

3A1174B

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## Interior Texture Sprayer TS650

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**For use with water based materials only. For professional use only.**

**Not approved to European explosive atmosphere requirements.**

### 24F565

50 psi (.35 MPa, 3.5 bar) Maximum Fluid Working Pressure

100 psi (.7 MPa, 7 bar) Maximum Air Input Pressure



### Important Safety Instructions

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

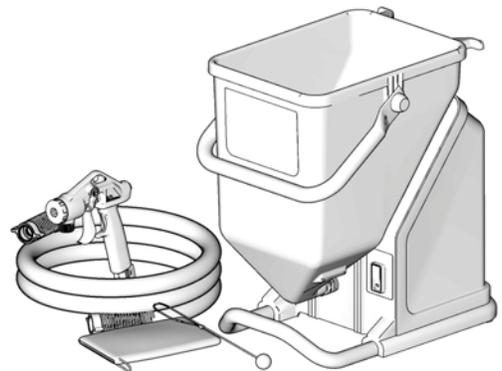
### Related Manuals



311969



3A1176



ti8370a

# 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, 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.

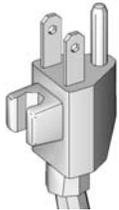
## **WARNING**



### **GROUNDING**

This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

- Improper installation of the grounding plug is able to result in a risk of electric shock.
- When repair or replacement of the cord or plug is required, do not connect the grounding wire to either flat blade terminal.
- The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.
- Check with a qualified electrician or serviceman when the grounding instructions are not completely understood, or when in doubt as to whether the product is properly grounded.
- Do not modify the plug provided; if it does not fit the outlet, have the proper outlet installed by a qualified electrician.
- This product is for use on a nominal 120V circuit and has a grounding plug similar to the plug illustrated in the figure below.

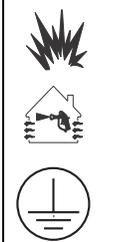
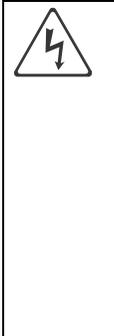
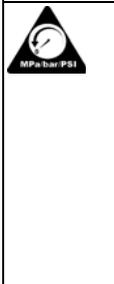


- Only connect the product to an outlet having the same configuration as the plug.
- Do not use an adapter with this product.

#### Extension Cords:

- Use only a 3-wire extension cord that has a 3-blade grounding plug and a 3-slot receptacle that accepts the plug on the product.
- Make sure your extension cord is not damaged. If an extension cord is necessary, use 12 AWG (2.5 mm<sup>2</sup>) minimum to carry the current that the product draws.
- An undersized cord results in a drop in line voltage and loss of power and overheating.

# ! WARNING

	<p><b>FIRE AND EXPLOSION HAZARD</b></p> <p>Flammable fumes, such as solvent, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> <li>• Use equipment in well ventilated area.</li> <li>• Sprayer generates sparks. When flammable liquids are used near the sprayer or for flushing or cleaning, keep sprayer at least 20 feet (6 meters) away from explosive vapors.</li> <li>• Keep work area free of debris, including solvent, rags and gasoline.</li> <li>• Ground equipment in the work area. See <b>Grounding</b> instructions.</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>• Keep a working fire extinguisher in the work area.</li> </ul>
	<p><b>ELECTRIC SHOCK HAZARD</b></p> <p>This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.</p> <ul style="list-style-type: none"> <li>• Turn off and disconnect power cord before servicing equipment.</li> <li>• Use only grounded electrical outlets.</li> <li>• Use only 3-wire extension cords.</li> <li>• Ensure ground prongs are intact on power and extension cords.</li> <li>• Do not expose to rain. Store indoors.</li> </ul>
	<p><b>PRESSURIZED EQUIPMENT HAZARD</b></p> <p>Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> <li>• Follow the <b>Pressure Relief Procedure, page 7</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, tubes, and couplings daily. Replace worn or damaged parts immediately.</li> </ul>

# ! WARNING



## EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Always wear appropriate gloves, eye protection, and a respirator or mask when painting.
- Do not operate or spray near children. Keep children away from equipment at all times.
- Do not overreach or stand on an unstable support. Keep effective footing and balance at all times.
- Stay alert and watch what you are doing.
- Do not leave the unit energized or under pressure while unattended. When the unit is not in use, turn off the unit and follow the **Pressure Relief Procedure** for turning off the unit.
- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not kink or over-bend the hose.
- Do not expose the hose to temperatures or to pressures in excess of those specified by Airlessco.
- Do not use the hose as a strength member to pull or lift the equipment.



## PLASTIC PARTS CLEANING SOLVENT HAZARD

Many solvents can degrade plastic parts and cause them to fail, which could cause serious injury or property damage.

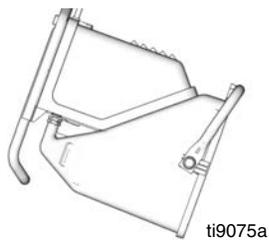
- Use only compatible water-based solvents to clean plastic structural or pressure-containing parts.
- See **Technical Data** in this and all other equipment instruction manuals. Read fluid and solvent manufacturer's MSDSs and recommendations.



## PERSONAL PROTECTIVE EQUIPMENT

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, hearing loss, inhalation of toxic fumes, and burns. This equipment includes but is not limited to:

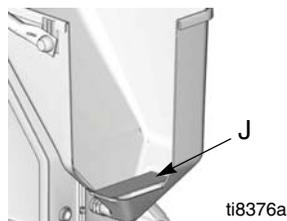
- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

**NOTICE**

Water or material remaining in unit when temperatures are below freezing can damage motor and/or delay pump startup.

To insure water and material are completely drained out of unit:

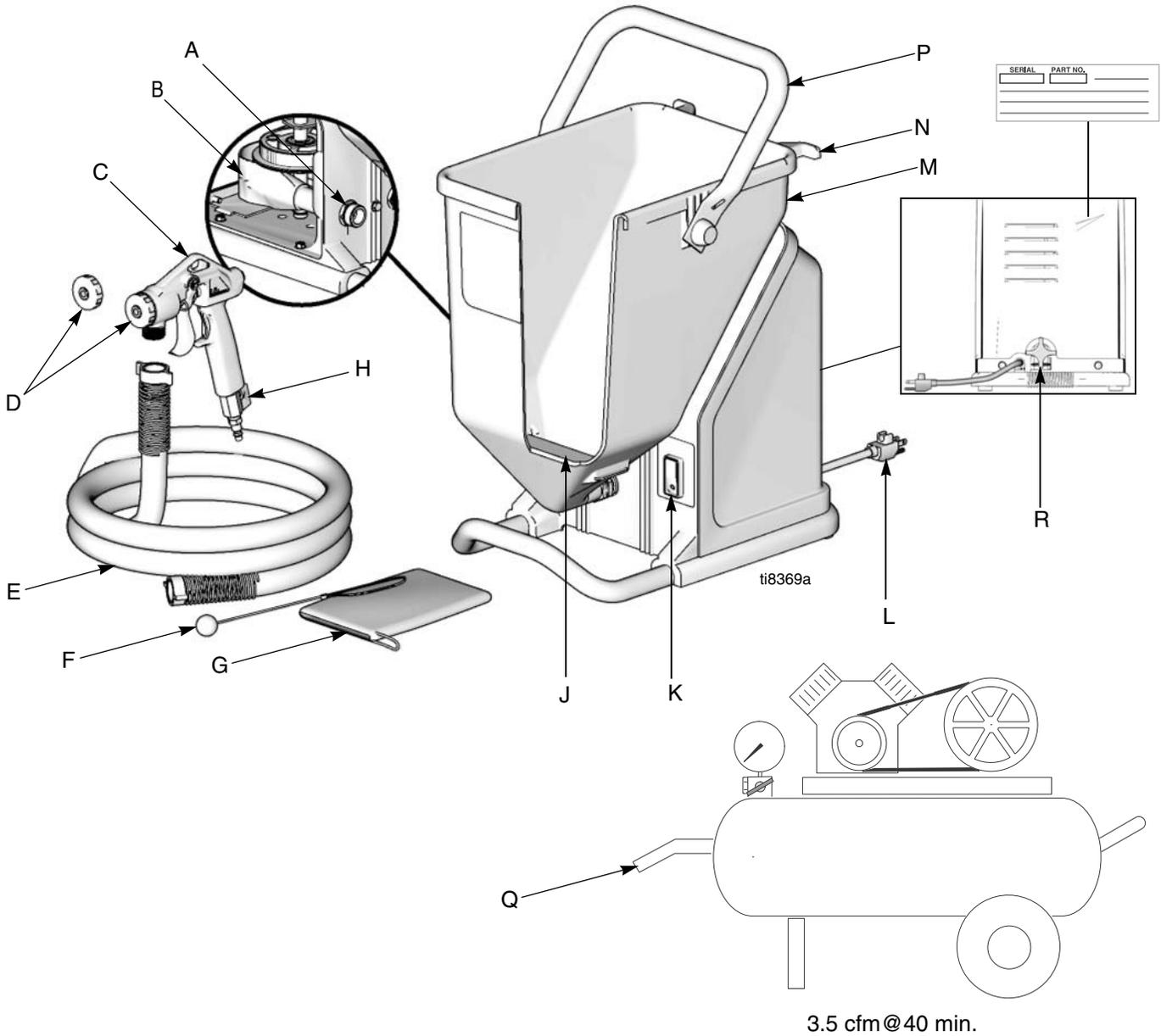
1. Remove material line from sprayer.
2. Tip sprayer up as shown.



Before adding material or starting unit in cold weather, run warm water through pump.

Before adding material to hopper, install burp guard (J). When only a small amount of material remains in the hopper, the burp guard prevents material from shooting out when the unit is turned off. This material could splash in the operator's eyes or on skin, or into the air.

# Component Identification



Item	Component	Item	Component
A	Pump Hose Outlet	J	Burp Guard
B	RotoFlex™ II Pump (inside)	K	ON/OFF Switch
C	Texture Spray Gun (Manual 311969)	L	Power Cord (120V, 15 ft)
D	Nozzle (2 included, see <b>Nozzle Selection, page 11</b> )	M	Material Hopper - 5 gallon
E	Material Hose (20 ft)	N	Cord Wrap
F	Material Thickness Gauge	P	Handle
G	Accessories Bag	Q	Air Compressor (Not Supplied)
H	Gun Air Valve	R	Knob

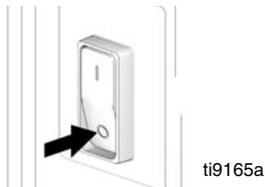
# Preparation

## Pressure Relief Procedure

		
<p>To reduce risk of injury, follow this procedure whenever you see this symbol throughout this manual, Also, perform this procedure whenever you:</p> <ul style="list-style-type: none"> <li>• Stop spraying</li> <li>• Check or repair any part of this system</li> <li>• Install or clean spray nozzle</li> </ul>		



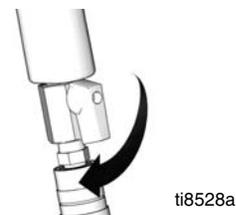
1. Turn power switch (K) OFF.



2. Trigger gun into material hopper.



3. Open gun air valve.



## Grounding and Electrical Requirements

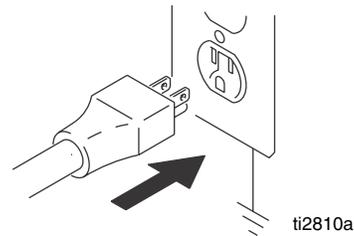
This sprayer must be grounded. Grounding reduces the risk of electrical shock by providing an escape wire for the electrical current. The sprayer cord includes a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Check with a qualified electrician or serviceman if grounding instructions are not completely understood, or if in doubt as to whether the product is properly grounded. Do not modify plug provided; if it will not fit the outlet, have proper outlet installed by a qualified electrician.



## 120V AC Systems

- This equipment requires a 120V AC, 60 Hz, 15A circuit with a grounding receptacle. Do not use an adapter with this product.



## Extension Cords

- Use only an extension cord with an undamaged, 3-prong plug.
- For 25 to 50 ft (7.6 to 15.2 m) cords, use 3-wire, 14 AWG (1.5 mm<sup>2</sup>) minimum.
- For up to 100 ft. (30.48 m) cord, use 3-wire, 12 AWG (2.5 mm<sup>2</sup>) minimum.

## Additional Required Equipment

### Auxiliary Air Compressor

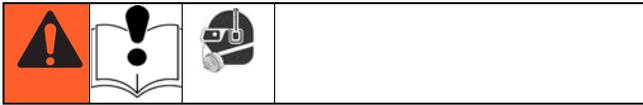
Minimum Requirements: 3.5 CFM @ 40 psi or 2.5 CFM @ 90 psi (maximum 100 psi)

3/8 x 25 ft minimum airline rated @ 120 psi/min

### Alternate Power - Generator Requirements

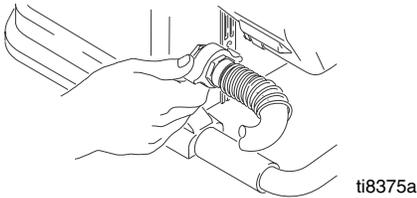
3500 W (3.5 kW) minimum

# Setup

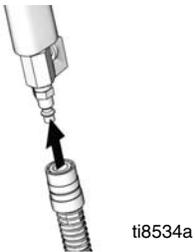


## Texture Spraying

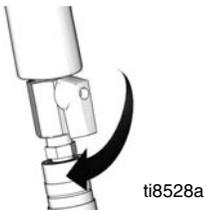
1. Connect air hose to user-supplied air compressor & material hose (G) to material hose outlets.



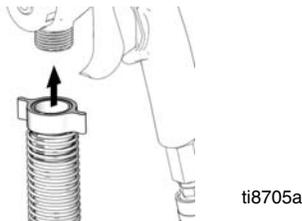
2. Connect air hose to gun.



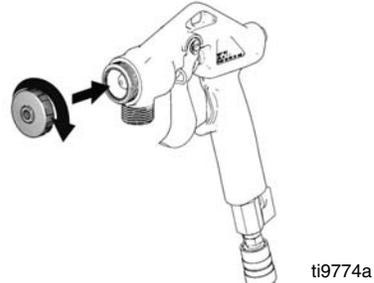
3. Open air valve.



4. Connect material hose to gun.



5. Install spray nozzle. See **Recommended Nozzle Selection Chart, page 11.**



**NOTE:** To break in new pump run dry for no more than 2 minutes.

6. Fill material hopper with 1 gallon of water.

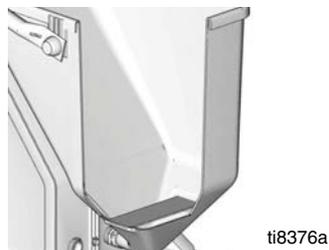


7. Turn power switch (K) ON (leave compressor OFF).

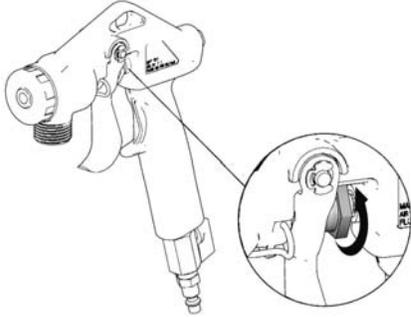


8. Point gun into waste bucket and pull trigger to pump water through the system. Continue to trigger gun until material hopper is empty.

9. Install burp guard (J).



10. Add pre-mixed texture mix to material hopper. **See Mixing Material, page 10.**
11. Continue to trigger gun and spray into waste bucket until a steady stream of material sprays out of gun.
12. Turn on Air compressor and open gun valve to desired setting.



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13. To achieve uniform spray pattern, adjust air valve and flow adjustment nut on gun. If you can not achieve a desired pattern, change nozzle, page 11.

**NOTE:** Fluid flow will be restricted if the material hose is kinked.

**NOTE:** To increase pump life, turn power off when not spraying.

# Mixing Material

## NOTICE

Correct material mixture is essential. The pump will not operate if the mixture is too thick.

**NOTE:** Mix the material in a separate container before pouring it into hopper.

**NOTE:** Use Material Thickness Gauge to determine mixture is thin enough to spray.

\*The Material Thickness Gauge will only determine if the material is thin enough to pass through the pump. For some applications or for higher speed spraying, your mixture may need to be thinner.

### Dry Mix - 40 lb (18 kg) bag.

**NOTE:** For best results do not use partial bags of material.

1. Slowly add one 40 lb. (18 kg) bag of texture material to 5-6 gallons (18.9-22.7 liters) of clean water as instructed on the bag instructions.



2. Agitate to mix, using a half-inch, variable speed drill with mixing paddle, to a smooth, lump-free consistency.



3. Allow ceiling texture to set for at least 15 minutes. Then remix prior to use.
4. After texture material is thoroughly mixed, gently set ball end of Material Thickness Gauge on surface of mixture.

**NOTE:** For an accurate test, be sure gauge is completely dry and clean every time it is used.

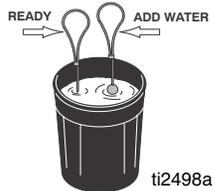
5. Observe the ball on the material. When the material is thin enough to spray the ball will sink completely into the mixture.



6. If the ball does not sink completely into the mixture within 10 seconds, add more water, agitate and try test again.

### Premix

1. Slowly add approximately 2 to 4 qts (1.9 to 3.8 liters) of water to a 5 gallon (18.9 liter) bucket of premix.



2. Agitate to mix, using a half-inch, variable speed drill with a mixing paddle, to a smooth, lump-free consistency.
3. After texture material is thoroughly mixed, gently set ball end of Material Thickness Gauge on surface of mixture.

**NOTE:** For an accurate test, be sure gauge is completely dry and clean every time it is used.

4. Observe the ball in material. When the material is thin enough to spray the ball will sink completely into the mixture.
5. If the ball does not sink completely into the mixture within 10 seconds, add more water, agitate and try test again.

# Spray Techniques

## Recommended Nozzle Selection Chart

Application	Nozzle Size <sup>2</sup>	Air Volume <sup>1</sup>
Simulated Acoustic	6 mm, white ( <i>fine to medium</i> ) 8 mm, gray ( <i>coarse</i> )	medium to high
Orange peel	6 mm, white	medium to high
Splatter coat	6 mm, white 8 mm, gray	low to medium
Knockdown	8 mm, gray	low

<sup>1</sup>Control air volume with gun air valve.

<sup>2</sup>For more material volume try a larger nozzle.

## Adjusting the System

Sufficient fluid output (volume and pressure) and good atomization is a balance of atomizing air, material thickness/material flow and nozzle selection. Achieving the correct balance for your application requires experimentation to achieve desired results. Keep in mind these important points when adjusting the gun:

- Select proper nozzle for your application. See **Nozzle Selection Chart**. Remember, the larger the nozzle, the heavier the pattern.
- Start sprayer with gun air flow valve completely open. If needed, slowly close gun air flow until you get a good spray pattern. Use minimum amount of air at spray gun to achieve proper spray pattern and to minimize bounce back.
  - + Test spray pattern on cardboard. Hold gun 18 to 24 in. (45.7 to 60.9 cm) from surface. Use this spraying distance for most applications.
- Air and material flow adjustments are made at the gun on all units.
  - + Opening air valve increases air flow through gun, which decreases texture material flow through pump.
  - + Closing air valve decreases air flow through gun, which increases texture material flow through pump.
- Set air compression at a minimum of 25 psi. Additional air pressure may be needed for thicker materials or when product is applied to ceilings.

## To Get Less Material

Try one or a combination of these methods:

- Open air valve.
- Turn gun flow adjustment nut to decrease flow, counter-clockwise.
- Use smaller nozzle.

## To Get More Material

Try any one or a combination of these methods:

- Close air valve.
- Turn gun flow adjustment nut to increase flow, clockwise.
- Use thinner material mixture.
- Use a larger nozzle.

## Preventing Material Surge at Gun Trigger

Pressure will build up in the system when you stop triggering the gun. To prevent material surge at initial gun triggering:

- Point gun away from surface you are spraying when you first pull trigger.
- When you first start to spray, hold the gun away from the surface and gradually work your way closer to it.
- Keep gun moving.
- After you begin spraying, trigger the gun as little as possible.

## For Continuous Spraying

Use trigger lock to hold trigger open and reduce fatigue.

## Check Material Consistency Periodically

Check and thin material as needed to maintain proper consistency. The material may thicken as it sits and slow down production. Agitate periodically.

# Shutdown and Cleanup

## NOTICE

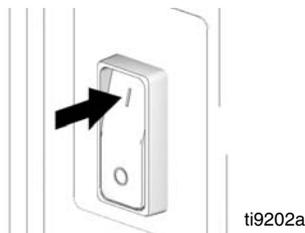
- Keep pump and hose clean when switching between simulated acoustic, knockdown and orange peel applications. A dirty pump can release particles of texture into the finish.
- To prevent damage, before removing material hose, be sure pressure is relieved and material is not in hose.
- To keep unit in good operating condition, always clean it thoroughly and prepare it properly for storage. Do not allow material to dry inside pump, hoses, gun or spray system to prevent damage to equipment.



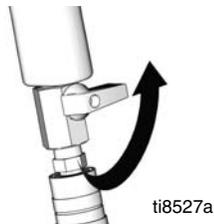
## Texture Spraying (5 gallon Material Hopper)

When you have finished spraying:

1. Turn sprayer power switch (K) ON (air compressor can remain OFF).

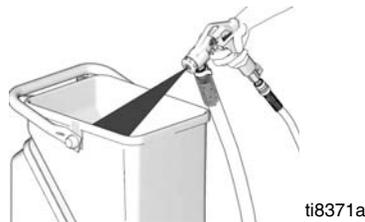


2. Close gun air valve.



3. Trigger gun into bucket until most of texture mix is pumped out.
4. Fill material hopper with 2-4 gallons of clean water.

5. Spray inside material hopper to circulate water through gun and hose. While circulating water, use gun to clean material hopper.



6. Spray water into a waste bucket to empty material hopper.

**NOTE:** A soft brush can be used to loosen dried on material.

7. Turn sprayer power switch OFF.
8. Turn air compressor ON.
9. Open gun air valve to blow out any remaining texture residue. Flush with water.

## NOTICE

If water freezes in unit, damage may occur. Store system where it will not freeze during cold weather.

10. Turn air compressor OFF.

**NOTE:** Inspect slots under machine daily for texture material. If you find material flowing out of slots or see material inside unit, replace pump hose immediately.

**NOTE:** To increase pump life, turn power off when not spraying.

# Troubleshooting



Problem	Cause	Solution
Sprayer won't run	Power switch not on	Turn switch on.
	No power at wall outlet	Check outlet by plugging in another appliance. If appliance does not work, try another outlet.
	Wrong size generator	Use a 3500 watt or larger generator. Refer to <b>Generator Requirements, page 7.</b>
	Breaker tripped	Reset breaker.
Pump won't pump material	Air lock	Open air valve on gun.
	Mix too thick	Add water to thin material. Use Material Thickness Gauge.
	Loose fittings	Check and retighten all fittings.
	Plugged gun	<b>Relieve Pressure, page 7.</b> Remove gun from hose. Clean gun.
	Pump hose worn out	Replace hose. Recommended hose replacement - once every year.
	Pump cold	Move pump to warm room and allow it to warm up or run hot water through sprayer.
Material runs out of bottom of sprayer	Pump hose worn out	Replace hose.
	Loose fittings	Check and retighten all fittings.
No air from compressor	Gun air valve closed	Open gun air valve.
	Low voltage	Check extension cord length and gauge. Replace if different than recommended. Refer to <b>Grounding and Electrical Requirements, page 7.</b>
	Gun needle plugged	Clean needle and retry.
	Worn compressor	Replace compressor. Contact an authorized Airlessco Service Center.
	Lines not connected	Check all quick disconnect connections to gun and hoses.
	Damaged hose	Replace hose.

Problem	Cause	Solution
Speed of application slow or slower	New pump hose not broken in properly	Run pump dry for no more than 2 minutes.
	Material too thick	Thin material.
	Nozzle too small	Change nozzles to a larger size. See <b>Recommended Nozzle Selection Chart, page 11.</b>
	Too much air being used	Partially close gun air valve to reduce air flow.
	Pump hose worn	Replace hose.
	Plugged or dirty gun	<b>Relieve Pressure, page 7.</b> Clean gun.
	Kinked hose	Unkink hose.
	Gun adjustment set too low	Increase flow adjustment with flow adjustment nut.
	Too many items on same circuit	Unplug other items from circuit
	Extension cord too long or wrong gauge	Use a different extension cord. Refer to <b>Grounding and Electric Requirements, page 7.</b>
Intermittent flow/sputtering	Hopper connection not tight	Check gasket. Tighten connection.
	Debris in system	Clean system.
Quick disconnect does not stay connected.	Dirty or corroded fitting	Clean thoroughly. Soak in oil. Apply a few drops of light oil.
Gun will not shut off	Worn nozzle or needle	<b>Relieve Pressure, page 7.</b> Replace worn parts.
	Debris in needle passage	<b>Relieve Pressure, page 7.</b> Clean.
Fluid leaking at Flow Adjustment Nut	Damaged seal	<b>Relieve Pressure, page 7.</b> Replace seal.
Fluid leaking out of either plug	Missing or damaged o-rings	<b>Relieve Pressure, page 7.</b> Replace o-rings.
	Gun damaged	Replace gun.
Needle adjustment won't adjust	Dirty threads	Clean threads.
	Nozzle not on gun	Put nozzle on gun.

# Technical Data

Main Unit Power Requirements . . . . .	120 Vac, 60 Hz, 15A, 1 phase
Maximum Fluid Working Pressure . . . . .	50 psi (.35 MPa, 3.5 bar)
Maximum Air Working Pressure . . . . .	100 psi (.7MPa, 7 bar)
Compressor Specifications . . . . .	Universal motor thermally protected, oil less
Compressor (Not Supplied) . . . . .	3.5 @ 40 psi minimum
Generator (Optional) . . . . .	3500 W minimum
Electric Motor . . . . .	Permanent Magnet DC-5A
Power Cord . . . . .	16 AWG, 3 wire, 15 ft
Material Hopper Capacity . . . . .	5 gallons
Maximum Delivery with Texture . . . . .	0.65 gpm
TS650 Dimensions and Weight	
Length . . . . .	19 in. (482 mm) with handle
Width . . . . .	12 in. (305 mm)
Height (no handle) . . . . .	20 in. (508 mm)
Weight (includes hoses or gun) . . . . .	33 lb (14.9 kg)
Wetted Parts . . . . .	brass, aluminum, plastic
Sound Data (less compressor)	
Sound Pressure Level . . . . .	N/A
Sound Power Level . . . . .	N/A
Storage Temperature Range . . . . .	35°F - 160°F (1.6°C - 71°C)
Operating Temperature Range . . . . .	40°F - 115°F (4°C - 46°C)
Gun:	
Maximum Fluid Working Pressure . . . . .	70 psi (.5 MPa, 5 bar)
Maximum Air Working Pressure . . . . .	125 psi (.86 MPa, 8.6 bar)
CFM Rating . . . . .	3.0 - 11 CFM
Weight . . . . .	1.1 lb (500 g)

# Airlessco Standard Warranty

Airlessco warrants all equipment referenced in this document which is manufactured by Airlessco 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 Airlessco, Airlessco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Airlessco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Airlessco's written recommendations.

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

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

Airlessco'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.

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

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

## **FOR AIRLESSCO CANADA CUSTOMERS**

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés, à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

**TO PLACE AN ORDER OR FOR SERVICE**, contact your Airlessco distributor,  
or call 1-800-223-8213 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.*

*Airlessco reserves the right to make changes at any time without notice.*

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

Original Instructions. This manual contains English. MM 3A1174

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