INSTRUCTIONS-PARTS LIST



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



309170

Rev. A

First choice when quality counts.™

120-Liter (30 Gallon) Size Ram-Mounted Pumps

See List of Models on page 2.

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List of Models

Model No. (Parts page)	Air Motor	Pump Lower	Ratio	Maximum Fluid Working Pressure	Maximum Air Input Pressure
C58815* (12)	Bulldog®	Check-Mate [™] 450	55:1	341 bar, 34 MPa (4950 psi)	6.2 bar, 0.6 MPa (90 psi)
C59568* (14)	Senator®	Dura–Flo™ 600	25:1	138 bar, 14 MPa (2000 psi)	5.5 bar, 0.5 MPa (80 psi)

* **C**E

Symbols

Warning Symbol

WARNING

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.

	EQUIPMENT MISUSE HAZARD
	Equipment misuse can cause the equipment to rupture or malfunction and result in serious injury.
INSTRUCTIONS	This equipment is for professional use only.
	Read all instruction manuals, tags, and labels before you operate the equipment.
	• Use the equipment only for its intended purpose. If you are not sure, call your Graco distributor.
	 Do not alter or modify this equipment. Use only Graco parts and accessories.
	Check equipment daily. Repair or replace worn or damaged parts immediately.
	• Do not exceed the maximum working pressure stated on the equipment or in the Technical Data for your equipment. Do not exceed the maximum working pressure of the lowest rated component in your system.
	 Use fluids and solvents that are compatible with the equipment wetted parts. See the Technical Data section of all equipment manuals. Read the fluid and solvent manufacturer's warnings.
	Wear hearing protection when you operate this equipment.
	• Comply with all applicable local, state, and national fire, electrical, and safety regulations.
	MOVING PARTS HAZARD
	Moving parts, such as the priming piston and ram plate, can pinch or amputate your fingers.
	 Keep clear of all moving parts when you start or operate the pump.
	• Keep hands and fingers away from the priming piston during operation and whenever the pump is charged with air.
	• Keep your hands away from the ram plate and the lip of the drum while the ram is operating.
	• Before you service the equipment, follow the Pressure Relief Procedure on page 9 to prevent the equipment from starting unexpectedly.
	TOXIC FLUID HAZARD
Ä	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.

3

A WARNING



INJECTION HAZARD

Spray from the spray gun/dispense valve, 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 might look like just a cut, but it is a serious injury. Get immediate medical attention.
- Do not point the gun/valve at anyone or at any part of the body.
- Do not put your hand or fingers over the spray tip/nozzle.
- 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. See the gun manual.
- Be sure the gun/valve trigger safety operates before you spray/dispense.
- Lock the gun/valve trigger safety when you stop spraying/dispensing.
- Follow the **Pressure Relief Procedure** on page 9 if the spray tip/nozzle clogs and before you clean, check, or service the equipment.
- Tighten all fluid connections before you operate 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.

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 and the object being sprayed or dispensed to. See **Ground the System** on page 5.
- If there is any static sparking or you feel an electric shock while using this equipment, **stop spraying/dispensing 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/dispensed to.
- Keep the spray/dispense area free of debris, including solvent, rags, and gasoline.
- Electrically disconnect all equipment in the spray/dispense area.
- Extinguish all open flames or pilot lights in the spray/dispense area.
- Do not smoke in the spray/dispense area.
- Do not turn on or off any light switch in the spray/dispense area while operating or if fumes are present.
- Do not operate a gasoline engine in the spray/dispense area.

Ground the System

WARNING



FIRE AND EXPLOSION HAZARD Improper grounding could cause static sparking, which could cause a fire or explosion. To reduce the risk of property damage or serious injury, follow the grounding instructions below.

The following grounding instructions are minimum requirements for a system. Your system may include other equipment or objects that must be grounded. Check your local electrical code for detailed grounding instructions for your area and type of equipment. Your system must be connected to a true earth ground.

• **Pump:** Check the ground wire and clamp. See Fig. 1. To install, loosen the grounding lug locknut (W) and washer (X). Insert one end of a 1.5 mm² (12 ga) minimum ground wire (Y) into the slot in the lug (Z), and tighten the locknut securely. Connect the other end of the wire to a true earth ground.



- Air compressors and hydraulic power supplies: Follow the manufacturer's grounding recommendations.
- Air, fluid, and hydraulic hoses connected to the pump: Use only electrically conductive hoses with a maximum of 150 m (500 ft) combined hose length to ensure grounding continuity. Check the electrical resistance of air and fluid hoses at least once a week. If the total resistance to ground exceeds 29 megohms, replace the hose immediately.

NOTE: Use a meter that is capable of measuring resistance at this level.

- **Spray gun / dispense valve:** Connect to a properly grounded fluid hose and pump.
- Fluid supply container: Follow the local code for grounding.
- Object being sprayed / dispensed to: Follow the local code for grounding.
- All solvent pails used when flushing: Follow the local code for grounding. 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.

To maintain grounding continuity when flushing or relieving pressure, always hold a metal part of the gun/dispense valve firmly to the side of a grounded metal pail, then trigger the gun/dispense valve.

KEY

- A Pump
- B Ram
- C Ram plate
- D Electrically conductive air supply hose
- E Main air bleed valve (required, for pump and ram)
- F Air manifold
- G Pump air regulator
- H Pump air bleed valve (required, for pump)
- J Air line filter
- K Bleed-type air valve (for accessories)
- L Fluid drain valve (required)
- M Fluid pressure regulator

- N Electrically conductive fluid hose
- P Electrically conductive fluid whip hose
- R Gun/valve swivel
- S Gun or dispense valve
- T Ram air regulator
- U Ram director valve
- V Air release valve
- W Air line drain valve
- Y Ground wire (required) See page 5 for installation instructions.
- AA Safety valve
- CC Vent valve



NOTE: Numbers and letters in parentheses in the text refer to the callouts in the figures and the Parts Drawings.

Accessories are available from Graco. Make certain all accessories are sized and pressure-rated to meet your system requirements.

Fig. 2 is only a guide for selecting and installing system components and accessories. Contact your Graco distributor for assistance in designing a system to suit your particular needs.

Air Line Components and Accessories

See Fig. 2.

A main air bleed valve (E), pump air bleed valve (H), and fluid drain valve (L) are required. These accessories help reduce the risk of serious injury, including fluid injection and splashing of fluid in the eyes or on the skin, and injury from moving parts if you are adjusting or repairing the pump.

The main air bleed valve (E) shuts off and relieves the air to the pump and ram. The ram holds pressure if the ram director valve (U) is in the horizontal (neutral) position. To relieve air pressure in the ram, close the main air bleed valve (E), and move the director valve (U) to DOWN. The ram will slowly drop.

The pump air bleed valve (H) relieves air trapped between it and the pump after the air is shut off. Trapped air can cause the pump to cycle unexpectedly. Install 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 might not be sufficient for relieving pressure.

• Main air bleed valve (E)

Required in your system to shut off the air supply to the pump and ram (see **WARNING** at left). When closed, the valve bleeds off all air in the ram and pump, and the ram slowly lowers. Be sure the valve is easily accessible from the pump and is installed **upstream** from the air manifold (F).

• Pump air bleed valve (H)

Required in your system to relieve air trapped between it and the air motor when the valve is closed (see **WARNING** at left). Be sure the valve is easily accessible from the pump, and is installed **downstream** from the air regulator (G).

• Air regulator (G)

Controls pump speed and outlet pressure by adjusting the air pressure to the pump. Install the regulator close to the pump, but **upstream** from the pump air bleed valve.

• Air manifold (F)

Has a swivel air inlet. Mounts to the cart and provides ports for connecting lines to air-powered accessories.

- Air line filter (J) Removes harmful dirt and moisture from the compressed air supply.
- Second bleed-type air valve (K) Isolates air line accessories for servicing. Install upstream from all other air line accessories.
- Ram air regulator (T) Controls air pressure to the ram.
- Ram director valve (U) Controls raising and lowering of the ram.
- Air release valve (V)
 Opens and closes flow of air to assist raising the ram plate (C) out of an empty drum.
- Vent valve (CC) Bleeds air from under the ram plate (C) to assist in priming the pump and lowering the ram plate into the drum.

Some pumps require assembly. To install the pump and other components on the ram, follow the instructions below for the **Bulldog and Senator Pumps**.

Location

Position the ram so the air regulators for the pump and the ram are easily accessible. Ensure that there is sufficient overhead clearance when the ram is fully raised. See the Dimensional Drawing in the separate ram manual 306934, supplied.

Using the holes in the ram base as a guide, drill holes for 1/2 in. (13 mm) anchors.

Check that the ram base is level in all directions. If necessary, level the base using metal shims. Secure the base to the floor using 13 mm (1/2 in.) anchors that are long enough to prevent the ram from tipping.

Air and Fluid Hoses

Be sure all air hoses (D) and fluid hoses (N, P) are properly sized and pressure-rated for your system. Use only electrically conductive hoses. Fluid hoses must have spring guards on both ends. Use of a short whip hose (P) and a swivel (R) between the main fluid hose (N) and the gun/valve (S) allows freer gun/valve movement.

Fluid Line Accessories

Install the following accessories in the locations shown in Fig. 2, using adapters as necessary:

• Fluid drain valve (L)

Required in your system to relieve fluid pressure in the hose and gun/valve (see **WARNING** on page 7). Screw the drain valve into the open branch of a tee mounted in the fluid line. Install the drain valve pointing down, but so the handle points up when opened.

• Fluid regulator (M)

Controls fluid pressure to the gun/valve and dampens pressure surges.

- Gun or dispense valve (S) Dispenses the fluid. The gun shown in Fig. 2 is a dispensing gun for highly viscous fluids.
- Gun swivel (R)

Allows freer gun/valve movement.

Assembly Procedure

Bulldog Pump (Model C58815)

- 1. Install gasket (6) on ram plate. See page 12.
- 2. Lower pump (2) onto ram plate and secure it with screws on ram plate collar. Secure pump to mounting plates with screws and washers included with ram.
- 3. Install air regulation kit (7): Insert air manifold stud in hole on ram mounting bracket (9), and secure it with washers (38) and nut (39). Connect air regulation kit hose (16) to pump air inlet.
- 4. Screw bushing (24) into elbow (21), and screw elbow onto pump outlet fitting so bushing faces straight up.
- 5. Connect one end of air hose (8) to 1/4 npt(f) port of air manifold (33) using swivel (17). Connect other end to swivel adapter of ram air regulator.

Senator Pumps (Model C59568)

- 1. Install gasket (6) on ram plate. See page 14.
- 2. Lower the pump (2) onto ram plate and secure it with four lugs (5) and screws (4). Secure pump to mounting plates with screws and washers included with ram.
- 3. Install air regulation kit (7): Insert air manifold stud in hole on ram mounting bracket (9), and secure it with washers (38) and nut (39). Connect air regulation kit hose (16) to pump air inlet.
- 4. Screw fitting (43), check valve (42), and bushing (24) into elbow (21), and screw elbow onto pump outlet fitting so bushing faces straight up.
- 5. Connect one end of the air hose (8) to 1/4 npt(f) port of air manifold (33) using swivel (17). Connect other end to swivel adapter of ram air regulator.

Operation

Pressure Relief Procedure



INJECTION HAZARD

The system pressure must be manually relieved to prevent the system from starting or spraying/dispensing

accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you

- Are instructed to relieve the pressure
- Stop spraying or dispensing
- Check or service any of the system equipment
- Install or clean the spray tip or nozzle
- 1. Lock the gun/valve trigger safety.
- 2. Close the pump air bleed valve (H, required in your system).
- Shut off the main air bleed valve (E, required in your system). Set the ram director valve (U) to DOWN. The ram will slowly drop.
- 4. Unlock the gun/valve trigger safety.
- 5. Hold a metal part of the gun/valve firmly to the side of a grounded metal pail, and trigger the gun/valve to relieve pressure.
- 6. Lock the gun/valve trigger safety.
- 7. Open the drain valve (required in your system) and/or the pump bleeder valve (DD), having a container ready to catch the drainage.
- 8. Leave the drain valve open until you are ready to spray/dispense again.

If you suspect that the spray tip/nozzle or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, very slowly loosen the tip guard retaining nut or hose end coupling and relieve pressure gradually. Then loosen it completely. Then clear the tip/nozzle or hose.

Starting and Adjusting the Ram

- 1. See Fig. 2. Close all air regulators and air valves.
- Open main air bleed valve (E), and set ram air regulator (T) to 2.8 bar, 0.26 MPa (40 psi). Pull up on director valve (U) handle so arrow points to UP, and let ram raise to its full height.
- 3. Set full drum of fluid on ram base, slide it back against tube stop, and center it under ram plate (C).
- 4. Remove drum cover, and smooth surface of fluid with straightedge.
- 5. If drum has plastic liner pull it over edge of drum. Secure liner with duct tape wrapped around circumferance of drum.
- 6. Lubricate ram plate wiper seals with heavy coat of vaseline, lithium grease, or other compatible grease. See ram manual for additional maintenance, assembly, and parts information.

WARNING

MOVING PARTS HAZARD



Moving parts can pinch or amputate your fingers. When the pump is operating and when raising or lowering the ram, keep

your fingers and hands away from the pump intake, ram plate, and lip of the drum.

NOTE: Do not use drums that have side bungs or large dents with this ram. Rough bung openings or large dents will damage the wipers or stop the ram plate, resulting in a runaway pump.

- 7. Push down on director valve handle so arrow points to DOWN, lower ram until ram plate is about to enter drum, and set valve to neutral. Reposition drum as necessary so wipers do not hit drum lip, and open vent valve (CC) on ram plate.
- 8. Set director valve to DOWN, and continue to lower ram until fluid appears at vent valve (CC). Set director valve to neutral and close vent valve.

Operation

Starting and Adjusting the Pump

- 1. Be sure pump air regulator (G) is closed. Set ram air regulator (T) to about 3.5 bar, 0.35 MPa (50 psi). Set director valve (U) to DOWN. See Fig. 2.
- 2. Start pump as explained in separate pump instruction manual.
- Keep director valve (U) set to DOWN while pump З. is operating.

NOTE: Increase air pressure to the ram if the pump does not prime properly with heavier fluids. If fluid is forced out around the top wiper, ram pressure is too high, and the air pressure should be decreased.

Shutdown and Care of the Pump

Set director valve (U) to neutral. 1.

WARNING

To reduce the risk of serious injury whenever you are instructed to relieve pressure, always follow the Pressure Relief Procedure on page 9.

- 2. Relieve the pressure.
- 3. Follow pump shutdown instructions in your separate pump manual.

Changing Drums

WARNING



MOVING PARTS HAZARD

Moving parts can pinch or amputate your fingers. When the pump is operating and when raising or lowering the ram, keep your fingers and hands away from the pump intake, ram plate, and lip of the drum.

- 1. Stop pump. Close pump air bleed valve (H).
- 2. Before raising wiper plate, locate push button on air release valve (V).
- 3. Set director valve (U) to UP to raise wiper plate. At same time, carefully equalize pressure in drum with air release valve.
- Raise wiper plate until it is completely out of drum. 4.
- 5. Remove empty drum.
- 6. Inspect wiper plate and, if necessary, remove any remaining material or buildup.
- Place full drum on ram base. 7.
- 8. Lower ram, and adjust position of drum relative to ram plate, as explained under Starting and Adjusting the Ram on page 9.

Notes

Model C58815, Series A 55:1 Ratio Bulldog Pump



Model C58815, Series A 55:1 Ratio Bulldog Pump

Ref No.	Part No.	Description	Qty	Ref No.	Part No.	Description	Qty
1	241988	RAM, drum, 120 liter (30 gal)		21	112040	ELBOW, fluid outlet, 90°;	
		See 306934 for parts	1			3/4 npt(fbe)	1
2	242046	55:1 RATIO BULLDOG PUMP		22	206994	THROAT SEAL LIQUID;	
		See 308017 for parts	1			8 oz (0.5 liter); not shown	1
6	184086	GASKET; PTFE	1	24	100896	BUSHING; 3/4 npt(m) x 1/2 npt(f)	1
7	238020	AIR REGULATION INSTALLATION K	IT	25	237569	GROUND WIRE	1
		Includes items 8 to 17, and 31	1	31	238724	AIR REGULATION KIT	
8	109123	. HOSE, air; buna-N; 1/4" (6 mm) ID;				Includes items 32 to 40	1
		1/4 npt (mbe); 18" (457 mm)	1	32	107141	. BLEED VALVE; 3/4 npt (m x f)	1
9	237962	. BRACKET	1	33	207675	. MANIFOLD, air; 3/4 npsm(f)	1
10	190747	. BRACKET	1	34	101180	. GAUGE, air	1
11	100021	. CAPSCREW; 1/4–20 unc–2a;		35	100840	. ELBOW, street; 90°; 1/4 npt (m x f)	1
		1 in. (25 mm) long	4	36	100509	. PLUG, pipe, sq hd; 1/4 npt	2
12	102040	. NUT, hex, locking; 1/4–20 unc–3b	4	37	100403	. PLUG, pipe; 1/8 npt	1
13	157129	. NIPPLE; 3/4 npt; 3.25 in. (82 mm)	1	38	100133	. WASHER, spring lock; 3/8"	1
14	113218	. AIR VALVE, bleed-type; red-handled	d;	39	100131	. NUT, hex; 3/8–16	1
		3/4 npt(m x f)	1	40	207755	. AIR REGULATOR	
15	156172	. SWIVEL; 3/4 npt(m) x 3/4 npsm(f)	1			See 308168 for parts	1
16	238088	. HOSE, air; buna-N; 3/4" (19 mm) ID	;	41	150707	KIT, designation plate (not shown)	1
		3/4 npt (mbe); 54" (1372 mm) long	1				
17	159840	. ADAPTER, swivel, 90°;					
		1/4 npt(m) x 1/4 npsm(f) swivel	1				

Model C59568, Series A 25:1 Ratio Senator Pump



Model C59568, Series A 25:1 Ratio Senator Pump

Ref	Part			Ref	Part		
No.	No.	Description	Qty	No.	No.	Description	Qty
1	241988	RAM, drum, 200 liter (55 gal)		17	155541	. ADAPTER, swivel, 90°;	
		See 306934 for parts	1			1/4 npt(m) x 1/4 npsm(f) swivel	1
2	686615	25:1 RATIO SENATOR PUMP		21	C38079	ELBOW, fluid outlet, 90°	1
		See 307592 for parts	1	22	206994	THROAT SEAL LIQUID;	
	222776	KIT, mounting;				8 oz (0.5 liter); not shown	1
		Includes items 4 to 6	1	24	510073	FITTING, hex nipple	2
4	102637	. SCREW, cap, hex hd;		25	237569	GROUND WIRE	1
		3/8–16 unc–2a x 38 mm (1.5") long	4	26	C58109	PLATE, 30 gallon	1
5	276025	. LUG	4		238704	AIR REGULATION KIT	
6	109495	. O-RING, packing, Viton®	1			Includes items 32 to 40	1
		AIR REGULATION INSTALLATION K	ΊT	32	107141	. BLEED VALVE; 3/4 npt (m x f)	1
		Includes items 8 to 17, and 31	1	33	207675	. MANIFOLD, air; 3/4 npsm(f)	1
8	109123	. HOSE, air; buna-N; 1/4" (6 mm) ID;		34	101180	. GAUGE, air	1
		1/4 npt (mbe); 18" (457 mm)	1	35	100840	. ELBOW, street; 90°; 1/4 npt (m x f)	2
9	237962	. BRACKET	1	37	100403	. PLUG, pipe; 1/8 npt	1
10	190747	. BRACKET	1	38	100322	. WASHER, spring lock; 3/8"	1
11	100021	. CAPSCREW; 1/4–20 unc–2a;		39	100131	. NUT, hex; 3/8–16	1
		1 in. (25 mm) long	4	40	207755	. AIR REGULATOR	
12	102040	. NUT, hex, locking; 1/4–20 unc–3b	4			See 308168 for parts	1
13	157129	. NIPPLE; 3/4 npt; 3.25 in. (82 mm)	1	41	150707	KIT, designation plate (not shown)	1
14	113218	. AIR VALVE, bleed-type; red-handled	d;	42	103347	VALVE, safety	1
		3/4 npt(m x f)	1	43	C38033	FITTING, male connector	1
15	156172	. SWIVEL; 3/4 npt(m) x 3/4 npsm(f)	1	44	C59546	VALVE, check, 3/4 npt, ss, 5000 psi	1
16	238088	. HOSE, air; buna-N; 3/4" (19 mm) ID	,				
		3/4 npt (mbe); 54" (1372 mm) long	1				

Dimensions



Pump Model	A (raised)	B (lowered)	С	D	E	F	G
All	2663 mm	1707 mm	533 mm	635 mm	965 mm	1067 mm	1111 mm
	(104.8 in.)	(67.2 in.)	(21 in.)	(25 in.)	(38 in.)	(42 in.)	(43.74 in.)

Notes

Technical Data

Model No.	Air Motor	Air Pressure of Sound Tests (25 cycles/min)	* Sound Pressure Level	** Sound Power Level
C58815	Bulldog®	7 bar, 0.7 MPa (100 psi)	94 dBa	109 dBa
C59568	Senator®	7 bar, 0.7 MPa (100 psi)	93 dBa	108 dBa

* Sound pressure level was measured in accordance with Cagi Pneurop, 1969.

** Sound power level was measured in accordance with ISO 3744, 1981.

Technical Data

Maximum air input pressure (ram)	10 bar, 1.0 MPa (145 psi)
Maximum fluid working pressure and air input pressure (pur	mp) See page 2.
Wetted parts (fluid outlet fittings)	See separate pump instruction manual.
Wetted parts (pump)	See separate pump instruction manual.
Viton [®] is a registered trademark of the DuPont Company.	

Graco Standard Warranty

Graco warrants all equipment 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.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

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, 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.

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

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Graco Phone Number

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you: 1-800-367-4023 Toll Free

All written and visual data contained in this document reflect the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

> Sales Offices: Minneapolis, Detroit International Offices: Belgium, Korea, Hong Kong, Japan

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