OPERATION MANUAL

MANUAL NUMBER X032778 | REVISION A | ENGLISH (US)

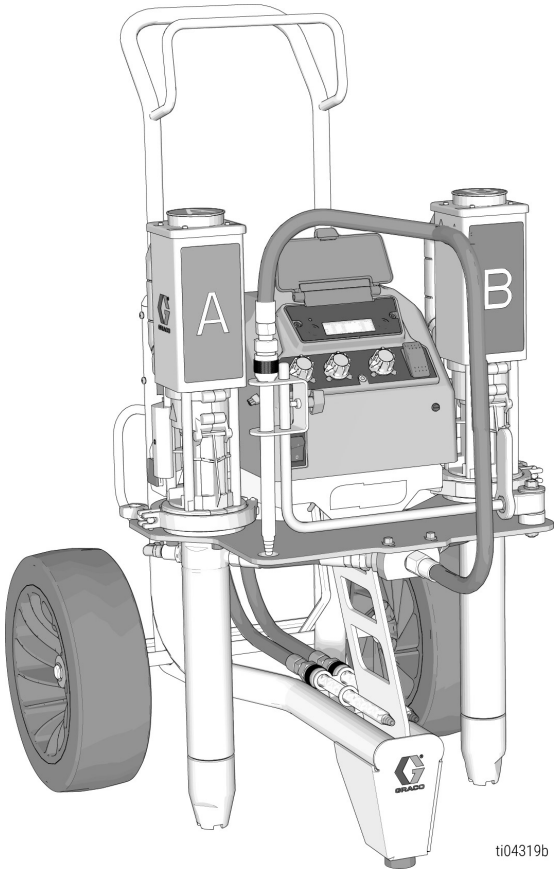
TruMix™ 150 XT

Electric variable ratio mixing system for two-component coatings. For professional use only.

Not approved for use in explosive atmospheres or hazardous (classified) locations.

Important Safety Instructions

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



Images are for illustrative purposes only

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MODELS

TRUMIX™ 150 XT MODELS

MODEL
2012053

TRANSLATED MANUALS

Additional language documents are available to support all regions where the TruMix™ 150 XT is sold. Find any available translations at www.graco.com.

Table 2-1: Translations for TruMix 150 XT Operation Manual

LANGUAGE	MANUAL NUMBER
Dutch	X032778NL
English	X032778EN
French	X032778FR
German	X032778DE
Italian	X032778IT
Japanese	X032778JA
Korean	X032778KO
Spanish	X032778ES

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
	Electric Shock Hazard
	Equipment Misuse Hazard
	Fire and Explosion Hazard
	Moving Parts Hazard
	Pressurized Equipment Hazard
	Splash Hazard
	Toxic Fluid or Fumes Hazard

SYMBOL	MEANING
	Eliminate Ignition Sources
	Follow Pressure Relief Procedure
	Ground Equipment
	Read Manual
	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.

⚠ WARNING

FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, **in work area** can ignite or explode. Paint or solvent flowing through the equipment can cause static sparking. To help prevent fire and explosion:

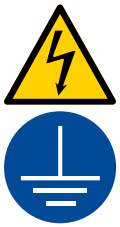
- Use equipment only in well-ventilated area.
- Eliminate all ignition sources, such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static sparking).
- Ground all equipment in the work area. See **Grounding** instructions.
- Never spray or flush solvent at high pressure.
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are anti-static or conductive.
- **Stop operation immediately** if static sparking occurs or you feel a shock. Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.

PRESSURIZED EQUIPMENT HAZARD

Fluid from the equipment, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.

- Follow the **Pressure Relief Procedure** when you stop spraying/dispensing and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.

⚠ WARNING



ELECTRIC SHOCK HAZARD

This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.

- Turn off and disconnect power cord before servicing equipment.
- Connect only to grounded electrical outlets.
- Use only 3-wire extension cords.
- Ensure ground prongs are intact on power and extension cords.
- Do not expose to rain. Store indoors.
- Wait five minutes after disconnecting power cord before servicing.
- Only use an authorized service center to replace a damaged power cord.

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

EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Specifications** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Specifications** 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.
- Do not leave the work area while equipment is energized or under pressure.
- Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or overbend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

BURN HAZARD

Equipment surfaces and fluid that is heated can become very hot during operation. To avoid severe burns:

- Do not touch hot fluid or equipment.

TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled or swallowed.

- 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.
- When spraying, servicing equipment, or when in the work area, always keep work area well-ventilated and always wear appropriate personal protective equipment. See **Personal Protective Equipment** warnings in this manual.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.

⚠ 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.

TECHNICAL SPECIFICATIONS

The table provides important information related to the TruMix™ 150 XT, including product attributes, measurements, and performance characteristics that support the use of the equipment.

Table 5-1: Technical Specifications for TruMix 150 XT

	US	METRIC
Output*		
Maximum Working Pressure	600 psi	4.14 MPa, 41.4 bar
Maximum Delivery (1:1)*	2.5 gpm	9.5 lpm
Maximum Delivery (2:1)*	1.87 gpm	7.1 lpm
Maximum Delivery (4:1)*	1.56 gpm	5.9 lpm
Electrical Ratings		
100-120 VAC	12A, 50/60 Hz	
200-240 VAC	7A, 50/60 Hz	
Temperature Ratings		
Maximum Ambient	120°F	49°C
Noise (dBa)		
Maximum sound pressure	84.2 dBa	
Maximum sound power	95.2 dBa	
Sound pressure measured 3.3 feet (1 m) from equipment. *Sound power measured per ISO-3744.*		
Materials of Construction		
Wetted materials on all models	PTFE, nylon, UHMPWE, acetal, tungsten carbide, stainless steel, chrome plating, nickel-plated carbon steel, ceramic, FKM polypropylene	
Weight		
Model 2012053	160 lb	72.6 kg
Notes		
** Higher ratios and material viscosity will reduce output. Lower temperatures may also reduce output.* *If unable to run the system while plugged in, check incoming voltage and frequency.* All trademarks or registered trademarks are the property of their respective owners.		

OVERVIEW

The TruMix™ 150 XT Variable Ratio Mixing System pumps and mixes two-component materials:

- Material from 1:1 to 6:1 ratios in 0.01 increments.
- Dispenses either continuously or in user-specified batch volumes.
- The ProConnect® Swappable Pumping System allows for quick changing of pumps due to material incompatibility or for ease of repairs, see **Remove ProConnect Swappable Pumping Systems**.

MATERIAL COMPATIBILITY

- Materials must be kept on intended side of system. **DO NOT** cross-contaminate.
- The system has been designed to accommodate incompatible material chemistries through the use of removable, dedicated ProConnect® Swappable Pumping Systems.

KEEP COMPONENTS A AND B SEPARATE

⚠ WARNING


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. Never cross solvent A and B.

NOTICE

TruMix™ 150 XT only pumps non-aggregated A and B component materials. To prevent damage:

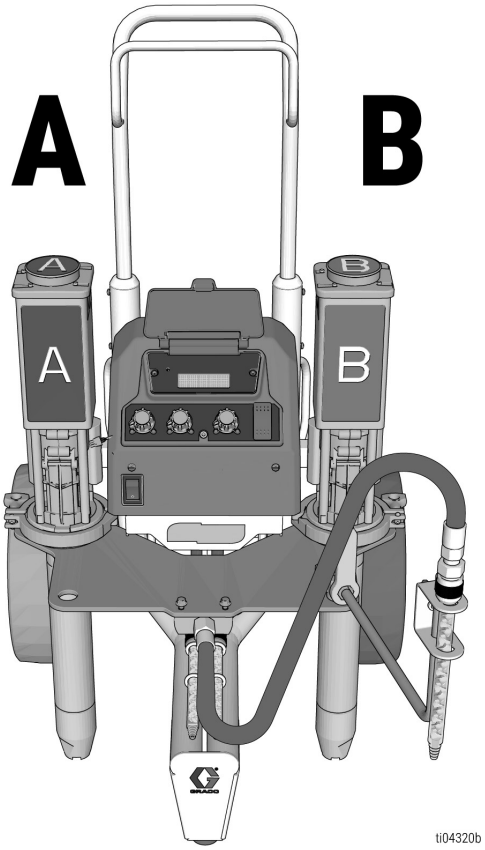
- **DO NOT** supply pumps with catalyzed materials.
- **DO NOT** mix in proximity of machine to prevent splattering cross-contamination.
- **DO NOT** combine mixed material with aggregates in proximity to machine to prevent aggregates from clogging pumps.

A (BLUE) AND B (RED) COMPONENTS

NOTE:

Material suppliers can vary in how they refer to plural component materials.

- Component A (Blue) is on the left side.
- Component B (Red) is on the right side.



CHANGING MATERIALS

NOTICE

Changing the material type 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.
- Check with your material manufacturer for chemical compatibility.
- To prevent damage, use separate ProConnect® Swappable Pumping Systems for incompatible materials, such as epoxies, polyurethanes, and polyaspartics. See **Remove ProConnect Swappable Pumping System**.

MOISTURE-SENSITIVE MATERIALS

Exposure to moisture (such as humidity) will cause moisture-sensitive materials to partially cure. Over time, the material will increase in viscosity and fully harden.

NOTICE

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

- Keep pump wet cup filled with appropriate lubricant. The lubricant creates a barrier between the material and the atmosphere.
- 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.

COMPONENT IDENTIFICATION

The diagram highlights the controls and features on the TruMix™ 150 XT that are used during typical operation.

TRUMIX™ 150 XT

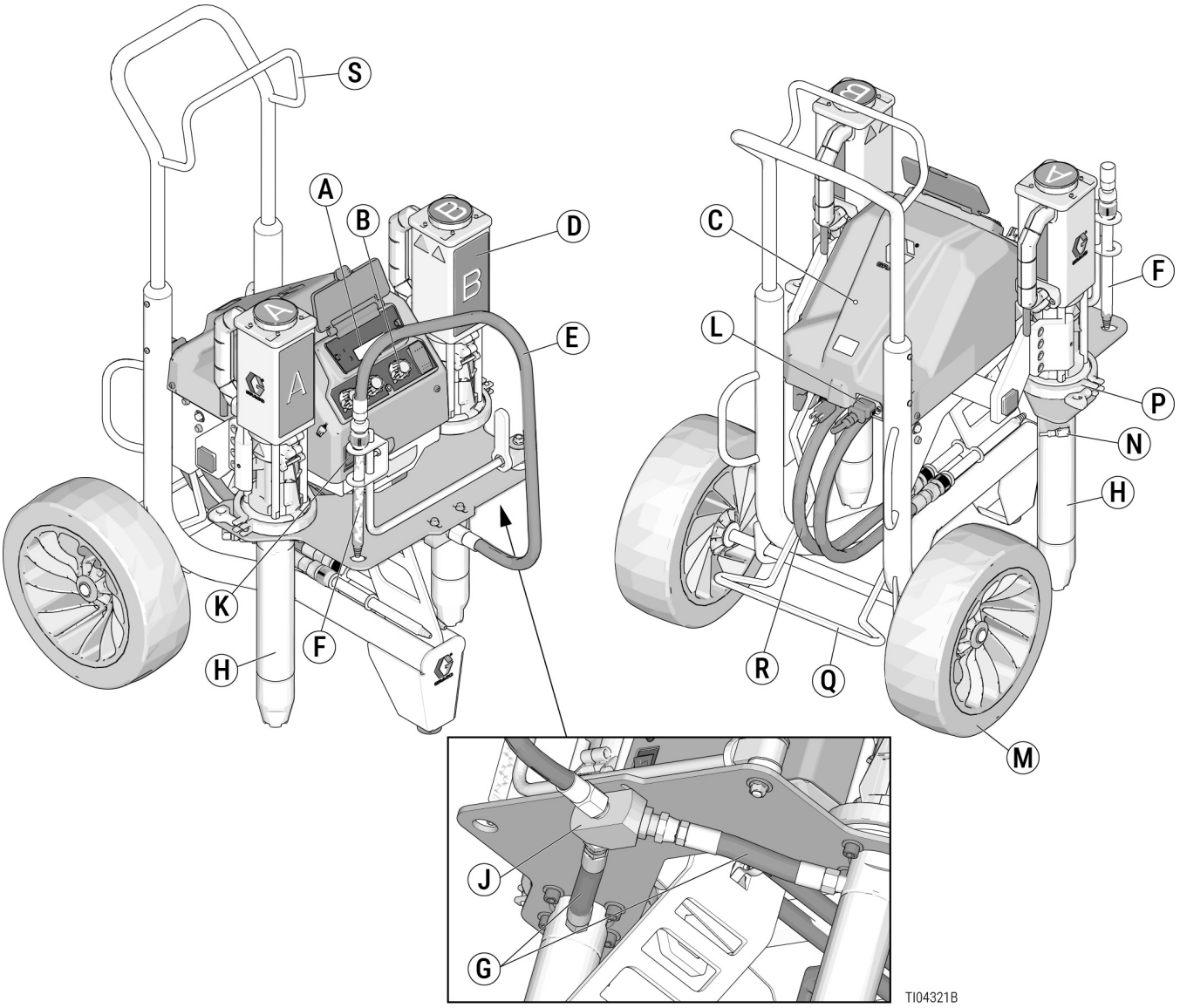


Figure 7-1: TruMix™ 150 XT Components

KEY	
A	Digital Display
B	User Controls
C	System Control Enclosure
D	XT Driver
E	CROSSLINK™ Multi-Stage Mix Hose
F	Applicator
G	A/B Component Material Hose
H	ProConnect Swappable Pumping System
J	Dispense Manifold (with check valves)
K	ON/OFF Power Switch
L	Power Port
M	Rear Wheel
N	Pressure Transducer
P	ProConnect® Clamp
Q	Kickstand
R	Spare CROSSLINK Multi-Stage Mix Hoses
S	Cord Wrap

DIGITAL DISPLAY

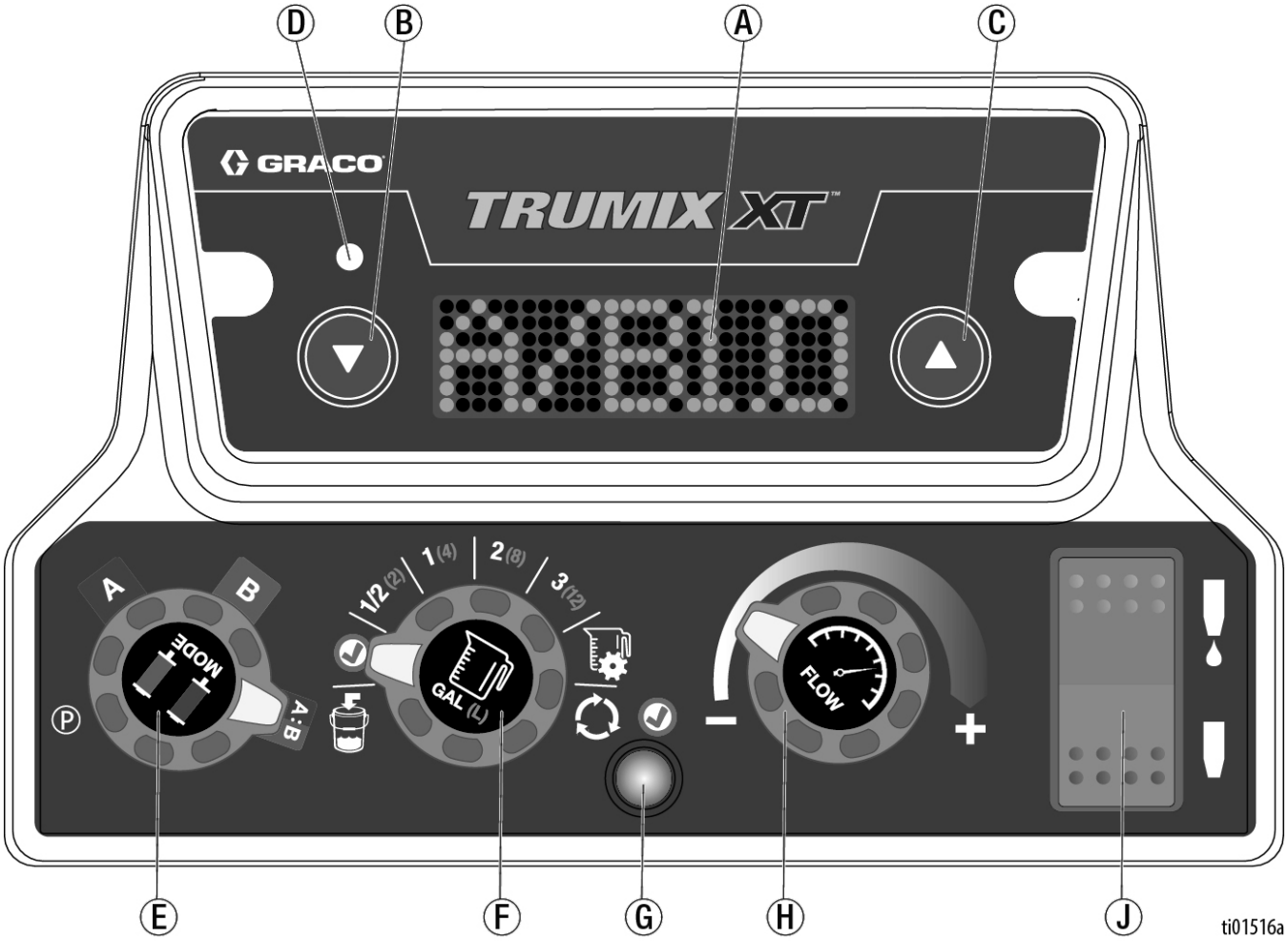


Figure 7-2: Digital Display Components

KEY	
A	System Information Screen
B	Left Menu Button
C	Right Menu Button
D	System Error Indicator Light
E	Pump Mode Knob - Park A, B, A:B
F	Batch Volume Knob
G	RatioGuard™ Indicator Light
H	Flow Speed Knob
J	Dispense Switch

The letters referenced in this section correlate with the figure keys in the **Component Identification** section.

See **Digital Display** for menu controls.

SYSTEM INFORMATION SCREEN (A)

This screen displays current material ratios, error codes, and other system information.

MENU BUTTON (B AND C)

There are four Primary Menu positions (1-4) and twelve Secondary Menu positions (5-16):

Primary Menu

NOTE:

Within the Primary Menu, the display will return to "1-RATIO" after five seconds of display inactivity.

1 - Ratio

Indicates the mode, depending on the following mode dial positions:

- **Park:** Park mode
- **A:** A only
- **B:** B only
- **A:B:** Cycles between A#, ##, and B#, ## indicating the current ratio target. User can double-press to edit A (ratio numerator) or use individual presses or holds to increase or decrease the value. Once A (ratio numerator) is at the desired value, double-press to advance to B (ratio denominator). Once B (ratio denominator) is at the desired value, double-press to exit edit mode and accept the new ratio target. See **Setup Ratios**.

2 - Batch Setting (gal./l)

Indicates batch volume setting depending on the following Batch Volume Knob positions:

- **Prime:**

  NOTE:

  Volume dispensed in prime setting ranges from 0.32 gal. (1.2 l) to 0.98 gal. (3.7 l), depending on ratio set by user.

- **Ratio Check:**
- **1/2-gallon batch:** 0.50 / 2-liter batch - 2.00
- **1-gallon batch:** 1.00 / 4-liter batch - 4.00
- **2-gallon batch:** 2.00 / 8-liter batch - 8.00
- **3-gallon batch:** 3.00 / 12-liter batch - 12.00
- **Custom batch:** Displays custom batch volume in user (gal./l). Double-press to edit volume using individual button presses or holds to increase or decrease the value.
- **Continuous:** Continuous

3 - Job A

Displays A material dispensed since totalizer was reset. Double-press to be prompted to reset volume totalizer.

NOTE:

Resetting the A totalizer will also reset the B totalizer.

NOTE:

Material dispensed during a ratio check is not included in the totalizer.

4 - Job B

Displays B material dispensed since totalizer was reset. Double-press to be prompted to reset volume totalizer.

NOTE:

Resetting the B totalizer will also reset the A totalizer.

NOTE:

Material dispensed during a ratio check is not included in the totalizer.

Secondary Menu

5 - Volume Units

Displays the user volume units. Double-press to edit.

NOTE:

Volume units are used to infer pressure units. Volume units of gal. will lead to pressure units of psi. Volume units of liter will lead to pressure units of bar.

6 - Pressure A

Display pressure transducer reading at the outlet of pump A.

7 - Pressure B

Displays pressure transducer reading the outlet of pump B.

8 - Life A

Displays A material dispensed over the lifetime of the motor controller (system).

9 - Life B

Displays B material dispensed over the lifetime of the motor controller (system).

10 - Motor Calibration (can only be performed while being serviced)

NOTE:

Residual fluid in CROSSLINK™ Multi-Stage Mix Hose may dispense. Place a bucket under Applicator prior to calibration.

Double-press to be prompted to reset the motor calibration.

Press Y to accept.

Turn Pump Mode Knob to A:B.

Turn Batch Volume Knob to prime.

Turn Dispense Switch **ON**.

Motor will now begin calibration.

11 - Knob Calibration Left

Double-press to calibrate the knobs. Updates the low end of the scale and adjusts boundaries accordingly.

NOTE:

In order to perform knob calibration, all knobs must be turned to the left.

12 - Knob Calibration Right

Double-press to calibrate the knobs. Updates the high end of the scale and adjusts boundaries accordingly.

NOTE:

In order to perform knob calibration, all knobs must be turned to the right.

13 - Job Log

Double-press to enter and scroll through a log of previous jobs.

Data in the log contains:

- Index
- Target Volume
- Ratio Target
- Ratio Measured

Once log is entered via double-press, the left (down) and right (up) buttons can be used to scroll through the log. Double-press to exit log.

NOTE:

The job log only updates when the job volume totalizers are reset or when the system dispenses material at a new ratio.

14 - Error Log

Double-press to enter and scroll through a log of previous errors.

Data in the log contains:

- Index
- Error Codes (see **Display Error Codes**)

Once log is entered via double-press, the left (down) and right (up) buttons can be used to scroll through the log. Double-press to exit log.

15 - Controller SW Rev

Displays the revision of motor controller software.

16 - Display SW Rev

Displays the revision of the display software.

SYSTEM ERROR INDICATOR LIGHT (D)

When this light is blinking, it indicates that an error has occurred. Read the System Information Screen to see the error code.

PUMP MODE KNOB (E)

There are four Pump Mode Knob positions:

Position 1 - P:	Park the Pump (Lower pumps to the bottom position for storage and removal)
Position 2 - A:	Run Pump A when the Dispense Switch is on until an error occurs or the batch volume is reached.
Position 3 - B:	Run Pump B when the Dispense Switch is on until an error occurs or the batch volume is reached.
Position 4 - A:B:	Run Pumps A and B on ratio when the Dispense Switch is on until an error occurs or the batch volume is reached.

BATCH VOLUME KNOB (F)

There are eight Batch Volume Knob positions:

Position 1 - Prime: Dispense while the Dispense Switch is ON until the individual hoses and hot hose are primed (approximate volumes listed below). This material is not guaranteed to be on ratio and should not be used for the end application.

NOTE:

Volume dispensed in prime setting ranges from 0.32 gal. (1.2 l) to 0.98 gal. (3.7 l), depending on ratio set by user.

Position 2 - Ratio Check: Dispense while the Dispense Switch is ON until (0.25 gallons or 1 liter have been dispensed). Upon completion, you will be prompted to verify whether the target volume (0.25 gallons or 1 liter) was dispensed. If you select Y (correct volume dispensed), the ratio assurance light will illuminate and the material may be used for the end application. If you select N (incorrect volume dispensed), the ratio assurance light will not illuminate and the material should NOT be used for the end application.

Position 3 - 8 Select Dispense Volume:

- 1/2-gal. (2 l)*: Dispense while the Dispense Switch is ON until 0.5 gal. (2 l) have been dispensed.
- 1-gal. (4 l)*: Dispense while the Dispense Switch is ON until 1 gal. (4 l) have been dispensed.
- 2-gal. (8 l)*: Dispense while the Dispense Switch is ON until 2 ga. (8 l) have been dispensed.
- 3-gal. (12 l)*: Dispense while the Dispense Switch is ON until 3 gal. (12 l) have been dispensed.
- Custom Batch (defaults to 4-gal. [16 l])*: Dispense while the Dispense Switch is ON until the custom batch volume has been dispensed.
- Continuous: Dispense indefinitely while the Dispense Switch is ON.

Batch volume resets when the Dispense Switch is OFF (if the batch is stopped before the volume is reached, it will restart from 0).

FLOW SPEED KNOB (H)

This variable knob increases or decreases the target speed/flow. Turning the knob clockwise makes the system operate faster; turning the knob counterclockwise makes the system operate slower.

NOTE:

When the Batch Volume Knob is in the ratio check position, material will be dispensed at the minimum speed.

DISPENSE SIWTCH (J)

This switch determines whether the pumps run (ON or stop (OFF).

ON/OFF POWER SWITCH (K)

This toggle switch controls the overall power for the entire system.

SERIAL ID

Identifies the serial number of your particular system.

LEFT MENU BUTTON

In Edit Mode:

- Short-press: Decrease value slowly.
- Hold (>1 second): Decrease value rapidly.

Outside Edit Mode:

- Short-press: Move to previous menu item.
- Hold (>5 seconds): Switch between primary menu and secondary menu.

RIGHT MENU BUTTON

In Edit Mode:

- Short-press: Increase value slowly.
- Hold (>1 second): Increase value rapidly.

Outside Edit Mode:

- Short-press: Move to next menu item.
- Hold (<1 second): No action.

BOTH MENU BUTTONS

- Short-press or hold (<1 second): Enter/exit edit mode, reset totalizer, or perform action (if applicable).

NOTE:

Display flashes the value being edited in edit mode.

NOTE:

If editing ratio numerator (part A), short-pressing both buttons will advance to edit the ratio denominator (part B). If editing ratio denominator (part B), short-pressing both buttons will exit edit mode.

MENU NOTES

- While in primary menu, the display will return to 1-RATIO afer five seconds without display interaction.
- Changing the Pump Mode or Batch Volume Knob while in primary menu will cause the display to immediately navigate to 1-RATIO or 2-BATCH SETTING and show the current value of the setting.
- Changing the volume units will cause the custom batch setting to revert to the default value for the units selected (4.00 gal. or 16.00 l).
- The job volume reset prompt will only appear once per power cycle after the completion of the ratio check. This prompt will not appear if ratio has been changed from the previous job. In this case, the job volumes will have automatically reset.

PRESSURE RELIEF PROCEDURE

Relieve pressure on the TruMix™ 150 XT when you suspect pressure has been trapped from a clogged hose.

Follow the Pressure Relief Procedure whenever you see this symbol.

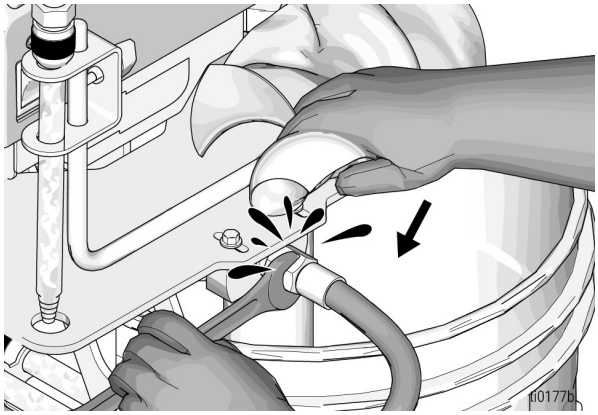
⚠ WARNING

To help prevent serious injury from pressurized fluid and splashing, follow the Pressure Relief Procedure if you suspect pressure has been trapped from a clogged hose.

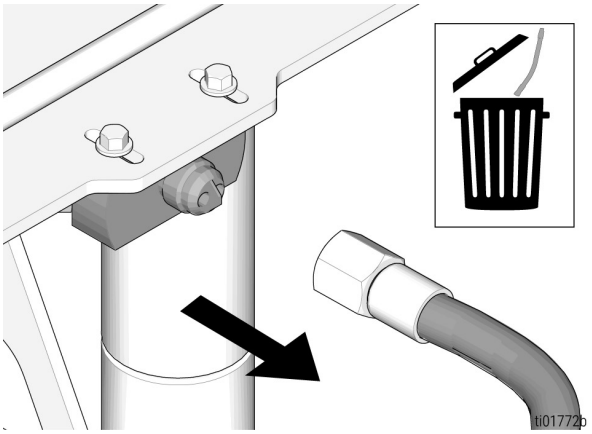
1. Cover with a rag to prevent splashing and carefully loosen CROSSLINK™ Multi-Stage Mix Hose fitting to allow fluid to leak out.

   NOTE:

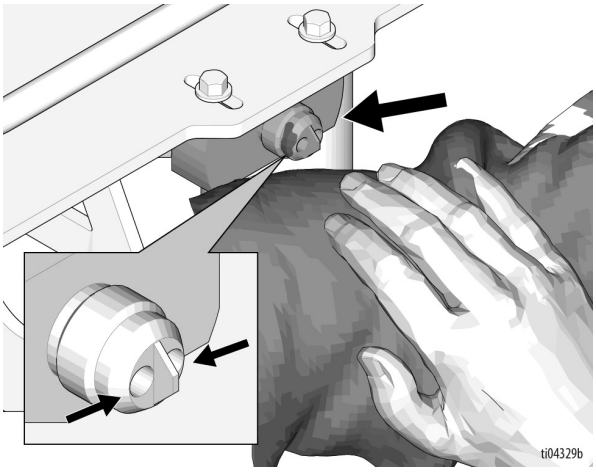
   Be careful and wear appropriate PPE as material may splash when fitting is loosened.



2. Wait for material to stop leaking from the fitting.
3. Remove hose and discard.



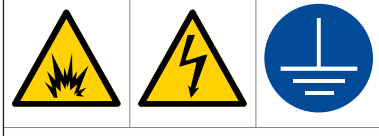
4. Clean Dispense Manifold A and B ports.



5. Replace and tighten CROSSLINK Multi-Stage Mix Hose.
6. Using a wrench, tighten the fittings.

Properly ground the TruMix™ 150 XT to help ensure correct operation.

⚠ WARNING



The equipment must be grounded to reduce the risk of static sparking and electric shock. An electric or static spark can cause fumes to ignite or explode. An improper ground can cause electric shock. A good ground provides an escape wire for the electric current.

This equipment is equipped with a power cord that has a ground wire and an appropriate grounding plug.

The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

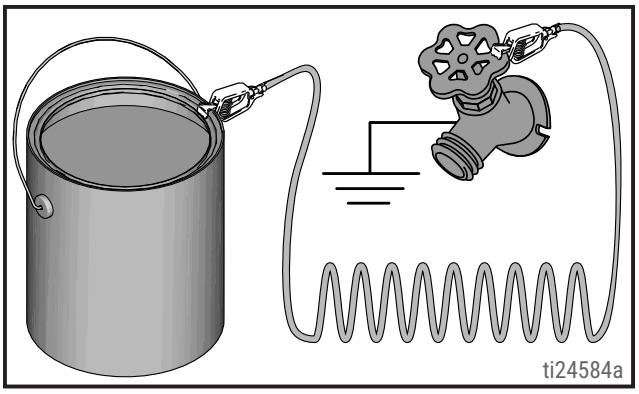
Do not modify the plug provided; if it does not fit the outlet, have the proper outlet installed by a qualified electrician.

PAILS

Flammable materials: follow local codes and regulations. Use only conductive metal pails, placed on a grounded surface such as concrete.

Do not place pail on a non-conductive surface, such as paper or cardboard. Non-conductive surfaces interrupt grounding continuity.

Always ground a metal pail: connect a ground wire to the pail. Clamp one end to the pail and the other end to a true earth ground such as a water pipe.



EXTENSION CORDS

Use an extension cord with an undamaged ground contact. If an extension cord is necessary, use a 3-wire, 12 AWG (2.5 mm²) minimum.

When using the equipment for the first time or after long term storage, follow these steps to prepare the TruMix™ 150 XT for operation.

CONNECT POWER

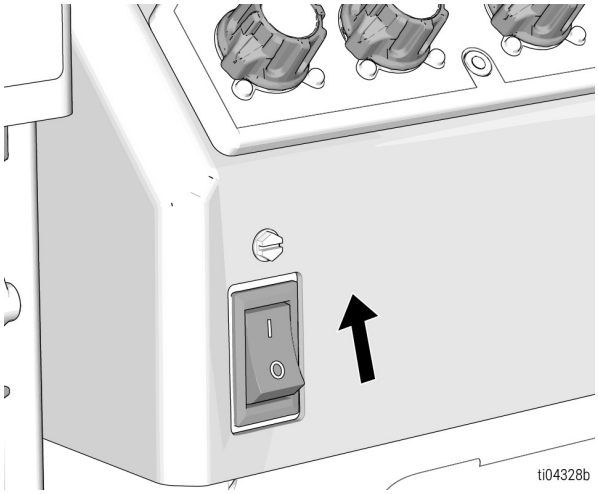
Plug the power cable into power port. Connect to 100-120 VAC, 50/60 Hz or 200-240 VAC, 50/60 Hz power source.

STARTUP

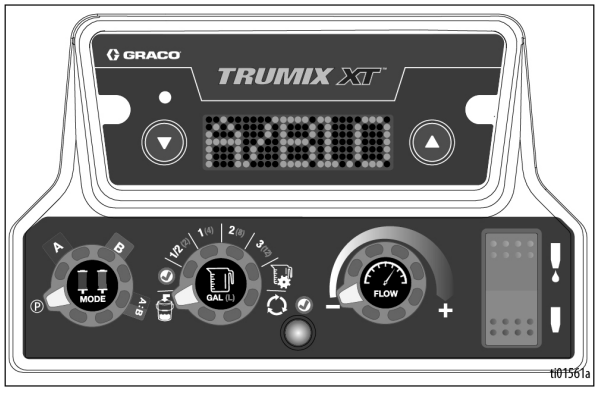
NOTE:

The TruMix™ 150 XT is shipped with caps on the end of the pumps. Prior to the first setup, remove and dispose of end caps.

1. Turn ON/OFF Power Switch **ON**.



2. The Digital Display will scroll text until the system is ready. The screen will stop on the current ratio targets.



SETUP RATIOS

1. Turn Pump Mode Knob to the A:B position.

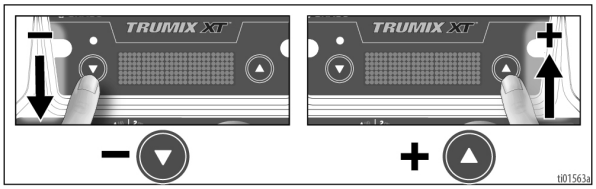
2. Press both menu buttons at the same time and release to edit the **A** side ratio volume.

NOTE:

Press the left menu button to decrease the ratio value **or** the right menu button to increase the ratio value.

NOTE:

Values can be increased by 0.01 with a single press of the button or hold for faster cycling, see **Universal Display Operations.**



3. Press both menu buttons at the same time again to lock in the volume of the **A** side ratio. This also allows you to now edit the **B** side ratio volumes.

4. Use the menu buttons to select the desired ratio for the **B** side, then push both menu buttons at the same time again to lock in the volume of the **B** side ratio.

PRIME THE SYSTEM

When solvents have been used to flush material from the previous job, a residual amount of solvent will remain in the pumps and hoses.

NOTICE

Perform the following procedure to ensure that all solvent has been properly flushed. Failure to do so could cause material to improperly cure.

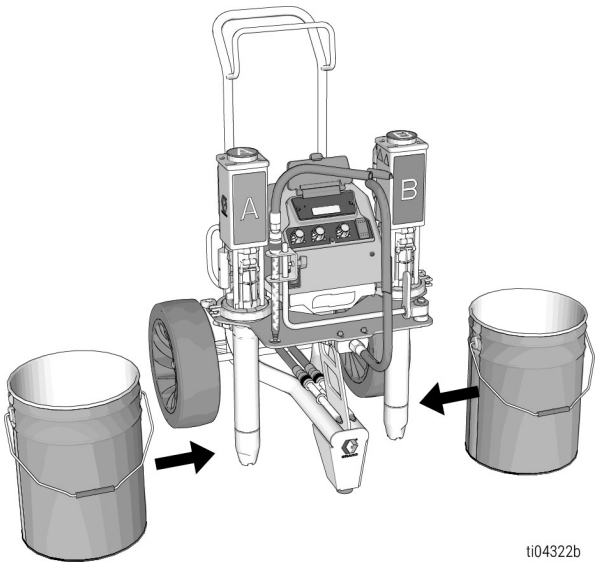
1. Place pails with A and B materials to be applied onto the respective sides of the machine.

   NOTE:

   If the machine has sat for an extended period of time without use, or was last used with a material that cures under humidity/air, it is recommended to flush the machine with a compatibile solvent to verify the pumps and check valves are operational before wetting the machine in two-component material. See **Flushing and Wipe Down of Pump**.

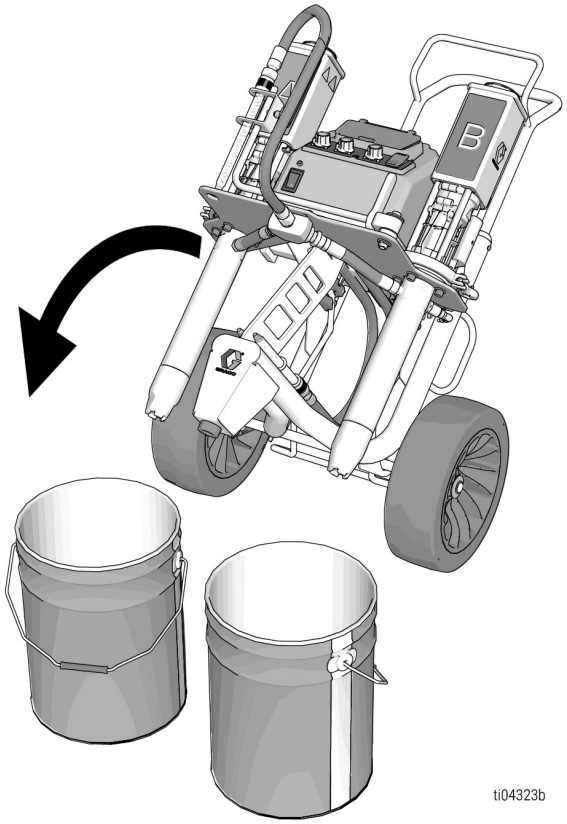
   NOTICE

   TruMix™ 150 XT only pumps non-aggregated A and B component materials. To avoid equipment damage, **DO NOT** supply pumps with catalyzed materials.



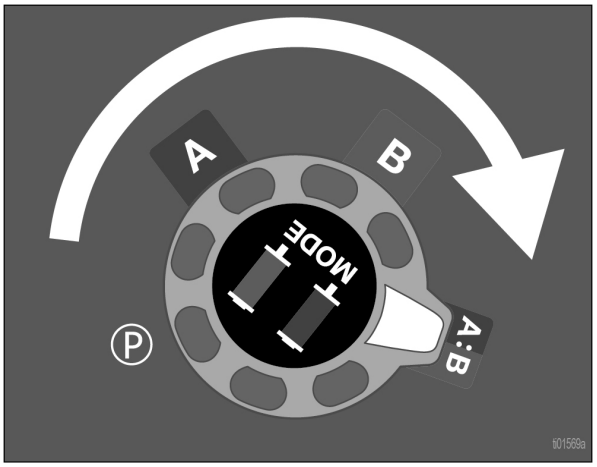
ti04322b

2. Pivot the two pumps downward into the material pails.



ti04323b

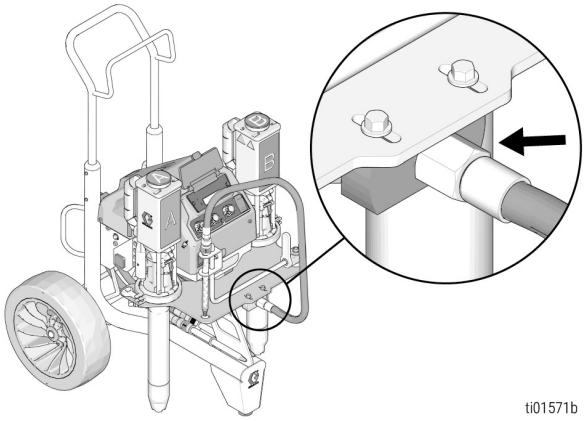
3. Turn the Pump Mode Knob to the A:B position.



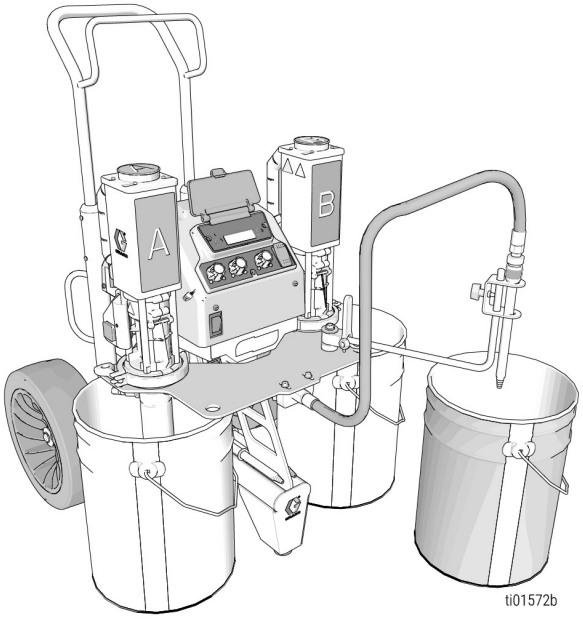
ti01569a

4. Turn the Batch Volume Knob to the Prime position.

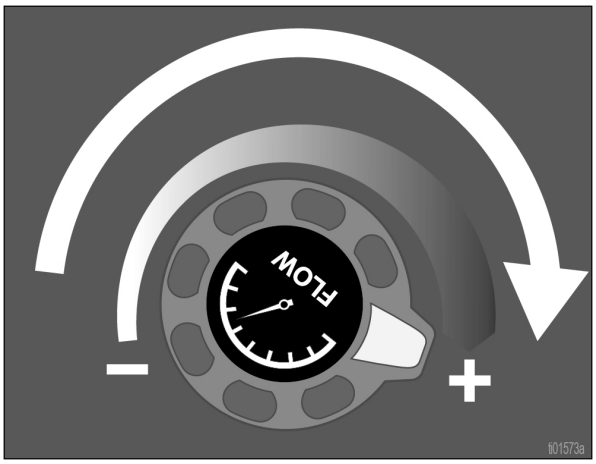
5. Make sure the CROSSLINK™ Multi-Stage Mix Hose is installed on the Dispense Manifold.



6. Place a waste pail under the Applicator.



7. Turn the Flow Speed Knob to maximum flow.



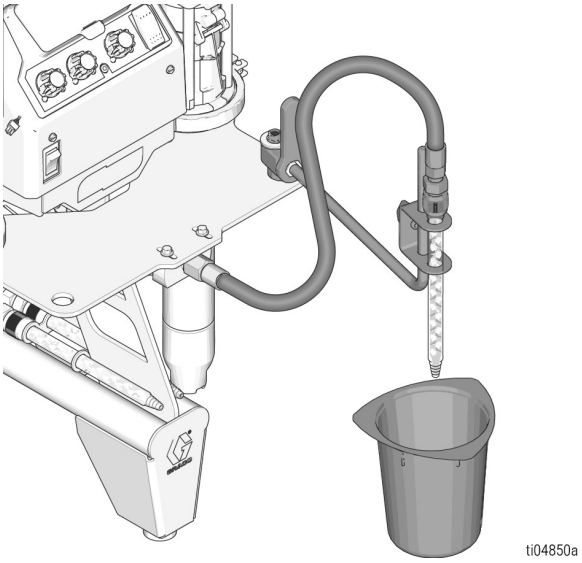
8. Turn on the Dispense Switch. The system will begin to dispense material until both the A hose and B hose are full, and the CROSSLINK Multi-Stage Mix Hose is compeltely purged. The display screen will scroll PRIME A:B COMPLETE once complete. The system is now ready for **Ratio Check**.

The instructions provide guidance on how to use the TruMix™ 150 XT.

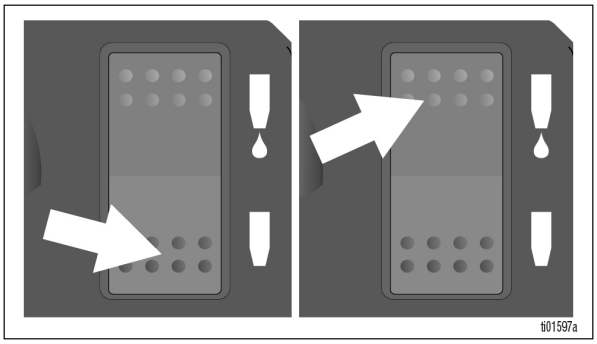
RATIO CHECK

1. Turn the Batch Volume Knob from the Prime position to Ratio Check.

2. Place ratio check cup under tip of Applicator.



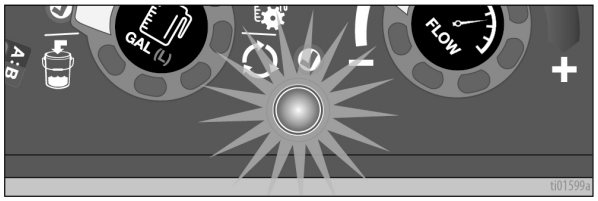
3. Turn the Dispense Switch **OFF** then back **ON** to start dispensing the ratio check material into the ratio check cup. The system will automatically stop dispensing when complete.



4. Visually verify that the correct amount of material (0.25 gal. or 1 l) was dispensed. Select YES (Y) or NO (N) when prompted on the display screen, depending on whether or not the correct amount of material was dispensed. If the RatioGuard™ Indicator Light does not illuminate, the material should not be used for the end application and the system will need to be re-primed.

NOTE:

Once YES (Y) is selected, the green RatioGuard Indicator Light will illuminate.



NOTE:

As long as the green RatioGuard™ Indicator Light is illuminated, the system can dispense on ratio. Otherwise, the system must be re-primed and a new ratio check must be performed to dispense on ratio.

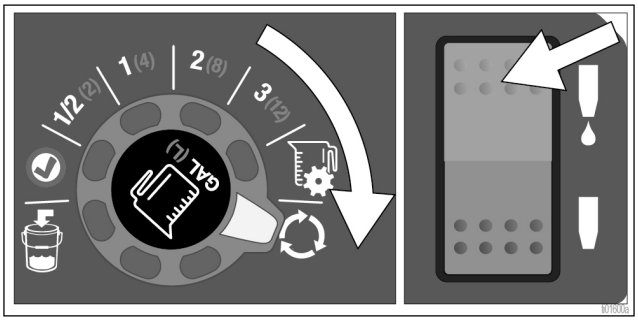
NOTE:

If attempting to dispense in a mode not covered by ratio assurance (Park, A only, B only), or in the Prime position on Batch Volume Knob, the unit will ask if you want to exit ratio assurance. If YES is selected, the unit will need to be re-primed and a new ratio check will need to be performed in order to dispense on ratio.

DISPENSING

CONTINUOUS SETTING

When set to the continuous setting (the Batch Volume Knob turned fully to the right), the Applicator will dispense an unlimited amount of material when the Dispense Switch is turned **ON**, as long as there is material in the pails.



NOTE:

Do not let material run out while the Applicator is set to the continuous setting. The Digital Display will show FEED ERROR if material runs out. If this occurs, re-prime the system, see **Prime the System**.

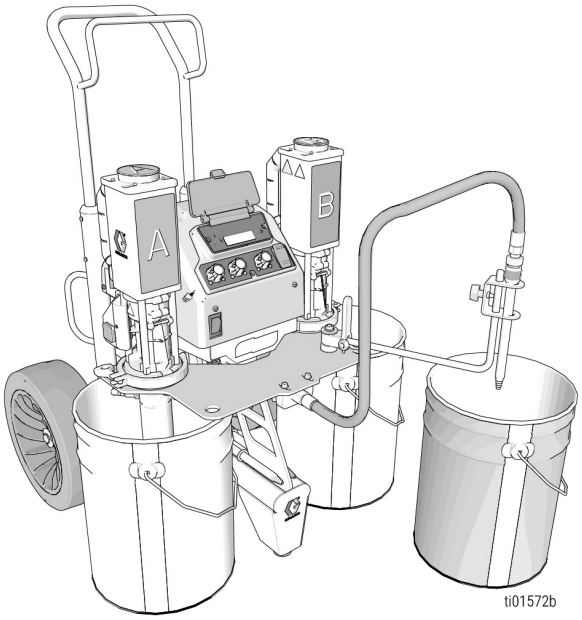
BATCH SETTING

When set to a specific batch volume setting, the TruMix™ 150 XT will dispense the exact volume selected on the Batch Volume Knob.

NOTE:

Ensure there is enough material in both the A and B pails to mix the total volume selected. Display screen will show FEED ERROR if material runs out. If this occurs, re-prime the system, see **Prime the System**.

1. Place Applicator into a clean, empty pail.



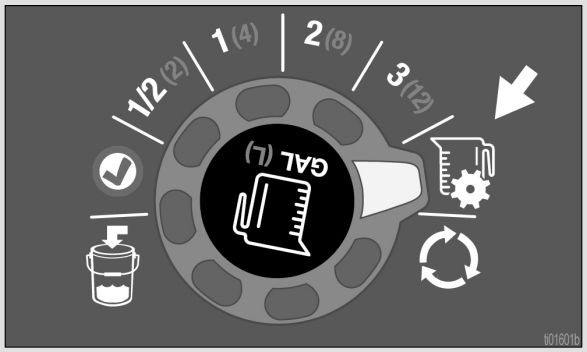
2. Use the Batch Volume Knob to select the desired volume of material to be dispensed.

NOTE:

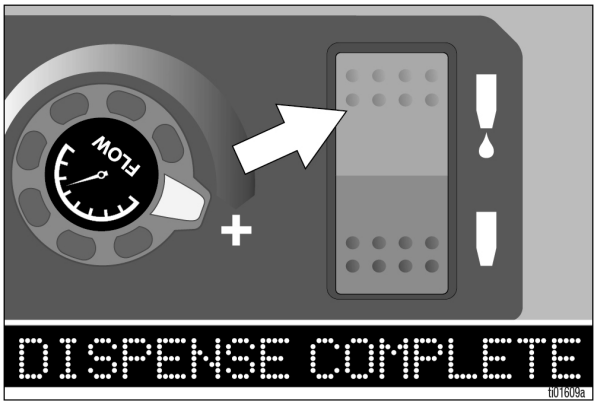
The volume size will display for five seconds before returning to ratio size when knob is turned to the appropriate value.

NOTE:

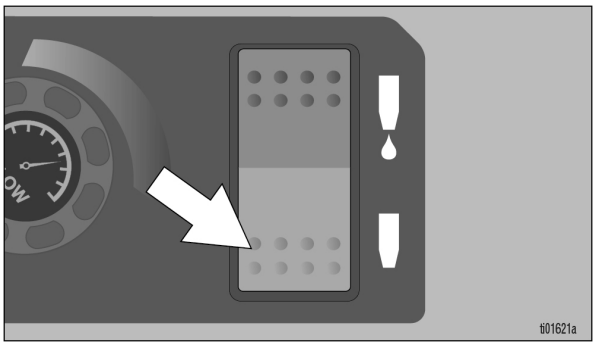
For custom batch sizes, turn the Batch Volume Knob to custom batch. The last stored volume size will display when this option is selected. Double press the Menu Button to edit the volume size. Use individual presses or holds to increase or decrease the value.



3. Turn the Dispense Switch to **ON** to start dispensing material. The system will automatically stop when the specified amount of mixed material has been dispensed, and DISPENSE COMPLETE will scroll across the System Information Screen.



4. Turn the Dispense Switch **OFF**.



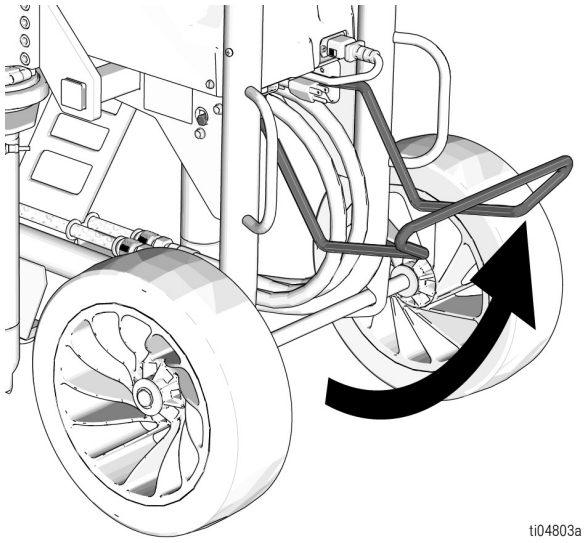
The TruMix™ 150 XT should be cleaned daily, when changing materials, or at the end of use.

FLUSHING AND WIPE DOWN OF PUMP

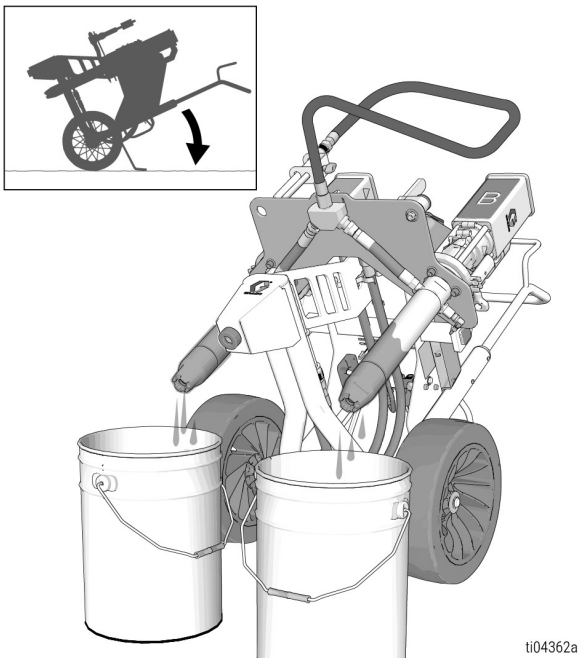
NOTE:

The pumps, hose, and Applicator will still be full of material at the start of the cleaning process.

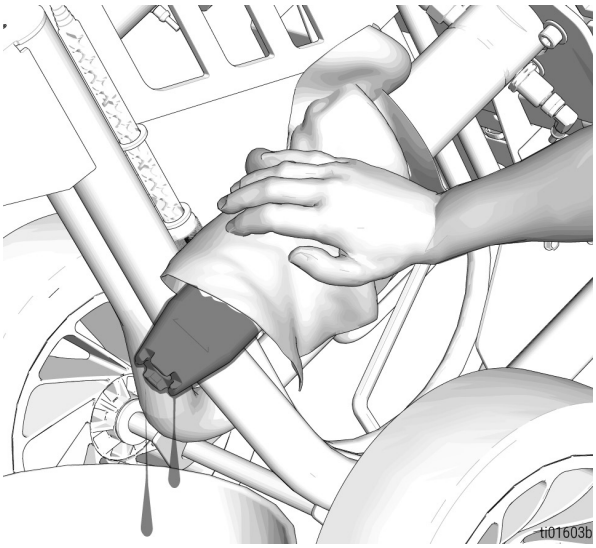
1. Extend the Kickstand.



2. Tilt the two pumps out of the materials and rest the TruMix™ 150 XT on the Kickstand.



3. Using a clean cloth, wipe each pump individually to remove as much material as possible.



NOTICE

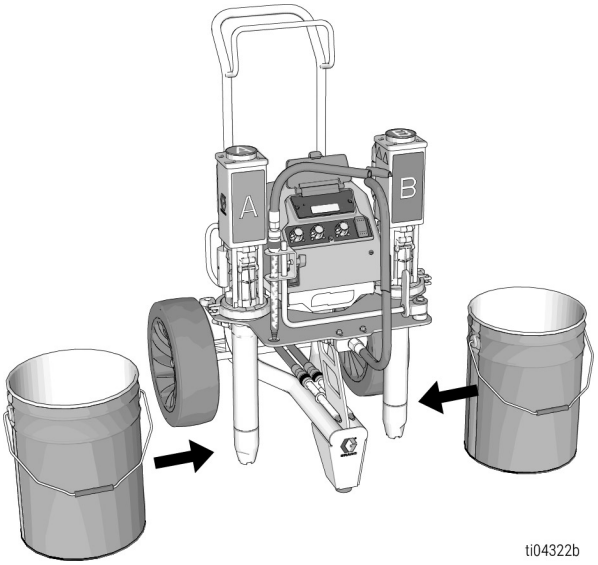
It is vital to use a separate, clean rag for each pump. Using the same rag to clean both the A and B pumps might activate the two-component mixtures and result in material curing on the pumps, resulting in potential damage.

⚠ WARNING

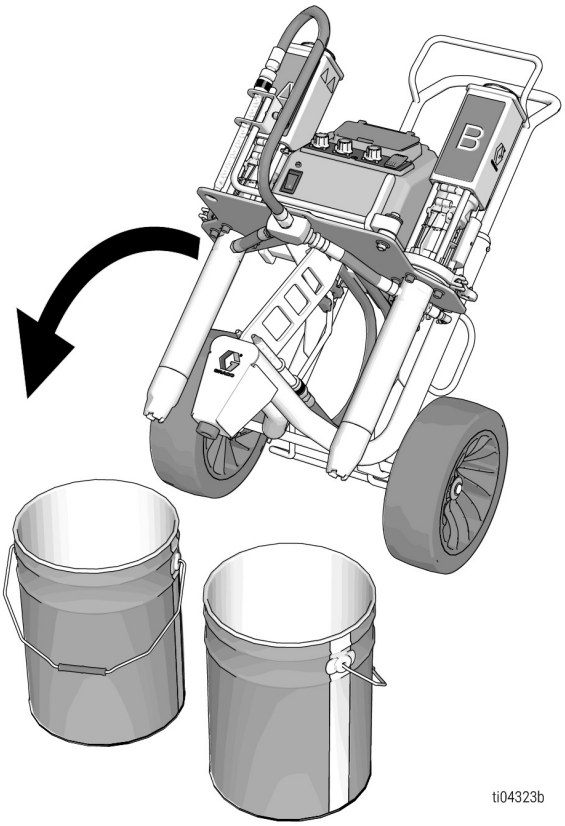
To avoid fire and explosion, always ground equipment and waste container. To avoid static sparking and injury from splashing, always flush at the lowest possible pressure in a well ventilated area.

4. Follow the grounding procedure, see **Grounding**.

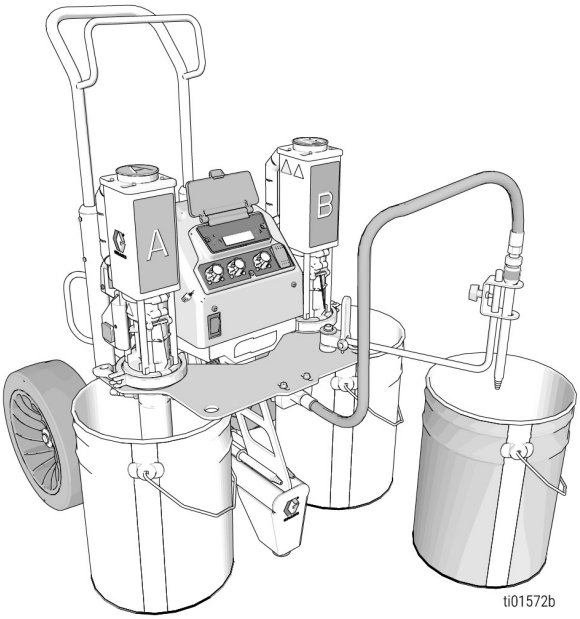
5. Replace material pails with pails containing an appropriate cleaning solvent. It is recommended flushing at least 1/2 gallons or 2 liters of solvent through each side of the system.



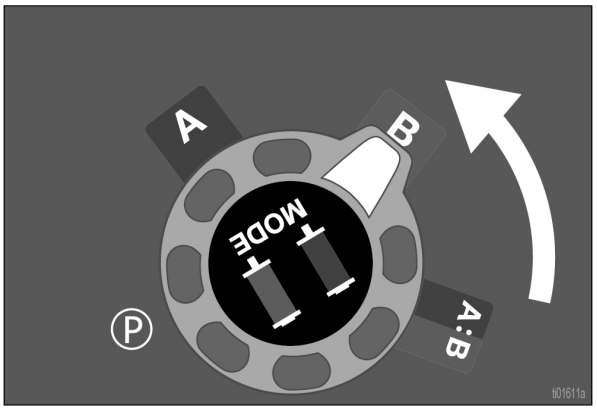
6. Tilt the pumps down into the solvent pails.



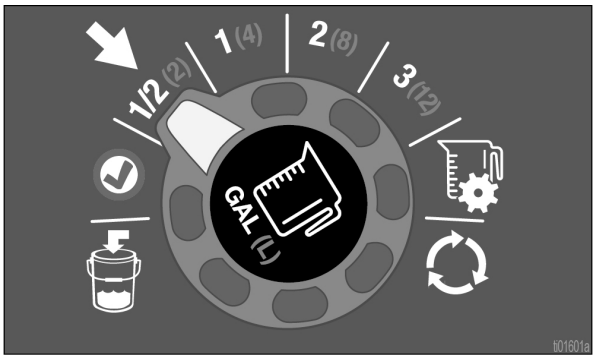
7. Place the Applicator into a waste pail.



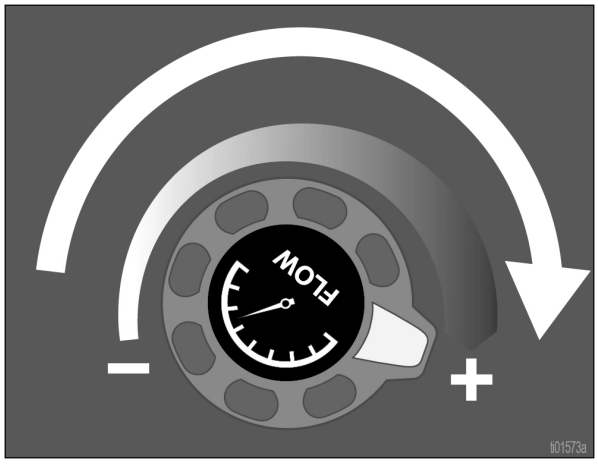
8. Move the Pump Mode Knob to the B position.



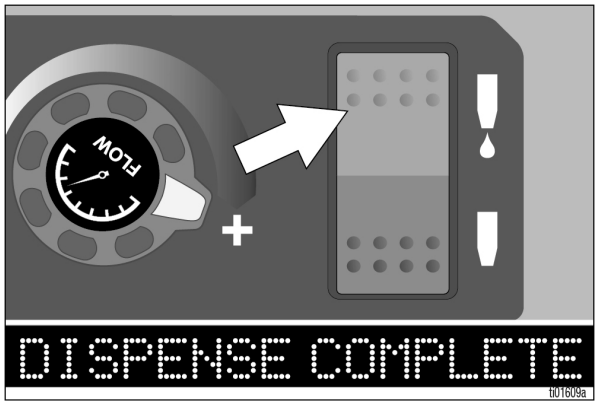
9. Set the Batch Volume Knob to the appropriate volume (minimum of 1/2 gallon). The amount of solvent needed may vary depending on the material used and the amount of color tinting added.



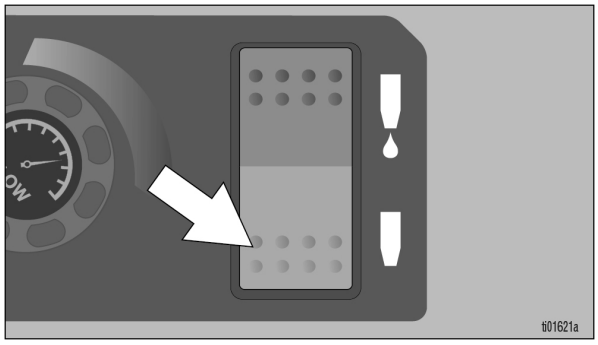
10. Set the Flow Speed Knob to the maximum setting (all the way to the right) to maximize the cleaning performance when flushing.



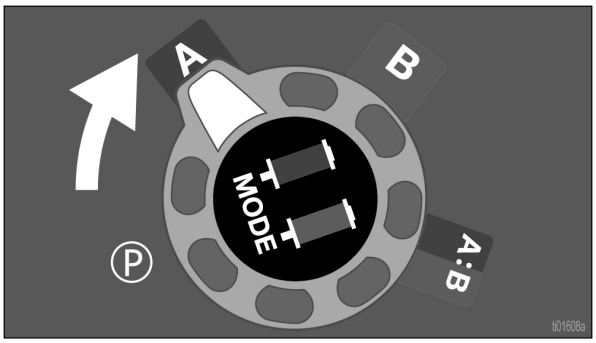
11. Turn the Dispense Switch **ON**. Once the B pump has cycled the predetermined amount of solvent, "DISPENSE COMPLETE" will scroll across the System Information Screen.



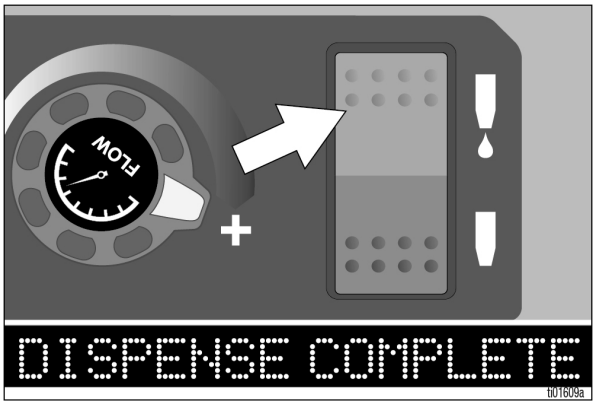
12. Turn the Dispense Switch **OFF**.



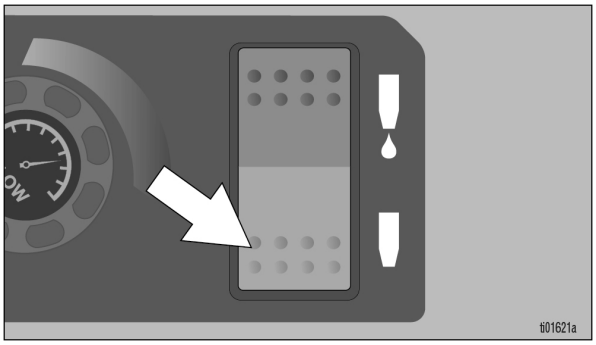
13. Move the Pump Mode Knob to the A position.



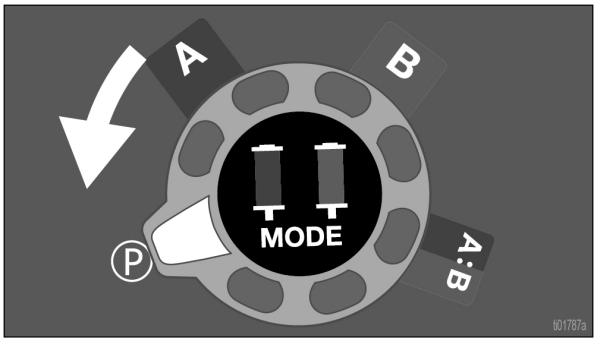
14. Turn the Dispense Switch **ON**. Once the A pump has cycled the predetermined amount of solvent, DISPENSE COMPLETE will scroll across the System Information Screen.



15. Turn the Dispense Switch **OFF**.



16. Turn Pump Mode Knob to the Park Position (P). Turn Material Dispense Switch **ON**. This will lower the pumps into the storage position for easy removal. PARK COMPLETE will scroll across the System Information Screen.



NOTE:

Parking the pumps prevents moisture from curing material on pump rods, extending the life of the pump seals.

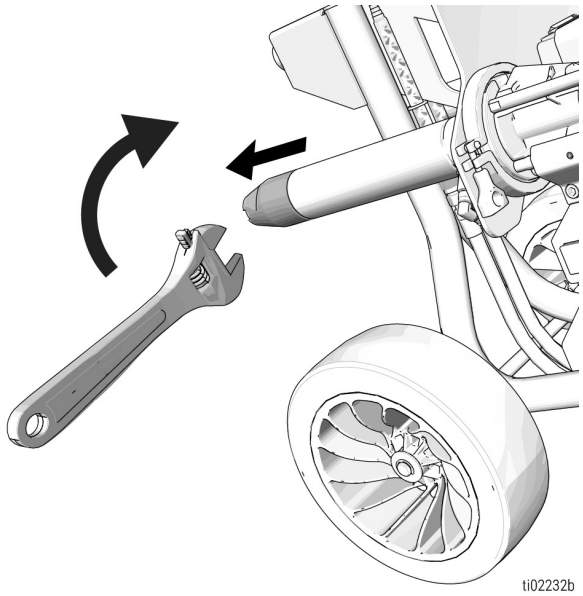
NOTE:

Parking the pumps is required for convenient removal of ProConnect® Swappable Pumping System.

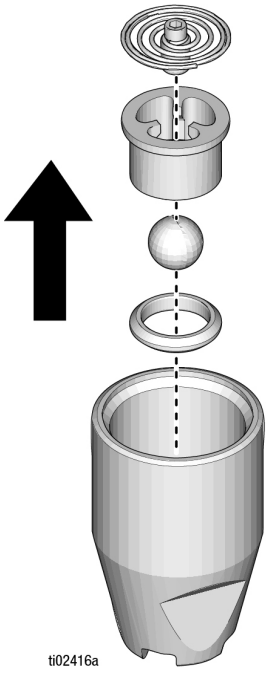
17. Turn the Power Switch OFF and unplug the power cord.

CLEAN PUMP INLET VALVE

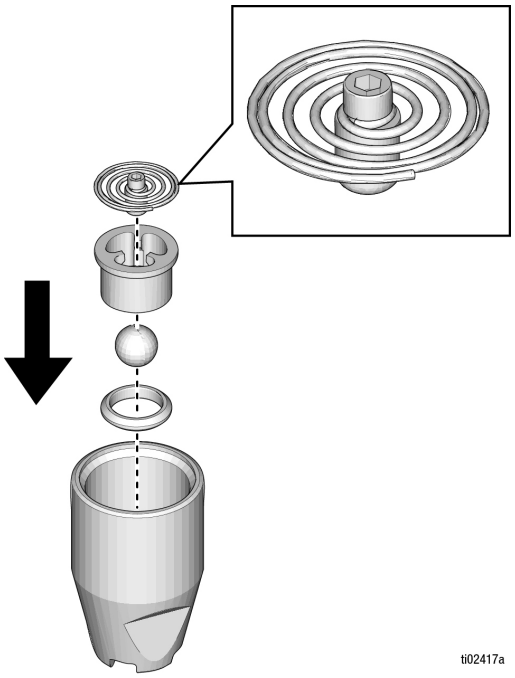
1. Turn the Power Switch OFF and unplug the power cord.
2. Unscrew inlet valve from cylinder.



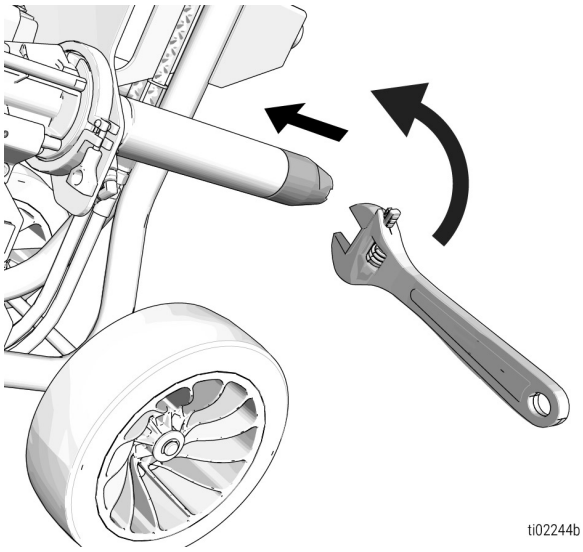
3. Disassemble inlet valve. Clean and inspect parts.



4. Reassemble inlet valve with seat, ball, ball cage, and spring. Seat may be flipped over and used on other side. Clean seat thoroughly.



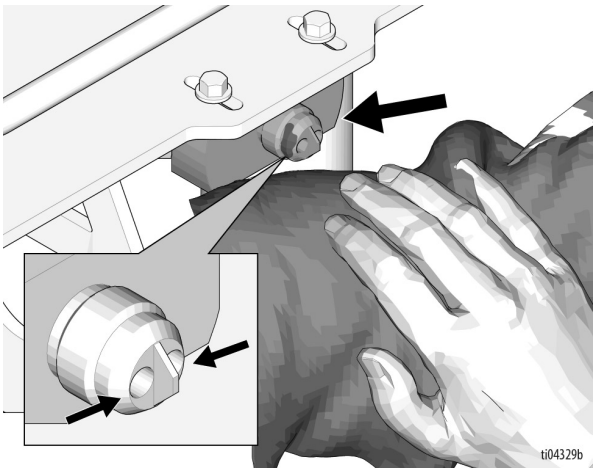
5. Install inlet valve on cylinder and torque to 80 ft-lb +/- 5 ft-lbs (108.5 +/- 6.8 N·m).



LONG-TERM/SEASONAL STORAGE

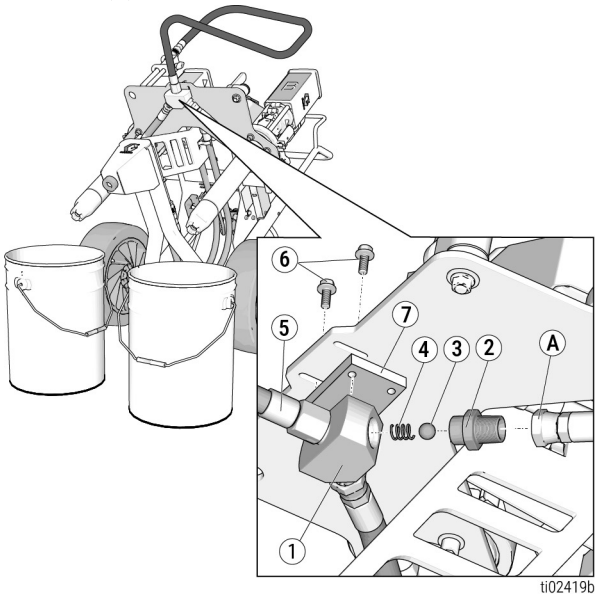
DISPENSE MANIFOLD WITH CHECK VALVES

1. Turn the Power Switch **OFF** and unplug the power cord.
2. Remove CROSSLINK™ Multi-Stage Mix Hose (5) from Dispense Manifold (1). Clean Dispense Manifold A and B ports.



3. Remove two Screws (6) from the Dispense Manifold (1).
4. Remove Hose Swivel Fitting (A) from the Check Valve Housing (2).
5. Remove Check Valve Housing (2) from the Dispense Manifold (1).
6. Remove Ball (3) and Spring (4) from the Dispense Manifold (1).
7. Inspect and clean Check Valve Housing (2), Ball (3), Spring (4), and Dispense Manifold (1).
8. Install Spring (4), Ball (3), and Check Valve Housing (2) into Dispense Manifold (1).
9. Torque Check Valve Housing (2) to 25 +/- 2 ft-lbs (33.9 +/- 2.7 N·m).

10. Tighten Hose Swivel Fitting (A) to the Check Valve Housing (2).



11. Repeat process for the other side.
12. Install the Spacer (7) and use two Screws (6) to mount the Dispense Manifold (1).
13. Inspect CROSSLINK Multi-Stage Mix Hose (5) and replace if there is any sign of material build-up inside.
14. Install CROSSLINK Multi-Stage Mix Hose (5) to Dispense Manifold (1).

MAINTENANCE

Follow the service schedule to keep the TruMix™ 150 XT in good condition for optimal use and to prevent trouble in the future.

⚠ WARNING

PREVENTATIVE MAINTENANCE SCHEDULE

ACTIVITY	INTERVAL
System Verifcation - Run Ratio Check	Daily, start of job, or at sign of any pumping issues.
Flush Procedure	Any switch of compatible materials, end of job.
Replace CROSSLINK™ Multi-Stage Mix Hose	Per material working time.
Inspect Dispense Manifold	Each time CROSSLINK Multi-Stage Mix Hose is replaced.
Inspect/Clean Dispense Manifold Check Valves	As required, see **Cleaning.**
Inspect/Clean Machine and Pumps	Daily or each time used, see **Cleaning.**
Check Hoses for Wear or Damage	Daily or each time used.
ProConnect® Clamps Tight	Daily or each time used.

RECYCLING AND DISPOSAL

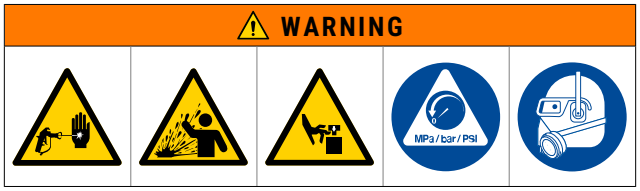
Properly recycle and dispose of the TruMix™ 150 XT at the end of its useful life to minimize environmental impact.

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**.
- 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.

When problems occur, use the table to identify potential causes and solutions to repair the TruMix™ 150 XT.



NOTE:

Check all possible problems and causes before disassembling the equipment.

PROBLEM	CAUSE	SOLUTION
Machine does not turn ON	No power	Turn ON/OFF Power Switch ON.
		Plug in power cord.
		Check incoming power (wall power). Check extension cord, check GFI, check breaker.
		See **Display Error Codes**.
Machine has power but will not dispense	System issue	See **Display Error Codes**.
No display	ON/OFF Power Switch is OFF	Turn ON/OFF Power Switch ON.
	Loose display cables	Check cable connections.
	Display board failed	Check display and replace as necessary.
Display errors	System alarms	See **Display Error Codes**.
Low output flow	Thick material	Condition material to recommended temperature per manufacturer specifications.
	CROSSLINK™ Multi-Stage Mix Hose clogged	Replace CROSSLINK Multi-Stage Mix Hose.
	Batch Volume Knob in Ratio Check position	Flow rate limited in Ratio Check setting; use volume for continuous setting.
	Motor encoder wire connections loose	Check motor encoder wire connections.
	Check valves clogged or assembled incorrectly	Clean or replace components.
	Material curing in Dispense Manifold	Clean or replace comonents, flush with more solvent after future uses, store with pumps vertical.
	Worn piston valve or intake valve inside pump	Rebuild pump.

PROBLEM	CAUSE	SOLUTION
Machine stops dispensing before batch completed without error	Pump Mode Knob and/or Batch Volume Knob changed positions while dispensing	Don't change knob settings during dispense. No issues and proceed with next dispense.
	Knobs incorrectly calibrated	Perform Knob Calibration, see Menu Button, step 11 in **System Menu Details**.
Machine not dispensing material during prime	Thick material	Condition material to recommended temperature per manufacturer specifications.
	Contamination inside pumps	Clean pumps.
	Intake valve is leaking	Clean or rebuild pump.
	Pump seals are worn	Rebuild pump.
	Dispense Switch not working	Check Dispense Switch and connections; replace switch.
Dispense Manifold leaks	Fittings loose	Clean or replace; re-torque connections
	Seals worn	Replace check valve housing o-ring.
A/B Component Material Hose leaks	Fittings loose	Loosen hose swivel connection to Dispense Manifold, tighten NPT hose connection to pump outlet, and re-tighten hose swivel connection to Dispense Manifold.
Pump leaks	Seals worn	Rebuild pump.
Transducer contacting bucket	Bucket too tall (>15 in.; >0.38 m)	Use buckets <15 in. (<0.38 m).
	Motor height moved	Adjust motor height as needed.
ProConnect® Swappable Pumping System does not remove	Pump rod interfering with motor housing	Park pumps.
	Transducer cables connected to ProConnect Swappable Pumping System	Remove both transducer cables from transducers.
ProConnect Swappable Pumping System does not install	Pump rod interfering with Precision Drive	Park pumps and/or adjust pump rod height.
	Pump rod interfering with motor housing	Adjust pump rod height.
	Pump width requires adjustment	See **Adjust ProConnect Swappable Pumping System Width**.

PROBLEM	CAUSE	SOLUTION
ProConnect Swappable Pumping System does not install	Incorrect motor height	Adjust motor height.
Transducer cables do not connect to transducers	Transducer cable is not aligned with the key slot	Transducers have a key slot alignment feature that mates to the transducer cable. Turn transducer cable until key slot aligns.
Application arm does not swing, swivel, or adjust.	Incorrect clamp tension	Adjust clamp tension accordingly.
	Material cured in clamp	Replace clamp.
Tire does not spin freely	Material cured in axel assembly	Clean and/or replace axel assembly.

DISPLAY ERROR CODES

If any error codes are active, the lowest-numbered error code will scroll across the display until the error is cleared.

NOTE:

Errors can be cleared by placing the Dispense Switch to the **OFF** position (errors will only clear if the error condition is resolved).

NOTE:

The system will not operate while any errors are present. A prime is required after all error conditions are resolved before the system will be allowed to dispense on ratio again.

ERROR CODE	ERROR DESCRIPTION (ON DISPLAY)	CAUSE	SOLUTION
E01X	SENSOR FAULT	Short/fault in pressure transducer or motor encoder wiring.	Check motor encoder wiring. Check pressure transducer wiring.
E02A	HIGH PRESSURE DETECTED, PUMP A	Too much restriction on pump A.	Follow **Pressure Relief Pressure**. Replace mix hose. Clean check valve. Clean pump.
E02B	HIGH PRESSURE DETECTED, PUMP B	Too much restriction on pump B.	Follow **Pressure Relief Pressure**. Replace mix hose. Clean check valve. Clean pump.
E03A	PRESSURE TRANSDUCER NOT DETECTED, PUMP A	Pressure transducer A unplugged. **NOTE:** This error will not occur while the Pump Mode Knob is set to Park.	Check A pressure transducer wiring. Replace A pressure transducer.
E03B	PRESSURE TRANSDUCER NOT DETECTED, PUMP B	Pressure transducer B unplugged. **NOTE:** This error will not occur while the Pump Mode Knob is set to Park.	Check B pressure transducer wiring. Replace A pressure transducer.
E04A	HIGH INCOMING VOLTAGE DETECTED	Supply voltage too high.	Check supply voltage.
E04B			
E08A	LOW INCOMING VOLTAGE DETECTED	Supply voltage too low.	Check supply voltage.
E08B			
E09A	MOTOR ENCODER FAULT, PUMP A	A motor calibration failed. Invalid output from encoder A.	Relieve pressure and re-calibrate motors. Check A encoder wiring.
E09B	MOTOR ENCODER FAULT, PUMP B	B motor calibration failed. Invalid output from encoder B.	Relieve pressure and re-calibrate motors. Check B encoder wiring.

ERROR CODE	ERROR DESCRIPTION (ON DISPLAY)	CAUSE	SOLUTION
E10A	CONTROL BOARD THERMAL PROTECTION FAILED	Motor controller too hot.	Let motor controller cool down. Ensure airflow to the unit restricted and system is in allowable temperature range. Check and/or replace fan.
E10B			
E12A	EXCESSIVE CURRENT PROTECTION ENABLED, PUMP A	Motor current too high.	Call Grace Technical Assistance.
E12B	EXCESSIVE CURRENT PROTECTION ENABLED, PUMP B		
E15A	NO MOTOR CURRENT, PUMP A	Motor disconnected.	Check A motor wiring.
E15B	NO MOTOR CURRENT, PUMP B	Motor disconnected.	Check B motor wiring.
E20X	LOW RATIO (B RICH)	Low ratio.	Check A motor and encoder wiring. Replace A precision drive. Replace A motor.
E21X	HIGH RATIO (A RICH)	High ratio.	Check B motor and encoder wiring. Replace B precision drive. B motor.
E23A	MOTOR NOT SPINNING, PUMP A	Motor incorrectly calibrated	Calibrate motors, see step 10 in **System Menu Details**. Check A motor and encoder wiring.
E23B	MOTOR NOT SPINNING, PUMP B		Calibrate motors, see step 10 in **System Menu Details**. Check B motor and encoder wiring.
E24A	INVALID STROKE RANGE, PUMP A	Motor and pump not coupled.	Verify the ProConnect® Swappable Pumping System is attached properly. Check A encoder wiring. Replace A precision drive.
E24B	INVALID STROKE RANGE, PUMP B		Verify the ProConnect® Swappable Pumping System is attached properly. Check B encoder wiring. Replace B precision drive.
E25X	CONTROL BOARD COMMUNICATION FAULT	Control board not working.	Replace control board.
E26X			
E27X	CONTROL BOARD SOFTWARE MISMATCH	Wrong hot software loaded onto control board.	Replace control board.

ERROR CODE	ERROR DESCRIPTION (ON DISPLAY)	CAUSE	SOLUTION
E28X	MODE KNOB NOT DETECTED	Pump Mode Knob unplugged or shorted. **NOTE:** Clear this error by pressing either button on the display so that the knobs can be calibrated.	Calibrate knobs, see step 11 in **System Menu Details**. Check wiring.
E29X	BATCH KNOB NOT DETECTED	Batch Volume Knob unplugged or shorted. **NOTE:** Clear this error by pressing either button on the display so that the knobs can be calibrated.	Calibrate knobs, see step 11 in **System Menu Details**. Check wiring.
E30X	SPEED KNOB NOT DETECTED	Flow Speed Knob unplugged or shorted. **NOTE:** Clear this error by pressing either button on the display so that the knobs can be calibrated. **NOTE:** This error will not occur while the batch volume knob is set to Ratio Check.	Calibrate knobs, see step 11 in **System Menu Details**. Check wiring.
E31A	LOW PRESSURE DETECTED, PUMP A	Too little restriction on Pump A.	Ensure mix hose is attached to system. Check pump and hoses for leaks. Ensure chemical is compatible with system.
E31B	LOW PRESSURE DETECTED, PUMP B	Too little restriction on Pump B.	
E32A	PUMP BLOCKAGE/LEAK DETECTED	Leak or blockage in Pump A.	Refill material. Check material for air entrapment or foreign debris. Check/clean balls, seals, and seats.
E32B		Leak or blockage in Pump B.	
E99A	FEED ERROR, PUMP A	Pump A cavitating or out of material, or inlet pump ball stuck.	Refill material. Check material for air entrapment or foreign debris. Check/clean balls, seals, and seats.
E99B	FEED ERROR, PUMP B	Pump B cavitating or out of material, or inlet pump ball stuck.	

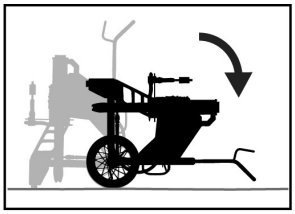
When replacing parts, follow the instructions to restore the components on the TruMix™ 150 XT.

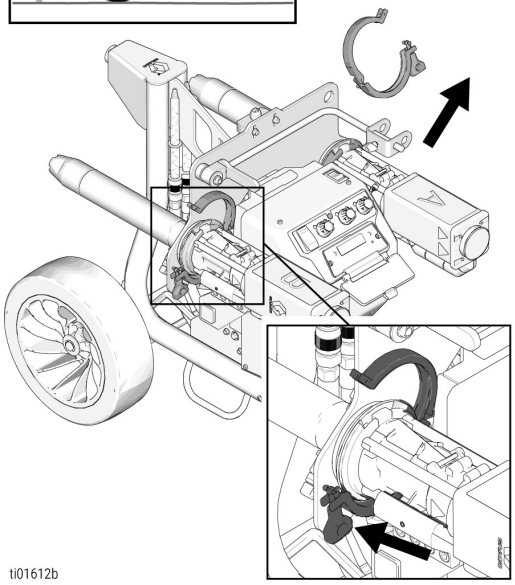
REMOVE PROCONNECT® SWAPPABLE PUMPING SYSTEM

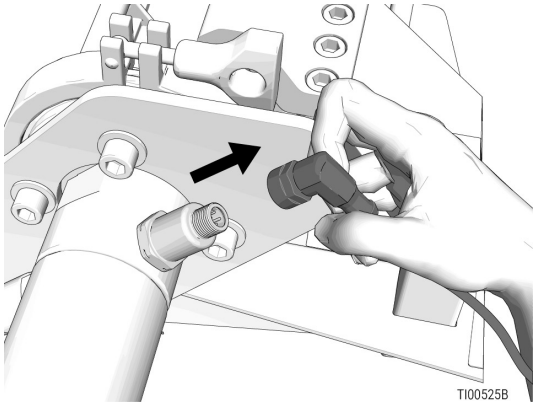
The ProConnect® Swappable Pumping System allows for quick changing of pumps due to material incompatibility or for ease of repairs.

Follow the steps to disconnect the ProConnect Swappable Pumping System from the TruMix™ 150 XT.

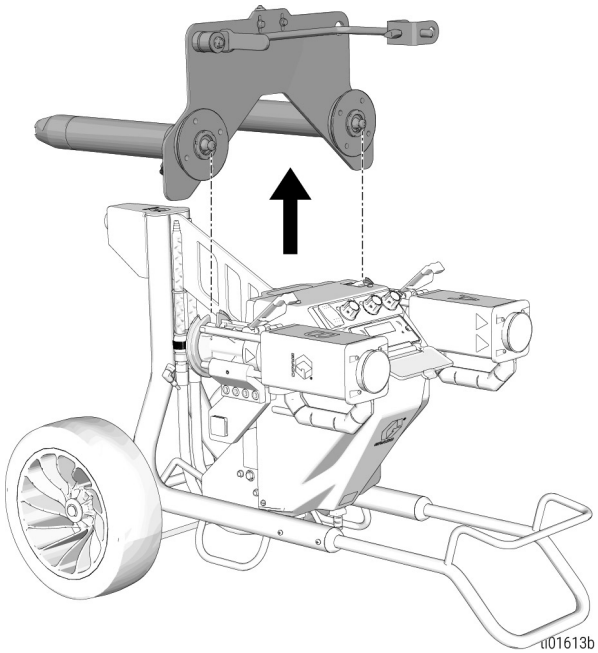
1. Return the pumps to the Park position.
2. Turn the Power Switch OFF and unplug the power cord.
3. Tilt the machine back. Release the ProConnect Clamps and pressure transducer cables.







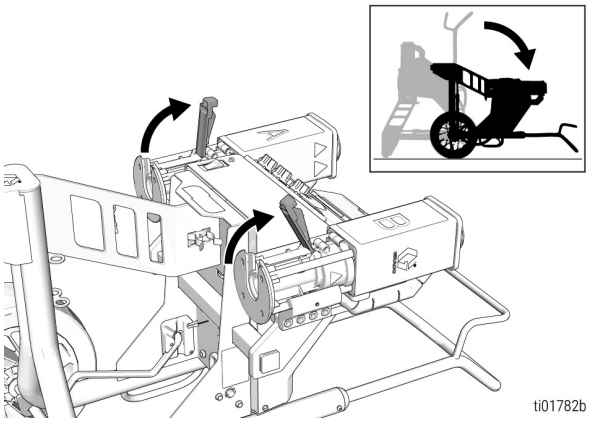
4. Remove the ProConnect Swappable Pumping System.



REPLACE PROCONNECT® SWAPPABLE PUMPING SYSTEM

Follow the steps to install the ProConnect Swappable Pumping System onto the TruMix™ 150 XT.

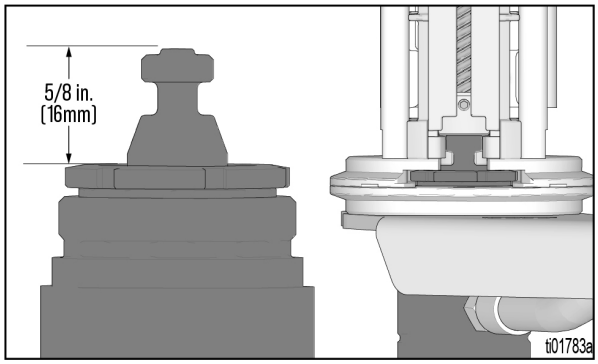
1. Turn the Power Switch OFF and unplug the power cord.
2. Make sure the machine is tilted back.
3. Lift driver doors.



4. Ensure top of pump rod is adjusted to 5/8 in. (1.59 cm) +/- 1/8 in. (0.32 cm) for proper fit in driver.

NOTE:

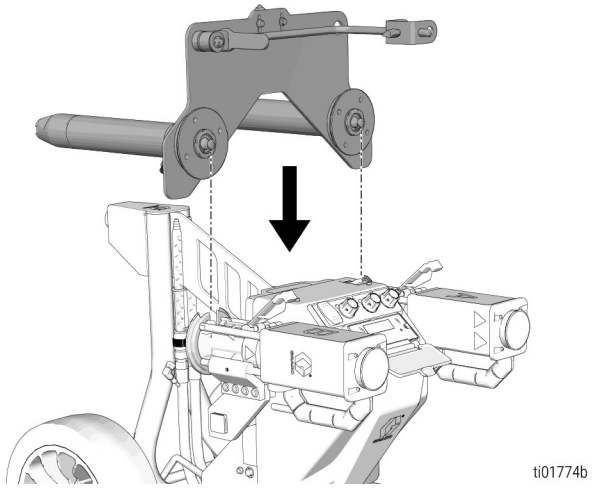
If necessary, use a screwdriver to gently pry out and tap back the pump rod to the required 5/8 in. (1.59 cm) adjustment.



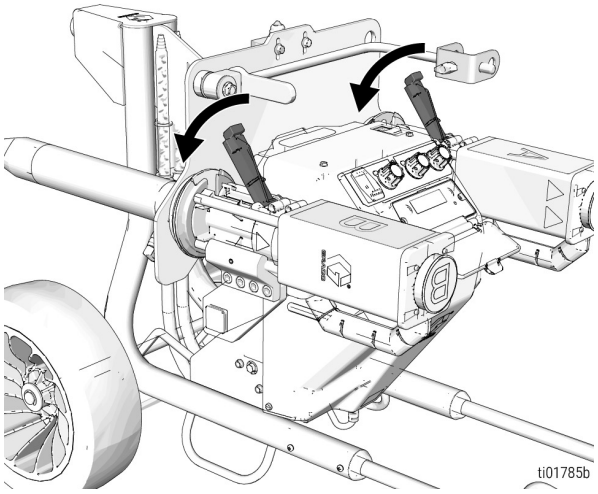
5. Slide the ProConnect Swappable Pumping System into place.

NOTE:

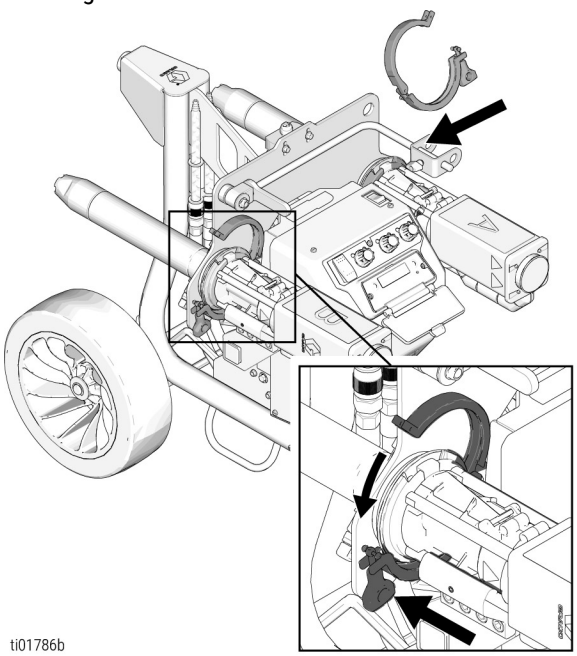
If the ProConnect Swappable Pumping System does not install, the width of the pump lowers can be adjusted. See **Adjust ProConnect Swappable Pumping System Width** for instructions.

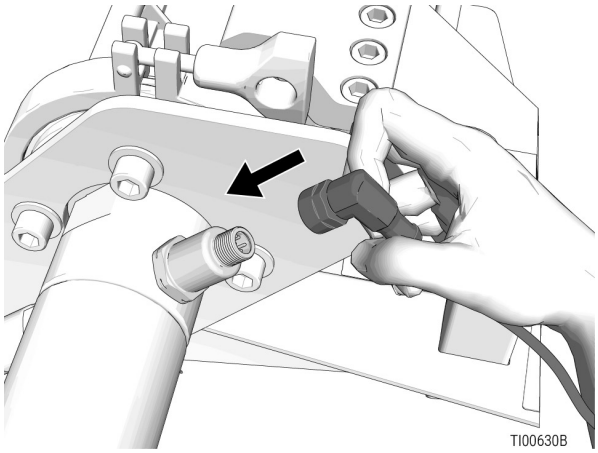


6. Lower Driver Doors.



7. Lock the ProConnect Clamps into place and reconnect pressure transducer cables. Use an adjustable wrench to tighten clamps one turn past hand tight.



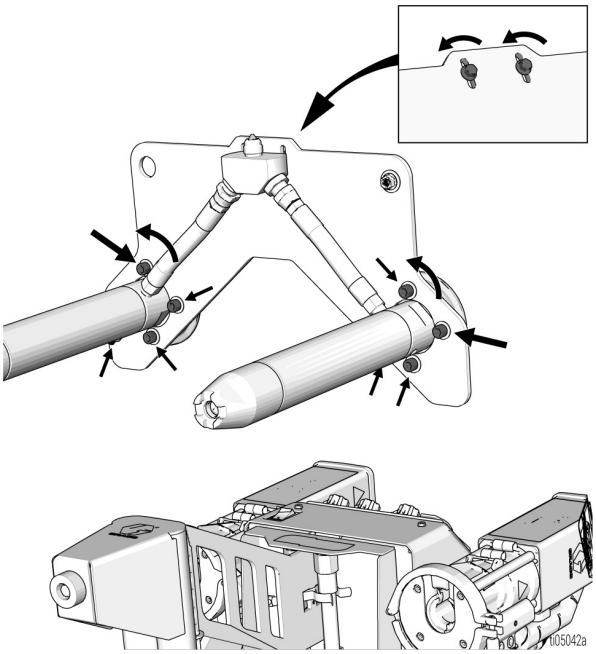


8. Tilt machine upward.

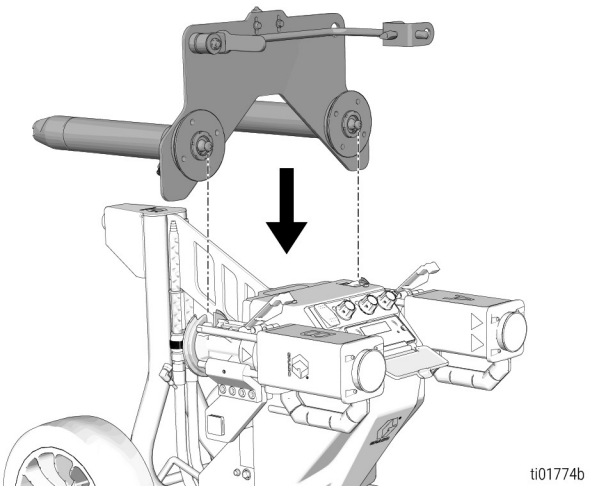
ADJUST PROCONNECT SWAPPABLE PUMPING SYSTEM WIDTH

Follow the steps to adjust the width of the ProConnect® Swappable Pumping System.

1. Loosen the eight bolts (1 to 2 turns) at the top of the pump lowers and loosen the two manifold bolts.

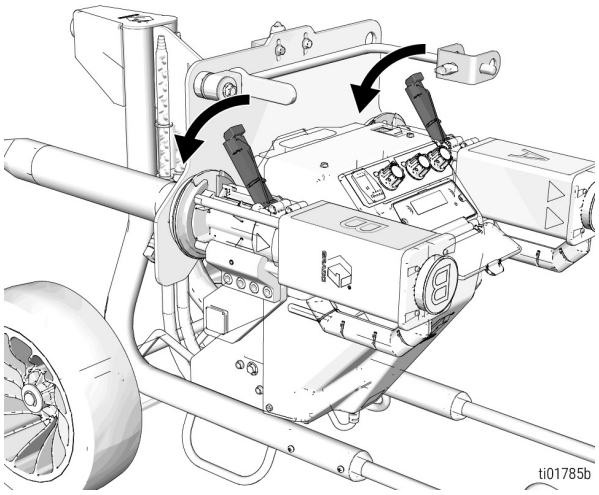


2. Slide the ProConnect Swappable Pumping System into place.

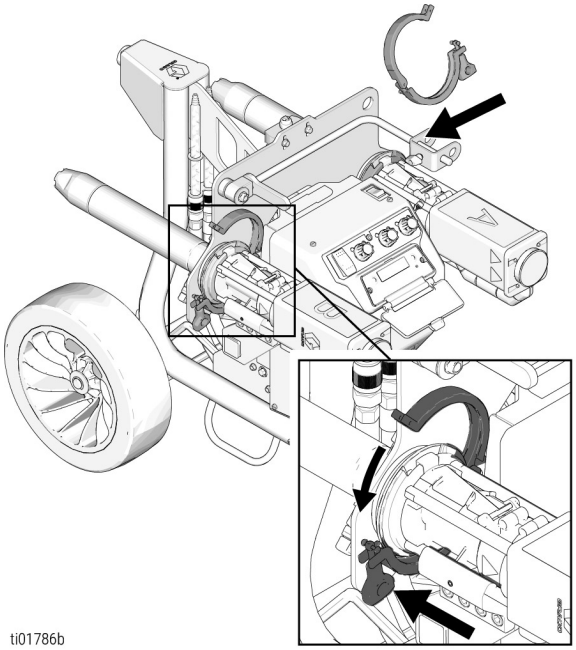


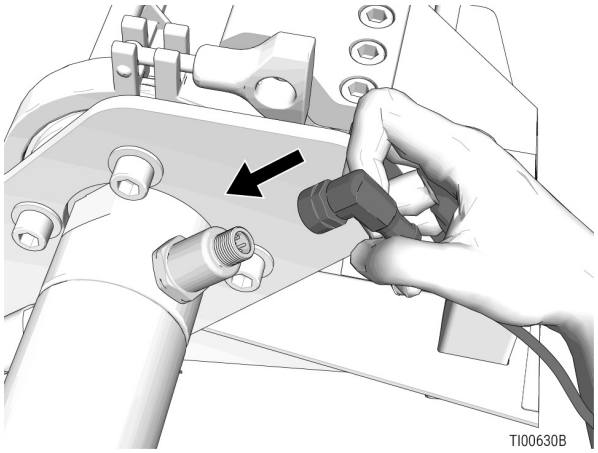
3. Tighten the eight bolts at the top of each pump lower to 140-180 in-lbs (15.8-18.1 N·m).
4. Tighten the two manifold bolts to 90-110 in-lbs (10.2-12.4 N·m).

5. Lower Driver Doors.



6. Lock the ProConnect Clamps into place and reconnect pressure transducer cables. Use an adjustable wrench to tighten clamps one turn past hand tight.





7. Tilt machine upward.

The parts illustrations and lists show the components of the TruMix™ 150 XT and their connections that are required for assembly, repair, and maintenance.

TOP LEVEL PARTS

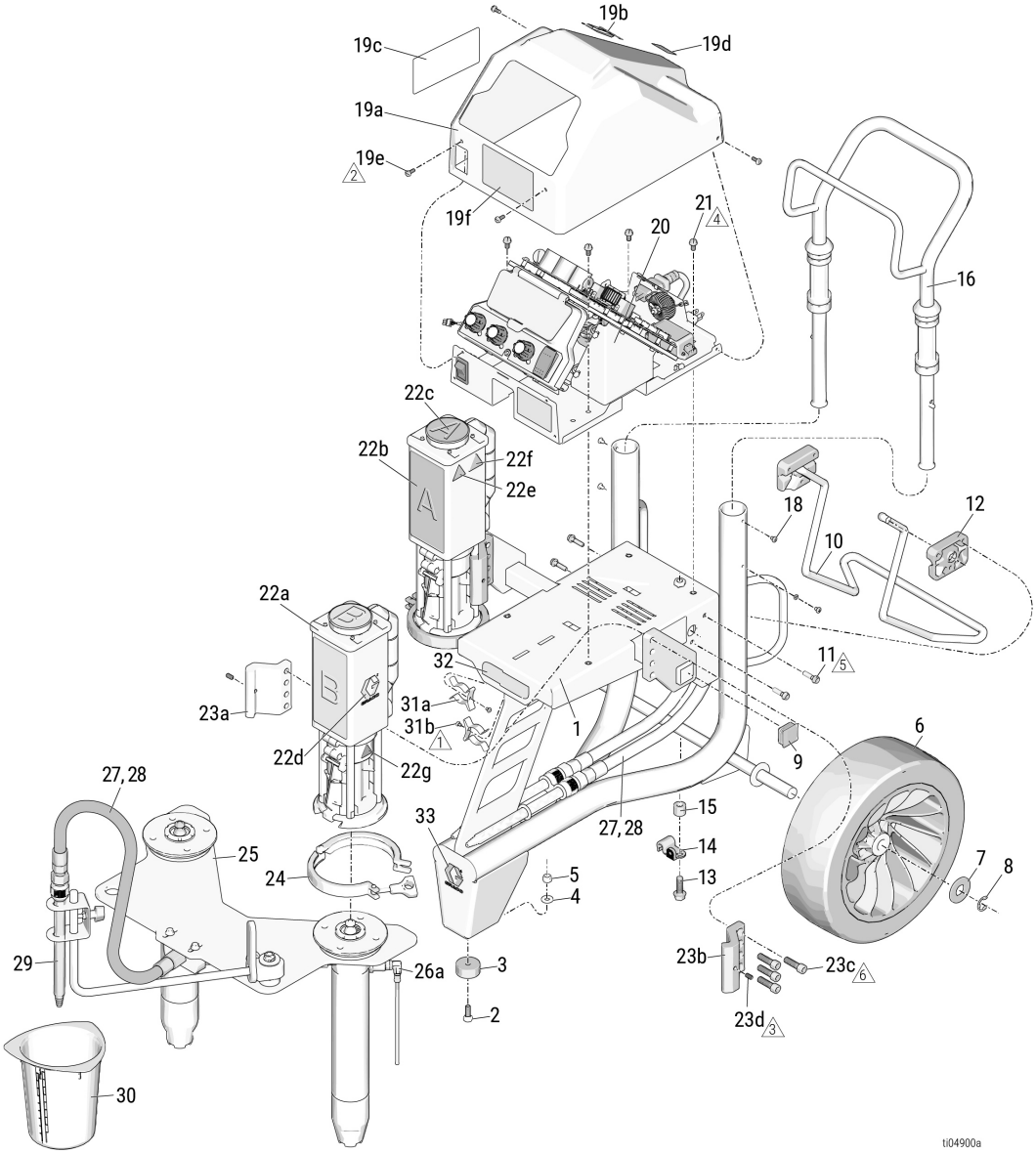


Figure 19-1: TruMix™ 150 XT Top Level Parts Diagram

1 Torque to 12-16 in-lbs (1.4-1.8 N·m)

2 Torque to 30-35 in-lbs (3.4-4.0 N·m)

3 Torque to 65-75 in-lbs (7.3-8.5 N·m)

4 Torque to 80-100 in-lb (9.0-11.3 N·m)

5 Torque to 130-150 in-lb (14.7-17.0 N·m)

6 Torque to 200-225 in-lb (22.6-23.2 N·m)

PARTS LIST

REF.	PART	DESCRIPTION	QTY.
1	2013215	Frame	1
2	101344	Bolt, 5/16-18 x 0.875	1
3	17Z490	Bumper	1
4	100527	Washer, 5/16	1
5	111040	Nut, 5/16-18, Nyloc	1
6	17E687	Tire, Polyurethane, Solid	1
7	156306	Washer, 3/4	1
8	120211	Ring, Retaining, E-Clip	1
9	2013216	Kit, Tube End Cap	2
10	19D921	Kickstand, formed metal	1
11	114531	Screw, 1/4-10 x 1.0, Plastite	1
12	15C982	Kickstand, Plastic Cam	1
13	111193	Bolt, Flange, 3/8-16 x 1.25	1
14	278204	Clip, Cable, Power	1
15	129627	Spacer, Nylon, 3/8	1
16	24A250	Assembly, Handle Bar	1
18	109032	Screw, #10-32 x 0.25, Thread Forming	1
19	2013217	Kit, Shroud w/ Labels, *includes 19a-19f*	1
19a	- - -	Shroud, Painted	1
19b	- - -	Label, Brand Logo, Shroud	1
19c ▲	2010100	Label, Safety, Warning	1
19d	16D576	Label, Flag	1
19e	118444	Screw, #10-24 x 0.5.0, Taptite (4 per kit)	1
19f	- - -	Label, Brand, TruMix 150 XT	1

REF.	PART	DESCRIPTION	QTY.
20	- - -	Assembly, Electrical Control Panel	1
21	101501	Bolt, 1/4-20 x 0.50	1
22	2013204	Kit, Driver, *includes 22a-22g*	
22a	- - -	Assembly, Driver	1
22b	- - -	Label, Driver A/B Front	1
22c	- - -	Label, Driver A/B Top	1
22d	- - -	Label, Brand Logo, Driver	1
22e ▲	15K616	Label, Caution Hot Surface	1
22f▲	15G303	Label, Warning Electrical	1
22g ▲	15H108	Label, Safety Pinch	1
23	2013205	Kit, Driver Bracket, *inlcudes 23a-23d*	1
23a	- - -	Bracket, Driver	1
23b	- - -	Bracket, Driver	1
23c	- - -	Screw, Socket Head, 3/8-16 x 1.25	4
23d	- - -	Screw, Set, 1/4-20 x 0.50	2
24	2007115	Kit, ProConnect Clamp	1
25	2012577	Kit, Fluid Module, Complete, *includes 27*	1
26	2013218	Kit, Cable, Pressure Transducer, *includes 26a, 26b*	1
26a	- - -	Cable, Pressure Transducer	2
26b	- - -	Zip Tie	4
27	2004623	Kit, CROSSLINK Multi-Stage Mix Hose (1 pack)	1
28	2002743	Kit, CROSSLINK Multi-Stage Mix Hose (3 pack)	3

REF.	PART	DESCRIPTION	QTY.
29	2006324	Kit, Mixer (1 pack)	1
30	2003161	Kit, Ratio Cup w/ Label (25 pack)	1
31	2013219	Kit, Broom Clip, *includes 31a, 31b*	1
31a	- - -	Clip, Hose	2
31b	- - -	Screw, Button Head, #8-32 x 0.25	2
32	15F584	Label, ProConnect	1
33	2013220	Label, Brand Logo, Frame	1

▲ *Replacement safety labels, tags, and cards are available at no cost.*

ELECTRICAL CONTROL PANEL

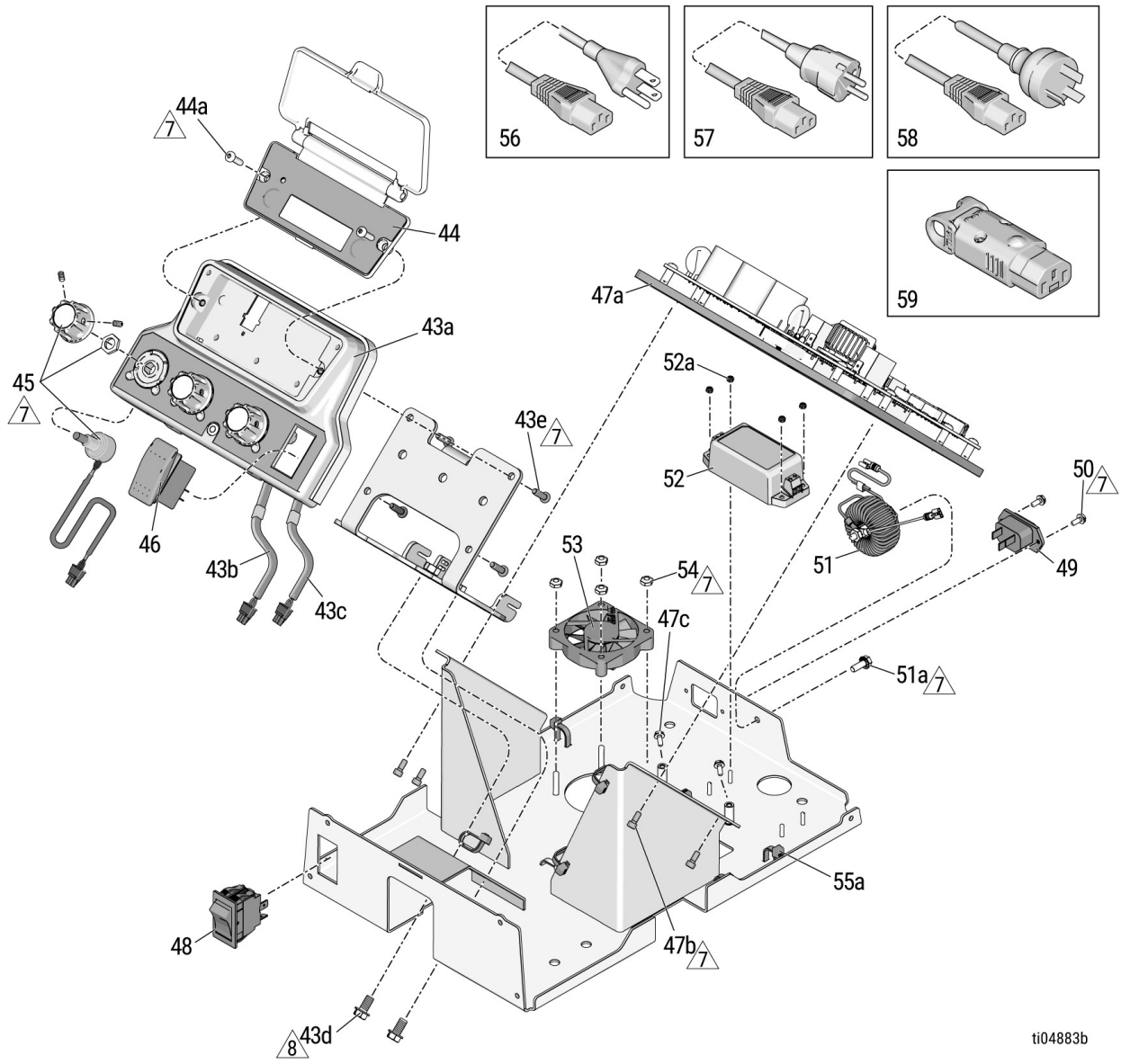


Figure 19-2: TruMix™ 150 XT Electrical Control Panel Parts Diagram

7 Torque to 12-16 in-lbs (1.4-1.8 N·m)

8 Torque to 80-100 in-lbs (9.0-11.3 N·m)

PARTS LIST

REF.	PART	DESCRIPTION	QTY.
43	2013211	Kit, HMI Assembly, *includes 43a-43e*	1
43a	- - -	Assembly, HMI Populated	1
43b	- - -	Harness, HMI Knobs	1
43c	- - -	Harness, HMI Display	1
43d	- - -	Screw, 1/4-20 x 0.50	2
43e	- - -	Screw, #8-16 x 0.625 in., plastite	4
44	2005996	Kit, HMI display, *inlcudes 44a*	1
44a	- - -	Screw, #8-16 X 0.625 in., plastite	2
45	2013207	Kit, Potentiometer	1
46	2013221	Kit, Dispense Switch	1
47	2013208	Kit, Control Board, *includes 47a-47c*	1
47a	- - -	Control Board	1
47b	- - -	Screw, Socket Head, #8-32 x 0.375	4
47c	- - -	Screw, Pan Head, #8-32 x 0.437	2

REF.	PART	DESCRIPTION	QTY.
48	2010665	Kit, Power Switch	1
49	114064	Port, IEC power	1
50	113160	Screw, #6-32 x 0.375, taptite	1
51	2013222	Kit, Ground Choke, *includes 51a*	1
51a	- - -	Screw, #10-32 x 0.50	1
52	2013223	Kit, 24V Power Supply, *includes 52a*	1
52a	- - -	Nut, #4-40, Nyloc	4
53	19D790	Fan	1
54	111280	Nut, #8-32, Nyloc	1
55	2013224	Kit, Power Wire Bundle *includes 55a*	1
55a	- - -	Zip Tie	8
56	17N758	Kit, IEC North America, 120V Plug	1
57	814-0339	Kit, IEC EU Plug	1
58	242005	Kit, IEC Australia Plug	1
59	26D296	Kit, IEC Field Wireable Plug	1

FLUID MODULE

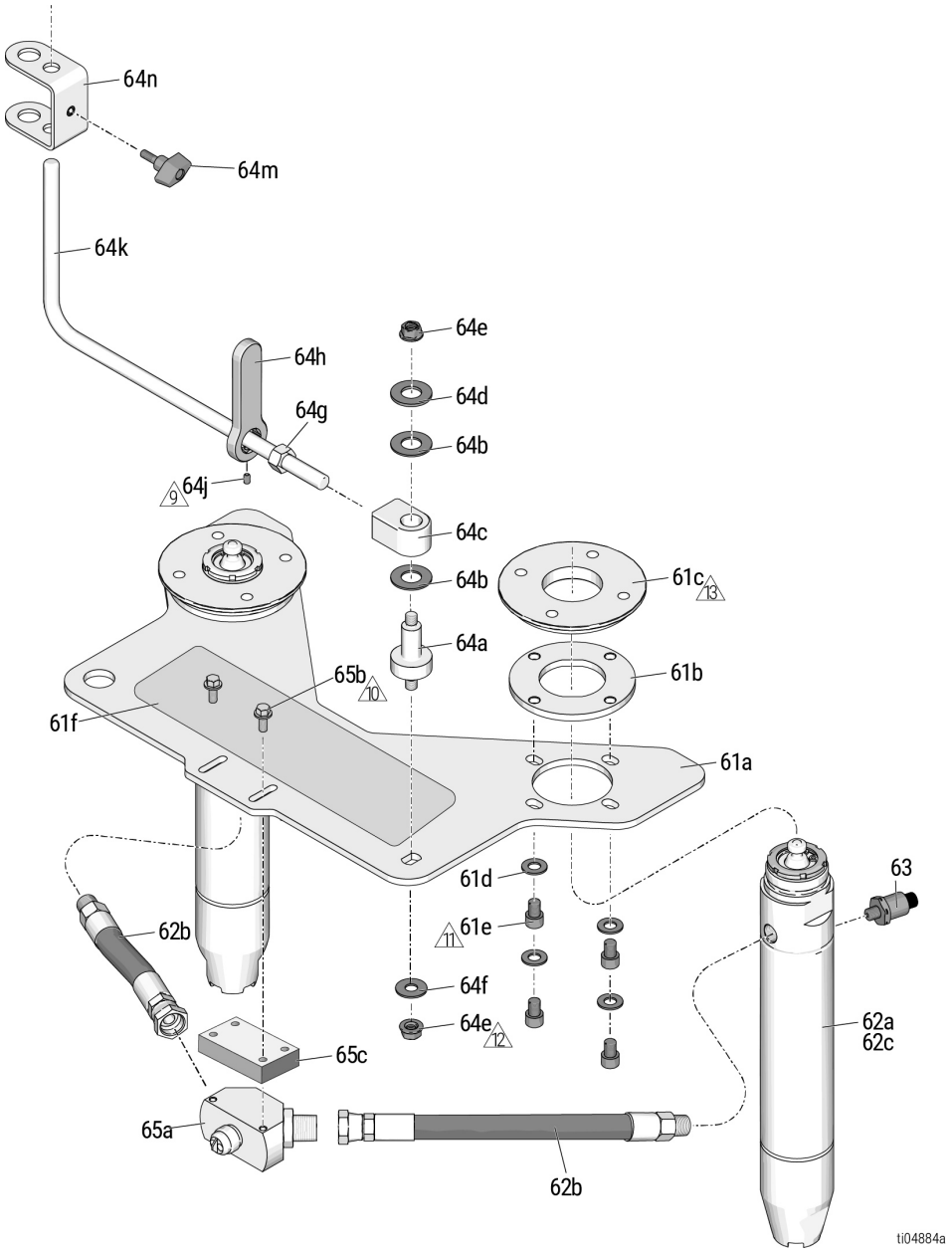


Figure 19-3: TruMix™ 150 XT Fluid Module Parts Diagram

9 Torque to 30-35 in-lbs (3.4-4.0 N·m)

10 Torque to 90-110 in-lbs (10.2-12.4 N·m)

11 Torque to 140-160 in-lbs (15.8-18.1 N·m)

12 Torque to 23-27 ft-lb (31.2-36.6 N·m)

13 Torque to 145-155 ft-lb (196.6-210.2 N·m)

PARTS LIST

REF.	PART	DESCRIPTION	QTY.
61	2013209	Kit, Fluid Module Plates, *includes 61a-61f*	1
61a	- - -	Plate, Fluid Module	1
61b	- - -	Plate, Pump Mount	2
61c	- - -	Flange, Pump	2
61d	- - -	Washer, 3/8	8
61e	- - -	Bolt, Socket Head, 3/8-24 x 0.5" Bolts	8
61f	2013225	Kit, QuikGuide Label	1
62	2013210	Kit, Pump Lower w/ Hose, *includes 62a, 62b*	1
62a	- - -	Pump Lower	1
62b	2013226	Kit, Hose Coupled, 7.7 inch	1
62c	2005980	Kit, Pump Lower, Repair	1
63	18B075PKG	Transducer, Pressure	1
64	2013227	Kit, Dispense Arm *includes 64a-64n*	1
64a	- - -	Post, Swivel Dispense	1
64b	- - -	Washer, Delrin	2
64c	- - -	Elbow, Swivel Dispense	1
64d	- - -	Washer, 5/8	1
64e	- - -	Nut, Flange, 3/8-16	2
64f	- - -	Washer, 3/8, Grade 5	1
64g	- - -	Nut, 1/2-13	1
64h	- - -	Handle, Dispense	1
64j	- - -	Screw, Set, Handle, 10-24	1
64k	- - -	Arm, Dispense	1
64m	- - -	Knob, T-Handle, 1/4-20	1
64n	2013228	Kit, Nozzle, Bracket, *includes 64m, 64n*	1
65	2013229	Kit, Dispense Manifold, *includes 65a -65c*	1
65a	- - -	Manifold, Dispense	1
65b	- - -	Bolt, Flange, 1/4-20 x 1.0	2
65c	- - -	Spacer, Manifold, Dispense	1

DRIVER ASSEMBLY

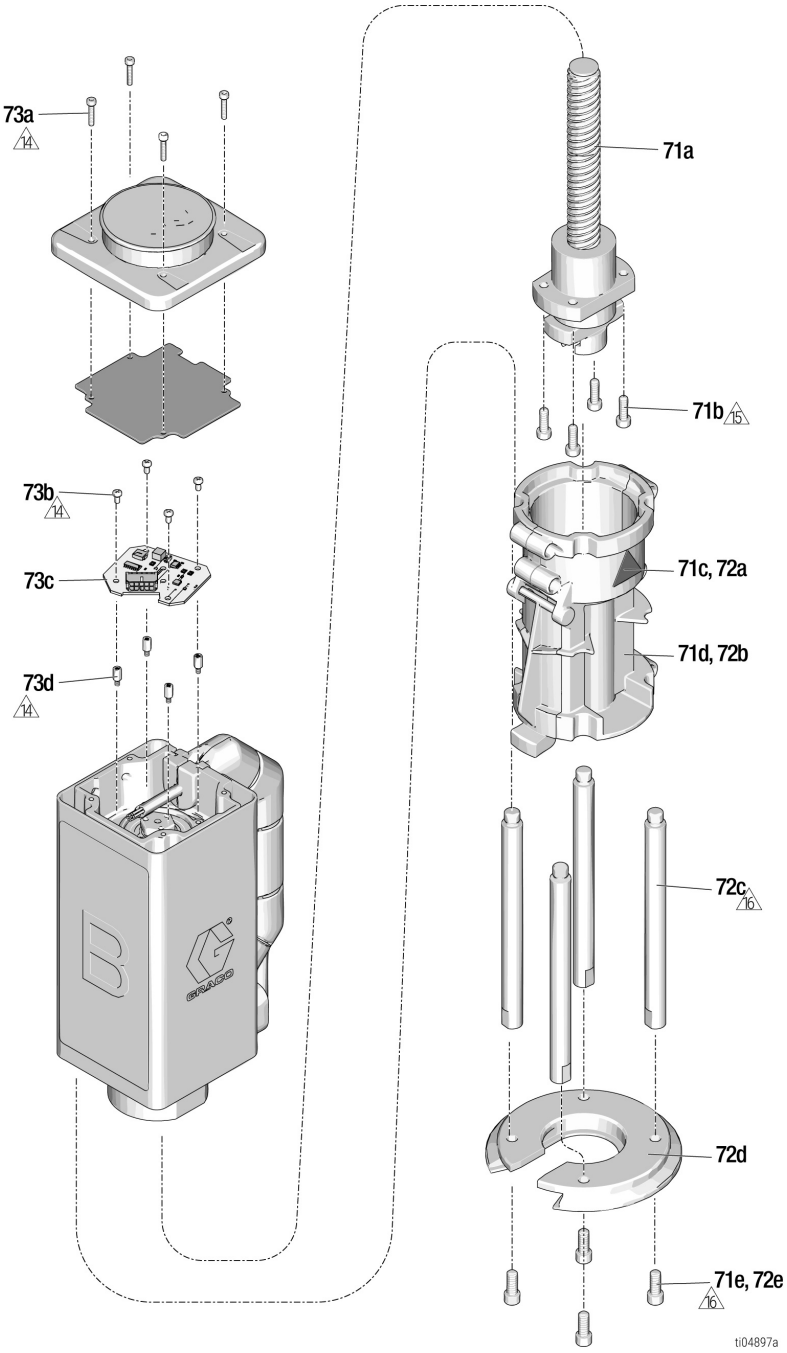


Figure 19-4: TruMix™ 150 XT Driver Assembly Parts Diagram

14 Torque to 4-6 in-lbs (0.5-0.7 N·m)

16 Torque to 110-120 in-lb (12.4-13.6 N·m)

15 Torque to 40-45 in-lbs (4.1-5.1 N·m)

PARTS LIST

REF.	PART	DESCRIPTION	QTY.
71	2013206	Kit, Ball Screw, *includes 71a-71f*	1
71a	- - -	Assembly, Ball Screw	1
71b	- - -	Screw, Socket Head, M5-0.8 x 16mm, Patch	4
71c ▲	15H108	Label, Safety Pinch	1
71d	- - -	Guide/Cover, Ball Screw	1
71e	- - -	Screw, Socket Head, 1/4-20 x 0.625 in.	4
71f	- - -	Lube Pack (not shown)	1
72	2013212	Kit, Driver, ProConnect, *includes 72a-72e*	1
72a ▲	15H108	label, Safety Pinch	1
72b	- - -	Guide/Cover, Ball Screw	1
72c	- - -	Tie, Rods, Driver	4
72d	- - -	Flange, Driver	1
72e	- - -	Screw, Socket Head, 1/4-20 x 0.625 in.	4
73	2013213	Kit, Encoder, Driver, *includes 73a-73d*	1
73a	- - -	Screw, Socket Head, M3-0.5 x 16mm	4
73b	- - -	Screw, Pan Head, M3-0.5 x 6mm	4
73c	- - -	Board, Encoder	1
73d	- - -	Standoff, M3-0.5 x 8mm	4

▲ *Replacement safety labels, tags, and cards are available at no cost.*

PUMP ASSEMBLY

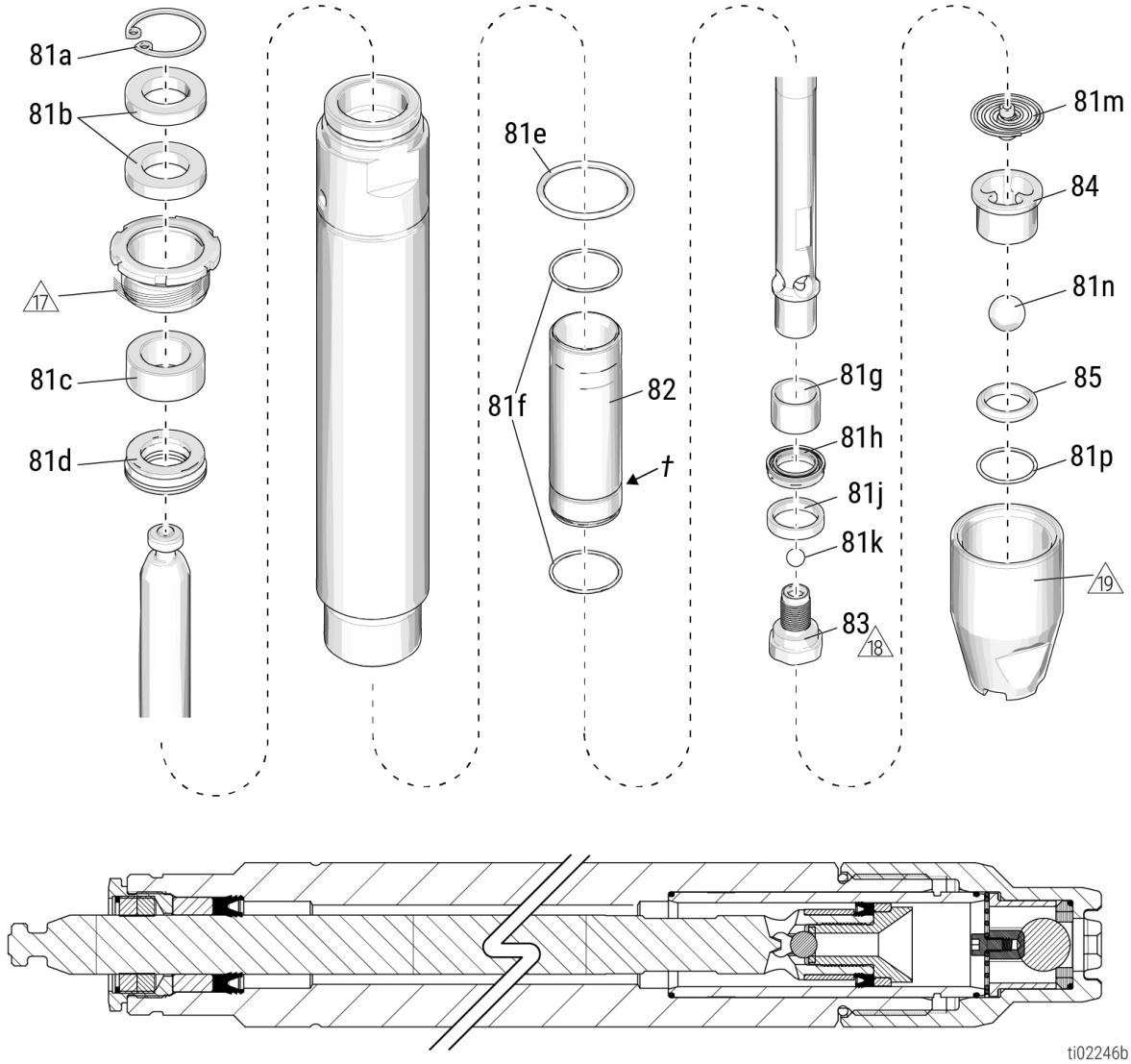


Figure 19-5: TruMix™ 150 XT Pump Assembly Parts Diagram

17 Torque to 90-110 in-lbs (10.2-12.4 N·m)

18 Torque to 47-53 ft-lbs (63.7-71.9 N·m)

19 Torque to 75-85 ft-lb (101.7-115.2 N·m)

† Not an o-ring groove.

PARTS LIST

REF.	PART	DESCRIPTION	QTY.
81	2005980	Kit, Pump, Repair, *includes 81a-81r*	1
81a	117718	Ring, Retaining	1
81b	117599	Washer, Felt (2 per kit)	1
81c	15B074	Bushing, Pump	1
81d	117446	Seal, U-Cup	1
81e	- - -	O-ring, EPDM	1
81f	107098	O-ring, PTFE (2 per kit)	1
81g	15J196	Bushing, pump	1
81h	117449	Seal, U-Cup	1
81j	15J197	Bushing, pump	1

REF.	PART	DESCRIPTION	QTY.
81k	124249	Ball, ceramic	1
81m	- - -	Spring, intake	1
81n	17Y533	Ball, Ceramic	1
81p	108526	O-ring, PTFE	1
81r	238049	Fluid, TSL, 4 oz (not shown)	1
82	16D143	Sleeve, Cylinder	1
83	24U983	Valve, Piston	1
84	193027	Guide, Ball	1
85	196866	Seat, Carbide	1

MANIFOLD ASSEMBLY

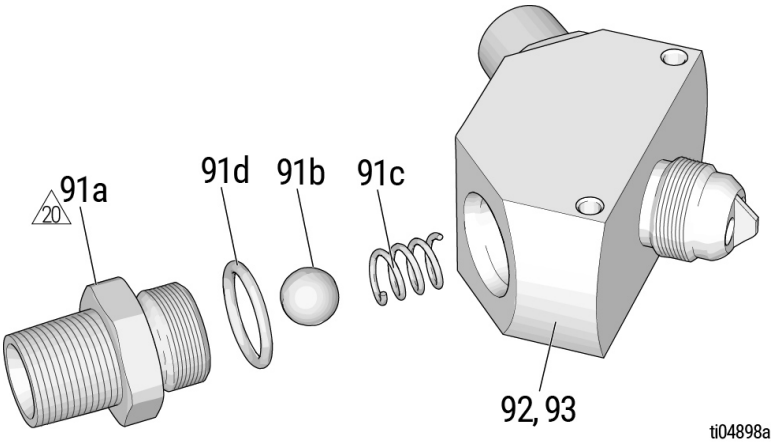


Figure 19-6: TruMix™ 150 XT Manifold Assembly Parts Diagram

20 Torque to 23-27 ft-lbs (31.8-36.6 N·m)

PARTS LIST

REF.	PART	DESCRIPTION	QTY.
91	2013214	Kit, Dispense Manifold, Rebuild, *incldues 91a-91d*	1
91a	- - -	Housing, Check Valve	2
91b	101874	Ball, SST (2 per kit)	1
91c	551345	Spring, SST (2 per kit)	1
91d	128531	O-ring, FKM (2 per kit)	1
92	- - -	Manifold, Dispense	1
93	2004987	Dispense Manifold, Assembled	1

ELECTRICAL SCHEMATIC

The wiring diagram illustrates the electronic connections that are useful for troubleshooting and repairing the electrical components of the TruMix™ 150 XT.

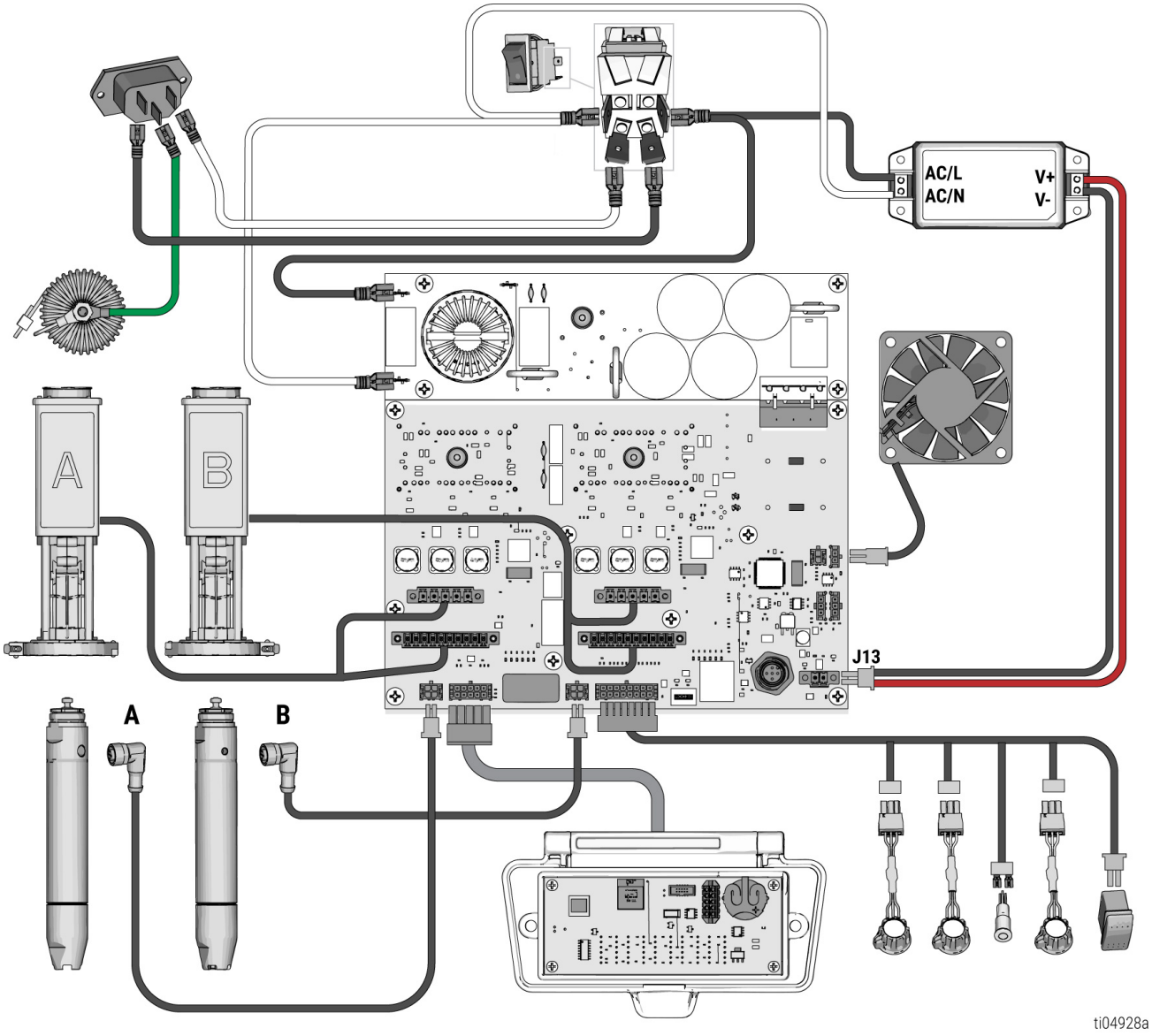


Figure 20-1: Wiring Diagram for TruMix 150 XT

CALIFORNIA PROPOSITION 65

CALIFORNIA RESIDENTS

⚠**WARNING** Cancer and reproductive harm — www.P65warnings.ca.gov.

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.

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