

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

DISASSEMBLY

- Tools required for dismantling the pump



- Loosen and remove 6 screws



- Remove mounting flange



- Remove shaft sealing



- Remove spring



- Remove 2 guide pins



- Remove O-ring



8. Turn pump upside down



9. Loosen and remove 10 screws



10. Remove cover



- 11.



12. Remove pistons and retainer plate



13. Remove retainer ball



14. Remove retainer



15. Remove spring



16. Remove cylinder barrel



20. Remove port flange



17. Remove port plate



21. Remove 1 guide pin



18. Remove 1 guide pin



22. Remove O-ring from port flange



19. Turn pump upside down. Loosen and remove 4 screws



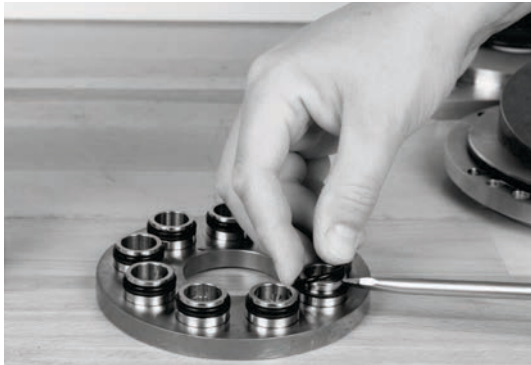
23. Loosen thrust plate from cylinder barrel



24. Remove thrust plate



25. Remove O-rings from thrust plate



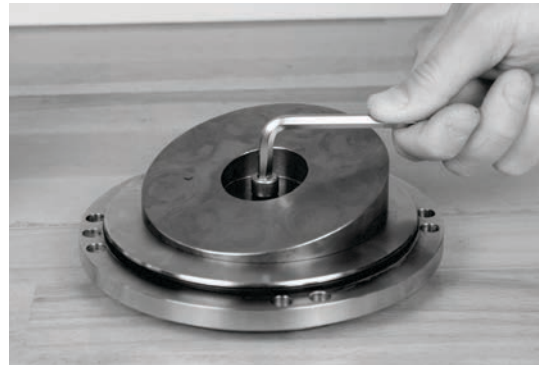
26. Remove backup rings from thrust plate



27. Remove 1 guide pin from end cover plate



28. Loosen and remove screw from swash plate



29. Remove swash plate



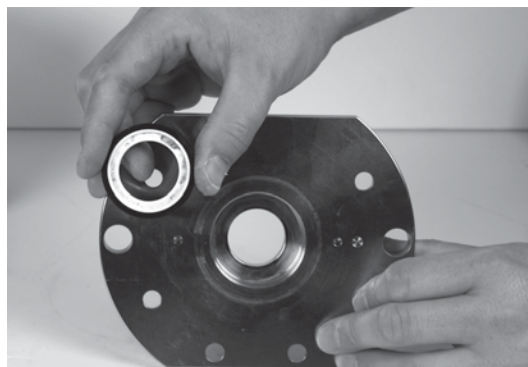
30. Remove 2 guide pins from end cover plate



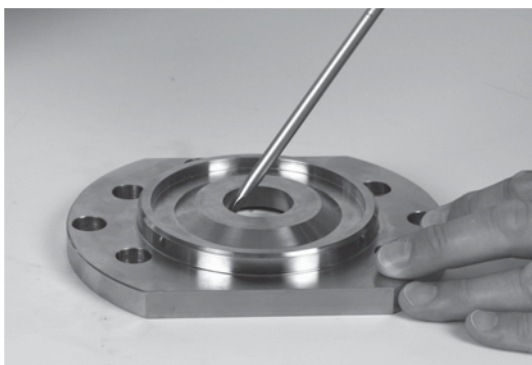
31. Remove O-ring from end cover plate



- 33.



32. Remove shaft sealing from mounting flange



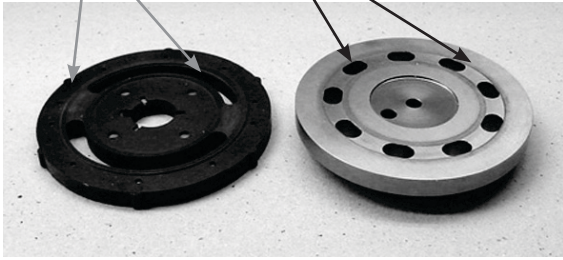
34. Pump disassembled



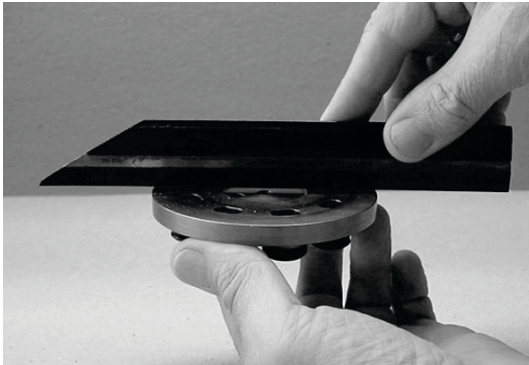
INSPECTION:

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).



Pistons

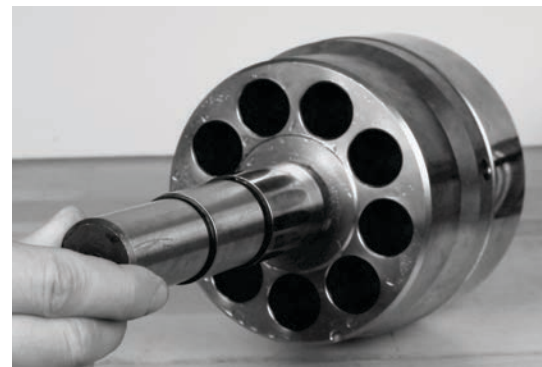
1. Play in ball and socket joint must not exceed 0.1 mm.
2. Thickness of piston shoes must be at least 4.1 mm.



3. Hold a ruler against surfaces of piston shoes to check that the surfaces are even and smooth and without any scratches. It is acceptable that the (black) treated surfaces of the pistons are partly worn.



4. Check bushes in cylinder barrel for wear and scratches



5. Check main bearing for wear and scratches



ASSEMBLY

1. Tools required for assembly of the pump



2. Parts needed for assembly of the pump



WARNING:

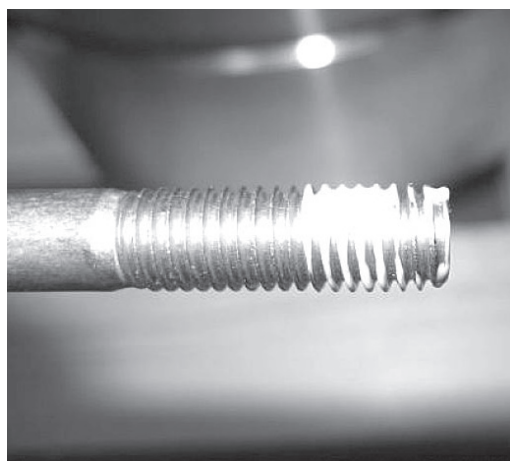
WARNING:
Do not use silicone when assembling the pump.
Do not reuse disassembled O-rings; they might be damaged. Always use new O-rings.

Important:

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

Lubrication:

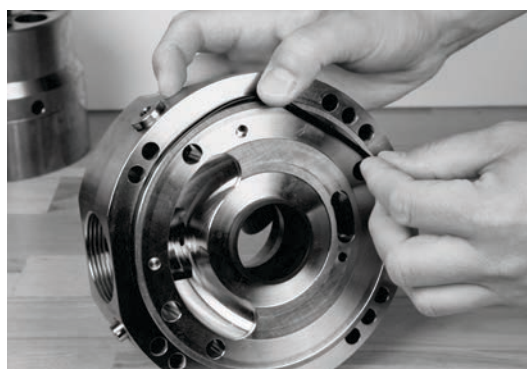
- To prevent seizing-up, lubricate all threads with PTFE lubrication type.
- O-rings inside pump may be lubricated only with clean filtered water.
- O-rings for port flange, mounting flange and flushing valve must be lubricated.
- It is important to lubricate ALL parts to be assembled with clean filtered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



3. Mount 1 guide pin in housing



4. Mount O-ring in port plate



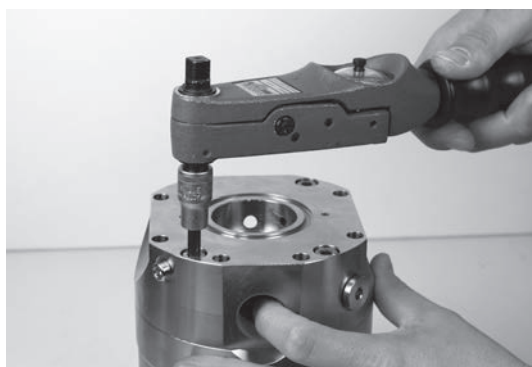
5. Mount port flange on housing. Use pin as guide



6. Mount 4 screws (M8x50)



7. Tighten screws to 30Nm



8. Turn pump upside down



9. Mount 1 guide pin inside the housing on the back side of the port plate



10. Mount port plate. Be aware of orientation/guide pin



11. Mount backup rings on the thrust plate



12. Mount O-rings on the thrust plate



13. Spray with water on cylinder barrel and thrust plate



14. Mount thrust plate on cylinder barrel



15. Press thrust plate into cylinder barrel



16. Mount cylinder barrel in housing



17. Mount spring



18. Mount retainer on top of the spring



19. Spray with water and mount retainer ball



20. Place retainer plate on top of retainer ball



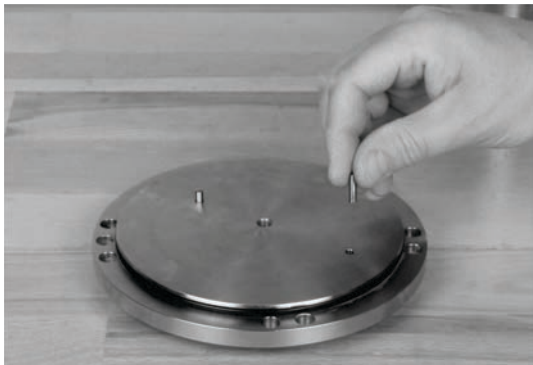
21. Spray with water and mount pistons



22. Spray with water and mount O-ring on end cover



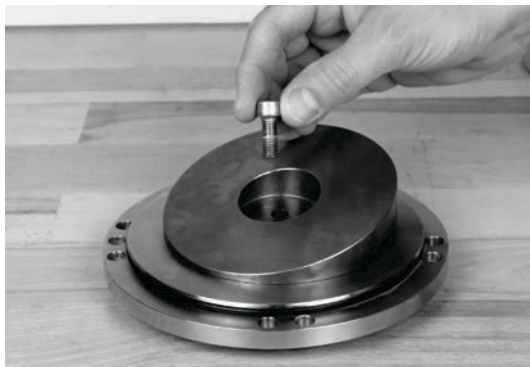
23. Mount 2 guide pins on endcover



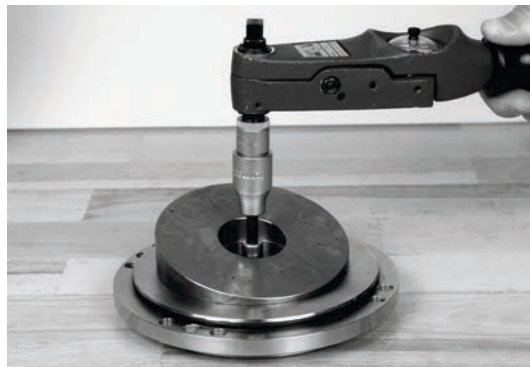
24. Mount swash plate



25. Mount screw (M8x16)



26. Tighten screw to 30Nm



27. Mount 1 guide pin on housing



28. Spray piston shoes with water



29. Mount endcover on the housing



30. Mount 10 screws (M8x16)



31. Tighten 10 screws to 30Nm



32. Turn pump upside down and mount 2 guide pins



33. Spray with water and mount O-ring



34. Spray shaft sealing with water before mounting



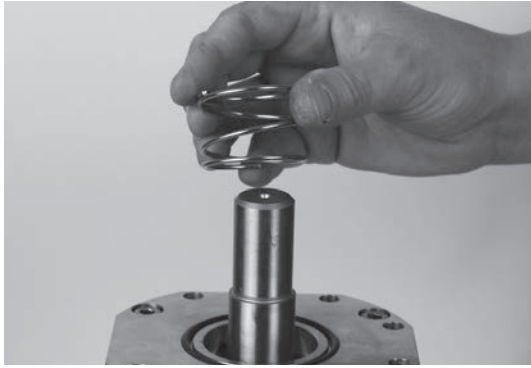
35. Use tool and press shaft sealing into place



36. Mount metal ring



37. Mount spring



38. Mount special tool on shaft



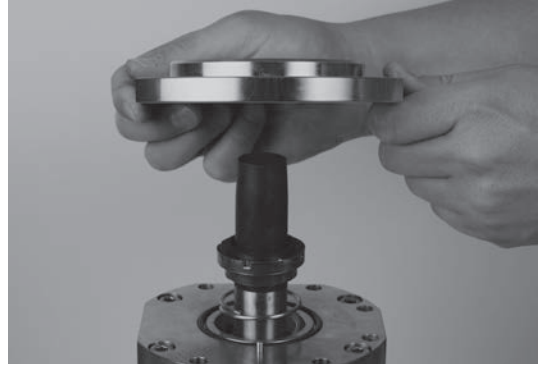
39. Spray with water



40. Mount sealing (smallest diameter pointing down)



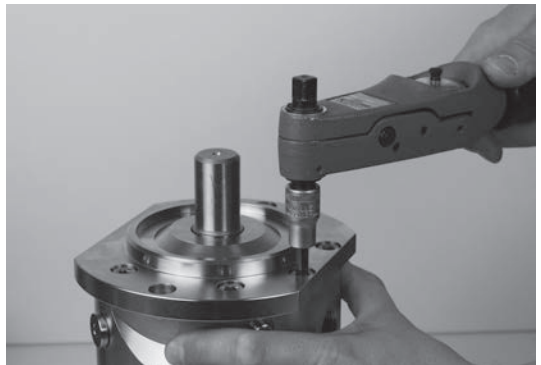
41. Mount mounting flange



42. Mount 6 screws



43. Tighten screws to 30Nm

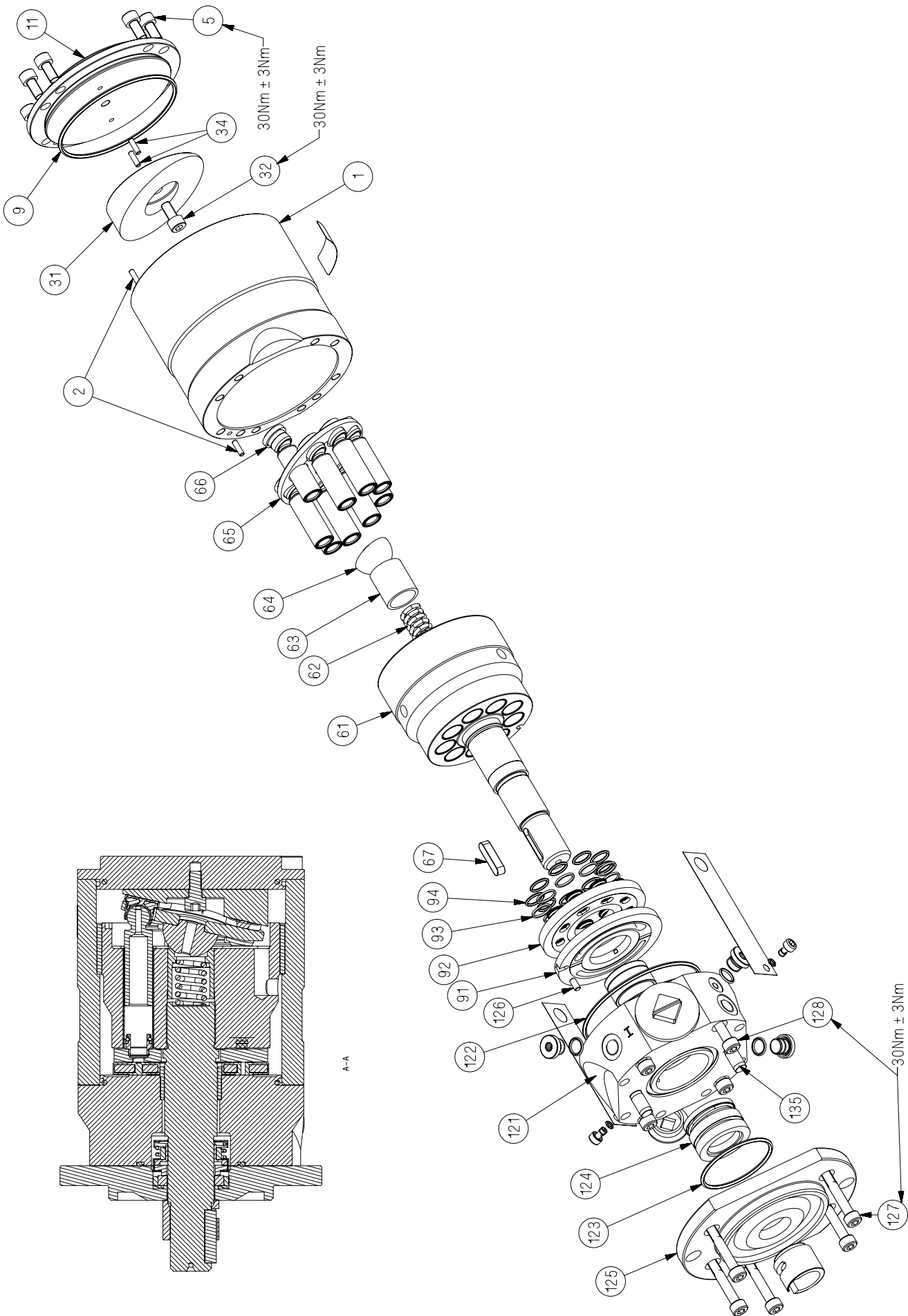


44. Finished



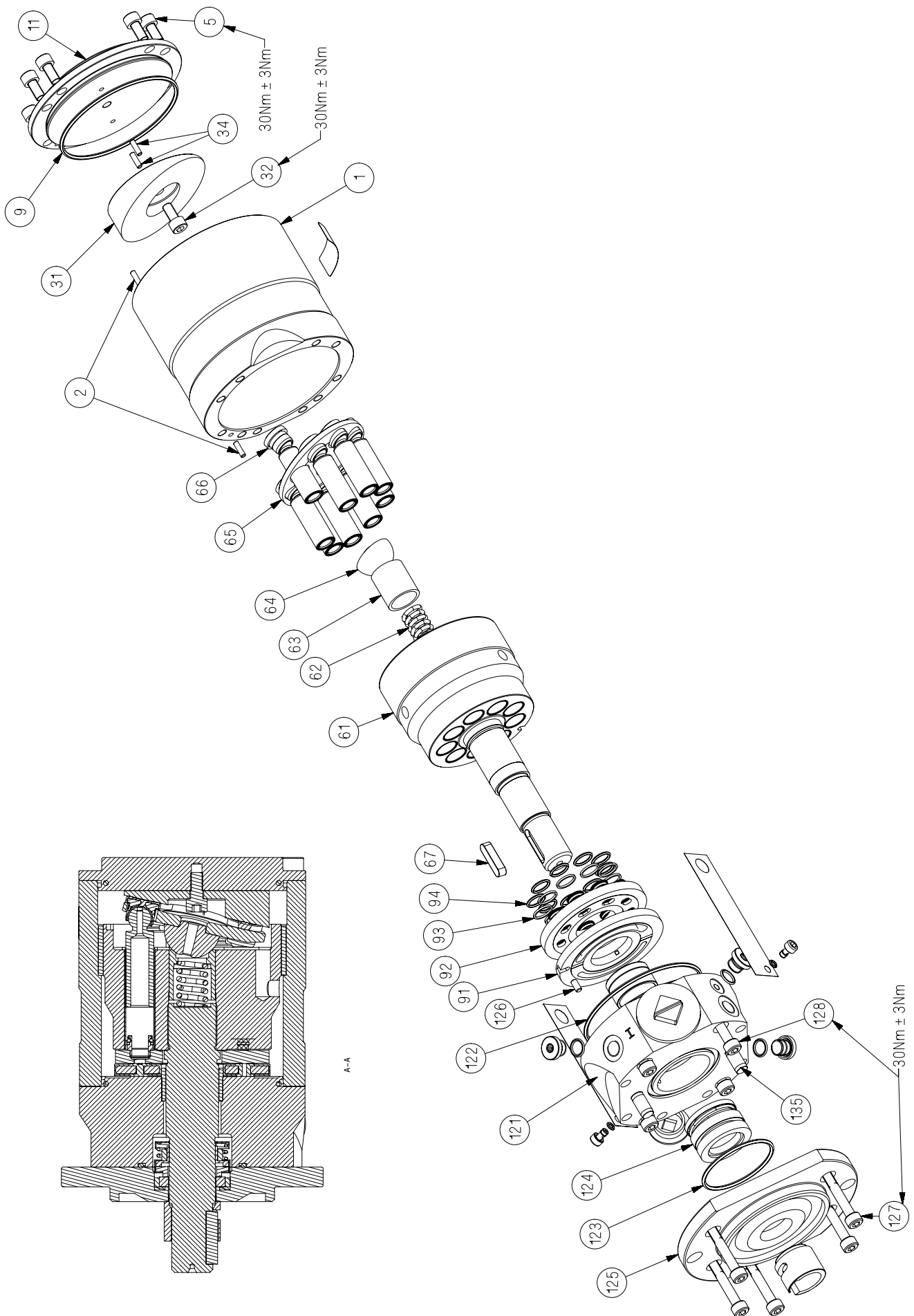
Spare parts list for PAHT 20-32				180B4055 - Seal set (PAHT 20-32)	180B4054 - Cylinder barrel set (PAHT 20-32)	180B4052 - Valve plate set (PAHT 20-32)	180B4053 - Piston set (PAHT 20-32)	180B4251 - Swash plate set (PAHT 20)	180B4254 - Swash plate set (PAHT 25)	180B4257 - Swash plate set (PAHT 32)
Pos.	Qnt.	Designation	Material							
1	1	Housing	AISI 316							
2	2	Pin Ø4 x 14	AISI 304	x						
5	10	Screw M8 x 16	AISI 304	x						
9	1	O-ring Ø102 x 3	NBR	x						
11	1	End cover CW	AISI 316							
31	1	Swash plate	AISI 431					x	x	x
32	1	Screw Ø8 x 16	AISI 304					x	x	x
34	2	Pin Ø4 x 14	AISI 304					x	x	x
61	1	Cylinder barrel	AISI 431		x					
62	1	Spring	AISI 304				x			
63	1	Retainer	PEEK				x			
64	1	Retainer ball	AISI 304				x			
65	1	Retainer plate	1.4301				x			
66	9	Piston	AISI 431 / PEEK				x			
67	1	Key 8 x 7 x 32	AISI 316Ti	x						
91	1	Port plate	AISI 304 / PEEK			x				
92	1	Valve plate	AISI 431			x				
93	9	Back up ring	PTFE			x				
94	9	O-ring Ø13 x 2	NBR			x				
121	1	Port flange	AISI 316							
122	1	O-ring Ø102 x 3	NBR	x						
123	1	O-ring Ø59,5 x 3	NBR	x						
124	1	Shaft sealing	AISI 304 / NBR	x						
125	1	End cover	AISI 316							
126	1	Pin Ø5 x 10	AISI 304			x				
127	6	Screw M8 x 60	AISI 304	x						
128	4	Screw M8 x 50	AISI 304	x						
	1	Service instruction		x						

**Exploded view
PAHT 20-32**



Spare parts list for PAHT G 20-32				180B4333 - Seal set (PAHT G 20-32)	180B4335 - Cylinder barrel set (PAHT G 20-32)	180B4337 - Valve plate set (PAHT G 20-32)	180B4336 - Piston set (PAHT G 20-32)	180B4323 - Swash plate set (PAHT G 20)	180B4324 - Swash plate set (PAHT G 25)	180B4325 - Swash plate set (PAHT G 32)
Pos.	Qnt.	Designation	Material							
1	1	Housing	AISI 316							
2	2	Pin Ø4 x 14	AISI 304	x						
5	10	Screw M8 x 16	AISI 304	x						
9	1	O-ring Ø102 x 3	NBR	x						
11	1	End cover CW	AISI 316							
31	1	Swash plate	AISI 431					x	x	x
32	1	Screw Ø8 x 16	AISI 304					x	x	x
34	2	Pin Ø4 x 14	AISI 304					x	x	x
61	1	Cylinder barrel	AISI 431		x					
62	1	Spring	AISI 304				x			
63	1	Retainer	PEEK				x			
64	1	Retainer ball	AISI 304				x			
65	1	Retainer plate	1.4301				x			
66	9	Piston	AISI 431 / PEEK				x			
67	1	Key 8 x 7 x 32	AISI 316Ti	x						
91	1	Port plate	AISI 304 / PEEK			x				
92	1	Valve plate	AISI 431			x				
93	9	Back up ring	PTFE			x				
94	9	O-ring Ø13 x 2	NBR			x				
121	1	Port flange	AISI 316							
122	1	O-ring Ø102 x 3	NBR	x						
123	1	O-ring Ø59,5 x 3	NBR	x						
124	1	Shaft sealing	AISI 304 / NBR	x						
125	1	End cover	AISI 316							
126	1	Pin Ø5 x 10	AISI 304			x				
127	6	Screw M8 x 60	AISI 304	x						
128	4	Screw M8 x 50	AISI 304	x						
	1	Service instruction		x						

**Exploded view
PAHT G 20-32**



Tool sets		180Z0236 - Tool set (PAH / PAHT / PAHT G 20-32)
Qty.	Designation	
1	Shaft bush, torpedo	
1	Press tool 1	
1	Press tool 2	
Danfoss A/S High Pressure Pumps DK-6430 Nordborg Denmark  info@lennotech.com Tel. +31-152-610-900 www.lennotech.com Fax. +31-152-616-289		
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