



This manual contains important warnings and information.
READ AND KEEP FOR REFERENCE.

INSTRUCTIONS

GRACO
First choice when
quality counts.™

Rev. B
Supercedes Rev. A

Fire-Ball® and President® Lubrication Pumps for Automatic Lubrication Systems

Units for Heavy Grease

50:1 Ratio Fire-Ball Pumps: 5000 psi (35 MPa, 350 bar) Maximum Working Pressure

75:1 Ratio President Pumps: 7500 psi (52 MPa, 517 bar) Maximum Working Pressure

Part No.	Pump	For Type of Container	Vent Valve Kit	Cover	Follow Plate*	Hold-down Kit
240-848	75:1 President	400 lb	240-763	240-666	240-459	
240-854	50:1 Fire-Ball	120 lb	240-761	240-668	240-457	222-061
240-857	50:1 Fire-Ball	70 lb †	240-760	240-668	240-457	240-671

* Follow plate is an option for all units and must be ordered separately.

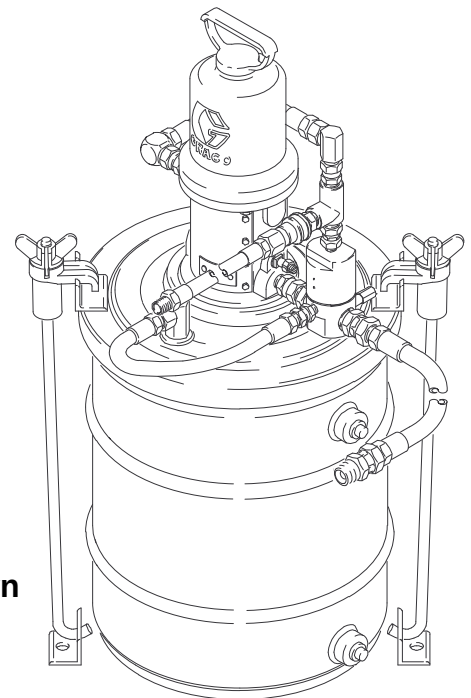
† Includes container.



WARNING

These systems are designed to be used only in pumping non-corrosive and non-abrasive lubricants. Any other use of the system can cause unsafe operating conditions and result in component rupture, fire, or explosion which can cause serious bodily injury, including fluid injection.

Model No. 240-857 shown



8428B

GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441

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Symbols

Warning Symbol



This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

Caution Symbol



This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.



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 not sure, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure stated on the equipment or in the **Technical Data** for your equipment. Do not exceed the maximum working pressure of the lowest rated component in your system.
- 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.
- Handle hoses carefully. Do not pull on hoses to move equipment.
- Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 150° F (66° C) or below –40° F (–40° C).
- Wear hearing protection when operating this equipment.
- Do not move or lift pressurized equipment.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.

WARNING



INJECTION HAZARD

Fluid from the injector, 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 is a serious injury. The injury may look like just a cut, but it is a serious injury. Get immediate medical attention.
- Do not put your hand or fingers over any grease outlet.
- Do not stop or deflect leaks with your hand, body, glove or rag.
- Do not “blow back” fluid; this is not an air spray system.
- Follow the **Pressure Relief Procedure** on page 10 before you clean, check, or service the equipment.
- Use only fittings, hoses, and tubing that are designed to meet the system pressure requirements.
- Tighten all fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn or damaged parts immediately. Do not repair high pressure couplings; you must replace the entire hose.



MOVING PARTS HAZARD

Moving parts can pinch or amputate your fingers.

- Keep clear of all moving parts when starting or operating the pump.
- Before checking or servicing the equipment, follow the **Pressure Relief Procedure** on page 10 to prevent the equipment from starting unexpectedly.

WARNING



FIRE AND EXPLOSION HAZARD

Improper grounding, poor ventilation, open flames or sparks can cause a hazardous condition and result in a fire or explosion and serious injury.

- Ground the equipment and the object being dispensed to. See **Grounding** on page 6.
- If there is any static sparking or you feel an electric shock while using this equipment, **stop dispensing immediately**. Do not use the equipment until you identify and correct the problem.
- Provide fresh air ventilation to avoid the buildup of flammable fumes from solvents or the fluid being dispensed.
- Keep the dispensing area free of debris, including solvent, rags, and gasoline.
- Do not smoke in the dispensing area.
- 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.



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.
- The air motor exhausts any fluids added to the input air.
- Graco does not manufacture or supply the reactive chemical components that may be used in this equipment and is not responsible for injury or property loss, damage, expense or claims (direct or consequential) that arise from the use of such chemical components.

[illegible]

Installation

Reference numbers and letters in parentheses in the text refer to the callouts in the figures and the parts drawing. Always use genuine Graco parts and accessories, available from your Graco distributor.

Grounding

WARNING



FIRE AND EXPLOSION HAZARD

Before operating the pump, ground the system as explained below. Also read the section **FIRE OR EXPLOSION HAZARD** on page 4.

Ground all of this equipment:

- *Air and fluid hoses:* Use only electrically conductive hoses.
- *Air compressor:* Follow the manufacturer's recommendations.
- *Injectors:* Ground through connection to a properly grounded fluid hose and pump or to the mounting manifold.
- *Object being dispensed to:* Follow the local code.
- *Pump:* Use a ground wire and clamp as shown in Fig. 1. Loosen the grounding lug locknut (W) and washer (X). Insert one end of a 12 ga (1.5 mm²) minimum ground wire (Y) into the slot in lug (Z) and tighten the locknut securely. Connect the other end of the wire to a true earth ground.

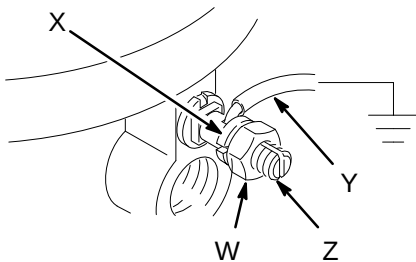


Fig. 1 _____ 0720

Air Line and Accessories

Note: Install the air line accessories in the order shown in the **Typical Installation** on page 7.

CAUTION

Do not hang air accessories directly on the air inlet. The fittings are not strong enough to support accessories and may cause one or more to break. Provide a bracket on which to mount accessories.

- Install a pump runaway valve (G) to shut off the air to the pump if the pump accelerates beyond the pre-adjusted setting. A pump that runs too fast can be seriously damaged.
- Install an air line lubricator (F) for automatic air motor lubrication.
- Install an air regulator (C) to control pump speed and pressure.
- On the main air supply line from the compressor, install an air filter (E) to remove harmful dirt and contaminants from the compressed air supply.
- Install a bleed-type master air valve (M) within easy reach of the pump, upstream from the air regulator (C).

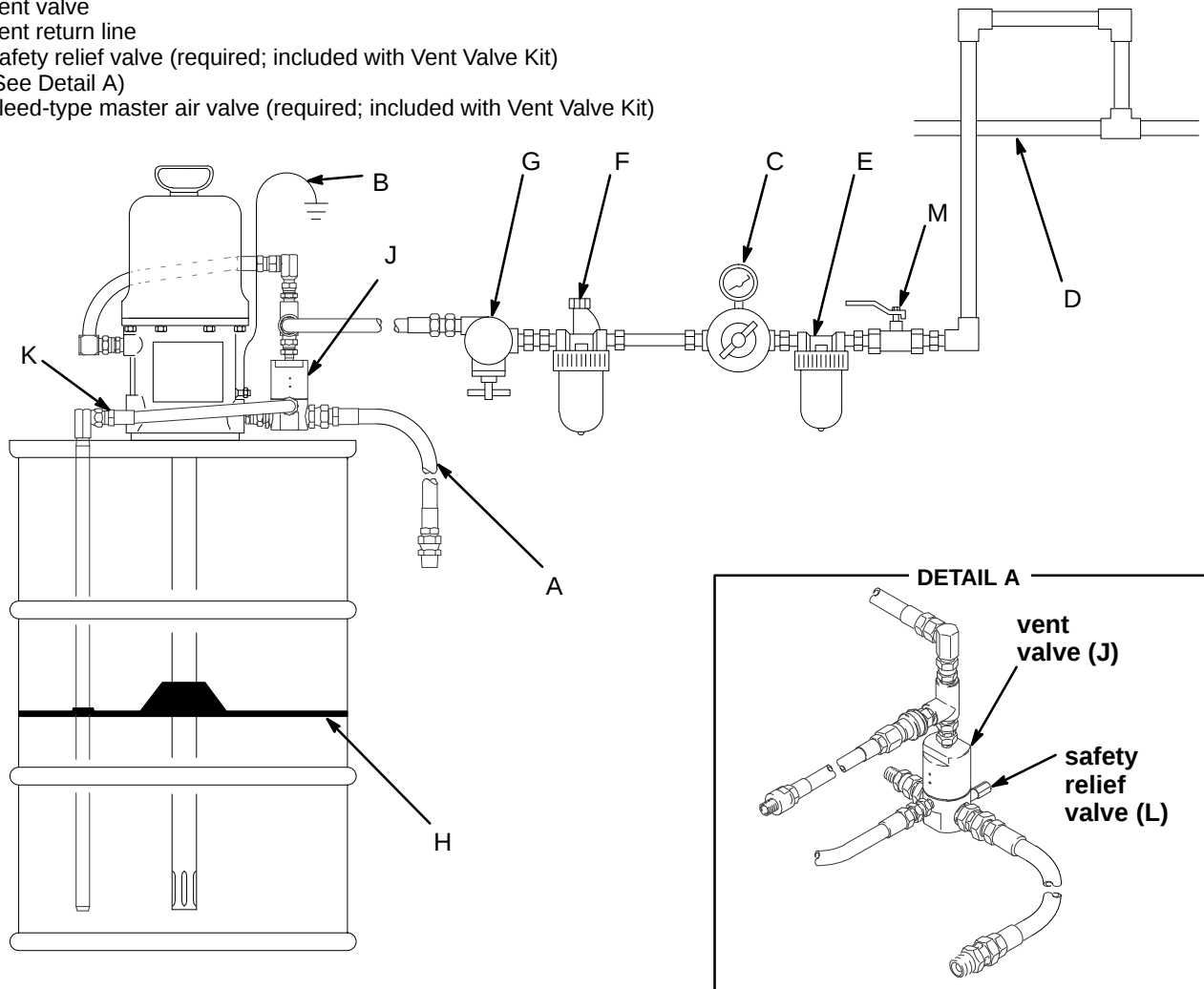
Installation

Typical Installation

The typical installation shown below is only a guide for selecting and installing system components and accessories. Contact your Graco distributor for assistance in designing a system to suit your particular needs.

Key

- A Fluid dispense line
- B Pump ground wire (required; included)
- C Air regulator
- D Main air supply line
- E Air filter
- F Air line lubricator
- G Pump runaway valve
- H Follow plate (optional)
- J Vent valve
- K Vent return line
- L Safety relief valve (required; included with Vent Valve Kit)
(See Detail A)
- M Bleed-type master air valve (required; included with Vent Valve Kit)



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Installation

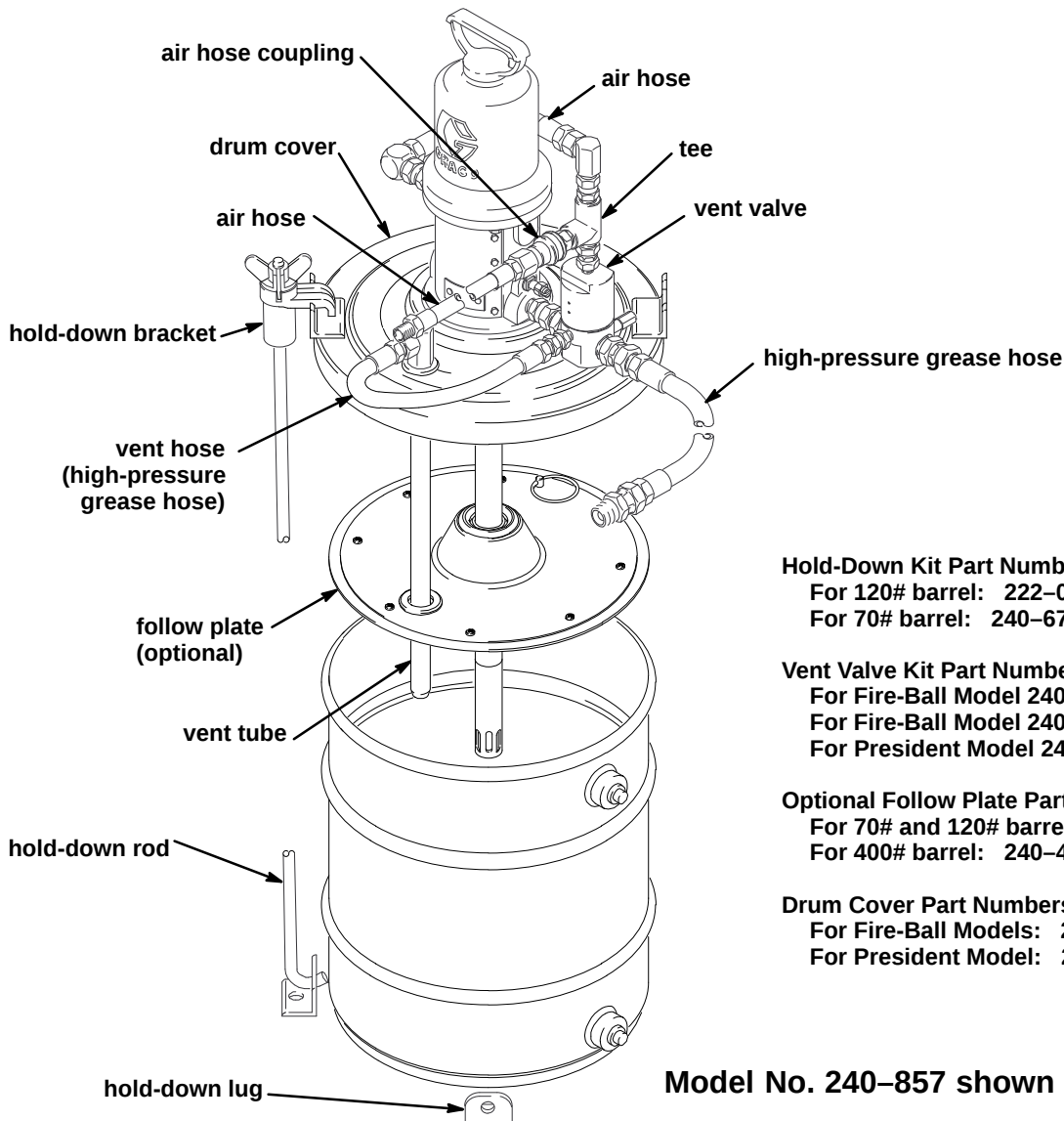
Stationary Mounting Layout

- Plan the layout for easy operator access to the pump air controls, leave sufficient room to change drums, and mount on a secure platform.
- For ease in changing drums, install a pump elevator.

Open Drum, Cover-Mounted Pumps

See Fig. 2.

1. Remove the original drum cover.
2. Place the new drum cover on the drum. Carefully guide the pump riser tube through the mounting gasket, and fasten the pump to the drum cover such that the outlet of the pump is 90° counter-clockwise from the hole with the grommet.
3. For Models 240–854 and 240–857, install the Hold-Down Kit according to the instruction in the **Drum Mounting With Hold-down Kit** section on page 9.
4. Install and tighten the bolts that secure the pump to the drum cover.



Hold-Down Kit Part Numbers:

For 120# barrel: 222–061

For 70# barrel: 240–671

Vent Valve Kit Part Numbers:

For Fire-Ball Model 240–857: 240–760

For Fire-Ball Model 240–854: 240–761

For President Model 240–848: 240–763

Optional Follow Plate Part Numbers:

For 70# and 120# barrel: 240–457

For 400# barrel: 240–459

Drum Cover Part Numbers:

For Fire-Ball Models: 240–668

For President Model: 240–666

Model No. 240–857 shown

Fig. 2

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Installation

Drum Mounting With Hold-down Kit

Models 240–857 and 240–854

See Fig 3.

1. Place the drum in the desired location.
2. Lay out the mounting locations for the hold-down lugs (R) to achieve the desired drum cover orientation. The drum cover orientation dictates the location of the tie downs and the vent valve.
3. Place the hold-down lugs (R) around the drum base, and bolt directly to the truck bed or mounting platform.
4. Assemble the hold-down bracket (P), rod (J), and wing nut (N) as shown, and tighten the wing nut to hold the cover securely on the container.

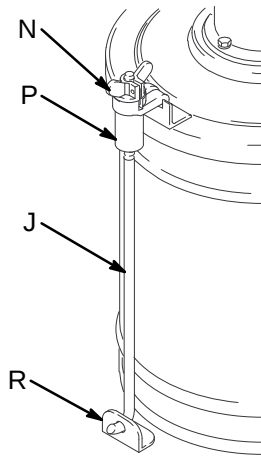


Fig. 3

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Mobile Mounting Layout

Plan the layout for easy operator access to the pump air controls, sufficient room to change drums, and a secure truck bed or mounting platform.

Installing the Vent Valve Kit

For pumps using Vent Valve Kits 240–760, 240–761, or 240–763 See Fig 4.

Note: The Vent Valve Kit is shipped only partially assembled. This is to facilitate proper alignment of hoses and fittings when you put together the unassembled parts and install the kit on your system.

1. Insert the vent tube (14 or 15) through the off-center hole in the container cover.
2. Apply anaerobic sealant to all male threads, except at swivel adapter joints.

3. Loosely assemble the remaining hoses, fittings, and vent valve on your system. Do not tighten any fittings until all parts are in place.
4. When all parts are in place and properly aligned, tighten all fittings.

! WARNING



INJECTION HAZARD

Be certain that all grease hoses and air hoses are properly installed in their correct location, as shown in Fig. 4 and in the Vent Valve Kits **Parts** drawings on page 11. Hose part numbers are stamped on the metal hose couplings. If you have doubts about the installation, do **not** operate the system; contact your Graco distributor or the factory to confirm the proper installation. Installing an air hose where a high-pressure grease hose is required could cause serious injury, including fluid injection.

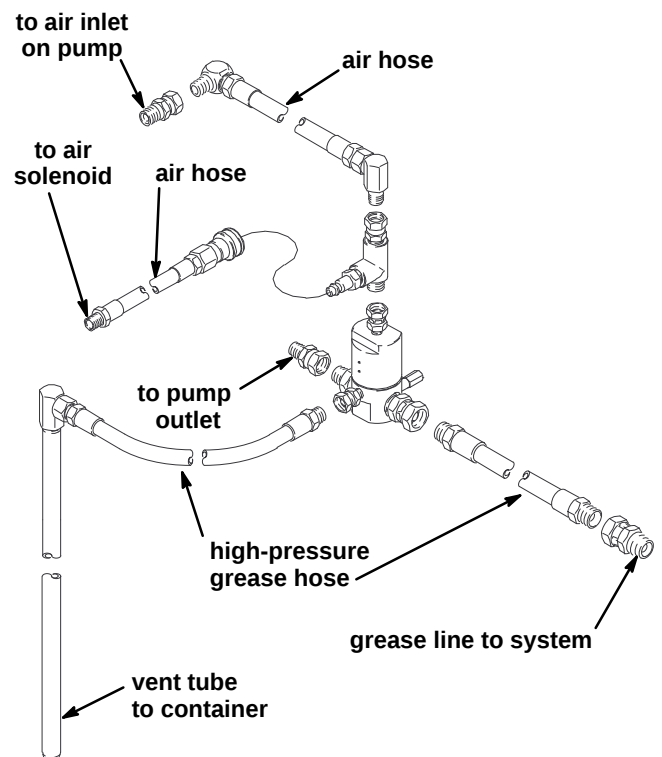


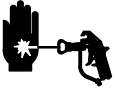
Fig. 4

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Operation

Pressure Relief Procedure

WARNING



INJECTION HAZARD

To reduce the risk of serious injury, including fluid injection or splashing in the eyes or on the skin, always follow the

Pressure Relief Procedure whenever you

- Are instructed to relieve the pressure
- Shut off the pump
- Check or service any of the system equipment
- Install or clean the grease fitting couplers

1. Disconnect power from the timer control.
2. Close the pump air regulator and/or bleed-type master air valve.
3. Disconnect the air coupler (3) from the tee (6) on the vent valve. *See drawings on page 11.*

Start-up

1. Close the air regulators and bleed-type master air valves to all but one pump.
2. Open the master air valve from the compressor.
3. Disconnect the supply lines from the injector manifolds, open the bleed-type master air valve, and open the pump air regulator slowly, until the pump is running and all air has been purged out of the lines. Reconnect the supply lines, remove the zerk cap from the injector, and use a standard grease gun to prime the feed lines to the bearings.

Note: When the pump is primed, and with sufficient air supplied, the pump starts when the timer activates the air line solenoid valve, and it shuts off when the timer deactivates the air valve.

4. Set the air pressure to the pump at the lowest pressure needed to get the desired results.
5. Read and follow the instructions supplied with each component in your system.
6. To shut off the system, disconnect power to the central timer, and turn off the air supply.

In an emergency situation, any of the following methods can be used to shut down the system:

- Turn off the electrical power to the system.
- Shut off the air supply with the bleed-type master air valve (M).
- Disconnect the air line quick coupler (3) from the air line fitting (4) on the vent valve tee (6).

WARNING

The maximum working pressure of each pump in your system may not be the same. To reduce the risk of over-pressurizing any part of your system, be sure you know the maximum working pressure rating of each pump and its connected components. Never exceed the maximum working pressure of the lowest rated component connected to a particular pump.

To determine the fluid output pressure using the air regulator reading, multiply the ratio of the pump by the air pressure shown on the regulator gauge. For example:

50:(1) ratio x 70 psi air = 3500 psi fluid output

50:(1) ratio x 0.48 MPa air = 24 MPa fluid output

50:(1) ratio x 4.8 bar air = 240 bar fluid output

Limit the air to the pump so that no air line or fluid line component or accessory is over-pressurized.

CAUTION

Never allow the pump to run dry of the fluid being pumped. A dry pump will quickly accelerate to a high speed, possibly damaging itself. If your pump accelerates quickly, or is running too fast, stop it immediately and check the fluid supply. If the supply container is empty and air has been pumped into the lines, prime the pump and lines with fluid, or flush it and leave it filled with a compatible solvent. Be sure to eliminate all air from the fluid system.

Note: A pump runaway valve, Part No. 224-040, can be installed on the air line to automatically shut off the pump if it starts to run too fast.

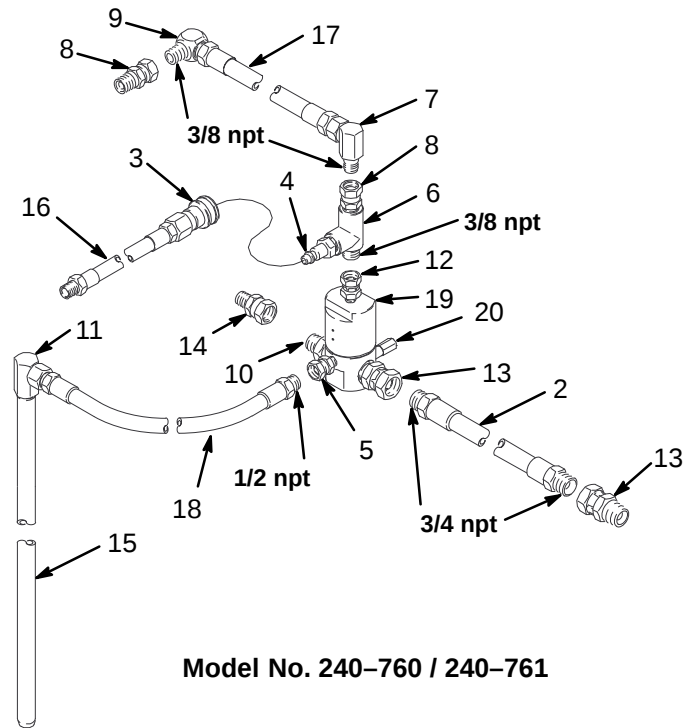
Parts — Vent Valve Kits, Models 240-760, 240-761, and 240-763

Note: Parts for Vent Valve Kit 240-760 and 240-761 are the same, except for the length of the vent tube (15).

Model No. 240-760 / 240-761

Ref No.	Part No.	Description	Qty.
1	*	SEALANT, anaerobic (not shown)	1
2	109-105	HOSE, coupled	1
3	*	COUPLER, air line	1
4	*	FITTING, air line	1
5	*	SWIVEL, straight	1
6	*	TEE	1
7	*	UNION, swivel; 90°	1
8	*	UNION, adapter	2
9	*	ELBOW, street; 90°	1
10	*	FITTING, adapter	1
11	*	UNION, swivel; 90°	1
12	*	UNION, swivel	1
13	*	UNION, swivel	2
14	*	UNION, swivel	1
15	*	TUBE, vent	1
16	203-320	HOSE, medium pressure	1
17	204-560	HOSE, medium pressure	1
18	220-598	HOSE, coupled	1
19	*	VALVE, vent	1
20	*	VALVE, safety relief	1
21	222-011	WIRE, ground, pump (not shown)	1
22	110-224	VALVE, air, bleed (not shown)	1

* These parts cannot be ordered separately.

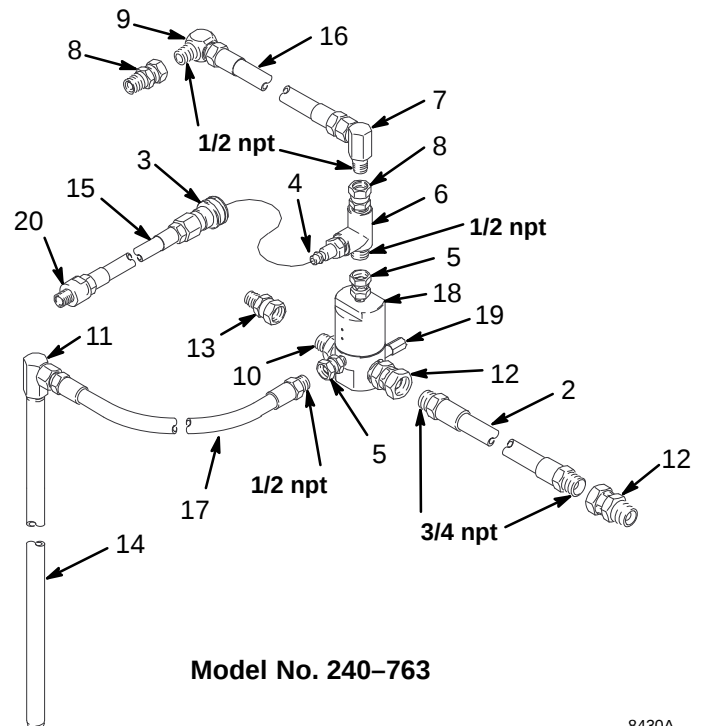


Model No. 240-760 / 240-761

Model No. 240-763

Ref No.	Part No.	Description	Qty.
1	*	SEALANT, anaerobic (not shown)	1
2	109-105	HOSE, coupled	1
3	*	COUPLER, air line	1
4	*	FITTING, air line	1
5	*	SWIVEL, straight	2
6	*	TEE	1
7	*	UNION, swivel; 90°	1
8	*	UNION, adapter	2
9	*	ELBOW, street; 90°	1
10	*	FITTING, adapter	1
11	*	UNION, swivel; 90°	1
12	*	UNION, swivel	2
13	*	UNION, swivel	1
14	*	TUBE, vent	1
15	205-418	HOSE, coupled	1
16	218-093	HOSE, medium pressure	1
17	220-598	HOSE, coupled	1
18	*	VALVE, vent	1
19	*	VALVE, safety relief	1
20	*	ADAPTER	1
21	222-011	WIRE, ground, pump (not shown)	1
22	110-225	VALVE, air, bleed (not shown)	1

* These parts cannot be ordered separately.



Model No. 240-763

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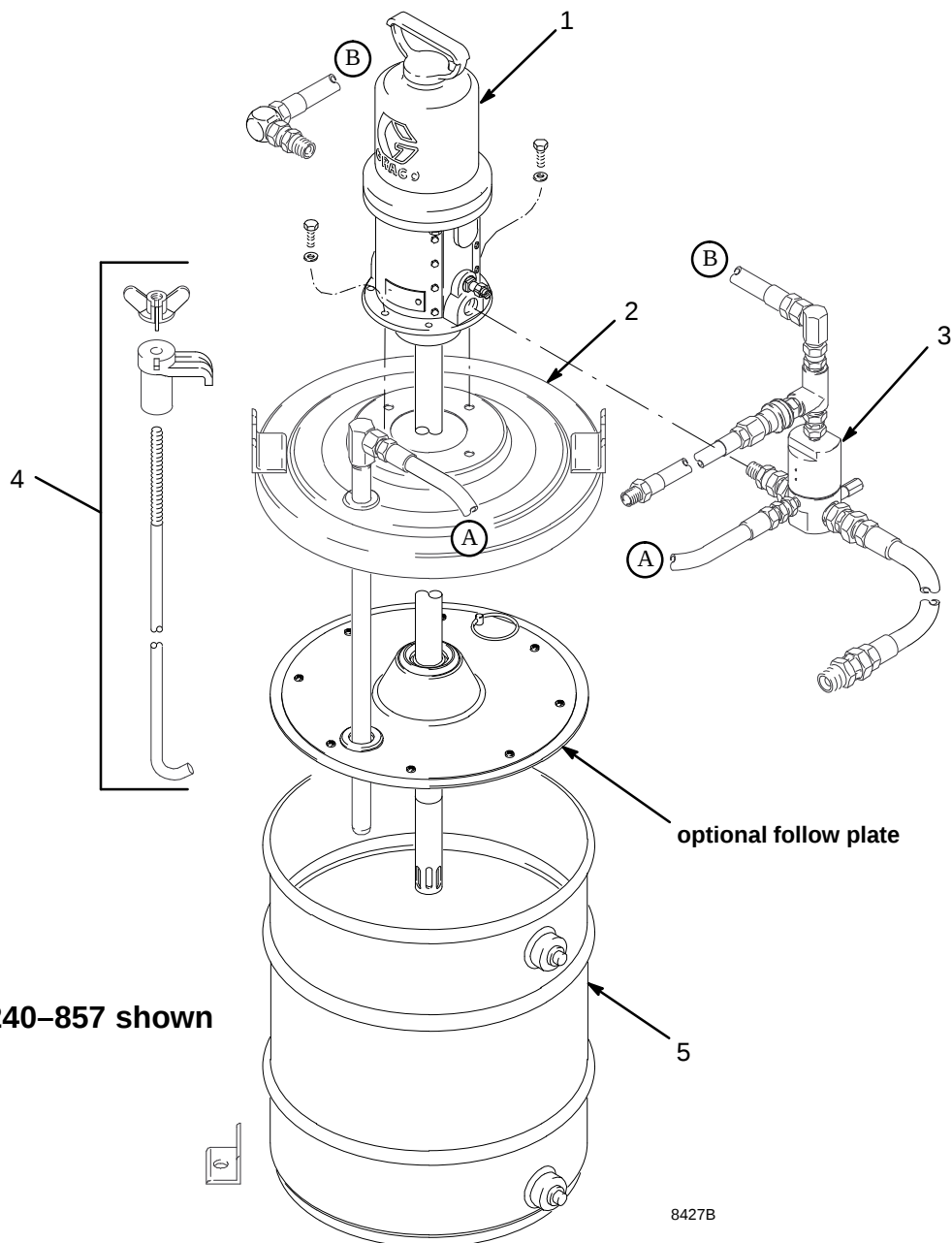
Parts — Fire-Ball Packages, Models 240-854 and 240-857

Model No. 240-854 50:1 Fire-Ball Package for 120-pound Barrel

Ref No.	Part No.	Description	Qty.
1	203-869	Pump; 50:1 Fire-Ball, for 120# barrel (not included) <i>See manual 306-517</i>	1
2	240-668	Cover, drum	1
3	240-761	KIT, vent valve <i>See parts on page 11</i>	1
4	222-061	KIT, hold-down <i>See parts on page 14</i>	1

Model No. 240-857 50:1 Fire-Ball Package with 70-pound Pail

Ref No.	Part No.	Description	Qty.
1	207-609	Pump; 50:1 Fire-Ball, for 70# barrel <i>See manual 306-517</i>	1
2	240-668	Cover, drum	1
3	240-760	KIT, vent valve <i>See parts on page 11</i>	1
4	240-671	KIT, hold-down <i>See parts on page 14</i>	1
5	114-624	PAIL, 10-gallon (38 liter)	1



Model No. 240-857 shown

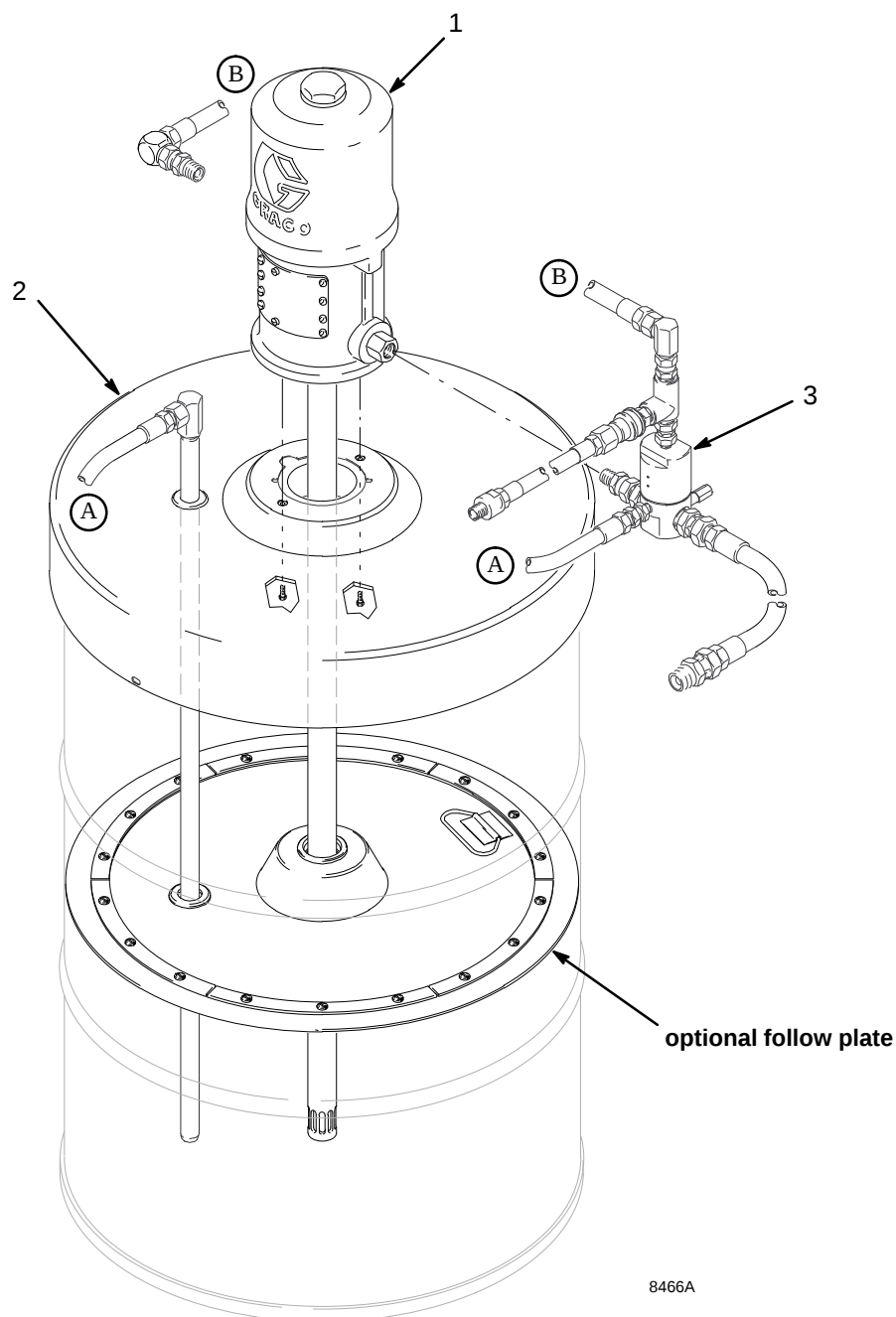
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Parts — President Package, Model 240–848

Model No. 240–848

75:1 President Package for 400-pound Barrel

Ref No.	Part No.	Description	Qty.
1	239–730	Pump; 75:1 President, for 400# barrel (not included) <i>See manual 308–777</i>	1
2	240–666	Cover, drum	1
3	240–763	KIT, vent valve <i>See parts on page 11</i>	1



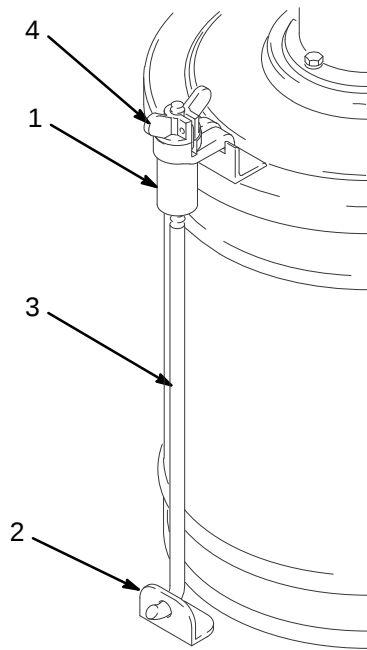
Hold-Down Kits 222-061 and 240-671

Hold-Down Kit 222-061, For Fire-Ball Model with 120-pound Barrel

Ref No.	Part No.	Description	Qty.
1	159-016	BRACKET, hold down	2
2	153-166	LUG, hold-down	4
3	153-102	ROD, drum mounting	2
4	200-889	ASSY, wing nut	2

Hold-Down Kit 240-671, For Fire-Ball Model with 70-pound Barrel

Ref No.	Part No.	Description	Qty.
1	159-016	BRACKET, hold down	2
2	153-166	LUG, hold-down	4
3	193-458	ROD, drum mounting	2
4	200-889	ASSY, wing nut	2



Hold-Down Kit 240-671 Shown

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Technical Data

See the separate pump instruction manuals for pump wetted parts, maximum delivery, air consumption, and so on.

Vent Valve Kits

Maximum air pressure 120 psi (0.8 MPa, 8 bar)

Maximum fluid pressure 3500 psi (24 MPa, 240 bar)

Safety unloader Safety relief valve (L) activates at 4000 psi (27.6 MPa, 276 bar)
See Typical Installation drawing on page 7.

Manual Change Summary

This manual went from Rev. A to Rev. B to update the drawings to show a change in the orientation of the pump relative to the drum cover and to add ground wires and bleed-type master air valves to the Vent Valve Kit **Parts Lists** on page 11.

Graco Standard Warranty

Graco warrants all equipment manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

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.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose in connection with accessories, equipment, materials or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS

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Graco Phone Number

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you:
1-800-367-4023 Toll Free

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Graco reserves the right to make changes at any time without notice.*

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GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441

<http://www.graco.com>

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