

# INSTRUCTIONS-PARTS LIST



## HIGH PRESSURE, MEDIUM VOLUME “red alert” Filters

306987J

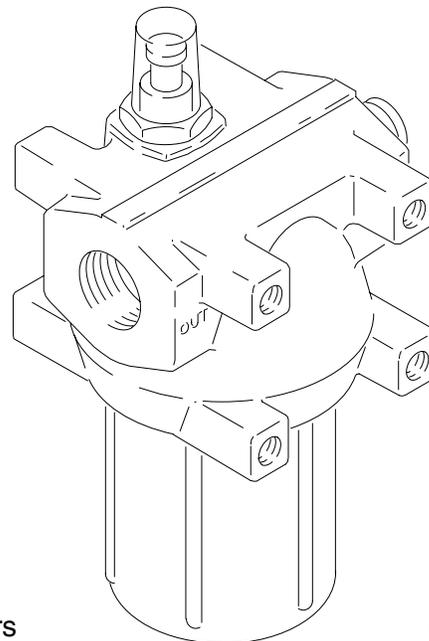


### Important Safety Instructions

Read all warnings and instructions in this manual. Save these instructions.

*3000 psi (210 bar) Maximum Working Pressure*

- Model 207994:** with 30 mesh (590 micron) element
- Model 207995:** with 60 mesh (250 micron) element
- Model 207996:** with 100 mesh (149 micron) element
- Model 207997:** with 150 mesh (95 micron) element
- Model 207998:** with 200 mesh (74 micron) element
- Model 207999:** with 0.040 in. (1 mm) stab point element
- Model 208000:** with 0.050 in. (1.3 mm) stab point element
- Model 102929:** less element--see back page for element numbers



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## WARNING

### SKIN INJECTION HAZARD



Spray from the gun, hose leaks, or ruptured components can inject fluid into your body and cause extremely serious injury, including the need for amputation. Fluid splashed in the eyes or on the skin can also cause serious injury.



- Fluid injected into the skin might look like just a cut, but it is a serious injury. **Get immediate surgical treatment.**
- Do not point the gun at anyone or at any part of the body.
- Do not put your hand or fingers over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove or rag.
- Follow the **Pressure Relief Procedure** on page 4 whenever you: are instructed to relieve pressure; stop spraying; clean, check, or service the equipment; and install or clean the spray tip.
- Tighten all fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn, damaged, or loose parts immediately. Permanently coupled hoses cannot be repaired; replace the entire hose.

# WARNING



INSTRUCTIONS

## EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are uncertain about usage, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories.
- Check equipment daily. Regular cleaning and inspection of the filter, based on the degree and kind of service, is essential. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. Refer to the **Technical Data** on page 6 for the maximum working pressure of this equipment.
- Use fluids and solvents which are compatible with the equipment wetted parts. Refer to the **Technical Data** section of all equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Never use 1,1, 1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use could result in a chemical reaction, with the possibility of explosion.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.



## TOXIC FLUID HAZARD

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, or swallowed.

- Know the specific hazards of the fluid you are using.
- Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state and national guidelines.
- Always wear protective eyewear, gloves, clothing and respirator as recommended by the fluid and solvent manufacturer.

# Installation

To clean or service the filter without shutting down the system, install a dual filter or a filter by-pass system as explained below.

**NOTE:** Be sure to allow 4.5 inches (114 mm) minimum clearance below the filter to ease removal of the filter bowl (10).

## Dual Filter System

This setup enables you to redirect the fluid to another filter while one filter is cleaned or serviced.

Install two filters as shown in Fig 1. Both filters must have an adapter (A) and drain valve (B) in the filter bowl (10) to relieve fluid pressure and drain the filter before removing the bowl. Install four suitable shut-off valves (D), one at each filter inlet and outlet, to redirect the fluid and isolate the filter not in use.

## Filter By-pass System

This setup enables you to redirect the fluid through pipes that by-pass the filter while cleaning or servicing the filter.

Install the filter and by-pass pipes as shown in Fig 2. An adapter (A) and drain valve (B) must be installed in the filter bowl (10) to relieve fluid pressure and drain the filter before removing the bowl. Install four suitable shut-off valves (D), one at the filter inlet; the filter outlet; the by-pass pipe inlet; and the by-pass pipe outlet, to redirect the fluid and isolate the filter while cleaning or servicing the filter.

## Dual Filter System

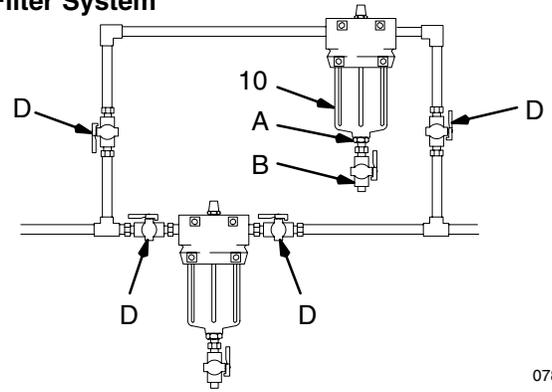


Fig 1

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## Filter Bypass System

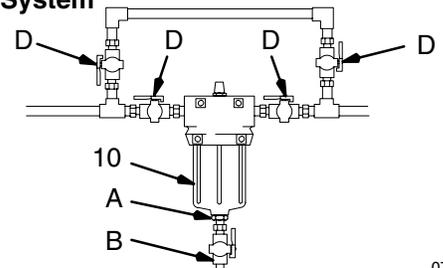


Fig 2

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# Service

## Pressure Relief Procedure

### WARNING



#### SKIN INJECTION HAZARD

The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop spraying,
- check or service any of the system equipment,
- or install or clean the spray tip.

1. Lock the gun trigger safety.
2. Turn off the power to the pump.
3. Unlock the gun trigger safety.
4. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
5. Lock the gun trigger safety.
6. Keeping your hands away from the end of the drain valve, slowly open the drain valves (required in your system), having a container ready to catch the drainage.
7. Leave the drain valves open until you are ready to use the system again.

### CAUTION

If the filter will not be used for awhile, thoroughly clean all the parts in solvent and blow them dry before the paint dries and clogs the filter. To avoid damaging parts, **DO NOT** clean them with a wire brush or sharp object.

## Indicator

The indicator provides gradual warning of a dirty element. When the indicator shown 3/4 red, clean the element. If not cleaned promptly, the filter by-pass valve opens and fluid will not be filtered.

Replace the indicator assembly (1) if the indicator isn't working correctly (it's always red or never red).

## By-pass Valve

The valve opens when a dirty element causes the filter's outlet pressure to drop 25 psi (2 bar) below the inlet pressure. This keeps the system pressure steady and prevents the element from collapsing. Replace the by-pass valve (2) if it is damaged or worn.

## Fluoroelastomer O-Ring and O-Ring Backup

These o-rings seal the bowl (10) to the housing (3). If fluid leaks around the bowl, replace the o-ring (8) and o-ring backup (9).

Remove the bowl and o-rings. Clean the parts in a compatible solvent. Be careful not to damage the o-rings or sealing surfaces of the bowl and housing. Before assembling, lubricate the parts with no. 2 grease. **BE SURE** to install the o-ring backup with the *groove facing up*.

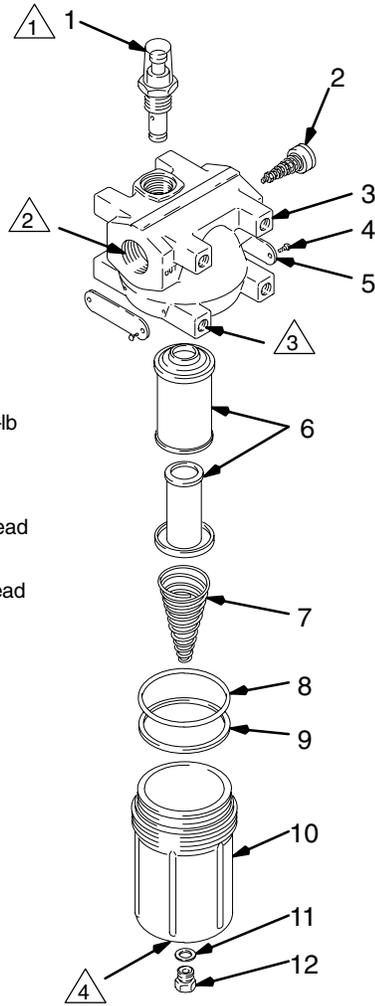
## Bowl, Element and Spring

Keep a spare bowl (10), element (6) and spring (7) on hand to reduce down time. Before removing the bowl, direct the fluid through the bypass system or shut down the system. Relieve fluid pressure by opening the drain valve (B).

Holding the bowl with a wrench to keep it from turning, screw the drain plug (12) out. After the fluid has drained out, remove the bowl, element, and spring. Replace immediately with the spare bowl, element and spring to keep the paint from drying on the housing (3) and other parts. Install the element with the dome end up. Lubricate the threads of the bowl before screwing it into the housing; tighten it securely.

Clean the bowl, element and spring you removed with a compatible solvent before the paint dries; **DO NOT** use a wire brush or sharp object for cleaning. Clean the filter element (6) with a small paint brush. Blow out lodged particles with air, and inspect for damage. Replace element if ruptured. Store clean parts until needed.

# Parts



- 1 Torque to 50 in-lb
- 2 1-1/4" npt(f) inlet and outlet
- 3 1/2-13 UNC thread mounting holes
- 4 3/4-16 UNF thread plugged drain

Ref. No.	Part No.	Description	Qty.
1	104784	INDICATOR, filter	1
2	104128	VALVE, by-pass	1
3	171430	HOUSING, filter	1
4	100055	SCREW, drive; type U, No. 6 x 1/4"	2
5	172205	PLATE, instruction	1
6*	108111	ELEMENT, 30 MH Filter (Model 207994 only)	1
	108112	ELEMENT, 60 MH Filter (Model 207995 only)	1
	108113	ELEMENT, 100 MH Filter (Model 207996 only)	1
	108115	ELEMENT, 150 MH Filter (Model 207997 only)	1
	108114	ELEMENT, 200 MH Filter (Model 207998 only)	1
	108119	ELEMENT, 0.040" SP Filter (Model 207999 only)	1
	108120	ELEMENT, 0.050" SP Filter (Model 208000 only)	1
7*	104127	SPRING, element	1
8*	104131	O-RING, fluoroelastomer; see Accessories for ethylene propylene packing	1
9*	104129	BACKUP, o-ring, fluoroelastomer; see Accessories for PTFE o-ring	1
10*	171431	BOWL, filter	1
11*	104444	O-RING, fluoroelastomer	1
12	104126	PLUG, boss; 3/4-16 UNF	1

\*Recommended "tool box" spare parts. Keep on hand to reduce down time

**NOTE:** MH indicates a mesh filter SP indicates a stab point filter.

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# Accessories

## CONVERSION O-RINGS

For use with fluids not compatible with fluoroelastomer.

- 105278** O-Ring, Ethylene-propylene
- 105277** Backup, o-ring, PTFE

## ADAPTER 105276

*3000 psi (210 bar) MAXIMUM WORKING PRESSURE*

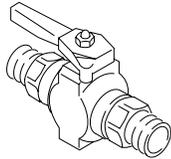
3/4-16 UNF x 1/4 npt; Adapts bowl to Drain Valves 210657 or 214037 (see below).

## DRAIN VALVES

*5000 psi (350 bar) MAXIMUM WORKING PRESSURE*

Installs in Adapter 105276 for relieving fluid pressure in the filter.

- 210657** 1/4 npt(m) Fluoroelastomer Seals
- 214037** 1/4 npt(m) PTFE Seals



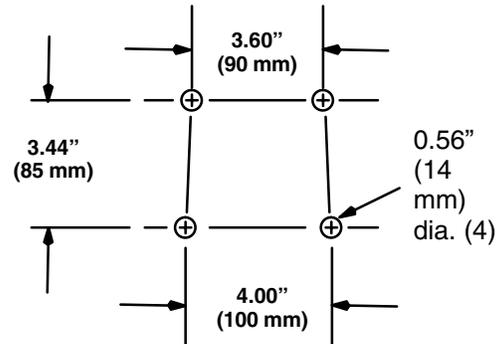
## FILTER BY-PASS VALVE 111523

Opens at 45 psi (3 bar), 20 GPM (76 kg/min.). For use in mastic applications.

# Manual Change Summary

Elements 108111 through 108120 are now standard.

# Mounting Hole Layout



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# Technical Data

- Dimensions . . . . . 6.56 in. (167 mm) wide  
6.56 in. (167 mm) deep  
13.08 in. (335 mm) high
- Weight . . . . . 30 lb 8 oz (13.8 kg)
- Maximum Working Pressure . . . . . 3000 psi (210 bar)
- Flow capacity
  - Mastics-Sealers . . . . . 6 gal. per min. (23 liters/min)  
(stab point elements)
  - Paints . . . . . to 20 gal. per min. (75 liters/min)  
(mesh elements)
- Wetted Parts . . . . . Aluminum, Iron, Fluoroelastomer,  
PTFE, Plated Steel
- Filtering Area . . 66 in<sup>2</sup> (425 cm<sup>2</sup>)--stab point elements  
226 in<sup>2</sup> (1450 cm<sup>2</sup>)--mesh elements
- Temperature . . . . . -40° F to 200° F

# Important Phone Numbers

**TO PLACE AN ORDER**, contact your Graco distributor, or call this number to identify the distributor closest to you: 1-800-328-0211 **Toll Free**

*All written and visual data contained in this document reflects the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.*

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