Operation

MAGNUM®

Painting Solutions. Expert Results.

# SR7 Airless Sprayer

*The manual provided with this sprayer contains English, Español and Français.*

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311984A

***- For portable spray applications of architectural paints and coatings -***

**IMPORTANT SAFETY INSTRUCTIONS.**
Read all warnings and instructions in this manual. Save these instructions.

## Model: 261810, Series A

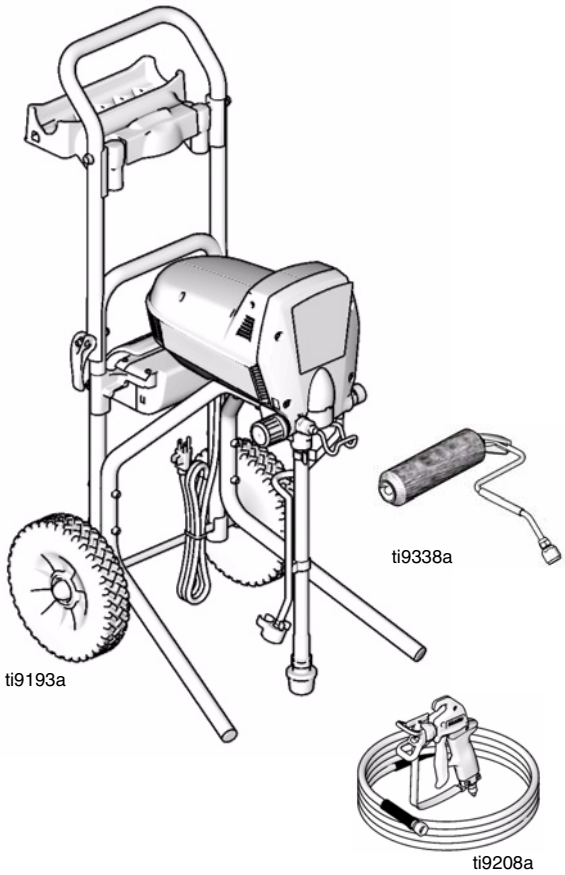
Maximum Working Pressure: 3000 psi (21 MPa, 207 bar)
Dispense Rate: 0.31 gpm (1.17 lpm)

### Includes:

Gun: SG10
Hose: 1/4 inch x 35-ft. (6.4 mm x 11 m)

## Specifications

*This equipment is not intended for use with flammable or combustible materials used in places such as cabinet shops or other "factory" or fixed locations. If you intend to use this equipment in this type of application, you must comply with NFPA33 and OSHA requirements for the use of flammable and combustible materials.*

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# 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. Refer back to these warnings. Additional, product specific warnings may be found throughout the body of this manual where applicable.

## ⚠ WARNING

### FIRE AND EXPLOSION HAZARD

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

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

### ELECTRIC SHOCK HAZARD

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

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

### SKIN INJECTION HAZARD

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

- Do not point gun at anyone or at any part of the body.
- Do not put your hand over the spray tip.
- Do not stop or deflect leaks with your hand, body, glove, or rag.
- Engage trigger lock when not spraying.
- Follow **Pressure Relief Procedure** in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.

## ⚠ WARNING

### EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. Read **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. Read **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS from distributor or retailer.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine Graco replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your Graco distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or overbend hoses or use hoses to pull equipment.
- Comply with all applicable safety regulations.
- Keep children and animals away from work area.
- Do not operate the unity when fatigued or under the influence of drugs or alcohol.

### PRESSURIZED ALUMINUM PARTS HAZARD

Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents in pressurized aluminum equipment. Such use can cause serious chemical reaction and equipment rupture, and result in death, serious injury, and property damage.

### 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 MSDS'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.

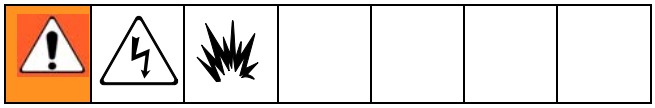
### PERSONAL PROTECTIVE EQUIPMENT

You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:

- Protective eye wear
- Clothing and respirator as recommended by the fluid and solvent manufacturer
- Gloves
- Hearing protection

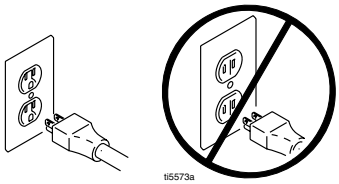
# Installation

## Grounding and Electric Requirements



**Sprayer** must be grounded. Grounding reduces the risk of static and electric shock by providing an escape wire for electrical current due to static build up or in the event of a short circuit.

- The 120 Vac sprayers require a 120 Vac, 60 Hz, 15A circuit with a grounding receptacle.
- The 230 Vac sprayers require a 230 Vac, 50 Hz, 10A circuit with a grounding receptacle.




- Never use an outlet that is not grounded or an adapter.
- Do not use the sprayer if the electrical cord has a damaged ground prong.
- Only use an extension cord with an undamaged 3-prong plug.

Recommended extension cords for use with this sprayer:
- 50 ft (15.0 m) 16 AWG (1.0 $mm^2$)
- 100 ft (30.0 m) 14 AWG (1.5 $mm^2$)

**Spray gun:** ground through connection to a properly grounded fluid hose and pump.

Smaller gauge or longer extension cords may reduce sprayer performance.

**Fluid supply container:** follow local code.

**Solvent pails used when flushing:** follow local code. Use only conductive metal pails, placed on a grounded surface such as concrete. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts grounding continuity.

**Grounding the metal pail:** connect a ground wire to the pail by clamping one end to pail and other end to ground such as a water pipe.

**Maintaining grounding continuity when flushing or relieving pressure:** hold metal part of the spray gun firmly to the side of a grounded metal pail, then trigger the gun.

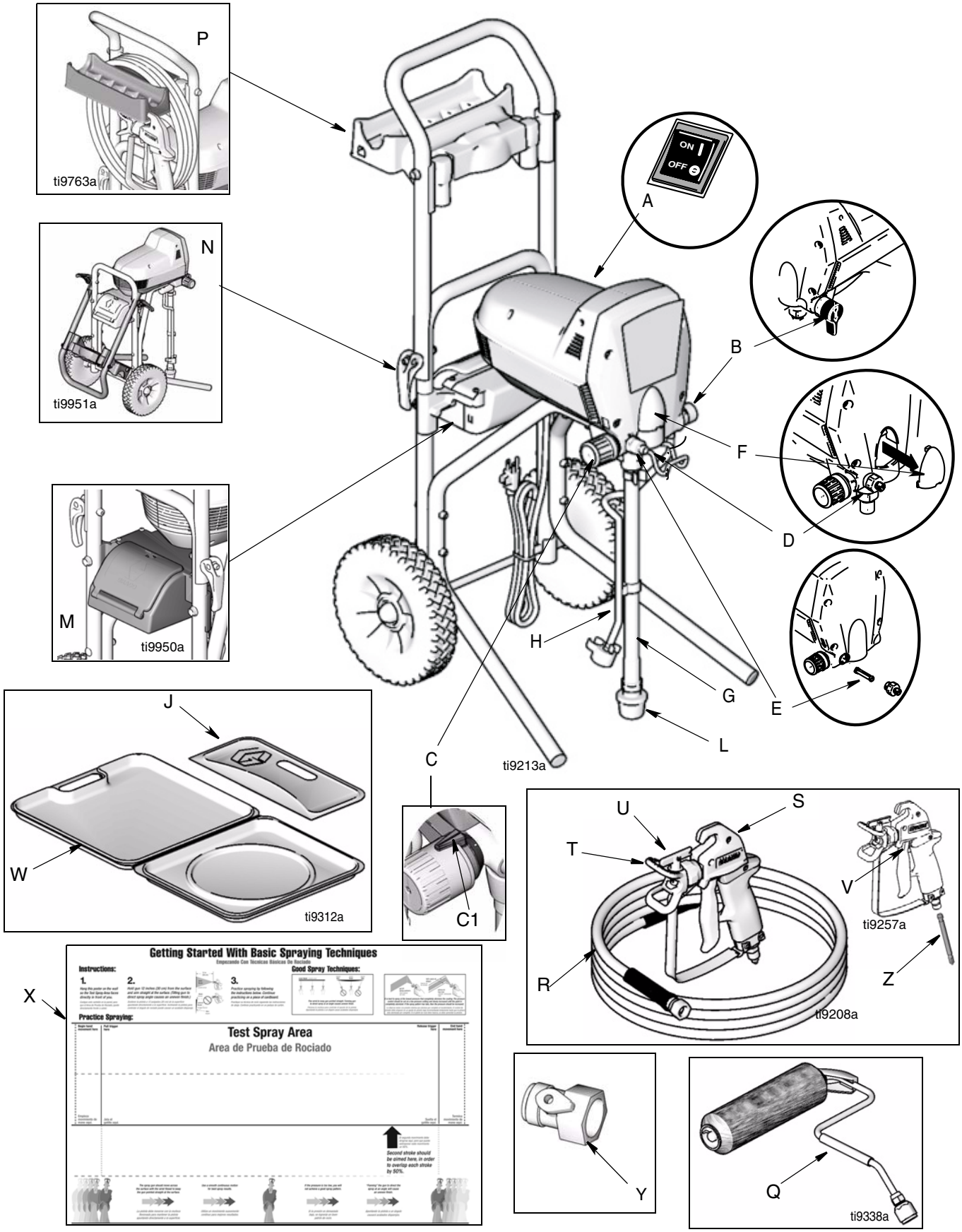
## Thermal Overload

Motor has a thermal overload switch to shut itself down if overheated. If unit overheats, allow approximately 45 minutes for unit to cool. Once cool, switch will close and unit will restart.

To reduce risk of injury from motor starting unexpectedly when it cools, always turn power switch OFF if motor shuts down.

# Component Identification

| | | |
|---|---|---|
| A | Power Switch | Turns sprayer ON and OFF. |
| B | Prime/Spray Valve | • PRIME position (pointing down) directs fluid to prime tube.<br>• SPRAY position (pointing forward) directs pressurized fluid to paint hose.<br>• Automatically relieves system pressure in overpressure situations. |
| C | Pressure control knob | Increases (clockwise) and decreases (counter-clockwise) fluid pressure in pump, hose and spray gun. |
| C1 | Setting Indicator | To select function, align symbol on pressure control knob with setting indicator, page engage trigger lock. |
| D | Pump fluid outlet fitting | Threaded connection for paint hose. |
| E | InstaClean™ fluid filter | • Filters fluid coming out of pump to reduce tip plugging and improve finish.<br>• Self cleans only during pressure relief. |
| F | Power-Piston™ Pump (behind Easy Access door) | Pressurizes fluid and delivers it to paint hose. Easy Access door permits quick removal of outlet valve. |
| G | suction tube | Draws fluid from paint pail into pump. |
| H | Prime tube (with diffuser) | Drains fluid in system during priming and pressure relief. |
| J | Sample Spray Shield | Introduces benefits of a spray shield. Blocks paint from surfaces you do not want to spray. |
| L | Inlet screen | Prevents debris from entering pump. |
| M | Storage compartment | Provides onboard storage for spray tips and/or tools. |
| N | Quick Release Latch | Collapses handle for compact or hanging storage. |
| P | Roller tray/Gun holder/Hose wrap | Removable tray can also be used to clean paint roller. |
| R | Paint hose | Transports high-pressure fluid from pump to spray gun. |
| Q | Roller attachment | Used with spray gun to apply coating directly to surfaces. |
| S | Airless spray gun | Dispense fluid through spray tip or roller attachment. |
| T | Tip guard | Reduces risk of fluid injection injury. |
| U | Reversible spray tip | • Atomizes fluid being sprayed, forms spray pattern and controls fluid flow according to hole size.<br>• Reverse unclogs plugged tips without disassembly. |
| V | Gun trigger safety lever (page 7) | Prevents accidental triggering of spray gun. |
| W | SpillGuard™ Tray | Protective tray to set sprayer and paint pail on during operation. |
| X | Practice spray board | Instructs user on how to perform basic spraying techniques and provides surface to practice techniques prior to spraying surfaces. |
| Y | Power Flush attachment | Connects garden hose to suction tube for power flushing water-base fluids. |
| Z | Gun fluid filter | Filters fluid entering spray gun to reduce tip clogs. |


P
ti9763a
N
ti9951a
M
ti9950a
A
ON
OFF
B
F
D
E
H
G
L
C
ti9213a
J
W
ti9312a
C1
U
S
T
V
R
Z
ti9257a
ti9208a
X
Getting Started With Basic Spraying Techniques
Instructions:
Good Spray Techniques:
Practice Spraying:
Test Spray Area
Area de Prueba de Rociado
Second stroke should be aimed here, in order to overlap each stroke by 50%.
Y
Q
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# Operation

## Trigger Lock

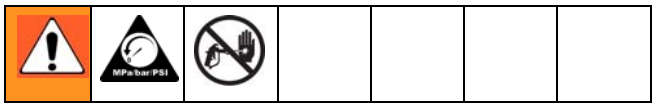
Always engage the trigger lock when you stop spraying to prevent the gun from being triggered accidentally by hand or if dropped or bumped.

**Trigger Locked**

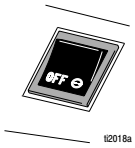
**Trigger Unlocked**

## Pressure Relief Procedure

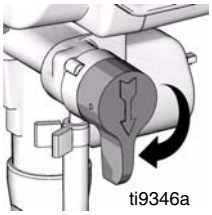
Follow this **Pressure Relief Procedure** whenever you stop spraying and before cleaning, checking, servicing, or transporting equipment.




1. Turn power switch OFF and unplug power cord.

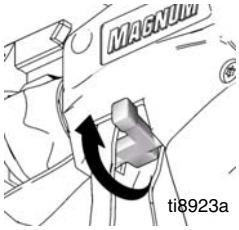



2. Turn Prime/Spray valve to PRIME to relieve pressure.




3. Hold gun firmly to side of pail. Trigger the gun to relieve pressure.

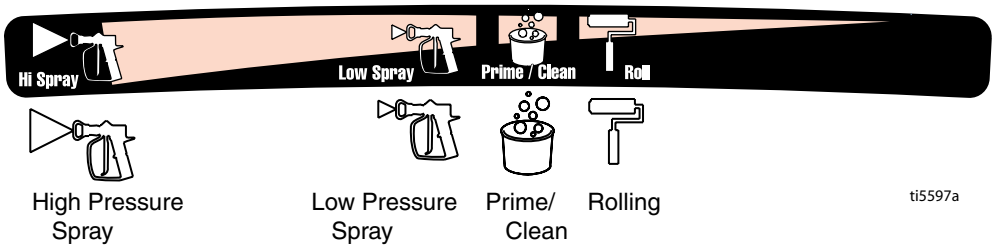
4. Engage trigger lock.




Leave Prime/Spray valve in the PRIME position until you are ready to spray again.

If you suspect the spray tip or hose is clogged or that pressure has not been fully relieved after following the steps above, VERY SLOWLY loosen tip guard retaining nut or hose end coupling to relieve pressure gradually, then loosen completely. Clear hose or tip obstruction. Read Unclogging Spray Tip, page 10.

## Pressure Control Knob Settings




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

# Setup

1. Unscrew tip and guard assembly from gun.

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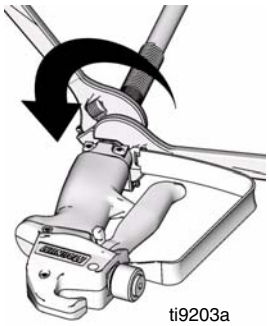
2. Uncoil hose and connect one end to gun.Use two wrenches to tighten securely.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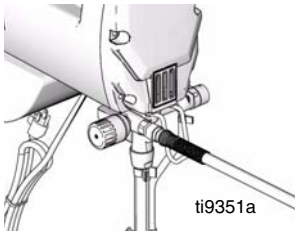
3. Connect other end of hose to sprayer.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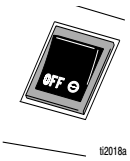
If hose is already connected, make sure connections are tight.

4. Turn OFF power switch.



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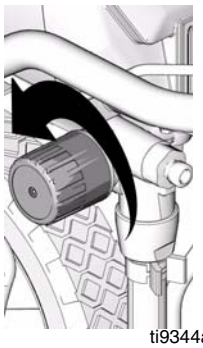
5. Turn Pressure Control Knob all the way left (counter-clockwise) to minimum pressure.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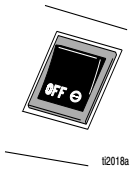
## Prime and Flush Storage Fluid

Before you use your sprayer for the first time or begin a new spraying project, you need to prime the sprayer and flush the storage fluid out of the sprayer.

### Oil- or Water-based Materials

- When spraying **water-based** materials, flush the system thoroughly with water.
- When spraying **oil-based** materials, flush the system thoroughly with mineral spirits or compatible, oil-based flushing solvent.
- To spray **water-based** materials **after spraying oil-based** materials, flush the system thoroughly with water first. The water flowing out of prime tube should be clear and solvent-free **before** you begin spraying the water-based material.
- To spray **oil-based** materials **after spraying water-based** materials, flush the system thoroughly with mineral spirits or a compatible oil-based flushing solvent first. The solvent flowing out of the prime tube should not contain any water.
- When flushing with solvents, ground pail and gun. Read Grounding and Electric Requirements, page 4.
- To avoid fluid splashing back on your skin or into your eyes, always aim gun at inside wall of pail.

1. Make sure power switch is OFF and sprayer is unplugged.



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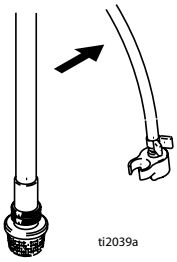
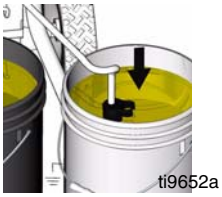
2. Separate prime/prime tube (smaller) from suction tube (larger).

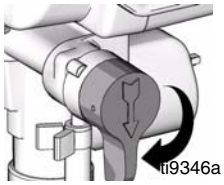



3. Place prime tube in waste pail.



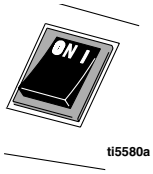

4. Submerge suction tube in water or flushing solvent.

5. Turn Prime/Spray Valve to PRIME.




6. Plug sprayer in a grounded outlet.

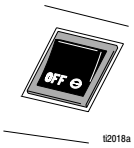
7. Turn power switch ON.



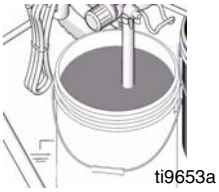

8. Align setting indicator with Prime/Clean setting on pressure control knob until pump starts, page 7.

9. When sprayer starts pumping, flushing solvent and air bubbles will be purged from system. Allow fluid to flow out of prime tube, into waste pail for 30 to 60 seconds.

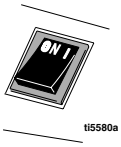
10. Turn power switch OFF.




11. Transfer suction tube to paint pail and submerge suction tube in paint.

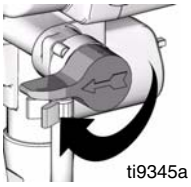



12. Turn power switch ON.



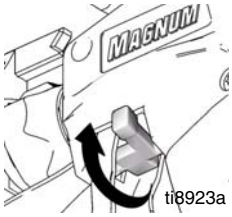

13. When you see paint coming out of prime tube:
    a. point gun into waste pail,
    b. unlock gun trigger lock,

    c. pull and hold gun trigger,
    d. turn Prime/Spray valve to SPRAY.




14. Continue to trigger gun into waste pail until you see only paint coming out of gun.

15. Release trigger. Engage trigger lock.




16. Transfer prime tube to paint pail and clip prime tube to suction tube.

- Motor stopping indicates pump and hose are primed with paint.
- If motor continues to run the sprayer is not properly primed. To reprime repeat step 8.

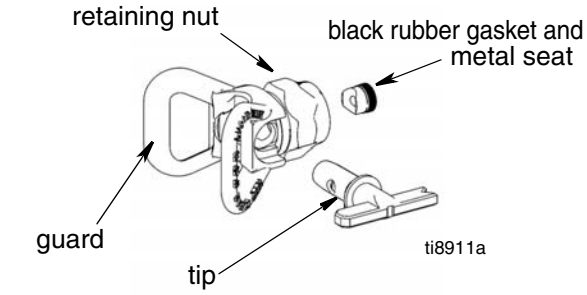
17. If spraying, install tip and guard on gun, page 10 and see Spraying Techniques, page 10.

    If rolling, roller setup and Rolling Techniques, begin on page 14.

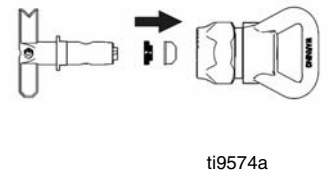
# Install Tip and Guard

1. Engage trigger lock.

2. Verify tip and guard parts are assembled in order as shown below.




Use tip to align seat in guard.



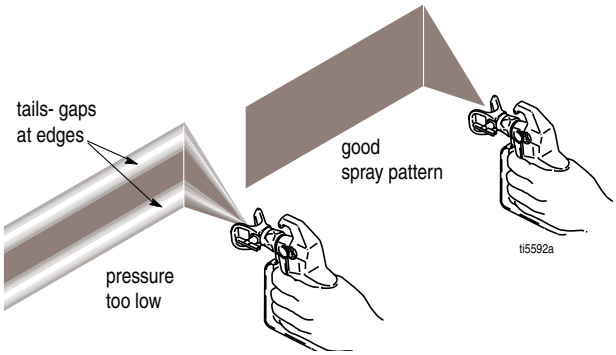

Tip must be pushed all the way into guard

3. Screw tip and guard assembly on gun. Tighten retaining nut.

# Spraying Techniques

## Preventing Excessive Tip Wear

- Spray should be atomized (evenly distributed, no gaps at edges). Start at low pressure setting, increase pressure a little at a time until you see a good spray pattern, without tails.
- Spray at lowest pressure that atomizes paint.
- If maximum sprayer pressure is not enough for a good spray pattern, tip is too worn. See Reversible Spray Tip Selection Chart, page 12.




If tails persist when spraying at the highest pressure, a smaller tip is needed or the material may need to be thinned.

## Adjust Spray Pressure

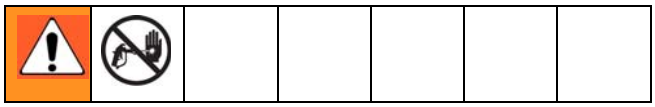
This sprayer is set up for most airless spraying applications. Details on tip selection, tip wear, coat thickness, etc. are provided on page 11.

Motor only runs when gun is triggered. Sprayer is designed to stop pumping when gun trigger is released.

Align setting indicator with function symbol on Pressure Control knob, page 7.

- Turning knob to right (clockwise), increases pressure at gun.
- Turning it left (counter-clockwise), decreases pressure.
- General spraying instructions are provided in Getting Started with Basic Spraying Techniques section of this manual, page 13.

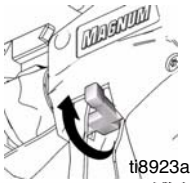
# Unclogging Spray Tip



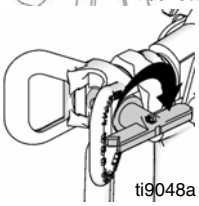
To avoid fluid splashback:

- Never pull gun trigger when arrow-shaped handle is between SPRAY and UNCLOG positions.
- Tip must be pushed all the way into guard.

1. To UNCLOG tip obstruction, lock trigger lock.

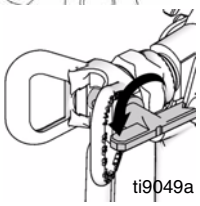



2. Point arrow-shaped handle backward to UNCLOG position.




3. Aim gun at piece of scrap or cardboard.
4. Unlock trigger lock. Pull trigger to clear clog.

5. When obstruction is cleared, lock trigger lock and rotate arrow-shaped handle back to SPRAY position.




Point the arrow-shaped handle on the spray tip forward to SPRAY and backward to UNCLOG obstructions.

# Tip Selection

## Selecting Tip Hole Size

Tips come in a variety of hole sizes for spraying a range of fluids. Your sprayer includes an 0.015 in (0.38 mm) tip for use in most spraying applications. Use the following table to determine the range of recommended tip hole sizes for each fluid type. If you need a tip other than the one supplied, see the **Reversible Tip Selection Chart** on page 12.

HINTS:

- As you spray, the tip wears and enlarges. Starting with a tip hole size smaller than the maximum will allow you to spray within the rated flow capacity of the sprayer.
- Maximum tip hole size supported by the sprayer is 0.017 in. (0.43 mm).

| Tip Hole Size | Coatings | | | | |
|---|---|---|---|---|---|
| | ***Stains*** | ***Enamels*** | ***Primers*** | ***Interior paints*** | ***Exterior paints*** |
| 0.011 in. (0.28 mm) | ✔ | | | | |
| 0.013 in. (0.33 mm) | ✔ | ✔ | ✔ | ✔ | |
| 0.015 in. (0.38 mm) | | ✔ | ✔ | ✔ | ✔ |
| 0.017 in. (0.43 mm) | | | ✔ | ✔ | ✔ |

# Choosing the Correct Tip for the Job

Consider coating and surface to be sprayed. Make sure you use best tip hole size for that coating and best fan width for that surface.

## Tip Hole Size

Tip hole size controls flow rate - the amount of paint that comes out of the gun.

HINTS:

- Use larger tip hole sizes with thicker coatings and smaller tip hole sizes with thinner coatings.
- Maximum tip hole sizes supported by sprayer is 0.017 in. (0.43 mm).
- Tips wear with use and need periodic replacement.

## Fan Width

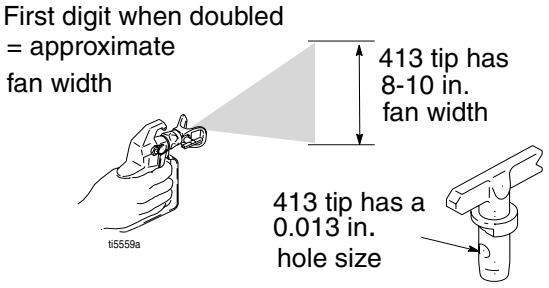
Fan width is the size of the spray pattern, which determines the area covered with each stroke. Narrower fans deliver a thicker coat, and wider fans deliver a thinner coat.

HINTS:

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

## Understanding Tip Number

The last three digits of tip number (i.e.: 221413) contain information about hole size and fan width on surface when gun is held 12 in. (30.5 cm) from surface being sprayed.




Last two digits = tip hole size in thousands of an inch

# Reversible Tip Selection Chart

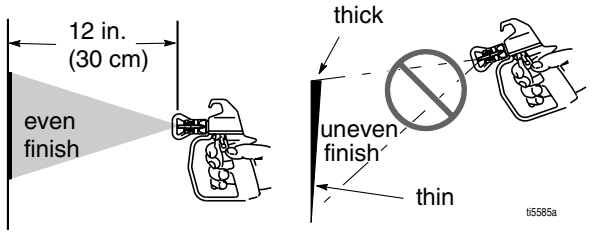
| Tip Part No. | Fan Width 12 in. (305 mm) from surface | Hole Size |
|---|---|---|
| 221311 | 6 - 8 in. (152 - 203 mm) | 0.011 in. (0.28 mm) |
| 221411 | 8 - 10 in. (203 - 254 mm) | 0.011 in. (0.28 mm) |
| 221313 | 6 - 8 in. (152 - 203 mm) | 0.013 in. (0.33 mm) |
| 221413 | 8 - 10 in. (203 - 254 mm) | 0.013 in. (0.33 mm) |
| 221415 | 8 - 10 in. (203 - 254 mm) | 0.015 in. (0.38 mm) |
| 221515 | 10 - 12 in. (254 - 305 mm) | 0.015 in. (0.38 mm) |
| 221417 | 8 - 10 in. (203 - 254 mm) | 0.017 in. (0.43 mm) |
| 221517 | 10 - 12 in. (254 - 305 mm) | 0.017 in. (0.43 mm) |

**Example**: For an 8 to 10 in. (203 to 254 mm) fan width and 0.013 (0.33 mm) hole size, order Part No. 221413.

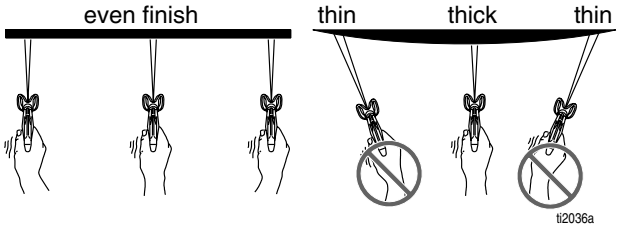
# Getting Started With Basic Techniques

*Use the Practice Spray Board to practice these basic spraying techniques before you begin spraying the surface.*

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

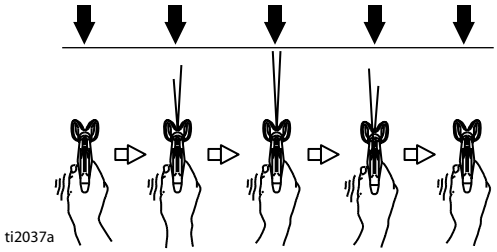



- Flex wrist to keep gun pointed straight. Fanning gun to direct spray at angle causes uneven finish.



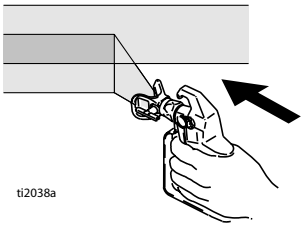

## Triggering Gun

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




## Aiming Gun

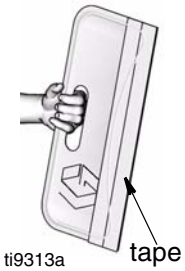
Aim tip of gun at bottom edge of previous stroke, overlapping each stroke by half.



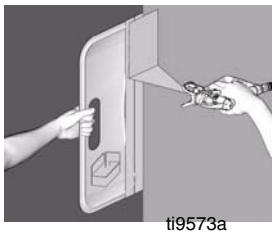

## Spray Shield

*Use Sample Spray Shield to help shield ceilings and floor boards from spray. The Sample Spray Shield is intended to introduce you to the benefits of a spray shield. Visit your local paint supplier for larger spray shield solutions.*

1. Apply a layer of masking tape approximately 4 inches wide to edge of spray shield. Change tape when paint starts to accumulate on spray shield.




2. Grasp shield firmly through handle grip with one hand.
3. When spraying, use shield to prevent paint from getting on ceiling or adjoining walls.
4. Move the spray shield as you move the gun to protect surface.

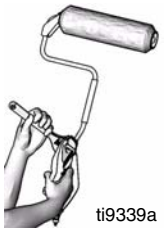


# Rolling

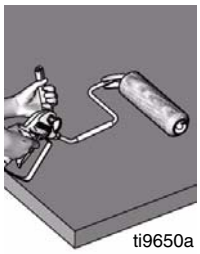
## Setup

- Follow Priming instructions, beginning on page 8, prior to assembling roller.

1. If installed, remove tip and guard assembly from gun.
2. Make sure gasket is in place in bottom of roller frame.
3. Attach pressure roller assembly to gun.

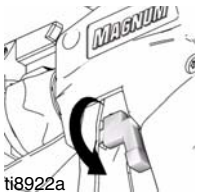



4. Rest roller on flat surface and align gun with roller. Tighten nut with wrench while keeping gun and roller aligned.




5. Turn Pressure Control Knob to ROLL.

6. Unlock gun trigger safety. Trigger gun. Roll surface until paint is fully dispersed on roller. This may take a minute.

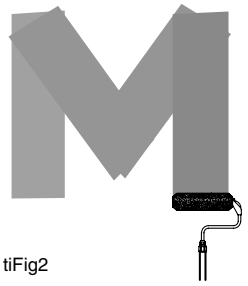



- Trigger gun briefly only when you need more paint.
- The best operating pressure is the lowest pressure that provides an even paint supply to the roller. This typically does not exceed 300 psi (2.1 MPa, 21 bar).

7. Increase pressure only if triggering gun does not supply enough paint for your rolling speed.
8. Whenever you stop painting, **relieve pressure,** page 7 and elevate roller end of extension tube to prevent paint from draining out.
9. Flush the pump, gun and pressure roller immediately after each use to prevent paint from drying in the pressure roller and damaging it. See Shutdown and Cleaning, beginning on page 16.

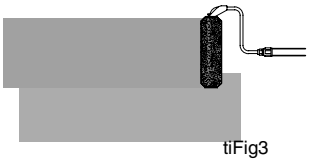
# Rolling Techniques

1. Rolling vertically, roll out the letter “M”.



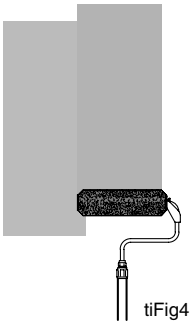
tiFig2

2. Cross roll, horizontally, to spread paint.



tiFig3

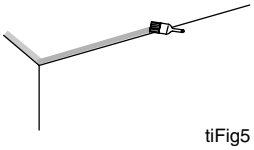
3. Finish with light, vertical strokes until the entire area has been covered evenly.



tiFig4

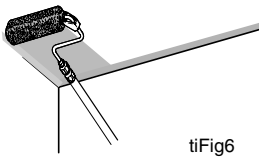
## Ceilings, Walls and Woodwork

1. ***Ceilings:*** Using a paint brush, apply a starting row of paint approximately the width of your paint brush where the walls and ceiling meet.



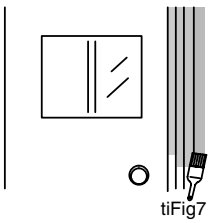
tiFig5

2. With the roller apply paint to the ceiling, working the short way of the room and applying as wide a strip as possible.



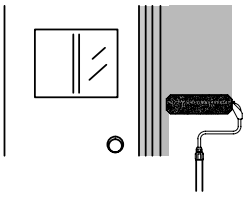
tiFig6

1. ***Walls and Woodwork:*** Using a brush, paint woodwork first. Apply a starting row of paint approximately the width of the paint brush around the woodwork and where the walls meet the ceiling.



tiFig7

2. With the roller, apply paint to the walls, following the Rolling Techniques, page 15.



tiFig8

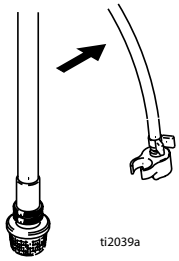
# Shutdown and Cleaning

## Pail Flushing

- For short term shutdown periods (overnight to two days) refer to Short Term Storage, page 22.
- For flushing after spraying oil-based coatings, use compatible oil-based flushing fluid or mineral spirits. Read Priming and Flushing Storage Fluid, page 8.
- For flushing after spraying water-based coatings, use water. Read Priming and Flushing Storage Fluid, page 8 or Power Flush, page 19.

1. **Relieve pressure**, page 7.
2. If you used a spray gun, remove tip and guard assembly from gun and place in flushing fluid.

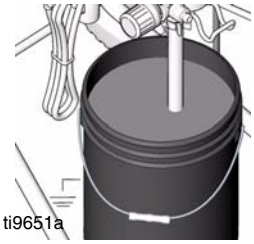
   If you used a roller, leave roller assembly attached to gun.
3. Lift suction tube and prime tube from paint pail. Let them drain into paint pail for a while.
4. Separate prime tube (smaller) from suction tube (larger).



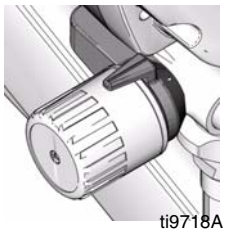

5. Place waste and paint pails side by side.

6. Place prime tube in waste pail.

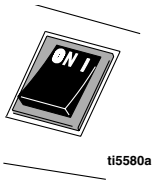
7. Submerge suction tube in water or flushing solvent.



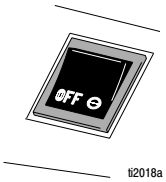

8. Turn Pressure Control knob to Prime/Clean setting.




9. Turn power switch ON.




10. Flush until approximately 1/3 of the flushing fluid is emptied from the pail.
11. Turn power switch OFF.




12.
    a. If you used a spray gun only, continue Pail Flushing, Step 13.

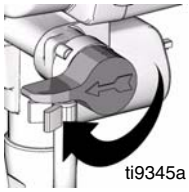
    b. If you used a roller follow roller cleanup instructions beginning on page 18.

Step 13 is for returning paint in hose back to paint pail. One 50-ft hose holds approximately 1-quart (1-liter) of paint.

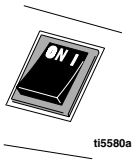
13. To preserve paint in hose:
    a. Point gun into paint pail.
    b. Unlock gun trigger lock.

ti8922a

    c. Pull and hold gun trigger.
    d. Turn Prime/Spray valve to SPRAY.


ti9345a

    e. Turn power switch ON.



ti5580a

    f. Continue to hold gun trigger until you see paint diluted with flushing fluid starting to come out of gun.

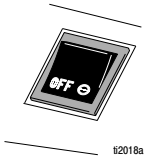
14. While continuing to trigger gun, quickly move gun to redirect spray into waste pail. Continue triggering gun into waste pail until flushing fluid dispensed from gun is relatively clear.

ti9726a

15. Stop triggering gun. Engage trigger lock.

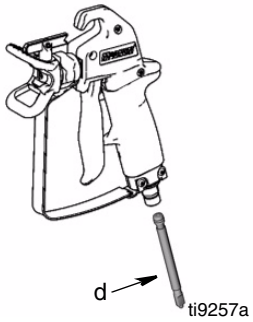
ti8923a

16. Turn power switch OFF.



ti2018a

17. Clean InstaClean Fluid Filter, page 21.
18. Fill unit with Pump Armor™ storage fluid. Read Long Term Storage, page 22.
19. Clean gun fluid filter (d) with water or flushing solvent and a brush every time you flush the system. Replace gun filter if damaged.



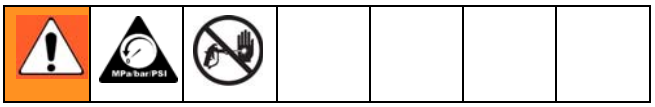
ti9257a

20. Clean tip and guard with water or flushing solvent. A soft brush can be used to loosen and remove dried on material if needed.

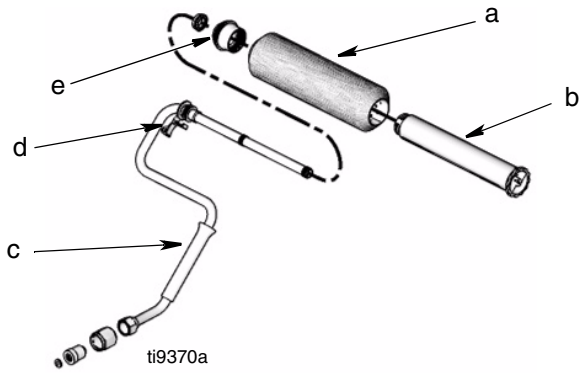
ti9671a

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

# Cleaning Roller




1. **Relieve Pressure,** page 7.
2. Remove roller cover (a) and core (b) from roller frame (c) as follows:
   a. Using your thumb, press clip (d) to release roller and core into waste pail.
   b. Remove cap (e) from core (b).
   c. Remove roller cover (a) from core (b).

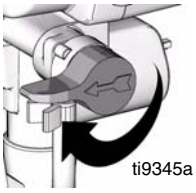



3. Clean roller cover, cap and core with water or a compatible flushing solvent for oil-based materials.

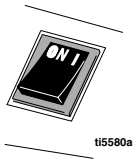
Step 4 is for returning paint in hose back to paint pail.

4.
   a. Place roller frame in paint pail. Be sure holes in roller frame are facing inside paint pail.
   b. Unlock gun trigger lock.

   c. Pull and hold gun trigger.
   d. Turn Prime/Spray valve to SPRAY.

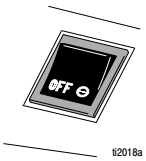



   e. Turn power switch ON.

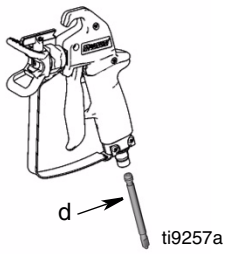



5. Move roller frame to waste pail. Trigger gun to flush hose, roller frame and gun.
6. Continue triggering gun until flushing fluid is gone from pail.
7. Stop triggering gun. Engage trigger lock.

8. Turn power switch OFF.



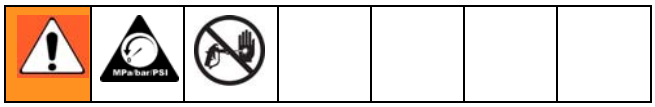

9. Clean InstaClean Fluid Filter, page 21.
10. Fill unit with Pump Armor™ storage fluid. Read Long Term Storage, page 22.
11. Clean gun fluid filter (d) with water or flushing solvent and a brush every time you flush the system. Replace gun filter if damaged.




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

# Power Flush

Power flushing is a faster method of flushing. It can only be used after spraying water-based coatings.




1. **Relieve pressure**, page 7.
2. If you used a spray gun, remove tip and guard assembly from gun and place in flushing fluid.

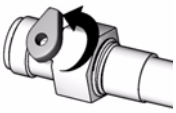
   If you used a roller, leave roller assembly attached to gun.
3. Place waste and paint pails side by side.

ti9726a

4. Lift suction tube and prime tube from paint pail. Let them drain into paint for a while.
5. Place suction and prime tube in waste pail.
6. Turn pressure control knob to Prime/Clean setting.

ti9718a

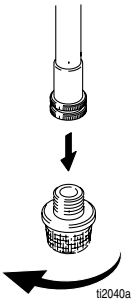
7. Screw power flush attachment to garden hose. Close valve.


ti94143a

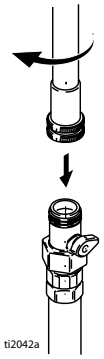
8. Turn on water. Open valve. Rinse paint off suction tube, prime tube and inlet screen.

ti9527a

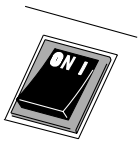
9. Turn lever to close power flush attachment.
10. Unscrew inlet screen from suction tube. Place inlet screen in waste pail.


ti2040a

11. Connect garden hose to suction tube with Power Flush attachment. Leave prime tube in waste pail.

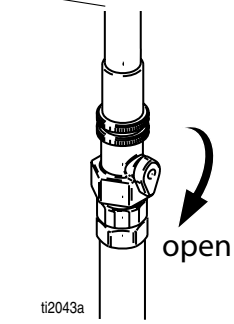

ti2042a

12. Turn power switch ON.



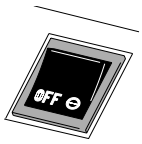
ti5580a

13. Open lever on Power Flush attachment.



ti2043a

14. Circulate water through sprayer, into waste pail, for 20 seconds.
15. Turn power switch OFF.



ti2018a

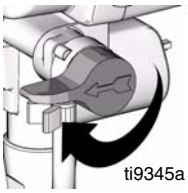
16.
    a. If you used a spray gun only, continue Power Flushing, Step 17.
    b. If you used a roller follow roller cleanup instructions beginning on page 18.

Step 17 is for returning paint in hose back to paint pail. One 50-ft (15-m) hose holds approximately 1-quart (1-liter) of paint.

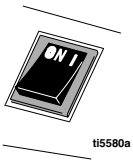
17. To preserve paint in hose:
    a. Point gun into paint pail.
    b. Unlock gun trigger lock.

ti8922a

    c. Pull and hold gun trigger.
    d. Turn Prime/Spray valve to SPRAY.


ti9345a

    e. Turn power switch ON.



ti5580a

    f. Continue to hold gun trigger until you see paint diluted with water starting to come out of gun.

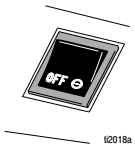
18. While continuing to trigger gun, quickly move gun to redirect spray into waste pail. Continue triggering gun into waste pail until water coming out of gun is relatively clear.

ti9745a

19. Stop triggering gun. Engage trigger lock.

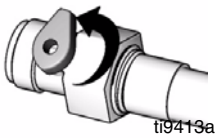
ti8923a

20. Turn power switch OFF.

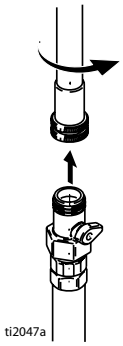


ti2018a

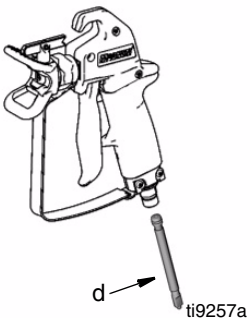
21. Turn off garden hose. Close Power Flush attachment.


ti9413a

22. Unscrew Power Flush attachment from suction tube.
23. Clean InstaClean Fluid Filter.
24. Fill unit with Pump Armor™ storage fluid. Read Long Term Storage, page 22.


ti2047a

25. Clean gun fluid filter (d) with water or flushing solvent and a brush every time you flush the system. Replace gun filter if damaged.



ti9257a

26. Clean tip and guard with water or flushing solvent. A soft brush can be used to loosen and remove dried on material if needed.

ti9671a

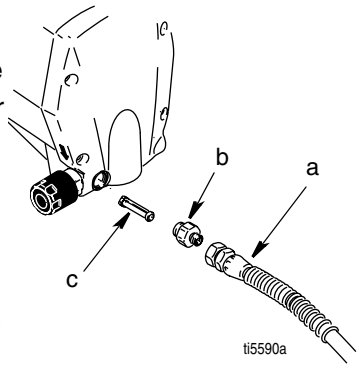
27. Wipe paint off outside of gun using a soft cloth moistened with water or flushing solvent.

# Cleaning InstaClean™ Fluid Filter

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

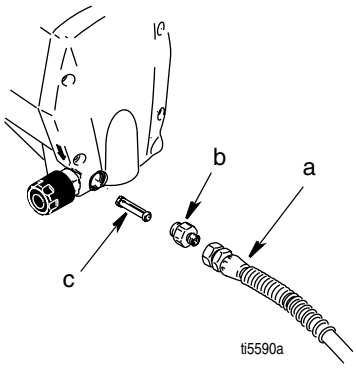
1. **Relieve pressure**, page 7.

2.
   a. Disconnect airless spray hose (a) from sprayer
   b. Unscrew outlet fitting (b).
   c. Remove InstaClean Fluid Filter (c).




3. Check InstaClean Fluid Filter (c) for debris. If needed, clean filter with water and a soft brush.

4.
   a. Install InstaClean Fluid Filter (c).
   b. Screw outlet fitting (b) into sprayer.
   c. Tighten outlet fitting and reconnect hose (a) to sprayer.

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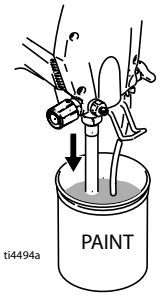
# Storage

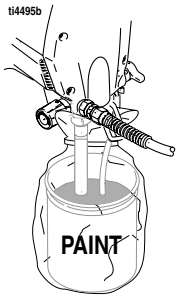
## Short Term Storage

***(up to 2 days)***

1. **Relieve pressure**, page 7.
2. Place suction and prime tube in paint can.




3. Cover can and hoses tightly with plastic wrap.



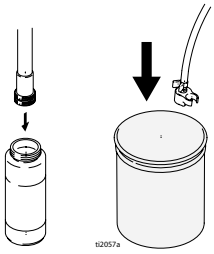

4.
   a. Engage trigger lock.
   b. Leave gun attached to hose.
   c. Remove tip and guard and clean with water or flushing solvent. A soft brush can be used to loosen and remove dried on material if needed.
   d. Wipe paint off outside of gun using a soft cloth moistened with water or flushing solvent.

## Long Term Storage

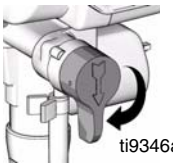
***(more than 2 days)***

Always circulate Pump Armor storage fluid through system after cleaning. Water left in sprayer will corrode and damage pump.

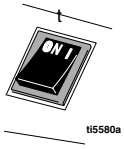
1. Place suction tube in Pump Armor storage fluid bottle and prime tube in waste pail.




2. Turn Prime/Spray valve to PRIME.

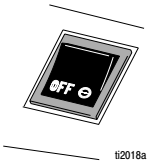



3. Turn power switch ON.

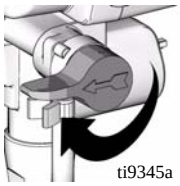



4. Turn pressure control knob clockwise until the pump turns on.

5. When storage fluid comes out of prime tube (5-10 seconds) turn power switch OFF.




6. Turn Prime/Spray valve to SPRAY to keep storage fluid in sprayer during storage.

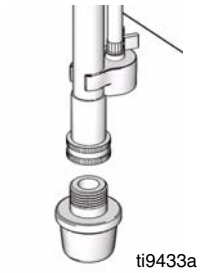


# Stowing Sprayer

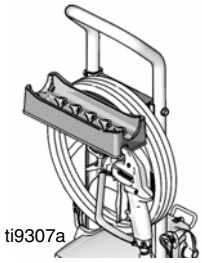
**CAUTION**

- Before storing sprayer make sure all water is drained out of sprayer and hoses.
- Do not allow water to freeze in sprayer or hose.
- Do not store sprayer under pressure.

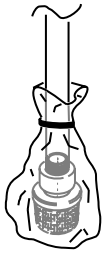
1. Screw inlet screen on suction tube.




2. Coil hose around hose wrap. Leave it connected to sprayer.




3. Secure a plastic bag around suction tube to catch any drips.
4. Store sprayer indoors.



# Troubleshooting

Check everything in this Troubleshooting Table before you bring the sprayer to a Graco/Magnum authorized service center.

| Problem | Cause | Solution |
|---|---|---|
| Power switch is on and sprayer is plugged in, but motor does not run, and pump does not cycle. | Pressure is set at zero pressure. | Turn pressure control knob clockwise to increase pressure setting. |
| | Motor or control is damaged. | Take sprayer to Graco/MAGNUM authorized service center. |
| | Electric outlet is not providing power. | • Try a different outlet or plug in something that you know is working to test outlet.<br>• Reset building circuit breaker or replace fuse. |
| | Extension cord is damaged. | Replace extension cord. Read Grounding and Electric Requirements, page 4. |
| | Sprayer electric cord is damaged. | Check for broken insulation or wires. Replace electric cord if damaged. |
| | Paint and/or water is frozen or hardened in pump. | Unplug sprayer from outlet. If frozen do NOT try to start sprayer until it is completely thawed or you may damage the motor, control board and/or drivetrain.<br><br>Make sure power switch is OFF. Place sprayer in a warm area for several hours. Then plug in powercord and turn sprayer ON. Slowly increase pressure setting to see if motor will start.<br><br>If paint is hardened in sprayer, pump packings, valves, drivetrain or pressure switch may need to be replaced. Take sprayer to Graco/MAGNUM authorized service center. |

| Problem | Cause | Solution |
|---|---|---|
| Pump does not prime. | Prime/Spray Valve is in SPRAY position. | Turn Prime/Spray Valve to PRIME position (pointing down). |
| | Inlet screen is clogged or suction tube is not immersed. | Clean debris off inlet screen and make sure suction tube is immersed in fluid. |
| | Inlet valve check ball is stuck. | Remove suction tube and place a pencil into the inlet section to dislodge the ball, allowing pump to prime properly. OR Power Flush sprayer, page 19. |
| | Outlet valve check ball is stuck. | Insert screw driver in slot and remove Easy-Access™ door, page 5. Unscrew outlet valve with a 3/4 in. socket. Remove and clean assembly. |
| | Suction tube is leaking. | Tighten suction tube connection. Inspect for cracks or vacuum leaks. |
| | Prime/Spray Valve is plugged. | Clean/replace prime tube as necessary. Take sprayer to Graco/MAGNUM authorized service center if valve is plugged. |
| Spray gun stopped spraying. | Spray tip is clogged. | Unclog spray tip, page 10. |
| Pump cycles but does not build up pressure. | Pump is not primed. | Prime pump. |
| | Inlet screen is clogged or suction tube is not immersed in fluid. | Clean debris off inlet screen and make sure suction tube is immersed in fluid. |
| | Paint pail is empty. | Refill paint pail. Reprime sprayer. |
| | suction tube is leaking. | Tighten suction tube connection. Inspect for cracks or vacuum leaks. If cracked or damaged, replace suction tube. |
| | Prime/Spray Valve is worn or obstructed with debris. | Take sprayer to Graco/MAGNUM authorized service center. |
| | Pump check ball is stuck. | Read ***Pump does not prime*** section in Troubleshooting, page 24. |
| Pump cycles, but paint only dribbles or spurts when spray gun is triggered. | Pressure is set too low. | Slowly turn Pressure Control Knob clockwise to increase pressure setting which will turn motor on to build pressure. |
| | Spray tip is clogged. | Unclog spray tip, page 10. |
| | InstaClean fluid filter is clogged. | Clean or replace InstaClean fluid filter, page 21. |
| | Spray gun fluid filter is clogged. | Clean or replace gun fluid filter, page 21. |
| | Spray tip is too large or worn. | Replace tip. |
| Spray pattern is inconsistent or is leaving stripes. | Pressure is set too low. | Turn Pressure Control Knob clockwise, to increase pressure. |
| | Spray tip is worn beyond capability of sprayer. | Replace spray tip. |

| Problem | Cause | Solution |
|---|---|---|
| Pressure is set at maximum but cannot achieve a good spray pattern. | Spray tip is too large for sprayer. | Select smaller spray tip. |
| | Spray tip is worn beyond capability of sprayer. | Replace spray tip. |
| | Extension cord is too long or not heavy enough gauge. | Replace extension cord. Grounding and Electrical Requirements, page 4. |
| | Spray gun fluid filter is clogged. | Clean or replace spray gun fluid filter, page 21. |
| | InstaClean fluid filter is clogged. | Clean or replace InstaClean fluid filter, page 21. |
| | Inlet screen is clogged. | Clean debris off inlet screen. |
| | Pump valves are worn. | Check for worn pump valves.<br>a. Prime sprayer with paint<br>b. Trigger gun momentarily. When trigger is released, pump should cycle momentarily and stop. If pump continues to cycle, pump valves may be worn. |
| | Material is too thick. | Thin material. |
| | Hose is too long (if extra section is added). | Remove section of hose. |
| When paint is sprayed, it runs down the wall or sags. | Coat is going on too thick. | Move gun faster. |
| | | Choose a tip with smaller hole size. |
| | | Choose tip with wider fan. |
| | | Make sure gun is far enough from surface. |
| When paint is sprayed, coat is not covering. | Coat is going on too thin. | Move gun slower. |
| | | Choose tip with larger hole size. |
| | | Choose tip with narrower fan. |
| | | Make sure gun is close enough to surface. |
| Motor is hot and runs intermittently. This is NOT a thermal overload condition. Motor automatically shuts off due to excessive heat. Damage can occur if cause is not corrected. **Thermal Overload**, page 4. | Vent holes in enclosure are plugged or sprayer is covered. | Keep vent holes clear of obstructions and overspray and keep sprayer open to air. |
| | Extension cord is too long or not a heavy enough gauge. | Replace extension cord. Read Grounding and Electrical Requirements, page 4. |
| | Unregulated electrical generator being used has excessive voltage. | Use electrical generator with a proper voltage regulator. Sprayer requires 120VAC, 60 Hz, 1500-Watt generator. |
| | Sprayer was operated at high pressure with very small tip which causes frequent motor starts and excessive heat build up. | Decrease pressure setting or increase tip size. |

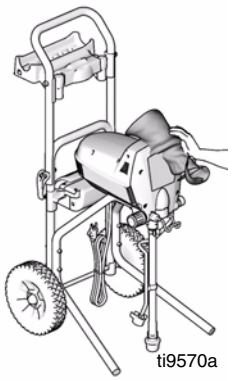
| Problem | Cause | Solution |
|---|---|---|
| Building circuit breaker opens after sprayer operates for 5 to 10 minutes. | Too many appliances are plugged in on same circuit. | Free up circuit (unplug things), or use a less busy circuit. |
| | Sprayer electrical cord is damaged. | Check broken insulation or wires. Replace electrical cord if damaged. |
| | Extension cord is damaged or too long or not a heavy enough gauge. | • Plug in something that you know is working to test extension cord.<br>• Replace extension cord. |
| Fan pattern varies dramatically while spraying.<br>OR<br>Sprayer does not turn on promptly when resuming spraying. | Pressure control switch is worn and causing excessive pressure variation. | Take sprayer to Graco/MAGNUM authorized service center. |
| Cannot trigger spray gun. | Spray gun trigger lock is locked. | Rotate trigger safety lever to unlock trigger lock, page 7. |
| Spray comes out of spray gun in two thick streams. | Reversible spray tip is in UNCLOG position. | Rotate arrow-shaped handle on spray tip so it points forward in SPRAY position, page 10. |
| Paint is coming out of pressure control switch. | Pressure control switch is worn. | Take sprayer to Graco/MAGNUM authorized service center. |
| Prime/Spray valve actuates automatically relieving pressure through prime tube. | System is over pressurizing. | Take sprayer to Graco/MAGNUM authorized service center. |
| Paint leaks down outside of pump. | Pump packings are worn. | Replace pump packings. |

# Maintenance and Service

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

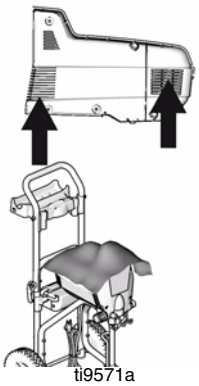
## Caring for Sprayer

Keep sprayer and all accessories clean and in good working order.




To avoid overheating motor, keep vent holes in shroud clear for air flow.

Do not cover sprayer while spraying.

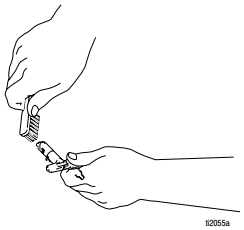



## Paint Hoses

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

## Tips

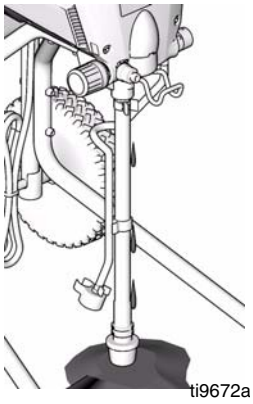
- Always clean tips with compatible solvent and brush after spraying.
- Tips may require replacement after 15 gallons (57 liters) or they may last through 60 gallons (227 liters) depending on abrasiveness of paint.
- Do not spray with worn tip.




## Pump Packings

When pump packings wear, paint will begin to leak down outside of pump.

- Replace pump packings at first sign of leaking or additional damage could occur.
- Purchase a pump repair kit and install according to instructions provided with kit.
- Consult a Graco/MAGNUM authorized service center.



# Technical Data

| | |
|---|---|
| Working pressure range | 0-3000 psi (0-21 MPa, 0-207 bar) |
| Electric motor | 6.5A (open frame, permanent magnet DC) |
| Operating horsepower | 3/4 |
| Maximum delivery (with tip) | 0.31 gpm (1.17 lpm) |
| Paint hose | 1/4 in. x 35 ft (6.4 mm x 11 m) |
| Maximum tip hole size | 0.017 in. (0.43 mm) |
| Weight, sprayer only | 31 lb (14 kg) |
| Weight, sprayer, hose & gun | 36 lb (17 kg) |
| Dimensions: Length | 19.5 in. (49.5 cm) |
| Width | 17.25 in. (43.8 cm) |
| Height | 40.75 in. (103.5 cm) |
| Height with folded handle | 26 in. (66 cm) |
| Power cord | 16 AWG, 3-wire, 6 ft (1.8 m) |
| Fluid inlet fitting | 3/4 in. internal thread (standard garden hose thread) |
| Fluid outlet fitting | 1/4 NPSM external thread |
| Inlet screen (on suction tube) | 35 mesh (450 micron) |
| Wetted parts, pump & hose | stainless steel, brass, leather, ultra-high molecular weight polyethylene (UHMWPE), carbide, nylon, aluminum, PVC, polypropylene, fluroelastomer |
| Wetted parts, gun | aluminum, brass, carbide, nylon, plated steel, stainless steel, UHMWPE, zinc |
| Generator requirement | 1500 Watt minimum |
| Electrical power requirement | 120 Vac, 60 Hz, 15A, 1 phase |
| Storage temperature range ◆❖ | -30° to 160°F (-35° to 71°C) |
| Operating temperature range ✔ | 40° to 115°F (4° to 46°C) |

◆ When pump is stored with non-freezing fluid. Pump damage will occur if water or latex paint freezes in pump.
❖ Damage to plastic parts may result if impact occurs in low temperature conditions.
✔ Changes in paint viscosity at very low or very high temperatures can affect sprayer performance.

# Notes

# Notes

# Graco Standard Warranty

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

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

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

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

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

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

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

**FOR GRACO CANADA CUSTOMERS**

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

***TO PLACE AN ORDER*** or to identify the nearest Graco/MAGNUM distributor, contact us at 1-888-541-9788

*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.*

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*This manual contains English*

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