

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

5:1 MONARK

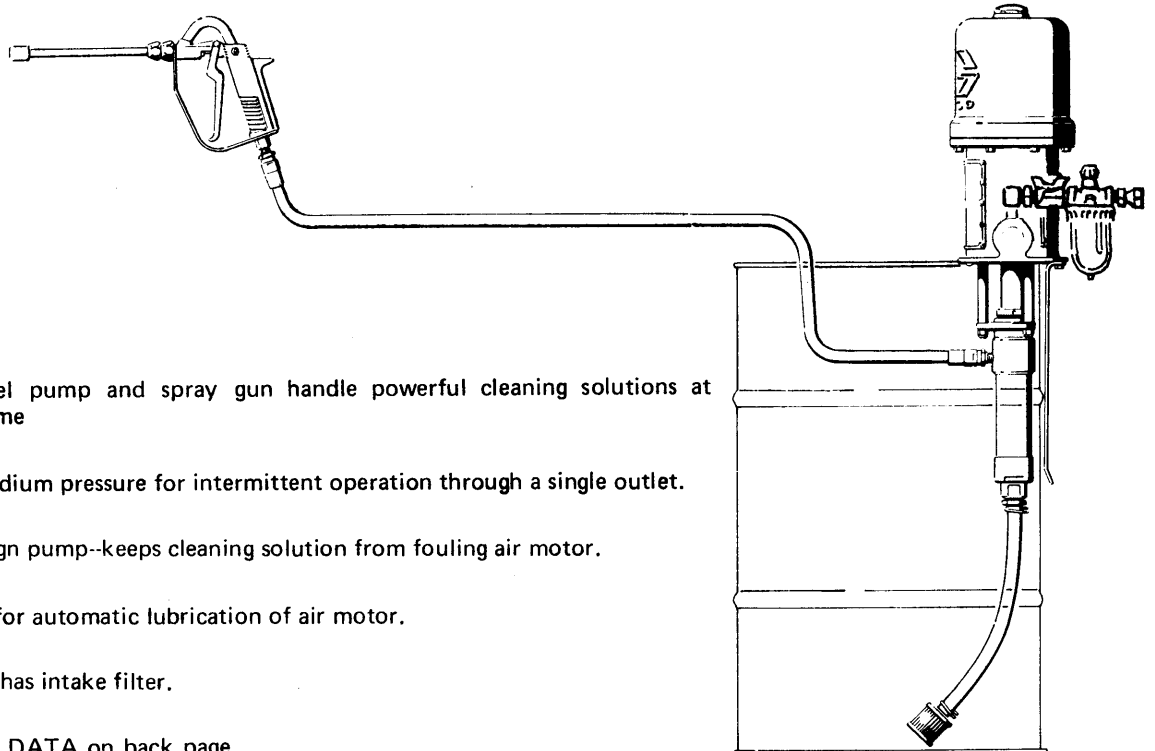
## HYDRA-CLEAN<sup>®</sup> PRESSURE WASHER

FOR MOUNTING ON OPEN 55 GALLON (208.2 litre) SUPPLY DRUM  
(can be wall mounted with accessory bracket -- see page 5)

900 PSI -- 62 bar -- MAXIMUM WORKING PRESSURE

Model 205-985

Model 226-206 (Includes 25 lb (11.34 kg) DIRT-TERGENT)



- Stainless Steel pump and spray gun handle powerful cleaning solutions at medium volume
- Develops medium pressure for intermittent operation through a single outlet.
- Divorced design pump--keeps cleaning solution from fouling air motor.
- Air line oiler for automatic lubrication of air motor.
- Suction tube has intake filter.
- TECHNICAL DATA on back page.

Solution volume and working pressure can be adjusted using accessory tips and air regulator. Fan pattern can be changed to concentrated jet stream using blasting tip. See page 5 for ACCESSORIES.

### CAUTION

The Graco warranty will not apply if abrasive or corrosive materials, other than those Graco recommends are used with this unit.

## INSTALLATION

### CONNECT HOSES AND MOUNT PUMP

Attach suction hose to pump intake housing. See Fig 1. Assemble hanging bracket to pump with the screw provided.

Using Loctite pipe sealant, cat. no. 70-31, connect hose to pump outlet and nozzle to spray gun. Connect the oiler assembly to pump inlet -- use pipe sealer -- and hang pump on cleaning solution drum.

#### NOTE

The filter on the suction hose should be about 1/2 in. off the bottom of the drum. If the hose is too long, cut it off as necessary.

Close the air valve, then connect your 1/2 ID (min) air supply hose to the 1/2 NPSM (F) inlet union -- don't use thread sealer. Install accessory air filter and water separator to remove excessive moisture that could cause air motor icing. Pour high quality SAE 10 into oiler until oil reaches level mark on sight glass.

#### CAUTION

Oils containing phosphate ester or chlorinated hydrocarbons are not compatible with the plastic bowl of oiler -- be sure oil used to lubricate the compressor is free of these additives also.

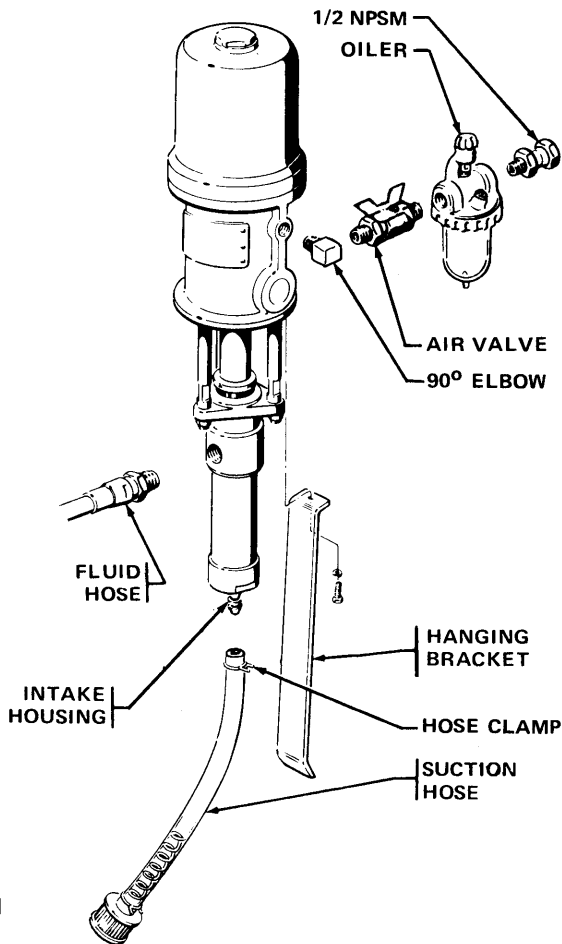


Fig 1

## OPERATION

#### WARNING

KEEP CLEAR OF NOZZLE. HIGH PRESSURE at tip can cause serious injury. Never point the gun at yourself or anyone else.

Prepare cleaning solution according to manufacturer's instructions, observing all safety precautions. Thoroughly mix powdered cleaners in a separate bucket of hot water before adding to water in supply drum. Undissolved powder is extremely abrasive, and may damage stainless steel surfaces in pump.

#### WARNING

Take care not to get spray containing cleaning chemicals into eyes, ears or nose. If any does get on your skin or in your eyes, flush immediately and thoroughly with water. Seek immediate medical attention for eyes.

To prime system, open main air supply valve, hold spray valve open and slowly open air valve until pump is running slowly. Once system is primed, pump will start and stop as the spray valve is opened or closed. Pump speed is controlled by the incoming air pressure. Always use the lowest pressure needed to get the results you want. Adjust oiler so that about 1 drop an hour is going through sight glass. Refer to separate oiler instructions.

#### NOTE

Protect surfaces that might be damaged by the cleaning solution and rinse before solution dries on surfaces. You can clean stubborn dirt off better with a stronger, heated solution.

### USEFUL HINTS

Hold the spray nozzle about 2 feet from the surface and completely mist-wet the object you are cleaning. Let it soak briefly, then use the spray to "chisel" the dirt off -- keep the nozzle about 6 in. from, and at an angle to the surface. If some dirt remains, wet the surface again. Let it soak a little longer, then hold the nozzle as close as possible so the spray will blast the dirt off.

After all the dirt is cleaned off, rinse all the solution off with clear, cold water. When you are through cleaning, close air petcock and open the spray valve to relieve pressure.

### SHUTDOWN AND CARE OF UNIT

When shutting down for the day or weekend, shut off main air supply and relieve pressure. Rinse all solution off the equipment with clear, cold water. Shut off water supply valve and relieve water pressure.

#### CAUTION

DON'T run the pump dry! Keep liquid in the container at all times to prevent pump from running away. Costly damage will result if this happens.

Check air line oiler often and keep it filled with oil. Also check pump packing nut regularly and keep it just tight enough to stop leakage -- no tighter. Use a 1/4 in. dia. rod to tighten.

#### WARNING

ALWAYS RELIEVE HIGH PRESSURE in spray unit before removing any part (including tip) for cleaning or servicing and when spraying is discontinued.

## SERVICE

Proper packing nut take-up will stop leakage. However, we recommend that after each 1000 hours of operation or delivery of 120,000 gallons of solution at 2 gpm, you replace all the packings in the fluid displacement pump. Use repair kit 206-923.

## TROUBLESHOOTING CHART

Before taking spray valve or pump apart, check all possible remedies in TROUBLESHOOTING CHART.

WHAT'S WRONG	WHY and WHAT TO DO
Excessive surge at spray nozzle	Obstructed spray tip, valve or hose (clean, clear)
Fluid leaking from valve actuating pin	Cleaning solution supply gone (fill-see CAUTION pg. 2)
Valve won't stop fluid spray	Loose packing nut or actuating pin packings worn (see 307-010)
Valve won't stop pump	Valve adjustments not right (Adjust-see 307-010)
Pump operating but spray pressure low on up stroke	Dirty or worn valve stem or seat (clean, clear or replace; see 307-010)
on down stroke	Dirty or worn fluid piston or packings*
on both strokes	Clogged intake filter, kinked or collapsed suction hose (clean, unkink)
Fluid won't come from pump (hose removed)	Dirty or worn fluid intake valve (clean, clear or replace)
Will not spray	Restricted air line (check for closed valve; use larger supply hose)
	Pump throat packing nut too tight (loosen)
	Loose packing nut or worn packings* (tighten, replace)
	Pump air motor not working (Service-see 307-043)

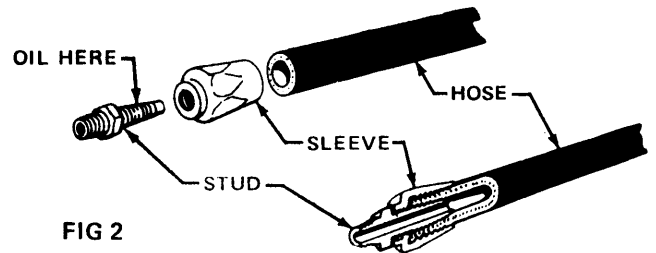
## HOSE REPAIR

To repair hose take reusable coupling off damaged hose by reversing installation steps (2) & (3) below. Then install coupling.

(1) Cut damaged part of hose off square so it will bottom flat on shoulder in sleeve.

(2) Clamp hose in vise so that end is no more than 1½ times sleeve length from vise. Then screw sleeve onto hose counterclockwise until hose bottoms. See Fig 2.

(3) Clamp sleeve in vise; oil stud lightly; screw stud clockwise into sleeve; tighten stud snugly against sleeve. Refer to Fig 2.



Shut off air, relieve pressures and remove pump from mounting.

### INTAKE VALVE

Unscrew intake valve from cylinder and remove valve. See Fig 3. Remove the ball stop pin and clean and inspect all parts for wear or damage. Check the seat in housing for nicks. Replace parts as necessary and reassemble. Be sure to replace the ball stop pin in the proper holes.

### PISTON

Remove intake valve (above). Remove cotter pin from air motor connecting rod and screw displacement rod from connecting rod.

Loosen the packing nut and push the displacement rod down until the piston clears the cylinder. Grasp piston and pull it and displacement rod from bottom of cylinder.

Remove the ball stop pin and use a 1/2 in. dia. pin in the large holes to screw piston housing off displ. rod. See Fig 3. Clean all parts and inspect for wear or damage, replacing parts as necessary. Unscrew the cylinder from the housing. Check the o-ring in the outlet housing and inside surface of displacement cylinder. Use "Teflon" tape on threads when reassembling pump. Be sure to replace the ball stop pin in the proper hole.

### THROAT PACKINGS

Remove intake valve and displacement rod (above). Screw the packing nut out of outlet housing and take the packings and glands out. Check the displacement rod for scratches or marring. Replace the glands and bearings, even if they appear to be good. Don't overtighten the packing nut when reassembling. The packing nut should be just tight enough to stop leakage -- no tighter.

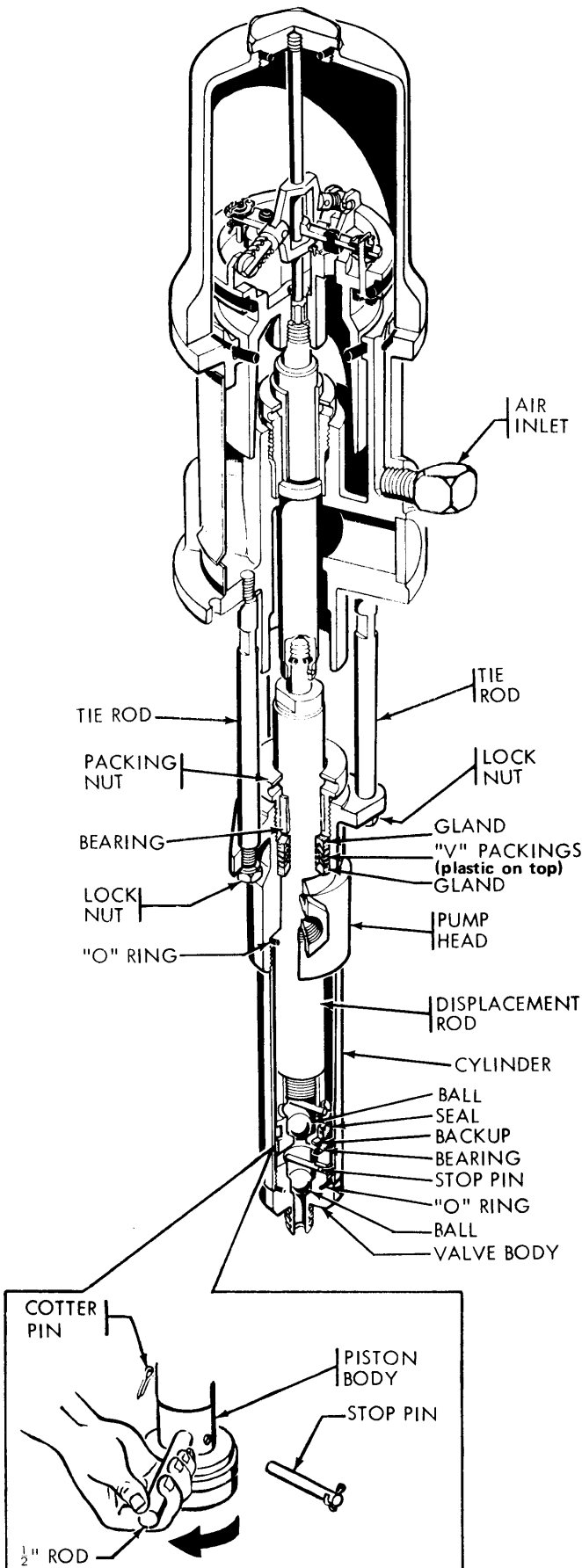
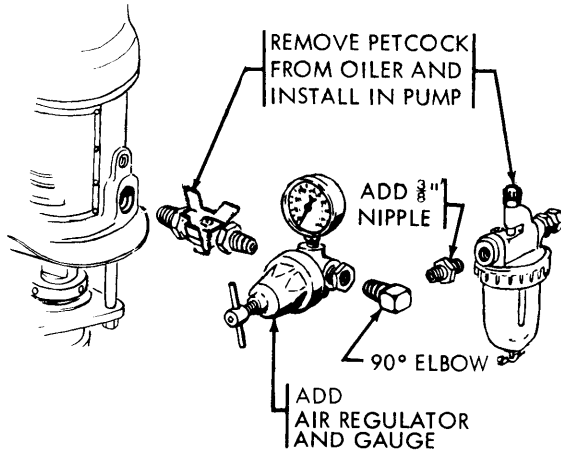


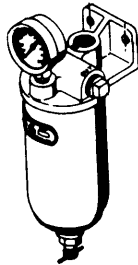
Fig 3

**ACCESSORIES (must be purchased separately)**

**202-156  
AIR REGULATOR (0-200 PSI)**

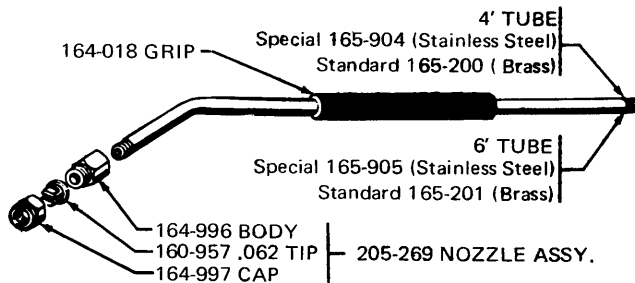


**203-421  
AIR FILTER and WATER SEPARATOR**



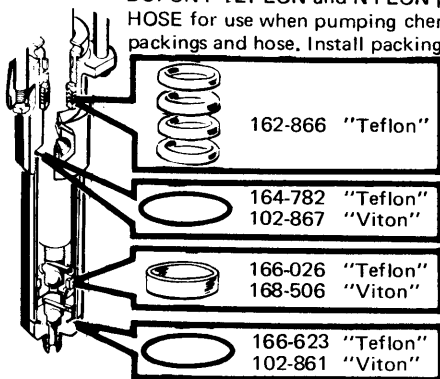
**SPRAY NOZZLE EXTENSIONS**

- 205-910 (4' Brass tube)
- 205-911 (6' Brass tube)



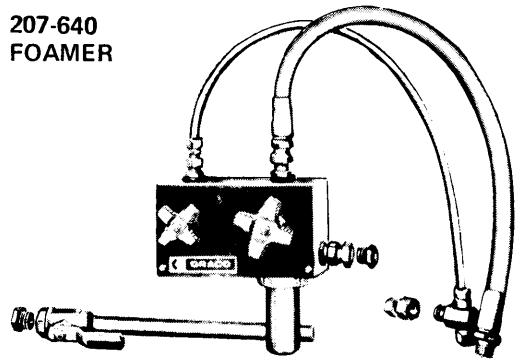
**TEFLON and NYLON PACKINGS and NYLON HOSE**

DUPONT TEFLON and NYLON packings and NYLON HOSE for use when pumping chemicals harmful to rubber packings and hose. Install packings as shown.



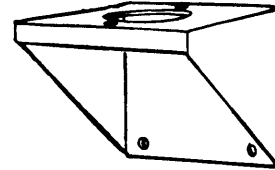
206-781 40' NYLON HOSE  
1/4" NPT (MBE) STAINLESS STEEL COUPLINGS

**207-640  
FOAMER**

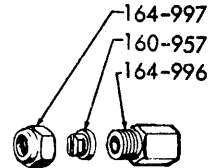


Foam adheres to vertical and under surfaces extending soaking action of cleaning agent.

**206-778  
WALL MOUNTING BRACKET**



**205-269 NOZZLE**



**STAINLESS STEEL SPRAY TIPS**  
(for extensions 205-910 & 205-911 and nozzle 205-269)

TIP NO.	ORIFICE SIZE	SPRAY ANGLE	AIR SUPPLY TO PUMP							
			100 PSI			150 PSI				
			GPM	CFM	WP	GPM	CFM	WP		
164-435	.043	40°								
160-951	.043	65°	.8	6.5	335	1.0	11	475		
160-964	.043	25°								
164-434	.052	25°								
164-436	.052	40°	1.2	9.5	290	1.4	15	425		
164-438	.052	65°								
160-950	.062	65°								
160-957*	.062	40°								
160-963	.062	25°	1.5	12	253	1.8	19	375		
160-969	.062	15°								

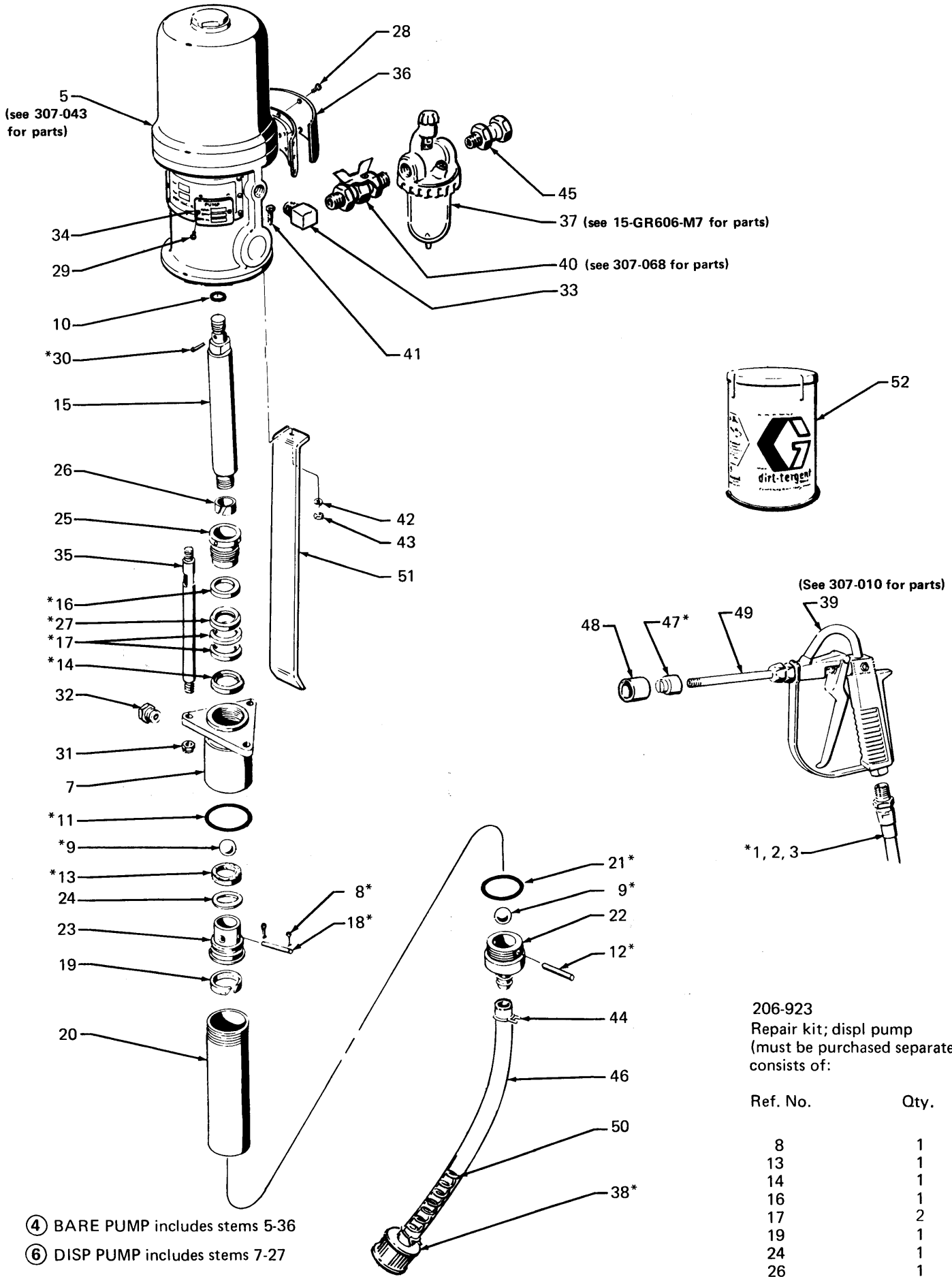
**KEY TO PERFORMANCE CHARTS**

GPM: Gallons Per Minute  
CFM: Cubic Feet Per Minute  
PSI: Pounds Per Square Inch  
WP: Working Pressure in PSI

**STAINLESS STEEL BLASTING TIPS**

TIP NO.	ORIFICE SIZE	TIP NO.	ORIFICE SIZE
102-442	.067	102-448	.107
102-444	.078	102-450	.125
102-446	.086		

PARTS DRAWING



④ BARE PUMP includes stems 5-36  
 ⑥ DISP PUMP includes stems 7-27

206-923  
 Repair kit; displ pump  
 (must be purchased separately)  
 consists of:

Ref. No.	Qty.
8	1
13	1
14	1
16	1
17	2
19	1
24	1
26	1
27	1

\*SUGGESTED REPLACEMENT PARTS

# PARTS LIST

Model 205-985 5:1 MONARK HYDRA-CLEAN includes items 1-51				Model 226-206 5:1 MONARK HYDRA-CLEAN includes items 1-52			
REF. NO.	PART NO.	DESCRIPTION	QTY.	REF. NO.	PART NO.	DESCRIPTION	QTY.
1	* 205-174	HOSE, material; cpld 1/4 npt (mbe); 1/4 ID; 40 ft (12.2 m) lg	1	29	100-203	. SCREW, type "z" self tap; no. 4 x 5/16	2
2	162-862	. STUD, reusable coupling	2	30	* 101-946	. PIN, cotter; 1/8 dia; 1 1/2 lg; stainless steel	1
3	162-938	. SLEEVE, reusable coupling	2	31	102-021	. LOCKNUT, hex; 3/8-16 thd size; stainless steel	3
4	205-638	5:1 MONARK PUMP includes items 5-36	1	32	102-022	. BUSHING, hex; 1/2 npt x 1/4 npt	1
5	205-997	. AIR MOTOR see 307-043 for parts	1	33	155-699	. ELBOW, 90° street; 3/8 npt	1
6	206-000	. DISPLACEMENT PUMP Assy Series "D" includes items 7-27	1	34	160-637	. PLATE, serial	1
7	205-999	. HOUSING, outlet	1	35	165-297	. ROD, tie	3
8	* 100-063	. PIN, cotter; 1/16 dia; 1" lg; stainless steel	2	36	168-838	. PLATE, name	1
9	* 101-917	. BALL; 7/8 dia; stainless steel	2	37	206-243	AIR LINE OILER see IS-GR606 M7 for parts	1
10	156-082	. O-RING; nitrile rubber	1	38	* 206-300	FILTER, suction hose	1
11	* 162-942	. O-RING; nitrile rubber	1	39	208-007	SPRAY GUN see 307-010 for parts	1
12	* 162-947	. PIN, ball stop	1	40	208-393	BALL VALVE (see 307-068 for parts)	1
13	* 164-627	. SEAL, rubber	1	41	102-023	SCREW, hex hd cap; 1/4-20 x 3/4	1
14	* 164-837	. GLAND, male	1	42	102-024	LOCKWASHER, spring; 1/4"; stainless steel	1
15	165-285	. ROD, displacement	1	43	102-025	LOCKNUT, hex; 1/4-20 thd size; stainless steel	1
16	* 165-288	. GLAND, female	1	44	102-123	CLAMP, hose; self tightening	2
17	* 165-289	. V-PACKING; nitrile rubber	2	45	162-505	UNION, str swivel; 3/8 npt (m) x 1/2 npsm (f)	1
18	165-291	. PIN, ball stop	1	46	162-950	HOSE, plastic; 3/4 ID; 29" (737 mm) lg	1
19	* 165-292	. BEARING, "Teflon"	1	47	* 162-980	NOZZLE, spray; .062 orifice; 50° fan angle	1
20	165-294	. CYLINDER	1	48	162-981	GUARD, spray nozzle	1
21	* 165-295	. O-RING; nitrile rubber	1	49	164-017	TUBE, spray; 1/4 npt (m); 10" lg	1
22	165-296	. HOUSING, intake valve	1	50	164-085	SPRING, reinforcing	1
23	166-510	. HOUSING, piston	1	51	165-280	BRACKET, pump mounting	1
24	166-512	. BACKUP; "Teflon" washer	1	52	162-804	DIRT-TERGENT; 25 lb (11.34 kg)	1
25	168-284	. NUT, packing	1				
26	168-285	. BEARING, sleeve	1				
27	* 170-625	. V-PACKING; polyethylene	1				
28	100-078	. SCREW, rd hd mach; no. 8-32 x 3/8	8				

### \*SUGGESTED REPLACEMENT PARTS

NOTE: 307 Numbers in descriptions refer to separate instruction manuals.

Order parts by number and name. Also give series letter and model number for which parts are ordered. Call or write your Graco distributor, nearest Graco factory branch or service depot for parts or service.

## SERVICE INFORMATION

Listed below by the assembly changed are OLD and NEW part.

ASSEMBLY CHANGED	PART DESIGNATION	REF NO.	PART NO.	NAME
BOTH	OLD		202-338	Petcock
FINAL Assy	NEW	40	208-393	Ball Valve

INTERCHANGEABILITY NOTE: NEW part replaces OLD part.