



OPERATING INSTRUCTION

AIRLESS PAINT SPRAYER · GROG F4L

3300 psi (22.7 MPa, 227 bar) · MAXIMUM WORKING PRESSURE
Electric · 100–120V (11A) | 230V (7.5A)



GROG F4L AIRLESS SPRAYING MACHINE

Electric airless sprayer for architectural coatings and paints.

3300 psi (22.7 MPa, 227 bar) Maximum Working Pressure. **Important safety instructions** — read all warnings and instructions in this manual. Save these instructions.

The GROG F4L is a portable, high-pressure electric airless sprayer built for professional application of primers, latex, enamels and architectural coatings. It features a SmartControl™ digital display with pressure control, job/lifetime volume tracking and diagnostics.

Specification	GROG F4L
Maximum working pressure	3300 psi (22.7 MPa, 227 bar)
Power supply	100–120 VAC, 50/60 Hz, 11 A, 1 phase / 230 VAC, 50/60 Hz, 7.5 A, 1 phase
Drive	Electric motor with SmartControl™ pressure control
Application	Architectural coatings and paints
Included accessories	Spray gun, SwitchTip & guard, airless hose, suction/drain set, manual

MANUAL CONVENTIONS

	WARNING A potentially hazardous situation which, if not avoided, could result in death or serious injury. Warnings in the instructions include a symbol indicating the hazard. Refer to the general Warnings section for a description of each hazard.
	CAUTION A potentially hazardous situation which, if not avoided, may result in property damage or destruction of equipment.
	NOTE Additional helpful information.

The following are general warnings related to the setup, use, grounding, maintenance and repair of this equipment. Additional, more specific warnings may be found throughout the body of this manual where applicable.

WARNING

FIRE AND EXPLOSION HAZARD

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

- Use equipment only in a well-ventilated area.
- Eliminate all ignition sources, such as pilot lights, cigarettes, portable electric lamps and plastic drop cloths (potential static arc).
- When flammable liquid is used in or near the sprayer or for flushing or cleaning, keep the sprayer at least 20 feet (6 m) away from explosive vapors.
- Keep the work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or lights on or off, when flammable fumes are present.
- Ground equipment and conductive objects in the work area. Use only conductive hoses.
- Hold the gun firmly to the side of a grounded pail when triggering into the pail.
- If there is static sparking or you feel a shock, **stop operation immediately**. Do not use the equipment until you identify and correct the problem.
- Keep a fire extinguisher in the work area.

SKIN INJECTION HAZARD

High-pressure fluid from the gun, hose leaks or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. **Get immediate surgical attention.**

- Do not point the gun at anyone or at any part of the body.
- Do not put your hand over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove or rag.
- Do not spray without the tip guard and trigger guard installed.
- Engage the trigger lock when not spraying.
- Follow the **Pressure Relief Procedure** when you stop spraying and before cleaning, checking or servicing equipment.

ELECTRIC SHOCK HAZARD

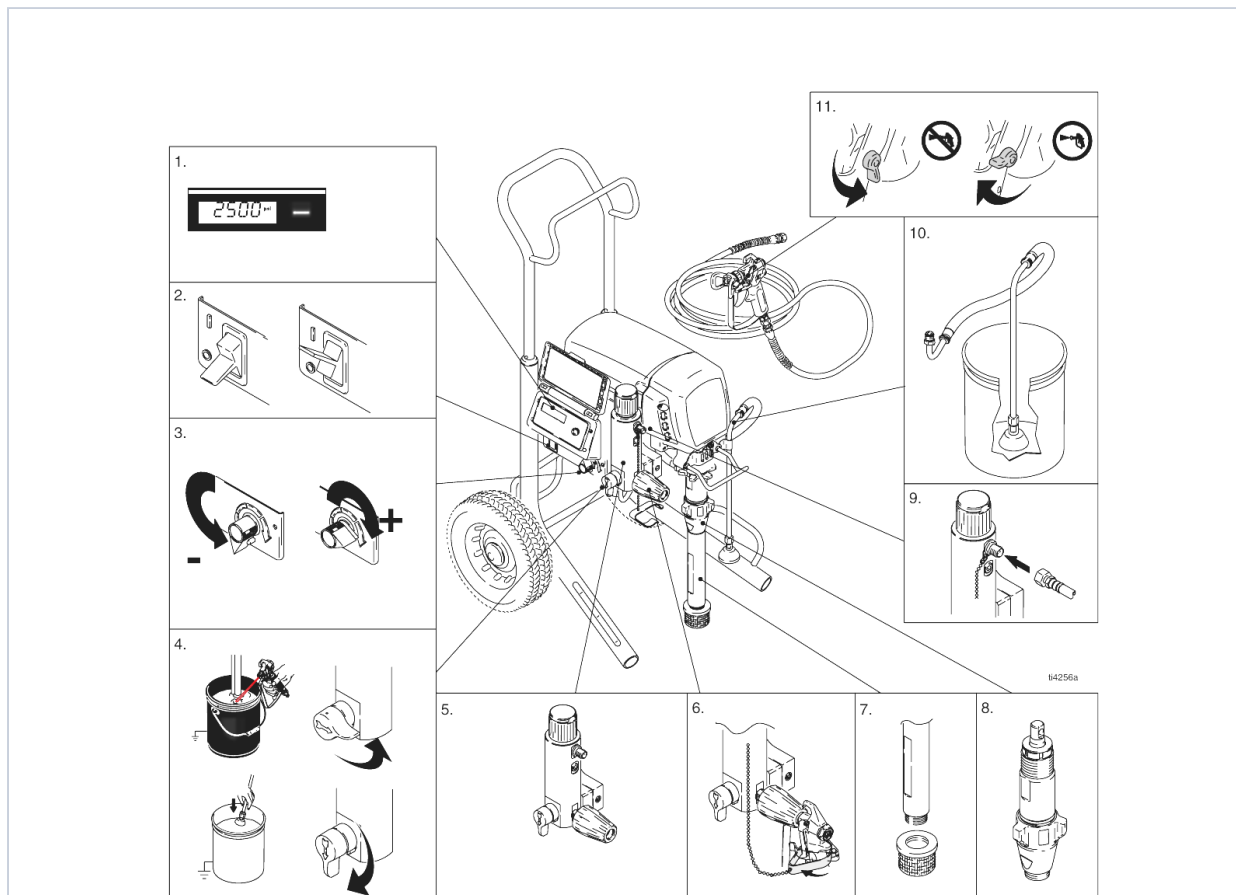
Improper grounding, setup or usage of the system can cause electric shock.

- Turn off and disconnect the power cord before servicing equipment.
- Use only grounded electrical outlets.
- Use only 3-wire extension cords.
- Ensure ground prongs are intact on the sprayer and extension cords.
- Do not expose to rain. Store indoors.

⚠ WARNING

	PRESSURIZED ALUMINUM PARTS HAZARD Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use can cause a serious chemical reaction and equipment rupture, and result in death, serious injury and property damage.
	EQUIPMENT MISUSE HAZARD Misuse can cause death or serious injury. • Do not exceed the maximum working pressure or temperature rating of the lowest-rated system component. Read the Technical Data in all equipment manuals. • Use fluids and solvents that are compatible with the equipment wetted parts. Read the fluid and solvent manufacturer's warnings. For complete information about your material, request the MSDS from the distributor or retailer. • Check equipment daily. Repair or replace worn or damaged parts immediately with genuine GROG replacement parts only. • Do not alter or modify equipment. Use equipment only for its intended purpose — call your GROG 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 the work area. Comply with all applicable safety regulations. • Do not operate the unit when fatigued or under the influence of drugs or alcohol.
	PERSONAL PROTECTIVE EQUIPMENT You must wear appropriate protective equipment when operating, servicing or when in the operating area of the equipment, to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns and hearing loss. This equipment includes but is not limited to: protective eyewear; clothing and respirator as recommended by the fluid and solvent manufacturer; gloves; and hearing protection.

GROG F4L COMPONENT IDENTIFICATION



GROG F4L sprayer – component locations (numbers correspond to the table below).

#	Component	Function
1	Display	SmartControl™ digital display — pressure, job/lifetime volume and diagnostics.
2	ON/OFF switch	Turns sprayer power on and off.
3	Pressure control	Adjusts fluid pressure for different applications.
4	Prime / Spray valve	Directs fluid to the drain tube (prime) or to the hose (spray).
5	Filter	Manifold fluid filter reduces tip clogs.
6	AutoClean	Assisted flush / clean function.
7	Siphon tube	Draws fluid from the material pail.
8	Pump	Displacement pump (piston rod & V-packings inside).
9	Fluid outlet	Connection point for the airless hose.
10	Drain tube	Drains fluid during priming and pressure relief.
11	Trigger lock	Locks the gun trigger to prevent accidental spraying.

GROUNDING

The sprayer must be grounded. Grounding reduces the risk of static and electric shock by providing an escape wire for the electrical current due to static build-up or in the event of a short circuit. The sprayer cord includes a grounding wire with an appropriate grounding contact.

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! If it will not fit in the outlet, have a grounded outlet installed by a qualified electrician. Do not use an adapter.

POWER REQUIREMENTS

Unit	Requirement
100–120V units	100–120 VAC, 50/60 Hz, 11 A, 1 phase
230V units	230 VAC, 50/60 Hz, 7.5 A, 1 phase
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 mm ²) minimum.

GROUNDING THE PAILS

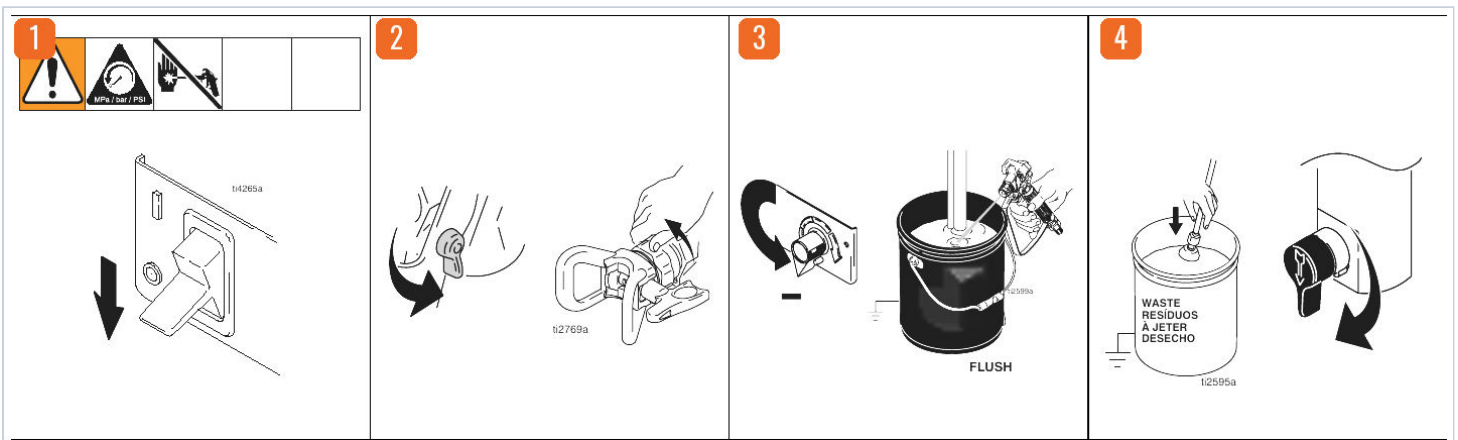
Solvent and oil-based fluids: follow local code. Use only conductive metal pails, placed on a grounded surface such as concrete. Do not place the pail on a nonconductive surface such as paper or cardboard, which interrupts grounding continuity.

Grounding a metal pail: connect a ground wire to the pail by clamping one end to the pail and the other end to a true earth ground such as a water pipe. **To maintain grounding continuity when flushing or relieving pressure:** hold a metal part of the spray gun firmly to the side of a grounded metal pail, then trigger the gun.

PRESSURE RELIEF PROCEDURE

1. Turn power **OFF**. Wait 7 seconds for power to dissipate.
2. Lock the gun trigger safety. Remove the guard and SwitchTip.
3. Turn pressure to the lowest setting. Trigger the gun to relieve pressure.
4. Put the drain tube in a pail. Turn the prime valve down.

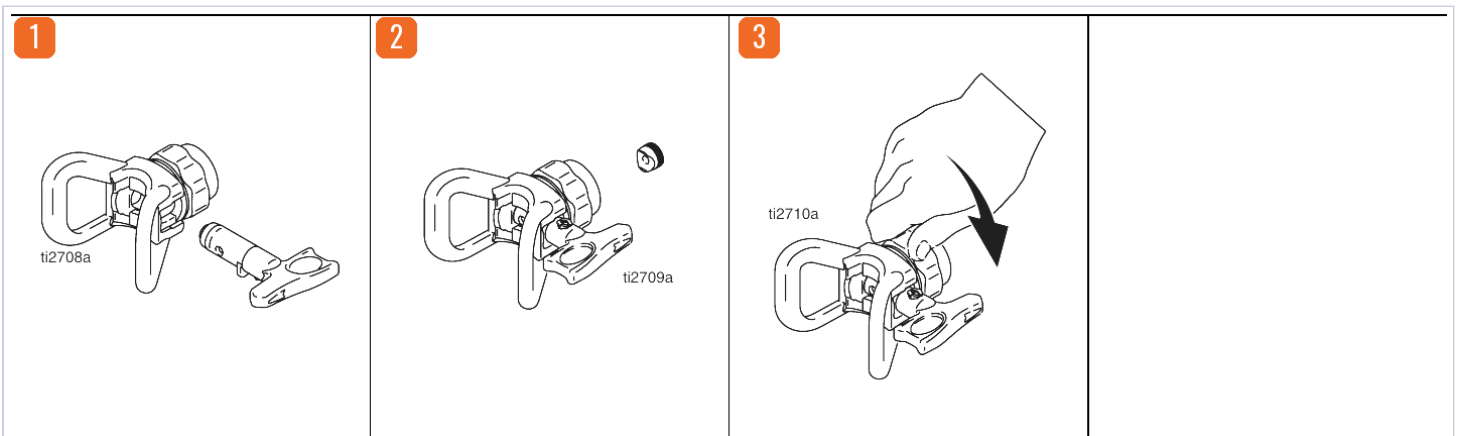
Follow the Pressure Relief Procedure whenever you stop spraying and before cleaning, checking, moving or servicing the equipment. If the tip or hose is clogged, or pressure is not fully relieved, **VERY SLOWLY** loosen the tip guard retaining nut or hose end coupling to relieve pressure gradually, then clear the obstruction.



Pressure Relief Procedure – steps 1–4.

SWITCHTIP & GUARD ASSEMBLY

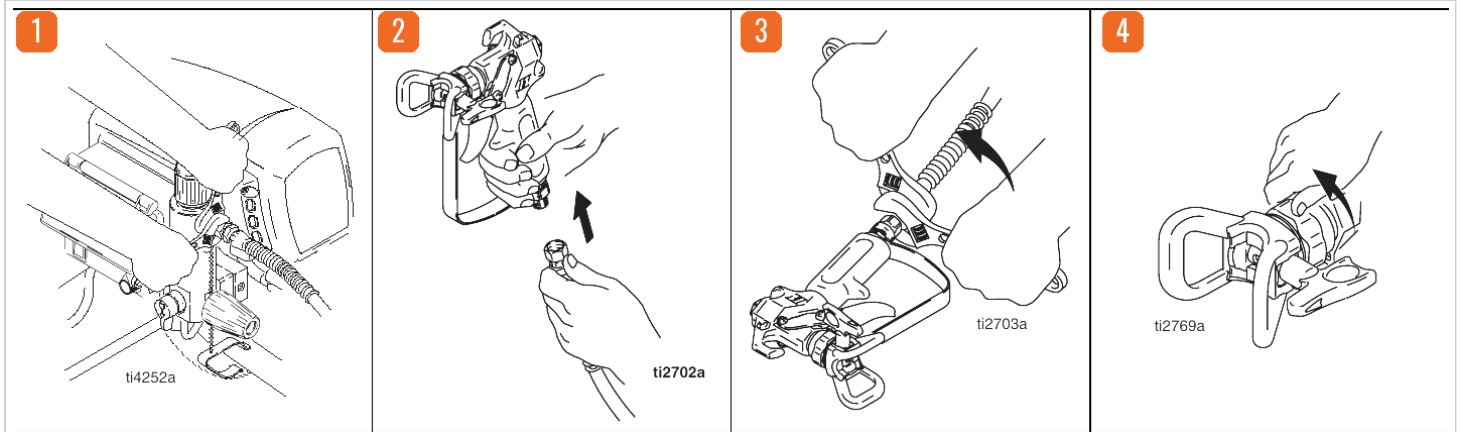
1. Insert the SwitchTip.
2. Insert the metal seal and OneSeal.
3. Screw the assembly onto the gun. Tighten.



SwitchTip & guard assembly – steps 1–3.

GROG F4L SETUP (1)

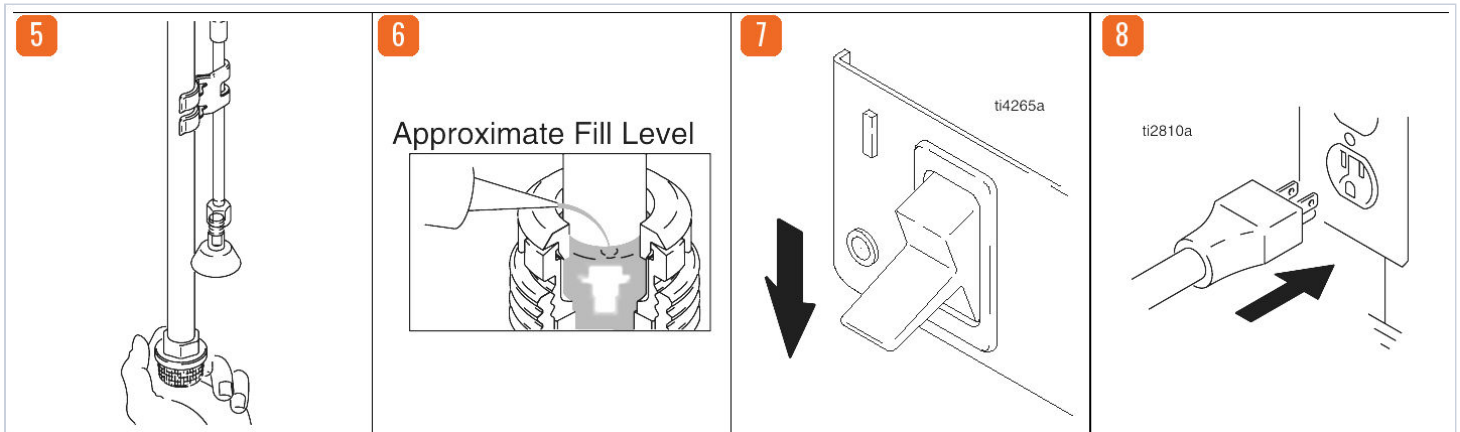
1. Connect the approved airless hose to the sprayer. Tighten securely.
2. Connect the other end of the hose to the gun.
3. Tighten securely.
4. Remove the tip guard.



Setup steps 1-4 – connect hose and gun, remove tip guard.

GROG F4L SETUP (2)

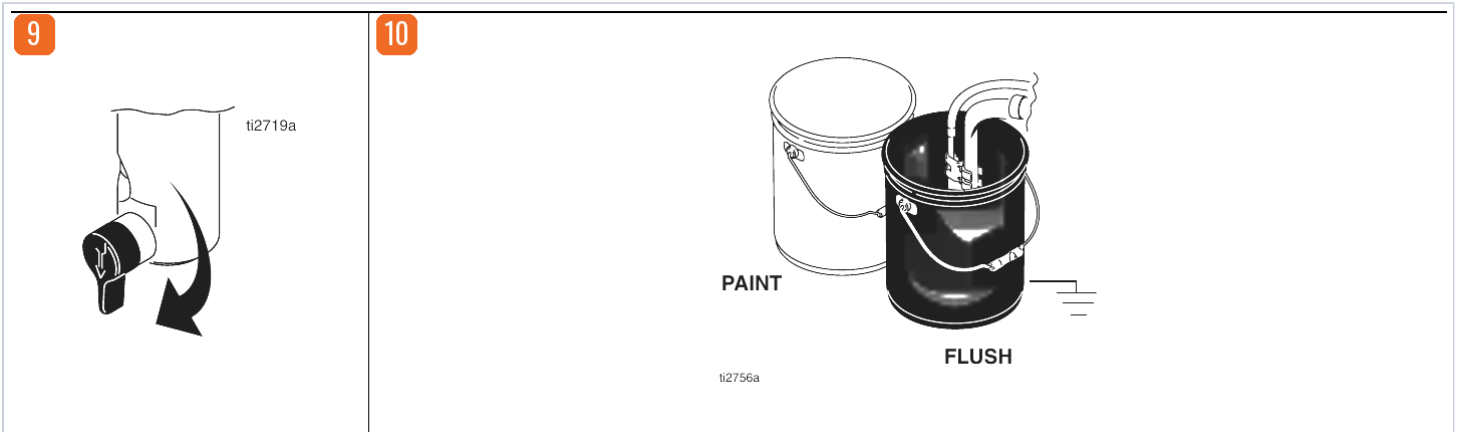
5. Check the inlet strainer for clogs and debris.
6. Fill the throat packing nut with TSL to prevent premature packing wear.
7. Turn power **OFF**.
8. Plug the power cord into a properly grounded electrical outlet.



Setup steps 5-8 – inlet strainer, throat packing (TSL), power off, plug in.

GROG F4L SETUP (3)

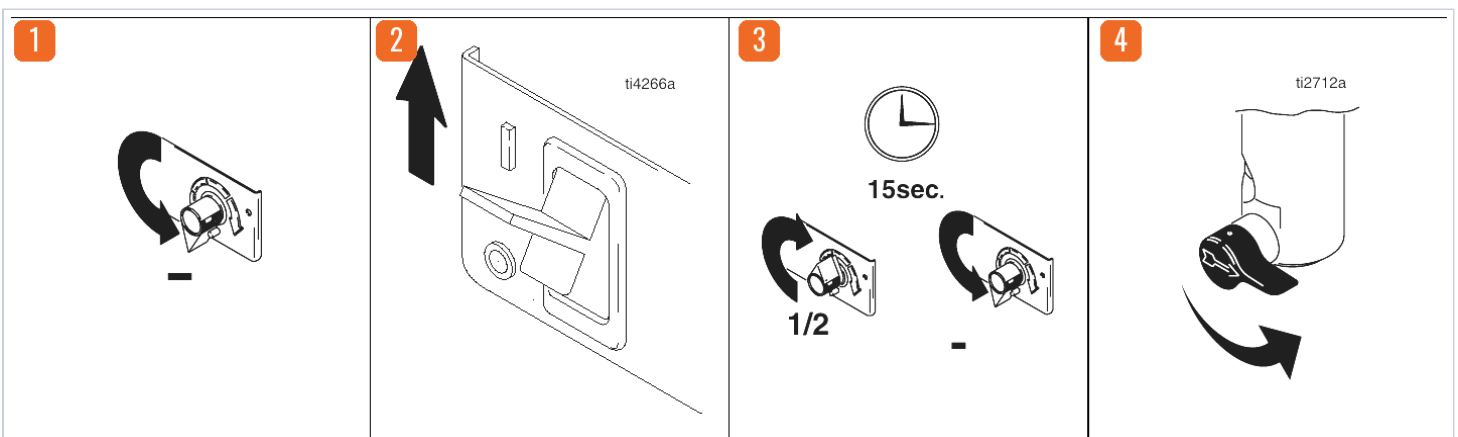
9. Turn the prime valve down.
10. Place the siphon tube set in a grounded metal pail partially filled with flushing fluid; attach the ground wire to the pail and to a true earth ground. Do steps 1–5 of **Startup** to flush out the storage oil (water for water-base paint, mineral spirits for oil-base).



Setup steps 9–10 – prime valve down, siphon tube in grounded flushing pail.

GROG F4L STARTUP (1)

1. Turn the pressure control to the lowest pressure.
2. Turn power **ON**.
3. Increase pressure 1/2 to start the motor; circulate fluid through the drain tube for 15 seconds, then turn the pressure down.
4. Turn the prime valve horizontal. Take the spray gun trigger safety OFF.



Startup steps 1–4 – lowest pressure, power on, circulate 15 s, prime valve horizontal.

GROG F4L STARTUP (2) — FLUSH & PRIME PAINT

5. Hold the gun against a grounded metal flushing pail. Trigger the gun and increase fluid pressure to 1/2. Flush for 1 minute.
6. Place the siphon tube in the paint pail.
7. Trigger the gun into the flushing pail until paint appears. Move the gun to the paint pail and trigger for 20 seconds. Set the gun safety ON, then assemble the tip and guard.

Inspect for leaks. Do not stop leaks with your hand or a rag! If leaks occur, do the **Pressure Relief Procedure**, tighten the fittings and repeat Startup steps 1–5. If no leaks, proceed to step 6.



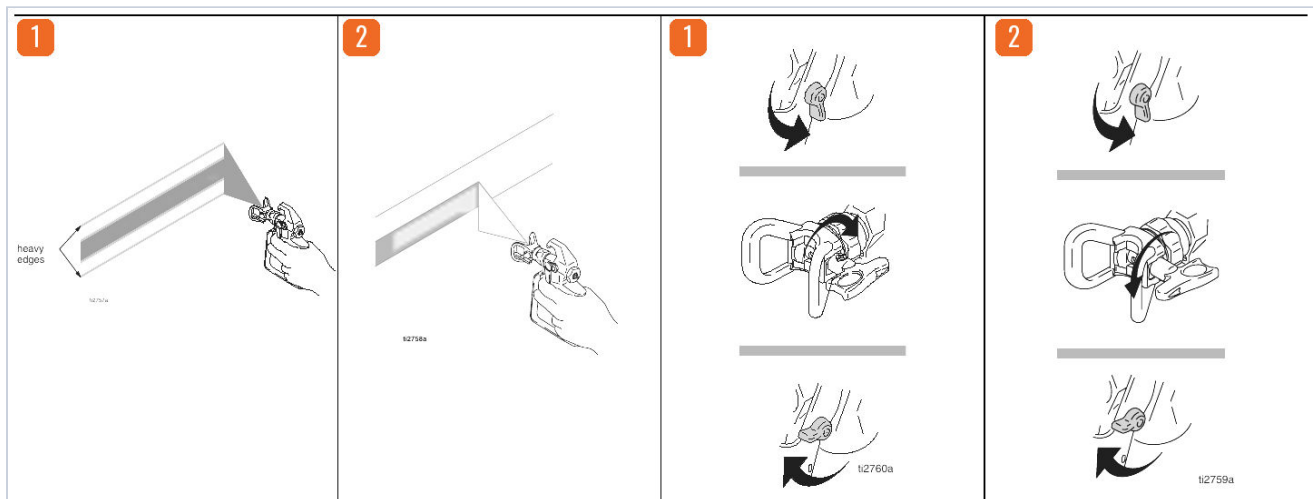
Startup steps 5–7 – flush, check for leaks, prime paint, switch to paint pail.

SPRAYING TECHNIQUE

1. Spray a test pattern. Adjust pressure to eliminate heavy edges. Use a smaller tip size if a pressure adjustment cannot eliminate heavy edges.
2. Hold the gun perpendicular, 10–12 in. (25–30 cm) from the surface. Spray back and forth, overlapping each stroke by 50%. Trigger the gun after starting the stroke and release the trigger before stopping.

CLEARING TIP CLOGS

1. Release the trigger and put the trigger safety ON. Rotate the SwitchTip. Take the trigger safety OFF and trigger the gun to clear the clog. **Never point the gun at your hand or into a rag!**
2. Put the trigger safety ON. Return the SwitchTip to its original position, take the trigger safety OFF and continue spraying.



Spraying technique (1–2, left) and Clearing Tip Clogs (1–2, right).

SMARTCONTROL™ — OPERATION MAIN MENU

Short-press the DTS button to move to the next display. Press and hold (5 seconds) to change units or reset data.

1. Turn pressure to the lowest setting. Trigger the gun to relieve pressure. Turn the prime valve down.
2. Turn power **ON**. The pressure display appears. Dashes appear when pressure is less than 200 psi (14 bar, 1.4 MPa).
3. Short-press the DTS button to move to Job Gallons (or Liters × 10). **JOB** displays briefly, then the number of gallons sprayed above 1000 psi (70 bar, 7 MPa).
4. Press and hold to reset to zero, or short-press to move to Lifetime Gallons. **LIFE** displays briefly, then the number of gallons sprayed above 1000 psi.
5. Short-press to move to AutoClean Timer operation. **Note:** if the pump is started in timer mode, the timer counts down to zero and shuts the pump OFF — use for flushing only.
6. Short-press to return to Pressure.

W-DOG PROTECTION SYSTEM

7. When **W-DOG** is **ON**, the pump stops and **EMPTY** displays when the paint pail is empty. Turn the pressure control to the lowest position to restart, then refill or reprime the sprayer.

SMARTCONTROL™ — SECONDARY MENU

1. Do **Pressure Relief** steps 1–4 if they have not already been done.
2. Press the DTS button and turn the power switch ON.
3. The model (e.g. **GROG F4L**) and **MOTOR ON** scroll past, then the total motor run hours are displayed.
4. Short-press the DTS button. **LAST ERROR CODE** scrolls by and the last error code is displayed, e.g. **E=07**.
5. Press and hold the DTS button to clear the error code to zero (**E=00**).
6. Short-press the DTS button. **W-DOG** scrolls past and **OFF** is displayed (the default). To turn the W-DOG feature ON, go to step 7.
7. Press and hold the DTS button to turn the W-DOG feature ON, or short-press to move to **SOFTWARE REV.**

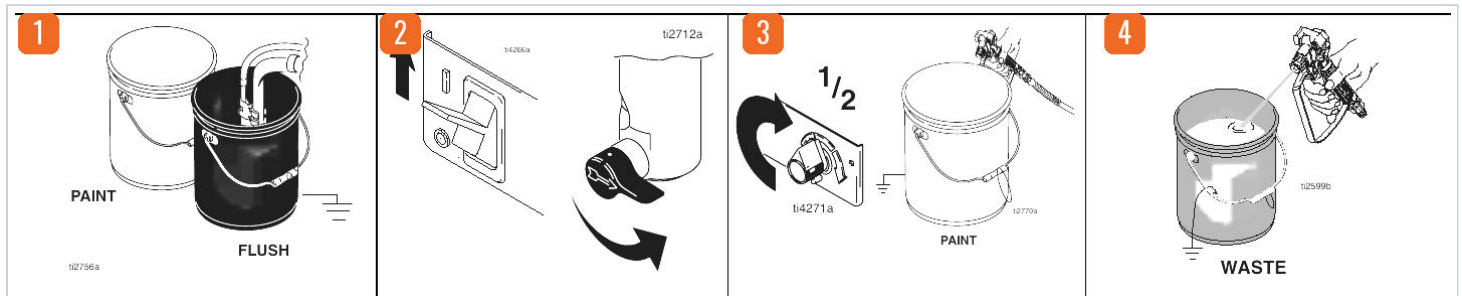
CHANGE DISPLAY UNITS

Press and hold the DTS button for 8 seconds to change pressure units (**psi, bar, MPa**) to the desired units. Selection of bar or MPa changes volume to **liters × 10**. Release the button to select the units.

Display	Meaning
JOB / LIFE	Job / lifetime gallons (or Liters×10) sprayed above 1000 psi.
MOTOR ON	Total motor run hours.
E=00 / E=07	No stored error / stored error code.
W-DOG / EMPTY	Empty-pail protection active / empty pail detected.

GROG F4L CLEANUP (1)

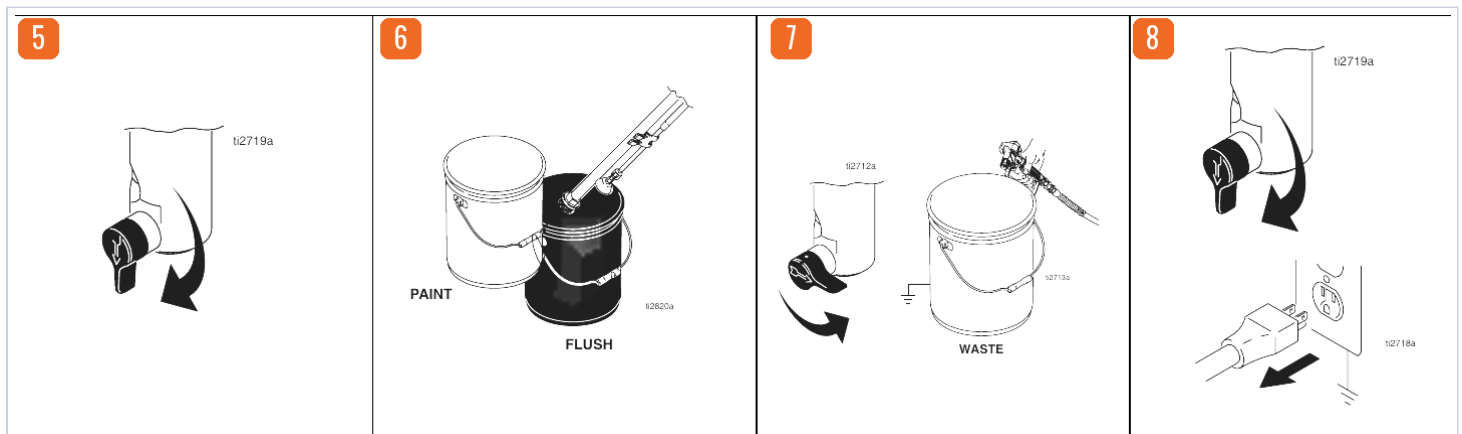
1. Do **Pressure Relief** steps 1–4. Remove the siphon tube set from the paint and place it in flushing fluid.
2. Turn power **ON**. Turn the prime valve horizontal.
3. Increase pressure to 1/2. Hold the gun against the paint pail, take the safety OFF and trigger until flushing fluid appears.
4. Move the gun to the waste pail and trigger to thoroughly flush the system. Release the trigger and put the safety ON.



Cleanup steps 1–4 – flush from paint into the waste pail.

GROG F4L CLEANUP (2)

5. Turn the prime valve down and circulate flushing fluid for 15 seconds to clean the drain tube.
6. Raise the siphon tube above the flushing fluid and run the sprayer for 15–30 seconds to drain fluid.
7. Close the drain valve. Trigger the gun into the flushing pail to purge the hose. Turn power **OFF**.
8. Open the prime valve. Unplug the sprayer.

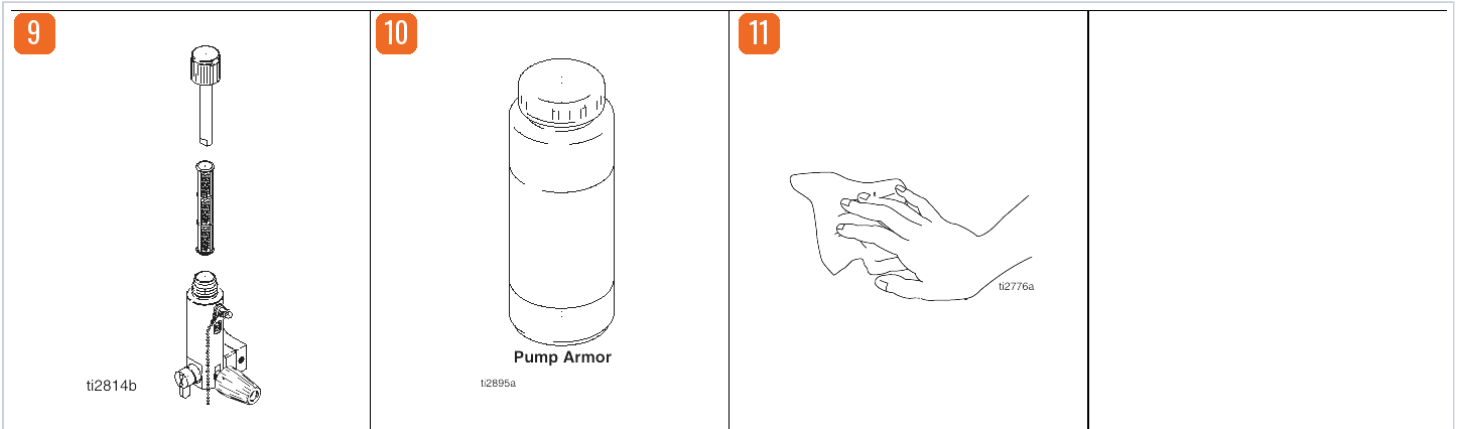


Cleanup steps 5–8 – clean drain tube, drain, purge hose, power off.

GROG F4L CLEANUP (3) — FILTERS & STORAGE

9. Remove the filters from the gun and sprayer, if installed. Clean, inspect and reinstall them.
10. If flushing with water, flush again with mineral spirits or Pump Armor to leave a protective coating that helps prevent freezing or corrosion.
11. Wipe the sprayer, hose and gun with a rag soaked in water or mineral spirits.

Caution — Pump Armor: If flushing with water, do not leave water in the sprayer. Flush with mineral spirits, oil or Pump Armor and leave this protective coating in the sprayer to help prevent freezing or corrosion and increase sprayer life.



Cleanup steps 9–11 — clean filters, Pump Armor protection, wipe down.

GROG STANDARD WARRANTY

GROG warrants all equipment referenced in this document which is manufactured by GROG and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. For a period of twelve (12) months from the date of sale, GROG will repair or replace any part of the equipment determined by GROG to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with GROG's written recommendations.

This warranty does not cover, and GROG 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-GROG component parts. Nor shall GROG be liable for malfunction, damage or wear caused by the incompatibility of GROG equipment with structures, accessories, equipment or materials not supplied by GROG.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized GROG distributor for verification of the claimed defect. If the claimed defect is verified, GROG will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

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

ADDITIONAL WARRANTY COVERAGE

- **Lifetime motor warranty** — if the motor fails from normal use, GROG will replace the motor for the original purchaser for the life of the sprayer.
- **Lifetime drive train warranty** — if the drive train fails from normal use, GROG will replace the drive train for the original purchaser for the life of the sprayer.