

Service guide

PAH pumps

PAH 50-100

Disassembling and assembling



Table of Contents

Contents

Introduction.....2

1. Disassembling the pump 3

2. Inspection7

2.1. Port plate and thrust plate.....7

2.2. Pistons.....7

2.3. Cylinder barrel8

2.4. Housing.....8

2.5. Swash plate8

3. Assembling.....9

4. Service kit list for PAH 50-100.....14

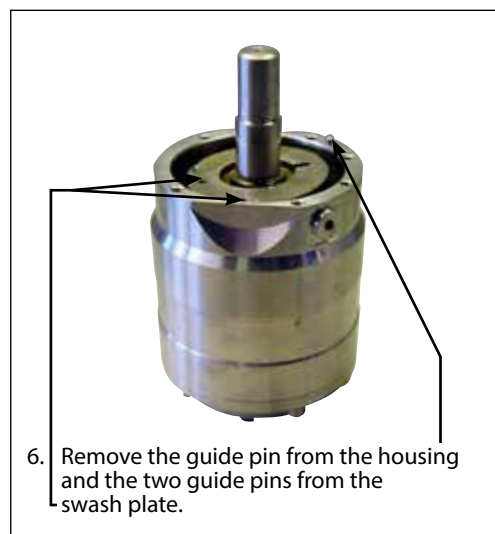
Introduction

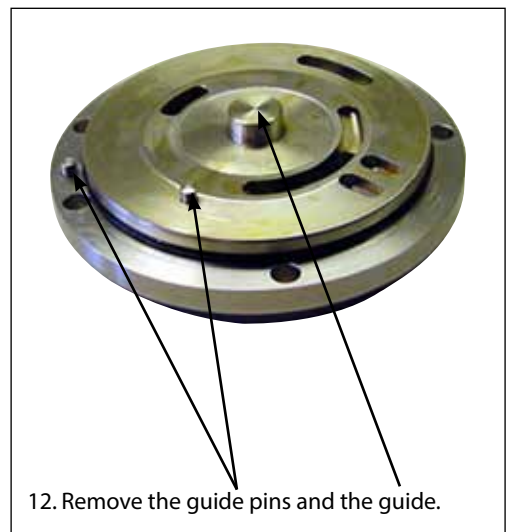
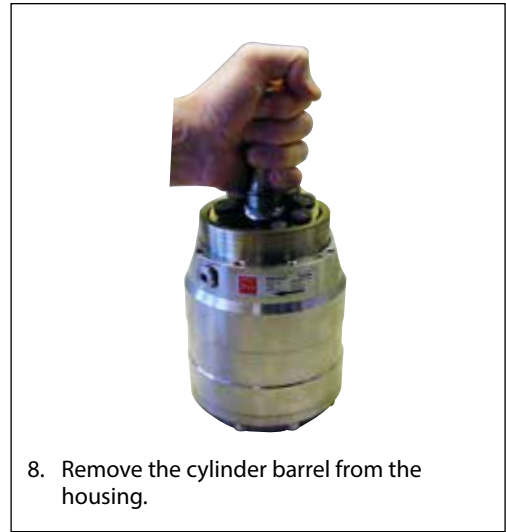
NOTE: If the pump is disassembled within the warranty period, the pump is no longer covered by the warranty.

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



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.

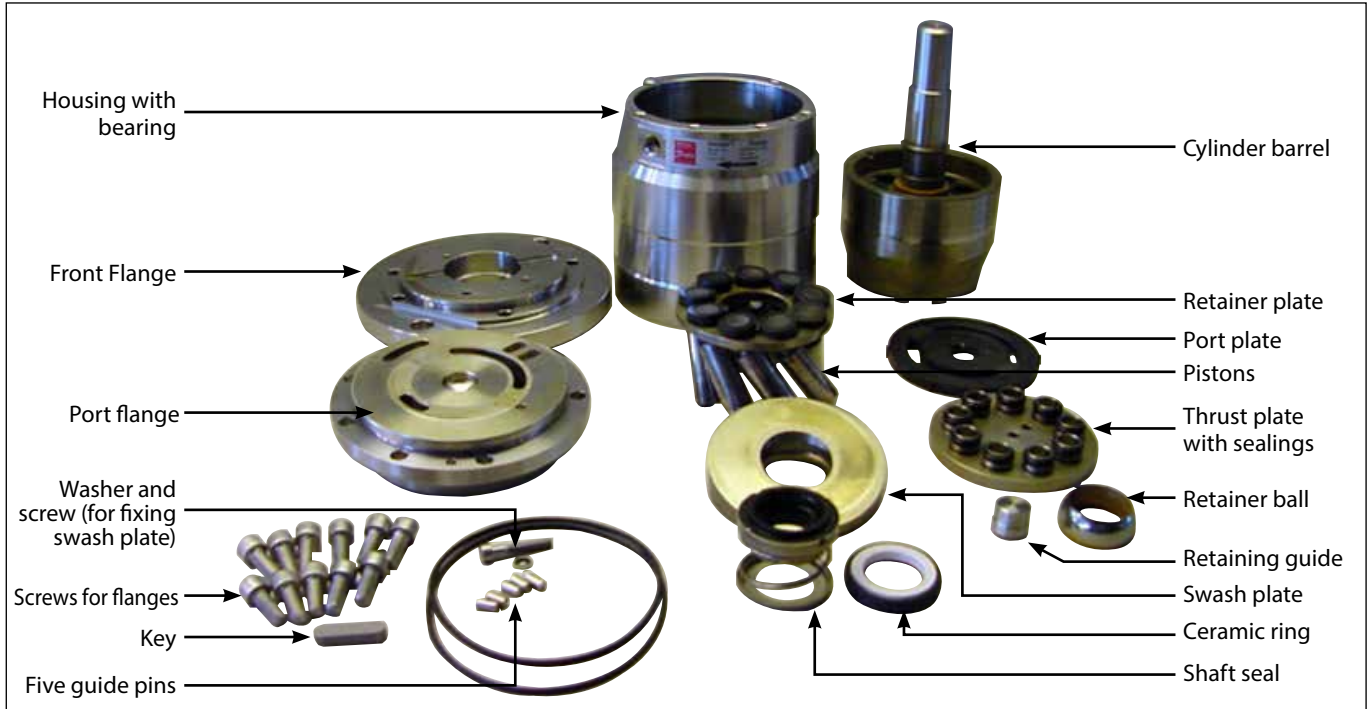
Instruction

Disassembling and assembling PAH 50-100

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

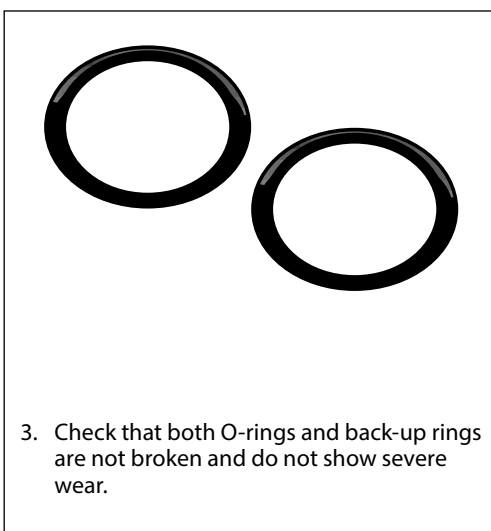
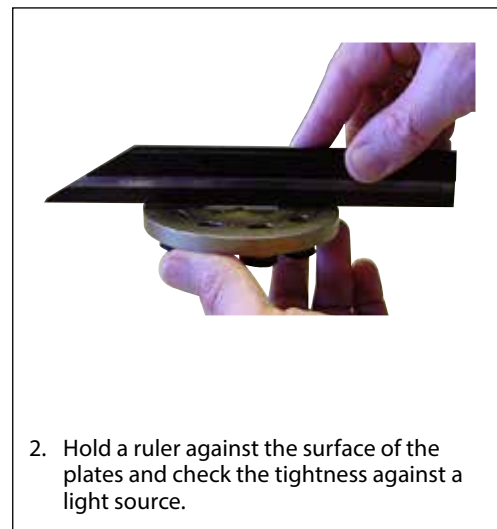
20. Inspect all parts carefully (see "Inspection") and replace any worn parts.

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

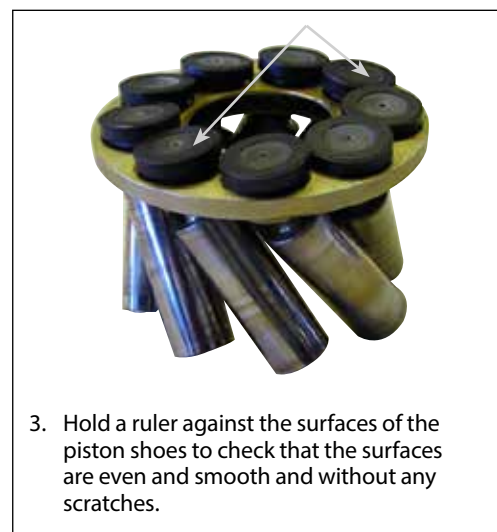


2. Inspection

2.1. Port plate and thrust plate

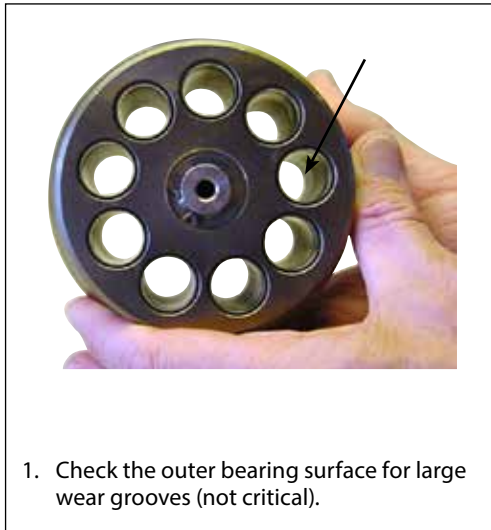


2.2. Pistons



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

2.3. Cylinder barrel

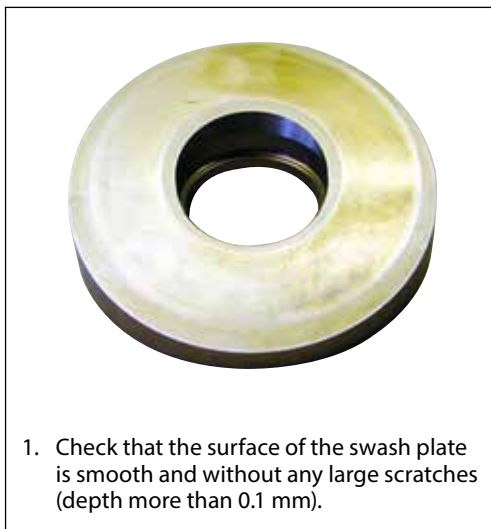


2. Check that the bushings are free from seizure and large scratches.
3. Ensure that the pistons can move freely in the bushings.

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.

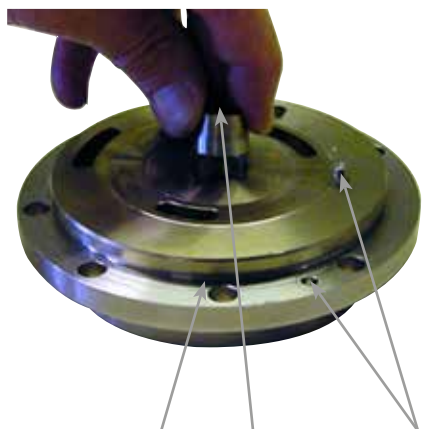
Important:
It is essential that the pump is serviced in conditions of absolute cleanliness. All parts must be absolute clean before mounting.



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.

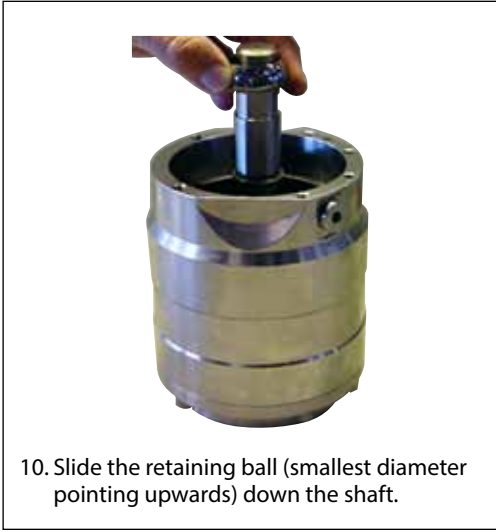
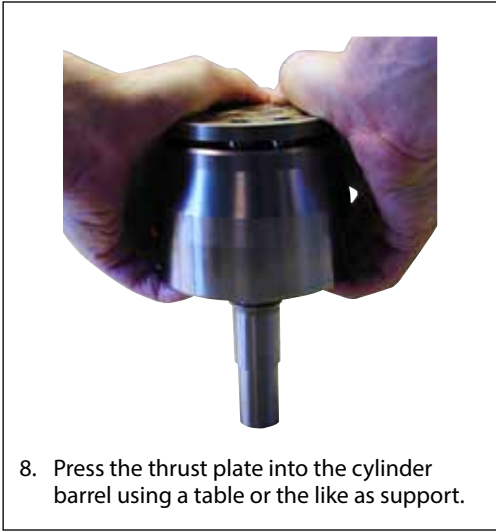


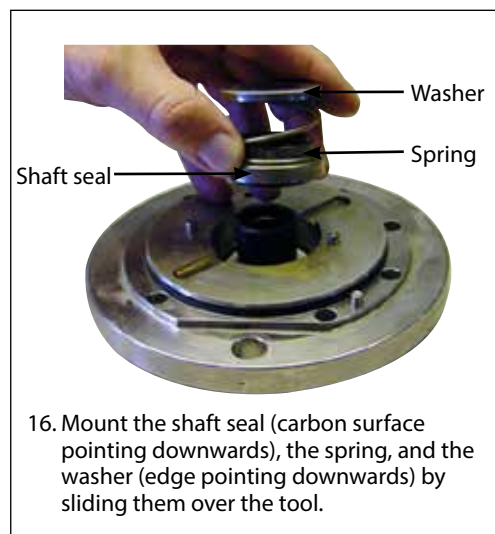
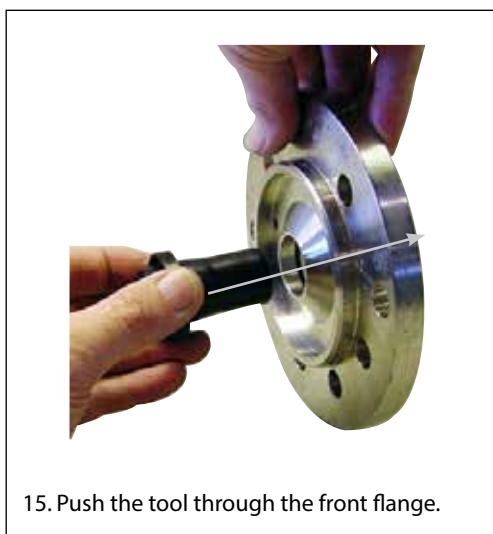
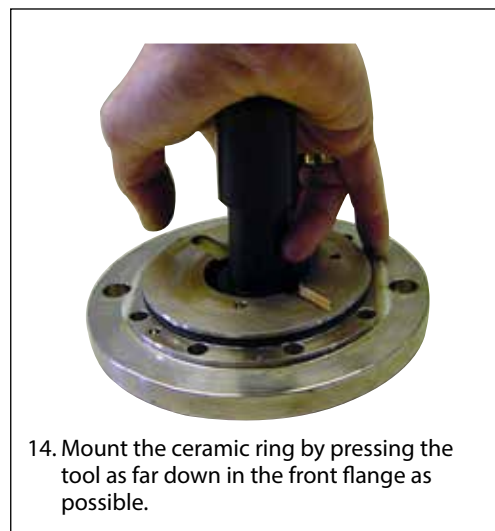
3. Mount the O-ring, the guide and the guide pins on the port flange.



Guide pin

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







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.



4. Service kit list for PAH 50-100

Pos.	Qty.	Unit	Designation	Material	180B4121 - Screw & seal kit	180B4122 - Valve plate kit	180B4125 - Piston kit PAH 50-80 (Standard pump)	180B4493 - Piston kit PAH 100 (Standard pump)	180B4123 - Piston kit (Tech. Water pump)	180B4126 - Cylinder Barrel (Standard pump)	180B4124 - Cylinder Barrel (Tech. water pump)	180B4127 - Cylinder Barrel CCW (Standard pump)	180B4009 - Swash plate kit PAH 50	180B4010 - Swash plate kit PAH 63	180B4011 - Swash plate kit PAH 70	180B4012 - Swash plate kit PAH 80	180B4492 - Swash plate kit PAH 100	180Z0237 - Tool set	
-	1	Pcs.	Shaft bush, torpedo	-															X
-	1	Pcs.	Press tool for 35 mm shaft	-															X
-	1	Pcs.	Mounting screw	-															X
1	1	Pcs.	Housing	AISI 304															
2	2	Pcs.	Pin	AISI 304	X														
3	2	Pcs.	Plug	AISI 304															
4	2	Pcs.	O-ring	NBR	X														
31	1	PC	Swash plate	Stainless steel (1.4057)									X	X	X	X	X		
34	2	PC	Pin	AISI 304	X														
61	1	PC	Cylinder barrel	Stainless steel (1.4057)						X	X	X							
64	1	PC	Retainer ball	Stainless steel (1.4057)			X	X	X										
65	1	PC	Retaining plate	Stainless steel (1.4057)			X	X	X										
66	9	PC	Piston	Stainless steel (1.4057)			X	X	X										
67	1	PC	Key	AISI 304	X														
91	1	PC	Port plate	AISI 304 / PEEK		X													
92	1	PC	Valve plate	Stainless steel (1.4057)		X													
93	9	PC	Back-up ring	PTFE	X	X													
94	9	PC	O-ring	NBR	X	X													
181	1	PC	Port flange	AISI 304															
182	1	PC	O-ring	NBR	X														
183	1	PC	Guide pin	AISI 304															
184	1	PC	Pin	AISI 304	X														
186	8	PC	Screw	AISI 304	X														
187	1	PC	Threaded plug	AISI 304															
188	1	PC	Threaded plug	AISI 304															
211	1	PC	Mounting flange	AISI 304															
212	1	PC	O-ring	NBR	X														
215	1	PC	Shaft seal	AISI 304 / NBR	X														
218	8	PC	Screw	AISI 304	X														
219	1	PC	Screw	AISI 304	X														
220	1	PC	Usit-ring	AISI 304 / NBR	X														
-	1	Pcs.	Service instruction (180R9098)		X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Danfoss A/S

High Pressure Pumps
Nordborgvej 81
DK-6430 Nordborg
Denmark

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.