

## E-Mix™ XT

3B0221F

EN

**Plural-component system used for proportioning, mixing, and spraying two component coatings. Not approved for use in explosive atmospheres or hazardous (classified) locations. For professional use only.**

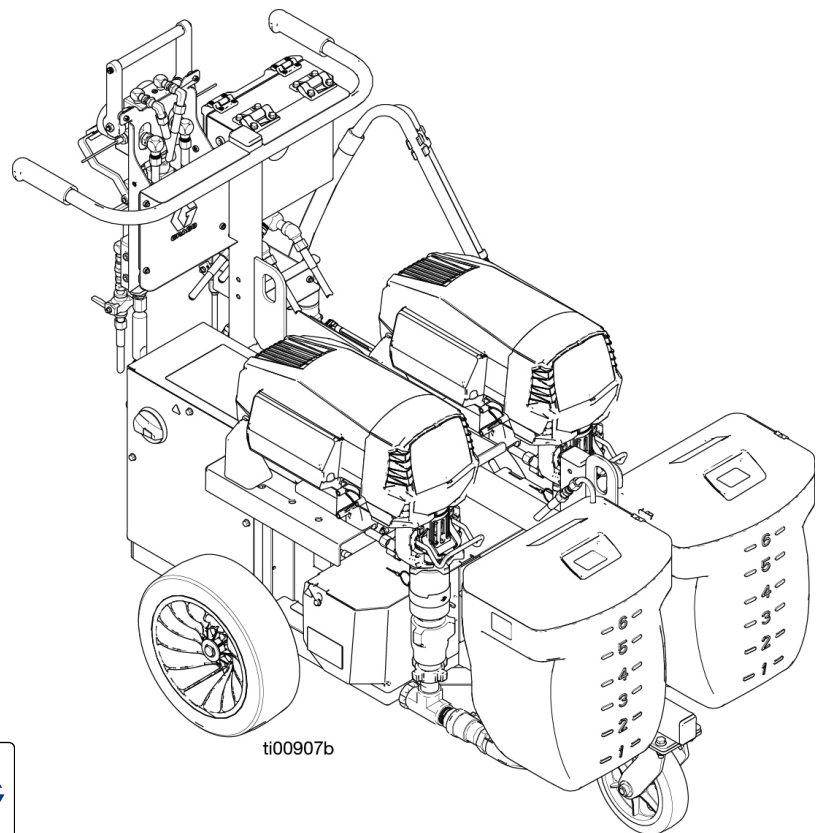
5000 psi (34.5 MPa, 345 bar) Maximum Working Pressure

See page 4 for model information, including approvals



### Important Safety Instructions

Read all warnings and instructions in this manual and in related manuals before using the equipment. Be familiar with the proper control and usage of the equipment. Save these instructions.



Use only genuine Graco replacement parts.  
The use of non-Graco replacement parts may void warranty.

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## Related Manuals

Find English manuals and any available translations at [www.graco.com](http://www.graco.com).



English Manual Number	Description
3B0224	E-Mix XT, Repair - Parts
3A7469	XTR 5+™ and XTR 7+™ Spray Guns, Instructions - Parts
<b>Solvent Flush</b>	
3A9095	Electric Airless Sprayers, Operation - Parts (Ultra 495 XT, 240 V)
<b>Mix Manifold</b>	
3A0590	Mix Manifold, Quickset Mix Manifold, Instructions - Parts
<b>Displacement Pump</b>	
3B0281	E-Mix XT Displacement Pump, Repair - Parts
<b>Heated Hose</b>	
3B0260	Independent Plug-in Heated Hose and Control Module, Operation - Repair - Parts

## Supplied Manuals



The following manuals and quick guides are shipped with the E-Mix XT. Refer to these manuals and quick guides for detailed equipment information. Manuals are also available at [www.graco.com](http://www.graco.com).

English Manual Number	Description
3B0261	E-Mix XT, Startup Quick Guide
3B0262	E-Mix XT, Shutdown Quick Guide

## Standard Models



Part	Maximum Working Pressure psi (MPa, bar)	Description	Approvals
2004087	5000 psi (34.5 MPa, 345 bar)	Sprayer, E-Mix XT, 200-240 VAC, 1ph	 <b>Intertek</b> 5024314 Certified to <b>CAN/CSA C22.2 No. 88</b> Conforms to ANSI/UL 499
2004088		Sprayer, E-Mix XT, 350-415 VAC, 3ph	











## Professional Models

Part	Maximum Working Pressure psi (MPa, bar)	E-Mix XT Sprayer	Voltage	Included Accessories (see page 45)
2005565	5000 psi (34.5 MPa, 345 bar)	2004087  <b>Intertek</b>	200-240 VAC, 1ph	<b>Remote Mix Manifold Carriage, 262522</b>  <b>Light Tower Kit, 18H278</b> <b>Hose Rack Kit, 2006329</b> <b>Remote Hose Kit, 2007132</b>
2005567		2004088 	350-415 VAC, 3ph	

# Safety Symbols

The following safety symbols appear throughout this manual and on warning labels. Read the table below to understand what each symbol means.

Symbol	Meaning
	Burn Hazard
	Crush Hazard
	Electric Shock Hazard
	Equipment Misuse Hazard
	Fire and Explosion Hazard
	Moving Parts Hazard
	Moving Parts Hazard
	Skin Injection Hazard
	Skin Injection Hazard
	Splash Hazard

Symbol	Meaning
	Toxic Fluid or Fumes Hazard
	Do Not Place Hands or Other Body Parts Near Fluid Outlet
	Do Not Stop Leaks with Hand, Body, Glove or Rag
	Do Not Wipe with a Dry Cloth
	Eliminate Ignition Sources
	Follow Pressure Relief Procedure
	Ground Equipment
	Read Safety Data Sheet
	Ventilate Work Area
	Wear Personal Protective Equipment












### Safety Alert Symbol

This symbol indicates: Attention! Become Alert! Look for this symbol throughout the manual to indicate important safety messages.

# General Warnings

The following warnings apply throughout this manual. Read, understand, and follow the warnings before using this equipment. Failure to follow these warnings can result in serious injury.

 <span style="font-size: 2em; font-weight: bold; color: white;">DANGER</span>	
 	<p><b>SEVERE ELECTRIC SHOCK HAZARD</b></p> <p>This equipment can be powered by more than 240 V. Contact with this voltage will cause death or serious injury.</p> <ul style="list-style-type: none"> <li>Turn off and disconnect all power before disconnecting any cables and before servicing equipment.</li> <li>This equipment must be grounded. Connect only to grounded power source.</li> <li>All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.</li> <li>Do not expose to rain. Store indoors.</li> </ul>

 <span style="font-size: 2em; font-weight: bold;">WARNING</span>	
   	<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. Paint or solvent flowing through the equipment can cause static sparking. 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 sparking).</li> <li>Ground all equipment in the work area. See <b>Grounding</b> instructions.</li> <li>Never spray or flush solvent at high pressure.</li> <li>Keep work area free of debris, including solvent, rags and gasoline.</li> <li>Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.</li> <li>Use only grounded hoses.</li> <li>Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are anti-static or conductive.</li> <li><b>Stop operation immediately</b> if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem.</li> <li>Keep a working fire extinguisher in the work area.</li> </ul>
	<p><b>FIRE AND EXPLOSION HAZARD</b></p> <p>Static charge may build up on plastic parts during cleaning and could discharge and ignite flammable vapors. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> <li>Clean plastic parts only in well-ventilated area.</li> <li>Do not clean with a dry cloth.</li> <li>Do not operate electrostatic guns in equipment work area.</li> </ul>

# ! WARNING



## SKIN INJECTION HAZARD

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. **Get immediate surgical treatment.**

- Do not spray without tip guard and trigger guard installed.
- Engage trigger lock when not spraying.
- Do not point gun at anyone or at any part of the body.
- Do not put your hand over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Follow the **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses and couplings daily. Replace worn or damaged parts immediately.








## MOVING PARTS HAZARD

Moving parts can pinch, cut or amputate fingers and other body parts.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** and disconnect all power sources.

# ! 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 Specifications</b> in all equipment manuals.</li> <li>• Use fluids and solvents that are compatible with equipment wetted parts. See <b>Technical Specifications</b> in all equipment manuals. Read fluid and solvent manufacturer’s warnings. For complete information about your material, request Safety Data Sheets (SDSs) from distributor or retailer.</li> <li>• Do not leave the work area while equipment is energized or under pressure.</li> <li>• Turn off all equipment and follow the <b>Pressure Relief Procedure</b> when equipment is not in use.</li> <li>• Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer’s replacement parts only.</li> <li>• Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.</li> <li>• Make sure all equipment is rated and approved for the environment in which you are using it.</li> <li>• Use equipment only for its intended purpose. Call your distributor for information.</li> <li>• Route 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>PRESSURIZED ALUMINUM PARTS HAZARD</b></p> <p>Use of fluids that are incompatible with aluminum in pressurized equipment can cause serious chemical reaction and equipment rupture. Failure to follow this warning can result in death, serious injury, or property damage.</p> <ul style="list-style-type: none"> <li>• Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents.</li> <li>• Do not use chlorine bleach.</li> <li>• Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.</li> </ul>
	<p><b>BURN HAZARD</b></p> <p>Equipment surfaces and fluid that is heated can become very hot during operation. To avoid severe burns:</p> <ul style="list-style-type: none"> <li>• Do not touch hot fluid or equipment.</li> </ul>
	<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 Safety Data Sheets (SDSs) for handling instructions and to know the specific hazards of the fluids you are using, including the effects of long-term exposure.</li> <li>• When spraying, servicing equipment, or when in the work area, always keep work area well-ventilated and always wear appropriate personal protective equipment. See <b>Personal Protective Equipment</b> warnings in this manual.</li> <li>• Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.</li> </ul>



 **WARNING****PERSONAL PROTECTIVE EQUIPMENT**

Always wear appropriate personal protective equipment and cover all skin when spraying, servicing equipment, or when in the work area. Protective equipment helps prevent serious injury, including long-term exposure; inhalation of toxic fumes, mists or vapors; allergic reaction; burns; eye injury and hearing loss. This protective equipment includes but is not limited to:

- A properly fitting respirator, which may include a supplied-air respirator, chemically impermeable gloves, protective clothing and foot coverings as recommended by the fluid manufacturer and local regulatory authority.
- Protective eyewear and hearing protection.

# Important Isocyanate (ISO) Information

Isocyanates (ISO) are catalysts used in two component materials.

## Isocyanate Conditions



Spraying or dispensing fluids that contain isocyanates creates potentially harmful mists, vapors, and atomized particulates.

- Read and understand the fluid manufacturer’s warnings and Safety Data Sheets (SDSs) to know specific hazards and precautions related to isocyanates.
- Use of isocyanates involves potentially hazardous procedures. Do not spray with this equipment unless you are trained, qualified, and have read and understood the information in this manual and in the fluid manufacturer’s application instructions and SDSs.
- Use of incorrectly maintained or mis-adjusted equipment may result in improperly cured material. Equipment must be carefully maintained and adjusted according to instructions in the manual.
- To prevent inhalation of isocyanate mists, vapors, and atomized particulates, everyone in the work area must wear appropriate respiratory protection. Always wear a properly fitting respirator, which may include a supplied-air respirator. Ventilate the work area according to instructions in the fluid manufacturer’s SDSs.
- Avoid all skin contact with isocyanates. Everyone in the work area must wear chemically impermeable gloves, protective clothing and foot coverings as recommended by the fluid manufacturer and local regulatory authority. Follow all fluid manufacturer recommendations, including those regarding handling of contaminated clothing. After spraying, wash hands and face before eating or drinking.

## Keep Components A and B Separate



Cross-contamination can result in cured material in fluid lines which could cause serious injury or damage equipment. To prevent cross-contamination:

- **Never** interchange component A and component B wetted parts.
- Never use solvent on one side if it has been contaminated from the other side.

## Moisture Sensitivity of Isocyanates

Exposure to moisture (such as humidity) will cause ISO to partially cure, forming small, hard, abrasive crystal that become suspended in the fluid. Eventually a film will form on the surface and the ISO will begin to gel, increasing in viscosity.

### NOTICE

Partially cured ISO will reduce performance and the life of all wetted parts.

- Always use a sealed container with a desiccant dryer in the vent, or a nitrogen atmosphere. **Never** store ISO in an open container.
- Keep the ISO pump wet cup or reservoir (if installed) filled with appropriate lubricant. The lubricant creates a barrier between the ISO and the atmosphere.
- Use only moisture-proof hoses compatible with ISO.
- Never use reclaimed solvents, which may contain moisture. Always keep solvent containers closed when not in use.
- Always lubricate threaded parts with an appropriate lubricant when reassembling.

**NOTE:** The amount of film formation and rate of crystallization varies depending on the blend of ISO, the humidity, and the temperature.

## Changing Materials

### NOTICE

Changing the material types used in your equipment requires special attention to avoid equipment damage and downtime.

- When changing materials, flush the equipment multiple times to ensure it is thoroughly clean.
- Always clean the Fluid Inlet Strainers after flushing.
- Check with your material manufacturer for chemical compatibility.
- When changing between epoxies and urethanes or polyureas, disassemble and clean all fluid components and change hoses. Epoxies often have amines on the B (hardener) side. Polyureas often have amines on the B (resin) side.

## Usage

The plural-component sprayer can mix and spray most two component epoxy and urethane protective coatings. It is a variable-ratio system, where settings in the Advanced Display Module can be changed to reconfigure the system to different volume mix ratios or spray pressures.

All models are mounted on a metal Cart, and are equipped with Hoppers where the resin (A material) and catalyst (B material) can be preheated and recirculated prior to spraying.

The materials are pumped to the Primary Heaters, where the resin and hardener are heated to the required spray temperatures. Heat improves the chemical reaction and lowers viscosity to improve the spray pattern.

The materials then flow to the Mix Manifold Assembly. The Mix Manifold Assembly consists of a Recirculation Manifold Assembly, Mix Manifold, and Solvent Flush Valve. At the Recirculation Manifold Assembly, the materials either recirculate back to the Hopper for continued preheating, or combine at the Mix Manifold Assembly into one fluid line. The mixed material then flows through static mixers for continued mixing to the Whip Hose and out the Spray Gun.

The solvent flush system flushes the mixed material out of the manifold, static mixers, mixed material hoses, and Spray Gun.

When using quick-setting materials (less than 10 minute pot life) a Remote Mix Manifold Assembly must be used. The Mix Manifold Assembly is separated from the Recirculation Manifold Assembly and mounted on a remote carriage. Heated hoses are used to prevent temperature loss in the materials while flowing to the remotely mounted Mix Manifold Assembly. Systems are configured to connect either a water heated hose, or an electric heated hose. Heated hoses are sold separately in various configurations and lengths depending on customer need.

## Over Pressure Protection



To reduce the risk of injury due to skin injection, perform the following:

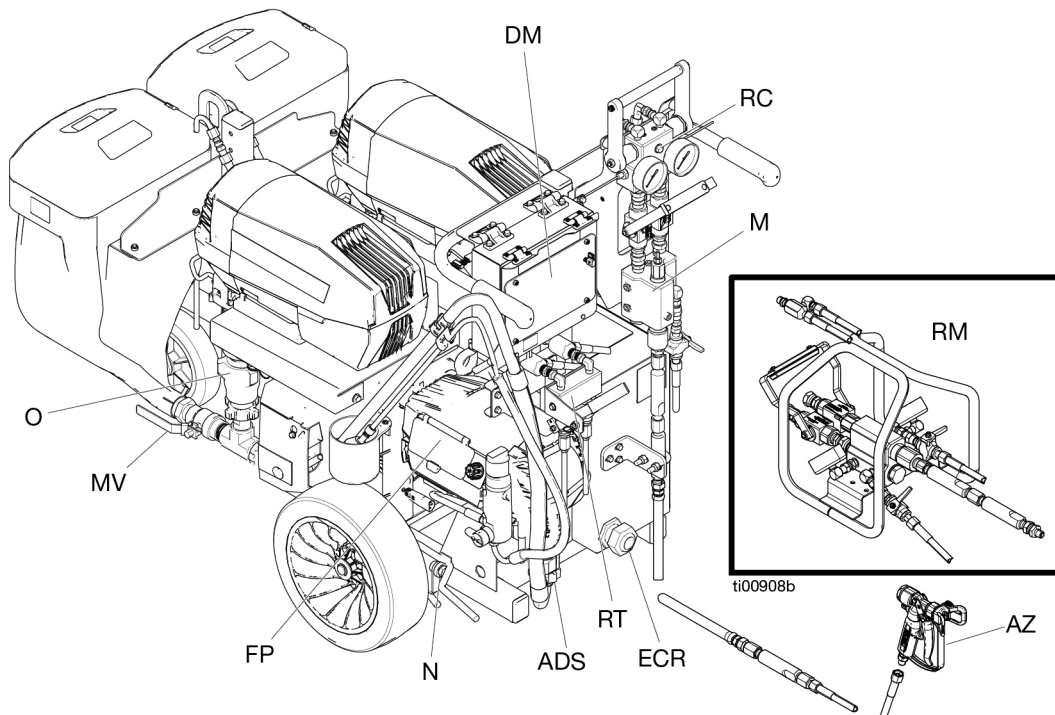
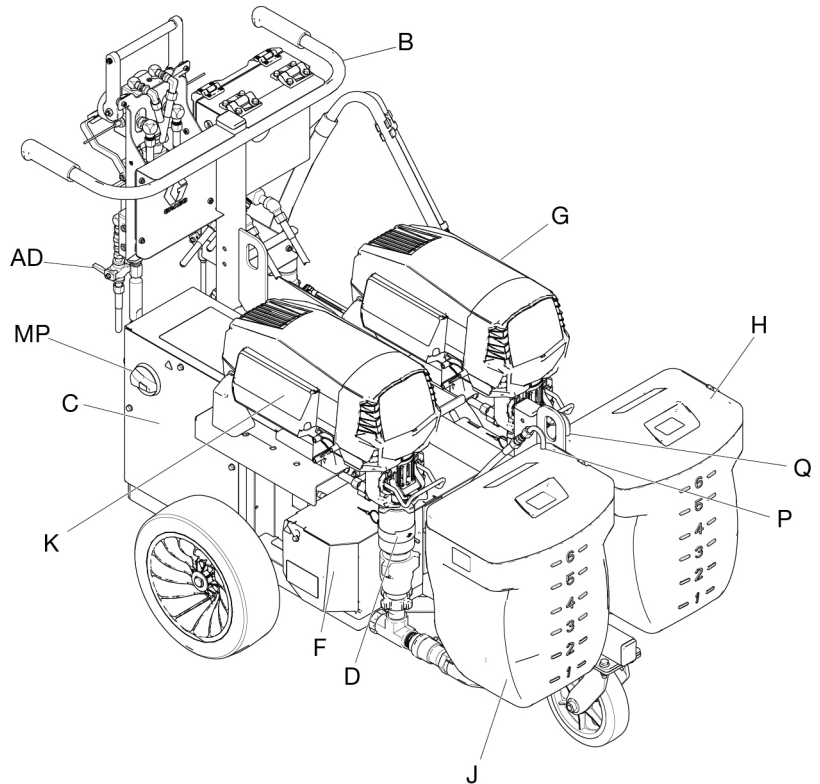
- Automatic over-pressure relief valves are used to transfer excess fluid pressure back to the supply. Never plug the return hoses. See **Fluid Control Assembly (System Mounted)**, on page 14.
- Never install individual shut off valves on the “A” and “B” lines. Common handles link the fluid control valves.
- A rupture disc is provided as a backup to the over-pressure relief valve. If the rupture disc opens, do not operate the machine until the over-pressure valve and the rupture disc have been replaced.

# Component Identification

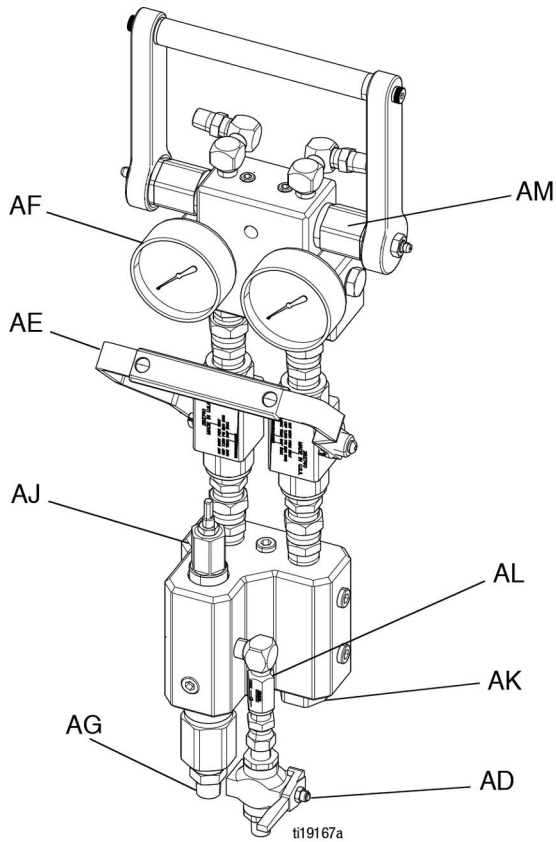
## Proportioner

**Key:**

- B Cart
- C Electrical Enclosure Panel
- D 'B' Displacement Pump
- F Primary Heater
- G 'A' Motor
- H 'A' Hopper (Blue)
- J 'B' Hopper (Green)
- K 'B' Motor
- M Mix Manifold
- N Brake
- O 'A' Displacement Pump
- P 'B' Side Recirculation/Pressure Relief Lines
- Q 'A' Side Recirculation/Pressure Relief Lines
- AD Solvent Flush Valve
- ADS Solvent Flush Suction Set
- AZ Spray Gun
- DM Advanced Display Module (ADM)
- ECR Electrical Cord Strain Relief
- FP Solvent Pump, see page 16
- MP Main Power Switch
- MV Material Inlet Ball Valve
- RC Recirculation Manifold, see page 14
- RM Remote Mix Manifold, see page 14
- RT Ratio Check Manifold



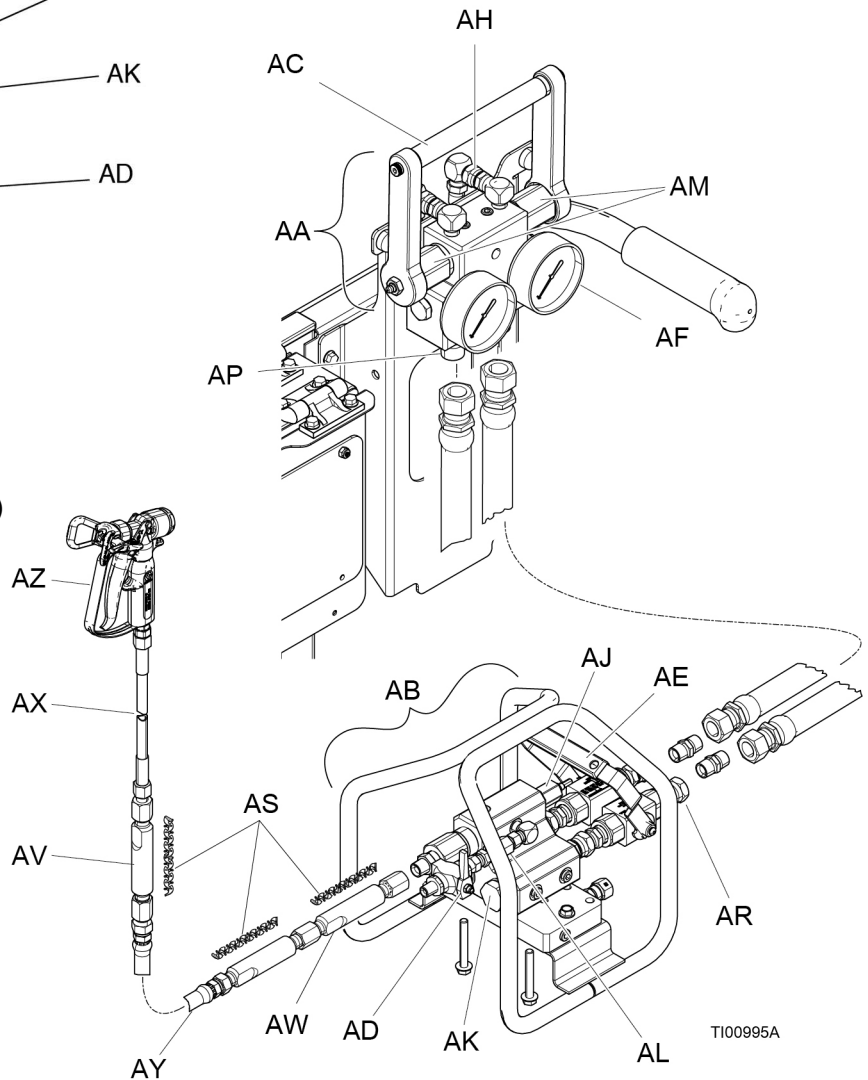
## Fluid Control Assembly (System Mounted)



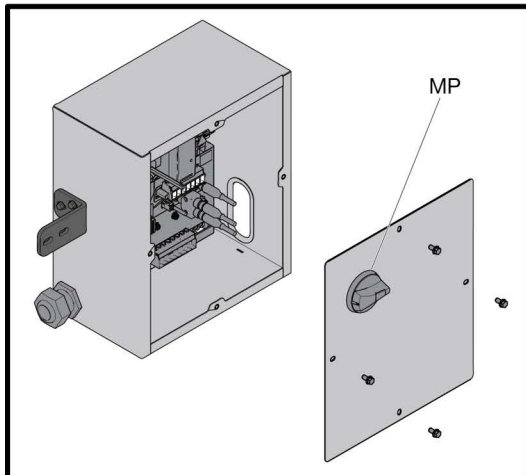
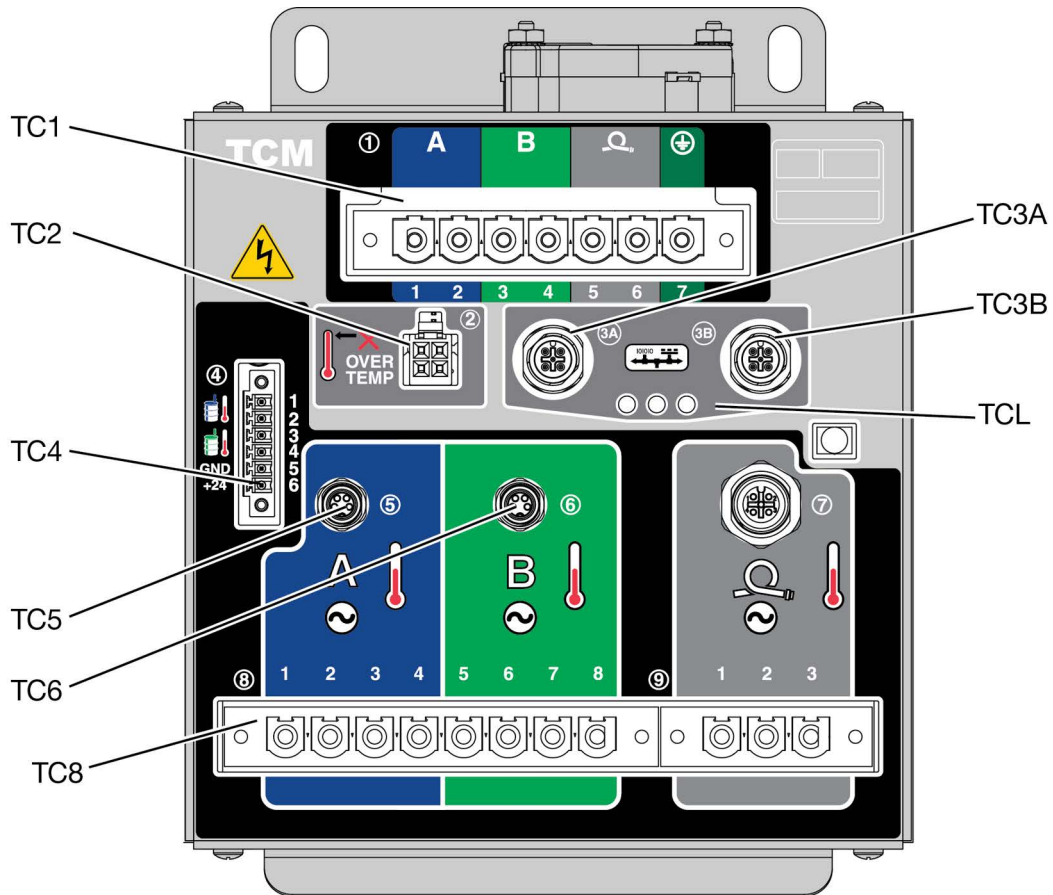
**Key:**

- AA Recirculation Manifold Assembly
- AB Mix Manifold Assembly
- AC Recirculation Handle
- AD Solvent Flush Valve
- AE Dual Shutoff Handle
- AF Fluid Pressure Gauges
- AG A and B Combined Outlet; 3/8 npt(m)
- AH Fluid Recirculation Outlet
- AJ B Component Adjustable Fluid Restrictor
- AK A and B Mix Manifold Check Valves
- AL Solvent Inlet Check Valve
- AM Over-Pressure Relief Valves; with grease fittings
- AP Recirculation Manifold Outlet
- AR Mix Manifold Inlet
- AS Mix Element
- AV Cleanup Static Mixer Tube
- AW Primary Static Mixer Tubes
- AX Whip Hose
- AY Mix Hose
- AZ Spray Gun

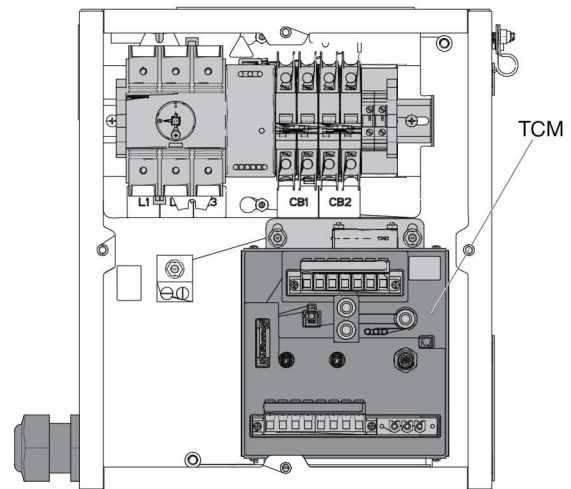
## Fluid Control Assembly (Remote Mounted)



# Temperature Control Module (TCM)



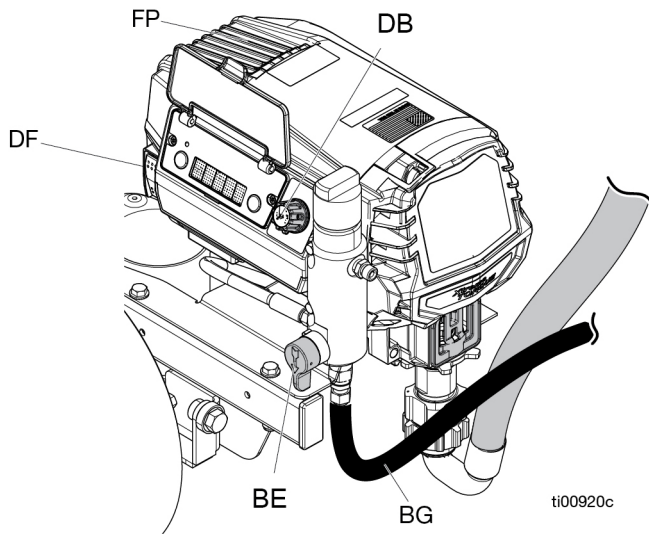
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Ref.	Description
TC1	Main Power Input
TC2	Heater Over-Temperature Inputs
TC3A, TC3B	CAN Communications
TC4	Power Supply 24VDC Input
TC5	A Heater Temperature Input

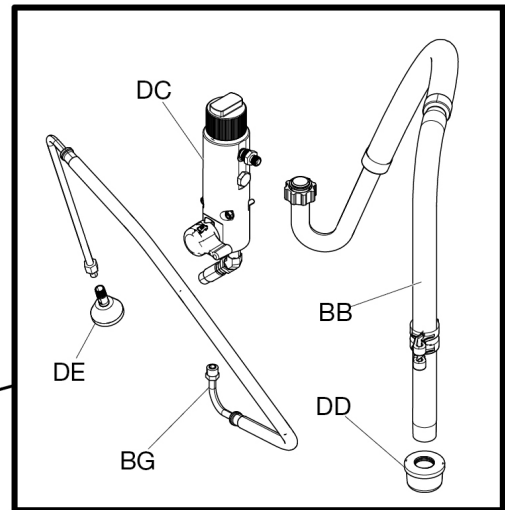
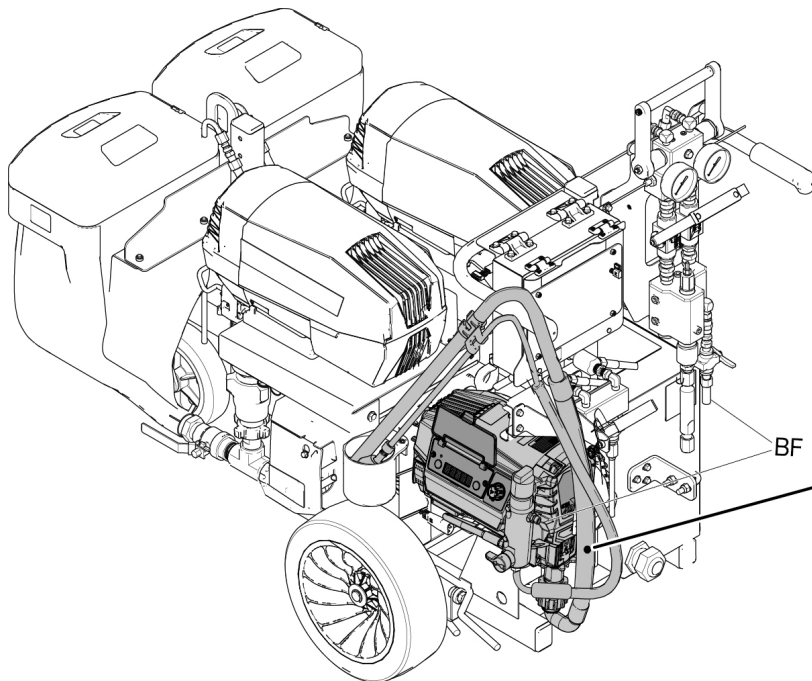
Ref.	Description
TC6	B Heater Temperature Input
TCL	TCM LED Status Lights
TCM	Temperature Control Module
MP	Main Power Switch
TC8	A/B Heater Power Outputs

# Solvent Pump



**Key:**

- FP Solvent Pump
- BB Siphon Tube
- BE Solvent Prime Valve
- BF Solvent Supply Hose
- BG Solvent Prime/Drain Hose
- DB Solvent Pump Control Knob
- DC Filter
- DD Fluid Inlet Strainer
- DE Material Deflector
- DF Solvent Pump ON/OFF Switch





# System Components

## Fluid Line Components

### Recirculation Manifold Assembly (AA)

Controls recirculation and pump priming.

### Mix Manifold Assembly (AB)

Combines A and B fluid into one fluid line.

### Recirculation Handle (AC)

Directs fluid flow for recirculation or mixing. Move to open position to relieve fluid pressure, prime pumps, and circulate material in Hoppers. Move to closed position to spray mixed material.

### Solvent Flush Valve (AD)

Controls solvent flow to the Mix Manifold Assembly, Hose, and Spray Gun.

### Dual Shutoff Handle (AE)

Controls A and B fluid flow for mixing and dispensing. Close before flushing.

### Static Mixer Tubes (AV, AW)

Thoroughly mixes the two fluids and delivers the mixed fluid to the Spray Gun.

## Heaters

### Primary Heater (F)

The fluid heater heats resin and hardener before the materials combine in the Mix Manifold Assembly. The heater improves chemical reaction and lowers viscosity of material to improve the spray pattern.

## Pumps

### Pump Assembly

Variable-ratio system that consists of two independently controlled fluid pumps, each with an electric pump driver and Pump Lower.

### Displacement Pump Lower (D and O)

Pump Lower used to deliver the resin and hardener materials at high pressure to the Mix Manifold Assembly and Spray Gun.

### Solvent Pump (FP)

Pump used to flush the Mix Manifold Assembly, Mix Hose, and Spray Gun.

### Feed Pumps

Pumps that transfer conditioned resin and hardener materials to the primary pump. Using feed pumps is the preferred method to transfer viscous material compared to the gravity feed method.

# Setup

## Initial System Setup



1. Check the shipment for accuracy. Ensure you have received everything you ordered. See **Component Identification**, page 13.
2. Check for loose fittings and fasteners.
3. If any accessories are added, refer to the **Related Manuals** listed on page 3 for all warnings and instructions. Any additional manuals not listed on page 3 can be found at [www.graco.com](http://www.graco.com).
4. Confirm electric power requirements and make sure a properly sized electrical cord is used, see **Electric Cord Guidelines**, page 20.
5. Install desiccant kits if using polyurethane isocyanates in Hoppers. See your desiccant kits manual for instructions.
6. Connect the feed pumps, fluid strainers, and air hoses as necessary. For systems without hoppers, see your feed pump and agitator kits manual.

7. Connect the fluid hose assembly, including the static mixer, Whip Hose and Spray Gun. See **Connect Static Mixers, Spray Gun, and Hoses**, page 22.

**NOTE:** A minimum of 3-5 gallons (11-19 liters) of “A” and “B” materials are needed to load the Hoppers and prime the system.

**NOTE:** A minimum of 5 gallons (19 liters) of solvent is required for flushing.

**NOTE:** Empty metal pails for both “A” and “B” materials are required for flushing.



### Location

Locate the Proportioner on a level surface. Apply Brakes to prevent movement. Follow the **Proper Lifting of Sprayer** procedure.

## Flush Before Using Equipment

The bare pump package was tested with lightweight oil, which is left in the fluid passages to protect parts. To avoid contaminating your fluid oil, flush the equipment with a compatible solvent before using the equipment. See **Flushing** section, pages 32-34.

## Proper Lifting of Sprayer

				
Follow these instructions to help prevent serious injury or damage to equipment. Never lift while a Hopper is filled.				

### NOTICE

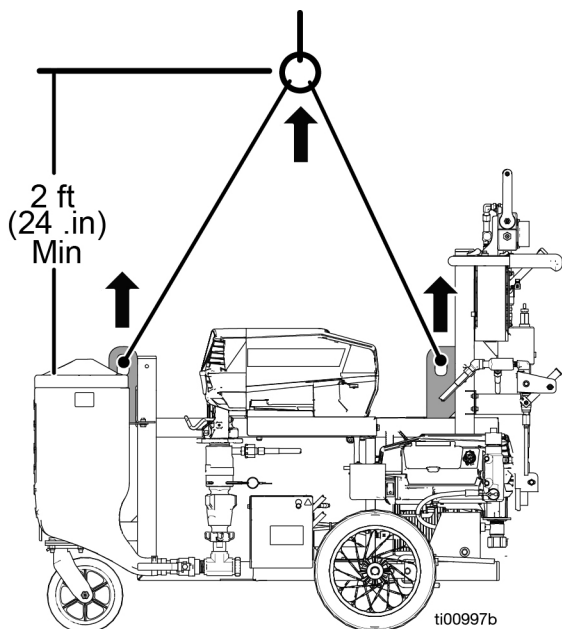
To prevent equipment damage and spilling, drain fluid prior to lifting the Proportioner.

## Using a Forklift



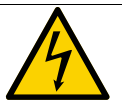

Do not use a forklift unless it is securely bolted to the original shipping pallet. Power must be OFF and disconnected. Carefully lift the sprayer; make sure it balances evenly.

## Using a Hoist

Sprayer can be lifted and moved using a hoist. Power must be OFF and disconnected. Connect a bridle swing, hooking an end to each of the lifting points shown below. Hook the center ring to a hoist as shown below. Carefully lift the sprayer; make sure it balances evenly. Do not lift with material in the Hoppers.



## Grounding

				
The equipment must be grounded to reduce the risk of static sparking and electric shock. Electric or static sparking can cause fumes to ignite or explode. Improper grounding can cause electric shock. Grounding provides an escape wire for the electric current.				

**System:** Connect the supply ground wire in the electrical compartment as shown in **Connect Power Source**, page 20.

**Fluid hoses:** Use only electrically conductive hoses with a maximum of 300 ft (91 m) combined hose length to ensure grounding continuity. Check electrical resistance of hoses regularly. If total resistance to ground exceeds 29 megohms, replace hose immediately.

**Spray Gun:** Ground through connection to a properly grounded fluid hose and pump.

**Solvent pails:** Follow your local code. Use only metal pails, which are conductive, placed on a grounded surface. Do not place pail on a non-conductive surface, such as paper or cardboard, which interrupts grounding continuity.

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

**Work area:** Ground the object being sprayed, fluid supply container, and all other equipment in the work area.

**Object being sprayed:** Follow your local code.

**Material supply container:** Follow your local code.

## Connect Power Source



Improperly installed or connected equipment may result in serious injury from fire, explosion, or electric shock. Follow all local codes and regulations.

**NOTE:** Required voltage and amperage is noted on the control panel label. See **Electric Cord Guidelines** tables below.



To help prevent injury from electric shock, turn off and disconnect all power before connecting any cables and before servicing equipment. All electrical work must be done by a qualified electrician and comply with local codes and regulations.

Use the intended entry locations shown in **Wiring Diagram**, page 21.

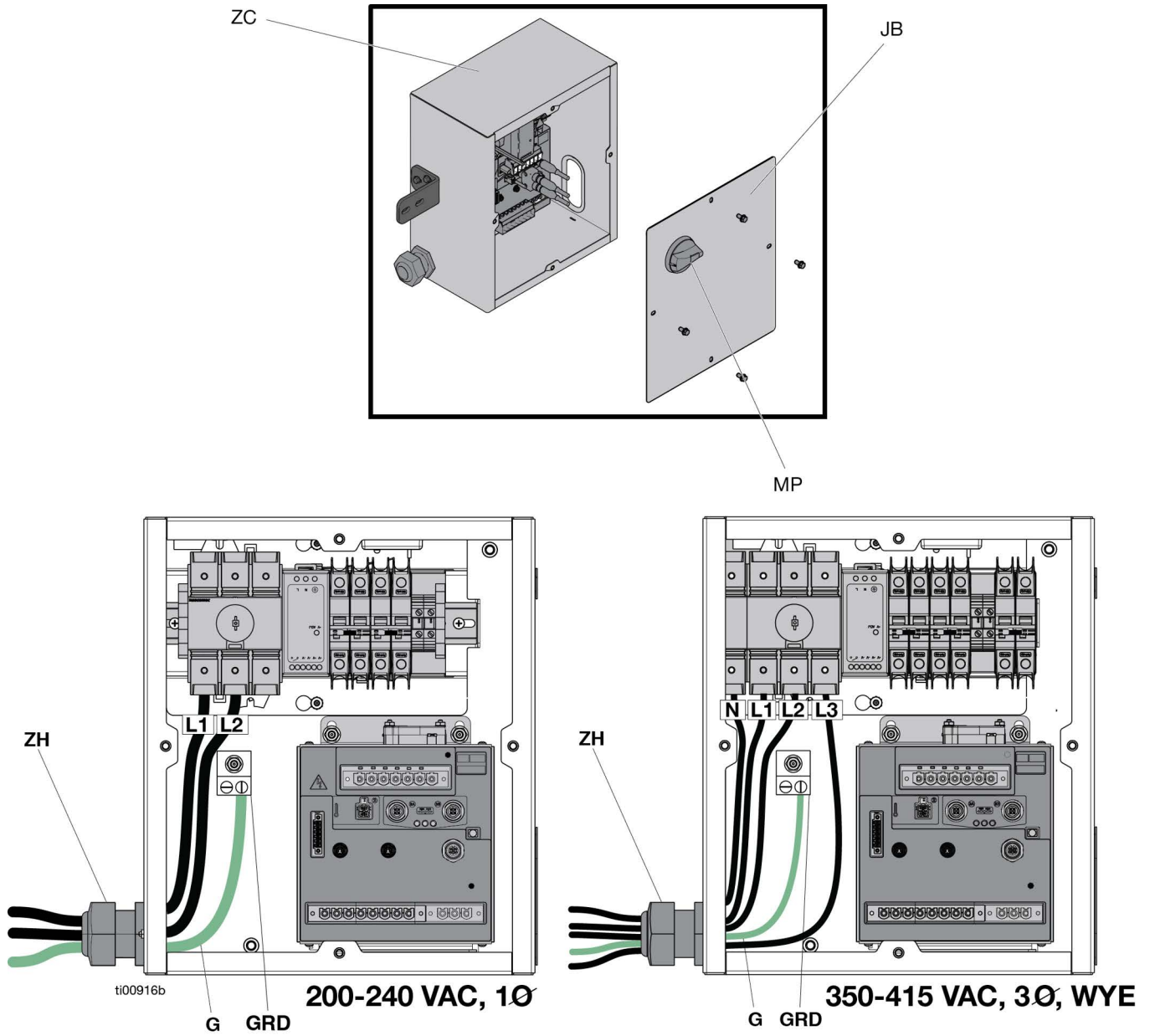
1. Turn the Main Power Switch (MP) off.
2. Open the Electrical Enclosure Panel (ZC) by removing electrical enclosure door (JB).
3. Route the power cord through the strain relief (ZH) into the electrical enclosure.
4. Connect the ground wire (G) to the ground terminal (GRD).
5. Connect the power cord to the Main Power Switch (MP) shown in **Wiring Diagram**, page 21. Gently pull on all connections to verify that they are properly secured.
6. Verify that all items are connected properly as shown in the **Wiring Diagram**, page 21, then close the Electrical Enclosure Panel (ZC).

## Electric Cord Guidelines

Use the guidelines listed in the table below to determine the power cord needed for your specific system.

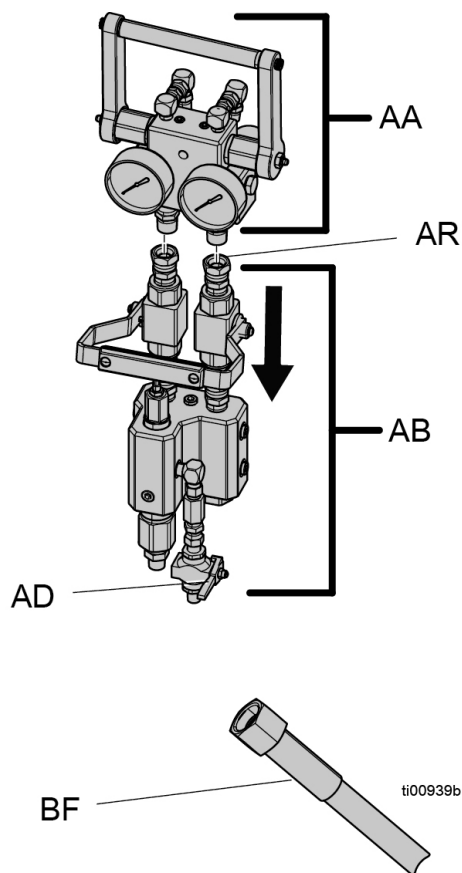
System Part Number	Voltage Rating (V)	Maximum Amperage (A)
2004087	200-240 VAC 1-Phase	40
2004088	350-415 VAC 3-Phase, WYE	20

# Wiring Diagram



## Connecting Heated Hose to Proportioner

1. Disconnect the Solvent Supply Hose (BF) from the Solvent Flush Valve (AD).
2. Remove the two fasteners holding the Mix Manifold Assembly (AB) to the frame.
3. Loosen the union fittings on the Mix Manifold Inlet (AR) that connect to the Recirculation Manifold Assembly (AA) to disconnect the Mix Manifold Assembly (AB). Loosen together to prevent damage.



4. For water jacketed heated hoses, follow **Connect Static Mixers, Spray Gun, and Hoses**, page 22.
5. For electric heated hoses, see your heated hose manual for installation. See **Related Manuals**, page 3. Attach the heated hose controller to the frame using the bracket provided.

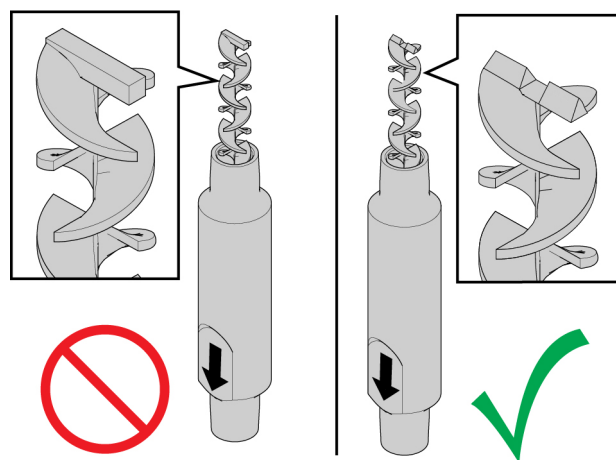
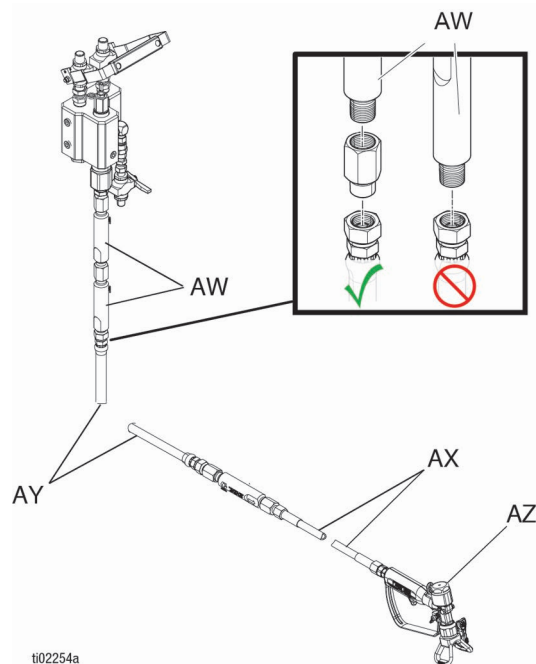
## Connect Static Mixers, Spray Gun, and Hoses

### System Mounted Configuration

1. Connect the outlet of the two Primary Static Mixer Tubes with mixer elements (AW) to the Mix Hose (AY), cleanup mixer, Whip Hose (AX), and Spray Gun (AZ).
2. Ensure all Mix Elements (AS) are placed in the Mixer Tubes (AW) in the correct orientation.

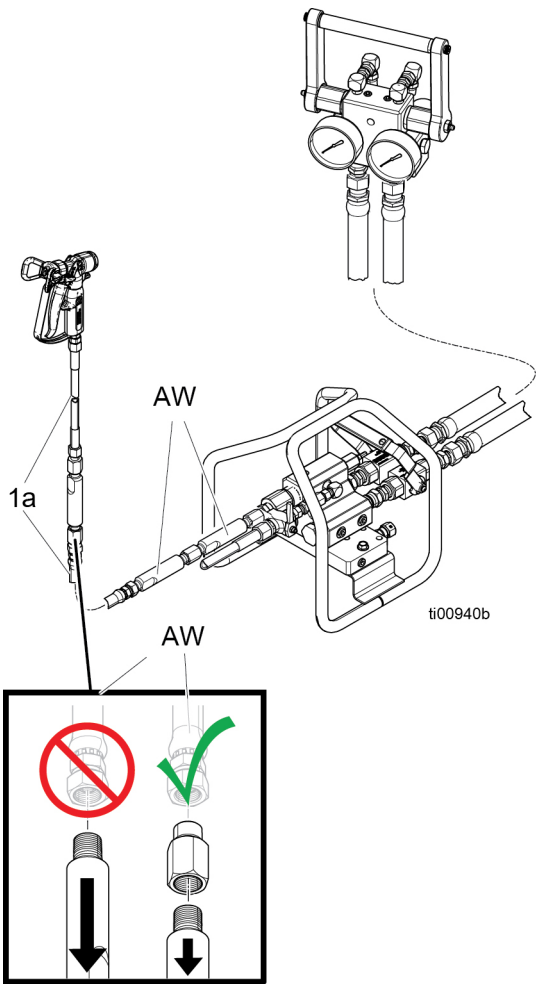
#### NOTICE

To prevent damage by creating a flare on the mixer tube, do not use a union swivel end on the mix tube inlet.



### Remote Mounted Configuration

1. Connect the outlet of the two Primary Static Mixer Tubes (AW) to the Spray Gun and hose assembly (1a).
2. Check that all connections are tight.



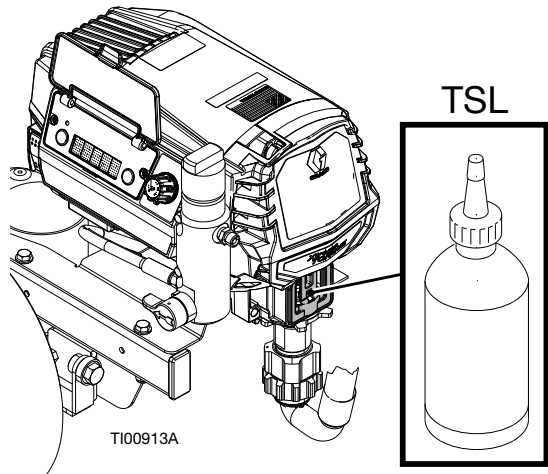
**NOTICE**

To prevent damage by creating a flare on the mixer tube, do not use a union swivel end on the mix tube inlet.

3. Connect solvent outlet hose to additional hose as needed to reach Solvent Flush Valve (AD).

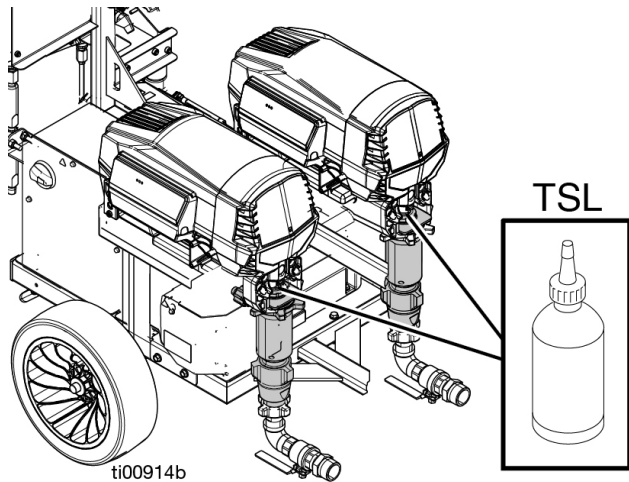
### Solvent Pump (FP)

Before starting, fill wet cup 1/3 full with Graco Throat Seal Liquid (TSL™) or compatible solvent.



### Displacement Pumps (D and O)

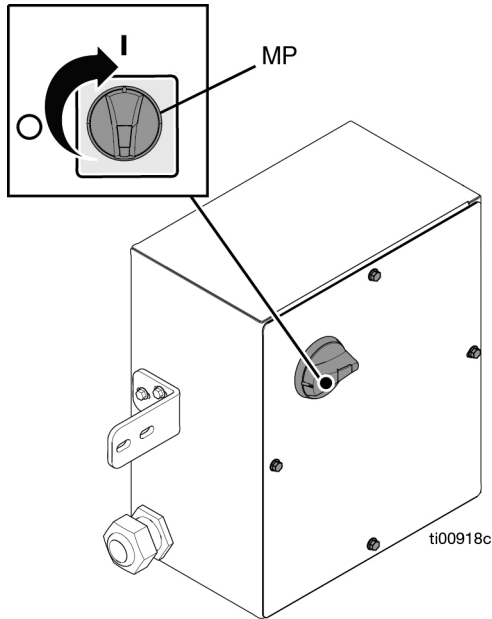
Make sure the A and B pump packing nuts are tightened. Fill the A and B pump packing nuts with TSL.



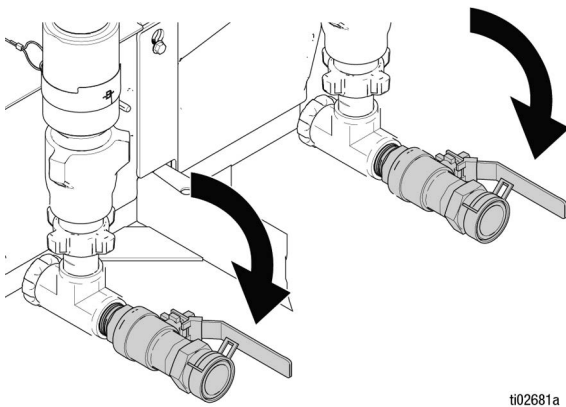
# Operation

## Flush Before Using Equipment

1. Connect system to appropriate power source.
2. Turn the Main Power Switch (MP) ON.



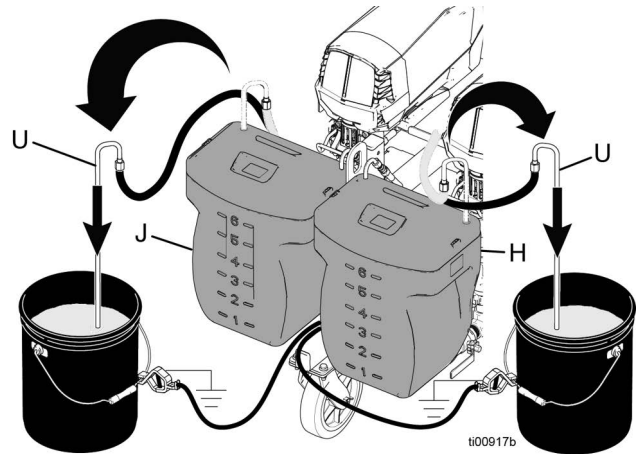
3. Open pump inlet ball valves.



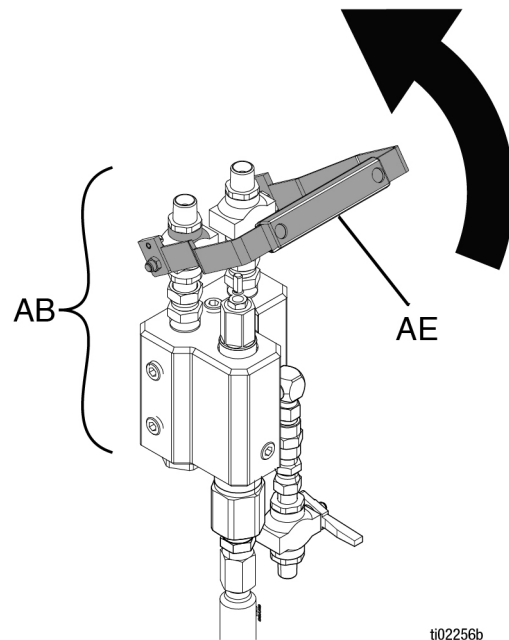
4. Prepare your materials prior to adding to Hoppers. Ensure resin materials are thoroughly agitated, homogeneous, and pourable prior to adding them to the Hopper. Stir hardeners back into suspension prior to adding material to the Hopper.

**NOTE:** All materials placed in Hoppers must be free of contaminants. Strain as needed to ensure material is clean.

5. Move the recirculation lines (U) to grounded empty containers.

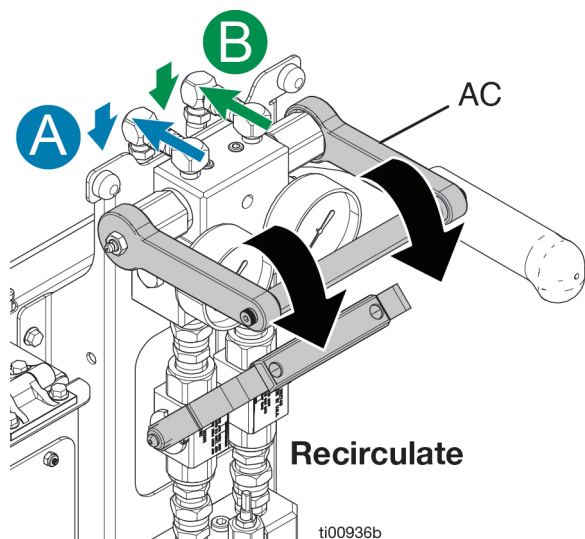


6. Fill the "A" and "B" Hoppers (H and J) with respective material, up to 6 gallons. Fill the "A" side (blue) with resin or base material. Fill the "B" side (green) with the hardener or catalyst.
7. Close the Dual Shutoff Handle (AE) on the Mix Manifold Assembly (AB).





- Open the Recirculation Handle (AC).



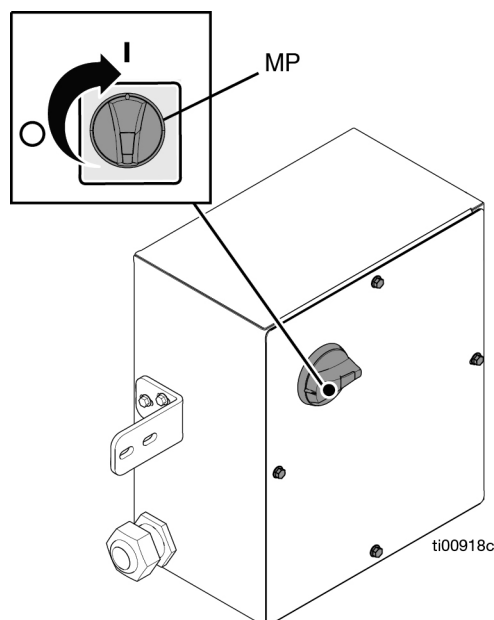
- If feed pumps are used: Follow the instructions in your feed pump manual.  
If feed pumps are not used: Follow the **Startup/Recirculate** procedure on page 25.
- Dispense fluid into the containers until clean fluid flows through the “A” and “B” recirculation lines.
- If feed pumps were used: Turn off the feed pump.  
If main pump was used: Turn off the main pump by exiting run mode on the Advanced Display Module.
- Move the recirculation lines (U) back to the correct Hopper.

## Startup/Recirculate

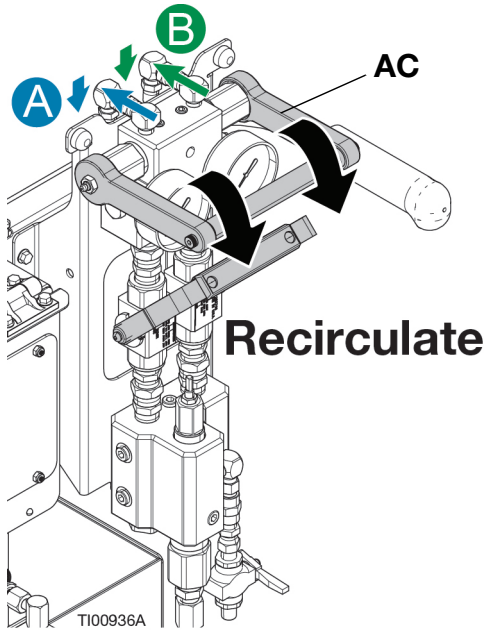


**NOTE:** Use recirculation mode to prime and to condition materials prior to spraying; agitating and heating materials evenly. To bring spray material up to temperature, the material needs to circulate through the heaters while adjusting the heater set point to the desired temperature.

- Turn the Main Power Switch (MP) ON.



2. Open the Recirculation Handle (AC).



3. Use the Advanced Display Module in jog mode to slowly increase the jog level by pressing the Proportioner Pump Jog Level +/- buttons on the main screen. The pumps will begin slow and increase speed as the jog level increases.

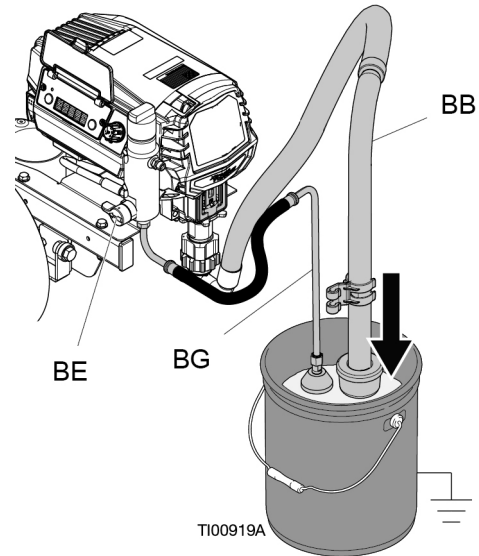
**NOTE:** Begin circulating at J10 to evenly heat materials, increase or decrease the pump rate depending on material conditions.

4. Turn on the primary heater from the Advanced Display Module.
5. Recirculate the fluids to raise the temperature of the materials in the Hoppers evenly. Continue running the pump until the material is uniform and reached the desired temperature.
6. Use the Advanced Display Module to switch back to spray mode.

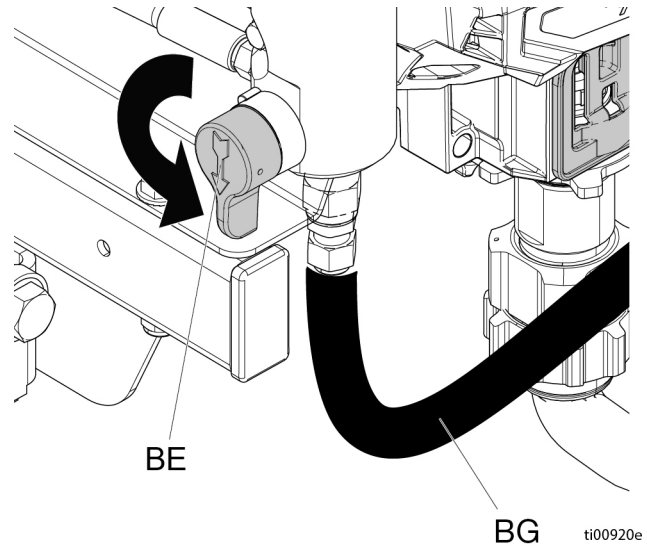
## Prime Solvent Pump



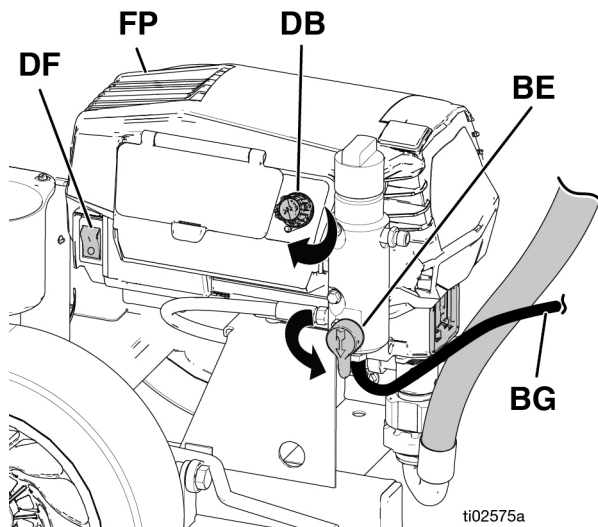
1. Connect a ground wire (not included) to a metal pail of solvent.
2. Place the Siphon Tube (BB) and the solvent circulation hose (BG) in the pail of solvent.



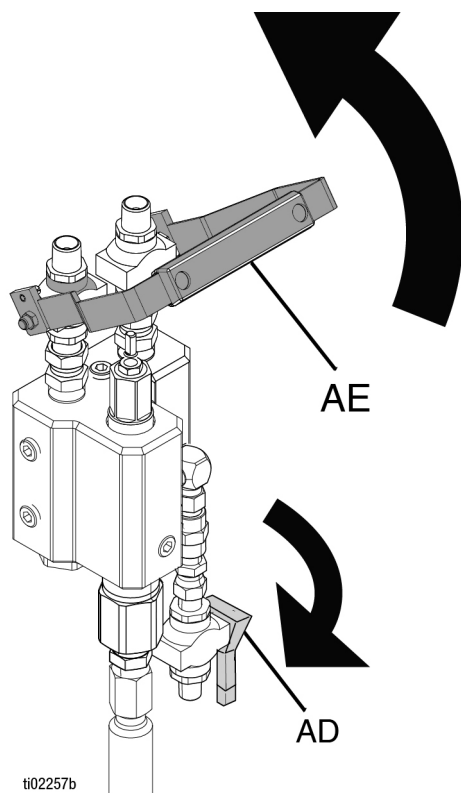
3. Rotate the Solvent Prime Valve (BE) down to the open position.



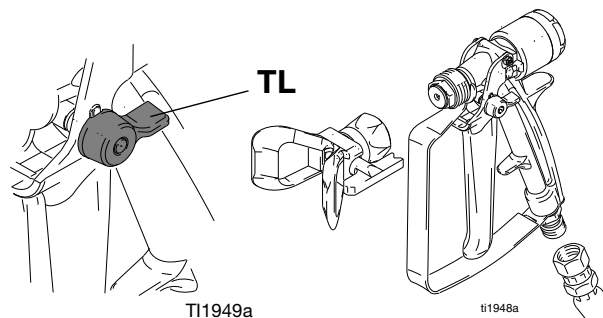
- Turn Solvent Pump (DF) ON. Slowly turn the Solvent Pump Control Knob (DB) clockwise to prime the Solvent Pump and route solvent back to the pail. Close the Solvent Prime Valve (BE) to switch from prime position to spray position.



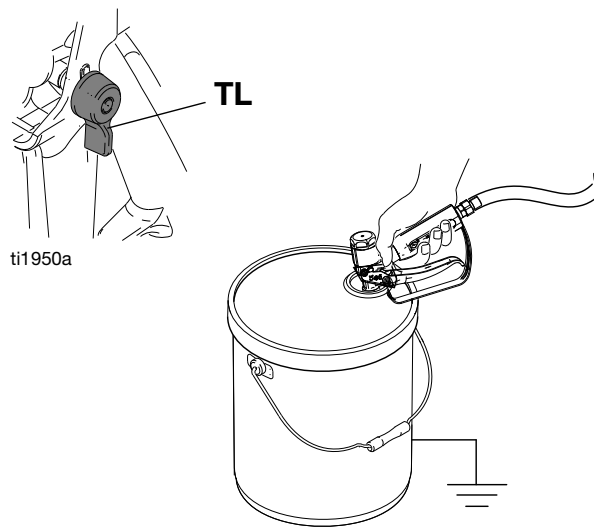
- Close the Dual Shutoff Handle (AE) on the Mix Manifold Assembly (AB). Open the Solvent Flush Valve (AD) on the Mix Manifold Assembly.



- Ensure the trigger lock (TL) is engaged. Remove the spray tip.

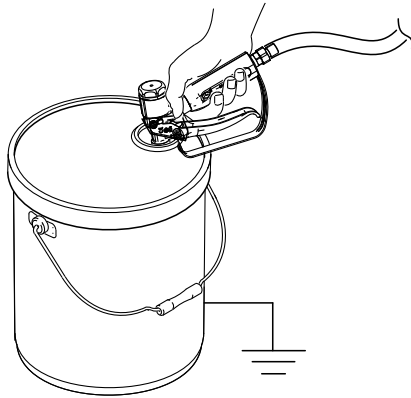


- Disengage the trigger lock (TL) and trigger the Spray Gun into a grounded metal pail while holding the metal part of the Spray Gun firmly against the side of the pail. Use a pail lid with a hole to dispense through. Seal around the hole and Spray Gun with a rag to prevent splash back. Be careful to keep fingers away from the front of the Spray Gun.

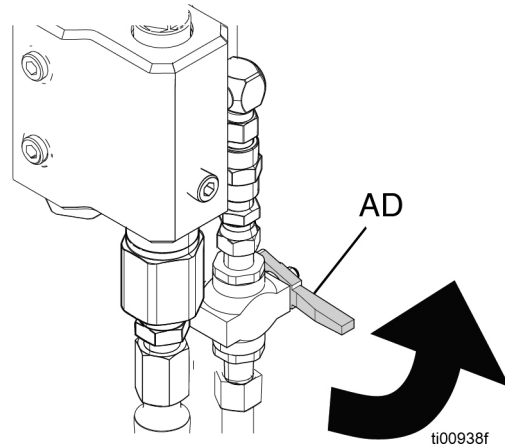


Operation

8. Slowly turn the Solvent Pump Control Knob clockwise to push air out of the Mix Hose and Spray Gun. Continue to hold the metal part of the Spray Gun firmly against the side of the grounded metal pail and trigger the Spray Gun until all air is purged.

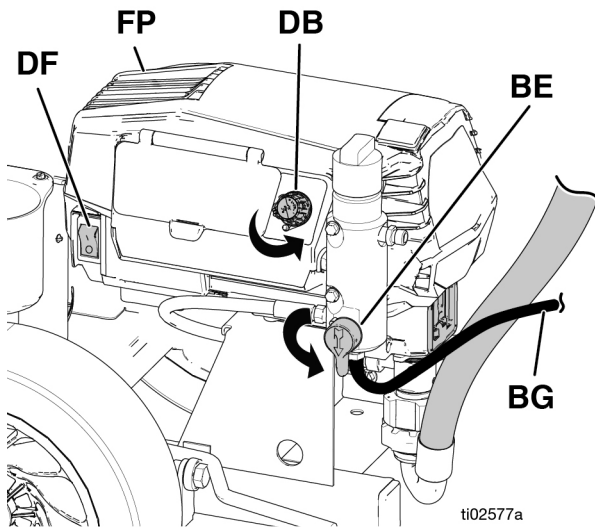


10. Close the Solvent Flush Valve (AD).



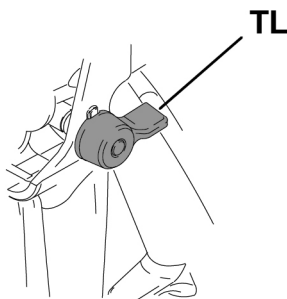
**NOTE:** Solvent Pump may stay pressurized while spraying.

9. Turn Solvent Pump Control Knob (DB) counterclockwise and turn Solvent Pump (DF) OFF. Trigger the Spray Gun to relieve pressure. Engage the trigger lock (TL). Replace the spray tip.

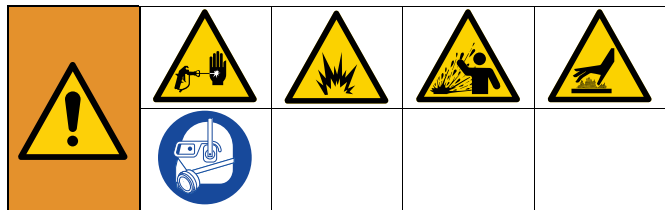


**NOTICE**

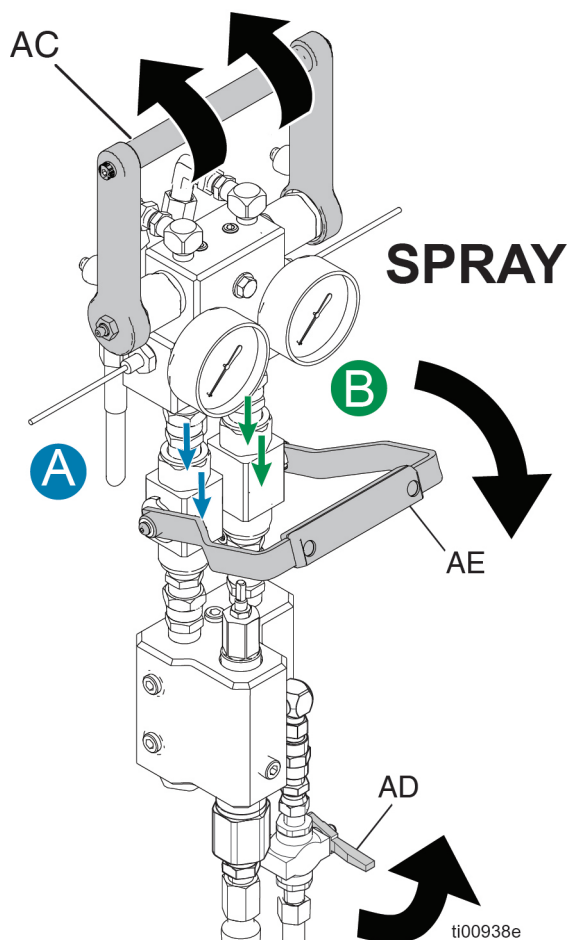
To prevent equipment damage from material curing inside the system, never spray mixed material without the Solvent Pump and hose primed with solvent for proper flushing in time to clear the mixed material.



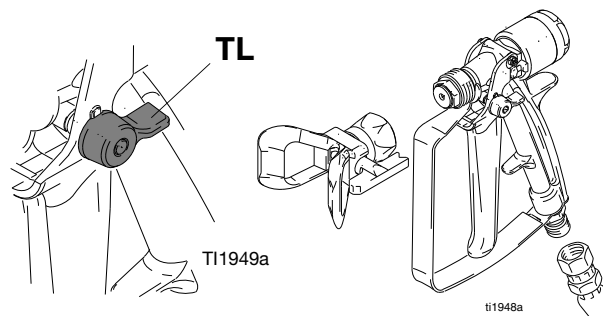
# Spray



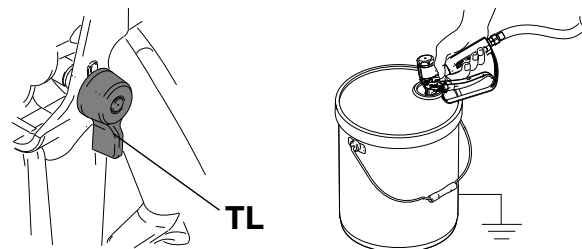
1. Follow the **Flush Before Using Equipment** procedure on page 24.
2. Follow the **Startup/Recirculate** procedure on page 25.
3. Use the Advanced Display Module to navigate to the **Home Screen** and ensure pressure shows '---'.
4. Close the Recirculation Handle (AC) and the Solvent Flush Valve (AD). Open the Dual Shutoff Handle (AE).



5. Engage the trigger lock (TL). Remove the spray tip.

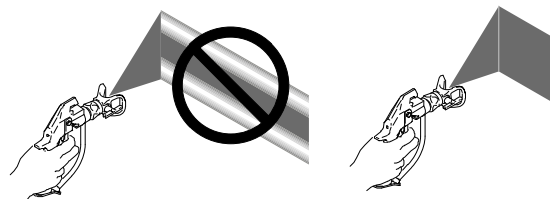


6. Disengage the trigger lock (TL) and trigger the Spray Gun while holding against a grounded metal pail. Use a metal pail lid with a hole to dispense through to avoid splashing-back.



7. Use the Advanced Display Module to enter spray mode and slowly increase pressure to cycle the pumps. Dispense out of the Mix Hose until a well mixed coating flows from the Spray Gun.
8. Engage the trigger lock (TL). install the tip on the Spray Gun.
9. Use the Advanced Display Module to adjust the pressure to the necessary spraying pressure and apply a coating to a test panel.

**NOTE:** Run **Ratio Check** tests everyday, see page 35.



**NOTE:** Excess pressure increases overspray and pump wear.

10. Check and record gauge readings frequently during operation. A change in gauge readings indicates a change in system performance.

**NOTE:** A pressure drop occurs during pump stroke changeover. It should be quick.

11. Flush the Mix Manifold Assembly as necessary during the day's operation when you are finished spraying or before potlife expires. Follow the **Flush Mixed Material**, page 33.

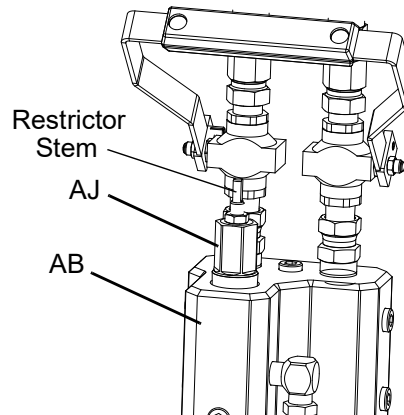
12. Follow the **Solvent Pump Pressure Relief**, page 32.

**NOTE:** Mixed material potlife or working time decreases with increased temperature. Pot life in the hose is much shorter than the dry time of the coating.

## Adjust the Restrictor

The B Component Adjustable Fluid Restrictor (AJ) reduces momentary "lead/lag" ratio imbalance of the A and B flow into the Static Mixer Tubes (AW) when the Spray Gun opens. The imbalance is caused by differences in viscosity, volume, and hose expansion.

The restrictor is used primarily when the Mix Manifold Assembly is positioned remotely from the machine with a short Mix Hose to the Spray Gun.



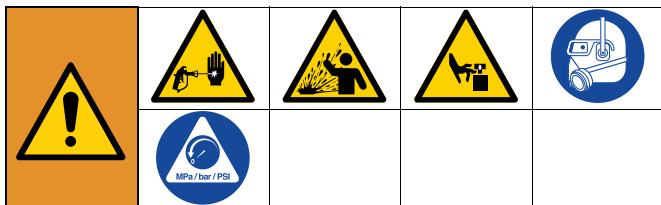
If the Mix Manifold Assembly (AB) is mounted on the machine, you do not need to adjust the restrictor. Leave the restrictor stem open two turns minimum from fully closed.

Use a wrench restrictor to balance the "B" pressure to the "A" pressure. Turn the restrictor clockwise to increase pressure, or counterclockwise to decrease pressure.

## Pressure Relief Procedure

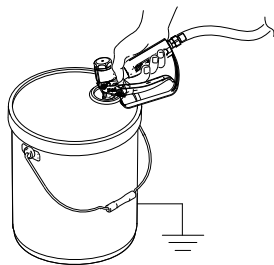


Follow the Pressure Relief Procedure whenever you see this symbol.

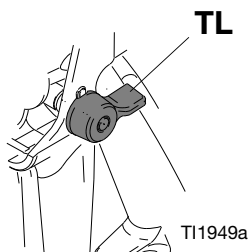


This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop spraying and before cleaning, checking, or servicing the equipment.

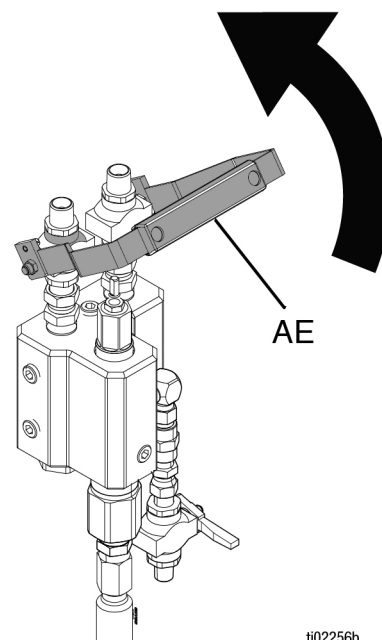
1. Use the Advanced Display Module to stop the system by pressing the Displacement Pump ON/OFF Switch on the home screen. See **Proportioner Control Panel**, page 39.
2. Turn OFF the heaters using Primary Heater A and B ON/OFF Switch on the home screen of the Advanced Display Module. See **Temperature Control Panel**, page 38.
3. Turn the Main Power Switch (MP) to OFF.
4. Turn off the feed pumps or Solvent Pumps, if used. Follow the **Solvent Pump Pressure Relief**, page 32.
5. Hold a metal part of the Spray Gun firmly to a grounded metal pail. Trigger the Spray Gun to relieve pressure in material hoses.



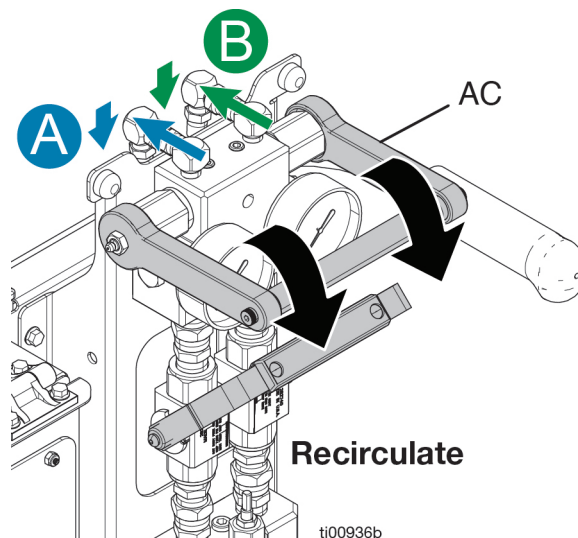
6. Engage the trigger lock (TL).



7. Close the Dual Shutoff Handle (AE).

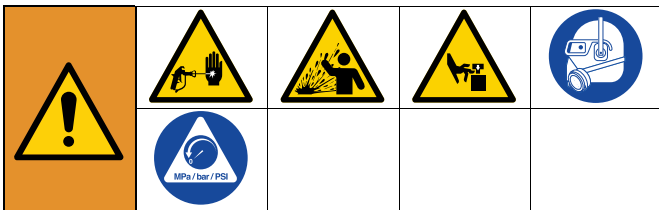


8. Open the Recirculation Handle (AC) to relieve "A" and "B" fluid pressure.



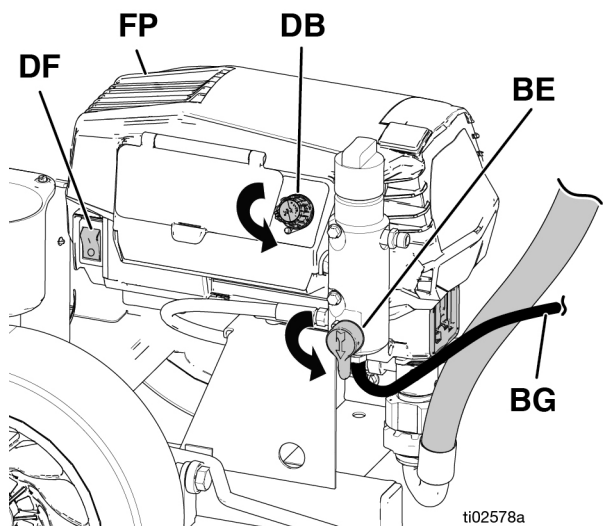
9. If you suspect the spray tip or hose is clogged or that the pressure has not been fully relieved:
  - a. Using a wrench, VERY SLOWLY loosen the tip guard retaining nut or the hose end coupling to relieve pressure gradually.
  - b. Loosen the nut or the coupling completely.
  - c. Clear the obstruction in the hose or tip.

## Solvent Pump Pressure Relief



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.

1. Turn the Solvent Pump power switch (DF) OFF.
2. Turn the Pressure Control (DB) to the OFF position.



3. Open the Solvent Flush Valve (AD).
4. Turn Solvent Prime Valve (BE) down to the PRIME position.
5. Hold a metal part of the Spray Gun firmly to a grounded metal pail. Trigger the Spray Gun to relieve pressure in material hoses.

6. If you suspect the spray tip or hose is clogged or that the pressure has not been fully relieved:
  - a. Using a wrench, VERY SLOWLY loosen the tip guard retaining nut or the hose end coupling to relieve pressure gradually.
  - b. Loosen the nut or the coupling completely.
  - c. Clear the obstruction in the hose or tip.

## Flushing



To avoid fire and explosion, always ground equipment and waste container. To avoid static sparking and injury from splashing, always flush at the lowest possible pressure. Hot solvent may ignite. To avoid fire and explosion:

- Flush equipment only in a well-ventilated area.
- Ensure main power is off and heater is cool before flushing.
- Do not turn on heater until fluid lines are clear of solvent.

## Guidelines

Flushing will help prevent materials from setting or gelling in the pumps, lines, and valves. Flush the system when any of the following situations occur:

- Any time the system will not be used for more than one week (depending on materials used)
- If the materials used have fillers that will settle
- If using materials that are moisture sensitive
- Before servicing
- If the machine is going into storage, replace the solvent with light oil. Never leave the equipment empty of any fluid.

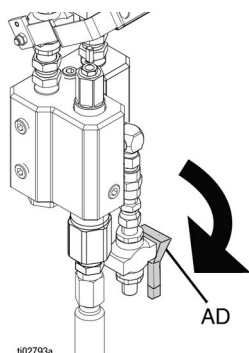
Flush the Mix Manifold Assembly when any of the following situations occur:

- Breaks in spraying
- Overnight shutdown
- Mixed material in system approaching end of pot life

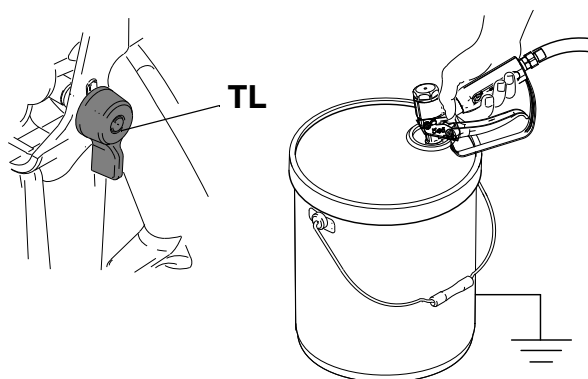


## Flush Mixed Material

1. Follow the **Pressure Relief Procedure**, page 31.
2. Turn the Solvent Pump ON and reduce it to the lowest pressure.



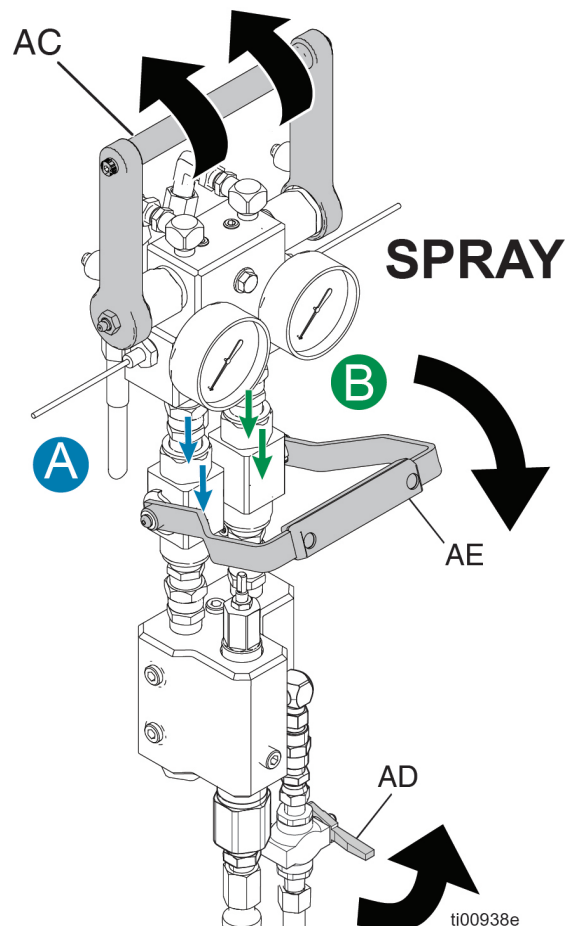
3. Open the Solvent Flush Valve (AD).
4. Disengage the trigger lock (TL), hold the Spray Gun against a grounded metal pail, and trigger the Spray Gun into the pail. Use a pail lid with a hole to dispense through. Seal around the hole and Spray Gun with a rag to prevent splash back. Be careful to keep fingers away from the front of the Spray Gun. Slowly increase the Solvent Pump pressure. Continue flushing until clean solvent dispenses.



5. Turn the Solvent Pump OFF.
6. Hold a metal part of the Spray Gun against a grounded metal pail and trigger the Spray Gun to relieve pressure. Close the Solvent Flush Valve (AD) after relieving the pressure.
7. Engage the trigger lock (TL). Disassemble and clean the spray tip with solvent by hand. Reinstall spray tip on the Spray Gun.

## Flush Material Lines Procedure

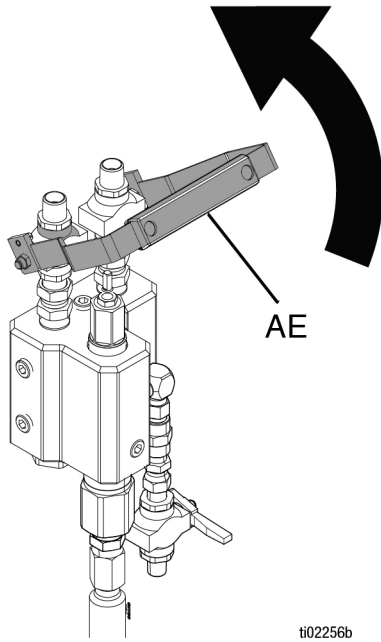
1. Follow the **Flush Mixed Material** procedure, page 33.
2. Close the Recirculation Handle (AC). Open the Dual Shutoff Handle (AE) and close the Flush Sprayer Ball Valve (AD).



3. Fill A and B Hoppers with fresh compatible solvent recommended by the material manufacturer.
4. Use the Advanced Display Module to navigate to the **Home Screen** and ensure pressure shows '---'.
5. Slowly increase pressure to cycle pumps and dispense fresh solvent from the Hoppers through the Mix Manifold valves and out the Spray Gun.
6. Continue flushing solvent until it runs clean.
7. Use the Advanced Display Module to stop the system by pressing the Displacement Pump ON/OFF Switch on the home screen. See **Proportioner Control Panel**, page 39.

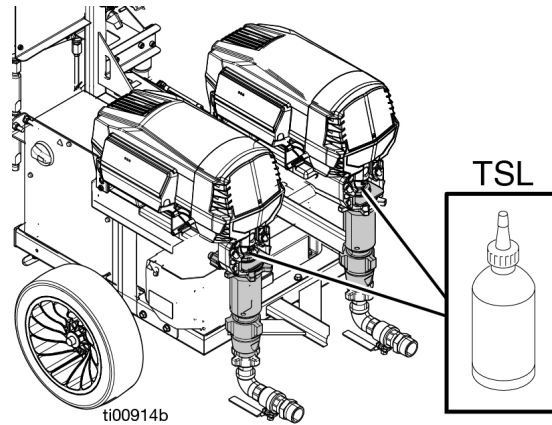
Operation

8. Lift to close the Dual Shutoff Handle (AE).



9. Follow the **Pressure Relief Procedure**, page 31.

10. Fill the pump packing nuts of the Displacement Pumps with Graco Throat Seal Liquid (TSL).



**NOTICE**

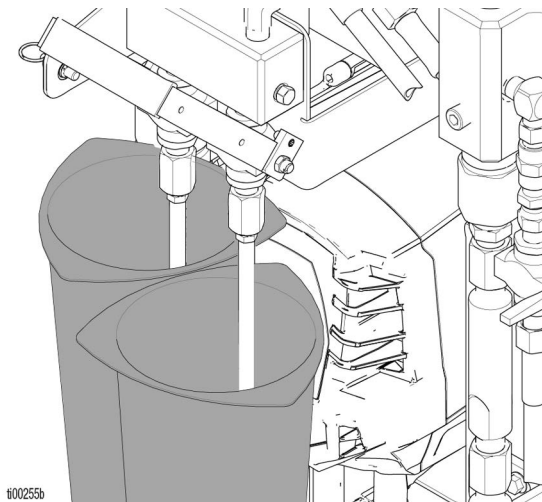
Always leave some type of fluid, such as solvent or oil, in the system to prevent scale build up. This build up can flake off later and cause damage to the equipment.

**NOTE:** Always keep the A side and B side solvent containers separate to avoid cross-contamination.

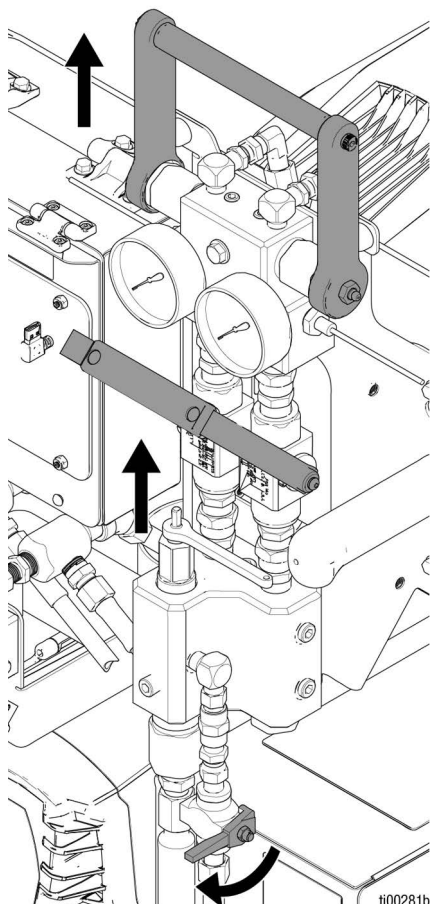
**NOTE:** If Hoppers are removed, always return to the A and B side as indicated in component identification section.

## Ratio Check

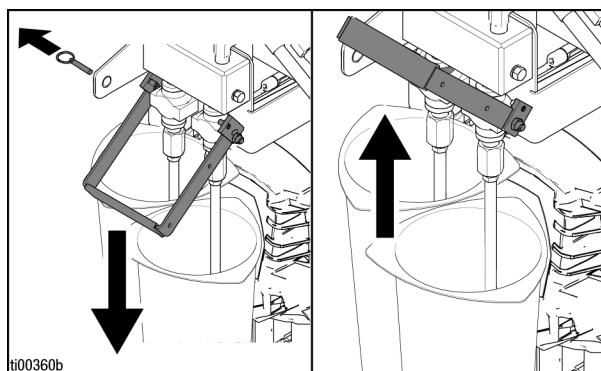
1. Place beakers or other graduated containers marked 750cc or 1000cc into the correct position below A and B on your proportioner.



2. Make sure the system Recirculation Handle (AC) is in the vertical position, the Dual Shutoff Handle (AE) is in the up/closed position and the Solvent Flush Valve (AD) is in the closed position.



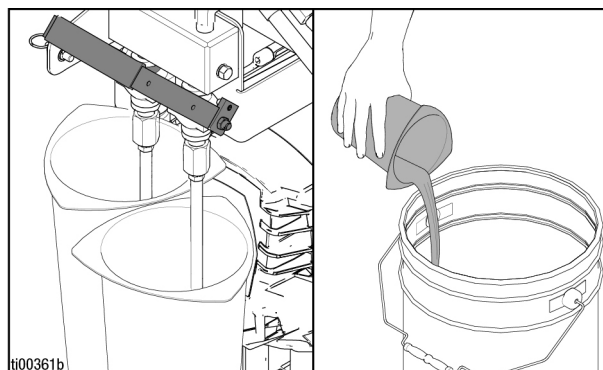
3. Set the Advanced Display Module to Ratio Check Mode level R5.
4. Set the Advanced Display Module ratio setpoint to the proper material ratio.
5. Turn the pumps on. Wait for Advanced Display Module green check mark to appear.
6. Pull the Locking Pin and move the ratio handle down to open and dispense until all air is purged out. When finished, move ratio handle up to close position.



**ON**

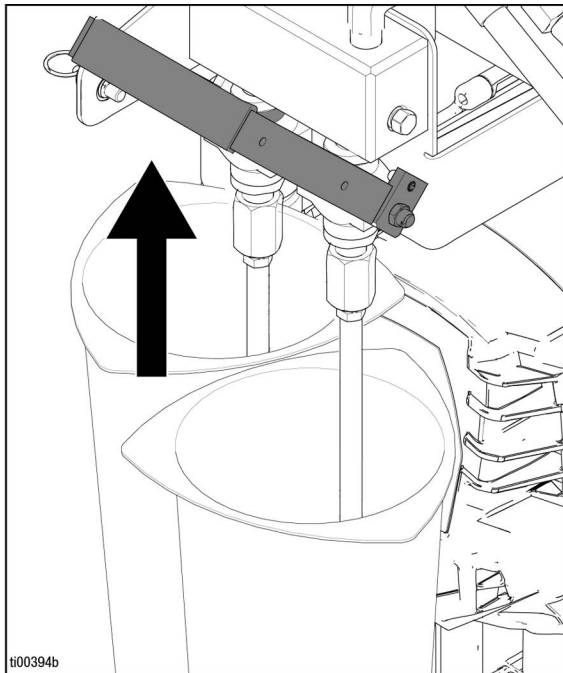
**OFF**

7. Discard or recycle dispensed material.



8. Place new containers below A and B, or reuse the waste container after they are cleaned out.
9. Move the ratio handle down to open and dispense.

10. Dispense a minimum of 200cc on the minor side and a minimum of 1000cc overall. A sample with a larger combined volume will result in a more accurate ratio measurement. Move the ratio handle up to close position.



**NOTE:** Moving the ratio handle very slowly and/or opening and shutting the handle multiple times to dispense a single sample could decrease the accuracy of the ratio measurement.

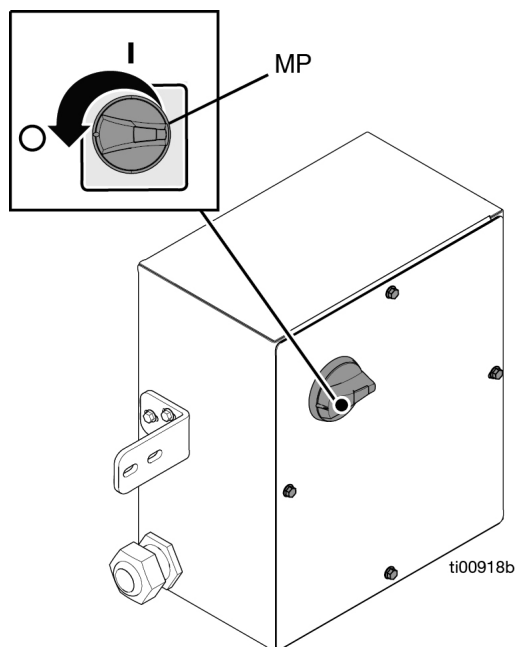
**NOTE:** If the mix ratio is by weight, weigh tared containers for a more accurate measurement. The weight ratio will be different than the volume ratio unless both fluids have the same specific gravity.

**NOTE:** If the ratio is not correct, refer to the troubleshooting section of your proportioner manual.

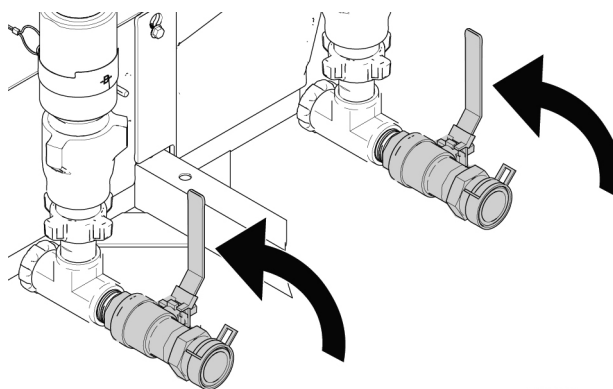
## Overnight Shutdown



1. Follow the **Pressure Relief Procedure**, page 31.
2. Flush the Mix Manifold, hoses, and Spray Gun. Follow the **Flush Mixed Material** procedure on page 33.
3. Follow the **Pressure Relief Procedure**, page 31, and the **Solvent Pump Pressure Relief**, page 32.
4. Turn the Main Power Switch (MP) OFF.

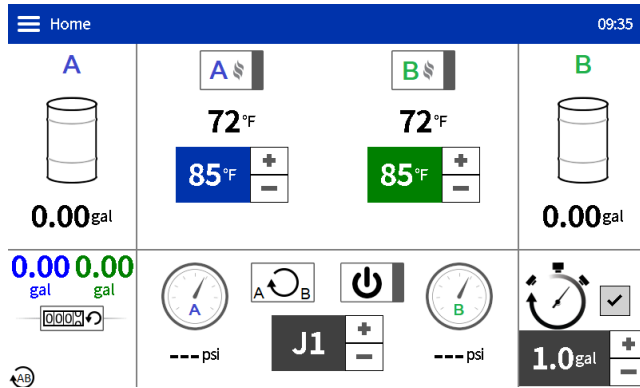


5. Close pump inlet ball valves.



# Advanced Display Module (ADM)

The ADM display shows graphical and text information related to setup and spray operations.



## ADM Keys and Indicators



Press to stop all proportioner processes. This is not a safety or emergency stop.

## Menu Bar

The menu bar is located at the top of each screen of the ADM. The menu bar contains the Navigation menu (1), current screen (2), system notifications (3), and time (4).

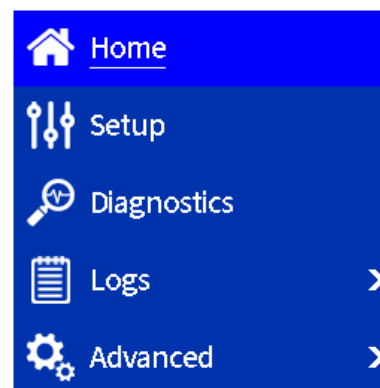


## System Notification Icons

Icon	Name	Description
	Software Update Pending	A software update will occur on next power cycle.
	USB Download/Upload in Progress	The USB drive detected and a download/upload in progress.
	USB Download/Upload Complete	The USB drive detected and a download/upload has completed successfully.
	USB Error	The USB drive detected but an error is preventing it from being used.

## Navigate the Screens

To navigate between screens, tap , then select the desired location from the drop-down. To switch between pages within each screen, tap and .

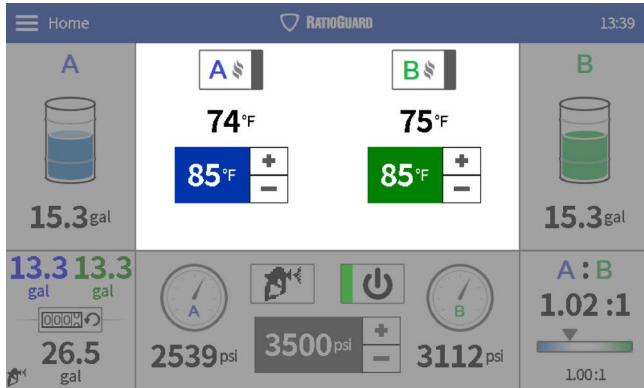


## Home Screen

Use the Home Screen to control the E-Mix XT system operation functions.

### Temperature Control Panel

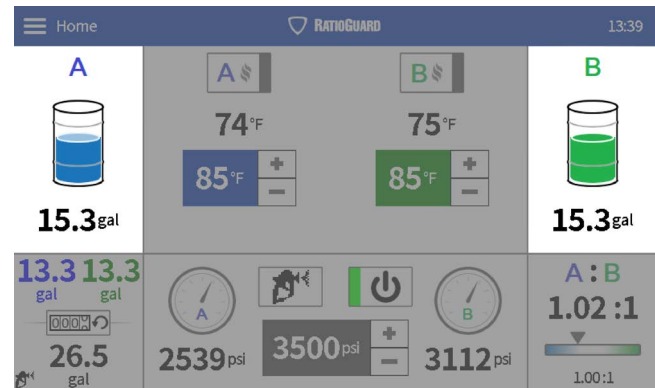
The Temperature Control panel contains controls for A and B-side Primary Heaters.



Icon	Name	Description
	Primary Heater A On/Off	Tap to toggle the A primary heater state.
	Primary Heater B On/Off	Tap to toggle the B primary heater state.
	A Temperature Set Point	Tap +/- to adjust the set point by one degree. Press and hold +/- to rapidly adjust the set point. Tap the number to open a pop-up and type in the set point directly.
	B Temperature Set Point	Tap +/- to adjust the set point by one degree. Press and hold +/- to rapidly adjust the set point. Tap the number to open a pop-up and type in the set point directly.

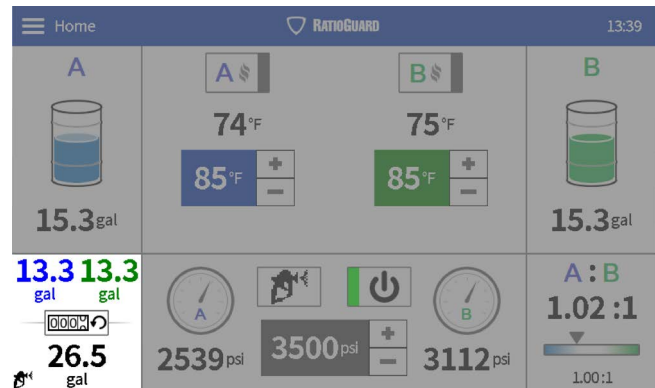
### A and B side Supply Control Panels

The A and B Supply Control panels display the remaining material supply for A and B side materials.



### Cycle Count Panel

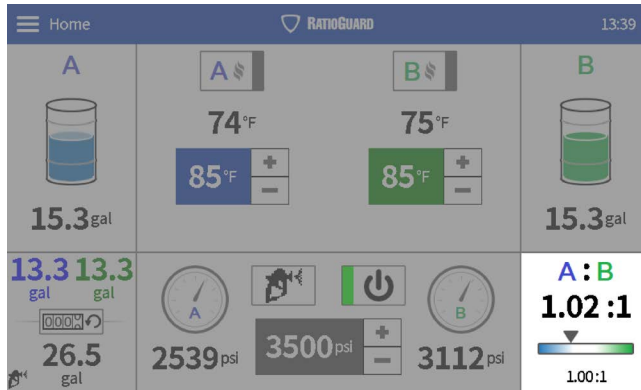
The Cycle Count panel contains information regarding pump cycles and the equivalent amount of material.



Icon	Name	Description
	Reset Cycle Counter	Tap to reset the cycle and volume counters in the lower left portion of the screen.  <b>NOTE:</b> Separate counters are kept in spray, jog mode, and ratio check. Pressing the reset button only resets the currently displayed counters.

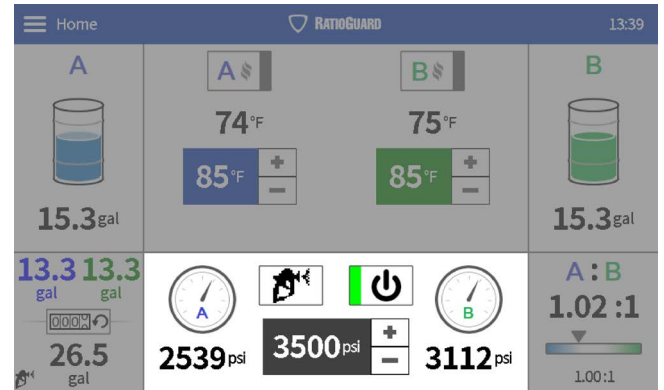
### Ratio Monitoring Panel

The Ratio Monitoring panel displays information regarding the A to B material ratio.



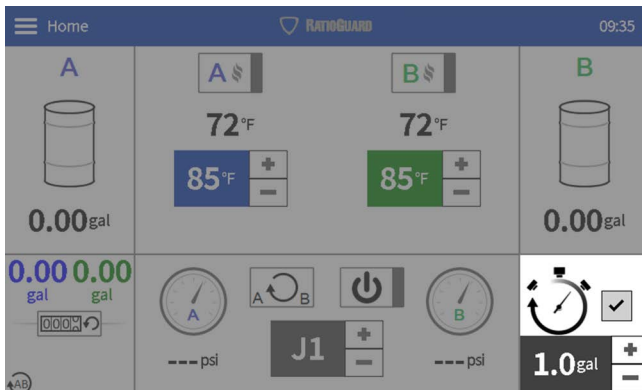
### Proportioner Control Panel

This Proportioner Control Panel contains controls for operation of the A and B displacement pumps.



### Jog Cycle Limit Panel




The jog Cycle Limit panel contains a feature enable/disable check box and a cycle limit countdown. Tap the check box to enable the feature. When enabled, the E-Mix XT pump will shut off after the specified volume.



Icon	Name	Description
	Proportioner Pressure Set Point	Tap +/- to adjust the set point by ten psi. Press and hold +/- to slew. Tap the number to open pop-up and type in set point directly.
	Proportioner Jog Level	Tap +/- to adjust the set point by one level. Press and hold +/- to slew. Tap the number to open pop-up and type in set point directly.
	Ratio Check Level	Tap +/- to adjust the set point by one level. Press and hold +/- to slew. Tap the number to open pop-up and type in set point directly.
	Proportioner Modes	Tap to select the proportioner mode. <b>Spray:</b> used to pressurize and spray material. Pump drives to pressure set point. <b>Jog:</b> used to recirculate/flush material. Pump drives to jog level. <b>Ratio Check:</b> used to perform system ratio checks. Pump drives to ratio check level.
	Proportioner On/Off Switch	Tap to toggle the proportioner state.

## Diagnostic Screen

Use the Diagnostic Screen to view information for all system components.


Icon	Name	Description
	General System Data	Tap to display general system information related to heat/pressure/flow.
	Heat Data	Tap to display more detailed information related to heat.
	Pressure/Flow Data	Tap to display more detailed information related to pressure/flow.

## Logs Screens

Use the Logs Screens to view information for E-Mix XT operation performance.

## Errors

The Errors screen shows the date, time, error code, and description of all errors that have occurred in the system during operation.

Icon	Name	Description
	Help	Tap to display a QR code with a link to <a href="http://help.graco.com">help.graco.com</a> for error and troubleshooting information.

## Events

The Events screen shows the date, time, event code, and description of all events that have occurred in the E-Mix XT system during operation.

## Usage

The Usage screen shows pump cycle counts and material usage for each day of use of the E-Mix XT system.


## USB Data Download

1. Insert USB drive on the back of the display box.

The **USB Download in Progress** icon  will appear in the menu bar on the ADM screen.

**NOTE:** USB A type drives are supported.

**NOTE:** The ADM can read/write to FAT (File Allocation Table) formatted storage devices. NTFS (New Technology File System) formatted devices are not supported.

2. Wait for the USB Download Complete icon  to appear in the menu bar.
3. Remove USB drive from the back of the display box.

## Software

The Software screen displays the system part number, system serial number, software part number, and software version.

Setting	Description
System Part #	System part number (shown on product label). <b>NOTE:</b> Value will be blank on replacement displays.
System Serial #	System serial number (shown on product label). <b>NOTE:</b> Value will be blank on replacement displays.
Software Part #	System software part number.
Software Version	System software version.



## Setup Screen

Use the Setup Screen to set pressure monitoring settings for the E-Mix XT system.

Setting	Description
Enable Pressure Imbalance Alarms	Tap the check-box to enable/disable Pressure Imbalance Alarms. Tap the number value to adjust the alarm threshold.
Select Higher Pressure Material	If using pressure material offset, this will determine which material will have the higher dynamic pressure.
Higher Pressure Material Offset	Tap the check-box to enable/disable Higher Pressure Material Offset. Tap the number value to adjust the alarm threshold.
Enable Low Pressure Alarms	Tap the check-box to enable/disable Low Pressure Alarms. Tap the number value to adjust the alarm threshold.
Enable Maximum Temperature Set Point	Tap the check-box to enable/disable Maximum Temperature Set Point. Tap the number value to adjust the maximum temperature set point.
Max Chemical Volume	Tap the number value to adjust the home screen maximum drum volume.
Enable Low Chemical Alarms	Tap the check-box to enable/disable Low Chemical Alarms. Tap the number value to adjust the low chemical alarm threshold.
Enable Jog Limit	Tap the check-box to enable/disable the jog limit feature. Tap the number to adjust the jog cycle limit. When enabled and in jog mode, the E-Mix XT pump will automatically shutoff when the specified number of gallons are completed. <b>NOTE:</b> This feature can be enabled directly on the home screen.
Show Manifold Handles Once	Tap the check-box to enable/disable only showing the manifold handles once when starting the pump in different spray modes. If this is disabled, the manifold handles will show every time the pumps are started. If this is enabled, the manifold handles will show once in each pump mode every time the E-Mix XT is turned on.

## Advanced Screens

Use the Advanced Screens to manage the display settings and software.

### Display

Use the Display screen to set the language, date format, current date, time, setup screens password, screen saver delay, temperature units, pressure units, and volume units.

Tap the field next to each setting to edit.

Setting	Description
Enable Demo Mode	Tap the enable/disable demo mode. <b>NOTE:</b> settings changed and cycles accrued in demo mode are not undone after exiting demo mode.
Language	Display language.
Number Format	Display and USB download number format.
Date Format	Display and USB download date format.
Date	Display date and time.
Screen Saver	Screen saver timeout period (zero disables the screen saver).
Password	Display password. Settings with a lock next to the entry can be password protected. <b>NOTE:</b> enter 0000 (default value) to disable the password.
Temperature Units	Display and USB download temperature units.
Pressure Units	Display and USB download pressure units.
Volume Units	Display and USB download volume units.

# Maintenance

## Filters

Once a week check, clean, and replace (if needed) the Spray Gun handle filter; see your Spray Gun manual.

## Seals

Once a week, check and tighten throat seals on both pumps (see table for torque specifications). Follow the **Pressure Relief Procedure**, page 31, prior to tightening seals. There must not be any pressure on the pumps when adjusting.

Pump Size	Torque Specification
All	70-80 ft-lb (95-108 N•m)

## Spray Hose Conductivity

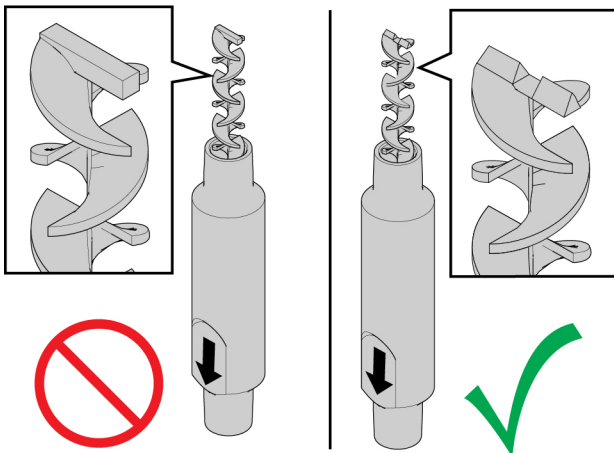
Check electrical resistance of hoses regularly. If total resistance to ground exceeds 29 megohms, replace hose immediately.

## Hose Wear

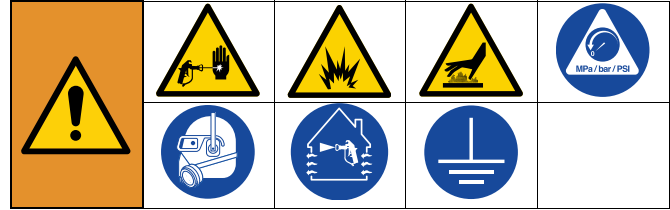
Check all hoses and couplings for wear each day. Replace worn or damaged parts immediately.

## Mixer Elements

Replace Mixer Elements as necessary and every time material is changed. Ensure new Mix Elements (AS) are placed in Mix Tubes (AW and AV) in the correct orientation before reinstalling in the fluid path.



## Cleaning Procedure



1. Ensure all equipment is grounded. See **Grounding**, page 19.
2. Ensure the area where the system will be cleaned is well ventilated and remove all ignition sources.
3. Turn off all heaters and allow equipment to cool.
4. Flush mixed material. Follow the complete **Solvent Pump Pressure Relief**, page 32.
5. Follow the **Ratio Check** procedure on page 35. Turn off all power.
6. Clean the external metal surfaces only using a rag soaked in solvent that is compatible with the spray material and surfaces being cleaned.
7. Allow enough time for the solvent to dry before using the system.

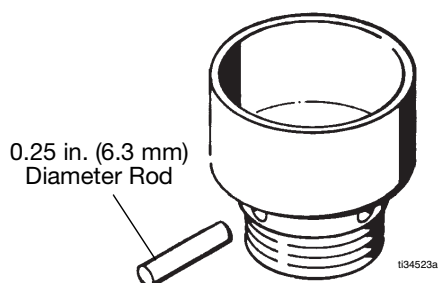
## Displacement Pumps

Check packing nut. Torque to 25-30 ft-lb (34-41 N•m). Keep the wet cup half filled with Graco Throat Seal Liquid (TSL).

## Feed Pumps (if equipped)



Keep the packing nut/wet-cup half filled with Graco Throat Seal Liquid (TSL) or compatible solvent to help prolong packing life.



Adjust the packing nut weekly so it is just tight enough to prevent leakage. See your feed pump manual.

Never leave the pump or hoses filled with water or air. To help prevent corrosion, flush the water and all air out of the system and leave it filled with mineral spirits or an oil-based solvent.

## Solvent Pump

Keep the wet cup half filled with Graco Throat Seal Liquid (TSL).

## Agitators (if equipped)

After the first 100 hours, or two weeks of operation, change the gear reducer oil. After that, change the oil every 2500 hours, or six months (whichever comes first) of operation under normal conditions. More frequent oil changes are needed under severe operating conditions or in atmospheres containing excessive moisture or abrasives. See your agitator manual for the oil changing procedure.

Every 2500 hours, or six months (whichever comes first) of operation, inspect the bearing block (see your agitator manual).

# Recycling and Disposal

This section includes information on how to properly recycle and dispose of a product at the end of its useful life.

## End of Product Life

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

- Perform the **Pressure Relief Procedure**, page 31.
- Drain and dispose of fluids according to applicable regulations. Refer to the material manufacturer's Safety Data Sheet.
- Remove motors, batteries, circuit boards, LCDs (liquid crystal displays), and other electronic components. Recycle according to applicable regulations.
- Do not dispose of batteries or electronic components with household or commercial waste.



- Deliver remaining product to a recycling facility.

# California Proposition 65

## CALIFORNIA RESIDENTS

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

## Accessories

### **Desiccant Dryer, 119974, 16F549 & 113093**

For use with polyurethane isocyanates in hoppers. See your desiccant kits manual for more information.

### **Desiccant Dryer Filter 2 Pack, 24K984**

### **Xtreme- Duty™ Agitator Kit, 25A598**

For mixing viscous materials held within a 55 gallon drum. See your feed pump and agitator kits manual for more information.

### **2:1 Feed Pump Kit, 256275**

For supplying viscous materials from a drum to E-Mix XT system. See your feed pump and agitator kits manual for more information.

### **2:1 Drum Feed Kit, 256232**

One T2 pump feed kit and one Twistork agitator kit for mixing and supplying viscous materials from a 55 gallon drum to E-Mix XT system. See your feed pump and agitator kits manual for more information.

### **5:1 Feed Pump Kit, 256276**

For supplying viscous materials from a drum to E-Mix XT system. See your feed pump and agitator kits manual for more information.

### **10:1 Drum Feed Kit, 256433**

For supplying highly viscous material from a 55 gallon drum to E-Mix XT system. See your feed pump and agitator kits manual for more information.

### **Quickset Mix Manifold, 24M398**

Mix manifold with independent A and B flushing for use with quick hardening materials. See your mix manifold manual for more information.

### **Remote Mix Manifold Carriage, 262522**

A protective guard to mount mix manifold remote. See your mix manifold manual for more information.

### **Mix Manifold Restrictor Wrench, 126786**

### **Gun Splitter with Carriage, 262826**

One splitter valve to use one, two, or three spray guns with the system. Provides independent flush for two guns. Optional 3rd gun port does not have independent flush. See your gun splitter valve manual for more information.

### **Lower Strainer and Valve Kit, 256653**

For straining material from a feed pump to an E-Mix XT system fluid inlet. See lower strainer and valve kit manual for more information.

### **Light Tower Kit, 18H278**

For identifying the status of the E-Mix XT system from a distance.

### **Hose Rack Kit, 2006329**

For use with remote mounting E-Mix XT system configurations. Helps contain heated and non-heated hoses while in use and in transporting.

### **Heated Hose Kits, 2007169-2007176**

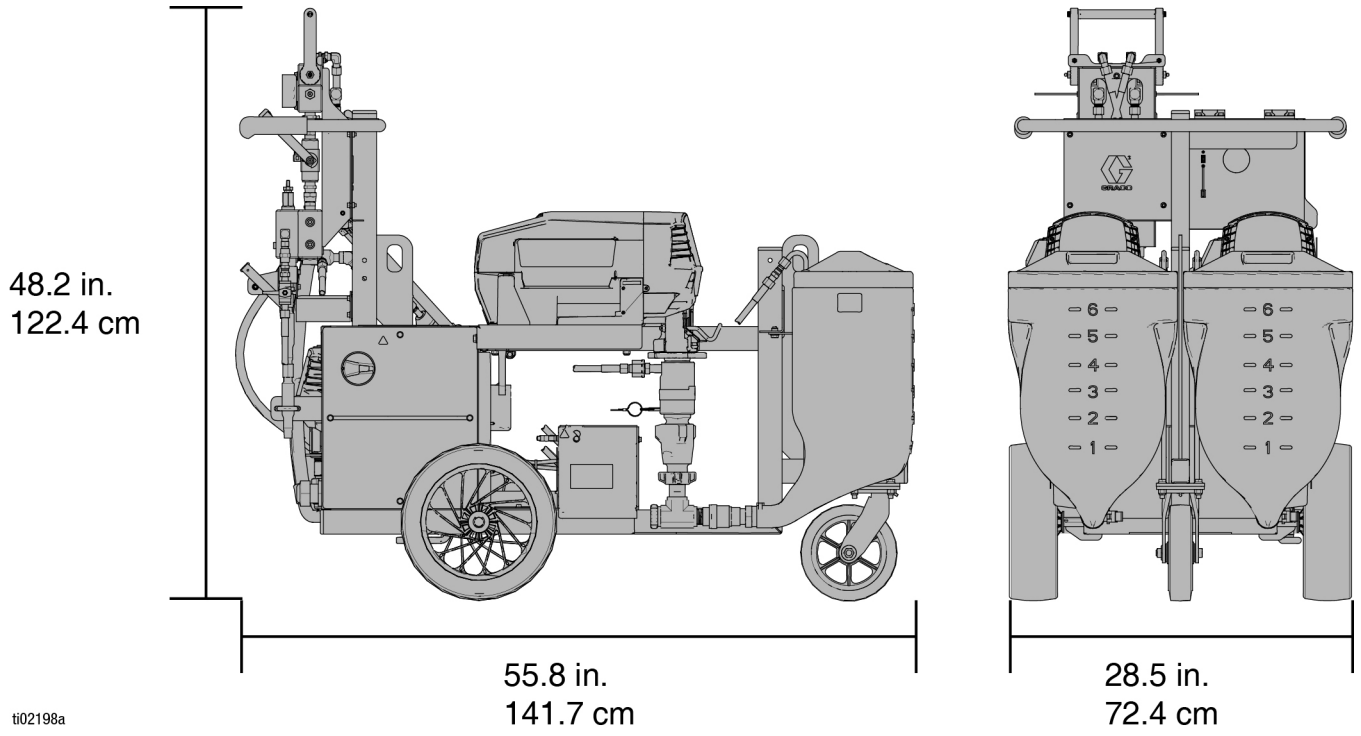
Helps maintain heat or generate more delta-T for a more efficient spray performance.

### **Remote Hose Kit, 2007132**

For use when remote mounting the mix manifold. Includes the following hoses and necessary fittings:

- 1/4" x 50 ft (qty. 2)
- 3/8" x 50 ft (qty. 2)
- 1/2" x 50 ft (qty. 4)

# Dimensions



# Technical Specifications

<b>E-Mix XT</b>		
	<b>U.S.</b>	<b>Metric</b>
<b>Output</b>		
Maximum System Fluid Working Pressure	5000 psi	345 bar, 34,5 MPa
Maximum Flush Pump Working Pressure	3300 psi	228 bar, 22.8 MPa
Maximum Storage Time	5 years (To maintain original performance, replace soft seals after 5 years of inactivity)	
<b>Electrical Specifications (See Wiring Diagram, page 21)</b>		
<b>2004087:</b> Voltage	200 - 240 Volts, 1 ph	
Current	40 Maximum Amps	
Frequency	50/60 Hz	
<b>2004088:</b> Voltage	350 - 415 Volts, 3 ph	
Current	20 Maximum Amps	
Frequency	50/60 Hz	
<b>Filtration</b>		
XTR Spray Gun	60 mesh	
<b>Viscosity</b>		
Gravity Feed	200 - 20,000 cps (pourable)	
Pressure Feed	Feed pressure must not exceed 15% of the spray pressure regardless of viscosity	
<b>Temperature</b>		
Operating	40-108 °F	4-42 °C
Storage	30-160 °F	1-71 °C
Maximum Fluid Temperature	160 °F	71 °C
<b>Wetted Materials</b>		
Housings and Manifold	Carbon steel with electroless nickel plating	
Displacement Pump Packings	Carbon filled PTFE, proprietary UHMWPE	
Solvent Pump	See Solvent Pump manual	
Hoses	Plated carbon steel, Nylon	
Feed Pump	See your feed pump manual	
Agitator	See your agitator manual	
Hopper	Polyethylene, stainless steel, brass, nickel plating, plated carbon steel, PTFE	
Miscellaneous Parts	Carbide, acetal, solvent resistant plastics, zinc- and nickel-plated carbon steel, nylon, stainless steel, PTFE, acetal, leather, UHMWPE, aluminum, tungsten carbide, polyethylene, fluoroelastomer, urethane	
<b>Weight</b>		
Dry Weight	423 lb	192 kg
<b>Output</b>		
Recirculation Manifold Assembly	1/2 in. npt(f)	
Fluid Mix Manifold Inlets (ball valves)	1/2 in. npsm	
Mix Manifold material outlet	1/2 npt(f)	
<b>Noise (dBa)</b>		
Maximum sound pressure	85.4 dBa at 5,000 psi (34.5 MPa, 345 bar)	
Sound pressure measured 1 feet (0.3 meter) from equipment. Sound power measured per ISO-3744.		
<b>Notes</b>		
All trademarks or registered trademarks are the property of their respective owners.		

# 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

For the latest information about Graco products, visit [www.graco.com](http://www.graco.com).

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

**TO PLACE AN ORDER**, contact your Graco distributor or call 1-800-690-2894 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. Graco reserves the right to make changes at any time without notice.*

Original instructions. This manual contains English. MM 3B0221

**Graco Headquarters:** Minneapolis

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

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