



This manual contains **IMPORTANT**
WARNINGS and INSTRUCTIONS
READ AND RETAIN FOR REFERENCE

Stubby

10:1 PRESIDENT[®] PUMP with Priming Piston for Lubricating Products Only

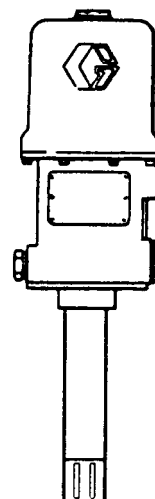
1800 PSI (124 bar) MAXIMUM WORKING PRESSURE

180 PSI (12.4 bar) MAXIMUM AIR INLET PRESSURE

Model: 965-124

INDEX

Safety Warnings	2, 3, 4
Typical Installation	7
Installation	7
Operation	8
Maintenance	8
Troubleshooting	9
Service	10
Displacement Pump Repair	11, 12
Check Valve Adjustment	12
Parts List	13
Parts Drawing	14
Accessories	15
Dimensional Drawing	16
Technical Data	Back Cover
Warranty	Back Cover



WARNING

PRIMING PISTON HAZARD

This pump has a priming piston which moves up and down inside the foot valve during operation. This piston could pinch or amputate your fingers as it moves up and down. To reduce the risk of injury, keep your fingers and all tools away from the slots in the foot valve during operation and whenever the air and fluid pressure in the pump is not **fully relieved**.

WARNING

HAZARD OF USING FLUIDS CONTAINING HALOGENATED HYDROCARBONS

Never use 1, 1, 1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in this equipment. Such use could result in a serious chemical reaction, with the possibility of explosion, which could cause death, serious bodily injury and/or substantial property damage.

Consult your fluid suppliers to ensure that the fluids being used are compatible with aluminum and zinc parts.

GRACO INC. - EAS, P.O. Box 1441, MINNEAPOLIS, MN 55440

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WARNING

**FLUID UNDER HIGH PRESSURE CAN CAUSE SERIOUS INJURY.
FOR PROFESSIONAL USE ONLY. OBSERVE ALL WARNINGS.**
Read and understand all instruction manuals before operating equipment.

TERMS

Be sure you read and understand each of these terms before reading the rest of the manual.

WARNING: Alerts user to avoid or correct conditions that could cause bodily injury.

CAUTION: Alerts user to avoid or correct conditions that could cause damage to or destruction of equipment.

NOTE: Identifies essential procedures or extra information.

FLEXIBLE EXTENSION: A flexible rubber hose extending from the dispensing valve, to which a grease fitting coupler is attached.

RIGID EXTENSION: A rigid tube extending from the dispensing valve, to which a grease fitting coupler is attached.

GREASE FITTING COUPLER: The device at the end of the flexible or rigid extension which connects to the parts to be lubricated.

FLUID INJECTION HAZARD

Fluid emitted under high pressure from leaks or ruptured components can penetrate the skin and cause extremely serious bodily injury, including the need for amputation. Also, fluid injected or splashed into the eyes can cause serious damage.

Dispense Valve Safety

Do not modify any part of the dispensing valve. Only use extensions and grease fitting couplers which are designed for use with your dispensing valve. Modifying parts can cause a malfunction and result in serious bodily injury.

Flexible Extension Safety

Be sure you know the maximum working pressure of the flexible extension you are using. **Never exceed that pressure**, even if your dispensing valve and/or pump is rated for higher working pressures.

Never use a low pressure flexible extension, designed for low pressure dispensing valves or hand-powered lubricating equipment, on a high pressure dispensing valve.

Never attempt to force the lubricant into a fitting! If the lubricant is not flowing, **STOP DISPENSING IMMEDIATELY!** The fitting may be clogged. Forcing lubricant may cause excessive back pressure in the flexible extension which could cause it to rupture and result in serious bodily injury, including injection and eye injury.

Grease Fitting Coupler Safety

Use extreme caution when cleaning or changing grease fitting couplers. If the coupler clogs while dispensing, **STOP DISPENSING IMMEDIATELY!**

Follow the Pressure Relief Procedure. Then remove the coupler to clean it. Never wipe off buildup around the coupler until pressure is fully relieved.

General Safety

Check the operation of all equipment safety devices before each use.

NEVER point the dispensing valve at anyone or any part of the body.

NEVER put hand or fingers over the grease fitting coupler.

NEVER try to stop or deflect leaks with your hand or body.

Medical Alert - Airless Spray Wounds

If any fluid appears to penetrate your skin, get **EMERGENCY MEDICAL CARE AT ONCE. DO NOT TREAT AS A SIMPLE CUT.** Tell the doctor exactly what fluid was injected.

Note to Physician: *Injection in the skin is a traumatic injury. It is important to treat the injury surgically as soon as possible. Do not delay treatment to research toxicity. Toxicity is a concern with some exotic coatings injected directly into the blood stream. Consultation with a plastic surgeon or reconstructive hand surgeon may be advisable.*

Pressure Relief Procedure

To reduce the risk of serious bodily injury, including injection, or splashing in the eyes or on the skin; always follow this procedure whenever you shut off the pump, and before inspecting, removing, cleaning or repairing any part of the pump or system.

1. Close the pump air regulator
2. Close the supply 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, extension or grease fitting coupler is clogged, or that pressure has not been fully relieved after following the steps above, **VERY SLOWLY** loosen the coupler or hose end coupling and relieve pressure gradually, then loosen completely. Now clear the clog.*

EQUIPMENT MISUSE HAZARD

General Safety

This pump is designed to be used **ONLY** in pumping non-corrosive and non-abrasive lubricants and greases. Any misuse of the spray equipment or accessories, such as overpressurizing, modifying parts, using incompatible fluids and chemicals, or using worn or damaged parts, can cause them to rupture and result in injection or other serious bodily injury, fire, explosion or property damage.

NEVER alter or modify any part of this equipment; doing so could cause it to malfunction.

CHECK all dispensing equipment regularly and repair or replace worn or damaged parts immediately.

System Pressure

DO NOT exceed 3000 PSI (210 bar) **MAXIMUM WORKING PRESSURE** to the gun. Be sure all accessory items and system components are rated to withstand the pressures developed. **NEVER** exceed the pressure rating of any component in the system.

Fluid Compatibility

BE SURE that all fluids and solvents used are chemically compatible with the wetted parts shown in the Technical Data. Always read the fluid and solvent manufacturer's literature before using them in this sprayer.

FIRE OR EXPLOSION HAZARD

Static electricity is created by the high velocity flow of fluid through the pump and hose. If every part of the spray equipment is not properly grounded, sparking may occur, and the system may become hazardous. Sparking may also occur when plugging in or unplugging a power supply cord. Sparks can ignite fumes from solvents and the fluid being sprayed, dust particles and other flammable substances, whether you are spraying indoors or outdoors, and can cause a fire or explosion and serious bodily injury and property damage. Do not plug in or unplug any power supply cords in the spray area when there is any chance of igniting fumes still in the air.

If you experience any static sparking or even a slight shock while using this equipment, **STOP SPRAYING IMMEDIATELY.** Check the entire system proper grounding. Do not use the system again until the problem has been identified and corrected.

Grounding

To reduce the risk of static sparking, ground the pump and all the spray equipment used or located in the spray area. **CHECK** your local electrical code for detailed grounding instructions for your area and type of equipment. **BE SURE** to ground all of this spray equipment:

1. *Pump*: use a ground wire and clamp as shown in Figure 1.
2. *Air hoses*: use only grounded air hoses.
3. *Fluid hoses*: use only grounded fluid hoses.
4. *Air compressor*: follow manufacturer's recommendations.
5. *Spray gun or dispensing valve*: grounding is obtained through connection to a properly grounded fluid hose and pump.
6. *Object being sprayed*: according to your local code.
7. *All solvent pails used when flushing*: according to local code. Use only metal pails, which are conductive, placed on a grounded surface. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts the grounding continuity.
8. *To maintain grounding continuity when flushing or relieving pressure*: always hold a metal part of the gun/valve firmly to the side of a grounded metal pail, then trigger the gun/valve.

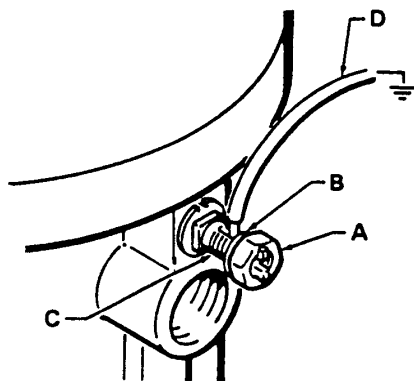


Figure 1

To ground the pump, loosen the grounding lug locknut (A) and washer (B). Insert one end of a 12 ga (1.5mm²) minimum ground wire (D) into the slot in lug (C) and tighten locknut securely. See Figure 1. Connect the other end of the wire to a true earth ground. Refer to ground wire and clamp in **ACCESSORIES**.

Flushing Safety

To reduce the risk of injection injury, static sparking, or splashing, follow the **Pressure Relief Procedure**. *Remove the spray tip (spray guns or spray valves only) before flushing.* Hold a metal part of the gun/valve firmly to the side of a grounded metal pail and use the lowest possible fluid pressure during flushing.

MOVING PARTS HAZARD

The piston in the air motor, located behind the air motor plates, moves when air is supplied to the motor. Moving parts can pinch or amputate your fingers or other body parts. **KEEP CLEAR** of moving parts when starting or operating the sprayer. Follow the **Pressure Relief Procedure** before checking or servicing the sprayer to prevent it from starting accidentally.

Before clearing an obstruction from the priming piston or servicing the pump, follow the Pressure Relief Procedure to prevent the pump from starting accidentally.

WARNING

Priming Piston Hazard

Moving parts can pinch or amputate your fingers or other body parts. When the pump is operating, the priming piston (Q) (located at the pump intake) moves up and down inside the intake valve. **NEVER** put your fingers or tools into the slots of the intake valve when the pump is operating or the pressure is not fully relieved. Before attempting to clear an obstruction from the priming piston (Q) or service the pump, follow the Pressure Relief Procedure to prevent the pump from accidentally starting.

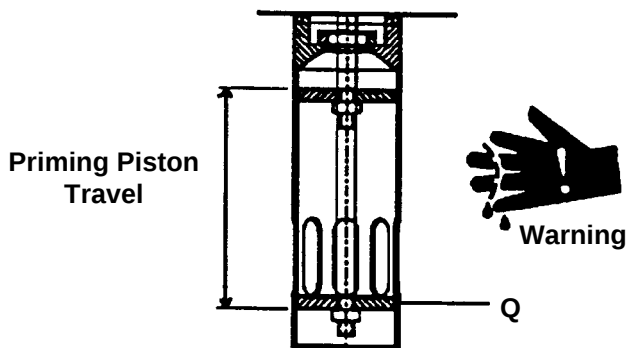


Figure 2

HOSE SAFETY

High pressure fluid in the hoses can be very dangerous. If the hose develops a leak, split or rupture due to any kind of wear, damage or misuse, the high pressure spray emitted from it can cause a fluid injection injury or other serious bodily injury or property damage.

ALL FLUID SPRAY HOSES MUST HAVE SPRING GUARDS! (except certain mastic applications). The spring guards help protect the hose from kinks or bends at or close to the coupling which can result in hose rupture.

TIGHTEN all fluid connections securely before each use. High pressure fluid can dislodge a loose coupling or allow high pressure spray to be emitted from the coupling.

NEVER use a damaged hose. Before each use, check entire hose for cuts, leaks, abrasion, bulging cover, or damage or movement of the hose couplings. If any of these conditions exist, replace the hose immediately. **DO NOT** try to recouple high pressure hose or mend it with tape or any other device. A repaired hose cannot contain the high pressure fluid.

HANDLE AND ROUTE HOSES CAREFULLY. Do not pull on hoses to move equipment. Do not use fluids or solvents which are not compatible with the inner tube and cover of the hose. **DO NOT** expose Graco hose to temperatures above 180°F (82°C) or below -40°F (-40°C).

Hose Grounding Continuity

Proper hose grounding continuity is essential to maintaining a grounded spray system. Check the electrical resistance of your air and fluid hoses at least once a week. If your hose does not have a tag on it which specifies the maximum electrical resistance, contact the hose supplier or manufacturer for the maximum resistance limits. Use a resistance meter in the appropriate range for your hose to check the resistance. If the resistance exceeds the recommended limits, replace it immediately. An ungrounded or poorly grounded hose can make your system hazardous. Also read **FIRE OR EXPLOSION HAZARD**.

IMPORTANT

United States Government safety standards have been adopted under the Occupational Safety and Health Act. These standards-particularly the General Standards, Part 1910, and the Construction Standards, Part 1926 - should be consulted.

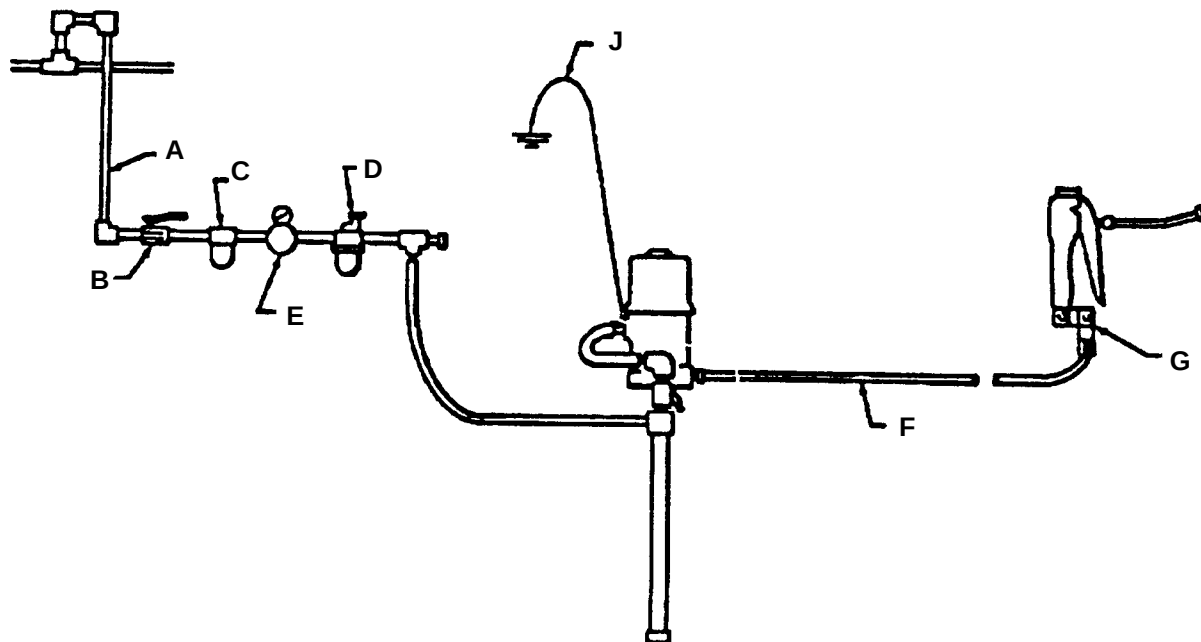
TYPICAL INSTALLATION

KEY

- A Grounded Air Line
- B Bleed-type Master Air Valve (required)
- C Air Filter
- D Air Line Oiler

KEY

- E Air Regulator
- F Grounded Dispensing Hose
- G Dispensing Valve
- J Ground Wire (required)



INSTALLATION

NOTE: Reference numbers and letters in parentheses in the test refer to the Typical Installation, Figure 1, 2 and the Parts Drawing.

Mount the pump to suit the type of installation planned. Very heavy lubricants may require an inductor plate. See **ACCESSORIES** for the mount and **DIMENSIONS** for the mounting hole layout.

Install the air line accessories in the approximate order shown in the Typical Installation. Install a bleed-type master air valve (B) within easy reach of the pump, upstream from the air regulator. Install an air filter (C) to remove harmful dirt and moisture from your compressed air supply.

For automatic air motor lubrication, install an air line oiler (D) close to the pump air inlet. Install an air regulator (E) to control pump speed.

WARNING

The bleed-type master air valve (B) is required to shut off and relieve air pressure that may be trapped in the air motor. Trapped air could cause the pump to cycle unexpectedly and cause serious bodily injury, including amputation.

Be sure the air hose is properly sized to deliver an adequate supply of air to the motor. Refer to the Technical Data.

Connect a dispensing hose to the 3/4" npt (f) pump outlet. Install an appropriate gun or dispensing valve to the hose.

Grounding

Proper grounding is essential to maintaining a safe system. Read **FIRE OR EXPLOSION HAZARD** then ground the pump and system as explained in that section.

OPERATION

WARNING

*To reduce the risk of serious bodily injury, including injection, always follow the **Pressure Relief Procedure** whenever you shut off the pump, and before inspecting, removing cleaning or repairing any part of the pump or system.*

For your safety in operating and servicing this pump, thoroughly read and follow all warning and instruction given in this manual and in any other manual supplied with this pump or any accessories you add to the system.

*Moving parts can pinch or amputate your fingers or other body parts. When the pump is operating, the priming piston (located at the pump intake) and the air motor piston (located behind the air motor plates) move. Therefore, **NEVER** operate the pump with the air motor plates removed, and keep your fingers and hands away from the priming piston.*

*Before clearing an obstruction from the priming piston or servicing the pump, follow the **Pressure Relief Procedure** to prevent the pump from starting accidentally.*

Open the bleed-type master air valve. Open the dispensing valve and slowly open the air regulator until the pump is running smoothly. After all the air is purged, close the dispensing valve - the pump will start and stop as the valve is opened and closed.

Never allow the pump to run dry of the fluid being pumped. A dry pump quickly accelerates to a high speed, and may damage 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 the pump and leave it filled with compatible solvent. Be sure to eliminate all air from the fluid system.

Use the air regulator (E) to control pump speed and fluid pressure. See the Typical Installation. Always use the lowest pressure necessary to obtain the desired results.

When you are done using the pump for the day, always follow the **Pressure Relief Procedure**.

MAINTENANCE

Lubrication

The accessory air line oiler (D) provides automatic air motor lubrication. For daily, manual lubrication, disconnect the air hose, place about 15 drops of light machine oil in the air inlet, reconnect the hose and turn on the air supply to blow oil into the motor.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Pump fails to operate, or no fluid flow	Inadequate air supply pressure or restricted air lines.	Increase air supply; clear
	Closed or clogged valves.	Open; clean
	Clogged fluid lines, hoses, valves, etc.	Clear *
	Damaged air motor	Service air motor
	Exhausted fluid supply	Refill and reprime or flush
	Loose or broken pump parts	Disassemble, check, repair.
Continuous air exhaust	Worn or damaged air motor gasket, packing, seal, etc.	Service air motor
Erratic pump operation	Exhausted fluid supply	Refill and reprime or flush
	Held open or worn intake valve or piston packings	Clear; service
Pump operates, but output low on up stroke	Held open or worn piston or packings	Clear; service
Pump operates, but output low on both strokes	Inadequate air supply or restricted air lines	Increase air supply; clear
	Closed or clogged valves	Open, clean
	Exhausted fluid supply	Refill and reprime or flush
	Clogged fluid lines, hoses, valves, etc.	Clear *

* Follow the **Pressure Relief Procedure**, and disconnect the fluid line. If the pump starts when the air is turned on again, the line, etc., is clogged.

WARNING

Pressure Relief Procedure

To reduce the risk of serious bodily injury, including injection or splashing in the eyes or on the skin, always follow this procedure whenever you shut off the pump, and before inspecting, removing, cleaning or repairing any part of the pump or system.

1. Close the pump air regulator
2. Close the supply 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, extension or grease fitting coupler is clogged, or that pressure has not been fully relieved after following the steps above, **VERY SLOWLY** loosen the coupler or hose end coupling and relieve pressure gradually, then loosen completely. Now clear the nozzle or hose.*

WARNING

*Moving parts can pinch or amputate your fingers or other body parts. When the pump is operating, the priming piston (located at the pump intake) and the air motor piston (located behind the air motor plates) move. Therefore, **NEVER** operate the pump with the air motor plates removed, and keep your fingers and hands away from the priming piston.*

NOTE: Check all other possible problems and solutions before disassembling the pump.

Displacement Pump Repair

Before you start:

1. A packing repair kit, part no. 206-927, is available. This kit includes two glands and eight packings for the motor as well as o-rings, packings and washers for the displacement pump. For the best results, use all the parts in the kit.
2. Clean all parts as you disassemble them, using a compatible solvent, and inspect for wear or damage. Replace parts as necessary.

Disassembly

1. Follow the **Pressure Relief Procedure**.
2. Remove nut (10) and priming plate (9) from priming rod (8).
3. Unscrew the foot valve housing (7) from cylinder (2).
NOTE: Poppet check (6) foot valve packings and bearings (5) slide off priming rod (8) when removing foot valve housing.
4. Unscrew bearing (5) from foot valve (7).
5. Remove poppet check (6) and inspect foot valve packings (30).
6. Unscrew riser tube (2) from pump base. Clean the tube and inspect it for wear by hold it up to a light at a slight angle. If you see wavy lines or scratches where the piston travels, replace the tube as it will not seal well with the new piston packings and the pump will perform poorly.
7. Loosen the locknut (4) and unscrew the valve housing (14) from the connecting rod (3), unscrew valve housing (14) from piston housing (16).
8. Remove washers (17), spreaders (19), cup packings (21), o-ring (27) and packing retainer (20) from the piston housing (16).
9. Clean and inspect all the parts.

Reassembly

10. Reassemble the piston, using all the new parts from the kit and any other new parts needed. Oil the leather packings (21) first. Then assemble the parts on the piston housing (16) in this order: backup washer (17*), spreader (19*), leather packing (21*), packing retainer (20) with new o-ring (27*), installed in it, another leather packing (21*), spreader (19*) and back up washer (17*).

NOTE: To replace the throat packings, follow the procedure given in your separate air motor manual, 306-982, supplied, before continuing with this procedure.

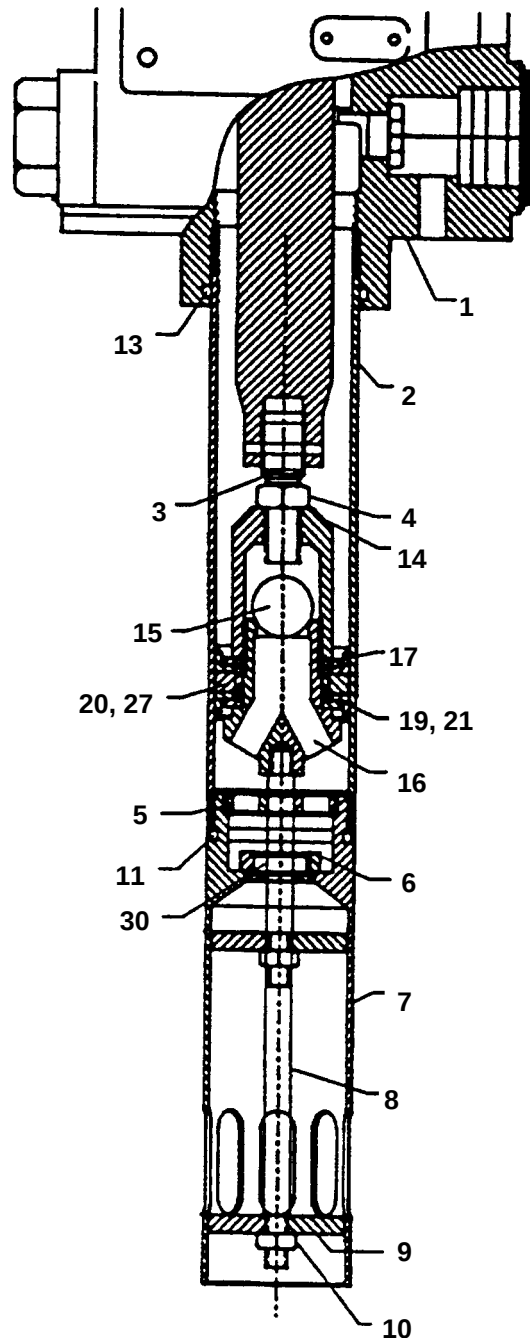


Figure 3

11. Screw the piston assembly onto the connecting rod (3) and adjust the ball travel as instructed in **Check Valve Adjustment**. Tighten the locknut (4).
12. Check the o-ring (13) in the pump base and replace it, if necessary.
13. Lubricate the piston packings and the inner wall at the top of the rise tube (2). Wrap the packings with a guide collar made of 1/64" maximum thickness shim stock or metal sheeting. Using a turning motion, work the first leather packing into the riser tube. Remove the guide collar and push the riser tube up and screw it into the base. Torque the tube to 100-150 ft-lb (135-204 N•m).
14. Slide bearing (5) onto priming rod (8) with the step side facing the bottom of the pump.
15. Insert foot valve packings (30) into poppet check (6) (replace if necessary).
16. Slide poppet check containing foot valve packings onto priming rod (8) with beveled edge facing the bottom of the pump.
17. Slide foot valve over poppet check and screw bearing (5) into the foot valve (7).
18. Push foot valve up to the riser tube.
19. Inspect o-ring (11) for damage and replace if necessary.
20. Screw foot valve (7) onto riser tube (2).
21. Slide priming plate (9) (beveled edge up) onto priming rod (8). Screw nut (10) onto priming rod and tighten.
22. Reconnect the pump's ground wire to a true earth ground.

CHECK VALVE ADJUSTMENT

This pump has an adjustable piston ball check.

To change the piston ball travel, loosen the locknut (4). Turn the piston valve housing (14) counterclockwise to increase, and clockwise to decrease. Medium viscosity fluid should have a 3/16" (5 mm) ball travel. See Figure 4. Decrease the ball travel minimizes surging at stroke changeover, but too short a ball travel restricts the flow and slows down the pump.

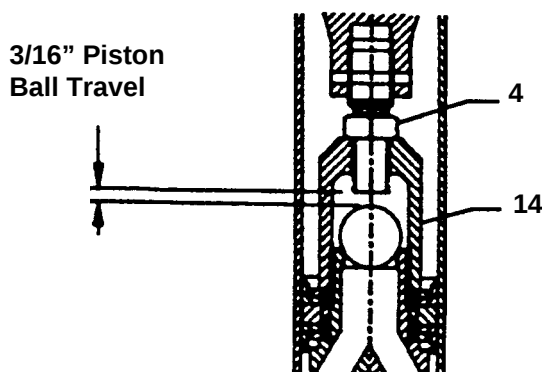


Figure 4

PARTS LIST

Model: 965-124

Includes items 1-30

REF. NO.	PART NO.	DESCRIPTION	QTY
1	205-647	MOTOR, air President	1
2	183-010	TUBE, riser	1
3	624-936	ROD, connecting	1
4	100-111	NUT	1
5	624-943	BEARING	1
6	624-938	CHECK, poppet	1
7	624-935	VALVE, foot, safety	1
8	624-937	ROD, priming	1
9	624-939	PLATE, priming, aluminum	1
10	100-077	NUT, 5/16-18 jam cs	1
11	156-633	O-RING	1
12	100-103	PIN, cotter, 1/8" x 1.5" cs	1
13	156-641	O-RING	1
14	624-941	HOUSING, valve	1
15	100-279	BALL	1
16	624-942	PISTON, housing	1
17	* 171-594	.WASHER, back up	2
18	206-924	KIT, repair 10:1 President	1
		Consists of: 17, 19, 21 & 27	1
19	* 171-590	.WASHER, spreader	2
20	158-857	RETAINER, packing 5:1 Monark	1
21	* 158-402	.PACKING, cup, leather	2
22	159-890	GASKET, copper	1
23	157-834	PLUG, 5/8-18 NF2 thd	1
24	159-445	PLUG, nd	1
25	159-446	GASKET, nd	1
26	184-090	LABEL, warning	1
27	* 154-662	.O-RING, Buna-N	1
30	603-778	PACKING, foot valve	2

* Included in Repair Kit 206-927
Keep on hand to reduce "down time"

REPAIR KIT: 206-927

(must be purchased separately)

REF NO.	QTY	REF NO.	QTY
17	2	21	2
19	2	27	1

HOW TO ORDER REPLACEMENT PARTS

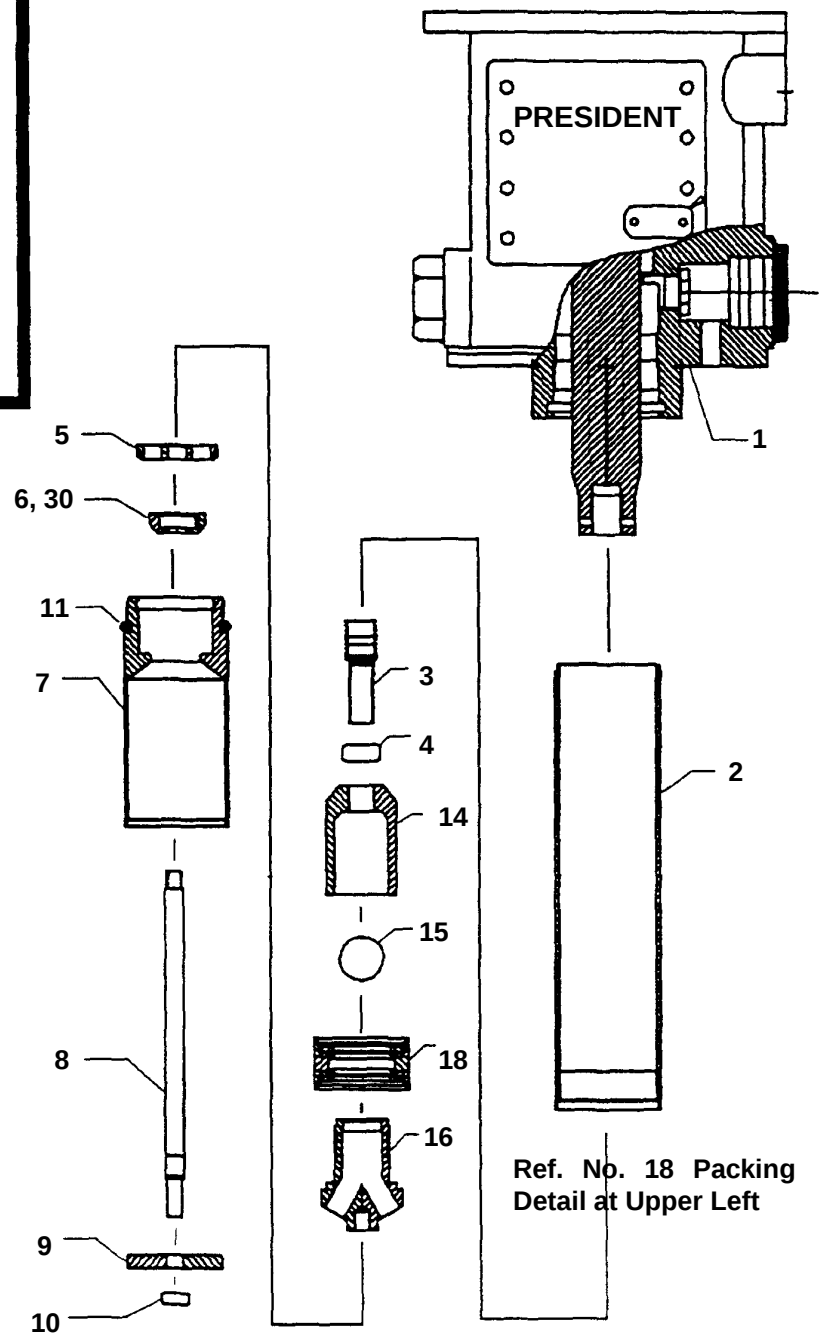
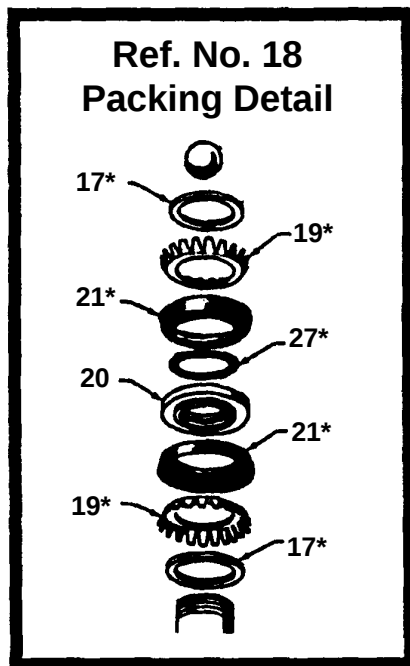
1. To be sure you receive the correct replacement parts, kit or accessories, always give all of the information requested in the chart below.
2. Check the parts list to identify the correct part number; **do not use the ref. no. when ordering.**
3. Order all parts from your nearest Graco distributor.

6 digit PART NUMBER	QUANTITY	DESCRIPTION

PARTS DRAWING

Model: 965-124

Includes items 1-30



ACCESSORIES

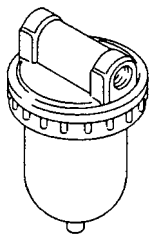
(Must be purchased separately)

AIR LINE FILTER

250 PSI (17.5 bar) MAXIMUM WORKING PRESSURE

106-149 1/2" npt inlet & outlet

106-150 3/4" npt inlet & outlet

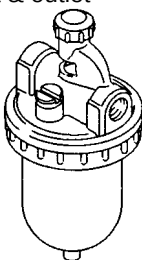


AIR LINE OILER

250 PSI (17.5 bar) MAXIMUM WORKING PRESSURE

214-848 1/2" npt inlet & outlet

214-849 3/4" npt inlet & outlet



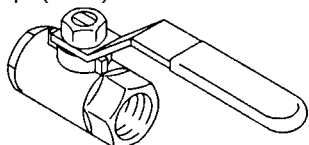
BLEED-TYPE MASTER AIR VALVE (required)

300 PSI (21 bar) MAXIMUM WORKING PRESSURE

Relieves air trapped in the air line between the pump air inlet and this valve when closed.

107-141 3/4" npt (m x f) inlet & outlet

102-142 1/2" npt (m x f) inlet & outlet

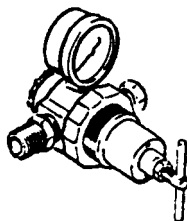


AIR REGULATOR 203-716

300 PSI (21 bar) MAXIMUM INBOUND AIR PRESSURE

9-200 PSI (0-14 bar) Regulated Pressure Range

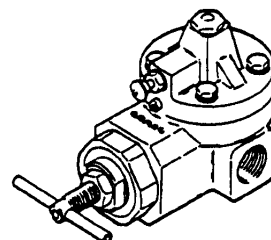
1/2" npsm (f) inlet, 3/8" npt (m) outlet



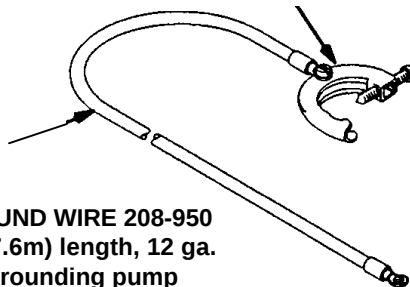
PUMP RUNAWAY VALVE 215-362

Shuts off air to pump automatically if it senses that the pump is running too fast, a condition caused by a depleted fluid supply.

3/4" npt (f) inlet & outlet



GROUNDING CLAMP 103-538



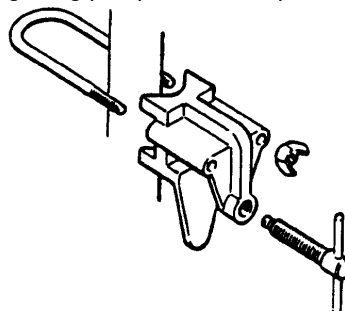
GROUND WIRE 208-950

25' (7.6m) length, 12 ga.

For grounding pump

STURDI-CLAMP 203-156

For mounting bung pump to side of open drum.



HIGH PRESSURE BALL VALVES, Viton Seals

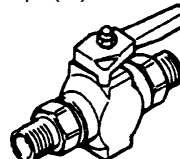
5000 PSI (350 bar) MAXIMUM WORKING PRESSURE

Can be used as fluid drain valve

210-657 1/4" npt (m)

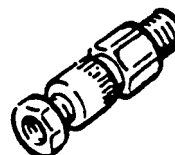
210-658 3/8" npt (m)

210-659 3/8" x 1/4" npt (m)

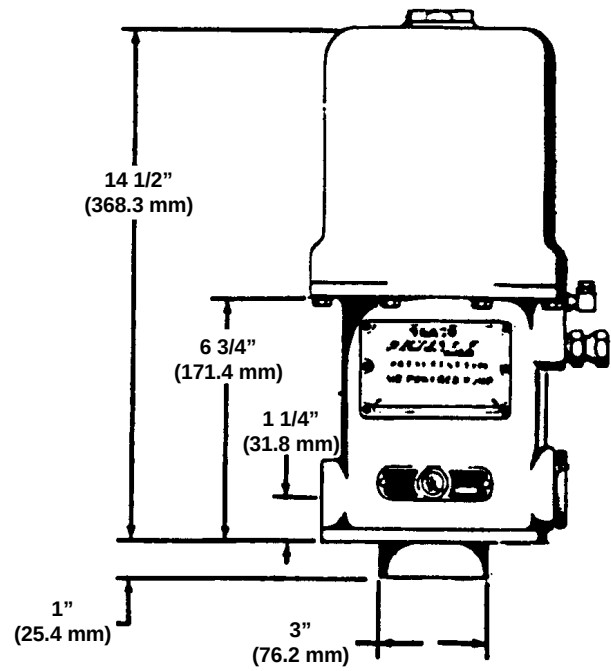
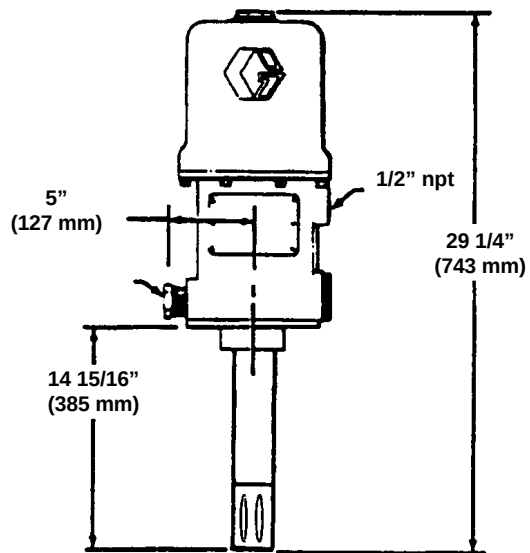


SWIVEL 207-947

3000 PSI (210 bar) MAXIMUM WORKING PRESSURE

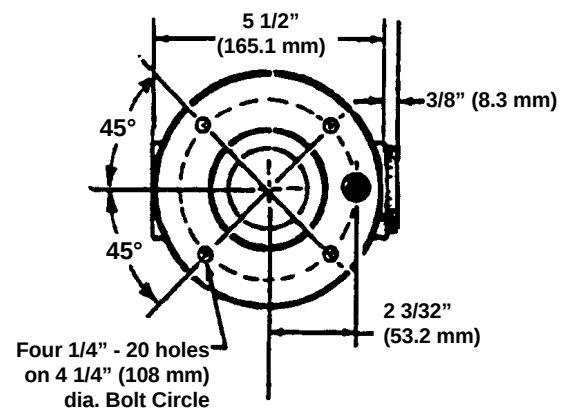


DIMENSIONS



Model: 965-124
Weight: 29 lb. (13 Kg)

Bottom View



TECHNICAL DATA

Fluid Pressure Ratio	10:1
Air Pressure Operating Range	40-180 PSI (3-12 bar)
Maximum Fluid Working Pressure	1800 PSI (124 bar)
Maximum Recommended Pump Speed	60 cycles/minute
Delivery (continuous duty)	3 GPM (12 liter/min)
Delivery (intermittent duty)	6 GPM (25 liter/min)
Cycles per Gallon (liter)	20 (6)
Air Motor Effective Diameter	4.25" (108 mm)
Pump Stroke	4" (100 mm)
Air Consumption	Approx. 13 CFM per gallon (6 m ³ /hr/liter) of fluid at 100 PSI (7 bar)
Wetted Parts	Steel, Aluminum, Brass, Leather, Buna-N

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 or two thousand hours of operation from time 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 production 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.

Sales Offices: Atlanta, Chicago, Detroit, Los Angeles

Foreign Offices: Canada; England; Switzerland; France; Germany; Hong Kong; Japan; Korea

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