



Nordson Corporation

OPERATOR'S CARD

P/N 229726B

Ink-Dot™ System

Safety



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



WARNING: To prevent serious injury to personnel, relieve fluid and air pressures before servicing this equipment.

To use this equipment safely,

- follow the instructions in this operator's card and the referenced manuals.
- obtain and read the Material Safety Data Sheets for all materials used.

Introduction

This operator's card contains only the information necessary for daily operation and maintenance.

System Components

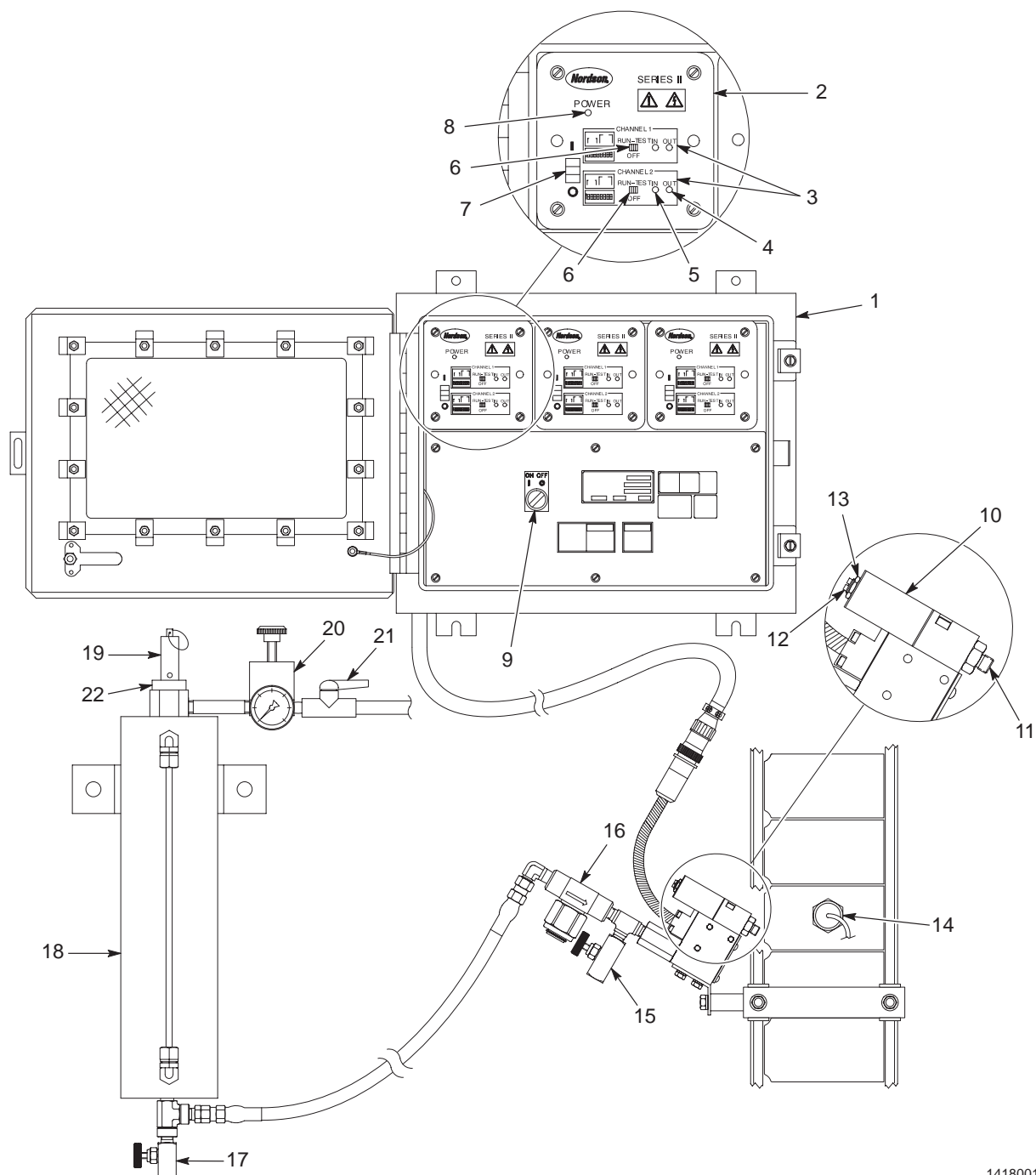
See [Figure 1](#). The major components of the Ink-Dot system are described in Table 1.

NOTE: The item numbers in Table 1 correspond to the callouts used in [Figure 1](#).

Table 1 Major System Components

Item	Description
1	Ink-Dot controller
2	Driver — Operates 2 Ink-Dot guns
3	Channels — Each channel activates an Ink-Dot gun
4	OUT light — Amber, pulses when you press the TEST switch
5	IN light — Green, lights when a trigger signal is present
6	Timer switch RUN — Enables the channel to respond to the driver inputs OFF — Disables the channel TEST — Checks quality of ink dot
7	Driver power switch — Enables or disables power to the driver
8	POWER Indicator — Lights when power to the driver is on
9	Controller power switch — Enables or disables power to the system
10	Ink-Dot gun — Can apply a dot 0.06-0.09 in. (1.52-2.29 mm) in diameter
14	Proximity sensor — Signals the Ink-Dot gun to spray when a can is properly positioned in front of the gun nozzle
18	Reservoir — 2 qt (1.9 l) capacity

Typical Ink-Dot System



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Figure 1 Typical Ink-Dot System

- | | | |
|------------------------|----------------------------|----------------------------|
| 1. Ink-Dot controller | 8. POWER indicator | 15. Bleeder valve |
| 2. Driver | 9. Controller power switch | 16. In-line filter |
| 3. Channels | 10. Ink-Dot gun | 17. Drain valve |
| 4. OUT light | 11. Nozzle | 18. Reservoir |
| 5. IN light | 12. Armature sleeve | 19. Relief valve |
| 6. RUN/OFF/TEST switch | 13. Locknut | 20. Air pressure regulator |
| 7. Driver power switch | 14. Proximity sensor | 21. Air shut-off valve |
| | | 22. Cap |

Initial Setup

See [Figure 1](#).

Before putting the Ink-Dot system into service for the first time you must first flush the system with a compatible solvent and then fill it with ink.

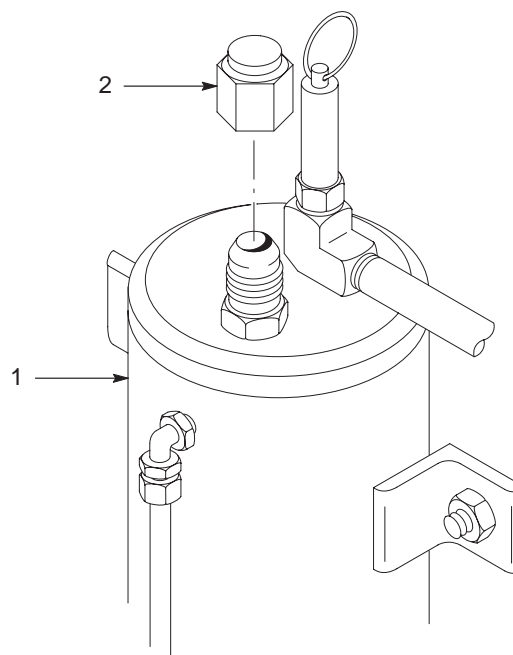
Perform these steps before putting the Ink-Dot hydraulic system into service for the first time.

1. Close the air shut off valve (21).
2. Set the air pressure regulator (20) to 0 bar/psi. Pull the relief valve lanyard (19) to relieve system air pressure.
3. Make sure that the drain valve (17) is closed.
4. See [Figure 2](#). Unscrew the cap (2) from the reservoir (1).
5. Fill the reservoir with a compatible solvent. Install the cap onto the reservoir.
6. See [Figure 1](#). Open the air shut-off valve (21).
7. Set the air pressure regulator (20) to 0.4–0.7 bar (5–10 psi).
8. Place a waste container under the bleeder valve (15). Open the bleeder valve and allow the solvent to flow through the system. This will also purge any air from the system. Close the bleeder valve.
9. Manually trigger the Ink-Dot gun (10) to purge contaminants from the gun.
10. Close the air shut-off valve (21).
11. Pull up on the relief valve lanyard (19) to relieve system air pressure.
12. Place a waste container under the drain valve (17). Open the drain valve to drain the solvent from the reservoir.
13. Close the drain valve.
14. Fill the reservoir with ink. Refer to *Filling the Reservoir*.

Filling the Reservoir

See [Figure 1](#). Follow these steps to fill the reservoir with ink after initial startup or flushing the system.

1. Repeat steps 1–8 of *Initial Startup* using ink instead of the compatible solvent.
2. Manually trigger the Ink-Dot gun (10) to purge any remaining solvents from the gun.
3. Adjust the dot size. Refer to *Dot Size Adjustment*.



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Figure 2 Reservoir

1. Reservoir
2. Cap

Operation

See [Figure 1](#).

NOTE: The break-in period for the valve seat is the first 10-24 hours of operation. If the dot size increases, refer to *Dot Size Adjustment*.

Startup

1. Open the air shut-off valve (21).
2. Set the air pressure regulator (20) to 0.4-0.7 bar (5-10 psi).
3. Turn on the Ink-Dot controller power switch (9).
4. Turn on the driver power switch (7).
5. Set the RUN/OFF/TEST switch (6) to RUN.
6. If desired, adjust the dot size. Refer to *Dot Size Adjustment*

Changing Materials

1. Close the air shut-off valve (21)
2. Set the air pressure regulator (20) to 0 bar/psi. Pull the relief valve (19) lanyard to relieve system air pressure.
3. Place a waste container under the drain valve (17) and open the drain valve. Allow the ink to drain from the reservoir (18) into the container. When the ink has drained from the reservoir close the drain valve.

Dot Size Adjustment

See [Figure 1](#). Follow these steps to adjust the dot size from the Ink-Dot electric spray gun.

1. Set the RUN/OFF/TEST switch (6) in the Ink-Dot control unit to OFF.
2. Set the air pressure regulator (20) to 0.5 bar (7 psi) at the ink reservoir.
3. Loosen the locknut (13).
4. Carefully screw in the armature sleeve (12) until it stops or bottoms out.
5. Unscrew the armature sleeve approximately $\frac{1}{12}$ of a turn or 30°.
6. Hold a piece of paper by the bottom of the can and in line with the nozzle (11).

4. See [Figure 2](#). Unscrew the cap from the reservoir (1) and fill with a $\frac{1}{2}$ quart of compatible solvent. Install the cap (2).
5. Perform a solvent flush. Refer to *Initial Startup* and perform steps 6–12.
6. Fill the reservoir with ink. Refer to *Filling the Reservoir*.

Shutdown



CAUTION: Failure to turn off the RUN/OFF/TEST switch can cause damage to the gun nozzle and ball and seat assembly.

See [Figure 1](#).

1. Set the RUN/OFF/TEST switch (6) to OFF.
2. Turn off the driver power switch (7).
3. Turn off the controller power switch (9).
4. Turn off the air supply link to the reservoir by closing the air shut-off valve (21).
5. Set the air pressure regulator (20) to 0 bar/psi. Pull on the relief valve (19) lanyard to relieve system air pressure.

7. Set the RUN/OFF/TEST switch (6) in the Ink-Dot control unit to TEST. Adjust the armature sleeve (12) until the dot is the desired size, typically 2–3 mm.

NOTE: Do not hold the armature sleeve screw with the screwdriver while you are tightening the locknut.

8. Use a $\frac{1}{2}$ -in. wrench to tighten the locknut.

NOTE: The dot size will become slightly larger when tightening the locknut.

9. If desired, change the fluid pressure to make fine adjustments to the dot size:

- Increase the pressure for a larger dot.
- Decrease the pressure for a smaller dot.

NOTE: Refer to the *Ink-Dot Series II Driver* manual to make additional adjustments to the dot size using the dip switches.

Unplugging the Nozzle

See [Figure 1](#).

1. Close the air shut-off valve (21).

2. Set the air pressure regulator (20) to 0 bar/psi. Pull on the relief valve (19) lanyard to relive system air pressure.

3. Set the RUN/OFF/TEST switch (6) to OFF.

4. Remove the nozzle (11) and clean with flushing thinner and a nozzle brush.

5. Loosen the locknut (13). Back out the armature sleeve (12) one turn.
6. Install the nozzle (11).

7. Close the relief valve (19).

8. Open the air shut-off valve (21). Set the air pressure regulator (20) to 0.2 bar (3 psi).

9. Open the bleeder valve (15) to bleed air out of the hose. Close the bleeder valve.

10. Set the air pressure regulator (20) to 0.4-0.7 bar (5-10 psi).

11. Set the RUN/OFF/TEST switch (6) to ON.

12. Adjust the dot size. Refer to *Adjusting the Dot Size*.

Maintenance

Table 2 provides maintenance procedures for the Ink-Dot system.

Table 2 Maintenance Schedule

Frequency	Task
Daily	Wipe or brush the nozzle once per shift with a solvent that is compatible with the ink. A nozzle brush is included with the gun.
Weekly	<div><div>1. Refer to the Ink-Dot gun manual to check the Ink-Dot gun mounting angle.</div><div>2. Check the distance between the<ul style="list-style-type: none">proximity sensor and can conveyorInk-Dot gun and can conveyorgun nozzle and proximity sensor</div><div>3. Make sure that the proximity sensor is perpendicular to the side of the can.</div></div>
Periodically	Check the ink level in the reservoir.
3–6 months	Flush the system with a compatible solvent and replace the inline filter element.
9–12 months	Replace the ball and seat, seals, O-rings and inline filter element in the gun.

Dimensions

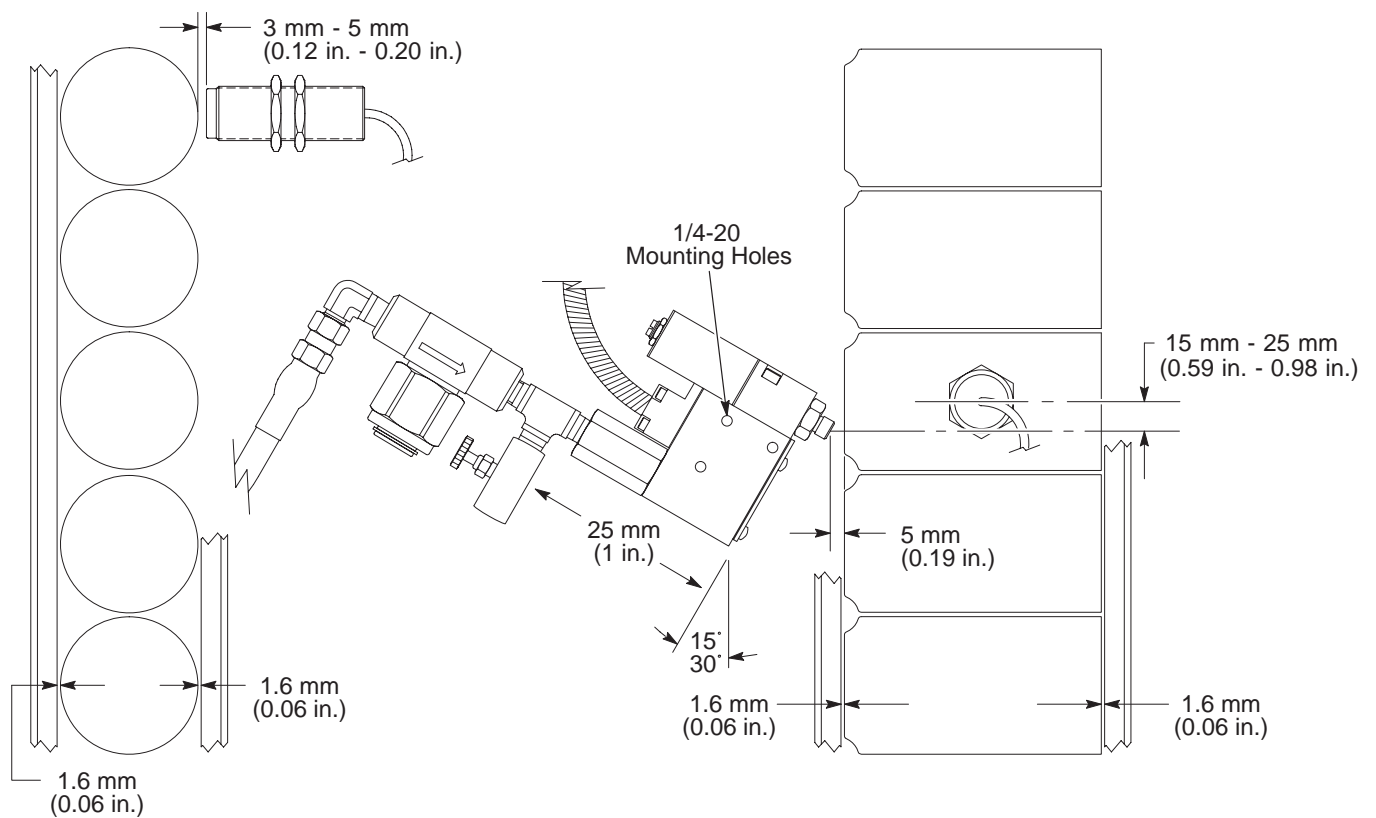


Figure 3 Dimensions

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