



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

INSTRUCTIONS

## FIRE-BALL® and PRESIDENT®

# LUBRICATION PUMPS

\* For stationary or mobile installations

### 5:1 Ratio Fire-Ball Pump

900 psi (62 bar) MAXIMUM WORKING PRESSURE

Model No.	Size	Type*	Hose Kit	Cover	Bung Adapter	Sturdi Clamp	Hold-Down Kit
225094	16-gallon open drum	S	X	X			
222086	16-gallon open drum, truck mounted	M	X	X			X
225642	55-gallon open drum	S	X	X			
225640	55-gallon closed drum	S	X		X		
206655	55-gallon closed drum, truck mounted	M	X	X			X
204264	55-gallon closed drum, truck mounted	M	X		X	X	X
225931	275-gallon obround tank	S	X		X		

### 10:1 Ratio President Pump

1800 psi (120 bar) MAXIMUM WORKING PRESSURE

Model No.	Size	Type*	Hose Kit	Cover	Bung Adapter	Sturdi Clamp	Hold-Down Kit
225782	55-gallon open drum	S	X	X			
225786	55-gallon closed drum	S	X		X		
206656	55-gallon closed drum, truck mounted	M	X	X			X
222067	55-gallon closed drum, truck mounted	M	X		X	X	X

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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.



### 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.
- 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 that 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.
- **All fluid hoses must have spring guards on both ends.** The spring guards help protect the hose from kinks or bends at or close to the coupling, which can result in hose rupture.
- Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 82°C (180°F) or below -40°C (-40°F).
- Do not lift pressurized equipment.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.
- Use only dispensing valves that are designed to dispense motor oil. Do not modify any part of the dispensing valve; doing so could cause a malfunction and result in serious bodily injury. Be sure the dispensing valve has a maximum working pressure that meets or exceeds that of the pump.
- The maximum fluid working pressure of these pumps, when operated at a maximum of 180 psi (12.6 bar) air pressure is **900 psi (60 bar) on the 5:1 Fire-Ball Pump, and it is 1800 psi (120 bar) on the 10:1 President Pump.**



## WARNING



### INJECTION HAZARD

Fluid from the dispensing valve, 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 may look like just a cut, but it is a serious injury. Get **immediate medical attention**.
- Do not point the dispensing valve at anyone or at any part of the body.
- Do not put your hand or fingers over the end of the dispensing valve.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Use only extensions and tips that are designed for use with your dispensing valve.
- 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.





### HAZARDOUS FLUIDS

Improper handling of hazardous fluids or inhaling toxic fumes can cause extremely serious injury or death due to splashing in the eyes, ingestion, or bodily contamination.

- 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.

## ! WARNING

	<p><b>FIRE AND EXPLOSION HAZARD</b></p> <p>Improper grounding, poor ventilation, open flames, or sparks can cause a hazardous condition and result in a fire or explosion and serious injury.</p> <ul style="list-style-type: none"> <li>• Ground the equipment. Refer to <b>Grounding</b> below.</li> <li>• If there is any static sparking or you feel an electric shock while using this equipment, <b>stop dispensing immediately</b>. Do not use the equipment until you identify and correct the problem.</li> <li>• Provide fresh air ventilation to avoid the buildup of flammable fumes from solvents or the fluid being dispensed.</li> <li>• Do not smoke in the dispensing area.</li> </ul>
	<p><b>MOVING PARTS HAZARD</b></p> <p>Moving parts can pinch or amputate your fingers.</p> <ul style="list-style-type: none"> <li>• Keep clear of all moving parts when starting or operating the pump.</li> <li>• Before servicing the equipment, follow the <b>Pressure Relief Procedure</b> on page 10 to prevent the equipment from starting unexpectedly.</li> </ul>

United States Government safety standards have been adopted under the Occupational Safety and Health Act. You should consult these standards—particularly General Standards, Part 1910, and Construction Standards, Part 1926.

## Installation

### Grounding

To reduce the risk of static sparking, ground the pump. Check your local electrical code for detailed grounding instructions for your area and type of equipment.

- *Pump:* Use ground wire and clamp as shown in Fig. 1.
- *Air and fluid hoses:* Use only electrically conductive hoses.
- *Air compressor:* Follow manufacturer's recommendations.
- *Dispensing valve:* Obtain grounding through connection to a properly grounded fluid hose and pump.
- *Fluid supply container:* Follow your local code.
- *Object being lubricated:* Follow your local code.
- *Any pails used when flushing:* Use only metal, grounded pails when flushing. Make firm metal-to-metal contact between a metal part of the dispensing valve and the pail. Use the lowest possible pressure.

- *To maintain grounding continuity when flushing or relieving pressure,* always hold a metal part of the dispensing valve firmly to the side of a *metal pail*, and then open the dispensing valve.

**To ground the pump,** loosen the grounding lug locknut (W) and washer (X). Insert one end of a 12 ga (1.5 mm<sup>2</sup>) minimum ground wire (Y) into the slot in the lug (Z), and tighten the locknut securely. Connect the other end of the wire to a true earth ground. See Fig. 1. To order a ground wire and clamp, order Part No. 222011.

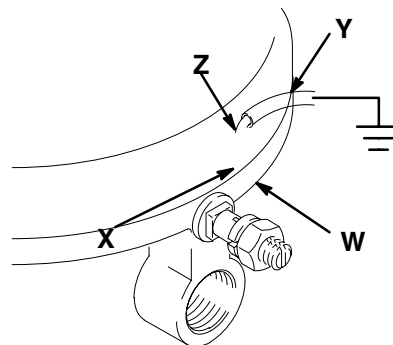


Fig. 1

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[illegible]

# Installation–Stationary Mounting

The typical installation shown in Fig. 2 is only an installation guide; it is not an actual system design. Contact your Graco distributor for assistance in designing a system to suit your needs.

## For Stationary Mountings

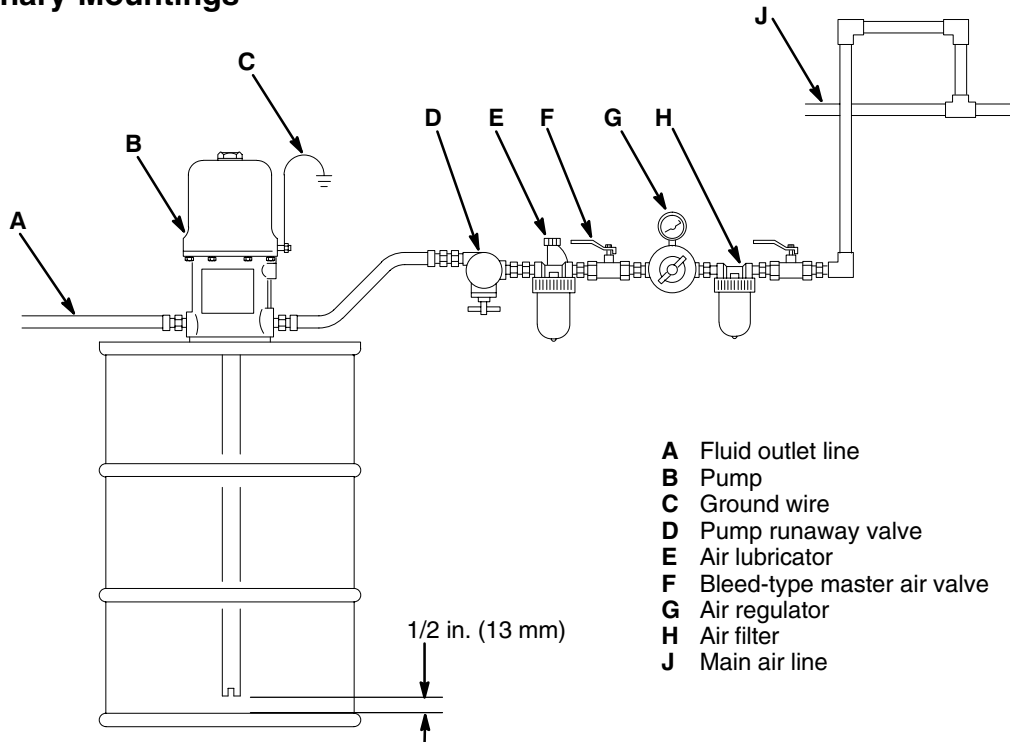


Fig. 2

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**NOTE:** See Fig. 4 on page 8 for the mobile mounting installation.

## Stationary Mounting Layout

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

For ease in changing drums, install a pump elevator.

## Open-Drum, Cover-Mounted Pumps

1. Remove the original drum cover.
2. Mount and fasten the new drum cover.
3. Guide the pump riser tube through the mounting gasket.

## Closed Bung-Type Drum

1. Loosen the drum cover vent plug, and remove the bung cover.
2. Install the pump through the bung hole until the pump foot valve is 1/2 in. (13 mm) off the drum bottom. Tighten the bung adapter.

## Air and Fluid Line Accessories

Install the accessories in the order shown in Fig. 2.

### **CAUTION**

Do not hang the air accessories directly on the air inlet. Mount them on brackets. The fittings are not strong enough to support the accessories and may break.

- Use thread sealant on male threads except at swivel connections.
- Install a pump runaway valve (D) to stop the pump if the fluid supply is depleted.
- Install a bleed-type master air valve (F) upstream from the pump air regulator (G), but within easy reach of the pump.

*To order a 300 psi (21 bar) maximum working pressure, 1/2 in. npt bleed-type master air valve, order Part No. 107142.*

# Installation—Stationary Mounting

## WARNING

A bleed-type master air valve is required in the system to help reduce the risk of serious bodily injury, including fluid injection, splashing in the eyes, and injury from moving parts when adjusting or repairing the pump. This valve relieves air trapped between the valve and the pump to prevent the pump from cycling unexpectedly.

- Install an air line lubricator (E) for automatic air motor lubrication.

*To order a 250 psi (17.5 bar) maximum working pressure air line lubricator, order a Part No. below:*

3/8 in. npt	214847
1/2 in. npt	214848

- Install an air regulator (G) to control pump speed and pressure.

*To order a 300 psi (21 bar) maximum working pressure regulator, order a Part No. below:*

3/8 in. npt	109107
1/2 in. npt	104266

- Install an air line filter (H) to remove harmful dirt and contaminants from your compressed air supply.

*To order a 250 psi (17.5 bar) maximum working pressure air filter, order a Part No. below:*

3/8 in. npt	106148
1/2 in. npt	214849

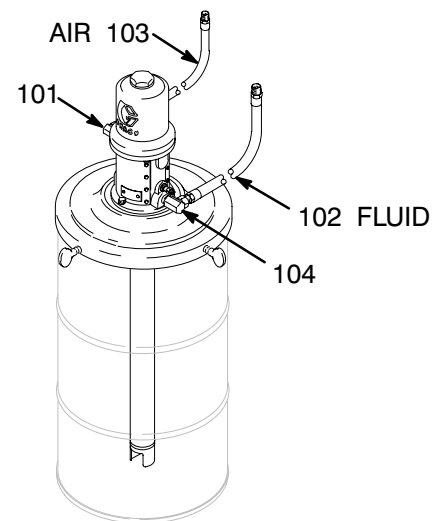
- Install a thermal relief kit on the dispensing valve side of the pump to assist in relieving pressure in the pump, hose, and dispensing valve due to heat expansion.

*To order a thermal relief kit for the Fire-Ball pump—900 psi (62 bar) maximum working pressure—order Part No. 237893.*

*To order a thermal relief kit for the President pump—1600 psi (110 bar) maximum working pressure—order Part No. 237904.*

## Hose Kits

Assemble hose kits as shown in Fig. 3.



**Fig. 3**

# Installation–Mobile Mounting

The typical installation shown in Fig. 4 is only an installation guide; it is not an actual system design. Contact your Graco distributor for assistance in designing a system to suit your needs.

## For Mobile Mountings

- K Hose reel
- L Truck bed
- M Hold-down rods
- N Compressor
- P Ground wires

See Air and Fluid  
Line Accessories  
on page 6

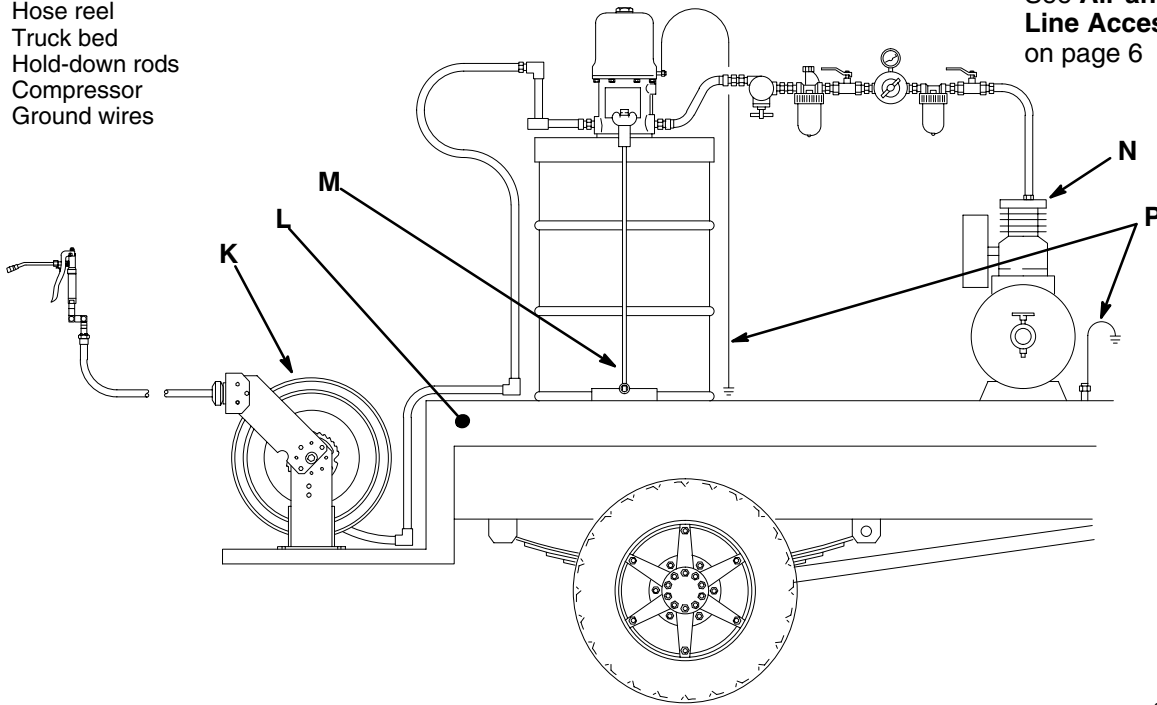


Fig. 4

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## Mobile Mounting Layout

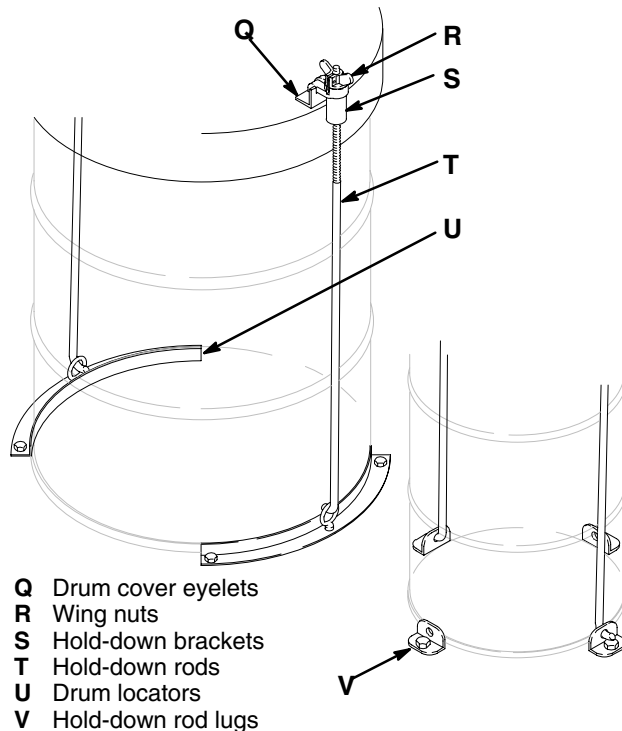
Plan the layout for easy operator access to the pump air controls, sufficient room to change drums, and a secure mounting platform.

## Drum Mounting

1. Place the drum in the desired location.
2. Place the hold-down lugs (V) or drum locators (U) around the drum base and bolt directly to the truck bed or mounting platform. See Fig. 5.

## Open-Drum, Cover-Mounted Pumps

1. Remove the original drum cover.
2. Mount the new drum cover and fasten.
3. Guide the pump riser tube through the mounting gasket.
4. Align the drum cover eyelets (Q) with the hold-down rods (T), install the cover brackets (S) and wing nuts (R) and tighten securely. See Fig. 5.



- Q Drum cover eyelets
- R Wing nuts
- S Hold-down brackets
- T Hold-down rods
- U Drum locators
- V Hold-down rod lugs

Fig. 5

01613



# Installation—Mobile Mounting

## Closed Bung-Type-Drum, Cover-Mounted Pump

1. Insert the pump riser tube through the gasket (W) and drum cover (X). Fasten the Fire-Ball pump from the top side and the President pump from the bottom side. See Fig. 6.
2. Slide the rubber grommet (Y), tapered end down, onto the riser tube and push it up against the pump base. See Fig. 6.
3. Guide the pump riser tube through the drum bung hole (Z) and place the cover on the drum. See Fig. 6.
4. Align the drum cover eyelets (Q) with the hold-down rods (T), install the cover brackets (S) and wing nuts (R) and tighten securely. See Fig. 5.

## Closed Bung-Type-Drum, Sturdi-Clamp-Mounted Pumps

1. Remove the adjustable bung adapter from the pump riser tube.
2. Screw the bung adapter (EE) into the bung hole.
3. Loosen the wing nuts (BB) and slide the clamp (AA) onto the pump riser tube, up to the base. See Fig. 7.
4. Holding the clamp onto the pump, insert the pump riser tube through the bung adapter, and lower the pump until the clamp rests on the edge of the drum. See Fig. 7.
5. Install the sturdi-clamp so its upper jaw fits against the pump base projection, its u-bolt (DD) fits around the riser tube, and its lower jaw fits against the bung adapter. Tighten the wing nuts (BB). See Fig. 7.
6. Tighten the T-handle (CC) firmly to the side of the drum.

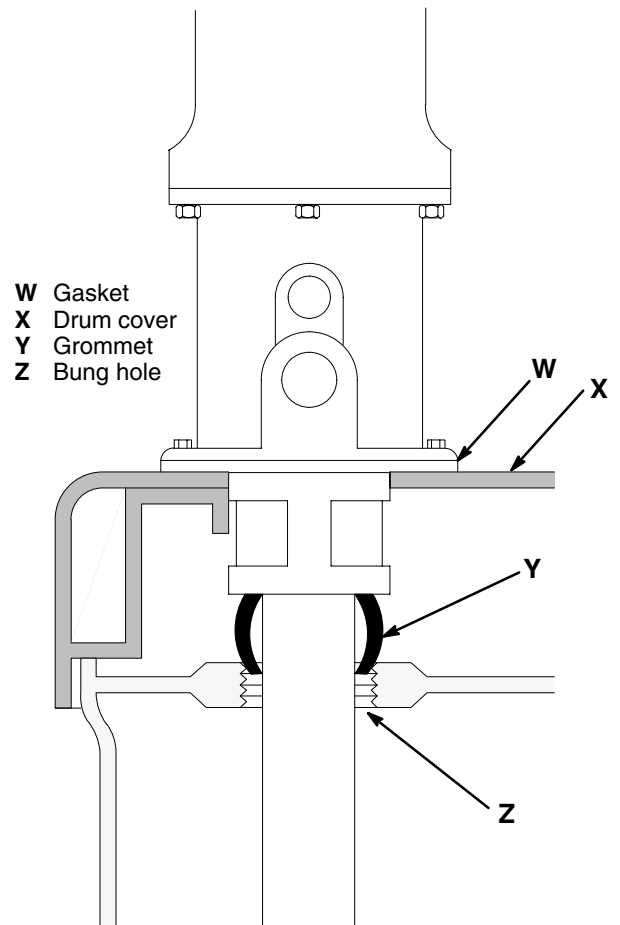


Fig. 6

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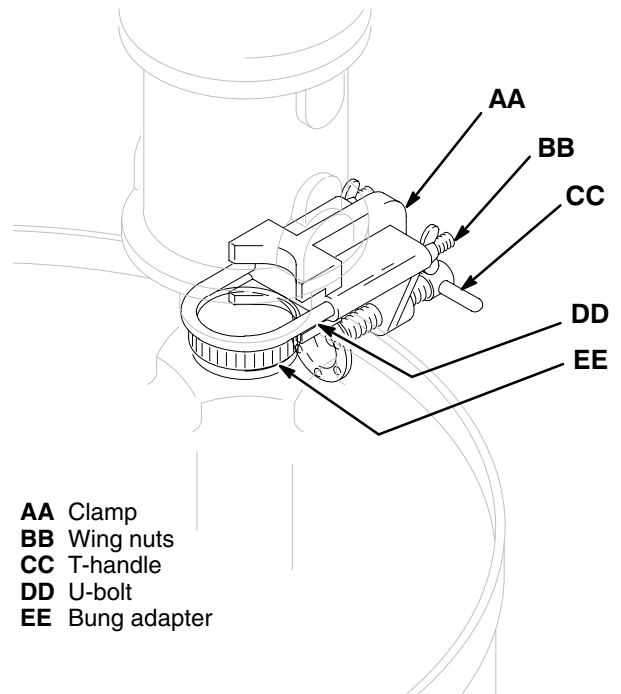




Fig. 7

01615

# Operation

## Pressure Relief Procedure

**WARNING**


**INJECTION HAZARD**

To reduce the risk of serious bodily injury, including fluid injection, injury from moving parts, or splashing in the eyes or on the skin, always follow this procedure whenever you shut off the pump, when checking or servicing any part of the system, when installing or changing dispensing devices, and whenever you stop dispensing.

1. Close the air regulator and disconnect the air supply hose.
2. Close the pump's bleed-type master air valve (required in the system).
3. Open the dispensing valve until pressure is fully relieved.

*If you suspect that the dispensing valve is clogged, or that pressure has not been fully relieved after following the steps above, **very slowly** loosen the dispensing valve coupler or hose end coupling to relieve pressure gradually, then loosen completely.*

## Operating


**WARNING**

Never exceed 180 psi (12.6 bar) Maximum Air Pressure to these pumps. Using higher air pressure will cause the pump to over pressurize which may result in component rupture, fire, or explosion and cause serious bodily injury.

**NOTE:** Read and follow the warnings and instructions in the manual for each of the system components.


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. For the pump that is connected, trigger the dispensing valve into a grounded metal waste container, making firm metal-to-metal contact between the container and valve. Open the bleed-type master air valve and open the pump air regulator slowly, just until the pump is running. When the pump is primed and all air has been pushed out of the lines, release the trigger.
4. If you have more than one pump, repeat this procedure for each pump.
5. When the pump is primed and has sufficient air supplied to it, it starts when the dispensing valve is opened and shuts off when it is closed.

**CAUTION**

Never allow the pump to run dry of the fluid being pumped. A dry pump will quickly accelerate to a high speed and possibly damage itself. If the pump accelerates quickly, 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.

6. Set the air pressure to each pump at the lowest pressure needed to get adequate fluid delivery.
7. When shutting off the system, and before checking or servicing it, **relieve the pressure**.

**WARNING**

**INJECTION HAZARD**

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** at left.

## Notes

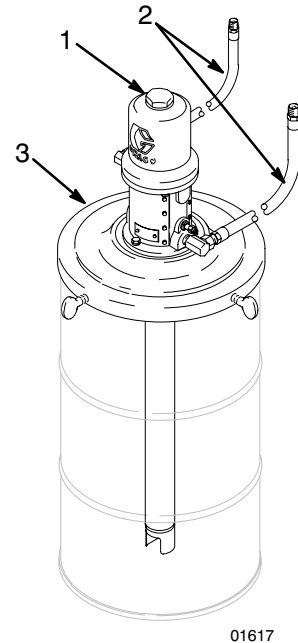
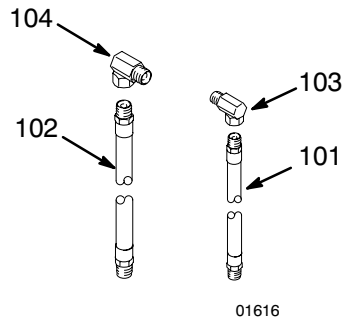
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# Fire-Ball Parts Lists and Drawings

## Model 222063

### Hose Kit for Fire-Ball Pump

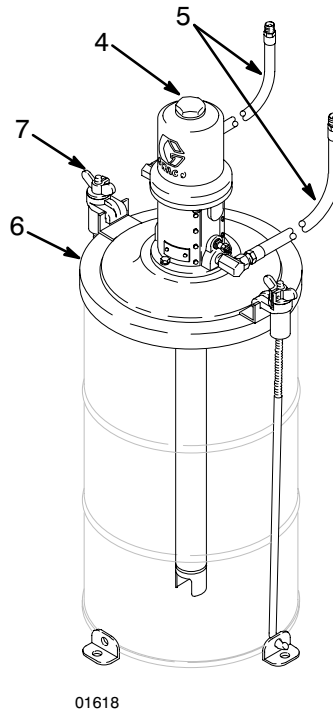
Ref No.	Part No.	Description	Qty.
101	203320	AIR HOSE, 3/8" ID, cpld 3/8-14 npt (mbe), 72" (1.8 m)	1
102	220591	FLUID HOSE, 1/2" ID, cpld 1/2-14 npt(mbe), 72" (1.8 m)	1
103	155494	UNION, 90°, 3/8-14 npt(m) x 3/8 npsm(f) swivel	1
104	155470	UNION, 90°, 1/2-14 npt(m) x 1/2 npsm(f) swivel	1



## Model 225094

### 5:1 Ratio Fire-Ball, 16-Gallon Open Drum

Ref No.	Part No.	Description	Qty.
1	203872	5:1 FIRE-BALL PUMP <i>See manual 306518 for parts.</i>	1
2	222063	HOSE & FITTING KIT <i>See parts list above.</i>	1
3	204574	DRUM COVER	1



01617

## Model 222086

### 5:1 Ratio Fire-Ball, 16-Gallon Open Drum

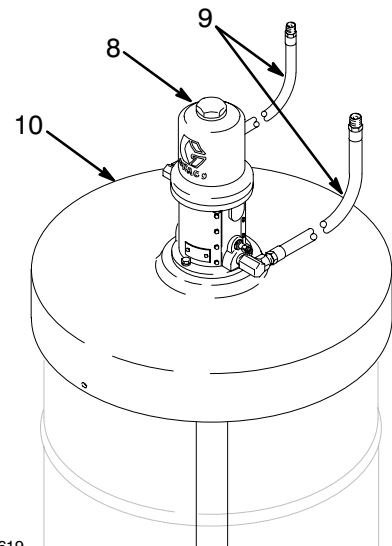
Ref No.	Part No.	Description	Qty.
4	203872	5:1 FIRE-BALL PUMP <i>See manual 306518 for parts.</i>	1
5	222063	HOSE & FITTING KIT <i>See parts list above.</i>	1
6	222060	DRUM COVER	1
7	222061	HOLD-DOWN KIT <i>See manual 306345 for parts.</i>	1

01618

## Model 225642

### 5:1 Ratio Fire-Ball, 55-Gallon Open Drum

Ref No.	Part No.	Description	Qty.
8	203857	5:1 FIRE-BALL PUMP <i>See manual 306518 for parts.</i>	1
9	222063	HOSE & FITTING KIT <i>See parts list above.</i>	1
10	200326	DRUM COVER	1

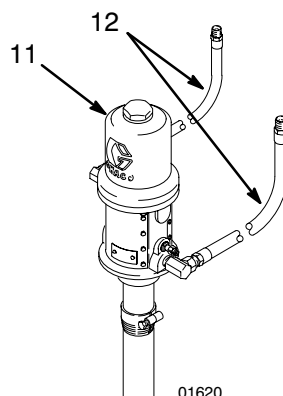


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## Model 225640

### 5:1 Ratio Fire-Ball, 55-Gallon Closed Drum

Ref No.	Part No.	Description	Qty.
11	204254	5:1 FIRE-BALL PUMP <i>See manual 306518 for parts.</i>	1
12	222063	HOSE & FITTING KIT <i>See parts above.</i>	1



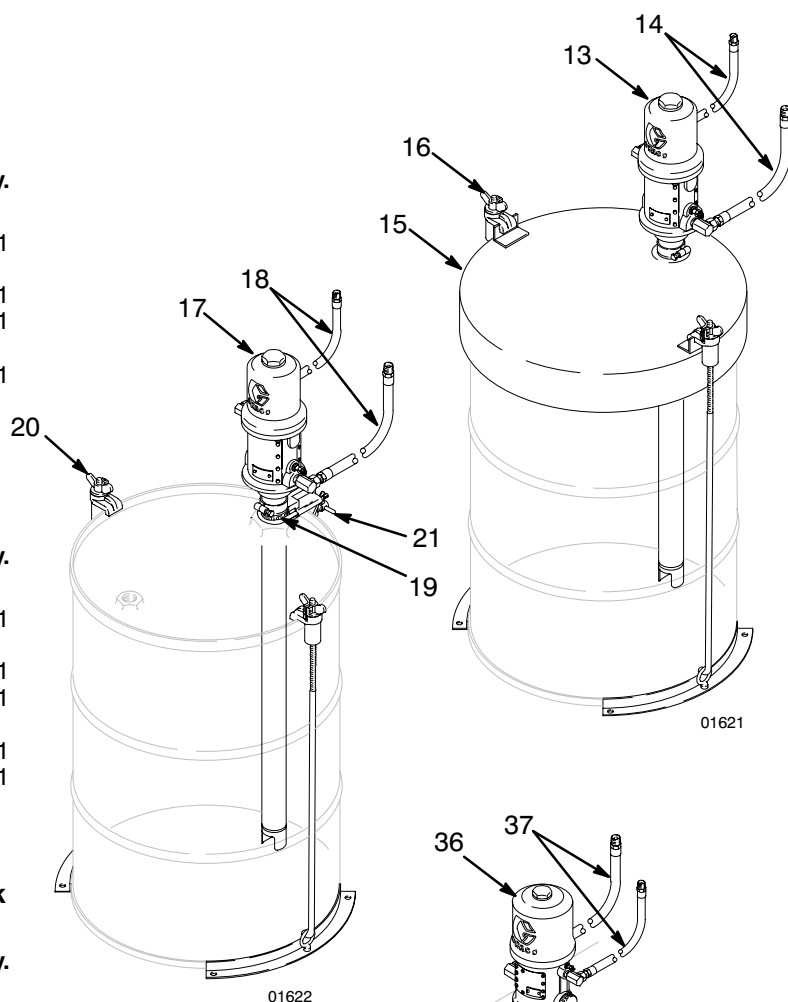
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# Fire-Ball Parts Lists and Drawings

## Model 206655

### 5:1 Ratio Fire-Ball, 55-Gallon Closed Drum

Ref No.	Part No.	Description	Qty.
13	203857	5:1 FIRE-BALL PUMP <i>See manual 306518 for parts.</i>	1
14	222063	HOSE & FITTING KIT <i>See parts on page 12.</i>	1
15	207367	DRUM COVER	1
16	222361	HOLD-DOWN KIT <i>See manual 306345 for parts.</i>	1



## Model 204264

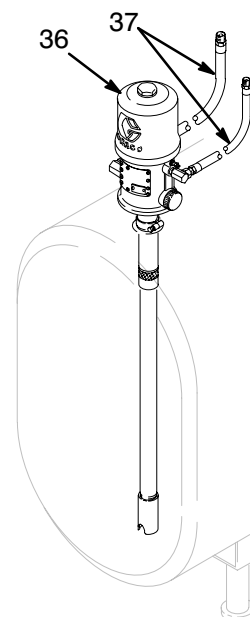
### 5:1 Ratio Fire-Ball, 55-Gallon Closed Drum

Ref No.	Part No.	Description	Qty.
17	204254	5:1 FIRE-BALL PUMP <i>See manual 306518 for parts.</i>	1
12	222063	HOSE & FITTING KIT <i>See parts on page 12.</i>	1
19	204076	BUNG ADAPTER, sealed	1
20	207361	HOLD-DOWN KIT <i>See manual 306345 for parts.</i>	1
21	204095	STURDI-CLAMP	1

## Model 225931

### 5:1 Ratio Fire-Ball, 275-Gallon Obround Tank

Ref No.	Part No.	Description	Qty.
36	222087	5:1 FIRE-BALL PUMP ASSY <i>See manual 306518 for parts.</i>	1
37	222063	HOSE & FITTING KIT <i>See parts on page 12.</i>	1

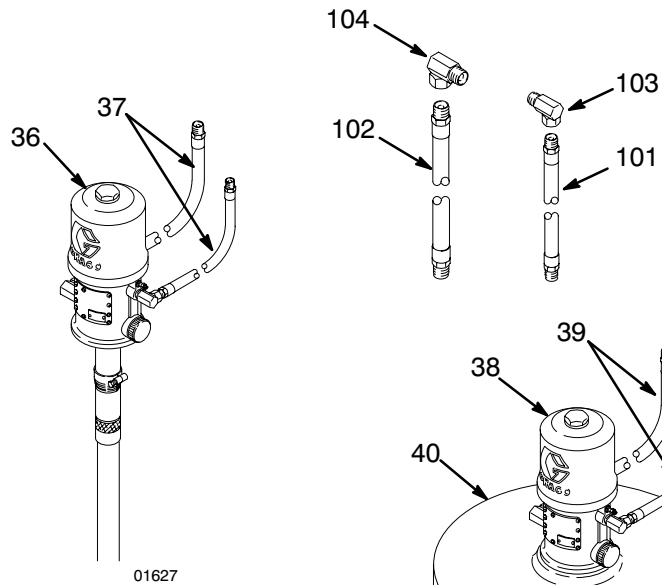


# President Parts Lists and Drawings

## Model 222066

### Hose Kit for President Pumps

Ref No.	Part No.	Description	Qty.
101	205418	AIR HOSE, 1/2 ID, cpld 1/2-14 npt (mbe), 72" (1.8 m)	1
102	109105	FLUID HOSE, 3/4" ID, cpld 3/4-14 npt(mbe), 72" (1.8 m)	1
103	155470	UNION, 90°, 1/2-14 npt(m) x 1/2 npsm(f) swivel	1
104	160327	UNION, 90°, 3/4-14 npt(m) x 3/4 npsm(f) swivel	1



## Model 225786

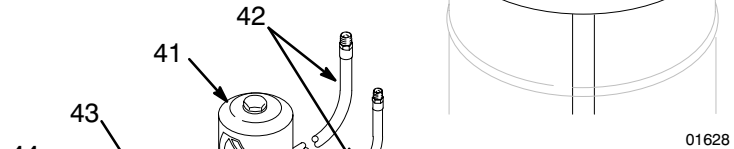
### 10:1 Ratio President, 55-Gallon Closed Bung

Ref No.	Part No.	Description	Qty.
36	222095	10:1 PRESIDENT PUMP <i>See manual 306726 for parts.</i>	1
37	222066	HOSE & FITTING KIT <i>See parts list above.</i>	1

## Model 225782

### 10:1 Ratio President, 55-Gallon Open Drum

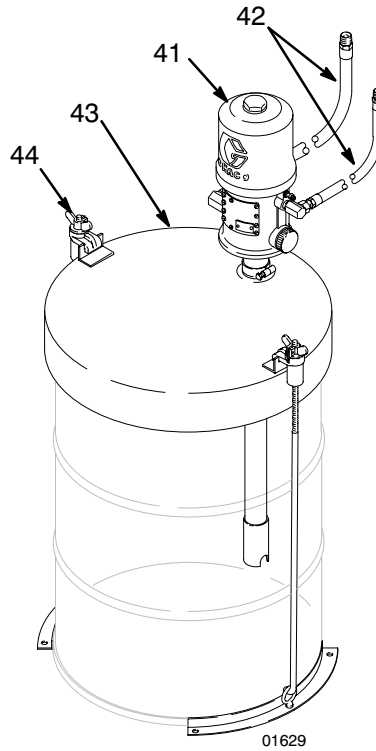
Ref No.	Part No.	Description	Qty.
38	222065	10:1 PRESIDENT PUMP <i>See manual 306726 for parts.</i>	1
39	222066	HOSE & FITTING KIT <i>See parts list above.</i>	1
40	200326	DRUM COVER	1



## Model 206656

### 10:1 Ratio President, 55-Gallon Closed Drum

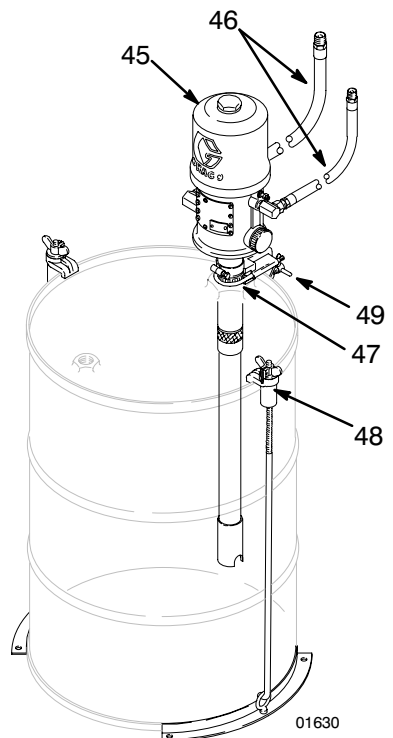
Ref No.	Part No.	Description	Qty.
41	222065	10:1 PRESIDENT PUMP <i>See manual 306736 for parts.</i>	1
42	222066	HOSE & FITTING KIT <i>See parts list above.</i>	1
43	207367	DRUM COVER	1
44	207361	HOLD-DOWN KIT <i>See manual 306345 for parts.</i>	1



## Model 222067

### 10:1 Ratio President, 55-Gallon Closed Bung

Ref No.	Part No.	Description	Qty.
45	222095	10:1 PRESIDENT PUMP <i>See manual 306726 for parts.</i>	1
46	222066	HOSE & FITTING KIT <i>See parts list above.</i>	1
47	224579	BUNG ADAPTER, sealed	1
48	207361	HOLD-DOWN KIT <i>See manual 306345 for parts.</i>	1
49	204095	STURDI-CLAMP	1



[illegible]

# Manual Change Summary

This revision contains the following changes:

- Changed hose part number from 215241 to 109105 on page 14.

## The Graco Warranty and Disclaimers

### WARRANTY

Graco warrants all equipment manufactured by it 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. As purchaser's sole remedy for breach of this warranty, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment proven 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, 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 with Graco equipment of 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 claim. 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.

### DISCLAIMERS AND LIMITATIONS

The terms of this warranty constitute purchaser's sole and exclusive remedy and are in lieu of any other warranties (express or implied), including warranty of merchantability or warranty of fitness for a particular purpose, and of any non-contractual liabilities, including product liabilities, based on negligence or strict liability. Every form of liability for direct, special, or consequential damages or loss is expressly excluded and denied. In no case shall Graco's liability exceed the amount of the purchase price. Any action for breach of warranty must be brought within two (2) years of the date of sale.

### EQUIPMENT NOT COVERED BY GRACO WARRANTY

Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose, with respect to accessories, equipment, materials, or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motor, 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.

## 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**

**FOR TECHNICAL ASSISTANCE**, service repair information, or assistance regarding the application of Graco equipment, call your Graco distributor.

*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.*

**Sales Offices:** Minneapolis, Detroit  
**International Offices:** Belgium, Korea, Hong Kong, Japan

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