



INSTRUCTIONS

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

First choice when quality counts.™

## Displacement Pump with sleeve

### Part No. 220872, Series A

Used in the GM5000 and GM10000 Sprayers  
*21.0 MPa (210 bar, 3000 psi) Maximum Working Pressure*

### Part No. 222580, Series A

Used in the Ultra 1000 and Ultra 750 Sprayers  
*21.0 MPa (210 bar, 3000 psi) Maximum Working Pressure*

### Part No. 222584, Series A

Used in the Ultra 500\* Sprayer  
*19.5 MPa (195 bar, 2750 psi) Maximum Working Pressure*

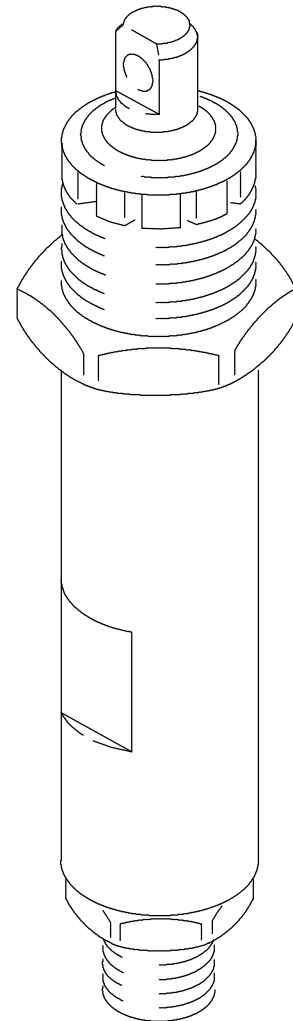
### Part No. 236533, Series B

Used in the GM7000 Sprayer  
*21.0 MPa (210 bar, 3000 psi) Maximum Working Pressure*

### Part No. 237488, Series A

Used in the Mark V and GM5000 HD Sprayers  
*21.0 MPa (210 bar, 3000 psi) Maximum Working Pressure*

\*When using this pump in place of a non-sleeved pump in the Ultra 500 Upright Sprayer, you must also order a new siphon tube, part no. 185417, since this pump has a 1/2 npt(m) inlet.



# Table of Contents

Warnings .....	2	Pump 236533 .....	16
Service .....	5	Pump 237488 .....	17
Parts		Technical Data .....	19
Pump 220872 .....	13	Warranty .....	20
Pump 222580 .....	14	Graco Phone Number .....	20
Pump 222584 .....	15		

## 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



### 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.



- If there is any static sparking or you feel an electric shock while using this equipment, **stop spraying 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 sprayed.
- Keep the spray area free of debris, including solvent, rags, and gasoline.
- Electrically disconnect all equipment in the spray area.
- Extinguish all open flames or pilot lights in the spray area.
- Do not smoke in the spray area.
- Do not turn on or off any light switch in the spray area while operating or if fumes are present.
- Do not operate a gasoline engine in the spray area.

### Pressure Relief Procedure



### 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 nozzle.

1. Engage gun safety latch.
2. Turn ON/OFF switch to OFF.
3. Unplug power cord.
4. Disengage gun safety latch. Hold metal part of gun against grounded metal pail and trigger gun into pail to relieve pressure.
5. Engage gun safety latch.
6. Open any fluid drain valves in system. Leave drain valve open until ready to dispense again.

# WARNING



## INJECTION HAZARD

Spray from the gun, leaks or ruptured components can inject fluid into your body and cause extremely serious injury, including the need for amputation. Fluid splashed in the eyes or on the skin can also cause serious injury.

- Fluid injected into the skin is a serious injury. The injury may look like just a cut, but it is a serious injury. Get immediate medical attention.
- Do not point the gun at anyone or at any part of the body.
- Do not put your hand or fingers over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove or rag.
- Do not “blow back” fluid; this is not an air spray system.
- Always have the tip guard and the trigger guard on the gun when spraying.
- Check the gun diffuser operation weekly. Refer to the gun manual.
- Be sure the gun trigger safety operates before spraying.
- Lock the gun trigger safety when you stop spraying.
- Follow the **Pressure Relief Procedure** on page 2 if the spray tip clogs and before cleaning, checking or servicing the equipment.
- Tighten all fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn or damaged parts immediately. Do not repair high pressure couplings; you must replace the entire hose.
- Fluid hoses must have spring guards on both ends, to help protect them from rupture caused by kinks or bends near the couplings.



## 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.



## MOVING PARTS HAZARD

Moving parts can pinch or amputate your fingers.

- Keep clear of all moving parts when starting or operating the pump.
- Before servicing the equipment, follow the **Pressure Relief Procedure** on page 2 to prevent the equipment from starting unexpectedly.

# 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 uncertain 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 system component. Refer to the **Technical Data** on page 19 for the maximum working pressure of this equipment.
- 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 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use could result in a chemical reaction, with the possibility of explosion.
- 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).
- Do not lift pressurized equipment.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.

# Service

## Repair Kits and Sleeve Removal Tools

Pump Part No.	Repair Kit	Sleeve Removal Tool
220872	220877	224788
222580	222588	224787
222584	222587	224786
236533	236564	236963
237488	223411	235976

## Tools Needed

Heavy duty vise

1-1/16" open end wrench for Pump 220872

7/8" open end wrench for Pump 222580

3/4" open end wrench for Pump 222584

1-1/4" open end wrench for Pump 236533

2-5/8" adjustable, open end wrench for Pump 236533

2-1/4" adjustable, open end wrench

Plastic mallet

Small screwdriver

Throat Seal Liquid

## Cleaning and Inspecting Parts

Clean and inspect the parts. Pay particular attention to the ball seat in the intake valve, which should have no nicks or wear, and to the inside of the sleeve and the outside of the piston rod, which should not be worn or scratched. Replace worn or damaged parts.

Remove and clean the sleeve when you are repacking the pump. A special sleeve removal tool is available. See the chart, above, for the tool number for your pump.

## WARNING

Always use the special sleeve removal tool to remove the sleeve. Other removal methods could cause the pump to rupture, resulting in serious bodily injury. If the sleeve cannot be removed easily using the tool, return the sleeve and cylinder to your Graco distributor for removal.

## Before You Service the Pump

## WARNING

Before doing this procedure, follow the **Pressure Relief Procedure Warning** on page 2 to reduce the risk of a fluid injection injury, splashing in the eyes or on the skin, injury from moving parts or electric shock.

## Pump Disassembly

Flush the pump, if possible, and relieve pressure again. Stop the pump with the piston rod in its lowest position, if possible. To lower the piston rod manually on electronic sprayers, be sure the sprayer is unplugged. Turn the blades of the motor fan to lower the piston rod.

**NOTE:** For removing or installing pump on a GM10000 sprayer, see GM10000 Airless Paint Sprayer Manual 308568.

# Service

Fig. 1. Unscrew suction tube and hose from pump.

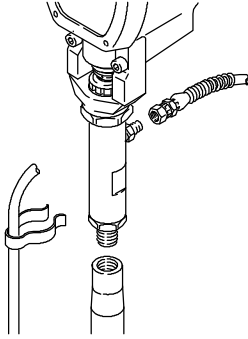


Fig. 1

02553

Fig. 4. Loosen locknut and unscrew pump.

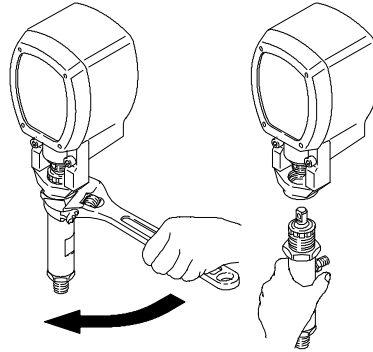


Fig. 4

02556

Fig. 2. Use screwdriver to push retaining spring up.

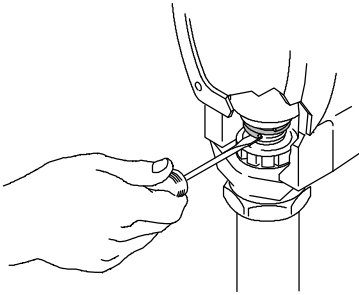


Fig. 2

02554

Fig. 5 and parts lists. Loosen plug (5) and packing nut (16).

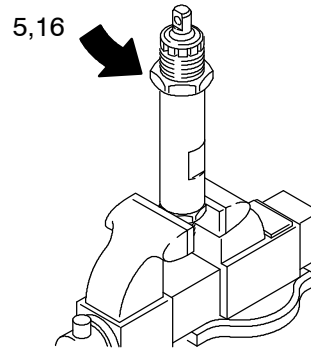


Fig. 5

02557

Fig. 3. Push out pin.

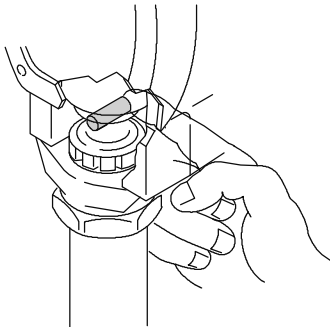


Fig. 3

02555

Fig. 6. Unscrew cylinder from intake valve.

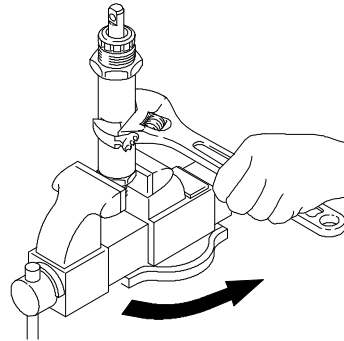
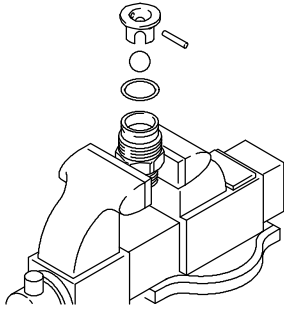


Fig. 6

02558

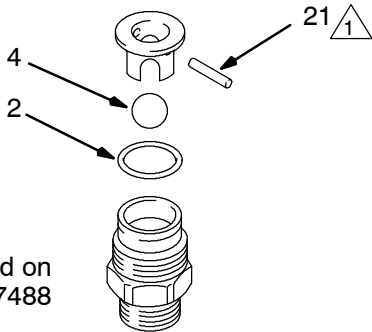
# Service

Fig. 7. Disassemble intake valve. Use pick to remove old gasket. Clean and inspect.



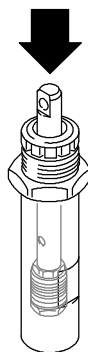
**Fig. 7** \_\_\_\_\_ 02559

Fig. 8 and parts lists. Reassemble intake valve, using new gasket (2), ball (4) and pin (21).



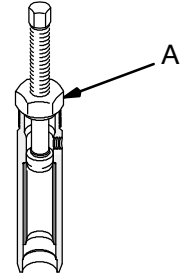
**Fig. 8** \_\_\_\_\_ 02560

Fig. 9. Tap piston rod out of cylinder.



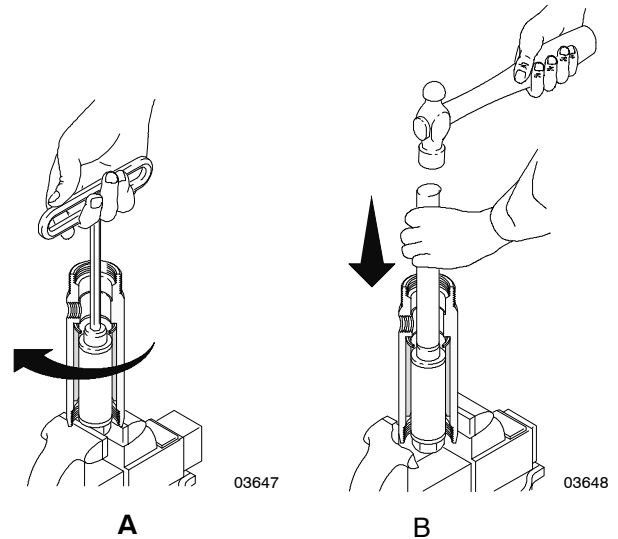
**Fig. 9** \_\_\_\_\_ 02561

Fig. 10. **For pumps 220872, 222580, 222584, and 237488.** Screw sleeve removal tool's large nut (A) into top of cylinder. Screw down rod to push sleeve out. Remove tool. Remove old o-ring and discard. Clean and inspect parts. Go to Fig. 12.



**Fig. 10** \_\_\_\_\_ 02562

Fig. 11 (A). **For pump 236533.** Position sleeve removal tool within cylinder with large retaining nut at bottom. Clamp retaining nut in vise. Using Allen wrench (or socket wrench with hex bar), tighten top nut by turning wrench clockwise. This expands cylinder.



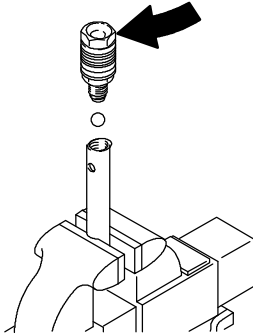
**Fig. 11** \_\_\_\_\_

Fig. 11 (B). Clamp cylinder flats in vise. Remove Allen wrench (or socket wrench with hex bar). Use rod and mallet to tap and dislodge sleeve and sleeve removal tool.

To remove sleeve from sleeve removal tool, clamp bottom nut of tool in vise. Place Allen wrench (or socket wrench with hex bar) in top nut and turn counterclockwise to collapse tool. Remove sleeve. Remove o-ring and discard. Clean and inspect parts. Go to Fig. 12.

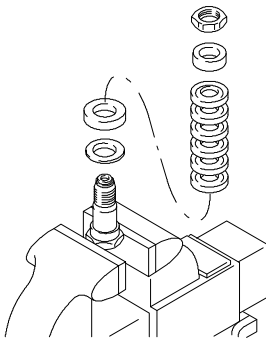
# Service

**Fig. 12. For all pumps.** Loosen retaining nut. Unscrew piston valve from rod. Clean and inspect parts.



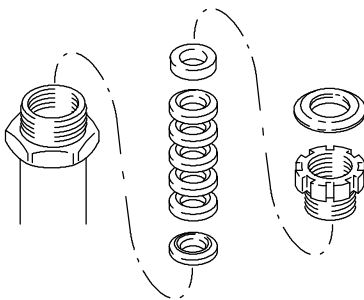
**Fig. 12** 02563

**Fig. 13.** Disassemble piston and discard packings and glands.



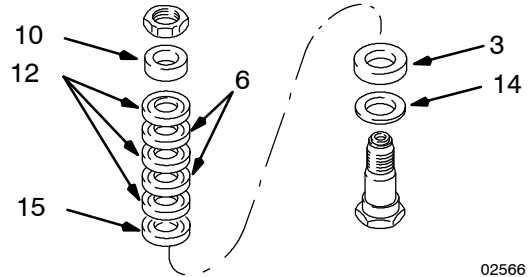
**Fig. 13** 02564

**Fig. 14.** Remove and discard throat packings and glands.



**Fig. 14** 02565

**Fig. 15 and parts lists.** Clean piston valve threads. One at a time, stack backup washer (14), seal (3) (with lips facing down), and female gland (15) on piston. Alternately stack polyethylene (12) and leather (6) packings (lips facing up) on piston. Then install male gland (10).

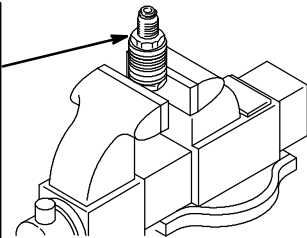


**Fig. 15** 02566

**Fig. 16.** Tighten packing retaining nut against piston valve as specified for your pump.

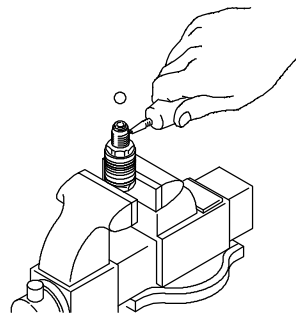
**Note the alignment** of piston valve to packing retainer nut. Maintain alignment, steps 17 through 19.

- Pump 220872**  
Torque to 3-4 in-lb
- Pumps 222580**  
Torque to 5-6 in-lb
- Pumps 222584**  
Torque to 1-2 in-lb
- Pumps 236533**  
Torque to 3-4 in-lb
- Pumps 237488**  
Torque to 3-4 in-lb



**Fig. 16** 02567

**Fig. 17.** Apply thread locking sealant to threads. Place ball on piston valve.

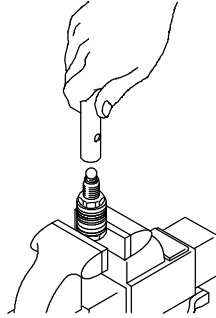


**Fig. 17** 02568



# Service

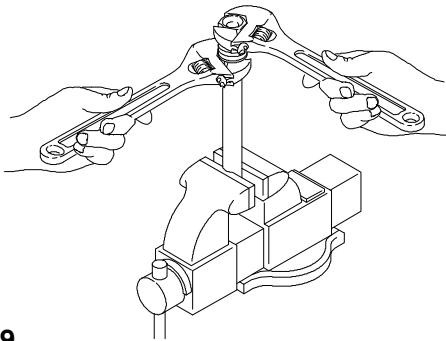
Fig. 18. While maintaining alignment of piston valve to packing retaining nut from Fig. 16, thread piston valve assembly into piston rod until piston valve nut just contacts rod.



**Fig. 18**

02569

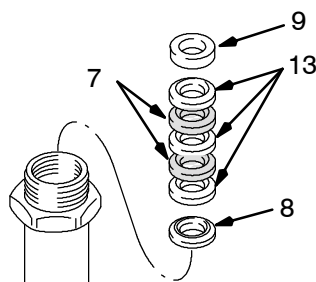
Fig. 19. Carefully tighten piston valve nut onto piston rod. For pumps 222580, 222584, and 237488 torque to 19 ft-lb (27 N.m). For pumps 222872 and 235533 torque to 28 ft-lb (40 N.m). Use two wrenches to maintain alignment.



**Fig. 19**

02570

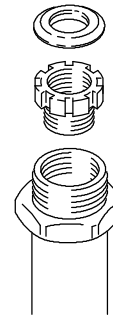
Fig. 20 and parts lists. Place male gland (8) in cylinder. Alternately stack polyethylene (13) and leather packings (7) (lips facing down). Then place female gland (9) in top of cylinder. Seat packings.



**Fig. 20**

02571

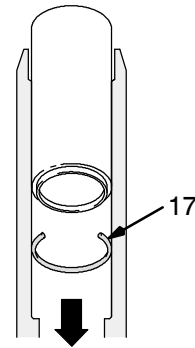
Fig. 21. Loosely install packing nut and plug.



**Fig. 21**

02572

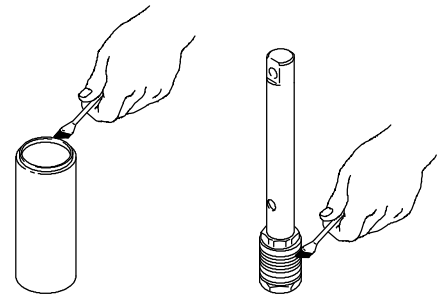
Fig. 22 and parts lists. Place o-ring (17) in cylinder. Slide sleeve in to cylinder up side down to seat o-ring. Remove sleeve.



**Fig. 22**

02573

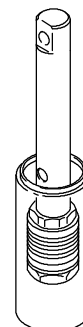
Fig. 23. Grease piston packings and top edge of sleeve.



**Fig. 23**

02574

Fig. 24. Carefully slide piston assembly into top of sleeve.



**Fig. 24**

02575

# Service

## Notes About Reassembling the Pump

- Install the sleeve with the tapered end down.
- Be sure the retaining spring is firmly in the groove all the way around the connecting rod to prevent it from working loose due to vibration.

### **⚠ WARNING**

If the pin works loose, it or other parts could break off due to the force of the pumping action. These parts could be projected through the air and result in serious bodily injury or property damage, including damage to the pump, connecting rod or bearing housing.

- Be sure the pump locknut is tightened firmly.

### **⚠ CAUTION**

If the pump locknut loosens during operation, the threads of the bearing housing will be damaged.

Fig. 25. Slide sleeve/piston rod assembly into bottom of cylinder.

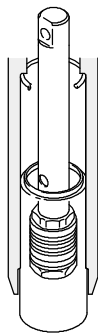


Fig. 25

02576

Fig. 26. Grease intake valve o-ring with non-silicon grease. Screw pump cylinder onto intake valve. For pumps 220892, 222580, and 222584 torque to 70 ft-lb (95 N.m). For pumps 236533 and 237488, torque to 110 ft-lb (149 N.m).

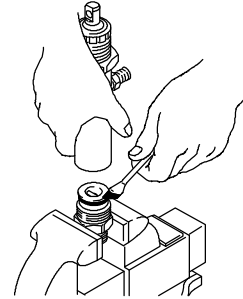


Fig. 26

02577

Fig. 27. Tighten packing nut (16) hand tight. Screw cylinder locknut (A) down to bottom of external cylinder threads.

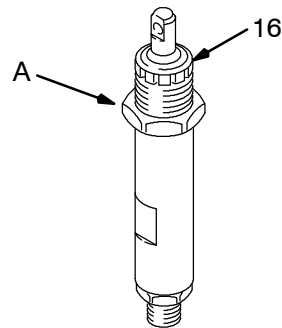


Fig. 27

02578

Fig. 28. Screw in pump until holes in bearing housing and piston rod align.

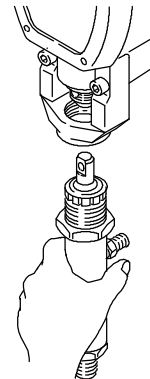
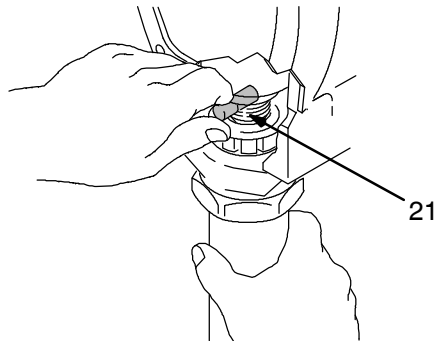


Fig. 28

02579

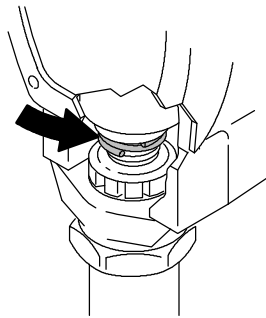
# Service

Fig. 29 and parts lists. Push pin (21) into holes.



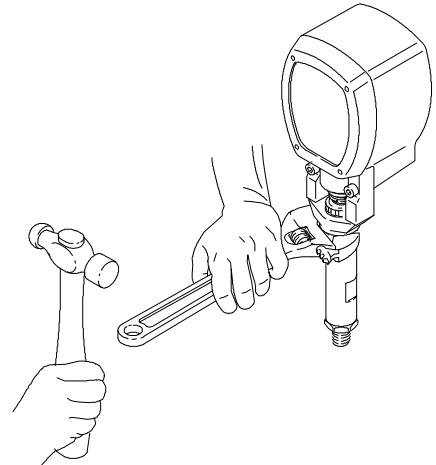
**Fig. 29** \_\_\_\_\_ 02580

Fig. 30. Push retaining spring into groove all the way around connecting rod.



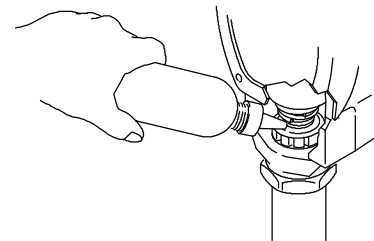
**Fig. 30** \_\_\_\_\_ 02581

Fig. 31. Screw pump further into bearing housing until it is flush with top of housing. Tighten locknut very tight. For pumps 220872, 222580, 222584, and 237488, tighten to approximately 70 ft-lb (95 N.m). For pump 236533, tighten to approximately 140 ft-lb (190 N.m).



**Fig. 31** \_\_\_\_\_ 02582

Fig. 32. Tighten packing nut just enough to stop leakage, but no tighter. Fill packing nut 1/3 full with Graco TSL.



**Fig. 32** \_\_\_\_\_ 02583



# Parts - Pump 220872

## Model 220872, Series A

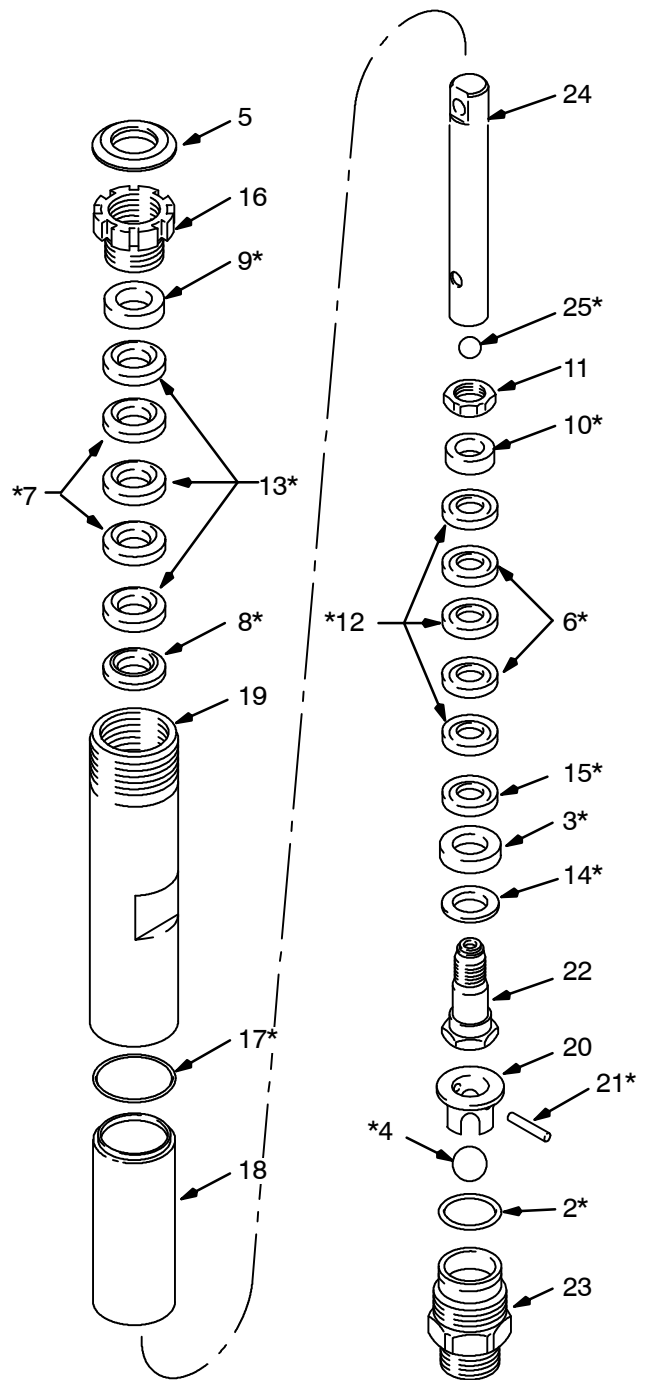
Carbon Steel Displacement Pump  
Includes items 2 to 25

Ref No.	Part No.	Description	Qty.
2*	107098	PACKING, o-ring, PTFE	1
3*	118504	WIPER, piston	1
4*	108775	BALL; sst	1
5	183171	PLUG	1
6*	183174	V-PACKING, leather	2
7*	183175	V-PACKING, leather	2
8*	183176	GLAND, male	1
9*	15C990	GLAND, female	1
10*	183178	GLAND, male	1
11	183179	NUT, hex, retaining	1
12*	193125	V-PACKING, polyethylene	3
13*	183183	V-PACKING, polyethylene	3
14*	15C998	WASHER, backup	1
15*	183185	GLAND, female	1
16	183186	NUT, packing	1
17*	183172	O-RING, PTFE	1
18	183361	SLEEVE, cylinder	1
19	183181	CYLINDER	1
20	183180	GUIDE, ball	1
21*	183173	PIN, ball stop	1
22	220631	VALVE, piston	1
23	220629	VALVE, intake	1
24	220630	ROD, piston	1
25*	101947	BALL	1

\* These parts are also included in Repair Kit 220877, which may be purchased separately.

## Accessory

**224788** Sleeve Removal Tool, for pump 220872. Use to remove pump sleeve.

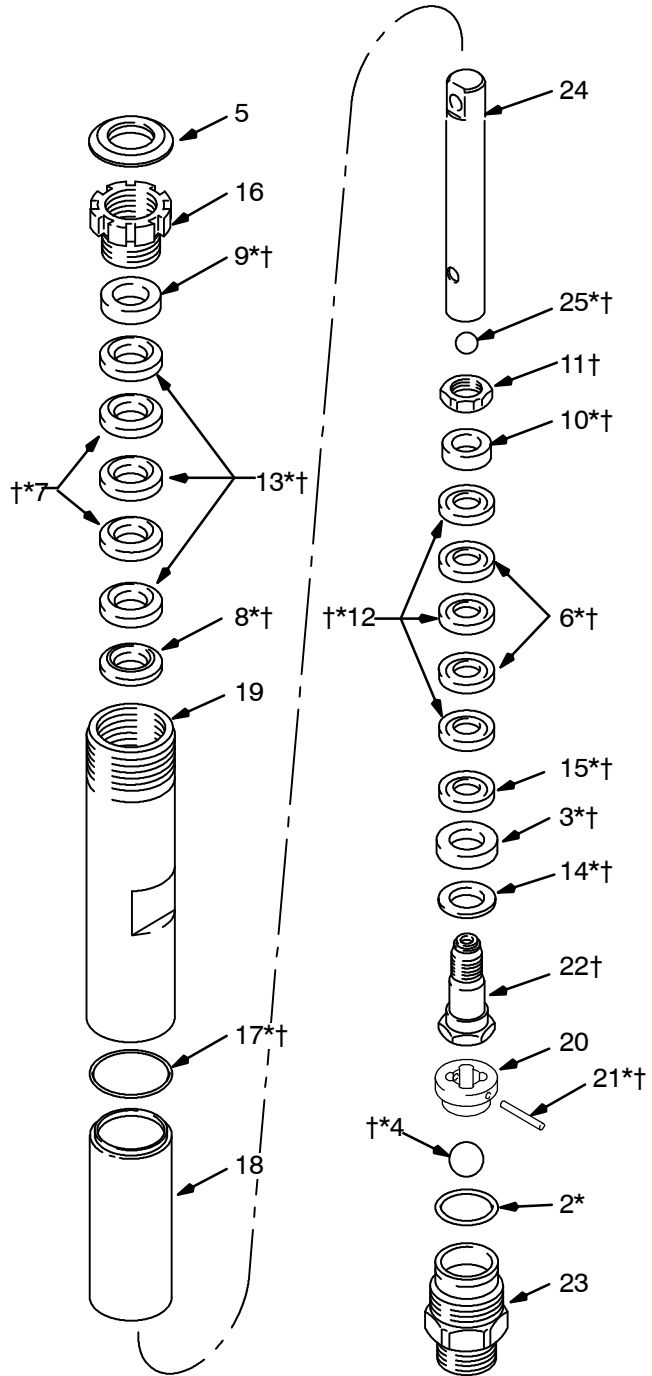


# Parts - Pump 222580

## Model 222580, Series A

Sleeved Displacement Pump  
Includes items 2 to 25

Ref No.	Part No.	Description	Qty
2*§	108526	PACKING, o-ring, PTFE	1
3*†	107093	SEAL, u-cup, polyurethane	1
4*†	105445	BALL; sst	1
5	179810	PLUG	1
6*†	178939	V-PACKING, leather	2
7*†	178940	V-PACKING, leather	2
8*†	15C987	GLAND, male	1
9*†	15C988	GLAND, female	1
10*†	178944	GLAND, male	1
11†	178945	NUT, hex, retaining	1
12*†	178964	V-PACKING, polyethylene	3
13*†	178965	V-PACKING, polyethylene	3
14*†	15C997	WASHER, backup	1
15*†	178969	GLAND, female	1
16	193046	NUT, packing	1
17*§†	108526	PACKING, o-ring, PTFE	1
18	185213	SLEEVE, cylinder	1
19	185211	CYLINDER	1
20	185214	GUIDE, ball	1
21*†	178938	PIN, ball stop	1
22†	218036	VALVE, piston	1
23	222437	VALVE, intake	1
24	222438	ROD, piston	1
25*†	105444	BALL	1



\* These parts are also included in Repair Kit 222588, which may be purchased separately.

† These parts are also included in Repair Kit 287079 (assembled piston), which may be purchased separately.

§ These parts are identical.

## Accessory

**224787** Sleeve Removal Tool, for pump 222580. Use to remove pump sleeve.

# Parts - Pump 222584

## Model 222584, Series A

Sleeved Displacement Pump  
Includes items 2 to 25

Ref No.	Part No.	Description	Qty
2*†	108954	PACKING, o-ring, PTFE	1
3*	105522	SEAL, u-cup, polyurethane	1
4*	105445	BALL; sst	1
5	180656	PLUG	1
6*	176749	V-PACKING, leather	2
7*	176755	V-PACKING, leather	2
8*	176754	GLAND, male	1
9*	176757	GLAND, female	1
10*	176750	GLAND, male	1
11	176751	NUT, hex, retaining	1
12*	176882	V-PACKING, polyethylene	3
13*	176997	V-PACKING, polyethylene	3
14*	186652	WASHER, backup	1
15*	180073	GLAND, female	1
16	176758	NUT, packing	1
17*†	108954	PACKING, o-ring, PTFE	1
18	183571	SLEEVE, cylinder	1
19	183562	CYLINDER	1
20	183559	GUIDE, ball	1
21*	183555	PIN, ball stop	1
22	218197	VALVE, piston	1
23	221098	VALVE, intake	1
24	183563	ROD, piston	1
25*	105444	BALL	1

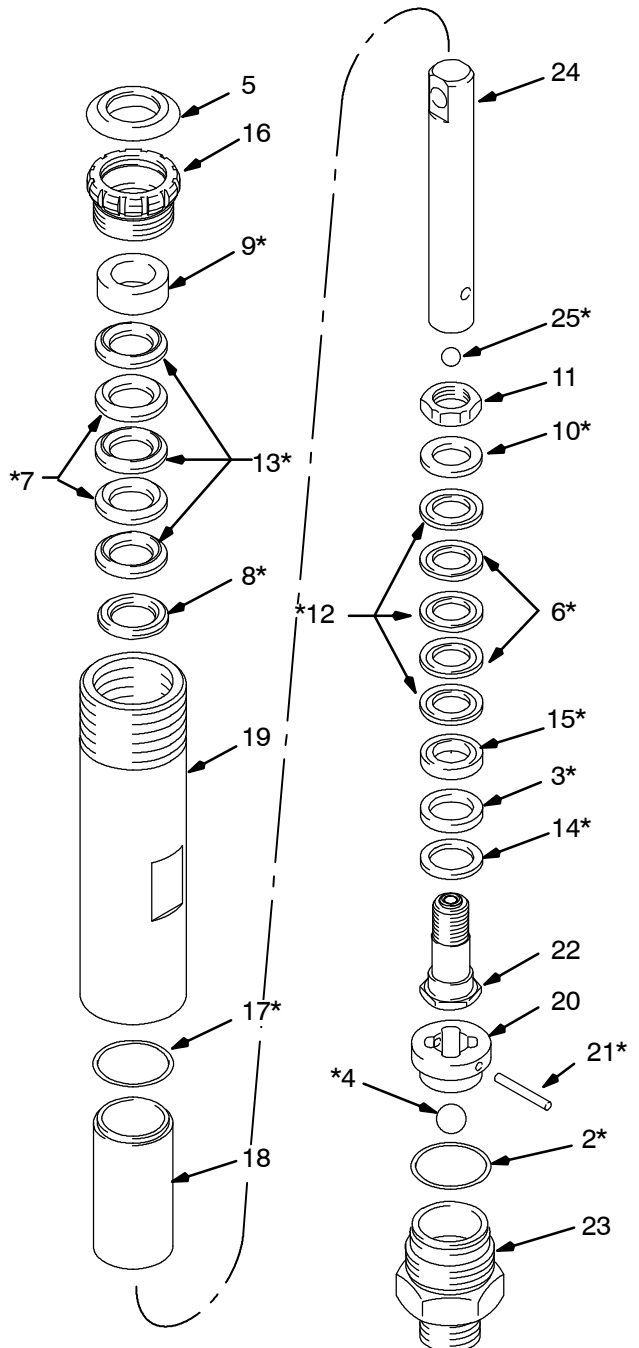
\* These parts are also included in Repair Kit 222587, which may be purchased separately.

† These parts are identical.

**NOTE:** When using this pump in place of a non-sleeved pump in the Ultra 500 Upright Sprayer, you must also order a new siphon tube, part no. 185417, since this pump has a 1/2 npt(m) inlet.

## Accessory

**224786** Sleeve Removal Tool, for pump 222584. Use to remove pump sleeve.



# Parts - Pump 236533

## Model 236533, Series B

Sleeved Displacement Pump  
Includes items 2 to 25

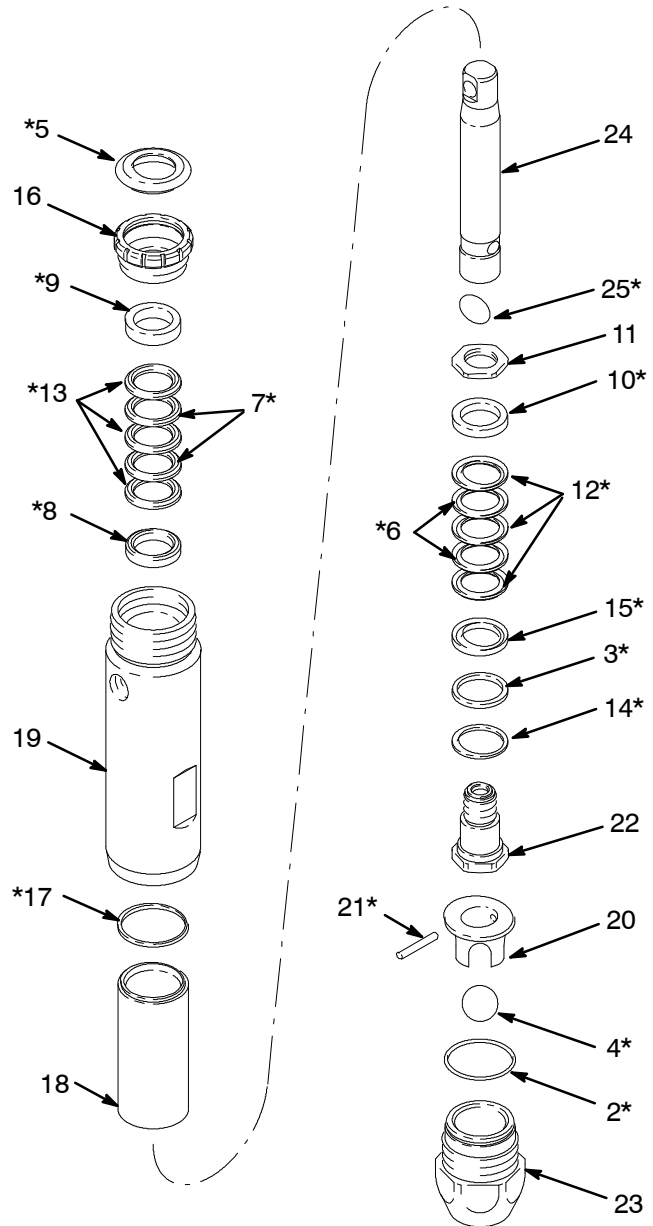
Ref No.	Part No.	Description	Qty
2*	108822	PACKING, o-ring, PTFE	1
3*	112589	SEAL, u-cup, polyurethane	1
4*	102972	BALL; sst	1
5	112590	PLUG	1
6*†	112591	V-PACKING, leather	2
7*†	112591	V-PACKING, leather	2
8*†	189585	GLAND, male	1
9*	189584	GLAND, female	1
10*†	183585	GLAND, male	1
11	189586	NUT, hex, retaining	1
12*†	112592	V-Packing, polyethylene	3
13*†	112592	V-Packing, polyethylene	3
14*	189587	WASHER, backup	1
15*	189588	GLAND, female	1
16	189589	NUT, packing	1
17*	189590	O-RING, PTFE	1
18	236566	SLEEVE, cylinder	1
19	189592	CYLINDER	1
20	189593	GUIDE, ball	1
21*	112593	PIN, ball stop	1
22	236565	VALVE, piston	1
23	236558	VALVE, intake	1
24	236567	ROD, piston	1
25*	105445	BALL	1

\* These parts are also included in Repair Kit 236564.  
Keep an extra kit on hand to reduce down time.

† Items 6 and 7, 8 and 10, and 12 and 13 are identical part sets.

## Accessory

**236963** Sleeve Removal Tool, for pump 236533. Use to remove pump sleeve.





# Parts - Pump 237488

## Model 237488, Series A

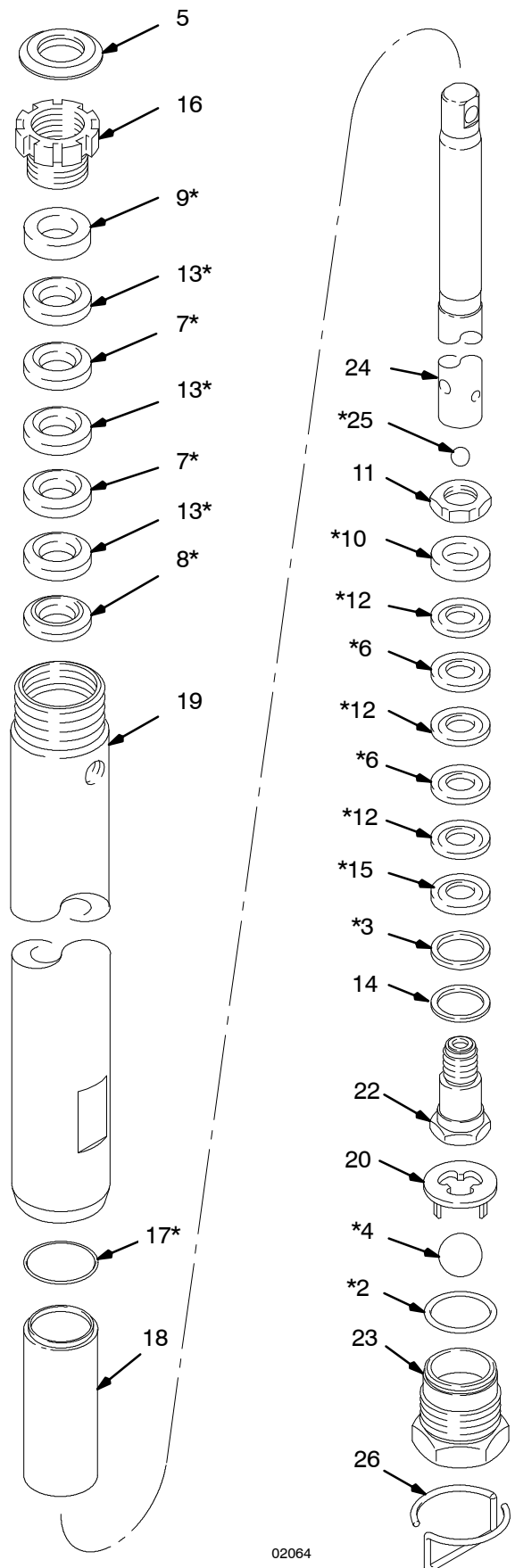
Displacement Pump  
Includes items 2 to 26

Ref No.	Part No.	Description	Qty
2	107098*	SEAL, sleeve	1
3	108690*	SEAL, u-cup, polyurethane	1
4	102972*	BALL; sst	1
5	183171	PLUG	1
6	183174*	V-PACKING, leather	2
7	183175*	V-PACKING, leather	2
8	183176*	GLAND, male	1
9	183177*	GLAND, female	1
10	183178*	GLAND, male	1
11	183179	NUT, hex, retaining	1
12	183182*	V-PACKING, polyethylene	3
13	183183*	V-PACKING, polyethylene	3
14	186653*	WASHER, backup	1
15	183185*	GLAND, female	1
16	183186	NUT, packing	1
17	183172*	O-RING, PTFE	1
18	188148	SLEEVE, cylinder	1
19	190082	CYLINDER, pump	1
20	185312	GUIDE, ball	1
22	235203	VALVE, piston	1
23	222691	VALVE, intake	1
24	235722	ROD, piston	1
25	101947*	BALL	1
26	185522	STAND OFF	1

\* These parts are also included in Repair Kit 223411.  
Keep an extra kit on hand to reduce down time.

## Accessory

**235976** Sleeve Removal Tool, for pump 237488. Use to remove pump sleeve.



02064



# Technical Data

## Maximum working pressure

Pump 222584 ..... 2750 psi (195 bar)  
Pumps 220872, 222580, 236533, 237488  
..... 3000 psi (210 bar)

## Fluid inlet size

Pump 236533 ..... 1 npt(f)  
Pumps 220872, 222580 ..... 3/4 npt(m)  
Pump 237488 ..... 5/8 non-threaded  
Pump 222584 ..... 1/2 npt(m)

## Fluid outlet size

Pumps 220872, 236533, 237488 ..... 3/8 npt(f)  
Pumps 222580, 222584 ..... 1/4 npt(f)

Wetted parts ..... Stainless steel, PTFE,  
leather, polyurethane, carbon steel,  
Delrin<sup>®</sup>, polyethylene

**NOTE:** Delrin<sup>®</sup> is a registered trademark of the Du Pont Company. Locktite<sup>®</sup> is a registered trademark of the Locktite Company.

# Manual Change Summary

This manual has been updated to Rev. L to officially change piston rod 235535 to 236567 on pump 236533. This was previously incorporated at Rev. K.

# Graco Standard Warranty

Graco warrants all equipment listed in this manual which is manufactured by Graco 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. With the exception of any special extended or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be 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 general wear and tear, or 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 of Graco equipment with 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.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

**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.

## LIMITATION OF LIABILITY

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

## FOR GRACO CANADA CUSTOMERS

The parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

# Graco Number

**TO PLACE AN ORDER**, contact your Graco distributor, or call 1-800-690-2894 to identify the nearest distributor.

*All written and visual data contained in this document reflects the latest product information available at the time of publication.*

*Graco reserves the right to make changes at any time without notice.*

*MM 307806*

*Original instructions. This manual contains English. MM 307806*

**Graco Headquarters:** Minneapolis

**International Offices:** Belgium, China, Japan, Korea

**GRACO INC. AND SUBSIDIARIES P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441 USA**

**Copyright 1987, Graco Inc. All Graco manufacturing locations are registered to ISO 9001.**

**[www.graco.com](http://www.graco.com)**

Revision S - September 2017