INSTRUCTIONS–PARTS LIST

307–744
Rev. C
Supersedes B

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

SAFETY MIX TANKS

For closed circulating system

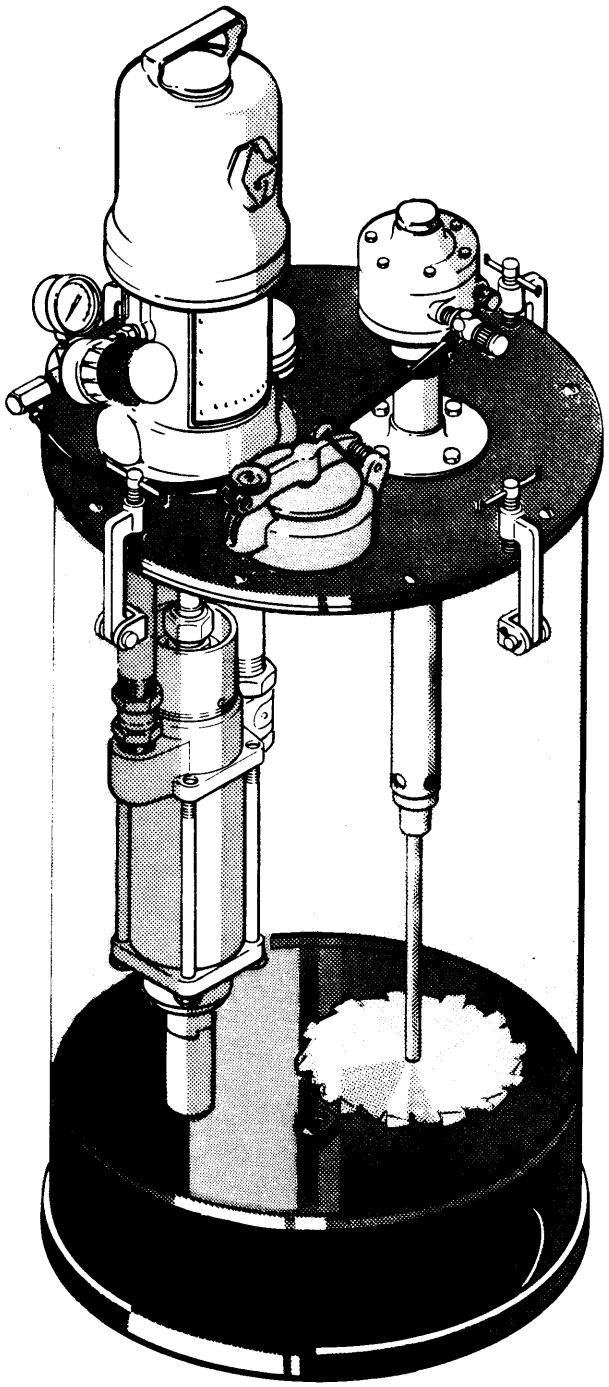
30 Gallon (114 liter) Stainless Steel Mix Tanks
Model 231–107, Series A
with 1.5:1 Ratio Monark® Pump
180 psi (12 bar) MAXIMUM WORKING PRESSURE

Model 230–989, Series A
with 3:1 Ratio President™ Pump
360 psi (25 bar) MAXIMUM WORKING PRESSURE

15 Gallon (57 liter) Stainless Steel Mix Tanks
Model 230–990, Series A
with 1.5:1 Ratio Monark® Pump
180 psi (12 bar) MAXIMUM WORKING PRESSURE

Model 230–991, Series A
with 3:1 Ratio President™ Pump
360 psi (25 bar) MAXIMUM WORKING PRESSURE

15 Gallon (57 liter) Carbon Steel Mix Tanks
Model 230–994, Series A
with 1.5:1 Ratio Monark® Pump
180 psi (12 bar) MAXIMUM WORKING PRESSURE



CONTENTS

GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440–1441

WARNING

FOR PROFESSIONAL USE ONLY. OBSERVE ALL WARNINGS.

Read and understand all instruction manuals before operating equipment.

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 including splashing in the eyes or on the skin, 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.

Read and follow the fluid and solvent manufacturer's literature regarding the use of protective clothing and equipment.

System Pressure

The systems powered by a 3:1 President pump can develop *360 psi (25 bar) MAXIMUM WORKING PRESSURE* at 120 psi (8 bar) maximum air pressure to the pump.

The systems powered by a 1.5:1 Monark pump can develop *180 psi (12 bar) MAXIMUM WORKING PRESSURE* at 120 psi (8 bar) maximum air pressure to the pump.

Be sure that all spray equipment and accessories are rated to withstand the maximum working pressure of this sprayer. DO NOT exceed the maximum working pressure of any component or accessory used 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 on the back cover and in the separate component manuals. Always read the fluid and solvent manufacturer's literature before using them in this sprayer.

Pressure Relief Procedure

To reduce the risk of serious bodily injury, including splashing in the eyes or onto the skin, or injury from moving parts, always follow this procedure whenever you shut off the pump, when checking or servicing any part of the spray system, when installing, cleaning or changing fluid tips, and whenever you stop spraying.

1. Shut off the air to the pump.
2. Close the bleed-type master air valve (required in your system).
3. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
4. Open the drain valve (required in your system), having a container ready to catch the drainage.
5. Leave the drain valve open until you are ready to spray again.

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

FIRE OR EXPLOSION HAZARD

Static electricity is created by the high velocity flow of fluid through the pump and hose. When the static electricity is discharged, sparking occurs. Sparks can ignite fumes from solvents, the fluid being sprayed, dust particles, and other flammable substances, resulting in fire or explosion and serious bodily injury.

In low flow airspray systems, static sparking is generally not a problem; however, some simple precautions should be taken to reduce the risk. Check your local code for detailed grounding instructions for your area and type of equipment, and ground all of this equipment:

1. *Pump:* use a ground wire and clamp as instructed to the right.
2. *Air Compressor:* according to manufacturer's recommendations.
3. *Object being sprayed,* if it is conductive; according to local code.
4. *All solvent pails used when flushing,* according to local codes. Use only metal pails, which are conductive. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts the grounding continuity.
5. *Fluid supply container:* according to local code.
6. To maintain grounding continuity when flushing or relieving pressure, always hold a metal part of the gun firmly to the side of a grounded metal pail, then trigger the gun.

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

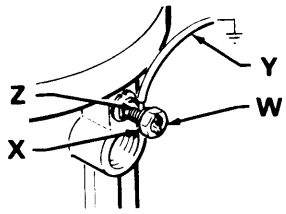


Fig 1

Flushing Safety

To reduce the risk of injury from splashing or static sparking, always hold a metal part of the spray gun firmly to the side of a grounded metal pail, and use the lowest possible fluid pressure when flushing.

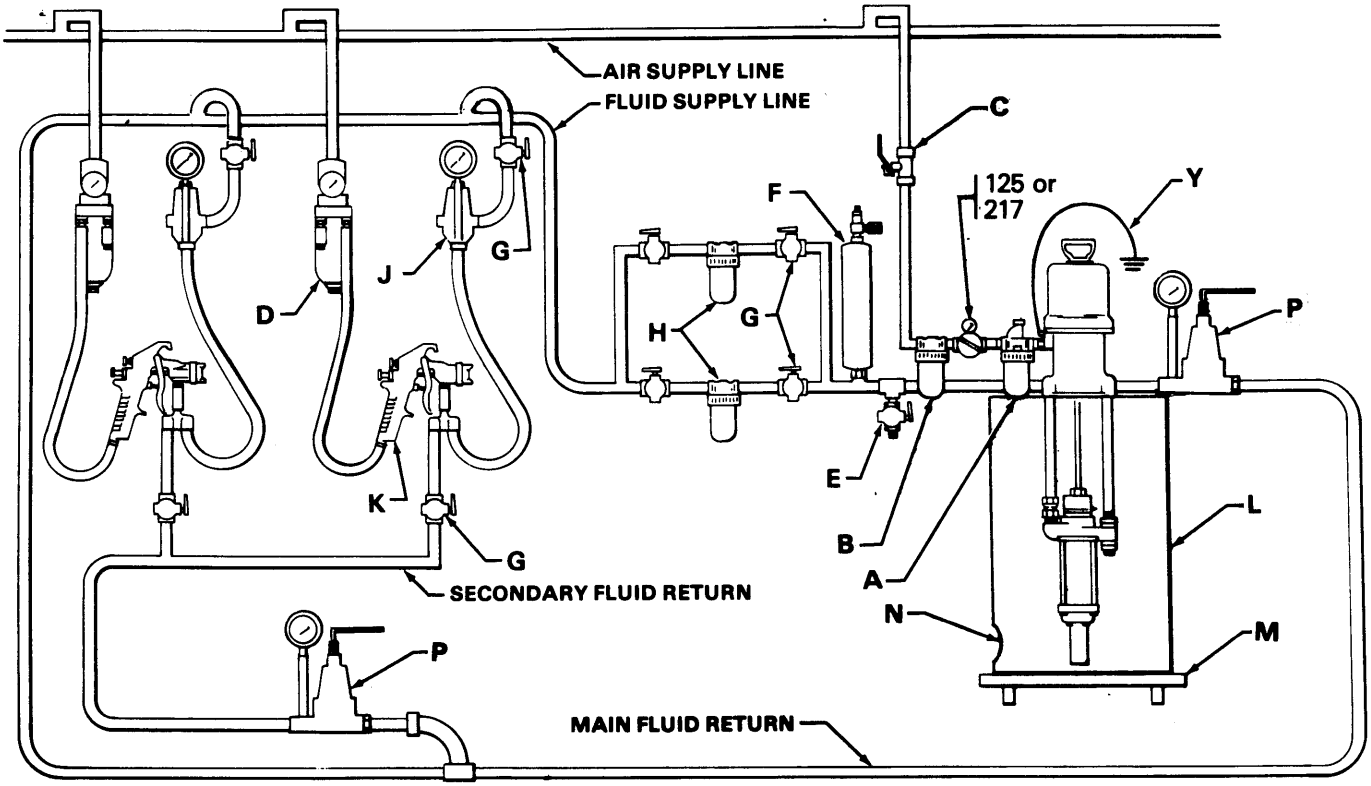
MOVING PARTS HAZARD

Moving parts can pinch or amputate your fingers or other body parts. KEEP CLEAR of moving parts when starting or operating the pump. NEVER operate the pump with the air motor plates removed. Follow the **Pressure Relief Procedure** above to prevent the pump from starting accidentally.

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



NOTE: The agitator supplied with these systems is not shown in this drawing. Refer to Fig 2.

KEY

A	Air Line Oiler	G	Shutoff Valve	N	Drain Access Hole
B	Air Filter to Pump	H	Fluid Filter	P	Back Pressure Valve
C	Bleed-type Master Air Valve	J	Fluid Pressure Regulator	Y	Ground Wire
D	Air Filter/Regulator to Gun	K	Air Spray Circulating Gun	125	Air Regulator (supplied) (Models 231-107 230-989, 230-990, and 230-991)
E	Drain Valve	L	Mix Tank	217	Air Regulator (supplied) (Model 230-994)
F	Surge Tank	M	Portable Tank Cart		

INSTALLATION

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

Reference numbers 1, 2, and 101 to 158 refer to Models 231-107, 230-989, 230-990, and 230-991. Reference numbers 201 to 228 refer to Model 230-994.

See pages 9 & 10 for accessories that are available from Graco.

The Typical Installation shown above is only a guide for selecting and installing system components. Contact your Graco representative for assistance in designing a system to suit your particular needs.

WARNING

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

The bleed-type master air valve relieves air trapped between this valve and the pump after the air 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.

Install the air line accessories in the approximate order shown in the Typical Installation. For automatic air motor lubrication, install an air line oiler (A) close to the air inlet. Install the air regulator (125 or 217) assembly, an air filter (B) to remove harmful dirt and contaminants from your compressed air supply, and a bleed-type master air valve (C) within easy reach of the pump.

On the air line to each gun, install a filter/regulator (D) assembly.

On the fluid supply line, install a drain valve (E) to help relieve fluid line pressure, and a surge tank (F) to reduce line pulsations. Install two fluid filters (H) with shutoff valves (G) on each side of each filter. This allows you to bypass one filter for cleaning without shutting down the system.

Each fluid supply line to the guns should have a fluid regulator (J) with shutoff valves (G) located approximately as shown.

On each fluid return line, install a back pressure valve (P) after the last gun station, to provide constant system back pressure for all spray guns and proper pressure for fluid circulation.

Be sure all air and fluid hoses are properly sized for your system.

Mount the Tank

NOTE: Refer to Fig 2 for Models 231-107, 230-989, 230-990 and 230-991. Refer to Fig 3 for Model 230-994. Reference numbers for all models are given in the text.

The tank was shipped with a protective coat of oil on the inside. Use a solvent-dampened rag to thoroughly clean the oil from the tank, cover, and other parts. Then wipe dry with a clean, lint-free rag.

If using an accessory cart, position the tank (L) so the drain access hole (N) is to one side.

Install the agitator (153 or 227) on the cover (156 or 226f). Fasten the cover to the top of the tank with the clamps.

Mount the Pump

NOTE: Refer to Fig 2 for Models 231-107, 230-989, 230-990 and 230-991. Refer to Fig 3 for Model 230-994. Reference numbers for all models are given in the text.

On all models except 230-994, screw the fluid intake tube (146) and the fluid return tube (145) onto the displacement pump.

Lower the displacement pump through the mounting hole and fasten it to the cover securely with the screws (116 or 203), lockwashers (120 or 201) and nuts (118).

Install the air regulator (125 or 217) at the pump air inlet. If you are using an air line oiler (A), it must be downstream from the regulator. Screw the swivel union (148 or 219) in the regulator.

Connect one end of the hose (127 or 214) to the air metering valve of the agitator and the other end to the 1/8 npt port of the swivel union (148 or 219).

The fluid supply and return ports are equipped with quick disconnect type couplers. Screw the 1/2 npt nipple (121 or 208) to the pump return port, and the 3/4 npt nipple (123 or 211) to the pump outlet port. Install the 1/2 npt coupler (122 or 209) on the return line at the spray booth station, and the 3/4 npt coupler (124 or 210) on the supply line at the spray booth station.

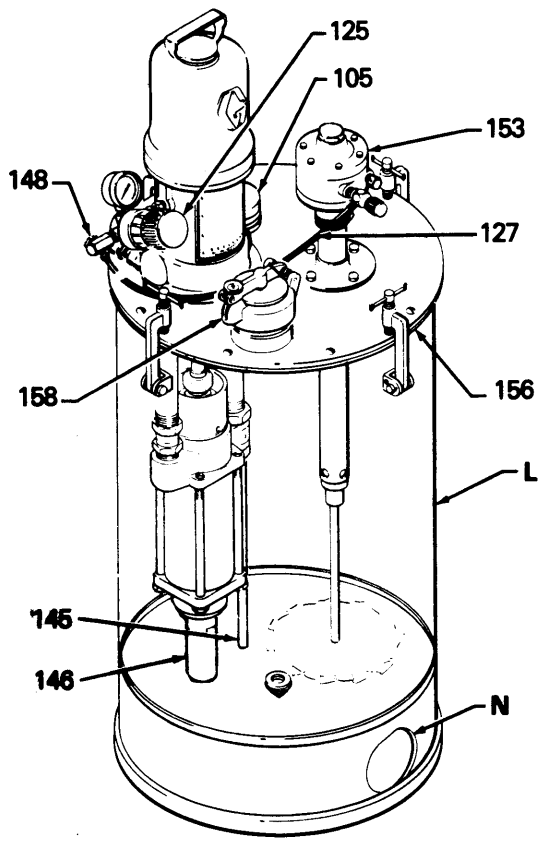
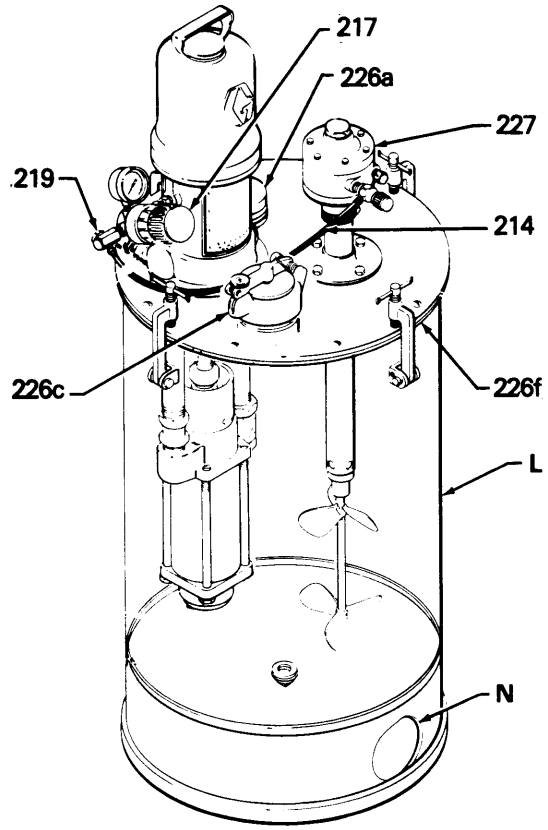


Fig 2



MODEL 230-994 ONLY

Fig 3

OPERATION

1. Fill the tanks through the paint return tube. Refer to Fig 3.
   a. Connect the 1/2" coupler (122 or 209) to the end of your paint room hose.
   b. Pull the sleeve of the coupler back and push the socket onto the return tube nipple (121 or 208).
   c. Start your supply pump and fill the tank. Occasionally lift the inspection cover and check the paint level to keep the tank from overflowing.
   d. When the tank is full, stop the supply pump and uncouple the supply hose.
2. Move the mixing tanks to their stations and uncouple the carts.
3. Couple the fluid hoses to the pump or suction tube.
4. With the air supply shut off, connect the air supply hose to the 1/2 npt(f) inlet of the swivel union (148 or 219).
5. Close the air regulator by turning the knob fully counterclockwise.
6. Open the air supply valve, then slowly open the agitator metering valve until the agitator is running slowly. Refer to the separate agitator instruction manual, supplied, to adjust the speed for mixing.
7. Turn the regulator knob clockwise to increase air pressure until the pump starts.
8. Adjust the back pressure valve (P) so the pump is running slowly. Refer to the separate instruction manual supplied with the valve for adjustment instructions.
9. The pump will circulate fluid through the lines and maintain constant pressure for spraying at all gun stations.
10. Adjust the fluid pressure regulator for each gun's spraying pressure.

NOTE: The pump will automatically speed up as supply demands.

Corrosion Protection for Carbon Steel Pumps

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** at right.

Fig 3

WARNING

Pressure Relief Procedure

To reduce the risk of serious bodily injury, including splashing in the eyes or on the skin, or injury from moving parts, always follow this procedure whenever you shut off the pump, when checking or servicing any part of the spray system, when installing, cleaning or changing fluid tips, and whenever you stop spraying.

1. Shut off the air to the pump.
2. Close the bleed-type master air valve (required in your system).
3. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
4. Open the drain valve (required in your system), having a container ready to catch the drainage.
5. Leave the drain valve open until you are ready to spray again.

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

MAINTENANCE

Clean the Safety Vent (105 or 226a) Often

1. Remove the three wing nuts (Q) and the vent hood (R). See Fig 4.
2. Unscrew the three retaining nuts (S).
3. Remove the top plate (T) and the discs (U and V).
4. Clean the discs thoroughly with a compatible solvent and blow dry with air.
5. Alternately, place a plain flat disc (V), then a dimpled disc (U) onto the base (W) until all are installed.
6. Install the top plate (T). Screw on the retaining nuts (S), install the hood (R), and secure with the wing nuts (Q).

Flushing

WARNING

For your safety, be sure your system is properly grounded to reduce the risk of static sparking which may occur when flushing. Refer to **FIRE OR EXPLOSION HAZARD** on page 1.

1. Flush the entire system regularly and when changing fluids to completely clean the lines and equipment of old paint.
2. Use a separate, clean mixing tank for flushing. Be sure the tank is properly grounded.
3. Unlatch the paint tank safety cover and raise the cover and pump assembly. Run the pump until all paint is forced out of the system.
4. Install the cover assembly onto the solvent tank and clamp down securely.
5. Drain the paint tank and clean thoroughly with solvent.
6. Disconnect the return hose and remove the coupler socket.
7. Place the end of the hose into a waste container.

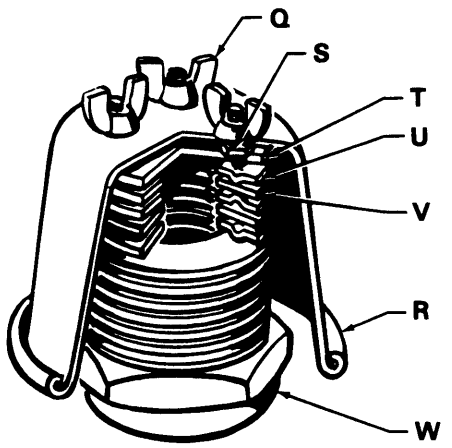


Fig 4

8. Start the pump and let it run until clean solvent is coming out.
9. Screw the coupler socket back onto the hose and connect it to the coupler nipple.
10. Start the pump to circulate clean solvent through the system. Trigger the spray guns to flush each hose and gun.
11. Leave the system filled with the solvent until you are ready to use it again.
12. To force the solvent out of the system, raise the safety cover and pump assembly above the tank so that the pump intake is above the solvent level, then run the pump long enough to force out all solvent.
13. Install the cover on the paint tank and clamp down.
14. Start the pump and adjust the back pressure valve.

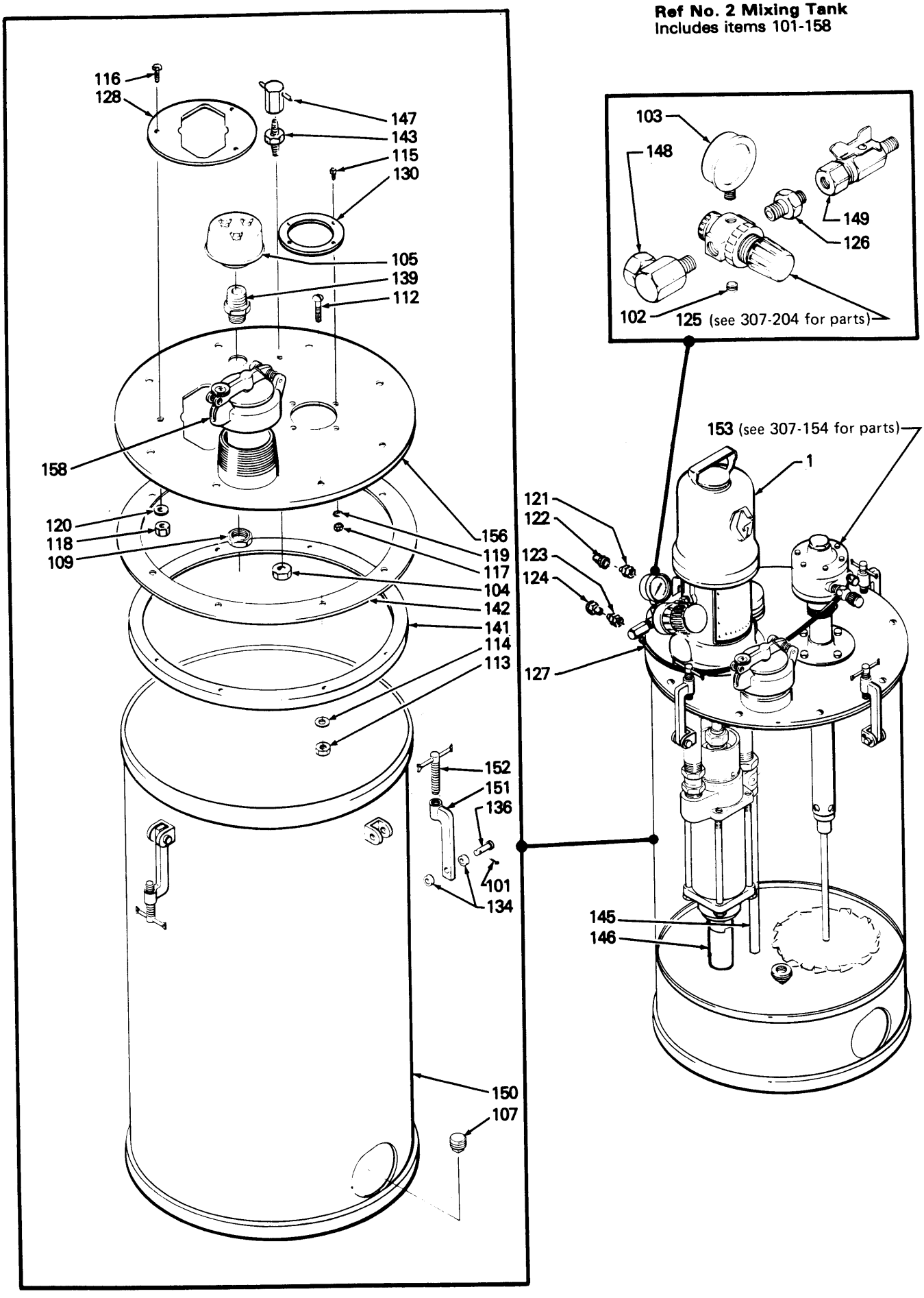
SERVICE

WARNING

For Your Safety, always read and follow all instructions in the instruction manuals provided with this system.

Additional operating instructions and all repair instructions are given in the separate component manuals, supplied.

Ref No. 2 Mixing Tank
Includes items 101-158



STAINLESS STEEL MIXING TANKS AND PUMP ASSEMBLIES

Model 231-107, Series A
1.5:1 Ratio Monark, 30 Gallon System
Includes items 1 and 2

REF NO.	PART NO.	DESCRIPTION	QTY
1	218-794	1.5:1 Ratio Monark Pump; See 307-653 for parts	1
2	210-035	30 Gallon Mixing Tank; See separate parts list	1

Model 230-990, Series A
1.5:1 Ratio Monark, 15 Gallon System
Includes items 1 and 2

REF NO.	PART NO.	DESCRIPTION	QTY
1	218-763	1.5:1 Ratio Monark Pump; See 307-653 for parts	1
2	210-036	15 Gallon Mixing Tank; See separate parts list	1

Model 230-989, Series A
3:1 Ratio President, 30 Gallon System
Includes items 1 and 2

REF NO.	PART NO.	DESCRIPTION	QTY
1	218-795	3:1 Ratio President Pump; See 307-674 for parts	1
2	210-035	30 Gallon Mixing Tank; See separate parts list	1

Model 230-991, Series A
3:1 Ratio President, 15 Gallon System
Includes items 1 and 2

REF NO.	PART NO.	DESCRIPTION	QTY
1	218-747	3:1 Ratio President Pump; See 307-674 for parts	1
2	210-036	15 Gallon Mixing Tank; See separate parts list	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	QTY	PART DESCRIPTION

Model 210-035 Series A
30 Gallon Mix Tank
Includes items 101 to 158

Model 210-036 Series A
15 Gallon Mix Tank
Includes items 101 to 158

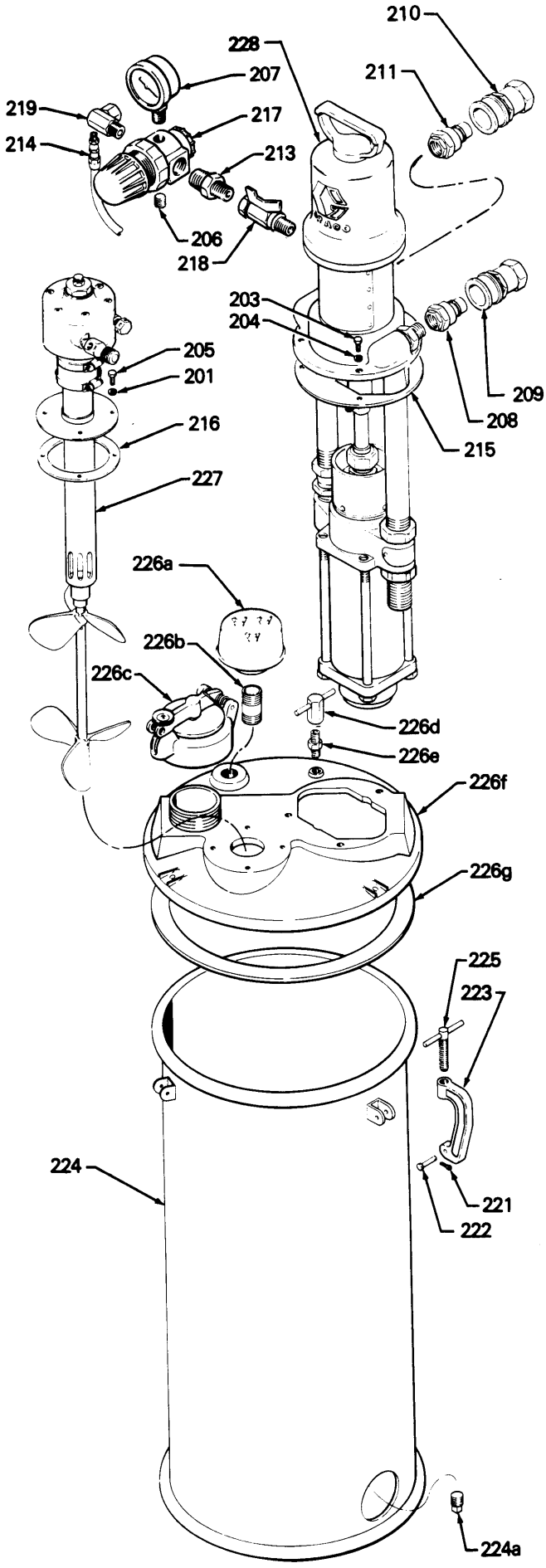
REF NO.	PART NO.	DESCRIPTION	QTY
101	100-063	PIN, cotter; 0.062" (1.59 mm) dia; 0.50" (12.7 mm) lg	4
102	100-721	PLUG, pipe; 1/4 npt	1
103	101-180	GAUGE, air pressure; 0-200 psi (0-14 bar) 1/4 npt	1
104	101-960	NUT, hex jam; 0.25"-20	1
105	102-622	VENT, safety	1
107	103-943	PLUG	1
109	104-026	NUT, hex jam; 1.0" thd	1
112	104-114	SCREW, rd hd mach; no. 10-24 x 0.75"	8
113	104-115	NUT, hex mach; no. 10-24	8
114	104-116	WASHER, hex hd cap; 0.5"-20 x 0.875"	8
115	104-119	SCREW, hex hd cap; 0.25"-20 x 0.875"	4
116	104-120	SCREW, hex hd cap; 0.312"-18 x 1.0"	3
117	104-121	NUT, hex mach; 0.25"-20	4
118	104-122	NUT, hex mach; 0.312"-18	3
119	104-123	LOCKWASHER, spring; 0.25"	4
120	104-124	LOCKWASHER, spring; 0.312"	3
121	104-133	NIPPLE, coupler; 1/2 npt(f)	1
122	104-134	COUPLER, valved; 1/2 npt(f)	1
123	104-135	NIPPLE, coupler; 3/4 npt(f)	1
124	104-136	COUPLER, valved; 3/4 npt(f)	1
125	104-267	REGULATOR, air; see 307-204 for parts	1
126	159-239	NIPPLE, reducing; 1/2 to 3/8 npt	1
127	160-023	HOSE, air; cpld 1/8 npt(m); 0.25" (6.4 mm) ID; 18" (457 mm) lg	1
128	161-322	GASKET, pump	1
130	166-569	GASKET, agitator	1
134	171-272	SPACER	8
136	171-274	PIN	4
139	171-279	NIPPLE, hex reducing; 1" npt x 1-12 unf-2A	1
141	171-371	RING, guiding	1
142	171-372	GASKET	1
143	171-427	STUD, terminal	1
145	171-433	TUBE, return (Model 210-036 only)	1
	171-434	TUBE, return (Model 210-035 only)	1
146	171-435	TUBE, suction (Model 210-036 only)	1
	171-436	TUBE, suction (Model 210-035 only)	1
147	207-435	NUT, ground terminal	1
148	207-438	UNION, 90° swivel; 1/2 npt(m); 1/2 npsm; 1/8 npt(f)	1
149	208-391	BALL VALVE; 3/8 npt(m x f), see manual 307-068	1
150	210-029	30 GALLON MIX TANK (Model 210-035 only)	1
	210-030	15 GALLON MIX TANK (Model 210-036 only)	1
151	210-034	ARM, clamp	4
152	210-038	HANDLE, tee	4
153	210-067	AGITATOR, 15 gal. size (Model 210-036 only)	1
	210-068	AGITATOR, 30 gal. size (Model 210-035 only)	1
156	217-465	MIX TANK COVER	1
158	102-623	INSPECTION CAP, 3" npt(f)	1

CARBON STEEL MIXING TANK AND PUMP ASSEMBLY

Model 230-994 Series A
1.5:1 Ratio Monark, 15 Gallon System
Includes items 201-228

REF NO.	PART NO.	DESCRIPTION	QTY
201	100-016	LOCKWASHER, 1/4"	4
203	100-057	CAPSCREW, hex head; 1/4-20 x 0.75"	3
204	100-214	LOCKWASHER, 3/8"	3
205	100-270	CAPSCREW, hex head; 1/4-20 x 0.625"	3
206	100-721	PLUG, pipe; 1/4 npt	1
207	101-180	GAUGE, air pressure; 0-200 psi (0-14 bar) range; 1/4 npt	1
208	104-654	NIPPLE, quick disconnect; 1/2 npt	1
209	104-653	COUPLER, shutoff, quick disconnect; 1/2 npt	1
210	104-651	COUPLER, quick disconnect; 3/4 npt	1
211	104-652	NIPPLE, quick disconnect; 3/4 npt	1
213	159-239	NIPPLE, reducing; 1/2 to 3/8 npt	1
214	160-023	HOSE, air; 1/4" ID; cpld 1/8 npt(mbe); 18" (457 mm) long	1
215	161-322	GASKET, pump	1
216	166-569	GASKET, agitator	1
217	104-267	REGULATOR, air; see 307-204 for parts	1
218	208-391	BALL VALVE, 3/8 npt(m x f); see 307-068 for parts	1
219	207-438	UNION, 90° swivel; 1/2 npt(m) x 1/2 npsm; 1/8 npt(f)	1
220	207-951	15 GALLON MIXING TANK; Includes items 221-225	1
221	101-421	.PIN, cotter; 0.058" (1.5 mm) x 0.375" (9.5 mm)	3
222	102-624	.PIN, clevis	3
223	167-832	.ARM, clamp	3
224	207-432	.15 GALLON MIX TANK, bare Includes item 224a	1
224a	104-663	..PLUG, pipe; 3/4 npt	1
225	207-950	.HANDLE, tee	3
226	207-952	COVER, tank, mixing Includes items 226a-226g	1
226a	102-622	..VENT, safety	1
226b	100-485	..NIPPLE, pipe, 1" npt	1
226c	102-623	..CAP, inspection	1
226d	207-435	..NUT, terminal ground	1
226e	167-839	..LUG, ground, terminal	1
226f	207-436	..COVER, mix tank bare	1
226g	170-122	..GASKET, organic polysulphide	1
227	207-953	AGITATOR; See 306-840 for parts	1
228	218-764	1.5:1 RATIO MONARK PUMP; See 307-653 for parts	1

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



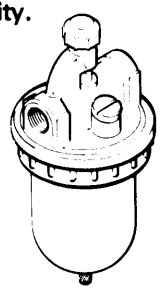
HOW TO ORDER REPLACEMENT PARTS

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	QTY	PART DESCRIPTION

ACCESSORIES (Must be purchased separately)

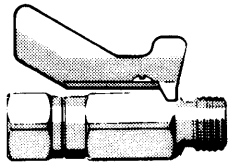
AIR LINE OILER 214-848
250 psi (17.5 bar) MAXIMUM WORKING PRESSURE
For automatic air motor lubrication; install close to air motor, downstream from regulators and filters. 1/2 npt, 80 SCFM flow rate; 8 oz. oil capacity.



DRAIN VALVE
500 psi (35 bar) MAXIMUM WORKING PRESSURE
For relieving fluid line pressure

208-630 1/2(m) x 3/8(f) npt; for non-corrosive fluids; cst and Teflon

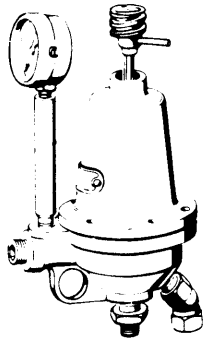
210-071 3/8(m) x 3/8(f) npt; for corrosive fluids; sst and Teflon



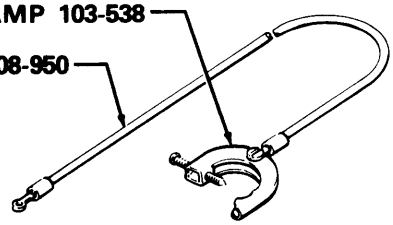
FLUID PRESSURE REGULATOR
250 psi (17.5 bar) MAXIMUM WORKING PRESSURE
Use on circulating line drops to regulate fluid pressure to one air spray gun or dispensing valve. 3/8 npsm(f) inlet; 3/8 npsm(m) and 3/8 npt(f) outlets.

203-831 Carbon Steel; 0-60 psi (0-4 bar) regulated fluid pressure range; 2 gpm (7.6 liter/min) maximum flow rate.

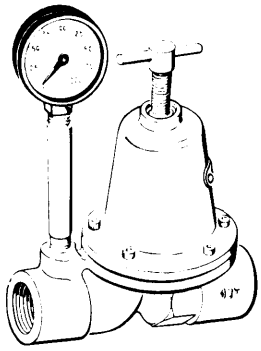
209-030 Stainless Steel; 5-100 psi (0.4-7 bar) regulated fluid pressure range; 3 gpm (11.3 liter/min) maximum flow rate.



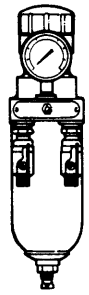
GROUNDING CLAMP 103-538
GROUND WIRE 208-950
25 ft (7.6 m) lg



BACK PRESSURE VALVE 205-122
180 psi (13 bar) MAXIMUM WORKING PRESSURE
0-180 psi (0-13 bar) back pressure control range; 3/8 npt(m) inlet; 3/8 npt(f) outlet. Provides constant system back pressure for all spray stations while maintaining proper pressure for fluid circulation. 2 gpm (7.6 liter/min) flow capacity.



AIR FILTER & REGULATOR 202-660
180 psi (12.6 bar) MAXIMUM WORKING PRESSURE
To regulate air and filter air. Has gauge and two 1/4 npt(m) air outlet valves. 50 micron filter element with 100 mesh inlet strainer. 1/2 npt(f) air inlet; CFM (m^3/min) is over 50 (1.4).



AIR SPRAY GUN, Series 900
With corrosion-resistant, stainless steel fluid passageways. See instruction manual 307-445 for specific flow rate and air consumption figures.

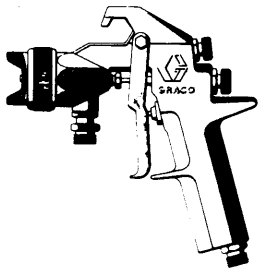
For Light Fluids
217-939, 217-940, 217-941, 217-942

For Medium Fluids
217-944, 217-945, 217-946, 217-947, 217-948, 217-949

For Heavy Fluids
217-950, 217-951, 217-952

For Medium-Heavy Zinc Rich Fluids
217-957

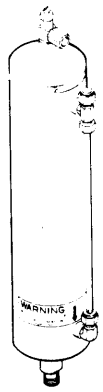
For Heavy Zinc Rich Fluids
217-958



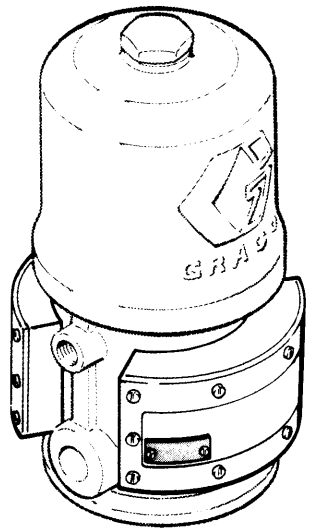
SURGE TANK
Reduce line pulsations. 1/2 npt fluid inlet.

209-011 Stainless Steel; for corrosive fluids
300 psi (21 bar) MAXIMUM WORKING PRESSURE.

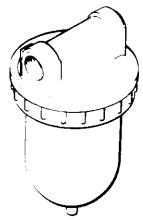
205-924 Carbon Steel; for non-corrosive fluids
250 psi (17.5 bar) MAXIMUM WORKING PRESSURE.



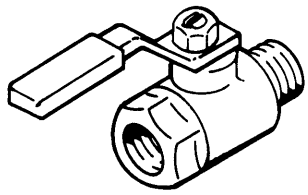
MUFFLER KIT 214-873
Replaces existing motor muffler to reduce noise and oil mist emissions. See separate instruction manual 307-361 for how to install.



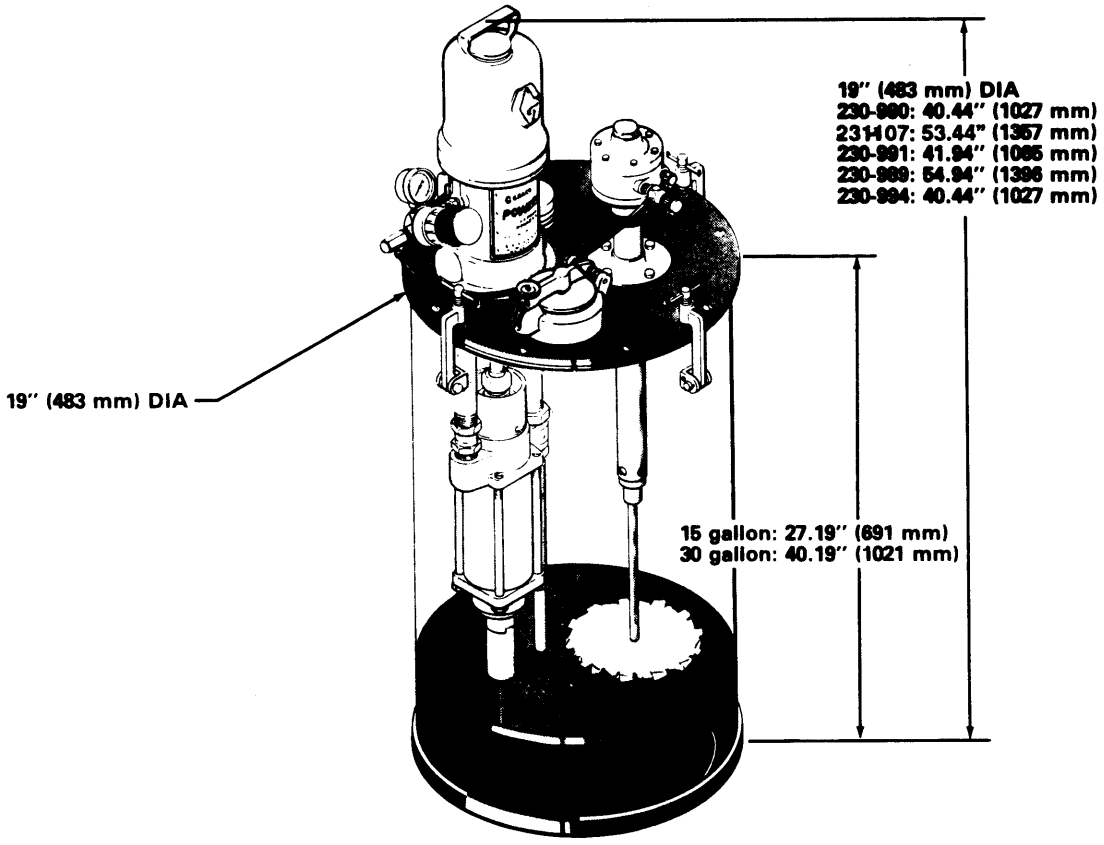
AIR FILTER 106-149
250 psi (17.5 bar) MAXIMUM WORKING PRESSURE
Removes harmful dirt and contaminants from your compressed air supply.
1/2 npt inlet and outlet.



BLEED-TYPE MASTER AIR VALVE 107-142
300 psi (21 bar) MAXIMUM WORKING PRESSURE
Relieves air trapped in the air line between the air motor and this valve when closed. 1/2 npt(m x f).



DIMENSIONAL DRAWING



TECHNICAL DATA

Maximum Working Pressure
Models 230-989 and 230-991 .... 360 psi (25 bar)
Models 231-107, 230-990, and 230-994 ..... 180 psi (12 bar)
Maximum Incoming Air Pressure ..... 120 psi (8 bar)
Wetted Parts
Models 231-107, 230-989, 230-990, and 230-991 ..... Stainless Steel Tank
Model 230-994 ..... Carbon Steel Tank
(For pump, agitator, and other component and accessory wetted parts, refer to the appropriate supplied manual.)

SERVICE INFORMATION

Changed the Model No. of the 30 Gallon (114 liter) Stainless Steel Mix Tank with a 1.5:1 Ratio Monark Pump from Model 230-988 to Model 231-107.

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 to an authorized Graco distributor for verification of 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 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 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, Chicago, Dallas, Detroit, Los Angeles, West Caldwell (N.J.)
Subsidiary and Affiliate Companies: Canada; England; Switzerland; France; Germany; Hong Kong; Japan
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