

# Instructions – Parts List



## CIRCULATING, HIGH PRESSURE Automatic Airless Spray Gun

308813J

*4000 psi (28 MPa, 280 bar) Maximum Working Fluid Pressure*

**Part No. 239786, Series A**

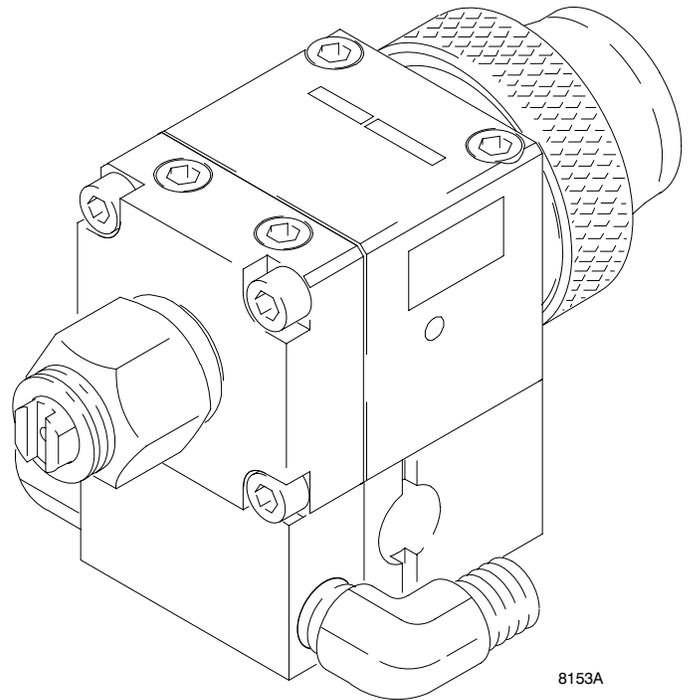
Standard Spray Gun  
Includes GG0 series tip of choice

**Part No. 241469, Series A**

Acid Catalyzed Fluid Spray Gun  
Includes GG0 series tip of choice

**Part No. 233670, Series A**

Sealant Streaming Gun



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**Read warnings and instructions.**

See page 2 for Table of Contents.

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# Symbols

## Warning Symbol



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

## Caution Symbol



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

# ! WARNING



INSTRUCTIONS

## EQUIPMENT MISUSE HAZARD

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

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are uncertain about usage, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories.
- Check the equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. This equipment has a **4000 psi (28 MPa, 280 bar) maximum working pressure**.
- Route the hoses away from the traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 180°F (82°C) or below -40°F (-40°C).
- Use only Graco approved hoses. Do not remove hose spring guards, which help protect the hose from rupture caused by kinks or bends near the couplings.
- Use fluids or solvents that are compatible with the equipment wetted parts. See the **Technical Data** section of all the equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Wear hearing protection when operating this equipment.
- Comply with all applicable local, state and national fire, electrical and other safety regulations.



## TOXIC FLUID HAZARD

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

- Know the specific hazards of the fluid you are using. Read the fluid manufacturer's warnings.
- Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state and national guidelines.
- Wear the appropriate protective clothing, gloves, eyewear and respirator.

# ⚠ WARNING



## INJECTION HAZARD

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

- Fluid injected into the skin might look like just a cut, but it is a serious injury. **Get immediate medical attention.**
- Do not point the spray gun at anyone or at any part of the body.
- Do not put hand or fingers over the spray tip.
- Do not stop or deflect fluid leaks with your hand, body, glove, or rag.
- Do not “blow back” fluid; this is not an air spray gun.
- Check the gun diffuser operation weekly.
- Follow the **Pressure Relief Procedure** on page 9 whenever you: are instructed to relieve pressure; stop spraying; clean, check, or service the equipment; or install or clean the spray tip.
- Tighten all the fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn, damaged, or loose parts immediately. Permanently coupled hoses cannot be repaired; replace the entire hose.



## FIRE AND EXPLOSION HAZARD

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

- Ground the equipment and the object being sprayed. See **Ground the System** on page 8.
- Provide fresh air ventilation to avoid the buildup of flammable fumes from solvent or the fluid being sprayed.
- Extinguish all the open flames or pilot lights in the spray area.
- Electrically disconnect all the equipment in the spray area.
- Keep the spray area free of debris, including solvent, rags, and gasoline.
- Do not turn on or off any light switch in the spray area while operating or if fumes are present.
- Do not smoke in the spray area.
- Do not operate a gasoline engine in the spray area.
- If there is any static sparking while using the equipment, **stop spraying immediately**. Identify and correct the problem.

# Installation

## Ventilate the Spray Booth

**⚠ WARNING**



**TOXIC FLUID HAZARD**  
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.

## Configure the Gun and Manifold

(Order Manifold separately, see page 20)

### Models 239786 and 241469 with Manifolds 241161 and 241162

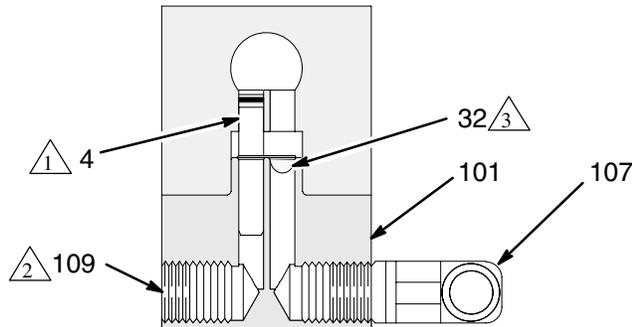
The gun is supplied with an internal fluid plug (4). See Fig. 1. To use the gun in a circulating system, remove the internal plug. In a non-circulating system, leave the plug in place to minimize flush time.

*In a circulating system,* apply anti-seize lubricant 222955 to the threads and mating faces of the manifold (101) and the elbows (107), supplied unassembled. Install elbows (107) in both fluid ports of the manifold (101). Connect the fluid supply line to one elbow and the fluid return line to the other. The manifold fluid ports are reversible.

*In a non-circulating system,* apply anti-seize lubricant 222955 to the threads and mating faces of the manifold (101), a plug (109), and an elbow (107), supplied unassembled. Install an elbow (107) in one fluid port of the manifold, and a plug (109) in the other port. Install the internal plug (4) in the gun fluid port on the same side as the manifold plug. Connect the fluid supply line to the manifold elbow. See Fig. 1.

### Non-Circulating Setup Shown (cutaway view)

- 1 Remove when used in circulating systems
- 2 Replace with an elbow (107) when used in circulating systems
- 3 Install filter in the fluid inlet port



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**Fig. 1: Manifolds 241161 and 241162**

The gun is supplied with an internal fluid filter (32). Install the filter in the gun port being used as the fluid inlet (see Fig. 1).

**NOTE:** The gun can operate without the filter. If you are using highly viscous fluid and the filter causes an unacceptable pressure drop, remove the filter.

Install the gun on the manifold, using the four screws (17). Thread the screws by hand, then torque alternately and evenly to 65 in-lb (7.3 N•m).

### Models 233670 with Manifold 244930

This gun and manifold are designed to be used with high viscosity material and sealants, such as protective coatings and automotive sealants. There is no circulation port. The fluid inlet uses both ports to feed the valve and no filter is used.

# Installation

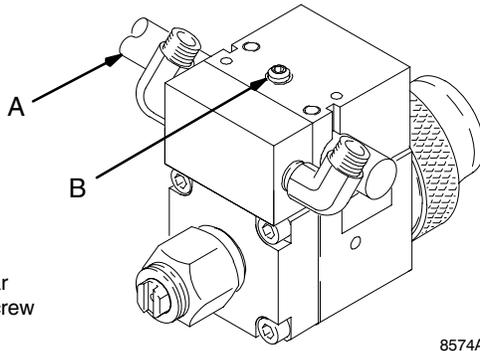
## Mount the Gun

### Manifolds 241161 and 241162

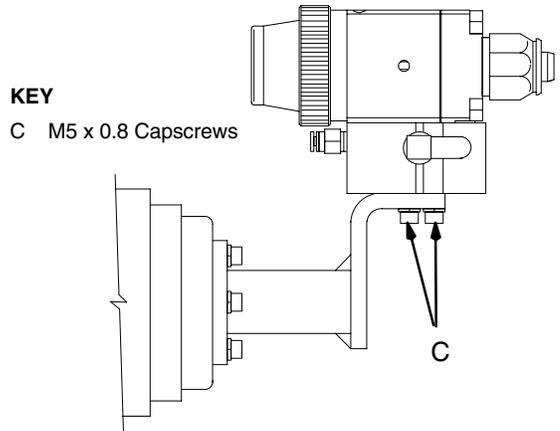
To mount the gun on a reciprocating arm [0.5 in. (13 mm) diameter maximum], insert the bar (A) through the hole in the manifold as shown in Fig. 2. Secure the gun to the bar by tightening the mounting screw (B). The tip of the gun should be 8 to 10 in. (200 to 250 mm) from the surface of the object being sprayed.

### All Manifolds

To mount the gun on a stationary support, see Fig. 3. Also refer to the mounting hole layout on page 30. Attach the gun to the support with two M5 x 0.8 capscrews (C). The screws must be long enough to engage the threaded holes in the gun manifold to a depth of 1/4 in. (6 mm). The tip of the gun should usually be 8 to 10 in. (200 to 250 mm) from the surface of the object.



**Fig. 2: Manifolds 241161 and 241162**



**Fig. 3: All Manifolds**

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# Installation

## Air Line and Accessory Recommendations

1. Install an air pressure regulator on the gun cylinder air supply line.

A minimum of 70 psi (0.49 MPa, 4.9 bar) air pressure must be supplied to the cylinder for proper operation. Air pressure opens the valve, a spring closes the valve. A three-way air valve, which exhausts cylinder air, is required.

2. Install a bleed-type air shutoff valve on the main air line. Install an additional bleed-type valve on each pump air supply line, downstream of the pump air regulator, to relieve air trapped between this valve and the pump after the air regulator is shut off.

### WARNING

The bleed-type air shutoff valve is required in your system to relieve air trapped between this valve and the pump after the air regulator is closed. Trapped air can cause the pump to cycle unexpectedly, which could result in serious injury.

3. Install a bleed-type air shutoff valve on the gun air cylinder supply line, downstream of the air regulator, to shut off air to the gun cylinder. Connect the air supply line to the gun cylinder air inlet (C). See Fig. 4.

**NOTE:** The cylinder air inlet accepts 1/4 in. (6.3 mm) O.D. tubing.

## Fluid Line and Accessory Recommendations

### WARNING



#### INJECTION HAZARD

To reduce the risk of property damage or serious injury, including injection, which could be caused by component rupture or unrelieved fluid pressure,

- A fluid drain valve(s) is required in your system to assist in relieving fluid pressure in the displacement pump, hose and gun; triggering the gun to relieve pressure may not be sufficient.
- A fluid pressure regulator must be installed in the system if the pump's maximum working pressure exceeds the gun's maximum fluid working pressure (see the front cover).

1. Install a fluid filter and drain valve(s) close to the pump's fluid outlet.
2. Install a fluid pressure regulator to control fluid pressure to the gun.

**NOTE:** Some applications require fine-tuned control of fluid pressure. You can control fluid pressure more accurately with a fluid pressure regulator than by regulating the air pressure to the pump.

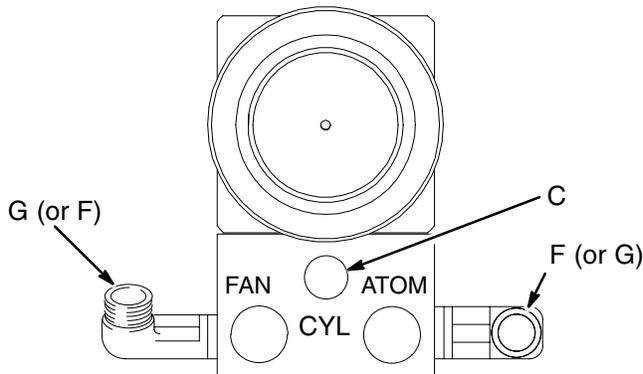
3. Install a fluid shutoff valve to shut off the fluid supply to the gun.
4. For paint spray applications, install an in-line fluid filter, part no. 210500, on the gun fluid inlet (F) to avoid clogging the spray tip with particles from the fluid. See Fig. 4.
5. Connect the electrically conductive fluid hose to the gun fluid inlet (F) or optional in-line filter.

# Installation

## Manifolds 241161 and 241162

6. **In a circulating system**, connect an electrically conductive fluid hose to the gun fluid outlet (G).

**In a non-circulating system**, remove the gun fluid outlet fitting (G) and plug the outlet port with the pipe plug (109) supplied.



### KEY

- C Cylinder Air Inlet: accepts 1/4 in. (6.3 mm) O.D. tubing
- F Fluid Inlet: 1/4-18 nptf or #5 JIC (1/2-20 unf)
- G Fluid Outlet (circulating gun only): 1/4-18 nptf or #5 JIC (1/2-20 unf)

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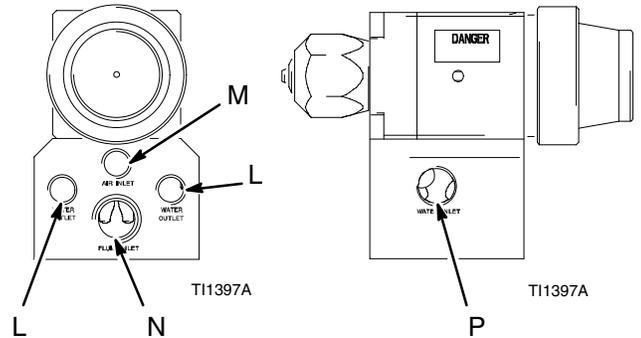
**Fig. 4: Manifolds 241161 and 241162**

## Manifold 244930

This manifold is equipped with passages for circulating water to maintain the temperature of the gun. Ports provided are:

- Side water inlet, 1/4 npt(f)
- Top water outlets, 1/8 npt(f)
- Side RTD sensor, 1/8 npt(f)

See Accessories, page 27, for available fittings and sensors.



### KEY

- L Water Outlet: 1/8 npt(f)
- M Air Inlet (to open valve): 1/8 npt(f)
- N Fluid Inlet: 3/8(f)
- P Water Inlet: 1/4 npt(f)

**Fig. 5: Manifold 244930**

# Installation

## Ground the System

### **WARNING**



#### **FIRE AND EXPLOSION HAZARD**

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



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

1. **Pump:** Ground the pump by connecting a ground wire and clamp between the fluid supply and a true earth ground as instructed in your separate pump instruction manual.
2. **Air compressors and hydraulic power supplies:** Ground them according to the manufacturer recommendations.
3. **Air, fluid, and hydraulic hoses connected to the pump:** Use only electrically conductive hoses with a maximum of 500 feet (150 m) combined hose length to ensure grounding continuity. Check the electrical resistance of your air and fluid hoses at least once a week. If the total resistance to ground exceeds 29 megohms, replace the hose immediately.  
**NOTE:** Use a meter that is capable of measuring resistance at this level.
4. **Spray gun:** Ground the gun by connecting it to a properly grounded fluid hose and pump.
5. **Fluid supply container:** Ground it according to local code.
6. **Object being sprayed:** Ground it according to local code.
7. **All solvent pails used when flushing:** Ground them according to local code. Use only metal pails, which are conductive. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts the grounding continuity.

# Operation

## Safety

### ⚠ WARNING



#### INJECTION HAZARD

Remember, this is not an air spray gun. For your safety be sure to read and follow the Warnings on pages 2 and 3 and throughout the text of this instruction manual.

Keep the wallet sized warning card, provided with the gun, with the operator of this equipment at all times. The card contains important treatment information should an injection injury occur. Additional cards are available at no charge from Graco.

## Pressure Relief Procedure

### ⚠ WARNING



#### INJECTION HAZARD

The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you:

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

1. Shut off the power to the pump.
2. Close the bleed-type master air valve (required in the system).
3. Trigger the gun to relieve the fluid pressure.
4. Open the pump drain valve (required in the system) to help relieve fluid pressure in the displacement pump. In addition, open the drain valve connected to the fluid pressure gauge (in a system with fluid regulation) to help relieve fluid pressure in the hose and gun. Triggering the gun to relieve pressure may not be sufficient. Have a container ready to catch the drainage.

5. Leave the drain valve(s) open until you are ready to spray again.
6. If you suspect that the spray tip or hose is completely clogged or that pressure has not been fully relieved after following the steps above, very slowly loosen the hose end coupling and relieve pressure gradually, then loosen the coupling completely. Now clear the tip or hose obstruction.

## Install a Spray Tip

### ⚠ WARNING



#### INJECTION HAZARD

To reduce the risk of an injection injury, follow the **Pressure Relief Procedure** at left before removing or installing a spray tip.

### ⚠ WARNING



#### INJECTION HAZARD

To reduce the risk of component rupture and serious injury, including injection, do not exceed the gun's maximum fluid working pressure (see the front cover) or the maximum working pressure of the lowest rated component in the system.

1. Make sure there is no pressure in the system. Follow the **Pressure Relief Procedure** at left.

### Models 239786 and 241469 with GG0 and GG1 Series Spray Tips

2. Install the spray tip (H) and the gasket (J) in the tip retainer nut (K). Screw the assembly firmly onto the gun. Tighten the assembly with a wrench. See Fig. 6.

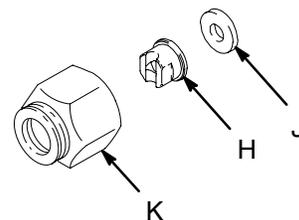


Fig. 6

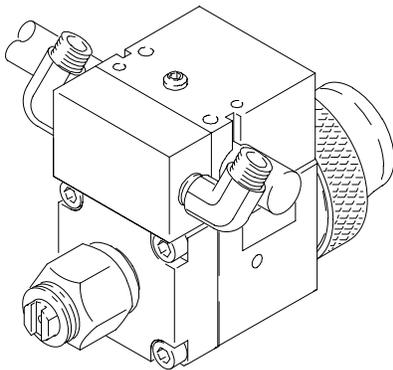
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**NOTE:** Gaskets are included with Streaming Tips 270XXX or Fan Tips 182XXX (used with Model 233670 Sealant Gun).

# Operation

## Adjust Spray Pattern

1. To adjust the spray pattern direction with fan tips, orient the slot in the tip horizontally for a horizontal pattern and vertically for a vertical pattern. See Fig. 7.
2. Start the pump. Adjust the fluid pressure until the spray is completely atomized. Use the lowest pressure necessary to get the desired results. Higher pressure may not improve the spray pattern and will cause premature tip wear and pump wear.
3. The spray tip orifice and spray pattern angle determines the coverage and size of pattern. When more coverage is needed, follow the **Pressure Relief Procedure** on page 9, and install a larger spray tip rather than increasing fluid pressure.



Tip shown in position for vertical spray pattern

Fig. 7

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## Adjust a Streaming Tip

Select a tip which will supply a stream at the required flow rate at the lowest pressure.

## Apply the Fluid

Adjust the system control device, if it is automatic, so the gun starts spraying just before meeting the workpiece and stops as soon as the workpiece has passed. Keep the gun a consistent distance, 8 to 10 inches (200 to 250 mm), from the surface of the object being sprayed.

## Clean the Spray Gun and System Daily

### **WARNING**



#### **INJECTION HAZARD**

To reduce the risk of an injection injury or splashing fluid in the eyes or on the skin:

- Follow the **Pressure Relief Procedure** on page 9 before cleaning, removing, or installing a spray tip and whenever you are instructed to relieve pressure.
- Do not wipe fluid buildup off the gun or spray tip until pressure is relieved.

### **CAUTION**

To avoid damaging the gun:

- Never immerse the gun in solvent as this could damage packings and allow solvent in the air passages.
- Do not use metal tools to clean holes in the spray tip.

### **CAUTION**

This gun is not adjustable. To ensure proper shutoff, screw the piston cap (18) onto the housing (1) until it bottoms out.

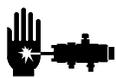
**NOTE:** Clean the front of the tip frequently during the day to help reduce buildup.

1. Relieve the pressure as instructed on page 9.
2. Clean the outside of the gun with a soft cloth dampened with compatible solvent.
3. To avoid damaging the spray tip, clean it with a compatible solvent and soft brush.
4. If using the internal filter and/or an in-line filter, remove and clean it thoroughly in a compatible solvent.
5. Clean the system's fluid filter and air line filter.

# Operation

## Flush the Gun Daily

### **WARNING**



#### **INJECTION HAZARD**

To reduce the risk of an injection injury, follow the **Pressure Relief Procedure** on page 9 before cleaning, removing, or installing a spray tip and whenever you are instructed to relieve pressure.

### **WARNING**

To reduce the risk of serious injury, including splashing fluid in the eyes or on the skin, or static electric discharge when flushing:

- Be sure the entire system, including flushing pails, are properly grounded.
- Remove the spray tip.
- Maintain metal to metal contact between the gun and the flushing pail.
- Use the lowest possible pressure.

#### **NOTE:**

- Flush the pump and gun before the fluid can dry in it.
- If it is available, the flushing procedure provided in the pump or sprayer manual should be used instead of this procedure.

1. Relieve the pressure as instructed on page 9.
2. Remove the spray tip. Clean the parts.
3. Supply a compatible solvent to the gun fluid inlet.
4. Start the pump and operate it at its lowest pressure.
5. Trigger the gun into a grounded metal waste container until all the material is removed from the gun passages.
6. Relieve the pressure as instructed on page 9.
7. Disconnect the solvent supply.

# Troubleshooting

## ⚠ WARNING



### INJECTION HAZARD

To reduce the risk of an injection injury, follow the **Pressure Relief Procedure** on page 9 before checking or servicing any of the system equipment and whenever you are instructed to relieve pressure.

### NOTE:

- Check all possible remedies in the troubleshooting charts before disassembling the gun.
- Some improper patterns are caused by the improper balance between air and fluid. Refer to **Spray Pattern Troubleshooting**, on page 13.

## General Troubleshooting

Problem	Cause	Solution
Fluid leakage through venting holes.	Worn o-rings (31) or needle assembly (12).	Replace o-rings or needle assembly.
Air leakage through venting hole.	Worn o-ring (23).	Check and replace as needed.
Air leakage from back of gun.	Worn o-rings (22, 23).	Replace o-rings.
Fluid leakage from front of gun.	Fluid needle (12) is dirty, worn, or damaged.  Dirty or worn seat (10).  Spray tip seal is leaking.  Seat (10) is insufficiently tightened or gasket (11) is missing or worn from multiple uses.	Clean or replace fluid needle.  Clean or replace the seat (10) and gasket (11). The gasket must be replaced whenever you remove the seat from the gun.  Tighten nut (7) or replace spray tip gasket (8).  Tighten seat (10) and replace gasket (11). The gasket must be replaced whenever you remove the seat from the gun.
Fluid needle will not trigger.	Loose or missing fluid needle stop (17) or setscrew (16).  Broken fluid needle (12).  Air leaking around piston (21).  Swollen piston o-ring (22).  Insufficient air pressure on the trigger.  Spray tip (9) is plugged.  Internal fluid filter (32) is plugged.  Plug (4) is in the incorrect fluid port.	Replace stop (17) or tighten setscrew (16).  Replace fluid needle (12).  Replace o-ring (22) or piston assembly (21).  Replace o-ring (22). Do not immerse piston in solvent.  Increase the air pressure or clean the air line.  Clean the spray tip (9).  Clean or replace the filter (32).  Move the plug to the fluid port consistent with manifold plumbing, unless you are using the gun in a circulating system. If you are, all fluid ports should be open, both inside the gun and on the manifold.

General Troubleshooting is continued on page 13.

# Troubleshooting

## WARNING



### INJECTION HAZARD

To reduce the risk of an injection injury, follow the **Pressure Relief Procedure** on page 9 before checking or servicing any of the system equipment and whenever you are instructed to relieve pressure.

## General Troubleshooting (continued)

Problem	Cause	Solution
Fluid does not shut off.	Piston cap (18) is not fully tightened.	Tighten piston cap until it bottoms out.
	Spring (19) is not in place.	Check that spring is in position.
	Swollen piston o-ring (22).	Replace o-ring (22). Do not immerse piston in solvent.

## Spray Pattern Troubleshooting

Problem	Cause	Solution
Fluttering spray 	Insufficient fluid supply  Air in paint supply line	Adjust fluid regulator or fill fluid supply tank.  Check, tighten siphon hose connections, bleed air from paint line.
Spitting spray 	Worn seat (10) or needle (12) ball.  Dirty spray tip (9).  Swollen piston o-ring (22).	Inspect seat and needle for wear. Replace if necessary. The gasket (11) must be replaced whenever you remove the seat from the gun.  Clean.  Replace o-ring. Do not immerse piston in solvent.
Irregular pattern 	Fluid build-up or spray tip partially plugged	Clean spray tip. See page 10.

# Service

## WARNING



### INJECTION HAZARD

To reduce the risk of an injection injury, follow the **Pressure Relief Procedure** on page 9 before checking or servicing any of the system equipment and whenever you are instructed to relieve pressure.

### NOTE:

- Follow the **Service Notes** in Figs. 8 and 9 when reassembling the gun.
- Gun repair kits are available. See page 18. Reference numbers marked with an asterisk (13\*) in the service procedures are included with the 241480 Air Seal Repair Kit. Reference numbers marked with a symbol (3†) in the service procedures are included with the 239896 Fluid Repair Kit.

## Disassembly

1. Relieve the pressure as instructed on page 9.
2. Unscrew the four screws (14) and remove the gun from the manifold.
3. Unscrew the tip retainer nut (7). Remove the spray tip (9) and gasket (8). See Figs. 8 and 9.
4. Remove the cap (18) from the piston housing (1). Remove the springs (20 and 19).
5. Using the supplied wrench (34), loosen the fluid needle setscrew (16). Remove the needle stop (17).
6. Remove the seat (10).

## CAUTION

Be sure to keep the needle straight when removing it from the gun. If the needle is bent it must be replaced.

7. Pull the needle assembly (12) straight out the front of the gun. Remove the o-rings (31) from the fluid needle (12).
8. Remove the gasket (11).

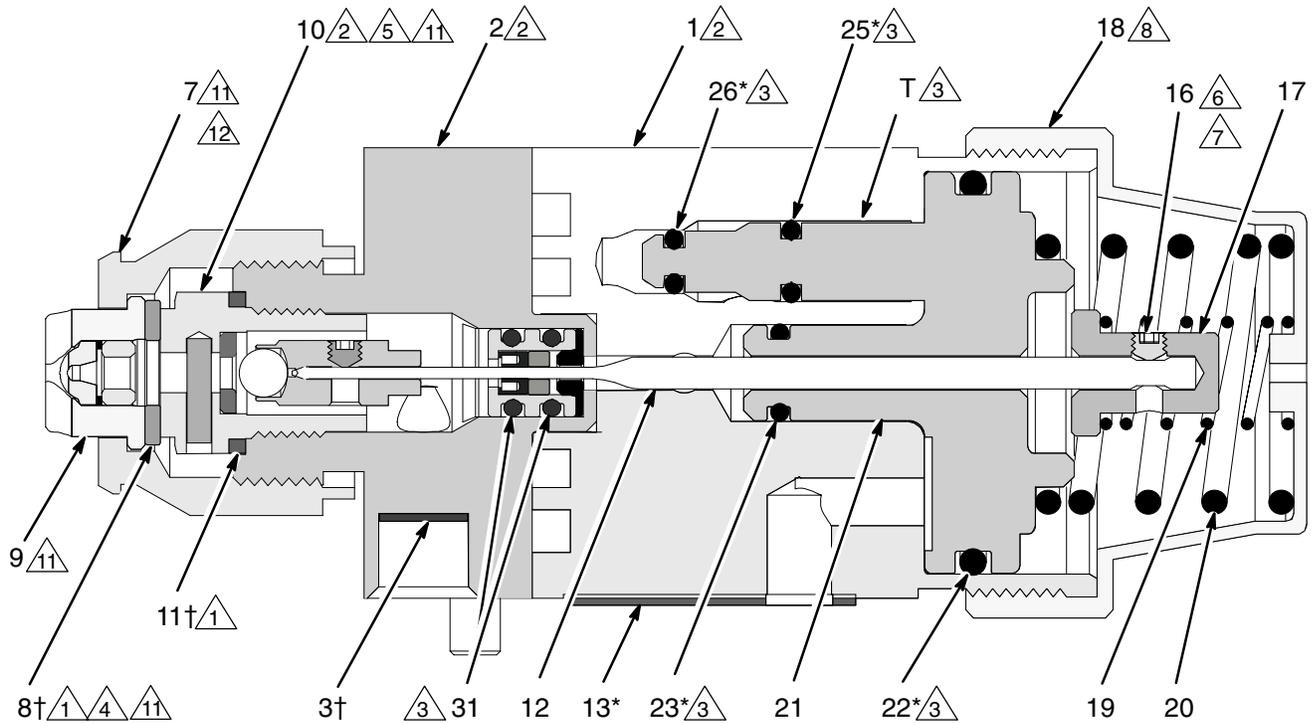
## CAUTION

Install a new gasket (11) whenever you remove the seat (10) from the gun. Failure to install a new gasket may result in fluid leaking into the air chamber.

9. Remove the four screws (15) holding the fluid housing (2) to the piston housing (1). Remove the gasket (13) from the bottom of the piston housing.
10. Using a pliers, pull the piston (21) out of the piston housing (1).
11. Remove the large o-ring (22) from the piston and the smaller o-ring (23) from the piston shaft. Remove the two o-rings (25, 26) from each of the piston stems (T). Check that the stems are solidly in place. If they are loose, replace the entire piston assembly (21).
12. Perform the following applicable step:
  - *Non-circulating Paint Guns:* Remove the fluid outlet port plug (4), gasket (3), and filter (32) from the fluid housing (2). Remove the o-ring (5) and backup (6) from the plug.
  - *Circulating Paint Guns:* Remove the gasket (3) and filter (32) from the fluid housing (2).
  - *Sealant Gun:* Remove the gasket (3).
13. Clean all parts and replace any worn parts. When assembling, lubricate the threads with anti-seize lubricant.

# Service

## Cutaway View



### SERVICE NOTES:

-  Seat gasket (11) must be replaced if seat (10) is removed or replaced to avoid fluid leakage
-  Lubricate threads with anti-seize lubricant
-  Lubricate with light-weight oil
-  Do not lubricate
-  Torque to 20–25 ft-lb (27–34 N•m)
-  Apply semi-permanent anaerobic sealant.
-  Torque to 4–5 in-lb (0.45–0.56 N•m)
-  Tighten cap (18) until it bottoms out
-  Model 233670 gun uses a different tip (9), tip nut (7), and a gasket (8), and the seat (10) does not include a diffuser. Model 233670 gun does not include items 4, 5, 6, 8, 9, and 32.
-  Model 233670 gun only.  
Max torque to 5 ft-lb (6.8 N•m)

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Fig. 8: Gun 239786 / 241469 shown

# Service

## SERVICE NOTES:

-  Seat gasket (11) must be replaced if seat (10) is removed or replaced to avoid fluid leakage
-  Lubricate threads with anti-seize lubricant
-  Lubricate with light-weight oil
-  Do not lubricate
-  Torque to 20–25 ft-lb (27–34 N•m)
-  Apply semi-permanent anaerobic sealant
-  Torque to 4–5 in-lb (0.45–0.56 N•m)
-  Tighten cap (18) until it bottoms out
-  Used on non-circulating guns only
-  Torque to 65 in-lb (7.3 N•m)

-  Model 233670 gun uses a different tip (9), tip nut (7), and a gasket (8), and the seat (10) does not include a diffuser. Model 233670 gun does not include items 4, 5, 6, 8, 9, and 32.
-  Model 233670 gun only.  
Max torque to 5 ft-lb (6.8 N•m)

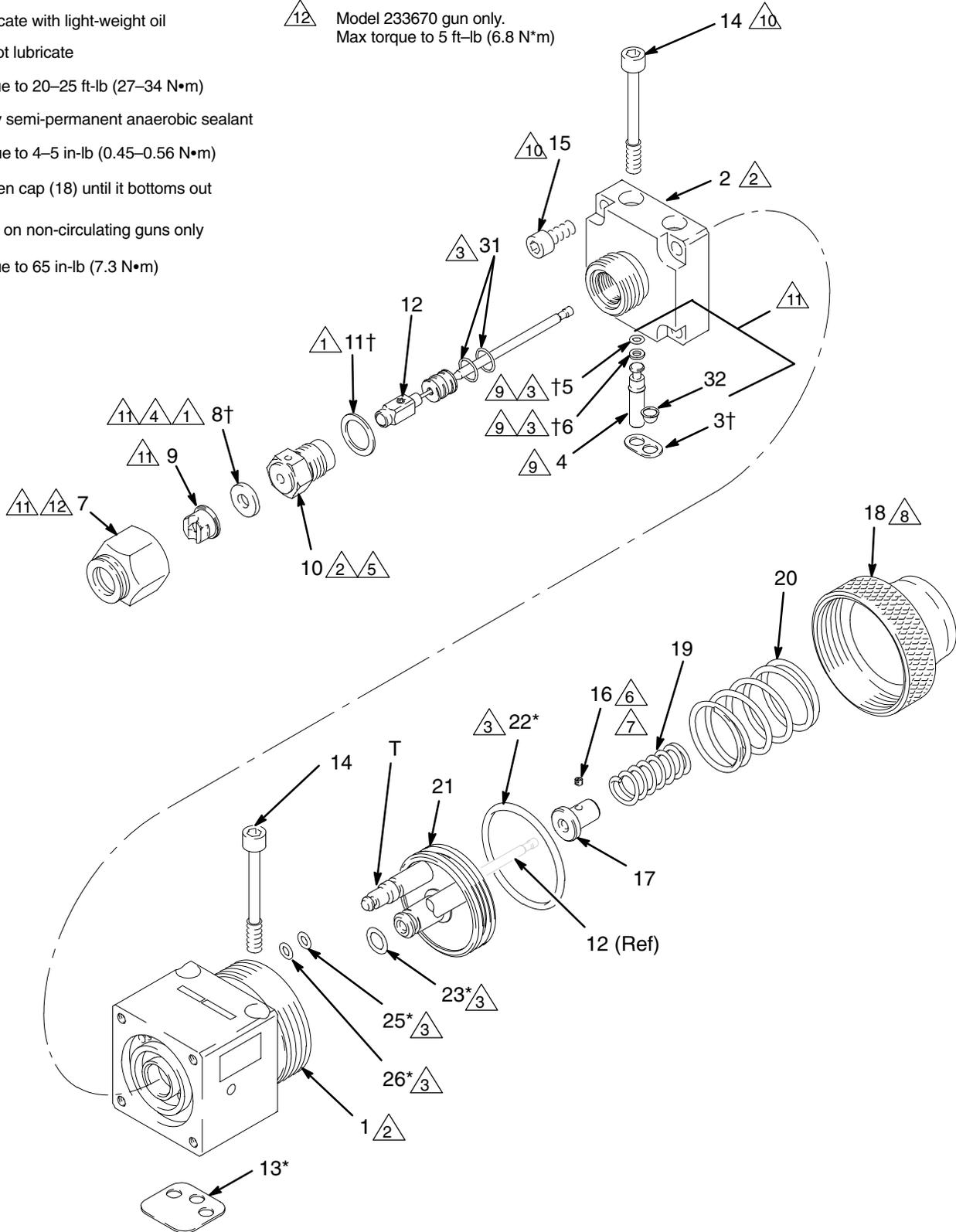


Fig. 9

8150A

# Service

## Reassembly

1. Perform the following applicable step:
  - *Non-circulating Paint Guns:* Lubricate the back-up (6†) and o-ring (5†) and install them on the fluid outlet port plug (4). Install the plug in the fluid outlet port of the fluid housing (2). See Fig. 9.
  - *Circulating Paint Guns:* Reinstall the filter (32) in the fluid inlet port and the gasket (3) in the fluid housing (2).
  - *Sealant Gun:* Reinstall gasket (3).
2. Install the o-rings (22\*, 23\*) on the piston (21). Install two o-rings (25\*, 26\*) on each of the piston stems (T). Lubricate all the o-rings, the piston, and the piston stems.
3. Insert the piston (21) into the piston housing (1).
4. Remove the protective paper from the sticky side of the gasket (13\*) and adhere the gasket to the bottom of the piston housing (1), making sure the three holes in the gasket are properly aligned with the matching holes in the housing.
5. Install the fluid housing (2) on the piston housing (1). Torque the four screws (15) to 65 in-lb (7.3 N•m).

### CAUTION

Install a new gasket (11†) whenever you remove the seat (10) from the gun. Failure to install a new gasket may result in fluid leaking into the air chamber.

6. Install the o-rings (31) on the fluid needle assembly (12). Lubricate with light weight oil.

### CAUTION

Be sure to keep the needle straight when installing it in the piston housing. If the needle is bent it must be replaced.

7. Insert the needle assembly (12) into the front of the fluid housing (2). Push it straight back through the piston.
8. Install a new gasket (11†) in the fluid housing (2).
9. Lubricate the threads of the seat (10). Screw it into the fluid housing (2) and torque to 20–25 ft-lb (27–34 N•m).
10. Install the needle stop (17) on the needle. Coat the setscrew (16) with semi-permanent anaerobic sealant and install the screw into the needle stop. Torque to 4–5 in-lb (0.45–0.56 N•m). Pull on the needle to make sure it seats fully.
11. Install the springs (19, 20).
12. Lubricate the threads of the piston housing (1). Screw the cap (18) onto the housing until it bottoms out.
13. **Do not** lubricate the gasket (8). Install the spray tip (9) and gasket (8) in the tip retainer nut (7). Screw the assembly firmly onto the gun. Tighten the assembly with a wrench, but do not exceed 5 ft-lb (6.8 N•m) for model 233670 gun.
14. Reinstall the gun on the manifold with the four screws (14). Torque to 65 in-lb (7.3 N•m).

# Parts

*Use Only Genuine Graco Parts and Accessories*

## Part No. 239786, Series A

Standard Automatic Airless Spray Gun  
Includes items 1–34

## Part No. 241469, Series A

Automatic Airless Acid Catalyzed Fluid Spray Gun  
Includes items 1–34

## Part No. 233670, Series A

Automatic Sealant Stream/Spray Gun  
Includes items 1–3, 7, 10–31, 34

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1	194143	HOUSING, piston	1	16	114137	SCREW, set; 6–32; 1/8 in. long	1
2	192688	HOUSING, fluid	1	17	192452	STOP, needle; stainless steel	1
3†☆	192443	GASKET, fluid; acetal homopolymer	2	18	192453	CAP, piston	1
4	192687	PLUG, fluid, internal; stainless steel	1	19✓	114138	SPRING, compression	1
5†	114244	O-RING; fluoroelastomer	1	20✓	114139	SPRING, compression	1
6†	114340	RING, backup; PTFE	1	21	240895	PISTON	1
7	171602	TIP RETAINER NUT; used with Part No. 239786 & 241469	1	22*	115066	O-RING; fluoroelastomer	1
	198391	TIP RETAINER NUT; used with Part No. 233670	1	23*	111450	O-RING; fluoroelastomer	1
8†	166969	GASKET	1	25*	112319	O-RING; fluoroelastomer	2
9✓	GG0xxx	SPRAY TIP; customer's choice	1	26*	111504	O-RING; fluoroelastomer	2
10✓	239890	SEAT, diffuser; used with Part No. 239786 & 241469	1	30▲	222385	CARD, warning; not shown	1
	233671	SEAT, valve; used with Part No. 233670	1	31	111516	O-RING included with item 12	2
11†	189970	GASKET, diffuser/valve; PEEK	1	32	240948	FILTER, internal; 60–80 mesh; stainless steel (package of 10)	1
12✓	239807	NEEDLE ASSEMBLY; 3/16 in. carbide ball; used with Part No. 239786 & 233670; includes item 31	1	34	114141	TOOL, wrench, hex	1
	241468	NEEDLE ASSEMBLY; 3/16 in. plastic ball; used with Part No. 241469; includes item 31	1				
13*	114134	GASKET; polyethylene	1				
14	114135	SCREW, cap, socket head; M5 x 0.8; 45 mm long	4				
15	114136	SCREW, cap, socket head; M5 x 0.8; 20 mm long	4				

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

☆ *An extra gasket (3) is included as a spare.*

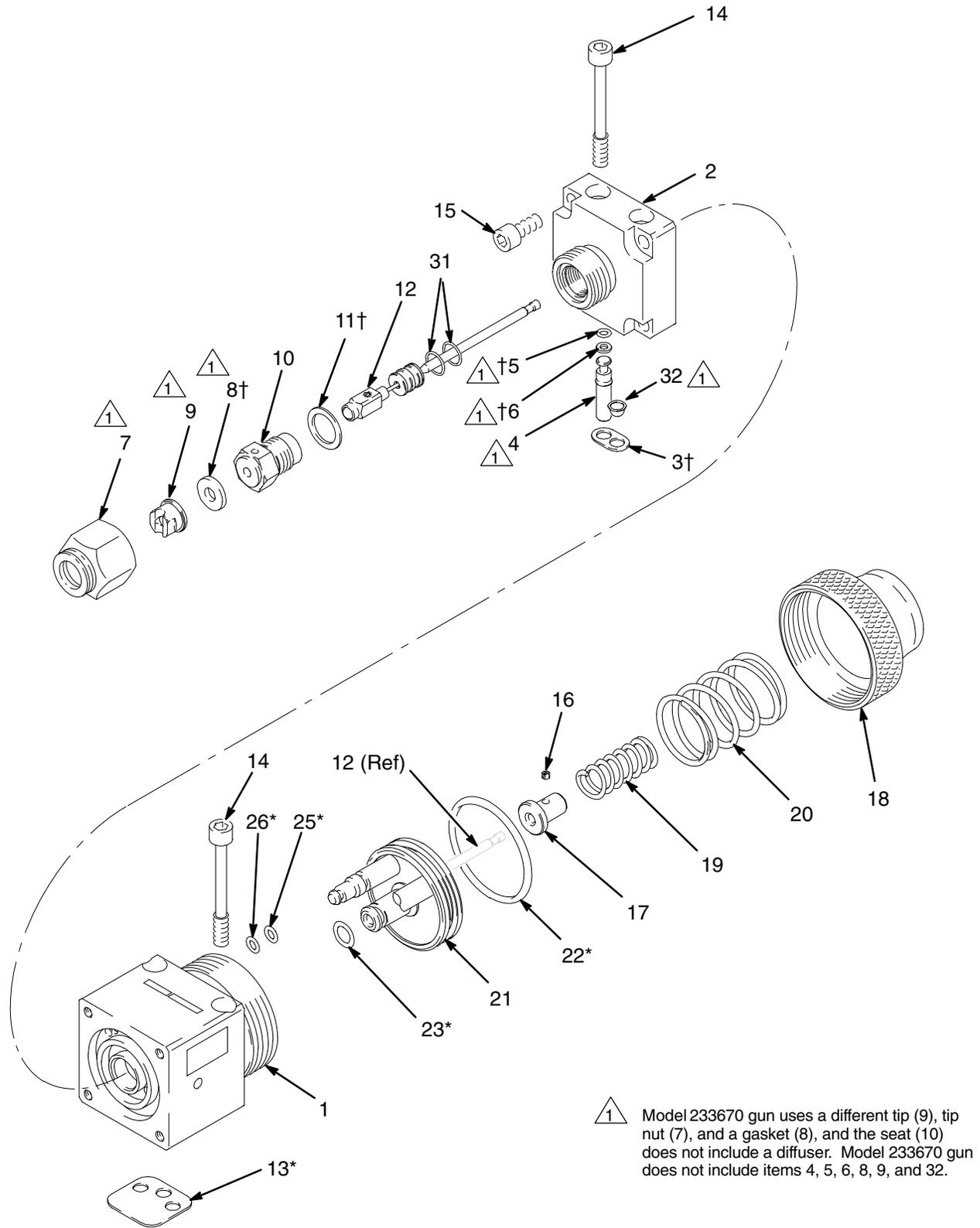
\* *These parts are included in Air Seal Repair Kit 241480, which may be purchased separately. The kit includes some parts which are not used on this gun.*

† *These parts are included in Fluid Repair Kit 239896, which may be purchased separately.*

✓ *Keep these spare parts on hand to reduce down time.*

# Parts

Part No. 239786 shown



8150A

# Parts

Use Only Genuine Graco Parts and Accessories

## Part No. 241161, Series A

North America Manifold

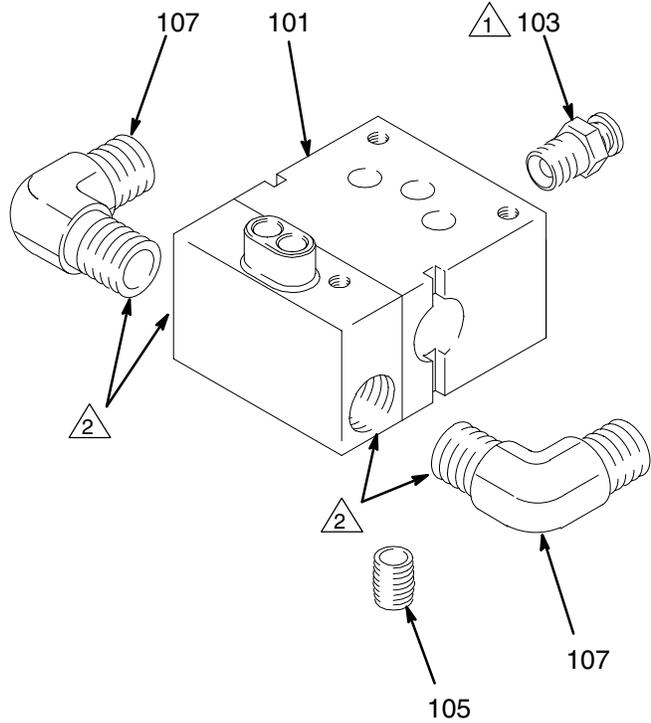
△1 Flats must be parallel to the surface of the manifold (101) to prevent interference with the gun.

## Part No. 241162, Series A

International Manifold

△2 Apply anti-seize lubricant 222955 to threads and mating faces of manifold (101) and any fittings and/or plugs used in the fluid ports.

Ref. No.	Part No.	Description	Qty.
101	239892	MANIFOLD	1
103	113208	FITTING, tube, air inlet; 1/4 in. (6.3 mm) OD tube x 1/8 npt(m)	1
105	114246	SCREW, set; 5/16; 0.437 in. long	1
107	114342	ELBOW, fluid, male; 1/4 nptf(mbe); stainless steel; Part No. 241161 only	2
	114247	ELBOW, fluid, male; ; #5 JIC (1/2-20 unf) x 1/4 npt(m); stainless steel; Part No. 241162 only	2
109	101970	PLUG, pipe; 1/4-18 ptf; stainless steel; not shown; install one in the fluid outlet port in non-circulating applications	3

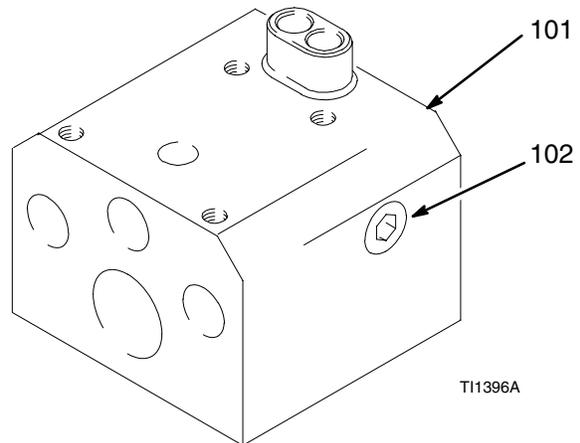


8673A

## Part No. 244930, Series A

High Flow Ambient or Temperature Conditioned Manifold for streaming or spraying.

Ref. No.	Part No.	Description	Qty.
101	198325	MANIFOLD, aluminum	1
102	110208	PLUG, 1/8 npt, stainless steel	1



T11396A

# GG0 Series Tip Selection Charts

For Models 239786 and 241469

## GG0 Series Spray Tips

Orifice Size inches (mm)	Fan Width at 12" (300 mm) Inches (mm)	Flow Rate (tested in water) gal/min (liters/min)	Part No.
0.007 (0.178)	2-2.5 (50-63)	.053 (0.20)	GG0107
	4-4.5 (100-113)		GG0207
	6-6.5 (150-163)		GG0307
0.009 (0.229)	2-2.5 (50-63)	.087 (0.33)	GG0109
	4-4.5 (100-113)		GG0209
	6-6.5 (150-163)		GG0309
	8-8.5 (196-213)		GG0409
0.011 (0.279)	2-2.5 (50-63)	0.13 (0.49)	GG0111
	4-4.5 (100-113)		GG0211
	6-6.5 (150-163)		GG0311
	8-8.5 (200-213)		GG0411
	10-10.5 (250-263)		GG0511
	12-13 (300-325)		GG0611
0.013 (0.330)	2-2.5 (50-63)	0.18 (0.69)	GG0113
	4-4.5 (100-113)		GG0213
	6-6.5 (150-163)		GG0313
	8-8.5 (200-213)		GG0413
	10-10.5 (250-263)		GG0513
	12-13 (300-325)		GG0613
	14-15 (350-375)		GG0713

Orifice Size inches (mm)	Fan Width at 12" (300 mm) Inches (mm)	Flow Rate (tested in water) gal/min (liters/min)	Part No.
0.015 (0.381)	2-2.5 (50-63)	0.24 (0.91)	GG0115
	4-4.5 (100-113)		GG0215
	6-6.5 (150-163)		GG0315
	8-8.5 (200-213)		GG0415
	10-10.5 (250-263)		GG0515
	12-13 (300-325)		GG0615
0.017 (0.432)	14-15 (350-375)	0.31 (1.17)	GG0715
	16-17 (400-425)		GG0815
	2-2.5 (50-63)		GG0117
	4-4.5 (100-113)		GG0217
0.017 (0.432)	6-6.5 (150-163)	0.31 (1.17)	GG0317
	8-8.5 (200-213)		GG0417
	10-10.5 (250-263)		GG0517
	12-13 (300-325)		GG0617
	14-15 (350-375)		GG0717
	16-17 (400-425)		GG0817
	18-19 (450-475)		GG0917

# GG0 Series Tip Selection Charts

For Models 239786 and 241469

## GG0 and GG1 Series Spray Tips

Orifice Size	Fan Width	Flow Rate	Part No.
0.019 (0.483)	2-2.5 (50-63)	0.39 (1.47)	GG0119
	4-4.5 (100-113)		GG0219
	6-6.5 (150-163)		GG0319
	8-8.5 (200-213)		GG0419
	10-10.5 (250-263)		GG0519
	12-13 (300-325)		GG0619
	14-15 (350-375)		GG0719
	16-17 (400-425)		GG0819
	18-19 (450-475)		GG0919
0.021 (0.533)	2-2.5 (50-63)	0.47 (1.79)	GG0121
	4-4.5 (100-113)		GG0221
	6-6.5 (150-163)		GG0321
	8-8.5 (200-213)		GG0421
	10-10.5 (250-263)		GG0521
	12-13 (300-325)		GG0621
	14-15 (350-375)		GG0721
	16-17 (400-425)		GG0821
	18-19 (450-475)		GG0921
0.023 (0.584)	4-4.5 (100-113)	0.57 (2.15)	GG0223
	6-6.5 (150-163)		GG0323
	8-8.5 (200-213)		GG0423
	10-10.5 (250-263)		GG0523
	12-13 (300-325)		GG0623
	14-15 (350-375)		GG0723
	16-17 (400-425)		GG0823
	18-19 (450-475)		GG0923

Orifice Size	Fan Width	Flow Rate	Part No.
0.025 (0.635)	4-4.5 (100-113)	0.67 (2.54)	GG0225
	6-6.5 (150-163)		GG0325
	8-8.5 (200-213)		GG0425
	10-10.5 (250-263)		GG0525
	12-13 (300-325)		GG0625
	14-15 (350-375)		GG0725
	16-17 (400-425)		GG0825
	18-19 (450-475)		GG0925
	20-21 (500-525)		GG1025
0.027 (0.686)	4-4.5 (100-113)	0.78 (2.96)	GG0227
	6-6.5 (150-163)		GG0327
	8-8.5 (200-213)		GG0427
	10-10.5 (250-263)		GG0527
	12-13 (300-325)		GG0627
	14-15 (350-375)		GG0727
	16-17 (400-425)		GG0827
	18-19 (450-475)		GG0927
	0.029 (0.737)		4-4.5 (100-113)
6-6.5 (150-163)		GG0329	
8-8.5 (200-213)		GG0429	
10-10.5 (250-263)		GG0529	
12-13 (300-325)		GG0629	
14-15 (350-375)		GG0729	
16-17 (400-425)		GG0829	
18-19 (450-475)	GG0929		

# GG0 Series Tip Selection Charts

For Models 239786 and 241469

## GG0 and GG1 Series Spray Tips

Orifice Size	Fan Width	Flow Rate	Part No.
0.031 (0.787)	4-4.5 (100-113)	1.03 (3.90)	GG0231
	6-6.5 (150-163)		GG0331
	8-8.5 (200-213)		GG0431
	10-10.5 (250-263)		GG0531
	12-13 (300-325)		GG0631
	14-15 (350-375)		GG0731
	16-17 (400-425)		GG0831
	18-19 (450-475)		GG0931
0.033 (0.838)	8-8.5 (200-213)	1.17 (4.42)	GG0433
	10-10.5 (250-263)		GG0533
	12-13 (300-325)		GG0633
	14-15 (350-375)		GG0733
	16-17 (400-425)		GG0833
	18-19 (450-475)		GG0933
0.035 (0.889)	4-4.5 (100-113)	1.31 (4.98)	GG0235
	6-6.5 (150-163)		GG0335
	8-8.5 (200-213)		GG0435
	10-10.5 (250-263)		GG0535
	12-13 (300-325)		GG0635
	14-15 (350-375)		GG0735
	16-17 (400-425)		GG0835
	18-19 (450-475)		GG0935
	22-23 (550-575)		GG1135
	24-25 (600-625)		GG1235

Orifice Size	Fan Width	Flow Rate	Part No.
0.037 (0.940)	8-8.5 (200-213)	1.47 (5.56)	GG0437
	12-13 (300-325)		GG0637
	14-15 (350-375)		GG0737
0.039 (0.991)	4-4.5 (100-113)	1.63 (6.18)	GG0239
	6-6.5 (150-163)		GG0339
	8-8.5 (200-213)		GG0439
	10-10.5 (250-263)		GG0539
	12-13 (300-325)		GG0639
	16-17 (400-425)		GG0839
	18-19 (450-475)		GG0939
	24-25 (600-625)		GG1239
0.041 (1.041)	6-6.5 (150-163)	1.80 (6.83)	GG0341
	8-8.5 (200-213)		GG0441
	10-10.5 (250-263)		GG0541
	12-13 (300-325)		GG0641
	16-17 (400-425)		GG0841
0.043 (1.092)	8-8.5 (200-213)	1.99 (7.51)	GG0443
	10-10.5 (250-263)		GG0543
	12-13 (300-325)		GG0643
	22-23 (550-575)		GG1143
	24-25 (600-625)		GG1243

# GG0 Series Tip Selection Charts

For Models 239786 and 241469

## GG0 and GG1 Series Spray Tips

Orifice Size	Fan Width	Flow Rate	Part No.
0.045 (1.143)	8-8.5 (200-213)	2.17 (8.23)	<b>GG0445</b>
	10-10.5 (250-263)		<b>GG0545</b>
	12-13 (300-325)		<b>GG0645</b>
	16-17 (400-425)		<b>GG0845</b>
	24-25 (600-625)		<b>GG1245</b>
0.047 (1.194)	10-10.5 (250-263)	2.37 (8.98)	<b>GG0547</b>
	12-13 (300-325)		<b>GG0647</b>
	16-17 (400-425)		<b>GG0847</b>
0.049 (1.245)	8-8.5 (200-213)	2.58 (9.76)	<b>GG0449</b>
	14-15 (350-375)		<b>GG0749</b>
	16-17 (400-425)		<b>GG0849</b>
0.051 (1.29)	6-6.5 (150-163)	2.79 (10.6)	<b>GG0351</b>
	8-8.5 (200-213)		<b>GG0451</b>
	10-10.5 (250-263)		<b>GG0551</b>
	12-13 (300-325)		<b>GG0651</b>
	20-21 (500-525)		<b>GG1051</b>
	24-25 (600-625)		<b>GG1251</b>
	28-29 (700-725)		<b>GG1451</b>
0.053 (1.35)	10-10.5 (250-263)	3.02 (11.4)	<b>GG0553</b>
0.055 (1.40)	8-8.5 (200-213)	3.25 (12.3)	<b>GG0455</b>
	10-10.5 (250-263)		<b>GG0555</b>
	12-13 (300-325)		<b>GG0655</b>
	28-29 (700-725)		<b>GG1455</b>

Orifice Size	Fan Width	Flow Rate	Part No.
0.057 (1.45)	6-6.5 (150-163)	3.49 (13.2)	<b>GG0357</b>
	8-8.5 (200-213)		<b>GG0457</b>
	10-10.5 (250-263)		<b>GG0557</b>
	12-13 (300-325)		<b>GG0657</b>
	14-15 (350-375)		<b>GG0757</b>
0.059 (1.50)	6-6.5 (150-163)	3.74 (14.1)	<b>GG0359</b>
	8-8.5 (200-213)		<b>GG0459</b>
	10-10.5 (250-263)		<b>GG0559</b>
	12-13 (300-325)		<b>GG0659</b>
	14-15 (350-375)		<b>GG0759</b>
	28-29 (700-725)	<b>GG1459</b>	
0.061 (1.55)	8-8.5 (200-213)	3.99 (15.1)	<b>GG0461</b>
	10-10.5 (250-263)		<b>GG0561</b>
	12-13 (300-325)		<b>GG0661</b>
	14-15 (350-375)		<b>GG0761</b>
	16-17 (400-425)		<b>GG0861</b>
	24-25 (600-625)		<b>GG1261</b>
0.063 (1.60)	8-8.5 (200-213)	4.26 (16.1)	<b>GG0463</b>
	10-10.5 (250-263)		<b>GG0563</b>
	12-13 (300-325)		<b>GG0663</b>
	14-15 (350-375)		<b>GG0763</b>
	16-17 (400-425)		<b>GG0863</b>

# GG0 Series Tip Selection Charts

For Models 239786 and 241469

## GG0 and GG1 Series Spray Tips

Orifice Size	Fan Width	Flow Rate	Part No.
0.065 (1.65)	8–8.5 (200–213)	4.53 (17.2)	<b>GG0465</b>
	10–10.5 (250–263)		<b>GG0565</b>
	12–13 (300–325)		<b>GG0665</b>
	14–15 (350–375)		<b>GG0765</b>
	16–17 (400–425)		<b>GG0865</b>
0.067 (1.70)	8–8.5 (200–213)	4.82 (18.2)	<b>GG0467</b>
	10–10.5 (250–263)		<b>GG0567</b>
	12–13 (300–325)		<b>GG0667</b>
	14–15 (350–375)		<b>GG0767</b>
	16–17 (400–425)		<b>GG0867</b>
	28–29 (700–725)		<b>GG1467</b>
0.069 (1.75)	8–8.5 (200–213)	5.11 (19.3)	<b>GG0469</b>
	10–10.5 (250–263)		<b>GG0569</b>
	12–13 (300–325)		<b>GG0669</b>

Orifice Size	Fan Width	Flow Rate	Part No.
0.071 (1.80)	8–8.5 (200–213)	5.41 (20.5)	<b>GG0471</b>
	10–10.5 (250–263)		<b>GG0571</b>
	12–13 (300–325)		<b>GG0671</b>
	16–17 (400–425)		<b>GG0871</b>
	28–29 (700–725)		<b>GG1471</b>
0.073 (1.85)	8–8.5 (200–213)	5.72 (21.7)	<b>GG0473</b>
	10–10.5 (250–263)		<b>GG0573</b>
0.075 (1.90)	8–8.5 (200–213)	6.04 (22.9)	<b>GG0475</b>
0.077 (1.95)	8–8.5 (200–213)	6.36 (24.1)	<b>GG0477</b>
0.079 (2.00)	8–8.5 (200–213)	6.70 (25.4)	<b>GG0479</b>
0.081 (2.06)	8–8.5 (200–213)	7.04 (26.7)	<b>GG0481</b>

\*Fluid output at 600 psi (4.1 MPa, 41 bar).

Fluid output (Q) at other pressures (P) can be calculated by this formula:  $Q = (0.041) (QT) (\sqrt{\frac{P}{P_1}})$ .

Where QT = Fluid output (fl oz/min) from the above table for the selected orifice size.

**NOTE:** Other tips are available on special work order. Allow 4 to 6 weeks for delivery.

# Sealer Application Tip Selection Charts

For Model 233670 with tip nut 198391

## Shower Tip

No. of Orifices	Orifice Size inches (mm)	Part No.
6	0.021 (0.533)	<b>C08224</b>

## Streaming Tips

Orifice Size inches (mm)	Part No.	Orifice Size inches (mm)	Part No.
0.025 (0.635)	<b>270025</b>	0.037 (0.940)	<b>270037</b>
0.027 (0.686)	<b>270027</b>	0.039 (0.991)	<b>270039</b>
0.029 (0.736)	<b>270029</b>	0.041 (1.041)	<b>270041</b>
0.031 (0.787)	<b>270031</b>	0.043 (1.092)	<b>270043</b>
0.035 (0.889)	<b>270035</b>	0.059 (1.500)	<b>270059</b>

## Single Orifice Fan Pattern Spray Tips

Orifice Size	Fan Width at 12" (300 mm)	Part No.
0.021 (0.533)	8-10 (200-250)	<b>182421</b>
	10-12 (250-300)	<b>182521</b>
	12-14 (300-350)	<b>182621</b>
	14-16 (350-400)	<b>182721</b>
	16-18 (400-460)	<b>182821</b>
0.023 (0.584)	8-10 (200-250)	<b>182423</b>
	10-12 (250-300)	<b>182523</b>
	12-14 (300-350)	<b>182623</b>
	14-16 (350-400)	<b>182723</b>
0.025 (0.635)	8-10 (200-250)	<b>182425</b>
	10-12 (250-300)	<b>182525</b>
	12-14 (300-350)	<b>182625</b>
	14-16 (350-400)	<b>182725</b>
0.027 (0.686)	8-10 (200-250)	<b>182427</b>
	12-14 (300-350)	<b>182627</b>

Orifice Size	Fan Width at 12" (300 mm)	Part No.
0.029 (0.737)	8-10 (200-250)	<b>182429</b>
	12-14 (300-350)	<b>182629</b>
	16-18 (400-460)	<b>182829</b>
0.031 (0.787)	8-10 (200-250)	<b>182431</b>
	12-14 (300-350)	<b>182631</b>
	16-18 (400-460)	<b>182831</b>
0.035 (0.889)	8-10 (200-250)	<b>182435</b>
	10-12 (250-300)	<b>182535</b>
	12-14 (300-350)	<b>182635</b>
0.039 (0.991)	8-10 (200-250)	<b>182439</b>
	10-12 (250-300)	<b>182539</b>
	12-14 (300-350)	<b>182639</b>
0.043 (1.041)	8-10 (200-250)	<b>182443</b>
	10-12 (250-300)	<b>182543</b>
	12-14 (300-350)	<b>182643</b>
	18-20 (450-500)	<b>182943</b>
0.047 (1.194)	18-20 (450-500)	<b>182947</b>

# Accessories

Use Only Genuine Graco Parts and Accessories

## GUN MANIFOLDS

**Order separately; not included with gun**  
(See page 20 for Parts list)

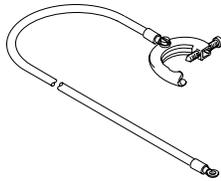
**Part No. 241161, Series A**  
North America Manifold

**Part No. 241162, Series A**  
International Manifold

**Part No. 244930, Series A**  
High Flow Ambient or Temperature Conditioned Manifold for streaming or spraying

## Grounding Clamp and Wire 222011

12 ga, 25 ft (7.6 m) wire



## High Pressure Ball Valves, Viton® Seals

5000 psi (34 MPa, 345 bar) Maximum Working Pressure

Can be used as fluid drain valve.

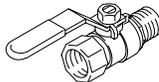
- 210657** 1/2 npt(m)
- 210658** 3/8 npt(m)
- 210659** 3/8 x 1/4 npt(m)

## Bleed-type Master Air Valve

300 psi (2.1 MPa, 21 bar) Maximum Working Pressure

Relieves air trapped in the air line between the pump air inlet and this valve when closed.

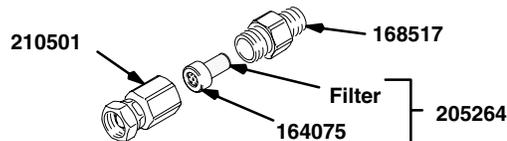
- 107141** 3/4 npt(m x f) inlet & outlet
- 107142** 1/2 npt(m x f) inlet & outlet



## In-line Fluid Filter 210500

5000 psi (35 MPa, 350 bar) Maximum Working Pressure

100 mesh. Fits onto the gun's fluid connector. 1/4–18 npsm. Includes the parts shown below.



## Needle/Diffuser Options

Needles must be used only with the specified seat to guarantee proper seating and life.

- **Standard viscosity/standard flow**
  - **Fluid Needle 239807**, 3/16 in. carbide ball
  - **Seat 239890 or 233671**
- **Acid catalyzed materials/very low viscosity materials**
  - **Fluid Needle 241468**, 3/16 in. plastic ball
  - **Seat 239890**

## Brush 101892

For cleaning the gun.

## Tube Fittings for Air or Water

250 psi (1.7 MPa, 17 bar) Maximum Working Pressure  
160° F (71° C) temperature rating

- 104172** 1/8 npt(m) x 1/4 O.D. tube
- 597151** 1/8 npt(m) x 1/4 O.D. tube, 90° elbow (swivel)

## Temperature Sensor and Cable

For temperature conditioned manifold

- 198457** RTD Sensor, 100 ohm, 1/8 npt(m) with 3 pin Picofast connector
- 198458** RTD cable 6 ft. (1.83 m) Flex cable to St. Clair connector

# Technical Data

Maximum working fluid pressure . . . . .	4000 psi (28 MPa, 280 bar)
Maximum working air pressure . . . . .	100 psi (0.7 MPa, 7 bar)
Maximum working fluid temperature . . . . .	140° F (60° C)
Minimum air cylinder actuation pressure . . . . .	70 psi (0.49 MPa, 4.9 bar)
Weight . . . . .	2 lb (895 g)
Wetted Parts . . . . .	Stainless Steel, Carbide, Ultra High Molecular Weight Polyethylene, Delrin®, PEEK, Chemically Resistant Fluoroelastomer, PTFE

Delrin® is a registered trademark of the DuPont Company.

## Triggering Speed

These values apply to a new gun with a 6 ft (1.8 m), 1/4 in. (6.3 mm) OD cylinder air line and a .019" tip. These values will vary slightly with use and with variations in equipment.

Cylinder air pressure psi (MPa, bar)	Fluid pressure psi (MPa, bar)	msec to fully open	msec to fully close
70 (0.49, 4.9)	600 (4.2, 42)	51	72
70 (0.49, 4.9)	1800 (12.4, 124)	56	73
70 (0.49, 4.9)	4000 (28, 280)	69	73

## Sound Pressure Levels (dBa) (measured at 1 meter from unit)

Input Fluid Pressures	
1500 psi (10.5 MPa, 105 bar)	4000 psi (28 MPa, 276 bar)
79.0 dB(A)	86.6 dB(A)

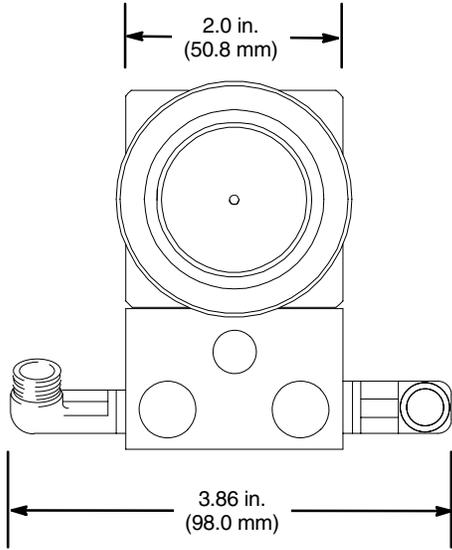
## Sound Power Levels (dBa) (tested in accordance with ISO 9614–2)

Input Fluid Pressures	
1500 psi (10.5 MPa, 105 bar)	4000 psi (28 MPa, 276 bar)
75.7 dB(A)	86.3 dB(A)

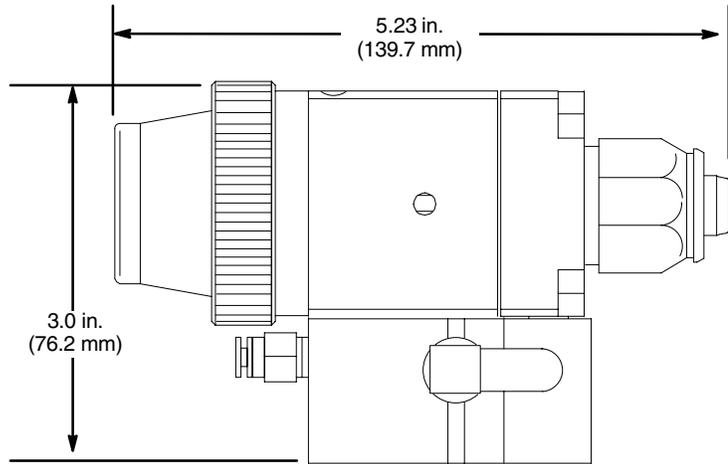


# Dimensions and Mounting Holes

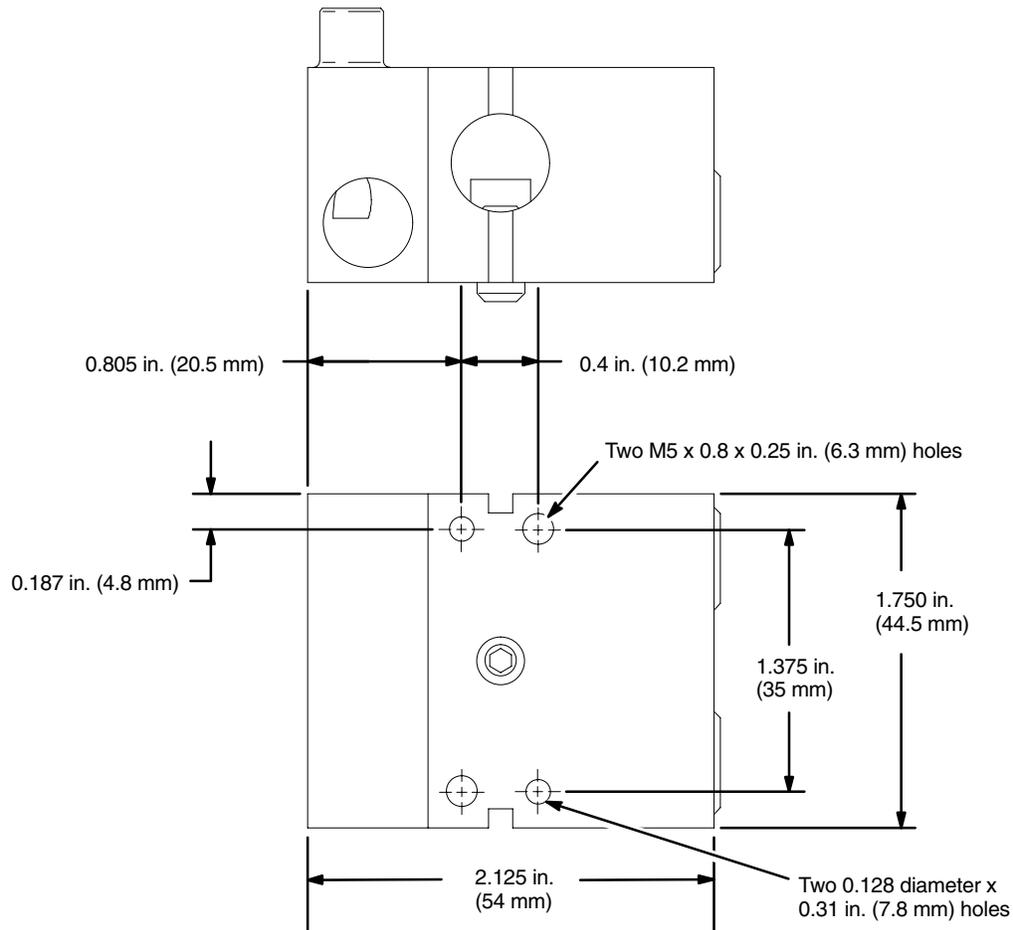
For Guns 239786 and 241469 with Manifolds 241161 and 241162



8576A



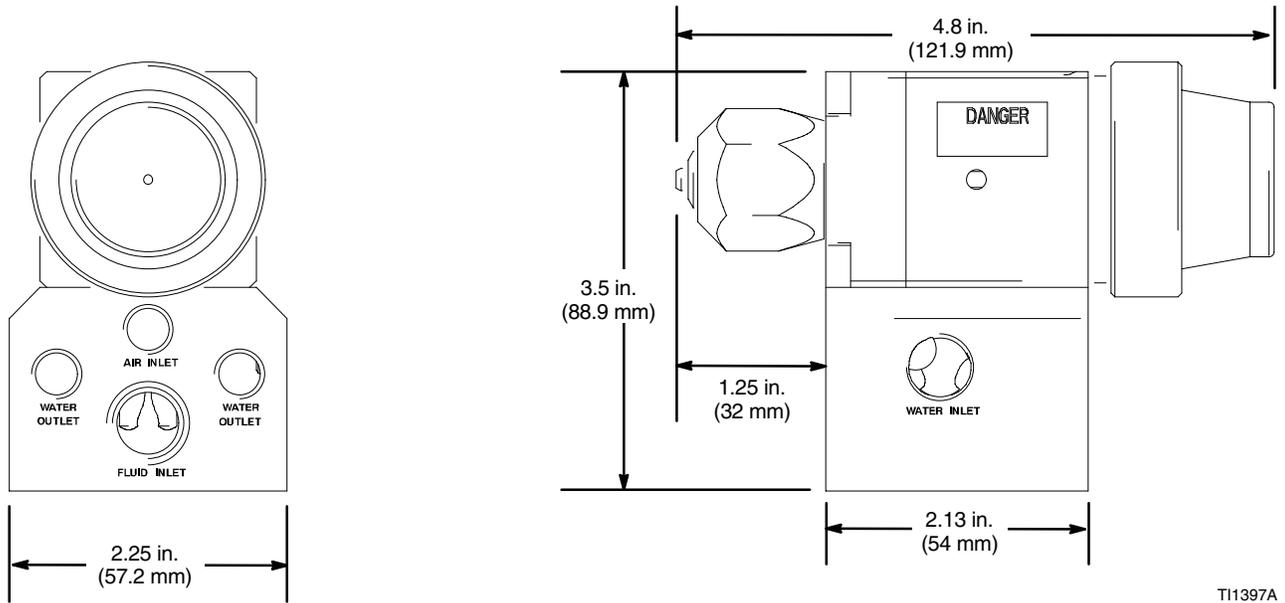
8581A



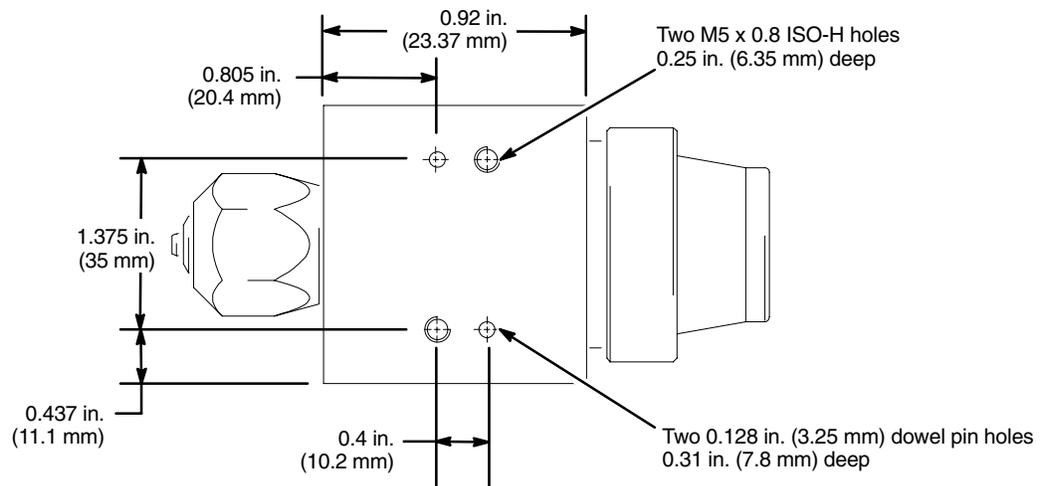
8722A

# Dimensions and Mounting Holes

For Model 233670



T11397A



T11397A

# Graco Standard Warranty

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

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

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

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

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

Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose in connection with accessories, equipment, materials or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

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

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# Graco Information

**TO PLACE AN ORDER**, contact your Graco distributor, or call one of the following numbers to identify the distributor closest to you:

**1-800-367-4023 Toll Free**

**612-623-6921**

**612-378-3505 Fax**

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

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

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