Instructions/Parts List

Part No. 245298

Round Pattern Kit

FOR THE PRO[™] Auto Xs AA ELECTROSTATIC AIR-ASSISTED SPRAY GUN ONLY

309449 rev.A

Installation

A WARNING

Fluid 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 fluid injection, splashing fluid, or electric shock, follow the **Pressure Relief Procedure** before installing the kit.

Pressure Relief Procedure

- 1. Turn off all the air to the spray gun except the cylinder air, which triggers the gun.
- 2. Turn off the fluid supply to the gun.
- 3. Trigger the gun into a grounded metal waste container to relieve the fluid pressure.
- 4. Open the pump drain valve and all other drain valves in the system, having a waste container ready to catch the drainage. Triggering the gun to relieve pressure may not be sufficient. Leave the drain valve open until you are ready to spray again

- 5. Relieve fluid pressure in the fluid supply equipment as instructed in its instruction manual.
- 6. Close the bleed-type master air valve on the main air supply line to shut off the air. Leave the valve closed until you are ready to spray again.
- 7. If you suspect that the spray tip or hose is still clogged or that pressure is not 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, Part No. 210500, ahead of the gun.
- Remove the gun fluid filter, Part No. 205264, and clean or replace it. See the gun repair manual 309298 to remove the filter.

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To Install the Kit

- 1. Flush the gun as instructed in the gun manual 309298.
- 2. Relieve the pressure, page 1.
- 3. Remove the retaining ring (A), tip guard (B), air cap (C), and tip assembly (D). See Fig. 1.





4. Install the diffuser/seal assembly (1), air cap/electrode assembly (2), and cover (3) onto the gun. Tighten the cover firmly. See Fig. 2.

Do not operate the gun with a damaged electrode. Make sure the electrode is in place before tightening the cover.



Fig. 2. Install the Round Spray Kit

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).

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



Fig. 3. Tighten the Spray Tip

Install or Replace the Electrode

If the electrode (2a) needs to be replaced or reinstalled, 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 and the **"Parts"** drawing on page 6.

Operation

Fluid Injection Hazard

This equipment operates at very high fluid pressure. 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 serious injury.

- Fluid injected into the skin might look like just a cut, but is a serious injury. **Get immediate medi-**cal attention.
- Do not point the gun at anyone or at any part of the body. Do not put your hand or fingers over the spray tip. Do not stop or deflect fluid leaks with your hand, body, glove, or rag.
- Follow the **"Pressure Relief Procedure"**, page 1, when you stop spraying and before cleaning, checking, or repairing equipment.
- Check the hoses and couplings daily. Replace worn, damaged, or loose parts immediately. Permanently coupled hoses cannot be repaired; replace the entire hose.
- Tighten all fluid connections before each use.
- See instruction manual 309298 for complete warnings and instructions for safe operation.

Install the gun as instructed in gun manual 309298. Adjust the atomization fluid pressure and spray pattern as follows:

1. Shut off the turbine air (TA) and atomizing air (A2). See Fig. 4.



Fig. 4. Gun Adjustments

2. 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 (2.1 MPa, 21 bar) for light viscosity fluids (about 20 centipoise) or about 600 psi (4.2 MPa, 42 bar) for medium viscosity fluids (about 42 centipoise).
- b. Spray quickly across a test surface (*quick-pass*), holding the gun about 12 in. (305 mm) from the surface. Note the atomization (particle size).
- c. Increase the fluid pressure by 100 psi (0.7 MPa, 7 bar) increments and spray test patterns until the atomization does not improve significantly (particle size no longer reduces); **do not** exceed the guns *Maximum Fluid Pressure* of 3000 psi (21 MPa, 210 bar).

NOTE: See the **"Spray Tip Chart"**, page 5, for fluid flow information. Refer to Spray Pattern Trouble-shooting, page 4, to correct spray pattern problems.

- 4. Adjust the air flow to the air cap, using the air regulator on the atomization air line (A2). Lower air flow will give a softer spray (less velocity). Too little air may cause spitting.
- 5. Adjust the turbine air (TA) pressure as instructed in gun manual 309298.
- 6. The gun is now ready to spray.

Recommended Spraying Distance

The recommended spraying distance is 8-12 in. (203-305 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 manifold and shroud, avoid spraying with the gun too far away from the grounded object being sprayed.

Tip Clogging

If the tip clogs, stop spraying immediately and relieve pressure (see page 1). Remove the spray tip (4) with the wrench (5) provided. Use a soft brush dampened with a compatible solvent to clean the fluid passages on the back side of the tip plate and the front of the diffuser (1). Refer to **"Parts"**, page 6, for kit materials.

Flushing and Cleaning

Fire, Explosion, and Electric Shock Hazard



To reduce the risk of fire, explosion, or electric shock, be sure the turbine air (TA) is turned OFF before flushing or cleaning the gun or round spray kit parts.

- 1. Relieve the pressure (see page 1).
- 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 309298.
- 4. Use a soft brush to clean the round spray parts with a compatible solvent (refer to **"Parts"**, page 6, for kit materials).

Spray Tip Chart

Part No.	Size No.	Maximum Pattern Width (ES ON) in. (mm)	Approximate Flow Rates for Light to Medium Viscosity Coatings (20-40 centipoise)*			
			300 psi (2.1 MPa, 21 bar)	600 psi (4.2 MPa, 42 bar)	1200 psi (8.4 MPa, 84 bar)	
236836	4A	9 (229)	2.5 oz/min (73 cc/min)	4.1 oz/min (120 cc/min)	5.7 oz/min (170 cc/min)	
236837	6A	10 (254)	2.9 oz/min (86 cc/min)	5.1 oz/min (150 cc/min)	7.4 oz/min (220 cc/min)	
236838	7A	10 (254)	3.2 oz/min (95 cc/min)	5.4 oz/min (160 cc/min)	7.8 oz/min (230 cc/min)	
236839	5B	14 (356)	5.4 oz/min (160 cc/min)	7.8 oz/min (230 cc/min)	11.0 oz/min (330 cc/min)	
236840	7B	13 (330)	7.1 oz/min (210 cc/min)	9.1 oz/min (270 cc/min)	14.2 oz/min (420 cc/min)	
236841	9B	12 (305)	8.8 oz/min (260 cc/min)	11.8 oz/min (350 cc/min)	17.9 oz/min (530 cc/min)	
236842	11B	11 (279)	11.8 oz/min (350 cc/min)	16.2 oz/min (480 cc/min)	23.7 oz/min (700 cc/min)	

* Flows are based on white acrylic, enamel paint.

Spray Pattern Troubleshooting

Problem	Possible Cause	Solution
Spray is too forceful (high velocity).	Air flow too high.	Reduce, using air regulator on the
		atomization air line (A2).
	Spray tip worn.	Replace tip.
	Diffuser worn.	Replace diffuser.
	Fluid flow too high.	Use smaller tip or lower pressure.
Spray gun spitting.	Air flow too low.	Increase, using air regulator on the
		atomization air line (A2).
	Tip size is too large.	Use smaller tip.
Tip clogging.	Paint not properly filtered.	Clean or replace gun filter. Install in-
		line filter or clean/replace in-line filter.
	Tip size is too small.	Use larger tip.
Distorted spray pattern (heavy to one	Tip is clogged.	See above.
side).		
	Worn or damaged spray tip.	Replace tip.

Parts

Part No. 245298

Ref. No.	Part No.	Description	Qty
1	236768	DIFFUSER/SEAL ASSY; stain- less steel, carbide, epoxy; includes item 1a	1
1a	183459	. SEAL; ultra-high molecular weight polyethylene	1
2	245294	AIR CAP/ELECTRODE ASSY; acetal homopolymer; includes item 2a	1
2a	198748	. ELECTRODE; stainless steel	1
3	245296	COVER; nylon	1
4	236xxx	SPRAY TIP; stainless steel, ceramic, epoxy; customer's choice; see chart on page 5	1
5	189780	WRENCH	1



Parts

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

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