

309665L

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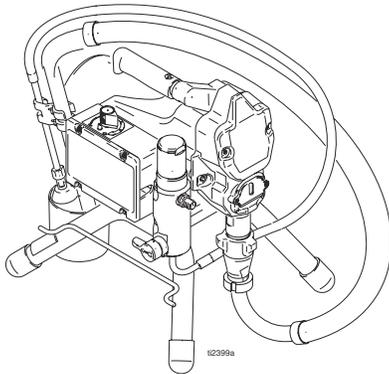
## Electric Airless Sprayers

- For the application of architectural paints and coatings -

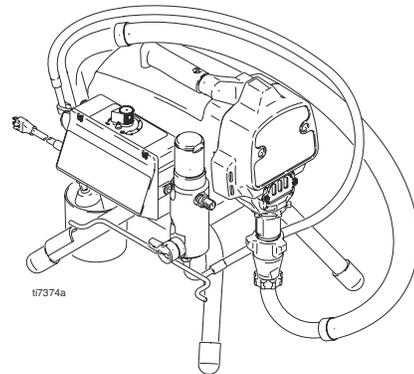


**Important Safety Instructions.** Read all warnings and instructions in this manual. Save these instructions.

3300 psi (227 bar, 22.7 MPa) Maximum Working Pressure



Ultra™ 395/495/595  
Ultimate Nova™ 395  
Super Nova™ 495/595  
ST Max™ 395/495/595



UltraMax II™ 490/495/595  
Ultimate MX II™ 490/495/595  
ST Max II™ 490/495/595

PROVEN QUALITY. LEADING TECHNOLOGY.



# Models

VAC	Model			
120	Ultra 395 Ultimate Nova 395	233960 826014	233961	233962
	Ultra 495 Super Nova 495	233966 826017	233967 826018	233968 826019
	Ultra 595 Super Nova 595		234490 826052	234435 826046
	Ultra Max II 490 Ultimate MX II 490	249911 825028	249913 825029	249914 825036
	Ultra Max II 495 Ultimate MX II 495	249915 825037	249916 825038	249917 825039
	Ultra Max II 595 Ultimate MX II 595		249918 825046	249919 825045
230 CEE	ST Max 395 Hopper	233955		
	ST Max 395	234176	258662	
	ST Max 495	233956	233970	233971
	ST Max 595		248661	244437
	ST Max II 490 Hopper	253011		
	ST Max II 490	249926	253012	253013
	ST Max II 495	249928	253014	249978
	ST Max II 595		253015	249930
230 Europe	ST Max 395	223963		
	ST Max 495	233957		233975
	ST Max 595			244436
	ST Max II 490	249927		
	ST Max II 495	249929		249979
	ST Max II 595			249931
110 UK	ST Max 395	223972		
	ST Max 495	233973		233975
	ST Max 595			244436
	ST Max II 490	249935		
	ST Max II 495	249936		249980
	ST Max II 595			249937
230 Asia	Ultra 395	234180		
	Ultra 495	234183	234181	234182
	Ultra 595		248660	244439
	Ultra Max II 490	249932		
	Ultra Max II 495	249933	253104	253105
	Ultra Max II 595		253107	249934
100 Japan	Ultra Max 495	234186	233974	
	Ultra Max II 495	249938	253106	

# Warnings

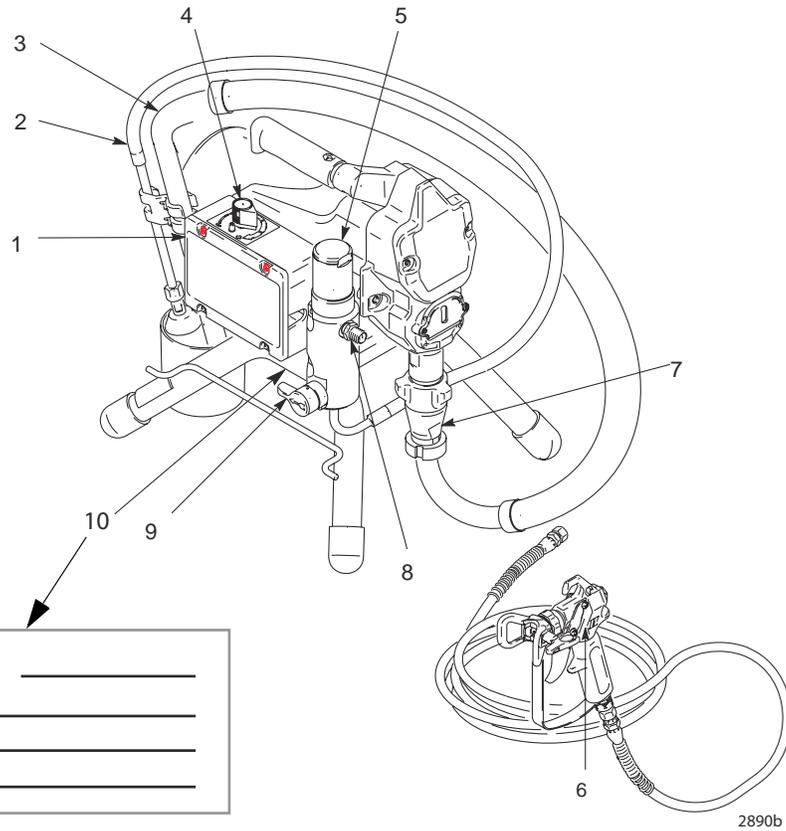
The following are general warnings related to the setup, use, grounding, maintenance and repair of this equipment. Additional, more specific warnings may be found throughout the body of this manual where applicable. Symbols appearing in the body of the manual refer to these general warnings. When these 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 work area 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>• Sprayer generates sparks. When flammable liquid is used in or near the sprayer or for flushing or cleaning, keep sprayer at least 20 feet (6 m) away from explosive vapors.</li> <li>• Keep work area free of debris, including solvent, rags and gasoline.</li> <li>• Do not plug or unplug power cords or turn lights on or off when flammable fumes are present.</li> <li>• Ground equipment and conductive objects in work area. Read <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 fire extinguisher in the work area.</li> </ul>
	<p><b>ELECTRIC SHOCK HAZARD</b></p> <p>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 sprayer and extension cords.</li> <li>• Do not expose to rain. Store indoors.</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>• 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. Read <b>Technical Data</b> in all equipment manuals.</li> <li>• Use fluids and solvents that are compatible with equipment wetted parts. Read <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 Graco replacement parts only.</li> <li>• Do not alter or modify equipment.</li> <li>• Use equipment only for its intended purpose. Call your Graco 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 overbend hoses or use hoses to pull equipment.</li> <li>• Comply with all applicable safety regulations.</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> </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>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 MSDS's 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>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 eye wear</li> <li>• Clothing and respirator as recommended by the fluid and solvent manufacturer</li> <li>• Gloves</li> <li>• Hearing protection</li> </ul>
	<p><b>CALIFORNIA PROPOSITION 65</b></p> <p>The engine exhaust from this product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.</p>

# Component Identification

Model 233960 shown

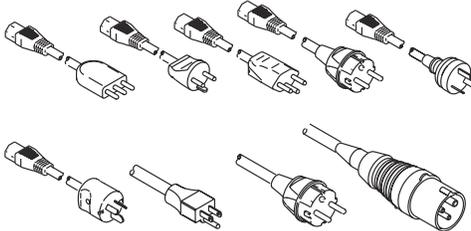
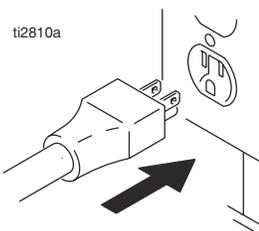


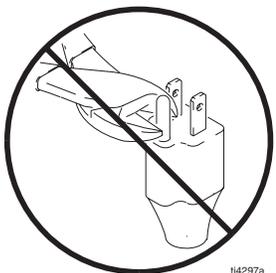
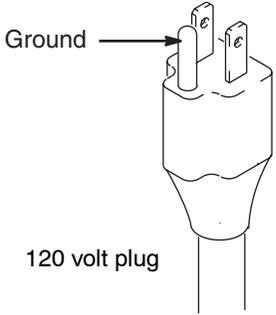
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_____	_____	_____

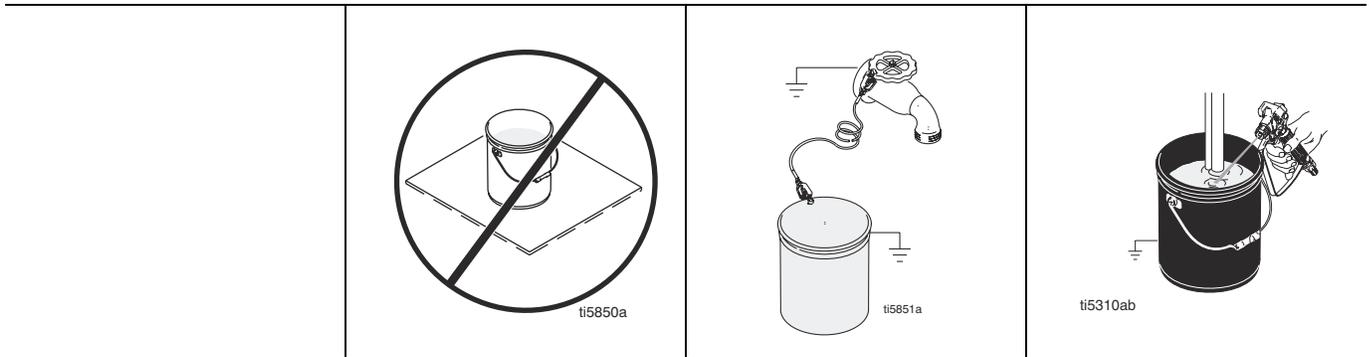
	English
1	ON/OFF switch
2	Drain tube
3	Siphon tube
4	Pressure control
5	Filter
6	Trigger lock
7	Pump
8	Fluid outlet
9	Prime/Spray valve
10	Service Tag (below sprayer frame)

## Grounding

English						
<p>The sprayer must be grounded. Grounding reduces the risk of static and electric shock by providing an escape wire for the electrical current due to static build up or in the event of a short circuit.</p>						
						

	
<ul style="list-style-type: none"> <li>The sprayer cord includes a grounding wire with an appropriate grounding contact.</li> </ul>	<ul style="list-style-type: none"> <li>The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.</li> </ul>

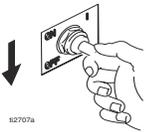
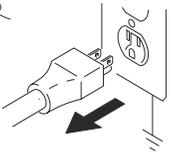
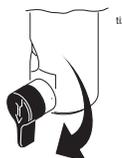
 <p>ti4297a</p>		 <p>120 volt plug</p>	
<ul style="list-style-type: none"> <li>Do not modify plug! If it will not fit in outlet, have grounded outlet installed by a qualified electrician. Do not use an adapter.</li> </ul>	<p><b>Power Requirements</b></p> <ul style="list-style-type: none"> <li>100-120V units require 100-120 VAC, 50/60 Hz, 15A, 1 phase.</li> <li>230V units require 230 VAC, 50/60 HZ, 7.5A, 1 phase.</li> </ul>	<p><b>Extension Cords</b></p> <ul style="list-style-type: none"> <li>Use an extension cord with an undamaged ground contact.</li> </ul>	<ul style="list-style-type: none"> <li>If an extension cord is necessary, use a 3-wire, 12 AWG (2.5 mm<sup>2</sup>) minimum.</li> </ul>



Pails			
<ul style="list-style-type: none"> <li>• <b>Solvent and oil-based fluids:</b> follow local code. Use only conductive metal pails, placed on a grounded surface such as concrete.</li> </ul>	<ul style="list-style-type: none"> <li>• Do not place pail on a nonconductive surface such as paper or cardboard which interrupts grounding continuity.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Grounding a metal pail:</b> connect a ground wire to the pail by clamping one end to pail and other end to a true earth ground such as a water pipe.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>To maintain grounding continuity when flushing or relieving pressure:</b> hold metal part of spray gun firmly to side of a grounded metal pail. Then trigger gun.</li> </ul>

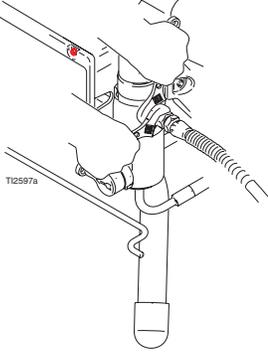
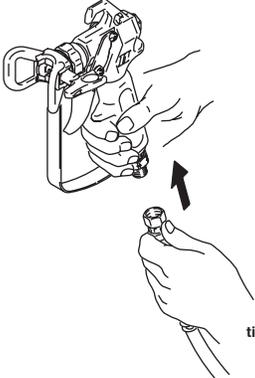
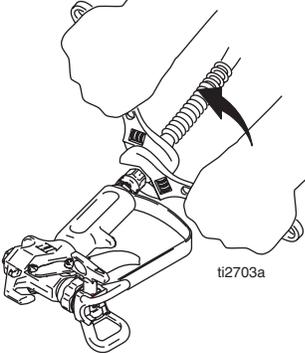
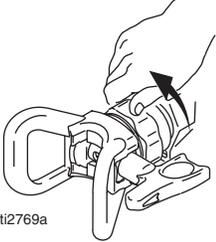
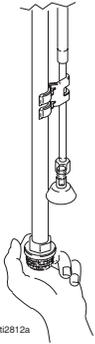
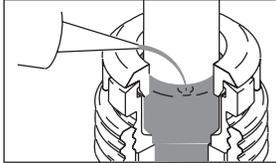
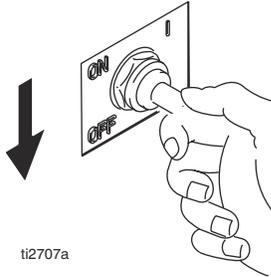
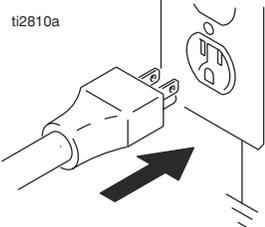
## Pressure Relief Procedure

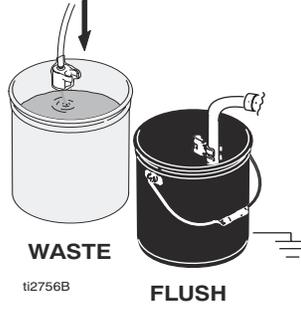
English
<p>To reduce risk of injury from injection, follow this procedure whenever you are instructed to relieve pressure, stop spraying, service equipment or install or clean spray tip.</p>

			
 <p>i2707a</p>  <p>i2707b</p>	 <p>i2614a</p>  <p>WASTE</p>  <p>i12</p>		
<p>1 Turn power <b>OFF</b> and unplug sprayer.</p>	<p>2 Turn pressure to lowest setting. Trigger gun to relieve pressure. Turn prime valve down.</p>	<p>If you suspect spray tip or hose is completely clogged, or that pressure has not been fully relieved after following these steps, <b>VERY SLOWLY</b> loosen tip guard retaining nut or hose end coupling to relieve pressure gradually, then loosen completely. Now clear tip or hose obstruction.</p>	

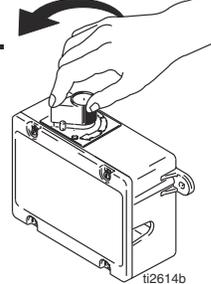
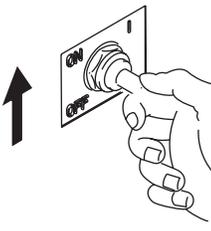
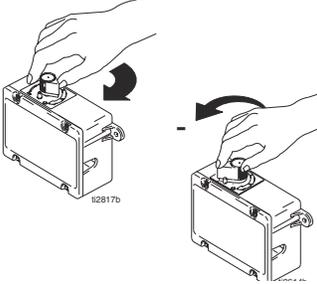
# Setup

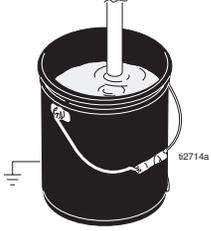
Throughout these instructions, Model 233960 is shown in all illustrations. Your sprayer model may look slightly different than pictured.

			
<p>1 Connect Graco airless hose to sprayer. Tighten securely.</p>	<p>2 Connect other end of hose to gun.</p>	<p>3 Tighten securely.</p>	<p>4 Remove tip guard.</p>
	<p>Approximate Fill Level</p> 		
<p>5 Check inlet strainer for clogs and debris.</p>	<p>6 Fill throat packing nut with TSL to prevent premature packing wear. Do this each time you spray.</p>	<p>7 Turn power OFF.</p>	<p>8 Plug power supply cord into a properly grounded electrical outlet.</p>

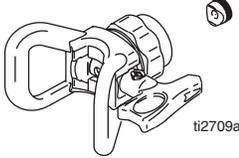
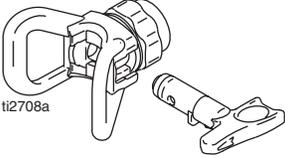
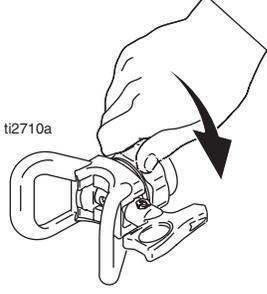
 <p>ti2719a</p>	 <p>ti2756B</p>
<p>9 Turn prime valve down.</p>	<p>10 Place siphon tube set in grounded metal pail partially filled with flushing fluid. Attach ground wire to pail and to true earth ground. Do 1. - 5. of <b>Startup</b>, page 9 to flush out storage oil shipped in sprayer. Use water to flush water-base paint and mineral spirits to flush oil-base paint and storage oil.</p>

## Startup

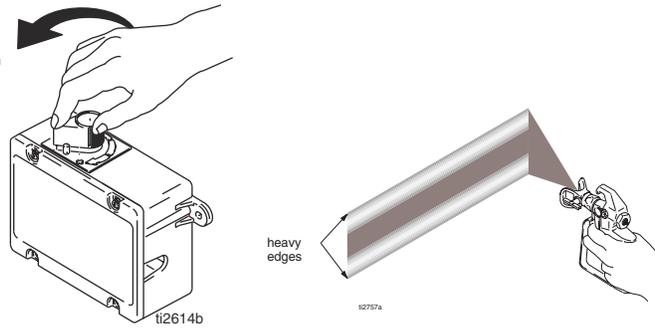
 <p>ti2614b</p>	 <p>ti2706a</p>	 <p>ti2817b</p>	 <p>ti2715a</p>
<p>1 Turn pressure control to lowest pressure.</p>	<p>2 Turn power <b>ON</b>.</p>	<p>3 Increase pressure to start motor and allow fluid to circulate through drain tube for 15 seconds; then turn pressure down.</p>	<p>4 Turn prime valve horizontal. Take spray gun trigger safety OFF.</p>

 <p>ti2599a</p> <p><b>WASTE</b></p>		 <p>ti2714a</p> <p><b>PAINT</b></p>	 <p>ti2713a</p> <p><b>WASTE</b></p>
<p>5 Hold gun against grounded metal flushing pail. Trigger gun and increase fluid pressure to 1/2. Flush 1 minute.</p>	<p>Inspect for leaks. Do not stop leaks with hand or a rag! If leaks occur, do Pressure Relief. Tighten fittings. Do <b>Startup</b>, 1. - 5, page 9. If no leaks, proceed to 6.</p>	<p>6 Place siphon tube in paint pail.</p>	<p>7 Trigger gun again into flushing pail until paint appears. Move gun to paint pail and trigger for 20 seconds. Set gun safety ON. Assemble tip and guard, page 10.</p>

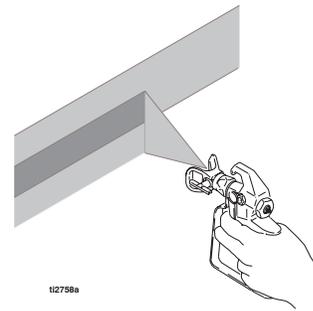
## Tip and Guard Assembly

 <p>ti2709a</p>	 <p>ti2708a</p>	 <p>ti2710a</p>	
<p>1 Insert metal seal and OneSeal.</p>	<p>2 Insert SwitchTip.</p>	<p>3 Screw assembly onto gun. Tighten.</p>	

## Spraying

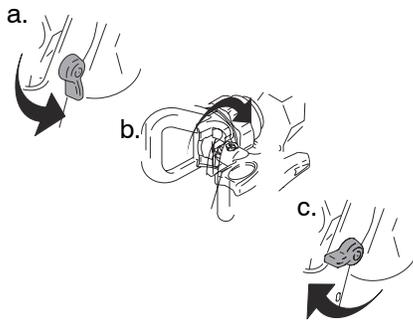


1 Spray test pattern. Start with pressure turned to its lowest setting, then gradually increase pressure until you achieve a consistent spray pattern without heavy edges. Use smaller tip size if pressure adjustment can not eliminate heavy edges.

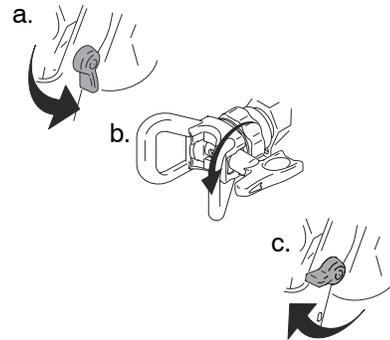


2 Hold gun perpendicular, 10-12 in. from surface. Spray back and forth, overlapping by 50%. To prevent heavy spots, before pulling trigger, first move gun using a back and forth motion. When you stop spraying, after releasing trigger, continue to move gun back and forth for a few seconds.

## Clearing Clog



1 a.) Release trigger, put safety ON.  
b.) Rotate SwitchTip.  
c.) Take safety OFF.  
d.) Trigger gun to clear clog. Never point gun at your hand or into a rag!



2 a.) Put safety ON.  
b.) Return Switch to original position.  
c.) Take safety OFF and continue spraying.

# Cleanup



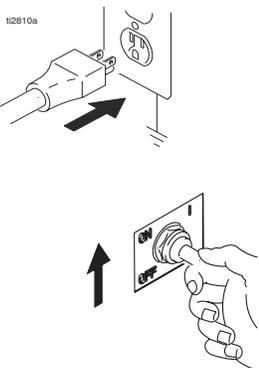
<p>1 Turn power <b>OFF</b> and unplug sprayer</p>	<p>2 Turn pressure to lowest setting. Trigger gun to relieve pressure.</p>	<p>3 Put drain tube in pail. Turn prime valve down.</p>	<p>4 Remove guard and SwitchTip.</p>

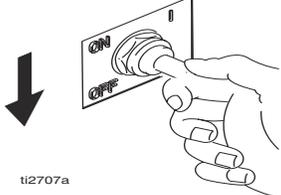
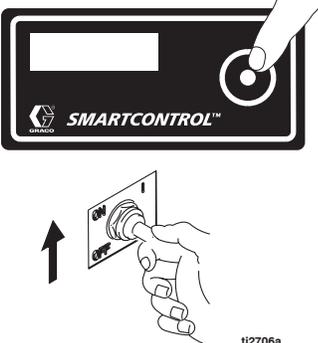
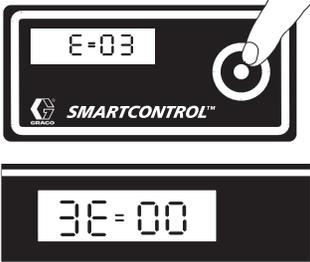
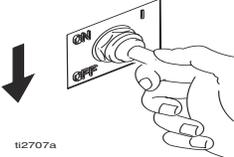
<p>5 Remove siphon tube set from paint and place in flushing fluid. Use water for water base paint and mineral spirits for oil base paint.</p>	<p>6 Plug in sprayer. Turn power <b>ON</b>. Turn prime valve horizontal.</p>	<p>7 Hold gun against paint pail. Take trigger safety <b>OFF</b>. Trigger gun and increase pressure until flushing fluid appears</p>	<p>8 Move gun to flushing pail, hold gun against pail, trigger gun to thoroughly flush system. Release trigger and put trigger safety <b>ON</b>.</p>

<p>9 Turn prime valve down and allow flushing fluid to circulate for 1 to 2 minutes to clean drain tube.</p>	<p>10 Raise siphon tube above flushing fluid and run sprayer for 15 to 30 seconds to drain fluid. Turn power <b>OFF</b></p>	<p>11 Close drain valve. Trigger gun into flushing pail to purge fluid from hose.</p>	<p>12 Open prime valve.</p>

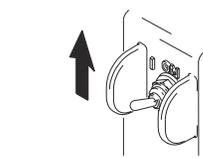
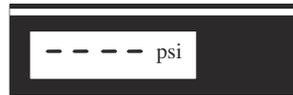
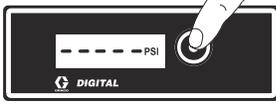
 <p>ti2814a</p>	 <p>Pump Armor ti2895a</p>	 <p>ti2776a</p>
<p>13 Remove filters from gun and sprayer, if installed. Clean and inspect. Install filters.</p>	<p>14 If flushing with water, flush again with mineral spirits, or Pump Armor, to leave a protective coating to prevent freezing or corrosion.</p>	<p>15 Wipe sprayer, hose and gun with a rag soaked in water or mineral spirits.</p>

### Ultra/ST Max 395/495/595 Sprayers - Digital Display (Optional)

<p><b>Operation</b></p>  	 <p>ti2810a</p> <p>ti2</p>	 <p>ti2786a</p>	 <p>ti2888a</p>
<p>1 Follow <b>Pressure Relief Procedure</b>, page 7.</p>	<p>2 Plug sprayer in to grounded outlet. Turn power <b>ON</b>.</p>	<p>3 The pressure is displayed. Dashes indicate pressure is less than 200 psi (14 bar, 1.4MPa).</p>	<p>4 Press and hold display button to change pressure units (psi, bar or MPa).</p>

<p>Stored Data</p>  <p>ti2827a</p>	 <p>ti2707a</p>	 <p>ti2706a</p>	 
	<p>1 Turn power <b>OFF</b>.</p>	<p>2 While pressing display button, turn power <b>ON</b> to enter Stored Data mode.</p>	<p>3 Model number is displayed and then Data Point 1, power on time in hours, is displayed.</p>
	 <p>ti2824a</p>		  <p>ti2707a</p>
<p>4 Press display button to display Data Point 2, motor on time in hours.</p>	<p>5 Press display button to display Data Point 3, last error code. Press and hold display button to erase last error code.</p>	<p>6 Press display button to display Data Point 4, software revision.</p>	<p>7 Press display button again to return to Data Point 1. Turn power <b>OFF</b> to exit Stored Data.</p>

## Ultra Max II/ST Max II Sprayers

 <p>ti7484a</p>	 <p>MPa / bar / PSI</p>	  <p>ti7485a</p>	   <p>ti7486b</p>
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### Operation Main Menu

<p>Short press moves to next display. Press and hold (5 seconds) changes units or resets data.</p>	<p>1 Follow <b>Pressure Relief</b>, page 7.</p>	<p>2 Turn power ON. Pressure display appears. Dashes appear when pressure is less than 200 psi (14 bar, 1,4 MPa).</p>	<p>3 Short press DTS button to move to Job Gallons (or Liters x 10). <b>Note:</b> <b>JOB</b> displays briefly, then the number of gallons sprayed above 1000 psi (70 bar, 7 MPa).</p>
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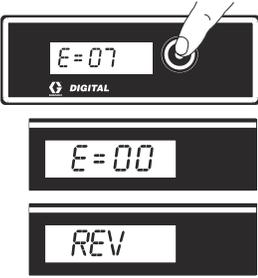
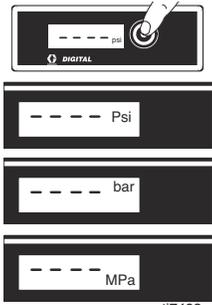
### Operation Main Menu

<p>4 Press and hold to reset to zero, or short press DTS button to move to Lifetime Gallons (or Liters x 10).</p>	<p><b>Note:</b> <b>LIFE</b> displays briefly, then the number of gallons sprayed above 1000 psi (70 bar, 7 MPa)</p>		
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 <p>MPa / bar / PSI</p>	  <p>ti7488a</p>	   <p>ti7489b</p>	  <p>ti7490b</p>
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### Secondary Menu

<p>1 Follow <b>Pressure Relief</b>, page 7.</p>	<p>2 Press DTS button and turn power switch ON.</p>	<p>3 Model (e.g. <b>U595</b>) displays for 1 sec, <b>S/N</b> for 1 sec, then the serial number. Short press DTS button. Total motor run hours displays.</p>	<p>4 Short press DTS button. Last error code is displayed; e.g., <b>E=07</b>. (manual 309674)</p>
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 <p style="text-align: right;">ti7491b</p>	 <p style="text-align: right;">ti7493a</p>		
<p><b>Secondary Menu</b></p>	<p><b>Change Display Units:</b></p>		
<p>5 Press and hold DTS button to clear error code to zero. Short press to move to software <b>REV</b>.</p>	<p>Press and hold DTS button for 8 seconds to change pressure units (<b>psi, bar, MPa</b>) to desired units. Selection of bar or MPa changes <b>gallons to liters x 10</b>.</p>		



# 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.

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Original Instructions. This manual contains English MM 309665

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