

Drywall Feed Pump

3A0245A

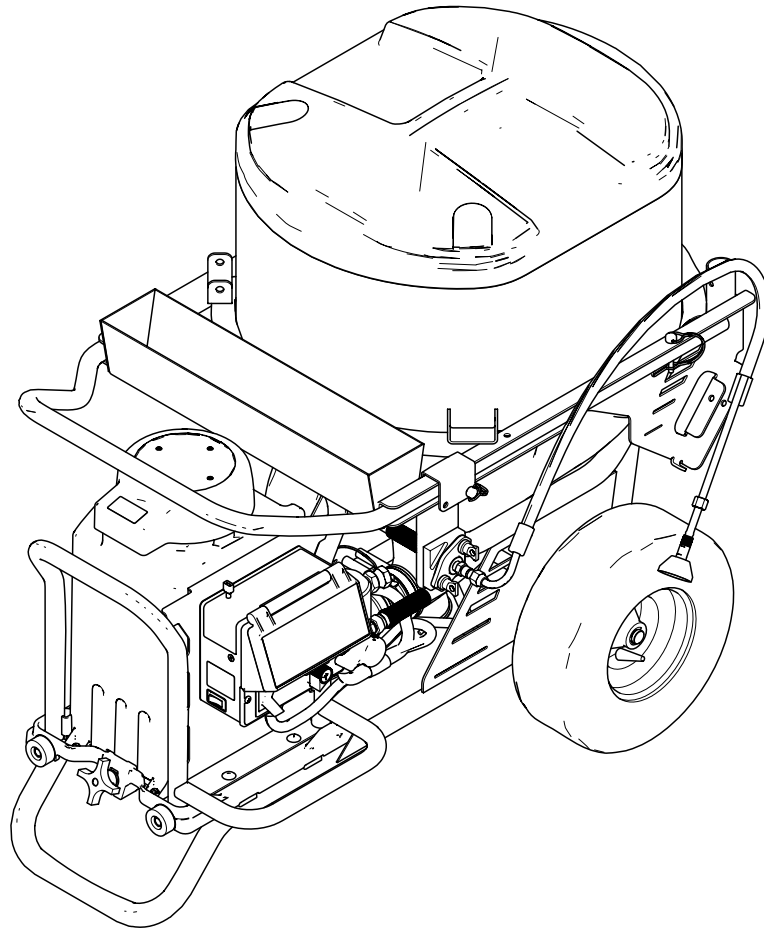
- For Water-Based Materials Only -



Read all warnings and instructions

Maximum Working Pressure 2500 psi (17.2 MPa, 172 bar)






Model: 257100



ti14873a

Warning

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 symbol refers to procedure-specific risk. Refer back to these warnings. Additional, product-specific warnings may be found throughout the body of this manual where applicable.

 WARNING	
	<p>FIRE AND EXPLOSION HAZARD</p> <p>Flammable fumes, such as solvent, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Keep work area free of debris, including solvent, rags and gasoline. • Ground equipment in the work area. See Grounding instructions. • If there is static sparking or you feel a shock, stop spraying immediately. Do not use equipment until you identify and correct the problem.
	<p>EQUIPMENT MISUSE HAZARD</p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> • Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See Technical Data in all equipment manuals. • Use water-based materials. Use fluids and solvents that are compatible with equipment wetted parts. See Technical Data in all equipment manuals. Read fluid and solvent manufacturer's warnings. • Check equipment daily. Repair or replace worn or damaged parts immediately. • Do not alter or modify equipment. • Use equipment only for its intended purpose. Call your Graco distributor for information. • Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces. • Do not use hoses to pull equipment. • Keep children and animals away from work area. • Comply with all applicable safety regulations.
	<p>PRESSURIZED EQUIPMENT HAZARD</p> <p>Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> • Follow Pressure Relief Procedure in this manual, when you stop spraying and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.
	<p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:</p> <ul style="list-style-type: none"> • Protective eye wear • Clothing and respirator as recommended by the fluid and solvent manufacturer • Gloves • Hearing protection

 **WARNING**

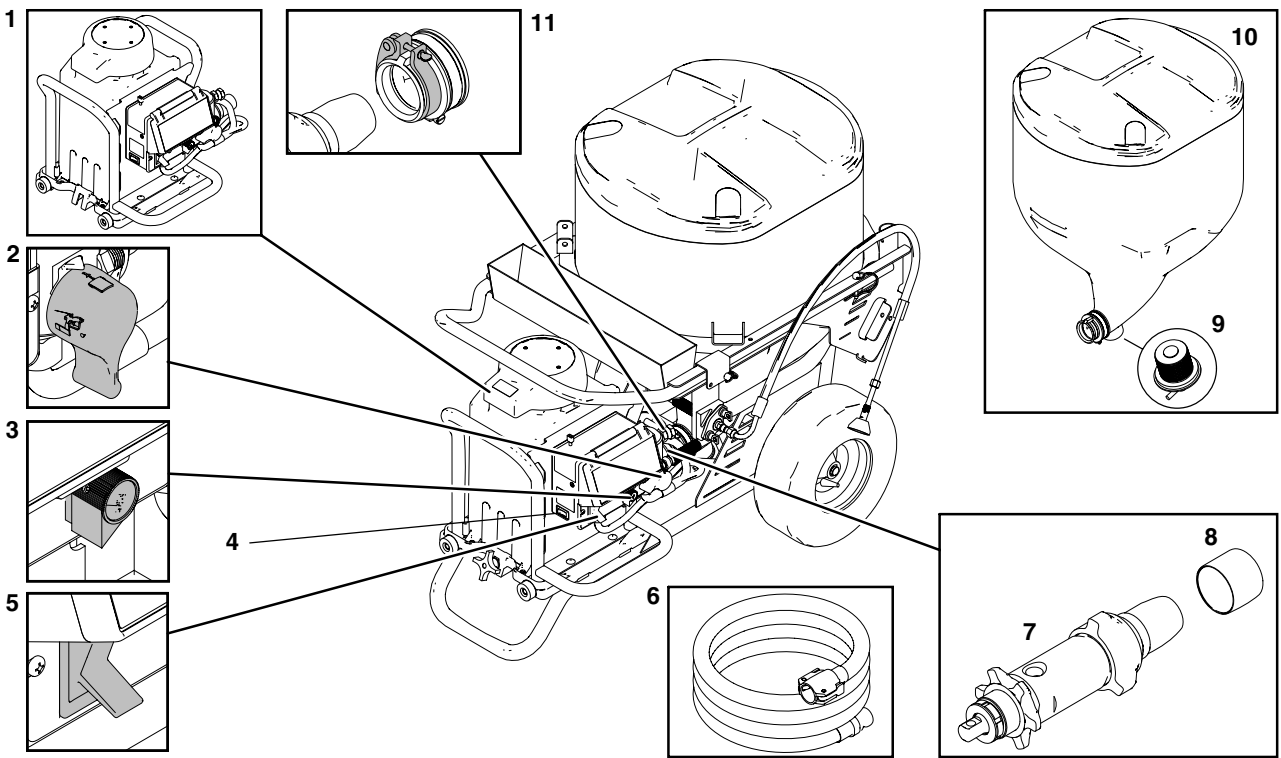


MOVING PARTS HAZARD

Moving parts can pinch 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** in this manual. Disconnect power or air supply.

Component Identification

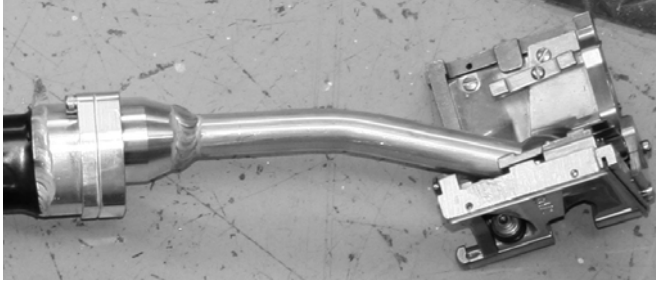


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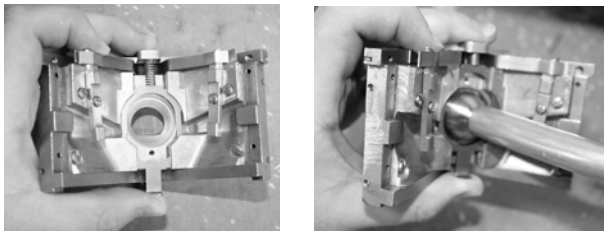
1	Pump Module
2	Prime/Tool Fill/Recirculation Valve
3	Flow Knob
4	15/20 Amp Switch
5	ON/OFF Switch
6	Material Hoses
7	Pump
8	Pump Inlet Cover
9	Hopper Plug
10	Hopper
11	Pump Connector

Finishing Tools

Corner Finisher

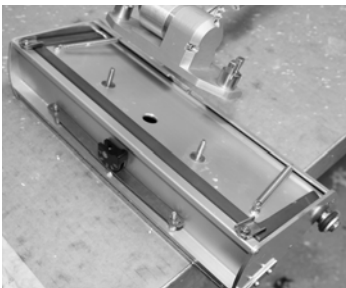


1. Press pin on top of corner finisher and install onto valve.



2. Work from bottom to top of vertical angles and from one end to other on ceiling angles.
3. Use drywall knife to detail corner and ceiling angle intersections.

Flat Finishing Box

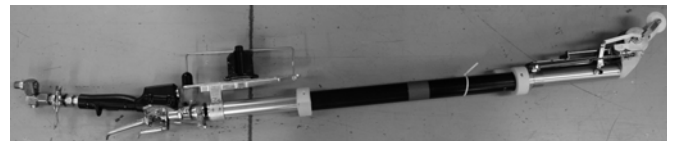


1. Install valve over two screws on box and tighten two wing nuts.



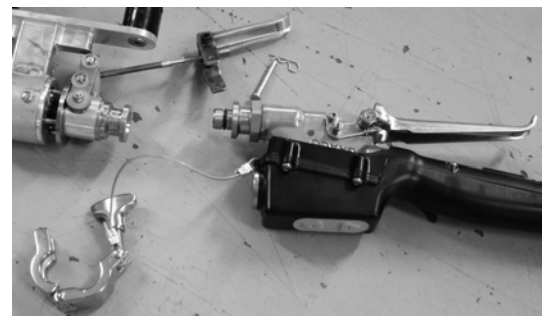
2. Place flat box at end of joint.
3. Lead with handle and draw the tool along the joint.
4. Near middle of the joint, remove flat box from joint surface with a sweeping motion.
5. Reverse hand positions and begin again at other end of joint.
6. Again draw flat box along joint up to previous stopping point and remove box from joint surface with a sweeping motion.
7. Use drywall knife to detail seams and overlap.

Automatic Taping Tool



NOTE: Fine flow rate adjustments can be made using buttons on valve handle.

1. Install trigger assembly and sanitary clamp.



2. Insert pin into trigger assembly.



Pressure Relief Procedure

3. Insert cotter pin.

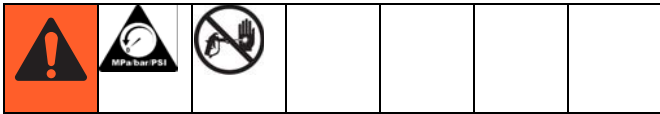


4. Place one hand on control tube and one hand at bottom of mud tub while in use.
5. Place tape at bottom of joint (slide tube forward to feed tape).

6. Lead with head of taper to make tracking easier. Large trigger feeds material through tool. Small trigger retracts creasing wheel.
7. Roll tape over seam with only one wheel in contact with wall until approximately three inches from end of seam.
8. Stop completely and pull tube back to cut tape.
9. Use drywall knife to detail seams and overlap.

NOTE: Clean all tools thoroughly after every use. Use a brush and water to remove all joint compound from tools. Once tools have been cleaned, lightly oil using any light machine oil.




Pressure Relief Procedure





1. Turn flow control knob OFF.

2. Point applicator into hopper and trigger to relieve pressure.
3. Fluid from pressure relief valve can splash in eyes or skin and cause serious injury. Keep hands clear of pressure relief valve. Wear safety glasses.

Operation

						
GROUNDING INSTRUCTIONS						
<p>This appliance is rated more than 15 A and is for use on a circuit having a nominal rating of 120 V and is factory equipped with a specific electric cord and plug. No adapter should be used with this appliance. If the appliance must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after the reconnection, the appliance should comply with all local codes and ordinances.</p> <p>Consult a qualified electrician if there is any doubt as to whether an outlet box is properly grounded.</p>						

						
<p>Do NOT tamper with relief valve or devices that control maximum pressure control during normal operation. Bodily injury and/or damaged to equipment can occur.</p>						

FCC Notice (FCC ID: JHICED1)

Model Number: DFS150

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference that may be received, including interference that may cause undesired operation.

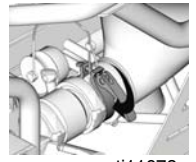
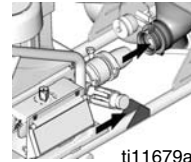
Changes or modifications not expressly approved by Graco, Inc. could void the user's authority to operate this equipment.

IC Notice (IC: 4840ACED1)

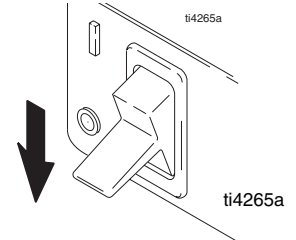
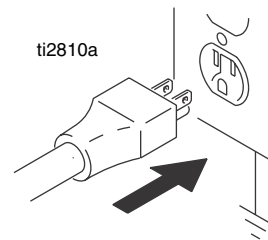
This product meets the applicable Industry Canada technical specifications/Le présent matériel est conforme aux spécifications techniques applicables d'Industrie Canada.

Setup

1. Connect pump module to hopper and cart. Tighten knob on front of pump module and clamp other end to hopper.



2. Connect power cord. Turn ON/OFF to OFF.



3. Connect material hose to outlet.
NOTE: Up to 150 ft of 1/2 in. hose plus 15 ft. x 1/4 in. can be connected to the unit. If desired flow rate is not obtainable, reduce hose length or add additional water to mud mixture.
4. Select 15A/20A setting based on your circuit rating.
5. Connect Z swivel.
6. Connect selected finishing tool to Z swivel using supplied sanitary clamps.

“Learn” the Valve

This unit performs differently depending on which valve is being used. Each time you change valves, perform the following steps so the unit can “Learn” the valve.

1. Turn flow control knob down (but not OFF).
2. Push digital display button 3 times until LEARN appears on display screen.
3. Pull trigger on valve.
4. OK should then appear on display screen (if not, see **Troubleshooting**).

Startup

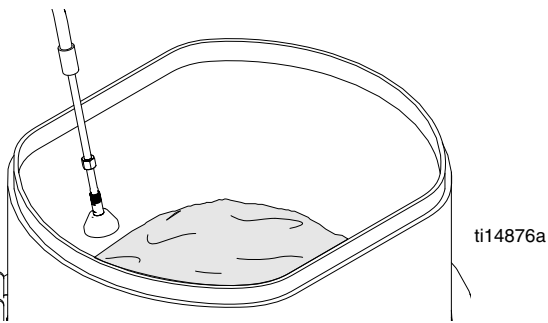
Pump Material

NOTICE
Do not use with quick-set materials. They can harden inside the unit and hose.

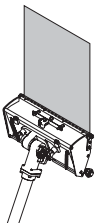
1. Mix material in separate bucket. Gradually add water and mix until desired consistency is achieved.
2. Add mixed material to hopper.



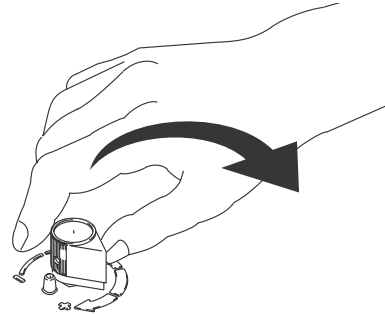
3. Place deflector into hopper to recirculated material.
NOTE: Keep deflector shield wet once it is in use.
4. Turn sprayer power ON and flip prime valve fully clockwise to prime pump. Place material hose and drain line in hopper.



5. After unit is primed, place prime valve in APPLY FINISH position.



6. Turn flow knob clockwise to increase material flow.



7. Place head of tool over waster bucket and trigger valve until material flows from tool head. Once all water has been flushed from hose and tool, position tool head over hopper until flow rate is determined.
8. Apply a couple of test coats to determine proper flow speed on sprayer. Fine adjustments can be made on valve handle to increase or decrease flow speed.

Fill Tools With Material

Fill Box

1. Remove tool-fill flange.
2. Install box fill adapter.



3. Place slot of box over box fill nozzle.



4. Turn Prime Valve to TOOL FILL position.

5. Turn flow control knob fully clockwise until box is filled with material.
6. Turn flow control knob fully counter-clockwise.

Fill Taper

1. Install taper-fill adapter.



2. Place material inlet of taper over nozzle of taper-fill adapter.



3. Turn Prime Valve to TOOL FILL position.
4. Turn control knob fully clockwise.
5. Place fingers inside top of taper. When you feel the plunger rise to the top, turn flow control knob fully counter-clockwise.

Bleed System Pressure



1. Turn flow knob to fully counterclockwise.
2. Place deflector in hopper or suitable container.
3. Place prime valve in RELIEF position.

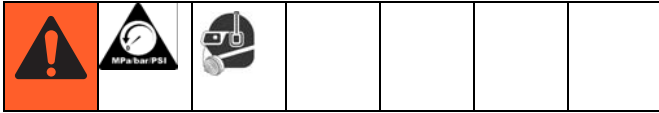
Remove Prime Valve

1. Use 3/32 in. punch and hammer to tap out handle pin (pliers may be required to pull out handle pin).
2. Use crescent wrench to unscrew prime valve handle.
3. Clear out any material that is lodged in valve or manifold.

Install Prime Valve

1. Tighten prime valve into manifold (use thread sealant on housing threads). Torque to 190 to 210 in-lb.
2. Install prime valve base. Pin in base must align with hole in manifold.
3. Orient .096 in. hole in drain valve stem vertically.
4. Place drain valve over drain valve base with handle in “apply” mode.
5. Use hammer to tap drain valve handle pin back into place.

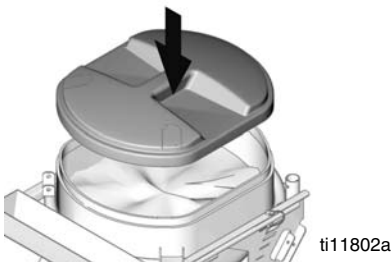
Cleanup



NOTICE
Do not use with quick-set materials. They can harden inside the unit and hose.

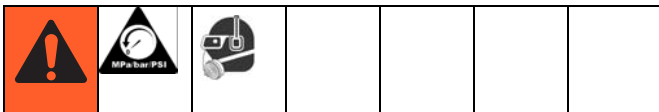
Storage - Less Than 24 Hours

1. Perform **Pressure Relief Procedure**, page 6 (valve in down position).
2. Remove tool from valve. Clean all tools or use supplied tool caps.
3. Remove hopper lid and use water bottle to spray enough water mist to cover top layer of material.



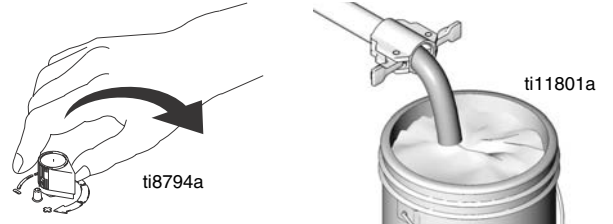
4. Clean hopper sides to material level. Cover material in hopper with hopper cover.

Storage - More Than 24 Hours

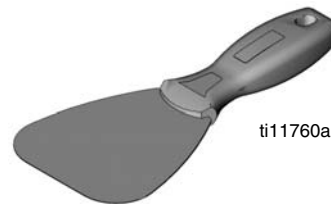


1. Perform **Pressure Relief Procedure**, page 6 (valve in down position).

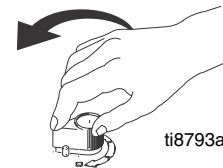
2. Hang drain line mount onto material bucket. Turn pump to drain position and pump unused material from hopper and hose.



3. Scrape material remaining in hopper into pump to be pumped from sprayer.



4. Turn pump control fully counter-clockwise to shut pump off.



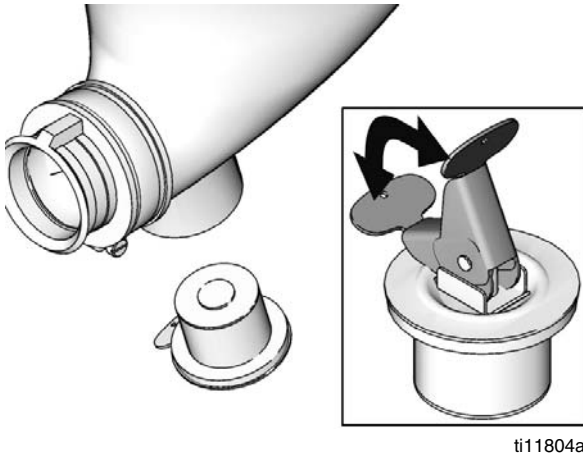
5. Fill material hopper with water and run pump to flush hose and valve. Use standard garden hose with nozzle to wash sprayer body.



6. Shut pump off.

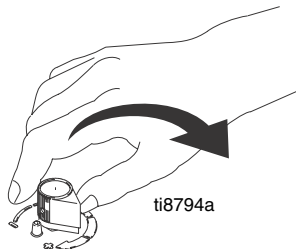
Cleanup

7. Remove drain plug from hopper. Flush with water. Clean and install drain plug.

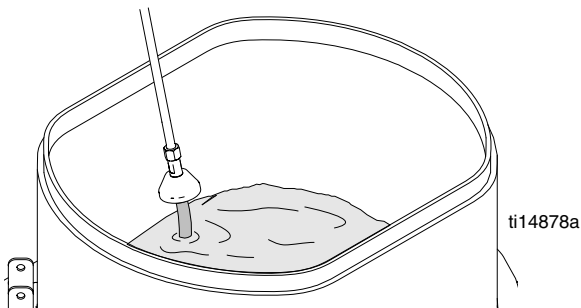


NOTE: Cap plug must not be inserted into the female side of the connector on the Z swivel. Residual pressure can cause the cap plug to lose the seal. To ensure that the cap plug properly seals, use cap plug on the inline gun outlet.

8. Wash all tools.
9. Turn pump control clockwise to start pump.



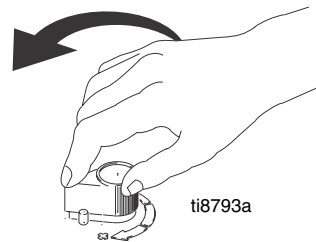
10. Run pump until clean water flows from applicator. Continue until hopper is empty.



11. Add additional water and repeat steps 13 - 14, if necessary.



12. Remove drain plug from hopper. Flush with water. Clean and install drain plug.
13. Rotate pump control to shut pump off.



Troubleshooting

Motor Won't Operate

PROBLEM	CAUSE	SOLUTION
Basic Fluid Pressure Problems	Pressure control knob setting. Motor will not run if at minimum setting (fully counterclockwise).	Slowly increase pressure setting to see if motor starts.
	Spray tip or fluid filter may be clogged.	Relieve pressure and clear clog or clean filter; refer to separate gun or tip instruction manual.
Basic Mechanical Problems	Frozen or hardened paint.	Thaw sprayer if water or water-based paint has frozen in sprayer. Place sprayer in warm area to thaw. Do not start sprayer until thawed completely. If paint hardened (dried) in sprayer, replace pump packing. See repair manual.
	Displacement pump connecting rod pin. Pin must be completely pushed into connecting rod and retaining spring must be firmly in groove of pump pin.	Push pin into place and secure with spring retainer.
	Motor. Remove drive housing assembly. Try to rotate fan by hand.	Replace motor if fan won't turn.
Basic Electrical Problems	Motor control board. Board shuts down and displays error code.	See Control Board Diagnostics .
	Electrical supply. Meter must read: 210-255 Vac for 220-240 Vac models; 85-130 Vac for 100-120 Vac models.	Reset building circuit breaker; replace building fuse. Try another outlet.
	Extension cord. Check extension cord continuity with volt meter.	Replace extension cord.
	Sprayer power supply cord. Inspect for damage such as broken insulation or wires.	Replace power supply cord.
	Check that motor leads are securely fastened and properly mated.	Replace loose terminals; crimp to leads. Be sure terminals are firmly connected. Clean circuit board terminals. Securely reconnect leads.
	ON/OFF Switch. Connect volt meter between L1 and L2 terminal on ON/OFF switch. Plug in sprayer and turn ON. Meter must read: 210-255 Vac for 220-240V models 85-130 Vac for 100-120V models.	Replace ON/OFF switch.
	All terminals for damage or loose fit.	Replace damaged terminals and reconnect securely.

Motor is Hot and Runs Intermittently

PROBLEM	CAUSE	SOLUTION
Motor is hot and runs intermittently.	Determine if sprayer was operated at high pressure with small tips, which causes low motor RPM and excessive heat build up	Decrease pressure setting or increase tip size.
	Be sure ambient temperature where sprayer is located is no more than 90°F and sprayer is not located in direct sun	Move sprayer to shaded, cooler area if possible.

Low or Fluctuating Output

PROBLEM	CAUSE	SOLUTION
Low Output	Worn spray tip.	Follow Pressure Relief Procedure Warning, then replace tip. See your separate gun or tip manual.
	Verify pump does not continue to stroke when applicator is turned off.	Service pump. Check piston and intake valves for wear or obstructions.
	Filter clogged (If optional filter is installed).	Relieve pressure. Check and clean filter.
	Material hose length. Longer hose length reduces sprayer performance.	Replace with hose length less than specified maximum.
	Pump hopper adapter connections.	Tighten any loose connections. Replace pump hopper adapter if cracked or punctured.
	Electrical supply with volt meter. Meter must read: 210-255 Vac for 220-240 Vac models; 85-130 Vac for 100-120 Vac models. Low voltages reduce sprayer performance.	Reset building circuit breaker; replace building fuse. Repair electrical outlet or try another outlet.
	Extension cord size and length; must be at least 1.0 mm ² (12 awg) wire and no longer than 90 m (295 ft). Longer cord lengths reduce sprayer performance.	Replace with a correct, grounded extension cord.
	Leads from motor to pressure control circuit board for damaged or loose wires or connectors. Inspect wiring insulation and terminals for signs of overheating.	Be sure male terminal blades are centered and firmly connected to female terminals. Replace any loose terminal or damaged wiring. Securely reconnect terminals.
Low stall pressure.	Turn pressure control knob fully clockwise. Make sure pressure control knob is properly installed to allow full clockwise position. Try a new transducer.	
Plugged Prime Valve	Material has dried and plugged the prime valve	Aim hose into waste pail. Turn prime valve from tool fill to dump and then back to tool fill. If valve remain plugged, see Bleed System Pressure , page 10.

Troubleshooting

Low or Fluctuating Output

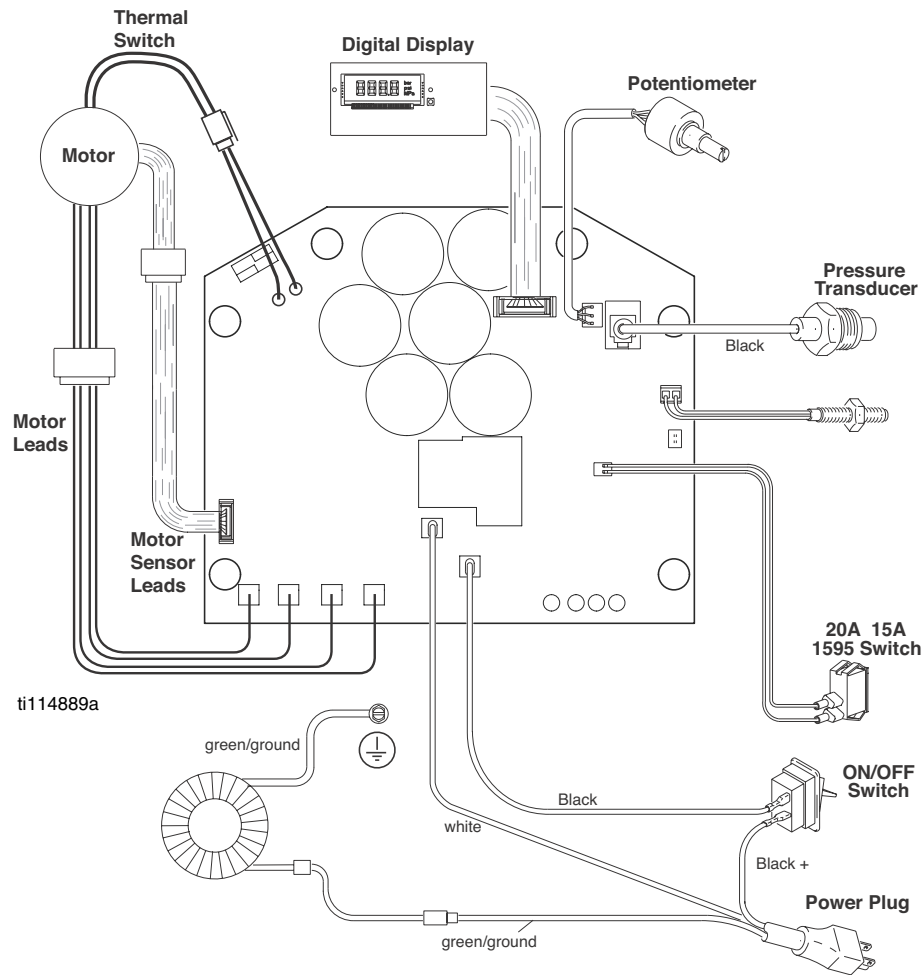
PROBLEM	CAUSE	SOLUTION
Motor runs and pump strokes	1. Material supply.	1. Refill hopper and re-prime pump.
	2. Loose fittings.	2. Tighten; use thread sealant or sealing tape on threads if necessary.
	3. Intake valve ball and piston ball are seating properly.	3. Remove intake and piston valves and clean. Check balls and seats for nicks or obstructions; replace if necessary, page 18. Clean hopper before using to remove particles that could clog pump.
	4. Leaking around throat packing nut which may indicate worn or damaged packings.	4. Replace packing, page 18. Also check piston valve seat for hardened paint or nicks and replace if necessary.
	5. Pump rod damage.	5. Repair pump.
Motor runs but pump does not stroke	1. Displacement pump pin (75) (damaged or missing).	1. Replace pump pin if missing. Be sure retainer spring (76) is fully in groove all around connecting rod.
	2. Connecting rod assembly (45) for damage.	2. Replace connecting rod assembly.
	3. Gears or drive housing.	3. Inspect drive housing assembly and gears for damage and replace if necessary.

Electrical Short

PROBLEM	CAUSE	SOLUTION
Building circuit breaker opens as soon as sprayer switch is turned on. CAUTION Any short in any part of the motor power circuit will cause the control circuit to inhibit sprayer operation. Correctly diagnose and repair all shorts before checking and replacing control board.	1. All electrical wiring for damaged insulation, and all terminals for loose fit or damage. Also wires between pressure control and motor.	1. Repair or replace any damaged wiring or terminals. Securely reconnect all wires.
	2. Motor armature for shorts. Inspect windings for burns	2. Replace motor.
	3. Motor control board by performing motor control board diagnostics. If diagnostics indicate, substitute with a good board.	3. Replace with a new pressure control board.

PROBLEM	CAUSE	SOLUTION
Building circuit breaker opens as soon as sprayer is plugged into outlet and sprayer is NOT turned on.	1. Basic Electrical Problems on page 13.	1. Perform necessary procedures.
	2. For damaged or pinched wires in pressure control.	2. Replace damaged parts.
Sprayer quits after sprayer operates for 5 to 10 minutes.	1. Basic Electrical Problems.	1. Perform necessary procedures.
	2. Electrical supply with volt meter. Meter must read: 210-255 Vac for 220-240 Vac models; 85-130 Vac for 100-120 Vac models.	2. If voltage is too high, do not operate sprayer until corrected.

Wiring Diagram



Technical Data

Power requirements	15A/20A
Motor HP (W)	2.5 (1864)
Maximum fluid working pressure	2500 psi (17.2 MPa, 172 bar)
Hopper capacity	
Maximum	28 gallons (106 liters)
Operating	24 gallons (91 liters)
Maximum delivery with texture material	1.0 to 1.7 gpm (3.8 to 6.4 lpm)
Maximum hose length	150 ft of 1/2 in. hose
Fluid outlet size	1/2 in. NPT female swivel
Dimensions	
Length	40 to 55 in. (102 cm to 140 cm) with handle
Width	22 in. (56 cm)
Height	31 in. (79 cm)
Weight	
Without hoses or applicator	141 lb (64 kg)
With hoses and applicator	166 lb (75 kg)
Wetted parts	Buna-N, aluminum, brass, polyethylene, neoprene, stainless steel, nickel-plated carbon steel, fluoro-elastomer, nickel-plated iron, wool felt, tungsten carbide, PTFE, nylon, zinc-plated carbon steel, paper, PVC, UHMWPE, leather, rubber
Sound data for sprayer	
Sound pressure level *	
Sound power level †	
* Measured while spraying at 1 m.	
† Measured per ISO-3744.	

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 by an authorized Graco distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS

The Parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présent document ainsi que de tous les documents, avis et procédures judiciaires exécutés, donnés ou intentés à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées, sera en anglais.

ADDITIONAL WARRANTY COVERAGE

Graco does provide extended warranty and wear warranty for products described in the "Graco Contractor Equipment Warranty Program".

TO PLACE AN ORDER, contact your Graco distributor, or call **1-800-690-2894** to identify the nearest distributor.

All written and visual data contained in this document reflects the latest product information available at the time of publication.
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This manual contains English, French, Spanish, Dutch, German mm 313XXX

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