



GRACO

First choice when  
quality counts.™

Rev. J

Supersedes Rev H  
and PCN J



This manual contains important  
warnings and information.  
**READ AND KEEP FOR REFERENCE.**

INSTRUCTIONS

## Husky™ 307 Air Spray/HVLP Systems

**STAINLESS STEEL FLUID FITTINGS,  
ACETAL PUMP WITH PTFE® DIAPHRAGM**

*0.7 MPa, 7 bar (100 psi) Maximum Fluid Working Pressure*

*0.7 MPa, 7 bar (100 psi) Maximum Air Input Pressure*

**Model 236-870, Series A**

Pail Mount Unit with Fluid Regulator

**Model 224-833, Series B**

Pail Mount Unit with Fluid Regulator and Hose Kit

**Model 236-412, Series A**

Pail Mount Unit with Surge Tank and Hose Kit

**Model 236-869, Series A**

Wall Mount Unit with Surge Tank and Suction Kit

**Model 236-628, Series A**

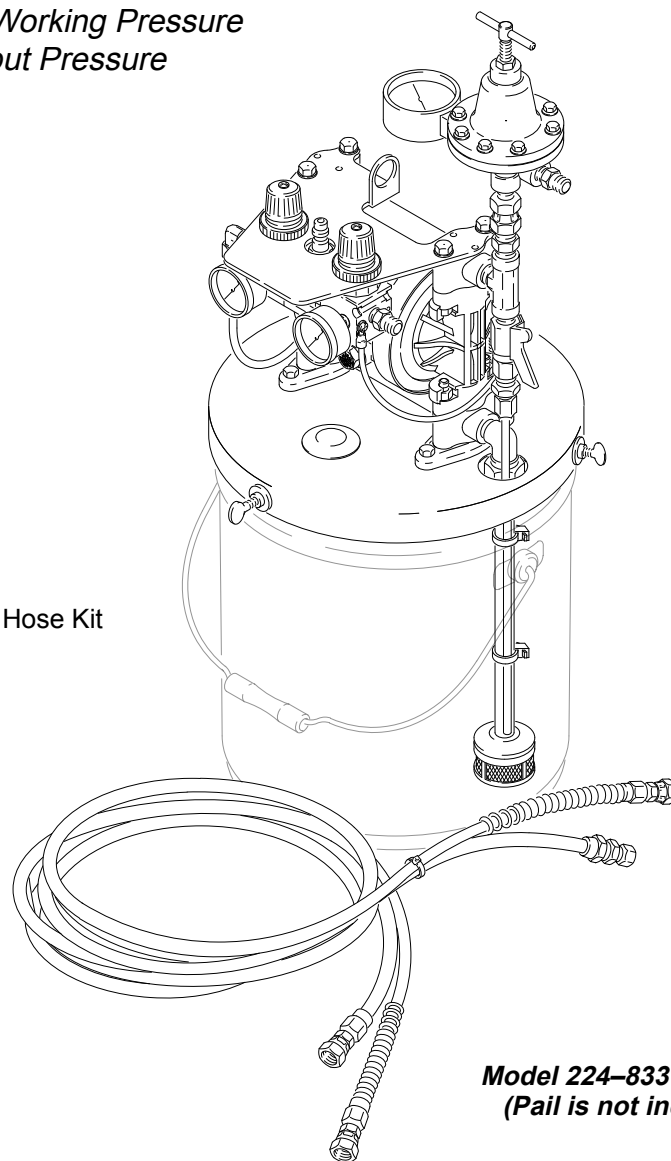
Wall Mount Unit with Surge Tank and Hose Kit

**Model 236-414, Series A**

Wall Mount Unit with Surge Tank, Suction Kit, and Hose Kit

**Model 236-868, Series A**

Wall Mount Unit with Surge Tank



**Model 224-833 Shown  
(Pail is not included)**

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

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# Symbols

## Warning Symbol



This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

## Caution Symbol



This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

# ! WARNING



INSTRUCTIONS

## EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are unsure about usage, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated component in your system. This equipment has a **100 psi (0.7 MPa, 7 bar) maximum working pressure at 100 psi (0.7 MPa, 7 bar) maximum incoming air pressure.**
- Use fluids and solvents which are compatible with the equipment wetted parts. Refer to the **Technical Data** section of all equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Do not use hoses to pull equipment.
- Route hoses away from traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 82°C (180°F) or below -40°C (-40°F).
- Wear hearing protection when operating this equipment.
- Do not lift pressurized equipment.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.

# ⚠ WARNING



## TOXIC FLUID HAZARD

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, or swallowed.

- Know the specific hazards of the fluid you are using.
- Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state and national guidelines.
- Always wear protective eyewear, gloves, clothing and respirator as recommended by the fluid and solvent manufacturer.
- Pipe and dispose of the exhaust air safely, away from people, animals, and food handling areas. If the diaphragm fails, the fluid is exhausted along with the air. See **Air Exhaust Ventilation** in the separate pump manual 308–553.



## FIRE AND EXPLOSION HAZARD

Improper grounding, poor ventilation, open flames or sparks can cause a hazardous condition and result in a fire or explosion and serious injury.

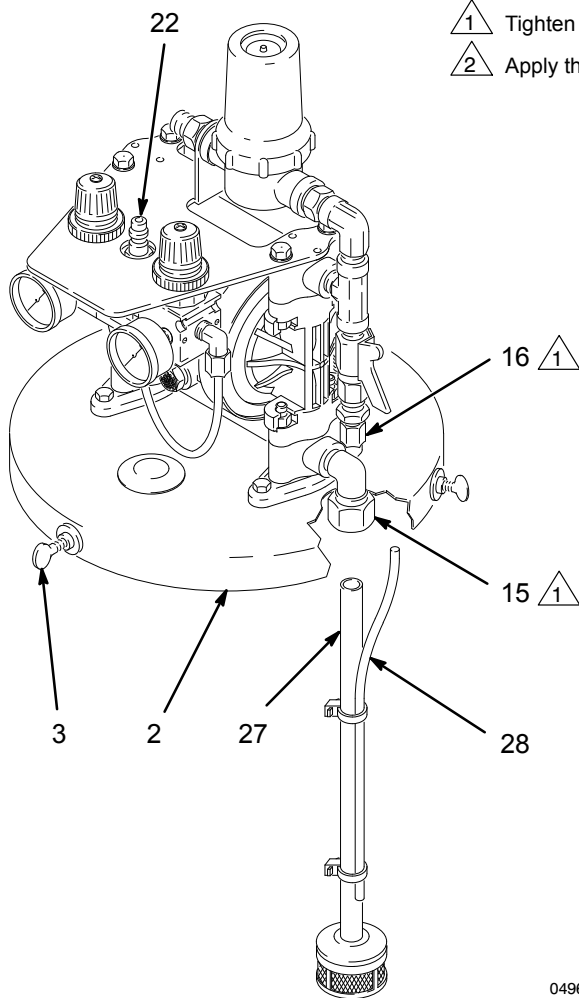
- Ground the equipment. Refer to **Grounding** on page 9.
- If there is any static sparking or you feel an electric shock while using this equipment, **stop pumping immediately**. Do not use the equipment until you identify and correct the problem.
- Provide fresh air ventilation to avoid the buildup of flammable fumes from solvents or the fluid being pumped.
- Pipe and dispose of the exhaust air safely, away from all sources of ignition. If the diaphragm fails, the fluid is exhausted along with the air. See **Air Exhaust Ventilation** in the separate pump manual 308–553.
- Keep the work area free of debris, including solvent, rags, and gasoline.
- Electrically disconnect all equipment in the work area.
- Extinguish all open flames or pilot lights in the work area.
- Do not smoke in the work area.
- Do not turn on or off any light switch in the work area while operating or if fumes are present.
- Do not operate a gasoline engine in the work area.

# Installation

## Assembling Pail Mount Units

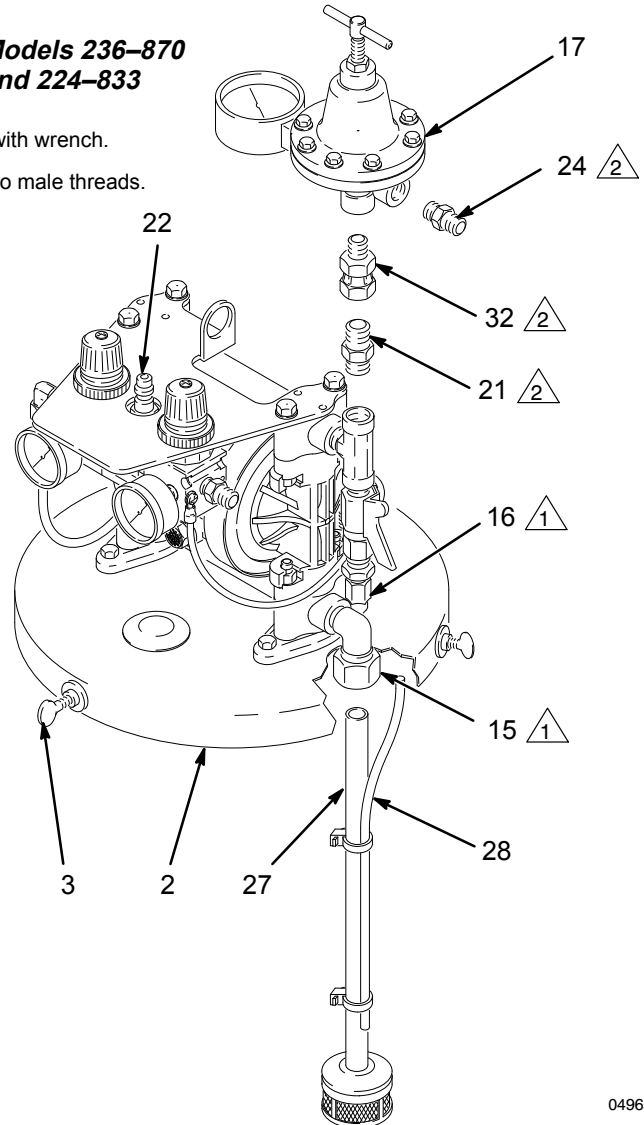
1. Insert the suction tube (27) into the elbow (15) to its full depth. Tighten the nut (16) securely. See Fig. 1.
2. Insert the recirculation tube (28) into the connector (16) to its full depth. Tighten the nut (16) securely.
3. On Models 236–870 and 224–833, assemble the Fluid Regulator Kit (items 17, 21, 24 and 32) as shown in Fig. 1.
4. Attach the pail cover (2) to a pail of fluid, using the thumbscrews (3). Tighten securely.

### Model 236–412



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### Models 236–870 and 224–833



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Fig. 1

# Installation

## Assembling the Wall Mount Unit

Install the wall bracket (2) 5 ft (1.52 m) above the floor. Use the mounting hole layout shown on page 18. Be sure the wall is strong enough to support the weight of the pump and hoses, any accessories, the fluid, and stress caused by pump operation.

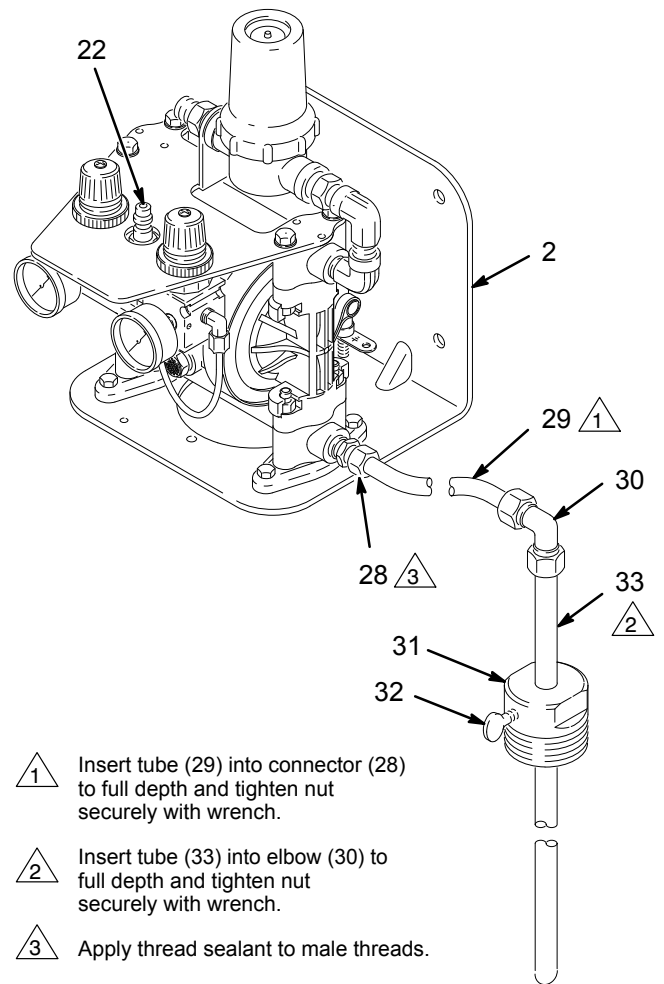
### **The following steps apply to Model 236–414 only:**

Apply thread sealant and screw the connector (28) into the pump's fluid inlet. See Fig. 2.

Slide the bung plug (31) onto the suction tube (33). Push the 0.625 in. (16 mm) OD suction tube into the elbow (30) to its full depth, then tighten the nut securely with a wrench.

Push the 0.5 in. (13 mm) OD flexible tube (29) into the elbow (30) to its full depth, then tighten the nut securely with a wrench. Push the other end of the flexible tube into the connector (28) to its full depth, then tighten the nut securely with a wrench.

Screw the bung plug (31) into the drum bung opening. Adjust the suction tube (33) so the end of the tube is about 1/2 in. (13 mm) off the bottom of the drum, and secure using the thumbscrew (32).




**Fig. 2**


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# Installation

## General Information

1. The Typical Installations shown on pages 7 and 8 are only a guide for selecting and installing system components. Contact your Graco distributor or Graco Technical Assistance (see back page) for assistance in planning a system to suit your needs.
2. Always use Genuine Graco Parts and Accessories, available from your Graco distributor. Refer to the Product Data Sheet for the pump, Form No. 305–528. If you supply your own accessories, be sure they are adequately sized and pressure rated for your system.
3. Use a compatible, liquid thread sealant or PTFE® tape on all male threads. Tighten all connections firmly to avoid air or fluid leaks. **Do not over-tighten plastic threads.**
4. Reference numbers and letters in parentheses refer to the callouts in the Figures and the parts lists on pages 12–17.


 **WARNING**



**TOXIC FLUID HAZARD**  
Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, or swallowed.

1. Read **TOXIC FLUID HAZARD** on page 3.
2. Use fluids and solvents which are compatible with the equipment wetted parts. Refer to the **Technical Data** section of all equipment manuals. Read the fluid and solvent manufacturer's warnings.

## Accessories

 **WARNING**

A bleed-type master air valve (B) is required in your system to relieve air trapped between this valve and the pump. Trapped air can cause the pump to cycle unexpectedly, which could result in serious injury, including splashing in the eyes or on the skin, injury from moving parts, or contamination from hazardous fluids.

A fluid drain valve (J) is required in your system to relieve pressure in the hose if it is plugged. (The fluid recirculation valve supplied with Models 236–870, 224–833, and 236–412 will serve this purpose.) The drain valve reduces the risk of serious injury, including splashing in the eyes or on the skin, or contamination from hazardous fluids when relieving pressure. Install the valve close to the pump's fluid outlet.

1. Install the air line accessories as shown in Figs. 3 and 4. Mount these accessories on the wall or on a bracket. Be sure the air line supplying the accessories is grounded.
  - a. Locate one bleed-type master air valve (B) close to the pump and use it to relieve trapped air. See the **WARNING** above. Locate the other master air valve (E) upstream from all air line accessories and use it to isolate them during cleaning and repair.
  - b. The air line filter (F) removes harmful dirt and moisture from the compressed air supply.
2. Install an electrically conductive, flexible air hose (C) between the accessories and the pump. Use a minimum 1/4" (6.3 mm) ID air hose. Screw an air line quick disconnect coupler (D) onto the end of the air hose (C). Do not connect the coupler (D) to the air inlet fitting (22, see Figs. 1 and 2) yet.

## Hose Connections

1. Read the entire spray gun manual before connecting the hoses and operating the sprayer.
2. Connect a fluid hose (N) between the pump fluid outlet fitting and the fluid inlet of the spray gun (R). See Figs. 3 and 4.
3. Connect an electrically conductive air hose (P) between the outlet fitting of the gun air regulator (G) and the air inlet of the spray gun (R).

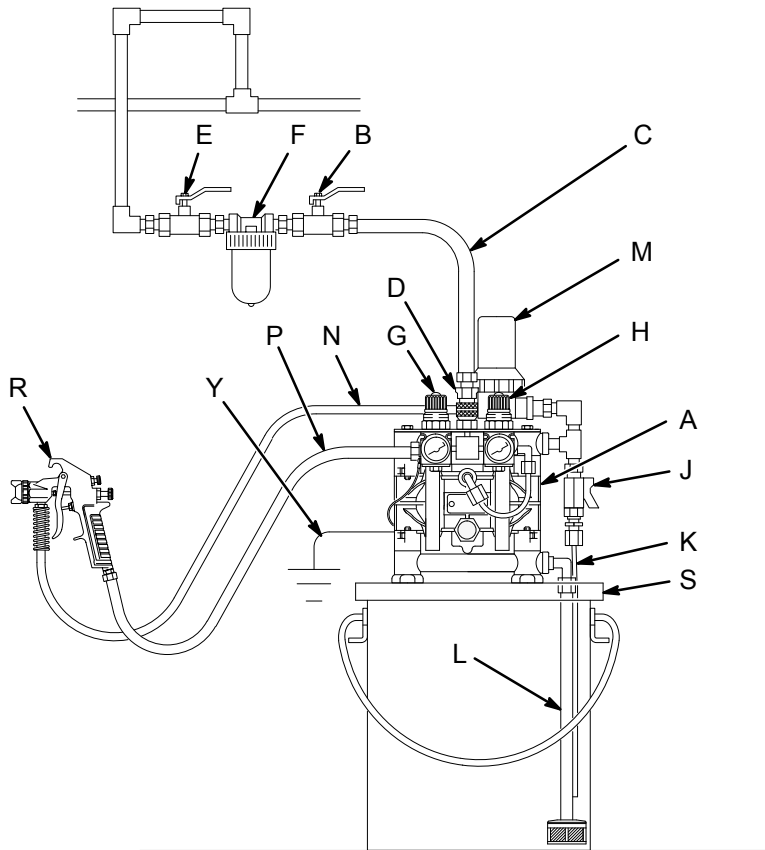
# Installation

## Air Spray Typical Installation – Pail Mount Models with Surge Tank

### KEY

- A Husky 307 Pump
  - B Bleed-Type Master Air Valve (required for pump)
  - C Air Supply Line
  - D Air Line Quick Disconnect
  - E Master Air Valve (for accessories)
  - F Air Line Filter
  - G Gun Air Regulator
  - H Pump Air Regulator
  - J Fluid Drain Valve (required)
  - K Fluid Recirculation Line
  - L Fluid Suction Line
  - M Surge Tank and Filter
  - N Gun Fluid Supply Hose
  - P Gun Air Supply Hose
  - R Air Spray Gun
  - S Pail Cover
  - Y Ground Wire (included)
- See page 9 for grounding instructions.

**NOTE:** Some components shown are included with the sprayer, depending on the model. Refer to the parts lists on pages 12–17 for parts included in your sprayer.



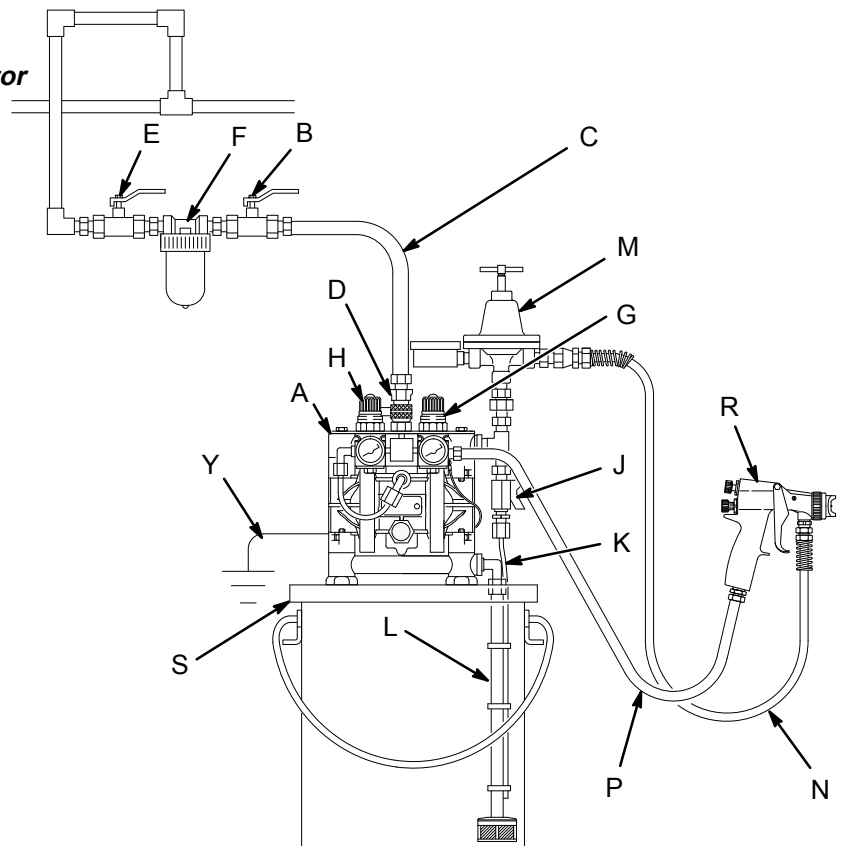
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## HVLP Typical Installation – Pail Mount Models with Fluid Regulator

### KEY

- A Husky 307 Pump
  - B Bleed-Type Master Air Valve (required for pump)
  - C Air Supply Line
  - D Air Line Quick Disconnect
  - E Master Air Valve (for accessories)
  - F Air Line Filter
  - G Gun Air Regulator
  - H Pump Air Regulator
  - J Fluid Drain Valve (required)
  - K Fluid Recirculation Line
  - L Fluid Suction Line
  - M Fluid Regulator and Gauge
  - N Gun Fluid Supply Hose
  - P Gun Air Supply Hose
  - R Optimiser HVLP Spray Gun
  - S Pail Cover
  - Y Ground Wire (included)
- See page 9 for grounding instructions.

**NOTE:** Some components shown are included with the sprayer, depending on the model. Refer to the parts lists on pages 12–17 for parts included in your sprayer.



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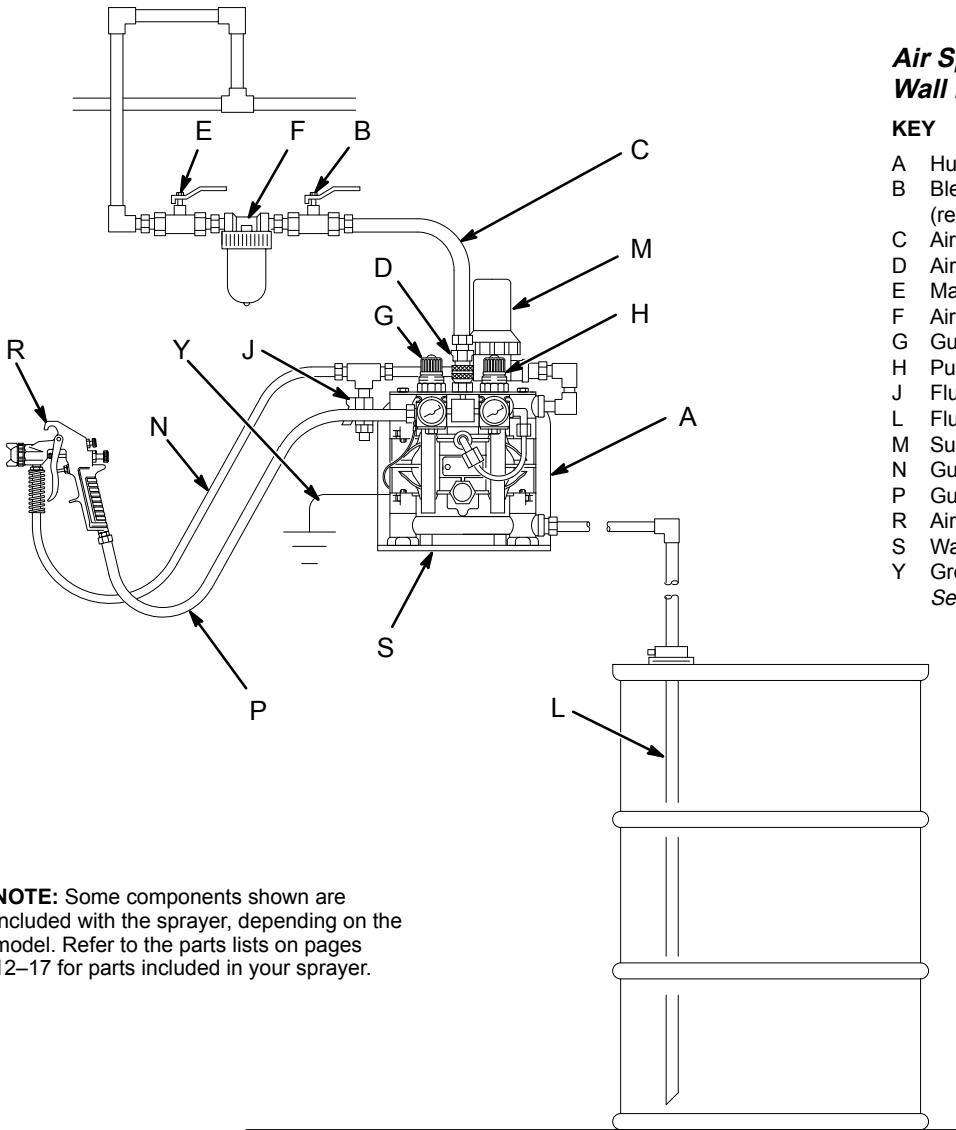
Fig. 3

# Installation

## Air Spray Typical Installation – Wall Mount Models with Surge Tank

### KEY

- A Husky 307 Pump
  - B Bleed-Type Master Air Valve (required for pump)
  - C Air Supply Line
  - D Air Line Quick Disconnect
  - E Master Air Valve (for accessories)
  - F Air Line Filter
  - G Gun Air Regulator
  - H Pump Air Regulator
  - J Fluid Drain Valve (required)
  - L Fluid Suction Line
  - M Surge Tank and Filter
  - N Gun Fluid Supply Hose
  - P Gun Air Supply Hose
  - R Air Spray Gun
  - S Wall Bracket
  - Y Ground Wire (included)
- See page 9 for grounding instructions.*



**NOTE:** Some components shown are included with the sprayer, depending on the model. Refer to the parts lists on pages 12–17 for parts included in your sprayer.


**Fig. 4**

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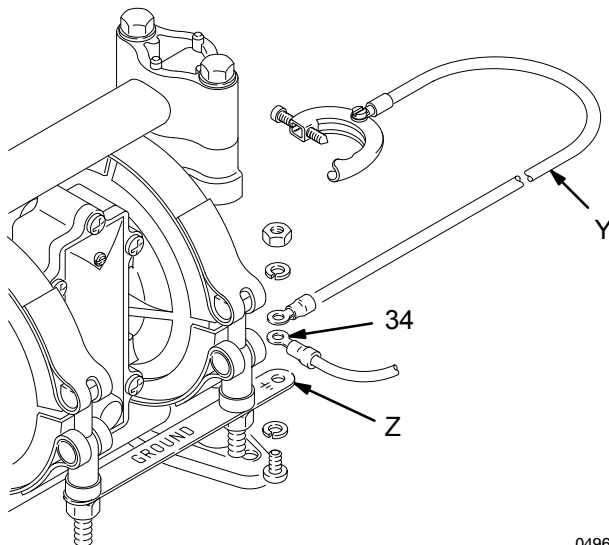
# Installation

## Grounding

<b>⚠ WARNING</b>	
	<b>FIRE AND EXPLOSION HAZARD</b> This pump must be grounded. Before operating the pump, ground the system as explained below. Also read the section <b>FIRE OR EXPLOSION HAZARD</b> on page 3.

To reduce the risk of static sparking, ground the pump and all other equipment used or located in the pumping area. Check your local electrical code for detailed grounding instructions for your area and type of equipment. **Ground all of this equipment.**

1. *Pump:* One end of the ground wire (Y) is connected to the pump grounding strip (Z). Connect the clamp end of the ground wire to a true earth ground.



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Fig. 5

2. *Air and fluid hoses:* Use only electrically conductive hoses.
3. *Spray gun:* The spray gun and the gun air hose are grounded with a ground wire (34) connected between the gun air regulator and the pump grounding strap (Z).
4. *Object being sprayed:* Follow your local code.
5. *Fluid supply container:* Follow your local code.
6. *Air compressor:* Follow the manufacturer's recommendations.
7. *Solvent pails used when flushing:* Follow your local code. 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.

# Operation

## Pressure Relief Procedure

### WARNING

#### PRESSURIZED EQUIPMENT HAZARD

The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. To reduce the risk of an injury from accidental spray from the gun, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop spraying,
- check or service any of the system equipment,
- or install or clean the spray tips.

1. Shut off the air to the pump.
2. Trigger the spray gun.
3. Open the fluid drain valve to relieve all fluid pressure, having a container ready to catch the drainage.

## Flush the Pump Before First Use

The pump was tested in water. If the test solution could contaminate the fluid you are pumping, flush the pump thoroughly with a compatible solvent. Follow the procedure in **Starting and Adjusting the Pump**.

## Starting and Adjusting the Pump

### WARNING



#### TOXIC FLUID HAZARD

Hazardous fluid or toxic fumes can cause serious injury or death if splashed in the eyes or on the skin, inhaled, or

swallowed. Do not lift a pump under pressure. If dropped, the fluid section may rupture. Always follow the **Pressure Relief Procedure** above before lifting the pump.

1. Be sure the pump is properly grounded. Read **FIRE OR EXPLOSION HAZARD** on page 3.
2. Check all fittings to be sure they are tight. Be sure to use a compatible liquid thread sealant or PTFE® tape on all male threads. Tighten the fluid inlet and outlet fittings snugly. Do not overtighten the fittings into the pump.
3. **On pail mount units**, place the suction tube in a pail of fluid and attach the pail cover using the thumbscrews. Tighten securely.  
  
**On wall mount units**, install the suction tube and bung plug in the fluid supply drum as explained on page 5.
4. Make sure the air regulators (G and H) and bleed valves (B and E) are closed. Open the fluid drain valve (J).
5. Connect the air line coupler (D) to the air inlet fitting.
6. With the gun air regulator (G) closed, open the bleed-type master air valves (B, E) and the pump air regulator (H).
7. Allow the pump to cycle slowly until all air is pushed out of the recirculation line and the pump is primed.
8. Point the spray gun (R) into a grounded metal pail, holding a metal part of the gun firmly to the side of the pail.
9. Trigger the air spray gun. Open the gun air regulator (G) and close the fluid drain valve (J). Allow the pump to cycle slowly until all air is pushed out of the fluid hose and gun.

*If you are flushing*, run the pump long enough to thoroughly clean the pump and hoses. Close the air regulator. Remove the suction tube from the solvent and place it in the fluid to be pumped.

# Operation

## Pump Shutdown

### **WARNING**

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 10.

At the end of the work shift, **relieve the pressure**.

## Flushing and Storage

### **WARNING**

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 10.

Flush the pump when necessary to prevent the fluid you are pumping from drying or freezing in the pump and damaging it. Use a compatible solvent.

Before storing the pump, always flush the pump and **relieve the pressure**.

## Recirculation Line

The recirculation tube (K, supplied with Models 236–870, 224–833, and 236–412) drains unused fluid back into the fluid container, ensuring an even flow at the gun. Recirculation also provides gentle fluid agitation. To recirculate fluid, open the drain valve (J) while you are spraying. To stop recirculation, close the valve.

## Surge Tank (Models 236–628, 236–869, 236–412, 236–868, and 236–414)

### **WARNING**

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the **Pressure Relief Procedure** on page 10.

The surge tank filter screen may require periodic cleaning. First, **relieve the pressure**. Unscrew the surge tank cover from its base and remove the filter screen. Clean the screen with a compatible solvent and reinstall it in the surge tank.

An optional Viton® gasket is supplied for the surge tank, for use in applications where the standard EPDM gasket is unsuitable.

# Parts

## Model 236–412, Series A

Includes items 1–42

Ref No.	Part No.	Description	Qty	Ref No.	Part No.	Description	Qty
1	D31–331	PUMP, Husky 307; SSTPTFE®; See 308–553 for parts	1	20	112–026	ELBOW, street; 3/8 npt (m x f); sst	1
2	235–505	COVER, pail; stainless steel	1	21	112–027	NIPPLE; 1/2 npt x 3/8 npt; sst	1
3	111–276	THUMBSCREW; 5/16–18 unc; 1" (25.4 mm) long; sst	3	22	169–971	FITTING, air line; 3/8 npt(m)	1
4	104–119	SCREW, cap, hex hd; 1/4–20 unc–2a; 0.875" (22 mm) long; sst	4	23	188–077	NIPPLE; 1/4–18 npt x 1/4–18.6 sf; cst	1
5	104–123	LOCKWASHER; 1/4" size; sst	4	24	188–380	NIPPLE; 1/2 npt x 3/8–18.6 sf; sst	1
6	102–025	NUT, hex; 1/4–20; sst	4	25	188–093	BRACKET, air regulator	1
7	101–754	PLUG, pipe; 3/8 npt	1	26	188–107	TUBE, inlet, air; nylon; 0.25" (6.3 mm) OD; 0.170" (4.3 mm) ID; 7.5" (191 mm) long	1
8	103–473	TIE, recirculation tube	3	27	188–108	TUBE, suction; nylon; 0.625" (16 mm) OD x 0.5" (13 mm) ID; 12.13" (308 mm) long	1
9	111–813	PLUG, button	1	28	188–115	TUBE, recirculation, fluid; nylon; 0.25" (6.3 mm) OD; 0.170" (4.3 mm) ID; 19" (483 mm) long	1
10	108–190	GAUGE, air pressure; 0–100 psi (0–0.7 MPa, 0–7 bar)	2	29	181–163	HOUSING, filter, inlet; nylon	1
11	110–209	NUT, regulator	2	30	181–164	FILTER, inlet; nylon	1
12	111–804	REGULATOR, air; 0–125 psi (0–0.85 MPa, 0–8.5 bar) pressure range	2	31▲	189–220	LABEL, warning	1
13	111–805	BLOCK, diverter Includes item 13a	1	34	223–324	GROUND WIRE; 12" (300 mm); from gun air regulator to pump	1
13a	108–284	. O-RING; buna-N	3	35	108–290	SCREW, machine; 8–32 x 1/4" (6.3 mm)	1
14	111–807	ELBOW, tube fitting, 90°; acetal; 1/4 npt(m) x ferrule nut for 0.25" (6.3 mm) OD tube	2	38	236–410	HOSE KIT Includes items 39–41	1
15	111–808	ELBOW, tube fitting, 90°; acetal; 3/8 npt(m) x ferrule nut for 0.625" (16 mm) OD tube	1	39	235–339	. HOSE, fluid; nylon; sst fittings; 3/8 npsm (fbc); 1/4" (6.3 mm) ID; 26 ft (7.9 m) long	1
16	111–811	CONNECTOR, tube fitting; acetal; 3/8 npt(m) x ferrule nut for 0.25" (6.3 mm) OD tube	1	40	210–867	. HOSE, air; buna-N; cst fittings 1/4 npsm (fbc); 5/16" (7.9 mm) ID; 25 ft (7.6 m) long	1
17	111–793	TANK, surge; 1/2 npt(f); nylon Includes items 17a and 17b	1	41	102–478	. TIE, hose	13
17a	111–884	. SCREEN, 20 mesh; sst	1	42	222–011	GROUND WIRE; 12 gauge (1.5 mm <sup>2</sup> ), 25 ft (7.6 m); with clamp	1
17b	112–035	. GASKET; EPDM (standard part)	1				
	111–885	. GASKET; Viton®; (alternative to EPDM; shipped loose)	1				
18	237–534	VALVE, ball; 3/8 npt (m x f); sst	1				
19	111–928	TEE; 3/8 npt(f) run x 3/8 npt(m) branch; sst	1				

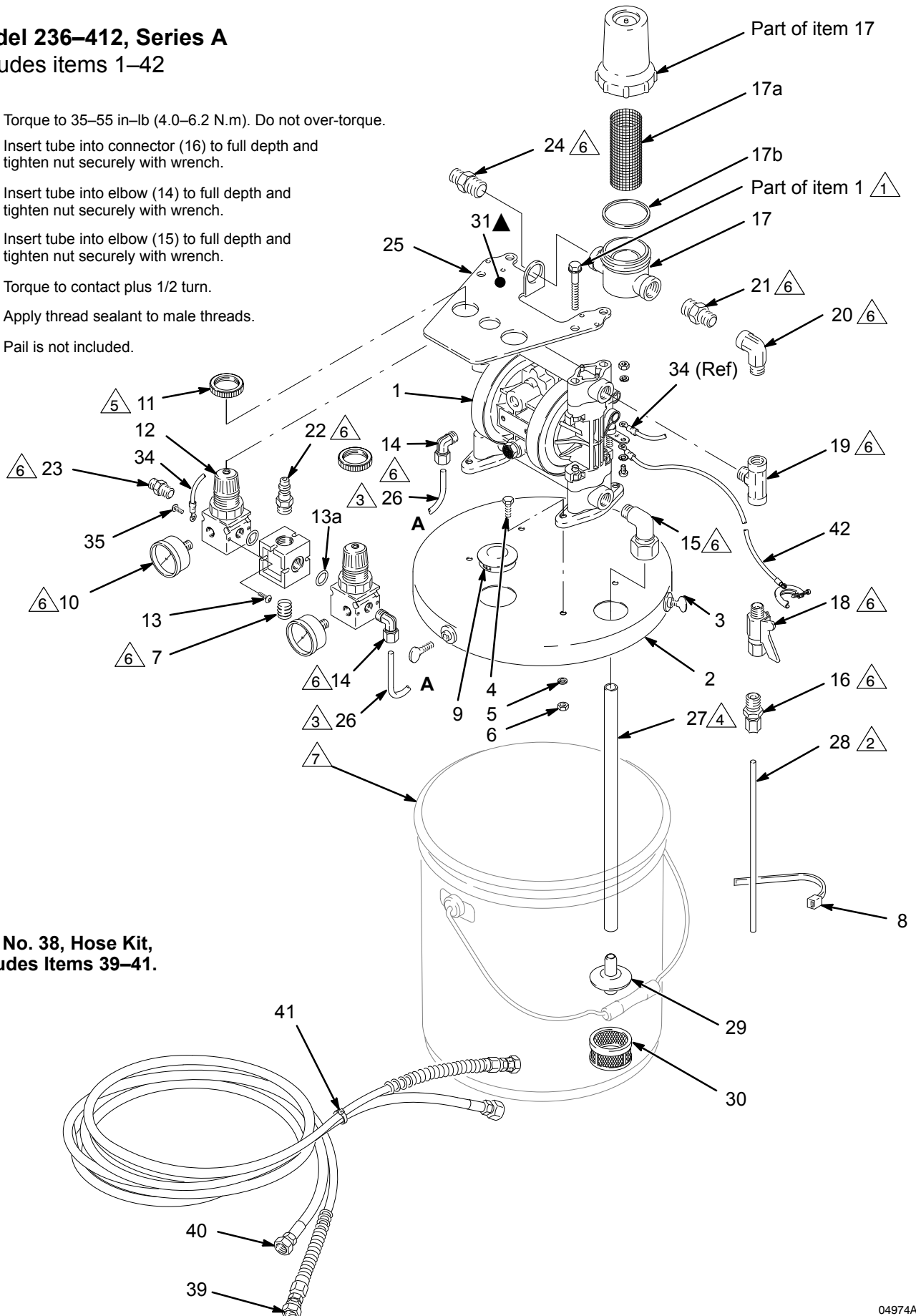
Use only **GENUINE GRACO PARTS AND ACCESSORIES.**

▲ *Replacement Danger and Warning labels, tags and cards are available at no cost.*

# Parts

## Model 236-412, Series A Includes items 1-42

- 1 Torque to 35-55 in-lb (4.0-6.2 N.m). Do not over-torque.
- 2 Insert tube into connector (16) to full depth and tighten nut securely with wrench.
- 3 Insert tube into elbow (14) to full depth and tighten nut securely with wrench.
- 4 Insert tube into elbow (15) to full depth and tighten nut securely with wrench.
- 5 Torque to contact plus 1/2 turn.
- 6 Apply thread sealant to male threads.
- 7 Pail is not included.



Ref. No. 38, Hose Kit,  
Includes Items 39-41.

# Parts

## Model 236–870, Series A

Includes items 1–35 and 42

## Model 224–833, Series B

Includes items 1–42

Ref No.	Part No.	Description	Qty	Ref No.	Part No.	Description	Qty
1	D31–331	PUMP, Husky 307; SSTPTFE®; See 308–553 for parts	1	23	188–077	NIPPLE; 1/4-18 npt x 1/4–8.6 sf; cst	1
2	235–505	COVER, pail; stainless steel	1	24†	189–436	NIPPLE; 1/4-18 npt x 3/8–18.6 sf; sst	1
3	111–276	THUMBSCREW; 5/16–18 unc; 1" (25.4 mm) long; sst	3	25	188–093	BRACKET, air regulator	1
4	104–119	SCREW, cap, hex hd; 1/4–20 unc–2a; 0.875" (22 mm) long; sst	4	26	188–107	TUBE, inlet, air; nylon; 0.25" (6.3 mm) OD; 0.170" (4.3 mm) ID; 7.5" (191 mm) long	1
5	104–123	LOCKWASHER; 1/4" size; sst	4	27	188–108	TUBE, suction; nylon; 0.625" (16 mm) OD x 0.5" (13 mm) ID; 12.13" (308 mm) long	1
6	102–025	NUT, hex; 1/4–20; sst	4	28	188–115	TUBE, recirculation, fluid; nylon; 0.25" (6.3 mm) OD; 0.170" (4.3 mm) ID; 19" (483 mm) long	1
7	101–754	PLUG, pipe; 3/8 npt	1	29	181–163	HOUSING, filter, inlet; nylon	1
8	103–473	TIE, recirculation tube	3	30	181–164	FILTER, inlet; nylon	1
9	111–813	PLUG, button	1	31▲	189–220	LABEL, warning	1
10	108–190	GAUGE, air pressure; 0–100 psi (0–0.7 MPa, 0–7 bar)	2	32†	112–497	SWIVEL, union; 1/4-18 npt x 3/8–18.6 npsm	1
11	110–209	NUT, regulator	2	34	223–324	GROUND WIRE; 12" (300 mm); from gun air regulator to pump	1
12	111–804	REGULATOR, air; 0–125 psi (0–0.85 MPa, 0–8.5 bar) pressure range	2	35	108–290	SCREW, machine; 8–32 x 1/4" (6.3 mm)	1
13	111–805	BLOCK, diverter Includes item 13a	1	38	236–410	HOSE KIT Includes items 39–41	1
13a	108–284	O-RING; buna-N	3	39	235–339	HOSE, fluid; nylon; sst fittings; 3/8 npsm (fbc); 1/4" (6.3 mm) ID; 26 ft (7.9 m) long	1
14	111–807	ELBOW, tube fitting, 90°; acetal; 1/4 npt(m) x ferrule nut for 0.25" (6.3 mm) OD tube	2	40	210–867	HOSE, air; buna-N; cst fittings; 1/4 npsm (fbc); 5/16" (7.9 mm) ID; 25 ft (7.6 m) long	1
15	111–808	ELBOW, tube fitting, 90°; acetal; 3/8 npt(m) x ferrule nut for 0.625" (16 mm) OD tube	1	41	102–478	TIE, hose	13
16	111–811	CONNECTOR, tube fitting; acetal; 3/8 npt(m) x ferrule nut for 0.25" (6.3 mm) OD tube	1	42	222–011	GROUND WIRE; 12 gauge (1.5 mm <sup>2</sup> ), 25 ft (7.6 m); with clamp	1
17†	236–449	REGULATOR, fluid; acetal; 3–30 psi (21–210 kPa, 0.2–2.1 bar) pressure range See manual 308–325	1	<b>Use only GENUINE GRACO PARTS AND ACCESSORIES.</b>			
18	237–534	VALVE, ball; 3/8 npt (m x f); sst	1	† <i>These parts are included in Fluid Regulator Kit 235–344.</i>			
19	111–928	TEE; 3/8 npt(f) run x 3/8 npt(m) branch; sst	1	▲ <i>Replacement Danger and Warning labels, tags and cards are available at no cost.</i>			
21†	188–089	NIPPLE; 3/8 npt x 3/8–18.6 sf; sst	1				
22	169–971	FITTING, air line; 3/8 npt(m)	1				

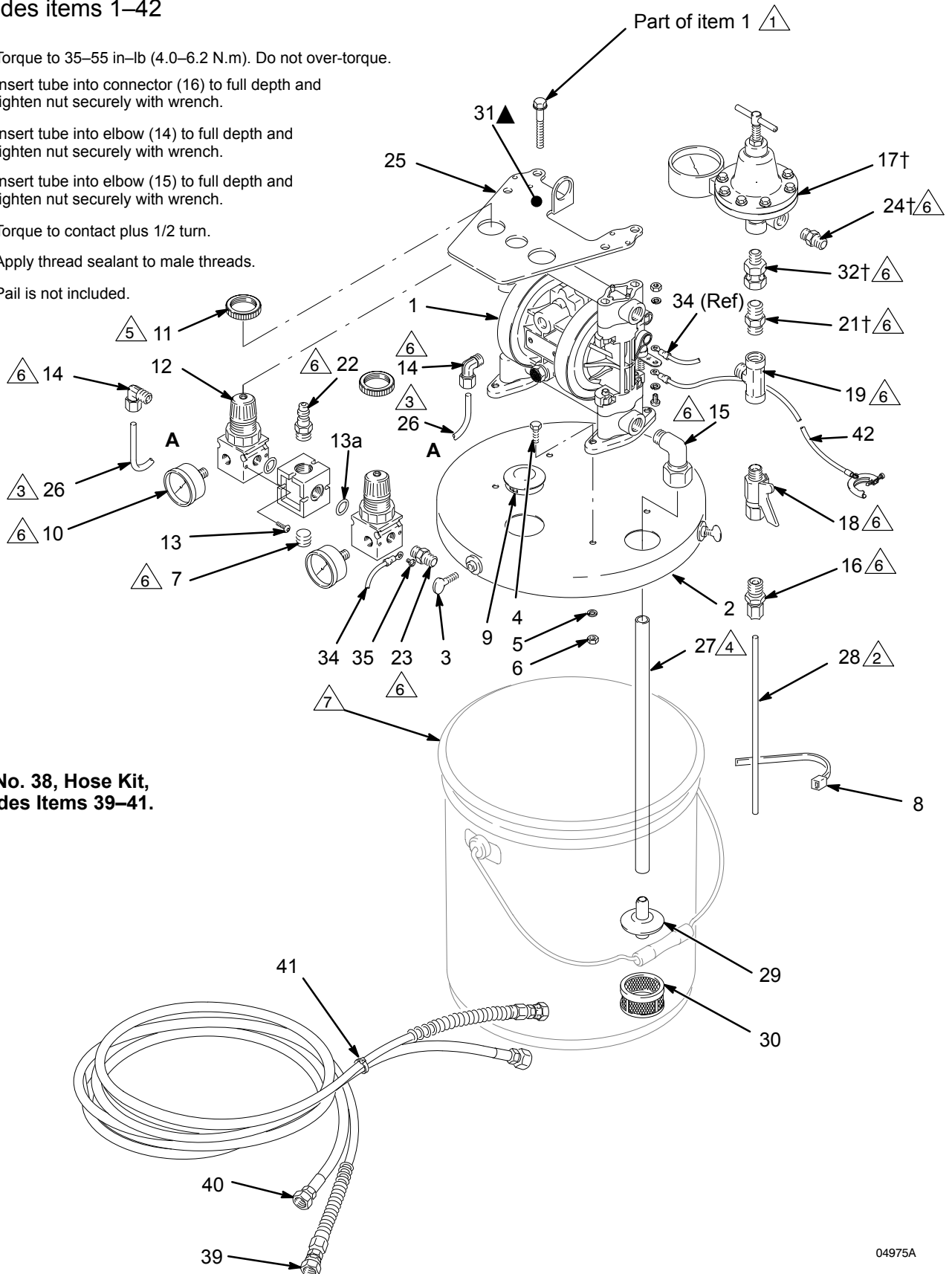
# Parts

**Model 236-870, Series A**  
Includes items 1-35 and 42

**Model 224-833, Series B**  
Includes items 1-42

† These parts are included in  
Fluid Regulator Kit 235-344.

- 1 Torque to 35-55 in-lb (4.0-6.2 N.m). Do not over-torque.
- 2 Insert tube into connector (16) to full depth and tighten nut securely with wrench.
- 3 Insert tube into elbow (14) to full depth and tighten nut securely with wrench.
- 4 Insert tube into elbow (15) to full depth and tighten nut securely with wrench.
- 5 Torque to contact plus 1/2 turn.
- 6 Apply thread sealant to male threads.
- 7 Pail is not included.



**Ref. No. 38, Hose Kit,**  
Includes Items 39-41.

# Parts

## Model 236–628, Series A

Includes items 1–26 and 34–42

## Model 236–868, Series A

Includes items 1–26, 34–37, and 42

## Model 236–869, Series A

Includes items 1–37 and 42

## Model 236–414, Series A

Includes items 1–42

Ref No.	Part No.	Description	Qty	Ref No.	Part No.	Description	Qty
1	D31–331	PUMP, Husky 307; SSTPTFE®; See 308–553 for parts	1	26	188–107	TUBE, inlet, air; nylon; 0.25" (6.3 mm) OD; 0.170" (4.3 mm) ID;	
2	224–835	WALL BRACKET KIT Includes items 3–6	1	27	235–500	SUCTION KIT Includes items 28–33	1
3	188–285	. BRACKET, wall	1	28	111–864	. CONNECTOR; acetal; 3/8 npt(m) x 0.5 in. (13 mm) tube	1
4	104–119	. SCREW, cap, hex hd; 1/4–20 unc–2a; 0.875" (22 mm) long; sst	4	29	188–173	. TUBE, flexible; nylon; 0.5 in. (13 mm) OD;	
5	104–123	. LOCKWASHER; 1/4" size; sst	4	30	111–863	. ELBOW, connector, reducing; acetal; 0.625 in. (16 mm) OD tube x 0.5 in. (13 mm) OD tube	1
6	102–025	. NUT, hex; 1/4–20; sst	4	31	188–181	. PLUG, bung; acetal	1
7	101–754	PLUG, pipe; 3/8 npt	1	32	111–276	. THUMBSCREW; 5/16–18 unc; 1" (25.4 mm) long; sst	1
10	108–190	GAUGE, air pressure; 0–100 psi (0–0.7 MPa, 0–7 bar)	2	33	188–171	. TUBE, suction; acetal; 0.625 in. (16 mm) OD;	
11	110–209	NUT, regulator	2	34	223–324	GROUND WIRE; 12" (300 mm); from gun air regulator to pump	1
12	111–804	REGULATOR, air; 0–125 psi (0–0.85 MPa, 0–8.5 bar) pressure range	2	35	108–290	SCREW, machine; 8–32 x 1/4" (6.3 mm)	1
13	111–805	BLOCK, diverter Includes item 13a	1	37▲	189–220	LABEL, warning	1
13a	108–284	. O-RING; buna-N	3	38	236–410	HOSE KIT Includes items 39–41	1
14	111–807	ELBOW, tube fitting, 90°; acetal; 1/4 npt(m) x ferrule nut for 0.25" (6.3 mm) OD tube	2	39	235–339	. HOSE, fluid; nylon; sst fittings; 3/8 npsm (fbc); 1/4" (6.3 mm) ID; 26 ft (7.9 m) long	1
17	111–793	TANK, surge; 1/2 npt(f); nylon Includes items 17a and 17b	1	40	210–867	. HOSE, air; buna-N; cst fittings 1/4 npsm (fbc); 5/16" (7.9 mm) ID; 25 ft (7.6 m) long	1
17a	111–884	. SCREEN, 20 mesh; sst	1	41	102–478	. TIE, hose	13
17b	112–035	. GASKET; EPDM (standard part)	1	42	222–011	GROUND WIRE; 12 gauge (1.5 mm <sup>2</sup> ), 25 ft (7.6 m); with clamp	1
	111–885	. GASKET; Viton®; (alternative to EPDM; shipped loose)	1				
20	112–026	ELBOW, street; 3/8 npt (m x f); sst	2				
21	112–027	NIPPLE, reducing; 1/2 npt x 3/8 npt; sst	1				
22	169–971	FITTING, air line; 3/8 npt(m)	1				
23	188–077	NIPPLE; 1/4–18 npt x 1/4–18.6 sf; cst	1				
24	188–091	NIPPLE; 1/2 npt x 3/8–18.6 sf; cst (Models 236–628 and 236–414 only)	1				
	188–380	NIPPLE; 1/2 npt x 3/8–18.6 sf; sst (Model 236–869 only)	1				
25	188–093	BRACKET, air regulator	1				

Use only **GENUINE GRACO PARTS AND ACCESSORIES**.

▲ Replacement Danger and Warning labels, tags and cards are available at no cost.



# Parts

## Model 236-628, Series A

Includes items 1-26 and 34-42

## Model 236-868, Series A

Includes items 1-26, 34-37, and 42

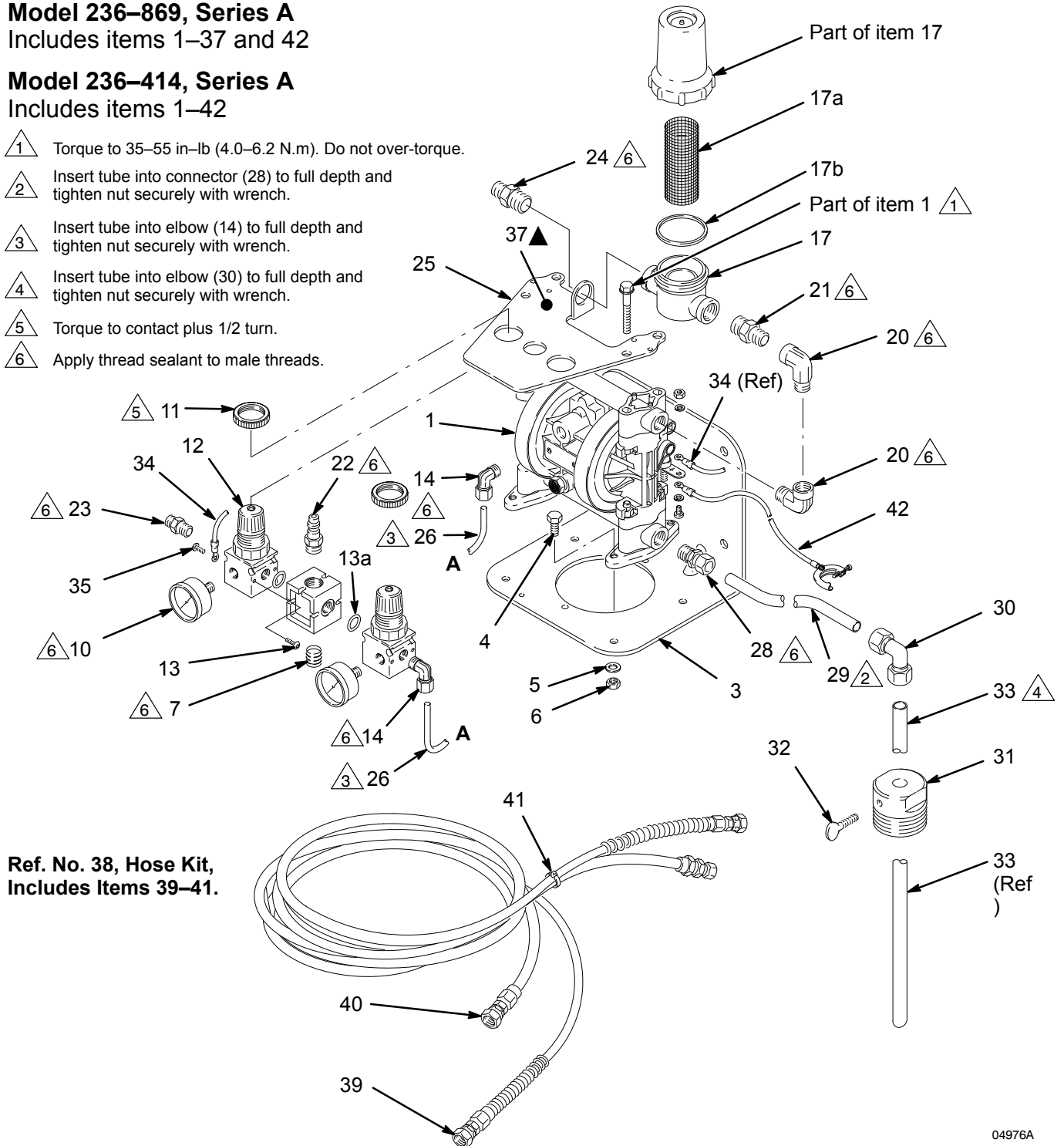
## Model 236-869, Series A

Includes items 1-37 and 42

## Model 236-414, Series A

Includes items 1-42

- 1 Torque to 35-55 in-lb (4.0-6.2 N.m). Do not over-torque.
- 2 Insert tube into connector (28) to full depth and tighten nut securely with wrench.
- 3 Insert tube into elbow (14) to full depth and tighten nut securely with wrench.
- 4 Insert tube into elbow (30) to full depth and tighten nut securely with wrench.
- 5 Torque to contact plus 1/2 turn.
- 6 Apply thread sealant to male threads.

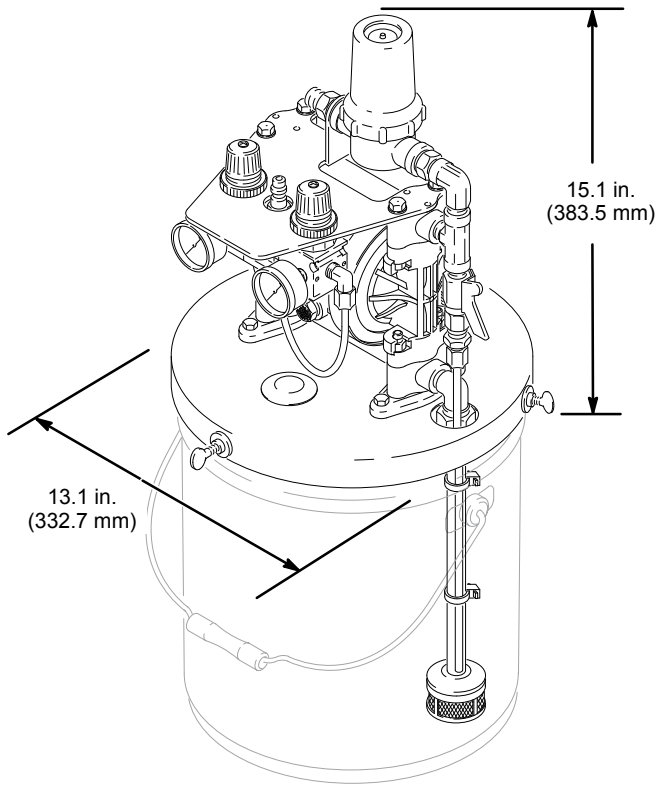


Ref. No. 38, Hose Kit,  
Includes Items 39-41.

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# Dimensions

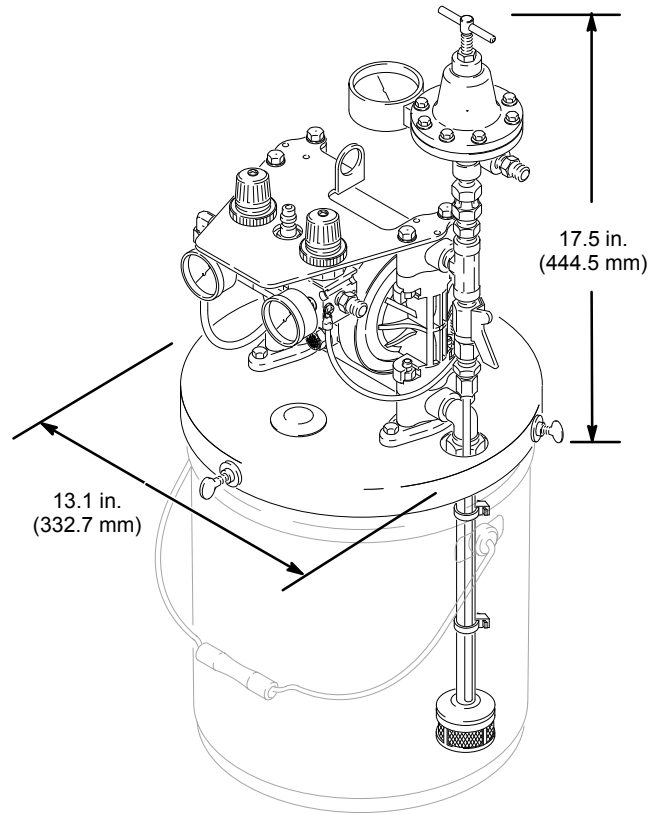
**Model 236-412**



Pail is not included.  
Maximum pail outer diameter is 12.125 in. (308 mm).

04970

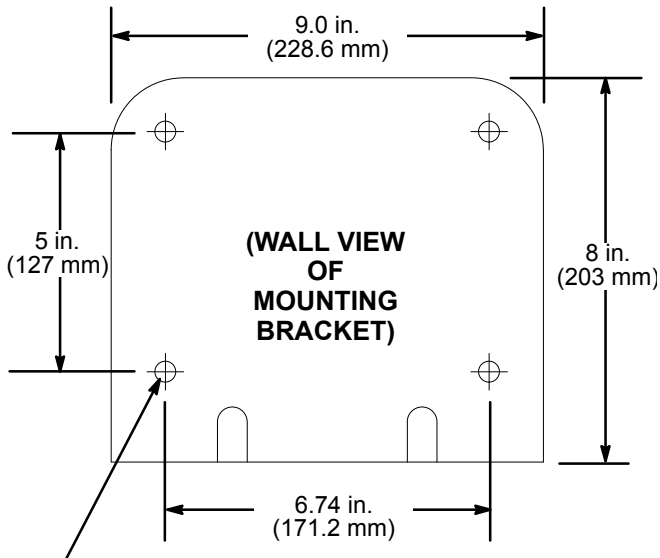
**Models 236-870 and 224-833**



Pail is not included.  
Maximum pail outer diameter is 12.125 in. (308 mm).

04971

## Wall Mounting Hole Layout



Four 0.438 in. (11 mm) Dia. Holes  
(To Mount Bracket To Wall)

0654

# Technical Data

## Wetted Parts

<i>Pump</i> .....	<i>See 308–553</i>
<i>Pail Cover (236–870, 224–833, 236–412)</i> .....	stainless steel
<i>Fluid Hoses</i> .....	nylon
<i>Hose Couplings</i> .....	stainless steel
<i>Surge Tank (236–412, 236–414, 236–628, 236–868, 236–869)</i> .....	nylon, EPDM or Viton®, stainless steel
<i>Fluid Regulator (236–870, 224–833)</i> .....	<i>See 308–325</i>
<i>Fittings</i> .....	acetal, stainless steel
<i>Tubing</i> .....	nylon
<i>Suction Tube (236–414 and 236–869)</i> .....	acetal

Maximum Fluid Working Pressure	. 100 psi (0.7 MPa, 7 bar)
Air Pressure Operating Range	15–100 psi (104–700 kPa, 1–7 bar)
Pump Air Inlet Size	1/4 npt(f)
Pump Fluid Inlet and Outlet Size	3/8 npt(f)
* Sound Data	
Pump sound level at 100 psi (0.7 MPa, 7 bar), full flow	85 dB(A)
Pump sound level at 70 psi (480 kPa, 4.8 bar), 1 gpm (3.8 lpm)	78 dB(A)
Operating Temperature Range:	40° to 150°F (4.4° to 65.5°C)
* Tested to CAGI-PNEUROP–1969	
PTFE	<i>is a registered trademark of the Du Pont Co.</i>

## Manual Change Summary

This manual was revised to include the changes from PCN J.

# The Graco Warranty and Disclaimers

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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.

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**GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO.** These items sold, but not manufactured by Graco (such as electric motors, gas engines, 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.

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