

Operation, Parts Electric Airless Sprayers



SINGH
ROOFING SUPPLIES
YOUR ONE STOP ROOFING SHOP



3A6491P

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

EN

490/495/595/650/395EU Models:

3300 psi (228 bar, 22.8 MPa) Maximum Working Pressure

See page 3 for additional model information.



Important Safety Instructions

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

Related Manuals

Gun – 3A6285 (Contractor PC)

Pump – 334599



ti35141a









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

PROVEN QUALITY. LEADING TECHNOLOGY.

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Models

	VAC	Model	Stand 	Lo- Boy 	Hi-Boy 
 110474 Certified to CAN/CSA C22.2 No. 68 Conforms to UL 1450	120 USA	Ultra MAX II 490 PC Pro	17E85	17E85	17E854
		Ultimate MX II 490 PC Pro	2	3	826245
		Ultra MAX II 495 PC Pro	82624	82624	17E857
		Ultimate MX II 495 PC Pro	3	4	826248
		Ultra MAX II 595 PC Pro	17E85	17E85	17E859
		Ultimate MX II 595 PC Pro	5	6	826250
		Ultra Max II 650 PC Pro	82624	82624	19Y128
		Ultimate MX II 650 PC Pro	6	7	826258
	230 CEE 7/7	ST MAX II 395 PC Pro	17E86	17E85	17E865
		ST MAX II 495 PC Pro	4		17E874
		ST MAX II 595 PC Pro	17E87	8	17E876
	230 Europe Multi	ST MAX II 495 PC Pro	17E872	82624	17E875
		ST MAX II 595 PC Pro			17E877
		Ultra Max II 650 PC Pro		19Y361	19Y359
		Mega Quick & Easy 5.0			18H23
	110 UK	ST MAX II 495 PC Pro	17E873	19Y12	6
		ST MAX II 595 PC Pro			17E870
		Ultra Max II 650 PC Pro		9	17E878
		Ultra MAX II 490 PC Pro		19Y362	19Y360
	230 Asia/ANZ	Ultra MAX II 495 PC Pro	17E88	82625	
		Ultra MAX II 595 PC Pro	7	17E89	17E892
		Ultra Max II 650 PC Pro	17E88	1	17E896
		Ultra MAX II 490 PC Pro	9	17E89	19Y424
		Ultra MAX II 495 PC Pro	26C97	7	
	230 AP	Ultra MAX II 595 PC Pro	0		
		Ultra Max II 650 PC Pro	26C97	26C97	26C97
	230 AP Multi Cord	Ultra MAX II 490 PC Pro	4	7	6
	100 JP/TW	Ultra MAX II 495 PC Pro	26C97	26C97	19Y424
		Ultra MAX II 595 PC Pro	1	9	
		Ultra Max II 650 PC Pro	26C97		26C97
			5		8

26C98
0

Warnings

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



G R O U N D I N G

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 regulations.

- 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 120 V or 230 V circuit and has a grounding plug similar to the plugs illustrated in the figure below.

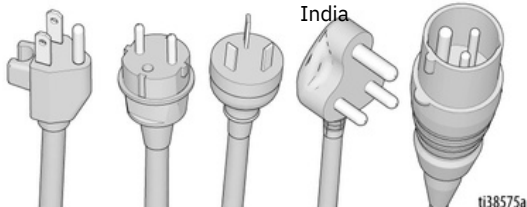
230 V
ANZ

120 V

230 V

230 V
India

110 V UK



- Only connect the product to an outlet having the same configuration as the plug.
- Do not use a 3-to-2 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 (2.5 mm²) 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.

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:



- Do not spray flammable or combustible materials near an open flame or sources of ignition such as cigarettes, motors, and electrical equipment. 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.
- Do not spray flammable or combustible liquids in a confined area.
- 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 at 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 solvent manufacturer's safety instructions.
- Keep a working fire extinguisher in the work area.

Warnings

⚠ 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 3300 psi. Use Graco replacement parts or accessories that are rated a minimum of 3300 psi.
- 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.
- Wait five minutes after disconnecting power cord before servicing.



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, crush, or amputate fingers and other body parts.



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



TOXIC FLUID OR FUMES HAZARD

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

- Read Safety Data Sheets (SDSs) 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

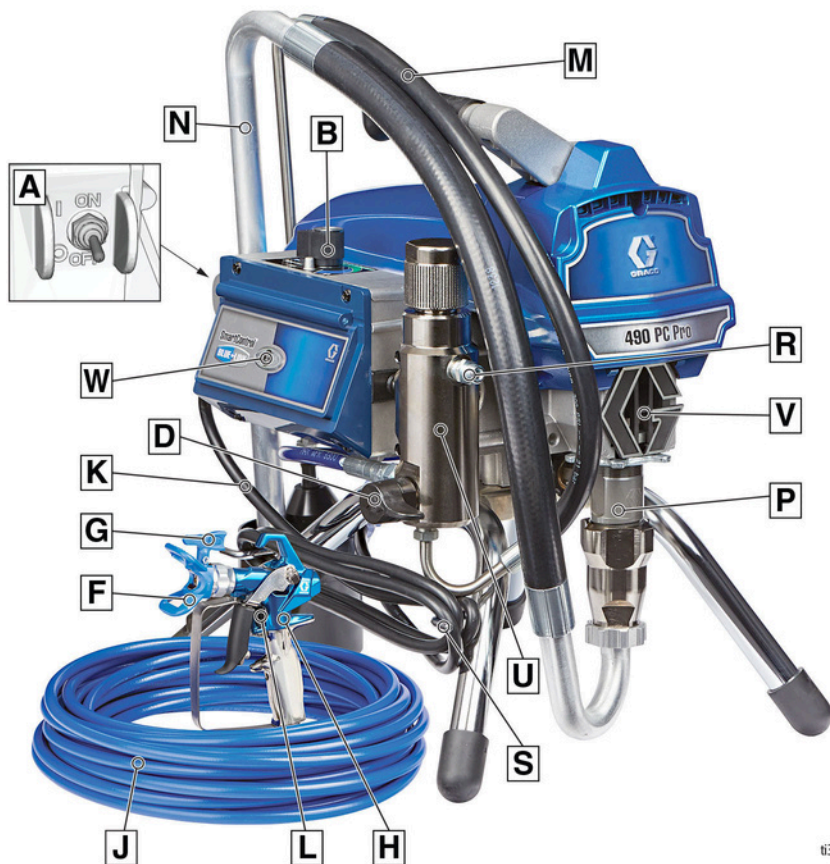
Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This protective equipment includes but is not limited to:

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

Component Identification

Component Identification

Stand Models



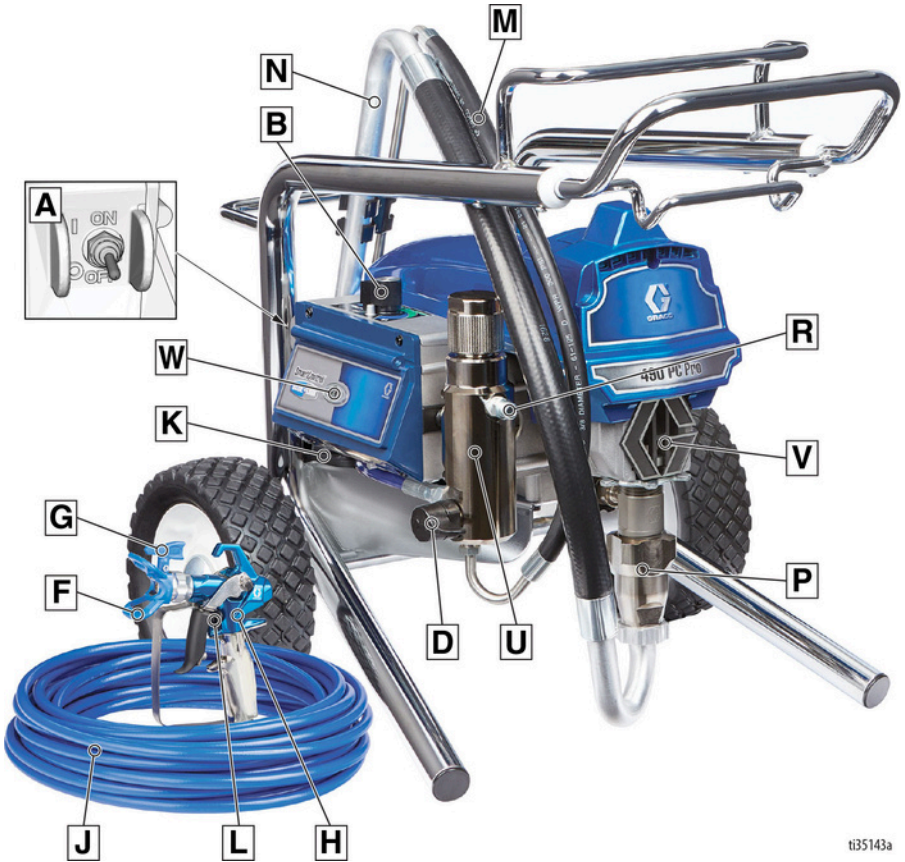
ti35142a

A	ON/OFF Switch
B	Pressure Control
D	Prime Valve
F	Tip Guard
G	Spray Tip
H	Gun
J	Airless Hose
K	Power Cord
L	Trigger Lock
M	Drain Tube

N	Suction Tube
P	Pump
R	Fluid Outlet
S	Power Cord Wrap
U	Filter
V	Finger Guard / TSL Fill Point
W	BlueLink™ Status Light or LCD Display
	Model/Serial Tag (Not shown, located on bottom of unit.)

Component Identification

Lo-Boy Models



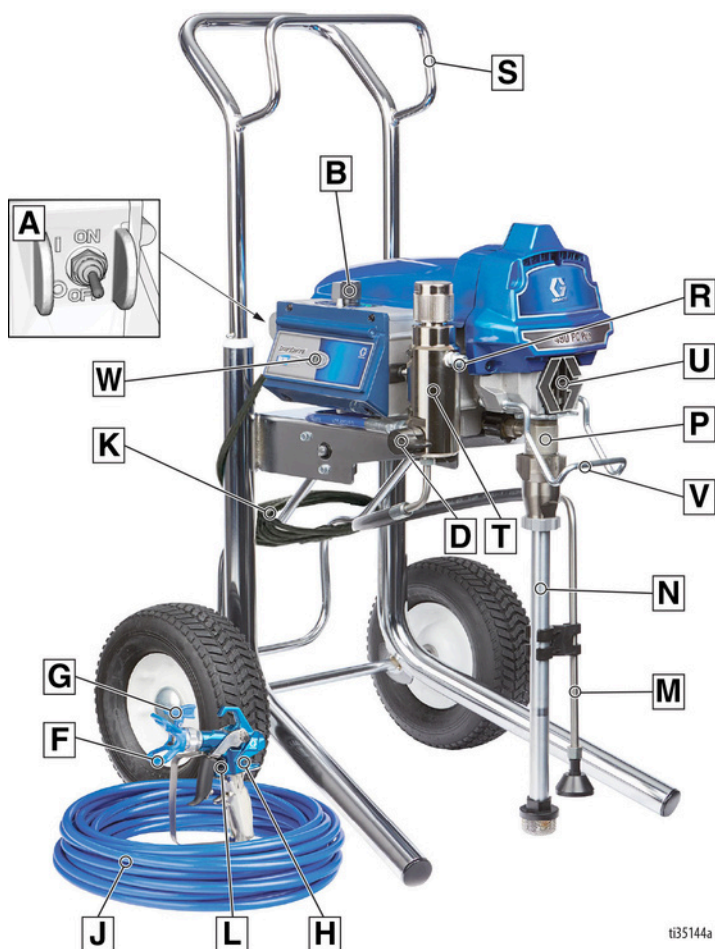
ti35143a

A	ON/OFF Switch
B	Pressure Control
D	Prime Valve
F	Tip Guard
G	Spray Tip
H	Gun
J	Airless Hose
K	Power Cord
L	Trigger Lock
M	Drain Tube

N	Suction Tube
P	Pump
R	Fluid Outlet
U	Filter
V	Finger Guard / TSL Fill Point
W	BlueLink™ Status Light or LCD Display
	Model/Serial Tag (Not shown, located on bottom of unit.)

Component Identification

Hi-Boy Models



ti35144a

A	ON/OFF Switch
B	Pressure Control
D	Prime Valve
F	Tip Guard
G	Spray Tip
H	Gun
J	Airless Hose
K	Power Cord
L	Trigger Lock
M	Drain Tube
N	Suction Tube

P	Pump
R	Fluid Outlet
S	Hanger
T	Filter
U	Finger Guard / TSL Fill Point
V	Pail Hook
W	BlueLink™ Status Light or LCD Display
	Model/Serial Tag (Not shown, located on bottom of unit.)

Grounding



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

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

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

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

Power Requirements

- 100-120V units require 100-120 VAC, 50/60 Hz, 12 or 15A, 1 phase.
- 230V units require 230 VAC, 50/60 HZ, 7 or 9A, 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 (2.5mm²) minimum.

NOTE: Smaller gauge or longer extension cords may reduce sprayer performance.

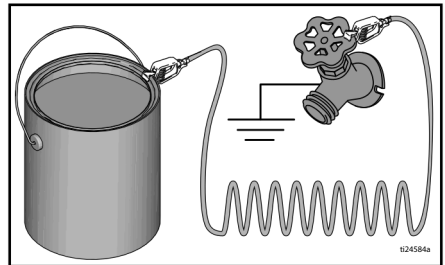
Pails

Solvent and oil-based fluids: follow local code. Use only conductive metal pails, placed on a grounded surface such as concrete.

Do not place 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.

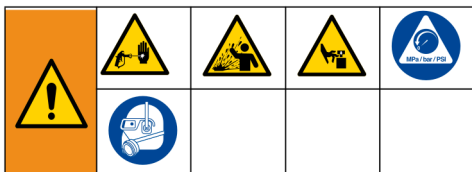


Pressure Relief Procedure

Pressure Relief Procedure



Follow the Pressure Relief Procedure whenever you see this sym bol.

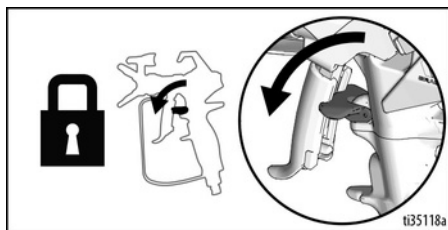


This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashed fluid and moving parts, follow the Pressure Relief Procedure whenever sprayer is stopped and before sprayer is cleaned or checked, and before equipment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

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



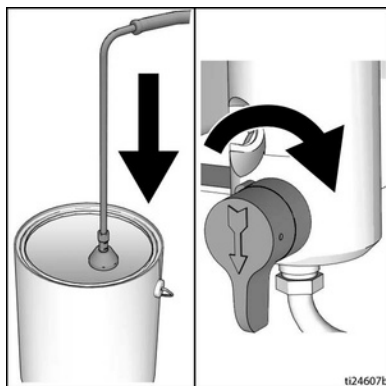
2. Engage the trigger lock.



3. Turn pressure control to the lowest setting.



4. Put drain tube in a pail and turn prime valve down to relieve pressure. Leave prime valve in the down (drain) position until you are ready to spray again.



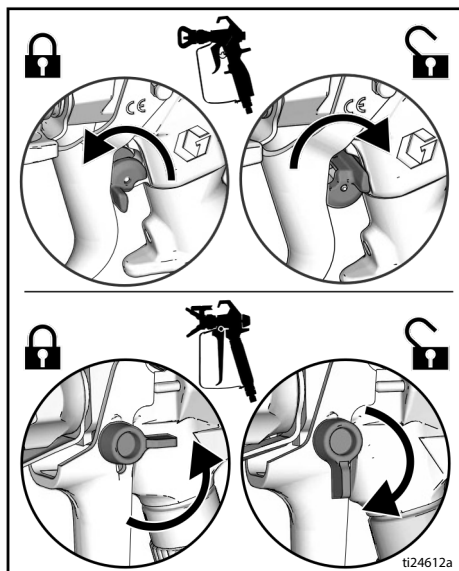
5. Hold a metal part of the spray gun firmly to a grounded metal pail. Point spray gun into pail. Disengage the trigger lock and trigger the spray gun to relieve pressure.



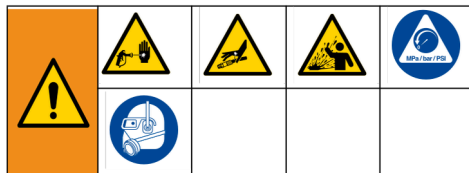
- 6 Engage the Trigger Lock.
- If you suspect the spray tip or hose is clogged or that pressure has not been fully relieved:
- 7
- - a. VERY SLOWLY loosen the tip guard retaining nut or the hose end coupling to relieve pressure gradually.
 - b. Loosen the nut or coupling completely.
 - c. Clear hose or tip obstruction.

Trigger Lock

Always engage the trigger lock when sprayer is stopped to prevent the gun from being triggered accidentally by hand or if dropped or bumped.

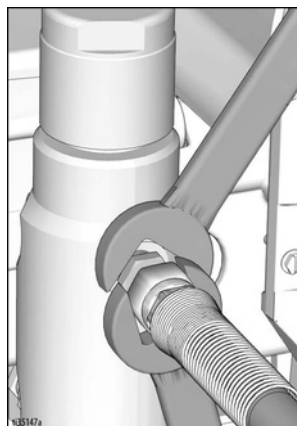


Setup

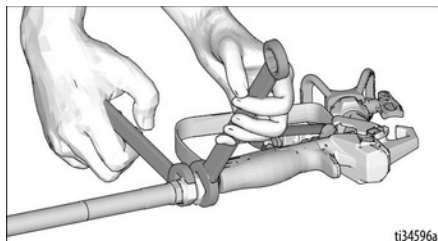


When unpacking sprayer for the first time or after long term storage perform setup procedure. When first setup is performed remove shipping plug from fluid outlet.

1. Connect Graco airless hose to fluid outlet. Use wrenches to tighten securely.



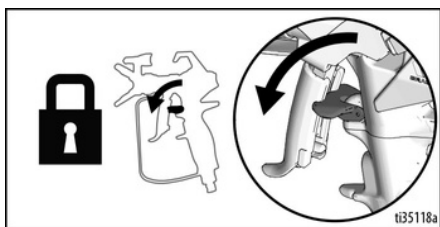
2. Connect other end of hose to gun.



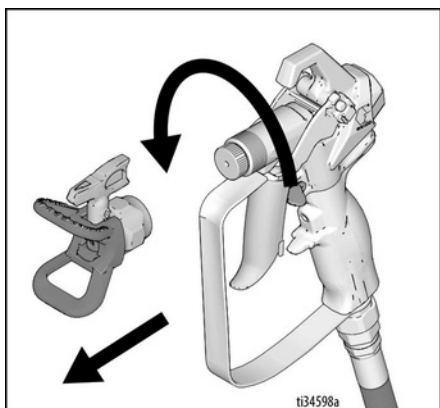
3. Use wrenches to tighten securely.

Setup

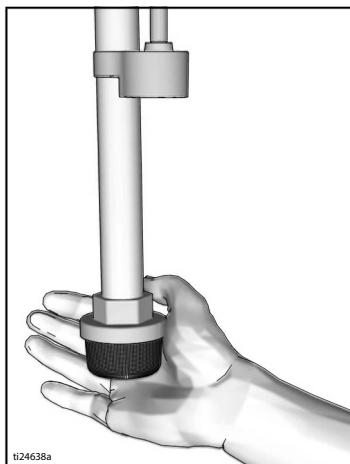
4. Engage trigger lock.



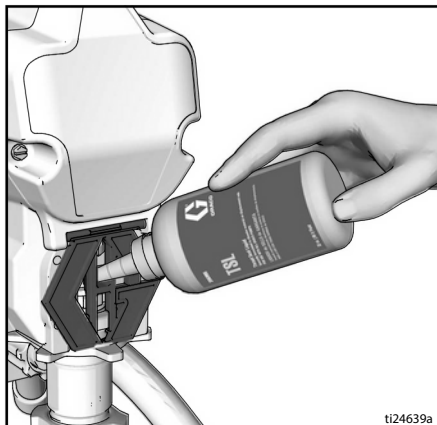
5. Remove tip guard.



6. When unpacking sprayer for the first time remove packaging materials from inlet strainer. After long term storage check inlet strainer for clogs and debris.



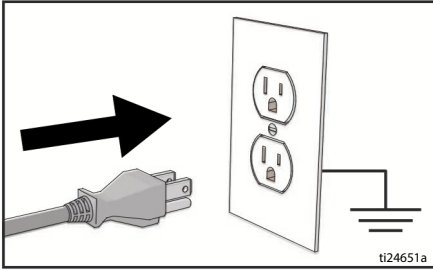
7. Fill throat packing nut with TSL to prevent premature packing wear. Do this daily or each time you spray.
- Place the TSL bottle nozzle into the top center opening in the grill at the front of the sprayer. Squeeze bottle
 - to dispense enough TSL to fill the space between the pump rod and packing nut seal.



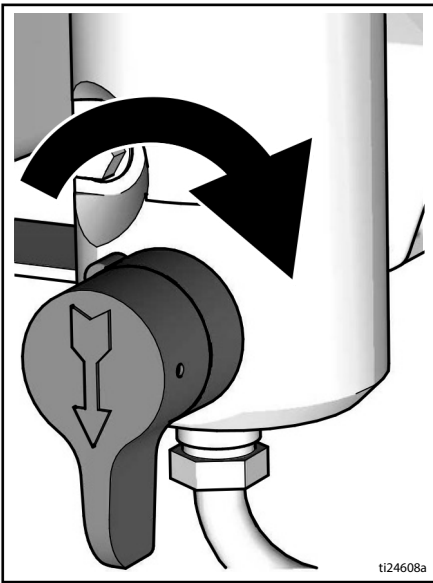
8. Make certain ON/OFF switch is **OFF**.



9. Plug power supply cord into a properly grounded electrical outlet.



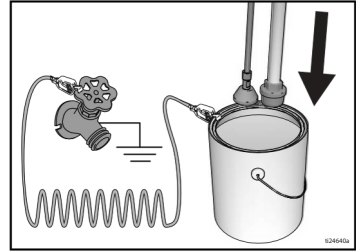
10. Turn prime valve down.



11. Place fluid intake with drain tube in grounded metal pail partially filled with flushing fluid. See **Grounding**, page 11.

NOTE: New sprayers are shipped with storage fluid that must be flushed out with mineral spirits prior to using the sprayer.

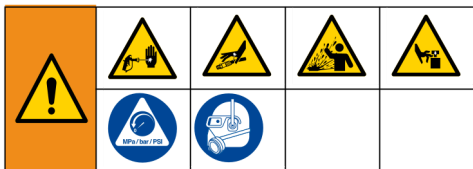
Check flushing fluid for compatibility with material that is to be sprayed. A secondary flush with a compatible fluid may be necessary. Water for latex paint or mineral spirits for oil-based paint.



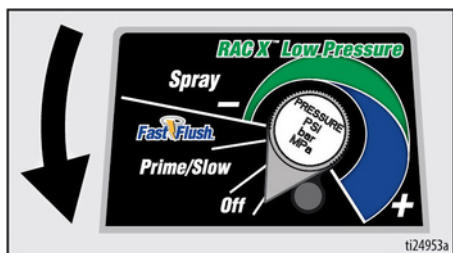
12. Turn pressure control to OFF.
13. Turn ON/OFF switch to **ON** position.
14. Turn prime valve horizontal. Disengage trigger lock.
15. Turn pressure control to Prime/Slow.
16. Hold a metal part of the gun firmly to a grounded metal pail. Trigger gun and flush for one minute.
17. Turn ON/OFF switch to **OFF** position.
18. Engage trigger lock.
19. After flushing storage fluid out of the sprayer empty pail. Replace fluid intake with drain tube in grounded metal pail partially filled with flushing fluid. Use water to flush water-based paint or mineral spirits to flush oil-based paint.
20. Turn ON/OFF switch to **ON** position.
21. Turn prime valve horizontal. Disengage trigger lock.
22. Hold a metal part of the gun firmly to a grounded metal pail. Trigger gun and flush until clean.
23. Turn ON/OFF switch to **OFF** position.
24. Engage trigger lock.
25. Sprayer is now ready for startup and spray.

Startup

Startup



1. Perform **Pressure Relief Procedure**, page 12.
2. Turn pressure control to lowest pressure.



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

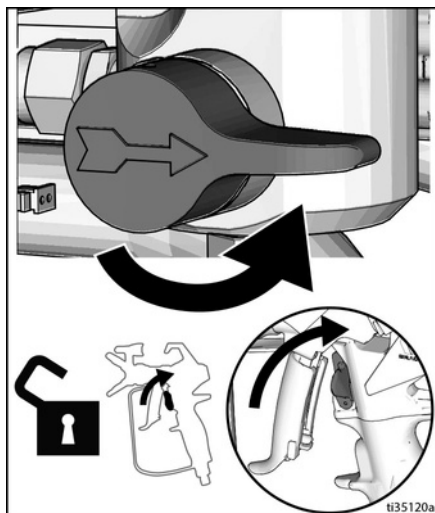


4. Place fluid intake in paint pail. Place drain tube in waste pail.

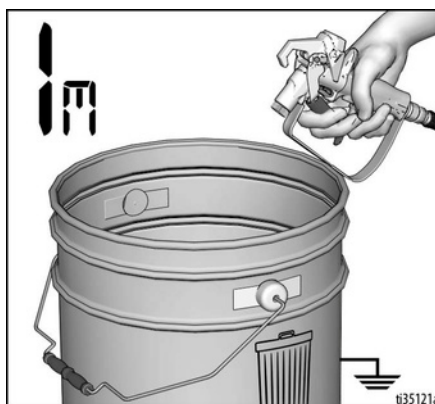
5. Turn pressure control to Fast Flush to start motor. Allow paint to circulate through drain tube for 15 seconds.



6. Turn prime valve horizontal. Disengage trigger lock.




7. Hold gun against grounded metal waste pail. Trigger gun until paint appears.



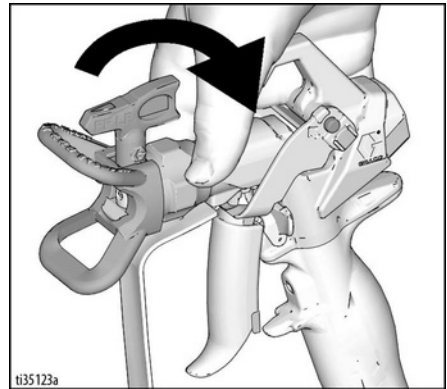
8. Move gun to paint pail and trigger for 20 seconds. Release trigger and allow sprayer to build pressure. Engage trigger lock.



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

9. Inspect airless hose connections for leaks. If leaks occur, perform **Pressure Relief Procedure**, page 12, then tighten all fittings and repeat Startup procedure. If there are no leaks continue with the next step.
10. Screw tip assembly onto gun and tighten. See **Spray Tip Installation**, page 18. For gun assembly instructions, see separate gun manual.



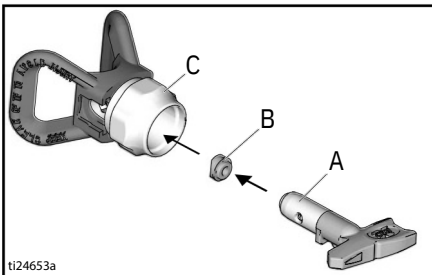
Operation

Spray Tip Installation

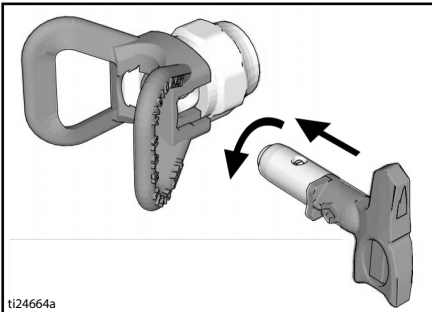


To avoid serious injury from skin injection do not put your hand in front of the spray tip when installing or removing the spray tip and tip guard.

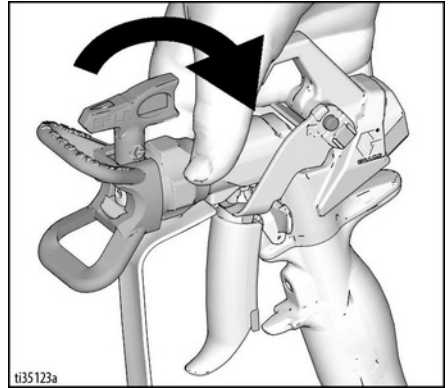
1. Perform **Pressure Relief Procedure**, page 12.
2. Use spray tip (A) to insert OneSeal™ (B) into tip guard (C).



3. Insert Spray Tip.

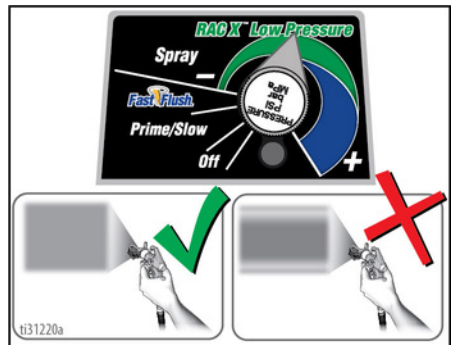


4. Screw assembly onto gun. Tighten.



Spray

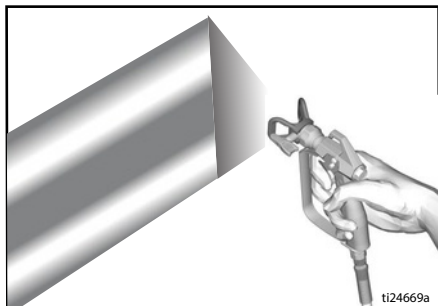
When a RAC X™ FF LP Fine Finish Low Pressure reversible spray tip is used, spraying pressure can be lowered. Spraying at a lower pressure results in less over spray and reduces spray tip wear. Adjust the sprayer pressure to minimize overspray.



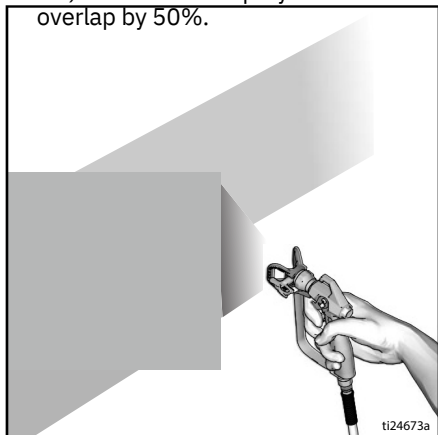
Atomized, evenly distributed fan pattern

Tails

1. Spray test pattern. Adjust pressure to eliminate heavy edges.



2. Use smaller tip size if pressure adjustment cannot eliminate heavy edges.
3. Hold gun perpendicular, 10-12 in. (25-30 cm) from surface. Spray back and forth; overlap by 50%.



4. Trigger gun after moving. Release trigger before stopping. For additional spraying information, see separate gun manual.

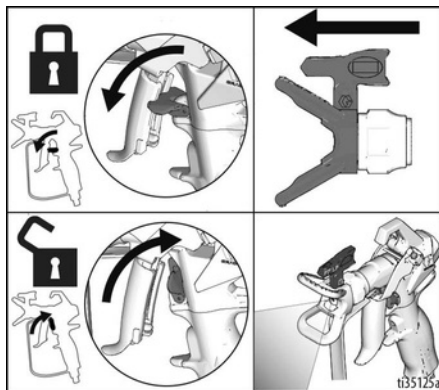
Clear Spray Tip Clog



1. Release trigger. Engage trigger lock. Rotate Spray Tip. Disengage trigger lock. Trigger gun at waste area to clear clog.



2. Engage trigger lock. Return Spray Tip to original position. Disengage trigger lock and continue spraying.

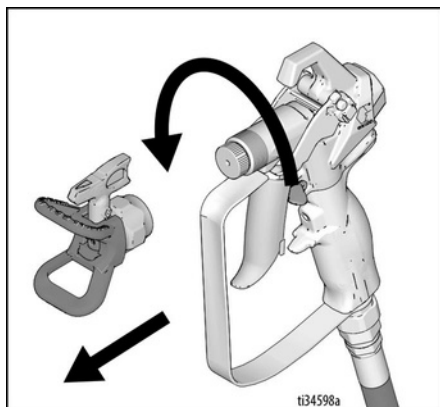


Operation

Cleanup

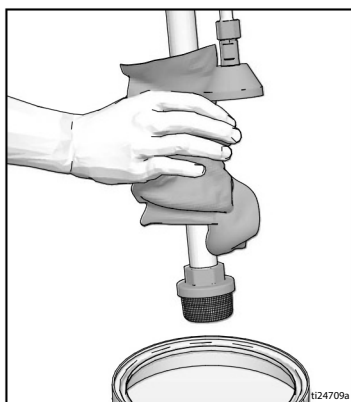


1. Perform **Pressure Relief Procedure**, page 12.
2. Remove tip guard and Spray Tip. For additional information, see separate gun manual.

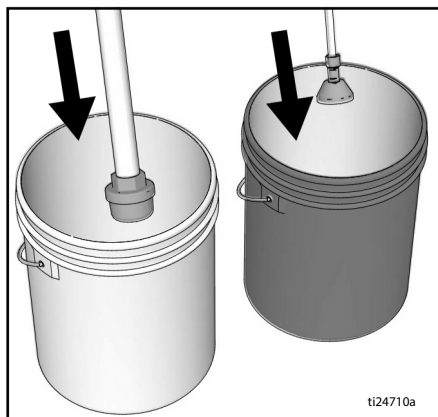


Fast Flush Drain Tube

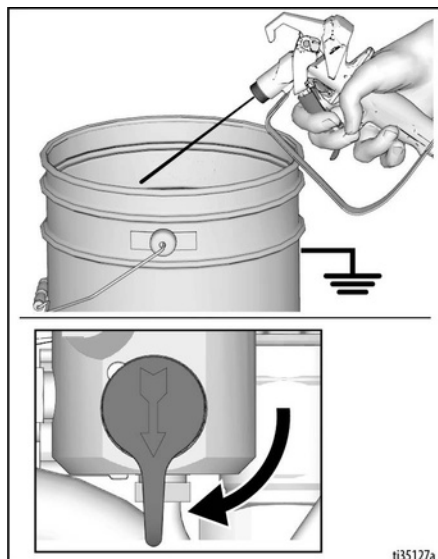
3. Remove fluid intake and drain tube from paint, wipe excess paint off outside.



4. Place fluid intake in flushing fluid. Use water for water base paint and mineral spirits for oil-based paint. Place drain tube in waste pail.



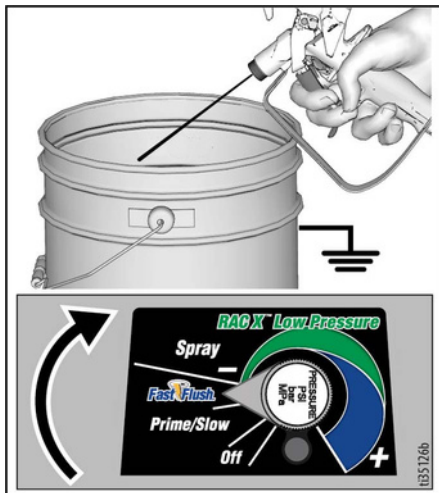
5. To flush drain tube and pump turn prime valve down.



6. Turn pressure control to Fast Flush operate until the pump runs steady and flushing fluid appears in the waste pail.

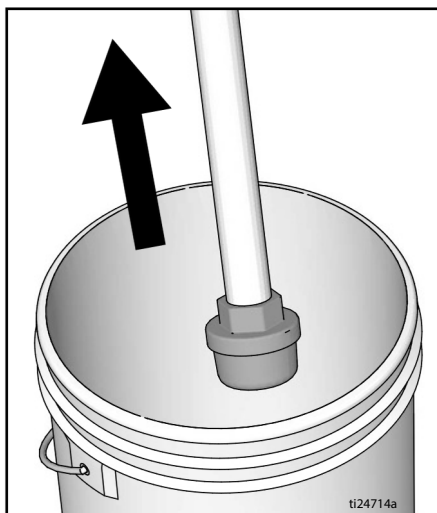
Fast Flush Hose and Gun

7. To flush airless hose and spray gun, turn prime valve horizontal.
8. Hold gun against waste pail. Disengage trigger lock. Trigger gun and turn pressure control to Fast Flush operate until the pump runs steady and flushing fluid appears.



9. Stop triggering gun.

10. Raise fluid intake above flushing fluid.



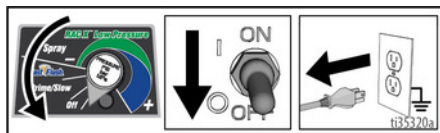
11. With prime valve horizontal. Trigger gun into flushing pail to purge fluid from hose.

12. Engage trigger lock.

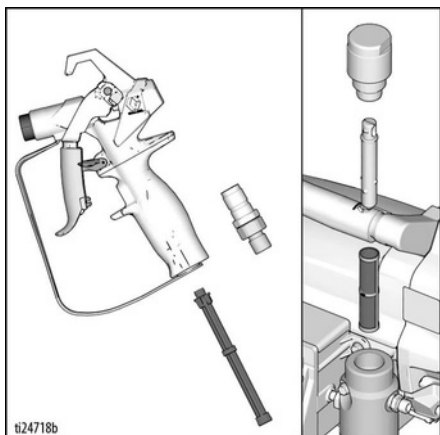


Operation

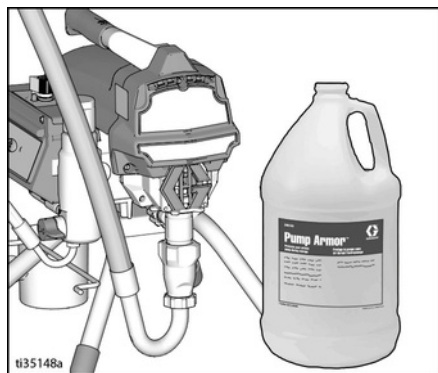
13. Turn pressure control knob to OFF and turn ON/OFF switch to **OFF** position. Disconnect power to sprayer.



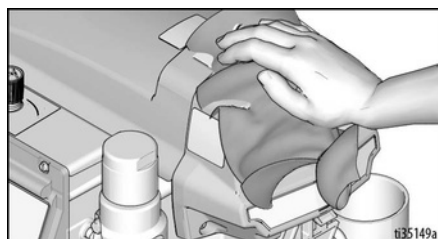
14. Remove filter from gun and sprayer if installed. Clean and inspect. Install filter. See separate gun manual.



15. If flushing with water, flush again with mineral spirits or Pump Armor to leave a protective coating to prevent freezing or corrosion.



16. Wipe sprayer, hose and gun with a rag soaked in water or mineral spirits.



Digital Display

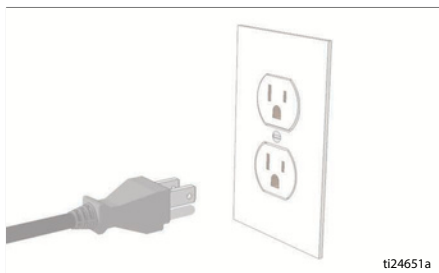
Most models are equipped with a digital display. This section explains how to use this feature.



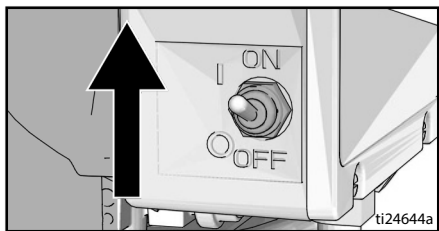
Operation Main Menu

A short press of the display button moves to the next display. Press and hold display button for five seconds to change units or reset data.

1. Perform **Pressure Relief Procedure**, page 12.
2. Plug sprayer into grounded outlet. Turn ON/OFF switch to **ON** position.

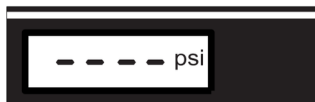


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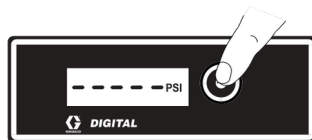
3. Pressure display appears. Dashes appear when pressure is less than 200 psi (14 bar, 1.4 MPa).



ti2786a

4. Short press display button to move to Job Gallons (or Liters x 10).

NOTE: **JOB** displays briefly, then the number of gallons sprayed above 1000 psi (70 bar, 7MPa).



ti7486b

5. Press and hold display button to reset to zero, or short press button to move to Lifetime Gallons (or Liters x10).

NOTE: **LIFE** displays briefly, then the number of gallons sprayed above 1000 psi (70 bar, 7MPa).



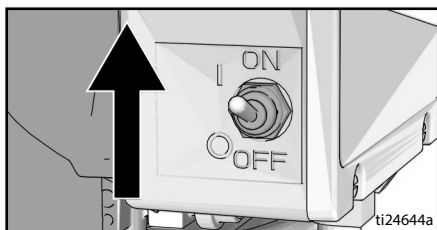
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6. To change pressure units (psi, bar, or MPa), press and hold display button for eight seconds until desired units appear. Selection of bar or MPa changes gallons to Liters x10.

Operation

Stored Data Display

1. Perform **Pressure Relief Procedure**, page 12.
2. Press display button and turn ON/OFF switch to **ON** position.



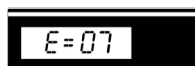
3. **S/N** displays for one second, then the serial number. Short press display button and the total motor run hours is displayed.



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4. Short press display button and the last error code is displayed: e.g., **E=07**. See **Electrical**, page 30 for trouble shooting information.



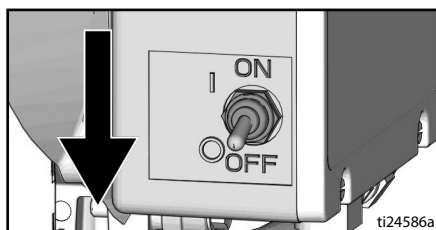
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5. Press and hold display button to clear error code to zero. Short press to move to software **REV**.



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6. Turn ON/OFF switch to **OFF** position to exit Stored Data.



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BlueLink™ App

(If applicable)

Download the Graco BlueLink app from the Apple App Store, Google Play, or other available application stores to connect to the paint sprayer via Bluetooth®.

The BlueLink app allows you to access sprayer information, settings, statistics, and provides access to useful features such as WatchDog™, improved maintenance tracking, sprayer tracking, and job tracking. Find the Graco BlueLink App at:

<https://www.graco.com/BlueLink>



Further instructions can be accessed within the app. Instructions can also be accessed online at:

<https://www.graco.com/BlueLinkSupport>



Enabling or Disabling BlueLink



The Graco BlueLink system uses Bluetooth to communicate between the sprayer's control board and a mobile phone. To disable BlueLink by shutting off the Bluetooth transmitter, perform the following steps:

1. Turn the ON/OFF switch to the **OFF** position. Turn the Pressure Control Knob all the way counterclockwise to the **OFF** position.
2. Unplug sprayer from power outlet and allow power to dissipate for 5 minutes.
3. Remove control box cover.
4. On the main control board, disconnect the ribbon cable. To enable BlueLink, re-connect this cable.



5. Reassemble control box cover.

Maintenance

Routine maintenance is important to ensure proper operation of your sprayer. Maintenance includes performing routine actions which keep your sprayer in operation and prevents trouble in the future.



Perform **Pressure Relief Procedure**, page 12, before performing maintenance.

Activity	Interval
Inspect/clean sprayer filter, fluid inlet strainer, and gun filter.	Daily or each time you spray
Inspect motor shield vents for blockage.	Daily or each time you spray
Fill TSL by adding through TSL fill point.	Daily or each time you spray
Check sprayer stall. With sprayer gun NOT triggered, sprayer motor should stall and not restart until gun is triggered again. If sprayer starts again with gun NOT triggered, inspect pump for internal/external leaks and check prime valve for leaks.	Every 1000 gallons (3785 liters)
Throat packing adjustment When pump packing begins to leak after extended use, tighten packing nut down until leakage stops or lessens. This allows approximately 100 gallons of additional operation before a repacking is required. Packing nut can be tightened without O-ring removal.	As necessary based on usage



Maintenance can be scheduled and tracked via the Graco BlueLink app.

Recycling and Disposal at End of Life

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

Preparation:

- Perform the **Pressure Relief Procedure**, page 12.
- Drain and dispose of fluids according to applicable regulations. Refer to the material manufacturer's Safety Data Sheet.

Dismantle and recycle:

- Remove motors, circuit boards, displays, and other electronic components. Remove the coin-cell battery from the battery holder on the control board. Recycle according to applicable regulations.
- Do not dispose of electronic components with household or commercial waste.
- Deliver remaining product to a recycling facility.

Troubleshooting

Mechanical/Fluid Flow



1. Follow **Pressure Relief Procedure**, page 12, before checking or repairing.
2. Check all possible problems and causes before disassembling the unit.

Problem	What to Check If check is OK, go to next check	What to Do When check is not OK, refer to this column
Control board status light is blinking or the light is off and there is power to the sprayer.	Fault condition exists.	Determine fault correction from Electrical , page 30.
Pump output is low	Spray tip worn.	Follow Pressure Relief Procedure , page 12, then replace tip. See separate gun or tip manual.
	Spray tip clogged.	Relieve pressure. Check and clean spray tip.
	Paint supply.	Refill and reprime pump.
	Intake strainer clogged.	Remove and clean, then reinstall.
	Intake valve ball and piston ball are not seating properly.	Remove intake valve and clean. Check balls and seats for nicks; replace if necessary. See pump manual. Strain paint before using to remove particles that could clog pump.
	Fluid filter or tip filter is clogged or dirty.	Clean filter.
	Prime valve leaking.	Follow Pressure Relief Procedure , page 12, then repair prime valve.
	Verify pump does not continue to stroke when gun trigger is released. (Prime valve not leaking.)	Service pump. See pump manual.
	Leaking around throat packing nut which may indicate worn or damaged packings.	Replace packings. See pump manual. Also check piston valve seat for hardened paint or nicks and replace if necessary. Tighten packing nut/wet-cup.

Troubleshooting

Problem	What to Check If check is OK, go to next check	What to Do When check is not OK, refer to this column
Pump output is low	Pump rod damage.	Repair pump. See pump manual.
	Low stall pressure.	Turn pressure knob fully clockwise. Make sure pressure control knob is properly installed to allow full clockwise position. If problem persists, replace pressure transducer.
	Piston packings are worn or damaged.	Replace packings. See pump manual.
	O-ring in pump is worn or damaged.	Replace o-ring. See pump manual.
	Intake valve ball is packed with material.	Clean intake valve. See pump manual.
	Large pressure drop in hose with heavy materials.	Reduce overall length of hose.
	Check extension cord for correct size.	See Extension Cords , page 11.
Motor runs but pump does not stroke	Connecting rod assembly damaged. See pump manual.	Replace connecting rod assembly. See pump manual.
	Gears or drive housing damaged.	Inspect drive housing assembly and gears for damage and replace if necessary.
Excessive paint leakage into throat packing nut	Throat packing nut is loose.	Remove throat packing nut spacer. Tighten throat packing nut just enough to stop leakage.
	Throat packings are worn or damaged.	Replace packings. See pump manual.
	Displacement rod is worn or damaged.	Replace rod. See pump manual.
Fluid is spitting from gun	Air in pump or hose.	Check and tighten all fluid connections. Cycle pump as slowly as possible during priming.
	Spray tip is partially clogged.	Clear tip. See Clear Spray Tip Clog , page 19.
	Fluid supply is low or empty.	Refill fluid supply. Prime pump. See pump manual. Check fluid supply often to prevent running pump dry.

Problem	What to Check If check is OK, go to next check	What to Do When check is not OK, refer to this column
Pump is difficult to prime	Air in pump or hose.	Check and tighten all fluid connections. Cycle pump as slowly as possible during priming. Clean intake valve. Be sure
	Intake valve is leaking.	ball seat is not nicked or worn and that ball seats well. Reassemble valve. Replace pump packings. See
	Pump packings are worn.	pump manual. Thin the paint according to
	Paint is too thick.	supplier recommendations. Loosen pump packing nut.
Sprayer operates for 5 to 10 minutes then stops	Pump packing nut too tight. When pump packing nut is too tight the packings on the pump rod restrict pump action and overloads the motor.	Check for leaks around throat. If necessary, replace pump packings. See Pump manual.

Troubleshooting

Electrical

Symptom: Sprayer does not run, stops running, or will not shut off.



Perform **Pressure Relief Procedure**, page 12.

1. Plug sprayer into correct voltage, grounded outlet.
2. Turn the ON/OFF switch **OFF** wait 30 seconds and then turn power back **ON** again (this ensures sprayer is in normal run mode).
3. Turn pressure control knob clockwise 1/2 turn.

4. Remove control box cover to view control board status light. To determine which code (or any other code besides voltage supply) refer to the control board status light. Turn the ON/OFF switch **OFF**, remove the control cover then turn power back **ON**. Observe the status light. Blinking LED total count equals the error code (for example: two blinks equals CODE 02).



Keep clear of electrical and moving parts during troubleshooting procedures. To avoid electrical shock hazards when covers are removed for troubleshooting, wait 5 minutes after disconnecting power cord for stored electricity to dissipate.


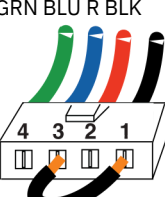
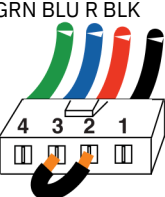
Error Code Messages

CODE	MESSAGE	ACTION
02	HIGH PRESSURE DETECTED - RELIEVE PRESSURE	Check for clogs. Use only Graco spray hoses, use a minimum of 50ft/15m.
03	PRESSURE TRANSDUCER NOT DETECTED	Check transducer connection.
05	MOTOR NOT SPINNING	Check for mechanical failure and check motor connections. Material may be too thick, thin material.
06	MOTOR OVERHEATED	Turn sprayer OFF. Check motor connections. Check shroud vents for blockage. Sprayer may take up to an hour to cool.

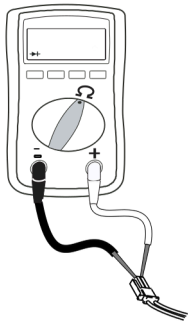
Problem	What to Check	How to check
Sprayer does not run at all AND Control board status light never lights	See flow chart, page 35.	
Sprayer does not shut off AND Control board status light blinks 2 times repeatedly	Control board.	Replace control board.
Sprayer does not run at all AND Control board status light blinks 2 times repeatedly	Check transducer or transducer connections	<p>Make sure there is no pressure in the system (see Pressure Relief Procedure, page 12). Check fluid path for clogs, such as clogged filter.</p> <p>Use airless paint spray hose with no metal braid. A small hose or metal braid hose may result in high-pressure spikes.</p> <p>Turn ON/OFF switch OFF and disconnect power to sprayer. Check transducer and connections to control board.</p> <p>Disconnect transducer from control board socket. Check that transducer and control board contacts are clean and secure.</p> <p>Reconnect transducer to control board socket. Connect power, turn ON/OFF switch ON and control knob 1/2 turn clockwise. If sprayer does not run properly, turn ON/OFF switch OFF and go to next step.</p> <p>Install new transducer. Connect power, turn ON/OFF switch ON and control knob 1/2 turn clockwise. Replace control board if sprayer does not run properly.</p>

Troubleshooting

Pr oblem	What to Check	How to check
Sprayer does not run at all AND Control board status light blinks 3 times repeatedly	Check transducer or transducer connections (control board is not detecting a pressure signal).	Turn ON/OFF switch OFF and disconnect power to sprayer. Check transducer and connections to control board. Disconnect transducer from control board socket. Check to see if transducer and control board contacts are clean and secure. Reconnect transducer to control board socket. Connect power, turn ON/OFF switch ON and control knob to 1/2 turn clockwise. If sprayer does not run, turn ON/OFF switch OFF and go to next step. Connect a confirmed working transducer to control board socket. Turn ON/OFF switch ON and control knob to 1/2 turn clockwise. If sprayer runs, install new transducer. Replace control board if sprayer does not run. Check transducer resistance with an ohmmeter (less than 9k ohm between red and black wires and 3-6k ohm between green and yellow wires).
Sprayer does not run at all AND Control board status light blinks 5 times repeatedly	Control is commanding motor to run but motor shaft does not rotate. Possibly locked rotor condition, an open connection exists between motor and control, there is a problem with motor or control board, or motor amp draw is excessive.	1. Remove pump and try to run sprayer. If motor runs, check for locked or frozen pump or drive train. If sprayer does not run, continue to step 2. 2. Turn ON/OFF switch OFF and disconnect power to sprayer. 3. Disconnect motor connector(s) from control board socket(s). Check that motor connector and control board contacts are clean and secure. If contacts are clean and secure, continue to step 4. 4. Set sprayer to OFF and spin motor fan 1/2 turn. Restart sprayer. If sprayer runs replace control board. If sprayer does not run, continue to step 5.

Problem	What to Check	How to check
		<p>5. Perform Spin Test: Test at large 4-pin motor field connector. Disconnect fluid pump from sprayer. Test motor by placing a jumper across pins 1 & 2. Rotate motor fan at about 2 revolutions per second. A cogging resistance to motion should be felt at the fan. The motor should be replaced if no resistance is felt. Repeat for pin combinations 1 & 3 and 2 & 3. Pin 4 (the green wire) is not used in this test. If all spin test is positive, continue to step 6.</p> <p>STEP 1:</p>  <p>STEP 2:</p>  <p>STEP 3:</p>  <p>6. Perform Field Short Test: Test at large 4-pin motor field connector. There should not be continuity from pin 4, the ground wire, and any of the remaining 3 pins. If motor field connector tests fail, replace motor.</p> <p>7. Reconnect motor connector(s) to control board socket(s). Connect power, turn ON/OFF switch ON and control knob to 1/2 turn clockwise. If motor does not run, replace control board.</p>

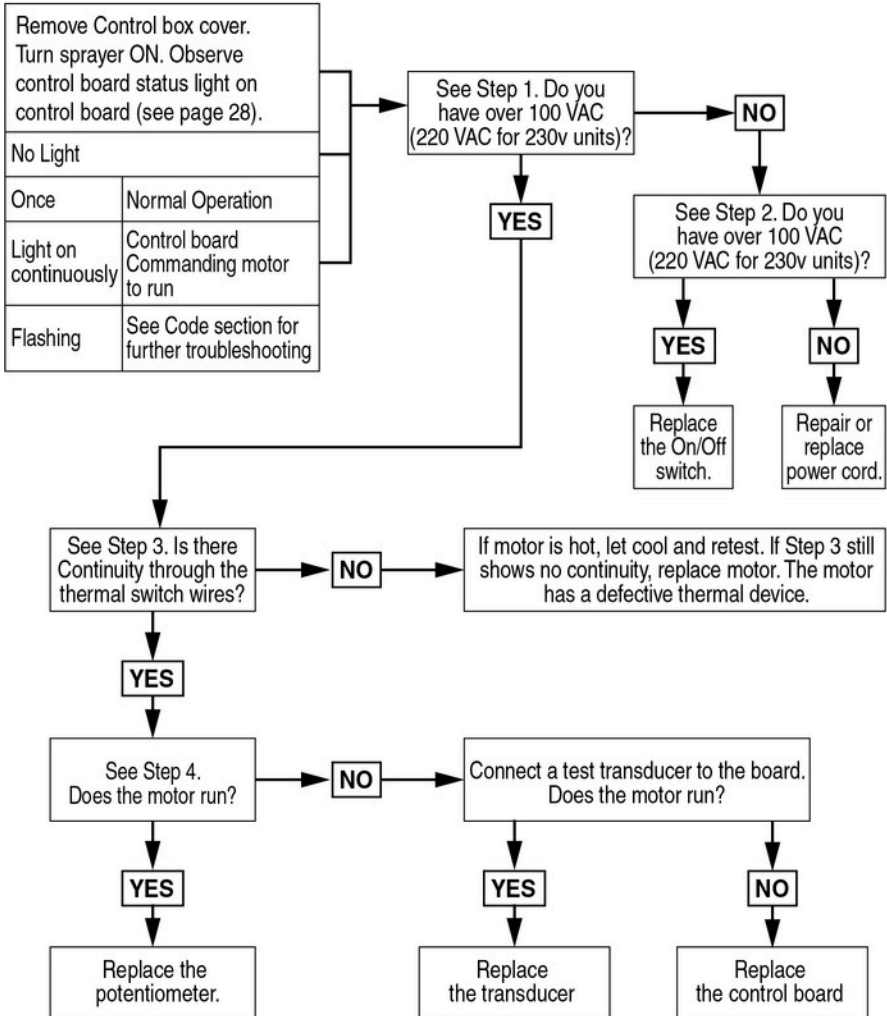
Troubleshooting

Pr oblem	What to Check	How to check
Sprayer does not run at all AND Control board status light blinks 6 times repeatedly	Motor is hot or there is a fault in the motor thermal device.	<p>Allow sprayer to cool. If sprayer runs when cool, correct cause of overheating. Keep sprayer in cooler location with good ventilation. Make sure motor air intake is not blocked. If sprayer still does not run, replace motor.</p> <p>NOTE: Motor must be cooled down for the test.</p> <ol style="list-style-type: none"> 1. Check thermal device connector (yellow wires) at control board. 2. Disconnect thermal device connector from control board socket. Make sure contacts are clean and secure. Measure resistance of the thermal device. If reading is not correct, replace motor.
		<p>Check Motor Thermal Switch:</p> <p>Unplug thermal wires. Set meter to ohms. Meter should read 100k ohms.</p>  <ol style="list-style-type: none"> 3. Reconnect thermal device connector to control board socket. Connect power, turn sprayer ON and control knob 1/2 turn clockwise. If sprayer does not run, replace control board.
Basic electrical problems	Motor leads are securely fastened and properly mated	<p>Replace loose terminals; crimp to leads. Be sure terminal are firmly connected.</p> <p>Clean circuit board terminals.</p> <p>Securely reconnect leads.</p>
	Motor armature commutator for burn spots, gouges or extreme roughness.	<p>Remove motor and have motor shop resurface commutator if possible.</p>

Electrical cont...

Sprayer Will Not Run

(See following page for steps)

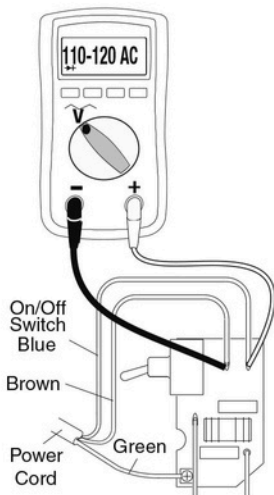


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Troubleshooting

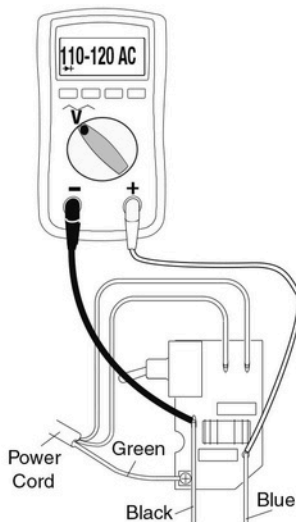
Step 1:

Plug Power cord in and turn switch ON.
Connect probes to control board. Turn
meter to AC Volts.



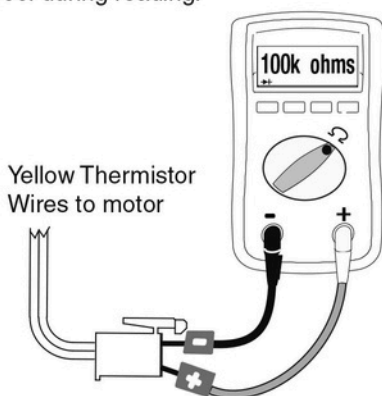
Step 2:

Plug Power cord in and turn switch
ON. Connect probes to control board.
Turn meter to AC Volts



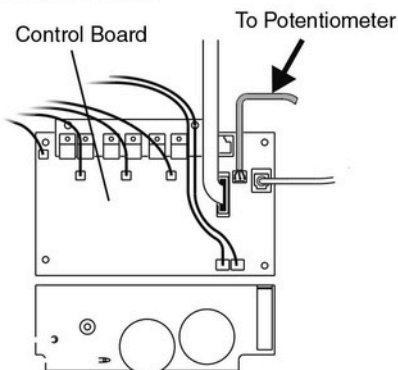
Step 3:

Check motor thermal switch. Unplug
yellow wires. Meter should read
100k ohms. NOTE: Motor should be
cool during reading.



Step 4:

Disconnect potentiometer.
Plug power cord in and
turn switch ON.



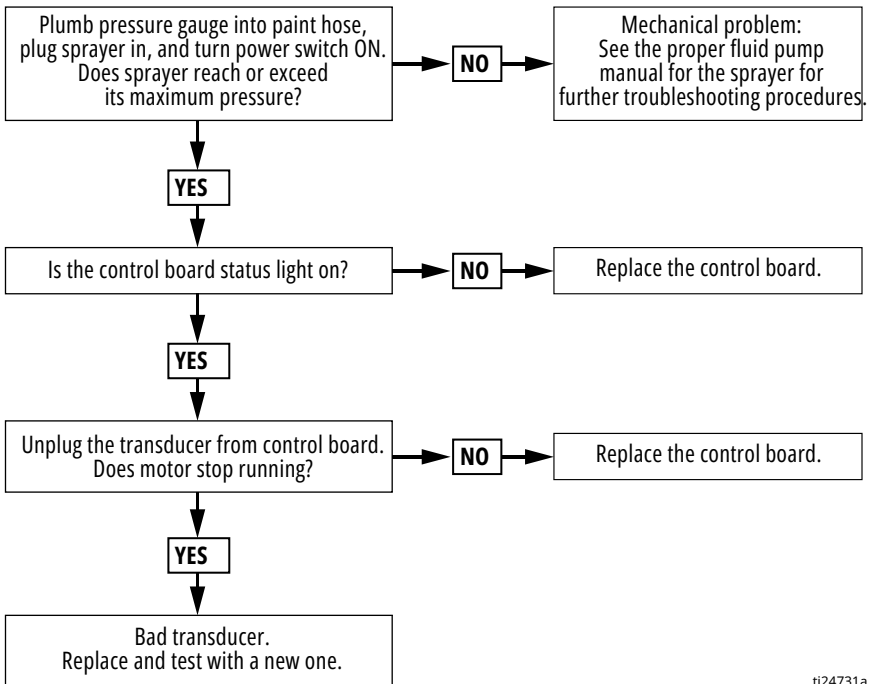
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Electrical cont...

Sprayer Will Not Shut Off

1. Perform **Pressure Relief Procedure**, page 12. Leave prime valve open (down) and turn ON/OFF switch **OFF**.
2. Remove control box cover so the control board status light can be viewed if available.

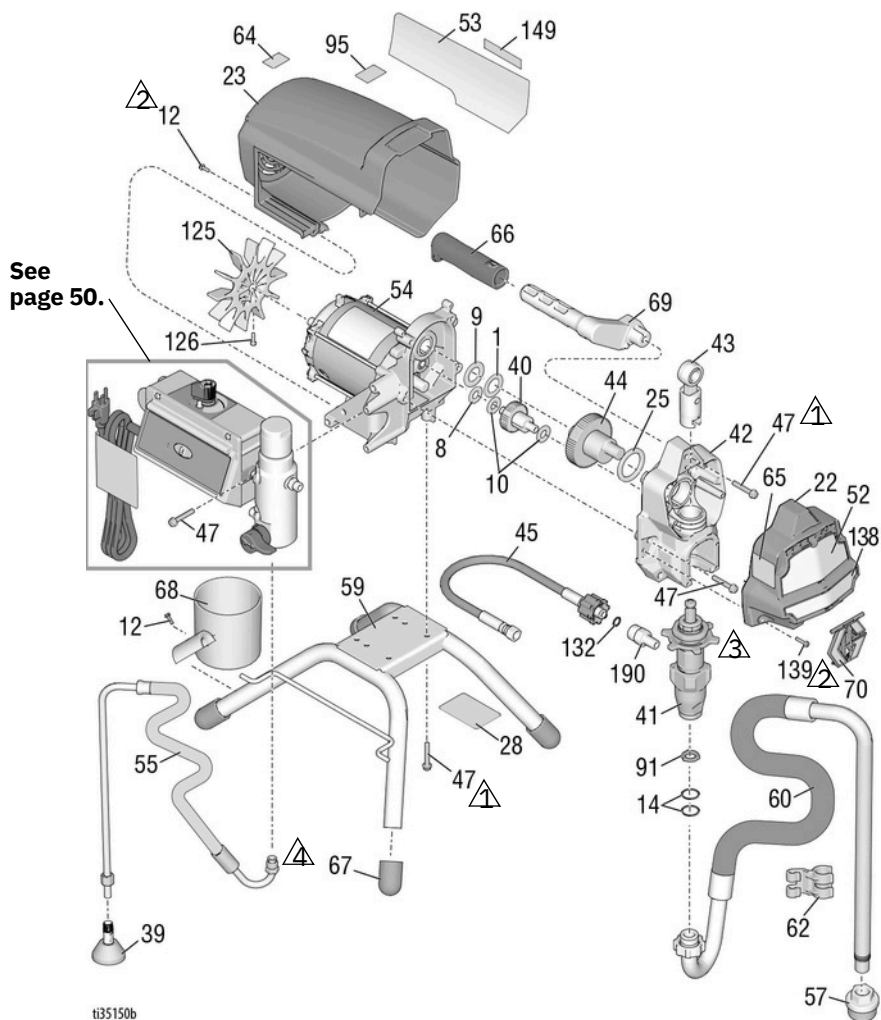
Troubleshooting Procedure



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490/495/395EU Stand Sprayers

Ref.	Torque
①	140-160 in-lb (15.8 - 18.1 N•m)
②	23-27 in-lb (2.6 - 3.0 N•m)
③	Hammer Tight
④	20-30 ft-lb (33.9 - 40.7 N•m)



490/495/395EU Stand Sprayers

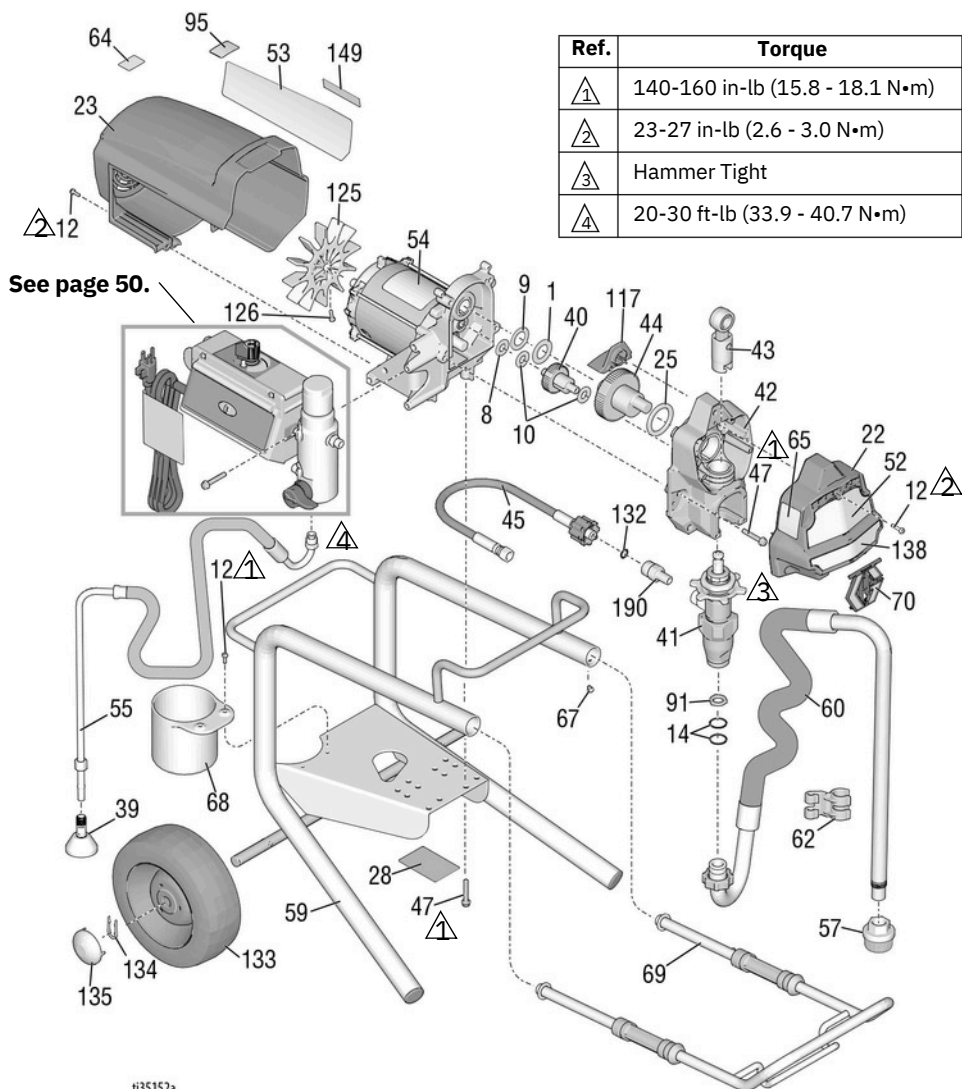
490/495/395EU Stand Sprayers Parts List

Ref. Part	Description	Qty.	Ref. Part	Description	Qty.
1 8 107434	BEARING, thrust	1	55 246381	HOSE, drain, stand, <i>includes 39, 62</i>	1
9 10 116073	WASHER, thrust	1	57 276897	STRAINER, 7/8-14 unf	1
12 116074	WASHER, thrust	1	59 19Y413	KIT, frame, standmount, <i>Includes 67</i>	1
116079	BEARING, thrust	2	60 246386	KIT, hose suction, <i>includes 14, 57, 62</i>	1
14 117501	SCREW, mach, hex	9	61		
22 117559	washer hd	2	62		
23 17C541	O-RING	1		See page GUN, spray (not shown)	1
25 187900	COVER, front, painted	1	48		
28 180131	SHIELD, motor, painted <i>includes 12</i>	1	276888	CLIP, drain line	1
	BEARING, thrust	1	63▲	See page LABEL, warning	1
33	LABEL, Identification, trans parent	2	48		
34▲	FLUID, TSL (not shown)	1	64▲16G596	LABEL, warning (Europe)	1
39 238049	See page CARD, medical alert (not shown)	1	65▲	See page LABEL, warning	1
40 48	DEFLECTOR, threaded	1	66 116139	GRIP, handle	4
41 241920	GEAR, reducer	1	67 15G857	CAP, leg	1
249194	PUMP, displacement, PC	1	68 15G838	CUP, suction/drain	1
17C487	North America		69 287072	HANDLE, sprayer, <i>includes 47, 66</i>	1
17C488	Asia/ANZ/Japan/TW/Korea		70 17C483	COVER, pump rod	1
	17C489 Europe		91 115099	WASHER, hose	1
4 24W817	HOUSING, drive, PC, <i>includes 10, 47</i>	1	95 15Y118	LABEL, made in the USA	1
2 24W640	ROD, connecting, PC	1	125 287898	KIT, fan, includes 126	1
24X020	KIT, repair, crankshaft, <i>includes 25</i>	1	126 115477	SCREW, mach, torx	1
4 24W830	KIT, hose, cpld, PC, <i>includes 132</i>	1	132 16H137	O-RING, FX-90	3
3	See page HOSE, cpld, 1/4 in. x 50 ft (not shown)	1	139 127914	SCREW, mach, slot, hex	1
4 117493	washer hd	13	149 17P924	LABEL, home center 490, 495	
5	See page LABEL, front,			17P925 395EU	
4	See page upper/lower	1	190 17C231	FITTING, pump, 1/4 NPT	1
6	LABEL, side	1	206994	FLUID, TSL, 8 oz. (not shown)	1
4	MOTOR, <i>includes 1, 8, 9, 10, 125, 126</i>	1			
	287805 490/495/395EU				
7					
5					
2					
5					
3					
5					
4					

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

490/495/595 Lo-Boy Sprayers

490/495/595 Lo-Boy Sprayers



490/495/595 Lo-Boy Sprayers

490/495/595 Lo-Boy Sprayers Parts List

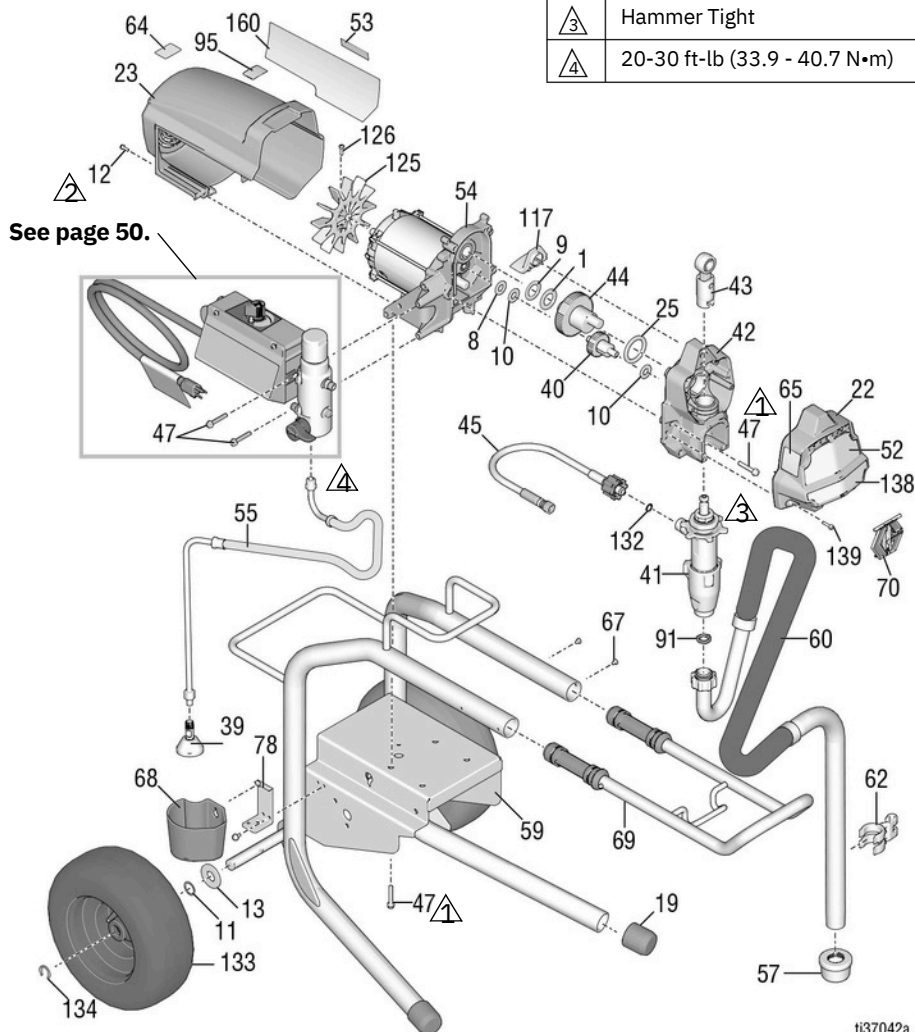
Ref. Part	Description	Qty.	Ref. Part	Description	Qty.
1 8 107434	BEARING, thrust	1	28780	Model 595	1
9 10 116073	WASHER, thrust	1	55 7	HOSE, drain, stand,	
12 116074	WASHER, thrust	1	57 24638	<i>includes 39, 62</i>	1
14 116079	BEARING, thrust	2	59 1	STRAINER, 7/8-14 unf	1
117501	SCREW, mach, hex	10	60 27689	FRAME, cart, lo	1
22 117559	washer hd		61 7	KIT, hose suction,	
23 17C541	O-RING	2		<i>includes 14, 57, 62</i>	1
287900	COVER, front, painted	1	62 24625	See page GUN, spray (not shown)	
25 180131	SHIELD, motor, painted	1	24638		1
28	<i>includes 12</i>		276888	CLIP, drain line	1
34	BEARING, thrust	1	63▲ See page LABEL, warning		1
	LABEL, identification,	2	48		1
▲	See page CARD, medical alert (not shown)	1	64▲ 16G596	LABEL, warning (Europe)	1
39 241920	DEFLECTOR, threaded	1	65▲ See page LABEL, warning		4
40 249194	GEAR, reducer	1	48		1
41 17C487	PUMP, displacement, PC	1	67 109032	SCREW, mach hd., pnh	1
17C488	North America		68 15B870	CUP, suction/drain	1
24W817	HOUSING, drive, PC,		69 70 287488	HANDLE, assembly, lo	1
4 24W640	<i>includes 10, 47</i>	1	91 17C483	cart	1
2	ROD, connecting, PC	1	95 115099	COVER, pump, rod	1
4	KIT, repair, crankshaft,	1	117 15Y118	WASHER, hose	1
	<i>includes 25</i>		125 15G447	LABEL, made in the USA	1
24X020	Models 490/495		126 287898	PLUG, shield painted	1
24X021	Model 595		132 115477	KIT, fan, includes 126	1
24W83	KIT, hose, cpld, PC,	1	133 16H137	SCREW, mach hd., torx	1
0	<i>includes 132</i>		134 195766	O-RING, FX-90	2
5 See page	HOSE, cpld, 1/4 in. x 50 ft	1	135 15B999	WHEEL, semi pneumatic	2
48	(not shown)		149 104811	CLIP, retaining	2
4 117493	SCREW, mach, hex	12	190 17P924	CAP, hub	1
	washer hd		206994 17C487	LABEL, home center	1
62▲ See page	LABEL, front,	1	17C487	FITTING, pump, 1/4 NPT	1
48	upper/lower				
4 ▲ See page	LABEL, side	1			
48					
3	MOTOR, <i>includes 1, 8, 9, 10, 125, 126</i>	1			
5 287805	Models 490/495				
4					

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

650 Lo-Boy Sprayer

650 Lo-Boy Sprayer

Ref.	Torque
△1	140-160 in-lb (15.8 - 18.1 N•m)
△2	30-35 in-lb (3.4 - 4.0 N•m)
△3	Hammer Tight
△4	20-30 ft-lb (33.9 - 40.7 N•m)








650 Lo-Boy Sprayers Parts List

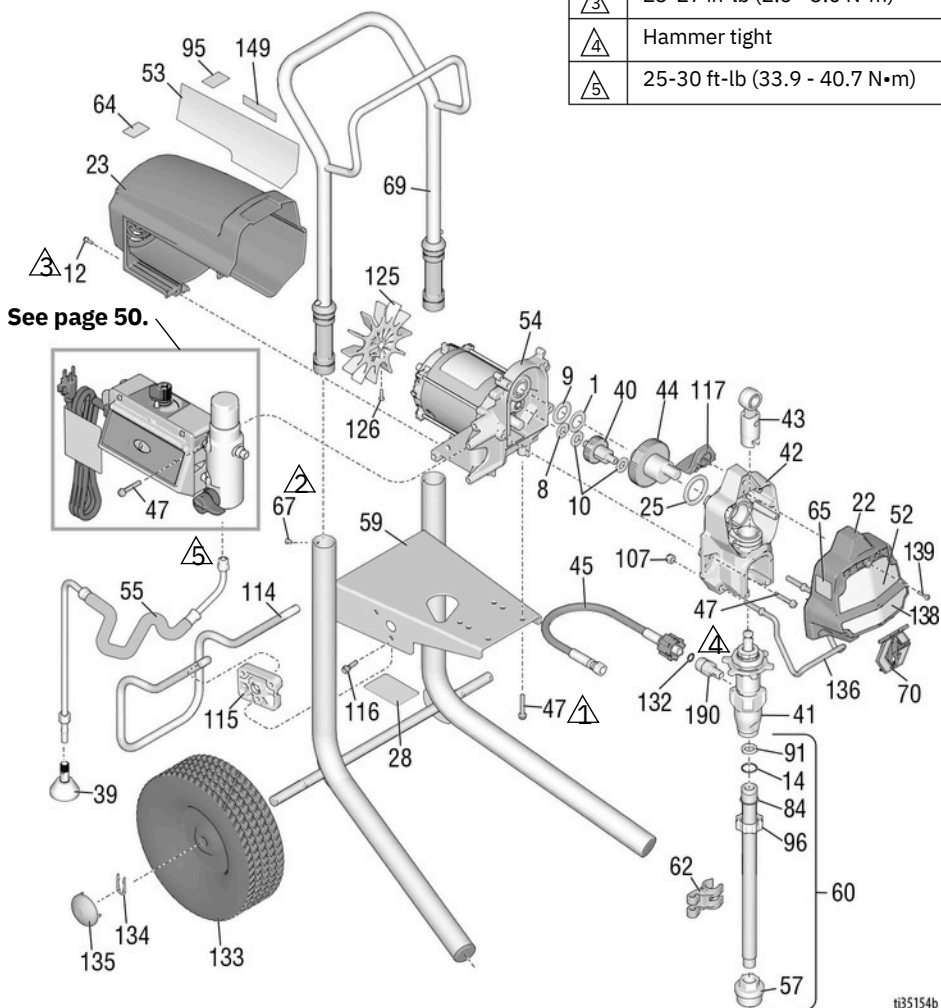
Ref. Part	Des cri pt io n	Qty.	Ref. Part	D escri pt i on	Qty.
1	107434	1	5	24Y424	1
8	116073	1	9	248216	1
9	116074	1	6	See page GUN, spray (not shown)	1
10	116079	2	0	48	1
11	116038	2	6	15D000	1
12	117501	8	63▲	See page LABEL, warning	1
	156306		6	48	1
13	15C871	2	64▲	16G596	1
19	17C541	2	65▲	See page LABEL, warning	1
22	287900	1	48		4
23	180131	1	67	109032	1
25		1	68	276975	1
	BEARING, thrust	1	69	24A249	1
34▲	See page CARD, medical alert (not shown)	1	70	17C483	1
39	48	1	78	15F952	1
40	241920	1	91	115099	1
41	249194	1	95	15Y118	1
42	19Y298	1	117	15G447	1
43	24W817	1	125	287898	1
44	24W640	1	126	115477	1
	includes 10, 47		132	16H137	1
44	300001	1	133	119420	2
45	24W830	1	134	15E891	2
	117493		139	127914	3
47	See page HOSE, coupled, 1/4 in., includes 132	12	160	17P924	1
	48			LABEL, home center	
	See page SCREW, mach, hex washer hd	1	206994	FLUID, TSL, 8 oz. (not shown)	1
52▲	48	1			
	LABEL, front				
52▲	287807	1			
	LABEL, side				
53▲	248217	1			
	MOTOR, includes 1, 8, 9, 10, 125, 126				
54	112604	1			
	HOSE, drain, stand, includes 39				
55		1			
	STRAINER				
57					

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

490/495/595/395EU Hi-Boy Sprayers

490/495/595/395EU Hi-Boy Sprayers

Ref.	Torque
 1	140-160 in-lb (15.8 - 18.1 N•m)
 2	30-35 in-lb (3.4 - 4.0 N•m)
 3	23-27 in-lb (2.6 - 3.0 N•m)
 4	Hammer tight
 5	25-30 ft-lb (33.9 - 40.7 N•m)








490/495/595/395EU Hi-Boy Sprayers

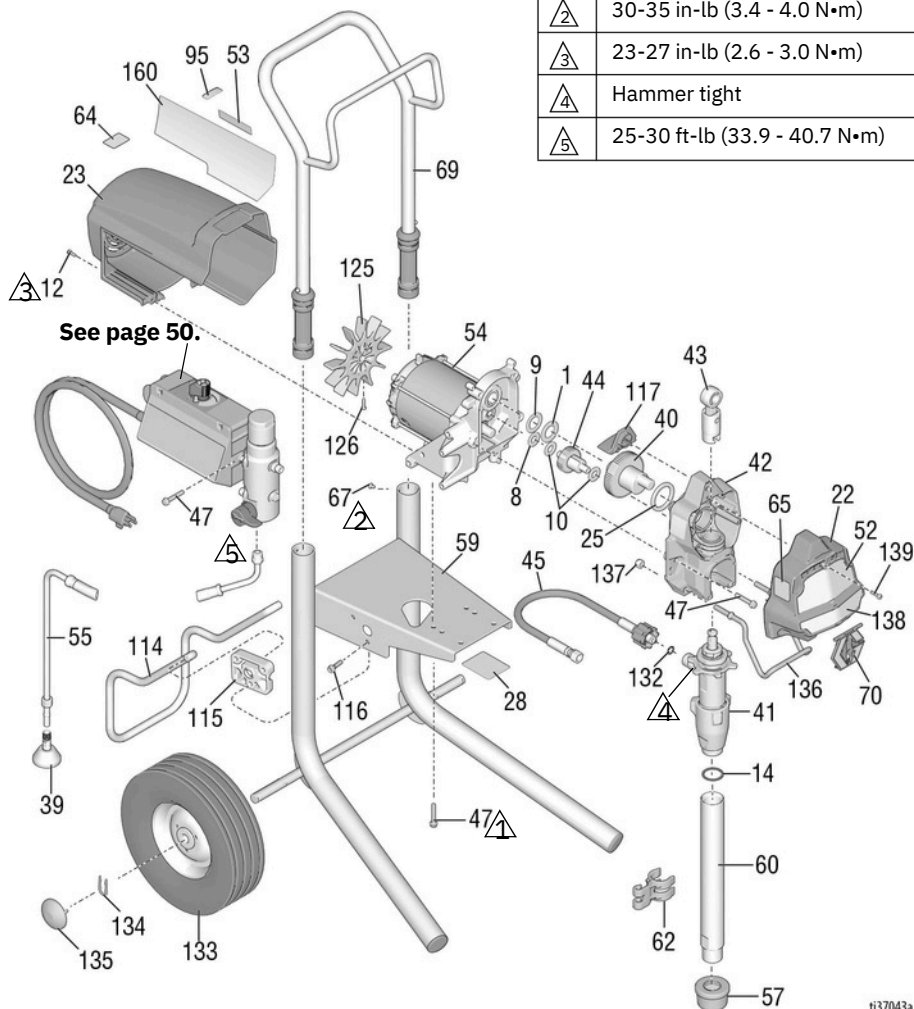
490/495/595/395EU Hi-Boy Sprayers Parts List

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
1	8	107434	BEARING, thrust	1	60	61172902	SEE PAGE 48, includes
9	10	116073	WASHER, thrust	1	warning	14, 57, 84, 91, 96	1
12		116074	WASHER, thrust	1		See page GUN, spray (not shown)	1
14		116079	BEARING, thrust	2	48		1
22		117501	SCREW, mach, hex	8	276888	CLIP, drain line	1
23		103413	washer hd	1			1
25		17C541	PACKING, O-ring	1	48		1
28		287900	COVER, front, painted	1	64	16G596	LABEL, warning (Europe)
33		180131	SHIELD, motor, painted	1	65	See page LABEL, warning	1
34			includes 12	1	48		1
▲			BEARING, thrust	1	67	109032	SCREW, mach, pan hd
39			LABEL, identification,	1	69	287489	HANDLE, assembly, hi cart
40			transparen t	1	70	17C483	COVER, pump rod
41			FLUID, TSL (not shown)	1	84	15B652	WASHER, suction
	238049			1	91	115099	WASHER, hose
	See page 48	CARD, medical alert (not shown)		95	15Y118	LABEL, made in the USA	1
	241920	DEFLECTOR, threaded		96	15E813	NUT, jam	2
	249194	GEAR, reducer		10	111040	NUT, lock, insert, nylock,	4
	17C487	PUMP, displacement, PC		7	15D281	5/16	1
	17C488	North America		11	15C982	HANGER, stand (on select	3
		Asia/ANZ/Japan/TW/Korea		4	114531	mo de ls)	1
	17C489	Europe		11	15G447	CAM, cart (on select	
4	24W81	HOUSING, drive, PC,	1	5	118852	mo de ls)	
2	7	includes 10, 47	1	11	287253	SCREW, mch, hex (on	
4	24W64	ROD, connecting, PC	1	6		select models)	
3	0	KIT, repair, crankshaft,		11		PLUG, shield, painted	
4		includes 25		7		SCREW, thrd. forming (on	
4	24X020	Models 395EU/490/495		12		select models, not shown)	
	24X021	Model 595		2		KIT, tool box, includes 122	
4	24W83	KIT, hose, cpld, PC,	1	12		(on select models, not	
	0	includes 132		3		shown)	
5	See page 48	HOSE, cpld, 1/4 in. x 50 ft	1	12	287898	KIT, fan, includes 126	
4	117493	SCREW, mach, hex	12	5	115477	SCREW, mach, torx	1
		washer hd		12	16H137	O-RING, FX-90	1
62	▲	See page 48	1	6	106062	CLIP, retaining	2
43	▲	See page 48	1	13	15B999	CAP, hub	2
34		MOTOR, includes 1, 8, 9,	1	2	104811	HANGER, pail, threaded	2
		10, 125, 126		13	17C990	SCREW, mach, slot, hex	1
				3	127914	LABEL, home center	3
				13			1
	287805	490/495/395EU		4	17P924	490/495/595	
	287807	595		13	17P925	395EU	
5	287952	HOSE, drain, includes 39	1	5			
5	276897	STRAINER, 7/8-14 UNF	1	13	206994	FLUID, TSL, 8 oz. (not shown)	1
5	17C485	FRAME, cart, hi	1	▲	Replacement safety labels, tags, and cards		
7				are available at no cost.			
5				9			
9							

650 Hi-Boy Sprayer

650 Hi-Boy Sprayer

Ref.	Torque
 1	140-160 in-lb (15.8 - 18.1 N•m)
 2	30-35 in-lb (3.4 - 4.0 N•m)
 3	23-27 in-lb (2.6 - 3.0 N•m)
 4	Hammer tight
 5	25-30 ft-lb (33.9 - 40.7 N•m)



650 Hi-Boy Sprayers Parts List

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
1	8	107434	1	59	60	1706253	1
9	10	116073	1	61	1706253	▲ See page 14	1
12		116074	1	62	1706253	▲ See page 14	1
14		116079	2	63	1706253	▲ See page 14	1
22		117501	8	64	16G596	LABEL, warning (Europe)	1
23		118494	1	65	1706253	▲ See page 14	1
25		17C541	1	66	1706253	▲ See page 14	1
28		287900	1	67	109032	SCREW, pan hd HANDLE,	2
33		180131	1	69	287489	assembly, hi- ca rt	4
34			2	70	17C483	COVER, pump rod LABEL,	1
▲			1	95	15Y118	made in the USA	1
39			1	114	15D281	HANGER, stand CAM, cart	1
40			1	115	15C982	SCREW, mch, hex PLUG,	1
41			1	116	114531	shield, painted KIT, fan,	2
42	238049	FLUID, TSL (not shown)	1	117	15G447	includes 126 SCREW,	2
43	See page 48	CARD, medical alert (not shown)	1	125	287898	mach, torx O-RING, FX-	2
44			1	126	115477	90 WHEEL, semi	1
45	241920	DEFLECTOR, threaded	1	132	16H137	pneumatic CLIP, retaining	2
46	249194	GEAR, reducer	1	133	106062	CAP, hub HANGER PAIL,	3
47	19Y298	PUMP, displacement, PC	1	134	15B999	threaded NUT, lock.	1
	24W817	HOUSING, drive, PC,	12	135	104811	insert, nylock, 5/16	1
	24W640	includes 10, 47	1	136	17C990	SCREW, mach, slot, hex	1
	300001	ROD, connecting, PC	1	137	111040	LABEL, home center	1
	24W830	KIT, repair, crankshaft,	1	139	127914		
		includes 1, 9, 25	1	160	17P924		
		KIT, hose, cpld, PC,	1	206994	FLUID, TSL, 8 oz. (not shown)		
		includes 132	1				
	See page 48	HOSE, cpld, 1/4 in. x 50 ft (not shown)	1				
	117493	SCREW, mach, hex washer hd	1				
52	▲	See page 48	1				
5	▲	LABEL, front, upper/lower	1				
3		See page 48	1				
5		LABEL, side	1				
5		MOTOR, includes 1, 8, 9,	1				
4		10, 125, 126	1				
5		HOSE, drain, includes 39	1				
5			1				
5			1				
7		189920 STRAINER	1				

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

Accessories and Labels





Sprayer Model	Ref. 34 Card, Medical Alert	Ref. 46 Hose, 1/4 in. x 50 ft	Ref. 52 Label, Front Upper/Lower	Ref. 53 Label, Side	Ref. 61 Gun, Spray	Ref. 63 Label, Warning	Ref. 65 Label, Warning
82 62 43 82 62 44 82 62 45	222385 #	82 60 79	1 7E9 47 / 1 7E 94 5	1 7E9 48	826291	15H085 #	195793 &
82 62 46 82 62 47 82 62 48	222385 #	82 60 79	1 7E9 47 / 1 7E 94 5	1 7E9 51	826291	15H085 #	195793 &
82 62 49 82 62 50	222385 #	82 60 79	1 7E9 47 / 1 7E 95 2	1 7E9 54	826291	15H085 #	195793 &
82 62 58 82 62 59	222385 #	82 60 79	1 7E9 47 / 1 9Y 23 1	1 9Y2 31	826291	15H085 #	195793 &
19 Y1 28 19 Y1 29	222385 #	24 07 94	1 7E9 44 / 1 9Y 23 1	1 9Y2 33	1 7Y0 43	15H085 #	195793 &
19 Y3 59 19 Y3 61	222385 #	24 07 94	1 7E9 44 / 1 9Y 23 1	1 9Y2 33	1 7Y0 43	n/a	n/a
19 Y3 60 19 Y3 62	222385 #	24 07 94	1 7E9 44 / 1 9Y 23 1	1 9Y2 33	1 7Y0 43	n/a	n/a
19 Y4 24 17 E8 52 17 E8 53 17 E8 54	17A134 ❖	24 07 94	1 7E9 44 / 1 9Y 23 1	1 9Y2 33	2 6D8 46	15H087 ❖	195792 @
17 E8 55 17 E8 56 17 E8 57	222385 #	24 07 94	1 7E9 44 / 1 7E 94 5	1 7E9 46	1 7Y0 43	15H085 #	195793 &
17 E8 58 17 E8 59	222385 #	24 07 94	1 7E9 44 / 1 7E 95 2	1 7E9 53	1 7Y0 43	15H085 #	195793 &
17 E8 64 17 E8 65	222385 #	24 07 94	1 7E9 67 / 1 7E 96 1	1 7E9 70	1 7Y0 43		
17 E8 71 17 E8 72 17 E8 73 17 E8 74 17 E8 75 17 E8 76	222385 #	24 07 94	1 7E9 67 / 1 7E 94 5	1 7E9 71	1 7Y0 43	n/a	n/a
17 E8 77 17 E8 78	222385 #	24 07	1 7E9 67 / 1 7E 96 1	1 7E9 71	1 7Y0 43	n/a	n/a
17 E8 87 17 E8 89 17 E8 91	17A134 ❖	07 94	7E 94 5 1 7E9 44	7E9 46	7Y0 44	15H087 ❖	195792 @
17 E8 92 17 E8 96 17 E8 97	17A134 ❖	24 07 94	1 7E9 44 / 1 7E 95 2	1 7E9 53	2 6D8 46	15H087 ❖	195792 @
26 C9 70 26 C9 74	17A134 ❖ 26A997 ★	24 07 94	1 7E9 44 / 1 9Y 23 1	1 7E9 46	1 7Y0 44	15H087 ❖ 26A971 ★	195792 @ 26A793 ★
2 6C7 7 2 6C7 6	17A134 ❖ 26A997 ★	24 07 94	1 7E9 44 / 1 7E 94 5	1 7E9 50	2 6D8 46	15H087 ❖ 26A971 ★	195792 @ 26A793 ★
26 C9 79 17 Y4 24	17A134 ❖ 26A997 ★	24 07 94	1 7E9 44 / 1 9Y 23 1	1 9Y2 33	1 7Y0 44	15H087 ❖ 26A971 ★	195792 @ 26A793 ★

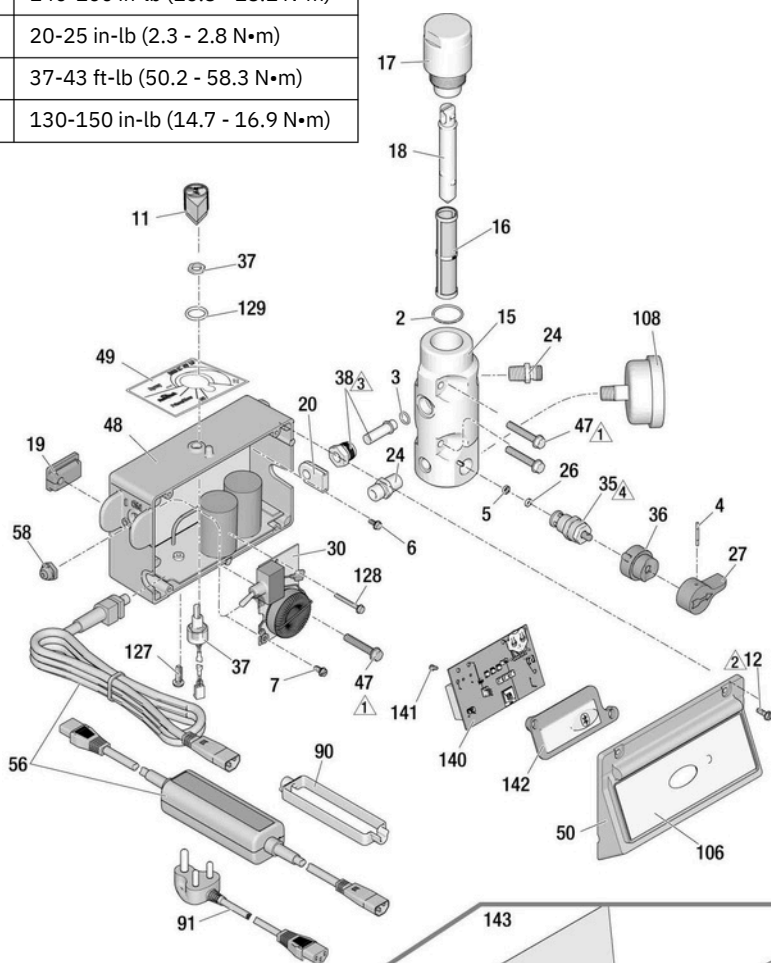
Accessories and Labels

Sprayer Model	Ref. 34 Card, Medical Alert	Ref. 46 Hose, 1/4 in. x 50 ft	Ref. 52 Label, Front, Upper/Lower	Ref. 53 Label, Side	Ref. 61 Gun, Spray	Ref. 63 Label, Warning	Ref. 65 Label, Warning
26C971	26A998*	240794 17E944/19Y232 17E946 26D846	15H086* 195792@				
26C975	26A998*	240794 17E944/17E949 17E950 26D846	15H086* 195792@				
26C978	26A998*	240794 17E944/17E592 17E953 26D846	15H086* 195792@				
26C980	26A998*	240794 17E944/19Y232 19Y233 26D846	15H086* 195792@				
288526 – Kit, accessory, hopper							
# – English, Spanish, French			@ – Asia Pacific				
❖ – English, Chinese, Korean			✓ – Europe				
& – North America			* – English, Chinese, Japanese				
★ – English, Indonesian, Hindi							
▲ Replacement safety labels, tags, and cards are available at no cost.							

Control Box

Control Box

Ref.	Torque
 1	140-160 in-lb (15.8 - 18.1 N•m)
 2	20-25 in-lb (2.3 - 2.8 N•m)
 3	37-43 ft-lb (50.2 - 58.3 N•m)
 4	130-150 in-lb (14.7 - 16.9 N•m)



637220c

Control Box Parts List

Ref. Part	Description	Qty.	Ref. Part	Description	Qty.
2 117828	PACKING, o-ring	1	❖ 19Y382	Display, 230V, 650 models	
3 111457	o-ring PIN, grooved	1	❖ 24W896	Display, 110V, UK,	
4 111600	seat, valve	1	4 17P731	490/495/595/650 models	
5 27 73 64	Phillips, pan	1	9	LABEL, pressure,	1
6 12 04 05	hd	5		adjustment, w/FastFlush	
7 12 38 50	SCREW, slot, hex, wash hd	1	5	COVER, control	1
11 116167	KNOB, potentiometer	1	0 17Y568	BlueLink	
12	SCREW, mach, hex washer	1		CORD, power	1
	hd	4	5 253367	US, 490/495 models	
	1/2", 120V models,		5 253371	US, 595/650 models	
	117501		6 253378	Japan	
15 17 Z21 6	US/Japan		253373	Multicord, Asia/ANZ	
	1-1/2", 110V UK and 230V	1	253369	CEE 7/7	
	(650 Models)		253370	Multicord, Europe	
	MANIFOLD, fluid		58 195428	BOOT, toggle	1
15 15 G45	One output port models		90 195551	RETAINER, plug, adapter	2
5 15	Two output port models			Multicord models	1
16 T811	FILTER, fluid	1		CEE 7/7 models	1
	30 mesh		91	CORD SET, adapter	
24 64 25	60 mesh, original			253368 UK	
24 63 84	100 mesh			242001 Europe	
24 63 82	200 mesh			242005 Australia	
1 24 63 83	KIT, repair, filter cap <i>includes</i>	1		287121 Italy, Denmark, Switzerland	
28 79 02	18			17N232 India	
7	INSERT, filter	1	92 242385	ADAPTER, Japan	1
15 B 071	BUSHING, control box	1	10 115523	LABEL, BlueLink	1
1 15 G56	GROMMET, transducer	1	6 120165	490/495/595 Models	1
8 15 B 120	NIPPLE, (1/4 npsm x 1/4 npt)	2		GAUGE, pressure, fluid (on	
16 24 53	SEAT, valve	1	10 120406	select models)	1
9 15 E 022	HANDLE, valve, drain	1	8 158674	SCREW, mach, Phillips, pan	1
2 18 76 25	BOARD, filter	1		hd	
0 28 79 11	120V, GFI, US/Japan		12 115522	SCREW, mach, hex washer	1
2 28 79 12	110V, UK			hd	1
4 28 79 12	230V		7 17Y405	O-RING, packing	1
2 28 79 13	VALVE, drain <i>includes</i> 5, 26	1	12	BOARD, control, BlueLink	2
2 23 99 14	BASE, valve	1		(490/495/595 models only)	
5 22 48 07	POTENTIOMETER, adj,	1	8	SCREW, mach, pan hd	1
3 22 48 07	pressure with nut	1	12	LENS, BlueLink	1
9 17 D8	TRANSDUCER, prs control,	1		(Models 490/495/595 only)	
3 24 32 22	<i>includes</i> 3	4	9	KIT, display, smart control	
7	SCREW, mach, hex washer		14 24W892	Domestic	
0	hd		14 287904	International	
3 117493	BOX, control board	1	14	KIT, ProGuard+, 230V models only	1
8 17 Z26 0	Bluetooth, 120V, 490/495			(not shown)	
	models, US/Japan		14 24W090	CEE 7/7	
4 17 Z26 1	Bluetooth, 120V, 595 models,		2 24W755	Multicord, IEC-320	
	US / Ja pan		14		
7 17 Z26 2	Bluetooth, 230V,				
	490/495/595 models				
4 17 Z26 3	Bluetooth, 110V, UK,				
	490/495/595 models				
8 24 W8 93	Display, 120V, 490/495				
	models, US/Japan				
† 24 W8 94	Display, 120V, 595 models,				
	US / Ja pan				
† 24 W8 95	Display, 230V, 490/495/595				
	models				
† 19 Y 365	Display, 120V, 650 models				

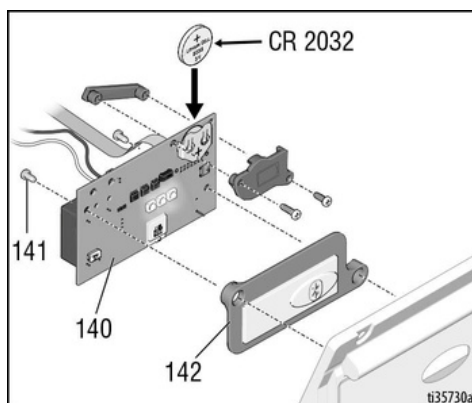
3 - Use battery CR2032 ‡ - Control boards (48 & 140) are a matched pair, if separated some BlueLink features will not function. Includes battery, 6, 7, 11, 19, 30, 37, 49, 50, 58, 106, 127, 128, 129, 140, 141, 142

❖ - Includes 6, 7, 11, 19, 30, 37, 49, 58, 127, 128, 129

Battery Replacement

Battery Replacement

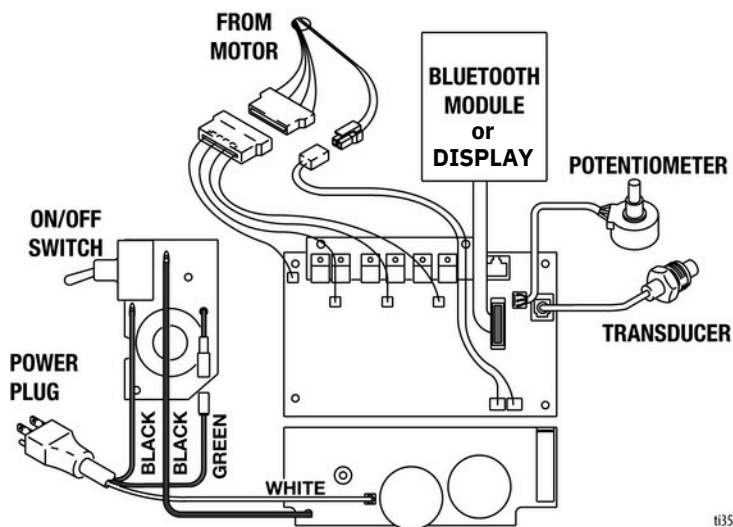
(BlueLink Units Only)



Wiring Diagrams

100V JP-TW/120V

Models 395EU, 490, 495, 595



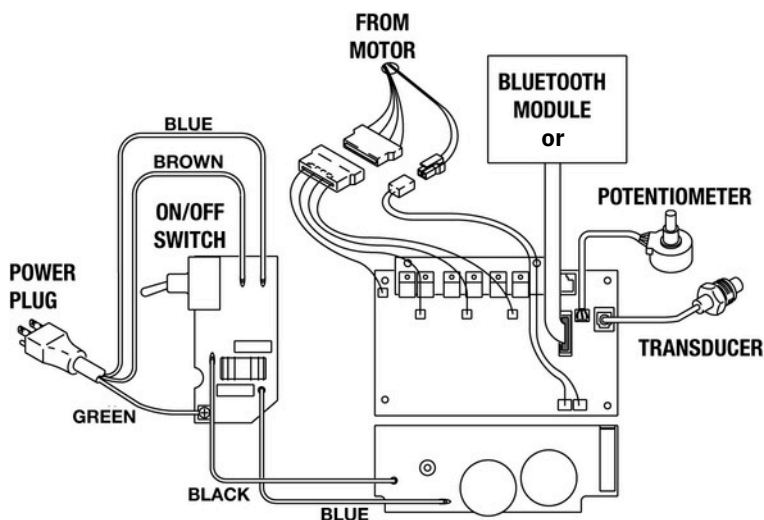
Wiring Diagrams

110V UK/230V

Models 490, 495, 595

NO TIE

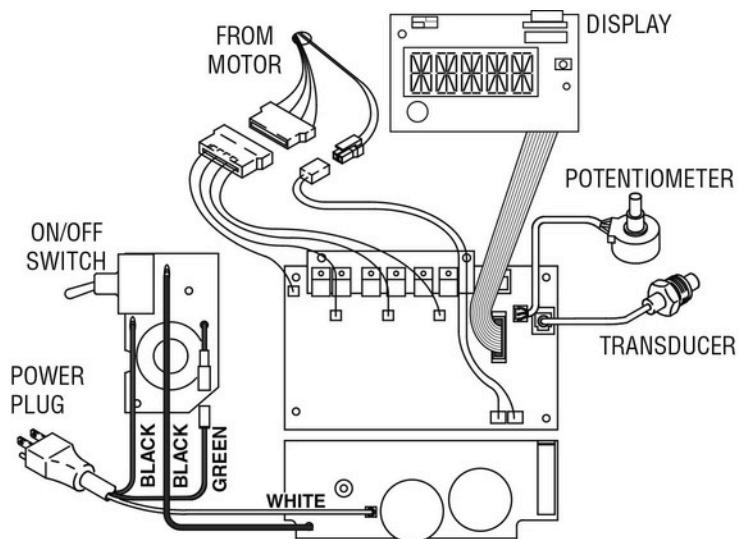
Heat from inductor coil of filter board may destroy wire insulation that comes in contact with it. Exposed wires could cause shorts and component damage. Bundle and tie loose wires so none lay in contact with inductor coil on the filter board.



ti35308a

100V JP-TW/120V

Model 650



tt37221a

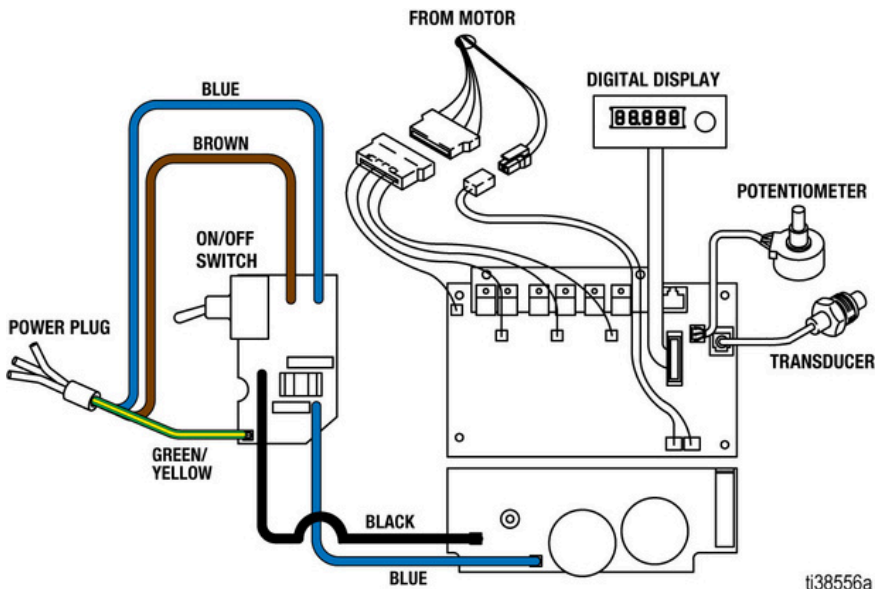
Wiring Diagrams

110V UK/230V

Model 650

NO TIE CE

Heat from inductor coil of filter board may destroy wire insulation that comes in contact with it. Exposed wires could cause shorts and component damage. Bundle and tie loose wires so none lay in contact with inductor coil on the filter board.



Notes

[illegible]

Notes

[illegible]

Technical Specifications

49 0/49 5/59 5/6 50/3 95EU		
	US	Metric
Sprayer		
Maximum fluid working pressure	3300 psi	228 bar, 22.8 MPa
Maximum Delivery		
3 95 EU/4	0.54 gpm	2.0
90 495	0.60 gpm	lpm
595 650	0.70 gpm	2.3
	0.80 gpm	lpm
Maximum Tip Size		
3 95 EU/4	0 .0	1.0
90 495	23 0	3.0
595 650	.0 25	1.0
	0 .0	Single Gun 25
	0.0 29	0.0 29
	Two Guns 27	
	0.0 19	0.0 19
Fluid Outlet npsm	1/4 in.	1/4 in.
Cycles		
3 95 EU/4 90 /4	720 per gallon	190 per
95 595 650	620 per gallon	liter 164
	570 per gallon	per liter
Generator Minimum 150 per		
3 95 EU/4 90	3500 W	liter
495	3750 W	
5 95 /6 50	4000 W	
Power Requirements		
395EU/490 1Ø, 50/60 Hz	110–120V, 12 A / 220–240V, 7	
495 1Ø, 50/60 Hz	A 110–120V, 15 A / 220–240V,	
595/650 1Ø, 50/60 Hz	9 A 110–120V, 15 A / 220–	
Di mens ions 240V, 9 A		
He ight		
St an d	18.5 in.	47.0 cm
Lo-Boy (490/495/395EU/595)	22.5 in.	57.2 cm
Lo-Boy (650)	27.5 in.	70 cm
Hi -Bo y	28.25 in. (Handle down) 38.25 in. (Handle up)	71.8 cm (Handle down) 97.2 cm (Handle up)
Length		
St an d	16 in.	40.6 cm
Lo-Boy (490/495/395EU/595)	26.5 in.	67.3 cm
Lo-Boy (650)	37 in.	94 cm
Hi -Bo y	23.25 in.	59.1 cm

Technical Specifications

490/495/595/650/395EU		
	US	Metric
Width		
Standard	14 in.	35.6 cm
Lo-Boy (490/495/395EU/595)	20 in.	50.6 cm
Lo-Boy (650)	22.5 in.	57 cm
Hi-Boy	20.5 in.	52.1 cm
Weight		
Standard		
395EU	45.1 lb.	20.5 kg
490 / 495	34 lb.	15 kg
Lo-Boy		
395EU	63 lb.	29 kg
490 /	59.1 lb.	26.8 kg
495 595	70 lb.	31.8 kg
650	77 lb.	34.9 kg
Hi-Boy		
395EU	66 lb.	30 kg
490 /	66.1 lb.	30 kg
495 595	73 lb.	33 kg
650	75 lb.	34 kg
Noise** (dBA) @ 70 psi (0.48 MPa, 4.8 bar)		
Sound pressure	90 dBA	
Sound power	100 dBA	
Materials of Construction		
Wetted materials on all models	zinc- and nickel-plated carbon steel, nylon, stainless steel, PTFE, acetal, leather, UHMWPE, aluminum, tungsten carbide, polyethylene, fluoroelastomer, urethane	
Notes		
* Startup pressures and displacement per cycle may vary based on suction condition, discharge head, air pressure, and fluid type.		
** Sound pressure measured 3 feet (1 meter) from equipment.		
Sound power measured per ISO-3744.		
All trademarks or registered trademarks are the property of their respective owners.		

Compliance

Radio Frequency Approvals

Transmitter Frequency (all models): 2.4GHz
Transmitter Power (all models): +8dBm






NOTE: FCC/IC Notice (all models)
Contains FCC ID: QOQBGM13P
Contains IC: 5123A-BGM13P

The enclosed device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:(1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.


Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

This equipment is not granted protection against harmful interference and cannot cause interference on systems properly authorized.

This equipment has the board BGM13P22A with homologation code ANATEL 01330-19-03402.

			 R-R-CE8-AR0573A R-C-BGT-BGM13P22	
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CALIFORNIA PROPOSITION 65

 **WARNING:** This product can expose you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Graco Standard Warranty

Warranty

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

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

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

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. Graco's sole obligation and buyer's sole remedy for any

breach of warranty shall be as set forth above.

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

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

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

FOR GRACO CANADA CUSTOMERS

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Graco Information

For the latest information about Graco products, visit www.graco.com.

For patent information, see www.graco.com/patents.

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



All written and visual data contained in this document reflects the latest product information available at the time of publication.

Graco reserves the right to make changes at any time without notice.

Original instructions. This manual contains English. MM 3A6491

Graco Headquarters: Minneapolis

International Offices: Belgium, China, Japan, Korea

GRACO INC. AND SUBSIDIARIES • P.O. BOX 1441 • MINNEAPOLIS MN 55440-1441 • USA

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www.graco.com
Revision P, April 2024