



INSTRUCTIONS

This manual contains important warnings and information. **READ AND RETAIN FOR REFERENCE** Refer to your gun instruction manual 308-294 for complete warnings and instructions for safe operation.

PRO AA4500™ Round Spray Conversion Kit

Part No. 236-902

For use with the PRO AA4500 Electrostatic Air-Assisted Airless Spray Gun only. This kit changes the gun from the standard fan pattern spray to round pattern spray.

Installation

WARNING

Pressure Relief Procedure

To reduce the risk of serious injury, including fluid injection and splashing in the eyes or on skin, or electrostatic shock, relieve all pressure in the system, as instructed below, before installing the kit; checking or servicing any part of the system; cleaning, installing, or changing spray tips; and whenever you stop spraying.

1. Lock the spray gun trigger safety latch.
2. Turn the gun's ES ON-OFF lever to the OFF position.
3. Shut off the power to the pump.
4. Close the bleed-type master air valve (required in system).
5. Close the air valve for the gun air supply line.
6. Unlock the gun trigger safety latch.
7. Trigger the gun into a grounded metal waste container to relieve fluid and air pressure.
8. Lock the gun trigger safety latch again.
9. Open the pump drain valve (required in system) to help relieve fluid pressure in the displacement pump. In addition, open the drain valve connected to the fluid pressure gauge (in a system with fluid regulation) to help relieve fluid pressure in the hose and gun. Triggering the gun to relieve pressure may not be sufficient. Have a container ready to catch the drainage.
10. Leave the drain valve(s) open until you are ready to spray again.

If you suspect that the spray tip or hose is completely clogged or that pressure has not been fully relieved after following the steps above, very slowly loosen the hose end coupling and relieve pressure gradually, then loosen completely. Now clear the tip or hose obstruction.

To help reduce spray tip clogging:

- Install the 100 mesh in-line fluid filter, P/N 210-500, ahead of the gun. See page 4 to order the filter.
- Remove the gun fluid filter, P/N 205-264, and clean or replace it. See gun manual 308-294 to remove the filter.

To install the kit:

1. Flush the fluid passages as instructed in gun manual 308-294.
2. Follow the **Pressure Relief Procedure Warning**, at left.
3. Remove the retaining ring (A), tip guard (B), air cap (C) and tip assembly (D). See Fig. 1.

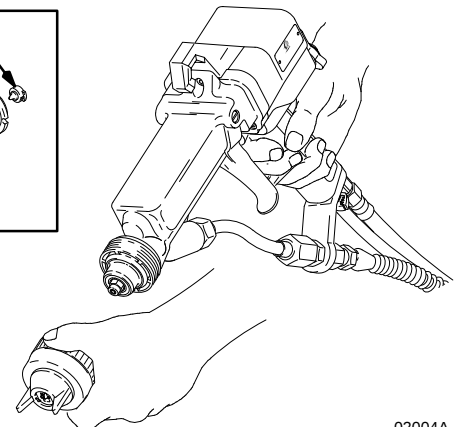
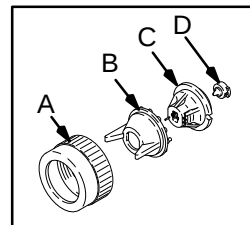


Fig. 1

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Installation

4. Install the kit diffuser/seal assembly (1), air cap/electrode assembly (2), and cover (3) onto the gun. Tighten the cover firmly. See Fig. 2. Be careful not to cross-thread the cover onto the barrel.

WARNING

To reduce the risk of electrostatic shock or explosion, make sure the electrode is in place. Never operate the spray gun with a bent, damaged or missing electrode.

1. Be sure the electrode (2a) is in place in the air cap (2).

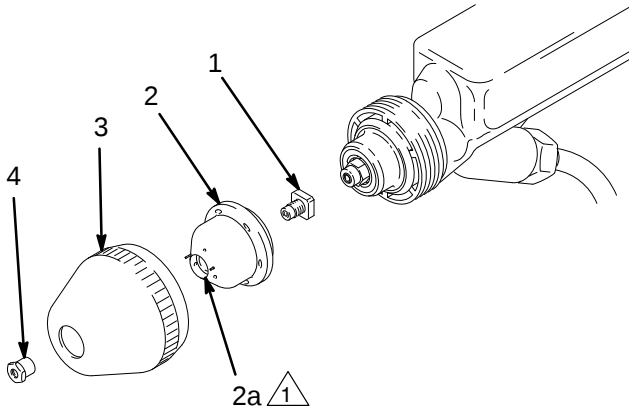


Fig. 2

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5. Install the spray tip (4) and tighten it, using the wrench (5) provided. See Fig. 3. When tightening, only grip the end of the wrench with your fingers; do not grip the wrench cross-arms (E).

CAUTION

Over tightening the spray tip (4) can damage the tip and cause poor spray performance.

1. Only grip the end of the wrench with your fingers; do not grip the wrench cross-arms (E)

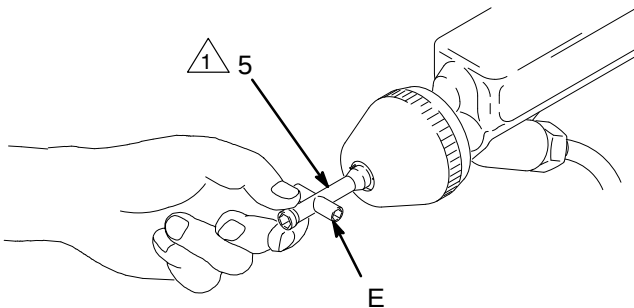


Fig. 3

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Installing or Replacing the Electrode

If the electrode (2a) needs to be replaced or re-installed, insert the two ends of the electrode into the two small air cap (2) holes until both electrode ends protrude through the front of the air cap. Refer to Fig. 2, at left, and the **Parts** drawing, page 4.

Operation

WARNING

This equipment operates at very high fluid pressure. Spray from the gun, leaks or ruptured components can inject fluid through your skin and into your body and cause extremely serious injury, including the need for amputation. Also, fluid injected or splashed into the eyes or on the skin can cause serious damage.

- Never point the spray gun at anyone or at any part of the body.
- Never put hand or fingers over the spray tip.
- Never try to “blow back” paint; this is **not** an air spray gun.
- Always lock the trigger safety latch when you are not spraying.
- Always follow the **Pressure Relief Procedure Warning**, on the cover, before checking or servicing any part of the system; cleaning or removing the spray tip; and whenever you stop spraying.
- Never try to stop or deflect leaks with your hand or body.
- Check operation of all equipment safety devices before each use.
- See the gun instruction manual 308–294 for complete warnings and instructions for safe operation.

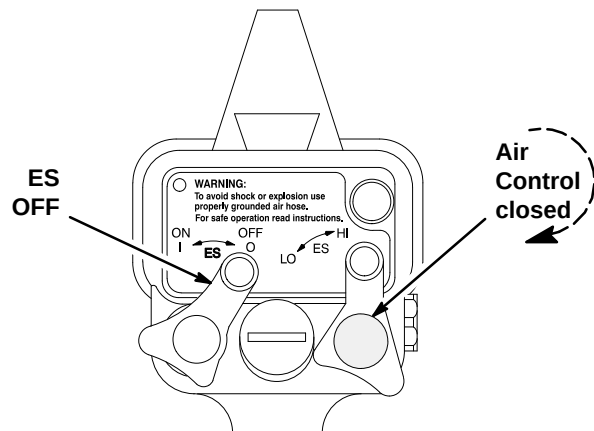


Fig. 4

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1. Adjust the air hose inlet pressure according to the instructions in the gun instruction manual 308–294.
2. Turn the ES ON-OFF lever OFF and close the air control knob. See Fig. 4.

Operation

3. Atomization fluid pressure will vary based on the viscosity of the fluid, the flow rate desired, and other characteristics of your system. To adjust the fluid pressure to achieve the desired flow rate:
 - a. Use a starting fluid pressure of about 300 psi (21 bar) for light viscosity fluids (about 20 centipoise) or about 600 psi (42 bar) for medium viscosity fluids (about 42 centipoise).
 - b. Spray quickly across a test surface (*quick-pass*), holding the gun 12 inches (305 mm) from the surface. Note the atomization (particle size).
 - c. Increase the fluid pressure by 100 psi (7 bar) increments and spray test patterns until the atomization does not improve significantly (particle size no longer reduces); **do not** exceed the gun's *Maximum Fluid Pressure* of 3000 psi (207 bar).
- NOTE:** See the **Spray Tip Chart**, page 3, for fluid flow information. Refer to **Spray Pattern Troubleshooting**, page 4, to correct spray pattern problems.
4. Use the gun's air control valve knob to adjust the air flow to the air cap. Lower air flow will give a softer spray (less velocity). Too little air may cause spitting.
 5. Turn the ES ON-OFF lever to ON. The gun is now ready to spray.

Recommended Spraying Distance

The recommended spraying distance is 8 to 12 inches (203 to 305 mm), from the front of the gun to the object being sprayed. Since the round pattern tip emits a very soft spray, the electrostatic attraction of the floating particles is relatively strong. To minimize having paint spray attracted to the gun and operator, avoid spraying with the gun too far away from the grounded object being sprayed.

Tip Clogging

If the tip clogs, stop spraying immediately and follow the **Pressure Relief Procedure Warning** on the front cover. Remove the spray tip (4) with the wrench (5) provided. Use a soft brush to clean the flow passages on the back side of the tip plate and the front of the diffuser (1) with a compatible solvent (refer to **Parts**, page 4, for kit materials).

Flushing and Cleaning

WARNING

To reduce the risk of fire, explosion, or electrostatic shock, be sure the ES ON-OFF lever is turned to OFF before flushing or cleaning the gun or round spray kit parts.

1. Follow the **Pressure Relief Procedure Warning** on the front cover.
2. Loosen the cover (3) and remove the round spray kit parts (1, 2, 4). See Fig. 2.

NOTE: Use the wrench (5) provided to remove the spray tip. See Fig. 3.

3. Flush and clean the gun as instructed in manual 308–294.
4. Use a soft brush to clean the round spray kit parts with a compatible solvent (refer to **Parts**, page 4, for kit materials).

Spray Tip Chart

Part No.	Size No.	Approximate Flow Rate for Light to Medium Viscosity Coatings (~20 to 40 centipoise)*		
		Flow at 300 psi (21 bar)	Flow at 600 psi (42 bar)	Flow at 1200 psi (84 bar)
236–836	4A	2.5 oz/min (73 cc/min)	4.1 oz/min (120 cc/min)	5.7 oz/min (170 cc/min)
236–837	6A	2.9 oz/min (86 cc/min)	5.1 oz/min (150 cc/min)	7.4 oz/min (220 cc/min)
236–838	7A	3.2 oz/min (95 cc/min)	5.4 oz/min (160 cc/min)	7.8 oz/min (230 cc/min)
236–839	5B	5.4 oz/min (160 cc/min)	7.8 oz/min (230 cc/min)	11.0 oz/min (330 cc/min)
236–840	7B	7.1 oz/min (210 cc/min)	9.1 oz/min (270 cc/min)	14.2 oz/min (420 cc/min)
236–841	9B	8.8 oz/min (260 cc/min)	11.8 oz/min (350 cc/min)	17.9 oz/min (530 cc/min)
236–842	11B	11.8 oz/min (350 cc/min)	16.2 oz/min (480 cc/min)	23.7 oz/min (700 cc/min)

* Flows based on white acrylic, enamel paint.

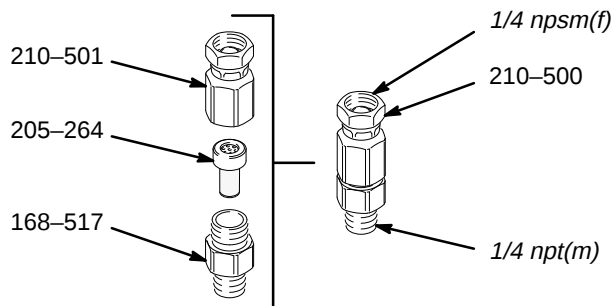
Spray Pattern Troubleshooting

Problem	Possible Cause	Solution
Spray is too forceful (high velocity)	Air flow too high	Use gun air adjustment knob to reduce air flow
	Spray tip worn	Replace tip
	Diffuser worn	Replace diffuser
	Fluid flow too high	Smaller spray tip or lower pressure
Spray gun spitting	Air flow too low	Use gun air adjustment knob to increase air flow
	Tip size too large	Try smaller size tip
Tip clogging	Paint not properly filtered	Clean or replace gun filter; Install line filter or clean/replace line filter
	Tip size too small	Try larger tip size
Distorted spray pattern (heavy to one side)	Tip clogged Worn or damaged spray tip	See above Replace tip

Accessories

Fluid Filter 210-500

5000 psi (350 bar) Maximum Working Pressure
100 mesh in-line fluid filter. Fits onto the gun fluid connector or the gun fluid whip hose.

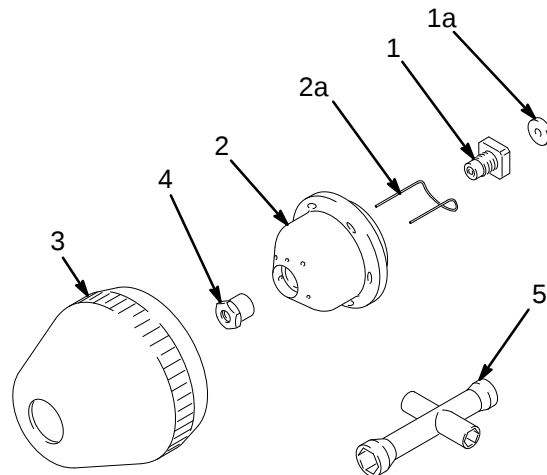


Parts

Part No. 236-902

PRO AA4500™ Round Spray Conversion Kit

Ref. No.	Part No.	Description	Qty.
1	236-768	DIFFUSER/SEAL ASSY. (stainless steel, ceramic, epoxy) Includes item 1a	1
1a	183-459	• SEAL (UHMW polyethylene)	1
2	236-769	AIR CAP/ELECTRODE ASSY. (acetal homopolymer) Includes item 2a	1
2a	189-874	• ELECTRODE (stainless steel)	1
3	189-761	COVER (nylon)	1
4	236-XXX	SPRAY TIP (stainless steel, ceramic, epoxy); customer choice; See Spray Tip Chart , page 3	1
5	189-780	WRENCH	1



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