

Service guide

PAHT / PAHT G pumps

PAHT 20-32 / PAHT G 20-32

Disassembling and assembling

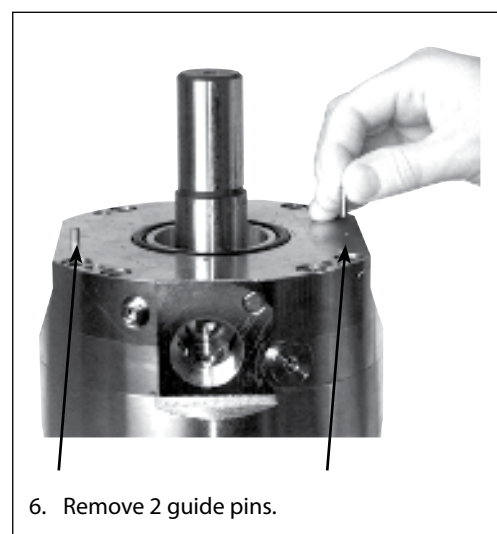
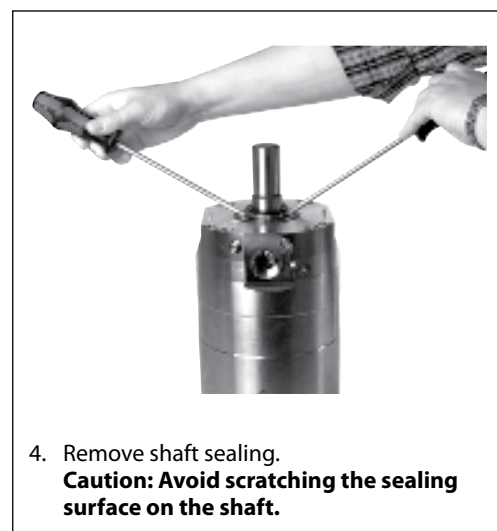


Introduction

This document covers the instructions for disassembling and assembling the axial piston pumps PAHT / PAHT G 20-32.



1. Disassembling the pump





7. Remove O-ring.



8. Turn pump upside down.



9. Loosen and remove 10 screws.



10. Remove cover.



11. View to pistons and retainer plate.



12. Remove pistons and retainer plate.



13. Remove retainer ball.



14. Remove retainer.



15. Remove spring.



16. Remove cylinder barrel.



17. Remove port plate.



18. Remove 1 guide pin.



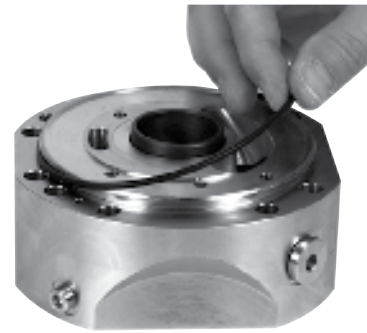
19. Turn pump upside down. Loosen and remove 4 screws.



20. Remove port flange.



21. Remove 1 guide pin.



22. Remove O-ring from port flange.



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.



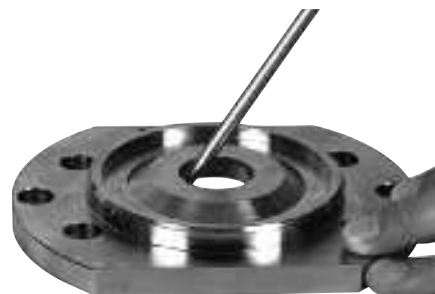
29. Remove swash plate.



30. Remove 2 guide pins from end cover plate.



31. Remove O-ring from end cover plate.



32. Remove shaft sealing from mounting flange.



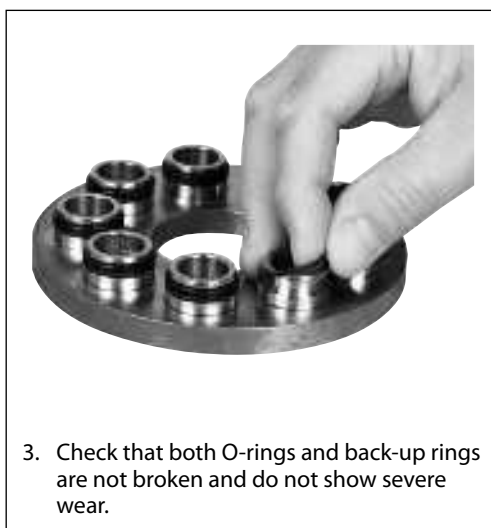
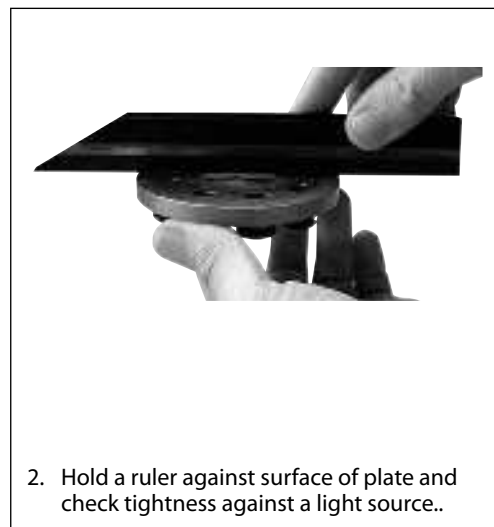
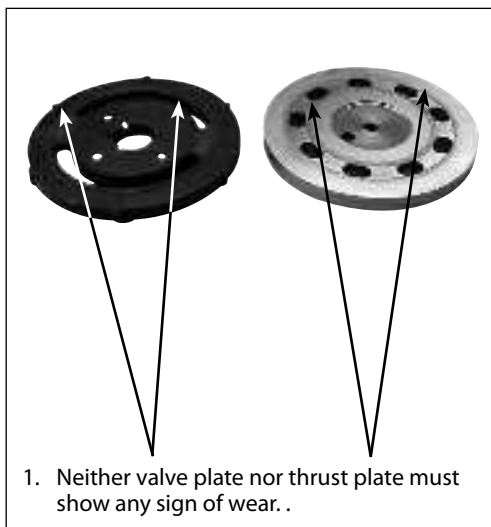
33.



34. Pump disassembled.

2. Inspection

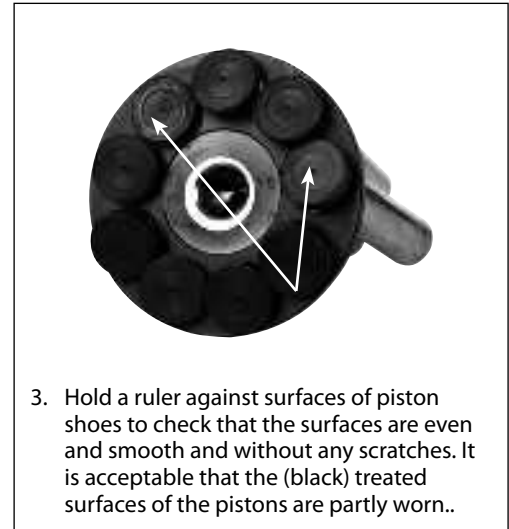
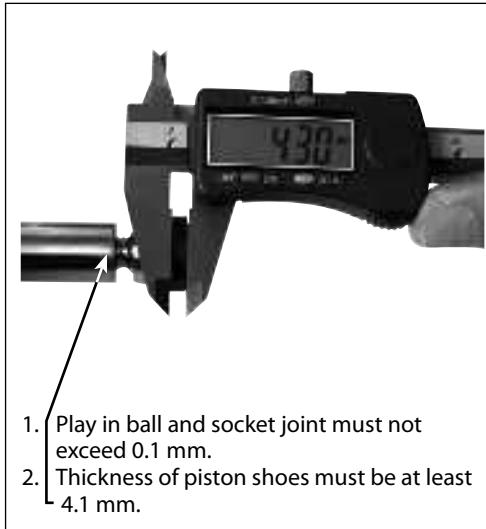
2.1. Valve and thrust plate:



2.2. Swash plate:



2.3. Pistons:



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.



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).



1. Tools required for assembly of the pump.



2. Parts needed for assembly of the pump.



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.



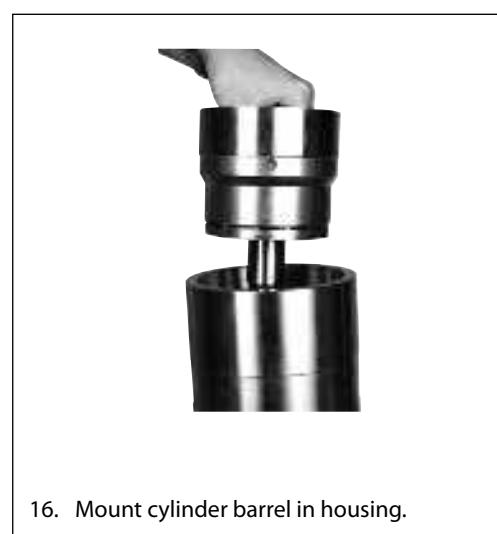
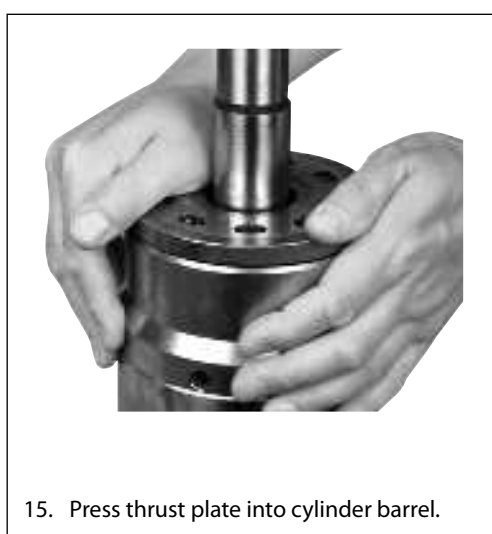
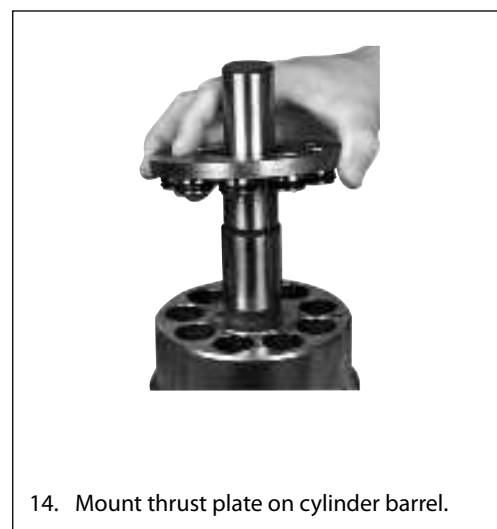
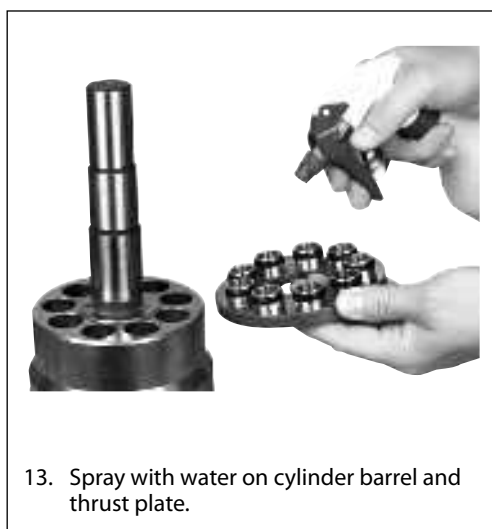
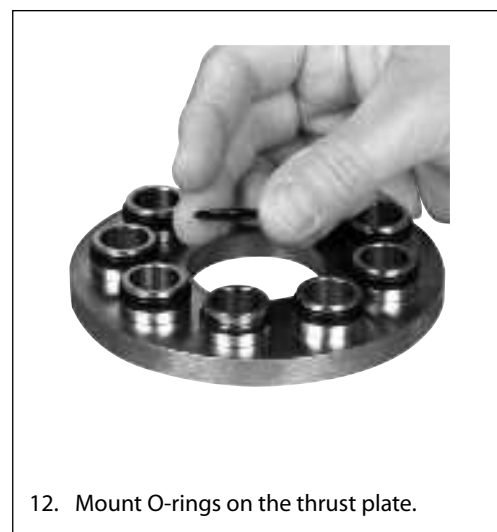
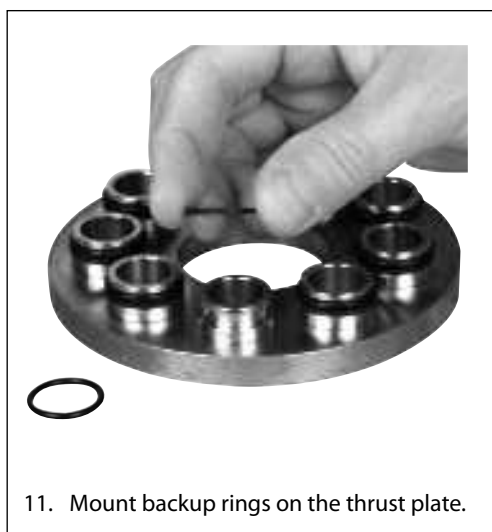
8. Turn pump upside down.



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.





17. Mount spring.



18. Mount retainer on top of the spring.



19. Spray with water and mount retainer ball.



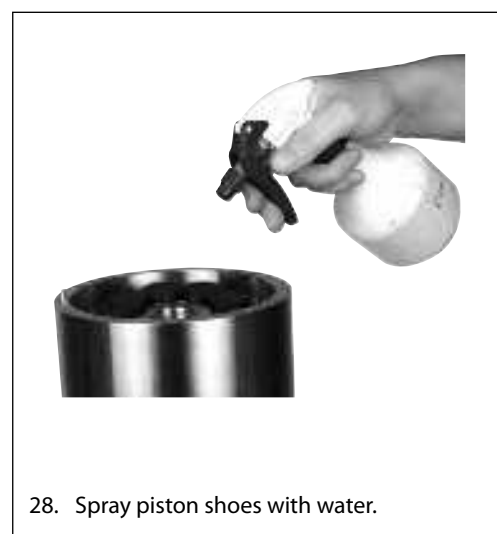
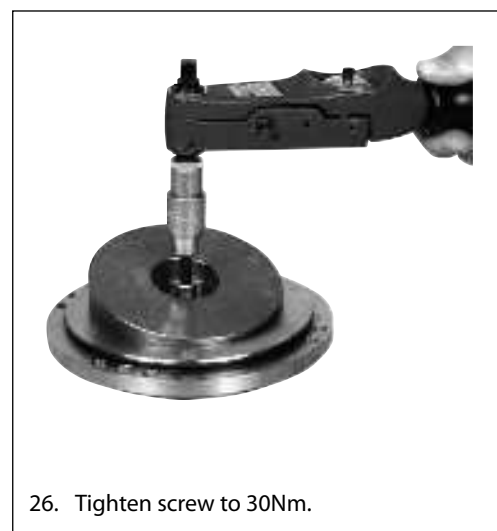
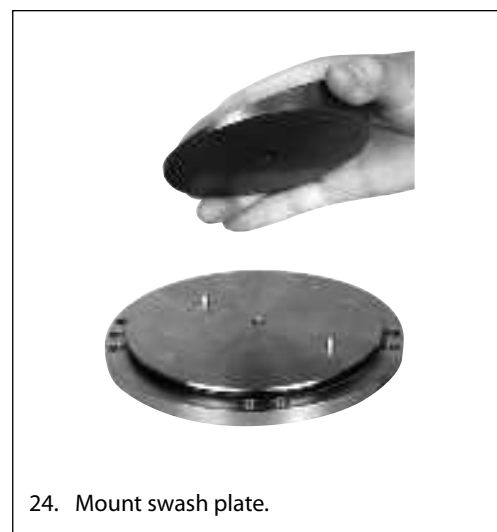
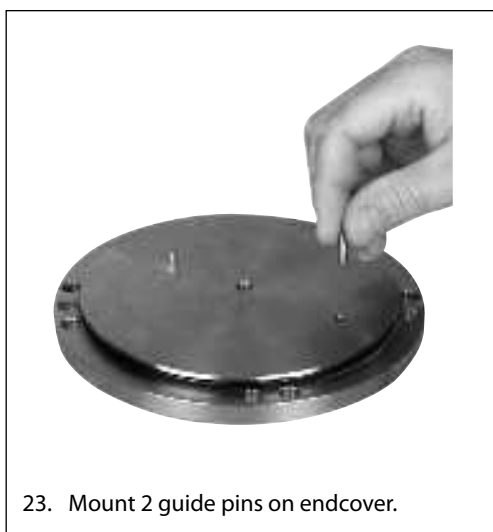
20. Place retainer plate on top of retainer ball.



21. Spray with water and mount pistons.



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





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.

Finished.

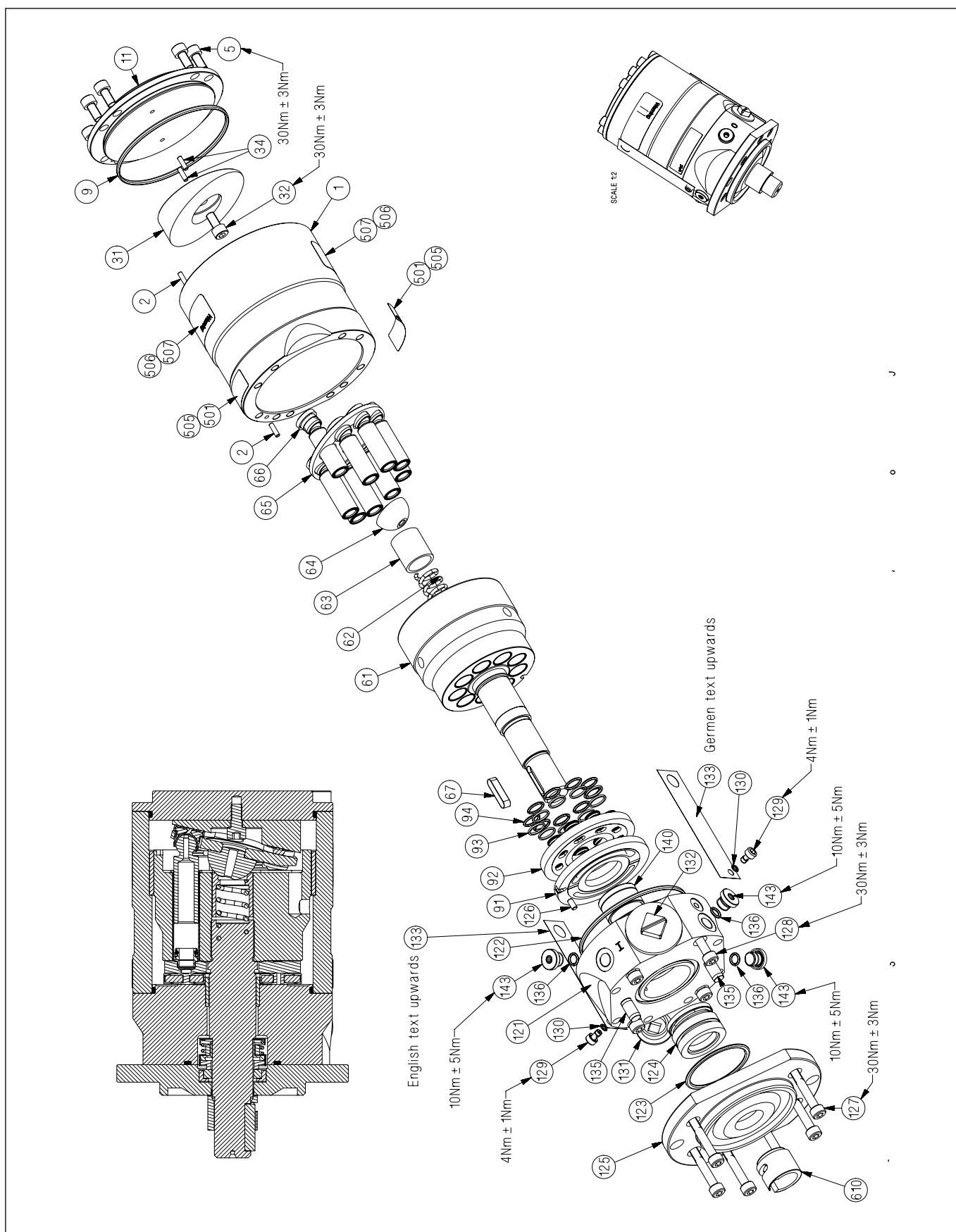


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4. Spare parts list for PAHT 20-32

Pos.	Qty.	Designation	Material	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)
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	x	x	x	x	x	x

5. Exploded view
PAHT 20-32

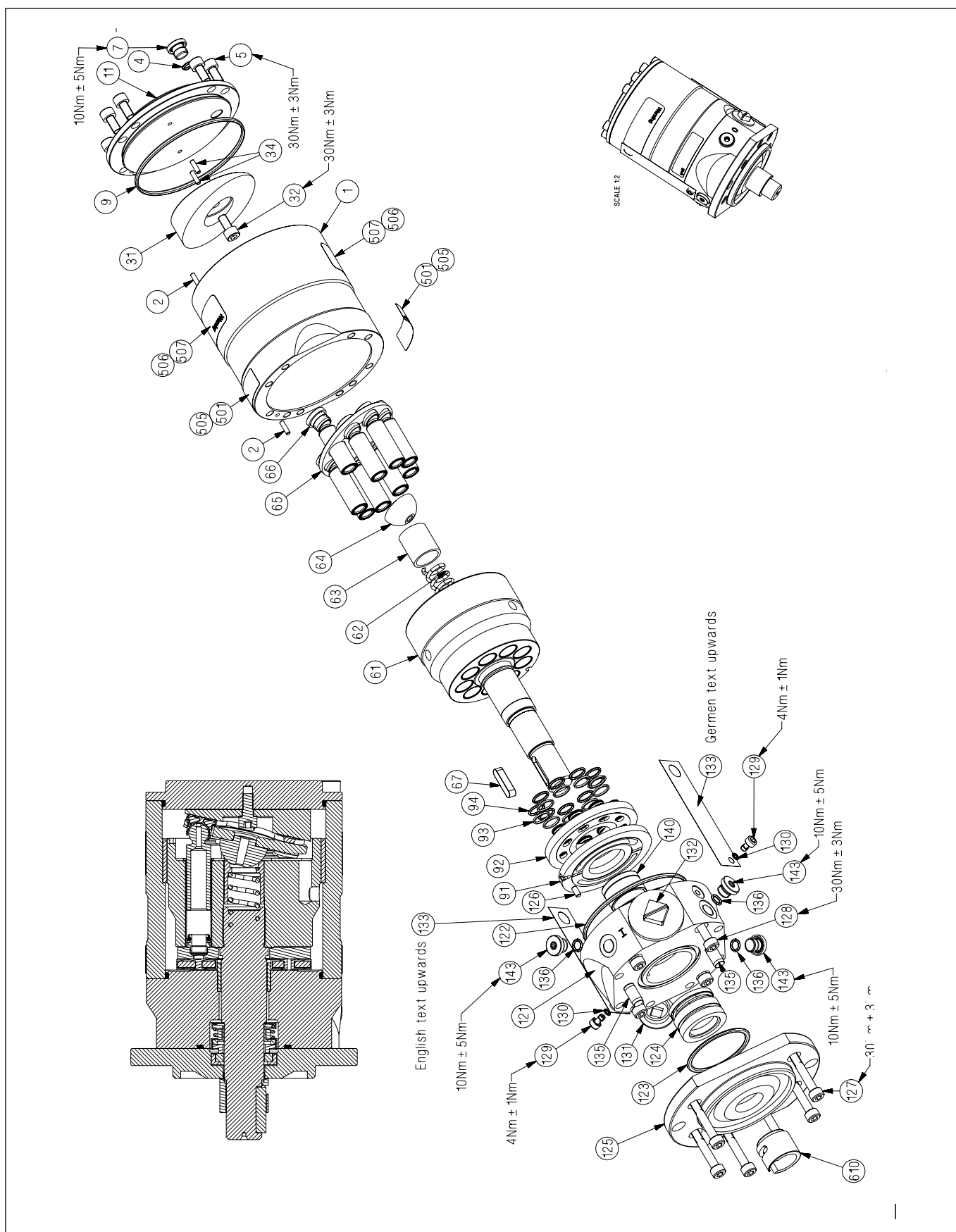


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6. Spare parts list for PAHT G 20-32

Pos.	Qty.	Designation	Material	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)
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	x	x	x	x	x	x

7. Exploded view
PAHT G 20-32



8. Tool sets

Qnt. Designation		180Z0236 - Tool set (PAH / PAHT / PAHT G 20-32)
1	Shaft bush, topedo	
1	Press tool 1	
1	Press tool 2	

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High Pressure Pumps

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