

Auto Probler[®] P2

Dispense Gun

313267ZAB

EN

For automated dispensing of non-flammable, two-component foam and polyurea materials. For professional use only.

Not approved for use in explosive atmospheres or hazardous locations.

Models:

GCP4RA

GCP4R0

GCP4R1

GCP4R2

GCP4R3

GCP4R4

GCP4R5

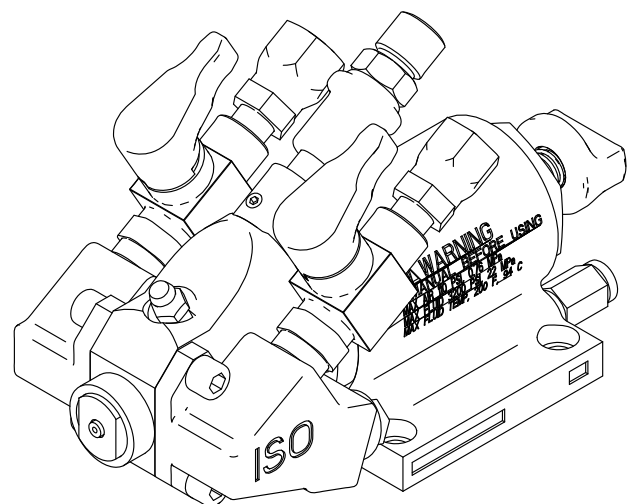
24X636

See page 3 for model information, including working pressure and approvals.



Important Safety Instructions


Read all warnings and instructions in this manual before using this equipment. Save these instructions.



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Models

Part No.	Description*	Air inlet Pressure Range psi (MPa, bar)	Maximum Static Fluid Pressure psi (MPa, bar)	Approvals
GCP4RA	Gun, P2, Automatic, .036 in.	90-110 psi (0.62-0.76 MPa, 6.2-7.6 bar)	3500 psi (24.1 MPa, 241 bar)	
GCP4R0	Gun, P2, Automatic, .051 in.			
GCP4R1	Gun, P2, Automatic, .059 in.			
GCP4R2	Gun, P2, Automatic, .073 in.			
GCP4R3	Gun, P2, Automatic, .088 in.			
GCP4R4	Gun, P2, Automatic, .100 in.			
GCP4R5	Gun, P2, Automatic, .125 in.			
24X636	Gun, P2, Automatic, .059 in., Stainless Steel			










* The measurement (in.) refers to the nozzle size.

Related Manuals

Manuals	
Part	Description
313266	Probler P2 Elite Dispense Gun Instructions
313213	Probler P2 Dispense Gun Instructions

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

 <h2 style="margin: 0;">WARNING</h2>	
 	<p>TOXIC FLUID OR FUMES HAZARD</p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled or swallowed.</p> <ul style="list-style-type: none"> • Read Safety Data Sheet (SDS) for handling instructions and to know the specific hazards of the fluids you are using, including the effects of long-term exposure. • When spraying, servicing equipment, or when in the work area, always keep work area well ventilated and always wear appropriate personal protective equipment. See Personal Protective Equipment warnings in this manual. • Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.
	<p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>Always wear appropriate personal protective equipment and cover all skin when spraying, servicing equipment, or when in the work area. Protective equipment helps prevent serious injury, including long-term exposure; inhalation of toxic fumes, mists or vapors; allergic reaction; burns; eye injury and hearing loss. This protective equipment includes but is not limited to:</p> <ul style="list-style-type: none"> • A properly fitting respirator, which may include a supplied-air respirator, chemically impermeable gloves, protective clothing and foot coverings as recommended by the fluid manufacturer and local regulatory authority. • Protective eyewear and hearing protection.
    	<p>SKIN INJECTION HAZARD</p> <p>High-pressure fluid from dispensing device, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. Get immediate surgical treatment.</p> <ul style="list-style-type: none"> • Do not point dispensing device at anyone or at any part of the body. • Do not put your hand over the fluid outlet. • Do not stop or deflect leaks with your hand, body, glove, or rag. • Follow the Pressure Relief Procedure when you stop dispensing and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses and couplings daily. Replace worn or damaged parts immediately.



WARNING

**BURN HAZARD**

Equipment surfaces and fluid that is heated can become very hot during operation. To avoid severe burns:

- Do not touch hot fluid or equipment.

**FIRE AND EXPLOSION HAZARD**

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. Paint or solvent flowing through the equipment can cause static sparking. To help prevent fire and explosion:

- Use equipment only in well-ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static sparking).
- Ground all equipment in the work area. See **Grounding** instructions.
- Never spray or flush solvent at high pressure.
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are anti-static or conductive.
- **Stop operation immediately** if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.

**EQUIPMENT MISUSE HAZARD**

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Specifications** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Specifications** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheets (SDSs) from distributor or retailer.
- Do not leave the work area while equipment is energized or under pressure.
- Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

**PRESSURIZED ALUMINUM PARTS HAZARD**

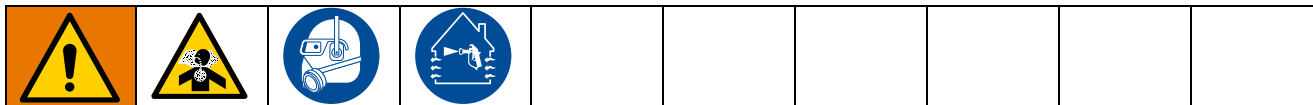
Use of fluids that are incompatible with aluminum in pressurized equipment can cause serious chemical reaction and equipment rupture. Failure to follow this warning can result in death, serious injury, or property damage.

- Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents.
- Do not use chlorine bleach.
- Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.

Important Isocyanate (ISO) Information



Isocyanates (ISO) are catalysts used in two component materials.

Isocyanate Conditions



Spraying or dispensing fluids that contain isocyanates creates potentially harmful mists, vapors, and atomized particulates.

- Read and understand the fluid manufacturer’s warnings and Safety Data Sheets (SDSs) to know specific hazards and precautions related to isocyanates.
- Use of isocyanates involves potentially hazardous procedures. Do not spray with this equipment unless you are trained, qualified, and have read and understood the information in this manual and in the fluid manufacturer’s application instructions and SDSs.
- Use of incorrectly maintained or mis-adjusted equipment may result in improperly cured material, which could cause off gassing and offensive odors. Equipment must be carefully maintained and adjusted according to instructions in the manual.
- To prevent inhalation of isocyanate mists, vapors and atomized particulates, everyone in the work area must wear appropriate respiratory protection. Always wear a properly fitting respirator, which may include a supplied-air respirator. Ventilate the work area according to instructions in the fluid manufacturer’s SDSs.
- Avoid all skin contact with isocyanates. Everyone in the work area must wear chemically impermeable gloves, protective clothing and foot coverings as recommended by the fluid manufacturer and local regulatory authority. Follow all fluid manufacturer recommendations, including those regarding handling of contaminated clothing. After spraying, wash hands and face before eating or drinking.
- Hazard from exposure to isocyanates continues after spraying. Anyone without appropriate personal protective equipment must stay out of the work area during application and after application for the time period specified by the fluid manufacturer. Generally this time period is at least 24 hours.
- Warn others who may enter work area of hazard from exposure to isocyanates. Follow the recommendations of the fluid manufacturer and local regulatory authority. Posting a placard such as the following outside the work area is recommended:

 WARNING	
	TOXIC FUMES HAZARD
DO NOT ENTER DURING SPRAY FOAM APPLICATION OR FOR ___ HOURS AFTER APPLICATION IS COMPLETE	
DO NOT ENTER UNTIL:	
DATE: _____	
TIME: _____	

Material Self-ignition



Some materials may become self-igniting if applied too thick. Read material manufacturer's warnings and Safety Data Sheets (SDSs).

Keep Material Components Separate



Cross-contamination can result in cured material in fluid lines which could cause serious injury or damage equipment. To prevent cross-contamination:

- **Never** interchange the wetted parts of the material components.
- Never use solvent on one side if it has been contaminated from the other side.

Moisture Sensitivity of Isocyanates

Exposure to moisture (such as humidity) will cause ISO to partially cure, forming small, hard, abrasive crystal that become suspended in the fluid. Eventually a film will form on the surface and the ISO will begin to gel, increasing in viscosity.

NOTICE

Partially cured ISO will reduce performance and the life of all wetted parts.

- Always use a sealed container with a desiccant dryer in the vent, or a nitrogen atmosphere. **Never** store ISO in an open container.
- Keep the ISO pump wet cup or reservoir (if installed) filled with appropriate lubricant. The lubricant creates a barrier between the ISO and the atmosphere.
- Use only moisture-proof hoses compatible with ISO.
- Never use reclaimed solvents, which may contain moisture. Always keep solvent containers closed when not in use.
- Always lubricate threaded parts with an appropriate lubricant when reassembling.

NOTE: The amount of film formation and rate of crystallization varies depending on the blend of ISO, the humidity, and the temperature.

Foam Resins with 245 fa Blowing Agents

Some foam blowing agents will froth at temperatures above 90°F (33°C) when not under pressure, especially if agitated. To reduce frothing, minimize preheating in a circulation system.

Changing Materials

NOTICE

Changing the material types used in your equipment requires special attention to avoid equipment damage and downtime.

- When changing materials, flush the equipment multiple times to ensure it is thoroughly clean.
- Always clean the fluid inlet strainers after flushing.
- Check with your material manufacturer for chemical compatibility.
- When changing between epoxies and urethanes or polyureas, disassemble and clean all fluid components and change hoses. Epoxies often have amines on the B (hardener) side. Polyureas often have amines on the B (resin) side.

Component Identification

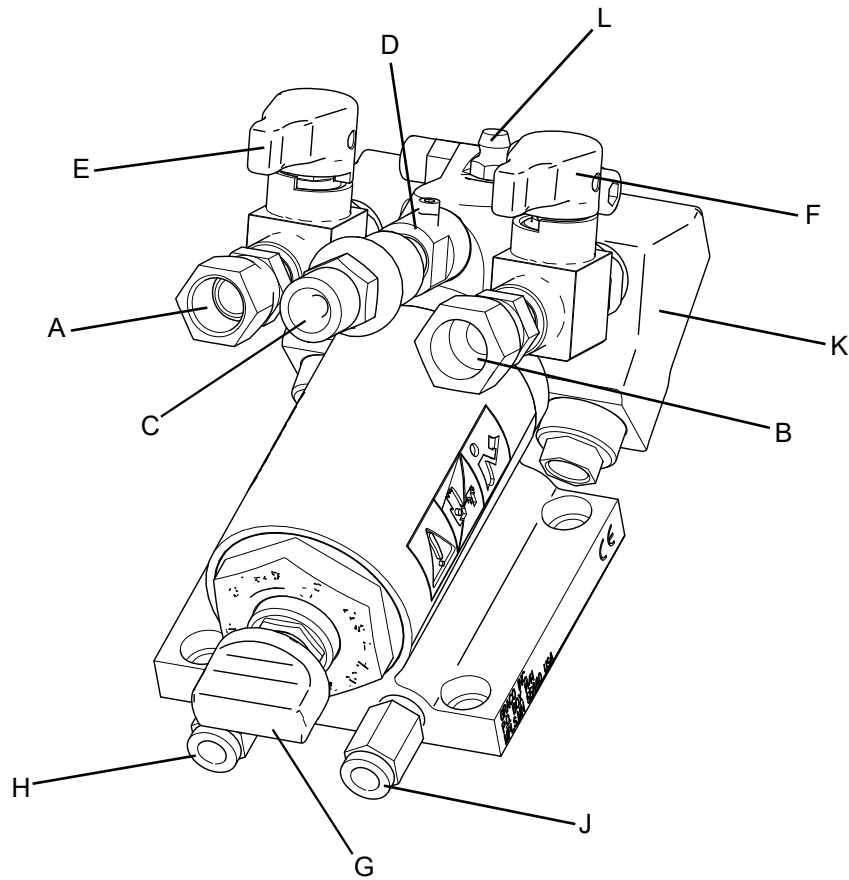


FIG. 1: Auto Probler P2 Component ID

Key:

- A Isocyanate (ISO) Hose Connection
- B Polyol Hose Connection
- C Supply Air Hose Connection
- D Supply Air Switch
- E Isocyanate Shutoff Valve
- F Polyol Shutoff Valve
- G Piston Lock
- H System Air Off Port
- J System Air On Port
- K Side Block
- L Zerk Fitting

Installation

NOTE: Letters in parenthesis used in this section refer to the callouts in **Component Identification** on page 8.

Grounding



The equipment must be grounded to reduce the risk of static sparking. Static sparking can cause fumes to ignite or explode. Grounding provides an escape wire for the electric current. Follow the grounding instructions described in the manual for the feed system you are using.

Ground the Auto Probler P2 spray gun through connection to a Graco-approved grounded fluid supply hose

Connecting to Graco Equipment



To help prevent serious injury from pressurized fluid, such as skin injection and splashing fluid, follow the **Pressure Relief Procedure** described on page 13 before connecting the Auto Probler P2 gun to the feed system equipment.

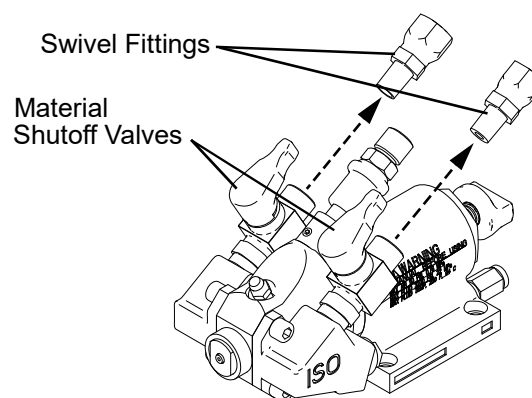
1. Follow the **Pressure Relief Procedure** as described on page 13.
2. Connect the isocyanate hose to the #6 JIC ISO hose connection (A) and connect the polyol hose to the #5 JIC polyol hose connection (B) on the Auto P2.
3. Connect the 1/4 in. NPS air supply hose included with the P2 to the supply air hose connection (C).
4. Connect the system air hoses to the 1/8 in. system air off (H) and system air on (J) ports.

Once the fittings are attached and tight, refer to the manual for the feed system you are using for startup instructions.

Connecting to Other Equipment

If the original equipment does not require the use of an unheated whip hose or isolation hose, the Auto P2 can be directly installed on to the material hose.

1. When replacing an existing gun, remove all of the hoses and fittings from the original gun.
2. Remove the swivel fitting connections (A,B) from the material shutoff valves (E,F) on the P2 as shown below. The valve connections are 1/8 in. NPT female.







3. Remove the air hose from the supply air switch (D). The supply air switch fitting is 1/4 in. NPSM.
4. Install the fittings from the original gun into the material shutoff valves (E,F) on the P2.

NOTE: You can use a non-permanent thread lock on the 1/8 in. NPT thread to assist as a sealant and keep the fittings from twisting with gun movement.

5. Install the P2 onto the original hoses.

NOTE: If needed, a swivel fitting, part no. GC2394, is available for connecting a supply air hose from other equipment. This part can be purchased separately or as part of GC1949 Hardware Kit 04-05. See **Service and Repair Kits** on page 23.

Operation

				
<p>To help prevent serious injury from pressurized fluid, such as skin injection and splashing fluid:</p> <ul style="list-style-type: none"> • Do not place any part of the body in the path of the material spray. • Do not point the gun at or near any person. • Do not look into the mixing chamber orifice at any time. • Wear appropriate protective equipment as recommended by the fluid manufacturer and local regulatory authority. 				

NOTE: Letters in parenthesis used in this section refer to the callouts in **Component Identification** on page 8.

How the Auto P2 Gun Works

The Auto Probler P2 is designed to be mounted on a robotic arm or other automated equipment connected to a feed system. The system automatically controls the on and off operation of the P2.

The system air on/off (H,J) ports actuate the gun's piston. When air from the system is applied to the system air on port (J), the air pressure forces the piston towards the rear of the gun, simultaneously closing off the purge air and moving the mixing chamber to a position where the mixing chamber orifices are aligned with the orifices in both the side block seal and check valve assemblies.

The proper alignment of the orifices is determined by setting the adjustment nut located on the piston lock (G) assembly. This adjustment nut determines the length of travel of the air piston. See **Piston Lock** on page 11 and **Piston Lock Adjustment and Installation Procedure** on page 17 for additional information.

NOTE: The adjustment nut has been preset at the factory and should not require adjustment.



The two fluids (isocyanate and polyol) flow through the material shutoff valves (E,F), seal, and check valve assemblies and into the mixing chamber. The two fluids impinge against each other and exit the mixing chamber in a swirling, conical spray pattern.

When air from the system is applied to the system air off port (H), the mixing chamber returns to its original position and the purge air flows into the mixing chamber housing. The front tip o-ring keeps the purge air inside the gun head, forcing all of the air through the orifices in the mixing chamber for a complete and constant purge.

This purge air continues to flow through the mixing chamber until the supply air switch (D) is closed (pulled up away from the front of the gun) to shut off all air to the gun.

Operating Requirements

Before starting, check that all fittings are tight and air regulators are turned to zero pressure.

				
<p>The P2 is designed and manufactured to operate at a maximum static fluid pressure not to exceed 3500 psi (24.1 MPa, 241 bar). To prevent serious injury from pressurized fluid if the P2 gun is installed on any other manufacturer's equipment, ensure that the maximum static fluid pressure is not exceeded.</p>				



If the gun is being used for short periods of spraying, Graco recommends that the purge air be left on.

NOTE: For proper purging following use, leave the supply air switch (D) open for at least 15 seconds after the air has been applied to the Off port.

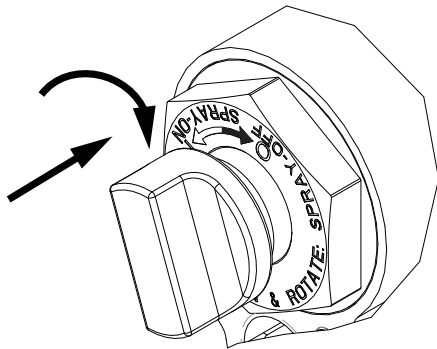
NOTICE
<p>If purge air needs to be turned off, the material shutoff valves must be turned to their off positions and the piston lock needs to be engaged before turning off the purge air. Failure to follow this procedure possibly will result in the gun head becoming encased with mixed product.</p>

NOTE: Refer to the instruction manual for the feed system you are using for complete system operation.

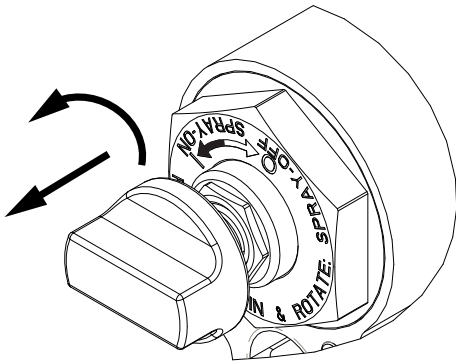
Piston Lock

				
<p>High-pressure fluid from dispensing devices can pierce skin. To help prevent serious injury from pressurized fluid, always engage the piston lock and close the material shutoff valves to avoid accidental triggering whenever you stop spraying.</p>				

To engage the piston lock (G), push the knob in and turn it clockwise. If engaged, the gun does not actuate.



To disengage the piston lock, push the knob in and turn it counterclockwise until it pops out away from the gun body.

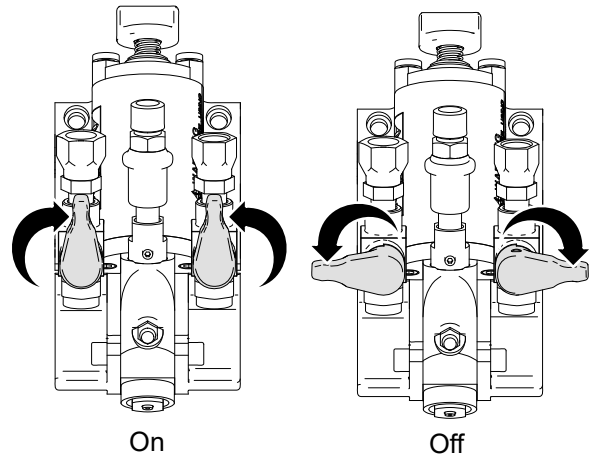


See **Piston Lock Adjustment and Installation Procedure** on page 17 for additional information.

Valve Control

The flow of material into the mixing chamber is controlled by the on or off position of the two material shutoff valves (E,F).

NOTE: Both material shutoff valves must be fully open and the piston lock (D) must be disengaged during dispensing. During service or extended shutdown periods, the shutoff valves must be fully closed and the piston lock engaged.



Refer to the manuals for the feed system you are using for startup and shutdown procedures.

Loss of Air Pressure

In the event of loss of air pressure, the gun continues to spray. To shut off the gun, do one of the following:

- Push in the piston lock (G).
- Close the material shutoff valves (E,F).

Spray Technique

Always follow all safety procedures outlined in this manual.

The standard .046 in. mixing chamber supplied with your gun is adequate for all but the smallest and largest applications.

To achieve the optimum spray pattern for other applications, appropriate mixing chambers are available from Graco in seven round and six flat spray sizes. See **Kits** on page 22.

NOTE: Foam rise and cure times vary according to the material and substrate temperature. Higher material or substrate temperatures increase the rise and cure times; lower material or substrate temperatures decrease rise and cure times. Consult your chemical manufacturer's data specification sheets for their recommended spray temperatures. Under most circumstances, both components are used at identical temperatures.

Higher pressures and temperatures may be used to increase material breakup, improve mixing, and speed up rise times. With hose lengths over 50 ft (15.25 m), or when material viscosities are high, higher material pump pressures may be necessary.

The supply air switch assembly (D) must be opened (pushed down towards the front of the gun) prior to spraying to provide air for piston operation and purge air when the piston is released.

When spraying, the gun piston may be activated continuously or deactivated at the end of each stroke. A smooth, even layer is best achieved by moving the gun back and forth in a slow, even motion, overlapping the previous pass by about 50 to 75 percent.

The ideal gun-to-surface distance is about 18 to 24 inches. Be sure to point the gun directly at the surface to be sprayed. Spraying at an angle to the surface causes the foam to be rough and generates over-spray.

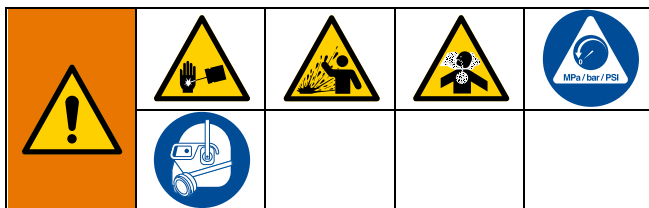
Maintenance

NOTE: Letters in parenthesis used in this section refer to the callouts in Component Identification on page 8.

Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this symbol.



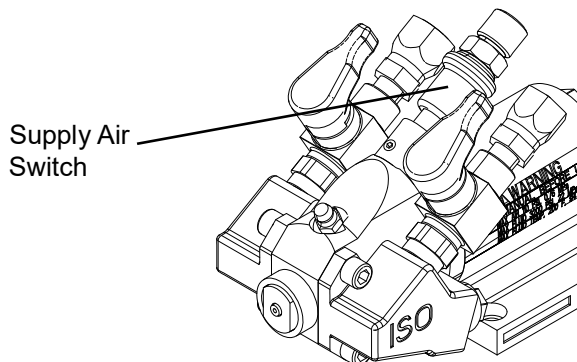
This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and toxic fumes, follow the **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing the equipment.

1. Turn off the air supply to the system, except the system air supplied to the On/Off ports (H,J). Refer to the manual for the feed system you are using for instructions about turning off the air supply.
2. Activate the gun until all material pressure has been relieved.
3. Turn off the system air supplied to the On/Off ports at the system.
4. Turn off the material feed system. Refer to the manual for the feed system you are using for instructions.
5. Activate the gun until all air pressure has been relieved.
6. Open all material drain valves in the system, having a waste container ready to catch drainage. Leave drain valve(s) open until you are ready to spray again.

7. If you suspect the spray tip or hose is clogged or that pressure has not been fully relieved:
 - a. Very slowly loosen each material hose (A,B) end coupling, one at a time, to relieve pressure gradually.
 - b. When pressure is relieved, loosen the hose couplings completely.
 - c. Clear the obstruction.

Check for Leaking Seals

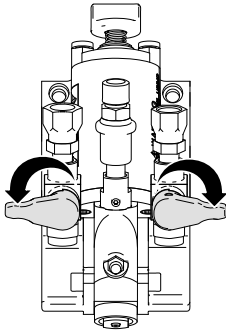
1. Engage the piston lock (G).
2. Turn off the incoming air to the gun by closing the supply air switch (D).



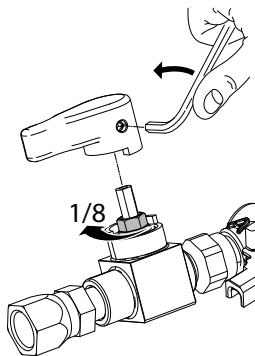
3. Wait approximately 10-20 seconds, then turn on the incoming air by opening the supply air switch.
4. Repeat two or three times.
5. If any material has been purged from the gun, the seals or o-rings are leaking.
6. Repair the leaks by replacing the seals or o-rings and rechecking.

Check the Material Valves for Leaks

1. Turn off both material shutoff valves (E,F).

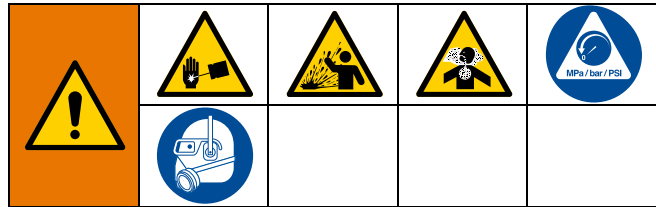


2. Disengage the piston lock (G).
3. Activate and deactivate the gun several times.
4. Wait approximately 10-20 seconds.
5. Activate and deactivate the gun several times again.
6. If additional material is purged, the material valves are leaking.
7. Repair the leaks by loosening the set screw and removing the handle where the leak is occurring. Turn the valve packing nut clockwise in 1/8 turn increments until the leak is corrected.



8. Recheck for leaks.

Check Side Blocks

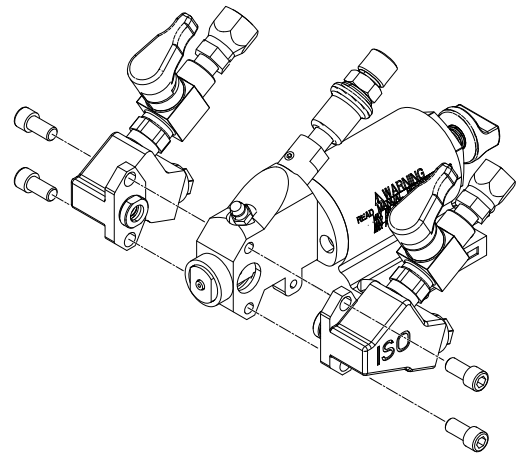


Before conducting any maintenance or removing the side blocks, follow the **Pressure Relief Procedure** to help prevent serious injury. Make sure that both material valves are in the off position. Existing fluid pressure could cause material to exit the side blocks with considerable force. Point the gun side blocks down and away from all personnel.

NOTICE

If the material valves are open when the side blocks are removed, the gun quickly becomes encased in urethane.

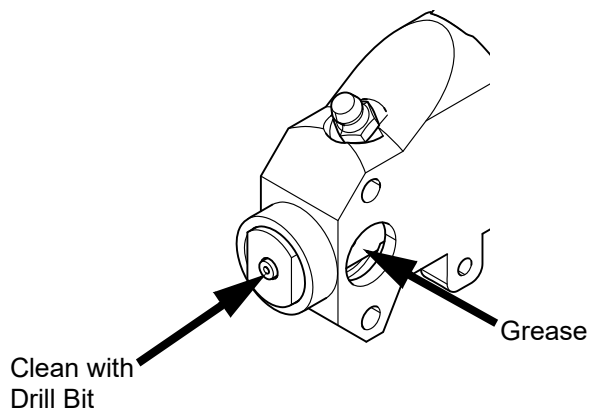
1. Follow the **Pressure Relief Procedure** as described on page 13.
2. Remove the screws holding the side blocks (K) and remove the side blocks from the mixing chamber.



3. Examine the sides of the mixing chamber for scratches and/or material buildup. Carefully, without scratching the seal surfaces, remove any accumulated material.

NOTICE
Solvent can be used to wash the accumulated material off of the chamber and side blocks. Keep the gun chamber tilted toward the ground so that the solvent does not run back into the gun. Some solvents can cause swelling and deterioration of the o-rings on the chamber shaft.

4. Place generous amounts of high quality, lubricant grease (part no. 117773) in each side of the gun front housing and on the side block seals.

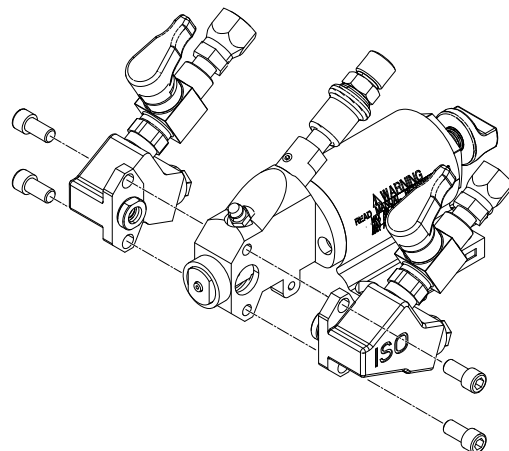


5. Use the correct size drill bit to clean the mixing chamber exit passage.

NOTE: Refer to the **Cleaning Drill Chart** on page 26 in this manual to select the correct size drill bits.

6. Use the correct size drill bit to clean the inlet side holes of the mixing chamber, taking care not to scratch the mixing chamber's polished surfaces.

7. Reassemble the side blocks (K) and tighten the screws. Grease should appear at the tip of the mixing chamber.

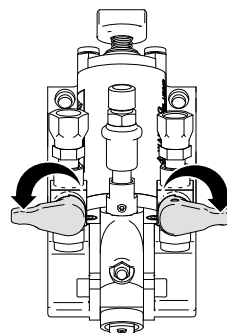


NOTE: Do not open the supply air switch on the gun because this purges grease from the gun. Allow the grease to remain in the gun overnight.

Daily Shutdown

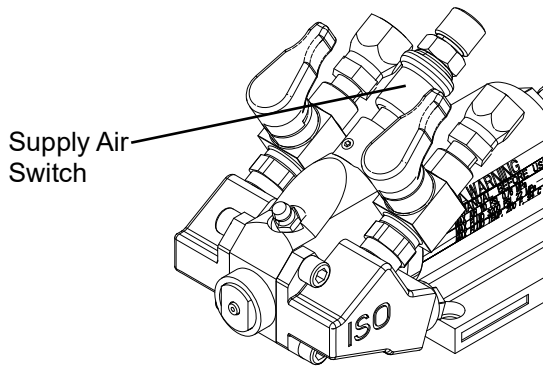
Once you have used the gun with a system and have become comfortable with techniques on how all of the variables are affecting your operation and maintenance, maintenance requirements can be addressed specific to your operation.

1. Turn off the material valves (E,F). Activate and deactivate the gun 5-6 times to purge residual pressure.

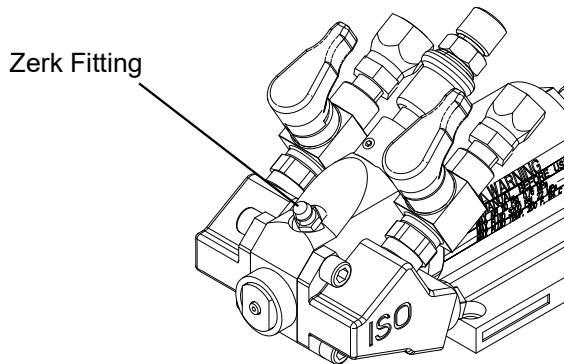


2. Engage the piston lock (G).
3. Drill out the chamber insert snout with the correct size drill bit for the insert. See the **Cleaning Drill Chart** on page 26.

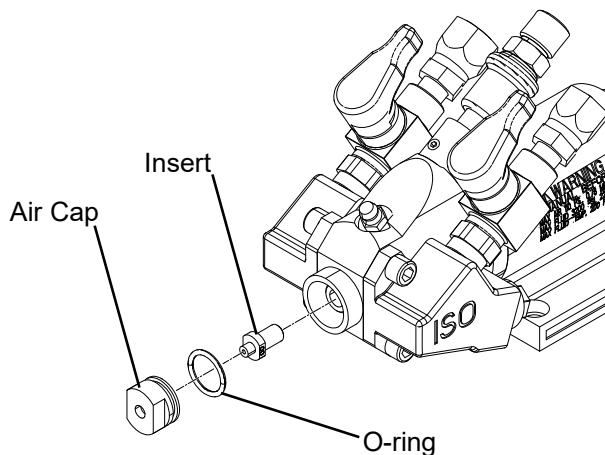
- Pull the slide valve on the supply air switch halfway back to limit the air purge.



- Use the grease gun (part no. 117792) to inject lubricant grease (part no. 117773) into the zerk fitting (L) until a light mist of grease is purged through the snout. Shut off the supply air switch.



- Remove the air cap and set it to the side. If solvent soaking is required, remove the o-ring prior to soaking.
- Remove the snout insert and soak it in solvent until the next usage.



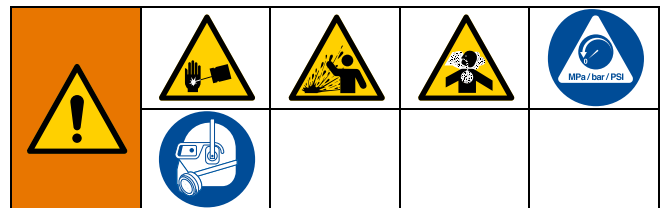
Daily Startup

- Clean the snout insert. Be sure both the face and bottom flat are clean. Drill out the snout bore with the correct size bit for the snout. See the **Cleaning Drill Chart** on page 26.
- Clean the inner bore of the chamber. Drill out the chamber snout inlet bore as required.
- Install the snout insert.
- Install the air cap onto the chamber. Tighten by hand until the cap bottoms out. Snug down with a 1/2 in. wrench.

NOTICE

Do not use a high torque when tightening the air cap. Over tightening can result in chamber damage.

Parts Replacement Procedure



Before removing the side blocks, follow the **Pressure Relief Procedure** to help prevent serious injury. Make sure that both material valves are in the off position.

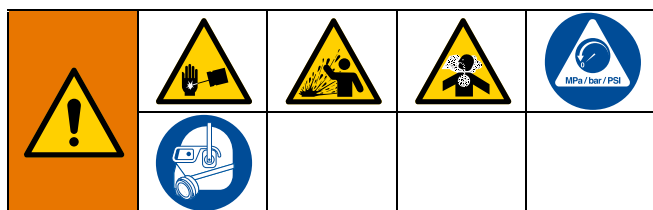
NOTICE

If the material valves are on when the side blocks are removed, the gun quickly becomes encased in urethane.

- Follow the **Pressure Relief Procedure** as described on page 13.
- Read each procedure entirely before beginning and refer to the illustrations as needed.
- Flush and clean all chambers and passages as they become accessible.
- Clean all parts before assembly.
- Replace all o-rings and seals with new parts from the appropriate kit.

6. Inspect all parts for wear or damage and replace as required with new genuine Graco replacement parts from your authorized Graco distributor.
7. Inspect all threads for wear or damage and replace as required.
8. Tighten all threaded parts securely but not excessively upon assembly.
9. Lightly lubricate all o-rings and threads with grease (part no. 118665).
10. Check all springs for resilience. They should return quickly to their original length.

Routine Care

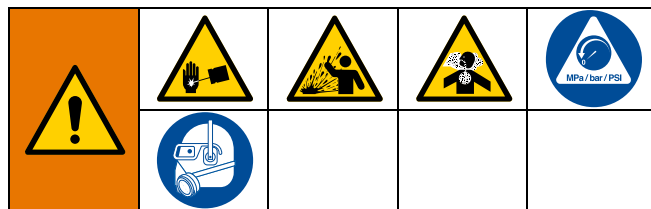


NOTICE				
If the material valves are on when the side blocks are removed, the gun quickly becomes encased in urethane.				

It is recommended that the following service be performed on a daily basis.

- Clean the gun using a brush and an appropriate cleaning solvent.
- Inspect the side block seals making certain they are clean and free of scratches, nicks, or foreign material. Clean and replace as required.
- Remove, clean, or replace the filter screen.
- Maintain a reasonable stock level of wear items such as seals and o-rings. See **Service and Repair Kits** on page 23.
- Grease the gun daily to prevent two-component curing and keep fluid passages clean. Purge air carries grease mist through the air chamber and impingement ports, then out the mix chamber nozzle, coating all surfaces. Use part no. 117773 grease.

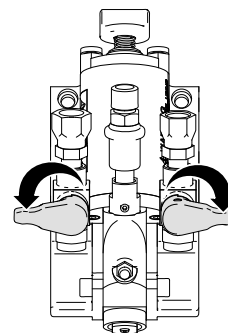
Piston Lock Adjustment and Installation Procedure



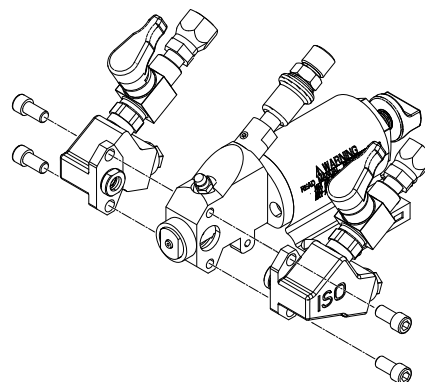
The distance back that the air piston travels when the gun is activated is factory set on the P2 and, as a rule, should not require adjustment. Proper travel adjustment aligns the mixing chamber side ports with the side block seal-through port.

Follow these steps to determine if the piston travel distance is correct.

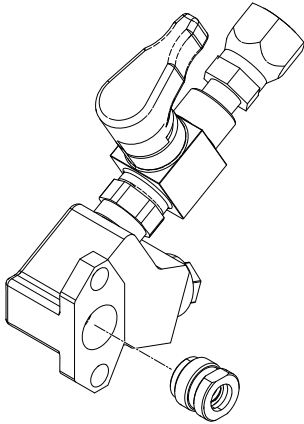
1. Follow the **Pressure Relief Procedure** on page 13 and disconnect the material hoses from the gun.
2. Turn the material valves (E,F) to the off position.



3. Verify that the piston lock (G) cap has been tightened and fully threaded into the gun.
4. Remove the side blocks (K).



5. Remove one of the side block seal housings from the side block. Leave the seal in the housing and rinse it with suitable solvent.



6. Place the side seal housing in the gun head so the face of the seal sits against the mix chamber.

NOTICE

If the material valves are on when the side blocks are removed, the gun quickly becomes encased in urethane.

7. Turn on the system air and activate the gun.

NOTE: The purge air does not shut off with the side block removed.

8. If the impingement port is not fully visible through the side seal housing, turn the system air off and activate the gun to relieve pressure. Use a 9/16 in. open-end wrench to adjust the adjustment nut in the appropriate direction. Repeat steps 7 and 8 until it is adjusted properly.
9. If the impingement port on the mix chamber is fully visible through the side seal housing (either on center or slightly forward), the piston lock adjustment nut is properly aligned.

NOTE: Non-permanent thread locker can be applied to the adjustment nut if necessary.

10. Reassemble the gun.

Verify the Piston Lock Assembly is Working

Before each use, verify that the piston lock assembly is installed and working properly.

1. Engage the piston lock (G).
2. Pressurize the system to working pressure.
3. Open the material valves (E,F).
4. Point the gun in a safe direction and trigger the gun. No material should flow from the gun tip.

NOTE: Do not use the gun if it is not working properly. Refer to information included in this **Maintenance** section to troubleshoot problems. For additional information or technical assistance, contact Graco Ohio Technical Assistance at 800-746-1334 or Ohio TA@graco.com.

Parts

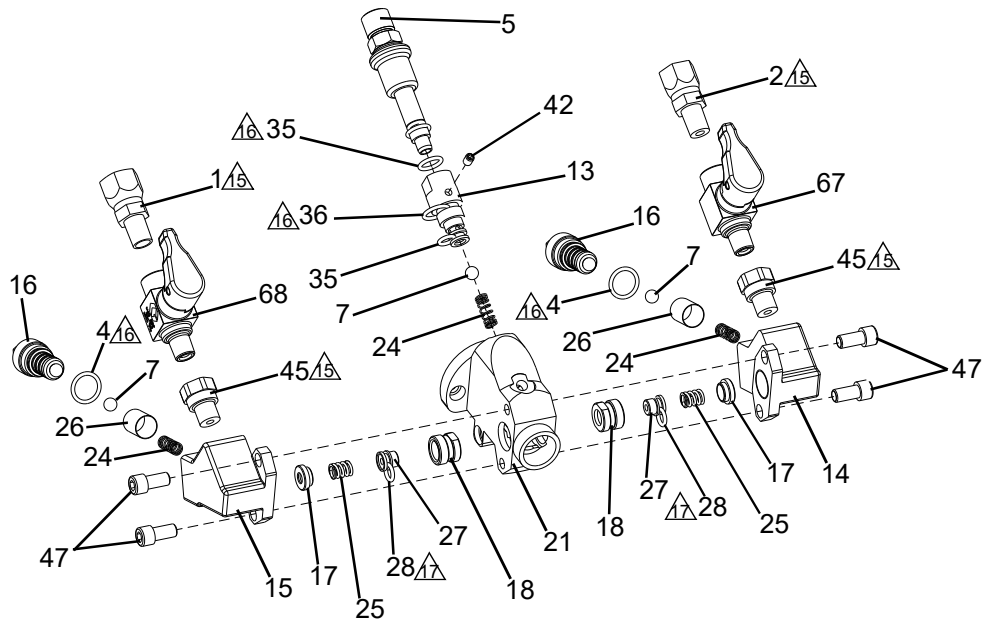
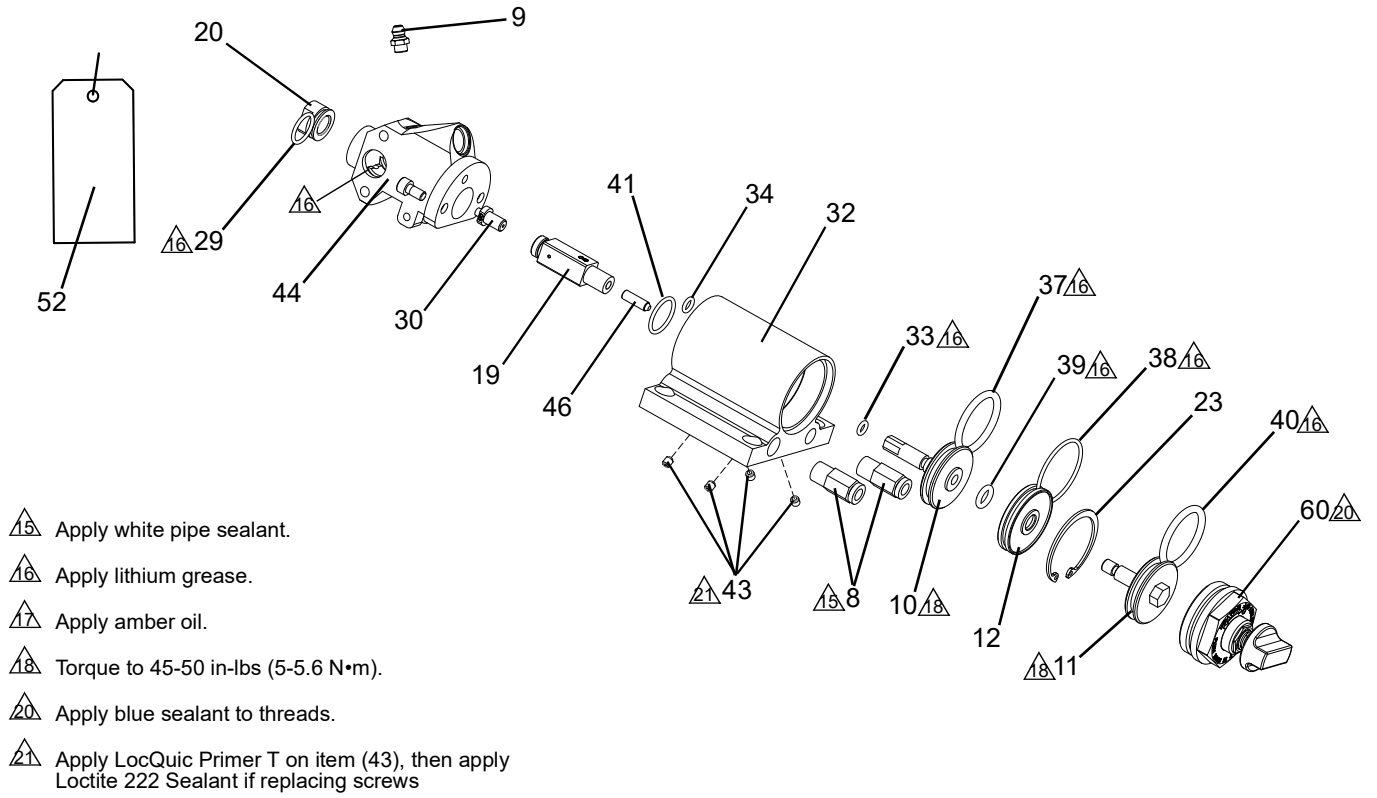


FIG. 2: Auto Probler P2 Parts - All Models

Parts

Ref	Part	Description	Quantity by Model							
			GCP4R A	GCP4R0	GCP4R1	GCP4R2	GCP4R3	GCP4R4	GCP4R5	24X636
1	117634	SWIVEL, union, no #6 jic	1	1	1	1	1	1	1	1
2	117635	SWIVEL, union	1	1	1	1	1	1	1	1
4	117724	O-RING	2	2	2	2	2	2	2	2
5	GC0128	SWITCH, assy, switch, air	1	1	1	1	1	1	1	1
7	GC0259	BALL, 1/4 dia, 302 sst	3	3	3	3	3	3	3	3
8	GC0498	FITTING, connector	2	2	2	2	2	2	2	2
9	100846	FITTING, lubtn, st	1	1	1	1	1	1	1	1
10	GC1898	PISTON, air, 1-3/8, probler 2	1	1	1	1	1	1	1	
	24Z770	KIT, piston, p2, alum pist, ss								1
11	GC1899	PISTON, air, 1-1/2, probler 2	1	1	1	1	1	1	1	1
12	GC1900	SPACER, cylinder, probler 2	1	1	1	1	1	1	1	1
13	GC1901	INSERT, valve, air	1	1	1	1	1	1	1	1
14	16N599	BLOCK, side, iso, p2	1	1	1	1	1	1	1	
	17P755	KIT, block, side, iso, p2, sst								1
15	16N600	BLOCK, side, poly, p2	1	1	1	1	1	1	1	
	17P758	KIT, block, side, poly, p2, sst								1
16	16P010	FILTER, valve, check	2	2	2	2	2	2	2	2
17	GC2494	KIT, seal, P2	2	2	2	2	2	2	2	2
18	GC2495	KIT, seal, housing, P2	2	2	2	2	2	2	2	2
19	GC250A	KIT, mix, chamber, p2, aa	1							
	GC2500	KIT, mix, chamber, p2, 00		1						
	GC2501	KIT, mix, chamber, p2, 01			1					
	GC2502	KIT, mix, chamber, p2, 02				1				
	GC2503	KIT, mix, chamber, p2, 03					1			
	GC2504	KIT, mix, chamber, p2, 04						1		
	GC2505	KIT, mix, chamber, p2, 05							1	
	17E465	KIT, mix, chamber, p2, 01								1
20	GC1914	TIP, front, probler 2	1	1	1	1	1	1	1	1
21	GC1916	HEAD, probler 2	1	1	1	1	1	1	1	
	17P726	KIT, head, probler 2, sst								1
23	GC1921	RING, retaining, internal	1	1	1	1	1	1	1	1
24	GC1922	SPRING, .24 od x 5/8 long	3	3	3	3	3	3	3	3
25	GC1923	SPRING, .30 od x 3/8 long	2	2	2	2	2	2	2	2
26	24R894	KIT, filter	2	2	2	2	2	2	2	2
27	GC2498	KIT, side, seal, p2	2	2	2	2	2	2	2	2
28	111450	PACKING, o-ring	2	2	2	2	2	2	2	2
29	117517	O-RING	1	1	1	1	1	1	1	1

Ref	Part	Description	Quantity by Model							
			GCP4R A	GCP4R0	GCP4R1	GCP4R2	GCP4R3	GCP4R4	GCP4R5	24X636
30	GC251A	KIT, insert, mix, chamber, aa	1							
	GC2510	KIT, insert, mix, chamber, 00		1						
	GC2511	KIT, insert, mix, chamber, 01			1					
	GC2512	KIT, insert, mix, chamber, 02				1				
	GC2513	KIT, insert, mix, chamber, 03					1			
	GC2514	KIT, insert, mix, chamber, 04						1		
	GC2515	KIT, insert, mix, chamber, 05							1	
	17P754	KIT, insert, mix, chamber, 059								1
31	GC1947*	KIT, hardware, gun, p2, 00-03		1	1	1	1			1
	GC1948*	KIT, hardware, gun, p2, aa	1							
	GC1949*	KIT, hardware, gun, p2, 04-05						1	1	
32	GC2520	KIT, block, p2, automatic	1	1	1	1	1	1	1	1
33	C20988	PACKING, o-ring	1	1	1	1	1	1	1	1
34	GC2056	O-RING, o-ring, viton, 2-009	1	1	1	1	1	1	1	1
35	110242	PACKING, o-ring	2	2	2	2	2	2	2	2
36	GC2057	O-RING, o-ring, viton, 2-013	1	1	1	1	1	1	1	1
37	108833	PACKING, o-ring	1	1	1	1	1	1	1	1
38	107563	PACKING, o-ring	1	1	1	1	1	1	1	1
39	GC2059	O-RING, o-ring, viton, 2-109	1	1	1	1	1	1	1	1
40	C20207	PACKING, o-ring	1	1	1	1	1	1	1	1
41	GC2060	O-RING, o-ring, viton, 2-017	1	1	1	1	1	1	1	1
42	GC2079	SCREW, set, half dog, #8	1	1	1	1	1	1	1	1
43	GC2081	SCREW, set, flpt, #8, 3/16, sst	4	4	4	4	4	4	4	4
44	GC2187	SCREW, shdc, ss,. 190 x .375	2	2	2	2	2	2	2	2
45	15U395	ADAPTER, male x female, 1/8 npt	2	2	2	2	2	2	2	2
46	GC2243	SCREW, set, cppt, .190-32 x .625	1	1	1	1	1	1	1	1
47	GC2248	SCREW, shdc, ss, .250 x .50	4	4	4	4	4	4	4	4
48	15B772*	HOSE, air, 18 inch	1	1	1	1	1	1	1	1
52	172479▲	TAG, warning	1	1	1	1	1	1	1	1
53	222385*	LABEL, safety, warning, med.alert	1	1	1	1	1	1	1	1
60	258761❖	KIT, assy, piston-lock, p2	1	1	1	1	1	1	1	
	24Z769❖	KIT, air cap, piston lock, p2								1
67	256459	KIT, a side valve	1	1	1	1	1	1	1	1
68	256460	KIT, b side valve	1	1	1	1	1	1	1	1
69	16P323*	TAG, instructions	1	1	1	1	1	1	1	1

* Not shown.

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

❖ See the parts for kits 257826 and 24X635 on page 22.

Kits

Air Cap Kits 258761 and 24Z769

NOTE: Refer to **Parts** on page 19.

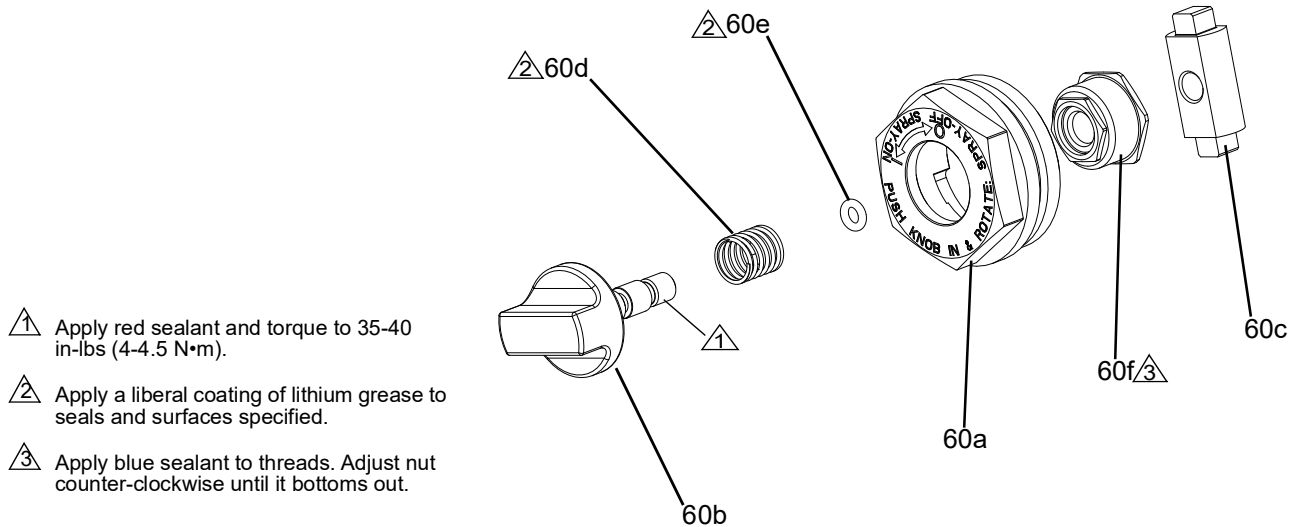


FIG. 3: Kits 257826 and 24X635 Parts

Ref	Part	Description	Quantity	
			258761	24Z769
60a	---	CAP, cylinder, p2	1	1
60b	---	SHAFT, safety stop, p2	1	
	---	SHAFT, safety stop, p2, cs		1
60c	---	STOP, piston, p2	1	1
60d	---	SPRING, compression	1	1
60e	---	O-RING	1	1
60f	---	NUT, adjustment, safety stop, p2	1	1

--- Not available for individual sale.

Service and Repair Kits

GC1937 Standard Repair Kit		
Part	Description	Quantity
C20988	O-Ring	1
GC2056	O-Ring	1
110242	O-Ring	2
106555	O-Ring	2
GC2057	O-Ring	1
GC2058	O-Ring	3
108833	O-Ring	1
107563	O-Ring	1
GC2059	O-Ring	1
C20207	O-Ring	1
GC2060	O-Ring	1
111450 †	O-Ring	4
117517 ★	O-Ring	1
113137	O-Ring	2
117724 ❖	O-Ring	2

❖ Available in 6-packs (248130).

† Available in 6-packs (248128).

★ Available in 6-packs (248131).

GC1949 Hardware Kit 04-05		
Part	Description	Quantity
GC0086	3/16 in. Ball Driver	1
GC0087	5/32 in. Ball Driver	1
GC0175	Pin Vise	1
GC2496	Filter Screen	2
GC0075	Drill Bit	1
GC0076	Drill Bit	1
117517	O-Ring	1
111450	O-Ring	2
GC2212	37 Deg. Connector Fitting	1
GC2334	45 Deg. Connector Fitting	1
GC2394	Adapter Fitting	1

GC194 Hardware Kit -AA		
Part	Description	Quantity
GC0082	Drill Bit	1
GC0081	Drill Bit	1
GC0086	3/16 in. Ball Driver	1
GC0087	5/32 in. Ball Driver	1
GC0175	Pin Vise	1
GC1924	Filter Screen	2
111450	O-Ring	2
117517	O-Ring	1

GC1950 Premium Repair Kit		
Part	Description	Quantity
GC1931	O-Ring	1
111516	O-Ring	1
113137	O-Ring	2
111316	O-Ring	2
118594	O-Ring	1
117724 ❖	O-Ring	2
117517 ★	O-Ring	1
GC1932	O-Ring	3
GC1933	O-Ring	1
GC1934	O-Ring	1
GC1935	O-Ring	1
GC1936	O-Ring	1
117610	O-Ring	1
111450 †	O-Ring	4
110242	O-Ring	2

❖ Available in 6-packs (248130).

† Available in 6-packs (248128).

★ Available in 6-packs (248131).

GC1946 Side Seal Kit		
Part	Description	Quantity
GC2498	SST Side Seal	2
111450	O-Ring	2

GC1947 Hardware Kit 00-03		
Part	Description	Quantity
GC0086	3/16 in. Ball Driver	1
GC0087	5/32 in. Ball Driver	1
GC0175	Pin Vise	1
GC2496	Filter Screen	2
GC0068	Drill Bit	1
GC0069	Drill Bit	1
GC0070	Drill Bit	1
GC0072	Drill Bit	1
GC0073	Drill Bit	1
GC0074	Drill Bit	2
GC0077	Drill Bit	1
GC0083	Drill Bit	1
GC2212	37 Deg. Connector Fitting	1
GC2334	45 Deg. Connector Fitting	1
117517	O-Ring	1
248128	O-Ring	6
GC2394	Adapter Fitting	1

258762, Piston Lock Repair Kit		
Part	Description	Quantity
	Stop Shaft	1
	Piston Stop	1
	Compression Spring	1
	O-Ring	1

Bulk Kits

24R894, 40 Mesh Filter Screens Kit		
Part	Description	Quantity
GC2496	Filter Screen, 40 Mesh	10

24R895, 100 Mesh Filter Screens Kit		
Part	Description	Quantity
GC2497	Filter Screen, 100 Mesh	10

24R896, Springs Kit		
Part	Description	Quantity
GC1922	Spring	12

Gun Cover

244914 Covers

Keeps gun clean while spraying. Pack of 10.

Lubricant for Gun Rebuild

248279, 4 oz (113 gram) [10]

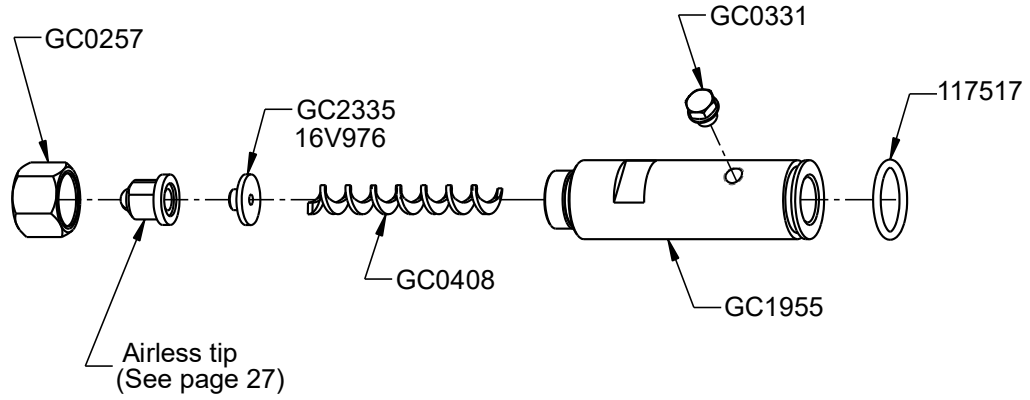
High adhesion, water resistant, lithium-based lubricant. SDS sheet available at www.graco.com.

Grease Cartridge for Gun Shutdown

248280 Cartridge, 3 oz (85 gram) [10]

Specially formulated low viscosity grease flows easily through gun passages to prevent 2 component curing and keep fluid passages clean.

Static Mixer Kit - GC1956



GC1956, Static Mixer Kit		
Part	Description	Quantity
GC2335 16V976	Fluid Nozzle Seal	1
GC0257	Nozzle Nut	1
GC0331	Plug Fitting	1
GC0480	Spiral Mixing Element	1
117517	O-ring	1
GC1955	Static Mixer Adapter	1

Cleaning Drill Chart

Round Mixing Chamber	Mixing Chamber Nozzle Cleaning Drill		Mixing Chamber Hole Cleaning Drill	
GC250A	248891	0.033	276984	0.022
GC2500	GC0083	0.049	GC0080	0.035
GC2501	249112	0.057	246629	0.042
GC2502	GC0069	0.071	256628	0.052
GC2503	246625	0.086	246627	0.059
GC2504	246624	0.094	296297	0.067
GC2505	246623	0.116	246625	0.086
Drill Pin Vise 117661				

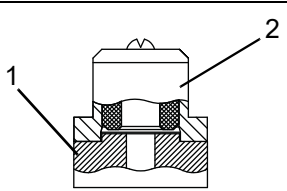
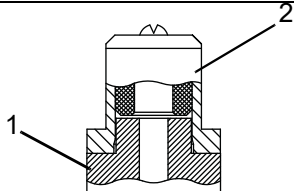
Short Version				
Part	FAN Code	Spray Width in. (mm)	Orifice Diameter	
GC2573	215	2-4 (50.8-101.6)	0.015	
GC2575	217		0.017	
GC2578	221		0.021	
GC2582	223		0.023	
GC2589	231		0.031	
GC2592	235		0.035	
GC2623	411		8-10 (203.2-254)	0.011
GC2624	413	0.013		
GC2574	415	0.015		
GC2576	417	0.017		
GC2625	419	0.019		
GC2579	421	0.021		
GC2583	423	0.023		
GC2626	425	0.025		
GC2586	427	0.027		
GC2590	431	0.031		
GC2593	435	0.035		
GC2595	439	0.039		
GC2627	511	10-12 (254-304.8)		0.011
GC2628	513			0.013
GC2629	515			0.015
GC2577	517		0.017	
GC2630	519		0.019	
GC2580	521		0.021	
GC2584	523		0.023	
GC2631	525		0.025	
GC2587	527		0.027	
GC2591	531		0.031	
GC2594	535		0.035	
GC2596	539		0.039	

Short Version			
Part	FAN Code	Spray Width in. (mm)	Orifice Diameter
GC2632	611	12-14 (304.8-355.6)	0.011
GC2633	613		0.013
GC2634	615		0.015
GC2635	617		0.017
GC2636	619		0.019
GC2637	621		0.021
GC2638	623		0.023
GC2639	625		0.025
GC2640	627		0.027
GC2641	711		14-16 (355.6-406.4)
GC2642	713	0.013	
GC2643	715	0.015	
GC2644	717	0.017	
GC2645	719	0.019	
GC2646	721	0.021	
GC2585	723	0.023	
GC2647	725	0.025	
GC2648	727	0.027	

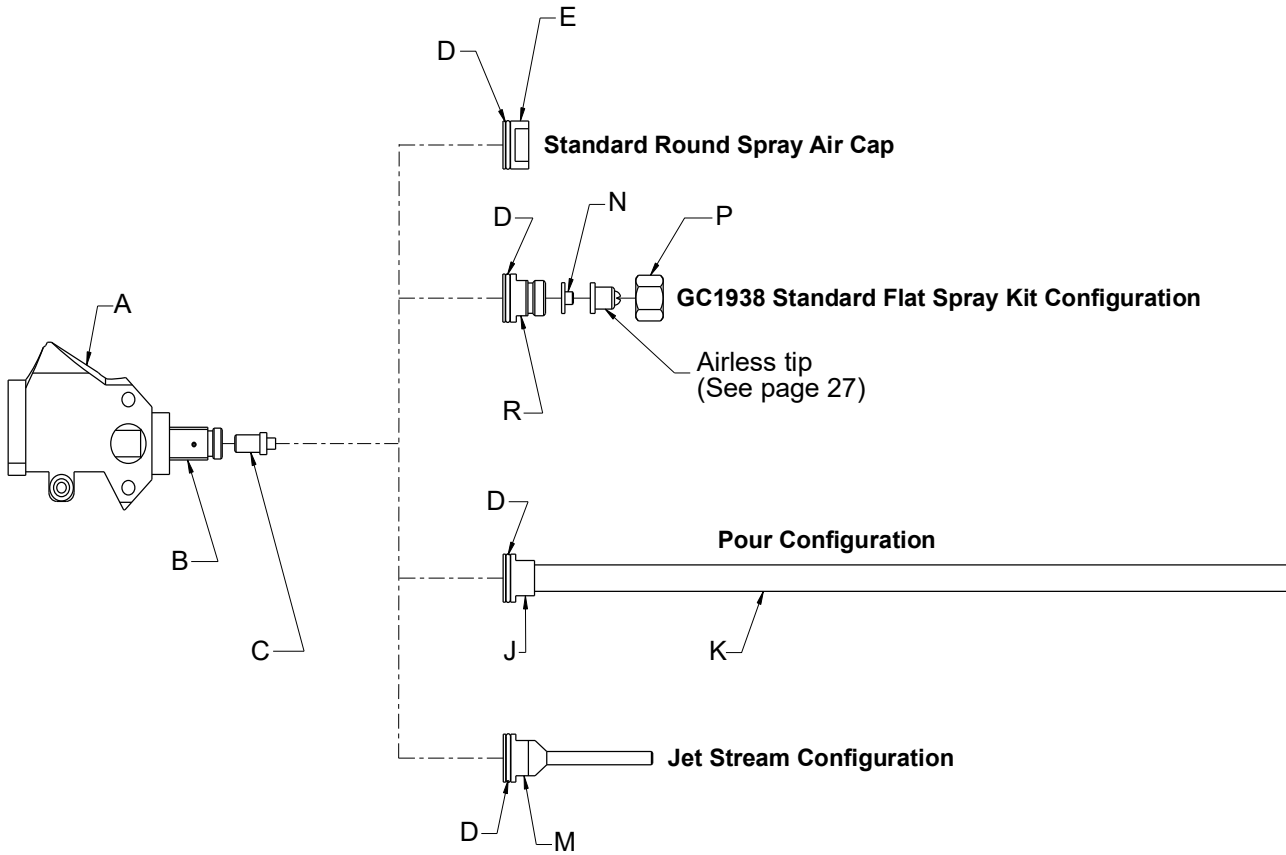
Long Version			
Part	FAN Code	Spray Width in. (mm)	Orifice Diameter
GC2599	351	6-8 (152.4-203.2)	0.051 in.
GC2600	451	8-10 (203.2-254)	0.051 in.
GC2604	461		0.061 in.
GC2607	471		0.071 in.
GC2597	543	10-12 (254-304.8)	0.043 in.
GC2601	551		0.051 in.
GC2605	561		0.061 in.
GC2608	571		0.071 in.
GC2606	661	12-14 (304.8-355.6)	0.051 in.
GC2602	751	14-16 (355.6-406.4)	0.061 in.

Spacer Seals

Use only brown series C spacer seals with series B spray tips. Failure to do so may result in material clogging.

Series C Spacer Seals (Brown)	
Short Version	Long Version
Use with tips LPA2-147-1525 through LPA2-147-3850	Use with tips LPA2-147-4325 through LPA2-147-7250
GC2335	16V976
23564-00	16V972
23572-00	16V973
LPA2-121G	16V974
LPA2-124S	16V975
	
1 - Tip Spacer Seal (Series C) 2 - Spray tip (Series B)	

Auto P2 Spray Options



P2 Auto Spray Options		
Ref	Part	Description
A	17F253	Gun Head
B	GC250X	Mix Chamber Body
C	GC251X	Mix Chamber Insert
D	117517	O-ring
E	GC1914	Air Cap
J	GC1954	Pour Cap
K	✳	Tubing, 1/4 in. ID
M	GC1952 GC1953	Jet Nozzle
N	GC2335 16V976	Seal
P	GC0257	Retaining Nut
R	GC1926	Field Spray Adapter

✳ Purchase locally.

Technical Specifications

Auto Probler P2		
	US	Metric
Maximum Static Fluid Pressure	3500 psi	24.1 MPa, 241 bar
Air Inlet Pressure Range*	90-110 psi	0.62-0.76 MPa, 6.2-7.6 bar
Air Inlet Size	1/4-18 NPSM	
Inlet Size A	5 JIC, 1/2-20 UNF	
Inlet Size B	6 JIC, 7/16-18 UNF	
Length	3.125 in.	79.375 mm
Height	4.75 in.	120.65 mm
Width	6.875 in.	174.625 mm
Weight		
GCP4R*	2.6 lb	1.18 kg
24X636	3.6 lb	1.63 kg
Wetted Parts	Stainless steel, carbon steel, chemically resistant o-rings, PTFE	

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale 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

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 Information

For the latest information about Graco products, visit www.graco.com.

For patent information, see www.graco.com/patents.

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.

Phone: 612-623-6921 or **Toll Free:** 1-800-328-0211, **Fax:** 612-378-3505

*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.*

Original instructions. This manual contains English. MM 313267

Graco Headquarters: Minneapolis

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