Generation 3 Inline Powder Pump

WARNING: Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

Description

The inline powder pump is used in powder feed centers to draw powder from a bulk container, atomize the powder stream, and transfer it to a powder spray gun. The Generation 3 version of the pump is fitted with a metal sleeve on the venturi throat, for use with 11-mm (768176) or $^1/_2$-in. (768178) Nordson antistatic powder feed hose.

Pump Removal

WARNING: Shut down the powder feed center, relieve system air pressure, and lock out the air supply before performing the following tasks. Failure to observe this warning may result in personal injury.

1. Shut down the powder feed center, relieve powder feed center air pressure, and lock out the system air supply.
2. See Figure 1. Move the clamping handles (7) to the down position.
3. Lift the feed hose manifold (2) off the pumps. Be careful not to damage the pump venturi throats (3).
4. Disconnect the air tubing from the flow rate (5) and atomizing air (4) fittings.
5. Pull the pump (6) off the manifold block (8) with a slight twisting motion.

Pump Installation

NOTE: For best results, the powder feed hose (1) should be no longer than 10.7 meters (35 feet) and rise vertically over its length no more than 3.7 meters (12 feet).

1. See Figure 1. Push the pump (6) into the manifold block (8) until the pump body bottoms out against the block.
2. Connect the flow rate and atomizing air tubing to the flow rate (5) and atomizing air (4) fittings.
3. Install the feed hose manifold (2) onto the pump venturi throats (3).
4. Move the clamping handles (7) to the up position.

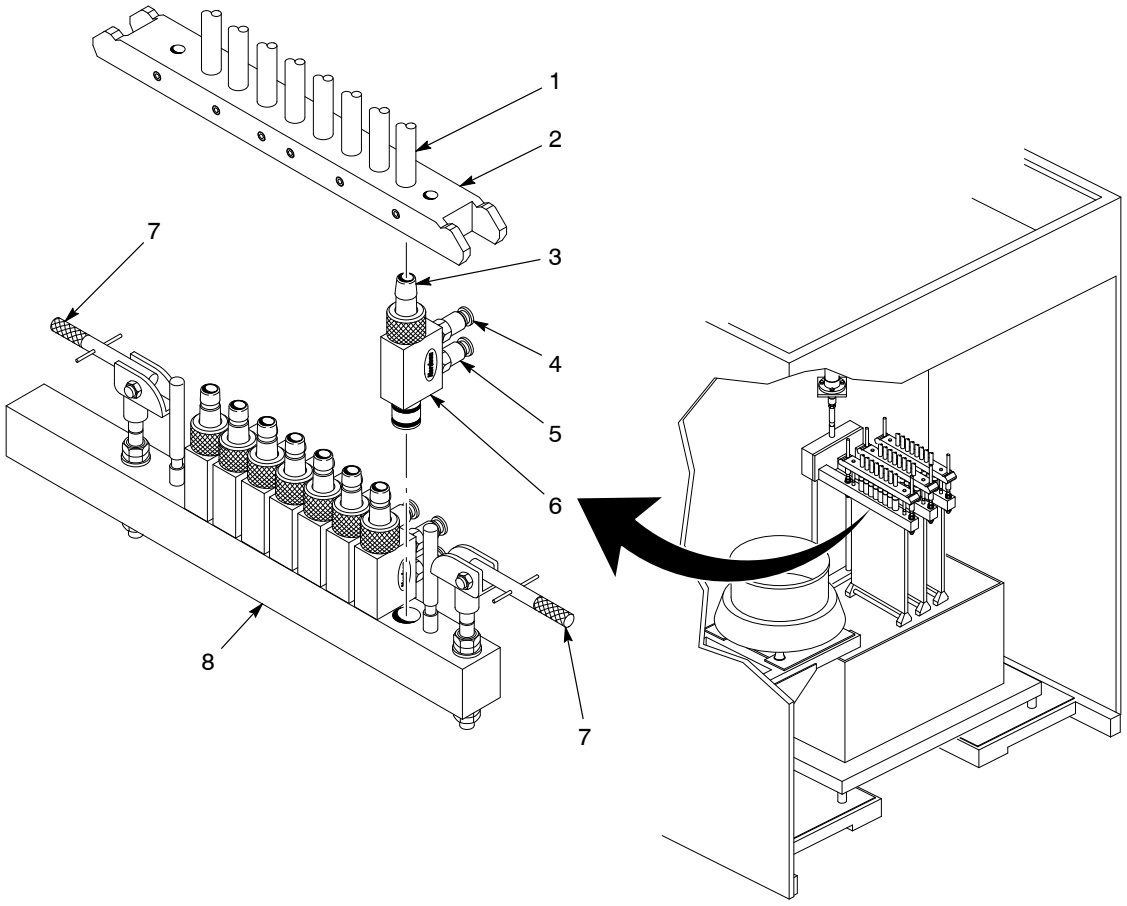

Figure 1 Removing and Installing the Inline Powder Pump

1. Powder feed hose
2. Feed hose manifold
3. Venturi throats
4. Atomizing air fitting
5. Flow rate air fitting
6. Inline powder pump
7. Clamping handles
8. Manifold block

Operation

WARNING: All conductive equipment in the spray area must be connected to a true earth ground. Ungrounded, or poorly grounded equipment can become electrically charged and cause a severe shock or create sparks hot enough to cause a fire or explosion.

Operating air pressures are directly affected by other factors in your powder coating system, including powder feed hose type and size, spray gun type, powder type, conveyor speed, and desired film build.

The following air pressures are average starting points. Adjust air pressures to achieve the desired powder delivery volume and density.

Atomizing Air: 2.1 bar (30 psi)
Flow-Rate Air: 1.4 bar (20 psi)

Maintenance

Daily	Purge the pump when performing either a color change or system shutdown. Refer to your powder feed center manual for more information.
Periodic	**CAUTION**: Always blow out the powder feed hose from the pump end. Make sure that the booth exhaust fan is operating. **CAUTION**: Do not scrape impact-fused powder off of the pump parts with any sharp metal tools. Powder will build up in any scratches on the powder contact surfaces, causing impact fusion and pump clogging. Periodically disassemble the pump and clean its parts following these guidelines: • Use low-pressure compressed air and lint-free cloths. • The parts may be wiped clean with a clean cloth dampened with a non-toxic solvent such as alcohol. Remove the O-rings first so the solvent does not damage them. • Inspect all parts and replace any that are worn or damaged.

Pump Repair

WARNING: Shut down the powder feed center, relieve system air pressure, and lock out the air supply before performing the following tasks. Failure to observe this warning may result in personal injury.

NOTE: Remove the pump from the feed center before repairing it. Refer to pump removal and installation procedures on page 1.

Venturi Throat Replacement

1. See Figure 2. Unscrew and remove the cap (1) from the pump body (6).

NOTE: If the ground spring (1A) comes out of the cap, re-install it into the cap as shown in Figure 2 before re-installing the cap.

2. Pull the venturi throat (2) out of the pump body and inspect it and the two O-rings (3) for wear or damage. If the venturi throat needs to be replaced, use one of the kits listed in the pump parts list notes.

NOTE: The metal sleeve must be installed on the venturi throat. The sleeve provides the necessary ground for Nordson antistatic powder feed tubing.

3. Push the venturi throat into the pump body and screw on the cap.

Injector Replacement

1. Unscrew the injector (7) from the pump body (6).
2. Inspect the injector for wear or damage. Replace the injector and O-rings (8, 9) if necessary.
3. Screw the injector into the pump body.

Parts

NOTE: Order the correct Venturi Throat Kit for your pump.

Item	Part	Description	Quantity	Note
—	1080235	PUMP, assembly, conductive throat, Tivar, packaged	1	
—	1080236	PUMP, assembly, conductive throat, glass-filled PTFE, packaged	1	
1	1089525	• CAP, inline pump, w/ground spring	1	
1A	1089523	• • SPRING, grounding, inline pump cap	1	
2	- - - - - -	• SLEEVE, venturi, inline pump	1	A, B
3	1036432	• O-RING, silicone, 13 mm ID x 2 mm wide	2	A, B, C, D
4	- - - - - -	• THROAT, venturi	1	A, B, C, D
5	344252	• VALVE, check, M8 tube x R $^1/_8$ in., M, output	2	
6	1037306	• BODY, inline pump, threaded	1	
7	1066888	• KIT, INJECTOR, inline pump, Generation II	1	
8	1088590	• • O-RING, conductive silicone, 16 mm x 20 mm x 2 mm	2	
9	1036432	• • O-RING, silicone, 13 mm x 17 mm x 2 mm	1	

NOTE A: Included in 1085643 Kit, Venturi, Inline Pump, Generation 3, Tivar.
B: Included in 1085647 Kit, Venturi, Inline Pump, Generation 3, Glass-Filled PTFE.
C: Included in 1083135 Kit, Venturi, with O-rings, Inline, Tivar.
D: Included in 1083138 Kit, Venturi, with O-rings, Inline, Glass-Filled PTFE.

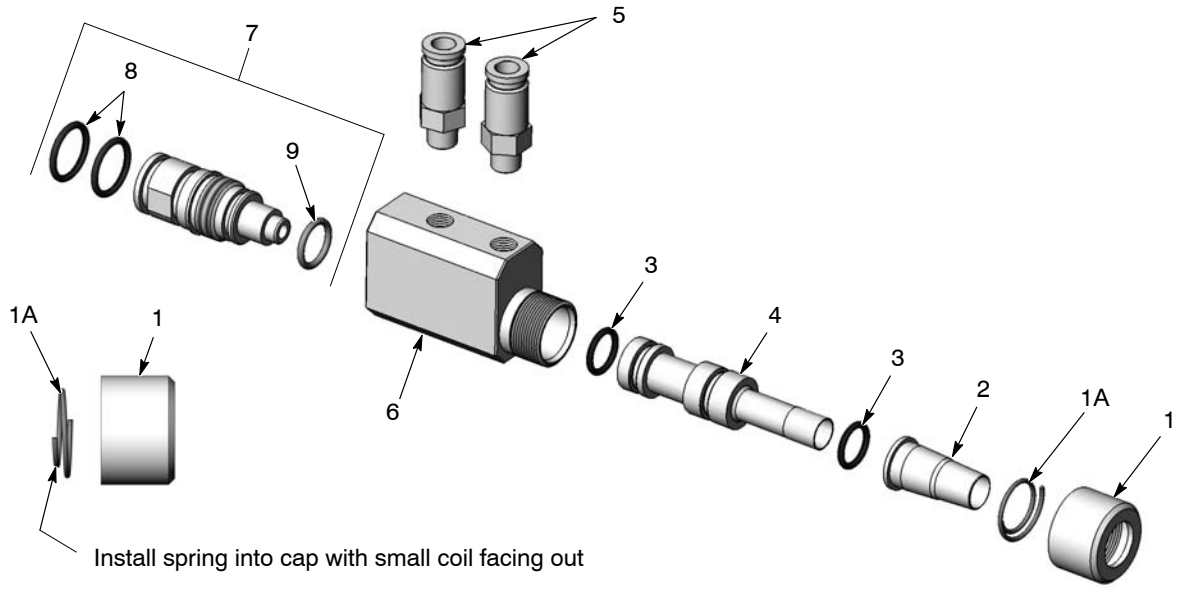

Figure 2 Inline Powder Pump Parts

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