

Nordson Corporation OPERATOR CARD

187729-01

JP Pump

Startup

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



WARNING: Relieve air and fluid pressure before servicing this equipment.

Introduction

This operator's card contains only the information necessary for daily operation and maintenance. For other information refer to the product manual. See Figure 1 for the following procedures.



WARNING: Make sure that all system components are grounded to a true earth ground. Ungrounded components can cause electrical sparking, fire, or explosion.

Before you start the JP pump, make sure that the

- solvent chamber is filled with the proper fluid.
- lubricator is filled with vitalizer oil.

Initial Startup

Before putting the JP pump into service, flush it to remove any contaminates left in the pump from the manufacturing and installation process.

- 1. Remove the gun nozzle (4).
- If using a circulation valve kit, insert the drain-off rod (8) into a waste container (9). Close the circulation valve (6) and open the drain-off valve (7).

NOTE: The solvent flush material can be a solvent used in the coating material or, if using water-based coatings, butyl cellosolve or soapy water.

 Insert the siphon rod (11) into a container of suitable solvent flush material (10). If a pressure feed is used, pressurize the siphon line.

NOTE: Make sure that the air regulator is completely backed out. The pump will run erratically if you start it without material in the lines.

4. Pressurize the air supply line (1).

- 5. Open the air shut-off valve (16).
- Adjust the air regulator (15) until the pump strokes at a rate of 20 times per minute. If using a non-circulating system, trigger the spray gun (3) to allow the pump to operate.

NOTE: If the pump does not stroke, push the manual override button (12) located on the double-pilot air valve (13).

Initial Startup (contd)

- 7. Observe the material being pumped out of the spray gun (3) or drain-off rod (8). Run the pump until the material flows without bubbles.
- Using a small screwdriver, set the lubricator (14) to a rate of 1 drop per 5–10 strokes of the pump. Make sure that the lubricator is filled with vitalizer oil.
- If using a circulation valve kit, close the drain-off valve (7) and slowly open the circulation valve (6). Adjust the circulation valve until the pump strokes 20 times per minute. Allow solvent flush material to circulate through the system for 15–30 minutes.
- 10. Using the air regulator (15), set the air pressure to zero.

- 11. If using a circulation valve kit, close the circulation valve and open the drain-off valve.
- Remove the siphon rod (11) from the solvent flush material container (10). If the pump is pressure-fed, shut off the pressure feed.
- Adjust the air regulator until the pump discharges the solvent flush material into a waste container (9). If using a non-circulating system, trigger the spray gun (3) until all solvent flush material has been pumped out of the system.
- 14. Using the air regulator, set the air pressure to zero.
- 15. Close the air shut-off valve (16).
- 16. Open the fluid filter drain (5) and clean the filter screen.

Normal Startup

- 1. Place the siphon rod (11) into the coating material container (10). If using a pressurized system, pressurize the feed line.
- 2. Pressurize the air supply line (1).
- 3. Open the air shut-off valve (16).
- 4. Adjust the air regulator (15) until the pump begins to stroke slowly.
- 5. Allow coating material to flow out of the filter drain (5). Close the drain.
- 6. Allow the pump to discharge coating material from the drain-off valve (7). Close the valve.
- 7. Adjust the air regulator to the pressure required to pump your material.
- 8. Adjust the circulation valve (6) until the pump strokes 8–10 times per minute.

WARNING: Always circulate material through the heater while it is on. Failure to circulate material through an operating heater can cause heater plugging, heat limiter failure, property damage, or personal injury.

- If using a heater (2), turn it on. Allow 10–15 minutes for the system to reach operating temperature. When the thermometer reads within 2 °C or 5 °F of the operating temperature, adjust the circulation valve. The maximum desired flow rate is 7.6 lpm (2.0 gpm) maximum.
- 10. Start spraying.

Changing Materials

NOTE: If the new material is incompatible with the old material, flush the system twice. First, use a solvent flush material compatible with the old material, then use a solvent flush material compatible with the new material.

- 1. Using the air regulator (15), set the air pressure to zero.
- 2. Place the siphon rod (11) in a container of compatible solvent flush material. Increase the air pressure.
- 3. For non-circulating systems, observe the material being pumped out of the spray gun (3) or filter drain (5). Run the pump until the material being pumped flows without bubbles.

Changing Materials (contd)

- 4. For circulating systems,
 - a. Close the drain-off valve (7) and slowly open the circulation valve (6). Open the circulation valve until the pump strokes 20 times per minute.
 - b. Allow solvent flush material to circulate through the system for 15–30 minutes.

- c. Open the drain-off valve and close the circulation valve.
- 5. Using the air regulator, set the air pressure to zero.
- 6. Place the siphon rod in a container of new coating material (10).



Figure 1 Typical JP Pump System

- 1. Air supply line
- 2. Heater
- 3. Spray gun
- 4. Gun nozzle
- 5. Filter drain
- 6. Circulation valve

- 7. Drain-off valve
- 8. Drain-off rod
- 9. Waste container
- 10. Coating or solvent flush material
- 11. Siphon rod

- 1200339B
- 12. Manual override button
- 13. Double-pilot air valve
- 14. Lubricator
- 15. Air regulator
- 16. Air shut-off valve

Shutdown

- 1. If using a heater (2), turn it off 10–15 minutes before shutting down the pump.
- 2. Using the air regulator (15), set the air pressure to zero.
- 3. Close the valve to the main air supply line (1).

Daily Maintenance

Clean the High-Pressure Fluid Filter

NOTE: To prevent production downtime, use a dual-filter assembly. Consult your Nordson representative to see if a dual filter is appropriate for your application and material.

Clean the high-pressure fluid filter daily unless experience indicates that less-frequent cleaning would be adequate:

- 1. Place a clean spare screen in the fluid filter and soak the dirty screen in a solvent that is compatible with your coating material.
- 2. Inspect the filter screen and discard it if ruptured or distorted.

Check the Solvent Chamber Fluid

- 1. If the solvent chamber fluid appears to be contaminated with coating material, drain the fluid and fill the solvent chamber with new fluid.
- Fill the solvent chamber to 10.2 cm (4 in.) from the top of the casting. Use only Nordson type-Q or -T solvent chamber fluid for water-based coatings.

Check the Air Lubricator Oil

- 1. If necessary, adjust the rate to approximately one drop of oil per every 5–10 strokes of the pump.
- 2. Refill the air lubricator with vitalizer oil or an approved substitute only. Refer to the *Adjusting Air Line Lubricators* instruction sheet for a list of approved replacement oils.

- 4. If using a pressurized system, close the main pressure feed supply valve.
- 5. Open the drain-off valve (7) to relieve system pressure. Close the drain-off valve.

Clean the Air Filter Components

- 1. Drain the air filter.
- 2. Remove the air filter bowl. Dump out any remaining water.
- 3. Remove the air filter element daily. This may be done less frequently if experience indicates that less-frequent cleaning would be adequate.
- 4. Wash the parts in soapy water, rinse, dry. Inspect the parts for any wear damage. Replace defective parts.

Clean the System Components



CAUTION: Do not soak system components in solvent. Some solvents can damage hose coverings and seals.

Wipe system components with a cloth soaked in a solvent compatible with your coating material.

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