GRACO MAGNUM X5, X7, ProX17 and ProX19 Owners Operation Manual

⚠WARNING

FIRE AND EXPLOSION HAZARD

X5/X7 Models:

- Use only non-flammable or water-based materials, or non-flammable paint thinners. Do not use materials having flash points lower than 100° F (38° C). This includes, but is not limited to, acetone, xylene, toluene, or naphtha. For more information about your material, request Safety Data Sheet (SDS) from the supplier.
- Spraying flammable or combustible materials in a factory or fixed location must comply with NFPA 33 and OSHA 1910.94(c) requirements in the USA and with all similar local regulations in other countries.

Not approved for use in explosive atmospheres or hazardous locations.
For portable airless spraying of architectural paints and coatings.

Important Safety Instructions

Read all warnings and instructions in this manual, related manuals, and on the unit. Be familiar with the controls and the proper usage of the equipment. Save these instructions.

Before You Spray

Review Warnings for Important Safety Information

Important! Read carefully and practice good safety habits.

Related Manuals

Gun: 312830 (SG)
ProXChange™ Pump: 3A3172 (ProX only)

Quick Guide:

3A4469 English
3A4470 Spanish
3A4471 Portuguese (Portugal)
3A4473 Korean
3A4474 Chinese

Models

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

	VAC	Model	Stand (Series)	Cart (Series)
CE	230 Schuko	X5	16W120 (B)	
		X7	16W121 (B)	
		ProX17	17H203 (A)	
		ProX19		17H210 (A)
		ProX21		17H217 (B)
	120V	X5	17N433 (A)	
		X7	17N434 (A)	
		ProX17	17H202 (A)	
		ProX19		17H209 (A)
		ProX21		17H216 (B)

Contents

Warnings

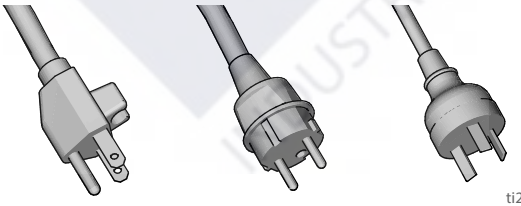
The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

⚠WARNING

GROUNDING

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

- Improper installation of the grounding plug is able to result in a risk of electric shock.
- When repair or replacement of the cord or plug is required, do not connect the grounding wire to either flat blade terminal.
- The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.
- Check with a qualified electrician or serviceman when the grounding instructions are not completely understood, or when in doubt as to whether the product is properly grounded.
- Do not modify the plug provided; if it does not fit the outlet, have the proper outlet installed by a qualified electrician.
- This product is for use on a nominal 120V or 230V circuit and has a grounding plug similar to the plugs illustrated below.



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

Extension Cords:

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

Conductor Size		Length
AWG (American Wire Gauge)	Metric	Maximum
16	1.5 mm^2	25 ft. (8 m)
12	2.5 mm^2	50 ft. (15 m)

⚠WARNING




FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:

X5/X7 Models:

- Do not spray or clean with materials having flash points lower than 100°F (38° C). Use only non-flammable or water-based materials, or non-flammable paint thinners. For complete information about your material, request the Safety Data Sheet (SDS) from the material distributor or retailer.
- Do not spray combustible materials near an open flame or sources of ignition such as cigarettes, motors, and electrical equipment.
- Do not spray combustible liquids in a confined area.

ProX Models:

- Do not spray flammable or combustible materials near an open flame or sources of ignition such as cigarettes, motors, and electrical equipment.
- Do not spray flammable or combustible liquids in a confined area.

All Models:

- Paint or solvent flowing through the equipment is able to result in static electricity. Static electricity creates a risk of fire or explosion in the presence of paint or solvent fumes. All parts of the spray system, including the pump, hose assembly, spray gun, and objects in and around the spray area shall be properly grounded to protect against static discharge and sparks. Use Graco conductive or grounded high-pressure airless paint sprayer hoses.
- Verify that all containers and collection systems are grounded to prevent static discharge. Do not use pail liners unless they are anti-static or conductive.
- Connect to a grounded outlet and use grounded extensions cords. Do not use a 3-to-2 adapter.
- Do not use a paint or a solvent containing halogenated hydrocarbons.
- Keep spray area well-ventilated. Keep a good supply of fresh air moving through the area.
- Sprayer generates sparks. Keep pump assembly in a well ventilated area a least 20 feet (6.1 m) from the spray area when spraying, flushing, cleaning, or servicing. Do not spray pump assembly.
- Do not smoke in the spray area or spray where sparks or flame is present.
- Do not operate light switches, engines, or similar spark producing products in the spray area.
- Keep area clean and free of paint or solvent containers, rags, and other flammable materials.
- Know the contents of the paints and solvents being sprayed. Read all Safety Data Sheets (SDSs) and container labels provided with the paints and solvents. Follow the paint and solvents manufacturer's safety instructions.
- Fire extinguisher equipment shall be present and working.

⚠WARNING

SKIN INJECTION HAZARD

High-pressure spray is able to inject toxins into the body and cause serious bodily injury. In the event that injection occurs, **get immediate surgical treatment.**

- Do not aim the gun at, or spray any person or animal.
- Keep hands and other body parts away from the discharge. For example, do not try to stop leaks with any part of the body.
- Always use the nozzle tip guard. Do not spray without nozzle tip guard in place.
- Use Graco nozzle tips.
- Use caution when cleaning and changing nozzle tips. In the case where the nozzle tip clogs while spraying, follow the **Pressure Relief Procedure** for turning off the unit and relieving the pressure before removing the nozzle tip to clean.
- Equipment maintains pressure after power is shut off. Do not leave the equipment energized or under pressure while unattended. Follow the **Pressure Relief Procedure** when the equipment is unattended or not in use, and before servicing, cleaning, or removing parts.
- Check hoses and parts for signs of damage. Replace any damaged hoses or parts.
- This system is capable of producing 3000 psi (207 bar, 20.7 MPa). Use Graco replacement parts or accessories that are rated a minimum of 3000 psi (207 bar, 20.7 MPa).
- Always engage the trigger lock when not spraying. Verify the trigger lock is functioning properly.
- Verify that all connections are secure before operating the unit.
- Know how to stop the unit and bleed pressure quickly. Be thoroughly familiar with the controls.

EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Always wear appropriate gloves, eye protection, and a respirator or mask when painting.
- Do not operate or spray near children. Keep children away from equipment at all times.
- Do not overreach or stand on an unstable support. Keep effective footing and balance at all times.
- Stay alert and watch what you are doing.
- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not kink or over-bend the hose.
- Do not expose the hose to temperatures or to pressures in excess of those specified by Graco.
- Do not use the hose as a strength member to pull or lift the equipment.
- Do not spray with a hose shorter than 25 feet.
- 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.

⚠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.
- Only use an authorized service center to replace a damaged power cord.

PRESSURIZED ALUMINUM PARTS HAZARD

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.

- Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents.
- Do not use chlorine bleach.
- Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.

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.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** and disconnect all power sources.

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 MSDSs to know the specific hazards of the fluids you are using.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.

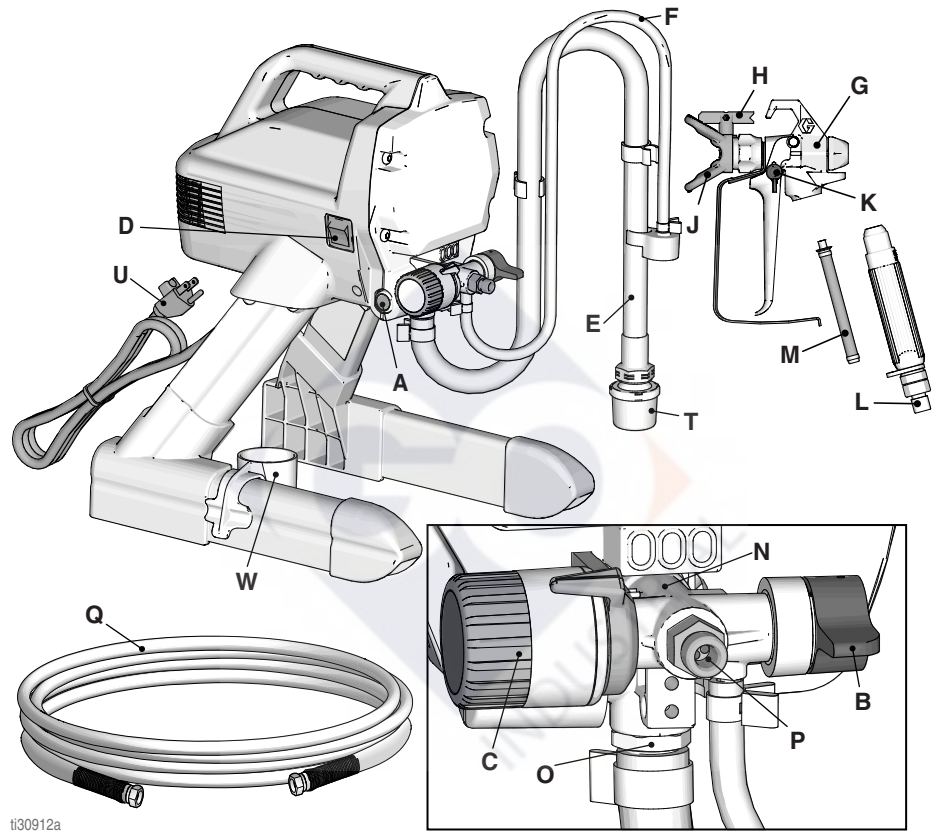
PERSONAL PROTECTIVE EQUIPMENT

Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This protective equipment includes but is not limited to:

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

Know Your Sprayer

X5 Stand Models

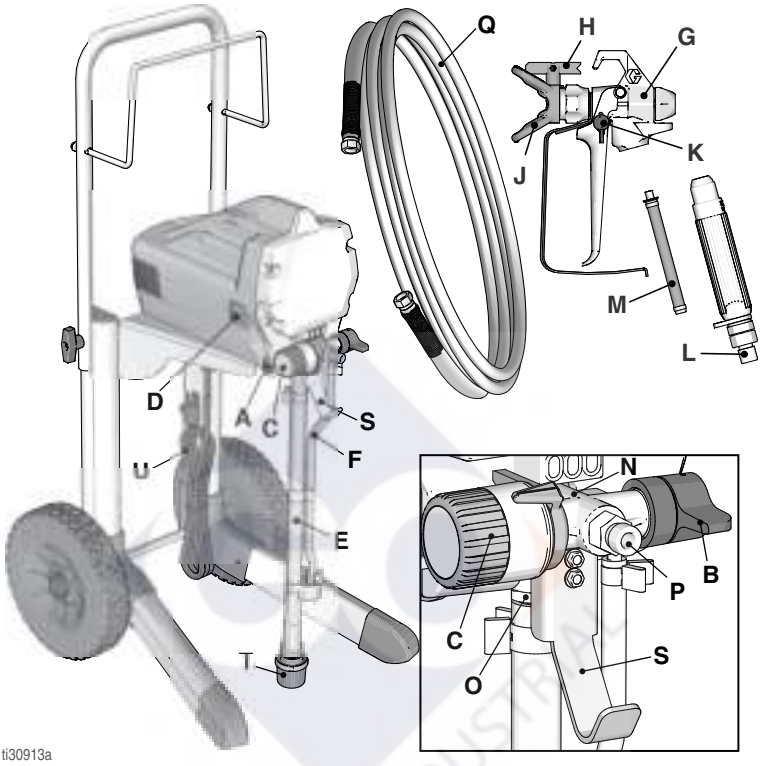


A	PushPrime™ Button
B	Prime/Spray Valve
C	Pressure Control Knob
D	ON/OFF Switch
E	Suction Tube
F	Drain Tube (with diffuser)
G	Airless Spray Gun
H	Reversible Spray Tip
J	Tip Guard
K	Gun Trigger Lock
L	Gun Fitting

M	Gun Filter (inside handle)
N	Pump
P	Outlet Valve (airless hose connection)
O	Inlet Valve
Q	Airless Hose
T	Inlet Strainer
U	Power Cord
	Model/Serial Tag (Not shown, located on bottom of unit.)
W	Suction Tube Drip Cup

See **Quick Reference**, page 32 for more information.

X7 Cart Model



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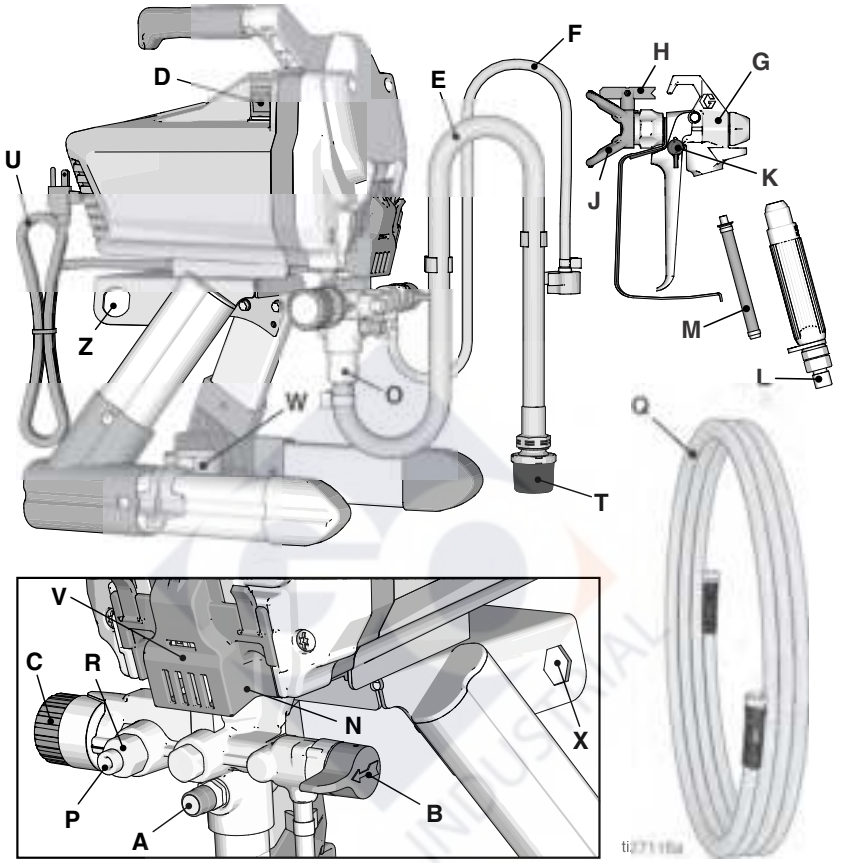
L	Gun Fitting

M	Gun Filter (inside handle)
N	Pump
O	Inlet Valve
P	Outlet Valve (airless hose connection)
Q	Airless Hose
S	Pail Hanger
T	Inlet Strainer
U	Power Cord
	Model/Serial Tag (Not shown, located on bottom of unit.)

See **Quick Reference**, page 32 for more information.

ProX Stand Models



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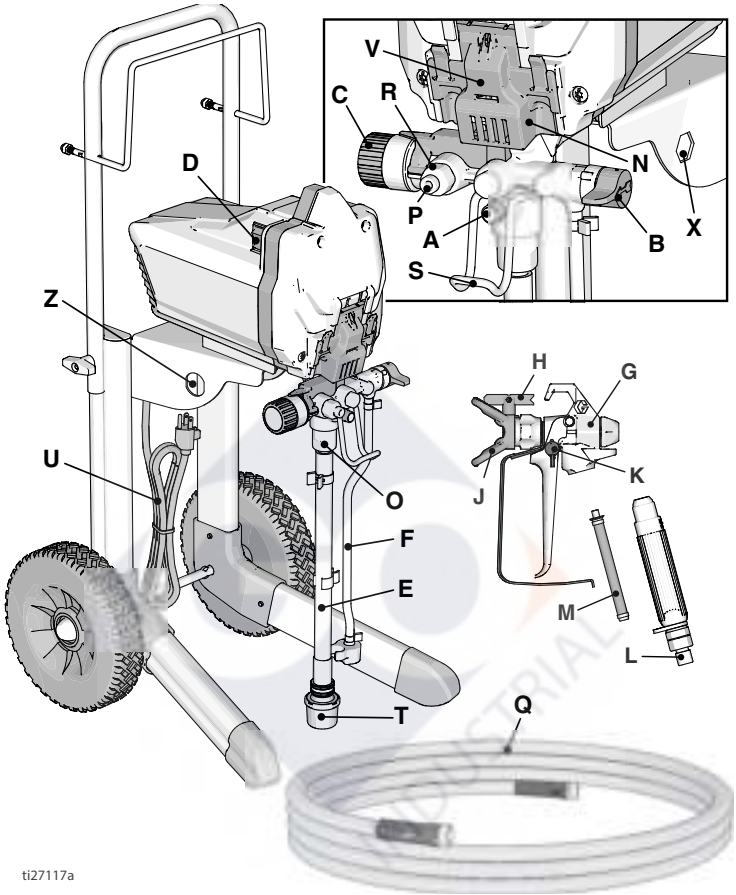
D	ON/OFF Switch
E	Suction Tube
F	Drain Tube (with diffuser)
G	Airless Spray Gun
H	Reversible Spray Tip
J	Tip Guard
K	Gun Trigger Lock
L	Gun Fitting
M	Gun Filter (inside handle)
N	ProXChange™ Pump (behind Easy Access Door)

O	Inlet Valve
P	Outlet Valve (airless hose connection)
Q	Airless Hose
R	InstaClean™ Fluid Filter (inside fluid outlet)
T	Inlet Strainer
U	Power Cord
V	Easy Access Door
W	Suction Tube Drip Cup
X	Pump Removal Tool
Z	Inlet Valve Removal Tool
	Model/Serial Tag (Not shown, located on bottom of unit.)

See **Quick Reference**, page 32 for more information.

ProX Cart Models



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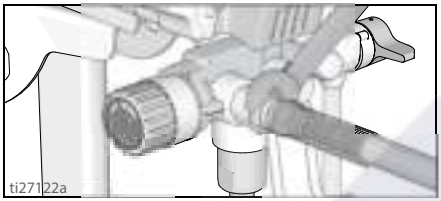
See **Quick Reference**, page 32 for more information.

Setup

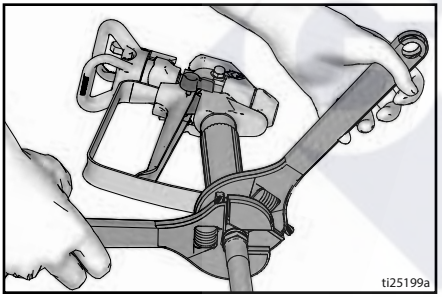
When unpacking sprayer for the first time or after long term storage perform setup procedure.

Assemble Your Sprayer

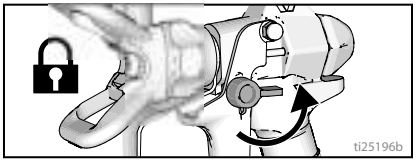
1. Connect Graco airless hose to outlet valve fitting. Use wrench to tighten securely.



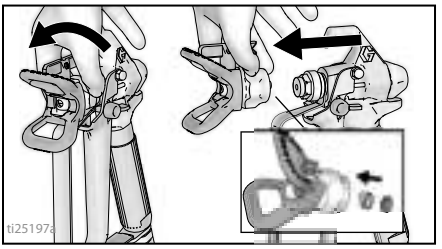
2. Connect other end of hose to gun.



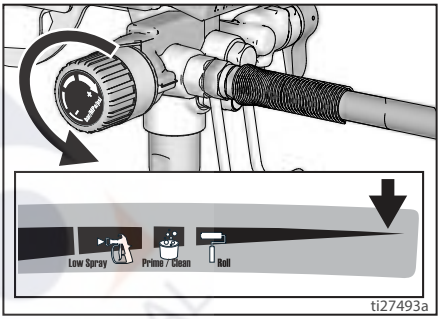
3. Use two wrenches to tighten securely. If hose is already connected, make sure connections are tight.
4. Engage trigger lock.



5. Remove tip guard. Be careful tip seal may fall out when tip guard is removed.



6. Turn pressure control knob all the way left (counter-clockwise) to lowest setting.

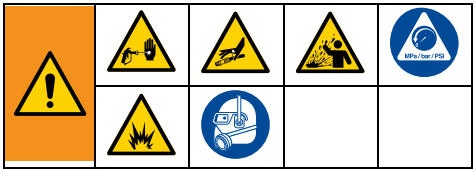


7. After long term storage check inlet strainer for clogs and debris.

Strain the Paint

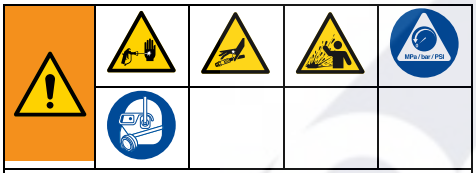
Previously opened paint may contain dried paint or other debris. To avoid priming problems and spray tip clogs it is recommended to strain the paint before using. Paint strainers are available where paint is sold. Stretch a paint strainer over a clean pail and pour the paint through the strainer to capture any dried paint and debris before spraying.

Start Up



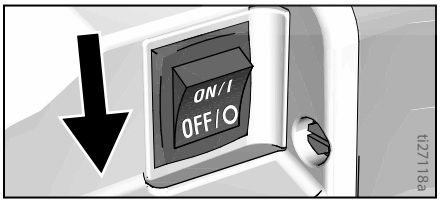
Pressure Relief Procedure

Follow the Pressure Relief Procedure whenever you see this symbol.

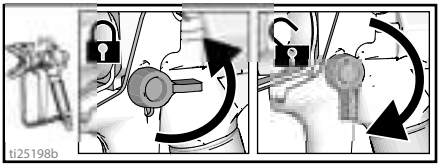


This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection or splashed fluid, follow the **Pressure Relief Procedure** whenever sprayer is stopped and before sprayer is cleaned or checked, and before equipment is serviced.

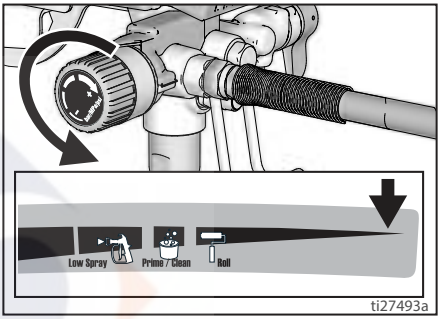
1. Turn ON/OFF switch to the **OFF** position.



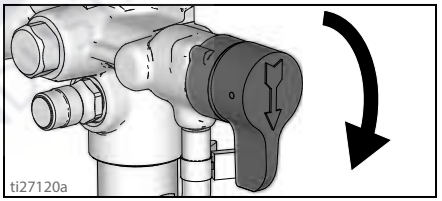
2. Engage the trigger lock. Always engage the trigger lock when sprayer is stopped to prevent the gun from being triggered accidentally.



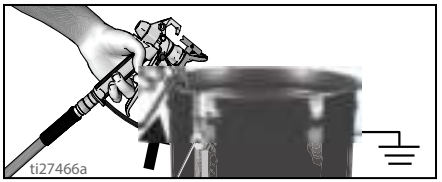
3. Turn pressure control knob to lowest setting.



4. Put drain tube into a waste pail and turn Prime/Spray valve in PRIME position to relieve pressure.



5. Hold the gun firmly to a pail. Point gun into pail. Disengage the trigger lock and trigger the gun to relieve pressure.



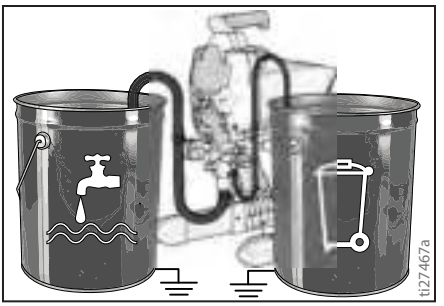
6. Engage the trigger lock.

7. If you suspect the spray tip or hose is clogged or that pressure has not been fully relieved:
   a. VERY SLOWLY loosen the tip guard retaining nut or the hose end coupling to relieve pressure gradually.
   b. Loosen the nut or coupling completely.
   c. Clear airless hose or spray tip obstruction. See **Clear Tip Clog**, page 21.

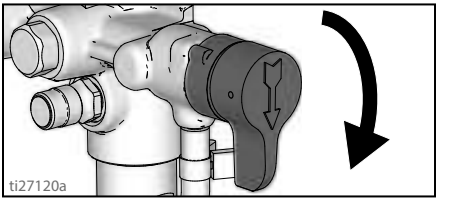
Flush Storage Fluid

This sprayer arrives from the factory with a small amount of test material in the system. **It is important that you flush this material from the sprayer before using it.** See **Cleaning Fluid Compatibility**, page 30 and **Static Grounding Instructions (Oil-Based materials)**, page 30 for additional information when using oil-based materials.

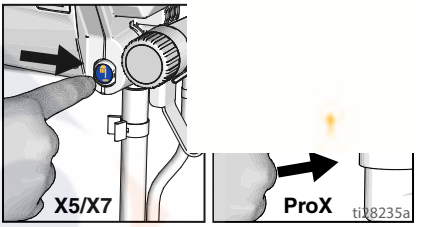
1. Perform **Pressure Relief Procedure**, page 13.
2. Make certain ON/OFF switch is **OFF**.
3. Separate drain tube (smaller) from suction tube (larger).
4. Place drain tube in a waste pail.
5. Submerge suction tube in a pail partially filled with water or flushing fluid. If spraying oil-based materials, submerge the suction tube in mineral spirits, or compatible cleaning solvent. If spraying water-based materials, submerge the suction tube in water.



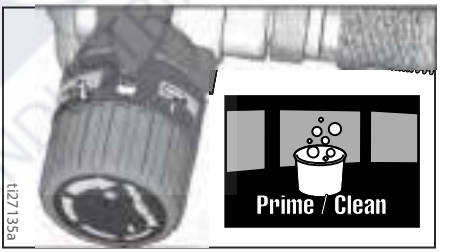
6. Turn Prime/Spray valve down to PRIME position.



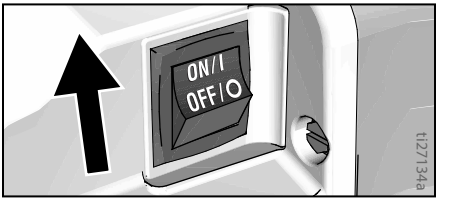
7. Plug power supply cord into a properly grounded electrical outlet.
8. Press PushPrime button twice to loosen inlet valve ball.



9. Align setting indicator with Prime/Clean setting on pressure control knob.



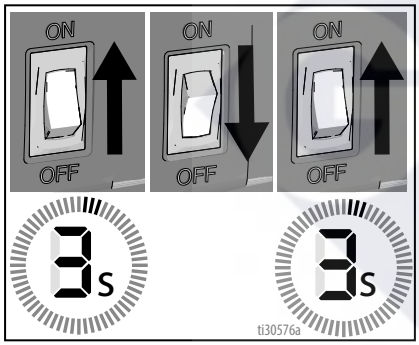
10. Turn ON/OFF switch to **ON** position.



11. When sprayer starts pumping, flushing fluid and air will be purged from the sprayer. Allow fluid to flow out of drain tube, into waste pail, for 30 to 60 seconds.
12. Turn ON/OFF switch to **OFF** position.

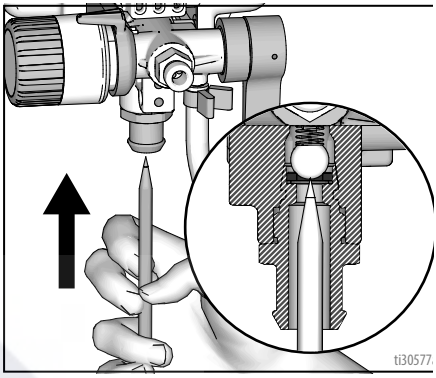
If flushing fluid fails to come out of the drain tube, perform the steps below until flushing fluid flows up the suction tube and out the drain tube.

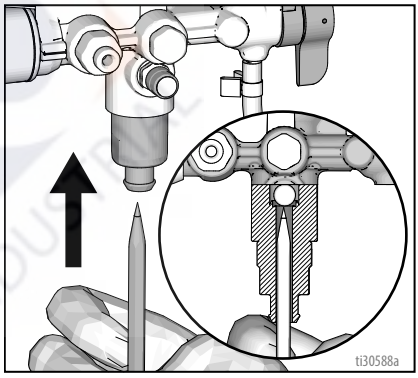
1. Some fluids prime faster if the ON/OFF switch is toggled on and off so the pump can slow and stop. Turn ON/OFF switch ON for three seconds, then OFF until motor stops, then ON again for three seconds, then OFF until motor stops. Continue until sprayer is primed. If flushing fluid does not flow up suction tube, see next step.



2. Remove suction tube. Insert pointed end of a pencil into the inlet and push up to free inlet valve ball.

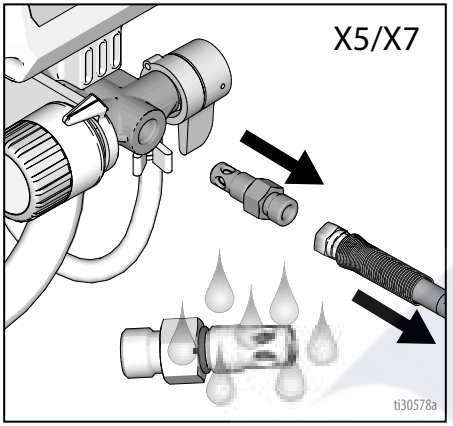
   Install suction tube and repeat **Flush Storage Fluid**, page 14.

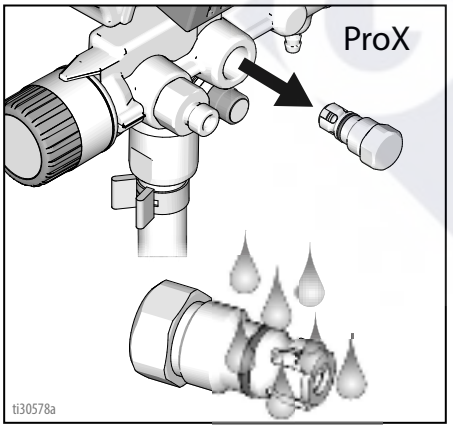




3. Remove outlet valve and clean. Make certain outlet ball moves free in the housing.

   Install outlet valve and repeat **Flush Storage Fluid**, page 14.



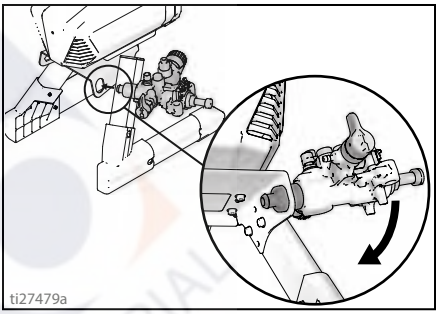


4. Remove suction tube. Remove inlet valve and clean. Make certain the spring is facing up when the inlet ball and valve are installed.

   Install inlet valve and suction tube and repeat **Flush Storage Fluid**, page 14.

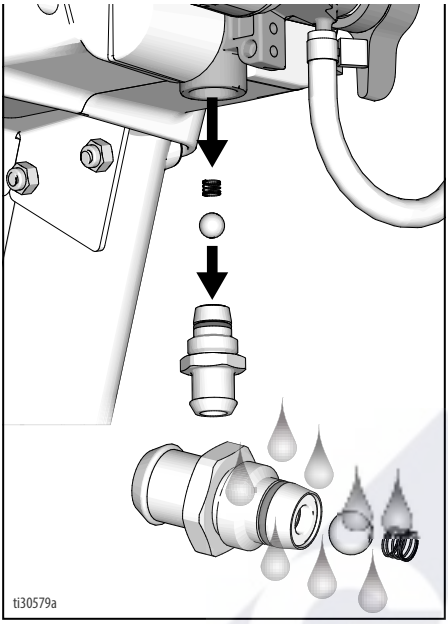
ProX Inlet Valve Removal

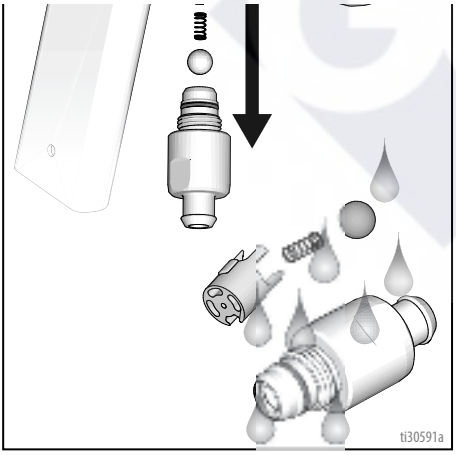
An integrated tool is included in the frame to remove the inlet valve assembly from the pump. If you suspect that the inlet valve is clogged or stuck, remove the valve assembly and clean or replace. Insert pump inlet into frame and loosen the inlet valve. Remove inlet valve.



NOTICE

Do not lose the ball and spring inside the inlet valve assembly. It may fall out when the inlet valve is removed. Pump will not prime without the ball and spring.





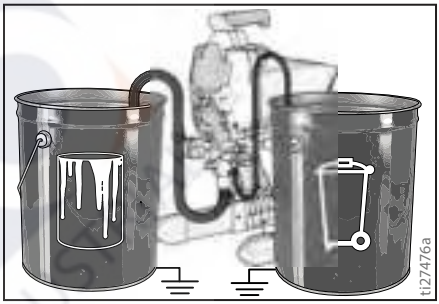
5. Perform a power flush. See **Cleanup with Power Flush Adapter**, page 23.

High-pressure spray is able to inject toxins into the body and cause serious bodily injury. Do not stop leaks with hand or rag.

Inspect for leaks. If leaks occur, perform **Pressure Relief Procedure**, page 13, then tighten all fittings and repeat **Start Up**. If there are no leaks continue with the next step.

Fill Pump (Prime Pump)

1. Move suction tube to paint pail and submerge suction tube in paint.

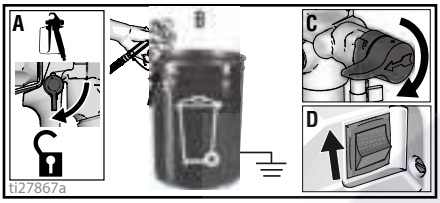


2. Turn ON/OFF switch to **ON** position.
3. Wait to see paint coming out of drain tube.
4. Turn ON/OFF switch to **OFF** position.

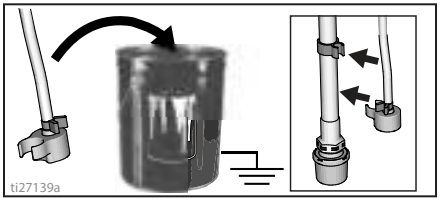
NOTE: If paint does NOT flow up the suction tube and out the drain tube, follow the **Flush Storage Fluid**, steps 1 - 5, in this section.

Fill Gun and Hose

1. Hold gun against waste pail. Point gun into waste pail.
   a. Disengage trigger lock.
   b. Pull and hold gun trigger.
   c. Turn Prime/Spray valve horizontal to SPRAY position.
   d. Turn ON/OFF switch to **ON** position.



2. Trigger gun into waste pail until only paint comes out of the gun.
3. Release trigger. Engage trigger lock.
4. Transfer drain tube to paint pail and clip to suction tube.



NOTE: When motor stops, sprayer is ready to paint. If motor continues to run, sprayer is not properly primed. Repeat **Fill Pump (Prime Pump)** and **Fill Gun and Hose**.

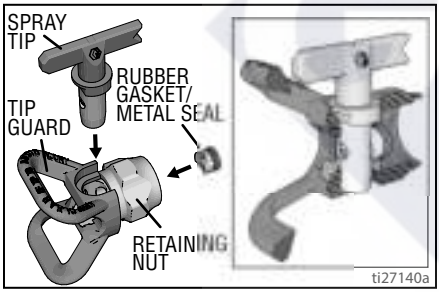
How to Spray

To avoid serious injury from skin injection do not put your hand in front of the spray tip when installing or removing the spray tip and tip guard.

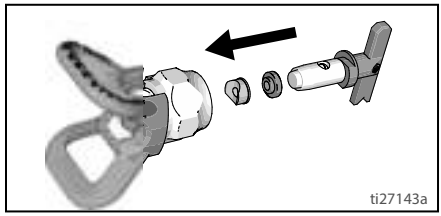
Spray Tip Installation

To prevent spray tip leaks make certain spray tip and tip guard are installed properly.

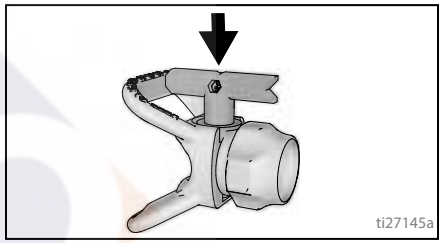
1. Perform **Pressure Relief Procedure**, page 13.
2. Engage trigger lock.
3. Verify spray tip and tip guard parts are assembled in the order shown.



a. Use spray tip to align gasket and seal in the tip guard.

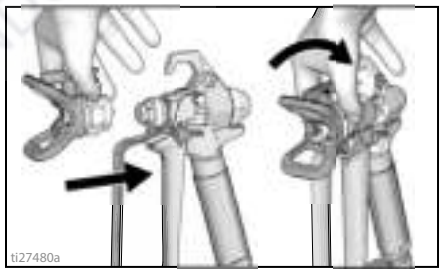


b. Spray tip must be pushed all the way into the tip guard. Turn spray tip to push down.



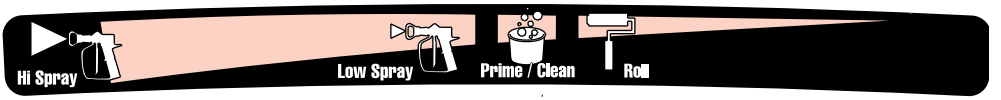
c. Turn the arrow shaped handle on the spray tip forward to the spray position.

4. Screw spray tip and tip guard assembly onto the gun and tighten.



Adjust Pressure Control

The pressure control knob allows for infinite pressure adjustment. To reduce overspray, always start at the lowest pressure setting and increase pressure to the minimum setting that results in an acceptable spray pattern.



3000 psi (207 bar, 20.7 MPa) | *1500 psi (103 bar, 10.3 MPa)* | *500 psi (34.5 bar, 3.5 MPa)*

ti5597b

To select function, align symbol on pressure control knob with setting indicator on sprayer.

Tip and Pressure Selection

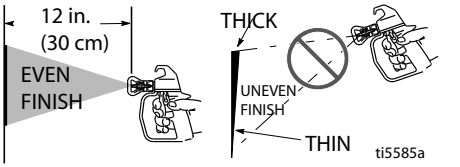
See table for recommended spray pressure for your material. Refer to paint (material) can for manufacturer's recommendations.
Maximum tip hole sizes supported by the sprayer:
– X5: 0.015 in. (0.38 mm) – X7: 0.017 in. (0.43 mm)
– ProX17: 0.017 in. (0.43 mm) – ProX19: 0.019 in. (0.48 mm) – ProX21: 0.021 in. (0.53 mm)

	Coatings				
	Interior Stains/ Interior & Exterior Clears	Exterior Solid Stains	Primers	Interior Latex Paints	Exterior Latex Paints
Spray Pressure	**Low Spray**	**High Spray**	**High spray**	**High Spray**	**High Spray**
Tip hole Size					
0.011 in. (0.28 mm)					
0.013 in. (0.33 mm)					
0.015 in. (0.38 mm)					
0.017 in. (0.43 mm)					
0.019 in. (0.48 mm)					
0.021 in. (0.53 mm)					

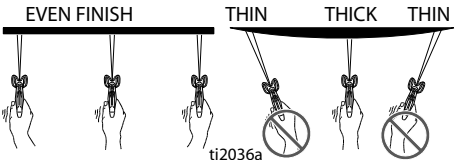
Spray Techniques

Use a piece of scrap cardboard to practice these basic spraying techniques before you begin spraying the surface.

- Hold gun 12 in. (30 cm) from surface and aim straight at surface. Tilting gun to direct spray angle causes an uneven finish.
- Flex wrist to keep gun pointed straight. Fanning gun to direct spray at angle causes uneven finish.



ti5585a



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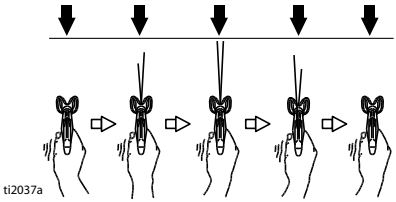
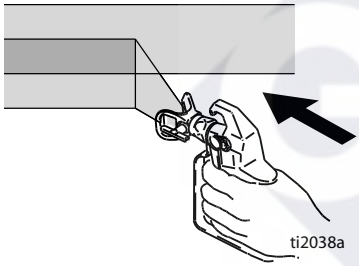
Triggering Gun

Pull trigger after starting stroke. Release trigger before end of stroke. Gun must be moving when trigger is pulled and released.



Aiming Gun

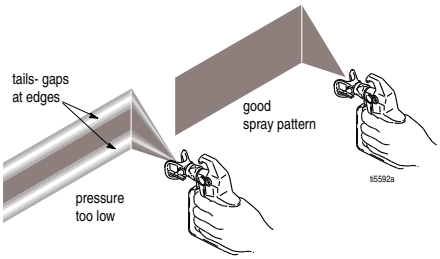
Aim center of spray of gun at bottom edge of previous stroke, overlapping each stroke by half.



Spray Pattern Quality

A good spray pattern is evenly distributed as it hits the surface.

- Spray should be atomized (evenly distributed, no gaps at edges).



If tails persist when spraying at the highest spray pressure:

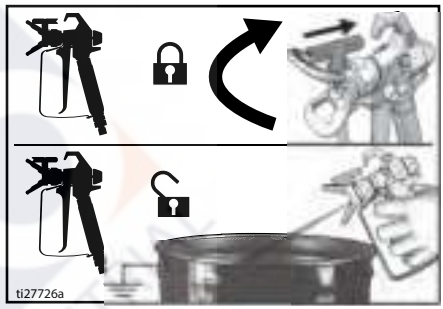
- Spray tip may be worn. See **Tip and Pressure Selection**, page 20.
- A smaller spray tip may be needed.
- Material may need to be thinned. If material needs to be thinned follow manufacturer's recommendations.

Clear Tip Clog

In the event that particles or debris clog the spray tip, this sprayer is designed with a reversible spray tip that quickly and easily clears the particles without disassembling the sprayer. See **Strain the Paint**, page 12 for additional information.

1. Engage trigger lock. Rotate spray tip to unclog position. Disengage trigger lock. Trigger gun at waste area to clear clog.

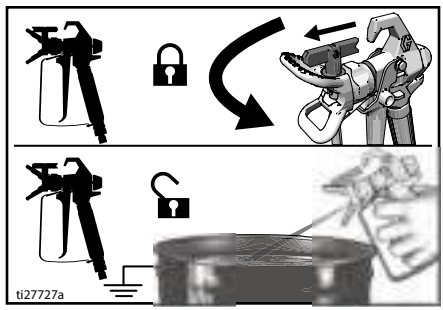
UNCLOG



NOTE: If spray tip is difficult to rotate when turning to the unclog position perform, **Pressure Relief Procedure**, page 13, then turn Prime/Spray valve to spray position and repeat step 1.

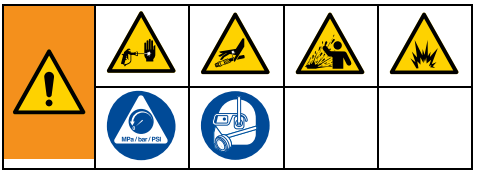
2. Engage trigger lock. Rotate spray tip back to spray position. Disengage trigger lock and continue spraying.

SPRAY



Cleanup

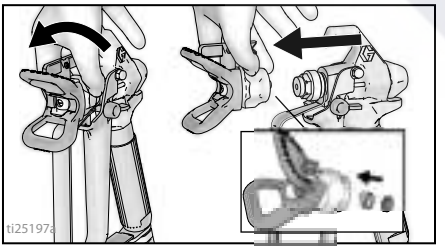
Cleaning the sprayer after each use results in a trouble free start up the next time the sprayer is used.



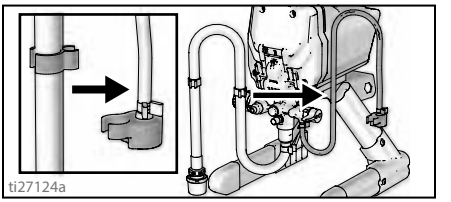
Cleaning from a Pail

- For short term shutdown periods (overnight to two days) refer to **Short Term Storage**, page 27.
- See **Cleaning Fluid Compatibility**, page 30 for information on flushing/cleaning fluids and **Static Grounding Instructions (Oil-Based materials)**, page 30.

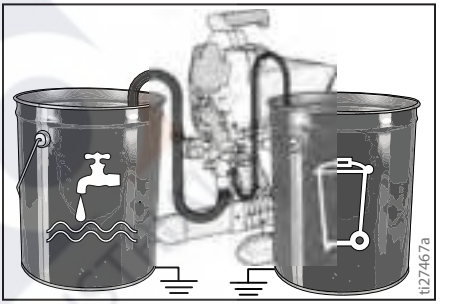
1. Perform **Pressure Relief Procedure**, page 13.
2. Remove spray tip and tip guard assembly from gun and place in waste pail.



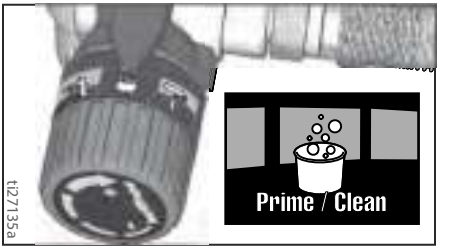
3. Lift suction tube and drain tube from paint pail. Let paint drain into the pail.
4. Separate drain tube (smaller) from suction tube (larger).



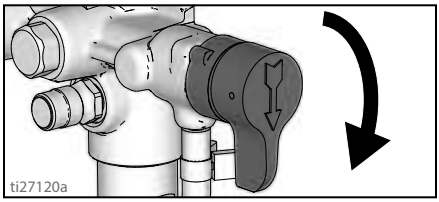
5. Place empty waste and flushing fluid pails side by side.
6. Place suction tube in flushing fluid. Use water for water based paint and mineral spirits or compatible oil-based flushing solvent for oil-based paint. Place drain tube in waste pail.



7. Turn pressure control knob to the Prime/Clean setting.



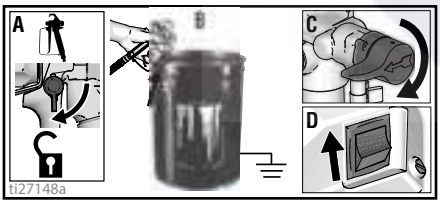
8. Turn Prime/Spray valve down to PRIME position.



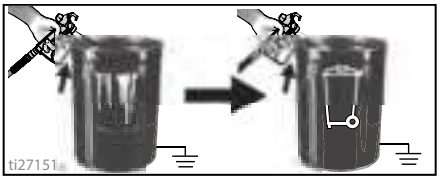
9. Turn ON/OFF switch to **ON** position.
10. Flush until approximately 1/3 of the flushing fluid is emptied from the pail.
11. Turn ON/OFF switch to **OFF** position.

NOTE: Step 12 is for returning paint in hose to paint pail. One 50 ft (15 m) hose holds approximately 1 quart (1 liter) of paint.

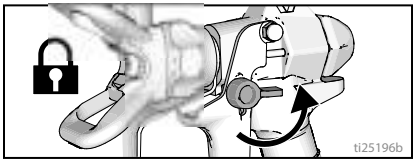
12. To recover paint in hose, point gun into paint pail while holding gun firmly to the pail.
    a. Disengage trigger lock.
    b. Pull and hold gun trigger.
    c. Turn Prime/Spray valve horizontal to SPRAY position.
    d. Turn ON/OFF switch to **ON** position.
    e. Continue to hold gun trigger until you see paint diluted with flushing fluid starting to come out of gun.



13. While continuing to trigger gun, quickly move gun to redirect spray into waste pail. Continue triggering gun into waste pail until flushing fluid dispensed from gun is relatively clear.



14. Turn pressure control knob to the lowest setting.
15. Stop triggering gun. Engage the trigger lock.

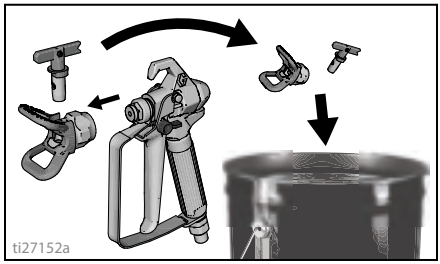


16. Turn Prime/Spray valve down to PRIME position.
17. Turn ON/OFF switch to **OFF** position.
18. Clean outlet filter. ProX only: See **Cleaning InstaClean™ Fluid Filter (ProX only)**, page 25.
19. Fill unit with Pump Armor™ fluid. See **Long Term Storage**, page 27.

Cleanup with Power Flush Adapter

(Water-based materials only)
Power flushing is a faster method of cleanup. It can only be used after spraying water-based coatings.

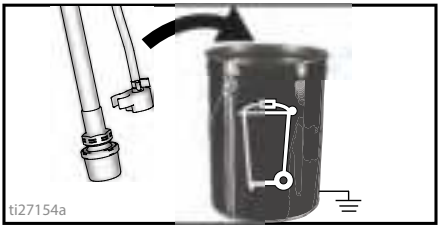
1. Perform **Pressure Relief Procedure**, page 13.
2. Remove spray tip and tip guard assembly from gun and place in waste pail.



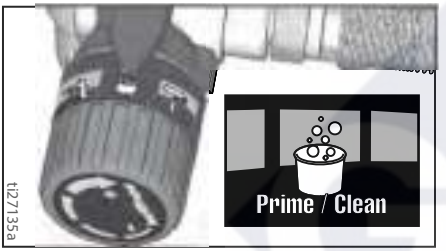
3. Place empty waste and paint pails side by side.
4. Lift suction tube and drain tube from paint pail. Let paint drain into the pail.

Cleanup

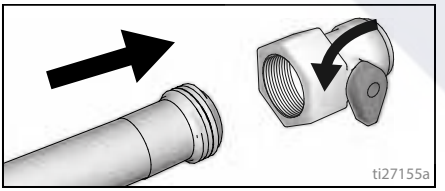
5. Place suction and drain tube in waste pail.



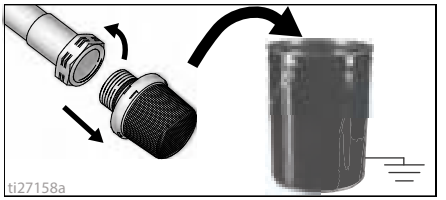
6. Turn pressure control knob to the Prime/Clean setting.



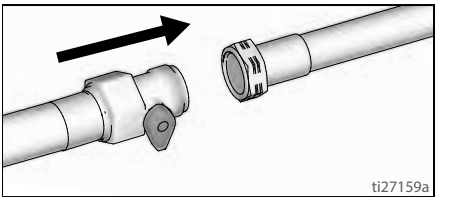
7. Screw Power Flush attachment valve to garden hose. Close valve.



8. Turn on water. Open valve. Rinse paint off suction tube, drain tube and inlet strainer. Close valve.
9. Unscrew inlet strainer from suction tube. Place inlet strainer in waste pail.



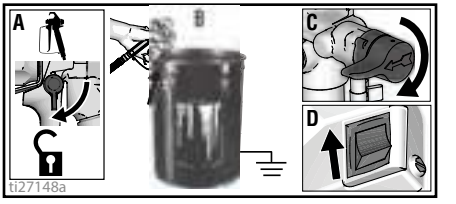
10. Connect garden hose to suction tube with Power Flush attachment valve. Leave drain tube in waste pail.



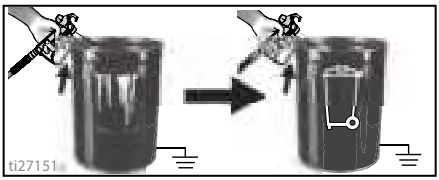
11. Turn ON/OFF switch to **ON** position.
12. Open Power Flush attachment valve.
13. Circulate water through sprayer, into waste pail, for 20 seconds.
14. Turn ON/OFF switch to **OFF** position.

NOTE: Step 15 is for returning paint in hose to paint pail. One 50 ft (15 m) hose holds approximately 1 quart (1 liter) of paint.

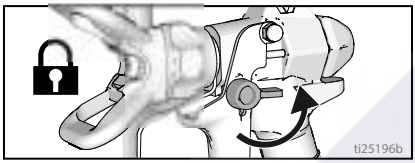
15. To recover paint in hose, point gun into paint pail while holding gun firmly to the pail.
    a. Disengage trigger lock.
    b. Pull and hold gun trigger.
    c. Turn Prime/Spray valve horizontal to SPRAY position.
    d. Turn ON/OFF switch to **ON** position.
    e. Continue to hold gun trigger until you see paint diluted with flushing fluid starting to come out of gun.



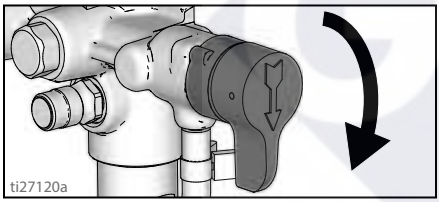
16. While continuing to trigger gun, quickly move gun to redirect spray into waste pail. Continue triggering gun into waste pail until flushing fluid dispensed from gun is relatively clear.



17. Turn pressure control knob to the lowest setting.
18. Stop triggering gun. Engage the trigger lock.



19. Turn Prime/Spray valve down to PRIME position.

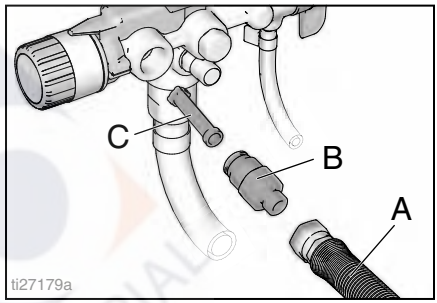


20. Turn ON/OFF switch to **OFF** position.

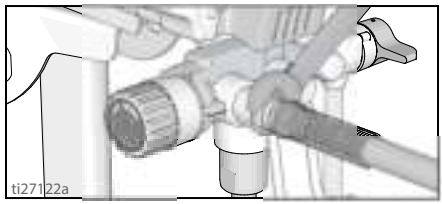
Cleaning InstaClean™ Fluid Filter (ProX only)

The InstaClean Fluid Filter prevents particles from entering paint hose. After each use, remove and clean it to ensure peak performance.

1. Perform **Pressure Relief Procedure**, page 13.
2. Disconnect airless spray hose (A) from sprayer.
3. Unscrew outlet fitting (B).
4. Remove InstaClean Fluid Filter (C).

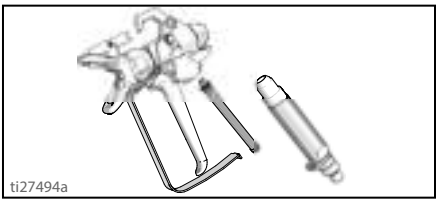


5. Check InstaClean Fluid Filter (C) for debris. If needed, clean filter with water or flushing fluid and a soft brush.
   a. Install closed (square) end of InstaClean Fluid Filter (C) in sprayer.
   b. Screw outlet fitting (B) into sprayer.
6. Tighten outlet fitting and reconnect hose (A) to sprayer. Use a wrench to tighten securely.

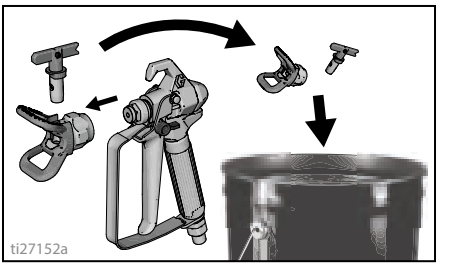


Clean the Gun

1. Clean gun filter with water or flushing fluid and a brush every time you flush the system. Replace gun filter if damaged.



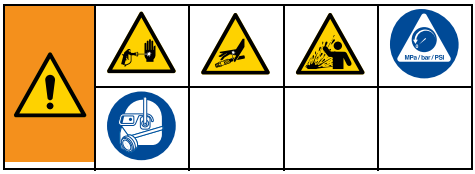
2. Remove spray tip and tip guard and clean with water or flushing fluid and a brush.



3. Wipe paint off outside of gun using a soft cloth moistened with water or flushing fluid.

Storage

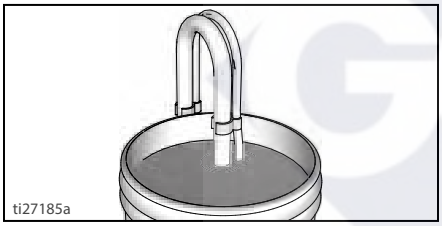
With proper storage, the sprayer will be ready to use the next time it is needed.



Short Term Storage

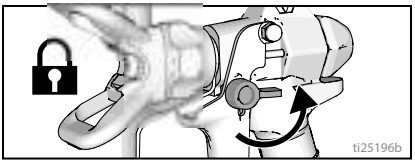
(up to 2 days)

1. Perform **Pressure Relief Procedure**, page 13.
2. Leave suction tube and drain tube in paint pail.



3. Cover paint and pail tightly with plastic wrap.

4. Engage trigger lock.



5. Leave gun attached to hose.
6. Remove tip and guard and clean with water or flushing fluid and a brush.
7. Wipe paint off outside of gun using a soft cloth moistened with water or flushing fluid.

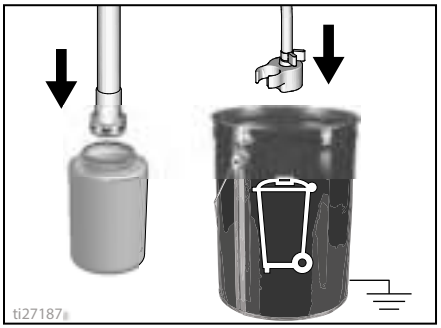
Long Term Storage

(more than 2 days)

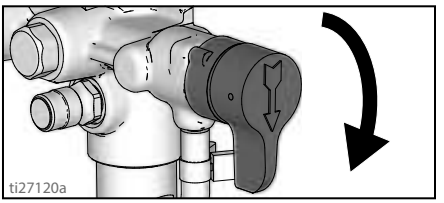
Pump Armor fluid protects the sprayer against freezing and corrosion.

- Before storing sprayer make sure all water is drained out of sprayer.
- Do not allow water to freeze in sprayer.
- Do not store sprayer under pressure.
- Store sprayer indoors.

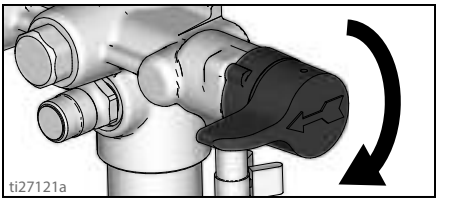
1. Perform **Pressure Relief Procedure**, page 13.
2. Place suction tube in Pump Armor fluid bottle and drain tube in waste pail.



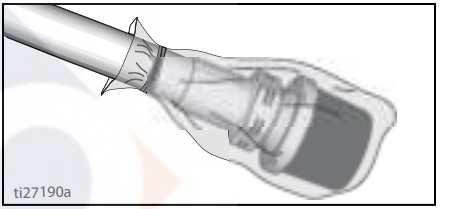
3. Turn Prime/Spray valve down to PRIME position.



4. Turn ON/OFF switch to **ON** position.
5. Turn pressure control knob clockwise until the pump turns on.
6. When storage fluid comes out of drain tube (5-10 seconds) turn ON/OFF switch to **OFF** position.
7. Turn Prime/Spray valve horizontal to SPRAY position to keep storage fluid in sprayer during storage.



8. Leave gun attached to hose.
9. Remove tip and guard and clean with water or flushing fluid and a brush.
10. Wipe paint off outside of gun using a soft cloth moistened with water or flushing fluid.



11. Secure a plastic bag around suction and drain tube to catch any drips.

Reference

Spray Tip Selection

Selecting Tip Size

Spray tips come in a variety of hole sizes for spraying a range of fluids. Your sprayer includes a tip for use in most paint spraying applications. Use the coatings table on page 20 to determine the range of recommended tip hole sizes for each fluid type. If you need a tip other than the one supplied, see the **Reversible Spray Tip Selection Chart**, page 29.

Hints:

- As you spray, the tip wears and enlarges. Starting with a tip hole size smaller than the maximum will allow you to spray within the rated flow capacity of the sprayer.
- Use larger tip hole sizes with thicker coatings and smaller tip hole sizes with thinner coatings.
- Tips wear with use and need periodic replacement.
- Tip hole size controls flow rate - the amount of paint that comes out of the gun.

Fan Width

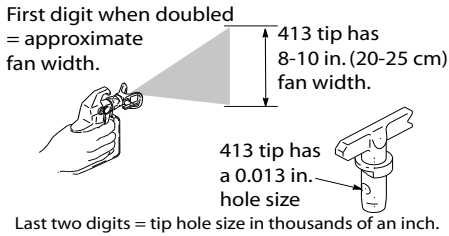
Fan width is the size of the spray pattern, which determines the area covered with each stroke.

Hints:

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

Understanding Tip Number

The last three digits of tip number (i.e.: 286413) contain information about hole size and fan width on surface when gun is held 12 in. (30.5 cm) from surface being sprayed.



Reversible Spray Tip Selection Chart

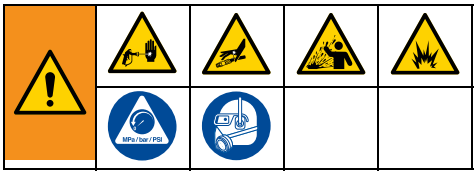
Tip Part #	Fan Width *		Hole Size	
	Inches	mm	Inch	mm
286311	6 – 8	152 – 203	0.011	0.28
286411	8 – 10	203 – 254	0.011	0.28
286313	6 – 8	152 – 203	0.013	0.33
286413	8 – 10	203 – 254	0.013	0.33
286415	8 – 10	203 – 254	0.015	0.38
286515	10 – 12	254 – 305	0.015	0.38
286417	8 – 10	203 – 254	0.017	0.43
286517	10 – 12	254 – 305	0.017	0.43
286519	12 – 14	305 – 356	0.019	0.48
286521	10 – 12	254 – 305	0.021	0.53
* – 12 in. (305 mm) from surface				

Example: For an 8 to 10 in. (203 to 254 mm) fan width and 0.013 (0.33 mm) hole size, order Part No. 286413.

Lacquer Conversion Kit

To spray lacquers with the ProX17 or ProX19, you must purchase a lacquer conversion kit, and follow **Static Grounding Instructions (Oil-Based materials)**, page 30, when using oil-based materials. See ProX17 and ProX19 parts list, page 45 or 47. The X5 and X7 must not be used with lacquers.

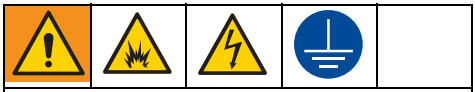
Cleaning Fluid Compatibility



Oil- or Water-Based Materials

- When spraying **water-based** materials, flush the system thoroughly with water.
- When spraying **oil-based** materials, flush the system thoroughly with mineral spirits or compatible, oil-based flushing solvent.
- To spray **water-based** materials **after spraying oil-based** materials, flush the system thoroughly with water first. The water flowing out of drain tube should be clear and solvent-free **before** you begin spraying the water-based material.
- To spray **oil-based** materials **after spraying water-based** materials, flush the system thoroughly with mineral spirits or a compatible oil-based flushing solvent first. The solvent flowing out of the drain tube should not contain any water. When flushing with solvents always follow **Static Grounding Instructions (Oil-Based materials)**, page 30.
- To avoid fluid splashing back on your skin or into your eyes, always aim gun at inside wall of pail.

Static Grounding Instructions (Oil-Based materials)

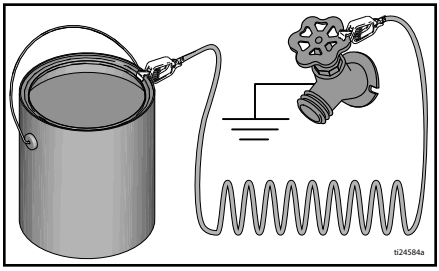


The equipment must be grounded to reduce the risk of static sparking and electric shock. An electric or static spark can cause fumes to ignite or explode. An improper ground can cause electric shock. A good ground provides an escape wire for the electric current.

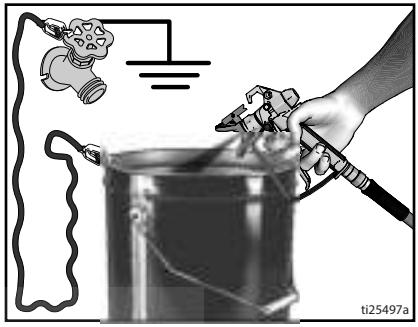
Always use a metal pail for oil-based materials requiring flushing with compatible oil-based flushing solvents when sprayer is flushed or pressure is relieved.
Follow local code. Use only conductive metal pails, placed on a grounded surface such as concrete.

Do not place pail on a non-conductive surface such as paper or cardboard which interrupts 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.



To maintain ground continuity when sprayer is flushed or pressure is relieved: hold metal part of spray gun firmly to the side of a grounded metal pail, then trigger the gun.



Quick Reference

Page 10	Name	Description
A	Prime/Spray Valve	• In PRIME position directs fluid to drain tube. • In SPRAY position directs pressurized fluid to paint hose. • Automatically relieves system pressure in overpressure situations.
B	PushPrime Button	Taps the inlet ball when pushed to loosen it.
C	Pressure Control Knob	Increases (clockwise) and decreases (counter-clockwise) fluid pressure in pump, hose, and spray gun. To select function, align symbol on pressure control knob with setting indicator, page 13.
D	ON/OFF Switch	Turns sprayer ON and OFF.
E	Suction Tube	Draws fluid from paint pail into pump.
F	Drain Tube	Drains fluid in system during priming and pressure relief.
G	Airless Spray Gun	Dispenses fluid.
H	Reversible Spray Tip	• Atomizes fluid being sprayed, forms spray pattern and controls fluid flow according to hole size. • Reverse position unclogs plugged tips without disassembly.
J	Tip Guard	Reduces risk of fluid injection injury.
K	Gun Trigger Lock	Prevents accidental triggering of spray gun.
L	Gun Fitting	Threaded connection for paint hose.
M	Gun Filter	Filters fluid entering spray gun to reduce tip clogs.
N	Pump	Pumps and pressurizes fluid and delivers it to paint hose.
O	Inlet Valve	Allows paint to flow from paint bucket into the sprayer.
P	Outlet Valve	Threaded connection for airless hose. Allows paint to flow fromthe sprayer to the gun.
Q	Airless Hose	Transports high-pressure fluid from pump to spray gun.
R	InstaClean™ Fluid Filter (ProX only)	• Filters fluid coming out of pump to reduce tip plugging and improve finish. • Self cleans only during pressure relief.
S	Pail Hanger	For transporting pail by its handle.
T	Inlet Strainer	Prevents debris from entering pump.
U	Power Cord	Plugs into power source.
V	Easy Access Door (ProX only)	Easy Access Door permits quick access to the pump. Open pump door by pulling out on the tabs while sliding door up.
W	Suction Tube Drip Cup	Holds the suction tube during transport to catch drips.
X	Pump Removal Tool (ProX only)	A cutout in the frame provides a tool to quickly remove the pump packing without additional tools.
Z	Inlet Valve Removal Tool (ProX only)	A cutout in the frame provides a tool to quickly remove the inlet valve without additional tools.
	Power Flush Attachment	Connects garden hose to suction tube for power flushing water-based fluids.

Maintenance

Routine maintenance is important to ensure proper operation of your sprayer.

Activity	Interval
Inspect motor shroud openings for blockage.	Daily or each time you spray
Inspect/clean InstaClean filter (ProX only), fluid inlet strainer, and gun filter.	Daily or each time you spray

NOTICE

Protect the internal drive parts of this sprayer from water. Openings in shroud allow cooling of mechanical parts and electronics inside. If water gets into these openings, the sprayer could malfunction or be permanently damaged.

Airless Hoses

Check hose for damage every time you spray. Do not attempt to repair hose if hose jacket or fittings are damaged. Do not use hoses shorter than 25 ft (7.6 m). Wrench tighten, using two wrenches.

Spray Tips

- Always clean tips with compatible cleaning fluid and brush after spraying.
- Tips may require replacement after 15 gallons (57 liters) or they may last through 60 gallons (227 liters) depending on abrasiveness of paint.

Pump Repair (ProX Only)

When pump packings wear, paint will begin to leak down outside of pump. Each time the pump kit is replaced, check pump inlet and outlet valves for wear or damage. Replace if worn or damaged. Always replace inlet and outlet valves every second time the pump kit is replaced.

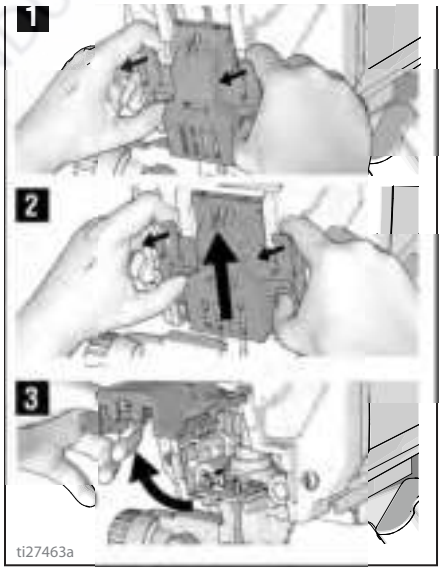
- See **ProXChange Pump (ProX only)**, page 50 or consult a Graco/MAGNUM authorized retailer, distributor, or service center.
- Purchase a pump repair kit and install according to instructions provided with kit, before your next job.

Pump Removal

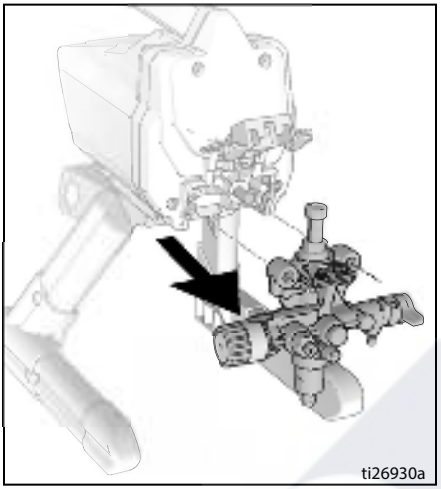
Remove airless hose, suction tube, and drain tube.

Always perform **Pressure Relief Procedure**, page 13 before starting any pump repairs and unplug the sprayer.

1. Unplug the sprayer from the power source.
2. Pull tabs on sides of the easy access door towards you while pushing the entire door up.
3. Now lift the door so that it swings out of the way.

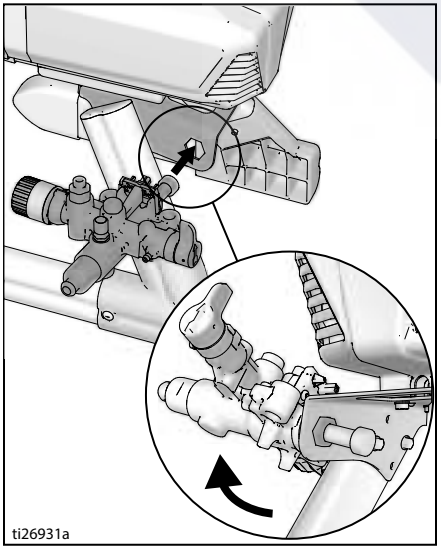


4. Slide pump assembly off the mounting pins.



ProXChange Removal Tool

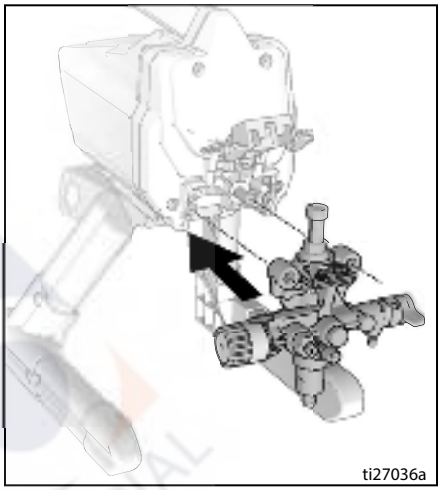
An integrated tool is included in the frame to remove the ProXChange packing assembly. See Pump repair manual for complete repair instructions.



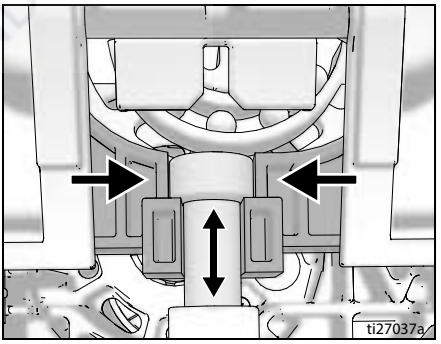
5. Clean any debris and dried paint from the cavity and replace the ball and spring. Tighten inlet valve to pump using integrated tool on the frame.

Pump Installation

1. Slide pump assembly onto the mounting pins.

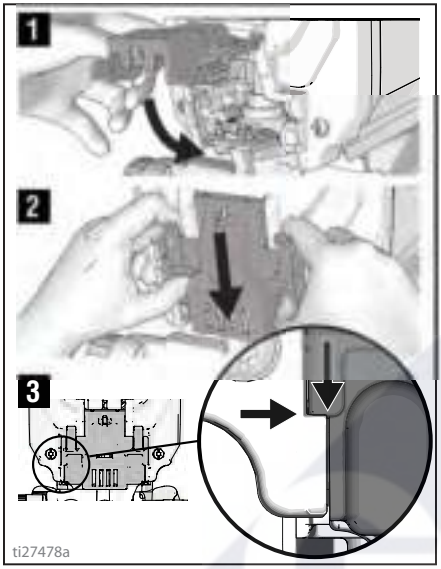


a. Move pump rod up or down until cap is level with the opening in the yoke.



b. Push on pump rod to slide pump assembly back on to mounting pins.

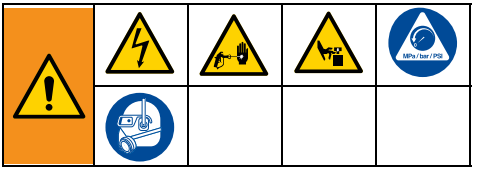
2. Swing easy access door closed while pushing the entire door down.



3. Install hose, suction tube, and drain tube.
4. Plug sprayer into power source.

NOTE: Door must be fully closed and latched before sprayer will operate.

Troubleshooting



1. Follow **Pressure Relief Procedure**, page 13, before checking or repairing.
2. Solutions at the beginning of each problem listed are the most common.
3. Check everything in this Troubleshooting Table before you bring the sprayer to an authorized service center.

Problem	Cause	Solution
Motor does not run: (verify sprayer is plugged in, and ON/OFF switch is on)	ProX only: Easy access door not fully closed.	Verify that easy access door is closed and latched. See page 34.
	Pressure control is set at zero pressure.	Turn pressure control knob clockwise to increase pressure setting.
	Electric outlet is not providing power.	Test outlet with known working device. Reset circuit breaker or replace fuse. Find working outlet. Reset building circuit breaker or replace fuse.
	Extension cord is damaged.	Replace extension cord. See page 4.
	Sprayer electric cord is damaged.	Check for broken insulation or wires. Replace electric cord if damaged.
	Pump is seized (Paint has hardened in pump or Water is frozen in pump.)	Turn ON/OFF switch off and unplug sprayer from outlet. If frozen do NOT try to start sprayer until it is completely thawed or it may damage the motor, control board and/or drive train. Place sprayer in warm area for several hours. Check for free moving pump by removing shroud and spinning fan. If not frozen, check for hardened paint in pump. If paint has hardened in pump. See page 33. If motor does not turn with pump removed, consult a Graco/ Magnum authorized retailer, distributor, or service center.
	Motor or control is damaged.	Consult a Graco/ Magnum authorized retailer, distributor, or service center.

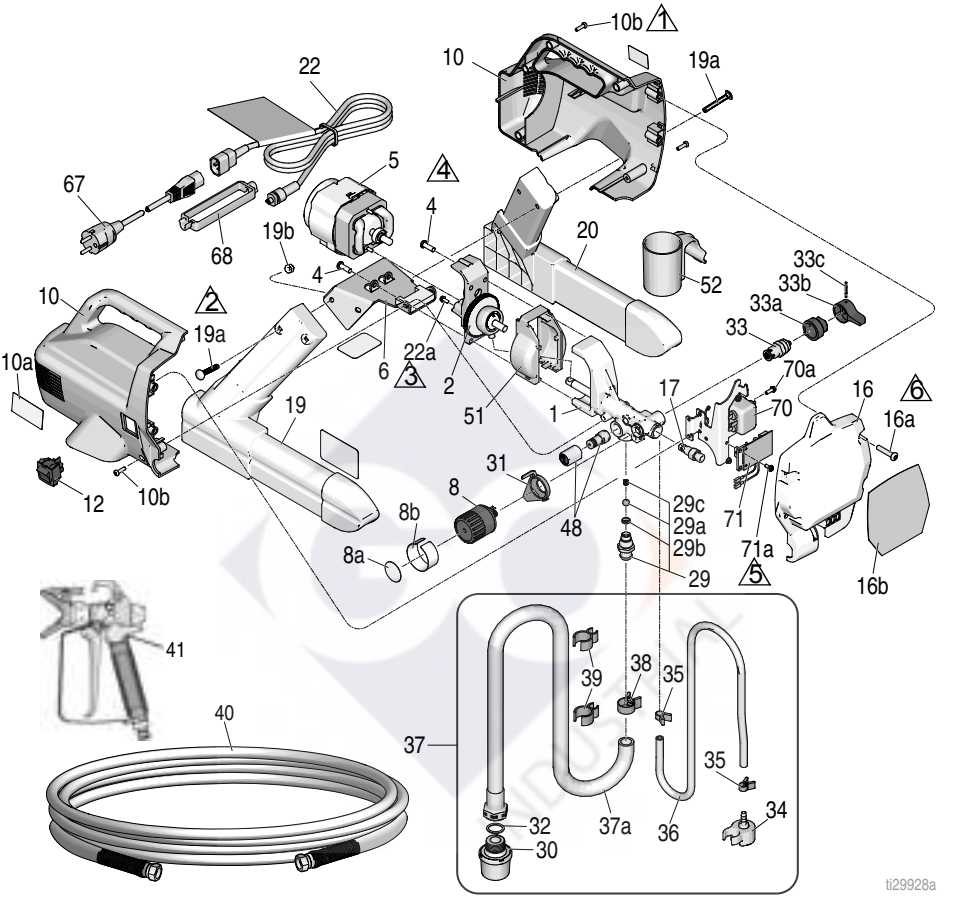
Problem	Cause	Solution
Sprayer runs, but pump does not prime or looses prime while in use. (Pump cycles but does not pump paint or build pressure.)	Prime/Spray valve is in SPRAY position.	Lift Prime/Spray valve to PRIME position until paint exits drain tube. The pump is now primed.
	Inlet strainer is clogged or suction tube is not immersed in paint.	Clean debris off inlet strainer and make sure suction tube is immersed in paint.
	Inlet valve ball is stuck or dirty.	Remove suction tube and place a pencil into the inlet section to dislodge the ball, see page 15. Clean inlet valve ball, see page 16, OR Power Flush Sprayer, see page 23.
	Thick or “sticky” paint.	Some fluids may prime faster if the ON/OFF switch is momentarily turned off so the pump can slow and stop. Turn ON/OFF switch on and off several times if necessary, see page 15.
	Suction tube is leaking.	Inspect suction tube connection for cracks or vacuum leaks.
	Outlet valve ball is stuck.	Unscrew outlet valve, remove, and clean assembly, see page 15.
	Debris in paint.	Strain the paint. See page 12.
	Prime/Spray valve is worn or obstructed with debris.	Take sprayer to Graco/MAGNUM authorized service center.

Troubleshooting

Problem	Cause	Solution
Pump is primed, but can not achieve good spray pattern.	Spray tip may be partially clogged.	Clear spray tip clog. See page 21.
	Reversible spray tip is in UNCLOG position.	Rotate arrow-shaped handle on spray tip so it points forward to SPRAY position. See page 21.
	Debris in paint.	Strain the paint. See page 30.
	Pressure is set too low.	Align pressure control knob setting indicator to desired spray setting. See page 20.
	ProX only: InstaClean fluid filter is clogged.	Clean or replace InstaClean fluid filter. See page 25.
	Spray gun filter is clogged.	Clean or replace gun fluid filter. See page 26.
	Spray tip selected is too large for capability of sprayer.	Replace tip. See page 20.
	Spray tip is worn beyond the capability of sprayer.	Replace tip. See page 20.
	Spray tip gasket and seal worn or missing.	Replace gasket and seal. See page 19.
	Inlet strainer is clogged or suction tube is not immersed in paint.	Clean debris off inlet strainer and make sure suction tube is immersed in paint.
	Extension cord is too long or not heavy enough gauge.	Replace extension cord. See page 4.
	Inlet valve or outlet valve is worn or clogged with debris.	Check for worn or contaminated inlet valve or outlet valve. - Prime sprayer with paint - Trigger gun momentarily - When trigger is released, pump should cycle momentarily and stop - If pump continues to cycle, valves may be worn or contaminated with debris - Clean and reinstall valves - ProX only: Replace valves with appropriate kits. See page 50.
	Material is too thick.	Thin material. Follow manufacturers recommendations.
	Airless hose is too long (if extra section was added).	Remove section of airless hose.
Spray gun stopped spraying while trigger is pulled.	Spray tip is clogged.	Clear spray tip clog. See page 21.
	Sprayer lost prime.	See troubleshooting section “Sprayer runs, but pump does not prime or looses prime while in use.” on page 37.

Problem	Cause	Solution
When paint is sprayed, it runs down the wall or sags.	Material is going on too thick.	Move gun faster.
		Choose a spray tip with smaller hole size.
		Choose spray tip with wider fan.
		Make sure gun is far enough from surface.
When paint is sprayed, coverage is inadequate.	Material is going on too thin.	Move gun slower.
		Choose spray tip with larger hole size.
		Choose spray tip with narrower fan.
		Make sure gun is close enough to surface.
Fan pattern varies dramatically while spraying.	Pressure control switch is worn and causing excessive pressure variation.	Take sprayer to Graco/MAGNUM authorized service center.
Cannot trigger spray gun.	Spray gun trigger lock is engaged.	Rotate trigger lock to disengage trigger lock. See page 12.
Paint is coming out of pressure control switch.	Pressure control switch is worn.	Take sprayer to Graco/MAGNUM authorized service center.
Paint is leaking through drain tube.	Sprayer is over pressurizing.	Take sprayer to Graco/MAGNUM authorized service center.
Paint leaks down outside of pump.	Pump packings are worn.	Replace pump packings ProX only: Replace pump packings with new ProXChange module. See page 33.
Motor is hot and runs intermittently. Motor automatically shuts off due to excessive heat. Damage can occur if cause is not corrected.	Vent holes in enclosure are plugged or sprayer is covered.	Keep vent holes clear of obstructions and overspray and keep sprayer open to air.
	Extension cord is too long or not a heavy enough gauge.	Replace extension cord. See page 4.
	Unregulated electrical generator being used has excessive voltage.	Use electrical generator with a proper voltage regulator.
	Motor needs to be replaced.	Take sprayer to Graco/Magnum authorized retailer, distributor, or service center.

X5: 16W120, 17N433 Stand Sprayer Parts



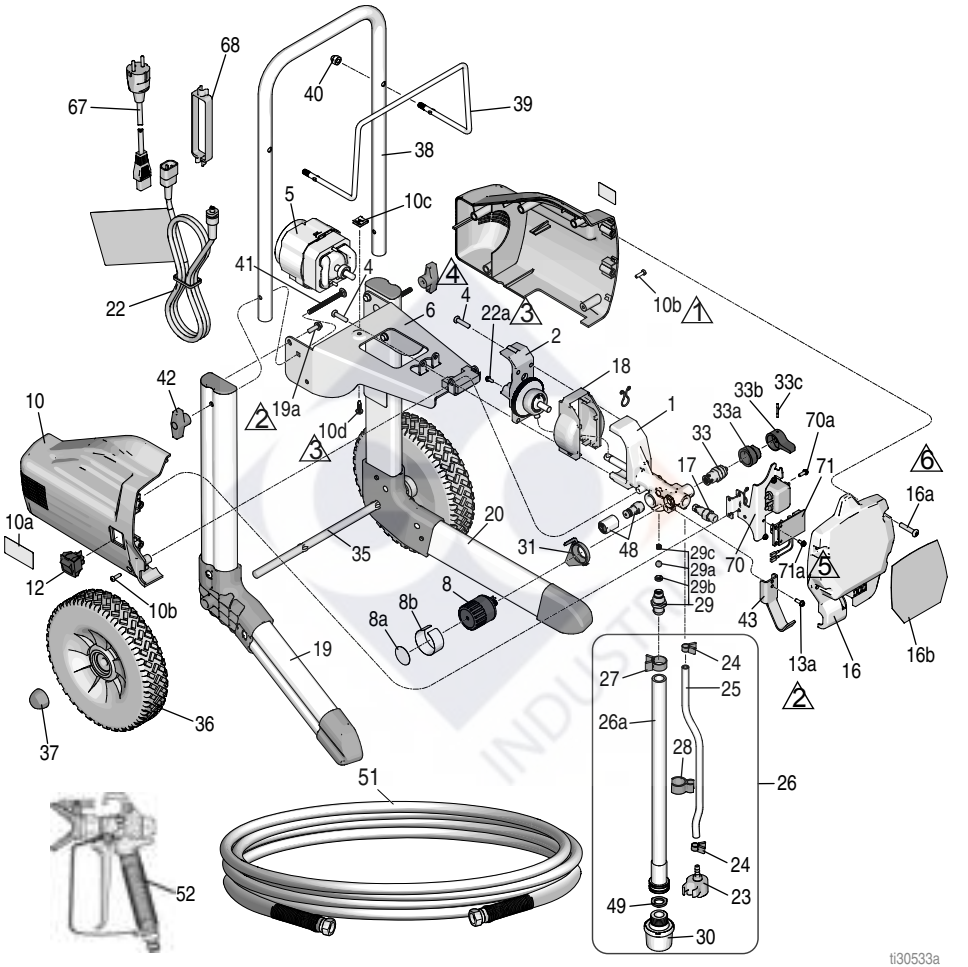
Ref.	Torque	Ref.	Torque
1	20-25 in-lb (2.3-2.8 N•m)	4	80-90 in-lb (9.0-10.0 N•m)
2	26-32 in-lb (2.9-3.6 N•m)	5	12-16 in-lb (1.4-1.8 N•m)
3	25-35 in-lb (2.8-4.0 N•m)	6	36-42 in-lb (4.0-4.7 N•m)

16W120, 17N433 Stand Sprayer Parts List

Ref.	Part	Description	Qty.
1	17L079	KIT, pump *includes 4, 8, 17, 29, 33, 48*	1
2	16E835	DRIVE	1
4	112689	SCREW, button, thd form	4
5		KIT, motor	
	17L282	120V	1
	16G228	230V	1
6	16D682	BRACKET, motor	1
8	244267	KIT, pressure control *includes 8a, 8b*	1
8a	15A464	LABEL, control	1
8b	15K530	LABEL, control	1
10	17K541	KIT, enclosure, X5 *includes 10a, 10b, 16a*	1
10b	115477	SCREW, mach, torx, pan hd	4
12	118899	SWITCH, rocker, spdt	1
16	17L085	KIT, housing cover *includes 16a, 16b*	1
16a	120724	SCREW	4
16b	17J963	LABEL, Magnum X5, front	1
17	16E845	KIT, outlet valve, X5 and X7	1
19	24K632	KIT, right leg, X5 *includes 2 screws, 19a, 19b*	1
19a	125116	BOLT, carriage	4
19b	102040	NUT, lock, hex	4
20	24K633	KIT, left leg, X5 *includes 2 screws, 19a, 19b*	1
22		KIT, power cord, X5 *includes 22a, 22b*	
	16E842	120V	1
	16X876	230V	1
22a	115498	SCREW, grounding	1
22b▲		LABEL, Magnum, warning (not shown)	
	17K627	English, Spanish, French	1
	16T398	English, Chinese, Korean	1
	17R828	English, Spanish, Portuguese	1
29	16E844	KIT, pump, inlet valve *includes 29a, 29b, 29c*	1
29a	124249	BALL, intake	1
29b	103338	O-RING	1
29c	123849	SPRING, inlet	1
30	288716	KIT, strainer	1
31	15Y296	COVER, wire	1
32	115099	WASHER, hose	1
33	235014	KIT, drain valve *includes 33a, 33b, 33c*	1
33a	24E578	BASE, valve	1
33b	187625	HANDLE, valve, drain	1
33c	111600	PIN, grooved	1
34	244035	DEFLECTOR, barbed	1
35	115489	CLAMP, drain tube	2
36	195084	TUBE, drain	1
37	24V074	KIT, tube, suction *includes 30, 32, 34, 35, 36, 37a, 38, 39, 61*	1
37a	197607	TUBE, suction *includes 32*	
38	116295	CLAMP, tube	1
39	195400	CLIP, spring	2
40	247339	HOSE, cpld, 1/4 in. x 25 ft	1
41	243011	GUN, spray, SG2	
48	17L086	KIT, push prime	1
51	16W319	COVER, gear	1
52	17H422	CUP, inlet drip	1
61	115648	VALVE, power flush (not shown)	1
62	244168	FLUID, pump armor, 8 oz (not shown)	1
63▲		CARD, medical wallet (not shown)	
	222385	English, Spanish, French	1
	17A134	English, Chinese, Korean	1
	17R476	English, Spanish, Portuguese	1
67		CORDSET	
	242001	EU	1
	242005	Australia	1
	129547	Brazil	1
68	195551	RETAINER, plug	1
70	16W318	KIT, filter EMI *includes 70a*	1
70a	115492	SCREW, mach, slot, HWH	2
71		KIT, control board	
	17L104	120V *includes 71a*	1
	16G223	230V *includes 71b*	1
71a	115477	SCREW, mach, torx	1
71b	115492	SCREW, mach, slot hex	2

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

X7: 16W121, 17N434 Cart Sprayer Parts



Ref.	Torque	Ref.	Torque
1	20-25 in-lb (2.3-2.8 N•m)	4	80-90 in-lb (9.0-10.0 N•m)
2	45-55 in-lb (5.0-6.2 N•m)	5	12-16 in-lb (1.4-1.8 N•m)
3	25-35 in-lb (2.8-4.0 N•m)	6	36-42 in-lb (4.0-4.7 N•m)

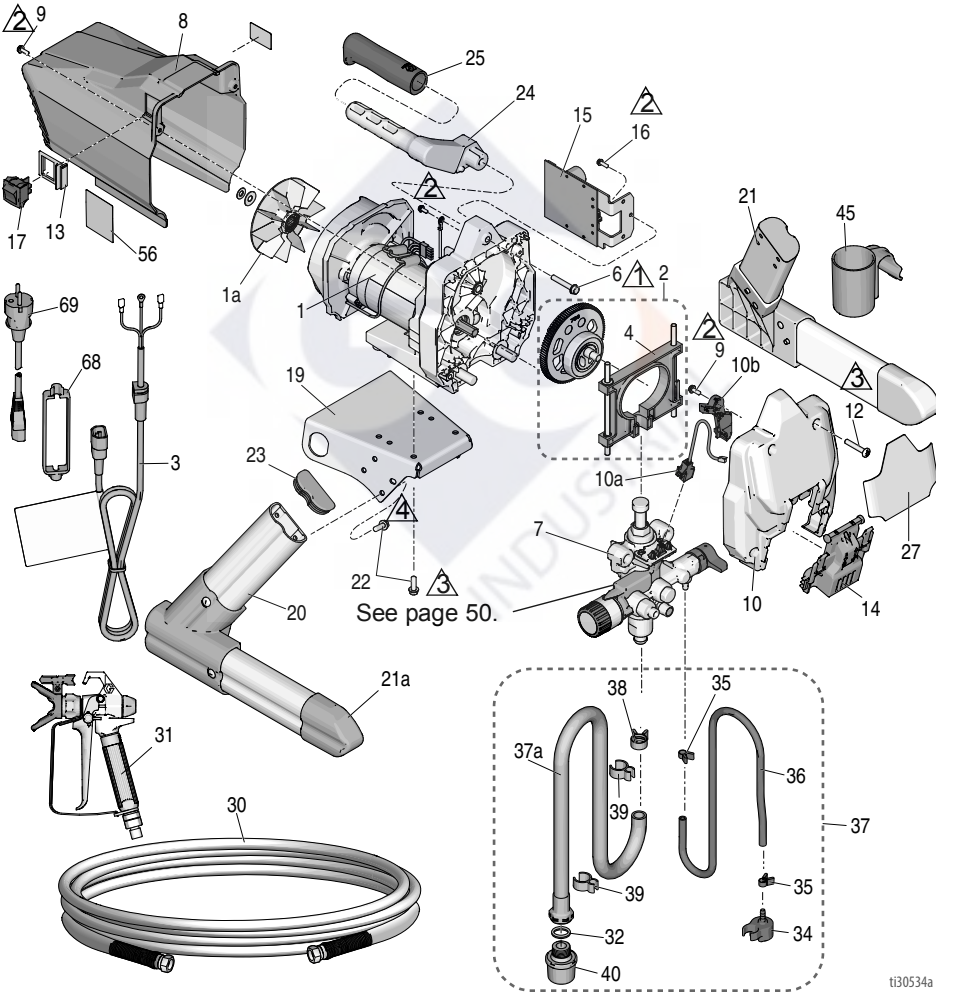
16W121, 17N434 Cart Sprayer Parts List

Ref.	Part	Description	Qty.
1	17L079	KIT, pump *includes 4, 8, 17, 29, 33, 48*	1
2	16E835	KIT, drive	1
4	112689	SCREW, button, thd form	4
5		KIT, motor	
	17L282	120V	1
	16G228	230V	1
6	16D683	BRACKET, motor	1
8	244267	KIT, pressure control *includes 8a, 8b*	1
8a	15A464	LABEL, control	1
8b	15K530	LABEL, control	1
10	17K542	KIT, enclosure, X7 *includes 10a, 10b, 10c, 10d, 16a*	1
10b	115477	SCREW, mach, torx, pan hd	4
10c	121481	NUT, U-type, tinnerman	1
10d	120093	SCREW, self drilling	1
12	118899	SWITCH, rocker, spdt	1
13a	115477	SCREW, mach, torx	1
13b	115492	SCREW, mach, slot hex	2
16	17L085	KIT, housing cover *includes 16a, 16b*	1
16a	120724	SCREW	4
16b	17J966	LABEL, Magnum X7, front	1
17	16E845	KIT, outlet valve	1
18	16W319	COVER, gear	1
19	17L088	KIT, right leg, X7 *includes 3 screws, 19a*	1
19a	260212	SCREW, hex washer	4
20	17L087	KIT, left leg, X7 *includes 3 screws, 19a*	1
22		KIT, power cord, X7 *includes 22a, 22b*	
	16E843	120V	1
	16X876	230V	1
22a	115498	SCREW, grounding	1
22b▲	17K627	LABEL, Magnum, warning (not shown)	1
	17R828	English, Spanish, Portuguese	1
23	244035	DEFLECTOR, barbed	1
24	115489	CLAMP, drain tube	2
25	195108	TUBE, drain	1
26	24V073	KIT, suction tube *includes 23, 24, 25, 26a, 27, 28, 30, 49, 61*	1
26a	16H348	TUBE, suction *includes 49*	1
27	116295	CLAMP, tube	1
28	195400	CLIP, spring	2
29	16E844	KIT, pump, inlet valve (includes 29a, 29b, 29c)	1
29a	124249	BALL, intake	1
29b	103338	O-RING	1
29c	123849	SPRING, inlet	1
30	288716	KIT, strainer	1
31	15Y296	COVER, wire	1
33	235014	KIT, drain valve *includes 33a, 33b, 33c*	1
33a	24E578	BASE, valve	1
33b	187625	HANDLE, valve, drain	1
33c	111600	PIN, grooved	1
35	15R602	AXLE, cart	1
36	115095	WHEEL, 9 in.	2
37	112612	CAP, hub	2
38	16H354	HANDLE, cart	1
39	16H350	RACK, hose	1
40	120689	NUT, hex, acorn, 5/16-18 nickel	2
41	120788	SCREW, carriage	2
42	115480	KNOB, t-handle	2
43	16D907	HANGER, pail	1
48	17L086	KIT, push prime	1
49	115099	WASHER, hose	1
51	247339	HOSE, cpld, 1/4 in. x 25 ft	1
52	243011	GUN, spray, SG2	1
61	115648	VALVE, power flush (not shown)	1
62	17A000	FLUID, pump armor, 8 oz (not shown)	1
63▲		CARD, medical wallet (not shown)	
	222385	English, Spanish, French	1
	17A134	English, Chinese, Korean	1
	17R476	English, Spanish, Portuguese	1
67		CORDSET	
	242001	EU	1
	242005	Australia	1
	129547	Brazil	1
68	195551	RETAINER, plug	1
70	16W318	KIT, filter EMI *includes 70a*	1
70a	115492	SCREW, mach, slot, HWH	2
71		KIT, control board	
	17L104	120V *includes 13a*	1
	16G223	230V*includes 13b*	1
71a	115477	SCREW, mach, torx	3

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

ProX17: 17H202, 17H203 Stand Sprayer Parts

Ref.	Torque	Ref.	Torque
1	140-160 in-lb (16-18 N•m)	3	110-120 in-lb (12-14 N•m)
2	30-35 in-lb (3.5-4.0 N•m)	4	45-55 in-lb (5-6 N•m)



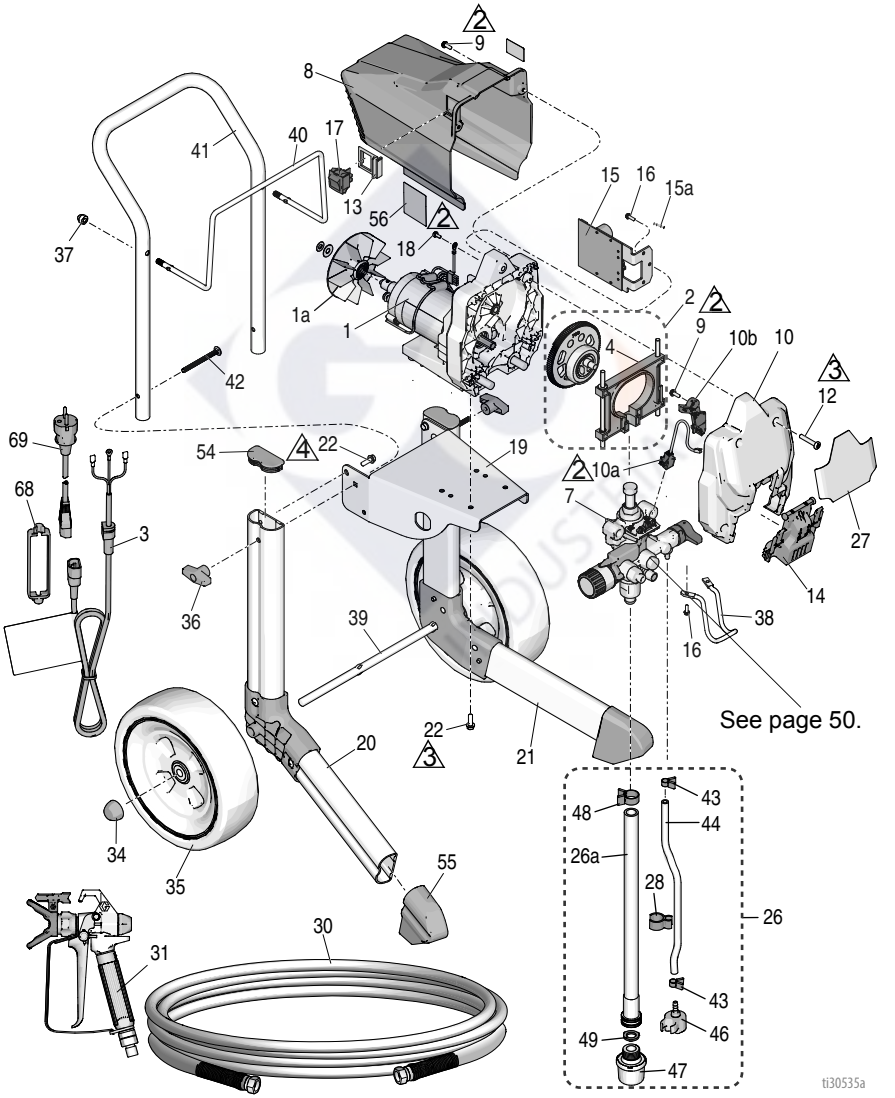
17H202, 17H203 Stand Sprayer Parts List

Ref.	Part	Description	Qty.
1		KIT, repair, motor, *includes 1a*	
	17K285	120V	1
	17F758	230V	1
1a		FAN	
	287770	120V	1
	16X980	230V	1
2	17J863	KIT, gear and yoke	1
3		CORD, power	
	17J173	120V	1
	17J405	230V	1
4	17J864	KIT, yoke	1
6	117493	SCREW, mach, hex, washer head	1
7	17K842	KIT, pump complete	1
8	17J865	SHIELD, motor, blue *includes 9 and labels*	1
9	118444	SCREW, mach, hwhd 10-24 x 0.5 in.	3
10	17J866	COVER, front *includes 9, 10a, 10b, 12, 14*	1
10a	128551	CABLE, jumper, PC	1
10b	17F262	COVER, wire	1
12	115478	SCREW, mach, Torx, pan hd	4
13	17X737	SWITCH, bracket	1
14	17F233	COVER, pump, locking	1
15		KIT, control board *includes 15a, 16*	
	17J867	120V	1
	17J885	230V	1
15a		FUSE (not shown)	
	119276	120V, 12.5A, slow blow	1
	129882	230V, 6.3A, slow blow	1
16	117501	SCREW, plastite	1
17	24Y329	KIT, switch, repair *includes 13*	1
18	115498	SCREW, mach, slot, hex whd	1
19	17G328	PLATE, motor mount	1
20	16E836	KIT, right leg *includes 21a, 22, 23*	1
21	16E837	KIT, left leg *includes 21a, 22, 23*	1
21a	15J695	CAP, tube	2
22	260212	SCREW, hwh, thread forming	12
23	15J699	CAP, tube	2
24	276864	HANDLE, sprayer	1
25	116139	GRIP, handle	1
27	17J031	LABEL, front	1
30	247340	HOSE, cpld, 1/4 in. x 50 ft	1
31	243012	GUN, spray, SG3	1
32	115099	WASHER, hose	1
34	244035	DEFLECTOR, barbed	1
35	115489	CLAMP, drain tube	2
36	195084	TUBE, drain	1
37	17K715	KIT, tube, suction *includes 32, 34, 35, 36, 37a, 38, 39, 40*	1
37a	17D155	TUBE, suction *includes 32*	1
38	116295	CLAMP, tube	1
39	195400	CLIP, spring	2
40	288716	KIT, strainer	1
45	17H422	CUP, suction/drain	1
56▲		LABEL, warning	
	17J027	English, Spanish, French	1
	17K017	English, Chinese, Korean	1
	17S455	English, Spanish, Portuguese	1
57▲		CARD, medical wallet (not shown)	
	222385	English, Spanish, French	1
	17A134	English, Chinese, Korean	1
	17R476	English, Spanish, Portuguese	1
61	115648	VALVE, power flush (not shown)	1
62	17A000	FLUID, pump armor, 8 oz (not shown)	1
68	195551	RETAINER, plug	1
69		CORDSET	
	242001	EU	1
	242005	Australia	1
	129547	Brazil	1
70	16W318	KIT, filter EMI *includes 70a*	1
70a	115492	SCREW, mach, slot, HWH	2
	17L305	KIT, conversion, lacquer, stand (sold separate)	

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

ProX19: 17H209 17H210 Cart Sprayer Parts

Ref.	Torque
2	30-35 in-lb (3.5-4.0 N•m)
3	110-120 in-lb (12-14 N•m)
4	45-55 in-lb (5-6 N•m)



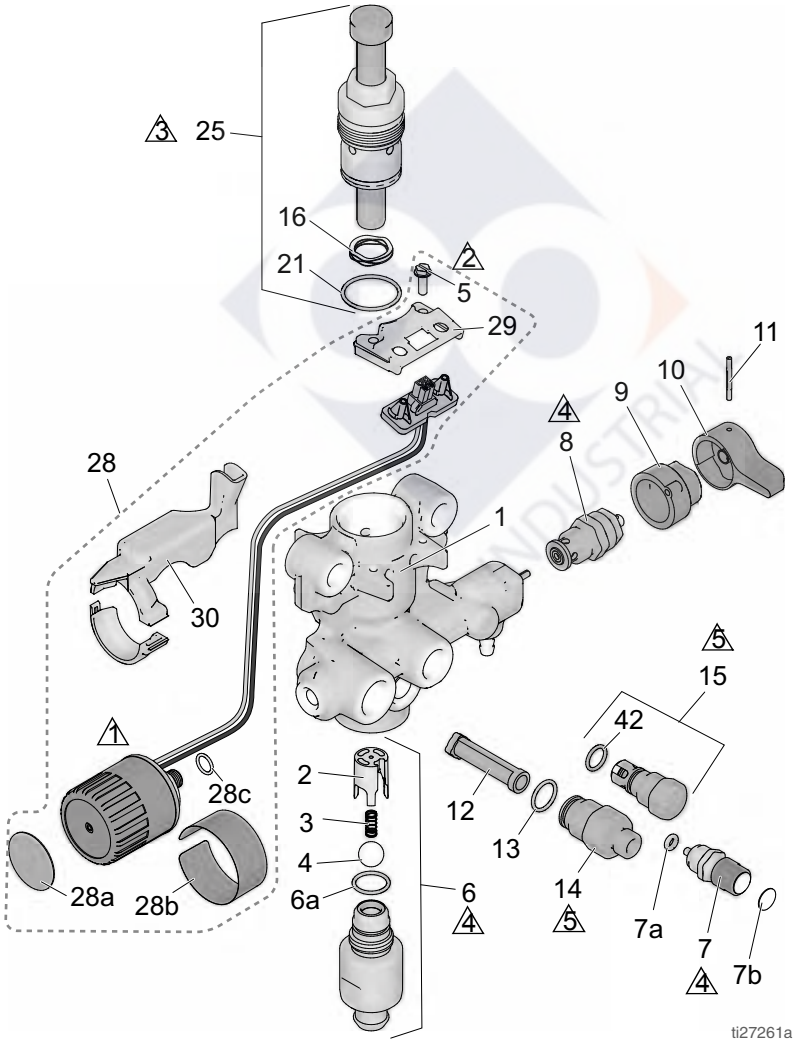
17H209, 17H210 Cart Sprayer Parts List

Ref.	Part	Description	Qty.
1		MOTOR	
	17F756	120V	1
	16G228	230V	1
1a		FAN	
	287770	120V	1
	16X980	230V	1
2	17J863	KIT, gear and yoke	1
3		CORD, power	
	17J173	120V	1
	17J405	230V	1
4	17J864	KIT, yoke	1
7	17K842	KIT, pump complete	1
8	17J865	SHIELD, motor, blue *includes 9 and labels*	1
9	118444	SCREW, mach, hwhd 10-24 x 0.5 in.	3
10	17J866	COVER, front *includes 9, 10a, 10b, 12, 14*	1
10a	128551	CABLE, jumper, PC	1
10b	17F262	COVER, wire	1
12	115478	SCREW, mach, Torx, pan hd	
13	17X737	SWITCH, bracket	1
14	17F233	COVER, pump, locking	1
15		KIT, control board *includes 15a, 16*	
	17J867	120V	1
	17J885	230V	1
15a		FUSE (not shown)	
	119276	120V, 12.5A, slow blow	1
	129882	230V, 6.3A, slow blow	1
16	117501	SCREW, plastite	3
17	24Y329	KIT, switch, repair *includes 13*	1
18	115498	SCREW, mach, slot, hex whd	1
19	17G541	PLATE, motor, mount	1
20	17K185	LEG, right *includes 54*	1
21	17K186	LEG, left *includes 55*	1
22	260212	SCREW, hwh, thread forming	8
26	24Z880	TUBE, suction, assembly *includes 26a, 43, 44, 47, 48, 49, 61*	1
26a	17K256	TUBE, suction *includes 49*	1
27	17J033	LABEL, front	1
30	247340	HOSE, cpld, 1/4 in. x 50 ft	1
31	243012	GUN, spray, SG3	1
34	112612	CAP, hub	2
35	17K546	WHEEL *includes 34*	2
36	115480	KNOB, T-handle	2
37	120689	NUT, hex, acorn, 5/16-18	2
38	17J430	HOOK, pail	1
39	16W362	AXLE, cart	1
40	16H350	RACK, hose	1
41	16H353	HANDLE, cart	1
42	120788	SCREW, carriage	2
43	115489	CLAMP, drain tube	1
44	195108	TUBE, drain	1
45	195400	CLIP, spring	1
46	244035	DEFLECTOR, barbed	1
47	288716	STRAINER, inlet	1
48	116295	CLAMP, tube	1
49	115099	WASHER, hose	1
54	15J699	CAP, tube	2
55		CAP, tube	
	16W505	ProX19, right	1
	16W517	ProX19, left	1
56▲		LABEL, warning	
	17J027	English, Spanish, French	1
	17K017	English, Chinese, Korean	1
	17S455	English, Spanish, Portuguese	1
57▲		CARD, medical wallet (not shown)	
	222385	English, Spanish, French	1
	17A134	English, Chinese, Korean	1
	17R476	English, Spanish, Portuguese	1
61	115648	VALVE, power flush (not shown)	1
62	17A000	FLUID, pump armor, 8 oz (not shown)	1
68	195551	RETAINER, plug	1
69		CORDSET	
	242001	EU	1
	242005	Australia	1
	129547	Brazil	1
70	16W318	KIT, filter EMI *includes 70a*	1
70a	115492	SCREW, mach, slot, HWH	2
	17J873	KIT, conversion, lacquer, cart (sold separate)	

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

ProXChange Pump (ProX only)

Ref.	Torque
1	140-160 in-lb (16-18 N•m)
2	30-35 in-lb (3.4-4.0 N•m)
3	30-35 ft-lb (40-48 N•m)
4	220-250 in-lb (25-28 N•m)
5	320-380 in-lb (36-43 N•m)

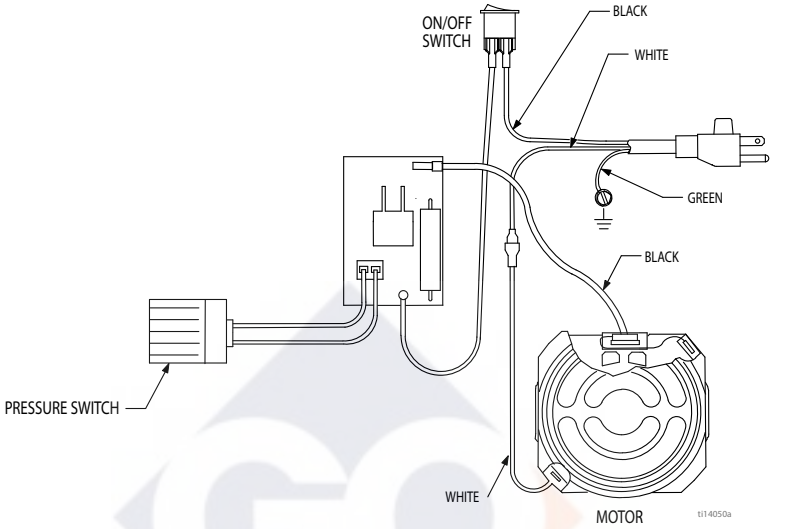


Pump Parts List

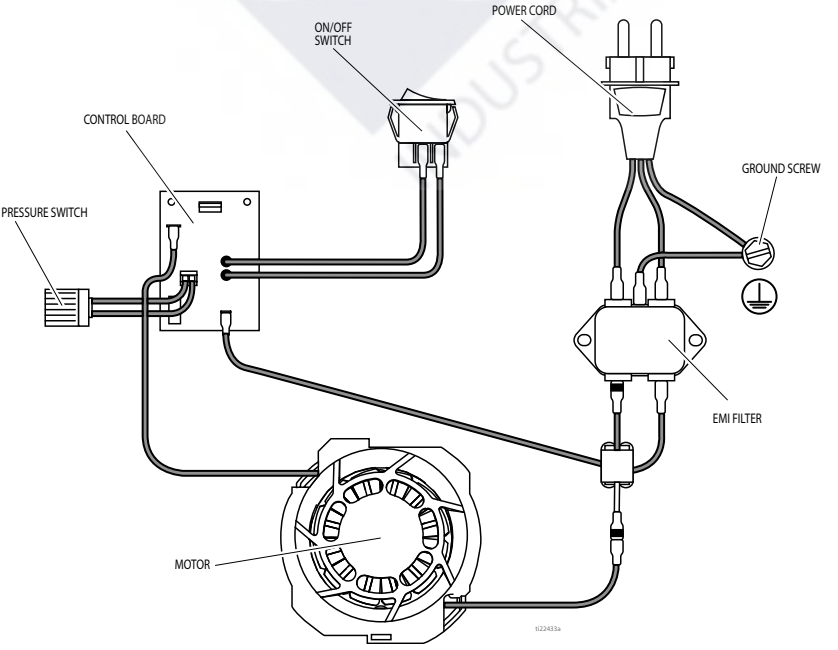
Ref.	Part	Description	Qty.
1	17G447	HOUSING, pump	1
2	17D364	GUIDE, ball	1
3	128336	SPRING, compression	1
4	105445	BALL, 0.5 in.	1
5	117501	SCREW, mach, slot HWH	2
6		KIT, inlet housing	
	17J876	ProX17, ProX19	1
	17J877	ProX21	1
6a	124582	O-ring	1
7	17J878	KIT, PushPrime *includes 7a, 7b*	1
7a	16P303	PACKING, O-ring	1
7b	17G540	LABEL, PushPrime	1
8	235014	VALVE, drain, assy	1
9	224807	BASE, valve	1
10	187625	HANDLE, valve, drain	1
11	111600	PIN, grooved	1
12	288747	KIT, filter	1
13	120776	PACKING, O-ring	1
14	24Y327	KIT, repair outlet *includes 12,13*	1
15	17J880	KIT, outlet valve repair *includes 42*	1
16	128323	SPRING, valve	1
21	16D531	PACKING, O-ring	1
25	24Y472	KIT, repair, piston pump	1
28	17J881	KIT, pressure control *includes 5, 28a, 28b, 28c, 29, 30*	1
28a	15A464	LABEL, control	1
28b	15K530	LABEL, control	1
28C	106555	O-ring	1
29	17F227	BRACKET, electrical connector	1
30	17F229	KIT, shield, wire	1
42	122486	PACKING, O-ring	1

Wiring Diagrams

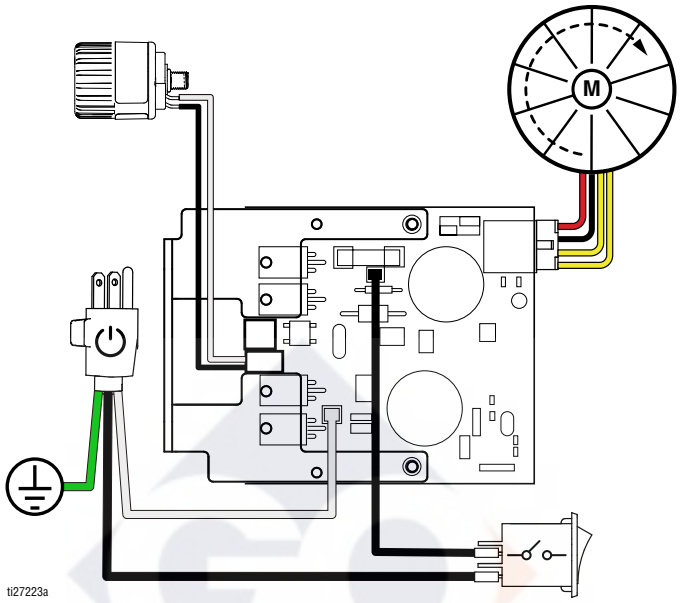
X5/X7 120V:



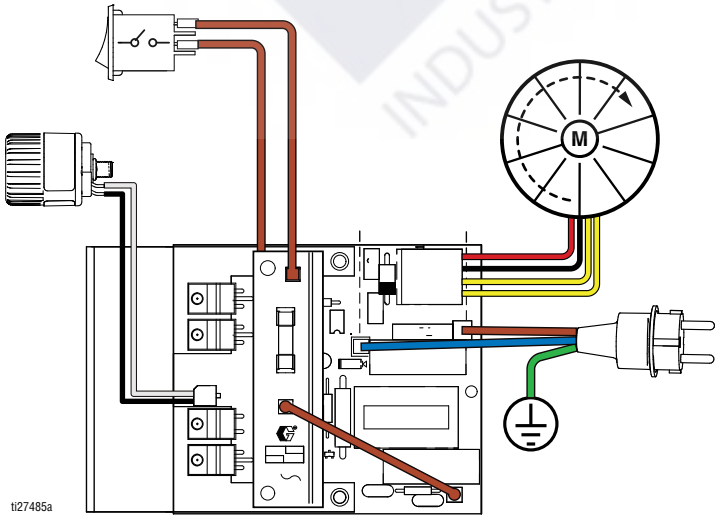
X5/X7 230V:



ProX 110/120V:



ProX 230V:



Technical Specifications

	US	Metric
Sprayer		
Maximum fluid working pressure	3000 psi	207 bar, 20.7 MPa
Maximum Delivery		
X5	0.27 gpm	1.0 lpm
X7	0.31 gpm	1.2 lpm
ProX17	0.34 gpm	1.3 lpm
ProX19	0.38 gpm	1.4 lpm
ProX21	0.47 gpm	1.8 lpm
Maximum Tip Size		
X5	0.015 in.	0.38 mm
X7	0.017 in.	0.43 mm
ProX17	0.017 in.	0.43 mm
ProX19	0.019 in.	0.48 mm
ProX21	0.021 in.	0.53 mm
Fluid Outlet npsm	1/4 in.	1/4 in.
Generator Minimum	2500 W	
Power Requirements		
X5, X7	110–120V, 9 A, 1Ø	
ProX17, ProX19	110–120V, 8 A, 1Ø	
ProX21	110–120V, 12 A, 1Ø	
X5, X7	220–240V, 9 A, 1Ø	
ProX17, ProX19	220–240V, 8 A, 1Ø	
ProX21	220–240V, 12 A, 1Ø	
Dimensions		
Height		
X5	17.9 in.	45.5 cm
X7	37.0 in.	94.0 cm
ProX17 Stand	21.2 in.	53.9 cm
ProX17 Cart	37.0 in.	94.0 cm
ProX19 Cart	36.7 in.	93.0 cm
ProX21 Cart	38.5 in.	97.8 cm
Length		
X5	14.5 in.	36.8 cm
X7	19.3 in,	49.0 cm
ProX17 Stand	15.1 in.	38.4 cm
ProX17 Cart	19.6 in.	49.8 cm
ProX19 Cart	20.2 in.	51.3 cm
ProX21 Cart	20.8 in.	52.8 cm

	US	Metric
Width		
X5	12.4 in.	31.5 cm
X7	15.3 in.	38.9 cm
ProX17 Stand	13.2 in.	33.5 cm
ProX17 Cart	15.2 in.	38.6 cm
ProX19 Cart	17.2 in.	43.7 cm
ProX21 Cart	20.6 in.	52.3 cm
Weight		
X5	16.5 lb.	7.5 kg
X7	26.5 lb.	12.0 kg
ProX17 Stand	27.3 lb.	12.4 kg
ProX17 Cart	37.5 lb.	17.0 kg
ProX19 Cart	41.2 lb.	18.7 kg
ProX21 Cart	49.5 lb.	22.5 kg
Storage temperature range ◆❖	–30° to 160°F	–35° to 71°C
Operating temperature range ✓	40° to 115°F	4° to 46°C
Materials of Construction		
Wetted materials on all models	stainless steel, brass, leather, ultra-high molecular weight polyethylene (UHMWPE), carbide, nylon, aluminum, PVC, polypropylene, fluoroelastomer, plated steel	
Notes		
** Startup pressures and displacement per cycle may vary based on suction condition, discharge head, air pressure, and fluid type.*		

◆ **When pump is stored with non-freezing fluid. Pump damage will occur if water or latex paint freezes in pump.**

❖ Damage to plastic parts may result if impact occurs in low temperature conditions.

✓ Changes in paint viscosity at very low or very high temperatures can affect sprayer performance.

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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