

Operation

**ASM™ Zip-Spray™**

# 3400G Airless Gas Sprayer

311206A

*-For the application of architectural paints and coatings-*

**Model 249616**

*3000 psi (20.7 MPa, 207 bar) Maximum Working Pressure*



**Important Safety Instructions**

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



**Related  
Manuals**



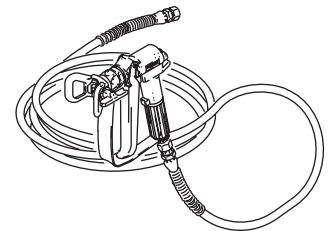
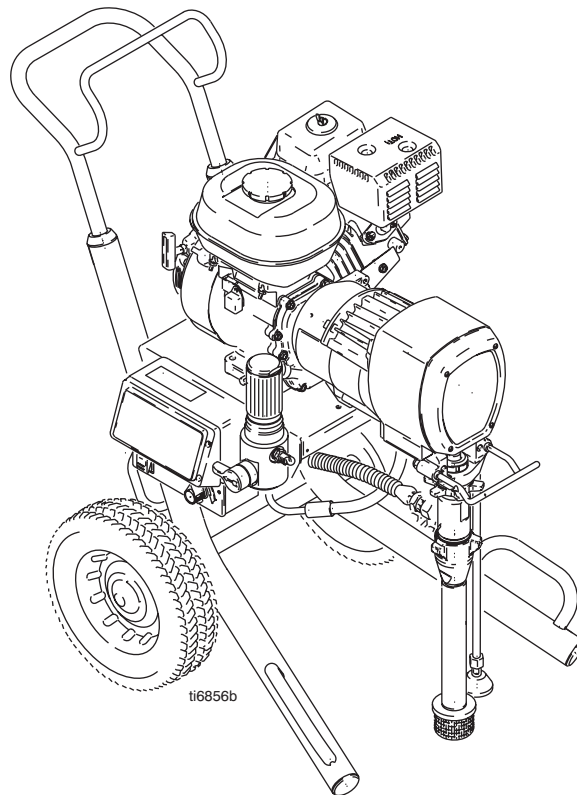
**Repair  
311207**



**Pump  
311061**






**Gun  
309971**








CE

# Warnings

The following are general warnings are related to the setup, use, grounding, maintenance and repair of this equipment. Additional more specific warnings may be found throughout the body of this manual where applicable. Symbols appearing in the body of the manual refer to these general warnings. When these symbols appear throughout the manual, refer back to these pages for a description of the specific hazard.

 <b>WARNING</b>	
	<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>• Do not fill fuel tank while engine is running or hot; shut off engine and let it cool. Fuel is flammable and can ignite or explode if spilled on hot surface.</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 equipment and conductive objects in 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.</li> <li>• If there is static sparking or you feel a shock, <b>stop operation immediately</b>. Do not use equipment until you identify and correct the problem.</li> <li>• When flammable liquid is used in or near sprayer or for flushing or cleaning, keep sprayer at least 20 ft (6 m) away from explosive vapors.</li> <li>• Keep a fire extinguisher in the work area.</li> </ul>
	<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 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>• Do not spray without tip guard and trigger guard installed.</li> <li>• Engage trigger lock when not spraying.</li> <li>• Follow <b>Pressure Relief Procedure</b> in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.</li> </ul>

 <b>WARNING</b>	
	<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 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 <b>Technical Data</b> 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>• Check equipment daily. Repair or replace worn or damaged parts immediately with genuine ASM replacement parts only.</li> <li>• Do not alter or modify equipment.</li> <li>• For professional use only.</li> <li>• Use equipment only for its intended purpose. Call your ASM 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>• Do not operate the unit when fatigued or under the influence of drugs or alcohol.</li> <li>• Comply with all applicable safety regulations.</li> </ul>
	<p><b>PRESSURIZED ALUMINUM PARTS HAZARD</b></p> <p>Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use can cause serious chemical reaction and equipment rupture, and result in death, serious injury, and property damage.</p>
	<p><b>CARBON MONOXIDE HAZARD</b></p> <p>Exhaust contains poisonous carbon monoxide, which is colorless and odorless. Breathing carbon monoxide can cause death. Do not operate in an enclosed area.</p>
	<p><b>PERSONAL PROTECTIVE EQUIPMENT</b></p> <p>You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:</p> <ul style="list-style-type: none"> <li>• Protective eyewear</li> <li>• Clothing and respirator as recommended by the fluid and solvent manufacturer</li> <li>• Gloves</li> <li>• Hearing protection</li> </ul>

## Specifications

This equipment is not intended for use with flammable or combustible materials used in places such as cabinet shops or other “factory” or fixed locations. If you intend to use this equipment in this type of application, you must comply with NFPA 33 and OSHA requirements for the use of flammable and combustible materials.

# Controls

## CONTROLS

**Engine On/Off Switch**

**Pump On/Off Switch**

**Pressure Control**

**Engine Controls**

**Drain Valve**

**ti6858b**

**! Spray Gun Trigger Safety**

Put trigger safety ON when not spraying.

safety ON

safety OFF

Take trigger safety OFF before triggering gun.

The diagram shows a central illustration of a spray gun machine with various callout boxes. The 'Engine On/Off Switch' box shows a rotary switch. The 'Pump On/Off Switch' box shows two rectangular switches with arrows indicating their operation. The 'Pressure Control' box shows a pressure gauge, a curved arrow indicating adjustment, and a pressure control knob. The 'Engine Controls' box shows a detailed view of the engine's control panel with various levers and indicators. The 'Drain Valve' box shows a valve handle and a spray gun nozzle. The 'Spray Gun Trigger Safety' section includes a warning symbol and two diagrams showing the safety lever being moved up (ON) and down (OFF) with corresponding text instructions.

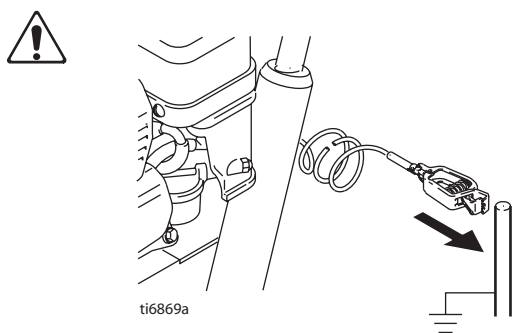
# Installation

## Grounding and Electric Requirements

The sprayer must be grounded. Grounding reduces the risk of static by providing an escape wire for the electrical current due to static build up.



Ground sprayer with grounding clamp.



**Spray gun:** ground through connection to a properly grounded fluid hose and pump.

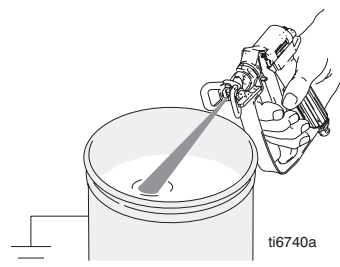
**WARNING**  
**HOT SURFACE HAZARD!**  
 Engine and drive housing may be very hot during operation and could burn skin if touched.

**Fluid supply container:** follow local code.

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

**Grounding the metal pail:** connect a ground wire to the pail by clamping one end to pail and other end to ground such as a water pipe.

**Maintaining grounding continuity when flushing or relieving pressure:** hold metal part of the spray gun firmly to the side of a grounded metal pail, then trigger the gun.



# Tip Selection

## Selecting Tip Hole Size

Tips come in a variety of hole sizes for spraying a range of fluids. Your Zip Spray sprayer includes the tip most likely to satisfy common spraying applications. Use the tables below to determine the range of recommended tip hole sizes for each fluid type. If you need a tip other than the one supplied, see the **Super Uni - Tip Selection Chart** below.

Tip Hole Size (expressed as diameter, based on area of elliptical orifice)	Coatings					
	<i>Stains</i>	<i>Enamels</i>	<i>Oil-base primers and paints</i>	<i>Interior latex paints</i>	<i>Exterior latex paints</i>	<i>Acrylics</i>
0.011 in. (0.28 mm)	✓					
0.013 in. (0.33 mm)	✓	✓	✓	✓		
0.015 in. (0.38 mm)		✓	✓	✓	✓	
0.017 in. (0.43 mm)			✓	✓	✓	✓
0.019 in. (0.48 mm)					✓	✓

### HINTS:

- As you spray, the tip wears and enlarges. Starting with a tip hole size smaller than the maximum will allow you to spray within the rated flow capacity of the sprayer while using the tip you selected.
- Maximum tip hole size supported by the Zip Spray sprayer is 0.017 in. (0.43 mm).

## Super Uni - Tip Selection Chart

Tip Part No.	Fan Width 12 in. (305 mm) from surface	Hole Size
59-411	8 to 10 in. (203 to 254 mm)	0.011 in. (0.28 mm)
59-511	10 to 12 in. (254 to 305 mm)	0.011 in. (0.28 mm)
59-313	6 to 8 in. (152 to 203 mm)	0.013 in. (0.33 mm)
59-413	8 to 10 in. (203 to 254 mm)	0.013 in. (0.33 mm)
59-415	8 to 10 in. (203 to 254 mm)	0.015 in. (0.38 mm)
59-515	10 to 12 in. (254 to 305 mm)	0.015 in. (0.38 mm)
59-417	8 to 10 in. (203 to 254 mm)	0.017 in. (0.43 mm)
59-517	10 to 12 in. (254 to 305 mm)	0.017 in. (0.43 mm)
59-519	10 to 12 in. (254 to 305 mm)	0.019 in. (0.48 mm)
59-619	12 to 14 in. (305 to 356 mm)	0.019 in. (0.48 mm)

### Using the Right Tip for the job

Consider the coating and the surface to be sprayed. Make sure you use the best tip hole size for that coating and the best fan width for that surface.

#### Tip Hole Size

Tip hole size controls the flow rate - the amount of paint that comes out of the gun.

#### HINTS:

- Generally, use larger tip hole sizes with thicker coatings and smaller tip hole sizes with thinner coatings.
- The maximum tip hole size a sprayer can support is related to its maximum flow rate. The maximum tip hole size supported by the Zip Spray sprayer is 0.017 in. (0.43 mm).
- Tips wear with use and need periodic replacement.

#### Fan Width

Fan width is the size of the spray pattern, which determines the area covered with each stroke. For a given tip hole size, narrower fans deliver a thicker coat, and wider fans deliver a thinner coat.

#### HINTS:

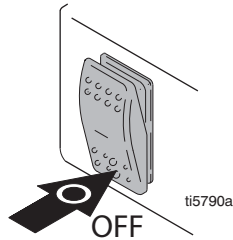
- Select a fan width best suited for the surface being sprayed.
- Wider fans allow for faster coverage on broad, open surfaces.
- Narrower fans allow for faster coverage on small, confined surfaces.

# Operation

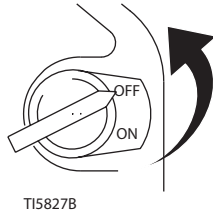
## Pressure Relief Procedure



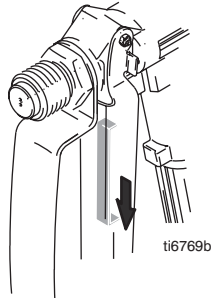
1. Engage trigger lock.
2. Turn pump switch OFF.



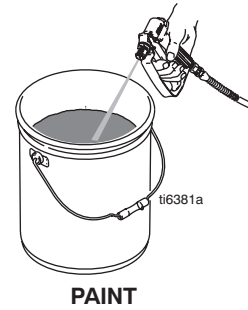
3. Turn engine OFF.



4. Disengage trigger lock.

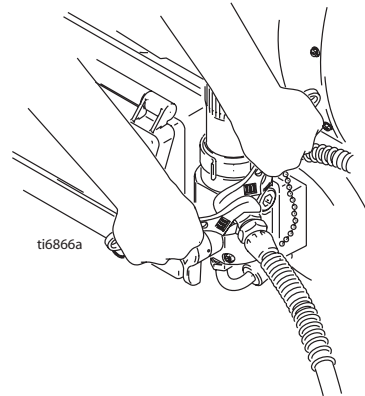


5. Turn pressure to lowest setting. Trigger gun to relieve pressure.

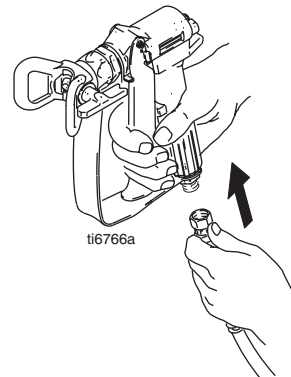


## Setup

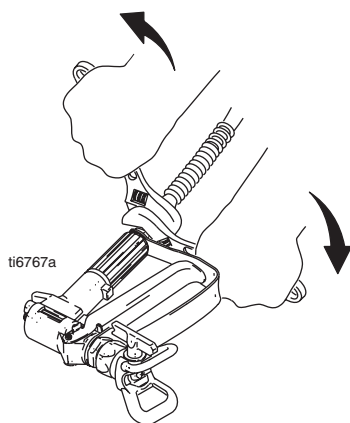
1. Connect high-pressure hose to sprayer. Tighten securely.



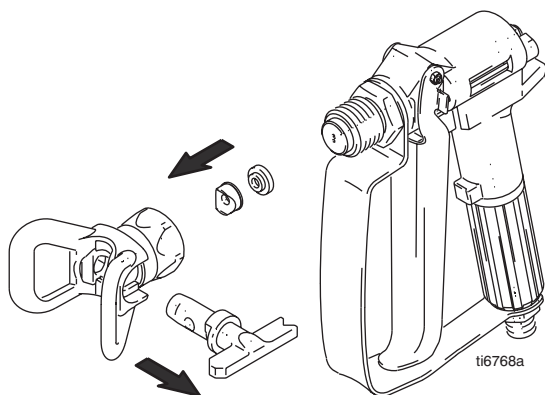
2. Connect other end of hose to gun.



3. Tighten Securely.



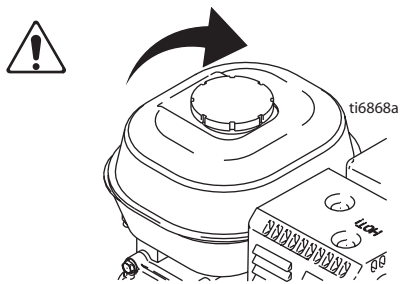
4. Remove tip guard.



5. Check engine oil level. Add SAE 10W-30 (summer) or 5W-20 (winter), if necessary.

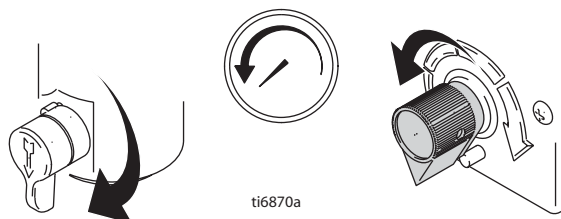


6. Fill fuel tank.

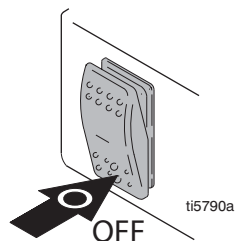


## Startup

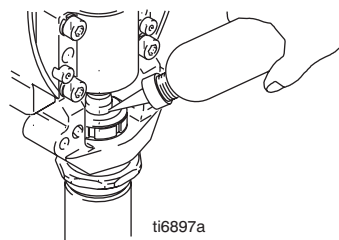
1. Place suction tube and drain tube in pail\* partially filled with flushing fluid.
2. Turn prime valve down. turn pressure control to lowest pressure.



3. Set pump switch OFF.

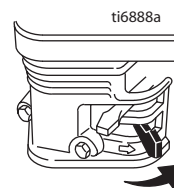


4. Fill throat packing nut with ASM Packing Seal fluid.



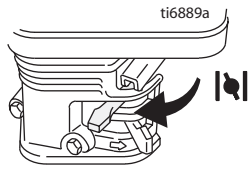
5. Start Engine.

- a. Move fuel valve to Open.

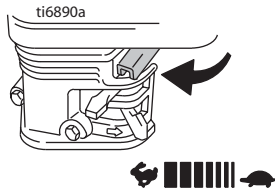




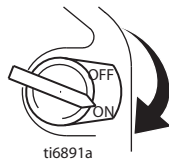
b. Move choke to Closed.



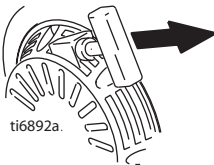
c. Set throttle to Fast.



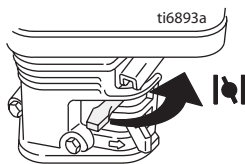
d. Set engine switch ON.



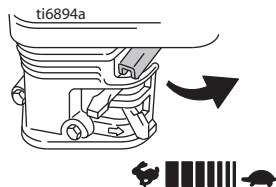
e. Pull starter cord.



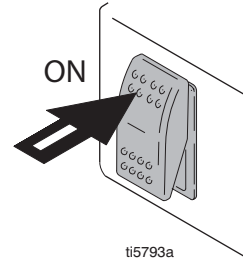
f. After engine starts, move choke to open.



g. Set throttle to desired setting.



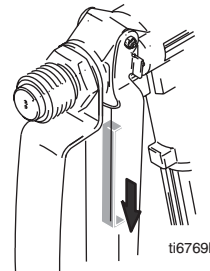
6. Set pump switch ON.  
- Pump/clutch is now active -



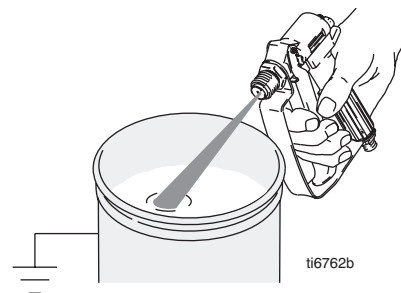
7. Increase pressure enough to start pump stroking and allow fluid to circulate for 15 seconds; turn prime valve horizontal.



8. Take spray gun trigger safety OFF.



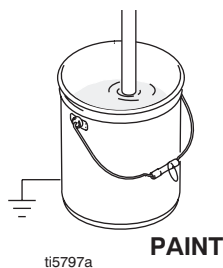
9. Hold gun against flushing pail. Trigger gun and increase fluid pressure slowly until pump runs smoothly.



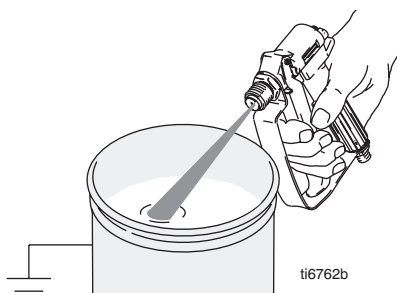


**Note:** Inspect fittings for leaks. **Do not stop leaks with your hand or a rag!** If leaks occur, turn sprayer OFF immediately. Follow **Pressure Relief Procedure, page 6.** Tighten leaky fittings. Repeat **Startup, steps 1-8.** If no leaks, continue to trigger gun until system is thoroughly flushed. Proceed to step 9.

10. Place siphon tube in paint pail.

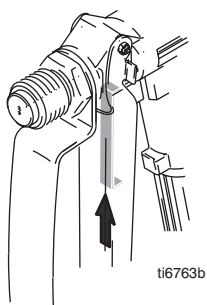


11. Trigger gun again into flushing fluid pail until paint appears.

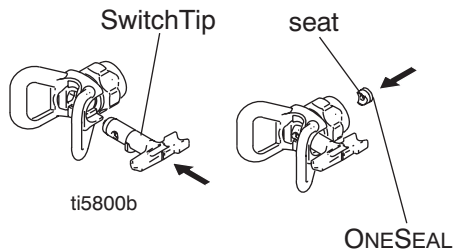


### Switch Tip and Guard Assembly

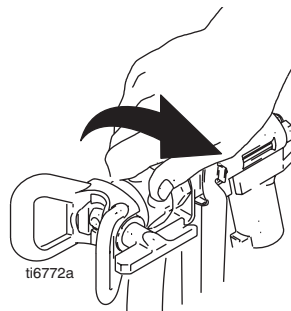
1. Engage trigger safety.



2. Insert SwitchTip™. Insert seat and OneSeal™.

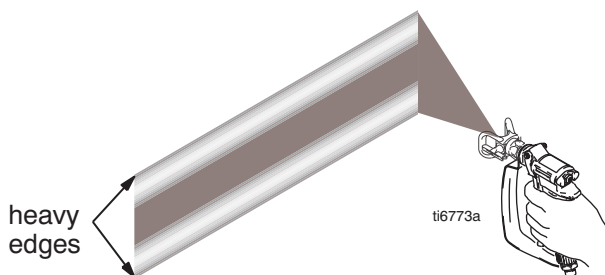


3. Screw assembly onto gun. Hand tighten.

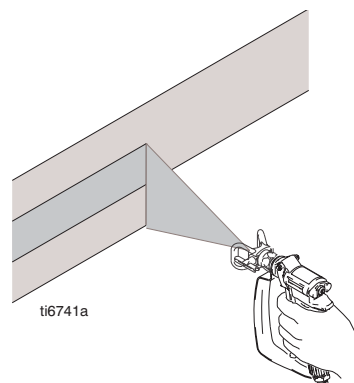


### Spray Test Pattern

1. Trigger gun and spray test pattern. Slowly adjust pressure to eliminate heavy edges. use smaller tip size if pressure adjustment can not eliminate heavy edges.



2. Hold gun perpendicular, 10-12 in. (25-30 cm) from surface. spray back and forth. Use strokes overlapped by 50%. Start gun movement before triggering gun and release trigger before stopping gun movement.

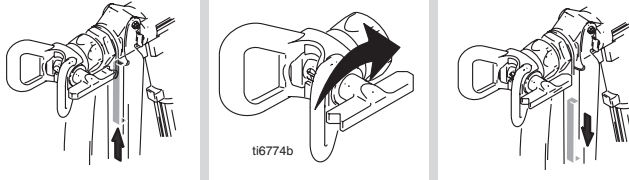


## Clearing Tip Clogs

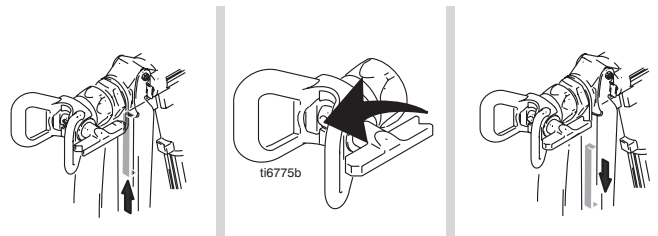
1. Release trigger, put safety ON. Rotate SwitchTip. Take trigger safety OFF and trigger gun to clear the clog.



Never point gun towards your hand or into a rag!



2. Put trigger safety ON, return SwitchTip to original position, take trigger safety OFF and continue spraying.

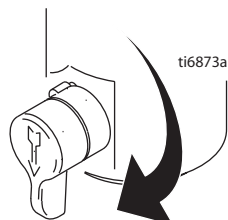


# Cleanup

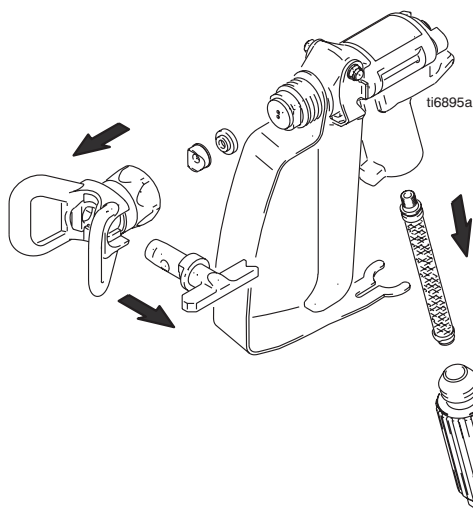
1. Relieve Pressure



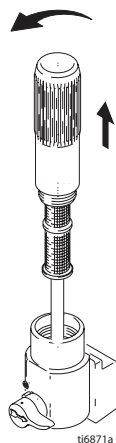
2. Turn prime valve down.



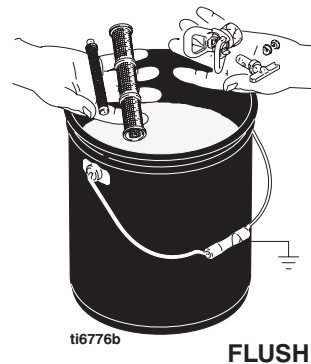
3. Remove hose, guard, SwitchTip, and filter (see gun manual 309971 for more information).



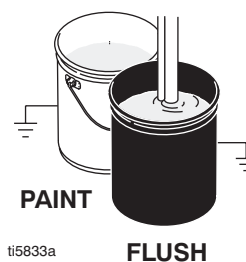
4. Unscrew bowl, remove filter. Assemble without filter.



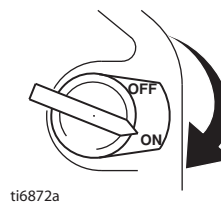
5. Clean all parts in flushing fluid. Use a soft-bristle brush to remove dried-on material.



6. Remove siphon tube set from paint and place in flushing fluid. Use water for water base paint and mineral spirits for oil base paint.



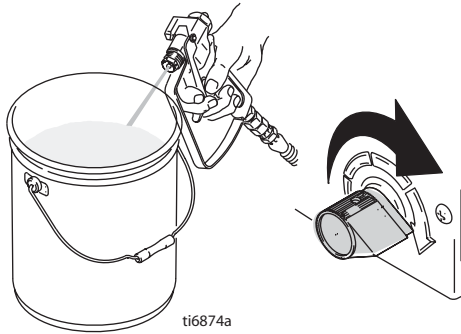
7. Turn engine ON and start engine. Set pump switch ON.



8. Turn prime valve horizontal.

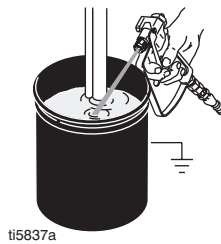


9. Hold gun against paint pail. Take trigger safety OFF. Trigger gun until flushing fluid appears. Turn pressure control up until motor begins to drive pump.



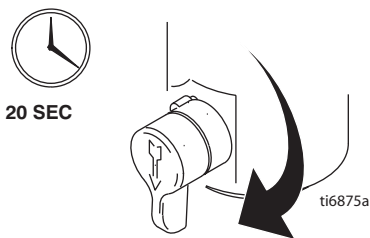
**PAINT**

10. Move gun to flushing pail, hold gun against pail, trigger gun to thoroughly flush system. Release trigger and set trigger safety **ON**.

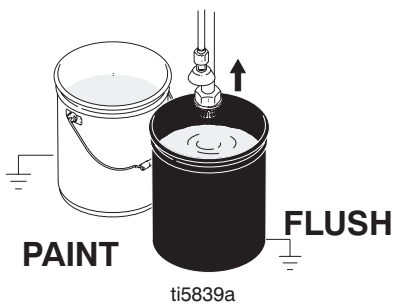


**FLUSH**

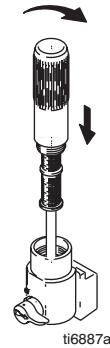
11. Turn prime valve down and allow flushing fluid to circulate for approximately 20 seconds to clean drain tube.



12. Raise siphon tube above flushing fluid and run sprayer for 15 to 30 seconds to drain fluid. Turn pump switch **OFF**. Turn engine **OFF**.



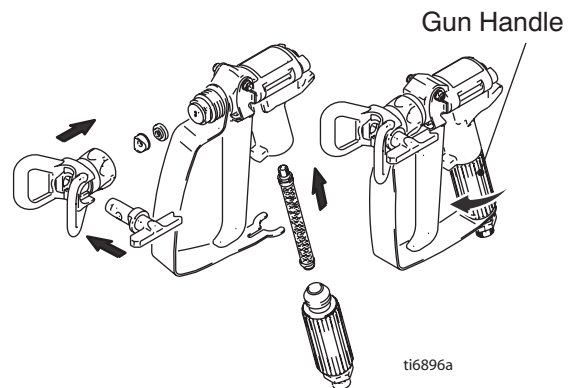
13. Install plastic support, filter and filter bowl. Hand tighten.



14. Wipe sprayer, hose and gun with a rag soaked in water or mineral spirits.



15. Hand tighten gun handle.



16. Store sprayer with mineral spirits or ASM Pump Life fluid.

# Notes

## Technical Data

Honda Engine	Inlet paint strainer .....16 mesh (1190 micron) stainless steel screen, reusable
Power Rating @ 3700 rpm	
ANSI .....4.0 Horsepower	
DIN 6270B/DIN 6271	
NA .....2.1 Kw - 2.8 Ps	
NB .....2.6 Kw - 3.6 Ps	
Maximum working pressure ...3000 psi (21 MPa, 210 bar)	Outlet paint filter .....60 mesh (250 micron) stainless steel screen, reusable
Noise Level	Pump inlet size .....3/4 in. npt (m)
Sound power .....105 dBa per ISO 3744	
Sound pressure ...96 dBa measured at 3.1 feet (1 m)	
Cycles/gallon (liter) .....182 (48)	Fluid outlet size .....1/4 npsm from fluid filter
Maximum delivery rating 1.15 gpm (4.4 liter/min)	Wetted parts .....zinc-plated carbon steel, PTFE, Nylon, polyurethane, UHMW polyethylene, Viton <sup>®</sup> , Delrin <sup>®</sup> , leather, aluminum, tungsten carbide, nickel- and zinc-plated carbon steel, stainless steel, chrome plating
Maximum tip size .....1 gun with 0.034 in. tip	<b>NOTE:</b> Delrin and Viton are trademarks of the DuPont Company.
2 guns with 0.024 in. tip	
3 guns with 0.017 in. tip	

## Dimensions

### Without hose or gun

Weight (dry, without packaging) .....110 lb (49.9 kg)	Length .....37 in. (94 cm)
Height .....40 in. (101.6 cm)	Width .....22 in. (55.9 cm)

# ASM Standard Warranty

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

This warranty does not cover, and ASM 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-ASM component parts. Nor shall ASM be liable for malfunction, damage or wear caused by the incompatibility of ASM equipment with structures, accessories, equipment or materials not supplied by ASM, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by ASM.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized ASM distributor for verification of the claimed defect. If the claimed defect is verified, ASM 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.**

ASM'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.

**ASM 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 ASM.** These items sold, but not manufactured by ASM (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. ASM will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will ASM be liable for indirect, incidental, special or consequential damages resulting from ASM 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 ASM, or otherwise.

## **FOR ASM BRAZILIAN/CANADIAN/COLUMBIAN CUSTOMERS**

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English.

**TO PLACE AN ORDER OR FOR SERVICE**, contact your ASM distributor, or call 1-800-854-4025 to identify the nearest distributor.

*All written and visual data contained in this document reflects the latest product information available at the time of publication. ASM reserves the right to make changes at any time without notice.*

MM 311206

**ASM Company, 3500 North 1st Avenue, Sioux Falls, SD 57104**

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

PRINTED IN USA 311206 7/2005