

Pressure Relief Kits

308403K

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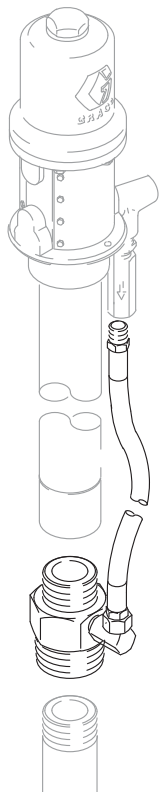
For preventing over pressurization due to thermal expansion of fluid. For professional use only.

See page 2 for model information, including maximum working pressure and approvals.

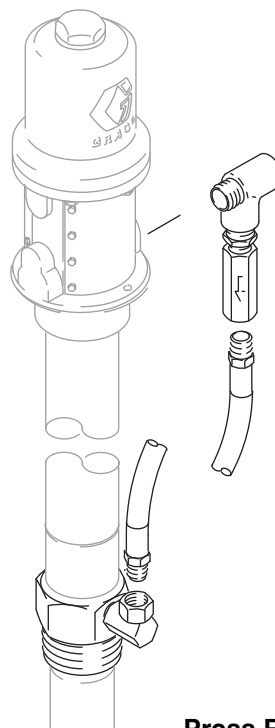


Important Safety Instructions

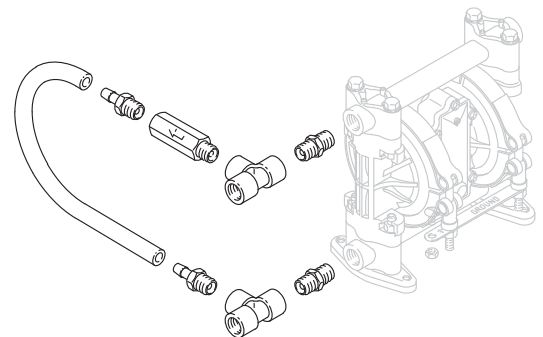
Read all warnings and instructions in this manual. Save these instructions.



Bung Adapter Kit
238125



Press Relief Kits
235998, 237893, and 237904



Pressure Relief Kit
238899

Models

NOTE: The thermal relief kits below are recommended based on Graco pump and component performance. You may need to change the thermal relief kit selection from application to application, depending on pump air operating pressure and fluid working pressures of system components. For example, there may be times when you wish to use 900 psi (6.2 MPa, 62 bar) thermal relief kit instead of the 1600 psi (11 MPa, 110 bar) thermal relief kit for Fire-Ball 425, 6:1. The lower relief pressure may ensure other (non-Graco) in-line components do not fail due to over-pressurization.

Model No.	Maximum Fluid Relief Pressure psi (MPa, bar)	Description
235998	600 (4.2, 42)	Series C, Fire-Ball 225, 3:1 and 1/4:1 Dyna-Star pumps
237601	600 (4.2, 42)	Series C, Fire-Ball 425, 3:1 pump
237893	900 (6.2, 62)	Series C, Fire-Ball 300, 3:1 pump
237904	1600 (11, 110)	Series C, 1:1 Dyna-Star pump
238899	150 (1, 10)	Series A, Husky 307 pump
240429	1600 (11, 110)	Series C, Fire-Ball 425 6:1 and 10:1 pumps
248296	900 (6.2, 62)	Series A, 5:1 Fire-Ball pump
248324	1600 (11, 110)	Series A, Fire-Ball 425 6:1 and 10:1 pumps
238125		Series C, Bung Adapter

Pre-Installation

Thermal expansion of fluid in the outlet line can cause over-pressurization. This can occur when using hard-plumbed fluid lines exposed to sunlight or ambient heat, or when plumbing from a cool to a warm area (for example, from an underground tank to a fluid lines along the ceiling).

In a properly functioning pressure-relieved system, when fluid pressure in the outlet line exceeds the rated relief pressure of your Pressure Relief Kit, the relieve valves opens to relieve the fluid pressure.

NOTICE
<p>If thermal expansion could occur in the system, a Pressure Relief Kit must be installed at the pump outlet to prevent over-pressurization and rupture of the pump or hose.</p>

Before installing the Pressure Relief Kit on the system follow the Manual Pressure Relief Procedure.

Manual Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this symbol.



This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing the equipment.

1. Close the pump air regulator.
2. Close the bleed-type master air valve (required in the system).
3. Hold a metal part of the dispensing valve firmly to the side of a grounded metal container, and trigger the valve to relieve fluid pressure.

NOTE: If you suspect that the dispensing valve, extension, or nozzle is clogged, or that pressure has not been fully relieved after completing the steps above, VERY SLOWLY loosen the coupler or hose end coupling, and relieve pressure gradually. Then loosen it completely and clear the clog.

Installation Alternatives

The installations shown in FIG. 1 are only a guide to shown alternatives to the bung-mounted drum installations. Contact your Graco distributor for assistance in designing a system to suit your particular needs.

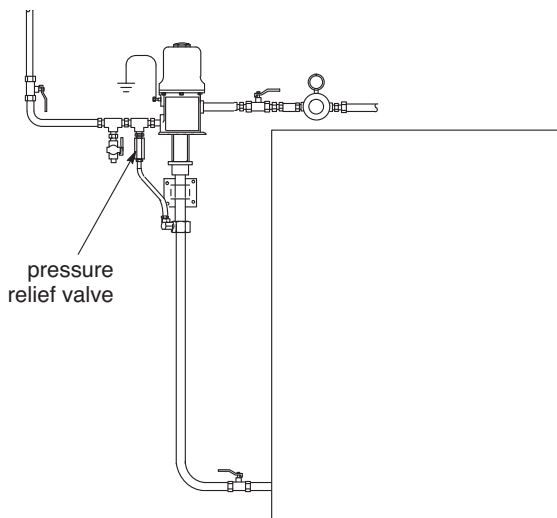
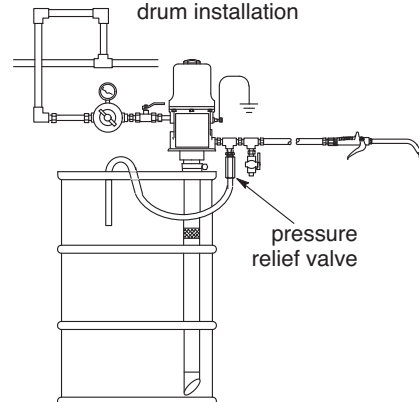


FIG. 1

Drum Cover-Mounted Pump Installation

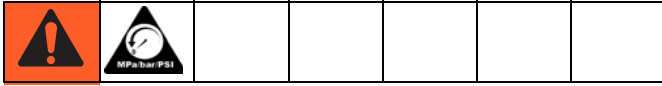
NOTE: See Fig. 2 for a bung-mounted drum installation



Installation

Bung Adapter Kit 238125

Refer to FIG. 2 for the following steps.



The Bung Adapter Kit routes pressure-relieved fluid from the pressure relief valve, through the bung adapter, and back into the tank.

1. Relieve the pressure, see **Manual Pressure Relief Procedure**, page 3.
2. Apply thread sealant and thread the two, 11-1/2 npt(m) threads of the bung adapter (4) into the bung of the tank cover.
3. Apply thread sealant and thread the pump onto the 1-1/2 - 11-1/2 npt(m) threads of the bung adapter (4).
4. Apply thread sealant and thread the 90° swivel adapter (6) into the 3/8-18 npt(f) threads of the bung adapter (4) with female adapter nut pointing up.
5. Apply thread sealant and thread the coupled hose (5) into the female threads of the pressure relief valve using thread sealant.
6. Rotate the pump and/or the bung adapter so that the two hose connections are on the same side of the pump lower. This prevents having to wrap the hose around the pump lower in step 7.

7. Connect the bottom end of the coupled hose (5) into the 90° swivel adapter (6) and tighten the adapter nut. No thread sealant is required.
8. Resume using the pump.

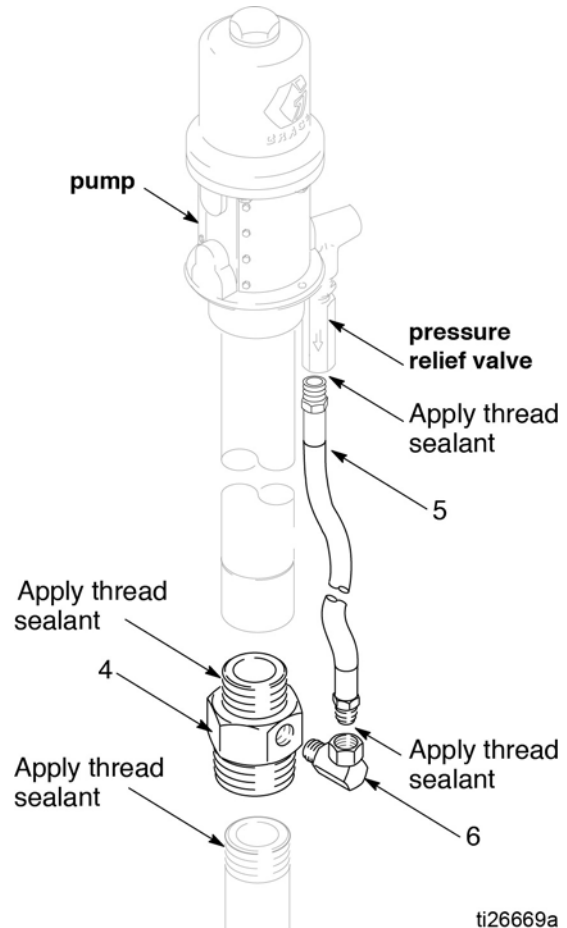


FIG. 2

Pressure Relief Kits 235998, 237601, 237893, 237904, 240429, 248296, and 248324

Refer to FIG. 4 for the following steps.



Install the kit at pump fluid outlet (A).

NOTE: Kits 235998, 237601, 237893, 237904 and 240429, follow steps 1-8 and 10 below. Kits 248296 and 248324, follow steps 1-3, 7, 9, and 10 only.

1. Relieve the pressure, see Manual Pressure Relief Procedure, page 3.
2. Disconnect the fluid outlet line from the pump fluid outlet (A).
3. *Pressure relief kits 235998, 237893, 237904, and 248296:*
Apply thread sealant to the male threads of the tee (2), and screw the tee firmly into the pump fluid outlet (A).

Pressure Relief Kits 237601, 240429, and 248324:
Apply thread sealant to all of the threads of the nipple (7), and use the nipple to thread the tee (2) to the pump fluid outlet.

4. Apply thread sealant and thread the two, 11-1/2 npt(m) threads of the bung adapter (4) into the bung of the tank cover.
5. Apply thread sealant and thread the pump onto the 1-1/2 - 11-1/2 npt(m) threads of the bung adapter.
6. Apply thread sealant and thread the 90° swivel adapter (6) into the 3/8-18 npt(f) threads of the bung adapter (4) with female adapter nut pointing up.
7. Apply thread sealant and thread the coupled hose (5) into the female threads of the pressure relief valve (3).
8. Connect the bottom end of the coupled hose (5) into the 90° swivel adapter (6) and tighten the adapter nut. No thread sealant is required.
9. *Pressure Relief Kits 248296 and 248324:*
Route the free end of the hose (5) into the supply drum or tank.

10. Connect the fluid outlet line to the tee (2) and resume using the pump.

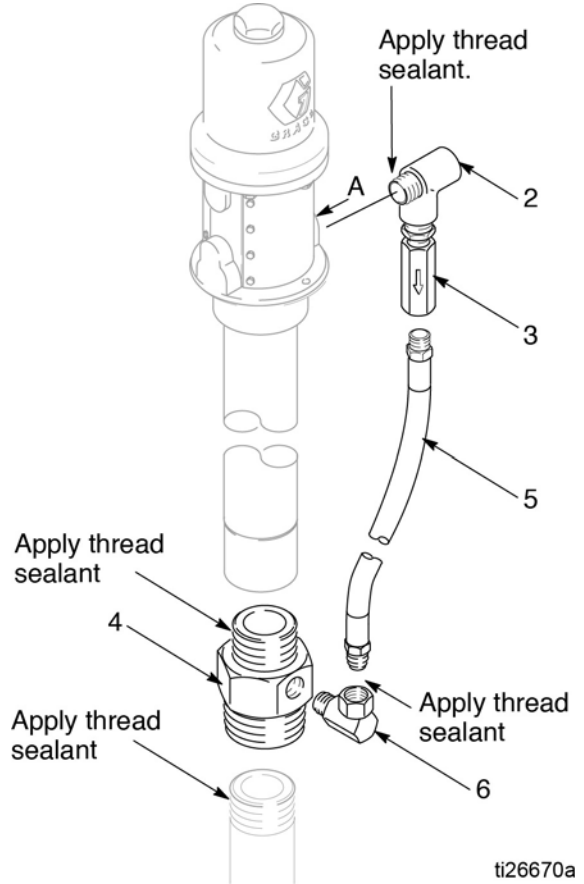


FIG. 3

Pressure Relief Kit 238899

Refer to FIG. 4 for the following steps.



Install the kit at the pump fluid inlet (A) and the pump fluid outlet (B).

1. Relieve the pressure, see Manual Pressure Relief Procedure, page 3.
2. Disconnect the fluid lines from the pump fluid inlet (A) and the pump fluid outlet (B).
3. Apply thread sealant to **all** male threads in the kit.

Installation

4. Screw the nipples (1) firmly into the pump fluid inlet (A) and pump fluid outlet (B).
5. Screw the tees (2) firmly into the nipples (1).
6. Screw the pressure relief valve (3) firmly into the tee that is on the fluid outlet (B) nipple.
7. Screw one hose adapter (4) firmly into the pressure relief valve (3) and the other hose adapter firmly into the fluid (A) inlet tee.
8. Push the ends of the flexible hose (5) onto the tubing connections of the hose adapters (4).
9. Connect the fluid lines to the pump fluid inlet (A) tee and the pump fluid outlet (B) tee, and resume using the pump.

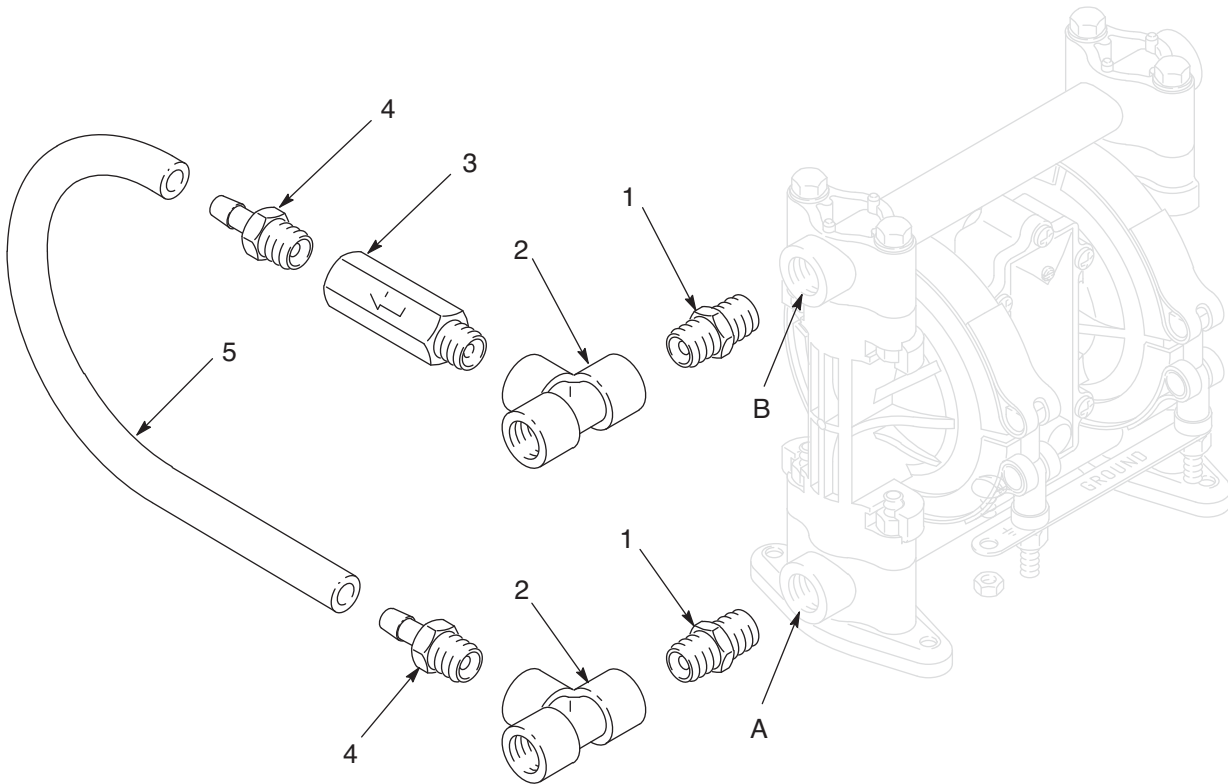
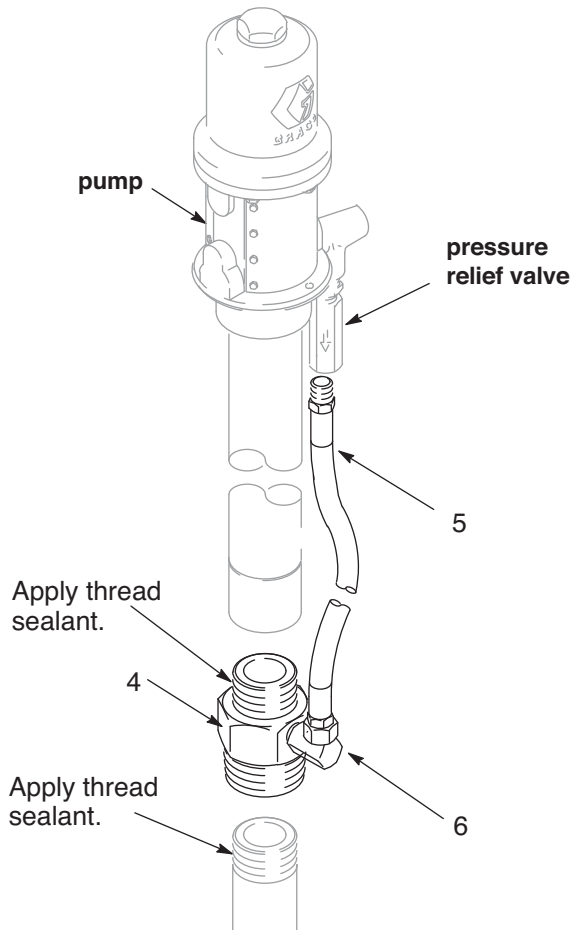


FIG. 4

Parts

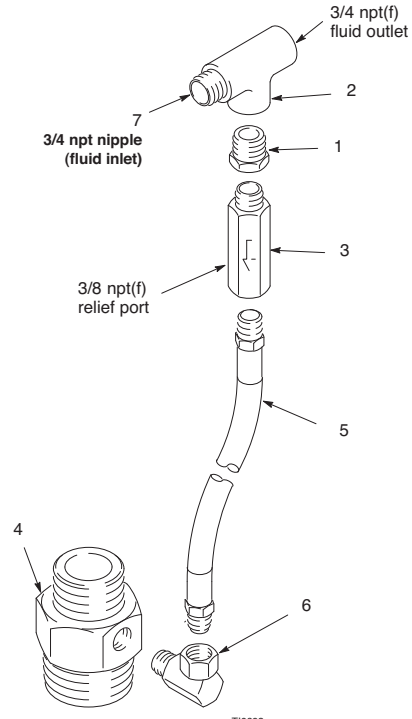
Bung Adapter Kit 238125

Ref.	Part	Description	Qty.
4	191075	BUNG ADAPTER, 2-11 1/2 npt(m) x 1 1/2-11 1/2 npt(m)	1
5	238370	HOSE, coupled, 3/8 - 18 npt(mbe) x 12" lg	1
6	155494	ADAPTER, 90° swivel, 3/8-18 npt(m) x 3/8-18 npsm(f)	1



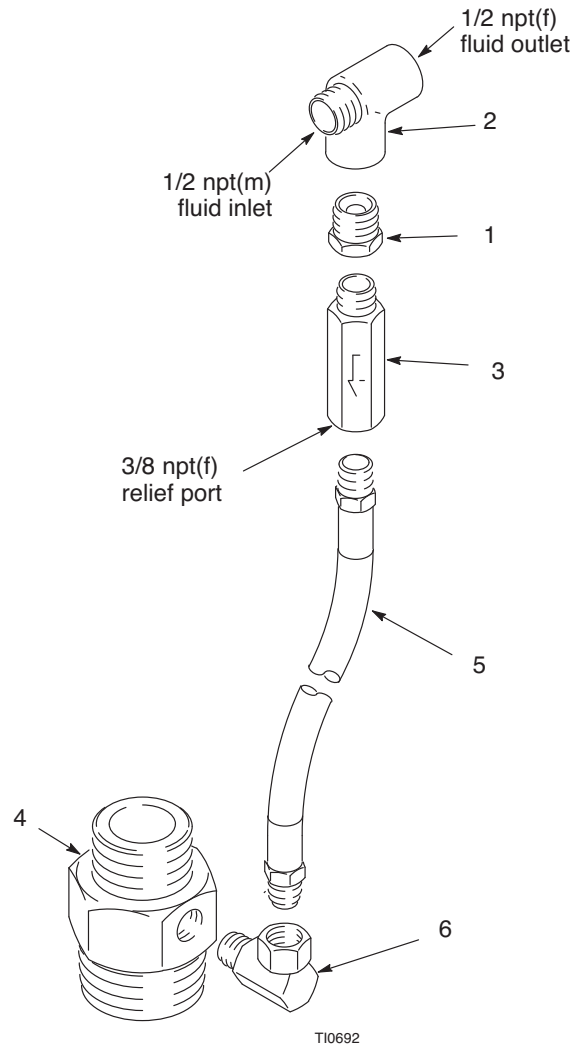
Pressure Relief Kits 237601, 240429, 248324

Ref.	Part	Description	Qty.
1	100505	BUSHING, pipe, 3/4 npt(m) x 3/8 npt(f), carbon steel	1
2	801787	TEE, 3/4 npt(f) x 3/4 npt(f) run, 3/4 npt(f) branch, brass	1
3	112174	RELIEVE VALVE, 3/8 npt(m) inlet, 3/8 npt(f) outlet, carbon steel, 600 psi (4.2 MPa, 42 bar) fixed fluid relief pressure, model 237601 only	1
	113053	RELIEVE VALVE, 3/8 npt(m) inlet, 3/8 npt(f) outlet, carbon steel, 1600 psi (11 MPa, 110 bar) fixed fluid relief pressure, model 240429 and 248324 only	1
4	191075	BUNG ADAPTER, 2-11 1/2 npt(m) x 1 1/2-11 1/2 npt(m), model 240429 and 237601 only	1
5	238370	HOSE, coupled, 3/8-18 npt(mbe) x 12" lg, model 240429 and 237601 only	1
		HOSE, coupled, 3/8-18 npt(mbe) x 6' lg, model 248324 only	1
6	155494	ADAPTER, 90° swivel, 3/8-18 npt(m) x 3/8-18 npsm(f), model 240429 and 237601 only	1
7	100350	NIPPLE, pipe, 3/4 npt, zinc plate	1



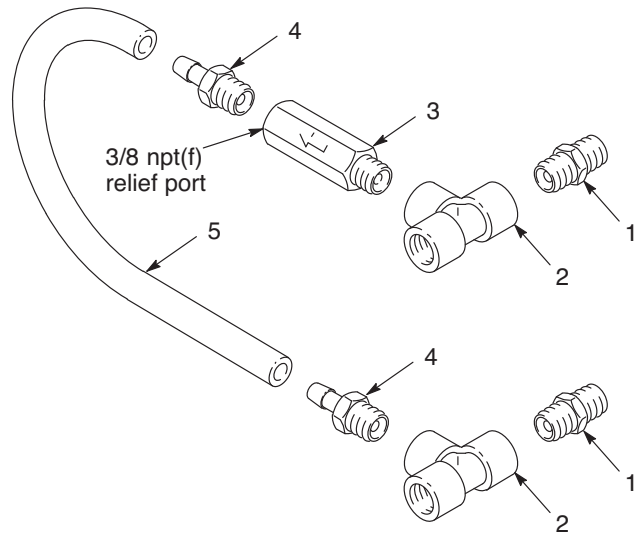
Pressure Relief Kits 235998, 237893, 237904, 248296

Ref.	Part	Description	Qty.
1	100081	BUSHING, pipe, 1/2npt(m) x 3/8 npt(f), carbon steel	1
2	107128	TEE, 1/2 npt(m) x 1/2 npt(f) run, 1/2 npt(f) branch, carbon steel	1
3	112174	RELIEVE VALVE, 3/8 npt(m) inlet, 3/8 npt(f) outlet, carbon steel, 600 psi (4.2 MPa, 42 bar) fixed fluid relief pressure, model 235998	1
	113053	RELIEVE VALVE, 3/8 npt(m) inlet, 3/8 npt(f) outlet, carbon steel, 1600 psi (11 MPa, 110 bar) fixed fluid relief pressure, model 237904	1
	102527	RELIEF VALVE, 3/8 npt(m) inlet, 3/8 npt(f) outlet, carbon steel, model 237893, 248296	1
4	191075	BUNG ADAPTER, 2-11 1/2 npt(m) x 1 1/2-11 1/2 npt(m), model 235998, 237893, 237904	1
5	238370	HOSE, coupled, 3/8-18 npt(mbe) x 12" lg, model 235998, 237893, 237904	1
	109163	HOSE, coupled, 3/8-18 npt(mbe) x 6' lg, model 248296	1
6	155494	ADAPTER, 90° swivel, 3/8-18 npt(m) x 3/8-18 npsm(f), model 235998, 237893, 237904	1



Pressure Relief Kit 238899

Ref.	Part	Description	Qty.
1	156849	NIPPLE, pipe, 3/8 npt, zinc plate	2
2	113718	TEE, 3/8 npt(f) x 3/8 npt(f) run, 3/8 npt(f) branch, polypropylene	2
3	113497	RELIEVE VALVE, 3/8 npt(m) inlet, 3/8 npt(f) outlet, steel, 150 psi (1 MPa, 10 bar) fixed fluid relief pressure	1
4	113424	HOSE ADAPTER, 3/8-18 npt(m) x 3/8 ID tube	2
5	191796	FLEXIBLE TUBE, clear PVC, 3/8' ID x 5/8" OD	1



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This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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Original instructions. This manual contains English. MM 308403

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Revised November 2018