

INSTRUCTIONS-PARTS LIST



306-526

Rev. E
SUPERSEDES D
and PCN D

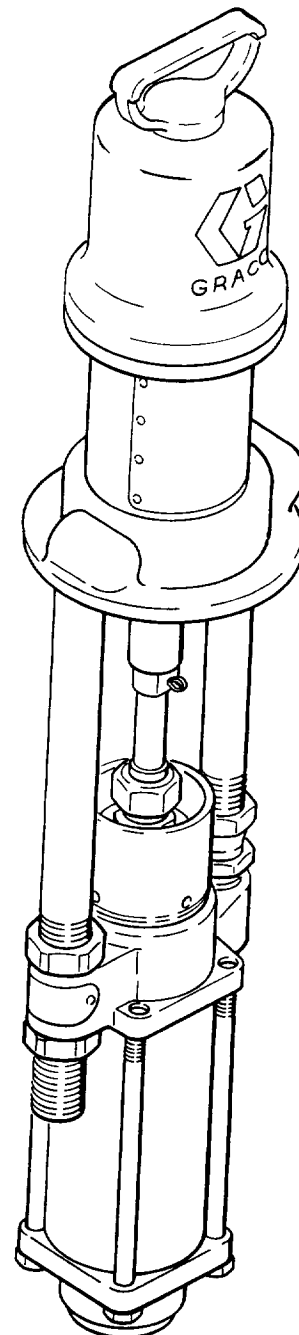
This manual contains **IMPORTANT**
WARNINGS and **INSTRUCTIONS**
READ AND RETAIN FOR REFERENCE

2:1 RATIO MONARK PUMPS

Model 204-117 Series D
240 psi (16.7 bar) *MAXIMUM WORKING PRESSURE*
55 gallon drum size
48 in. (1.2 m) stand pipe

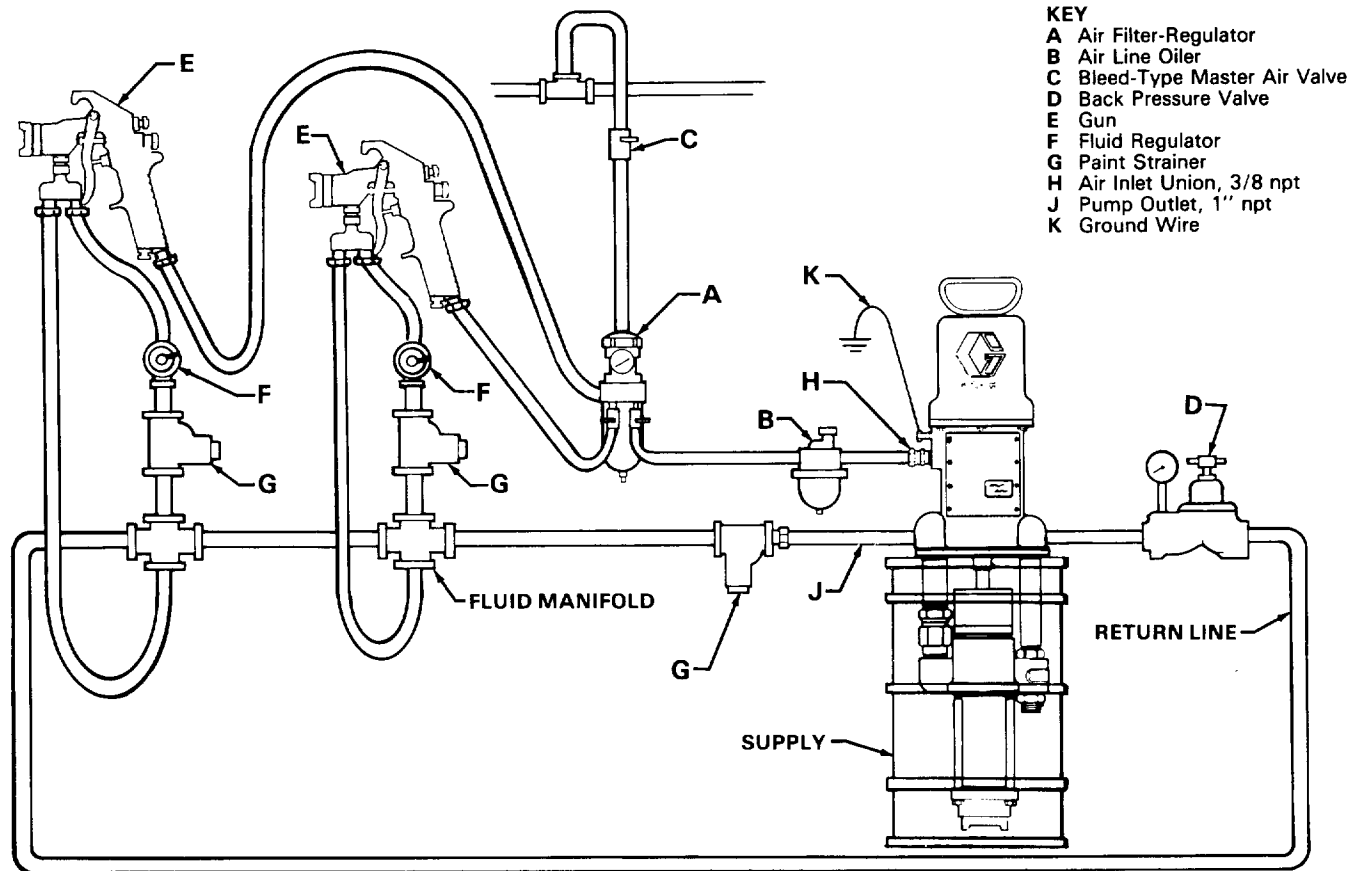
Model 206-827 Series D
240 psi (16.7 bar) *MAXIMUM WORKING PRESSURE*
Wall mount size

Model 207-954 Series D
360 psi (25 bar) *MAXIMUM WORKING PRESSURE*
15 gallon mix tank size



- Accessories on page 8 and 9.
- TECHNICAL DATA on back page.

TYPICAL INSTALLATION



- KEY**
- A Air Filter-Regulator
 - B Air Line Oiler
 - C Bleed-Type Master Air Valve
 - D Back Pressure Valve
 - E Gun
 - F Fluid Regulator
 - G Paint Strainer
 - H Air Inlet Union, 3/8 npt
 - J Pump Outlet, 1" npt
 - K Ground Wire

INSTALLATION

Mount The Pump

Mount the pump to suit the type of installation planned. The mounting accessories are shown on page 8. The pump dimensional drawing and mounting hole layout are given on the back page.

Ground the Pump and Other System Components

WARNING

To reduce the risk of fire or explosion, which can result from static sparking, ground the pump and all the other components used or located in the spray area. CHECK your local electrical code for detailed grounding instructions for your area and type of equipment.

To ground the pump, loosen the grounding lug locknut (K) and washer (L). Insert one end of a 12 ga (1.5 mm²) minimum ground wire (N) into the slot in the lug (M) and tighten the locknut securely. See Fig 1. Connect the other end of the wire to a true earthen ground. Refer to page 9 to order a ground wire and clamp.

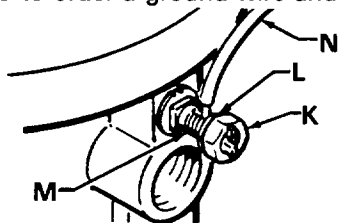


Fig 1

System Accessories

The Typical Installation shown above is only a guideline for setting up a circulating system. Contact your Graco representative for assistance in designing a system to suit your particular needs. The accessories mentioned are shown on pages 8 and 9.

NOTE: To ensure maximum pump performance, be sure that any accessory used is properly sized to meet your system requirements.

You should install an air filter-regulator (A) to remove harmful dirt and moisture from your compressed air supply and regulate the air to the pump. Install an air line oiler (B) near the air inlet for automatic pump lubrication. Install a bleed-type master air valve (C) to help relieve air trapped between the valve and the pump.

WARNING

The *bleed-type master air valve* is required to shut off and relieve air pressure that may be trapped in the air motor. This air could cause the pump to cycle unexpectedly and cause serious bodily injury, including amputation if your fingers are caught in a moving part, such as the air motor piston.

Install a back pressure valve (D) in the fluid return line, after the last gun station, to provide constant system back pressure for all the spray guns (E) and proper pressure for fluid circulation.

Install a fluid regulator (F) for each gun to control fluid pressure and a paint strainer (G) to remove contaminants from the fluid supply.

Connect the Hoses

Connect an electrically conductive air supply hose to the 3/8 npt air inlet union (H). Connect a 3/4 in. minimum ID, electrically conductive fluid hose to the 1 in. npt(f) outlet (J) of the pump, using a suitable adapter.

OPERATION

WARNING

Pressure Relief Procedure

To reduce the risk of serious bodily injury, always follow this procedure whenever you stop spraying and before inspecting, removing, cleaning or repairing any part of the system: (1) Shut off the pump. (2) Close the bleed-type master air valve (required). (3) Trigger the gun to relieve pressure.

Adjusting the Pump Speed and Pressure

In a circulating system, the pump operates until the air supply is turned off. In a direct supply system, when supplied with adequate air pressure and volume, the pump starts and stops as the gun is triggered and released.

Use an air regulator to control the fluid pressure and pump speed. See page 8 for an accessory Graco air regulator. Always use the lowest air pressure needed to obtain the desired results.

WARNING

To reduce the risk of overpressurizing the system, which could result in component rupture and cause serious bodily injury, always follow these precautions:

NEVER exceed the pump **MAXIMUM WORKING PRESSURE** of 360 psi (25 bar) or 180 psi (12 bar) maximum air pressure to the pump.

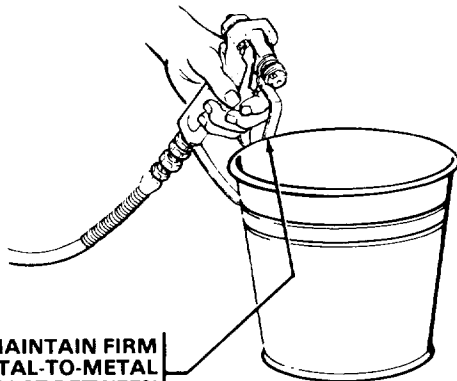
NEVER exceed the maximum working pressure of the lowest rated component or accessory used in your system.

Flushing the Pump

The pumps are tested with motor oil which is left in to protect the pump parts. If the fluid to be pumped can be contaminated by motor oil, flush the pump with a compatible solvent before using.

WARNING

Before flushing, be sure the entire system and flushing pails are properly grounded. Always use the lowest possible fluid pressure, and maintain firm metal-to-metal contact between the gun and the pail during flushing to reduce the risk of static sparking and splashing.



MAINTAIN FIRM
METAL-TO-METAL
CONTACT BETWEEN
GUN AND CONTAINER

Lubrication and Care

When operating the pump non-immersed, keep the wet-cup filled with Graco Throat Seal Liquid (TSL).

Check the tightness of the packing nut (36) weekly. The packing nut should be tight enough to prevent leakage, no tighter. Use a spanner wrench or a 0.25 in. (6.4 mm) diameter rod to tighten the packing nut. Always turn off the air supply and relieve all pressures before adjusting the packing nut.

Never allow the pump to run dry of the fluid being pumped. A dry pump will quickly accelerate to a high speed, possibly damaging itself. If the pump accelerates suddenly, or is running too fast, stop the pump immediately and check the fluid supply. If the supply container is empty and air has been pumped into the lines, refill the supply container and prime the pump and lines, being sure to eliminate all the air from the fluid system, or flush the pump as described below.

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

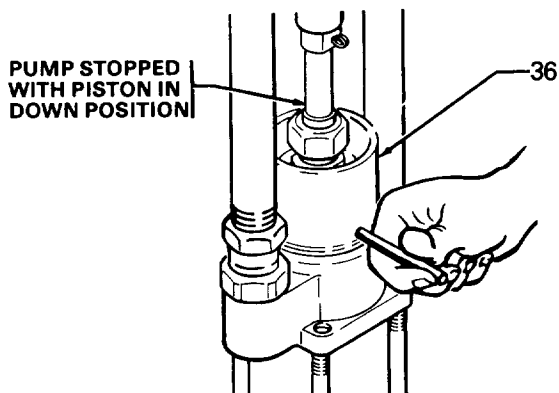


Fig 2

Always flush the pump with a compatible solvent before the fluid can dry in the pump and the hoses.

At the end of each day, if you are pumping water based material, first flush with water, then with mineral spirits. Relieve pressure and leave the mineral spirits in the pump to prevent corrosion.

SERVICE

WARNING

Pressure Relief Procedure

To reduce the risk of serious bodily injury, always follow this procedure whenever you stop spraying and before inspecting, removing, cleaning or repairing any part of the system: (1) Shut off the pump. (2) Close the bleed-type master air valve (required). (3) Trigger the gun to relieve pressure.

WARNING

NEVER operate the air motor with the muffler plates removed. Operating the air motor with these plates removed can result in amputation if your fingers are caught in a moving part, such as the air motor piston.

TROUBLESHOOTING CHART

PROBLEM	CAUSE	SOLUTION
Pump operates, but output low on both strokes	Restricted lines or inadequate air supply Insufficient air pressure—closed or clogged air valves, etc. Exhausted fluid supply Clogged fluid line, valves, gun, etc. Fluid check valves need adjustment Loose packing nut or worn packings	Clear lines; increase air supply Open; clean Refill & reprime or flush Clear*. Adjust; see page 5. Tighten; replace.
Pump operates, but output low on down stroke	Held open or worn fluid intake valve	Clear; service.
Pump operates, but output low on up stroke	Held open or worn fluid piston or packing	Clear; service
Erratic pump operation	Exhausted fluid supply Fluid check valves need adjustment Held open or worn fluid intake valve Held open or worn fluid piston or packing	Refill & reprime or flush. Adjust; see page 5. Clear; service. Clear; service.
Pump fails to operate	Restricted lines or inadequate air supply Insufficient air pressure—closed or clogged air valves, etc. Exhausted fluid supply Damaged air motor	Clear lines; increase air supply. Open; clean. Refill & reprime or flush. Service; see 307-043.

*Follow the **Pressure Relief Procedure Warning** above. Disconnect the fluid line. If the pump starts when the air is turned on, the line, etc. is clogged.

DISPLACEMENT PUMP SERVICE

NOTES:

- a. Repair Kit 206-922 is available. See page 6. Use all the parts in the kit even if the old ones still look good. The old parts will wear faster, making pump repair required again sooner.
 - b. Clean all the parts thoroughly as you disassemble the pump. Check them for wear or damage, replacing parts as necessary.
 - c. See manual 307-043 to service the air motor.
1. Flush the pump with a compatible solvent. Follow the **Pressure Relief Procedure** on page 3 before servicing the pump. Stop the pump at the bottom of its stroke.
 2. Disconnect the air and fluid lines. Remove the pump from its mounting, and clamp it in a vise.
 3. Unscrew the coupling nut (28) from the displacement rod (3). Unscrew the lower nut (45) and lockwasher (42) from the return mounting tube (47). Unscrew the swivel union (26) from the supply mounting tube (48). See Fig 5. If the mounting tubes need to be removed, wrench the tubes close to the air motor base to avoid damaging the threads in the base.
 4. Unscrew the four tie bolts (17) from the pump outlet housing (33). See Fig 6.
 5. Loosen the packing nut (36).
 6. Remove the intake valve housing (12). Remove the ball stop pin (21), noting the pin position. Remove the ball (15) and gasket (34). Clean the parts thoroughly and inspect for wear or damage.
 7. Pull the cylinder (22) off the displacement rod (3). Inspect the inside surface of the cylinder for scoring; a worn cylinder causes premature packing wear and leaking. Replace if necessary.
 8. Remove the three screws (16) and washers (19). Disassemble the piston parts, clean them, and reassemble as shown in Fig 6. Install the new washer (38), packing spreaders (37) and leather cup packings (25). Torque the three screws (16) to 115-125 in-lb (13-14 N·m).
 9. Remove the gasket (35) from the pump housing (33) and replace it with a new gasket.
 10. Remove the packing nut (36), glands (29 & 30), and v-packings (31 & 32) from the pump housing. Clean the pump housing. Lubricate the new parts. Install the male gland (29), three leather v-packings (32), Teflon v-packing (31) and female gland (30). Be sure the lips of the v-packings face down. Install the packing nut loosely.

11. Do not disassemble the displacement rod (3) unless necessary. Then, before disassembling it, make note of how far the plunger bolt (10) protrudes from the lower cap (9). This determines how much travel the piston ball (14) has. Screw the upper and lower caps (8 & 9) off the plunger bolt (10). Inspect the o-rings (4 & 6) in place. Replace any parts with nicks, scratches or wear. Reassemble, making sure to screw the plunger bolt in the proper distance. To readjust the piston ball travel, see page 5.
12. Install the displacement rod (3) through the bottom of the pump housing (33) and engage the coupling nut (28). Tighten the packing nut (36) just enough to stop leakage, no tighter.

CAUTION

Always replace the hard Nitralloy seats (27 & 11) when replacing the fluid piston or intake valve balls (14 & 15). Do not reseal the balls as the seats are easily chipped.

13. Reassemble the intake valve, placing the ball stop pin (21) in the same holes from which it was removed. To readjust the ball travel, see page 5.
14. Screw the four cap screws (17) into the pump housing (33). Torque the cap screws to 200-225 in-lb (23-25 N·m).
15. Align the pump mounting tubes (47 & 48) with the pump housing (33). Connect the displacement rod (3) and motor connecting rod (1) and loosely engage the coupling nut (28). See Fig 5.
16. Firmly tighten the swivel union (26) onto the supply mounting tube (48). Place the lockwasher (42) and lower locknut (45) on the bottom of the return line mounting tube (47) and engage about two threads. Tighten the coupling nut (28) firmly.
17. Operate the pump slowly and adjust the return line tube locknuts (45) as necessary until the pump runs smoothly at minimum power to the motor. Then tighten the nuts securely, being careful not to change the alignment.
18. Mount the pump and connect the air and fluid hoses.
19. Reconnect the ground wire if it was disconnected during repair.
20. If operating the pump non-immersed, fill the wet-cup with Graco Throat Seal Liquid (TSL).

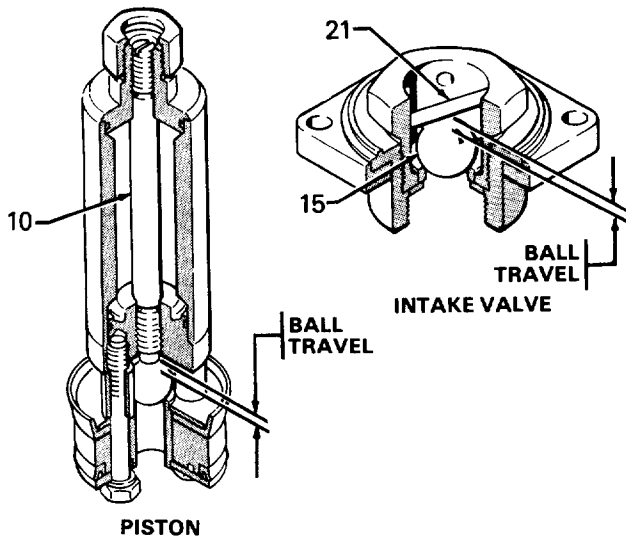


Fig 3

The Fluid Piston & Intake Valve Adjustment

The fluid piston and intake valves are factory set for pumping medium viscosity fluids such as spray paint. The pin (21) in the intake valve is in the lower set of holes. The piston ball travel is set at 0.19 in. (4.8 mm), or four complete turns of the plunger bolt (10) from the top of the piston ball.

1. If heavy viscosity paint is used and erratic pump operation develops, increase the ball travel of the intake valve by moving the pin (21) to the center or upper set of holes, and in the piston valve by backing out the plunger bolt (10) two complete turns, or 0.28 in. (7.1 mm) total travel. See Fig 3.

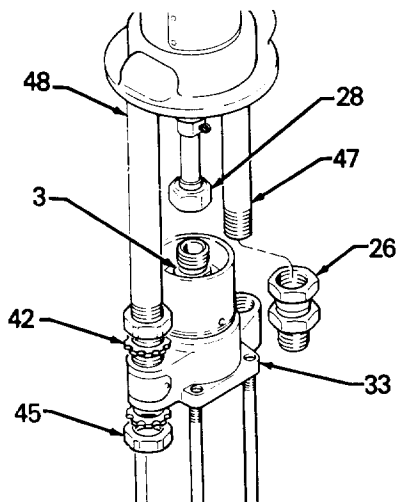
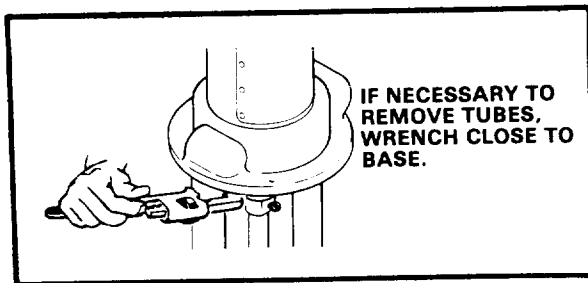


Fig 5

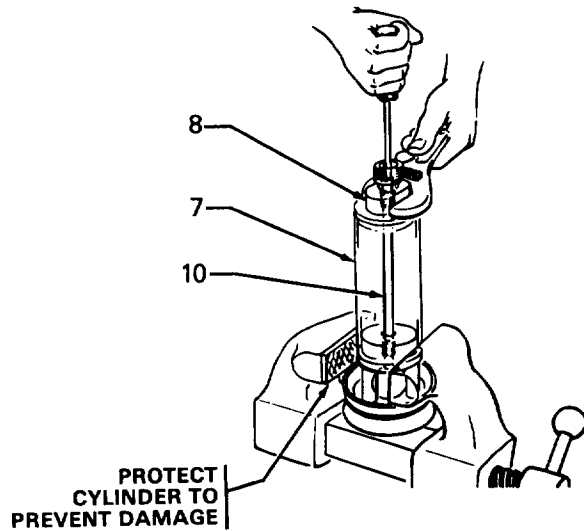


Fig 4

2. If light paint is used and surging develops, decrease the ball travel in the intake valve by moving the pin (21) to a lower set of holes, and in the piston valve by screwing in the plunger bolt (10) two complete turns, or 0.09 in. (2.3 mm) total travel. See Fig 3.

Adjust the valves as follows: Disassemble the pump as explained on page 4. Place the piston in a vise. Be sure to protect the surface of the cylinder (7). See Fig 4. Loosen the upper plunger cap (8) to relieve tension on the plunger bolt (10). Adjust the plunger bolt for the desired ball travel and retighten the upper plunger cap securely. Set the intake valve pin (21) as desired and reassemble the pump as explained on page 4.

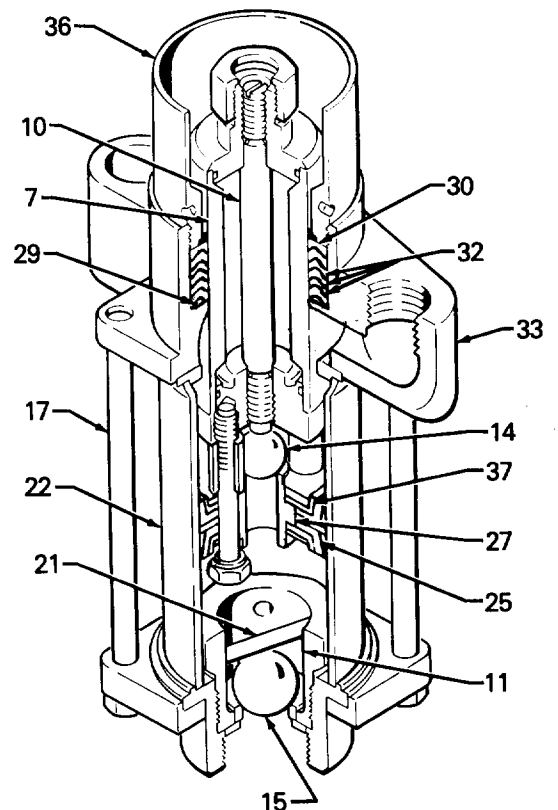
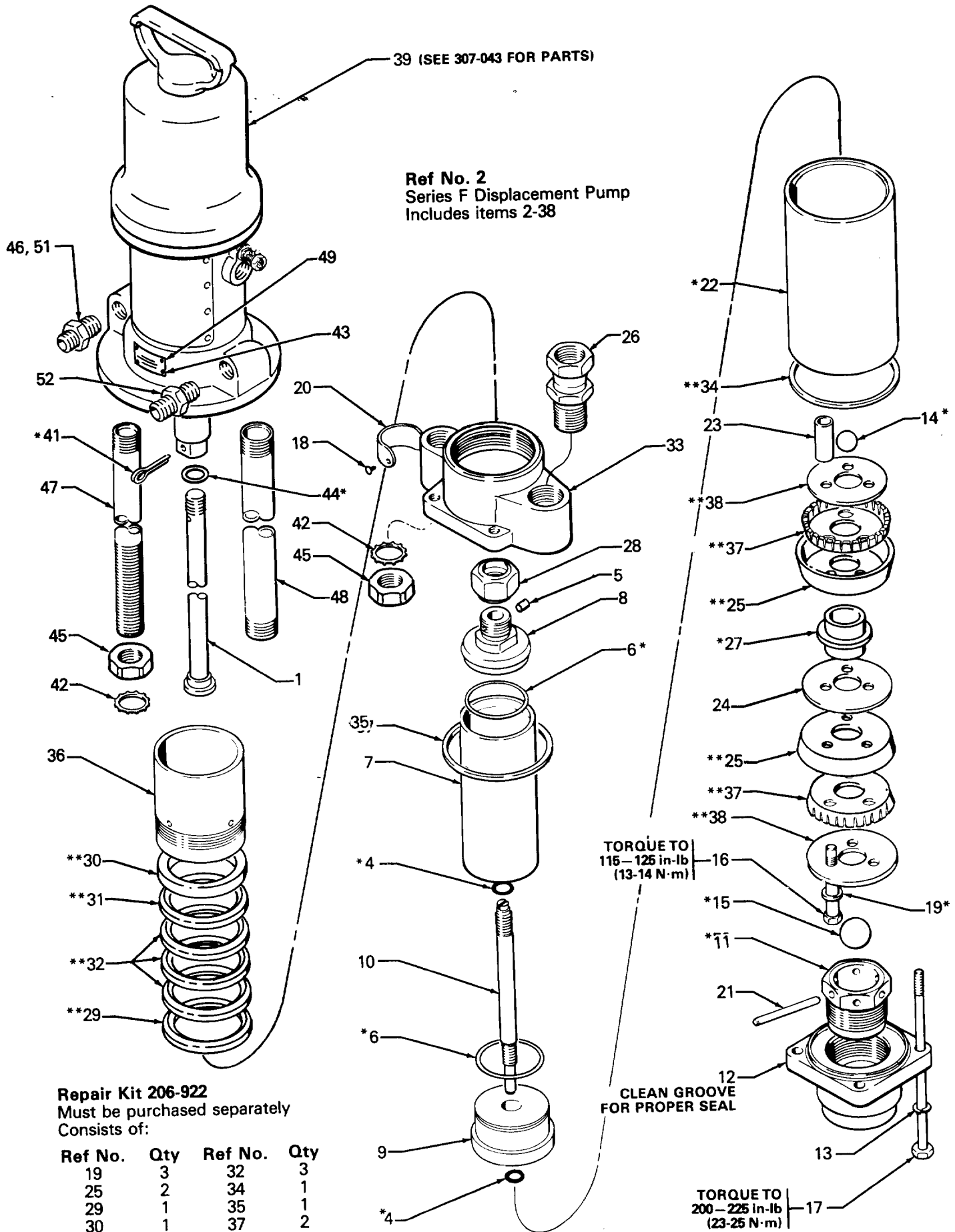


Fig 6

PARTS DRAWING

39 (SEE 307-043 FOR PARTS)

Ref No. 2
Series F Displacement Pump
 Includes items 2-38



Repair Kit 206-922
 Must be purchased separately
 Consists of:

Ref No.	Qty	Ref No.	Qty
19	3	32	3
25	2	34	1
29	1	35	1
30	1	37	2
31	1	38	2

TORQUE TO
 115 - 125 in-lb
 (13-14 N·m)

CLEAN GROOVE
FOR PROPER SEAL

TORQUE TO
 200 - 225 in-lb
 (23-25 N·m)

PARTS LIST

Model 204-117 Series D 2:1 MONARK PUMP; 55 gal. size
Includes items 1-50

Model 207-954 Series D 2:1 MONARK PUMP; 15 gal. mix tank size. Includes items 1-45, 47-52

Model 206-827 Series D 2:1 MONARK PUMP; wall mount size. Includes items 1-45, 47-50

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
1	204-719	ROD, connecting (Model 204-117 only)	1	34	**166-650	.GASKET, aluminum	1
	206-843	ROD, connecting (Model 206-827 only)	1	35	*166-651	.GASKET, aluminum	1
	204-714	ROD, connecting (Model 207-954 only)	1	36	167-711	.NUT, packing; w/wet cup	1
2	206-657	DISPLACEMENT PUMP ASSY		37	**172-580	.SPREADER, packing	2
	Series F	Includes items 3-38	1	38	**171-593	.WASHER, piston	2
3	204-703	.DISPLACEMENT ROD		39	206-955	AIR MOTOR (see 307-043 for parts)	1
		Includes items 4-10	1	41	*100-579	PIN, cotter; 0.109" (2.8 mm) dia; 1" (25.4 mm)	1
4	*160-015	..O-RING, nitrile rubber	2	42	162-648	LOCKWASHER ext, shkprf; 1" (25.4 mm) x 0.062" (1.59 mm) thick	2
5	160-519	..PELLET, nylon lock	1	43	104-088	RIVET, blind	2
6	*161-547	..O-RING, nitrile rubber	2	44	*156-082	O-RING, nitrile rubber	1
7	*161-741	..TUBE, displacement plunger	1	45	160-026	NUT, special lock; 3/4" garden hose thd	2
8	161-742	..CAP, upper	1	46	160-032	NIPPLE, pipe; 3/4 npt	1
9	161-743	..CAP, lower	1	47	160-313	TUBE, return mtg (model 204-117 only)	1
10	161-744	..BOLT, plunger	1		166-723	TUBE, return mtg (model 206-827 only)	1
11	*205-061	.RETAINER & SEAT; intake valve	1		161-756	TUBE, return mtg (model 207-954 only)	1
12	162-644	.HOUSING, intake valve	1	48	160-467	TUBE, supply mtg (model 204-117 only)	1
13	100-133	.LOCKWASHER, spring; 3/8" size	4		166-724	TUBE, supply mtg (model 206-827 only)	1
14	*100-279	.BALL, steel; 0.875" (22.23 mm) dia	1		161-757	TUBE, supply mtg (model 207-954 only)	1
15	*101-178	.BALL, steel; 1.25" (31.8 mm) dia	1	49	172-446	PLATE, designation	1
16	101-529	.SCREW, hex hd cap; 3/8-16 x 2.75" (70 mm)	3	58	157-191	ADAPTER, 1/2 npt(m) x 3/4 npt(m) (model 207-954 only)	1
17	102-292	.SCREW, hex hd cap; 3/8-16 x 7.50" (180 mm)	4	59	158-555	NIPPLE, reducing; 1" npt x 3/4 npt (model 207-954 only)	1
18	102-641	.SCREW, type "T" self tap; No. 6-32 x 0.312" (8 mm)	2				
19	*150-540	.WASHER, copper	3				
20	150-707	.PLATE, serial	1				
21	160-006	.PIN, ball stop	1				
22	*180-935	.CYLINDER	1				
23	160-016	.SPACER, piston	3				
24	160-019	.WASHER, back-up	1				
25	**160-020	.PACKING, cup; leather	2				
26	160-022	.UNION, str. swivel; 1" npt(mxf)	1				
27	*160-068	.SEAT, piston valve	1				
28	160-502	.NUT, coupling	1				
29	**165-944	.GLAND, male packing	1				
30	**165-945	.GLAND, female packing	1				
31	**166-165	.V-PACKING, Teflon	1				
32	**166-489	.V-PACKING, leather	3				
33	166-491	.HOUSING, pump	1				

307 number in descriptions refers to separate instruction manuals.

*Recommended "tool box" spare parts. Keep on hand to reduce down time.

**Supplied in repair kit 206-922.

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

SERVICE INFORMATION

Listed below by the assembly changed are OLD, NEW, ADDED and DELETED parts.

ASSEMBLY CHANGED	PART STATUS	REF NO	PART NO.	NAME
206-657 Disp. Pump Series to F	OLD		205-063	Housing
	NEW	12	162-644	Housing
	OLD		160-007	Cylinder
	NEW	22	180-935	Cylinder
	OLD		171-589	Spreader
	NEW	37	172-580	Spreader
	ADDED (2)	23	160-016	Spacer*
204-117, 206-827 and 207-954 Pumps Series to D	DELETED	40	100-078	Screw
	OLD		101-527	Lockwasher
	NEW	42	162-648	Lockwasher
	OLD		102-556	Rivet
	NEW	43	104-088	Rivet
	OLD		160-637	Plate
	NEW	49	172-446	Plate
	DELETED	50	162-400	Plate
	DELETED	51	204-720	Rod
	DELETED	52	161-184	Tube
DELETED	53	161-185	Tube	

INTERCHANGEABILITY NOTE: NEW parts replace OLD parts listed directly above them.

DISCONTINUED PRODUCT NOTE: Model 204-364 has been discontinued. It is superseded by Model 204-117 and 14.5 in. (368.3 mm) carbon steel riser tube 169-593. Riser tubes 204-149 and 203-818 are no longer available as accessories.

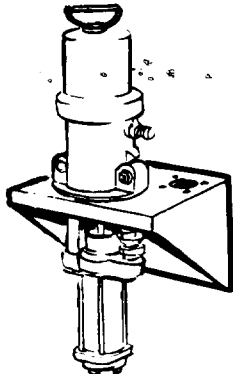
*The number in parentheses in the Parts Status column indicates the quantity added.

ACCESSORIES

(Must be purchased separately)

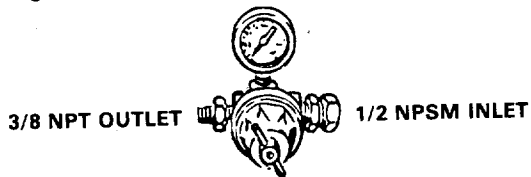
PUMP MOUNTING BRACKET 206-220

For mounting pump to wall.
See manual 306-783.



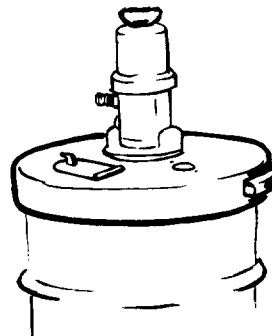
AIR REGULATOR & GAUGE 202-858

300 psi (21 bar) MAXIMUM WORKING PRESSURE
For controlling volume of air to pump. See manual 307-204.



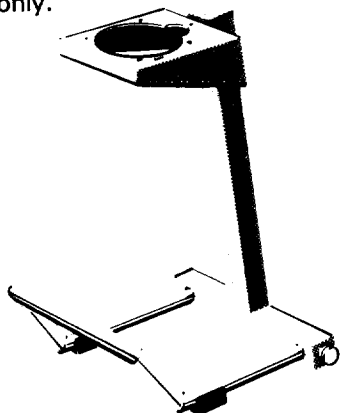
DRUM COVER 203-723

For mounting pumps in open head 55 gallon drums.



PUMP MOUNTING STAND 208-211

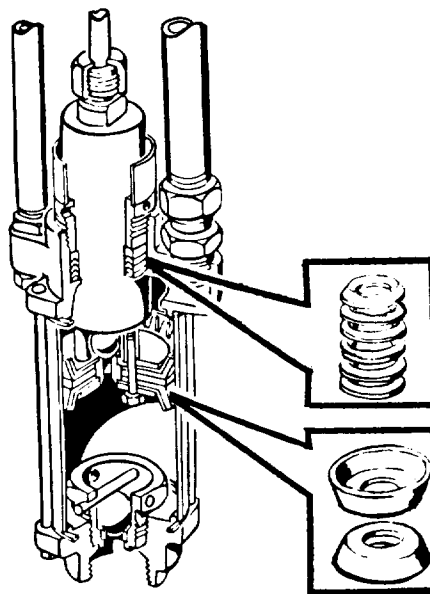
For pump model 206-827 only.
See manual 306-988.



TEFLON PACKINGS

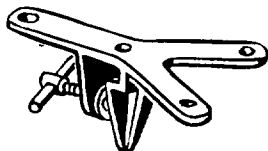
For use when pumping materials which attack leather.
Install as shown.

166-165 Teflon v-packing. Six required at throat.
162-870 Teflon cup packing. Two required at piston.



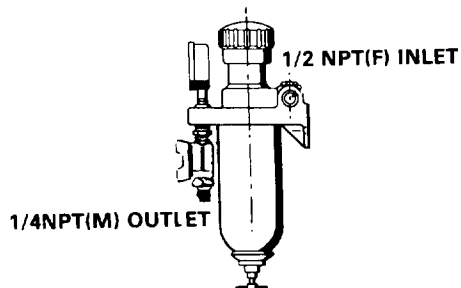
STURDI-CLAMP 203-813

Holds pump securely to side of open head drum. See manual 306-487.



AIR FILTER & REGULATOR 202-660

180 psi (12 bar) MAXIMUM WORKING PRESSURE
Removes harmful dirt and moisture from compressed air supply and regulates air to pump. See manual 306-273.



THROAT SEAL LIQUID

Non-evaporating solvent for wet-cup.

206-995 1 quart (0.95 liter)
206-996 1 gallon (3.8 liter)



ACCESSORIES (Continued)

FILTER (AIR or PAINT) 202-271

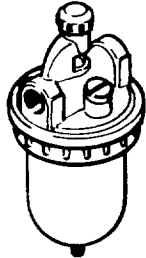
750 psi (52 bar) MAXIMUM WORKING PRESSURE
With 60 mesh element
3/8 npt inlet & outlet



AIR LINE OILER

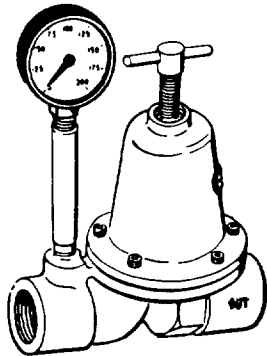
250 psi (17.5 bar) MAXIMUM WORKING PRESSURE

214-848 1/2 npt inlet & outlet
214-849 3/4 npt inlet & outlet



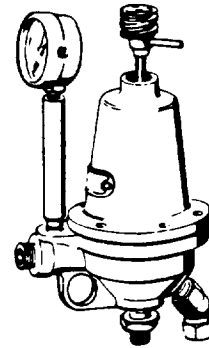
BACK PRESSURE REGULATOR 206-019

180 psi (12 bar) MAXIMUM WORKING PRESSURE
1" npt inlet & outlet



FLUID PRESSURE REGULATOR 203-831

250 psi (18 bar) MAXIMUM INBOUND PRESSURE
0-60 psi (0-4 bar) REGULATED PRESSURE



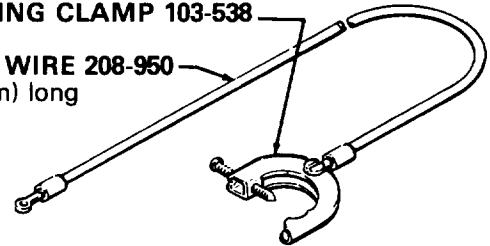
BLEED-TYPE MASTER AIR VALVE (REQUIRED)

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
107-142 1/2 npt(m x f) inlet & outlet

GROUNDING CLAMP 103-538

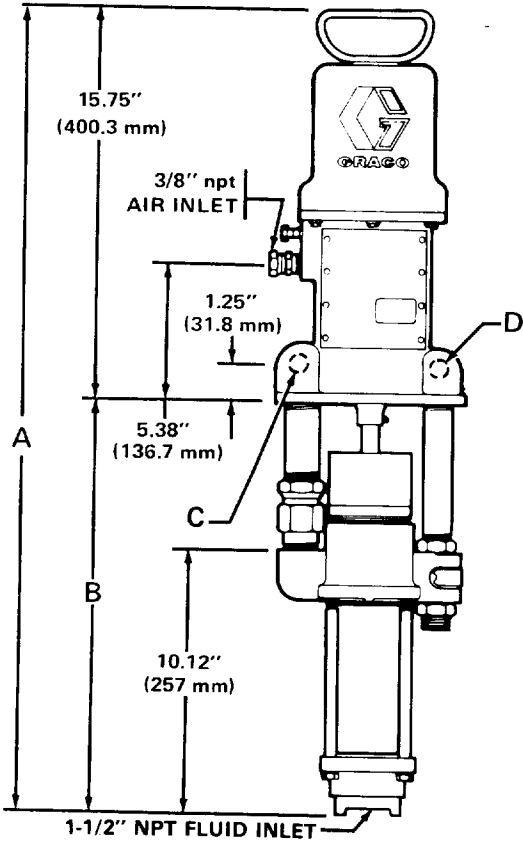
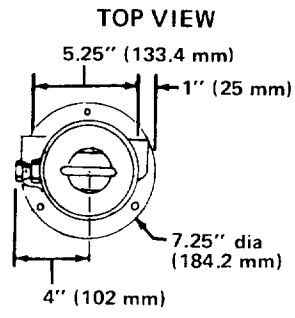
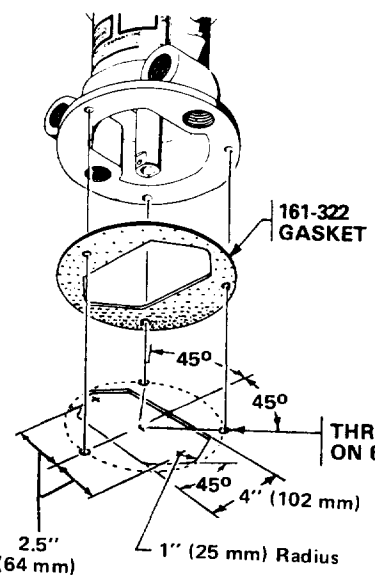
GROUND WIRE 208-950
25 ft (7.6 m) long



DIMENSIONAL DRAWING

PUMP NO.	A OVERALL LENGTH	B DISPL PUMP LENGTH	C FLUID OUTLET	D FLUID RETURN	WEIGHT
204-117	48.25" (1125 mm)	32.50" (826 mm)	1" NPT(F)	3/4 NPT(M)	36 lb (16.3 kg)
206-827	31.75" (793 mm)	15.88" (403 mm)	1" NPT(F)	3/4 NPT(F)	33 lb (15 kg)
207-954	43.50" (1105 mm)	27.75" (705 mm)	3/4 NPT(M)	1/2 NPT(M)	35 lb (15.9 kg)

MOUNTING HOLE LAYOUT



TECHNICAL DATA

- Air operating range : *Models 204-117 & 206-827:*
40-120 psi (3-8.3 bar)
- Model 207-954:*
40-180 psi (3-12 bar)
- Air consumption : 2.5 cfm/gal pumped (0.02 m³/min/liter) at 100 psi (7 bar); up to 15 cfm (0.18 m³/min/liter) with pump operated within recommended range
- Pump cycles per gallon (3.8 liter) : 11
- Maximum recommended pump speed : 66 cycles/min; 6 gpm (22.7 liter/min)
- Recommended speed for optimum pump life : 15-25 cycles/min; approx 2 gpm (7.6 liter/min)
- Wetted parts : Copper, Aluminum, Steel, Zytel, Bronze, Nitralloy, Leather

THE GRACO WARRANTY

Graco Inc. warrants all equipment manufactured by it and bearing its name to be free from defects in material and workmanship under normal use and service. This warranty extends to the original purchaser for a period of 12 months from the date of purchase and applies only when the equipment is installed and operated in accordance with written factory recommendations. This warranty does not cover damage or wear which, in the reasonable judgment of Graco, arises from misuse, abrasion, corrosion, negligence, accident, substitution of non-Graco parts, faulty installation or tampering.

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 workmanship or material, repairs will be made at a reasonable charge and return transportation will be charged.

THIS LIMITED WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES (EXPRESS OR IMPLIED) INCLUDING WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND OF ANY NON-CONTRACTUAL LIABILITIES INCLUDING PRODUCT LIABILITIES BASED ON NEGLIGENCE OR STRICT LIABILITY. EVERY FORM OF LIABILITY FOR DIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSS IS EXPRESSLY EXCLUDED AND DENIED.

EQUIPMENT NOT COVERED BY GRACO WARRANTY. Accessories or components of equipment sold by Graco that are not manufactured by Graco (such as electric motors, switches, hose, etc.) are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making such claims.

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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