Instructions – Parts List

Parts

HIGH PRESSURE AIR-ASSISTED

Alpha™ Plus AA Spray Gun 309117F

For air–assisted spray application of paints and coatings.

4000 psi (28 MPa, 280 bar) Maximum Working Fluid Pressure
100 psi (0.7 MPa, 7 bar) Maximum Working Air Pressure

16 psi (110 kPa, 1.1 bar) Maximum Compliant Inbound Air Pressure
(243575 HVLP Guns Only)

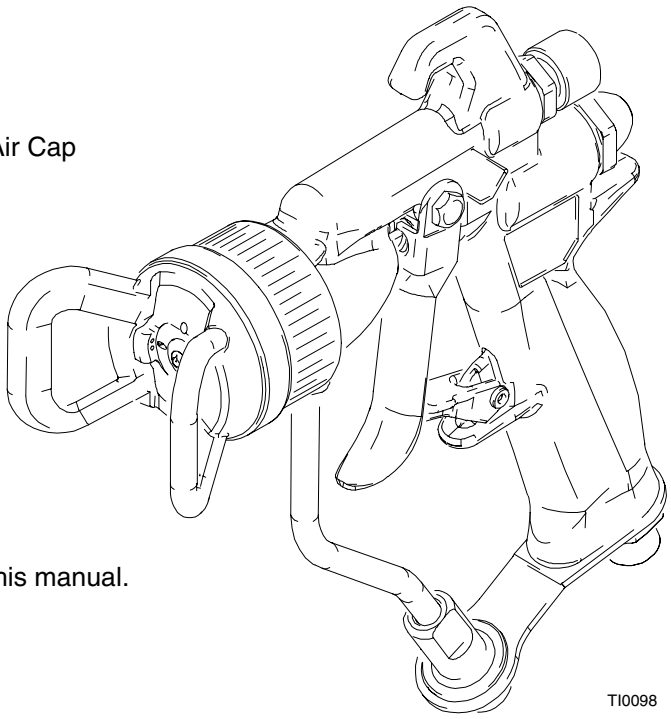
Part No. 243573, Series A
Air-Assisted Spray Gun

Part No. 243574, Series A
Hi-Flow Air-Assisted Spray Gun

Part No. 243575, Series A
HVLP Air-Assisted Spray Gun with Compliant Air Cap

Part No. 243576, Series A
AA Reverse-A-Clean® (RAC) Spray Gun

Part No. 243577, Series A
Hi-Flow Reverse-A-Clean® (RAC) Spray Gun



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Read Safety instructions.
Read all warnings and instructions in this manual.
Save these instructions.

PROVEN QUALITY. LEADING TECHNOLOGY.

GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440–1441

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Table of Contents

⚠ WARNING

INJECTION HAZARD

Spray from the gun, hose leaks, or ruptured components can inject fluid into your body and cause an extremely serious injury, including the need for amputation. Splashing fluid in the eyes or on the skin can also cause a serious injury.

- Fluid injected into the skin might look like just a cut, but it is a serious injury. **Get immediate surgical treatment.**
- Do not point the spray gun at anyone or at any part of the body.
- Do not put hand or fingers over the spray tip.
- Do not stop or deflect fluid leaks with your hand, body, glove, or rag.
- Do not “blow back” fluid; this is not an air spray gun.
- Check the gun diffuser operation weekly.
- Be sure the gun trigger safety operates before spraying.
- Lock the gun trigger safety when you stop spraying.
- Follow the **Pressure Relief Procedure** on page 9 whenever you: are instructed to relieve pressure; stop spraying; clean, check, or service the equipment; or install or clean the spray tip.
- Tighten all the fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn, damaged, or loose parts immediately. Permanently coupled hoses cannot be repaired; replace the entire hose.

TOXIC FLUID HAZARD

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

- Know the specific hazards of the fluid you are using. Read the fluid manufacturer’s warnings.
- Store hazardous fluid in an approved container. Dispose of hazardous fluid according to all local, state and national guidelines.
- Wear the appropriate protective clothing, gloves, eyewear and respirator.

⚠ WARNING

EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are uncertain about usage, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories.
- Check the equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. This equipment has a **4000 psi (28 MPa, 280 bar) maximum working fluid pressure and a 100 psi (0.7 MPa, 7 bar) maximum incoming air pressure**.
- Route the hoses away from the traffic areas, sharp edges, moving parts, and hot surfaces. Do not expose Graco hoses to temperatures above 180°F (82°C) or below –40°F (–40°C).
- Do not kink or over bend hoses or use hoses to pull equipment.
- Use only Graco approved hoses. Do not remove hose spring guards, which help protect the hose from rupture caused by kinks or bends near the couplings.
- Use fluids or solvents that are compatible with the equipment wetted parts. See the **Technical Data** section of all the equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Wear hearing protection when operating this equipment.
- Comply with all applicable local, state and national fire, electrical and other safety regulations.

FIRE AND EXPLOSION HAZARD

Improper grounding, poor air ventilation, open flames, or sparks can cause a hazardous condition and result in fire or explosion and serious injury.

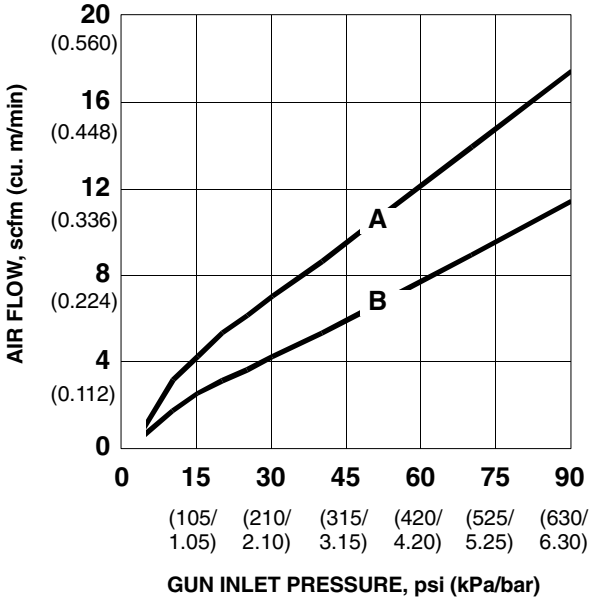
- Ground the equipment and the object being sprayed. See **Ground the System** on page 6.
- Provide fresh air ventilation to avoid the buildup of flammable fumes from solvent or the fluid being sprayed.
- Eliminate all ignition sources such as pilot lights, cigarettes and plastic drop cloths (static arc hazard). Do not plug or unplug power cords or turn lights on or off in the spray area.
- Keep the spray area free of debris, including solvent, rags, and gasoline.
- Do not turn on or off any light switch in the spray area while operating or if fumes are present.
- Do not smoke in the spray area.
- Do not operate a gasoline engine in the spray area.
- If there is any static sparking while using the equipment, **stop spraying immediately**. Identify and correct the problem.
- Keep a fire extinguisher in the work area.

Air Flow Charts

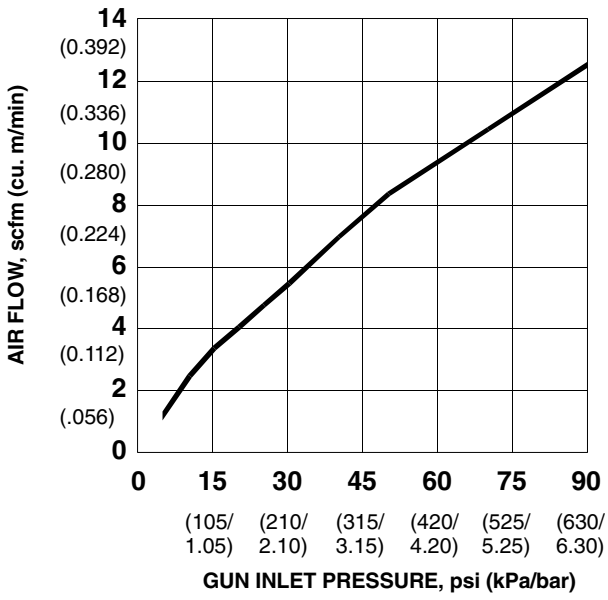
Gun Models 243573, 243574, 243576, and 243577

KEY: **A** = Fan valve open.
B = Fan valve closed.

Air Flow; Standard Air Cap 239781



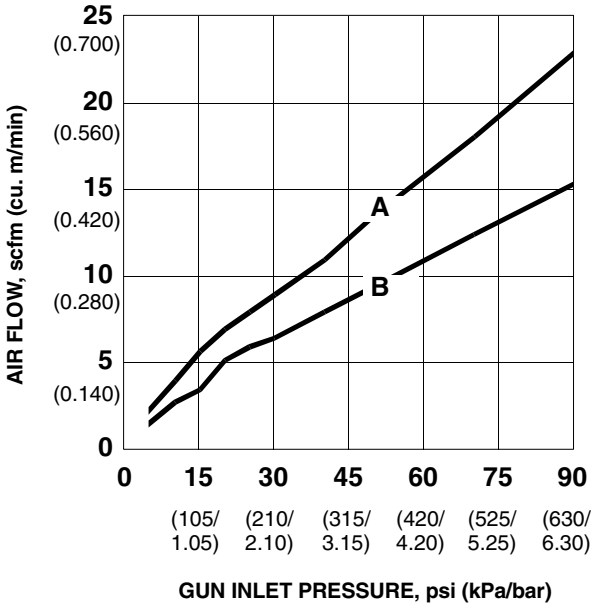
Air Flow; AA RAC Air Cap 243570



HVLP Gun Model 243575

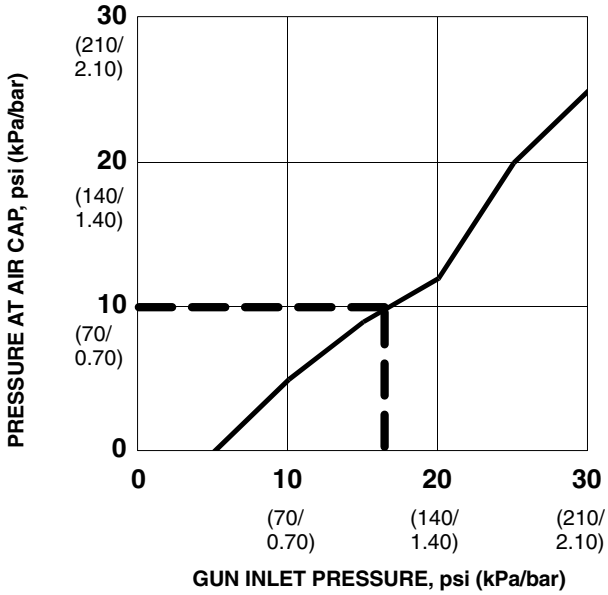
KEY: **A** = Fan valve open.
B = Fan valve closed.

Air Flow; Compliant Air Cap 239898

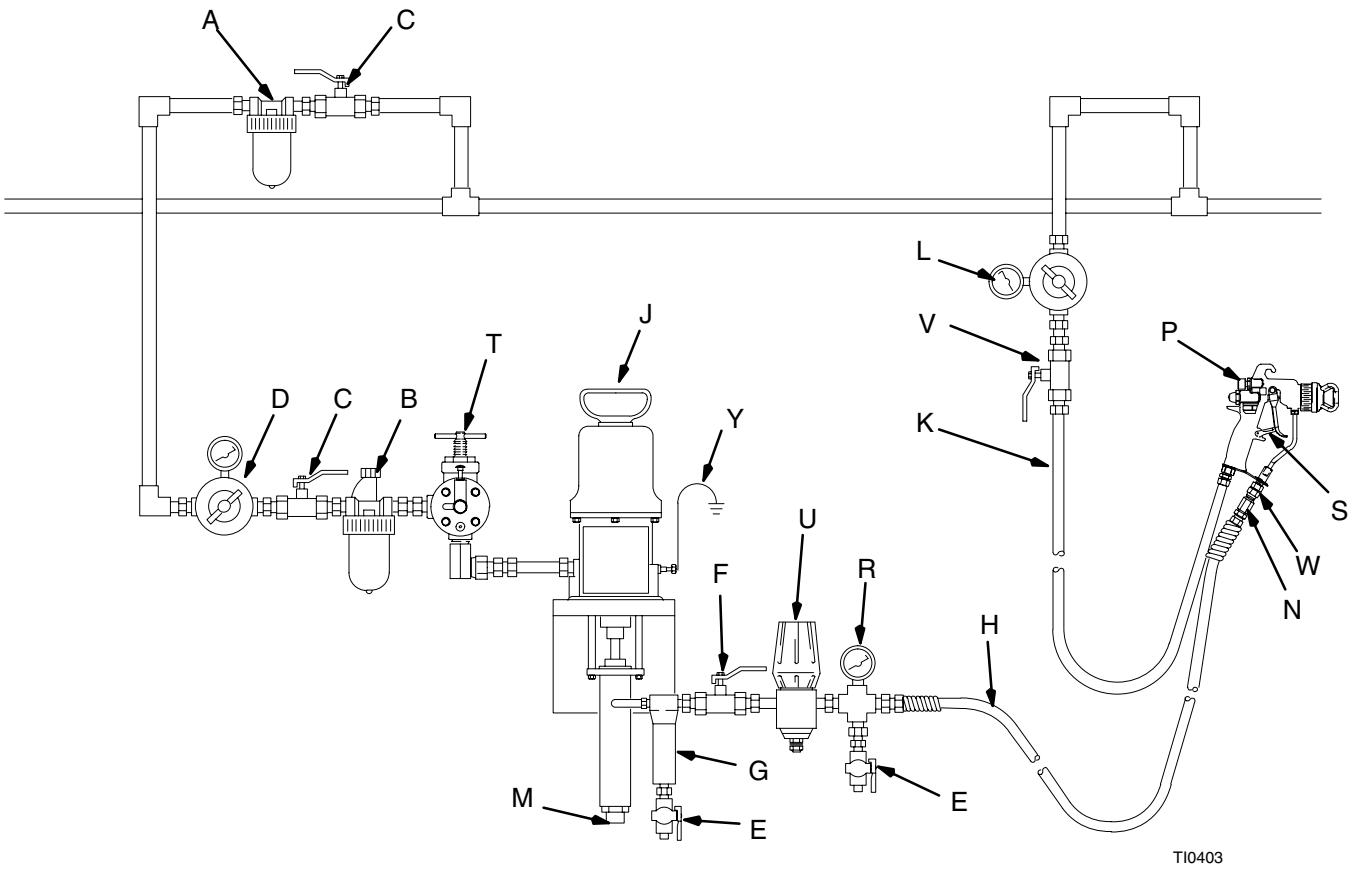


Atomizing Air Pressure; Compliant Air Cap 239898

(inlet pressure versus atomizing pressure)



Installation



KEY

A Air Line Filter
B Air Line Lubricator
C* Bleed-type Air Shutoff Valve
D Pump Air Regulator
E* Fluid Drain Valve
F Fluid Shutoff Valve
G Fluid Filter
H* Grounded Fluid Hose
J Pump
K Air Line
L Air Pressure Regulator
M Pump Fluid Inlet
N In-line Fluid Filter
P Pattern Adjustment Valve Knob
R Pressure Gauge
S Trigger Safety
T Pump Runaway Valve
U* Fluid Pressure Regulator
V Air Shutoff Valve
W Fluid Swivel
Y* Pump Ground Wire

**Equipment required for safe operation of the system. Must be purchased separately.*

Fig. 1

Typical Installation

The typical installation shown in Fig. 1 is only a guide for selecting and installing air-assisted spray systems. Contact your Graco distributor for assistance in designing a system to meet your needs.

Ventilate the Spray Booth

⚠ WARNING

To prevent hazardous concentrations of toxic and/or flammable vapors, spray only in a properly ventilated spray booth. Do not operate the spray gun unless ventilation fans are operating.

Check and follow all of the National, State and Local codes regarding air exhaust velocity requirements.

Check and follow all local safety and fire codes.

Installation

Ground the System

⚠ WARNING

FIRE AND EXPLOSION HAZARD
Improper grounding could cause static sparking, which could cause a fire or explosion. To reduce the risk of property damage or serious injury, follow the grounding instructions below.

The following grounding instructions are minimum requirements for a system. Your system may include other equipment or objects which must be grounded. Check your local electrical code for detailed grounding instructions for your area and type of equipment. Your system must be connected to a true earth ground.

1. **Pump:** Ground the pump by connecting a ground wire and clamp between the fluid supply and a true earth ground as instructed in your separate pump instruction manual.

2. **Air compressors and hydraulic power supplies:** Ground them according to the manufacturer recommendations.

3. **Air, fluid, and hydraulic hoses connected to the pump:** Use only electrically conductive hoses with a maximum of 500 feet (150 m) combined hose length to ensure grounding continuity. Check the electrical resistance of your air and fluid hoses at least once a week. If the total resistance to ground exceeds 29 megohms, replace the hose immediately.

   NOTE: Use a meter that is capable of measuring resistance at this level.

4. **Spray gun:** Ground the gun by connecting it to a properly grounded fluid hose and pump.

5. **Fluid supply container:** Ground it according to local code.

6. **Object being sprayed:** Ground it according to local code.

7. **All solvent pails used when flushing:** Ground them according to local code. Use only metal pails, which are conductive. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts the grounding continuity.

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

Setup

1. Connect the Air Line

NOTE:

- You must install an air pressure regulator (L) on the gun air line to control air pressure to the gun. See Fig. 1.
- *If your regulated air source does not have a filter,* install an air filter (A) on the air line to ensure a dry, clean air supply to the gun. Dirt and moisture can ruin the appearance of your finished workpiece.
- Install an air pressure regulator (D) on the pump air supply line to control air pressure to the pump.
- Install a bleed-type air shutoff valve (C) on the main air line and on the pump air line, to shut off air to the pump.

⚠ WARNING

The bleed-type air shutoff valve is required in your system to relieve air trapped between this valve and the pump after the air regulator is closed. Trapped air can cause the pump to cycle unexpectedly, which could result in serious injury.

- Use a 3/16 inch (5 mm) I.D. or larger air hose to minimize excessive pressure drop in the hose.

NOTE: The gun air inlet has a 1/4–18 npsm (R1/4–19) compound male thread that is compatible with npsm and bsp female swivel connectors.

A. Install an air shutoff valve (V) on each gun air supply, downstream of the gun air regulator, to shut off air to the gun.

B. Connect the air hose (K) to the 1/4 npsm gun air inlet.

C. Connect the other end of the air hose (K) to the outlet of the gun air regulator (L).

2. Connect the Fluid Hose

NOTE:

- Before connecting the fluid line, blow it out with air and flush it with solvent. Use solvent which is compatible with the fluid to be sprayed.
- If better control of fluid pressure is needed, install a fluid regulator (U) on the fluid line to level out fluid pressure to the gun. See Fig. 1.
- Use of an inline fluid filter (N) is recommended to remove coarse particles and sediment, to avoid clogging the spray tip and causing finishing defects.

A. Connect the fluid hose (H) to the gun fluid inlet. If desired, install a fluid swivel (W) at the gun inlet, for best maneuverability.

B. Connect the other end of the fluid hose (H) to the pump fluid outlet.

⚠ WARNING

INJECTION HAZARD
To reduce the risk of property damage or serious injury, including fluid injection, which could be caused by component rupture or unrelieved fluid pressure,

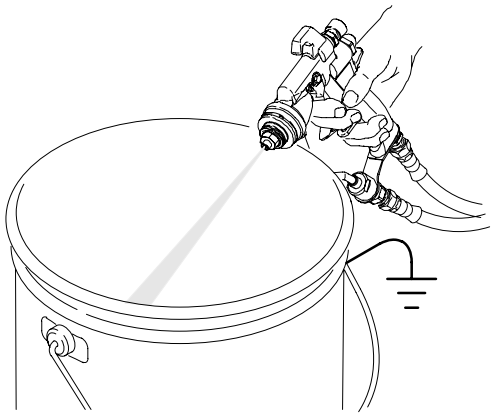
- If a plugged tip occurs, shut off the air supply to the pump, lock the gun trigger safety, and **very slowly** loosen the air cap retaining ring to relieve pressure in the cavity between the ball/seat shutoff and the plugged tip. Clear the tip orifice or tip filter, if installed.
- A fluid pressure regulator (U) must be installed in the system if the pump's maximum working pressure exceeds the gun's maximum fluid working pressure of 4000 psi (28 MPa, 280 bar).

Setup

3. Flush the Spray Gun.

Remove the air cap retaining ring (18), air cap (14), and spray tip (33).

Before putting any finishing fluid through the spray gun, flush the gun out with a solvent that is compatible with the fluid to be sprayed, using the lowest possible fluid pressure and a grounded metal container.



9126A

Fig. 2

4. Relieve the Pressure.

⚠ WARNING

PRESSURIZED EQUIPMENT HAZARD
To reduce the risk of a serious injury whenever you are instructed to relieve pressure, follow the **Pressure Relief Procedure** on page 9.

5. Select a Spray Tip and Air Cap.

The fluid flow and pattern width depend on the size of the spray tip, the fluid viscosity, and the fluid pressure. Contact your Graco distributor for assistance in selecting an appropriate spray tip for your application. Refer to the **Tip Selection Charts** on page 26.

6. Install a Spray Tip.

Install a spray tip in the gun. Insert the tip into the air cap. Ensure that the tip locating pin is positioned in the slot of the air cap. Insert the air cap into the tip guard/retaining ring (18) and tighten this assembly onto the gun firmly by hand, to ensure a good seal between the tip gasket and the seat housing (13).

7. Position the Air Cap

The air cap and spray tip position determines the direction of the spray pattern.

Rotate the air cap (the spray tip rotates with it) as needed to achieve the desired spray pattern direction.

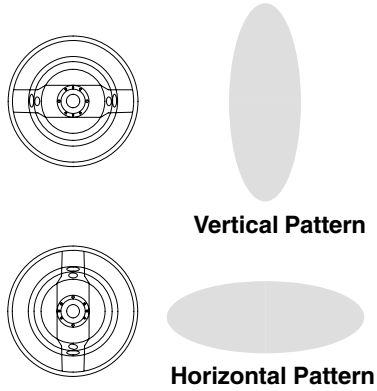


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Fig. 3

Operation

Safety

⚠ WARNING

INJECTION HAZARD
Remember, this is not an air spray gun. For your safety be sure to read and follow the Warnings on pages 2 and 3 and throughout the text of this instruction manual.

Keep the wallet sized warning card 179960, provided with the gun, with the operator of this equipment at all times. The card contains important treatment information should an injection injury occur. Additional cards are available at no charge from Graco.

Pressure Relief Procedure

⚠ WARNING

INJECTION HAZARD
The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop spraying,
- check or service any of the system equipment,
- or install or clean the spray tip.

1. Shut off power to the pump by closing the bleed-type master air valve (required in the system).

2. Unlock the gun trigger safety. See Fig. 4.

3. Hold a metal part of the gun firmly to the side of a grounded metal waste container and trigger the gun to relieve the fluid pressure.

4. Lock the gun trigger safety. See Fig. 4.

5. If you suspect that the spray tip is completely clogged or that pressure has not been fully relieved after following the steps above, **very slowly** loosen the air cap retaining ring to relieve pressure in the cavity between the ball/seat shutoff and the plugged tip. Clear the tip orifice.

6. If you suspect that the fluid hose is completely clogged or that pressure has not been fully relieved after following the steps above, **very slowly** loosen the hose end coupling at the gun and relieve pressure gradually. Then loosen completely to clear the obstruction.

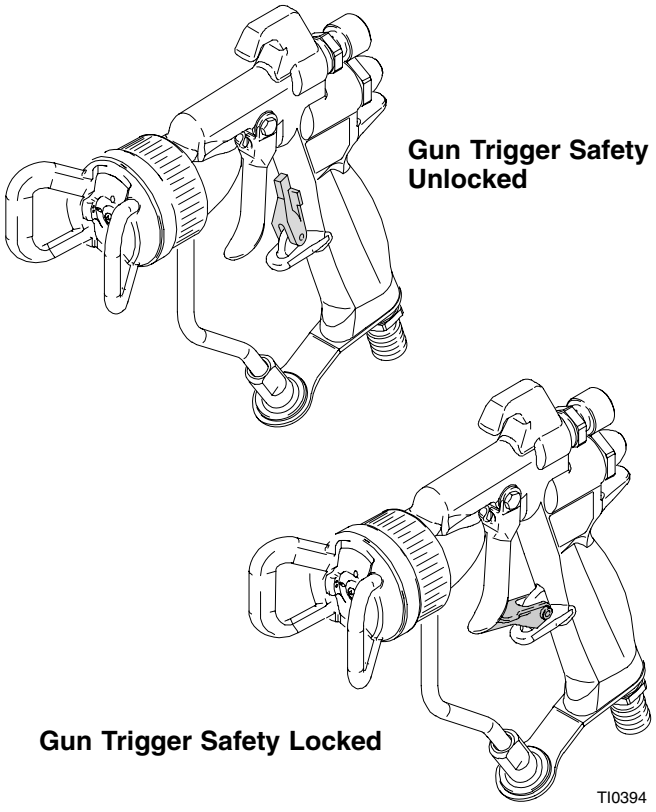


Fig. 4

How the Air-Assisted Spray Gun Operates

The air-assisted spray gun combines airless and air spraying concepts. The spray tip shapes the fluid into a fan pattern, as does a conventional airless spray tip. Air from the air cap further atomizes the fluid and completes the atomization of the paint tails into the pattern to produce a more uniform pattern. The width of the pattern can be slightly adjusted by the pattern adjustment valve.

Note that the air-assisted spray gun differs from an air spray gun in that increasing the pattern air reduces the pattern width. To increase the pattern width, less pattern air or a larger size tip must be used.

The spray gun has a built-in lead and lag operation. When triggered, the gun begins emitting air before the fluid is discharged. When the trigger is released, the fluid stops before the air flow stops. This helps assure the spray is atomized and prevents fluid buildup on the air cap.

Operation

Adjust the Spray Pattern

⚠ WARNING

INJECTION HAZARD
To reduce the risk of component rupture and serious injury, including injection, do not exceed the gun's maximum fluid working pressure of 4000 psi (28 MPa, 280 bar) or the maximum working pressure of the lowest rated component in the system.

⚠ WARNING

COMPONENT RUPTURE HAZARD
Do not exceed the **maximum fluid and air pressure** of this gun. Higher pressures can cause parts to rupture and result in serious injury.

1. Do not turn on the air supply yet. Set the fluid pressure at a low starting pressure, approximately 600 psi (4.2 MPa, 42 bar). If a fluid pressure regulator is installed, use it to make the adjustments.

   If your system does not have a fluid regulator, the fluid pressure is controlled by the air regulator supplying the pump, per the formula below:

Pump Ratio	x	Pump Air Regulator Setting	=	Fluid Pressure

2. Trigger the gun to check the atomization; do not be concerned about the pattern shape yet.

3. Slowly increase the fluid pressure, just to the point where a further increase in fluid pressure does not significantly improve fluid atomization.

4. Close off the pattern adjustment air by turning the knob (S, see Fig. 5) clockwise (in) all the way. This sets the gun for its widest pattern.

5. Set the atomizing air pressure at about 5 psi (0.35 bar, 35 kPa) when triggered. Check the spray pattern, then slowly increase the air pressure until the tails are completely atomized and pulled into the spray pattern. See Fig. 6. Do not exceed 100 psi (0.7 MPa, 7 bar) air pressure to the gun.

   For a narrower pattern, turn the pattern adjustment valve knob (S, see Fig. 5) counterclockwise (out). If the pattern is still not narrow enough, increase the air pressure to the gun slightly or use a different size tip.

NOTE: There is no fan adjustment when using AA RAC tips and caps.

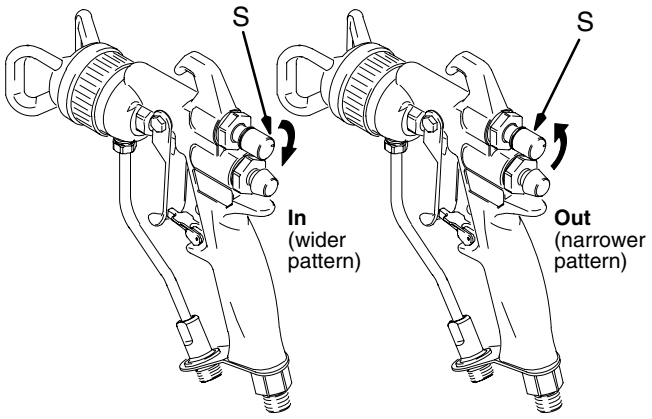


Fig. 5

Fig. 6

Operation

Air Pressure Verification Kit for HVLP Guns

NOTE: When using Gun Part No. 243575, with the 239898 Air Cap, the compliant air pressure should be verified by using Air Pressure Verification Kit 243581 (not to be used for actual spraying). Refer to page 30.

Install the verification kit air cap on the gun. Turn on the air to the gun, then trigger the gun to read the air pressure on the gauge. To be HVLP compliant, the air pressure must not exceed 10 psi (70 kPa, 0.7 bar).

Remove the verification kit air cap and install Air Cap 239898.

Apply the Fluid

Always hold the gun at a right angle from the surface. Do not make an arc with the gun as it causes an uneven coat of fluid. See Fig. 7.

1. To achieve the best results when applying fluid, keep the gun perpendicular to the surface and maintain a consistent distance of approximately 8 to 12 inches (200 to 300 mm) from the object being sprayed. See Fig. 7.

2. To obtain an even finish, use smooth, even strokes across the object being sprayed with 50% overlap.

3. Paint using parallel strokes. This spray gun applies all coatings evenly without cross coating.

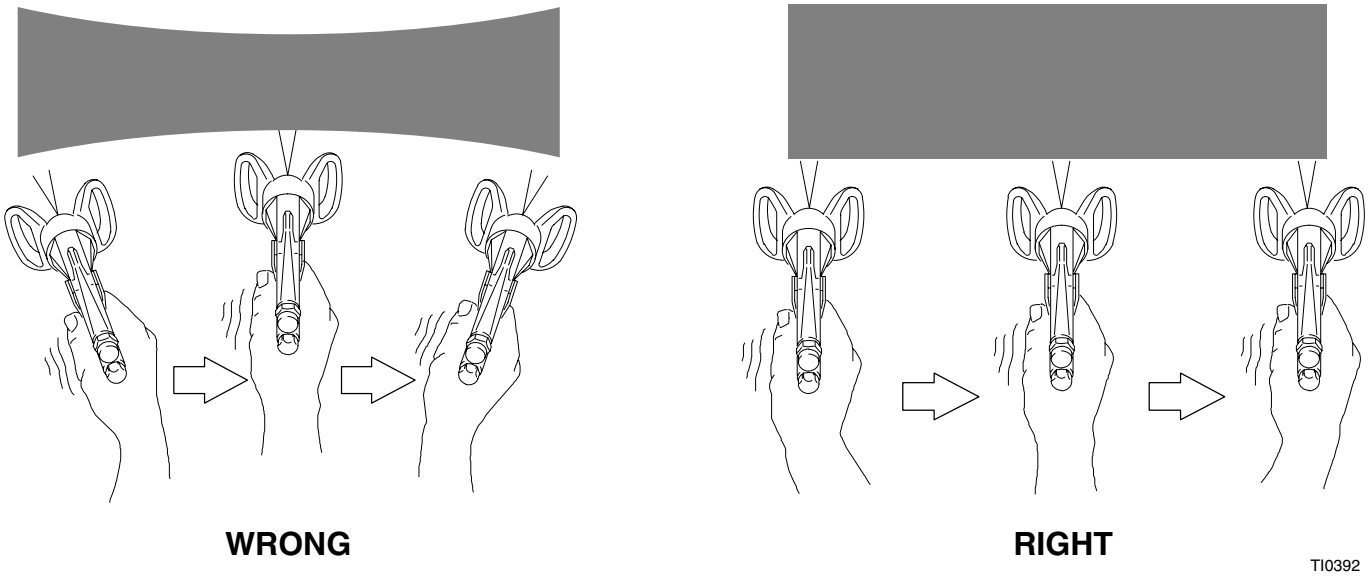


Fig. 7

Daily Gun Care, Flushing, and Cleaning

⚠ WARNING

PRESSURIZED EQUIPMENT HAZARD
To reduce the risk of a serious injury whenever you are instructed to relieve pressure, follow the **Pressure Relief Procedure** on page 9.

⚠ CAUTION

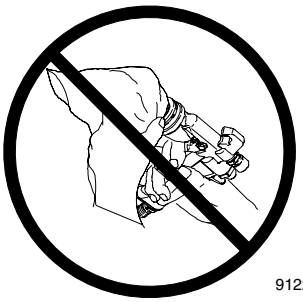
Clean all parts with a non-conductive solvent, compatible with the fluid being sprayed. Conductive solvents can cause the gun to malfunction.

Methylene chloride with formic or propionic acid is not recommended as a flushing or cleaning solvent with this gun as it will damage aluminum and nylon components.

⚠ CAUTION

Solvent left in gun air passages could result in a poor quality paint finish. Do not use any cleaning method which may allow solvent into the gun air passages.

Do not point the gun up while cleaning it.



9122A

Do not wipe the gun with a cloth soaked in solvent; ring out the excess.

02027

Do not immerse the gun in solvent.

9127A

Do not use metal tools to clean the air cap holes as this may scratch them; scratches can distort the spray pattern.

02055

General System Maintenance

1. Relieve the pressure.
2. Clean the fluid and air line filters daily.
3. Check for any fluid leakage from the gun and fluid hoses. Tighten fittings or replace equipment as needed.
4. Flush the gun before changing colors and whenever you are done operating the gun.

Daily Gun Care, Flushing, and Cleaning

⚠ WARNING

PRESSURIZED EQUIPMENT HAZARD
To reduce the risk of a serious injury whenever you are instructed to relieve pressure, follow the **Pressure Relief Procedure** on page 9.

1. Relieve the pressure.
2. Remove the tip guard assembly (18), air cap (14), and spray tip (33).
3. Disconnect the fluid supply hose (H) and air supply hose (J) from the gun.

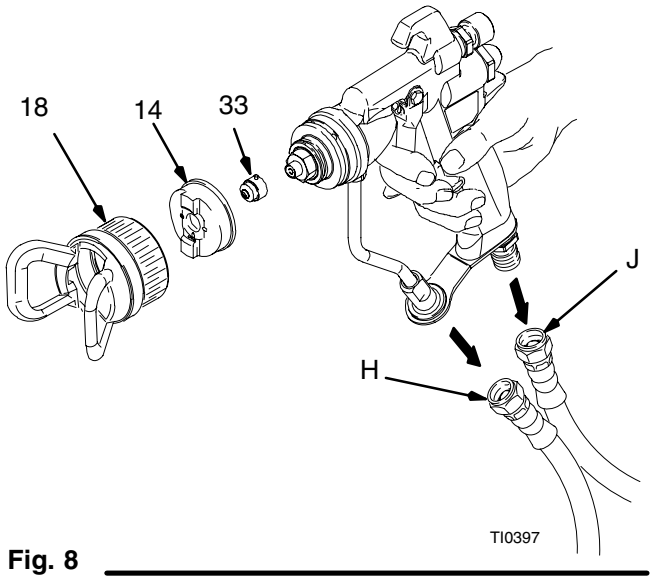


Fig. 8

4. Connect the solvent supply hose (T) to the gun.

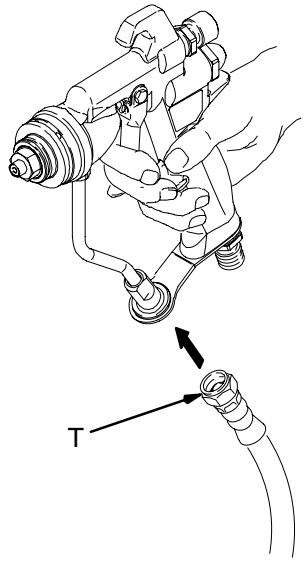


Fig. 9

5. Increase the pressure slowly. Point the gun down into a grounded metal container and flush the gun with solvent until all traces of fluid are removed from the gun passages.

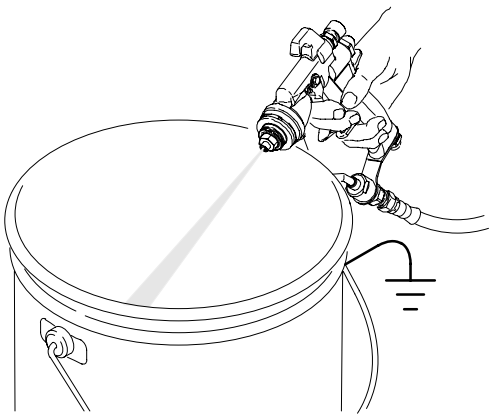


Fig. 10

6. Turn off the solvent supply.
7. Relieve the pressure.
8. Disconnect the solvent (T) supply hose from the gun.

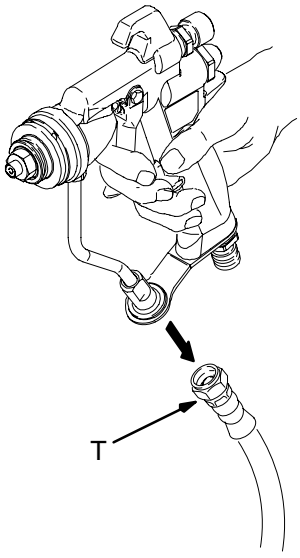


Fig. 11

Daily Gun Care, Flushing, and Cleaning

⚠ CAUTION

Trigger the gun whenever you tighten or remove the seat housing. This keeps the needle ball away from the seating surface and prevents the seat from being damaged.

9. If it is necessary to remove the seat housing (13) to clean, trigger the gun while you remove the seat housing with the gun tool (36). Remove the seat housing gasket (12b) and replace with a new gasket.

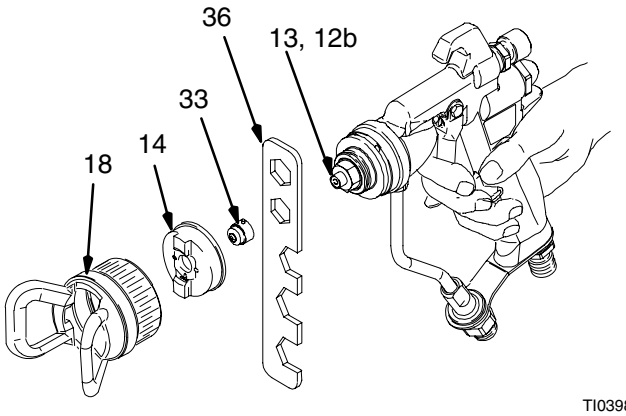


Fig. 12

10. Clean the tip guard assembly (18), air cap (14), and seat housing (13) with solvent.

11. Dip the end of a soft-bristle brush into a compatible solvent. Do not continuously soak the brush's bristles with solvent and do not use a wire brush.

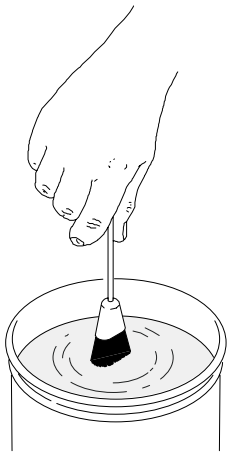


Fig. 13

12. With the gun pointed down, clean the front of the gun, using the soft-bristle brush and solvent.

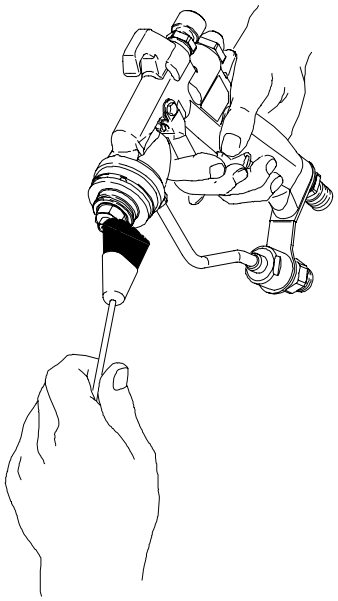


Fig. 14

13. Scrub the tip guard assembly, air cap, and spray tip with the soft-bristle brush. To clean out air cap holes, use a soft implement, such as a toothpick, to avoid damaging critical surfaces. Clean the air cap and spray tip daily, minimum. Some applications require more frequent cleaning.

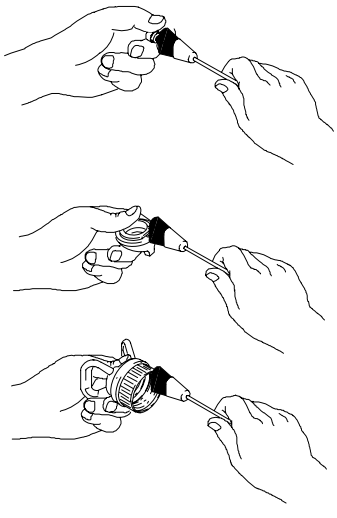


Fig. 15

Daily Gun Care, Flushing, and Cleaning

14. Be sure to install a new seat gasket (12b). Trigger the gun while you install the seat housing (13) with the gun tool (36). Tighten the housing securely to obtain a good seal. Refer to Fig. 16 for recommended torque values. When properly tightened, the flange will bottom out on the gun.
15. Install the tip guard assembly (18), air cap (14), and spray tip (33).

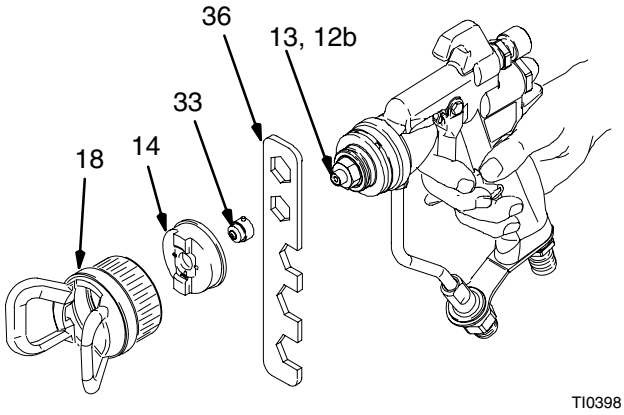


Fig. 16

16. Dampen a soft cloth with solvent and wring-out the excess. Point the gun down and wipe off the outside of the gun.

Fig. 17

17. After cleaning the gun, lubricate the following parts with lubricant 111265 weekly:
    - Trigger pivot pin
    - Boss on both sides of the gun where the trigger contacts the gun body
    - Fluid needle shaft, behind trigger

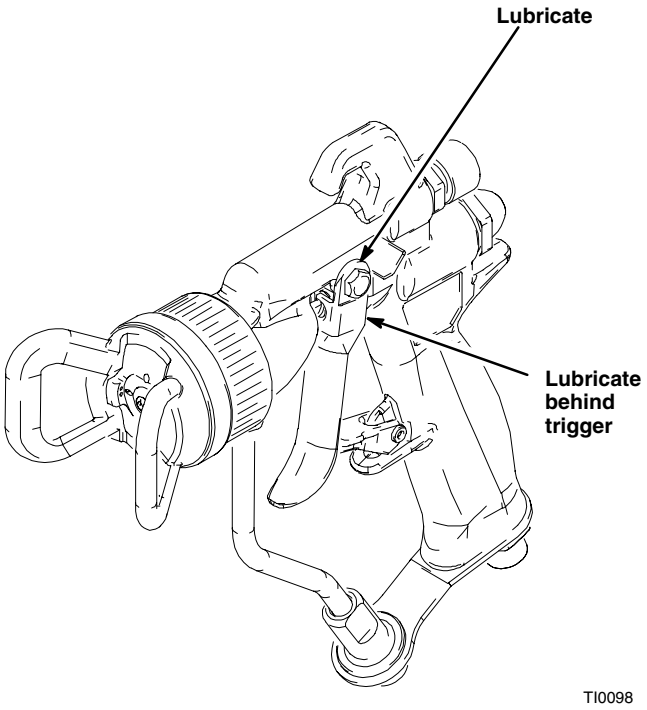
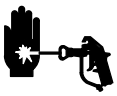


Fig. 18

Troubleshooting

⚠ WARNING



INJECTION HAZARD
To reduce the risk of a fluid injection injury, follow the **Pressure Relief Procedure** on page 9 before checking or servicing any of the system equipment and whenever you are instructed to relieve pressure.

NOTE:

- Check all possible remedies in the troubleshooting charts before disassembling the gun.
- Some improper patterns are caused by the improper balance between air and fluid.

General Troubleshooting

Problem	Cause	Solution
Fluid leakage from back of fluid packing area	Worn packings or needle shaft	Replace entire needle assembly (12).
Air leakage from front of gun	Air valve not seating properly	Clean or replace air valve (23).
Fluid leakage from front of gun	Needle ball worn or damaged	Replace entire needle assembly (12).
	Worn seat assembly	Replace the seat assembly (13) and gasket (12b). The gasket must be replaced whenever the seat assembly is removed.
Fluid in air passages	Spray tip seal leaking	Tighten tip guard assembly (18) or replace spray tip (33).
	Leaking around seat housing	Replace the gasket (12b). The gasket must be replaced whenever the seat assembly is removed.
	Fluid inlet fitting leaking	Replace the fluid tube gasket (7). The gasket must be replaced whenever the fluid tube connector is removed.
Slow fluid shut-off	Fluid buildup on fluid needle components	Remove and clean or replace the fluid needle assembly (12).
No fluid output when triggered	Tip orifice plugged	**Very slowly** loosen tip guard assembly (18), air cap (14), and spray tip (33). Clean the tip orifice.
	Fluid hose plugged	After tip removal (see above), **very slowly** loosen the hose end coupling at the gun and relieve pressure gradually. Then loosen completely to clear the obstruction.

Troubleshooting

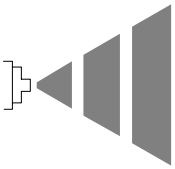
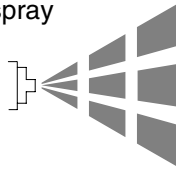
⚠ WARNING

INJECTION HAZARD
To reduce the risk of a fluid injection injury, follow the **Pressure Relief Procedure** on page 9 before checking or servicing any of the system equipment and whenever you are instructed to relieve pressure.

NOTE:

- Check all possible remedies in the troubleshooting charts before disassembling the gun.
- Some improper patterns are caused by the improper balance between air and fluid.

Spray Pattern Troubleshooting

Problem	Cause	Solution
Fluttering or spitting spray  9240A	Insufficient fluid supply	Adjust fluid regulator or fill fluid supply tank.
	Air in paint supply line	Check, tighten pump siphon hose connections, bleed air from paint line.
	Attempting to “feather” (partially trigger) the gun	Cannot “feather” with an AA gun. Feathering will cause drastic reduction of pressure at the tip, resulting in poor atomization and/or spitting.
Striping spray  9240A	Spray tip orifice partially plugged	Clean or replace spray tip. See page 13.
Irregular pattern  9240A	Fluid build-up on spray tip, or spray tip partially plugged	Clean spray tip. See page 13.
	On defective side of pattern, air horn holes are partially or totally plugged	Clean air horn holes with solvent and soft brush. See page 13.
Pattern pushed to one side, same side of air cap gets dirty	Air horn holes partially or totally plugged	Clean air horn holes with solvent and soft brush or toothpick. See page 13.

Service

Items Needed for Service

- Gun Tool – provided
- Packing Installation Tool – provided
- Needle Wrench – provided
- Adjustable Wrench
- Pliers
- O-ring Pick
- Lubricant part no. 111265; see **Accessories** to order
- Compatible Solvent

Repair Kit 241619

NOTE: Order Repair Kit 241619. For the best results, use all the new parts in the kit. Kit parts are marked with an asterisk, for example (7*). Refer to pages 22 and 24.

Fan Valve Repair

⚠ WARNING

INJECTION HAZARD
To reduce the risk of a fluid injection injury, follow the **Pressure Relief Procedure** on page 9 before checking or servicing any of the system equipment and whenever you are instructed to relieve pressure.

1. Relieve the pressure.

2. Unscrew the fan valve packing nut (A) from the back of the gun body (1). Slide the fan valve assembly (28) out of the gun body. See Fig. 19.

3. Remove the retaining ring (28b) from the fan valve shaft (B). Carefully remove the two u-cups (28a) from the packing nut (A). Be careful not to damage the packing groove sealing surfaces.

4. Install the u-cups (28a*) in the packing nut (A) with the lips of the u-cups facing out of the packing nut, toward the gun body (1).

5. Reinstall the fan valve assembly (28) into the gun body (1). Screw the packing nut (A) into the gun body. Torque to 125–135 in-lb (14–15 N•m).

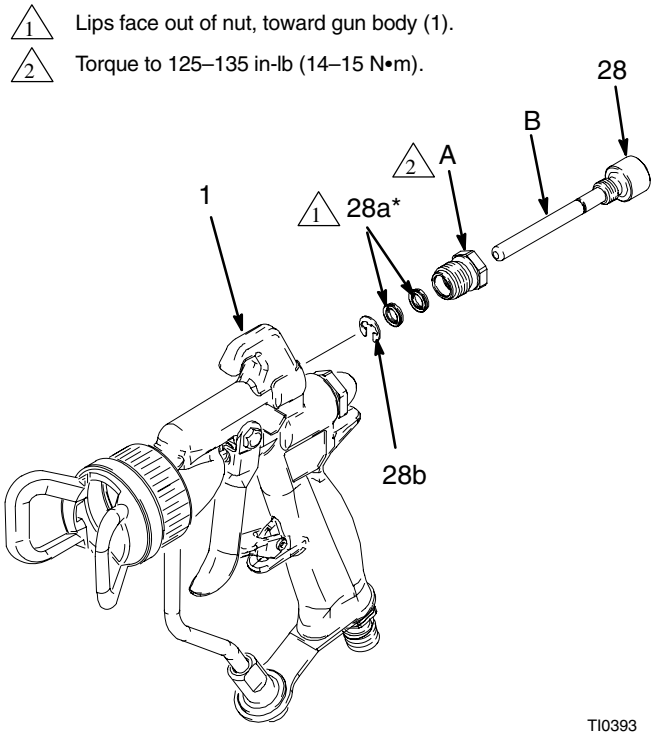


Fig. 19

Service

Complete Gun Packing Replacement

Disassembly

NOTE:

- Gun Repair Kit 241619 is available. The kit includes an o-ring (17), gaskets (7, 12b), u-cups (18a, 22, 28a), air valve assembly (23), and seal installation tool (34).
- Clean parts with a solvent that is compatible with the parts and the fluid being sprayed.
- Lightly lubricate the parts indicated in Fig. 23 with lubricant 111265.

⚠ WARNING

INJECTION HAZARD
To reduce the risk of a fluid injection injury, follow the **Pressure Relief Procedure** on page 9 before checking or servicing any of the system equipment and whenever you are instructed to relieve pressure.

1. Relieve the pressure. Remove the fluid and air hoses from the gun.

2. Remove the tip guard assembly (18), air cap (14), and spray tip (33). See Fig. 23.

3. Unscrew the air separator (16) from the front of the gun body (1). Carefully remove the o-ring (17). Do not damage the o-ring groove.

4. Trigger the gun to pull the needle ball off the seat while you unscrew the seat assembly (13) from the gun body (1), using the gun tool (36). Remove and discard the seat assembly gasket (12b).

NOTE: Always install a new seat gasket (12b) whenever you remove the seat assembly (13).

5. Remove the trigger lock screw (20), pivot pin (21), and trigger (19).

6. Unscrew the spring cap (27) from the back of the gun body (1). Remove the two springs (25, 26).

7. Use the needle wrench (41) on the flats of the needle to prevent it from rotating while unscrewing the needle extension (24) from the fluid needle. See Fig. 20.

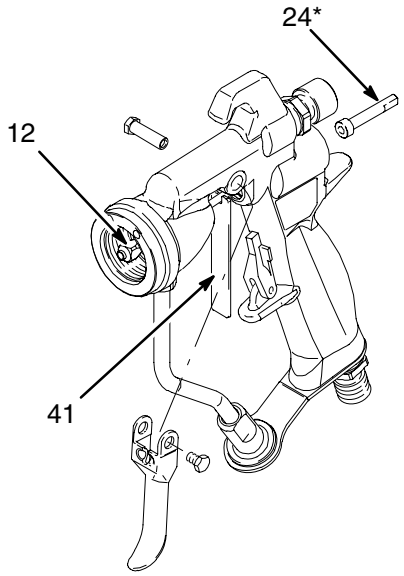


Fig. 20

8. Pull the air valve assembly (23) out the back of the gun.

9. Grip the ball housing with a pliers and pull the fluid needle assembly (12) out the front of the gun. If the needle is bent or damaged, or the packing is worn or leaking, replace the entire needle assembly.

10. Remove the o-rings (12a) from the packing cartridge on the needle shaft. Clean the o-ring groove and the needle.

11. Using a pick, remove the u-cup (22) from the gun body.

12. Unscrew the fluid inlet fitting (11). Remove and clean or replace the inline fluid filter (10).

13. Unscrew the fluid tube connector (C) from the gun's fluid inlet. Carefully remove the gasket (7). Do not damage the seat.

Service

Reassembly

1. Install the gasket (7*) in the gun. Screw the fluid tube connector (C) into the gun's fluid inlet. Torque to 105–115 in-lb (12–13 N•m). See Fig. 23.

2. Place the new u-cup (22*) on the seal installation tool (34*), with the u-cup lips facing the tool as shown in Fig. 21. Push the u-cup into the back of the gun until a definite snap is felt.

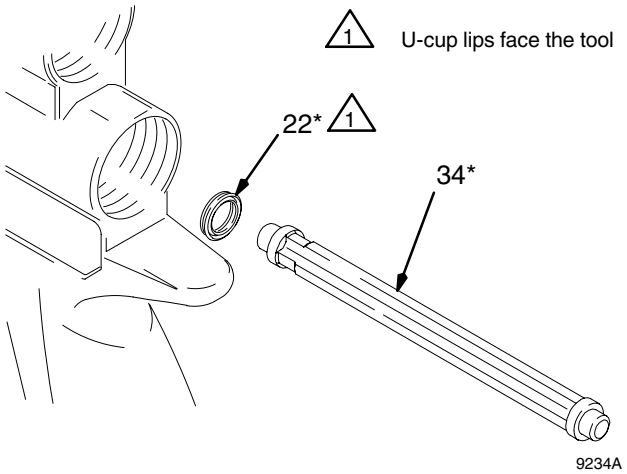


Fig. 21

3. Install the two o-rings (12a) on the packing cartridge on the needle shaft. Lightly lubricate the o-rings. Also lubricate the needle shaft where the packing slides.

4. Insert the fluid needle assembly (12) into the front of the gun. Use the tool (12c) to push the packing cartridge into the gun body until the cartridge bottoms out. See Fig. 22.

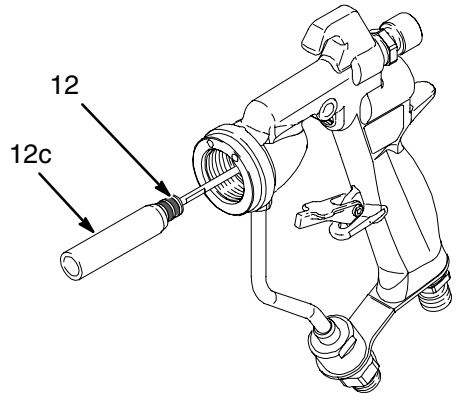


Fig. 22

5. Lubricate the front end of the air valve assembly. Slide the air valve assembly (23*) onto the back of the fluid needle assembly (12) and push the air valve assembly into the back of the gun as far as it will go.

6. Use the needle wrench (41) on the flats of the needle to prevent it from rotating while screwing the needle extension (24) onto the fluid needle. See Fig. 20. ***Use only finger pressure on the tool to tighten. Do not overtighten!***

7. Install the two springs (25, 26). Screw the spring cap (27) into the back of the gun body (1). Torque to 125–135 in-lb (14–15 N•m).

8. Install the trigger (19), pivot pin (21), and trigger lock screw (20). Torque to 20–30 in-lb (2.3–3.3 N•m). Lubricate both sides of the pivot pin where the trigger contacts the pin, and lubricate the boss on both sides of the gun where the trigger contacts the gun body.

NOTE: Always install a new seat gasket (12b) whenever you replace the seat assembly (13).

9. Install a new seat gasket (12b). Trigger the gun to pull the needle back while you screw the seat assembly (13) into the gun body (1), using the gun tool (36). Refer to Fig. 23 for recommended torque values. When properly tightened, the flange will bottom out on the gun.

10. Install the o-ring (17*) and screw the air separator (16) onto the front of the gun body (1).

11. Install the spray tip (33) and air cap (14), then secure with the tip guard assembly (18).

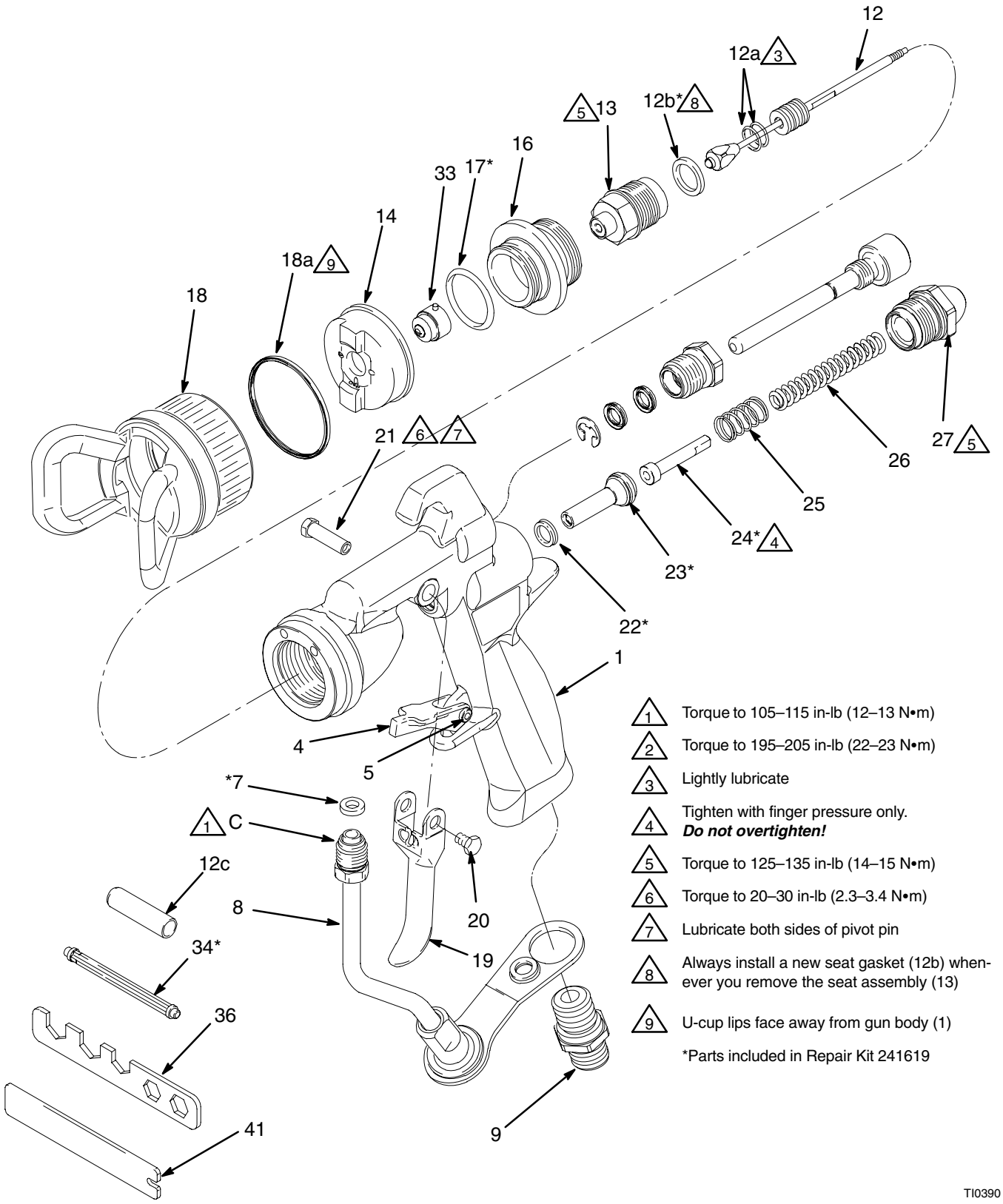

12
12a 3
12b* 8
5 13
16
33
17*
14
18a 9
18
21 6 7
27 5
26
25
24* 4
23*
22*
1
4
5
*7
1 C
12c
8
20
19
34*
36
41
9
1 Torque to 105–115 in-lb (12–13 N•m)
2 Torque to 195–205 in-lb (22–23 N•m)
3 Lightly lubricate
4 Tighten with finger pressure only. Do not overtighten!
5 Torque to 125–135 in-lb (14–15 N•m)
6 Torque to 20–30 in-lb (2.3–3.4 N•m)
7 Lubricate both sides of pivot pin
8 Always install a new seat gasket (12b) whenever you remove the seat assembly (13)
9 U-cup lips face away from gun body (1)
*Parts included in Repair Kit 241619
TI0390

Fig. 23

Parts

Part No. 243573 Air-Assisted Spray Gun

Part No. 243574 Hi-Flow Air-Assisted Spray Gun

Part No. 243575 HVLP Air-Assisted Spray Gun with Compliant Air Cap

Ref. No.	Part No.	Description	Qty.
1	243578	BODY, gun	1
4	194745	LOCK, trigger	1
5	112033	PIN, dowel	1
7*	115133	GASKET, tube; acetal	1
8	243572	TUBE, fluid	1
9	195065	FITTING, air inlet; 1/4–18.6 special form spt(m)	1
12	243585	KIT, needle; 3/32 in. carbide includes items 12a through 12c; used on Part Nos. 243573 and 243575	1
	243586	KIT, needle; 1/8 in. carbide includes items 12a through 12c; used on Part No. 243574	1
12a	111450	• O-RING	2
12b*	115134	• GASKET, seat; acetal	1
12c	196140	• TOOL, repair, packing	1
13	243563	SEAT ASSEMBLY; 3/32 in. carbide; used on Part Nos. 243573 and 243575	1
	243564	SEAT ASSEMBLY; 1/8 in. carbide; used on Part No. 243574	1
14	239781	AIR CAP; used on Part Nos. 243573 and 243574	1
	239898	AIR CAP, compliant; used on Part No. 243575 only	1
16	194749	SEPARATOR, air	1
17*	107079	O-RING; PTFE	1
18	243568	TIP GUARD; includes replaceable item 18a	1
18a*	192760	• U-CUP	1
19	192271	TRIGGER	1
20	203953	SCREW, trigger lock	1
21	192272	PIN, pivot	1
22*	188493	U-CUP; UHMWPE	1
23*	241503	AIR VALVE ASSEMBLY	1
24*	194563	EXTENSION, needle	1
25	114069	SPRING, air valve	1
26	115141	SPRING, needle	1
27	194562	CAP, spring	1
28	241484	FAN VALVE ASSEMBLY includes replaceable items 28a and 28b	1
28a*	188493	• U-CUP; UHMWPE	2
28b	115114	• RING, retaining	1
33	GG4XXX	SPRAY TIP, customer's choice, see page 26	1
34*	192282	TOOL, seal installation	1
36	194750	TOOL, gun	1
39▲	172479	TAG, instruction (not shown)	1
40▲	222385	WARNING CARD (not shown)	1
41	196319	WRENCH, needle	

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

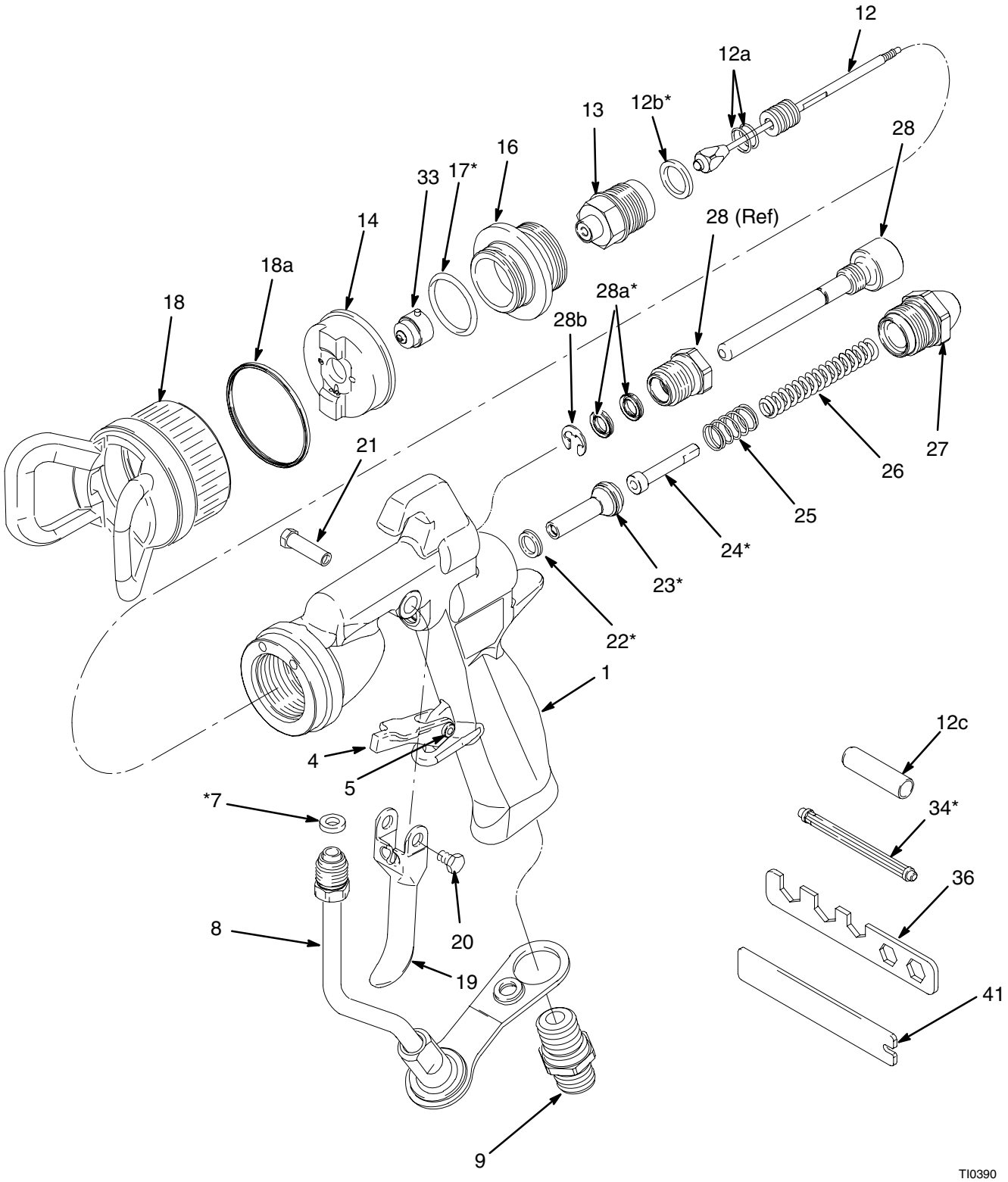
* *These parts are included in Repair Kit 241619, which may be purchased separately.*

Parts

Part No. 243573 Air-Assisted Spray Gun

Part No. 243574 Hi-Flow Air-Assisted Spray Gun

Part No. 243575 HVLP Air-Assisted Spray Gun with Compliant Air Cap



Parts

Part No. 243576 AA RAC Spray Gun

Part No. 243577 Hi-Flow AA RAC Spray Gun

Ref. No.	Part No.	Description	Qty.
1	243578	BODY, gun	1
4	194745	LOCK, trigger	1
5	112033	PIN, dowel	1
7*	115133	GASKET, tube; acetal	1
8	243572	TUBE, fluid	1
9	195065	FITTING, air inlet; 1/4–18.6 special form spt(m)	1
11	192096	HOUSING, AA RAC	1
12	243585	KIT, needle; 3/32 in. carbide includes items 12a through 12c; used on Part No. 243576	1
	243586	KIT, needle; 1/8 in. carbide includes items 12a through 12c; used on Part No. 243577	1
12a	111450	• O-RING	2
12b*	115134	• GASKET, seat; acetal	1
12c	196140	• TOOL, repair, packing	1
13	243565	SEAT ASSEMBLY, AA RAC; 3/32 in. carbide; used on Part No. 243576	1
	243566	SEAT ASSEMBLY, AA RAC; 1/8 in. carbide; used on Part No. 243577	1
18	243570	AA RAC TIP GUARD	1
19	192271	TRIGGER	1
20	203953	SCREW, trigger lock	1
21	192272	PIN, pivot	1
22*	188493	U-CUP; UHMWPE	1
23*	241503	AIR VALVE ASSEMBLY	1
24*	194563	EXTENSION, needle	1
25	114069	SPRING, air valve	1
26	115141	SPRING, needle	1
27	194562	CAP, spring	1
28	196655	PLUG	1
33	242XXX	AA RAC SPRAY TIP, customer's choice; see chart on page 28; includes item 33a	1
33a	193000	• SEAT, fluid	1
34*	192282	TOOL, seal installation	1
36	194750	TOOL, gun	1
39▲	172479	TAG, instruction (not shown)	1
40▲	222385	WARNING CARD (not shown)	1
41	196319	WRENCH, needle	

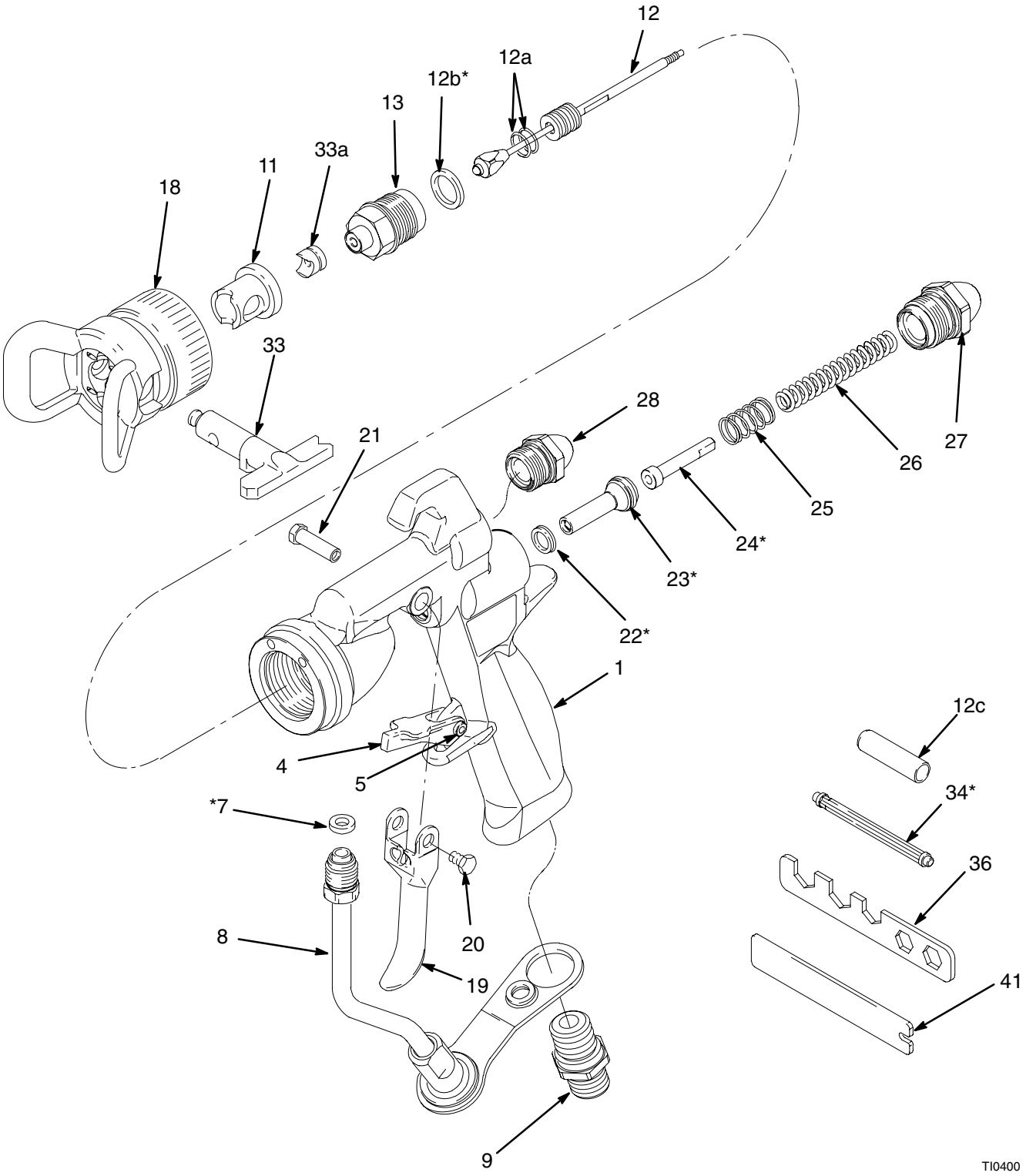
▲ *Replacement Warning labels, tags and cards are available at no cost.*

* *These parts are included in Repair Kit 241619, which may be purchased separately.*

Parts

Part No. 243576 AA RAC Spray Gun

Part No. 243577 Hi-Flow AA RAC Spray Gun



Spray Tip Selection Charts

NOTE: Part No. 243586 Fluid Needle and 243564 Diffuser-seat must be used with GG4 tips larger than 0.025 in. (0.635 mm).

Standard Spray Tips, for use with Air Cap 239781

Orifice Size *inches (mm)*	**Fan Width at 12" (300 mm)** *Inches (mm)*	***Light to Medium Viscosity** *fl oz/min (liters/min)*	***Heavy Viscosity** *fl oz/min (liters/min)*	**Part No.**
0.007 (0.178)	2–4 (50–100)	4.0 (0.1)		**GG4107**
	4–6 (100–150)			**GG4207**
	6–8 (150–200)			**GG4307**
0.009 (0.229)	2–4 (50–100)	7.0 (0.2)		**GG4109**
	4–6 (100–150)			**GG4209**
	6–8 (150–200)			**GG4309**
	8–10 (200–250)			**GG4409**
	10–12 (250–300)			**GG4509**
0.011 (0.279)	2–4 (50–100)	10.0 (0.3)		**GG4111**
	4–6 (100–150)			**GG4211**
	6–8 (150–200)			**GG4311**
	8–10 (200–250)			**GG4411**
	10–12 (250–300)			**GG4511**
	12–14 (300–350)			**GG4611**
0.013 (0.330)	4–6 (100–150)	13.0 (0.4)		**GG4213**
	6–8 (150–200)			**GG4313**
	8–10 (200–250)			**GG4413**
	10–12 (250–300)			**GG4513**
	12–14 (300–350)			**GG4613**
	14–16 (350–400)			**GG4713**

Orifice Size	**Fan Width at 12" (300 mm)**	***Light to Medium Viscosity**	***Heavy Viscosity**	**Part No.**
0.015 (0.381)	4–6 (100–150)	17.0 (0.5)		**GG4215**
	6–8 (150–200)			**GG4315**
	8–10 (200–250)			**GG4415**
	10–12 (250–300)			**GG4515**
	12–14 (300–350)			**GG4615**
	14–16 (350–400)			**GG4715**
	16–18 (400–460)			**GG4815**
0.017 (0.432)	4–6 (100–150)	22.0 (0.7)	17.0 (0.5)	**GG4217**
	6–8 (150–200)			**GG4317**
	8–10 (200–250)			**GG4417**
	10–12 (250–300)			**GG4517**
	12–14 (300–350)			**GG4617**
	14–16 (350–400)			**GG4717**
	16–18 (400–460)			**GG4817**
	18–20 (457–508)			**GG4917**
0.019 (0.483)	4–6 (100–150)	28.0 (0.8)	21.0 (0.6)	**GG4219**
	6–8 (150–200)			**GG4319**
	8–10 (200–250)			**GG4419**
	10–12 (250–300)			**GG4519**
	12–14 (300–350)			**GG4619**
	14–16 (350–400)			**GG4719**
	16–18 (400–460)			**GG4819**
	18–20 (457–508)			**GG4919**

Spray Tip Selection Charts

Standard Spray Tips, for use with Air Cap 239781

Orifice Size	Fan Width at 12" (300 mm)	*Light to Medium Viscosity	*Heavy Viscosity	Part No.
0.021 (0.533)	6–8 (150–200)	35.0 (1.0)	27.0 (0.8)	**GG4321**
	8–10 (200–250)			**GG4421**
	10–12 (250–300)			**GG4521**
	12–14 (300–350)			**GG4621**
	14–16 (350–400)			**GG4721**
	18–20 (457–508)			**GG4921**
0.023 (0.584)	8–10 (200–250)	40.0 (1.2)	34.0 (0.97)	**GG4423**
	10–12 (250–300)			**GG4523**
	12–14 (300–350)			**GG4623**
	14–16 (350–400)			**GG4723**
	18–20 (457–508)			**GG4923**
0.025 (0.635)	8–10 (200–250)	50.0 (1.5)	42.0 (1.2)	**GG4425**
	12–14 (300–350)			**GG4625**
	14–16 (350–400)			**GG4725**
	16–18 (400–460)			**GG4825**
	18–20 (460–510)			**GG4925**
0.027 (0.686)	10–12 (250–300)	58.5 (1.7)	50.0 (1.4)	**GG4527**
	12–14 (300–350)			**GG4627**
	16–18 (400–460)			**GG4827**

Orifice Size	Fan Width at 12" (300 mm)	*Light to Medium Viscosity	*Heavy Viscosity	Part No.
0.029 (0.737)	12–14 (300–350)	68.0 (1.9)	59.0 (1.7)	**GG4629**
0.031 (0.787)	8–10 (200–250)	78.0 (2.2)	69.0 (2.0)	**GG4431**
	12–14 (300–350)			**GG4631**
0.033 (0.838)	12–14 (300–350)	88.0 (2.5)	79.0 (2.3)	**GG4633**
	16–18 (400–460)			**GG4833**
0.035 (0.889)	8–10 (200–250)	98.0 (2.8)	89.0 (2.5)	**GG4435**
	12–14 (300–350)			**GG4635**
0.037 (0.940)	14–16 (350–400)	108.0 (3.1)	99.0 (2.8)	**GG4737**
0.039 (0.991)	10–12 (250–300)	118.0 (3.4)	109.0 (3.1)	**GG4539**
	12–14 (300–350)			**GG4639**
	16–18 (400–460)			**GG4839**

**Fluid output at 600 psi (4.1 MPa, 41 bar).*

Fluid output (Q) at other pressures (P) can be calculated by this formula: $Q = (0.041)\ (QT)\ \sqrt{P}$.

Where QT = Fluid output (fl oz/min) from the above table for the selected orifice size.

Spray Tip Selection Charts

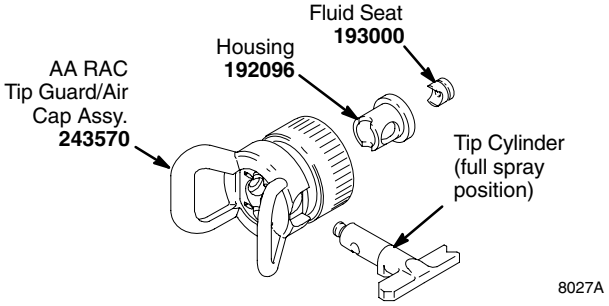
Standard Sealer Tips, for use with Air Cap 239781

NOTE: Part No. 243586 Fluid Needle and 243564 Diffuser-seat must be used with GG4 tips larger than 0.025 in. (0.635 mm).

Orifice Size *inches (mm)*	***Light to Medium Viscosity** *fl oz/min (liters/min)*	***Heavy Viscosity** *fl oz/min (liters/min)*	**Part No.**
0.025 (0.635)	50.0 (1.5)	42.0 (1.2)	**GG4025**
0.029 (0.737)	50.0 (1.5)	42.0 (1.2)	**GG4029**
0.031 (0.787)	50.0 (1.5)	42.0 (1.2)	**GG4031**
0.035 (0.889)	50.0 (1.5)	42.0 (1.2)	**GG4035**

**Fluid output at 600 psi (4.1 MPa, 41 bar).*

AA Reverse-A-Clean (AA RAC™) Spray Tips



NOTE:

- AA RAC Tips 242XXX feature a 1–piece plastic fluid seat 193000. Do not use in combination with parts from previous generations of AA RAC Tips (AARXXX).
- The air separator (item 16) must be removed when using the AA RAC.
- AA RAC Conversion Kit is available. See page 30.

AA Reverse-A-Clean (AA RAC™) Spray Tips

Orifice Size *inches (mm)*	**Fan Width at 12" (300 mm)** *Inches (mm)*	***Light to Medium Viscosity** *fl oz/min (liters/min)*	***Heavy Viscosity** *fl oz/min (liters/min)*	**Part No.**
0.011 (0.279)	6–8 (150–200)	10.0 (0.3)		**242311**
	8–10 (200–250)			**242411**
	10–12 (250–300)			**242511**
0.013 (0.330)	4–6 (100–150)	13.0 (0.4)		**242213**
	6–8 (150–200)			**242313**
	8–10 (200–250)			**242413**
	10–6–8 (150–200)			**242513**
	12–14 (300–350)			**242613**
0.015 (0.381)	4–6 (100–150)	17.0 (0.5)		**242215**
	6–8 (150–200)			**242315**
	8–10 (200–250)			**242415**
	10–12 (250–300)			**242515**
	12–14 (300–350)			**242615**
0.017 (0.432)	4–6 (100–150)	22.0 (0.7)	17.0 (0.5)	**242217**
	6–8 (150–200)			**242317**
	8–10 (200–250)			**242417**
	10–12 (250–300)			**242517**
	12–14 (300–350)			**242617**
0.019 (0.483)	4–6 (100–150)	28.0 (0.8)	21.0 (0.6)	**242219**
	6–8 (150–200)			**242319**
	8–10 (200–250)			**242419**
	10–12 (250–300)			**242519**
	12–14 (300–350)			**242619**

Continued on the next page.

Spray Tip Selection Charts

AA Reverse-A-Clean (AA RAC™) Spray Tips

Orifice Size	Fan Width at 12" (300 mm)	*Light to Medium Viscosity	*Heavy Viscosity	Part No.
0.021 (0.533)	4–6 (100–150)	35.0 (1.0)	27.0 (0.8)	**242221**
	6–8 (150–200)			**242321**
	8–10 (200–250)			**242421**
	10–12 (250–300)			**242521**
	12–14 (300–350)			**242621**
0.023 (0.584)	8–10 (200–250)	40.0 (1.2)	34.0 (0.97)	**242423**
	12–14 (300–350)			**242623**

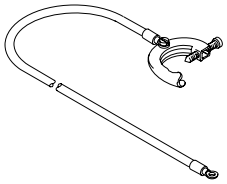
Orifice Size	Fan Width at 12" (300 mm)	*Light to Medium Viscosity	*Heavy Viscosity	Part No.
0.025 (0.635)	10–12 (250–300)	50.0 (1.5)	42.0 (1.2)	**242525**
	12–14 (300–350)			**242625**
0.027 (0.686)	8–10 (200–250)	58.5 (1.7)	50.0 (1.4)	**242427**
0.029 (0.737)	10–12 (250–300)	68.0 (1.9)	59.0 (1.7)	**242529**
0.031 (0.787)	10–12 (250–300)	78.0 (2.2)	69.0 (2.0)	**242531**
	12–14 (300–350)			**242631**

**Fluid output at 600 psi (4.1 MPa, 41 bar).*

Accessories

Use Only Genuine Graco Parts and Accessories

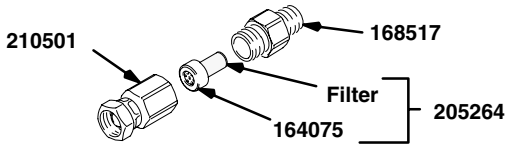
Grounding Clamp and Wire 222011
12 ga, 25 ft (7.6 m) wire



High Pressure Ball Valves, Viton® Seals
5000 psi (35 MPa, 350 bar) Maximum Working Pressure
Can be used as fluid drain valve.

210657	1/2 npt(m)
210658	3/8 npt(m)
210659	3/8 x 1/4 npt(m)

In-line Fluid Filter 210500
5000 psi (35 MPa, 350 bar) Maximum Working Pressure
100 mesh. Fits onto the gun's fluid connector. 1/4–18 npsm. Includes the parts shown below.

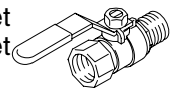


Ruby Ball Needle Kit 243588
4000 psi (28 MPa, 280 bar) Maximum Working Pressure
Includes: Ruby Ball Tipped Needle Assembly and gasket.

For use with acid catalyzed finishes. Use with diffuser-seat 243564 only. Not recommended for use with AA RAC tips.

Bleed-type Master Air Valve
300 psi (2.1 MPa, 21 bar) Maximum Working Pressure
Relieves air trapped in the air line between the pump air inlet and this valve when closed.

107141	3/4 npt(m x f) inlet & outlet
107142	1/2 npt(m x f) inlet & outlet



Air Line Quick-disconnect 113367
Consists of:

113410	Coupling, female, quick-disconnect
113368	Coupling, male, quick-disconnect

Brush 101892
For cleaning the gun.

Fluid Swivel Connector 189018

5800 psi (40 MPa, 400 bar) Maximum Working Pressure
To ease movement of the gun and fluid hose. 1/4–18 npsm.

Air Whip Hoses

100 psi (0.7 MPa, 7 bar) Maximum Working Pressure
To ease movement of the gun and hose. 1/4–18 npsm, polyurethane with SST braid.

238759	3 ft. (0.92 m) hose
236873	6 ft. (1.83 m) hose

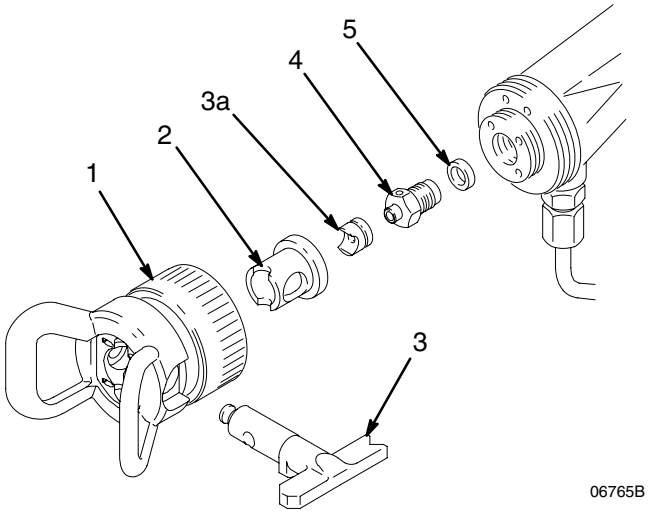
HVLP Verification Kit 243581

For air cap 239898 only, to determine air pressure behind the air cap. Do not use for actual spraying. To be compliant, atomizing air pressure must not exceed 10 psi (70 kPa, 0.7 bar).

Conversion Kit 243790

Converts gun part no. 243573 with standard spray tip, tip guard, and air cap to gun part no. 243576 with the AA RAC assembly. See parts list and drawing below for parts included with kit.

Ref. No.	Part No.	Description	Qty.
1	243570	AA RAC AIR CAP ASSEMBLY	1
2	192096	AA RAC HOUSING	1
3	242XXX	TIP CYLINDER; tip of choice	
		Includes item 3a	1
3a	193000	• FLUID SEAT	1
4	243565	DIFFUSER-SEAT	1
5	115134	GASKET, fluid	1

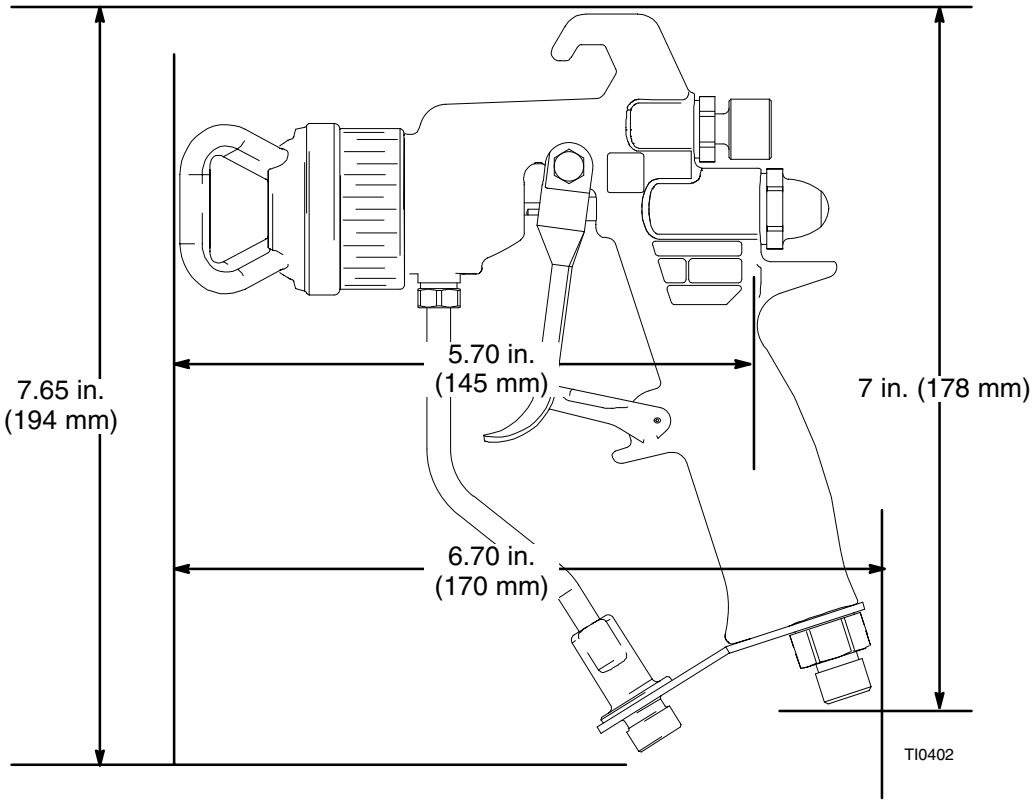


Technical Data

Category	Data
Maximum Working Fluid Pressure	4000 psi (28 MPa, 280 bar)
Maximum Working Air Pressure	100 psi (0.7 MPa, 7 bar)
Maximum Compliant Inbound Air Pressure *(Model 243575 only)*	16 psi (110 kPa, 1.1 bar)
Maximum Working Fluid Temperature	120° F (49° C)
Fluid Inlet	1/4–18 npsm
Air Inlet	1/4–18 npsm (R1/4–19) compound male thread
Gun Weight	20.1 oz (570 grams)
*Sound Pressure at 30 psi (210 kPa, 2.1 bar)	86.2 dB(A)
*Sound Pressure at 100 psi (0.7 MPa, 7 bar)	89.4 dB(A)
*Sound Power at 30 psi (210 kPa, 2.1 bar)	90.2 dB(A)
*Sound Power at 100 psi (0.7 MPa, 7 bar)	93.9 dB(A)
Wetted Parts	Stainless Steel, Carbide or Engineered Plastic, Ultra High Molecular Weight Polyethylene, Acetal, PTFE

* Sound pressure was measured at 1 meter from the unit. Sound power was tested in accordance with ISO 9614–2.

Dimensions



Graco Standard Warranty

Graco warrants all equipment 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.

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612–378–3505 Fax

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