HYDAC INTERNATIONAL

Filters

HF2P Series
Service and Parts

Index

This symbol is followed by user tips and particularly useful information.

- This pressure unit is for use with hydraulic power or lube systems only.
- All repair, maintenance, installation and commissioning work must be carried out by trained personnel.
- Operate this pressure unit in accordance with hydraulic power or lube system operating instructions.
- Ensure the pressure unit is sufficiently cool before handling.
- This pressure unit is suitable for use with hydraulic or lubricating fluids only.
- It is the responsibility of the operator to comply with local water regulations.

CAUTION!

This symbol denotes safety precautions, the non-observance of which can endanger persons and the environment.

- Filter bowl may be full of hot hydraulic fluid. Collect oil in a suitable container and dispose of properly.
- Observe proper venting procedures to avoid the formation of air pockets.
- Caution: Pressurized unit. Purge system pressure before performing any work on the pressure unit.
- Under no circumstances must any modifications *(welding, drilling, or opening by force...)* be carried out on the pressure unit. Any modifications will void the warranty.
- Statutory accident prevention regulations, safety regulations and safety data sheets for fluids must be observed.
- When working on or near hydraulic systems, avoid exposure to open flames and spark generating equipment. Do not smoke near equipment.
- Comply with all regulations with regard to the disposal of used oil and waste.
- Wear proper protective clothing and guards to avoid injury or scalding due to high pressure or high temperature oli.
- Filter housing must be grounded.
- Disconnect all electrical power to the system and other electrical components, prior to working on filter clogging indicators.

NOTE: All details subject to technical modification

FILTER MAINTENANCE

1. General

1.1 Commitment to Quality

HYDAC demonstrates its commitment to quality through the implementation of an ISO 9001: 2008 program, which encompasses not only product design and manufacturing but service and delivery as well.

1.2. Installation

- Before installing the filter in the system, check that the operating pressure of the system does not exceed the maximum allowable operating pressure of the filter.
- Observe type code label on the filter.
- Important: When operating filters without bypass valve above 20 bar (290 psid), high collaspe BH/HC type filter elements must be used to ensure safe operation.

1.3. Commissioning

Unscrew bowl and check that the correct filter element is installed. Screw in bowl again fully (metal to metal contact) and then unscrew by one quarter-turn *(the sealing effect will not be improved by overtightening.)* Switch on hydraulic system and check filter for leakage. Vent filter at an appropriate point in the system.

1.4. Tools Required for Maintenance

Size	Wrench size for filter bowl	Wrench size for clogging indicator
HF2P	24 mm	27 mm

1.5. Torque Values

Type	Max. Torque Nm[ft-lb]
VD-clog ind	100 [74] 50 [37] (A, LE, LZ)
Oil Drain Plug	N/A
Bowl/Lid or end cover	Do not Torque See 1.3 and 3.2

2. Maintenance

2.1. General

This section describes periodic maintenance requirements. Periodic and thorough maintenance will ensure operator safety and the life of the filter.

2.2. Maintenance Procedures

- Only high quality spare parts meeting the technical requirements specified by the manufacturer should be used, quality is always guaranteed with HYDAC original spare parts.
- Keep tools, working area and equipment clean.
- After disassembling the filter, clean all parts and check for damage or wear. Replace parts as required.
- When changing filter elements, a high level of cleanliness must be observed.
- Ultrasonic cleaning is used for cleaning Metal Fiber (V) and Wire Screen (W/HC) elements.

2.3. Interval Between Changing Elements

- To ensure optimum performance, HYDAC recommends replacing filter elements every 6 months or upon indication, whichever occurs first.
- HYDAC recommends installing the filter with a clogging indicator *(visual and/or electric or electronic)* to monitor for excessive filter element pressure drop.
- If the clogging indicator trips, immediately change or clean the filter element. *(Only wire mesh and metal fiber elements can be cleaned)*.
- If no clogging indicator is installed, HYDAC recommends changing elements at specified intervals *(depends on filter sizing and conditions)*. Higher dynamic loads across the element might necessitate shorter intervals between changes. Shorter intervals can also be expected during commissioning, repairs, oil changes, etc. of the hydraulic system.

3. Element Replacement

3.1. Element Removal

1. Switch off hydraulic system and release filter pressure.
2. Remove oil drain plug (if present). Drain oil into container.
3. **One-piece bowl:** Unscrew filter bowl (drain fluid into a suitable container and clean or dispose of it in accordance with environmental regulations).

   Two-piece bowl: Unscrew lid (drain fluid into a suitable container and clean or dispose of it in accordance with environmental regulations) and remove threaded pin.

   Top removable: Unscrew the lid.
4. Remove filter element from nozzle in filter head (check surface of element for contamination residue and larger particles; these can indicate damage to components).
5. Replace or clean filter element (only W/HC (wire screen) and V (metal fiber) elements can be cleaned).
4. Clean filter bowl and filter head; particular attention must be given to the threads.
5. Examine filter, especially sealing surfaces, for mechanical damage.
6. Check O-rings – and replace if necessary.

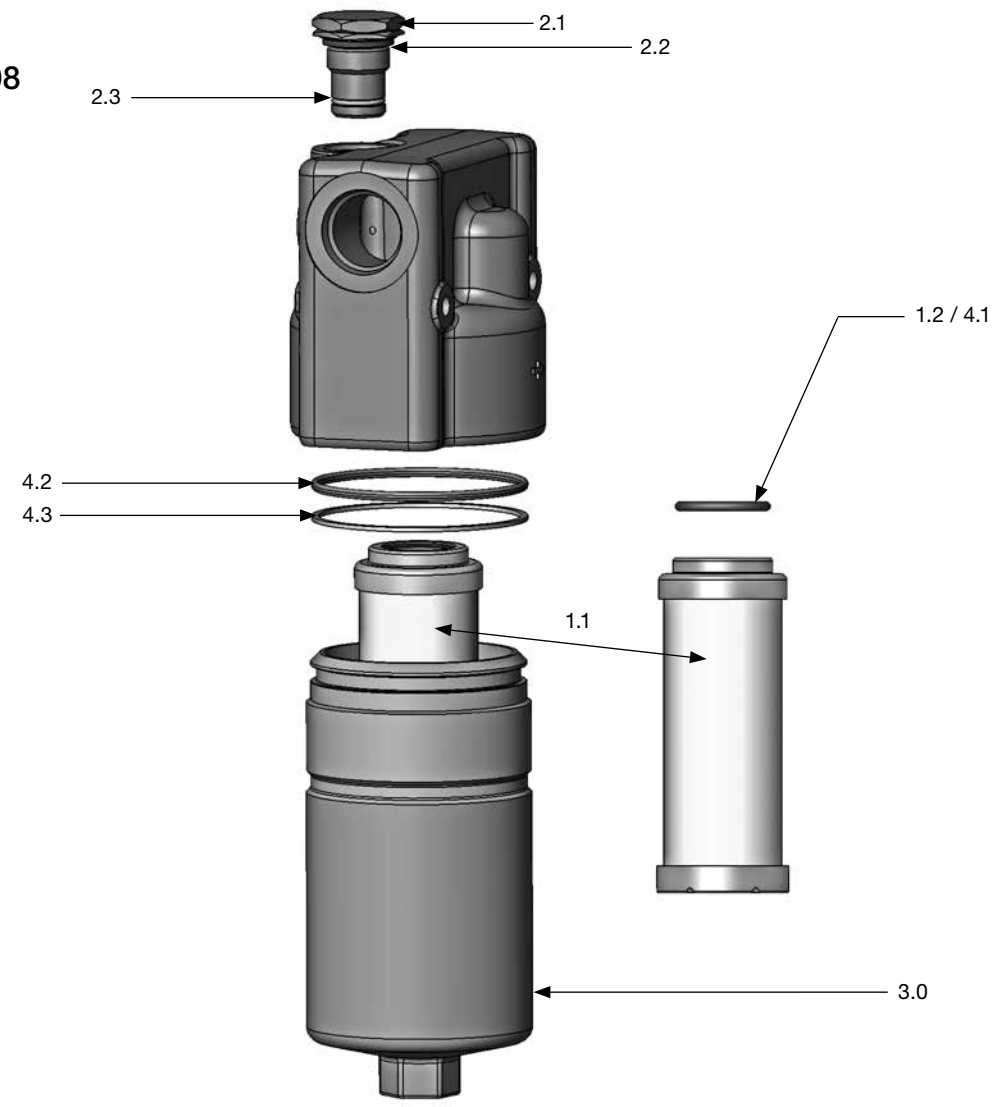
3.2. Element Installation

1. Lubricate sealing surfaces and thread on the filter head and bowl, and the seals with clean operating fluid.
2. When installing a new element, verify that the designation corresponds to that of the old element.
3. Place filter element carefully onto the element location nozzle in the filter head.
4. Apply silver grade anti-seize (per Mil-PRF-907E) to threads. Screw in bowl fully (metal to metal contact) then unscrew by one quarter-turn.
5. Switch on hydraulic system and vent filter at an appropriate point in the system.
6. Check filter for leakage.

Note: Contamination or incomplete pressure release on disassembly can lead to seizing of the bowl thread. Filter elements which cannot be cleaned must be disposed of in accordance with environmental regulations.

4. Spare Parts

4.1. HF2P - 04/08

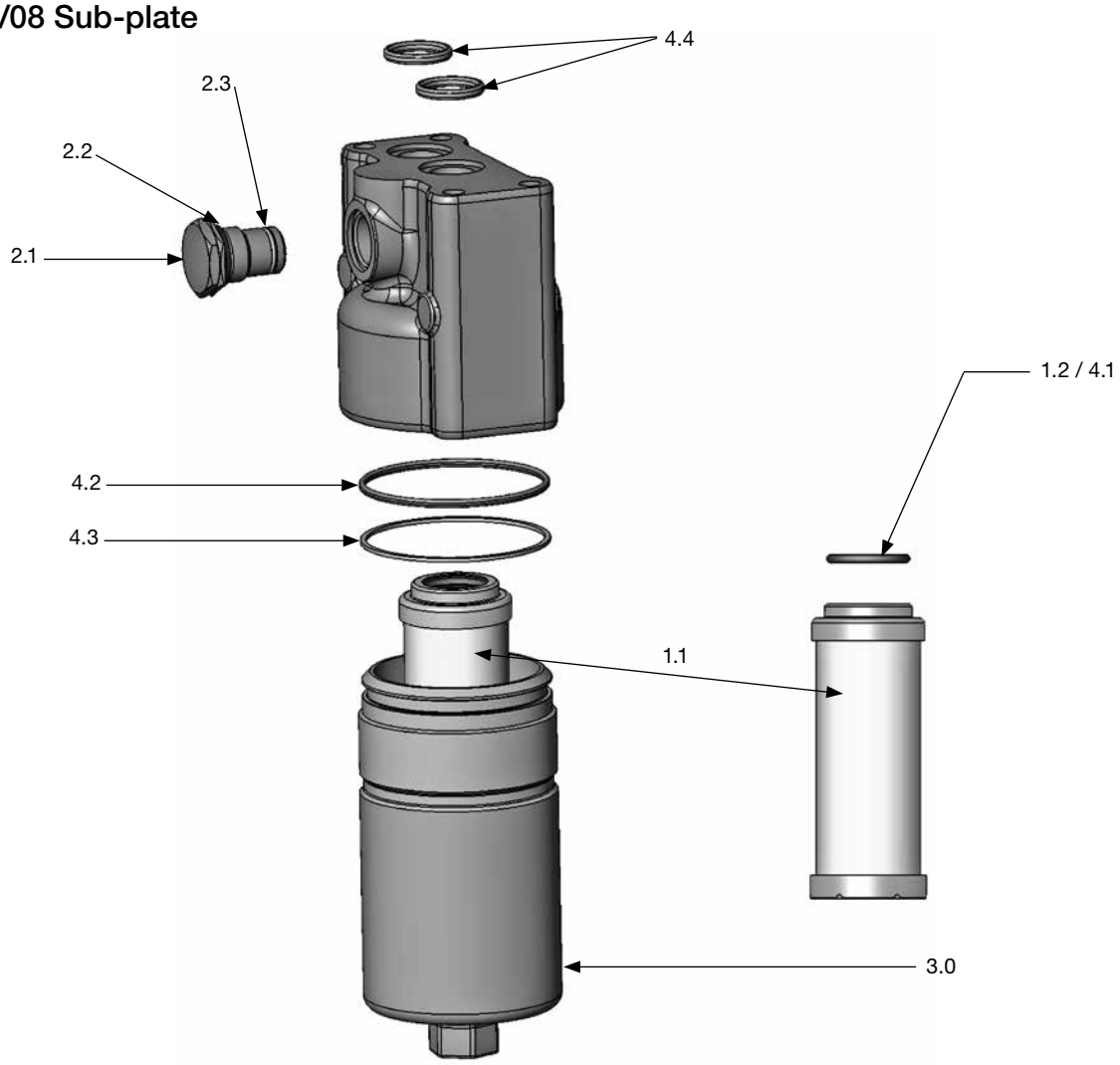


Item	Consists of	Designation	HF2P-versions 1.0 & 1.1	HF2P-version 1.2
1.		**Filter element**	See point 5 Replacement elements	
	1.1	Filter element	On request	
	1.2	O-ring (1.07.0XXDYYBN element) O-ring (1.07.XXDYYBH element)	24.99 x 3.53 (AS568A-214) 25.07 x 2.62 (AS568A-120)	
2.		**Clogging indicator or indicator plug** **VD 0 A.1** **VD 0 A.1 /-V**	See Filter Clogging Indicator brochure 00305932 00305931	
	2.1	Indicator plug	VD...	
	2.2	Profile seal ring	VD... (AS586A-908)	
	2.3	O-ring	16.36 x 2.21 (AS568A-014)	15 x 1.5
3.		**BOWL**	For Bowl Assembly - consult factory	
4.		**SEAL KIT HF4P**	2202425	2202428
		Seal Kit HF2P /-V	2202426	2202429
	4.1	O-ring (element)	See 1.2 above	
	4.2	O-ring (bowl)	53.65 x 2.62	67.95 x 2.62 (AS586A-138)
	4.3	Back-up ring (bowl)	54.4 x 58.8 x 1.3	71.60 X 67.20 X 1.40

Other spare parts available on request
Bold items can be ordered.

-O-Ring durometer can range from 70-80Sh. EPR Seal Kits available on request.
-Bowl assembly kits on request - kits include complete bowl with seals, and plug (if present).

4.2. HF2P - 04/08 Sub-plate



Item	Consists of	Designation	HF2P-versions 1.0 & 1.1	HF2P-version 1.2
1.		**Filter element**	See point 5 Replacement elements	
	1.1	Filter element	On request	
	1.2	O-ring (1.07.0XXDYYBN element) O-ring (1.07.XXDYYBH element)	24.99 x 3.53 (AS568A-214) 25.07 x 2.62 (AS568A-120)	
2.		**Clogging indicator or indicator plug** **VD 0 A.1** **VD 0 A.1 /-V**	See Filter Clogging Indicator brochure 00305932 00305931	
	2.1	Indicator plug	VD...	
	2.2	Profile seal ring	VD... (AS586A-908)	
	2.3	O-ring	16.36 x 2.21 (AS568A-908)	15 x 1.5
3.		**BOWL**	For Bowl Assembly - consult factory	
4.		Seal Kit HF4P	2202431	2202434
		SEAL KIT HF4P /-V	2202432	2202435
	4.1	O-ring (element)	See 1.2 above	
	4.2	O-ring (bowl)	53.65 x 2.62	67.95 x 2.62 (AS586A-147)
	4.3	Back-up ring (bowl)	54.4 x 58.8 x 1.3	71.60 X 67.20 X 1.40
	4.4	O-ring	20.29 x 2.62 (AS568A-117) - two required	

Other spare parts available on request
Bold items can be ordered.

-O-Ring durometer can range from 70-80Sh. EPR Seal Kits available on request.
-Bowl assembly kits on request - kits include complete bowl with seals, and plug (if present).

5. Replacement Element Model Code

1 . 07 . 08 D 03 BN / V

Length *(nominal inches)*
04, 08

Filtration Rating *(micron)*
3, 6, 12, 25 = BN
3, 6, 10, 17 = BH

Element Media
BN, BH

Seals

(omit)	=	Nitrile rubber (NBR) *(standard)*
V	=	Fluorocarbon elastomer (FKM)
EPR	=	Ethylene propylene rubber (EPR)

Supplementary Details

SO263	=	Modification of elements for Skydrol or HYJET phosphate ester fluids
SFREE	=	Element specially designed to minimize electrostatic charge generation

6. NOTE

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

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