

INSTRUCTIONS-PARTS LIST



307-717

Rev A

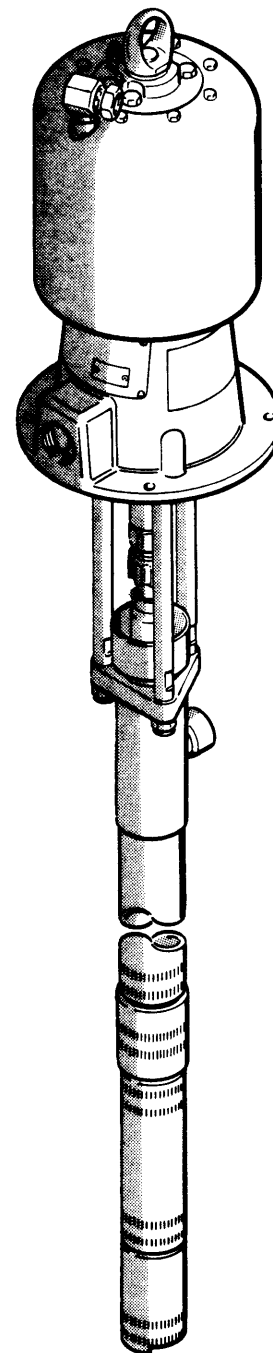
This manual contains **IMPORTANT**
WARNINGS and **INSTRUCTIONS**
READ AND RETAIN FOR REFERENCE

Drum Length, Bung Pump

22:1 RATIO SENATOR II PUMP

2200 psi (154 bar) MAXIMUM WORKING PRESSURE

Model 218-611, Series A



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WARNING

HIGH PRESSURE SPRAY CAN CAUSE SERIOUS INJURY.

FOR PROFESSIONAL USE ONLY. OBSERVE ALL WARNINGS.

Read and understand all instruction manuals before operating equipment.

FLUID INJECTION H A Z A R D

General Safety

This equipment generates very high fluid pressure. Spray from the gun/valve, leaks or ruptured components can inject fluid through your skin and into your body and cause extremely serious bodily injury, including the need for amputation. Also, fluid injected or splashed into the eyes can cause serious damage.

NEVER point the spray gun or dispensing valve at anyone or at any part of the body. NEVER put hand or fingers over the spray tip.

ALWAYS have the tip guard in place on the gun/valve when spraying.

ALWAYS follow the Pressure Relief Procedure, below, before cleaning or removing the spray tip or nozzle or servicing any system equipment.

NEVER try to "blow back" paint; this is not an air spray pump.

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

Be sure equipment safety devices are operating properly before each use.

Medical Treatment

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. For treatment instructions, have your doctor call the

**NATIONAL POISON CENTER NETWORK
(412)681-6669**

Spray Gun and Dispensing Valve Safety Devices

Be sure all gun/valve safety devices are operating properly before each use. Do not remove or modify any part of the gun/valve; this can cause a malfunction and result in serious bodily injury.

Safety Latch (if applicable)

Whenever you stop spraying, even for a moment, always set the gun/valve safety latch in the closed or "safe" position, making the gun/valve inoperative. Failure to set the safety latch can result in accidental triggering of the gun/valve.

Diffuser (if applicable)

The gun diffuser breaks up spray and reduces the risk of injection when the tip is not installed. Check diffuser operation regularly. Follow the Pressure Relief Procedure, below, then remove the spray tip. Aim the gun into a metal pail, holding the gun firmly to the pail. Using the lowest possible pressure, trigger the gun. If the fluid emitted is *not* diffused into an irregular stream, replace the diffuser immediately.

EQUIPMENT MISUSE HAZARD

General Safety

Any misuse of the spray equipment or accessories, such as overpressurizing, modifying parts, using incompatible chemicals and fluids, 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 spray equipment regularly and repair or replace worn or damaged parts immediately.

ALWAYS read and follow the fluid and solvent manufacturer's recommendations regarding the use of protective clothing and equipment.

Tip Guard

ALWAYS have the tip guard in place on the gun/valve while spraying. The tip guard alerts you to the injection hazard and helps prevent accidentally placing your fingers or any part of your body close to the spray tip.

Trigger Guard (if applicable)

Never operate the gun with the trigger guard removed. This guard helps prevent the gun from triggering accidentally if it is dropped or bumped.

Spray Tip and Nozzle Safety

Use extreme caution when cleaning or changing spray tips or nozzles. If the spray tip or nozzle clogs while spraying, engage the gun/valve safety latch immediately. ALWAYS follow the Pressure Relief Procedure and then remove the spray tip or nozzle to clean it.

NEVER wipe off build-up around the spray tip or nozzle until pressure is fully relieved and the gun/valve safety latch is engaged.

Pressure Relief Procedure

To reduce the risk of serious bodily injury, including injection, always follow this procedure whenever you shut off the pump, when checking or servicing any part of the system, when installing or changing spray tips, and whenever you stop spraying.

- 1 Engage the spray gun or dispensing valve safety latch.
- 2 Close the pump air regulator.
- 3 Close the master bleed-type air valve (required in your system).
- 4 Disengage the gun or dispensing valve safety latch.
- 5 Hold a metal part of the gun or valve firmly to a grounded metal waste container and trigger to relieve the fluid pressure.
- 6 Engage the safety latch again.
- 7 Open the pump drain valve (required in your system having a container ready to catch the drainage).
- 8 Leave the drain valve open until you are ready to spray again.

If you suspect that the spray tip or hose is clogged or that fluid pressure is not fully relieved after following the steps above, VERY SLOWLY loosen the tip guard or hose end coupling and allow pressure to be relieved gradually, then remove completely. Now clear the tip or hose obstruction.

System Pressure

This 22: 1 Ratio Senator II Pump develops 2200 psi (154 bar) MAXIMUM WORKING PRESSURE at 100 psi (6.9 bar) air pressure. Never exceed 100 psi (6.9 bar) air supply to the motor. NEVER exceed the stated maximum working pressure of the pump or of the lowest rated component in your system.

Be sure that all accessories you add to the spray system are properly rated to withstand the maximum air and fluid working pressures of this system.

Fluid Compatibility

BE SURE that all fluid and solvent used are chemically compatible with the wetted parts shown in the Technical Data on the back cover. 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 for positive 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 other 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 Fig 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.

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 an 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.

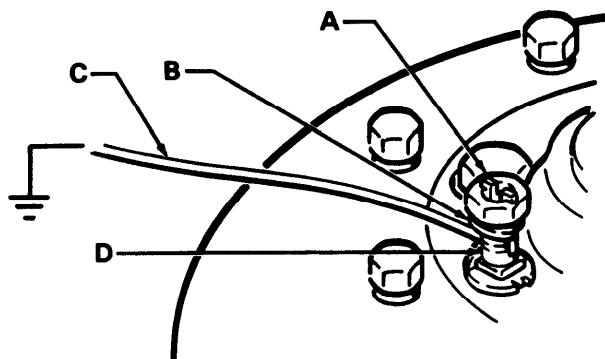


Fig 1

To ground the pump, loosen the grounding lug locknut (A) and washer (B). Insert one end of a 12 ga (1.5 mm²) minimum ground wire (C) into the slot in lug (D) and tighten locknut securely. See Fig 1. Connect the other end of the wire to a true earth ground. Refer to page 8 to order a ground wire and clamp.

Flushing Safety

To reduce the risk of injection injury, static sparking, or splashing follow the Pressure Relief Procedure on page 2, and 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 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. Therefore, **NEVER** operate the pump with the air motor plates removed. **KEEP CLEAR** of moving parts when starting or operating the pump. Before checking or servicing the pump, follow the Pressure Relief Procedure on page 2 to prevent the pump from starting accidentally.

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.

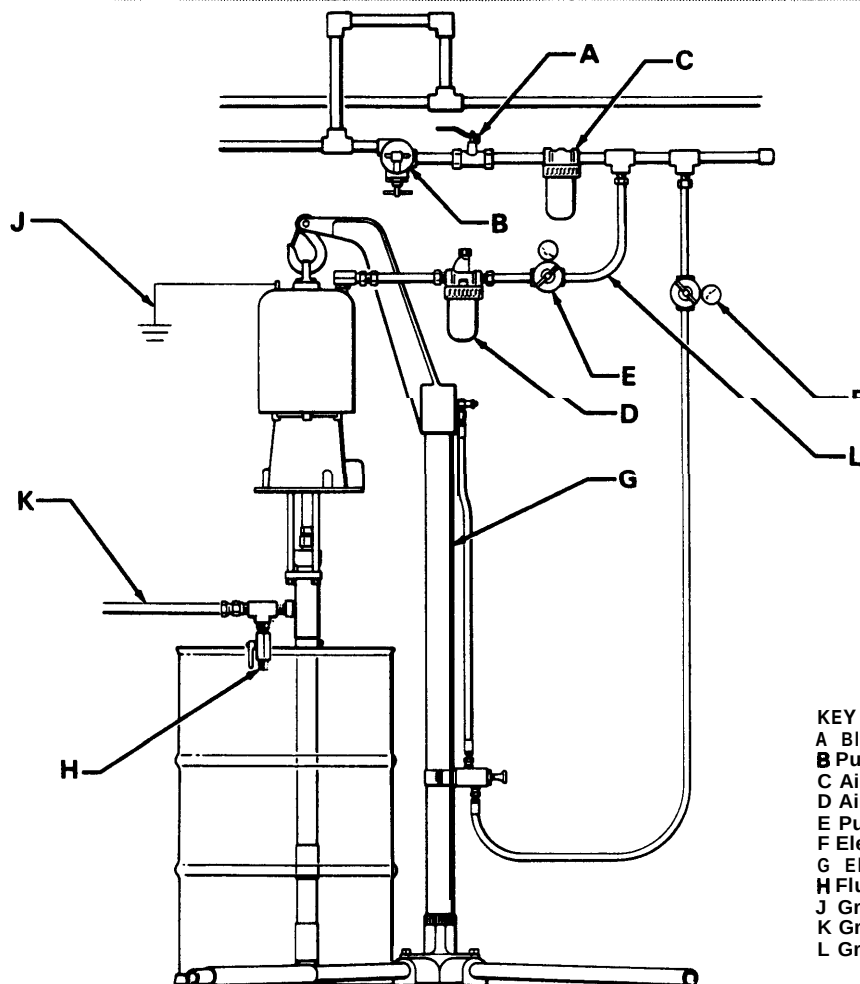
Hose Grounding Continuity

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**, at the right.

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 Bleed-type Master Air Valve
- B Pump Runaway Valve
- C Air Line Filter
- D Air Line Oiler
- E Pump Air Regulator
- F Elevator Air Regulator
- G Elevator
- H Fluid Drain Valve
- J Ground Wire
- K Grounded Fluid Hose
- L Grounded Air Hose

INSTALLATION

NOTE: Reference numbers and letters in parentheses in the text refer to the callouts in the figure illustrations and the parts drawing.

See page 8 for accessories that are available from Graco.

The Typical Installation shown above is only a guide to selecting and installing required and optional accessories. For assistance in designing a system to suit your needs, contact your Graco representative.

Mount the pump to suit the type of installation planned. The pump dimensions and mounting hole layout are shown on page 10.

Install the pump in the drum so it is 1/2 in. (13 mm) off the bottom of the drum. Use a suitable drum cover and bung adapter or open drum mounting.

Install the air line accessories in the approximate order shown in the Typical Installation drawing. Install the bleed-type master air valve (A) within easy reach of the pump. A pump runaway valve (B) installed on the air line senses when the pump is running too fast and shuts off the air supply to motor. An air line filter (C) removes 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 air to the motor and pump speed.

Be sure the air supply hose is properly grounded, and is at least 1/2 in. (13 mm) ID in order to supply an adequate volume of air to the motor.

On the fluid line, install a drain valve (H) close to the fluid outlet to assist in relieving fluid pressure. Connect a suitable, grounded fluid hose and spray gun or dispensing valve to the pump's 1 in. npt outlet.

Grounding

Proper grounding is essential to maintaining a safe system. Read FIRE OR EXPLOSION HAZARD on page 3, then ground the pump and system as explained in that section.

WARNING

Two accessories are required in your system: a bleed-type master air valve (A) and a fluid drain valve (H). These accessories help reduce the risk of serious bodily injury including injection, splashing in the eyes, and injury from moving parts if you are adjusting or repairing the pump.

The bleed-type master air valve relieves air trapped between this valve and the pump after the air regulator is shut off. Trapped air can cause the pump to cycle unexpectedly. Locate the valve close to the pump.

The fluid drain valve assists in relieving fluid pressure in the displacement pump, hose and gun; triggering the gun to relieve pressure may not be sufficient.

OPERATION

The pump was tested in oil, and some oil was left in the pump to protect it from corrosion. If the oil will contaminate the fluid you are pumping, flush it out.

Fill the packing nut/wet cup 1/2 full with Graco Throat Seal Liquid or a compatible solvent. Keep the cup filled at all times to help prevent the fluid you are pumping from drying on the displacement rod and damaging the throat packings.

Use the air regulator (E) to control fluid pressure and pump speed. Always use the lowest pressure necessary to get the desired results. Higher pressures cause premature pump wear and spray tip wear, and usually do not improve the spray pattern.

WARNING

To reduce the risk of overpressurizing your system, which could result in component rupture and cause serious bodily injury, NEVER exceed 100 psi (6.9 bar) Maximum Incoming Air Pressure to the pump.

In a direct supply system, with adequate air pressure supplied to the motor, the pump starts when the gun or dispensing valve is opened, and stalls against pressure when it is closed.

If the pump accelerates quickly or is running too fast, stop it immediately. Check the fluid supply and refill it if necessary. Prime the pump to remove all air from the system, or flush the pump, relieve pressure, but leave the system filled with mineral spirits or an oil-based solvent to protect the pump from corrosion.

NOTE: A pump runaway valve (B) can be installed on the air line to automatically shut off the pump if it starts to run too fast.

Shutdown and Care of the Pump

Always stop the pump at the bottom of its stroke to prevent fluid from drying on the rod and damaging the throat packings.

WARNING

Always follow the **Pressure Relief Procedure** on page 2 whenever you stop spraying and before checking, or repairing any part of the system, to reduce the risk of serious bodily injury.

If you are pumping fluid which dries, hardens or sets up, flush the system with a compatible solvent as often as necessary to prevent a build up of dried fluid in the pump or hoses.

Flushing

To reduce the risk of injection injury, static sparking, or splashing follow the Pressure Relief Procedure on page 2, and *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.

Corrosion Protection

CAUTION

Water, or even moist air, can cause your pump to corrode. To help prevent corrosion, NEVER leave the pump filled with water or air. After normal flushing, flush the pump again with mineral spirits or oil-based solvent, relieve pressure, and leave the mineral spirits in the pump. Be sure to follow all steps of the Pressure Relief Procedure on page 2.

TROUBLESHOOTING CHART

WARNING

Pressure Relief Procedure

To reduce the risk of serious bodily injury, including injection, splashing in the eyes, or injury from moving parts, follow this procedure whenever you shut off the pump, when checking or repairing any part of the system, when installing, cleaning or changing spray tips, and whenever you stop spraying. (1) Engage the gun safety latch. (2) Close the pump air regulator. (3) Close the bleed-type master air valve. (4) Disengage the gun safety latch. (5) Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure. (6) Engage the gun safety latch. (7) Open the drain valve, having a container ready to catch the drainage. (8) Leave the drain valve open until you are ready to spray again.

If you suspect that the spray tip or hose is completely clogged, or that pressure has not been fully relieved after following the steps above. VERY SLOWLY loosen the tip guard retaining nut or hose end coupling and relieve pressure gradually, then loosen completely. Now clear the tip or hose obstruction.

WARNING

Never operate the pump with the air motor plate removed. Moving parts in the piston can pinch or amputate fingers.

PROBLEM	CAUSE	SOLUTION+
Pump does not operate, or no fluid flow	Loose or broken pump parts	Disassemble, check, repair
	Restricted line or inadequate air supply	Clear, increase
	Exhausted fluid supply	Refill and prime
	Clogged fluid hoses	Clean, or replace
	Fluid intake or piston valves need adjustment	Adjust
	Damaged air motor	Repair; see 307-716
Pump operates but output is low	Insufficient air supply	Increase
	Exhausted fluid supply	Refill and prime
	Obstructed gun or dispensing valve	Clear
	Damaged fluid pump packings	Replace
	Held open or worn piston or intake valve	Repair. See 307-719
Erratic or accelerated operation	Exhausted fluid supply	Refill and prime
	Fluid intake or piston valve worn	Repair; see 307-719

*A/ways follow the Pressure Relief Procedure Warning first!

PARTS LIST

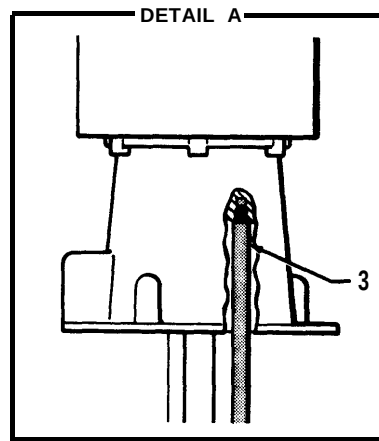
Model 218-611, Series A
22:1 Ratio Senator II Pump
 Includes items 1-13

REF PART NO. NO.	DESCRIPTION	QTY
1	218580 SENATOR II AIR MOTOR Series A See manual 307-716 for parts	1
2	218-612 DISPLACEMENT PUMP Series A See manual 307-719 for parts	1
3	180-652 ROD, tie; 15.5" (393.7 mm)	3
4	101580 NUT, lock, 1/2"	3
5	161-543 COUPLING, connecting rod	1
6	158-674 O-RING; Buna-N	1
7	161544 NUT, shoulder	2
8	100-103 PIN, cotter	1
9	100-884 SCREW, tapping, pnh; Type F; No. 6-32 x 1/4"	4
10	*181-220 LABEL, designation	1
11	* 172-477 TAG, warning/instruction	1
12	104-088 RIVET	1
13	172-446 PLATE, serial	1
14	* 172-447 LABEL, warning	1

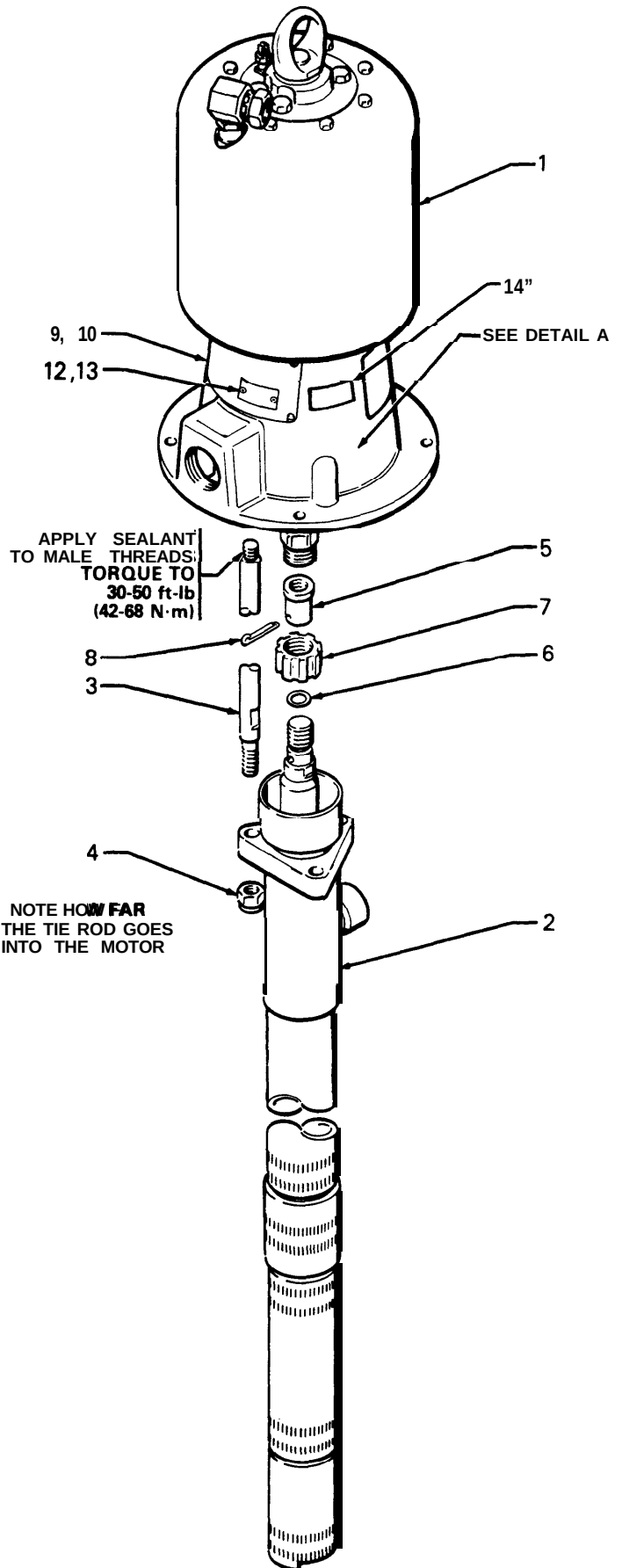
306 & 307 numbers in descriptions refer to separate instruction manuals.

*Additional warning tags and plates are available at no charge.

Order parts by name and series letter of the assembly for which you are ordering.



PARTS DRAWING



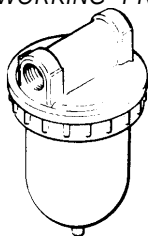
ACCESSORIES (Must be purchased separately)

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

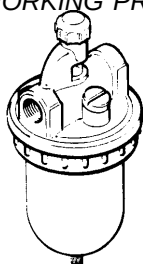


AIR LINE OILER

250 psi (17.5 bar) MAXIMUM WORKING PRESSURE

214-848 1/2 npt inlet & outlet

214-849 3/4 npt inlet & outlet



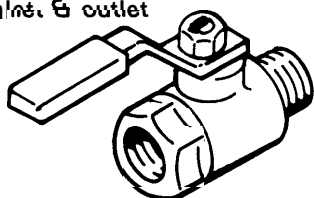
BLEED-TYPE MASTER AIR VALVE (REQUIRED)

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

107-W 1/2 npt(m x f) inlet & outlet

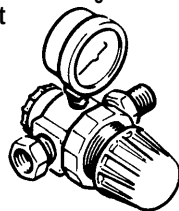


AIR REGULATOR 203-716

300 psi (21 bar) MAXIMUM INBOUND AIR PRESSURE

0-200 psi (0-14 bar) Regulated Pressure Range

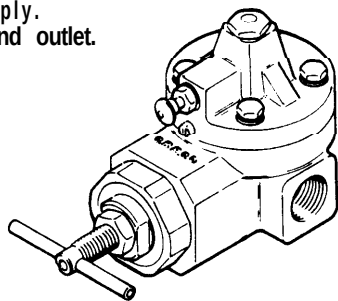
1/2 npsm(f) inlet, 3/8 npt(m) outlet



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 and outlet.

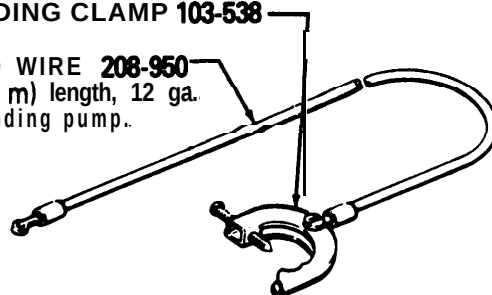


GROUNDING CLAMP 103-538

GROUND WIRE 208-950

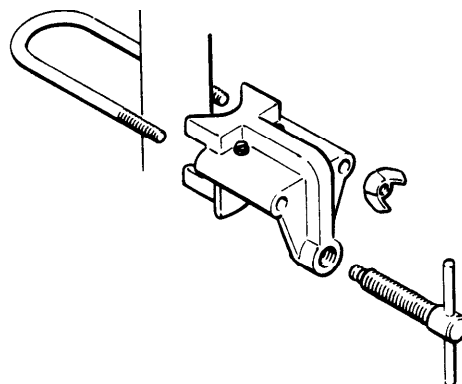
25 ft (7.6 m) length, 12 ga.

For grounding pump.



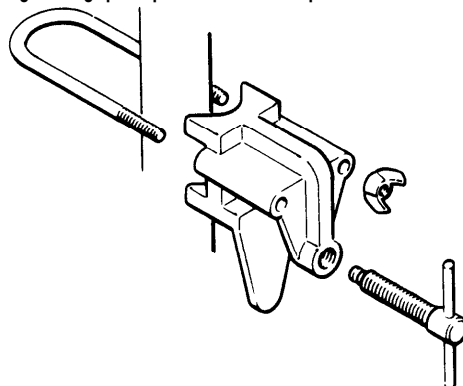
STURDI-CLAMP 218-702

For mounting Senator bung pump to closed head drum.



STURDI-CLAMP 203-156

For mounting bung pump to side of open drum.



TSL THROAT SEAL LIQUID

Non-evaporating liquid for wet cup.

206-995 1 quart (0.9 liter)

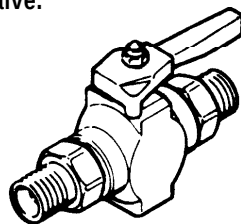
206-996 1 gallon (3.8 liter)

HIGH PRESSURE BALL VALVES, Viton Seals
5000 psi (350 bar) MAXIMUM WORKING PRESSURE
 Can be used as fluid drain valve.

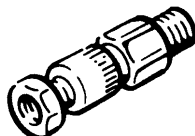
210-657 1/4 npt(m)

210-658 3/8 npt(m)

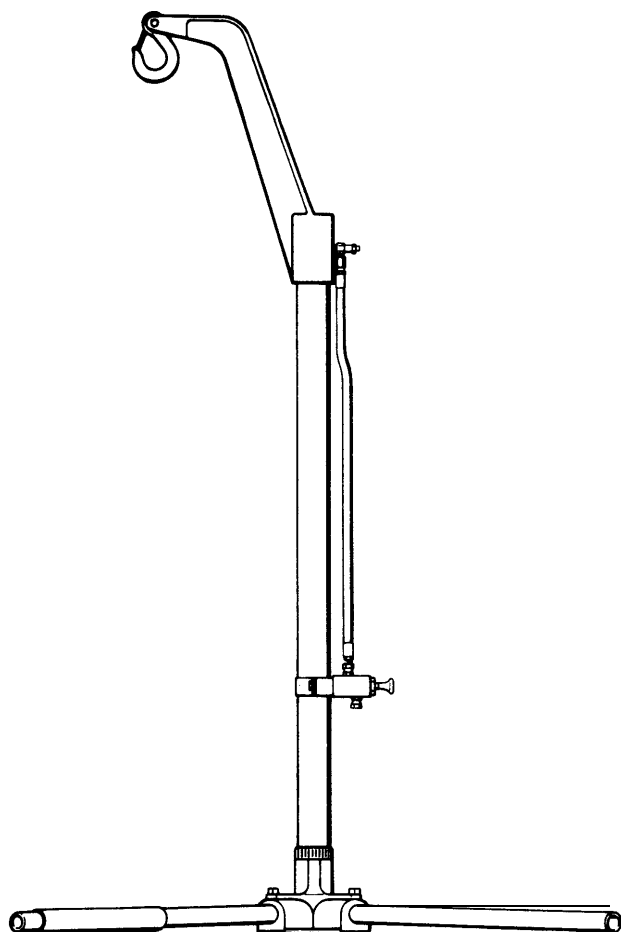
210-659 3/8x 1/4 npt(m)



SWIVEL 207-947
3000 psi (210 bar) MAXIMUM WORKING PRESSURE



AIR-OPERATED PUMP ELEVATOR 218-704
50 psi (3.4 bar) MAXIMUM AIR PRESSURE
100 lb (45 Kg) Maximum Lift Weight



GROUNDING MASTIC FLUID HOSE
2250 psi (155 bar) MAXIMUM WORKING PRESSURE

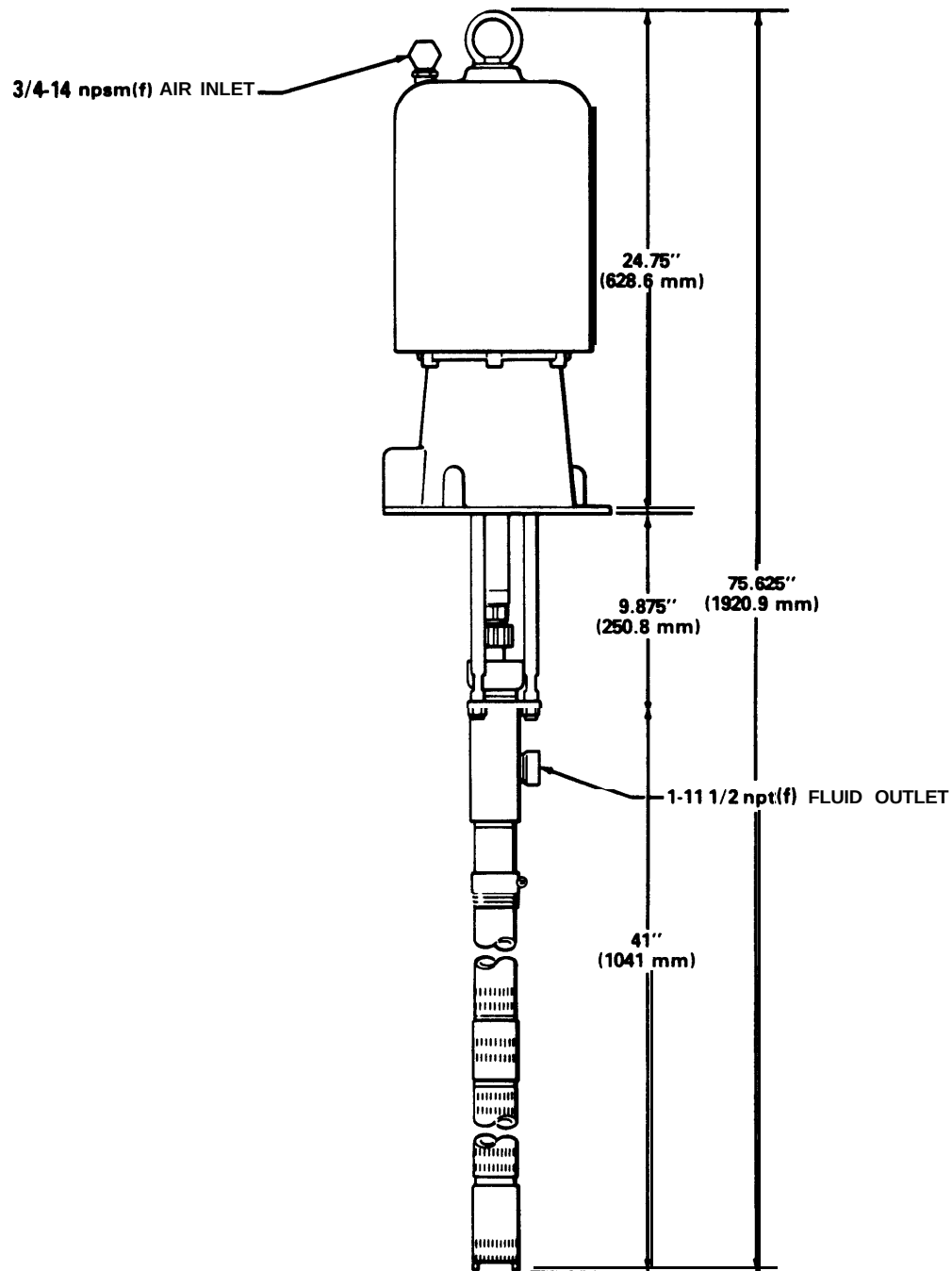
Hose No.	ID	Coupling Thread & Type	Inner Tube Material	Length
210-659	3/4 in.	3/4 npt(mbe)	Buna-N	50 ft (15.2 m)

3500 psi (240 bar) MAXIMUM WORKING PRESSURE
 Spring guards on both ends

Hose No.	ID	Coupling Thread & Type	Inner Tube Material	Length
214-962	1/2 in.	1/2 npt(mbe)	Buna-N	15 ft (4.6 m)
214-963	1/2 in.	1/2 npt(mbe)	Buna-N	25 ft (7.6 m)
214-964	1/2 in.	1/2 npt(mbe)	Buna-N	50 ft (15.2 m)

GROUNDING BUNA-N AIR SUPPLY HOSE
175 psi (12 bar) MAXIMUM WORKING PRESSURE

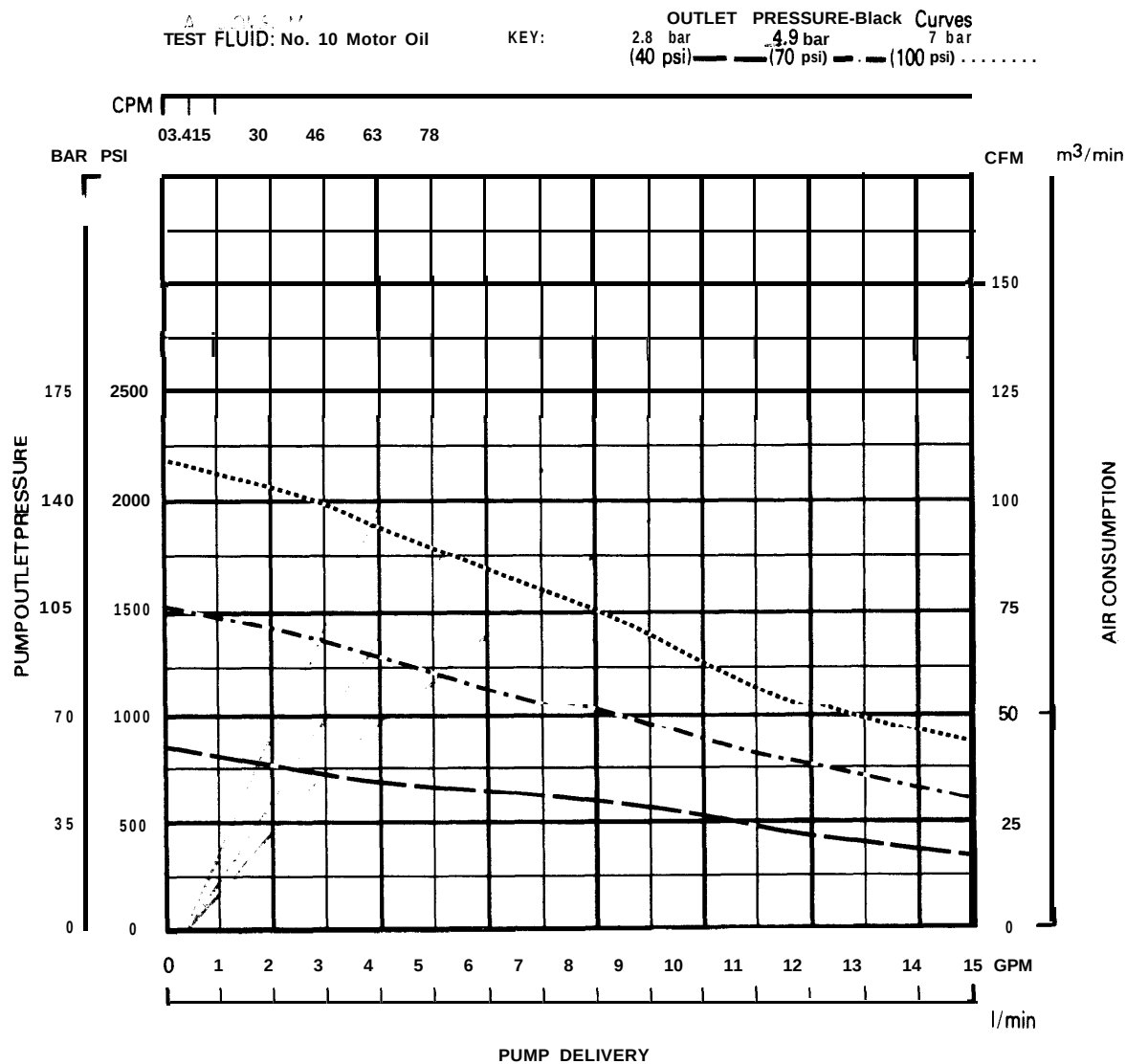
Part No.	ID	Length	Thd. Size
205-548	3/4" (19 mm)	50 ft (15.2 m)	3/4 npt(m)
208-612	3/4" (19 mm)	50 ft (15 m)	3/4 npt(m)



Weight: 79 lb (35.5 Kg)

PUMP PERFORMANCE CHART

22:1 SENATOR



Pump may be operated continuously to shaded area.
 To find Outlet Pressure (bar/psi) at a specific delivery (liter/gpm//min) and operating air pressure (bar/psi):
 1. Locate desired delivery along bottom of chart.
 2. Read vertical line up to intersection with selected fluid outlet pressure curve. Curve slopes from left to right. Follow left to scale and read outlet pressure.

To find Pump Air Consumption (m³/CFM//min) specific delivery (liter/gpm//min) and operating air pressure (bar/psi):
 1. Locate desired delivery along bottom of chart.
 2. Read vertical line up to intersection with selected air consumption curve. Curve slopes from right to left. Follow right to scale and read air consumption. Follow left to scale and read outlet pressure.

TECHNICAL DATA

Fluid pressure ratio : 22:1
Air pressure operating range : 40-100 psi (3-6.9 bar)
Maximum working pressure : 2200 psi (154 bar)
Maximum recommended pump speed : 60 cpm cycles/minute
Air motor effective diameter : 5.5" (138 mm)
Stroke : 8" (200 mm)
Air inlet size : 3/4 npsm(f)
Fluid outlet size : 1 in. npt(f)

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 for examination by Graco to verify the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the 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, ANY 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.

Factory Branches: Atlanta, Dallas, Detroit, Los Angeles, West Caldwell (N.J.)
Subsidiary and Affiliate Companies: Canada; England; Switzerland; France; Germany; Hong Kong; Japan

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