

## Fire-Ball<sup>®</sup> 225, 300, and 425 Oil Pumps

309868B

***For non-corrosive and non-abrasive oils  
and lubricants only.***



### **Important Safety Instructions**

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

### **Mini Fire-Ball 225, 3:1 Parts 246775 and 248097**

*540 psi (3.7 MPa, 37 bar) Maximum Working Pressure*

*180 psi (1.24 MPa, 12.4 bar) Maximum Air Input Pressure*

### **Fire-Ball 300, 5:1**

### **Parts 203876, 203872, 203857, 204254, and 222087**

*900 psi (6.2 MPa, 62 bar) Maximum Working Pressure*

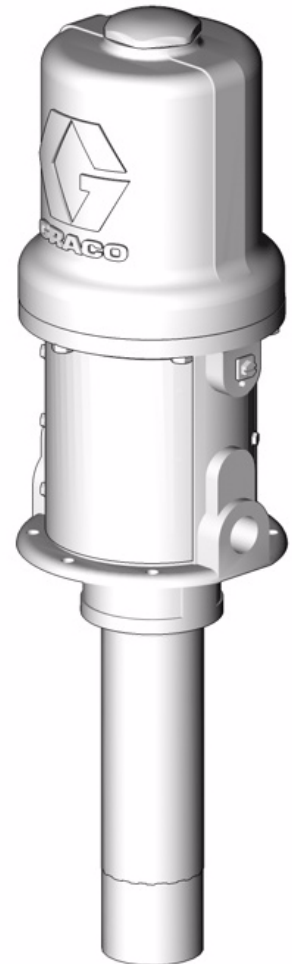
*180 psi (1.24 MPa, 12.4 bar) Maximum Air Input Pressure*

### **Fire-Ball 425, 10:1**

### **Parts 205626, 222065, and 222095**

*1800 psi (12.4 MPa, 124 bar) Maximum Working Pressure*

*180 psi (1.24 MPa, 12.4 bar) Maximum Air Input Pressure*



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## Additional Reference Manuals

This manual covers the installation and operation of Graco Fire-Ball pumps. For information on service and repair of these pumps, please see the following manual.

- Fire-Ball Pump Service, Troubleshooting, and Repair 309869.



You should also read the instruction manuals for all components of your system.

# Packages

Model/ Package No.	Pump	Description	Hose/ Fitting Kit	Cover/Bung Adapter	Dispense Kit	Air Regulator
<b>Fire-Ball 225 Packages</b>						
248230	246775	Universal	222062			
246903	248097	16 gallon (60 liter), gear lube		204574	237075	224512
246904	248097	16 gallon (60 liter), drum cover	222063	204574		224512
246906	248097	55 gallon (208 liter), drum cover	222063	200326		224512
246907	248097	55/275 gallon (208/1041 liter), bung mount	222063	222308		
<b>Fire-Ball 300 Packages</b>						
225852	203876	Universal	222062			
225728	203872	16 gallon (60 liter), gear lube		204574	237075	224512
225094	203872	16 gallon (60 liter), drum cover	222063	204574		
225642	203857	55 gallon (208 liter), drum cover	222063	200326		
225640	204254	55 gallon (208 liter), bung mount	222063	222308		
225931	222087	275 gallon (1041 liter) obround tank	222063	222308		
222086	203872	16 gallon (60 liter), drum cover, truck mount	222063	222060		
206655	203857	55 gallon (208 liter) drum cover, truck mount	222063	207367		
204264	204254	55 gallon (208 liter) bung adapter, truck mount	222063	204076		
<b>Fire-Ball 425 Packages</b>						
225853	205626	Universal	222068			
225782	222065	55 gallon drum (208 liter), drum cover	222066	200326		
225786	222095	55 gallon (208 liter), bung adapter	222066	222308		
206656	222065	55 gallon (208 liter) drum cover, truck mount	222066	207367		
222067	222095	55 gallon (208 liter) bung adapter, truck mount	222066	224579		

# Manual Conventions


## Warning




 <b>WARNING</b>

<p>A warning alerts you to possible serious injury or death if you do not follow instructions.</p> <p>Symbols, such as fire and explosion (shown), alert you to a specific hazard and direct you to read the indicated hazard warnings beginning on page 4.</p>

## Caution

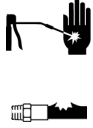



<b>CAUTION</b>
<p>A caution alerts you to possible equipment damage or destruction if you do not follow instructions.</p>

## Note

 A note indicates additional helpful information.

 <b>WARNINGS</b>	
	<p><b>EQUIPMENT MISUSE HAZARD</b></p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> <li>• Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See <b>Technical Data</b> in all equipment manuals.</li> <li>• Use fluids and solvents that are compatible with equipment wetted parts. See <b>Technical Data</b> in all equipment manuals. Read fluid and solvent manufacturer’s warnings.</li> <li>• Check equipment daily. Repair or replace worn or damaged parts immediately.</li> <li>• Do not alter or modify equipment.</li> <li>• Use equipment only for its intended purpose. Call your Graco distributor for information.</li> <li>• For professional use only.</li> <li>• Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.</li> <li>• Do not use hoses to pull equipment.</li> <li>• Comply with all applicable safety regulations.</li> </ul>
	<p><b>PRESSURIZED EQUIPMENT HAZARD</b></p> <p>Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> <li>• Follow <b>Pressure Relief Procedure</b> in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.</li> <li>• Tighten all fluid connections before operating the equipment.</li> <li>• Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.</li> </ul>

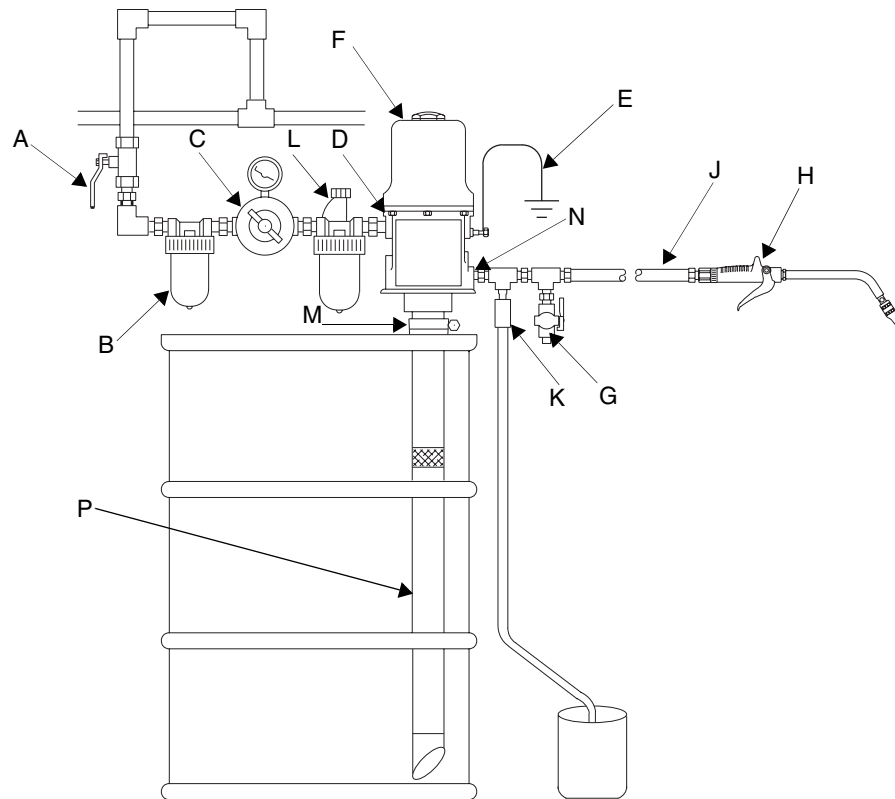

**WARNING**

	<p><b>SKIN INJECTION HAZARD</b></p> <p>High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. <b>Get immediate surgical treatment.</b></p> <ul style="list-style-type: none"> <li>• Do not point gun at anyone or at any part of the body.</li> <li>• Do not put your hand over the spray tip.</li> <li>• Do not stop or deflect leaks with your hand, body, glove, or rag.</li> <li>• Do not spray without tip guard and trigger guard installed.</li> <li>• Engage trigger lock when not spraying.</li> <li>• Follow <b>Pressure Relief Procedure</b> in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.</li> </ul>
	<p><b>MOVING PARTS HAZARD</b></p> <p>Moving parts can pinch or amputate fingers and other body parts.</p> <ul style="list-style-type: none"> <li>• Keep clear of moving parts.</li> <li>• Do not operate equipment with protective guards or covers removed.</li> <li>• Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the <b>Pressure Relief Procedure</b> in this manual. Disconnect power or air supply.</li> </ul>
	<p><b>TOXIC FLUID OR FUMES HAZARD</b></p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"> <li>• Read MSDS's to know the specific hazards of the fluids you are using.</li> <li>• Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.</li> </ul>
	<p><b>FIRE AND EXPLOSION HAZARD</b></p> <p>Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> <li>• Use equipment only in well ventilated area.</li> <li>• Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).</li> <li>• Keep work area free of debris, including solvent, rags and gasoline.</li> <li>• Do not plug or unplug power cords or turn lights on or off when flammable fumes are present.</li> <li>• Ground equipment and conductive objects. See <b>Grounding</b> instructions.</li> <li>• Use only grounded hoses.</li> <li>• Hold gun firmly to side of grounded pail when triggering into pail.</li> <li>• If there is static sparking or you feel a shock, <b>stop operation immediately</b>. Do not use equipment until you identify and correct the problem.</li> </ul>

# Installation

The typical stationary installation shown in is only a guide for selecting and installing a pump; it is not an actual system design. Contact your Graco distributor for assistance in designing a system to meet your needs.

Letters used to identify components in FIG. 1 are referred to in the package installation drawings, FIG. 3 through FIG. 7. Additional letter references are used in installation drawings as necessary.



Key

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| <b>A</b> Bleed-type master air valve | <b>H</b> Dispensing valve            |
| <b>B</b> Air line filter             | <b>J</b> Fluid hose                  |
| <b>C</b> Air regulator and gauge     | <b>K</b> Thermal relief kit (235998) |
| <b>D</b> Air inlet                   | <b>L</b> Air line lubricator         |
| <b>E</b> Ground wire                 | <b>M</b> Bung adapter                |
| <b>F</b> Pump                        | <b>N</b> Fluid outlet                |
| <b>G</b> Drain valve                 | <b>P</b> Extension tube              |

FIG. 1

## Mounting the Pump

### WARNING

Mount the pump securely so that it cannot move during operation. Failure to do so could result in personal injury or equipment damage.

- Select a location that allows the operator easy access to the pump and air controls, sufficient room to change supply containers, and a secure mounting platform.
- If you are mounting the pump directly on the supply container, be sure it is positioned so the pump's intake tube is no more than **1 in. (25 mm)** from the bottom of the container. Mount the pump to the cover or other suitable mounting device.



To prevent damage to the pump, remove sediment from the bottom of the container before installing a pump in an existing container.

## Grounding

Proper grounding is essential to maintaining a safe system.

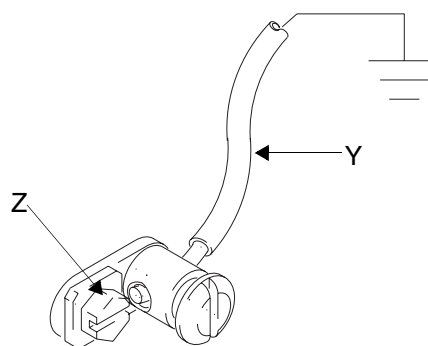
To reduce the risk of static sparking, ground the pump. Check local electrical codes for detailed grounding instructions for your area and equipment type. Be sure the following equipment is properly grounded:

- *Pump:* See FIG. 2
- *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 maintain grounding continuity when flushing or relieving pressure, always hold a metal part of the valve firmly to the side of a grounded metal pail, then trigger the valve.

To ground the pump, remove the ground screw (Z) and insert through the eye of the ring terminal at end of ground wire, (Y). Fasten the ground screw back onto the pump and tighten securely. Connect the other end of the ground wire to a true earth ground. See FIG. 2. To order a ground wire and clamp order Part No. 222011.



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FIG. 2

**Universal Pump**  
**Fire-Ball 225 Model 248230**  
**Fire-Ball 300 Model 225852**  
**Fire-Ball 425 Model 225853**

1. Apply thread sealant to the male threads of the 3/8 npt swivel union (2d). Screw the union into the pump air inlet (D).
2. Apply thread sealant to the male threads of the 1/2 npt swivel union (2b). Screw the union into the pump fluid outlet (N).
3. Connect the 1/2 npt(mbe) fluid hose (2a) to the swivel union (2b).
4. Connect the 3/8 npt(mbe) air hose (2c) to the swivel union (2d).

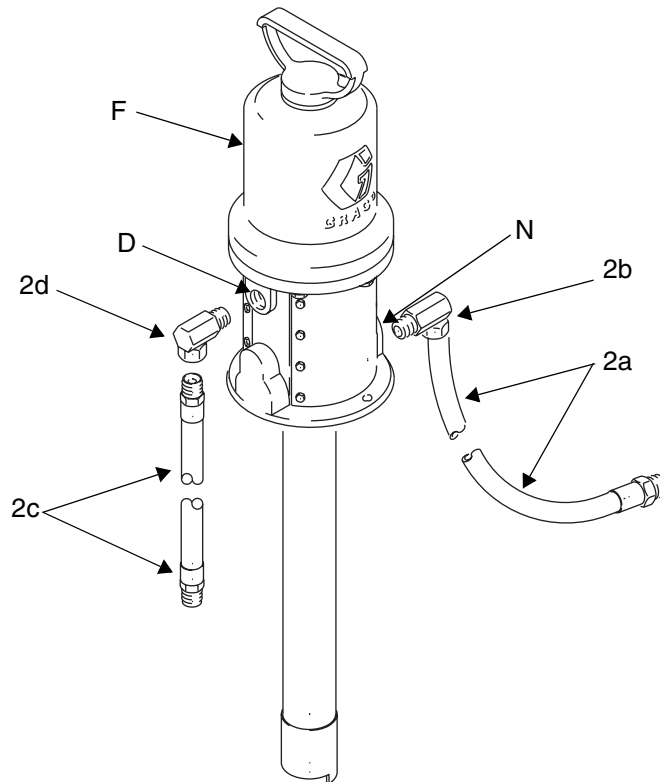


FIG. 3



**16-Gallon (60 Liter) Gear Lube Dispenser  
Fire-Ball 225 Model 246903  
Fire-Ball 300 Model 225728**

1. Assemble the base (5) as shown in FIG. 4. Place an opened 16-gallon (60 liter) drum on the base and secure it with the hold-down clamps. Tighten the hold-down clamp bolts
2. For 246903, cut the extension tube (P) at a 45° angle to a length appropriate for the size of the drum. When installed, the bottom of the angle should be about 1" (25 mm) from the bottom of the drum. The down tube for 225728 is sized for the container.
3. Set the cover (4) on the drum and secure the thumbscrews (Q). Install the pump (F) on the cover (4) with the screws (R), washers and nuts (S) provided
4. Connect the hose (2a) to the pump fluid outlet (N).

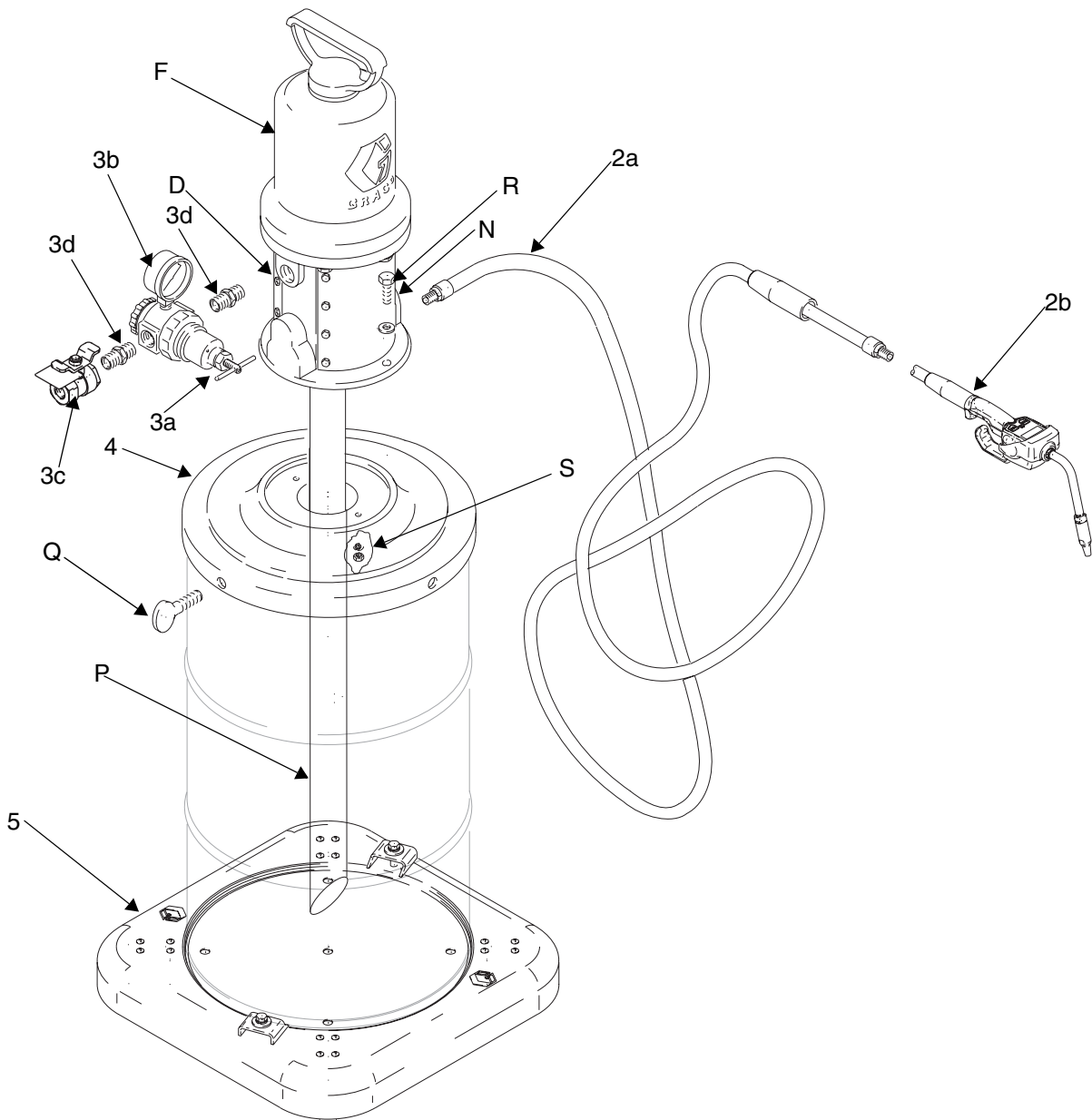


FIG. 4

**16-Gallon (60 Liter) Drum Cover Pump**  
**Fire-Ball 225 Model 246904**  
**Fire-Ball 300 Model 225094**

1. Set the cover (4) on a 16-gallon (60 liter) drum and secure with the thumbscrews (Q). See FIG. 5.
2. For 246904 cut the extension tube (P) at a 45° angle to a length appropriate for the size of the drum. When installed, the bottom of the angle should be about 1" (25 mm) from the bottom of the drum. The down tube for 225094 is sized for the container.
3. Install the pump (F) on the cover (4) with the screws (R), washers and nuts (S) supplied.
4. Assemble the air regulator kit (items 3a-3d) to the pump air inlet (D) as shown. Use thread sealant and tighten all parts securely.
5. Apply thread sealant to the male threads of the 3/8 npt swivel union (2d). Screw the union into the bleed-type master air valve (3c).
6. Apply thread sealant to the male threads of the 1/2 npt swivel union (2b). Screw the union into the pump fluid outlet (N).
7. Connect the 1/2 npt(mbe) fluid hose (2a) to the swivel union (2b).
8. Connect the 3/8 npt(mbe) air hose (2c) to the swivel union (2d).

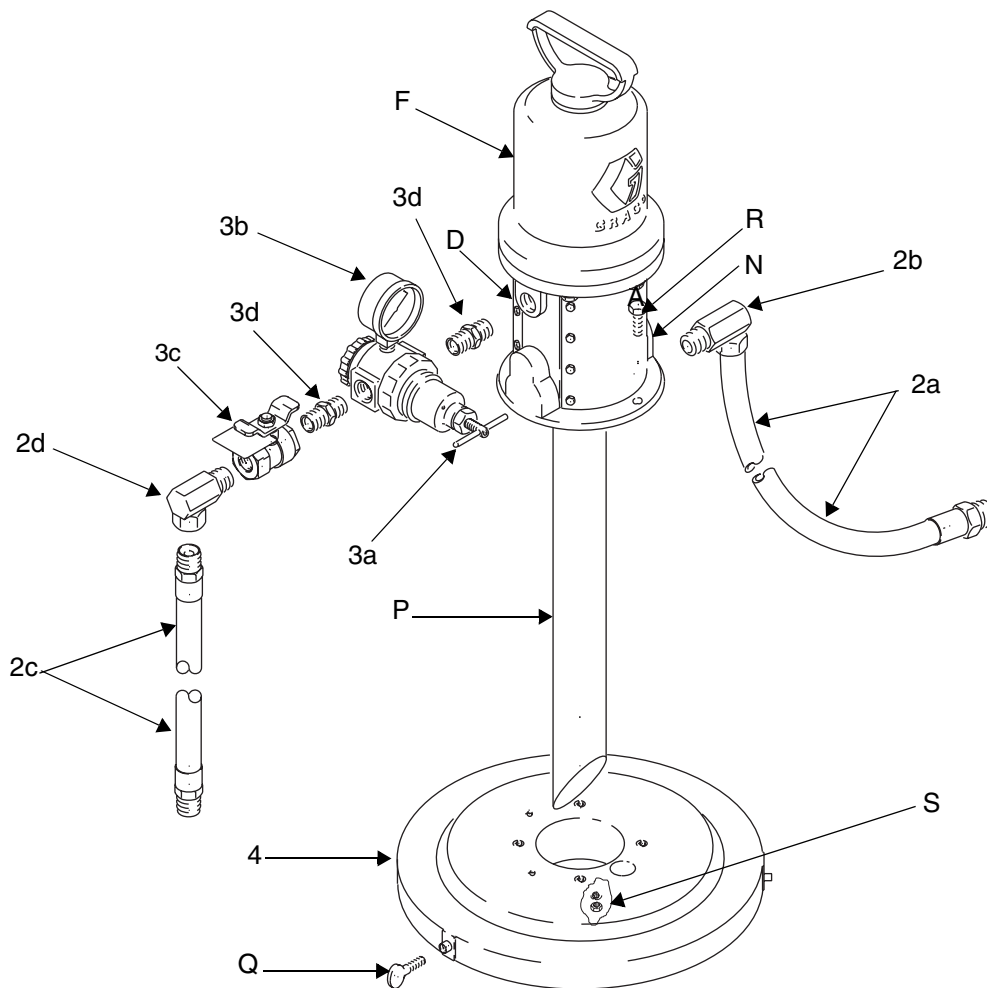


FIG. 5

**55-Gallon (208 Liter) Drum Cover Pump**  
**Fire-Ball 225 Model 246906**  
**Fire-Ball 300 Model 225642**  
**Fire-Ball 425 Model 225782**

1. For 246906 cut the extension tube (P) at a 45° angle to a length appropriate for the size of the drum. When installed, the bottom of the angle should be about 1" (25 mm) from the bottom of the drum. For 225642 and 225782 the down tube is sized for the container.
2. Set the cover (4) on a 55-gallon (208 liter) drum. Install the pump (F) on the cover with the screws (R) supplied. See FIG. 6
3. Assemble the air regulator kit (items 3a-3d) to the pump air inlet (D) as shown. Use thread sealant and tighten all parts securely.
4. Apply thread sealant to the male threads of the 3/8 npt swivel union (2d). Screw the union into the bleed-type master air valve (3c).
5. Apply thread sealant to the male threads of the 1/2 npt swivel union (2b). Screw the union into the pump fluid outlet (N).
6. Connect the 1/2 npt(mbe) fluid hose (2a) to the swivel union (2b).
7. Connect the 3/8 npt(mbe) air hose (2c) to the swivel union (2d).

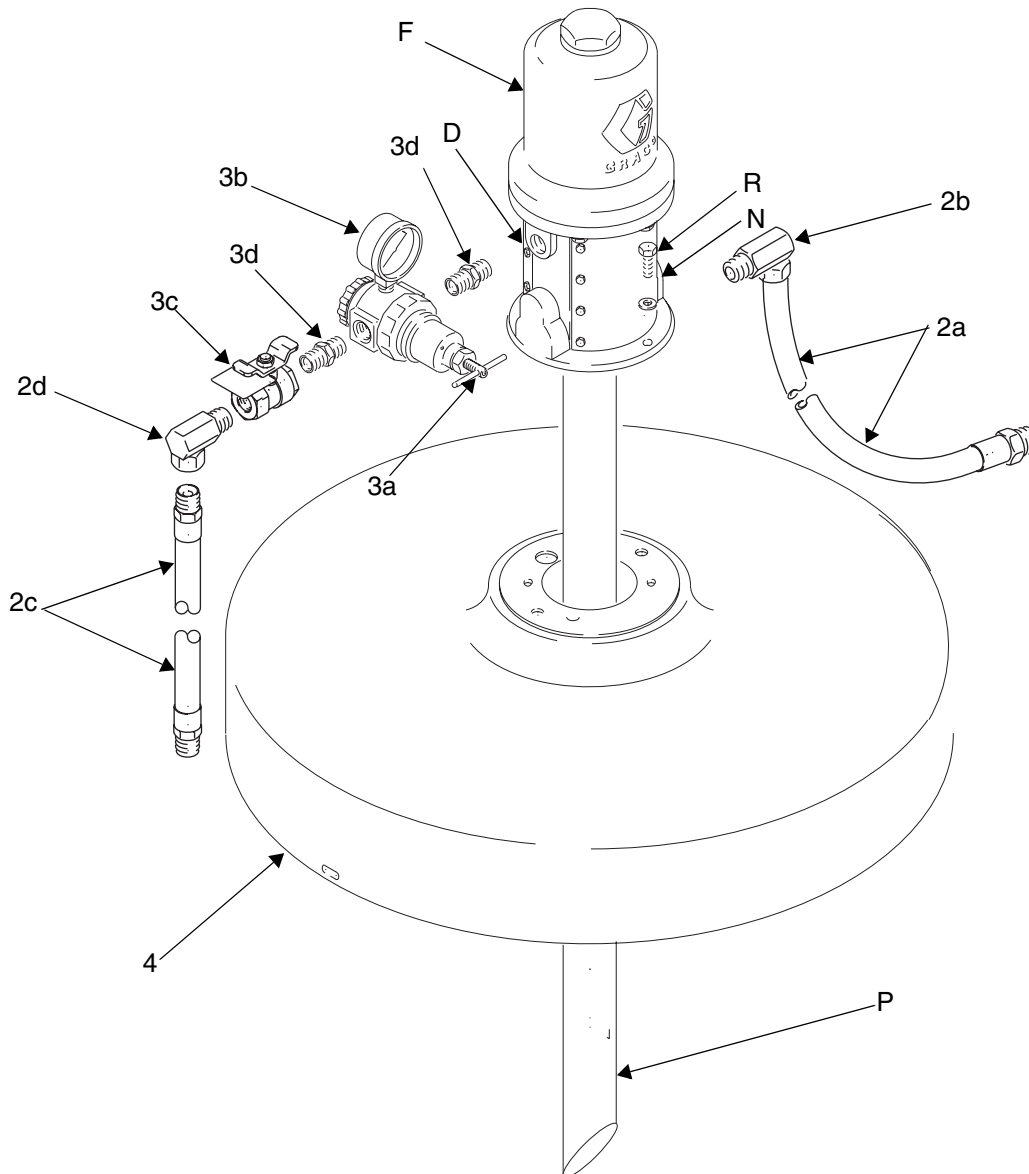


FIG. 6

**55-/275-Gallon (208 Liter) Drum,  
Bung-Mount Pump  
Fire-Ball 225 Model 246907  
Fire-Ball 300 Models 225640 and 225931**

1. Screw the bung adapter (M) into the bung hole of the drum. See FIG. 7.
2. For 246907 cut the extension tube (P) at a 45° angle to a length appropriate for the size of the drum. When installed, the bottom of the angle should be about 1" (25 mm) from the bottom of the drum. For 224640 and 225931 the down tube is sized for the container.

3. Tighten the bung adapter screw (T) to hold the pump in position.
4. Apply thread sealant to the male threads of the 3/8 npt swivel union (2d). Screw the union into the pump air inlet (D).
5. Apply thread sealant to the male threads of the 1/2 npt swivel union (2b). Screw the union into the pump fluid outlet (N).
6. Connect the 1/2 npt(mbe) fluid hose (2a) to the swivel union (2b).
7. Connect the 3/8 npt(mbe) air hose (2c) to the swivel union (2d).

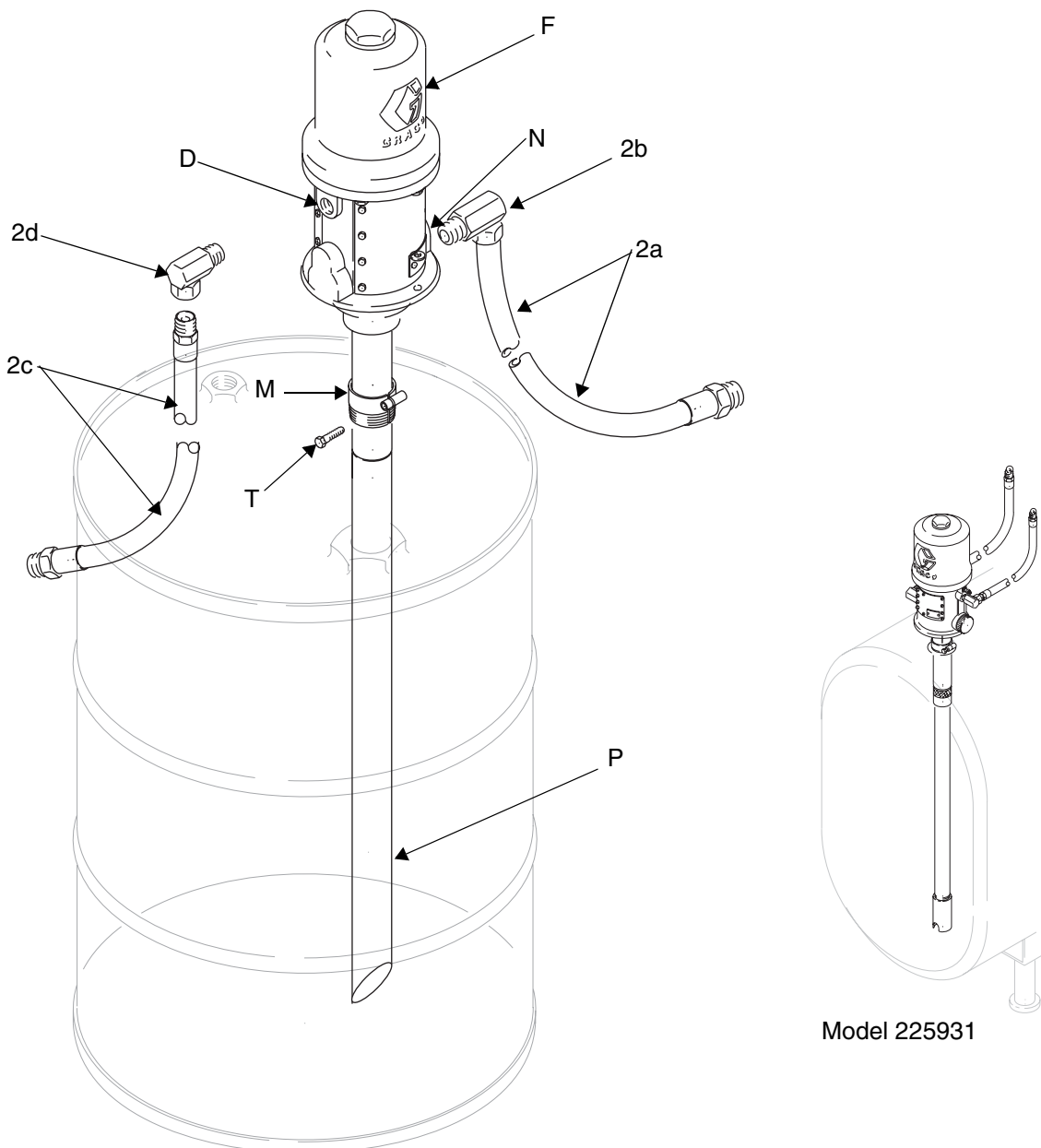


FIG. 7

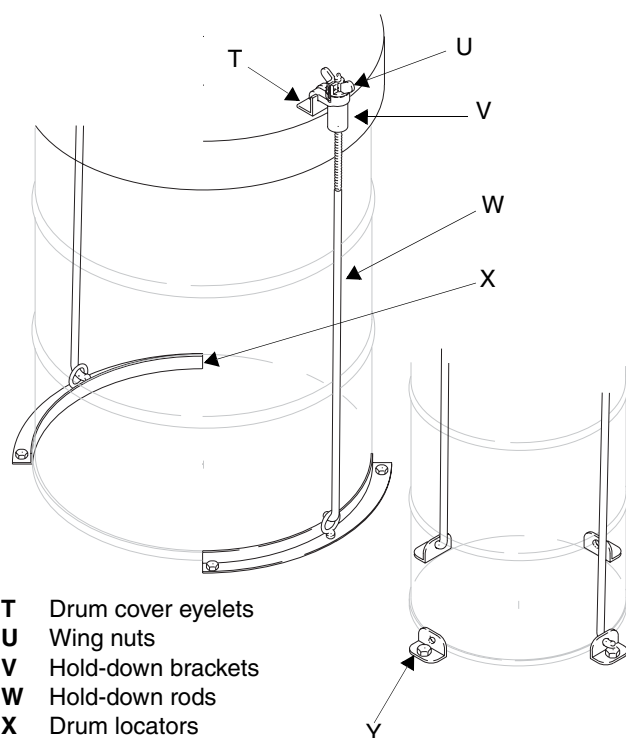
## Mobil Mounting

### Mobil Mounting Layout

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

### Drum Mounting

1. Place the drum in the desired location.
2. Place the hold-down lugs (Y) or drum locators (X) around the drum base and bolt directly to the truck bet or mounting platform. See FIG. 8.



- T Drum cover eyelets
- U Wing nuts
- V Hold-down brackets
- W Hold-down rods
- X Drum locators
- Y Hold-down rod lugs

FIG. 8

### Open Drum, Cover-Mounted Pumps

1. Remove the original drum cover.
2. Mount the new drum cover and fasten in place.
3. Guide the pump extension tube through the mounting gasket.
4. Align the drum cover eyelets (T) with the hold-down rods (W), install the cover brackets (V) and wing nuts (U) and tighten securely. See FIG. 8.

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

1. Insert the pump extension tube through the gasket (Z) and drum cover (AA). Fasten the Fire-Ball 300 from the top and the Fire-Ball 425 from the bottom. See FIG. 9.
2. Slide the rubber grommet (BB), tapered end down, onto the extension tube and push it up against the pump base. See FIG. 9.
3. Guide the pump extension tube through the drum bung hole (CC) and place the cover on the drum. See FIG. 9.
4. Align the drum cover eyelets (T) with the hold-down rods (W), install the hold-down brackets (V) and wing nuts (U) and tighten securely. See FIG. 8.

- Z Gasket
- AA Drum cover
- BB Grommet
- CC Bung Hole

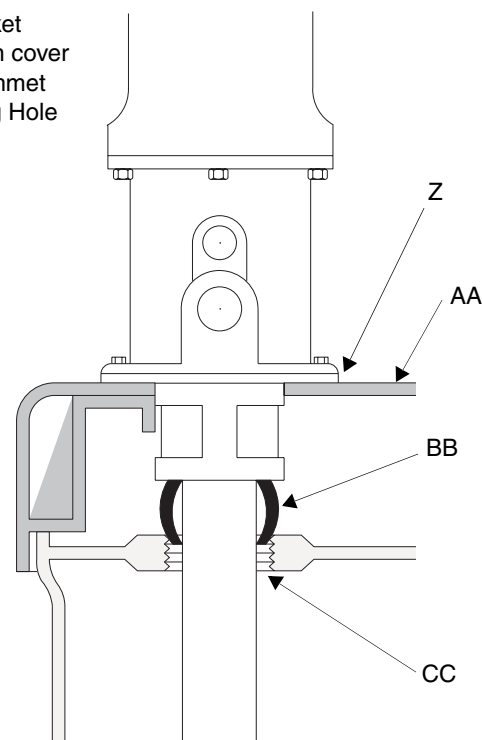
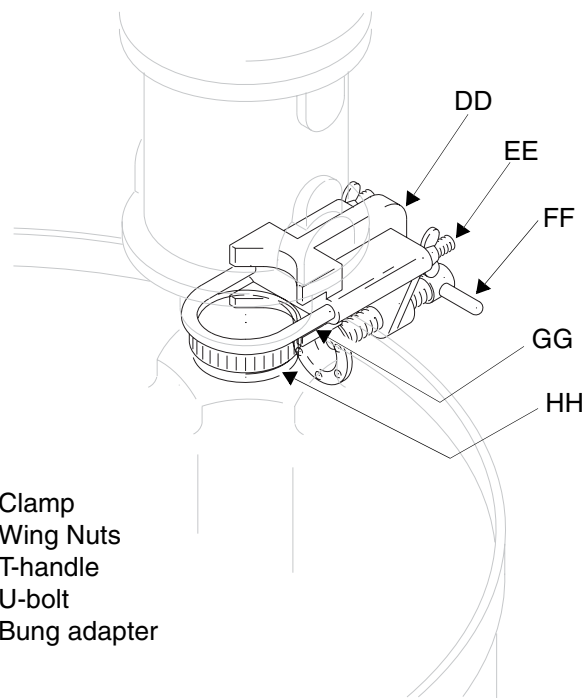


FIG. 9

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

1. Remove the adjustable bung adapter from the pump extension tube.
2. Screw the bung adapter (HH) into the bung hole.
3. Loosen the wing nuts (EE) and slide the clamp (DD) onto the pump extension tube, up to the base. See FIG. 10.
4. Holding the clamp onto the pump, insert the pump extension tube through the bung adapter, and lower the pump until the clamp rests on the edge of the drum. See FIG. 10.
5. Install the sturdi-clamp so its upper jaw fits against the pump base projection, its u-bolt (GG) fits around the extension tube, and its lower jaw fits against the bung adapter. Tighten the wing nuts (EE). See FIG. 10.
6. Tighten the T-handle (FF) firmly to the side of the drum.



**DD** Clamp  
**EE** Wing Nuts  
**FF** T-handle  
**GG** U-bolt  
**HH** Bung adapter

**FIG. 10**

# Operation

See FIG. 1 to identify references shown in parentheses, i.e.,(A).

WARNING

This equipment stays pressurized until pressure is manually relieved. Read PRESURIZED EQUIPMENT HAZARD warnings on page 4.

Maximum working pressure of all components in the system may not be the same. To reduce risk of over-pressurizing any component, be sure you know the maximum working pressure of each component. Never exceed the maximum working pressure of the lowest rated component in the system. Overpressurizing any component can result in rupture, fire, explosion, property damage, and serious injury.

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:

3 (:1) ratio x 100 psi air = 300 psi fluid output

Limit the air pressure to the pump so that no air line or fluid line component is overpressurized.

## Relieving Pressure

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

## Starting and Adjusting the Pump

WARNING

Read the MOVING PARTS HAZARD and TOXIC FLUID OR FUMES warnings on page 5

1. With the air regulator (C) closed, open the bleed-type master air valve (A).
2. Open the dispensing valve (H) into a grounded metal waste container, making firm metal-to-metal contact between the container and valve.

3. Open the pump air regulator (C) slowly, just until the pump is running. When the pump is primed and all air has been pushed out of the lines, close the dispensing valve (H).

**NOTE:** When the pump is primed, and with sufficient air supplied, the pump starts when the dispensing valve (H) is opened, and shuts off when it is closed.

4. Adjust the air regulator (C) until you get sufficient flow from dispensing valve (H). Always run the pump at the lowest pressure necessary to get the desired results. Do not exceed the maximum working pressure of any component in the system.

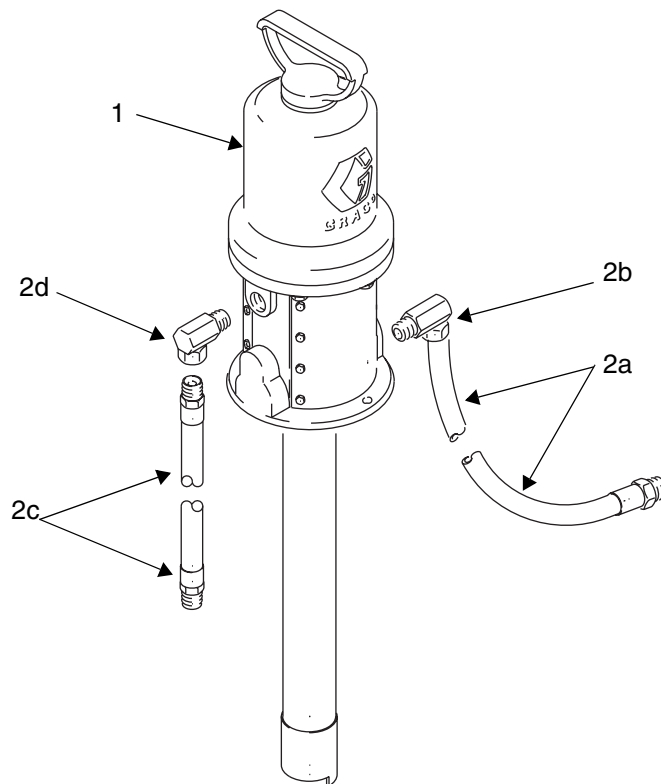
### CAUTION

Never allow the pump to run dry of the fluid being pumped. A dry pump will quickly accelerate to a high speed, possibly causing pump damage. It may also get very hot.

5. 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 lines.
6. Read and follow the instructions supplied with each component in your system.
7. If the pump will be unattended for any period of time, if there is an air supply interruption, or at the end of the work shift, shut off the system and always **relieve the pressure**.

# Parts

**Universal Pump Package**  
**Fire-Ball 225 Model 248230**  
**Fire-Ball 300 Model 225852**  
**Fire-Ball 425 Model 225853**



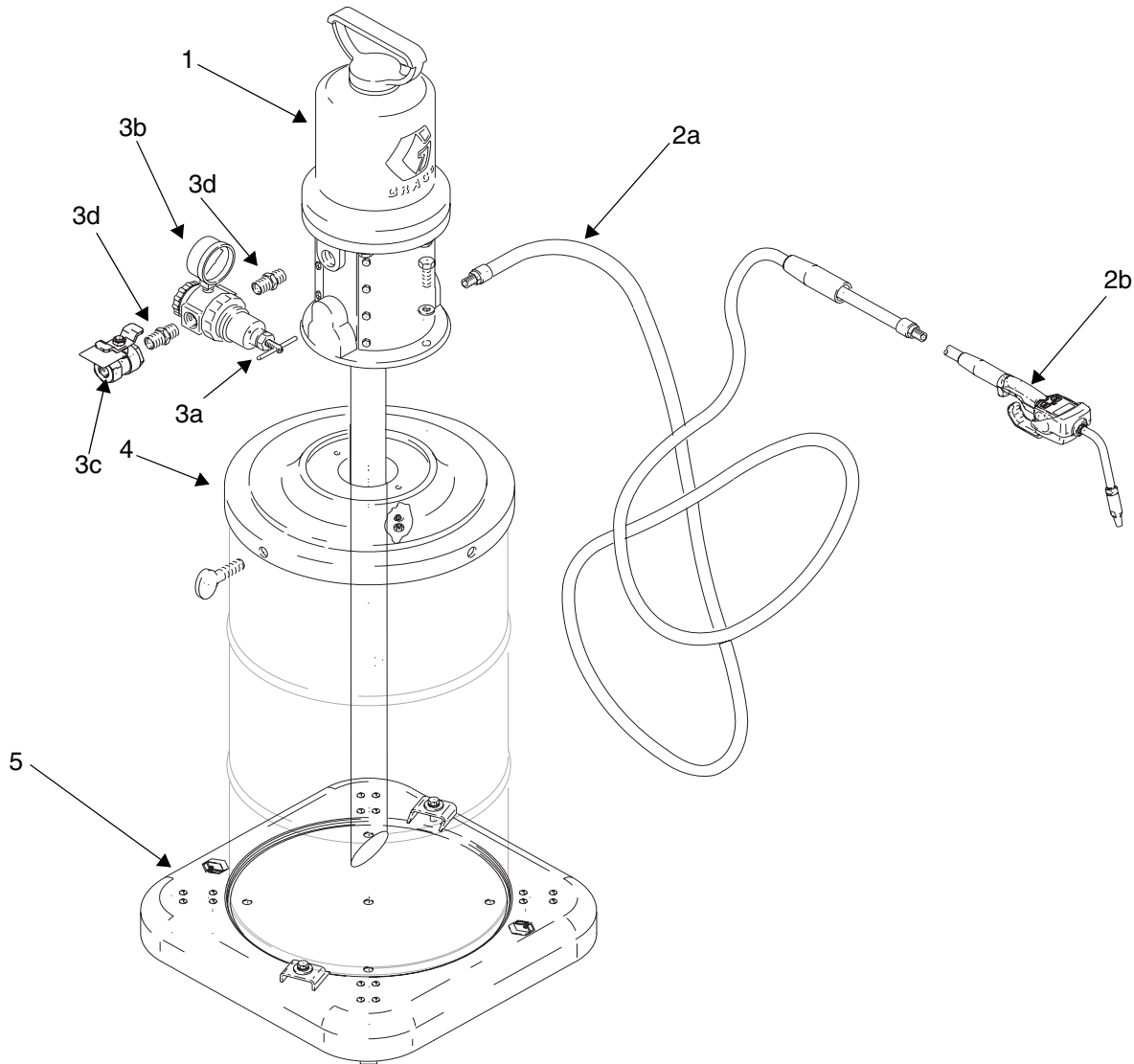


## Parts List

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	246775	PUMP, Mini-Fire-Ball 225 3:1, universal; (for 248230, see 309869 for parts)	1	2a	220598	•FLUID HOSE, 1/2' ID, cpld 1/2-14 npt(m), 18 in. (457 mm) (for 222062)	1
	203876	Pump, Fire-Ball 300 5:1, universal; (for 225852, see 309869 for parts)	1		109108	•FLUID HOSE, (for 222068)	1
	205626	Pump, Fire-Ball 425 10:1, universal; (for 225853, see 309869 for parts)	1	2b	155470	•UNION, swivel, 90°; 1/2 npt(m) x 1/2 npsm(f) (for 222062)	1
2	222062	HOSE AND FITTING KIT; (for 248230 and 225852) Includes items 2a-2d	1		160327	•UNION, 90°, 3/4-14 (for 222068)	1
	222068	HOSE AND FITTING KIT; (for 225853) Includes items 2a-2d	1	2c	204560	•AIR HOSE, 3/8 in. ID, cpld 3/8-18 npt(m), 18 in. (457 mm) (for 222062)	1
					218093	•AIR HOSE, (for 222068)	1
				2d	155494	•UNION, swivel, 90°; 3/8 npt(m) x 3/8 npsm(f) (for 222062)	1
					155470	•UNION, swivel, 90°; 1/2 npt(m) x 1/2 npsm(f) (for 222068)	1

# 16-gallon (60 Liter) Gear Lube Dispenser

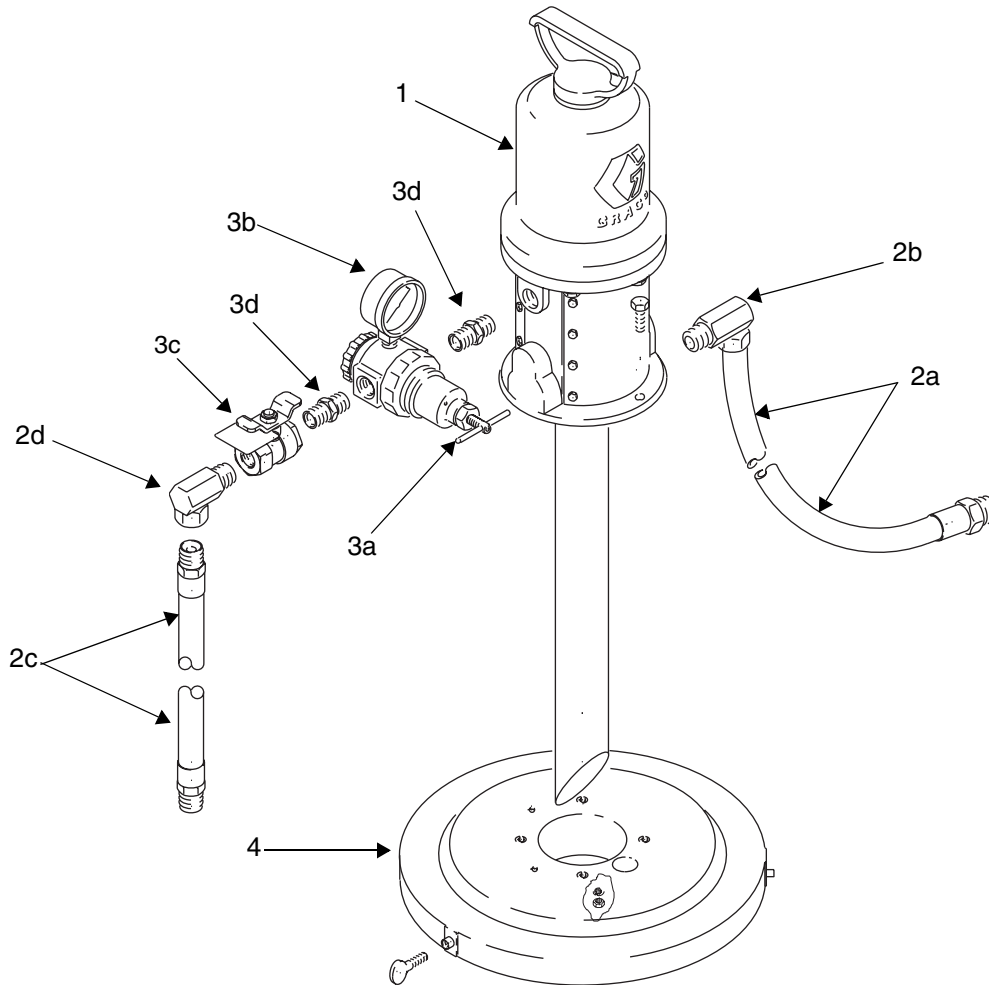
Fire-Ball 225 Model 246903  
Fire-Ball 300 Model 225728



## Parts List

Ref. No.	Part No.	Description	Qty.
1	248097	PUMP, Mini-Fire-Ball 225 3:1, multi-length; (for 246903, see 309869 for parts)	1
	203872	PUMP, Fire-Ball 300 5:1; (for 225728, see 309869 for parts)	
2	237075	DISPENSE KIT; Included items 2a and 2b See manual 307884	1
2a	220591	• HOSE, coupled, 6 ft. (1/2 in. npt (mbe))	1
2b	238463	• VALVE, dispense	1
3	224512	AIR REGULATOR KIT Includes items 3a-3d	1
3a	110234	• REGULATOR, air; 3/8 npt(f) 0-250 psi 0-1.7 MPa, 0-14.4 bar) range See manual 308167	1
3b	100960	• GAUGE, air pressure	1
3c	110224	• VALVE, air, bleed-type; 3/8 npt(f)	1
3d	156849	• NIPPLE, 3/8 npt	2
4	204574	COVER, drum; See manual 306345 for parts	1
5	203622	PORTABLE BASE; See manual 308668 for parts	1

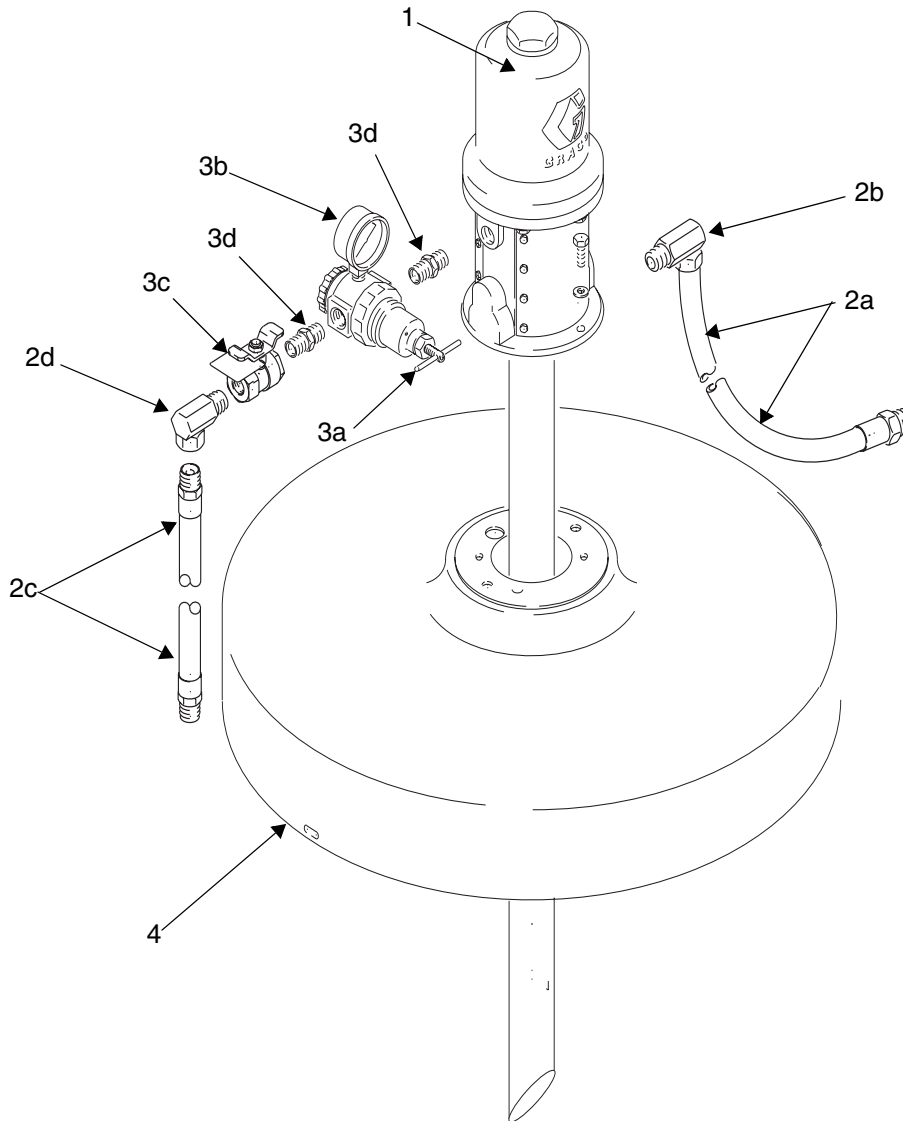
**16-gallon (60 Liter) Drum Cover Pump**  
**Fire-Ball 225 Model 246904**  
**Fire-Ball 300 Model 225094**



## Parts List

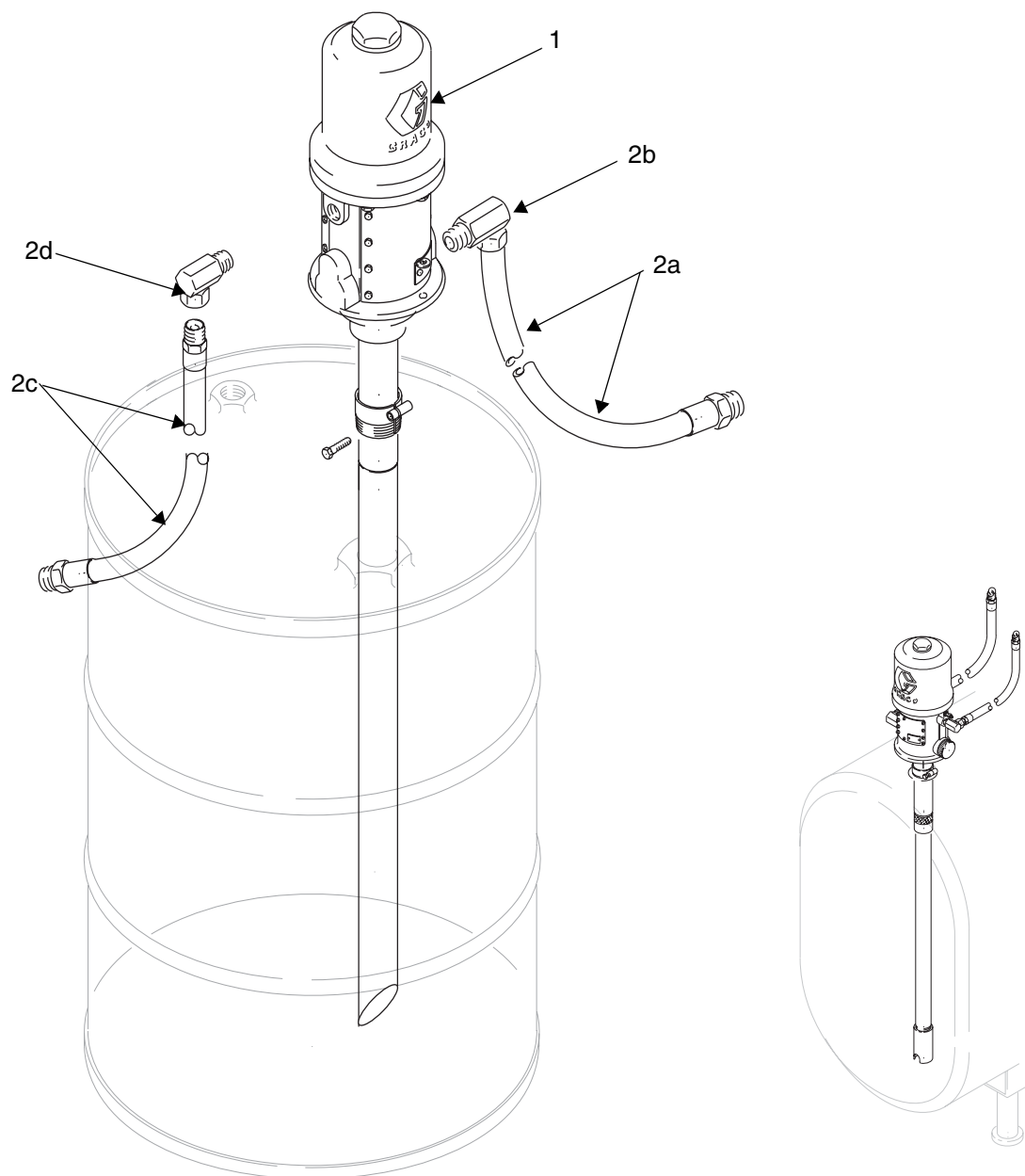
Ref. No.	Part No.	Description	Qty.
1	248097	PUMP, Mini-Fire-Ball 225 3:1, multi-length; (for 246904, see 309869 for parts)	1
	203872	PUMP, Fire-Ball 300 5:1; (for 225094, see 309869 for parts)	1
2	222063	HOSE AND FITTING KIT Includes items 2a-2d	1
2a	220591	• HOSE, fluid; nitrile; 1/2 in. ID; 1/2 npt(mbe); 6 ft (1.83 m)	1
2b	155470	• UNION, swivel, 90°; 1/2 npt(m) x 1/2 npsm(f)1	1
2c	203320	• HOSE, air; buna-N; 3/8 in. ID; 3/8 npt(mbe); 6 ft (1.83 m)	1
2d	155494	• UNION, swivel, 90°; 3/8 npt(m) x 3/8 npsm)	1
3	224512	AIR REGULATOR KIT Includes items 3a-3d	1
3a	110234	• REGULATOR, air; 3/8 npt(f) 0-250 psi 0-1.7 MPa, 0-14.4 bar) range See manual 308167	1
3b	100960	• GAUGE, air pressure	1
3c	110224	• VALVE, air, bleed-type; 3/8 npt(f)	1
3d	156849	• NIPPLE, 3/8 npt	2
4	204574	COVER, drum; See 306345 for parts	1

**55-gallon (208 Liter) Drum Cover Pump**  
**Fire-Ball 225 Model 246906**  
**Fire-Ball 300 Model 225642**  
**Fire-Ball 425 Model 225782**



Ref. No.	Part No.	Description	Qty.
1	248097	PUMP, Mini-Fire-Ball 225 3:1, multi-length; (for 246906, see 309869 for parts)	1
	203857	PUMP, Fire-Ball 300 5:1; (for 225642, see 309869 for parts)	
	222065	PUMP, Fire-Ball 425 10:1; (for 225782, see 309869 for parts)	
2	222063	HOSE AND FITTING KIT (for 246906 and 225642) Includes items 2a-2d	1
	222066	HOSE AND FITTING KIT (for 225782) Includes items 2a-2d	1
2a	220591	• HOSE, fluid; nitrile; 1/2 in. ID; 1/2 npt(mbe); 6 ft (1.83 m) (for 222063)	1
	109105	• HOSE, fluid; nitrile; 3/4 in. ID; 3/4 npt(mbe); 6 ft (1.83 m) (for 222066)	1
2b	155470	• UNION, swivel, 90°; 1/2 npt(m) x 1/2 npsm(f) (for 222063)	1
	160327	• UNION, swivel, 90°; 3/4 npt(m) x 3/4 npsm(f) (for 222066)	
2c	203320	• HOSE, air; buna-N; 3/8 in. ID; 3/8 npt(mbe); 6 ft (1.83 m) (for 222063)	1
	205418	• HOSE, air; buna-N; 1/2 in. ID; 1/2 npt(mbe); 6 ft (1.83 m) (for 222066)	1
2d	155494	• UNION, swivel, 90°; 3/8 npt(m) x 3/8 npsm (for 222063)	1
	155470	• UNION, swivel, 90°; 1/2-14 npt(m) x 1/2 npsm(f) (for 222066)	1
3	224512	AIR REGULATOR KIT (for 246906 and 225642 only) Includes items 3a-3d	1
3a	110234	• REGULATOR, air; 3/8 npt(f) 0-250 psi 0-1.7 MPa, 0-14.4 bar) range See manual 308167	1
3b	100960	• GAUGE, air pressure	1
3c	110224	• VALVE, air, bleed-type; 3/8 npt(f)	1
3d	156849	• NIPPLE, 3/8 npt	1
4	200326	COVER, drum; See 306345 for parts	1

**55-/275-gallon (208 Liter) Drum Bung-Mount Pump**  
**Fire-Ball 225 Model 246907**  
**Fire-Ball 300 Model 225640**  
**Fire-Ball 300 Model 225931**  
**Fire-Ball 425 Model 225786**

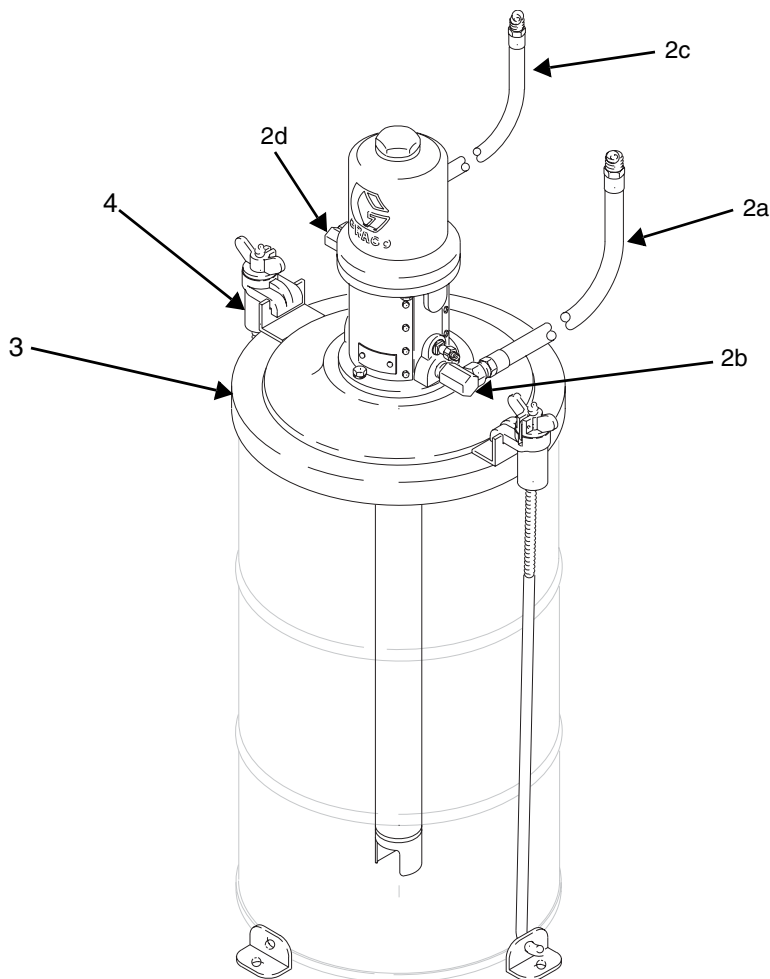




## Parts List

Ref. No.	Part No.	Description	Qty.
1	248097	PUMP, Mini-Fire-Ball 225 3:1, multi-length; (for 246907, see 309869 for parts)	1
	204254	PUMP, Fire-Ball 300 5:1; (for 225640, see 309869 for parts)	
	222087	PUMP, Fire-Ball 300 5:1; (for 225931, see 309869 for parts)	
	222095	PUMP, Fire-Ball 425 10:1; (for 225786, see 309869 for parts)	
2	222063	HOSE AND FITTING KIT (for 246907, 225640 and 225931) Includes items 2a-2d	1
	222066	HOSE AND FITTING KIT (for 225786) Includes items 2a-2d	1
2a	220591	• HOSE, fluid; nitrile; 1/2 in. ID; 1/2 npt(mbe); 6 ft (1.83 m) (for 222063)	1
	109105	• HOSE, fluid; nitrile; 3/4 in. ID; 3/4 npt(mbe); 6 ft (1.83 m) (for 222066)	1
2b	155470	• UNION, swivel, 90°; 1/2 npt(m) x 1/2 npsm(f) (for 222063)	1
	160327	• UNION, swivel, 90°; 3/4 npt(m) x 3/4 npsm(f) (for 222066)	
2c	203320	• HOSE, air; buna-N; 3/8 in. ID; 3/8 npt(mbe); 6 ft (1.83 m) (for 222063)	1
	205418	• HOSE, air; buna-N; 1/2 in. ID; 1/2 npt(mbe); 6 ft (1.83 m) (for 222066)	1
2d	155494	• UNION, swivel, 90°; 3/8 npt(m) x 3/8 npsm (for 222063)	1
	155470	• UNION, swivel, 90°; 1/2-14 npt(m) x 1/2 npsm(f) (for 222066)	1

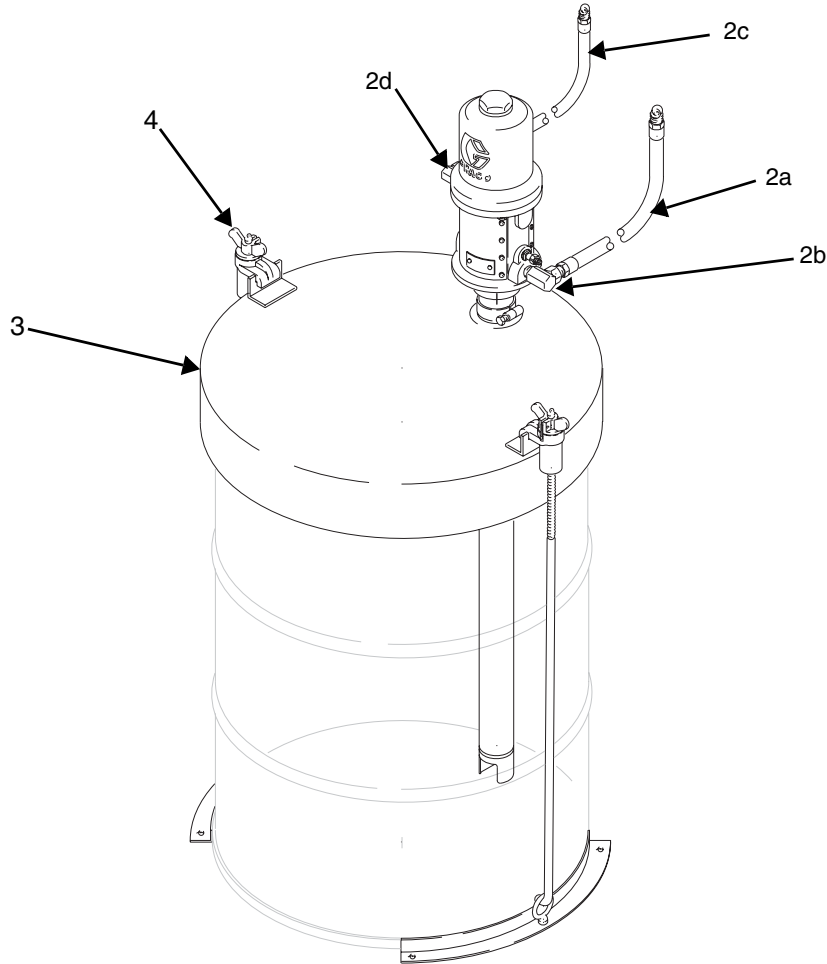
# 16-gallon (60 Liter) Drum Cover, Truck Mounted Pump Fire-Ball 300 Model 222086



## Parts List

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	203872	PUMP, Fire-Ball 300 5:1; (See 309869 for parts)	1	2b	155470	• UNION, swivel, 90°; 1/2 npt(m) x 1/2 npsm(f)1	1
2	222063	HOSE AND FITTING KIT Includes items 2a-2d	1	2c	203320	• HOSE, air; buna-N; 3/8 in. ID; 3/8 npt(mbe); 6 ft (1.83 m)	1
2a	220591	• HOSE, fluid; nitrile; 1/2 in. ID; 1/2 npt(mbe); 6 ft (1.83 m)	1	2d	155494	• UNION, swivel, 90°; 3/8 npt(m) x 3/8 npsm)	1
				3	222060	DRUM COVER	1
				4	222061	HOLD-DOWN KIT See manual 306345 for parts	1

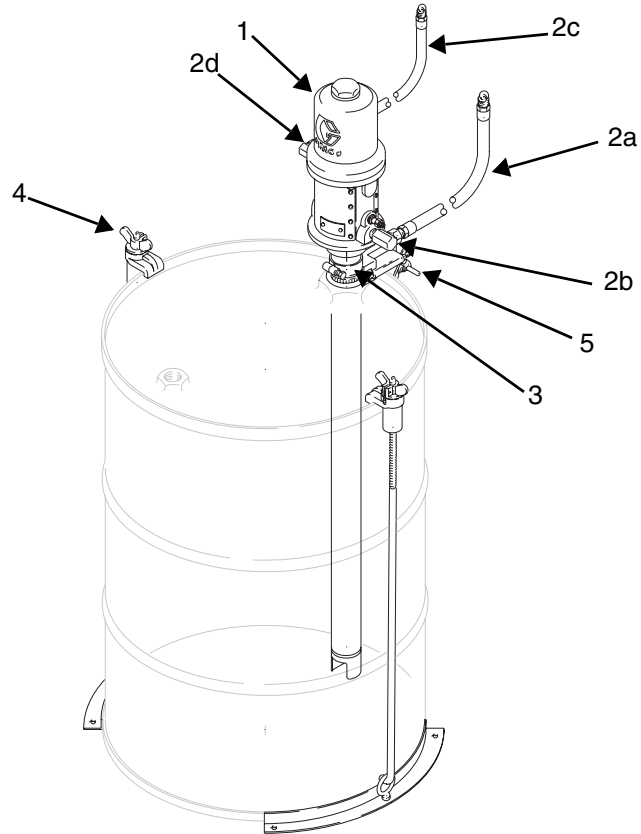
# 55-gallon (208 Liter) Drum Cover, Truck Mounted Pump Fire-Ball 300 Model 206655 Fire-Ball 425 Model 206656



## Parts List

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	203857	PUMP, Fire-Ball 300 5:1; (for 206655, see 309869 for parts)		2b	155470	• UNION, swivel, 90°; 1/2 npt(m) x 1/2 npsm(f)1	1
	222065	PUMP, Fire-Ball 425 10:1; (for 206656, see 309869 for parts)		2c	203320	• HOSE, air; buna-N; 3/8 in. ID; 3/8 npt(mbe); 6 ft (1.83 m)	1
2	222063	HOSE AND FITTING KIT Includes items 2a-2d	1	2d	155494	• UNION, swivel, 90°; 3/8 npt(m) x 3/8 npsm	1
2a	220591	• HOSE, fluid; nitrile; 1/2 in. ID; 1/2 npt(mbe); 6 ft (1.83 m)	1	3	207367	DRUM COVER	1
				4	207361	HOLD-DOWN KIT See manual 306345 for parts	1

**55-gallon (208 Liter) Bung Adapter, Truck Mounted Pump  
Fire-Ball 300 Model 204264  
Fire-Ball 425 Model 222067**



## Parts List

Ref. No.	Part No.	Description	Qty.
1	204254	PUMP, Fire-Ball 300 5:1; (For 204264, see 309869 for parts)	1
	222095	PUMP, Fire-Ball 425 10:1; (For 222067, see 309869 for parts)	
2	222063	HOSE AND FITTING KIT (for 204264) Includes items 2a-2d	1
	222066	HOSE AND FITTING KIT (for 222067) Includes items 2a-2d	1
2a	220591	• HOSE, fluid; nitrile; 1/2 in. ID; 1/2 npt(mbe); 6 ft (1.83 m) (for 222063)	1
	109105	• HOSE, fluid; nitrile; 3/4 in. ID; 3/4 npt(mbe); 6 ft (1.83 m) (for 222066)	1
2b	155470	• UNION, swivel, 90°; 1/2 npt(m) x 1/2 npsm(f) (for 222063)	1
	160327	• UNION, swivel, 90°; 3/4 npt(m) x 3/4 npsm(f) (for 222066)	
2c	203320	• HOSE, air; buna-N; 3/8 in. ID; 3/8 npt(mbe); 6 ft (1.83 m) (for 222063)	1
	205418	• HOSE, air; buna-N; 1/2 in. ID; 1/2 npt(mbe); 6 ft (1.83 m) (for 222066)	1
2d	155494	• UNION, swivel, 90°; 3/8 npt(m) x 3/8 npsm (for 222063)	1
	155470	• UNION, swivel, 90°; 1/2-14 npt(m) x 1/2 npsm(f) (for 222066)	1
3	204076	BUNG ADAPTER, sealed (for 204264)	1
	224579	BUNG ADAPTER, sealed (for 222067)	1
4	207361	HOLD-DOWN KIT See manual 306345 for parts	
5	204095	STURDI-CLAMP	1

# Technical Data

## Fire-Ball 225 (3:1)

Fluid to air ratio ..... 3:1  
 Cycles/gallon (cycles/liter) ..... 43.5 (11.4)  
 Fluid flow @80 cpm (gpm/lpm) ..... 1.84 (7.0)  
 Pumping distance guideline ..... up to 250 ft. (76.2 m)  
 Maximum fluid pressure ..... 540 psi (3.7 MPa, 37 bar)  
 Air motor effective diameter ..... 2.25 in. (57.2 mm)  
 Air operating range ..... 40-180 psi (0.28-1.2 MPa,  
 ..... 2.8-12 bar)

Approx. air consumption and fluid flow @ 100 psi air and  
 80 cpm ..... 8.5 scfm @ 2.1 gpm (.241 m<sup>3</sup>/min @ 7.9 lpm)

Dry suction lift (feet of water) ..... 23

Wetted materials ..... steel, polyurethane, aluminum,  
 ..... buna-N, Rulon®

Air inlet port size ..... 3/8 in. npt(f)

Fluid inlet port size ..... 1.5 in. npt(f)

Fluid outlet port size ..... 1/2 in. npt(f)

Sound pressure (measured 1 meter from unit) ... 77.8dB

Sound pressure (ISO 9614-2) ..... 85.6dB

## Fire-Ball 300 (5:1)

Fluid to air ratio ..... 5:1  
 Cycles/gallon (cycles/liter) ..... 28.4 (8.6)  
 Fluid flow @80 cpm (gpm/lpm) ..... 2.8 (9.3)  
 Pumping distance guideline ..... up to 500 ft. (152.5 m)  
 Maximum fluid pressure ..... 900 psi (6.2 MPa, 62 bar)  
 Air motor effective diameter ..... 3.0 in. (76.2 mm)  
 Air operating range ..... 40-180 psi (0.28-1.2 MPa,  
 ..... 2.8-12 bar)

Approx. air consumption and fluid flow @ 100 psi air and  
 80 cpm ..... 8.5 scfm @ 2.1 gpm (.241 m<sup>3</sup>/min @ 7.9 lpm)

Dry suction lift (feet of water) ..... 26

Wetted materials ..... steel, polyurethane, aluminum,  
 ..... buna-N

Air inlet port size ..... 3/8 in. npt(f)

Fluid inlet port size ..... 1.5 in. npt(f)

Fluid outlet port size ..... 1/2 in. npt(f)

Sound pressure (measured 1 meter from unit) ... 77.8dB

Sound pressure (ISO 9614-2) ..... 85.6dB

## Fire-Ball 425 (10:1)

Fluid to air ratio ..... 10:1

Cycles/gallon (cycles/liter) ..... 19.6 (5.2)

Fluid flow @80 cpm (gpm/lpm) ..... 4.1 (15.4)

Pumping distance guideline ..... up to 750 ft. (228.6 m)

Maximum fluid pressure ... 1800 psi (12.4 MPa, 124 bar)

Air motor effective diameter ..... 4.25 in. (107.9 mm)

Air operating range ..... 40-180 psi (0.28-1.2 MPa,  
 ..... 2.8-12 bar)

Approx. air consumption and fluid flow @ 100 psi air and  
 80 cpm .32.0 scfm @ 4.1 gpm (.555 m<sup>3</sup>/min @ 15.4 lpm)

Dry suction lift (feet of water) ..... 26

Wetted materials ..steel, polyurethane, aluminum, nitrile

Air inlet port size ..... 1/2 in. npt(f)

Fluid inlet port size ..... 1.5 in. npt(f)

Fluid outlet port size ..... 3/4 in. npt(f)

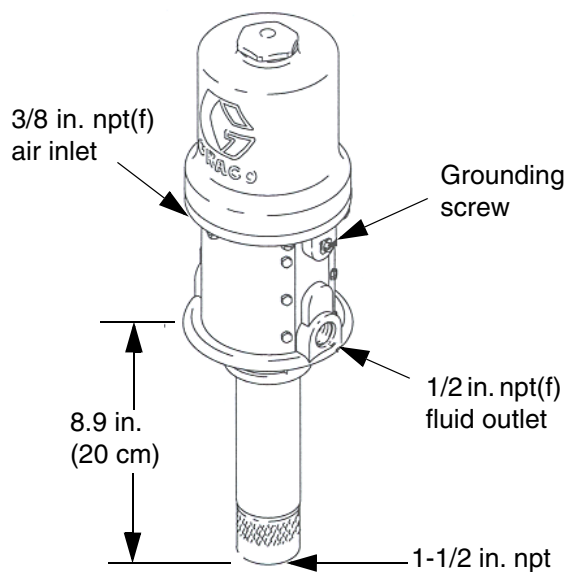
Sound pressure (measured 1 meter from unit) .80.85dB

Sound pressure (ISO 9614-2) ..... 94.62dB

# Dimensions

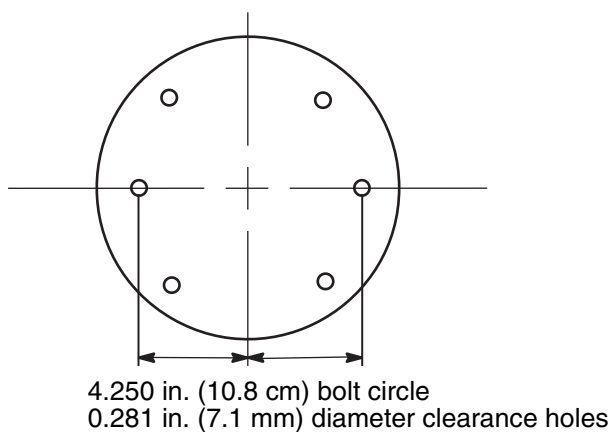
## Fire-Ball 225

**Model 246775**  
Universal



05752

### Mounting Hole Layout



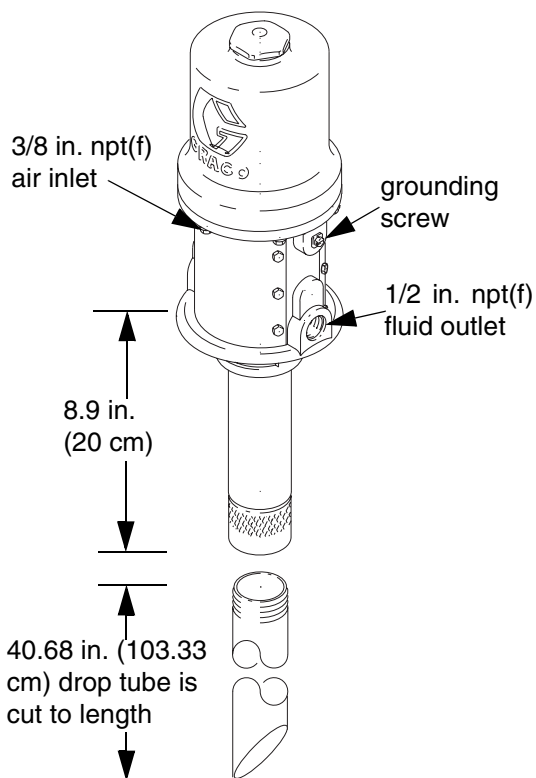
**Model 246775**  
Universal

Overall Length: 18.9 in. (48 cm)

**Model 248097**  
Variable length

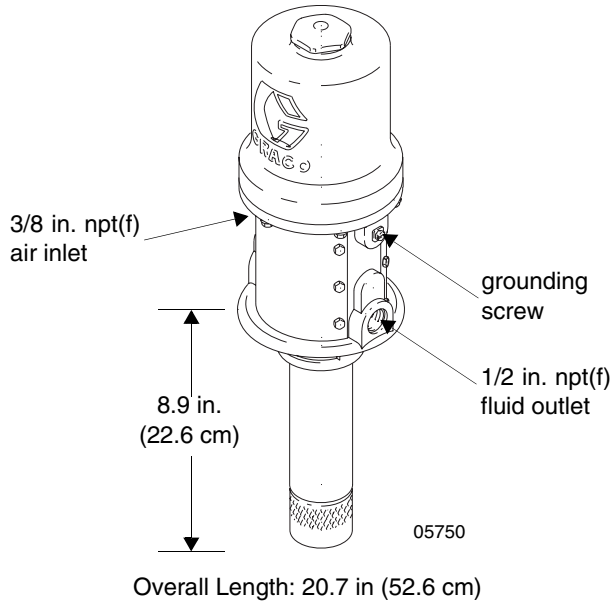
Overall Length: 59.2 in. (150.4 cm)

**Model 248097**  
Variable length



# Fire-Ball 300

## Model 203876 Universal



## Model 203857

55-gal. (400 lb) drum size, cover mount  
Overall Length: 45.6 in. (115.8 cm)

## Model 203872

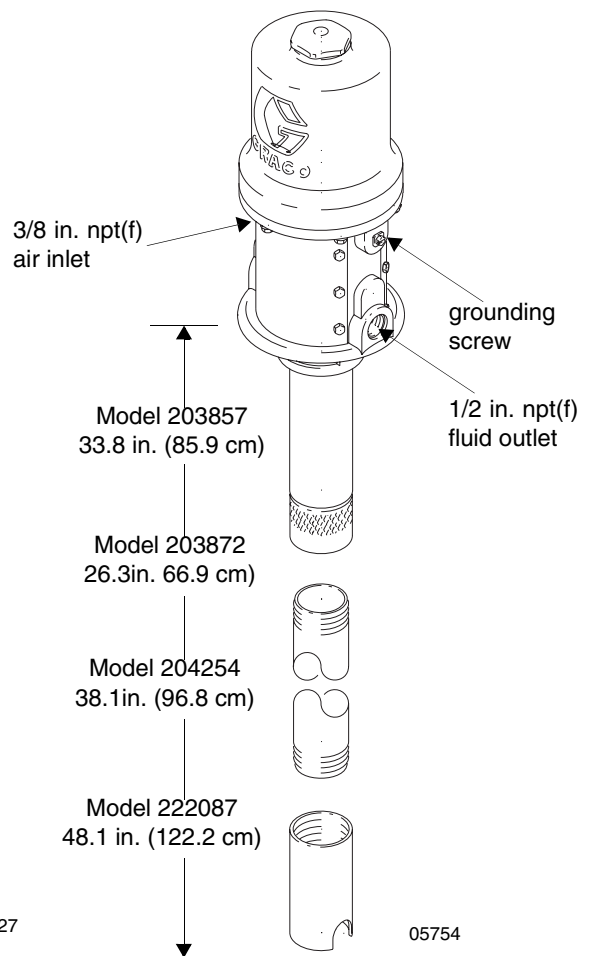
16-gal. (120 lb) drum size, cover mount  
Overall Length: 38.1 in. (96.8 cm)

## Model 204254

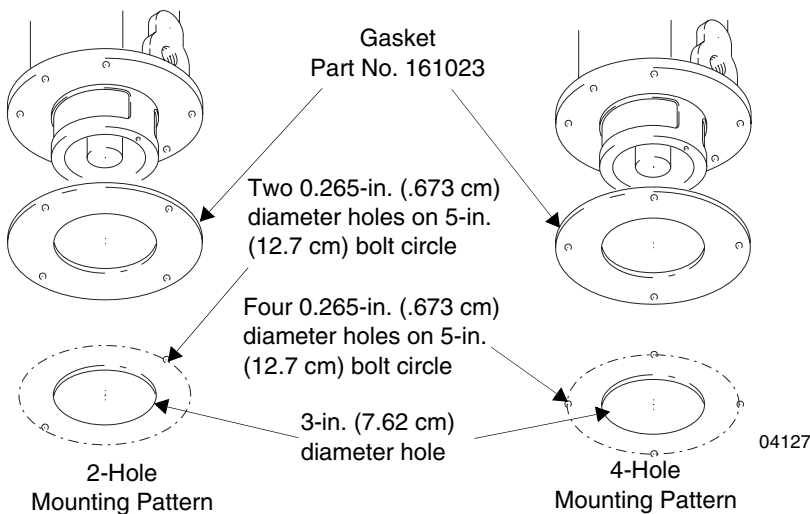
55-gal. (400 lb) drum size, bung mount  
Overall Length: 49.9 in. (126.7 cm)

## Model 222087

275-gal. tank size, bung mount  
Overall Length: 59.9 in. (152.1 cm)

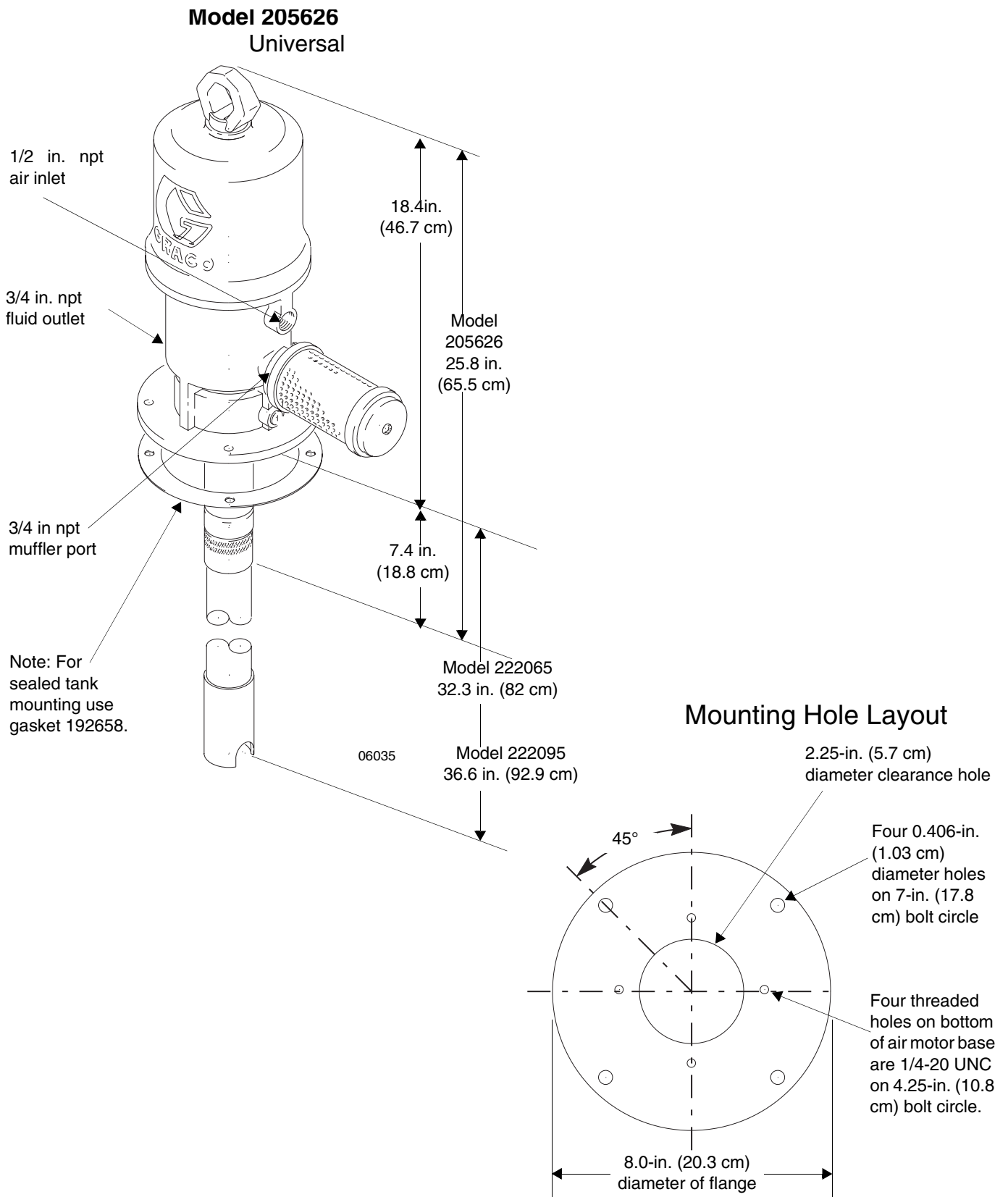


## Mounting Hole Layout





# Fire-Ball 425



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MM 309868

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Installation and Operation 6/2006