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2. Maintenance
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NOTE: All details subject to technical modification
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 collapse 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

<table>
<thead>
<tr>
<th>Size</th>
<th>Wrench size for filter bowl</th>
<th>Wrench size for clogging indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>HF2P</td>
<td>24 mm</td>
<td>27 mm</td>
</tr>
</tbody>
</table>

1.5. Torque Values

<table>
<thead>
<tr>
<th>Type</th>
<th>Max. Torque Nm[f-lb]</th>
</tr>
</thead>
<tbody>
<tr>
<td>VD-clog ind</td>
<td>100 [74]</td>
</tr>
<tr>
<td></td>
<td>50 [37] (A, LE, LZ)</td>
</tr>
<tr>
<td>Oil Drain Plug</td>
<td>N/A</td>
</tr>
<tr>
<td>Bowl/Lid or end cover</td>
<td>Do not Torque</td>
</tr>
<tr>
<td></td>
<td>See 1.3 and 3.2</td>
</tr>
</tbody>
</table>

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).
4. **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.
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

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

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

**Filter Maintenance**

### 1. Filter element

- **1.1** Filter element
- **1.2** O-ring (1.07.OXXDYYBN element)
  - O-ring (1.07.XXDYYBH element)

### 2. Clogging indicator or indicator plug

- **2.1** Indicator plug
- **2.2** Profile seal ring
- **2.3** O-ring
  - 16.36 x 2.21 (AS568A-908)
  - 15 x 1.5

### 3. BOWL

- **3.0** For Bowl Assembly - consult factory

### 4. Seal Kit HF4P

- **4.1** O-ring (element)
- **4.2** O-ring (bowl)
  - 53.65 x 2.62
  - 67.95 x 2.62 (AS568A-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

---

**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.OXXDYYBN element) | 24.99 x 3.53 (AS568A-214) |  
| O-ring (1.07.XXDYYBH element) | 25.07 x 2.62 (AS568A-120) |  
2. | Clogging indicator or indicator plug | See Filter Clogging Indicator brochure |  
| VD 0 A.1 | 00305932 |  
| VD 0 A.1 /-V | 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 (AS568A-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.

-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

<table>
<thead>
<tr>
<th>Length (nominal inches)</th>
<th>1  .  07  .  08  D  03  BN / V</th>
</tr>
</thead>
<tbody>
<tr>
<td>04, 08</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Filtration Rating (micron)</th>
<th>3, 6, 12, 25 = BN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3, 6, 10, 17 = BH</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element Media</th>
<th>BN, BH</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Seals</th>
<th>(omit) = Nitrile rubber (NBR) (standard)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V = Fluorocarbon elastomer (FKM)</td>
</tr>
<tr>
<td></td>
<td>EPR = Ethylene propylene rubber (EPR)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supplementary Details</th>
<th>SO263 = Modification of elements for Skydrol or HYJET phosphate ester fluids</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SFREE = Element specially designed to minimize electrostatic charge generation</td>
</tr>
</tbody>
</table>

### 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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