

# XHF Spray Gun

3A2799B

EN

For spraying viscous materials at high flow rates. For professional use only.

## Part No. 262854, Series A

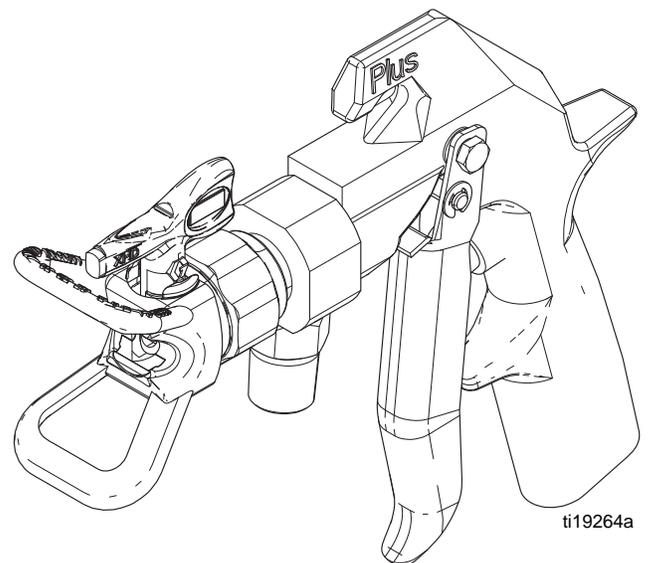
Includes an XHD™ RAC® Guard and XHD429 SwitchTip™

7250 psi (50 MPa, 500 bar) Maximum Working Pressure



### Important Safety Instructions

Read all warnings and instructions in this manual. Save all instructions.

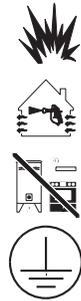


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# Warnings

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>	
	<p><b>SKIN INJECTION HAZARD</b></p> <p>High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. <b>Get immediate surgical treatment.</b></p> <ul style="list-style-type: none"> <li>• Do not spray without tip guard and trigger guard installed.</li> <li>• Engage trigger lock when not spraying.</li> <li>• Do not point gun at anyone or at any part of the body.</li> <li>• Do not put your hand over the spray tip.</li> <li>• Do not stop or deflect leaks with your hand, body, glove, or rag.</li> <li>• Follow the <b>Pressure Relief Procedure</b> when you stop spraying and before cleaning, checking, or servicing equipment.</li> <li>• Tighten all fluid connections before operating the equipment.</li> <li>• Check hoses and couplings daily. Replace worn or damaged parts immediately.</li> </ul>
	<p><b>FIRE AND EXPLOSION HAZARD</b></p> <p>Flammable fumes, such as solvent and paint fumes, in <b>work area</b> can ignite or explode. To help prevent fire and explosion:</p> <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 arc).</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>• Ground all equipment in the work area. See <b>Grounding</b> instructions.</li> <li>• Use only grounded hoses.</li> <li>• Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are antistatic 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>

# **WARNING**

 	<p><b>EQUIPMENT MISUSE HAZARD</b></p> <p>Misuse can cause death or serious injury.</p> <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 Data</b> in all equipment manuals.</li> <li>• Use fluids and solvents that are compatible with equipment wetted parts. See Technical Data in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS 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 hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.</li> <li>• Do not kink or over bend hoses or use hoses to pull equipment.</li> <li>• Keep children and animals away from work area.</li> <li>• Comply with all applicable safety regulations.</li> </ul>
	<p><b>RECOIL HAZARD</b></p> <p>Gun may recoil when triggered. If you are not standing securely, you could fall and be seriously injured.</p>
	<p><b>TOXIC FLUID OR FUMES HAZARD</b></p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"> <li>• Read MSDSs 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>
	<p><b>PERSONAL PROTECTIVE EQUIPMENT</b></p> <p>Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This protective equipment includes but is not limited to:</p> <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>

# Operation

Keep the wallet-sized warning card provided with this gun with the operator at all times. The card contains important treatment information should an injection injury occur. Additional cards (part no. 222385) are available at no charge from Graco.

## System Requirements

Pressure drain valves are recommended in the system; they assist in relieving fluid pressure in the displacement pump, hose and gun in the event that the gun is clogged and triggering the gun does not relieve all pressure.

## Ground the System

						
<p>The equipment must be grounded to reduce the risk of static sparking. Static sparking can cause fumes to ignite or explode. Grounding provides an escape wire for the electric current.</p>						

Ground the pump and all other equipment used or located in the spray area. Check your local electrical code for detailed grounding instructions for your area and type of equipment. Follow the grounding instructions provided in your pump or sprayer manual. Ground the gun through connection to a properly grounded fluid hose and pump or sprayer.

## Gun Trigger Lock

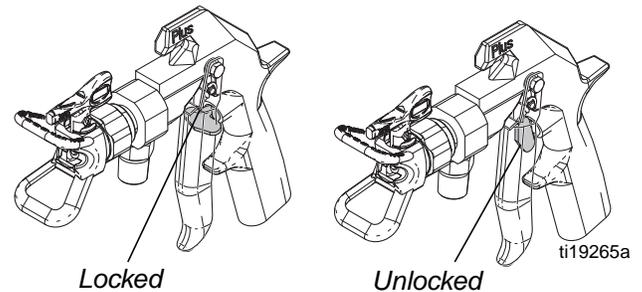
1. To engage the gun trigger lock, rotate the lock so it is perpendicular to the gun body. See FIG. 1.
2. To disengage the gun trigger lock, push the lock out and rotate it so it is parallel with the gun body. See FIG. 1.

## Pressure Relief Procedure

 Follow the Pressure Relief Procedure whenever you see this symbol.

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

1. Engage the gun trigger lock.
2. Shut off power to the pump.
3. Disengage the gun trigger lock.
4. Hold a metal part of the gun firmly to a grounded metal pail. Trigger the gun to relieve pressure.
5. Engage the gun trigger lock.
6. Open the system drain valve, having a container ready to catch the drainage. Observe the pressure gauge. The gauge reads 0 psi/bar when fully drained. Close the system drain valve.
7. If you suspect that the spray tip or hose is completely clogged or that pressure has not been fully relieved after following the previous steps, very slowly loosen the tip guard retaining nut or hose end coupling to relieve pressure gradually. Clean the tip or hose obstruction.



**FIG. 1: Trigger Lock Positions**

## Operation

						
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To reduce the risk of component rupture, and serious injury, including fluid injection, do not exceed the gun's 7250 psi (500 bar, 50 MPa) maximum working pressure or the maximum working pressure of lowest rated component in the system.

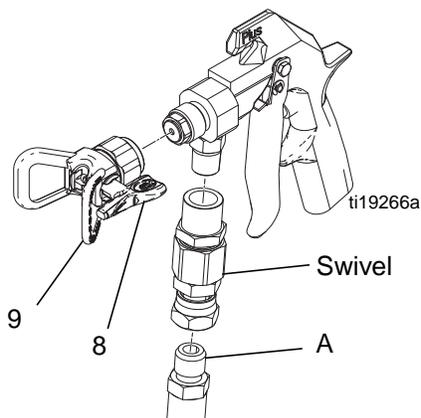


FIG. 2

1. Connect a fluid hose (A) to the gun inlet. Use swivel 207946 or 24P834 if desired (order separately). See Fig. 2.
2. With SwitchTip (8) and tip guard (9) removed, start the pump. Flush the pump according to the instructions supplied with it. Use the lowest pressure possible.
3. Prime the system with the material.
4. Relieve pressure.
5. Install the SwitchTip (8) and tip guard (9). See FIG. 2.
6. Start the pump. Trigger the gun onto test paper. 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 and pump wear.
7. If adjusting the pressure does not give a good spray pattern, relieve pressure and try another tip size.

8. Use a full-open, full-close trigger action. Hold the gun about 14 in. (350 mm) from and at right angles to the work surface. Don't swing the gun in an arc. Practice to find the best length and speed of stroke.

## Adjust the Spray Pattern

1. To adjust the spray pattern direction, relieve pressure. Loosen the tip guard retaining nut (B). Rotate the tip guard as necessary to achieve a vertical or horizontal spray pattern. See FIG. 3. Tighten the nut.
2. The spray tip orifice and spray angle determines the coverage and size of pattern. When more coverage is needed, use a larger spray tip rather than increasing fluid pressure.

### NOTICE

Openings in the tip guard reduce material buildup on the guard while spraying. Damage to the sharp edges of the openings causes material to collect in the damaged area. To prevent this, never hang the gun by the tip guard.

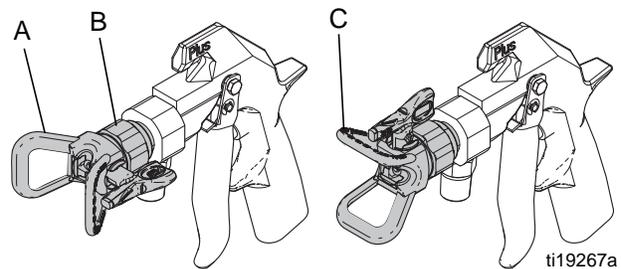


FIG. 3

## Gun Care

						
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- To reduce the risk of fluid injection or splashing in the eyes or on the skin, do not point gun at anyone or at any part of the body when cleaning or checking a clogged tip. Point the gun toward the ground or into a waste container when checking to see if the spray tip is cleared.
- Do not try to “blow back” material; this is not an air spray gun.
- Do not wipe fluid buildup off the gun or spray tip until pressure is relieved.

### Cleaning during the day

						
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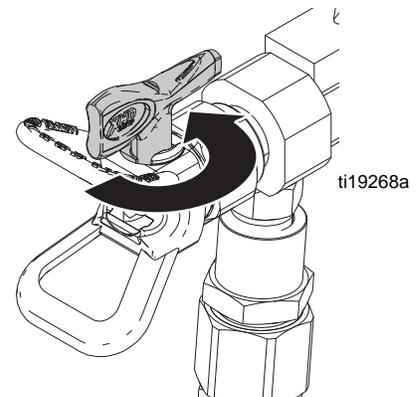
1. Relieve pressure, page 5.
2. Use a solvent-soaked brush to clean the spray tip. Clean the front of the tip frequently during the day to help reduce buildup.
3. Clean the tip and tip guard at the end of each work day.

### If the spray tip clogs while spraying

1. Stop spraying immediately.
2. Lock the gun trigger lock. Rotate the RAC SwitchTip handle 180°. See Fig. 4.
3. Unlock the gun trigger lock. Trigger the gun into a pail or onto the ground to remove the clog.
4. Lock the gun trigger lock. Rotate the tip handle back to the spraying position.
5. If the tip is still clogged:
  - a. Engage the gun trigger lock.
  - b. Shut off the sprayer and disconnect the power source.
  - c. Open the pressure drain valve to relieve pressure.
  - d. Clean the spray tip as shown in manual 308644, supplied with the RAC SwitchTip.

**NOTICE**

Never soak the entire gun in solvent. Prolonged exposure to solvent can ruin the packings.



*Spraying position shown. Rotate tip handle 180° and trigger gun to clear clog.*

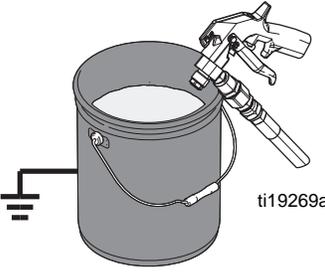
**FIG. 4**

## Flush the Gun

					
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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, is properly grounded.
- Remove the tip guard and spray tip.
- Maintain metal to metal contact between the gun and the flushing pail.
- Use the lowest possible pressure.



### NOTICE

Always flush the pump and gun before the sprayed fluid cures.

**NOTE:** This procedure requires a grounded pail of compatible flushing fluid.

1. Relieve pressure.
2. Remove the tip guard and spray tip. Soak and clean the parts.
3. *Single component systems only:* Remove the pump intake from the original pail. Put the pump intake in a grounded pail of compatible solvent.
4. Start the pump at its lowest pressure.
5. *Single component systems only:* Trigger the gun into the original pail. When flushing fluid appears, release the trigger.
6. *Two-component systems only:* Trigger the gun into a waste container. When flushing fluid appears release the trigger.

7. Now trigger the gun into the flushing fluid supply pail. Circulate the fluid until the system is thoroughly flushed.
8. After gun is thoroughly flushed, relieve pressure.

# Service

<p>To reduce the risk of serious injury from fluid injection or splashing, always follow the <b>Pressure Relief Procedure</b> on page 5 before servicing the gun.</p>						

## Disassembly for Repair or Cleaning

**NOTE:** If replacing only the needle and seat, step 4 and 5 are not required. However, removing them allows you to clean the gun more thoroughly.

1. Relieve pressure.
2. Disconnect the fluid hose (A) and swivel (if used). Remove the tip guard (9). Unscrew the spring screw (21) about 1/4 in. (7 mm) to release spring tension. See FIG. 5.

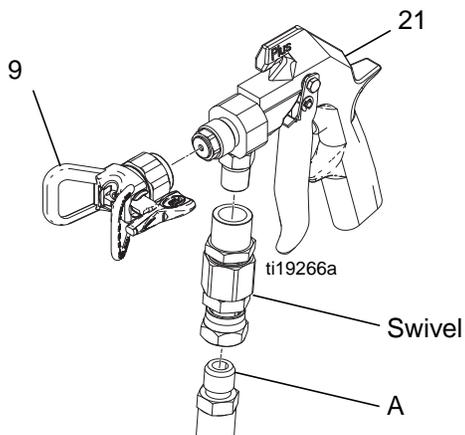


FIG. 5

3. Unscrew the valve seat (2a). Remove the gasket (2b). See FIG. 6.

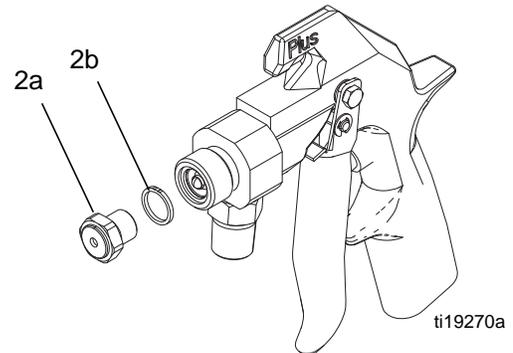


FIG. 6

4. Remove one e-clip (26) then push the pin (18) out of the gun. Remove the screw (13), pivot pin (23), and trigger (24). See FIG. 7.

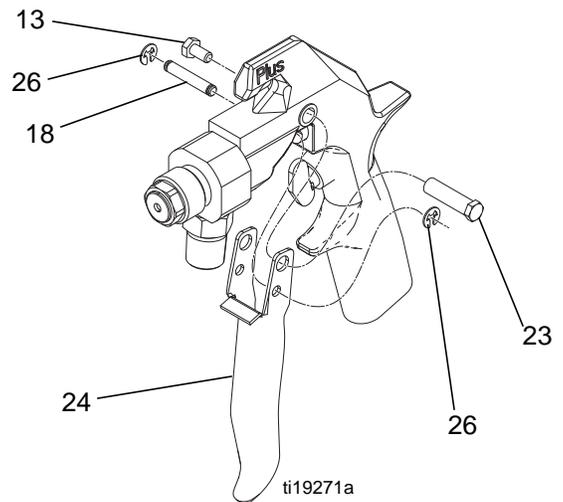


FIG. 7

- Loosen the setscrew (15) then remove the fluid housing (22) from the gun body (1). See FIG. 8.

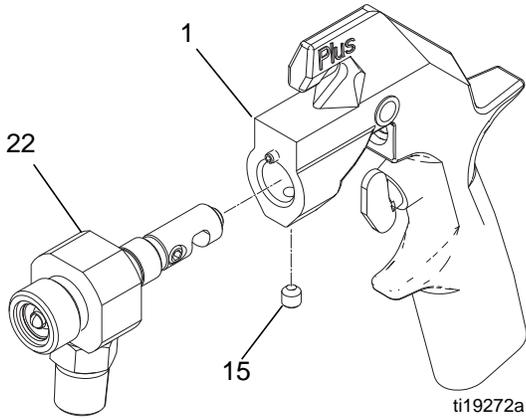


FIG. 8

- While supporting the spring guide (16) to prevent bending the needle (2c), loosen the setscrews (17) then remove the spring guide (16). See FIG. 9.

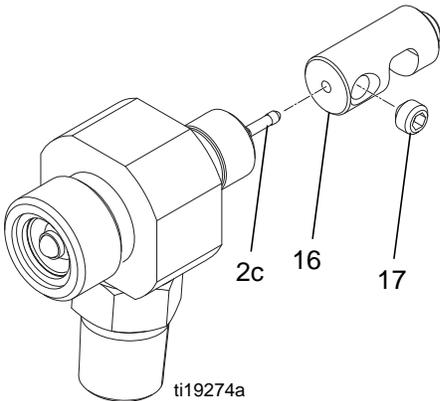


FIG. 9

- Remove the needle (2c). Unscrew the seal retainer (2d) then remove the seal (2e). See FIG. 10.

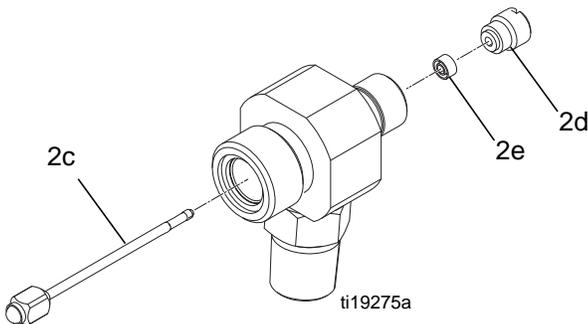


FIG. 10

- Clean all parts and cavities thoroughly with a compatible flushing fluid. Dry with a rag or compressed air. Replace any parts that are worn or damaged.

## Reassembly

- Lightly grease the inner cavities of the fluid housing (22). Install the small seal (2e) so the lips face into the fluid housing cavity. Install the seal retainer (2d) and torque to 30-40 in-lb (3.4-4.5 N•m). See FIG. 11.

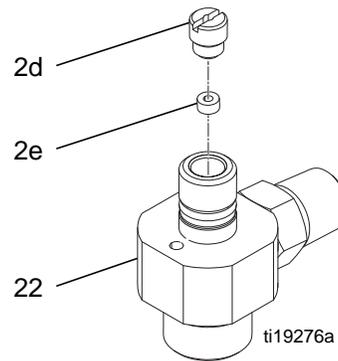


FIG. 11

- Lightly grease the small end of the needle (2c) then guide it into the large end of the fluid housing (22). See FIG. 12.

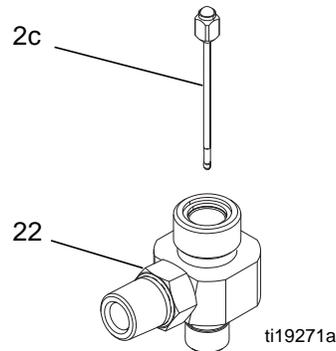
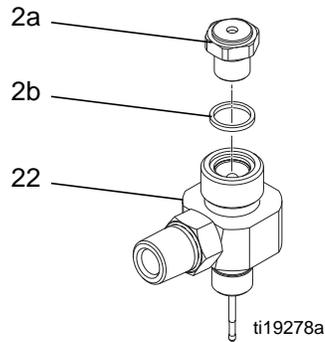


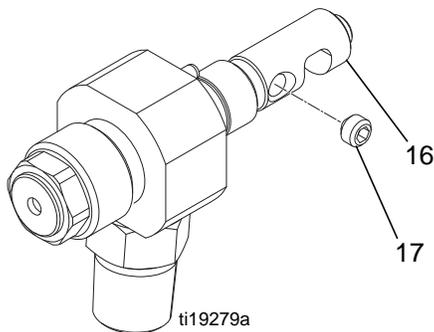
FIG. 12

- Place the gasket (2b) on the valve seat (2a). Grease the threads of the valve seat (2a) then install into the fluid housing (22). Torque to 20-25 ft-lb (27-34 N•m). See FIG. 13.



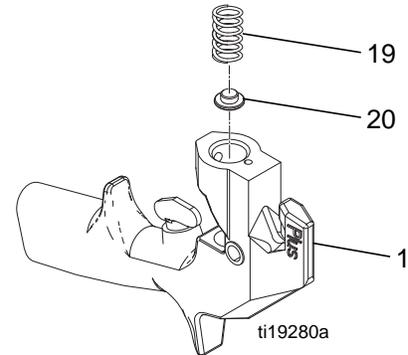
**FIG. 13**

- Install the spring guide (16) and seat it against the needle. Loosely thread both setscrews (17) into the spring guide then alternately and evenly tighten the setscrews to 10-15 in-lb (1.1-1.6 N•m). Fill the set-screw cavities with petroleum jelly. See FIG. 14.



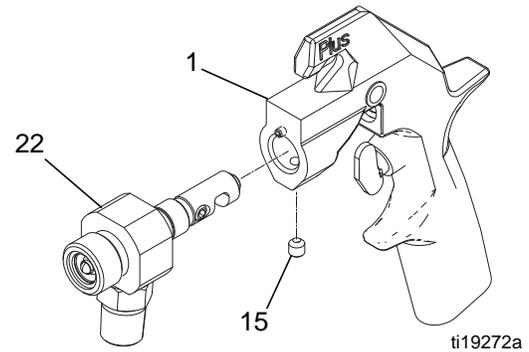
**FIG. 14**

- If the spring (19) was removed, grease the spring adjuster (20) and place the spring on the adjuster then drop into the gun body (1). See FIG. 15.



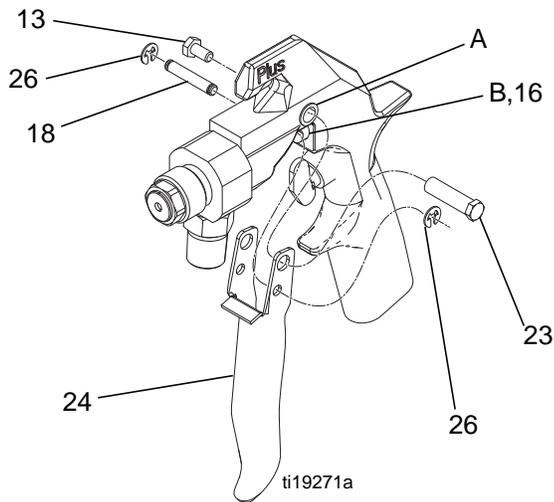
**FIG. 15**

- Push the fluid housing (22) onto the gun body (1) until fully seated. Apply medium strength (blue) Loctite® or equivalent to setscrew (15). Tighten the setscrew to 60-75 in-lb (6.8-8.5 N•m). Fill the set-screw cavity with petroleum jelly. See FIG. 16.



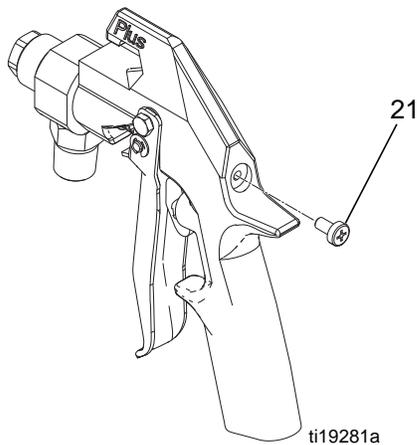
**FIG. 16**

7. Position the trigger (24) on the gun body. Insert the pivot pin (23) into the top hole (A) and secure with the screw (13) on the other side. Ensure there is an e-clip (26) on one end of the trigger pin (18). Slide the pin through lower trigger holes and through the slot (B) in the spring guide (16) -- turn the spring guide to align, as needed. Install the other e-clip (26) onto pin. See FIG. 17.



**FIG. 17**

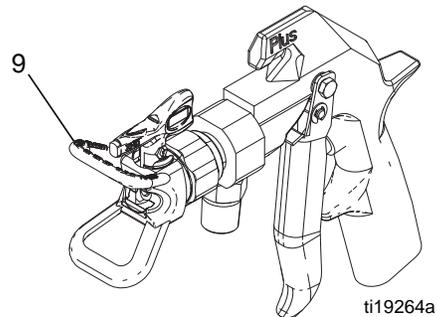
8. If it was removed, install the spring tension screw (21) at the rear of the gun. Then turn the screw in until it stops. See FIG. 18.



**FIG. 18**

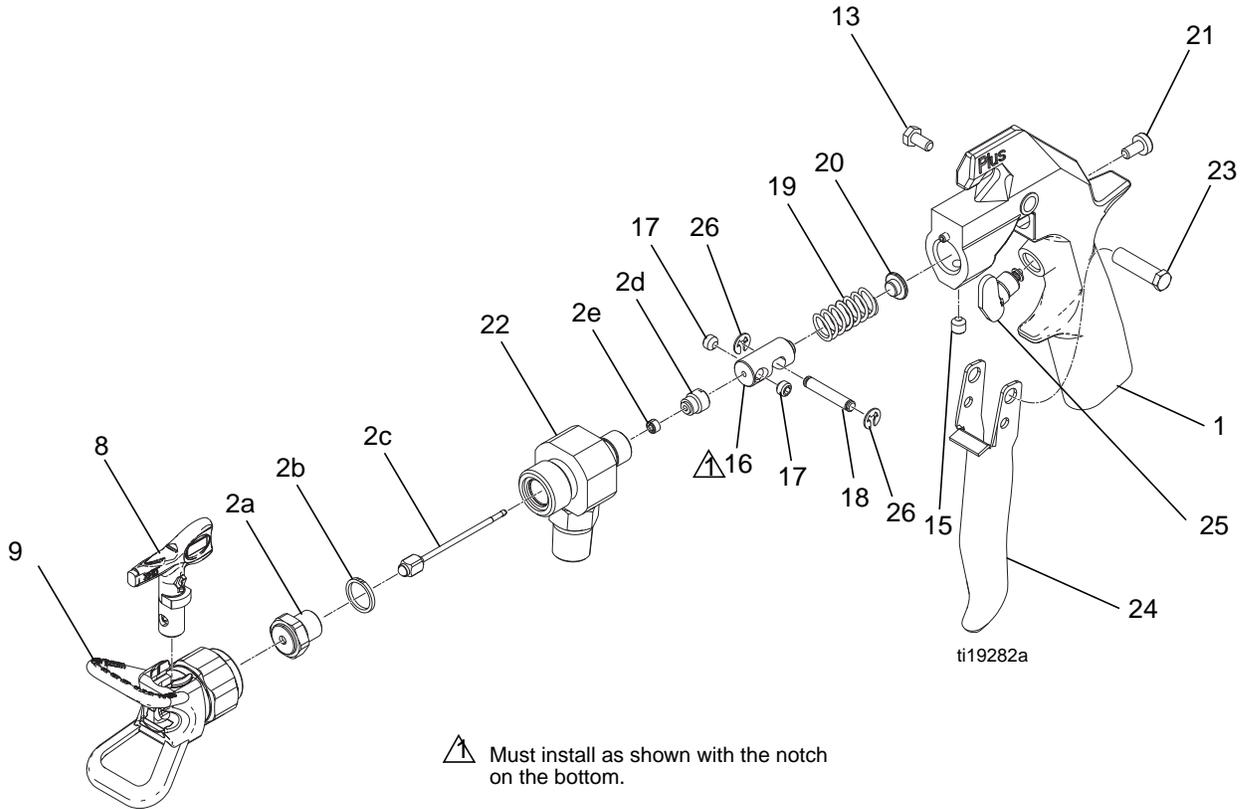
## Test the Gun After Service

1. Lock the gun trigger lock. Connect a hose to the gun. Start and prime the pump.
2. Release the gun trigger lock. Trigger the gun into a waste container until fluid dispenses. Release the trigger to be sure the gun immediately stops spraying and that there are no leaks in any gun connections.
3. Lock the gun trigger lock.
4. Install the tip guard (9) before regular use. See FIG. 19.



**FIG. 19**

# Parts



Ref	Part	Description	Qty	Ref	Part	Description	Qty
1	---	BODY, gun	1	20	189990	ADJUSTER, spring	1
2	237260	KIT, needle and seat	1	21	110637	SCREW, adjusting	1
2a	---	SEAT, valve	1	22	16P780	HOUSING, fluid	1
2b	---	GASKET	1	23	187965	PIN, pivot	1
2c	---	NEEDLE	1	24	189974	TRIGGER, gun	1
2d	---	RETAINER, seal	1	25	235468	STOP, trigger	1
2e	---	SEAL	1	26	112410	E-CLIP	2
8	XHD429	SwitchTip, size 429	1	28▲	187987	TAG, warning	1
9	XHD001	KIT, RAC Guard	1	29▲	222385	CARD, warning (not shown)	1
13	203953	SCREW, hex head, 10-24	1				
15	126943	SETSCREW, 1/4-20	1				
16	189960	GUIDE, spring	1				
17	112729	SETSCREW, socket head	2				
18	189958	PIN, trigger	1				
19	112727	SPRING	1				

--- Not for sale.

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

## Needle and Seat Kits

The needle and seat are available only in kits that include items 2a through 2e.

The standard non-diffused needle and seat kit, 237260, includes all OEM parts and has the number 125 stamped on the needle and seat. It is recommended for use with mastics, sealers and other high viscosity materials which have fillers that cannot easily pass through a diffuser.

The optional needle and seat kit, 237398, has the number 090 stamped on the needle and seat. This kit will decrease the maximum flow rate of the gun.

## Accessories

						
To reduce the risk of component rupture, and serious injury, including fluid injection, do not exceed the gun's 7250 psi (500 bar, 50 MPa) maximum working pressure or the maximum working pressure of lowest rated component in the system.						

### 207946 Swivel

Connects the gun inlet to the fluid supply hose and allows easier gun movement and twisting. **Maximum working pressure is 6500 psi (45 MPa, 450 bar).**

### 24P834 Swivel

Connects the gun inlet to the fluid supply hose and allows easier gun movement and twisting. This swivel has a PTFE seal for improved chemical resistance. **Maximum working pressure is 6500 psi (45 MPa, 450 bar).**

# Technical Data

Maximum Working Pressure . . . . .	7250 psi (50 MPa, 500 bar)
Fluid orifice size . . . . .	0.125 in. (3.2 mm)
Inlet size . . . . .	3/8 npt(m)
Weight (includes tip and tip guard) . . . . .	23.2 oz (720 g)
Length . . . . .	8.25 in. (210 mm)
Height . . . . .	7.0 in. (178 mm)
Sound Data:	
Sound Pressure Level* . . . . .	84 dB(A)
Sound Power Level** . . . . .	93 dB(A)
Wetted Parts . . . . .	Tungsten carbide, 17-4PH passivated stainless steel, polypropylene, polyethylene

\* Sound pressure measured 3.3 feet (1 meter) from equipment.

\*\* Sound power measured per ISO-9614-2.

# Graco Standard Warranty

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

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

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

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

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

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

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

## **FOR GRACO CANADA CUSTOMERS**

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# Graco Information

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

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**Graco Headquarters:** Minneapolis

**International Offices:** Belgium, China, Japan, Korea

**GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA  
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