ø85 x 3	NBR	X					X
61	1	Pc.	Cylinder barrel	1.4301				X		
62	1	Pc.	Spring	SAF2205			X			
63	1	Pc.	Retainer	PEEK			X			
64	1	Pc.	Retainer ball	Stainless steel (1.4057)			X			
65	1	Pc.	Retainer plate	1.4301			X			
66	9	Pcs.	Piston	Stainless steel (1.4057)			X			
67	1	Pc.	Key 8x7x32	1.4571 / AISI316Ti	X					
91	1	Pc.	Valve plate PAHT 20-32	AISI 304 / PEEK		X				
92	1	Pc.	Thrust plate	1.4057/AISI 431		X				
93	9	Pcs.	Back-up ring	PTFE		X				
94	9	Pcs.	O-ring 13.00 x 2.00	NBR		X				
121	1	Pc.	Port flange	1.4404/AISI 316						
122	1	Pc.	O-ring ø85 x 3	NBR	X					X
123	1	Pc.	O-ring ø59.5 x 3	NBR	X					
124	1	Pc.	Shaft sealing	AISI 304 / NBR	X					
125	1	Pc.	End cover	1.4401/AISI 316						
126	1	Pc.	Pin 5 x 10	AISI 304		X				
127	8	Pcs.	Screw M8 x70	AISI 304	X					
128	2	Pcs.	Screw M6 x 35	AISI 304						X
129	2	Pcs.	Bleeding screw M6	1.4462						
130	2	Pcs.	O-ring ø4.5 x 1.5	NBR						
131	1	Pc.	Plug	Polyamid						
132	1	Pc.	Plug	Polymer						
136	3	Pcs.	O-ring 11.0 x 2.0	NBR						
140	1	Pc.	Bearing	PEEK						
143	3	Pcs.	Plug	AISI 304						
	1	Pc.	Service instruction 180R9180		X	X	X	X		X