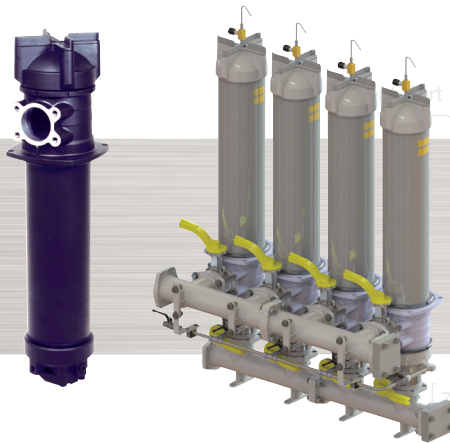


HYDAC INTERNATIONAL

Filters



NF Series & NF MMP (Manifold-Modular-Parallel) with 1314/2614 ECO-Fit Service and Parts

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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.



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

- 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 oil.
- 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.

1.3. Commissioning

Check that the correct filter element is installed. Screw in cover plate again fully (metal to metal contact) (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 VD 0 A 1.0	Wrench size for VR 0 A.0
NF	27 mm	19 mm

1.5. Torque Values

Type	Max. Torque Nm[ft-lb]
VM...clogging indicators	33[24]
VR...clogging indicators	33[24]
Oil drain Plug	80[59] - G1/2 91[67] - G3/4
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.

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. Undo vent screw(s); remove oil drain plug(s); drain fluid into a container.
3. Unscrew cap.
4. Remove filter element(s) from element nozzle. (examine surface of element for dirt residue and larger particles; these can indicate damage to the components).
5. Replace filter element.
6. Clean cap and housing; pay particular attention to the threads.
7. Examine filter, especially sealing surfaces and thread, for damage.
8. Check O-rings and seals and replace parts as necessary.

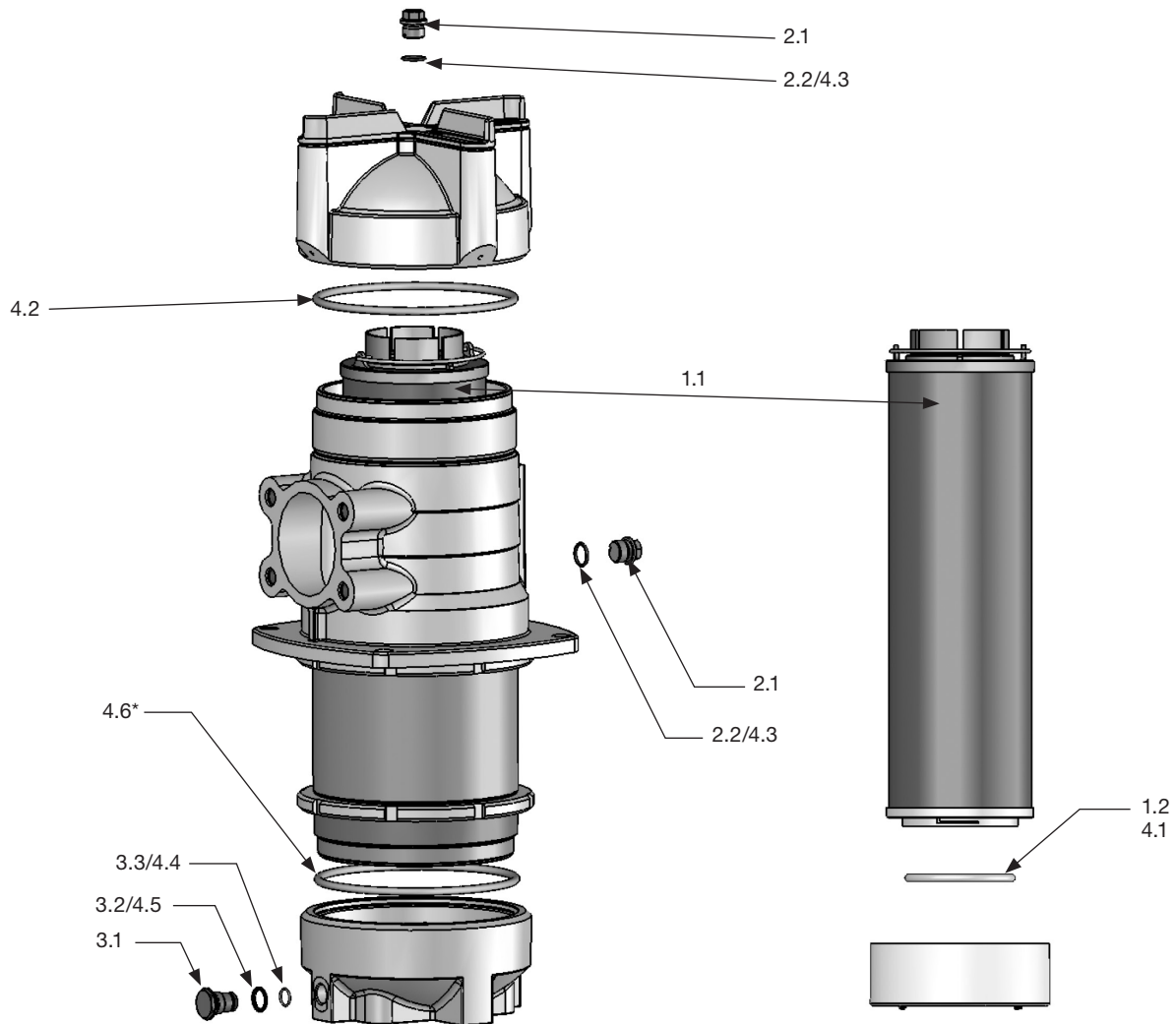
3.2. Element Installation

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.
4. Apply silver grade anti-seize (per Mil-PRF-907E) to threads. Screw on cap fully (metal to metal contact) and then unscrew by one quarter-turn.
5. Apply silver grade anti-seize (per Mil-PRF-907E) to threads. Screw in oil drain screw(s); tighten vent screw(s)
6. Switch on hydraulic system and vent filter at an appropriate point in the system.
7. 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. NF 1314/2614... 1.0/3.0



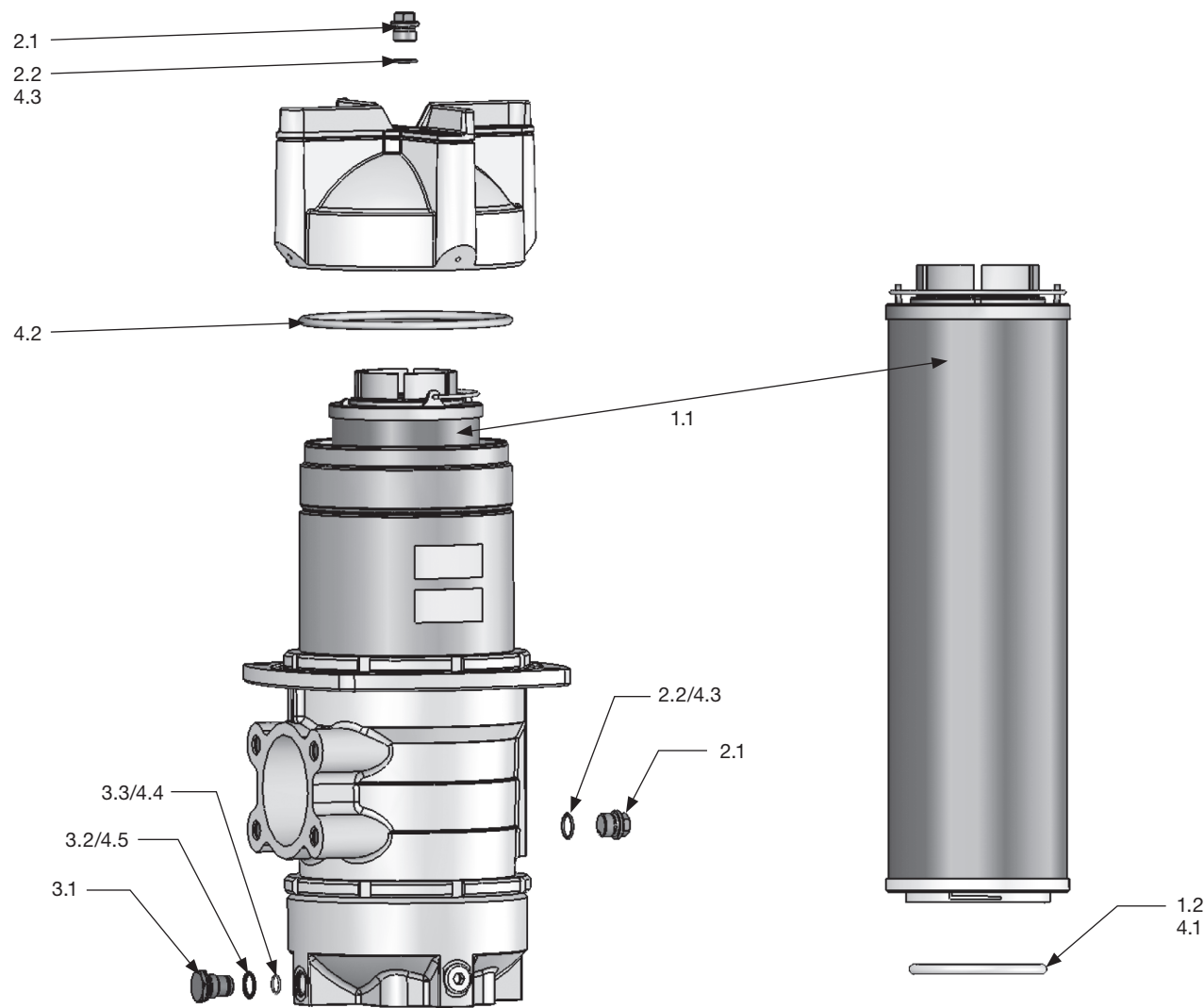
Item	Consists of	Designation	NF 1314	NF 2614
1.		Filter element	See point 5 Replacement elements	
	1.1	Filter element	1.14.16 D...	1.14.39 D...
	1.2	O-ring	104.37 x 3.53	
2.		Indicator plug VR 0 A.0	00306006	
		Indicator plug VR 0 A.0 / -V	00305928	
	2.1	Indicator plug	VR...	
3.		Indicator plug VD 0 A.1	00305932	
		Indicator plug VD 0 A.1 / -V	00305931	
	3.1	Indicator plug	VD...	
4.	3.2	Profile seal ring	VD...	
	3.3	O-ring	15 x 1.5	
		REPAIR KIT-E NF...1314 F 1.0	TBD	
		REPAIR KIT-E NF...1314 F 1.0 / -V	TBD	
	4.1	O-ring (element)	104.37 x 3.53	
	4.2	O-ring (cover plate)	189.87 x 5.33	
	4.3	O-ring (VR 0 A.0)	18 x 2.5	
	4.4	O-ring (VD 0 A.1)	15 x 1.5	
4.	4.5	Profile seal ring (VD 0 A.1)	VD...	
	4.6*	O-ring	240.67 x 5.33	

*only for type 1.0
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 - not available.

FILTER MAINTENANCE

4.2. NF 1314/2614...2.0



Item	Consists of	Designation	NF 1314	NF 2614
1.		Filter element	See point 5 Replacement elements	
	1.1	Filter element	1.14.16 D...	1.14.39 D...
	1.2	O-ring	104.37 x 3.53	
2.		Indicator plug VR 0 A.0	00306006	
		Indicator plug VR 0 A.0 / -V	00305928	
	2.1	Indicator plug	VR...	
3.	2.2	O-ring	18 x 2.5	
		Indicator plug VD 0 A.1	00305932	
		Indicator plug VD 0 A.1 /-V	00305931	
	3.1	Indicator plug	VD...	
4.	3.2	Profile seal ring	VD...	
	3.3	O-ring	15 x 1.5	
		REPAIR KIT-E NF..1314 F 1.0	TBD	
		REPAIR KIT-E NF..1314 F 1.0 /-V	TBD	
	4.1	O-ring (element)	104.37 x 3.53	
	4.2	O-ring (cover plate)	189.87 x 5.33	
	4.3	O-ring (VR 0 A.0)	18 x 2.5	
	4.4	O-ring (VD 0 A.1)	15 x 1.5	
	4.5	PRofile seal ring (VD 0 A.1)	VD...	

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 not available.

5. Replacement Element Model Code

Size 1.14.39D **1.14.39D** **6** **ECO/N** - **V**

Filtration Rating (micron) 3, 6, 12, 25 = ECO/N

Element Media ECO/N

Seals (omit) = Nitrile rubber (NBR) (standard)
V = **Fluorocarbon elastomer (FKM)**

6. Clogging Indicator Model Code

Indicator Prefix VM **VM** **5** **BM** . **X** /

VM = ΔP, G 1/2" 3000 psi
 VD = ΔP G 1/2" 6000 psi
 (2.0 ver. - LE Indicators only)

Trip Pressure 2 = 29 psid (2 bar) (return filters)
5 = **72 psid (5 bar) (optional)**

Type of Indicator A = No indicator, plugged port
BM = Pop-up indicator (manual reset)
 C = Electric switch - SPDT
 D = Electric switch and LED light - SPDT
LE = **Electric switch and pop-up**

Modification Number

Supplementary Details

Seals (omit) = Nitrile rubber (NBR) (standard)
V = **Fluorocarbon elastomer (FKM)**
EPR = **Ethylene Propylene rubber (EPDM)**

Light Voltage (D type indicators only) L24 = 24V L110 = 110V

Thermal Lockout (VM type C, D, J, J4 only) T100 = Lockout below 100°F

Underwriter's Approval (VM type C, D, J, J4 only) cRUus = Electrical Indicator with underwriter's recognition
 (For additional details and options, see Section G - Clogging Indicators.)

7. 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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