

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

Model H.E.L.P. G1200 and H.E.L.P. G1200B

HIGH EFFICIENCY LOW PRESSURETM HVLP SPRAY GUN

100 psi (7 bar) MAXIMUM WORKING FLUID PRESSURE

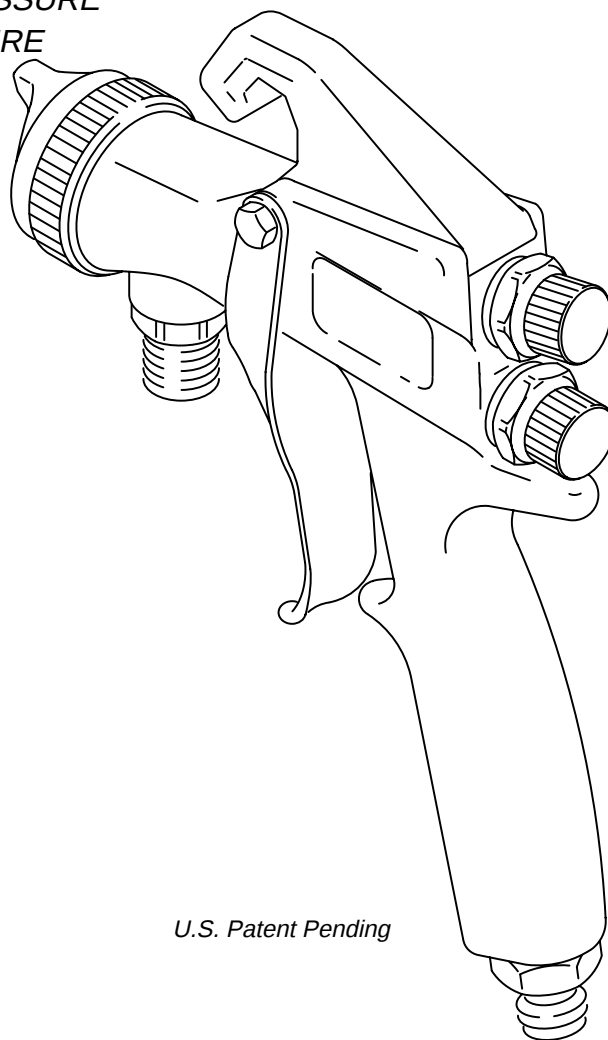
15 psi (1 bar) MAXIMUM WORKING AIR PRESSURE

See the **Selection Chart** on page 4 for complete spray gun assembly ordering numbers and descriptions.

IMPORTANT APPLICATION NOTE

The *Model G1200* spray gun has a trigger-operated air valve that will accept an air supply of 15 psi (1 bar) or less.

The *Model G1200B* bleeder-type spray gun does not have an air valve for use with turbine-type air supplies.



U.S. Patent Pending

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TABLE OF CONTENTS

Warnings	3	Troubleshooting Chart	15
Selection Charts	4	Service	16
Air Flow	7	Model G1200 Parts Drawing & Parts List	20
Typical Installation	8	Model G1200 Parts Drawing & Parts List	22
Installation	10	Accessories	24
Model G1200B Gun & Non-Graco Cup Connection	11	Technical Data	Back Cover
Operation	12	Important Phone Numbers	Back Cover
Maintenance	14	Warranty	Back Cover

WARNINGS

FOR PROFESSIONAL USE ONLY. OBSERVE ALL WARNINGS.

**Read and understand all instruction manuals, tags,
and warning labels before operating equipment.**

EQUIPMENT MISUSE HAZARD

General Safety

Any misuse of the spray equipment or accessories, such as over pressurizing, modifying parts, using incompatible chemicals and fluids, or using worn or damaged parts, can cause them to rupture and result in serious bodily injury, fire, explosion or property damage.

NEVER point the spray gun at anyone or at any part of the body. NEVER put hand or fingers over the spray nozzle.

ALWAYS follow the **Pressure Relief Procedure**, at right, before cleaning or removing the fluid nozzle or servicing any system equipment.

NEVER try to stop or deflect leaks with your hand or body.

NEVER alter or modify any part of this equipment; doing so could cause it to malfunction.

CHECK all spray equipment regularly and repair or replace worn or damaged parts immediately.

System Pressure

This gun has a **MAXIMUM FLUID WORKING PRESSURE** of 100 psi (7 bar) and a **MAXIMUM AIR WORKING PRESSURE** of 15 psi (1 bar). Never exceed the maximum working pressure of the gun or any other component or accessory used in the system.

Fluid Compatibility

BE SURE all fluids and solvents used are chemically compatible with the “Wetted Parts” shown in the **TECHNICAL DATA** on the back cover. Always read the fluid and solvent manufacturer’s literature before using the fluid or solvent in this gun.

Methylene Chloride with formic or propionic acid is not recommended as a flushing or cleaning solvent with this gun or any other device with nylon or aluminum components as it can damage these parts.

Pressure Relief Procedure

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

1. Turn off the air and fluid supply to the gun.
2. Trigger the gun into a grounded metal waste container to relieve air and fluid pressure.

HOSE SAFETY

TIGHTEN all fluid connections securely before each use.

NEVER use a damaged hose. Before each use, check the entire hose for cuts, leaks, abrasion, bulging cover, or damage or movement of the hose couplings. If any of these conditions exist, replace the hose immediately.

HANDLE AND ROUTE HOSES CAREFULLY. Do not pull on hoses to move equipment. Do not use fluids or solvents which are not compatible with the inner tube and cover of the hose.

IMPORTANT

United States Government safety standards have been adopted under the Occupational Safety and Health Act. These standards—particularly the General Standards, Part 1910 and the Construction Standards, Part 1926—should be consulted.

SELECTION CHARTS

CHART 1: GUN ASSEMBLIES AVAILABLE

Standard Non-bleeder-type Guns, with trigger-actuated air shut-off valves.

Complete Gun Assy. Part No.	Includes: Needle/Nozzle/Air Cap Kit Part No.	Orifice Size	Material Usage (See <i>TERMS</i> below)
223-252	224-312	0.055" (1.397 mm)	Light to Medium Fluids or Low Fluid Flow (5-8 oz/min)
223-253	224-313	0.070" (1.778 mm)	Medium to Heavy Fluids or Medium Fluid Flow (6-10 oz/min)
223-254	224-314	0.086" (2.184 mm)	Heavy Fluids or Medium Fluid Flow (6-10 oz/min)

Bleeder-type Guns, allow air to bleed through the gun at all times, regardless of trigger position.

Complete Bleeder Gun Assy. Part No.	Includes: Needle/Nozzle/Air Cap Kit Part No.	Orifice Size	Material Usage (See <i>TERMS</i> below)
224-609	224-312	0.055" (1.397 mm)	Light to Medium Fluids or Low Fluid Flow (5-8 oz/min)
224-610	224-313	0.070" (1.778 mm)	Medium to Heavy Fluids or Medium Fluid Flow (6-10 oz/min)
224-611	224-314	0.086" (2.184 mm)	Heavy Fluids or Medium Fluid Flow (6-10 oz/min)

TERMS:

Light Fluid: 15 to 20 seconds (No. 2 Zahn cup) -- Auto, Furniture, Appliances, Fine Finish Metallics, Top Coats, Lacquer, Enamel Primer.

Medium Fluid: 20 to 25 seconds (No. 2 Zahn cup) -- Contact Adhesive, Latex, Maintenance Paints, Textures, Primers, Epoxies, Vinyls, High Flow High Viscosity.

Heavy Fluid: +25 seconds (No. 2 Zahn cup) -- 2.8 Volatile Organic Compounds, High-solid Polyurethanes, Heavy Waterborne Enamels

SELECTION CHARTS

SELECTING THE PROPER NEEDLE/NOZZLE/AIR CAP SET

The High Efficiency Low Pressure Spray Gun's needle/nozzle sets range in size to provide different fluid flow rates. Chart 2 shows the recommended combinations of needle/nozzle kits and air caps.

Select from Charts 2, 3, 4, and 5, using the following guidelines.

As a general guideline, use the fluid nozzle that will give the required flow with the needle fully triggered at the lowest fluid pressure.

For low flow rates or light viscosity fluid, select the smaller nozzle sizes.

For high flow rates or high viscosity fluid, select the larger nozzle sizes.

Some applications may benefit by using an air cap that is one size larger than the needle/nozzle size that is being used. In certain applications, this may improve atomization, keep the air cap cleaner, and will decrease the pattern size. It will increase air flow, but also will decrease air pressure at the air cap.

Using an air cap size that is smaller than the nozzle/needle size **is not** recommended.

NOTE: To help select the proper needle/nozzle size, a fluid pressure gauge may be connected temporarily to the gun fluid inlet to determine the fluid pressure.

Selection Problems and Solutions

PROBLEM	POSSIBLE CAUSE	SOLUTION
Fluid <u>pressure</u> is too high (greater than 10 psi [0.7 bar]) with gun triggered	Using set with too small orifice	Use needle/nozzle/air cap set with larger orifice
Using a low pressure setting, the fluid <u>flow</u> is too high, making it necessary to restrict needle travel to reduce fluid flow.	Using set with too large orifice	Use needle/nozzle/air cap set with smaller orifice
Fluid system will not operate at low enough fluid pressure [below 10 psi (0.7 bar)]	There's no fluid regulator or air regulator is not sensitive enough	Add low pressure fluid regulator or add more sensitive air regulator on pressure pot

CHART 2: NEEDLE/NOZZLE/AIR CAP KIT

Needle/Nozzle/Air Cap Kit Part No.	Includes:		Orifice Size
	Standard Plastic Needle & Plastic Nozzle Kit Part No.	Air Cap* Part No.	
224-310	224-290	185-720	0.030" (0.762 mm)
224-311	224-291	185-721	0.042" (1.067 mm)
224-312	224-292	185-722	0.055" (1.397 mm)
224-313	224-293	185-723	0.070" (1.778 mm)
224-314	224-294	185-724	0.086" (2.184 mm)
224-315	224-295	185-725	0.110" (2.794 mm)
224-316	224-296	185-726	0.125" (3.175 mm)

*Approximate fan width for all air cap sizes 9 to 12 in. (229 to 305 mm).

Charts 3, 4, and 5 are on the next page.

CHART 3: STANDARD NEEDLE/NOZZLE KIT

STANDARD Plastic Needle & Plastic Nozzle Kit Part No.	Includes:		Orifice Size
	Plastic Fluid Nozzle Part No.*	Standard Plastic Fluid Needle Part No.	
224-290	275-910	185-710**	0.030" (0.762 mm)
224-291	275-911	185-711	0.042" (1.067 mm)
224-292	275-912	185-712	0.055" (1.397 mm)
224-293	275-913	185-713	0.070" (1.778 mm)
224-294	275-914	185-714	0.086" (2.184 mm)
224-295	275-915	185-715	0.110" (2.794 mm)
224-296	275-916	185-716	0.125" (3.175 mm)

CHART 4: OPTIONAL SST FLUID NOZZLE

Optional SST Fluid Nozzle Part No.
185-700
185-701
185-702
185-703
185-704
185-705
185-706

*When installing the molded fluid nozzle in the spray gun, the maximum recommended torque is 35 in-lbs (4 N•m).

**Non-feathering

CHART 5: OPTIONAL SST FLUID NEEDLE/NOZZLE MATCHED SET

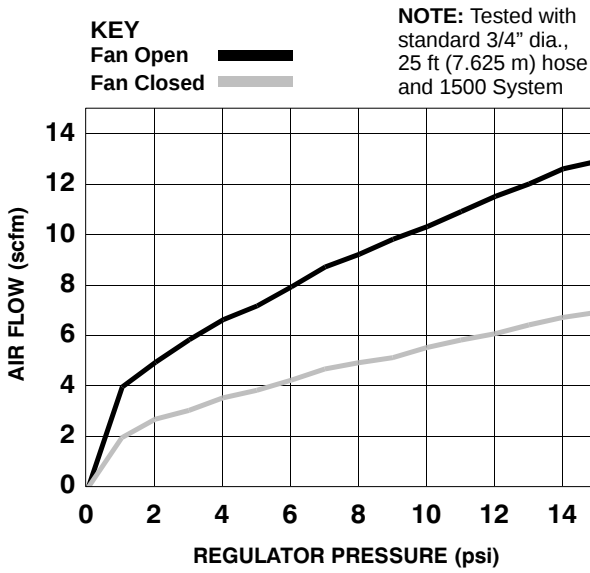
OPTIONAL Stainless Steel Needle/Nozzle Matched Set Part No.	Orifice Size
223-286	0.030" (0.762 mm)
223-287	0.042" (1.067 mm)
223-288	0.055" (1.397 mm)
223-289	0.070" (1.778 mm)
223-290	0.086" (2.184 mm)
223-291	0.110" (2.794 mm)
223-292	0.125" (3.175 mm)

NOTE: The stainless steel needle and nozzle are a matched set. DO NOT order a separate fluid nozzle from Chart 4, above, as it will not function properly with an unmatched stainless steel needle; order another matched needle and nozzle set.

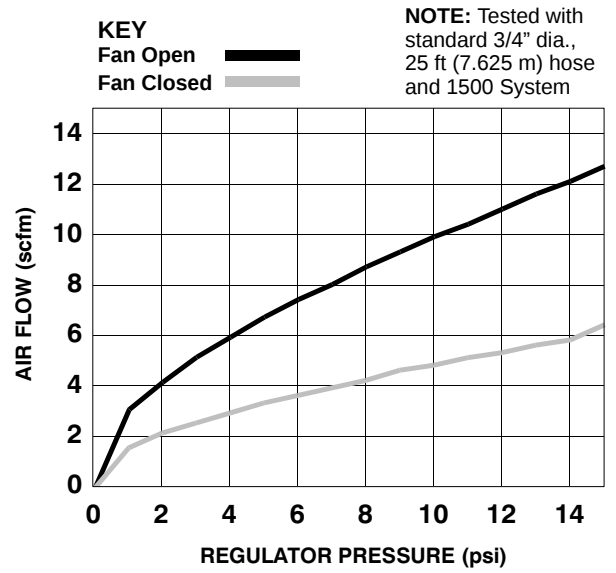
AIR FLOW

NOTE: Air flows apply to all nozzle sizes.

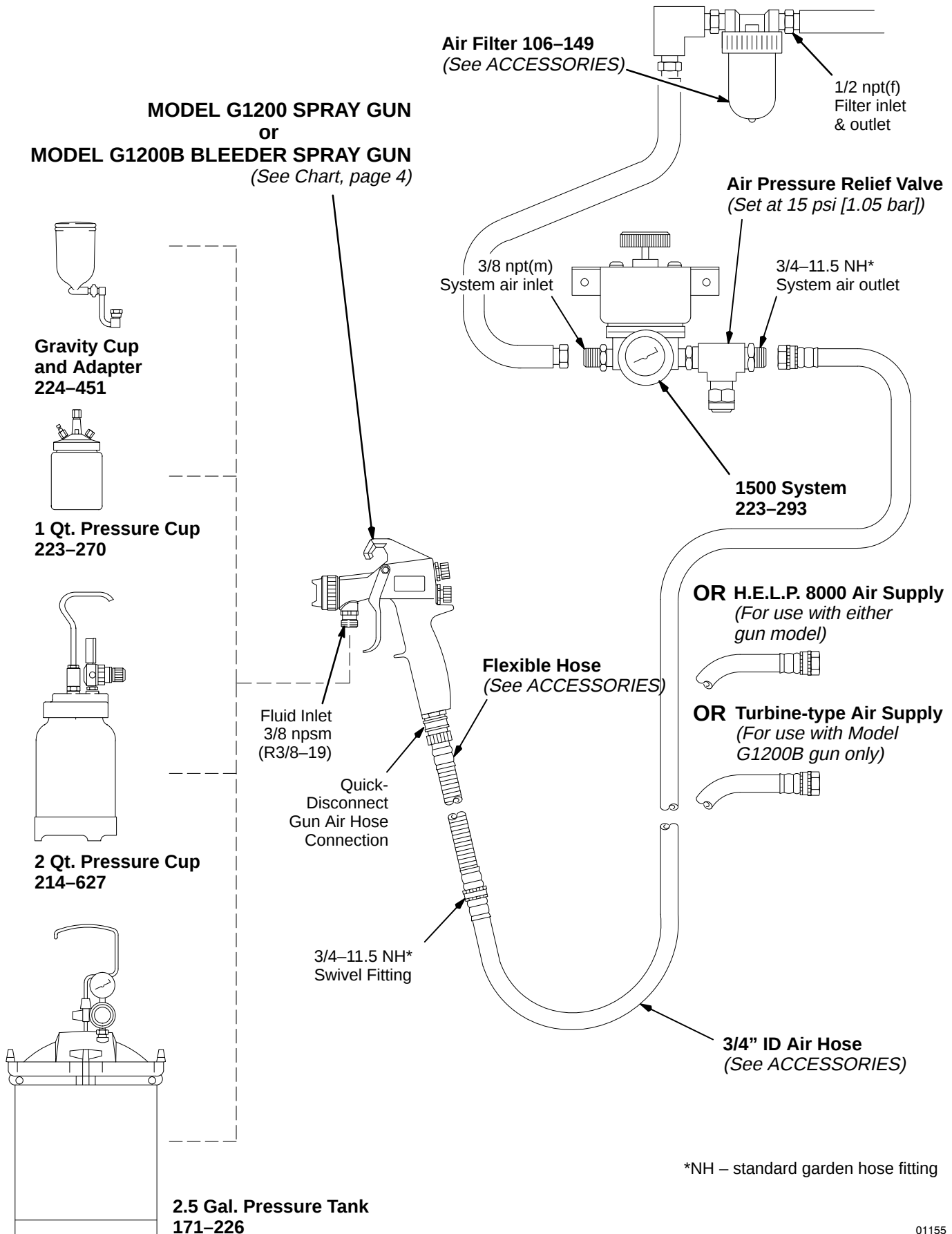
STANDARD NON-BLEEDER GUNS



BLEEDER GUNS



TYPICAL INSTALLATION



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TYPICAL INSTALLATION

Models G1200 and G1200B High Efficiency Low Pressure Spray Gun were designed to produce the highest quality finish with today's fluids as well as the the Low V.O.C. (*volatile organic compound*) fluids of tomorrow.

This spray gun can spray most coatings or finishes currently being used for automotive refinish, industrial, aerospace, marine, wood, plastic and architectural applications, while easily operating from any paint delivery system, including pressure pots of any size, or remote pumps for production line operation.

Models G1200 and G1200B Spray Gun typically utilizes up to 10 psi (0.7 bar) air pressure with high air volume to produce high quality paint finishes.

Possible Air sources to use with this gun include:

1. *High Efficiency Low Pressure 1500 System*
Accurately converts standard air line pressure down to the 10 psi (0.7 bar) required to meet all new regulations.
2. *High Efficiency Low Pressure 8000 System*
A stand-alone powered air supply, which is capable of supplying full, consistent air pressure to four guns.
3. *Turbine-type Air Supply*
For use with the Model G1200B Bleeder Gun only. (Must be type that will not be "dead-headed" by the air valve in the spray gun.)

NOTE: The 1500 and 8000 Systems can have an output air pressure of 15 psi (1.05 bar). However, for proper operation, 10 psi (0.7 bar) or lower output air pressure is recommended.

Installation of one of the Air Hose Assemblies listed in the **ACCESSORIES** section is required to minimize the air pressure drop in the hose while still maintaining good hose flexibility. This combination produces the best atomization with high transfer efficiency.

Ventilate the Spray Booth

WARNING

To prevent hazardous concentrations of toxic and/or flammable vapors, spray only in a properly ventilated spray booth. **Never operate the spray gun unless ventilation fans are operating.**

Check and follow all of the National, State and Local codes regarding air exhaust velocity requirements.

Check and follow all local safety and fire codes.

2. If using the High Efficiency Low Pressure Model 1500 Air Supply System, install an air and water separator (Part No. 106–149) on the air line to ensure a dry, clean air supply to the gun. Dirt and moisture can ruin the appearance of your finished workpiece. See **ACCESSORIES**.

Connect the Fluid Line

1. Before connecting the fluid line, blow it out with air and flush it with solvent. Use solvent which is compatible with the fluid to be sprayed.
2. Install a fluid regulator on the fluid line to control fluid pressure to the gun.
3. Connect the fluid line to the gun fluid inlet (3/8–18 npsm [R 3/8–19] compound thread).

Connect the Air Line

1. Connect the flexible air hose between the atomizing air hose and the gun's quick-disconnect air fitting. Refer to the system drawing on page 8.

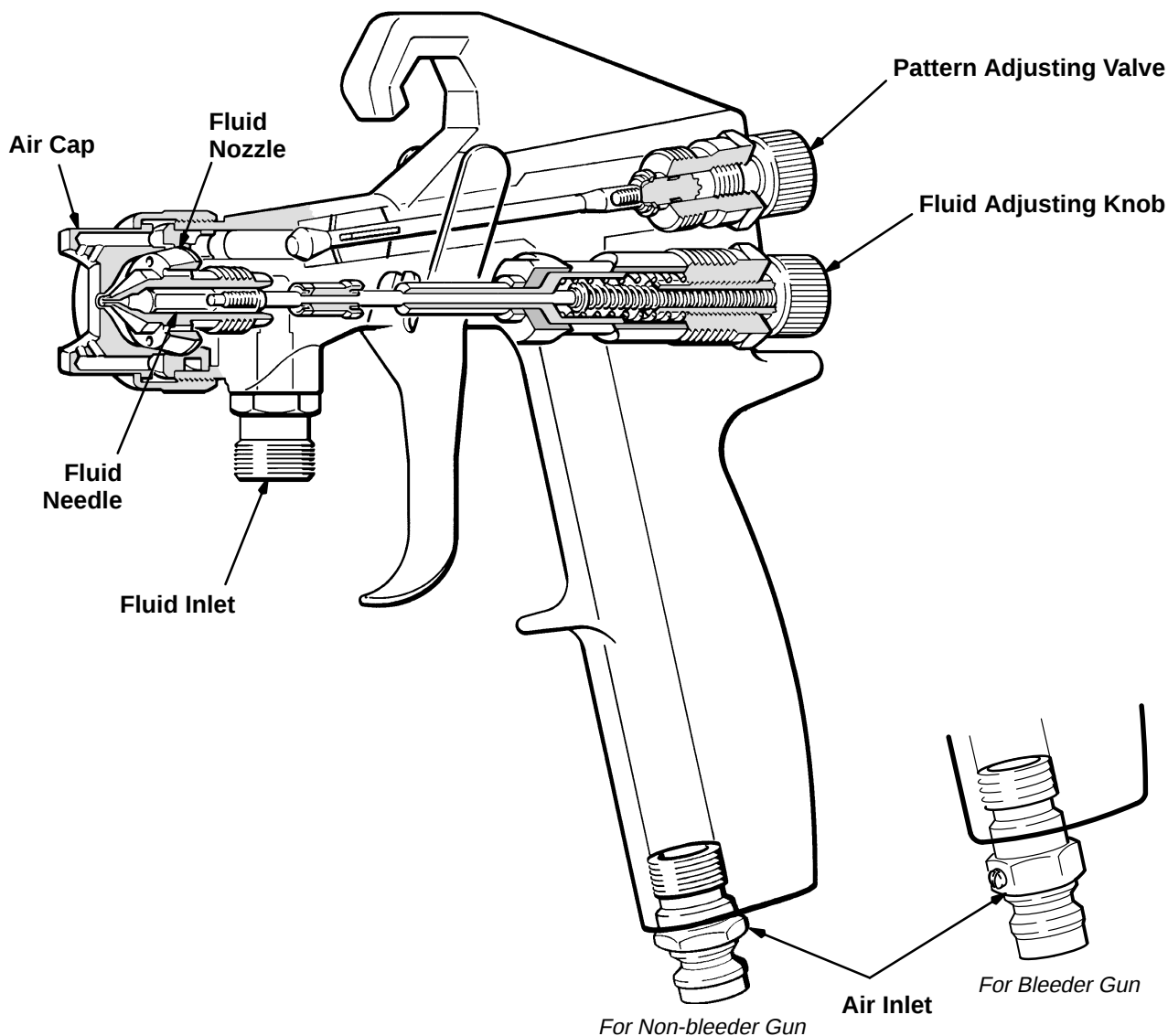


Fig 1

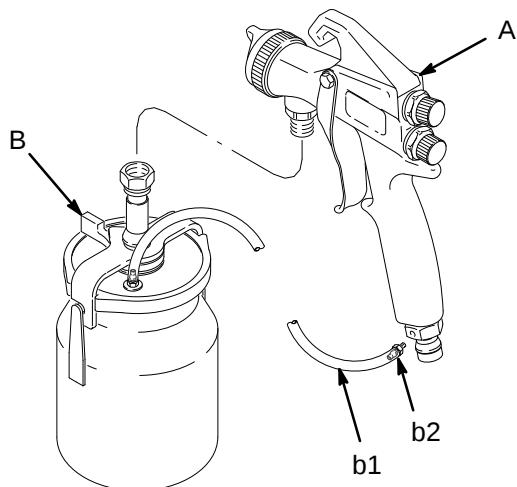
MODEL G1200B GUN & NON-GRACO CUP CONNECTION

WARNING

The assembly instructions below ONLY apply to connecting the *Binks*, *Sharpe*, or *Capspray* one-quart pressure cups to the *Graco Model H.E.L.P. G1200B* (bleeder) gun. The instructions do not apply to other spray gun models.

DO NOT exceed the 10 psi (0.7 bar) maximum working air pressure rating of the pressure cups. Failure to use the cups as intended may result in serious injury or property damage.

Binks One-quart Pressure Cup



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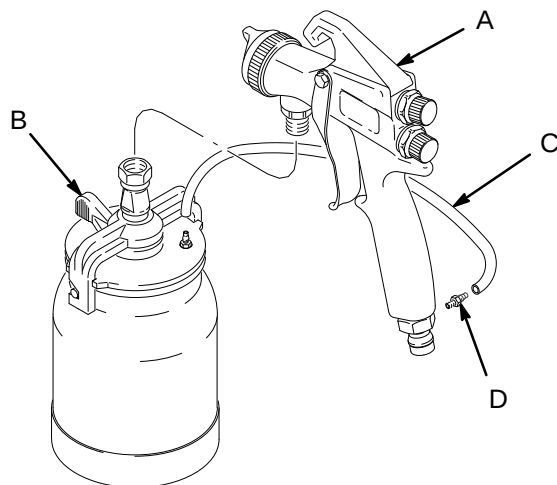
Ref

Letter	Part No.	Description
A		G1200B Spray Gun
B		Binks One-quart Cup; <i>Includes items b1 & b2</i>
b1		Tubing
b2		Barbed Fitting

Assembly Instructions

1. Remove the screw from the gun air inlet fitting port.
2. Connect the cup (B) to the gun (A) fluid inlet fitting.
3. Disconnect the tubing (b1) from the cup lid.
4. Connect the tubing and barbed fitting (b2) to the gun air inlet fitting.
5. Reconnect the tubing to the cup lid fitting

Sharpe One-quart Pressure Cup



01211

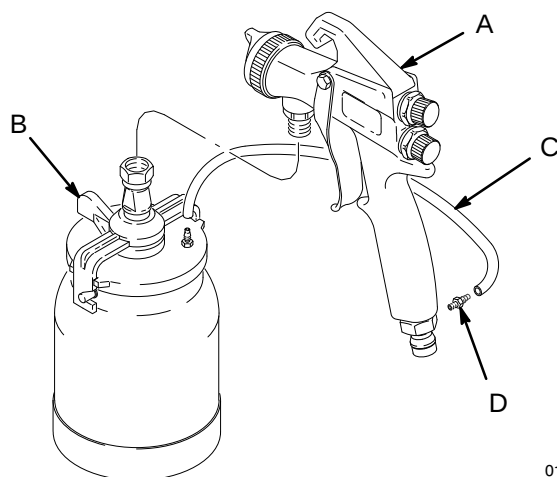
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Letter	Part No.	Description
A		G1200B Spray Gun
B		Sharpe One-quart Cup
C	185-859	Tubing, 0.125" ID
D	110-494	Barbed Fitting

Assembly Instructions

1. Remove the screw from the gun air inlet fitting port. Install the barbed fitting (D) into the port.
2. Connect the cup (B) to the gun (A) fluid inlet fitting.
3. Cut the tubing (C) to the desired length and connect it between the cup and gun barbed fittings.

Capspray One-quart Pressure Cup



01212

Ref

Letter	Part No.	Description
A		G1200B Spray Gun
B		Capspray One-quart Cup
C	185-860	Tubing, 0.187" ID
D	110-494	Barbed Fitting

Assembly Instructions

1. Remove the screw from the gun air inlet fitting port. Install the barbed fitting (D) into the port.
2. Connect the cup (B) to the gun (A) fluid inlet fitting.
3. Cut the tubing (C) to the desired length and connect it between the cup and gun barbed fittings.

WARNING

Pressure Relief Procedure

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

1. Turn off the air and fluid supply to the gun.
2. Trigger the gun into a grounded metal waste container to relieve fluid pressure.

Filter the Fluid

Filter the fluid to remove coarse particles and sediment which could clog the spray nozzle.

Select a Needle/Nozzle Set and Air Cap

Check the viscosity of your paint. Install the proper needle/nozzle set and air cap combination, selected from the charts on pages 5 and 6.

CAUTION

Trigger the gun whenever you tighten or remove the nozzle. This keeps the needle seat away from the nozzle seating surface and prevents the seat from being scratched.

Position the Air Cap

Rotate the air cap as needed to achieve the desired spray pattern direction. See Fig 2. To create a round pattern, turn the pattern air off.

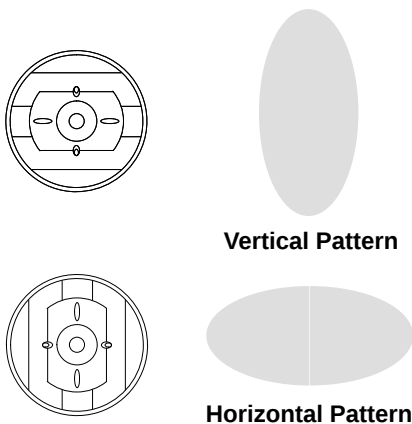


Fig 2 0791A

Adjust the Spray Pattern

Follow these steps to establish the correct fluid flow and air flow:

1. Adjust the fluid flow by using the fluid pressure regulator installed in the fluid line.

2. The spray gun has a 15 psi (1 bar) maximum recommended inlet air pressure. Using the air pressure regulator, set the air line pressure according to the fluid manufacturer's recommendations for a high volume, low pressure application. Local laws may limit the air line maximum pressure to 10 psi (0.7 bar).

NOTE: The H.E.L.P. 1500 System is factory set to 10 psi (0.7 bar) air pressure with 100 psi (7 bar) air pressure at inlet. The pressure can be reduced by adjusting the air supply adjustment knobs.

3. Adjust the pattern size by turning the pattern adjusting valve *OUT* (*counterclockwise*) for a wider pattern or *IN* (*clockwise*) for a narrower pattern.
4. To adjust the volume of fluid output:
 - a. Turn the fluid adjusting knob out (*counterclockwise*) until no restriction of the trigger movement is felt. Refer to Fig 1.
 - b. Then adjust the air pressure at the pressure pot or pump until the desired fluid flow is obtained.

WARNING

DO NOT exceed the gun's 100 psi (7 bar) maximum fluid pressure. Higher pressures can cause parts to rupture and result in serious bodily injury or property damage.

- c. For final adjustment, turn the fluid adjusting knob in (*clockwise*) to reduce the volume of fluid output and obtain the desired results.

CAUTION

Restricting the trigger and fluid needle travel by continuously spraying with the fluid adjusting knob turned in (*clockwise*), will cause accelerated abrasive wear on the fluid needle and wear on the trigger/air valve shaft interface.

For the best results, adjust the fluid flow at the pressure pot or pump or use a different size needle/nozzle set and air cap combination. See the **SELECTION CHARTS** on pages 5 and 6.

NOTE: If the fluid adjusting valve is turned in all the way the gun will emit only air.

- d. The fluid flow can be feathered by partially triggering the fluid needle, except when using the smallest needle/nozzle/air cap size. See the charts on pages 5 and 6.
5. *For continuous spraying*, leave the fluid adjusting valve in the full open position. This provides maximum fluid flow and prevents premature wear on the fluid nozzle.
 6. Test the spray pattern and atomization while holding the gun about 6 to 8 inches (150 to 200 mm) from the test piece. Adjust as needed.

Apply the Fluid

1. To achieve the best results when applying fluid, keep the gun perpendicular to the surface and maintain a consistent distance of approximately 6 to 8 inches (150 to 200 mm) from the object being sprayed. See Fig 3.
2. To obtain an even finish, use smooth, even strokes across the object being sprayed with 50% overlap.
3. Paint using parallel strokes. This spray gun applies all coatings evenly without cross coating.

NOTE: To eliminate the need to shut off the air pressure at the air supply, install One-way Shut-off Valve 110-367 in the gun's quick disconnect. See **ACCESSORIES**.

If the one-way shut-off valve is installed in the gun line, allow for a 0.5 psi (0.035 bar) air pressure drop to the gun, due to increased restriction of the air line.

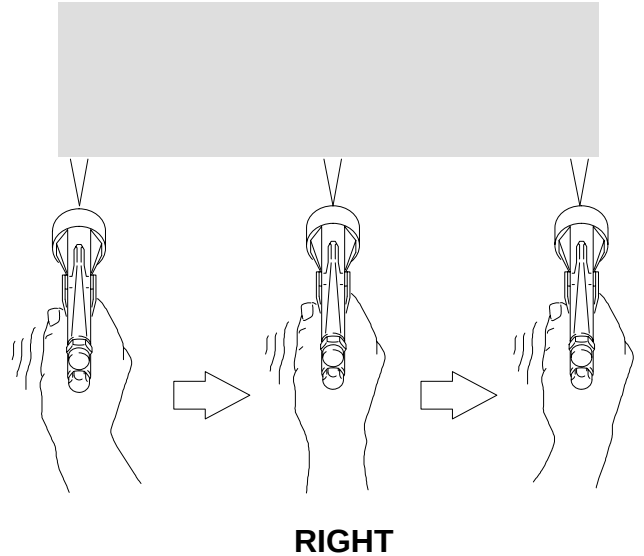
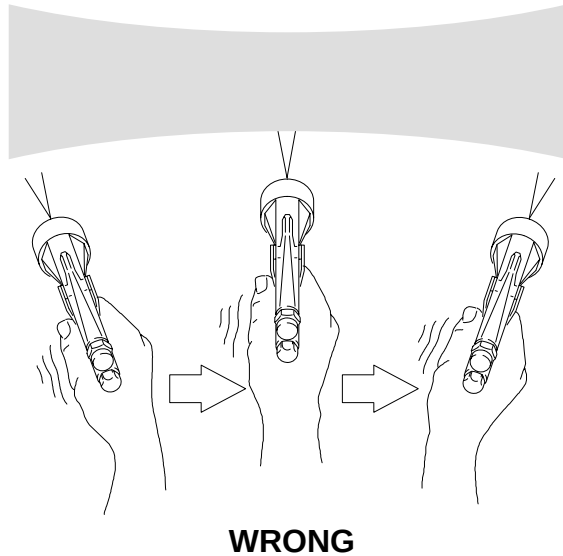


Fig 3

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Daily Care and Cleaning

WARNING

Pressure Relief Procedure

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

1. Turn off the air and fluid supply to the gun.
2. Trigger the gun into a grounded metal waste container to relieve fluid pressure.

CAUTION

Clean all parts with a solvent compatible with the fluid being sprayed and compatible with gun wetted parts. See the **TECHNICAL DATA** on the back page.

Methylene Chloride is not recommended as a flushing or cleaning solvent with this gun or any other device with nylon or aluminum components as it can damage these parts.

To avoid getting solvent in the gun air passages, NEVER immerse the gun in solvent.

Hold the front of the gun down when brushing it clean with solvent to prevent dirty solvent from getting into the air passages.

1. After operation, flush the gun with a compatible solvent until all traces of paint are removed from the gun passages. Follow the **Pressure Relief Procedure Warning**, above, before proceeding.
2. Wipe the outside of the gun clean with a solvent dampened cloth.

CAUTION

Trigger the gun whenever you tighten or remove the nozzle. This keeps the needle seat away from the nozzle seating surface and prevents the seat from being scratched.

3. Trigger the gun and remove the air cap and fluid nozzle from the gun. Soak them in solvent and scrub them with the fine, bristled brush. See **ACCESSORIES** to order brush.

4. To clean out air cap holes, use a soft implement, such as a toothpick, to avoid damaging critical surfaces. Clean the air cap and fluid nozzle daily, minimum. (Some applications require more frequent cleaning.)

NOTE: If the fluid shaft is removed from the gun with dried paint (fluid) still on the needle tip end, replace the fluid seal as instructed on page 18.

5. Lubricate the gun daily, after cleaning it, at the points marked in Fig 4. Periodically lubricate the fluid needle spring (16) with lubricant 111-265 (see **ACCESSORIES** to order).

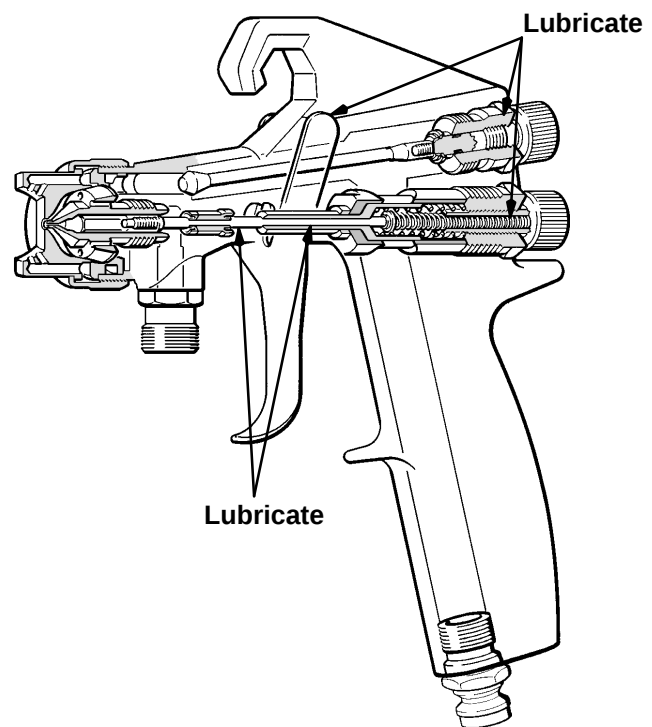


Fig 4

TROUBLESHOOTING CHART

WARNING

Pressure Relief Procedure

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

1. Turn off the air and fluid supply to the gun.
2. Trigger the gun into a grounded metal waste container to relieve fluid pressure.

PROBLEM	CAUSE	SOLUTION
Whistling sound coming from gun while spraying	Pattern valve vent hole position	Turn pattern adjusting knob slightly in either direction
Fluid flow is fluttering while spraying	1. Fluid nozzle not tight enough 2. Fluid filter clogged 3. Fluid adjusting knob not properly set 4. Baffle (item 11) installed wrong or damaged	1. Tighten fluid nozzle to 70–100 in-lbs (8–11 N•m) 2. Check fluid filter 3. Adjust the fluid adjusting knob for less feathering or use a larger size nozzle 4. Check if baffle protrusion is properly inserted into gun insert hole; see page 17. Replace baffle if damaged
Fluid flow fades while spraying high viscosity fluids	Fluid pressure too low, causing fluid to stop or reduce when gun is elevated	Raise fluid pressure at source or use a smaller fluid nozzle with higher air pressure on pressure pot
No round pattern control	Baffle (item 11) installed wrong or damaged	Check if baffle protrusion is properly inserted into gun insert hole; see page 17. Replace baffle if damaged
Pattern becomes off-set or heavy on ends	1. Fluid nozzle is over tightened 2. Air cap too tight 3. Air cap holes plugged	1. DO NOT exceed 70–100 in-lbs (8–11 N•m) torque. Replace nozzle if damaged 2. Loosen air cap 3. Clean air cap holes with non-metallic item such as a toothpick
Fluid system will not operate at low enough fluid pressure [below 10 psi (0.7 bar)]	There's no fluid regulator or air regulator is not sensitive enough	Add low pressure fluid regulator or add more sensitive air regulator on pressure pot

Air Valve Service

When the air valve is closed, a maximum of 0.5 scfm air flow is allowed to pass around the air valve during normal operation. If an excessive amount of air is passing through the air valve, service the valve as instructed below; refer to Fig 7.

1. Follow the **Pressure Relief Procedure Warning** on page 15 to relieve fluid pressure.

NOTE: Removing the trigger will ease disassembly.

2. Remove the air cap ring (12), air cap (17), and fluid nozzle (18).
3. Remove the fluid adjusting nut (8) and spring (16); the knob (9) will come out with it. Remove the second spring (15), *included with standard non-bleeder guns only*.
4. Hold the fluid shaft (7a) while removing the fluid needle (19). Pull the fluid shaft out the back of the gun.
5. Push the air valve (14) or air valve filler (25) out the back of the gun.
6. Clean the parts and check them for damage or wear. Replace as necessary.

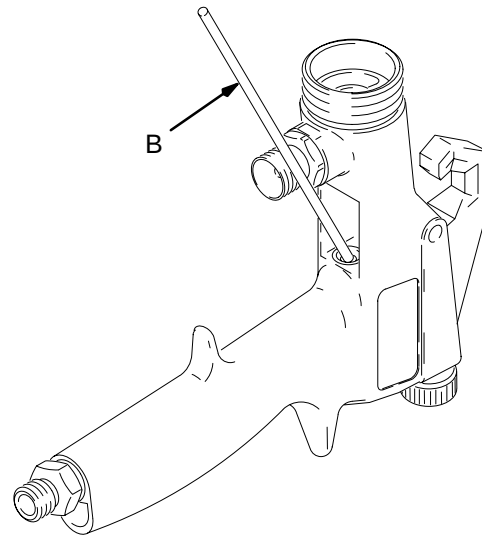
NOTE: If dried paint is found on the fluid shaft (7a), replace the fluid seal (7b) as instructed on page 18.

7. Lightly lubricate the fluid shaft (7a) and other parts as indicated in Fig 7 with lubricant 111-265 (see **ACCESSORIES**) and reassemble the parts.

Air Valve Cartridge Removal

NOTE: The cartridge cannot be removed without damaging the air seal (14b). Be sure to have a replacement air seal.

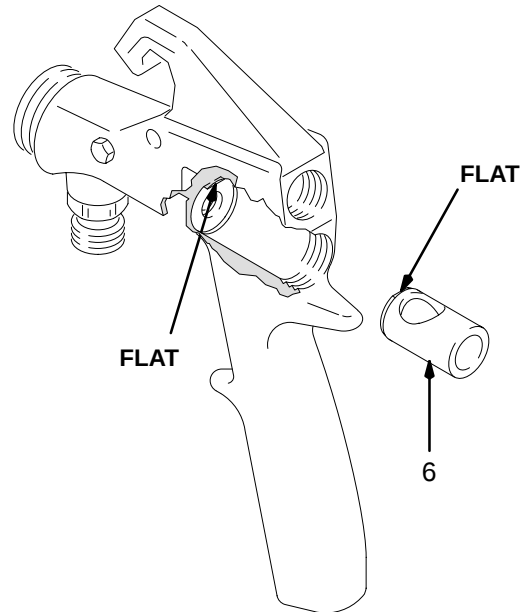
1. Follow steps 1 through 4 in **Air Valve Service**, above.
2. Push the air valve (14a) or air valve filler (25) out the back of the gun.
3. Place the packing removal tool (B) through the gun's trigger actuation area and against the air seal (14b). See Fig 5. Use a rubber mallet with the packing removal tool to drive the cartridge (6) out the back of the gun.



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Fig 5

4. Install the new air seal (14b) with its open end towards the back of the gun body.
5. Align the flat on the cartridge (6) with the flat in the gun body. See Fig 6.
6. Lightly lubricate the parts as indicated in Fig 7 and reassemble the gun.



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Fig 6

NOTE: Lubricate parts as indicated in Fig 7 with lubricant 111-265. See ACCESSORIES to order.

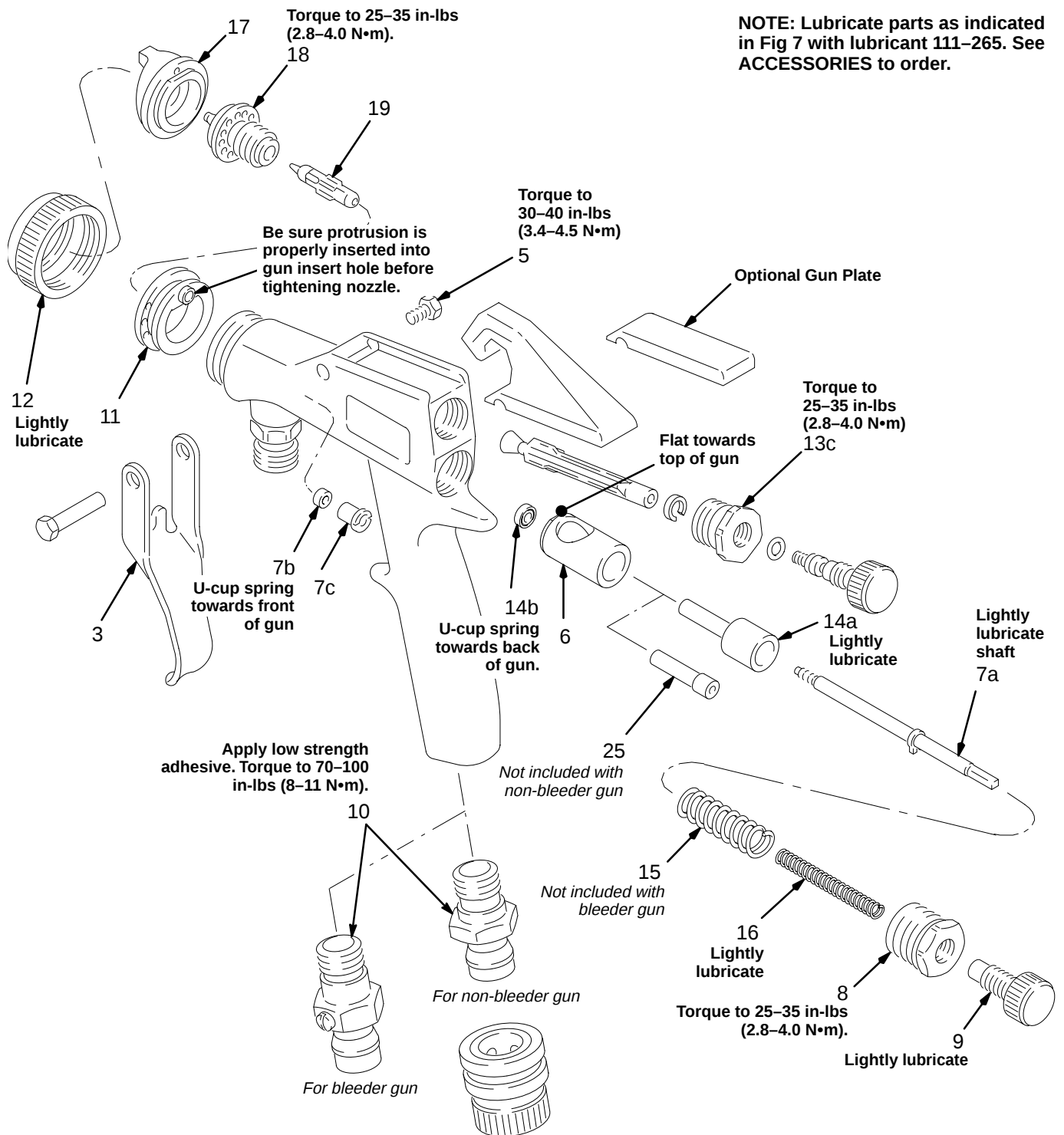


Fig 7

0590A

Fluid Seal Replacement

If leakage occurs at the fluid seal area, the u-cup seal (7b) or fluid shaft (7a) may be damaged or worn. Service as instructed below; refer to Fig 7.

NOTE: If the u-cup seal (7b) is removed, it **MUST** be replaced.

1. Follow the **Pressure Relief Procedure Warning** on page 15 to relieve fluid pressure.

NOTE: Removing the trigger will ease disassembly.

2. Remove the air cap ring (12), air cap (17), and fluid nozzle (18).
3. Remove the fluid adjusting nut (8) and spring (16); the knob (9) will come out with it. Remove the second spring (15), *included with standard non-bleeder guns only*.
4. Hold the fluid shaft (7a) while removing the fluid needle (19). Pull the fluid shaft out the back of the gun.
5. Insert the packing removal tool (B) through the front of the gun and push on the u-cup seal (7b) until the seal and seal retainer (7c) are pressed out of the trigger area. See Fig 8.

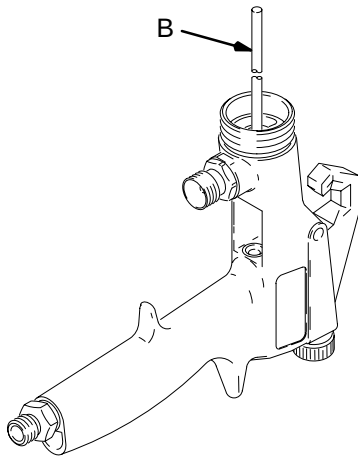


Fig 8 0533

6. To ease installation of the u-cup seal (7b), remove the trigger (3) and air valve (14) or air valve filler (25).
7. Clean the parts. Check the fluid shaft (7a) for damage or excessive wear. Replace if necessary. Lubricate the parts indicated in Fig 7 with lubricant 111-265.

8. Install a new u-cup seal (7b) and seal retainer (7c) into the gun insert, following the procedure below.

- a. Carefully place the u-cup seal (7b) into the smaller diameter end of the seal insertion tool (A), with the open end of the seal facing outward in the tool. See Fig 9.

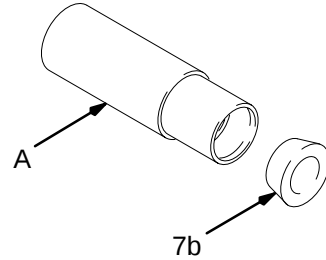


Fig 9 0531

- b. Make sure the cavity for the seal is clean of dried fluid. Place the seal insertion tool (A) into the back of the gun insert. See Fig 10. Then force the seal down into the seal cavity, using the packing removal tool (B).

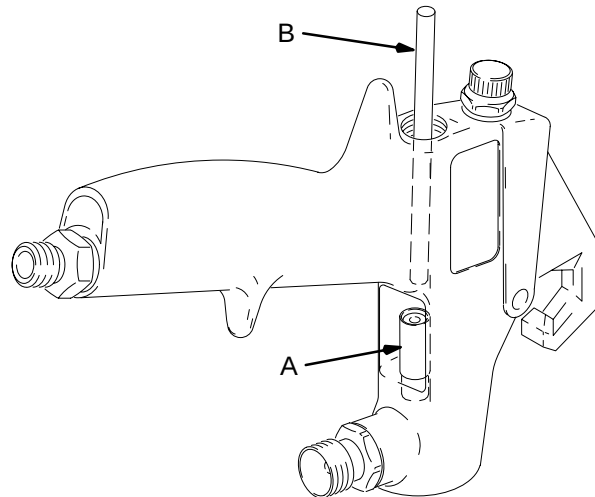
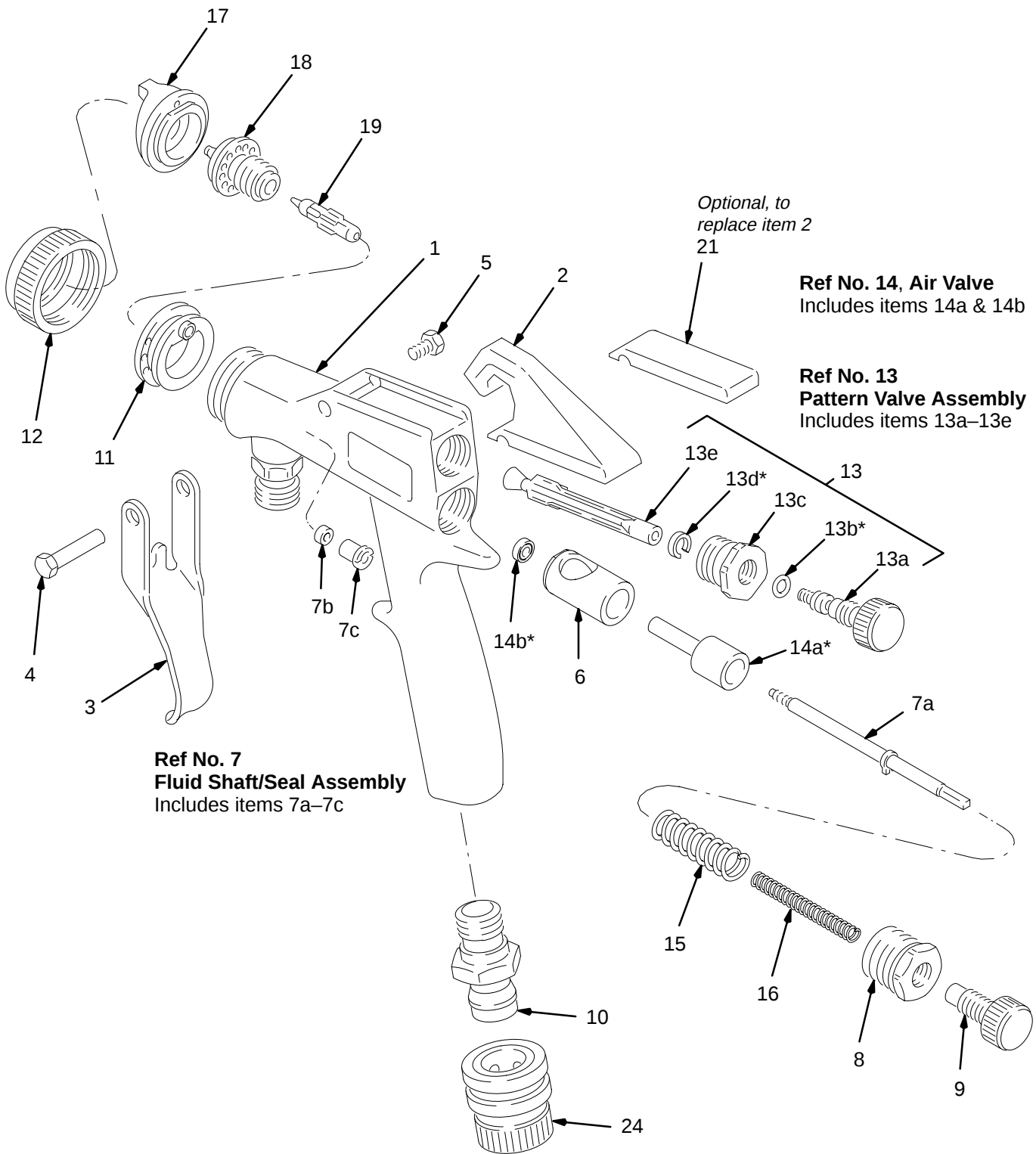


Fig 10 0532

- c. Press the seal retainer (7c) in behind the u-cup seal (7b) until a definite snap is felt.

9. Reassemble the remaining parts.

MODEL G1200 PARTS DRAWING



0575A

MODEL G1200 PARTS LIST

Standard Non-bleeder Guns

Part Nos. 223–252, 223–253, 223–254

Includes items 1–24

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
1	235–118	GUN BODY	1	13d*	105–456	•RING, retaining	1
2	275–852	HOOK	1	13e	275–850	•VALVE, pattern	1
3	185–761	TRIGGER, two-finger	1	14	223–303	VALVE, air; Includes items 14a & 14b	1
4	185–746	PIN, pivot; 10-24 UNC-2B	1	14a*	223–305	•VALVE, shuttle	1
5	203–953	SCREW, lock; No. 10–24 UNC-2A x 0.375 in.	1	14b*	110–405	•SEAL, u-cup; carbon/graphite filled PTFE	1
6	185–751	CARTRIDGE, valve	1	15	110–401	SPRING, compression	1
7	223–302	SHAFT/SEAL ASSEMBLY, fluid Includes items 7a–7c	1	16	110–402	SPRING, compression;	1
7a	224–849	•SHAFT FLUID Assembly	1	17		AIR CAP; See charts on pages 4–6	1
7b**		••SEAL, fluid (<i>orange</i>)	1	18		FLUID NOZZLE; See charts on pages 4–6	1
7c**		••RETAINER, seal	1	19		FLUID NEEDLE; See charts on pages 4–6	1
8	185–744	NUT, fluid adjusting	1	21	275–853	PLATE, gun; (To replace hook, item 2)	1
9	185–745	KNOB, fluid adjusting	1	24	110–365	FITTING, quick-disconnect	1
10	185–772	FITTING, air inlet	1				
11	275–851	BAFFLE, pattern	1				
12	185–759	RING, air cap	1				
13	223–301	VALVE ASSEMBLY, pattern Includes items 13a–13e	1				
13a	185–748	•SCREW, air adjustment	1				
13b*	168–110	•O-RING; Viton®	1				
13c	185–747	•NUT, air adjusting	1				

*Recommended “tool box” replacement parts.

**Order Fluid Seal Replacement Kit 223–304 to replace these parts.

HOW TO ORDER REPLACEMENT PARTS

1. To be sure you receive the correct replacement parts, kits or accessories, always give all of the information requested in the chart below.
2. Check the parts list to identify the correct part number; do not use the ref. no. when ordering.
3. Order all parts from your nearest Graco distributor.

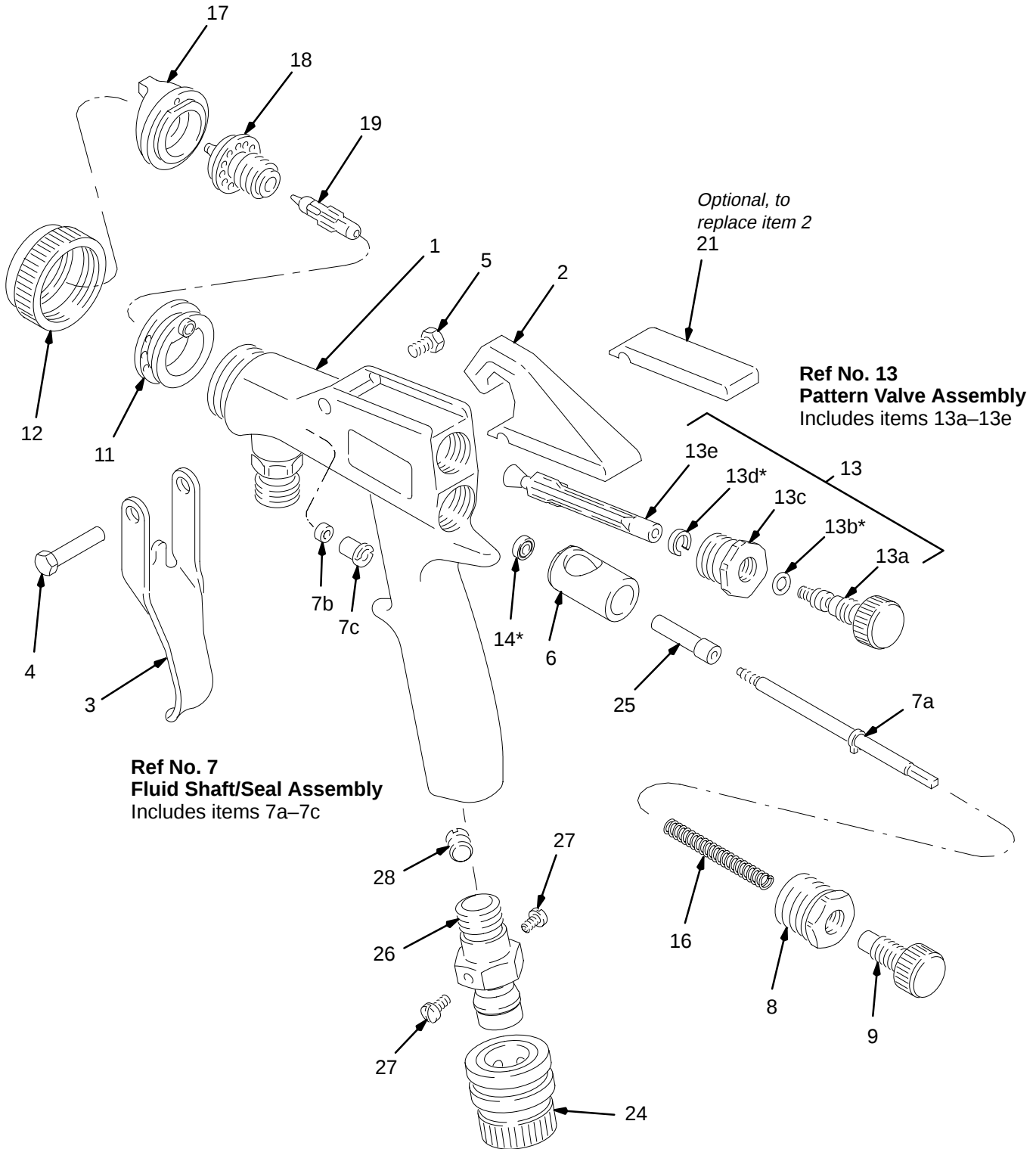
6 digit Part Number	Qty	Part Description

Fluid Seal Replacement Kit 223–304

Kit must be ordered separately. It includes the following parts.

REF NO.	PART NO.	DESCRIPTION	QTY
7b		SEAL, fluid (<i>orange</i>)	1
7c		RETAINER, seal	1
	179–803	TOOL, packing removal	1
	187–349	TOOL, seal insertion	1

MODEL G1200B PARTS DRAWING



0575B

MODEL G1200B PARTS LIST

Bleeder Guns

Part Nos. 224–609, 224–610, 224–611

Includes items 1–31

REF NO.	PART NO.	DESCRIPTION	QTY	REF NO.	PART NO.	DESCRIPTION	QTY
1	235–118	GUN BODY	1	16	110–402	SPRING, compression;	1
2	275–852	HOOK	1	17		AIR CAP; See charts on	1
3	185–761	TRIGGER, two-finger	1			pages 4–6	1
4	185–746	PIN, pivot; 10-24 UNC-2B	1	18		FLUID NOZZLE; See charts on	1
5	203–953	SCREW, lock; No. 10–24 UNC-2A	1			pages 4–6	1
		x 0.375 in.	1	19		FLUID NEEDLE; See charts on	1
6	185–751	CARTRIDGE, valve	1			pages 4–6	1
7	223–302	SHAFT/SEAL ASSEMBLY, fluid	1	21	275–853	PLATE, gun;	1
		Includes items 7a–7c	1			(To replace hook, item 2)	1
7a	224–849	•SHAFT FLUID Assembly	1	24	110–365	FITTING, quick-disconnect	1
		Includes items 7a & 7c	1	25	185–830	STEM, filler, valve	1
7b**		••SEAL, fluid (<i>orange</i>)	1	26	185–760	FITTING, quick-disconnect	1
7c**		••RETAINER, seal	1	27	103–832	SCREW, 10–32	2
8	185–744	NUT, fluid adjusting	1	28	103–219	PLUG, 1/8 npt	1
9	185–745	KNOB, fluid adjusting	1	29†	110–494	FITTING, barbed, tubing	1
11	275–851	BAFFLE, pattern	1	30†	185–859	TUBE, 0.125" ID	1
12	185–759	RING, air cap	1	31†	185–860	TUBE, 0.188" ID	1
13	223–301	VALVE ASSEMBLY, pattern	1				
		Includes items 13a–13e	1				
13a	185–748	•SCREW, air adjustment	1				
13b*	187–699	•O-RING, split; 0.008, Teflon®	1				
13c	185–747	•NUT, air adjusting	1				
13d*	105–456	•RING, retaining	1				
13e	275–850	•VALVE, pattern	1				
14*	110–405	SEAL, u-cup; carbon/graphite	1				
		filled PTFE	1				

* Recommended "tool box" replacement parts.

** Order Fluid Seal Replacement Kit 223–304 to replace these parts.

† These parts sent unassembled and are not shown in Parts Drawing. See page 11 for assembly instructions.

HOW TO ORDER REPLACEMENT PARTS

1. To be sure you receive the correct replacement parts, kits or accessories, always give all of the information requested in the chart below.
2. Check the parts list to identify the correct part number; do not use the ref. no. when ordering.
3. Order all parts from your nearest Graco distributor.

6 digit Part Number	Qty	Part Description

Fluid Seal Replacement Kit 223–304

Kit must be ordered separately. It includes the following parts.

REF NO.	PART NO.	DESCRIPTION	QTY
7b		SEAL, fluid (<i>orange</i>)	1
7c		RETAINER, seal	1
	179–803	TOOL, packing removal	1
	187–349	TOOL, seal insertion	1

ACCESSORIES

H.E.L.P. AIR REGULATOR & GUN SYSTEMS

Wall-Mount Air Regulator & Gun System

H.E.L.P. System Part No.	G1200 Spray Gun Part No.	Orifice Size	Air Hose Part No.	H.E.L.P. 1500 System Part No.
224-074	223-251	0.042" (1.1 mm)	223-265 25' (7.6 m)	223-293 wall-mount
224-075	223-252	0.055" (1.4 mm)	223-265 25' (7.6 m)	223-293 wall-mount
224-076	223-253	0.070" (1.8 mm)	223-265 25' (7.6 m)	223-293 wall-mount
224-078	223-251	0.042" (1.1 mm)	223-274* 30' (9.2 m)	223-293 wall-mount
224-079	223-252	0.055" (1.4 mm)	223-274* 30' (9.2 m)	223-293 wall-mount
224-080	223-253	0.070" (1.8 mm)	223-274* 30' (9.2 m)	223-293 wall-mount

* Includes 25 ft (7.625 m) Atomizing Air Hose Assembly 223-265 and 5 ft (1.525 m) Flexible Air Hose Assembly 223-296.

Wall-Mount Air Regulator, Gun & Pressure Cup System

H.E.L.P. System Part No.	G1200 Gun with Cup Part No.	Orifice Size	Air Hose Part No.	H.E.L.P. 1500 System Part No.
224-089	223-272	0.055" (1.4 mm)	223-274* 30' (9.2 m)	223-293 wall-mount

* Includes 25 ft (7.625 m) Atomizing Air Hose Assembly 223-265 and 5 ft (1.525 m) Flexible Air Hose Assembly 223-296.

Belt-Mount Air Regulator & Gun System

H.E.L.P. System Part No.	G1200 Spray Gun Part No.	Orifice Size	Flex Air Hose Part No.	H.E.L.P. 1500 System Part No.
224-084	223-251	0.042" (1.1 mm)	223-296 5' (1.5 m)	223-285 belt-mount
224-085	223-252	0.055" (1.4 mm)	223-296 5' (1.5 m)	223-285 belt-mount
224-086	223-253	0.070" (1.8 mm)	223-296 5' (1.5 m)	223-285 belt-mount

Belt-Mount Air Regulator, Gun & Pressure Cup System

H.E.L.P. System Part No.	G1200 Gun with Cup Part No.	Orifice Size	Flex Air Hose Part No.	H.E.L.P. 1500 System Part No.
224-083	223-272	0.055" (1.4 mm)	223-296 5' (1.5 m)	223-285 belt-mount

CLEANING BRUSH 105-749

For use in cleaning gun

LUBRICANT 111-265

One 4 oz. (113 gr) tube sanitary (non-silicone) lubricant for fluid packings and wear areas.

FOUR-FINGER TRIGGER CONVERSION KIT 185-762

For changing from a standard two-finger trigger to a four-finger trigger.

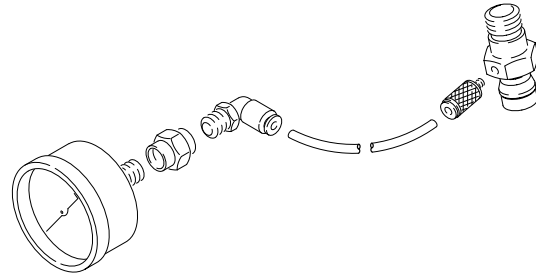
AIR PRESSURE VERIFICATION KIT 224-119

For use in checking gun inlet air pressure at various supply air pressures. **NOT to be used for actual spraying.**

Assemble the kit as shown in the drawing below. Install the quick-disconnect air fitting in the gun air inlet. Turn on the air to the gun, then trigger the gun and read the resulting air pressure.

NOTE: To be "HVLP compliant", the atomizing inlet air pressure must not exceed 10 psi (0.7 bar).

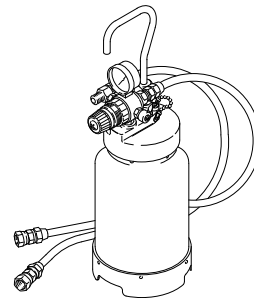
The air cap pressure will be slightly lower than the inlet air pressure reading [approximately 0.5 psi (0.3 bar)] due to the natural pressure drop in gun air passages. Gauge accuracy is +/- 2% over the middle half of gauge scale, +/- 3% over remainder of gauge scale.



01156

PRESSURE CUP with Cover 214-627

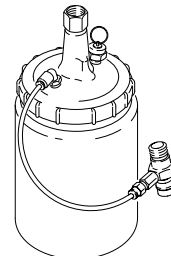
2 qt (1.94 liter) capacity, aluminum body. Includes air pressure regulator and gauge, 4 ft (1.2 m) length air and fluid hose with 1/4 npsm(f) swivel ends, safety relief valve, and rigid hook handle.



0123

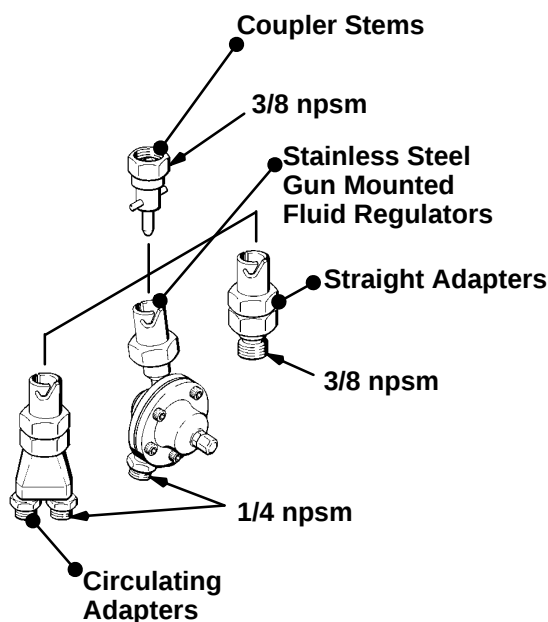
PRESSURE CUP with Cover 223-270

1 qt (0.95 liter) capacity, aluminum body. Some assembly required. To connect the supply air to the pressure cup, you must replace the air inlet fitting supplied with the gun with air inlet fitting 185-760 (supplied with the pressure cup).



01157

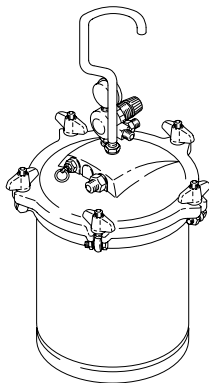
ACCESSORIES



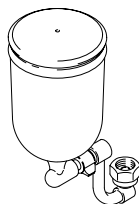
	Twist Lock	Slip Ring	Union Adapter	Twist Lock
Models	208-087* 223-627*† 1.0 oz	208-085* 1.5 oz		204-891* 223-628*† 1.3 oz
Models	223-621*† 7.0 oz	208-082* 7.5 oz	223-622*† 7.0 oz	223-623*† 7.3 oz
Models	214-018 223-624*†	208-250		223-625*†
Models	214-019 223-626*†	208-252		210-097

* Stainless Steel Models
† These Models are compatible with water-base fluids

PRESSURE TANK with Cover 171-226
2.5 gal (9.5 liter) capacity, aluminum body
Includes air pressure regulator and gauge, safety relief valve, pickup tube, and rigid hook handle.



GRAVITY CUP KIT 224-451
13.6 oz (400 cc) capacity, aluminum body,
3/8 npsm(f) fluid inlet



FLUID HOSE ASSEMBLY 205-142
300 psi (21 bar) MAXIMUM WORKING PRESSURE
Nylon with neoprene cover, 0.375 in. (9.5 mm) ID,
3/8 npsm(fbe), 25 ft (7.6 m) long

FLEXIBLE AIR HOSE ASSEMBLY
15 psi (1 bar) MAXIMUM WORKING PRESSURE
0.62 in. (16 mm) ID, 3/4-11.5 NH (standard garden hose)
female swivel fitting (to air hose) and 3/4-11.5 male
thread (to gun quick-disconnect). Install for more flexible
movement of the spray gun.

223-295 3 ft (0.912 m) long
223-296 5 ft (1.525 m) long

ATOMIZING AIR HOSE ASSEMBLY
15 psi (1 bar) MAXIMUM WORKING PRESSURE
0.75 in. (19 mm) ID, 3/4-11.5 NH (standard garden hose)
male x female swivel fittings, natural-color polyurethane

223-263 15 ft (4.575 m) long
223-265 25 ft (7.625 m) long

AIR HOSE COUPLING WASHER 110-366
Replacement washer for use in female swivel end of air
hose.

ACCESSORIES

FILLER AIR VALVE 187-137

Replaces air valve and converts the gun to a bleeder gun.

ONE-WAY AIR SHUT-OFF VALVE 110-367

Install in standard quick disconnect (provided with flexible air hose assy.) to turn off air pressure when spray gun is disconnected. **Not for use with G1200B bleeder gun models.**



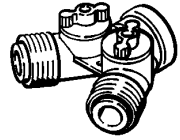
AIR HOSE QUICK-DISCONNECT 110-365

Install between gun air inlet fitting and air hose.



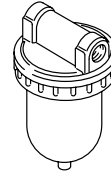
TWIN OUTPUT AIR ADAPTER 111-222

Allows output of air to two guns from a H.E.L.P. 1500 System.



AIR FILTER & MOISTURE SEPARATOR 106-149

250 psi (17.5 bar) MAXIMUM WORKING PRESSURE
Removes moisture, oil, and other contaminants from the compressed air supply. 1/2 npt(fbe)



SERVICE INFORMATION

This manual was revised to make the part list changes shown below and also, to add a table of Optional SST Fluid Nozzles to the *SELECTION CHARTS*, add an application note to the front cover, add Fluid Seal Kit 223–304, add instructions on how to connect a non-Graco cup to the bleeder gun, and to update the Typical Installation drawing.

MODEL G1200 CHANGES

The part numbers that changed are listed below.

Model Changed	Status	Ref No.	Part No.	Name
G1200 Spray Gun	OLD NEW	1	223–306 235–118	Gun Body
	DELETED	7d	110–404	Ring
	DELETED	7e	223–304	Fluid Seal
	DELETED	7f	275–847	Retainer
	DELETED	7g	110–400	U-cup Seal
	DELETED	7h	179–803	Tool
	DELETED	7i	187–349	Tool
	OLD NEW	13b	168–110 187–699	O-Ring
	DELETED	22	185–758	Fitting

MODEL G1200B CHANGES

The part numbers that changed are listed below.

Model Changed	Status	Ref No.	Part No.	Name
G1200B Spray Gun	OLD NEW	1	223–306 235–118	Gun Body
	DELETED	7d	110–404	Ring
	DELETED	7e	223–304	Fluid Seal
	DELETED	7f	275–847	Retainer
	DELETED	7g	110–400	U-cup Seal
	DELETED	7h	179–803	Tool
	DELETED	7i	187–349	Tool
	OLD NEW	13b	168–110 187–699	O-Ring
	DELETED	22	185–758	Fitting
	DELETED	23	106–456	O-Ring
	OLD NEW	25	187–137 185–830	Filler Stem
	ADDED	26	185–760	Fitting
	ADDED	27	103–832	Screw
	ADDED	28	103–219	Plug
	ADDED	29	110–494	Fitting
	ADDED	30	185–859	Tube
	ADDED	31	185–860	Tube

TECHNICAL DATA

Weight 17 oz. (475 g)
Gun Length 6.39 in. (163 mm)
Maximum Working Fluid Pressure 100 psi (7 bar)
Maximum Working Air Pressure 15 psi (1 bar)
Air Inlet 3/4–11.5 NH (standard garden hose)
Fluid Inlet ... 3/8–18 npsm (R3/8–19) compound thrd.
Wetted Parts 304 Stainless Steel, Delrin®

Delrin® is a registered trademark of Du Pont Company.

IMPORTANT PHONE NUMBERS

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you: **1-800-328-0211 Toll Free**

FOR TECHNICAL ASSISTANCE, service repair information or assistance regarding the application of Graco equipment: **1-800-543-0339 Toll Free**

THE GRACO WARRANTY AND DISCLAIMERS

WARRANTY

Graco warrants all equipment manufactured by it and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. As purchaser's sole remedy for breach of this warranty, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment proven defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for, any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility with Graco equipment of structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor and transportation.

DISCLAIMERS AND LIMITATIONS

THE TERMS OF THIS WARRANTY CONSTITUTE PURCHASER'S SOLE AND EXCLUSIVE REMEDY AND ARE IN LIEU OF ANY OTHER WARRANTIES (EXPRESS OR IMPLIED), INCLUDING WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY NON-CONTRACTUAL LIABILITIES, INCLUDING PRODUCT LIABILITIES, BASED ON NEGLIGENCE OR STRICT LIABILITY. EVERY FORM OF LIABILITY FOR DIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSS IS EXPRESSLY EXCLUDED AND DENIED. IN NO CASE SHALL GRACO'S LIABILITY EXCEED THE AMOUNT OF THE PURCHASE PRICE. ANY ACTION FOR BREACH OF WARRANTY MUST BE BROUGHT WITHIN TWO (2) YEARS OF THE DATE OF SALE.

EQUIPMENT NOT COVERED BY GRACO WARRANTY

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO ACCESSORIES, EQUIPMENT, MATERIALS, OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motor, switches, hose, etc.) are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

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Subsidiary and Affiliate Companies: Canada; England; Switzerland; France; Germany; Hong Kong; Japan; Korea

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