



HFRL-508 60 CFM FILTER-REGULATOR HAF-502 100 CFM FILTER

IMPORTANT:

Read and follow all instructions and **SAFETY PRECAUTIONS** before using this equipment. Retain for future reference.

WARNING

**Risk of personal injury.
Risk of property damage.**

Except as otherwise specified by the manufacturer, this product is specifically designed for compressed air service and use with any other fluid (liquid or gas) is a misapplication. For example, use with or injection of certain hazardous gases in the system (such as oxygen or liquid petroleum gas) could be harmful to the unit or result in a combustible condition that may cause fire or explosion. Manufacturer's warranties are void in the event of misapplication and manufacturer assumes no responsibility for any resulting loss.

DESCRIPTION

This 100 CFM filter (Model HAF-502) is designed to remove dirt, pipe scale and most liquid aerosol. It includes a 5 micron filter element. A model with 50 CFM air regulator is also available (Model HFRL-508).

Specifications

Air Filter:

| | |
|-------------------------|---------------------|
| Air Inlet | 1/2" NPT(F) |
| Air Outlet | 1/2" NPT(F) |
| Air Flow Capacity | 100 CFM |
| Maximum Temp. | 150° F (65.6° C) |
| Max. Inlet Pressure | 150 psig (10.3 bar) |
| Max. Operating Pressure | 150 psig (10.3 bar) |

Air Connections Model HFRL-508:

| | |
|------------------|-----------------|
| Regulated | Non-Regulated |
| (1) 1/4" NPS(M) | (1) 1/4" NPS(M) |
| (1) Plugged Port | |

INSTALLATION



WARNING

Risk of injury. Release all air pressure from system before servicing system. Do not place unit in service without metal bowl guard installed. Plastic bowl units are sold only with metal bowl guards. To minimize the danger of flying fragments in the event of plastic bowl failure, guard must not be removed. If the unit is in service without the metal bowl guard installed, manufacturer's warranties are void and the manufacturer assumes no responsibility for a resulting loss. If unit has been in service and does not have a metal bowl guard, order one and install before placing back in service.

CAUTION

Certain solvents, paints and chemicals may attack plastic bowl and can cause bowl failure. Do not use near these materials.

1. Be sure to read all **"WARNINGS"** and **"CAUTIONS"** in this manual and on the unit before installation or using this equipment.
2. Install filter as close as possible to point where air is being used. Install main air shut-off valve and standard pipe union (supplied by user) upstream of filter to allow maintenance to unit.
3. Install unit with air flow through filter in direction of arrow on top of unit.
4. Minimum 1/2" piping is recommended. Avoid using fittings, couplings, etc. that restrict air flow.
5. A 1/2" street elbow will be needed to allow vertical pipe installation. Mount filter in a vertical position.
6. Do not install filter in an application where the pressure drop will exceed 20 psi. For example, a quick opening valve located upstream from the filter could cause a momentary pressure drop in excess of 20 psi.
7. Install "T" handle into regulator (Model HFRL-508).
8. Maximum inlet pressure and operating temperature is: 150 PSIG (10.3 bar) and 150° F (65.6° C).
9. A 6' length of vinyl tubing is shipped loose with the unit. Slide over automatic drain which protrudes from bottom of bowl. Place other end of vinyl tubing into appropriate receptacle (i.e. below booth grating, can, etc.). Prevent vinyl tubing from becoming kinked which would prevent free movement of liquids discharged from the automatic drain.
10. An optional manual drain (HAF-11) is supplied loose in the carton (see item 10, Fig. 2). If desired, this can be installed in place of the automatic drain.

OPERATION

After unit is installed and ready to use:

1. Attach air hose(s) to outlet ball valve(s), selecting regulated and/or non-regulation according to the application.
2. Open main shut-off valve upstream of filter.
3. Main line air pressure is monitored by the top air gauge.
4. Adjust regulator to desired setting by turning "T" handle in or out.
5. Open ball valve(s) to supply air to spray gun or tool being used. With air flowing, readjust air pressure at regulator if necessary.
6. After use, shut off ball valve(s) and bleed off residual air in hose(s).

MAINTENANCE

CAUTION

Certain solvents, paints and chemicals may attack plastic bowl and can cause bowl failure. Do not use near these materials. When bowl becomes dirty, wipe only with a clean, dry cloth. Immediately replace any crazed, cracked, damaged or deteriorated plastic bowl with a new plastic bowl. Reinstall metal bowl guard.

1. If bowl is equipped with manual drain, drain bowl at least once per shift. Units with automatic drain will drain automatically.
2. Before performing maintenance on unit, close main shut-off valve located upstream of filter. Bleed off residual air in unit.
3. To open filter, press button located on clamp ring and rotate ring either clockwise or counterclockwise. The metal bowl guard and plastic bowl can then be removed from the filter head.

IMPORTANT! DO NOT DESTROY

It is the Customer's responsibility to have all operators and service personnel read and understand this manual. Contact your local DeVilbiss representative for additional copies of this manual.

READ ALL INSTRUCTIONS BEFORE OPERATING THIS DEVILBISS PRODUCT.

4. Remove the filter element by loosening the baffle counter-clockwise. Clean or replace the filter element. The element can be cleaned by blowing off with a duster gun (clean from inside out). Frequency of element cleaning/replacement will depend upon air quality, air usage, and condition of the air piping. It is recommended to check and clean/replace the element every 3-6 months.
5. Inspect o-ring (2) for damage. Replace if necessary.
6. Inspect plastic bowl for signs of damage such as cracks, crazing or deterioration. Replace if necessary. See **"Caution"** at beginning of **"Maintenance"** section, page 1.

Note

Do not wash plastic bowl with the automatic drain installed. Water can get into the float mechanism, causing the drain to malfunction. Remove the automatic drain before cleaning the plastic bowl with soap and water (no solvents).

WARNING

Do not place unit in service without metal bowl guard installed.

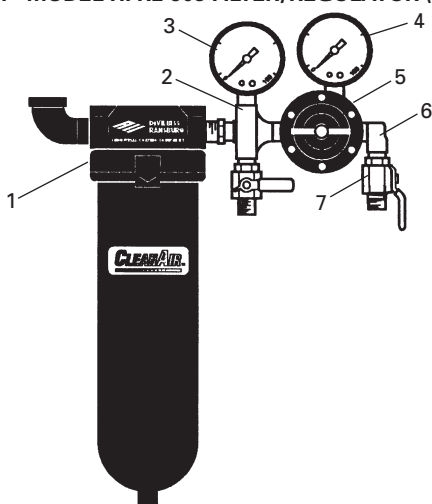
7. Before placing unit back into service, make sure plastic bowl and metal bowl guard are properly installed and securely locked in place.
8. Confirm automatic drain operates properly after unit is in operation. Replace if necessary.

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PROP 65 WARNING

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

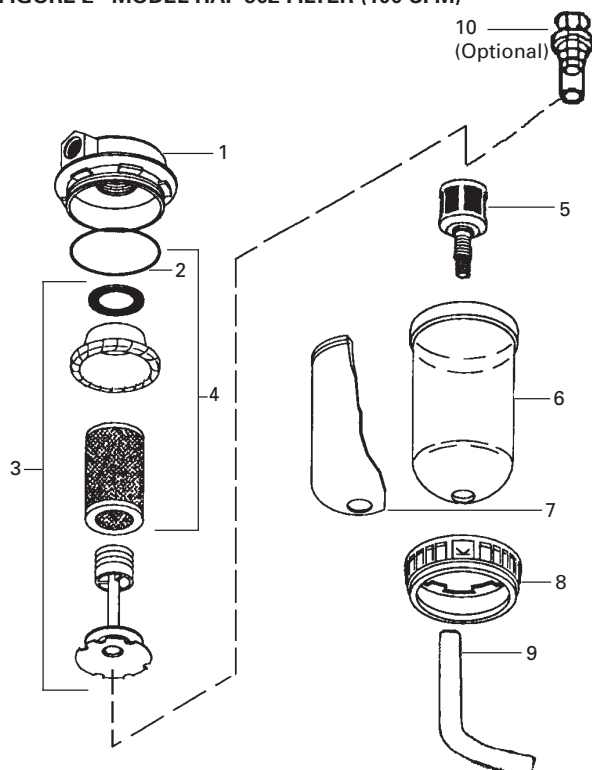
FIGURE 1 MODEL HFRL-508 FILTER/REGULATOR (60 CFM)



PARTS LIST – Model HFRL-508

| Ref No. | Replacement Part No. | Description | Ind. Parts Req. |
|---------|----------------------|----------------------------------|-----------------|
| 1 | HAF-502 | Air Filter, 100 CFM, See Fig.2 | 1 |
| 2 | HAF-21 | Cross Manifold | 1 |
| 3 | GA-288 | Air Gauge, 0-160 psi (main line) | 1 |
| 4 | 83-2727 | Air Gauge, 0-100 psi (regulated) | 1 |
| 5 | HAR-507 | Air Regulator (See Fig. 3) | 1 |
| 6 | — | 1/4" Street Elbow, 90° | 1 |
| 7 | VA-542 | Ball Valve | 2 |

FIGURE 2 MODEL HAF-502 FILTER (100 CFM)

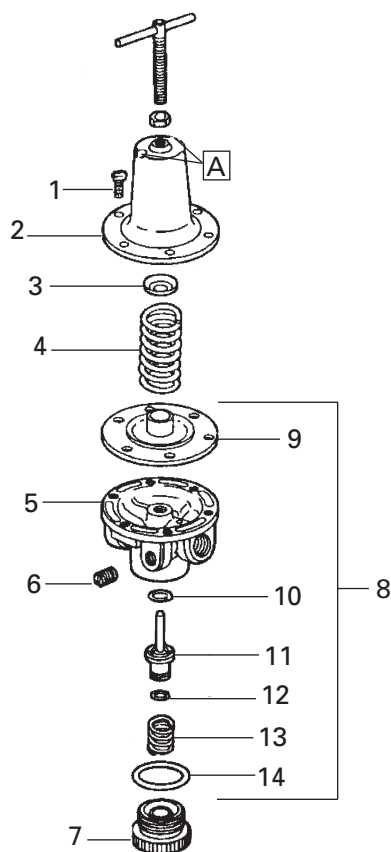


PARTS LIST - Model HAF-502

| Ref No. | Replacement Part No. | Description | Ind. Parts Req. |
|---------|----------------------|--|-----------------|
| 1 | — | Cover | 1 |
| 2 | — | O-Ring | 1 |
| 3 | HAF-26 | Baffle Kit | 1 |
| 4 | HAF-6 | Filter and O-Ring Kit | 1 |
| 5 | HAF-18 | Automatic Drain (Std.) | 1 |
| 6 | HAF-8 | Plastic Bowl | 1 |
| 7 | HAF-19 | Metal Bowl Guard | 1 |
| 8 | HAF-409 | Clamp Ring | 1 |
| 9 | — | 1/2 x 3/8 Vinyl Tubing, 6 ft. | 1 |
| 10 | HAF-11 | Manual Drain (Optional, shipped loose) | 1 |

FIGURE 3 HAR-507 AIR REGULATOR, 60 CFM

PARTS LIST - Model HAR-507 Regulator Assembly



| Ref No. | Replacement Part No. | Description | Individual Parts Required |
|---------|----------------------|---------------------------------------|---------------------------|
| 1 | --- | #10-32 x 9/16 Fillister Hd. Screw | 6 |
| 2 | HAR-14 | Cover | 1 |
| 3 | --- | Spring Button | 1 |
| 4 | --- | Diaphragm Spring | 1 |
| 5 | --- | Body | 1 |
| 6 | --- | Pipe Plug 1/4" NPT(M) | 1 |
| 7 | --- | Bottom Plug | 1 |
| 8 | KK-4977 | Repair Kit (includes Items 9 thru 14) | 1 |
| 9 | --- | Diaphragm Assembly | 1 |
| 10 | --- | O-Ring | 1 |
| 11 | --- | Valve | 1 |
| 12 | --- | O-Ring | 1 |
| 13 | --- | Spring | 1 |
| 14 | --- | O-Ring | 1 |

REGULATOR MAINTENANCE

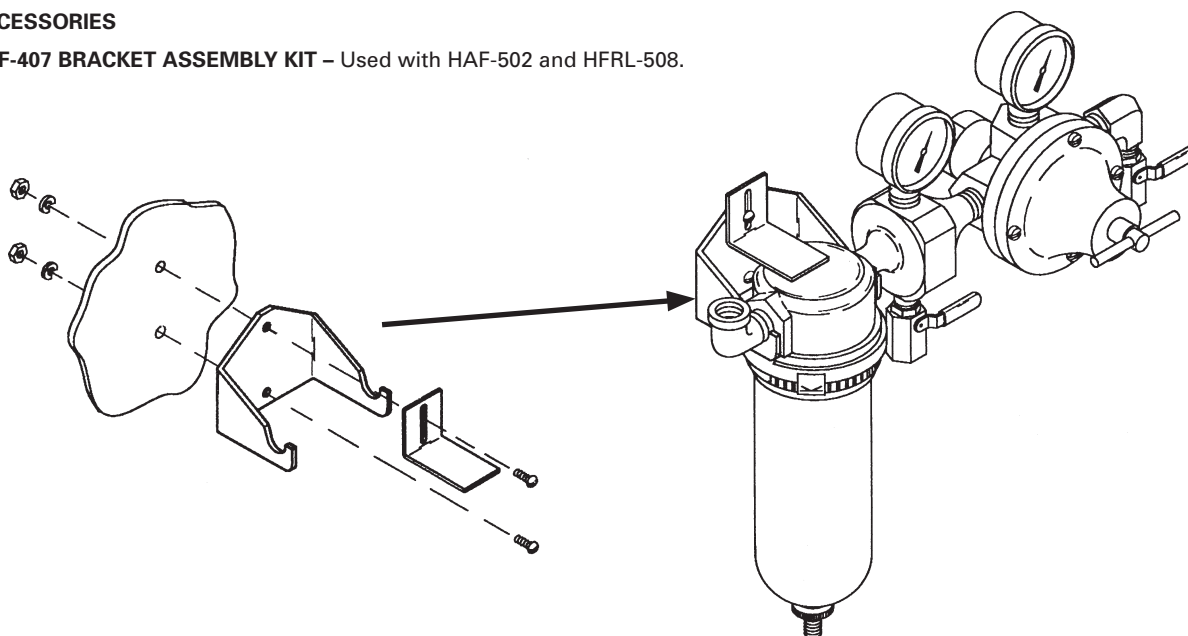
1. Occasionally remove bottom plug (7) and clean valve seat (11) and body. Clean parts with denatured alcohol, wipe off seat and blow out body with compressed air.
2. To disassemble regulator, remove screws, bonnet, spring and spring button. Diaphragm assembly can now be removed.
3. Check all o-rings for signs of damage. Replace if necessary.
4. Reassemble parts. Center stem of valve in hole of regulator body. Screw bottom plug into body.

Note

Erratic operation or loss of regulation is usually due to dirt in the valve area and cleaning is necessary. If cleaning does not correct the problem, replace the items included in Repair Kit KK-4977. If unit leaks air at **A**, install Repair Kit KK-4977.

ACCESSORIES

HAF-407 BRACKET ASSEMBLY KIT – Used with HAF-502 and HFRL-508.



WARRANTY POLICY

This product is covered by Carlisle Fluid Technologies' materials and workmanship limited warranty. The use of any parts or accessories, from a source other than Carlisle Fluid Technologies, will void all warranties. Failure to reasonably follow any maintenance guidance provided may invalidate any warranty.

For specific warranty information please contact Carlisle Fluid Technologies.

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