# Owners Manual





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### **Project Series Paint Sprayers**



### **Important Safety Instructions**

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





### **AWARNING**

To avoid fire and explosion, use only non-flammable or water-based materials, or non-flammable paint thinners. Do not use materials which state "FLAMMABLE" on the packaging. For more information about your material, request SDS from distributor or retailer.

Use oil based materials outdoors or in a well-ventilated area with a flow of fresh air.

## Have a Question?

Call toll-free:

1-888-541-9788

Or visit us at:

www.paintsprayersbygraco.com

ti24021a

For portable spray applications of water-based and oil-based non-flammable architectural paints and coatings only.

For Household Use Only.
Not approved for use in explosive atmospheres or hazardous locations.

## Important User Information

## Important User Information

#### Thank You for Your Purchase!

Before using your sprayer read this Owners Manual for complete instructions on proper use and safety warnings.

Congratulations! You have purchased a high-quality paint sprayer made by Graco Inc. This sprayer is designed to provide superior spray performance with water-based and oil-based (mineral spirit-type) architectural paints and coatings. This user information is intended to help you understand the types of materials that can be used with your sprayer.

Please read the information on the material container label to determine if it can be used with your sprayer. Ask for a Safety Data Sheet (SDS) from your supplier. The container label and SDS will explain the contents of the material and the specific precautions related to it.

Paints, coatings and clean-up materials generally fit into one of the following **3 basic categories:** 



**WATER-BASED:** The container label should indicate that the material can be cleaned up with soap and water. Your sprayer is compatible with this type of material. Your sprayer is **NOT** compatible with harsh cleaners such as chlorine bleach.



*OIL-BASED:* The container label should indicate that the material is COMBUSTIBILE and can be cleaned up with mineral spirits or paint thinner. The SDS must indicate that the flash point of the material is above 100° F. Your sprayer is compatible with this type of material. Use oil-based material outdoors or in a well-ventilated indoor area with a flow of fresh air. See the safety warnings in this manual.



**FLAMMABLE:** This type of material contains flammable solvents such as xylene, toluene, naphtha, MEK, lacquer thinner, acetone, denatured alcohol, and turpentine. The container label should indicate that this material is FLAMMABLE. This type of material is **NOT** compatible with your sprayer and **CANNOT** be used.

## Important Safety Information

## **Important Safety Information**

The following warnings are for the setup, use, 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.

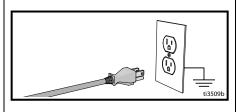
### **AWARNING**



#### **GROUNDING INSTRUCTIONS**

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

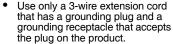
- Improper installation of the grounding plug is able to result in a risk of electric shock.
- When repair or replacement of the cord or plug is required, do not connect the grounding wire to either flat blade terminal.
- The wire with insulation having an outer surface that is green with or without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

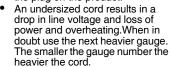


### **WARNING**



#### **Extension Cords:**





- When using the sprayer outdoors, use an extension cord suitable for outdoor use.
- Make sure your extension cord is not damaged. When using an extension cord, be sure to use a cord heavy enough to carry the current that your sprayer draws. See chart for appropriate sizes and lengths:

Extension Cord		
Conductor Size		Length
AWG (American Wire Gauge)	Metric	Maximum
18	1.0 mm <sup>2</sup>	50 ft (15 m)
16	1.5 mm <sup>2</sup>	100 ft (30 m)
14	2.5 mm <sup>2</sup>	200 ft (61 m)

## Important Safety Information

### **AWARNING**



### 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:



 Sprayer generates sparks. Do not spray or flush with flammable liquids.



- Use only non-flammable or water-based materials, or non-flammable paint thinners.
- Keep spray area well-ventilated. Keep a good supply of fresh air moving through the area.
- When spraying oil-based material, use outdoors or in a well-ventilated indoor area with a flow of fresh air.
- Do not spray or flush with combustible materials near an open flame or sources of ignition.
- 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.
- Keep sprayer at least 10 in. (25 cm) away from objects while spraying or flushing.
- Verify all containers and collection systems are grounded to prevent static discharge.
- Connect to a grounded outlet and use grounded extension cords. Do not use a 3 to 2 adapter.
- Do not use paints or solvents containing halogenated hydrocarbons.
- Do not smoke in the spray area.
- 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 (SDS) and container labels provided with the paints and solvents. Follow the paint and solvents manufacturer's safety instructions.
- Fire extinguisher equipment shall be present and working.

#### **AWARNING**



#### 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 sprayer 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.
- Disconnect power when not spraying.
- Always use the spray tip guard. Do not spray without spray tip guard in place.
- Use caution when cleaning and changing spray tips. In the case where the spray tip clogs while spraying, follow the Pressure Relief Procedure, page 15 for relieving the pressure before removing the spray tip to clean.
- Do not leave the unit energized or under pressure while unattended. When the unit is not in use, unplug the sprayer and follow the Pressure Relief Procedure, page 15.
- Check parts for signs of damage. Replace any damaged parts.
- This system is capable of producing 2000 psi. Use replacement parts or accessories that are rated a minimum of 2000 psi.
- Do not carry the unit with a finger on the trigger.
- 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.



#### **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 or wet conditions. Store indoors.

## Important Safety Information

### **AWARNING**



#### **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.
- Use only in dry locations. Do not expose to water or rain.
- Use in well-lit areas.
- Do not spray outdoors on windy days.



## 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 SDS's 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.

### **AWARNING**



## 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.



## 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 eye wear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

#### **CALIFORNIA PROPOSITION 65**

This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling.

## Start Up







Use only water-based or oil-based (mineral spirit-type) materials with a flash point greater than 100° F (38° C). Do not use materials which state "FLAMMABLE" on the packaging. For more information about your material, request SDS from distributor or retailer.

When spraying oil-based material, use outdoors or in a well-ventilated indoor area with a flow of fresh air.

**Keep spray area well-ventilated.** Keep a good supply of fresh air moving through the area.

#### **NOTICE**

Your sprayer is **NOT** compatible with harsh cleaners such as chlorine bleach. Using these cleaners will cause damage to the sprayer.

### Starting a New Job

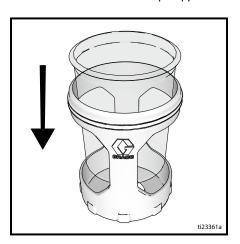
If you are using the sprayer for the very first time, see **Flushing a New Sprayer**, page 21.

#### Strain the Paint

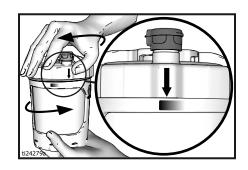


Previously opened paint may contain dried paint or other debris. To avoid priming problems and tip clogs it is advisable to strain the paint before using. Paint strainers are available where paint is sold. Stretch a paint strainer over a clean pail and pour the paint through the strainer to capture any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

Install FlexLiner in the cup support.

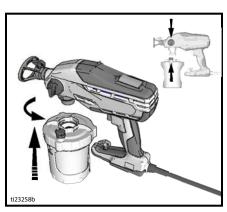


 Fill FlexLiner with material. Securely tighten cup cover onto cup support. Tighten so the arrow on the cup cover is within range of the indicator on the cup support.

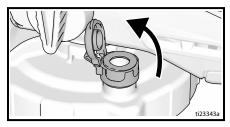


## Start Up

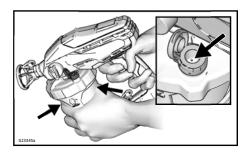
 Align VacuValve on cup cover with Prime Pump/Spray knob. Push cup assembly onto sprayer and twist to lock.



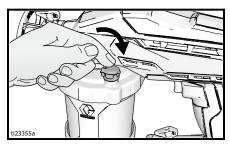
 The VacuValve is an important part of your new sprayer. It is used to evacuate the air out of the FlexLiner. Open VacuValve cap.



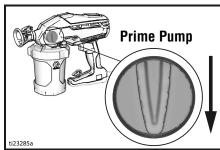
5. Tilt the sprayer so the VacuValve is the highest point, causing any air in the FlexLiner to rise to the VacuValve. Gently squeeze the FlexLiner to evacuate all air through the VacuValve air hole. Once you see material enter the VacuValve reservoir, all air should be evacuated from the FlexLiner.

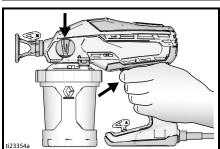


 Stop squeezing the FlexLiner and snap the VacuValve cap closed. You will hear the cap click when it is closed properly.



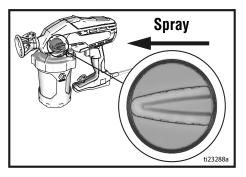
- 7. Plug sprayer into power source.
- Turn Prime Pump/Spray knob down to Prime Pump position. To fill sprayer with fluid, point sprayer into a waste area and hold the trigger in for 5–10 seconds.



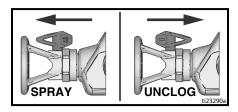


## Start Up

- Air from pump may have entered the FlexLiner during priming. Repeat Steps 4 - 6 to ensure all air is evacuated.
- 10. Turn Prime Pump/Spray knob forward to spray position.



11. Make certain spray tip is in the spray position.

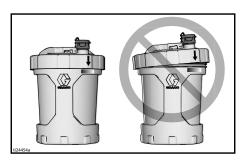


12. You are now ready to spray.

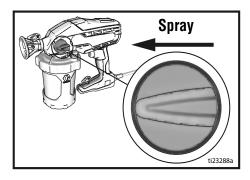
**NOTE:** For best results; to evacuate all material from the FlexLiner when the material is nearly gone, gently squeeze the bottom of the FlexLiner to push the last of the material up to the cup lid.

#### If sprayer does not spray, try one of the steps below:

- Make certain there is only one FlexLiner in cup support. It is possible for two liners to nest tightly together and appear as only one.
- Make certain the cup cover is properly threaded to the cup support. If threads are visible below the cup cover when tight, then the cover is cross-threaded. Fully remove the cup cover and reinstall to the cup support so no threads are visible when tight.



- Repeat steps 2 6 on pages 8 9 to ensure all the air is evacuated from the FlexLiner.
- Make certain the Prime Pump/Spray knob is in the Spray position.

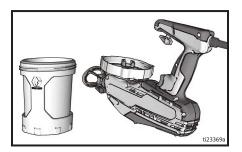


 If sprayer still does not spray, perform steps11 and 11 on page 22. If material sprays while upside down there is air in the cup. Repeat steps above.

### **Refilling FlexLiner**

If sprayer runs out of paint simply separate the cup support from the cup cover/sprayer and refill the FlexLiner.

- 1. Unplug sprayer from power source.
- Separate the cup support from the cup cover/sprayer. Set the sprayer upside down on a flat surface. This will keep the wet paint in the cup cover.



3. Follow steps 2 - 12 in **Starting a New Job**, page 8 procedure.

## **How to Spray**

Take a few moments prior to spraying and review these simple tips to ensure your spraying project is a success.

### **Dual Speed Control**

#### (Not available on all units)

The dual speed control feature allows you to slow down or speed up when spraying.

- Turn the dual speed control to LOW to slow down the speed of application when first learning to spray or when spraying small items that require more control.
- The LOW setting delivers more control and will reduce overspray when spraying thinner materials such as stain.
- Turn the dual speed control to HIGH when you want to get to job done fast and when spraying large surfaces.
- To reduce overspray, always spray at lowest speed that results in an acceptable spray pattern.

### **Variable Speed Control**

#### (Not available on all units)

The variable speed control feature allows you infinite speed control to slow down or speed up to best suit your material and project.

- Turn the variable speed control to lower speed settings to slow down the speed of application when first learning to spray or when spraying small items that require more control.
- The lower speed settings deliver more control and will reduce overspray when spraying thinner materials such as stain.
- Turn the variable speed control to higher speed settings when you want to get the job done fast and when spraying large surfaces.
- To reduce overspray, always start at lowest speed setting and increase speed to the minimum setting that results in an acceptable spray pattern.

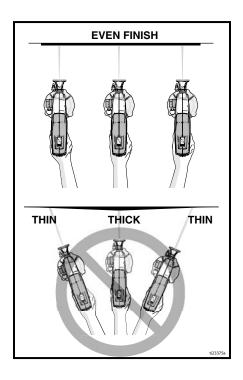
### **Spray Techniques**

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

- Hold sprayer 10 in. (25 cm) from surface and aim straight at surface. Tilting the sprayer to direct the spray angle causes an uneven finish.
- Flex wrist to keep sprayer pointed straight. Fanning sprayer to direct spray at angle causes uneven finish.

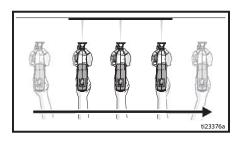
**NOTE:** How fast you move the sprayer will affect spray application. If material is pulsating, you are moving too fast. If material drips, you are moving too slow. See **Troubleshooting**, page 28.





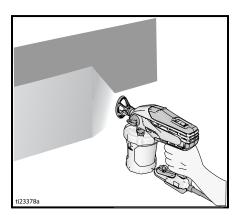
### **Triggering Sprayer**

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



### **Aiming Sprayer**

Aim sprayer at bottom edge of previous stroke, overlapping each stroke by half.



Rotating the spray tip guard changes the pattern to either the vertical or horizontal orientations.

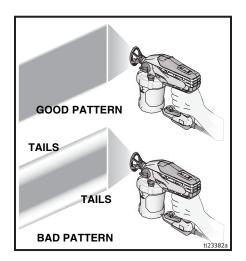
When spraying vertical corners turn spray tip guard to the horizontal orientation and move sprayer up and down.

## How to Spray

### **Spray Pattern Quality**

A good spray pattern is evenly distributed as it hits the surface. If tails persist, material may need to be thinned.

If material needs to be thinned follow manufacturers recommendations.



If you see pulsations in the pattern, try the following:

- On the dual speed models turn the dual speed control to HIGH
- On the variable speed models turn the variable speed control to higher setting
- Slow down your speed of movement
- Hold sprayer farther away from surface
- Switch to black (12") spray tip

Spray Pattern is Pulsating

## Cleanup







Use only water-based or oil-based (mineral spirit-type) materials with flash point greater than 100° F (38° C). Do not use materials which state "FLAMMABLE" on the packaging. For more information about your material, request SDS from distributor or retailer.

Clean in a well-ventilated area. Keep a good supply of fresh air moving through the area.

To avoid serious injury or damage to equipment, do not expose the sprayer electronics to cleaning fluids. Keep sprayer at least 10 in. (25 cm) above the rim of the container when cleaning.



### **Pressure Relief Procedure**



Follow the Pressure Relief Procedure whenever you see this symbol.



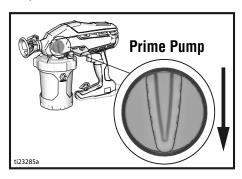






This sprayer builds up an internal pressure of 2000 psi (14 MPa, 138 bar) during use. Follow this **Pressure Relief Procedure** whenever you stop spraying and before cleaning, checking, servicing, or transporting equipment to prevent serious injury.

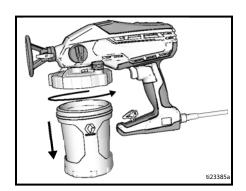
- 1. Disconnect power (unplug power cord).
- Turn Prime Pump/Spray Knob down to PRIME PUMP position to relieve pressure.



### Cleaning Sprayer

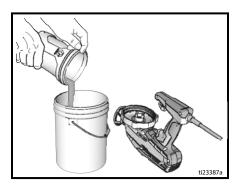
Cleaning your sprayer properly and after every spray job is of the utmost importance! Proper care and maintenance will make your paint sprayer last and work for you trouble free.

- 1. Turn Prime Pump/Spray knob to Prime Pump to relieve pressure.
- Separate the cup support with FlexLiner from the cup cover/sprayer.



## Cleanup

 Set the sprayer upside down on a flat surface. This will keep the wet paint in the cup cover. Return excess material to original container. Hold the FlexLiner in place when pouring.



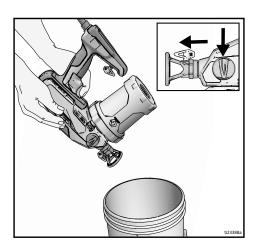
- You can either dispose of the used FlexLiner and install a new FlexLiner or clean a used FlexLiner.
- To clean the sprayer, fill FlexLiner approximately half-full with appropriate cleaning fluid (water or mineral spirits).
- Securely tighten cup cover onto cup support.



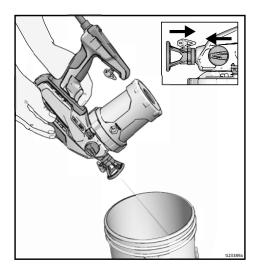
 To clean the cup cover and strainer, secure the cup assembly to the sprayer and shake the entire sprayer for ten seconds.  Make certain the Prime Pump/Spray knob is in the Prime Pump position (pointed down). On models with a dual speed control switch, set speed control to HIGH. On variable speed models set speed control to 10.



 Turn the sprayer upside down and point the sprayer into a waste pail. Pull the trigger for ten seconds.



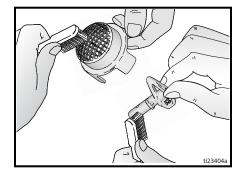
- Turn Prime Pump/Spray knob forward to SPRAY position. Reverse spray tip to UNCLOG position.
- While holding the sprayer upside down point the sprayer into a waste pail. Pull the trigger for five seconds. Release the trigger.
- 12. If second spray tip was used, remove cleaned spray tip from spray tip guard and install second spray tip. See Installing Spray Tips, page 19. Repeat steps 10 and 11 to clean second spray tip.



- Remove cup assembly and discard used fluid. Dispose of used cleaning fluid properly.
- 14. Replace cleaning fluid and repeat steps1- 13 until spray output is clean.

**IMPORTANT!** For best results, do not spray more than one cup of water through the tip while cleaning. If more flushing is needed, remove the tip from the sprayer to avoid excessive wear.

Remove spray tip and strainer, see
 Remove Spray Tip, page 19. Clean with
 appropriate cleaning fluid (water or
 mineral spirits). A soft brush can be used
 to loosen and remove dried material if
 needed.



16. Use a soft cloth to clean the cup support and cup cover.



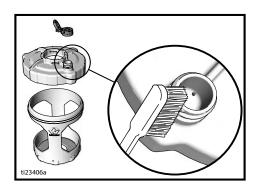
#### NOTICE

The spray tip guard is permanently attached to the sprayer. Removal for cleaning is not necessary and will result in damage to the sprayer.

### Cleaning VacuValve

The VacuValve is an important part of your sprayer and it should be cleaned after every use.

- Remove VacuValve cap from cup cover and clean it.
- 2. Clean VacuValve reservoir in lid.
- Clean VacuValve air hole. If VacuValve air hole becomes clogged, use a paper clip to clean the hole.



## **Storage**





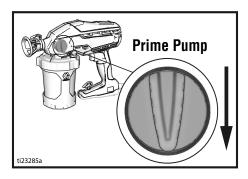


#### NOTICE

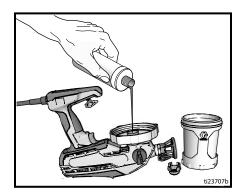
Failure to store sprayer with Pump Armor will result in operational problems the next time you spray. Always circulate Pump Armor through the sprayer after cleaning. Water or solvents other than mineral spirits left in the sprayer will corrode and damage the pump.

Pump Armor fluid protects the sprayer while in storage. It helps protect sprayer against freezing and corrosion when not in use.

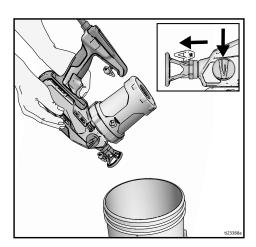
- 1. Clean the sprayer and cup assembly. See **Cleanup**, page 15.
- Turn Prime Pump/Spray knob down to the Prime Pump position. Remove cup support and FlexLiner. Make certain that VacuValve cap is closed.



- Separate the cup support with FlexLiner from the cup cover/sprayer. Set the sprayer upside down on a flat surface.
- 4. Remove strainer from pump opening.
- With the sprayer upside-down pour approximately 2 oz. (60 ml) Pump Armor into pump opening.
- 6. Install strainer into pump opening.



- 7. With sprayer upside-down attach cup support with FlexLiner to sprayer.
- Holding sprayer upside-down over a waste container, pull sprayer trigger for three seconds.



- Turn Prime Pump/Spray knob forward to spray position. Remove cup assembly and pour any remaining Pump Armour back into Pump Armor bottle. Replace child-resistant cap and tighten securely for storage.
- Store sprayer indoors in a cool, dry place. Store in an upright position only. Never store sprayer with material in the cup.