

Instructions



# Hygienic SaniForce® Automatic Airless Spray Guns

3A8816B

EN

***For use in hygienic spraying applications for automatic airless systems. For professional use only.***

## **Model 26C799**

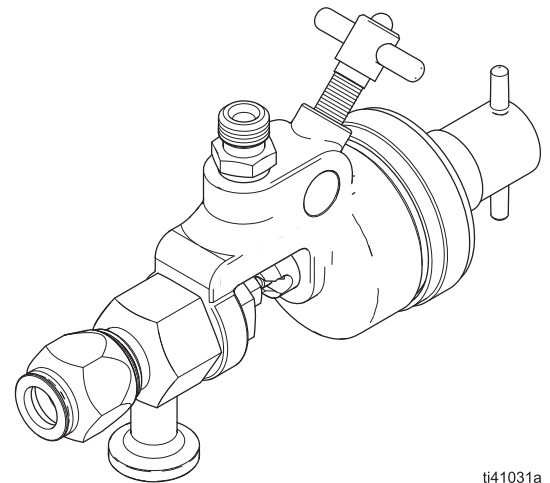
*600 psi (4.1 MPa, 41 bar) Maximum Working Fluid Pressure*

*200 psi (1.4 MPa, 14 bar) Maximum Working Air Pressure*

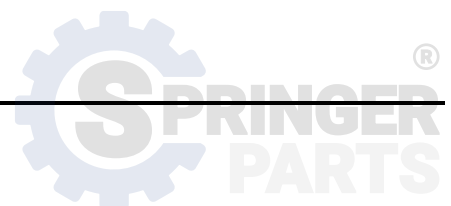
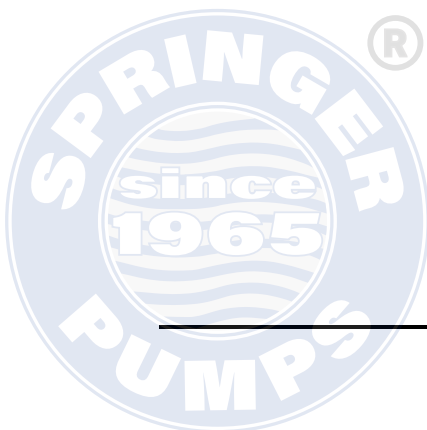


### **Important Safety Instructions**

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



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## Approvals

Model 26C799 is certified:


















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Ex h IIA T6 Gb



# 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.

 <b>WARNING</b>	
 	<b>EQUIPMENT MISUSE HAZARD</b> Misuse can cause death or serious injury. <ul style="list-style-type: none"> <li>Do not operate the unit when fatigued or under the influence of drugs or alcohol.</li> <li>Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See <b>Technical Specifications</b> in all equipment manuals.</li> <li>Use fluids and solvents that are compatible with equipment wetted parts. See <b>Technical Specifications</b> 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.</li> <li>Do not leave the work area while equipment is energized or under pressure.</li> <li>Turn off all equipment and follow the <b>Pressure Relief Procedure</b> when equipment is not in use.</li> <li>Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.</li> <li>Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.</li> <li>Make sure all equipment is rated and approved for the environment in which you are using it.</li> <li>Use equipment only for its intended purpose. Call your distributor for information.</li> <li>Route lines and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.</li> <li>Do not kink or over bend lines or use lines to pull equipment.</li> <li>Keep children and animals away from work area.</li> <li>Comply with all applicable safety regulations.</li> </ul>
  	<b>PRESSURIZED EQUIPMENT HAZARD</b> Fluid from the equipment, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury. <ul style="list-style-type: none"> <li>Follow the <b>Pressure Relief Procedure</b> when you stop spraying/dispensing and before cleaning, checking, or servicing equipment.</li> <li>Tighten all fluid connections before operating the equipment.</li> <li>Check lines, tubes, and couplings daily. Replace worn or damaged parts immediately.</li> </ul>

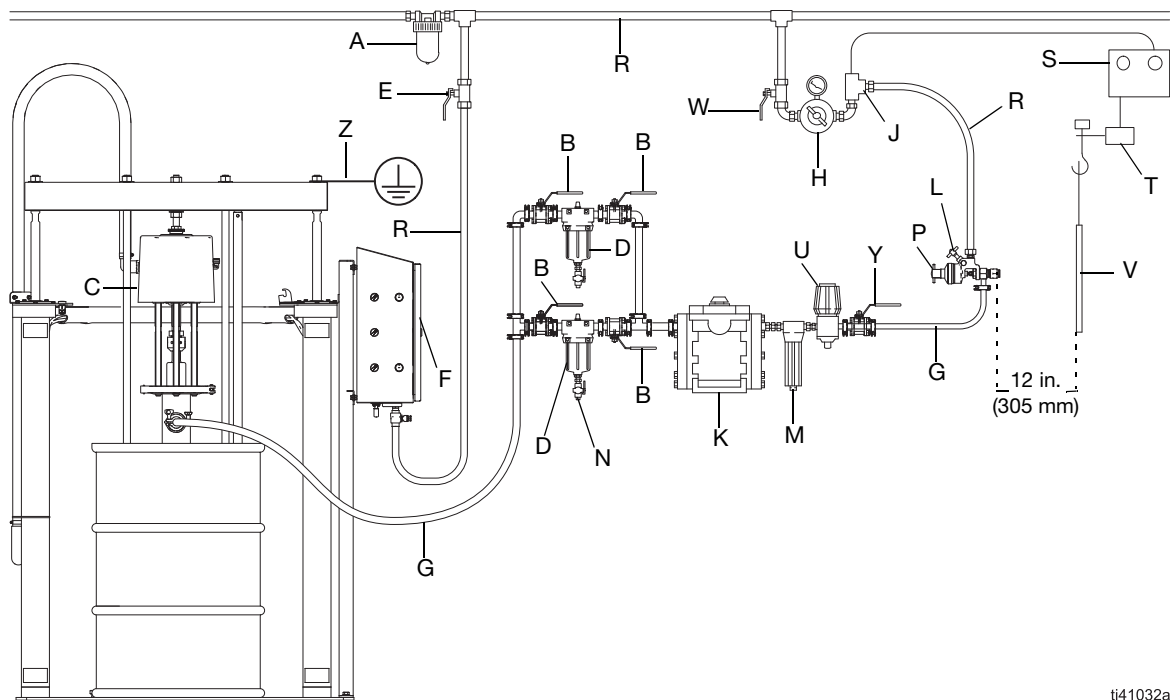
 <b>WARNING</b>	
   	<b>FIRE AND EXPLOSION HAZARD</b> Flammable fumes, such as solvent and paint fumes, in <b>work area</b> can ignite or explode. Paint or solvent flowing through the equipment can cause static sparking. To help prevent fire and explosion: <ul style="list-style-type: none"> <li>• Use equipment only in well-ventilated area.</li> <li>• Eliminate all ignition sources, such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static sparking).</li> <li>• Ground all equipment in the work area. See <b>Grounding</b> instructions.</li> <li>• Never spray or flush solvent at high pressure.</li> <li>• Keep work area free of debris, including solvent, rags and gasoline.</li> <li>• Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.</li> <li>• Use only grounded fluid and air lines.</li> <li>• Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are anti-static or conductive.</li> <li>• <b>Stop operation immediately</b> if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem.</li> <li>• Keep a working fire extinguisher in the work area.</li> </ul>
	<b>TOXIC FLUID OR FUMES HAZARD</b> Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed. <ul style="list-style-type: none"> <li>• Read Safety Data Sheets (SDSs) to know the specific hazards of the fluids you are using.</li> <li>• Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.</li> </ul>
 	<b>MOVING PARTS HAZARD</b> Moving parts can pinch, cut or amputate fingers and other body parts. <ul style="list-style-type: none"> <li>• Keep clear of moving parts.</li> <li>• Do not operate equipment with protective guards or covers removed.</li> <li>• Equipment can start without warning. Before checking, moving, or servicing equipment, follow the <b>Pressure Relief Procedure</b> and disconnect all power sources.</li> </ul>
	<b>PERSONAL PROTECTIVE EQUIPMENT</b> Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, and inhalation of toxic fumes. Protective equipment includes but is not limited to: <ul style="list-style-type: none"> <li>• Protective eyewear, and hearing protection.</li> <li>• Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.</li> </ul>

# Installation

## General Information

- A typical installation is shown in FIG. 1. It is only a guide for selecting and installing system components. Contact your Graco distributor for assistance in planning a system to suit your needs.
- Always use genuine Graco parts and accessories.
- Reference numbers and letters in parentheses refer to the callouts in the figures.

## Typical Installation



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**FIG. 1: Typical Installation**

### KEY:

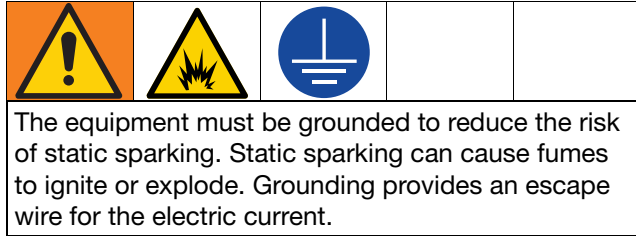
- A** Air line filter  
**B** Ball valves  
**C** Pump  
**D** High pressure fluid filters  
**E** Second bleed-type air valve  
**F** Pump air control (includes pump air regulator)  
**G** Flexible, conductive fluid supply line  
**H** Gun air regulator  
**J** Normally closed 3-way air solenoid valve (required, not supplied)  
**K** Heater (if used)  
**L** Tee handle  
**M** Fluid filter  
**N** Fluid drain valve

- P\*** Automatic spray gun  
**R** Air line  
**S** Timer  
**T** Timer switch  
**U** Fluid regulator  
**V\*** Workpiece  
**W** Bleed-type master air valve  
**Y** Fluid shutoff valve  
**Z** Pump ground wire

\* Ensure that the tip of the spray gun (P) is 12 in. (305 mm) away from the surface of the workpiece (V).

**NOTE:** See **Accessory Kits**, page 20, for system components that are available separately (purchase separately).

## Grounding



The following grounding instructions are minimum requirements for a system. Check your system for other components that must be grounded. Follow local codes and regulations. Connect the system to a true earth ground.

**Spray gun:** Ground through connection to a properly grounded fluid line and pump.

**Pump:** Ground as detailed in your separate pump manual.

**Air and fluid lines:** Use only electrically conductive lines with a maximum of 100 ft (30.5 m) combined line length to ensure grounding continuity. Check electrical resistance of lines. If total resistance to ground exceeds 25 megohms, replace line immediately.

**Air compressor:** Follow manufacturer's recommendations.

**Fluid supply container:** Follow local codes and regulations.

**Object being sprayed:** Follow local codes and regulations.

**Solvent pails used when flushing:** Follow local codes and regulations. Use only conductive metal pails, placed on a grounded surface. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts grounding continuity.

**Accessories:** Follow local codes and regulations.

**To maintain grounding continuity when flushing or relieving pressure:** Hold a metal part of the spray gun firmly to the side of a grounded metal pail, then actuate the gun.

## Mount the Equipment

1. Ensure that the mounting setup can support the weight of the spray gun (P), system components, and accessories, as well as the stress caused during operation.
2. Mount the spray gun (P) on a rod (AB) with a diameter of 0.50 in. (12.7 mm). See FIG. 2.
3. Tighten the tee handle (L) to secure the spray gun (P) in place.

**NOTE:** Ensure that the tip (22) of the spray gun (P) is 12 in. (305 mm) away from the surface of the workpiece (V). See FIG. 2.

**NOTE:** For ease of operation and service, mount the spray gun so the spray gun components are easily accessible.

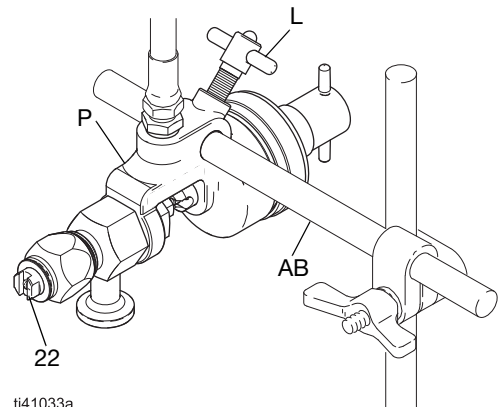
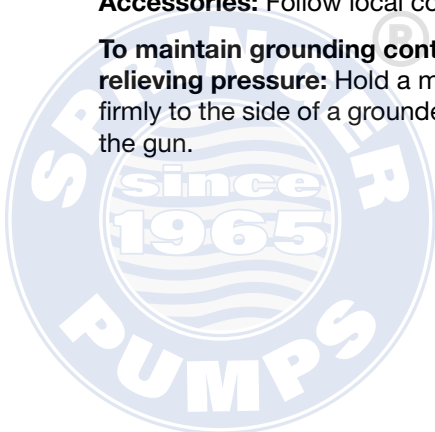
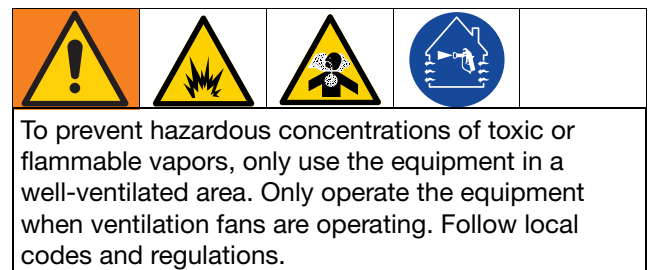


FIG. 2: Mounting Rod

## Ventilate the Workspace

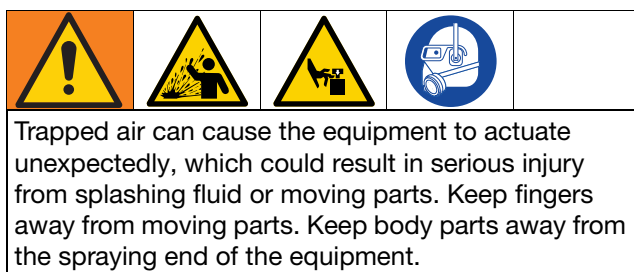


## Install Accessories

Install the following accessories in the order shown in FIG. 1, using adapters as necessary.

### Install Air Line Accessories

- **Bleed-type master air valve (W):** Required in your system to relieve air trapped between the air supply and the gun when the valve is closed. Locate upstream from the dispensing point.
- **Second bleed-type air valve (E):** Required in your system to relieve air trapped between the air supply and the pump when the valve is closed.



- **Gun air regulator (H):** controls air pressure to the gun.
- **Pump air regulator (F):** To control pump speed and outlet pressure. Locate close to the pump.
- **Air line filter (A):** Removes harmful dirt and moisture from compressed air supply.
- **Air supply:** Use a normally closed 3-way air solenoid valve (J) to control the spray gun (P). Attach a flexible, conductive air supply line (R) from the 3-way air solenoid valve (J) to the air inlet adapter (3). See FIG. 3.

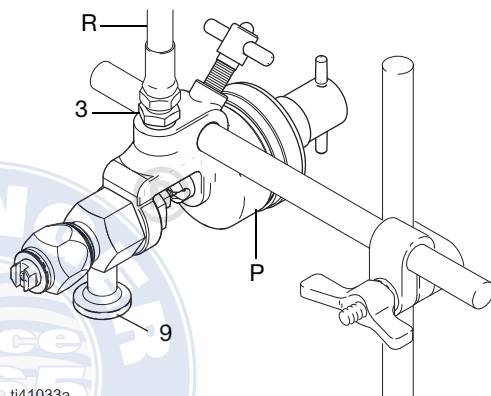


FIG. 3

### Install Fluid Line Accessories

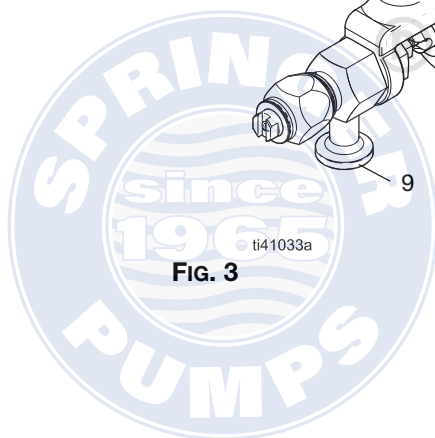
- **Fluid filter (M):** With a 60 mesh (250 micron) stainless steel element to filter particles from the fluid as it leaves the pump.
- **Fluid drain valve (N):** Required in your system to relieve fluid pressure in the fluid line and gun.
- **Fluid shutoff valve (Y):** Shuts off fluid flow.
- **Fluid pressure regulator (U):** For more precise adjustment of the fluid pressure to the gun.
- **Gun (P):** To dispense fluid.
- **Fluid supply:** Connect a flexible, conductive fluid supply line (G) from the pump to the fluid inlet housing (9) of the gun. See FIG. 3.

## Sanitize Before First Use

The equipment was tested with water, which is left in the fluid passages to protect parts.

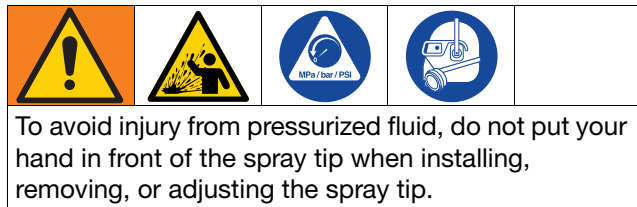
Properly sanitize the equipment before first use. Depending on your requirements, you can flush the equipment with a sanitizing solution or disassemble and clean individual parts.

- To flush with a sanitizing solution, follow the steps under **Start and Adjust the Equipment**, page 10, and **Flushing and Storage**, page 11.
- To disassemble and clean individual parts, see **Repair**, page 15.



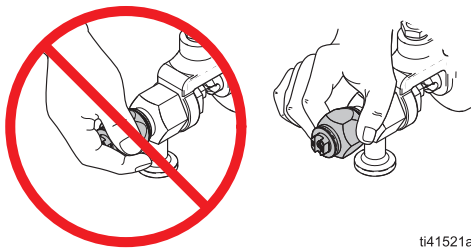


## Setup



NO

YES



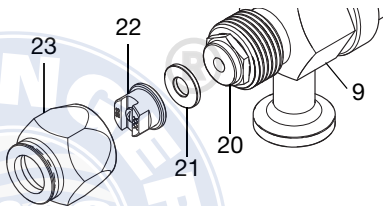
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## Select a Spray Tip

A spray tip (22) is not provided with the gun assembly. Select a spray tip (purchase separately) to install in the gun. See **Spray Tip Selection Chart**, page 19.

## Install the Spray Tip

1. Follow the **Pressure Relief Procedure**, page 9.
2. Close all air valves.
3. Unscrew the tip retaining nut (23).
4. Remove the gasket (21).
5. Install the spray tip (22) and gasket (21) inside the tip retaining nut (23).
6. Securely tighten the tip retaining nut (23) to the housing (9).



**FIG. 4: Spray Tip**

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## Adjust the Spray Tip

### Adjust the Spray Pattern

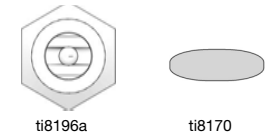
The spray tip position determines the spray direction and pattern orientation. To adjust the spray pattern orientation:

1. Loosen the tip retaining nut (23).
2. Orient the slot in the spray tip (22) horizontally for a horizontal pattern and vertically for a vertical pattern. See FIG. 5.

#### Vertical Pattern



#### Horizontal Pattern



**FIG. 5: Spray Pattern**

3. Tighten the tip retaining nut (23) to secure the tip in place. See FIG. 4.

### Adjust the Spray Coverage

The spray tip orifice size and cut angle determine the coverage and size of the spray pattern. For more coverage, install a spray tip with a larger orifice.

#### NOTICE

To prevent equipment damage, do not increase pump pressure to increase spray coverage. Instead, use a larger spray tip.

1. Select a spray tip. See **Spray Tip Selection Chart**, page 19.
2. Replace the spray tip as needed to meet your coverage and spray pattern requirements. Follow **Replace the Spray Tip**, page 15.



# Operation

## Before Each Use

### Check the Spray Tip

Before each use, check the spray tip (22) before operating the equipment:

- Clean the spray tip as needed. See **Clean the Spray Tip**, page 13.
- Adjust the spray tip as needed. See **Adjust the Spray Tip**, page 8.
- Replace worn or damaged parts as needed.

### Tighten Connections

Before each use, check and tighten all air and fluid connections before operating the equipment. Replace worn or damaged parts as needed.

#### NOTICE

Firmly tighten all fasteners and connections to avoid air or fluid leaks. Air or fluid leaks may damage equipment parts.

### Lubricate the Equipment

1. Before each day of operation, lubricate the exposed portion of the needle (19) and the air piston (16). Use a lubricant compatible with the fluid being dispensed.

#### NOTICE

Do not over-lubricate the equipment. Lubricant could contaminate your fluid supply or other equipment. Excessive lubrication can also cause the equipment to malfunction.

2. After lubricating, cover the exposed portions of the needle (19) and air piston (16) with a piece of plastic to prevent fluid build-up on these parts.

#### NOTICE

Fluid buildup on equipment parts could damage the fluid section. To prevent fluid buildup on equipment parts, cover exposed equipment parts with a piece of plastic.

## Flush the Equipment

Flush the equipment before each use, before changing colors, and after operating the equipment.

See **Flushing and Storage**, page 11.

## 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 splashing fluid and moving parts, follow the **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing the equipment.

1. Shut off power to the pump (C).
2. Close the bleed-type air valve (E).
3. Close the fluid shutoff valve (Y).
4. Hold a metal part of the gun firmly to a grounded metal pail. See FIG. 6.
5. Actuate the gun into a grounded metal waste container to relieve pressure. See FIG. 6.

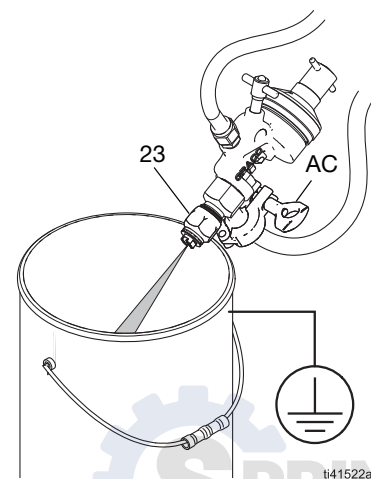


FIG. 6

6. Close the bleed-type master air valve (W).

7. Open all fluid drain valves (N) in the system. Have a waste container ready to catch drainage. Leave drain valves open until ready to spray again.
8. If the spray tip or line is clogged, or if the pressure has not been fully relieved:
  - a. Very slowly loosen the tip retaining nut (23) or the fluid line clamp (AC) to gradually relieve pressure. See FIG. 6.
  - b. Remove the tip retaining nut (23) or the fluid line clamp (AC) completely.
  - c. Clear the obstruction in the line or tip.

## Start and Adjust the Equipment



To avoid injury from pressurized fluid, such as splashing fluid and moving parts:

- Do not put your hand in front of the spray tip.
- Keep fingers away from moving parts, such as the needle (19).
- Do not exceed the maximum fluid pressure rating. See **Technical Specifications**, page 22.

1. Confirm that the equipment is properly grounded. See **Grounding**, page 6.
2. Check the spray tip (22) before operating the equipment. See **Check the Spray Tip**, page 9.
3. Check and tighten the tip retaining nut (23) before operating the equipment. Replace worn or damaged parts as needed.

4. Check and tighten all air and fluid connections before operating the equipment. Replace worn or damaged parts as needed.

### NOTICE

Firmly tighten all connections to avoid air or fluid leaks. Air or fluid leaks may damage equipment parts.

5. Set the timer (S) so that the gun will start spraying before meeting the workpiece (V) and stop spraying just after the workpiece has passed.
6. Set the actuating air to a minimum of 50 psi (325 kPa, 3.4 bar). Do not exceed 200 psi (1.4 MPa, 14 bar).
7. Start the pump. See your separate pump manual.
8. Adjust the pump speed and pressure to modify atomization.

**NOTE:** Use the lowest pump speed and pressure necessary for the desired results. Higher speed or pressure may not improve the spray pattern and will cause premature tip wear and pump wear.

### NOTICE

To prevent equipment damage, do not increase pump pressure to increase spray coverage. Instead, use a larger spray tip.

**NOTE:** The spray tip orifice size and angle determine coverage and pattern. See **Adjust the Spray Pattern**, page 8, and **Adjust the Spray Coverage**, page 8.



## Shut Down the Equipment

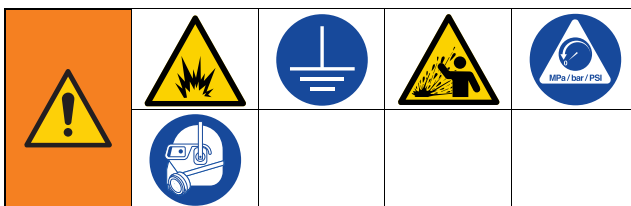


This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as splashing fluid and moving parts, follow the **Pressure Relief Procedure** when you shut down the equipment.

At the end of each work shift, follow **Pressure Relief Procedure**, page 9.

Flush the equipment if necessary. See **Flushing and Storage**, page 11.

## Flushing and Storage



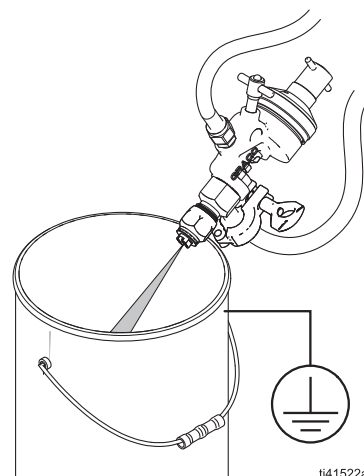
To avoid fire and explosion, always ground equipment and waste container. To avoid static sparking and injury from splashing fluid, always flush at the lowest possible pressure.

- Flush before changing fluid materials, before fluid can dry or freeze in the equipment, at the end of the day, before storing, and before repairing equipment.
- Flush at the lowest pressure possible. Check and tighten all fluid connections. Replace worn or damaged parts as needed.
- Flush with a solvent that is compatible with the fluid being dispensed and the equipment wetted parts.
- Flushing schedule will vary based on particular uses.

- Always follow **Pressure Relief Procedure**, page 9, and flush the equipment before storing it for any length of time.

1. Follow **Pressure Relief Procedure**, page 9.
2. Remove the spray tip and thoroughly clean parts. Follow **Disassemble the Spray Tip**, page 15, and **Clean the Spray Tip**, page 13.
3. Supply a compatible solvent to the gun.
4. Set the pump to the lowest possible fluid pressure, and start the pump. See your separate pump manual.
5. Hold a metal part of the gun firmly to a grounded metal pail. Actuate the gun until clean solvent dispenses. See FIG. 7.

**NOTE:** Never point the gun up while dispensing fluid.



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**FIG. 7**

6. Follow **Pressure Relief Procedure**, page 9.
7. Disconnect the solvent supply.



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# Maintenance

## Establish a Preventive Maintenance Schedule

### NOTICE

Regularly maintain the equipment to avoid equipment damage.

Establish a preventive maintenance schedule based on the equipment service history.

## Inspect the Equipment

Regularly inspect the equipment for leaks and worn or damaged parts. Replace parts as needed.

## Tighten Connections

Check and tighten all air and fluid connections before operating the equipment. Replace worn or damaged parts as needed.

### NOTICE

Firmly tighten all connections to avoid leaks and damage to equipment parts.

## Flush the Equipment

Flush the equipment before each use, before changing colors, and after operating the equipment.

1. Follow **Flushing and Storage**, page 11.
2. Disassemble and clean individual parts as needed. See applicable disassembly procedures.

## Clean the Equipment



To avoid injury from pressurized fluid, such as splashing fluid and moving parts:

- Do not put your hand in front of the spray tip.
- Keep fingers away from moving parts, such as the needle (19).

### NOTICE

To avoid damage to equipment parts:

- Ensure that the cleaning solvent is compatible with the fluid being dispensed.
- Do not use any cleaning method that may cause solvent to enter the air passages of the gun.
- Do not immerse the gun in solvent.
- Do not clean the gun with a cloth soaked in solvent. Remove excess solvent. Only use a soft cloth that is dampened with a compatible solvent.
- Do not use metal instruments or sharp tools to clean the hole in the spray tip.

**NOTE:** Cleaning kits are available (purchase separately). See **Kits and Accessories**, page 20.

## Clean Filters

Clean the fluid filters and air line filters daily. If using an in-line filter, regularly remove and clean the in-line filter thoroughly in a compatible solvent. Replace filters as needed.



## Clean the Spray Tip

To reduce buildup, frequently clean the front of the spray tip throughout the day.

1. Follow **Pressure Relief Procedure**, page 9.
2. Clean the outside of the spray tip with a soft cloth or soft brush dampened with a compatible solvent.

### NOTICE

To avoid damage to the spray tip, only clean the spray tip with a compatible solvent and soft cloth or soft brush.

## Clear Clogs

1. Follow **Pressure Relief Procedure**, page 9.
2. Follow **Disassemble the Spray Tip**, page 15.
3. Clean the inside and outside of the spray tip with a soft cloth or soft brush dampened with a compatible solvent.

**NOTE:** As needed, soak the clogged tip in a compatible solvent and use a soft bristled brush to clean the tip. Do not use sharp or metal tools to clean the spray tip.

**NOTE:** To remove a hardened particle from the spray tip: Remove the spray tip and blow air through the orifice from the front.

### NOTICE

To avoid damage to the spray tip, do not use metal instruments or sharp tools to clean the hole in the spray tip. Metal instruments and sharp tools may damage the hole in the spray tip and distort the spray pattern.

4. Inspect parts for wear or damage. Replace parts as needed.

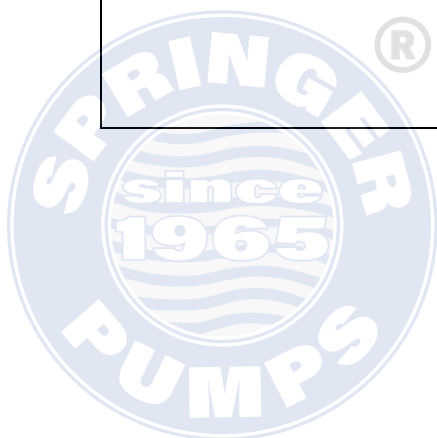


# Troubleshooting



1. Follow **Pressure Relief Procedure**, page 9, before checking or repairing the equipment.
2. Check all possible problems and causes before disassembling the equipment.

Problem	Cause	Solution
Uneven spray pattern	Low fluid pressure	Increase pressure to pump or adjust fluid pressure regulator.
Spray pattern leaves tails or fingers	Low fluid pressure	Increase pressure to pump or adjust fluid pressure regulator.
	Fluid too viscous	Decrease fluid viscosity by thinning, heating, or agitation.
	Fluid supply is low	Refill supply.
	Tip orifice too small for fluid	Change to larger tip.
Gun will not stop spraying	Fluid needle is binding	Clean, repair.
	Piston packing is binding	Repair.
	Obstructed or worn needle or seat	Clean or replace.
	Inadequate force on spring (7)	Tighten the spring housing assembly (5, 6) in the air cylinder cap (4).
Gun will not spray	Pump not operating	Refer to separate pump manual.
	Fluid line clogged	Clear.
	Fluid valve closed	Open.
	Clogged spray tip or needle seat	Clean.
	No actuator air pressure	Check, clean air lines.
	Worn or dry piston packings	Replace.
Distorted spray pattern	Low fluid pressure	Increase pressure to pump or adjust fluid pressure regulator.
	Clogged spray tip or needle seat	Clean.
	Fluid buildup on tip or worn tip	Clean, replace.



# Repair

**NOTE:** Repair kits are available (purchase separately). See **Kits and Accessories**, page 20.

## Prepare Equipment for Repair



Servicing this equipment may cause injury from pressurized fluid if work is not properly performed.

- Do not service this equipment unless you are trained and qualified.
- To reduce risk of injury, follow the **Pressure Relief Procedure** before checking, servicing, or repairing the equipment.

Always complete the following procedure before performing any service or repair to the equipment.

1. Follow **Pressure Relief Procedure**, page 9.
2. Follow **Flushing and Storage**, page 11.
3. Verify that the equipment is turned off and power to the system is disconnected before performing any service or repair procedure.
4. Disconnect all air and fluid lines.

## Replace the Spray Tip



To avoid injury from pressurized fluid, do not put your hand in front of the spray tip when installing, removing, or adjusting the spray tip.

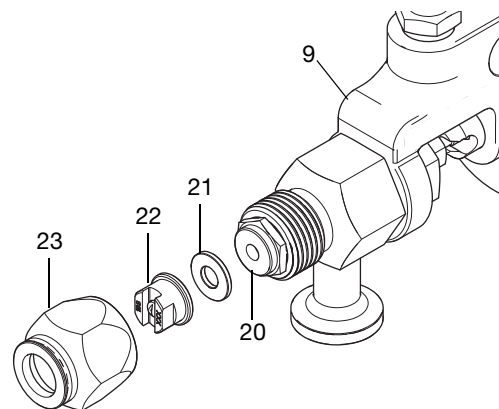
## Disassemble the Spray Tip

1. Follow the **Pressure Relief Procedure**, page 9.
2. Close all air valves.
3. Unscrew the tip retainer (23).
4. Disassemble the gasket (21) and spray tip (22).
5. Clean and inspect parts for wear or damage. Replace parts as necessary.

## Reassemble the Spray Tip

6. Install the spray tip (22) and gasket (21) inside the tip retainer (23).
7. Securely tighten the tip retainer (23) to the housing (9). See FIG. 8.

**NOTE:** The spray tip position determines the direction and pattern width. To adjust the pattern, see **Adjust the Spray Pattern**, page 8.



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**FIG. 8**





## Repair the Fluid Section

### Disassemble the Fluid Section

See FIG. 9.

1. Follow **Prepare Equipment for Repair**, page 15.
2. Unscrew the locknut (11).
3. Use an applicable wrench to hold the nut (15) securely in place. At the same time, unscrew the housing (9).
4. Remove the housing (9) from the gun body (1).
5. Remove the seat (20) and gasket (12) from the housing (9).
6. Remove the needle (19) assembly from the socket in the air piston (16).
7. Disassemble the needle (19), locknut (11), nut (15), gland (14), and washers (13).
8. Remove the spray tip. Follow **Disassemble the Spray Tip**, page 15.
9. Remove the seat (20) and gasket (12) from the housing (9).
10. Clean and inspect parts for wear or damage. Replace parts as necessary.

### Reassemble the Fluid Section

See FIG. 9.

1. Install the gasket (12) and seat (20) in the housing (9). Torque the seat (20) to 190–210 in-lb (21–24 N•m).
2. Install the spray tip. Follow **Reassemble the Spray Tip**, page 15.
3. Assemble the needle (19), locknut (11), nut (15), gland (14), and washers (13).
4. Install the needle (19) assembly in the socket of the air piston (16).

5. Insert the housing (9) assembly over the needle (19) and through the hole in the gun body (1).
6. Use an applicable wrench to hold the nut (15) securely in place. At the same time, tighten the housing (9) to the gun body (1). Securely tighten.
7. Securely tighten the locknut (11) to the housing (9).

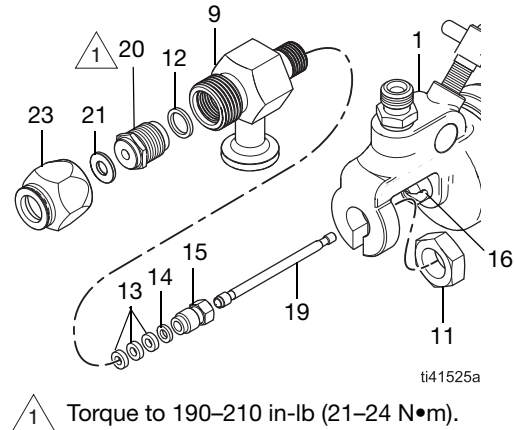


FIG. 9: Fluid Section

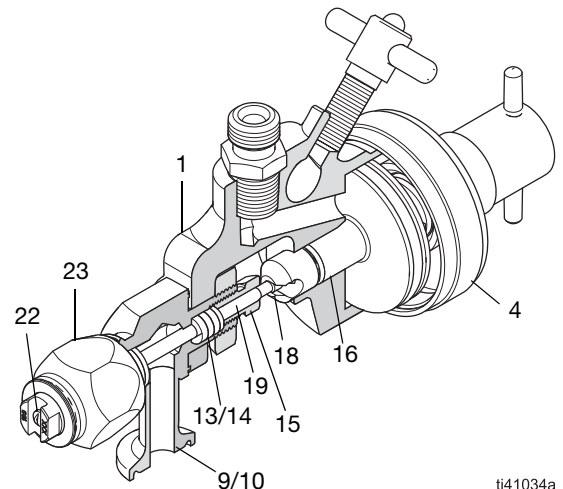
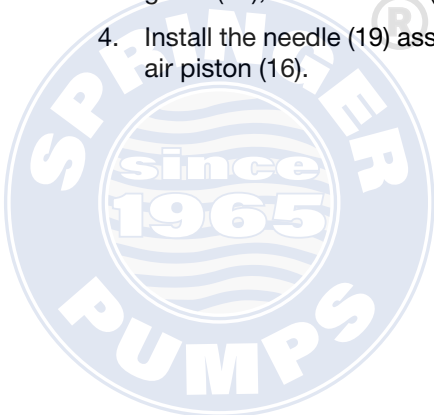


FIG. 10: Cutout View of Fluid Section



## Repair the Air Piston, Spring, and Seals

### Disassemble the Air Piston, Spring, and Seals





See FIG. 11.

1. Follow **Prepare Equipment for Repair**, page 15.
2. Follow **Disassemble the Fluid Section**, page 16.
3. Remove the air cylinder cap (4) assembly.
4. Remove the spring (7).
5. Remove the guide (8), seal (17), air piston (16), and seal (18) from the gun body (1).
6. Clean and inspect parts for wear or damage. Replace parts as necessary.

### Reassemble the Air Piston, Spring, and Seals

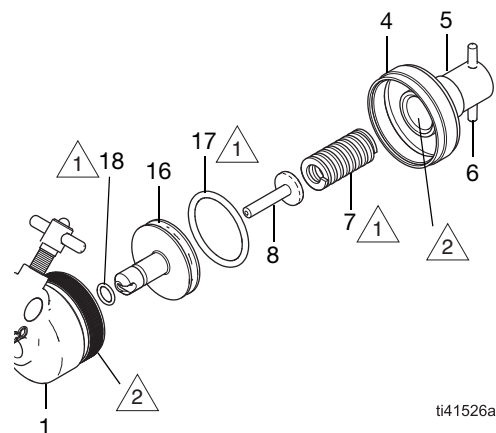
See FIG. 11.

1. Lubricate applicable parts with a light, waterproof grease. See FIG. 11.
2. Install the seal (18), air piston (16), seal (17), guide (8) in the gun body (1).
3. Install the spring (7) in the air cylinder cap assembly (4, 5, 6).
4. Install the air cylinder cap assembly (4, 5, 6) to the gun body (1). Securely tighten.

				
<p>To avoid injury from pressurized fluid, ensure the spring housing assembly (5, 6) is fully tightened to the air cylinder cap (4). If the spring housing assembly (5, 6) is not fully tightened, the gun may not shut off.</p>				

5. Fully turn the spring housing assembly (5, 6) onto the air cylinder cap assembly (4) to secure the spring (7) in place. Securely tighten.

**NOTE:** Ensure the spring housing assembly (5, 6) is fully tightened to the air cylinder cap (4).



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1 Liberally apply a light, waterproof grease.

2 Lightly apply a light, waterproof grease to threads.

FIG. 11: Air Piston, Spring, and Seals

## Recycling and Disposal

### End of Product Life

At the end of a product's useful life, recycle it in a responsible manner.



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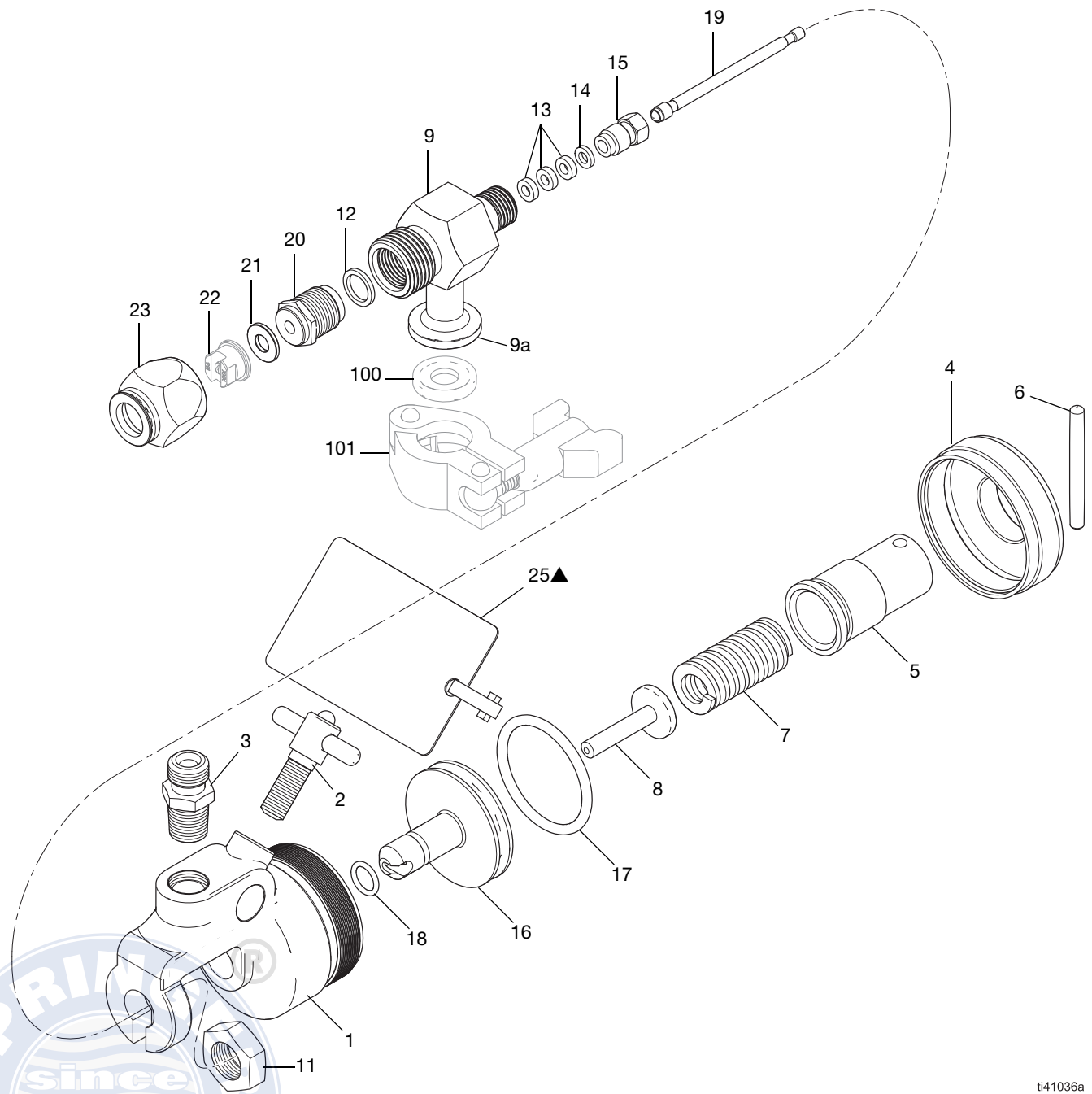
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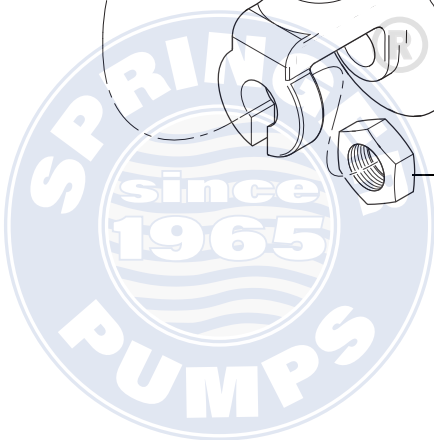


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# Parts



ti41036a



## Parts

Ref.	Part	Description	Qty.
1	---	BODY, gun, valve housing	1
2	205355	SCREW, handle, tee	1
3	162453	FITTING, air connection, 1/4 npsm x 1/4 npt	1
4	166848	CAP, cylinder	1
5	164737	HOUSING, spring	1
6	164736	PIN, drive	1
7	164739	SPRING, compression	1
8	164740	GUIDE, spring	1
9	---	HOUSING, fluid	1
9a	---	CONNECTION, fluid, 1/2 in. sanitary clamp connection	
11	102300	NUT	1
12*	176255	GASKET, nylon	1
13*	168296	WASHER, packing	3
14*	---	GLAND, packing	1
15*	---	NUT, packing	1
16	164741	PISTON, air	1

Ref.	Part	Description	Qty.
17*	156593	SEAL, o-ring	1
18*	155685	SEAL, o-ring	1
19*	---	NEEDLE, fluid	1
20*	---	SEAT, valve	1
21	166969	GASKET, non-metallic	1
22†♦	---	TIP, spray	1
23	18F539	NUT, tip, retainer	1
25▲	26D796	TAG, warning	1
100‡*	---	GASKET	1
101‡*	---	CLAMP	1

--- Not available separately.

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

\* See **Kits and Accessories**, page 20.

‡ Not part of the equipment assembly. Only available separately.

♦ See **Spray Tip Selection Chart**, page 19.

## Spray Tip Selection Chart

Spray Tips									
Orifice Size		Fluid Output (at 600 psi (4.1 MPa, 41 bar))		Maximum Pattern Width (at 12 in. (305 mm) distance from the workpiece)					
				6 to 8 in. (150 mm)	8 to 10 in. (200 mm)	10 to 12 in. (250 mm)	12 to 14 in. (300 mm)	14 to 16 in. (300 mm)	16 to 18 in. (400 mm)
in.	mm	oz/min	lpm	Part					
0.013	0.330	0.018	0.0005	16S313					
0.015	0.381	0.024	0.0007	16S315	16S415	16S515			
0.017	0.432	0.031	0.0009		16S417	16S517		16S717	
0.019	0.483	0.39	0.0115		16S419	16S519		16S719	
0.021	0.533	0.47	0.0139		16S421	16S521	16S621		
0.023	0.584	0.57	0.0169		16S423	16S523		16S723	
0.025	0.635	0.67	0.0198			16S525			16S825
0.027	0.686	0.78	0.0231			16S527			

# Kits and Accessories

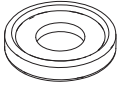
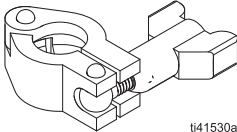
## Part Kits

### Fluid Section Kits

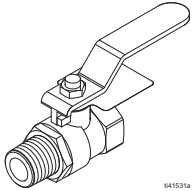
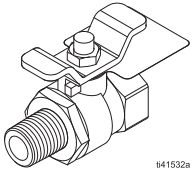
Kit	Description	Includes
26D735	KIT, fluid section, needle valve	<ul style="list-style-type: none"> <li>• 1 seat valve (20)</li> <li>• 1 gasket (12)</li> <li>• 3 washers (13)</li> <li>• 1 packing gland (14)</li> <li>• 1 nut (15)</li> <li>• 1 needle (19)</li> <li>• 1 seal (17)</li> <li>• 1 seal (18)</li> </ul>

## Accessory Kits

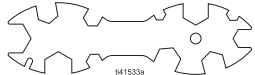
### Clamp Kits

Kit	Description	Includes	
26D734	GASKET, 1/2 in. Buna-N gasket for sanitary tri-clamps	5 gaskets (100)	 t41529a
19F478	CLAMP, 1/2 in. sanitary clamp	1 clamp (101)	 t41530a


### Air Valve Kits

Kit	Description	Includes	
107141	VALVE, air, ball, vented; 3/4-14 npt inlet and outlet	1 bleed type master air valve (W)	 t41531a
107142	VALVE, air, ball, vented; 1/2-14 npt inlet and outlet	1 bleed type master air valve (W)	 t41532a

### Tool Kits

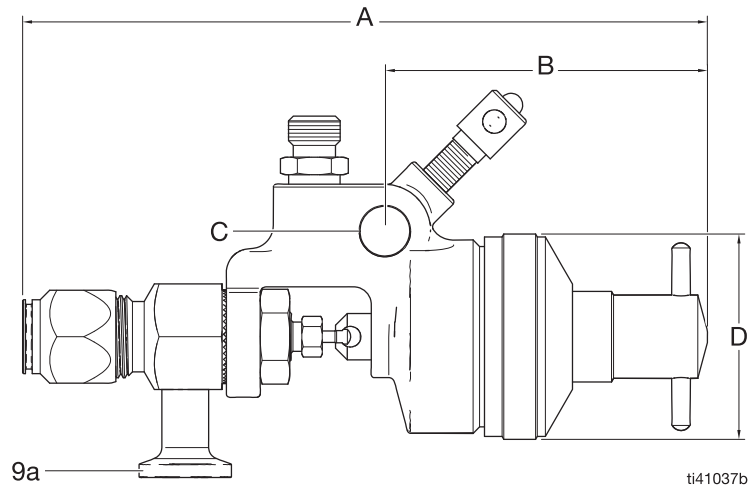
Kit	Description	Includes	
171147	TOOL, wrench	1 wrench	 t41533a

### Cleaning Kits

Kit	Description	Includes	
101891	BRUSH, nylon, cleaning, 3/8 in. diameter	1 brush	



# Dimensions



	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>9a</b>
<b>in.</b>	7.24	3.59	0.53	2.20	1/2 in.
<b>mm</b>	184	91	13	56	Sanitary Flange



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# Technical Specifications

Hygienic SaniForce® Automatic Airless Spray Guns		
	US	Metric
Maximum fluid working pressure	600 psi	4.1 MPa, 41 bar
Minimum operating pressure of air actuator	50 psi	345 kPa, 3.4 bar
Maximum working air pressure	200 psi	1.4 MPa, 14 bar
Maximum fluid operating temperature	120°F	49°C
Inlet/Outlet Sizes		
Air inlet size	1/4 npsm(m)	
Fluid inlet size	1/2 in. sanitary flange	
Materials of Construction*		
Wetted materials on all models	Acetal Homopolymer, Nylon, PTFE, Tungsten Carbide, 303 Stainless Steel, 316 Stainless Steel, Chrome-plated 416 Stainless Steel	
Weight		
All models	1.78 lb	0.81 kg
Noise (dBa)		
Maximum sound pressure	79 dBa at 600 psi (04.1 MPa, 41 bar) fluid input pressure	
Maximum sound power	76 dBa at 600 psi (04.1 MPa, 41 bar) fluid input pressure	
Sound pressure measured 3.28 feet (1 meter) from equipment.		
Sound power measured per ISO-9614-2.		
Notes		
* All fluid contact materials are FDA-compliant and meet the United States Code of Federal Regulations (CFR) Title 21 for repeated use in food-processing machinery. The equipment user must verify that the construction materials meet their specific application requirements.		
All trademarks or registered trademarks are the property of their respective owners.		

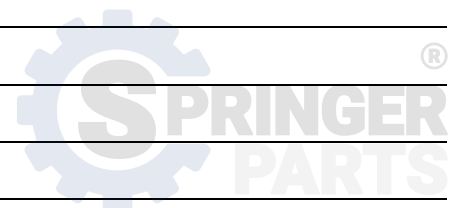
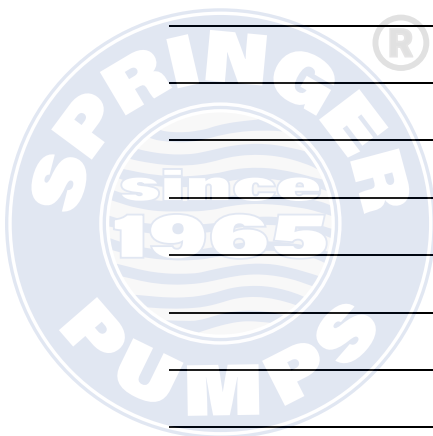
## California Proposition 65

### CALIFORNIA RESIDENTS

 **WARNING:** Cancer and reproductive harm – [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov).







# 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.**

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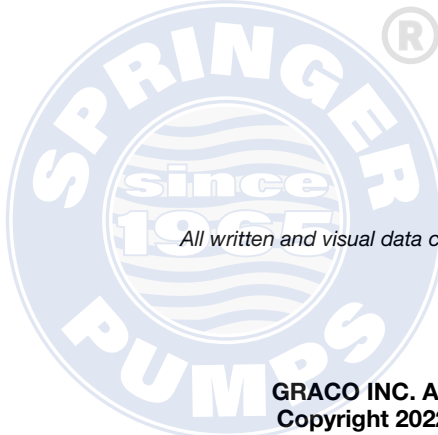
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For patent information, see [www.graco.com/patents](http://www.graco.com/patents).

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