Maverick HVLP Spray Gun

Safety
Read and follow these safety instructions. Task- and equipment-specific warnings, cautions, and instructions are included in equipment documentation where appropriate.

Make sure all equipment documentation, including these instructions, is accessible to persons operating or servicing equipment.

Qualified Personnel
Equipment owners are responsible for making sure that Nordson equipment is installed, operated, and serviced by qualified personnel. Qualified personnel are those employees or contractors who are trained to safely perform their assigned tasks. They are familiar with all relevant safety rules and regulations and are physically capable of performing their assigned tasks.

Intended Use
Use of Nordson equipment in ways other than those described in the documentation supplied with the equipment may result in injury to persons or damage to property.

Some examples of unintended use of equipment include
- using incompatible materials
- making unauthorized modifications
- removing or bypassing safety guards or interlocks
- using incompatible or damaged parts
- using unapproved auxiliary equipment
- operating equipment in excess of maximum ratings

Regulations and Approvals
Make sure all equipment is rated and approved for the environment in which it is used. Any approvals obtained for Nordson equipment will be voided if instructions for installation, operation, and service are not followed.

Personal Safety
To prevent injury follow these instructions.

- Do not operate or service equipment unless you are qualified.
- Do not operate equipment unless safety guards, doors, or covers are intact and automatic interlocks are operating properly. Do not bypass or disarm any safety devices.
- Keep clear of moving equipment. Before adjusting or servicing moving equipment, shut off the power supply and wait until the equipment comes to a complete stop. Lock out power and secure the equipment to prevent unexpected movement.
- Relieve (bleed off) hydraulic and pneumatic pressure before adjusting or servicing pressurized systems or components. Disconnect, lock out, and tag switches before servicing electrical equipment.
- While operating manual spray guns, make sure you are grounded. Wear electrically conductive gloves or a grounding strap connected to the ground handle or other true earth ground. Do not wear or carry metallic objects such as jewelry or tools.
- If you receive even a slight electrical shock, shut down all electrical or electrostatic equipment immediately. Do not restart the equipment until the problem has been identified and corrected.
**Personal Safety (contd)**

- Obtain and read Material Safety Data Sheets (MSDS) for all materials used. Follow the manufacturer’s instructions for safe handling and use of materials, and use recommended personal protection devices.
- Make sure the spray area is adequately ventilated.
- To prevent injury, be aware of less-obvious dangers in the workplace that often cannot be completely eliminated, such as hot surfaces, sharp edges, energized electrical circuits, and moving parts that cannot be enclosed or otherwise guarded for practical reasons.

**High-Pressure Fluids**

High-pressure fluids, unless they are safely contained, are extremely hazardous. Always relieve fluid pressure before adjusting or servicing high pressure equipment. A jet of high-pressure fluid can cut like a knife and cause serious bodily injury, amputation, or death. Fluids penetrating the skin can also cause toxic poisoning.

If you suffer a fluid injection injury, seek medical care immediately. If possible, provide a copy of the MSDS for the injected fluid to the health care provider.

The National Spray Equipment Manufacturers Association has created a wallet card that you should carry when you are operating high-pressure spray equipment. These cards are supplied with your equipment. The following is the text of this card:

**WARNING:** Any injury caused by high pressure liquid can be serious. If you are injured or even suspect an injury:

- Go to an emergency room immediately.
- Tell the doctor that you suspect an injection injury.
- Show him this card
- Tell him what kind of material you were spraying

**Fire Safety**

To avoid a fire or explosion, follow these instructions.

- Ground all conductive equipment. Use only grounded air and fluid hoses. Check equipment and workpiece grounding devices regularly. Resistance to ground must not exceed one megohm.
- Shut down all equipment immediately if you notice static sparking or arcing. Do not restart the equipment until the cause has been identified and corrected.
- Do not smoke, weld, grind, or use open flames where flammable materials are being used or stored.
- Do not heat materials to temperatures above those recommended by the manufacturer. Make sure heat monitoring and limiting devices are working properly.

**MEDICAL ALERT—AIRLESS SPRAY WOUNDS: NOTE TO PHYSICIAN**

Injection in the skin is a serious traumatic injury. It is important to treat the injury surgically as soon as possible. Do not delay treatment to research toxicity. Toxicity is a concern with some exotic coatings injected directly into the bloodstream.

Consultation with a plastic surgeon or a reconstructive hand surgeon may be advisable.

The seriousness of the wound depends on where the injury is on the body, whether the substance hit something on its way in and deflected causing more damage, and many other variables including skin microflora residing in the paint or gun which are blasted into the wound. If the injected paint contains acrylic latex and titanium dioxide that damage the tissue’s resistance to infection, bacterial growth will flourish. The treatment that doctors recommend for an injection injury to the hand includes immediate decompression of the closed vascular compartments of the hand to release the underlying tissue distended by the injected paint, judicious wound debridement, and immediate antibiotic treatment.
• Provide adequate ventilation to prevent dangerous concentrations of volatile particles or vapors. Refer to local codes or your material MSDS for guidance.
• Do not disconnect live electrical circuits when working with flammable materials. Shut off power at a disconnect switch first to prevent sparking.
• Know where emergency stop buttons, shutoff valves, and fire extinguishers are located. If a fire starts in a spray booth, immediately shut off the spray system and exhaust fans.
• Shut off electrostatic power and ground the charging system before adjusting, cleaning, or repairing electrostatic equipment.
• Clean, maintain, test, and repair equipment according to the instructions in your equipment documentation.
• Use only replacement parts that are designed for use with original equipment. Contact your Nordson representative for parts information and advice.

Halogenated Hydrocarbon Solvent Hazards

Do not use halogenated hydrocarbon solvents in a pressurized system that contains aluminum components. Under pressure, these solvents can react with aluminum and explode, causing injury, death, or property damage. Halogenated hydrocarbon solvents contain one or more of the following elements:

<table>
<thead>
<tr>
<th>Element</th>
<th>Symbol</th>
<th>Prefix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluorine</td>
<td>F</td>
<td>&quot;Fluo-&quot;</td>
</tr>
<tr>
<td>Chlorine</td>
<td>Cl</td>
<td>&quot;Chloro-&quot;</td>
</tr>
<tr>
<td>Bromine</td>
<td>Br</td>
<td>&quot;Bromo-&quot;</td>
</tr>
<tr>
<td>Iodine</td>
<td>I</td>
<td>&quot;Iodo-&quot;</td>
</tr>
</tbody>
</table>

Check your material MSDS or contact your material supplier for more information. If you must use halogenated hydrocarbon solvents, contact your Nordson representative for information about compatible Nordson components.

Action in the Event of a Malfunction

If a system or any equipment in a system malfunctions, shut off the system immediately and perform the following steps:
• Disconnect and lock out system electrical power. Close hydraulic and pneumatic shutoff valves and relieve pressures.
• Identify the reason for the malfunction and correct it before restarting the system.

Disposal

Dispose of equipment and materials used in operation and servicing according to local codes.

Description

The lightweight Maverick HVLP spray gun is ideal for production settings and can be used with a variety of low and high-viscosity coatings on a range of substrates including wood, metal and glass. The gun’s lightweight, ergonomic design, easy trigger pull, and single knob fan adjustment maximize operator efficiency and reduce fatigue.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>558 grams (19.69 oz)</td>
</tr>
<tr>
<td>Air Inlet Size</td>
<td>3/8 in. NPS</td>
</tr>
<tr>
<td>Fluid Inlet Size</td>
<td>3/8 in. NPS</td>
</tr>
<tr>
<td>Maximum Air Pressure</td>
<td>3 bar (43 psi)</td>
</tr>
</tbody>
</table>
Installation

See Figure 1.

Make sure:

- you have an appropriate fluid tip and air cap for your application.
- you have air and fluid hoses of the correct length, ID, and materials. Use a grounding-type air hose.

**WARNING:** The air hose must be a grounding-type hose, with continuity between fittings. Without a ground, a static charge could build up in the spray gun, resulting in shocks to the operator or sparking that could cause a fire. Resistance checks, from hose fitting to hose fitting, should be part of your regular maintenance procedures.

1. Clean the air hose fittings with a clean, dry cloth.
2. Blow out the air hose then connect the air hose between the 1/4-inch NPS air inlet at the base of the gun handle and the air supply outlet.
3. Regulate the supply air for a maximum pressure of 3.0 bar (43psi) or less at the gun.
4. Connect the fluid hose between the fluid delivery system outlet and the 3/8-inch NPS fluid inlet on the gun extension.
5. Bundle the air and fluid hose(s) together with hook and loop tape, spiral-cut tubing, or similar devices. Make sure the hoses can flex without strain.
6. Supply clean, filtered air to the spray gun.
7. Use the wrench included with the spray gun to tighten the nozzle.
Operation

Make sure:

- the fluid tip is securely tightened and the air cap is correctly installed and securely held with the retaining ring.
- all fluid and air connections are secure and leak-free. The fluid hose(s) are grounded.
- air supply and fluid delivery components are correctly installed. All conductive system components and flammable material containers are securely connected to a true earth ground.
- the gun handle, operator's station, and spray area are clean and free of debris.

NOTE: When starting a new spray system for the first time, remove the air cap and flush the fluid delivery system, hose(s), and spray gun with a solvent compatible with the coating material you will be using. Flushing will remove contaminants from the system.

1. Adjust the air pressure with the air control knob in the handle of the spray gun.
2. Adjust the spray pattern with the pattern control knob on the left side of the spray gun.

Daily Maintenance

Daily lubrication and cleaning of the spray gun is recommended to maintain the best condition of the spray gun.

1. Shut off the fluid delivery system and air supply.
2. Trigger the gun into the booth or a grounded waste container to relieve any residual pressure.
3. Soak the fluid tip and air cap in a compatible solvent to dissolve any accumulated coatings. Clean them with the brushes included with the gun.
4. Clean the gun extension and handle with a clean cloth dampened with solvent. Do not soak the gun in solvent.
5. Dry the fluid tip, air cap, and gun with low-pressure air from an OSHA-approved blowgun.
6. Apply lubrication and grease where noted in Figure 2.
Troubleshooting

This section contains troubleshooting procedures for common gun problems and spray pattern and film-build faults. If you cannot solve your problem with the information given here, contact your Nordson representative for help.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Example</th>
<th>Possible Cause</th>
<th>Corrective Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gun will not spray</td>
<td>No pressure at spray gun</td>
<td>Check the air lines and air supply connection.</td>
<td>Adjust the fluid adjusting screw. Thoroughly clean the spray gun.</td>
</tr>
<tr>
<td></td>
<td>Fluid adjusting screw not properly adjusted</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spray gun or fluid supply passages blocked</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Incorrect spray pattern</td>
<td>Material build up on air cap</td>
<td>Clean the air cap</td>
<td>Replace the green plastic ring (21)</td>
</tr>
<tr>
<td></td>
<td>Worn or damaged gasket</td>
<td></td>
<td>Adjust the material flow or viscosity</td>
</tr>
<tr>
<td></td>
<td>Incorrect material flow or viscosity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal Spray Pattern:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Fluttering Spray</td>
<td>Spray gun or fluid supply passages blocked</td>
<td>Thoroughly clean the spray gun.</td>
<td>Replace or tighten the seal nut (22). Replace or tighten the nozzle/fluid tip (3).</td>
</tr>
<tr>
<td></td>
<td>Worn packing or loose packing nut</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Damaged or loose fluid tip</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Fluid leaking from packing nut</td>
<td>Packing nut loose or the packing is dry</td>
<td>Tighten or lubricate the seal (23). Replace the needle (12).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Needle is worn</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Fluid dripping from fluid tip</td>
<td>Worn or damaged fluid tip or needle</td>
<td>Replace the nozzle/fluid tip (3) or needle (12). Lubricate the seal (23) or needle (12). Adjust the seal (23)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stuck needle packing or needle</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Packing gland to tight</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Loose fluid control knob</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See Figure 2.
Repair

See Figure 2.

Preparations

1. Flush the fluid delivery system, hoses, and spray gun.
2. Turn off the fluid delivery system and air supply. Relieve system fluid and air pressures. Point the gun into the booth and trigger it to relieve any residual pressure.
3. Disconnect the air and fluid hoses from the spray gun.
4. Move the spray gun to a clean, dry, flat surface.

Air Cap, Nozzle, and Needle Replacement

The spray gun is shipped standard with a 1.0-mm fluid tip, needle, and air cap combination. Additional size kit combinations are available depending on the application.

1. Remove the fluid control knob (11) and needle spring (10) from the back of the spray gun.
2. Carefully pull the needle (12) back out of the needle housing (9).
3. Remove the retaining ring (2), air cap (1) and nozzle (3) from the front of the spray gun.

NOTE: Make sure to replace the complete nozzle, needle, and air cap set.

4. Install the new nozzle and air cap on the front of the spray gun.
5. Carefully slide the new needle through the needle housing and into the spray gun extension until only the small lip of the needle remains outside the needle housing.
6. Insert the spring into the needle housing.
7. Push the fluid control knob onto the spring to mate the threaded parts then screw the knob onto the needle housing.

Spray Gun Disassembly

A complete set of replacement wear parts including seals, springs, and fittings and a spanner wrench are included with your spray gun. Use Figure 2 to disassemble and assemble the spray gun to replace any of the wear parts.

NOTE: When assembling the spray gun, apply lubrication and grease where noted in Figure 2.
## Parts

See Figure 2.

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1059773</td>
<td>GUN, manual HVLP spray, with 1.0-mm air cap</td>
<td></td>
</tr>
<tr>
<td>1059774</td>
<td>REPAIR KIT, manual HVLP spray gun</td>
<td>A</td>
</tr>
</tbody>
</table>

**NOTE A:** Kit includes a complete set of replaceable wear items.

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**Figure 2**  Maverick HVLP Spray Gun

1. Air cap  
2. Retaining ring  
3. Nozzle/Fluid tip  
4. Ring  
5. Control knob  
6. Screw  
7. Spray regulator  
8. Gun body  
9. Needle housing  
10. Needle spring  
11. Fluid control knob  
12. Needle  
13. Air adjust valve  
14. Spanner wrench  
15. Brush  
16. Material sleeve  
17. Pin  
18. Trigger  
19. Washer  
20. Air valve assembly  
21. Green plastic ring  
22. Seal nut  
23. Seal  
24. Washer  
25. Spring

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1300566A  

**Items in Repair Kit 1059774**

- Apply Lubricant
- Apply Non-Silicone Grease
Air Cap, Nozzle, and Needle Kits

See Figure 3.

NOTE: The spray gun is shipped standard with a 1.0-mm fluid tip, needle, and air cap combination. Additional size kit combinations are available depending on the application. Make sure to replace the complete fluid tip, needle, and air cap set.

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Siphon Feed Kits</strong></td>
<td></td>
</tr>
<tr>
<td>1059775</td>
<td>AIR CAP KIT, siphon feed, HVLP spray, 1.0 mm</td>
<td></td>
</tr>
<tr>
<td>1059776</td>
<td>AIR CAP KIT, siphon feed, HVLP spray, 1.4 mm</td>
<td></td>
</tr>
<tr>
<td>1059777</td>
<td>AIR CAP KIT, siphon feed, HVLP spray, 1.7 mm</td>
<td></td>
</tr>
<tr>
<td>1059778</td>
<td>AIR CAP KIT, siphon feed, HVLP spray, 2.0 mm</td>
<td></td>
</tr>
<tr>
<td>1059779</td>
<td>AIR CAP KIT, siphon feed, HVLP spray, 2.3 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>HVLP Siphon Feed Compliance Kits</strong></td>
<td></td>
</tr>
<tr>
<td>1059793</td>
<td>AIR CAP KIT, compliance, siphon feed, HVLP spray, 1.0 mm</td>
<td>A</td>
</tr>
<tr>
<td>1059794</td>
<td>AIR CAP KIT, compliance, siphon feed, HVLP spray, 1.4 mm</td>
<td>A</td>
</tr>
<tr>
<td>1059795</td>
<td>AIR CAP KIT, compliance, siphon feed, HVLP spray, 1.7 mm</td>
<td>A</td>
</tr>
<tr>
<td>1059796</td>
<td>AIR CAP KIT, compliance, siphon feed, HVLP spray, 2.0 mm</td>
<td>A</td>
</tr>
<tr>
<td>1059797</td>
<td>AIR CAP KIT, compliance, siphon feed, HVLP spray, 2.3 mm</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td><strong>Pressure Feed Kits</strong></td>
<td></td>
</tr>
<tr>
<td>1059790</td>
<td>AIR CAP KIT, pressure feed, HVLP spray, 1.4 mm</td>
<td></td>
</tr>
<tr>
<td>1059791</td>
<td>AIR CAP KIT, pressure feed, HVLP spray, 1.7 mm</td>
<td></td>
</tr>
<tr>
<td>1059792</td>
<td>AIR CAP KIT, pressure feed, HVLP spray, 2.3 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>HVLP Pressure Feed Compliance Kits</strong></td>
<td></td>
</tr>
<tr>
<td>1059798</td>
<td>AIR CAP KIT, compliance, pressure feed, HVLP spray, 1.4 mm</td>
<td>A</td>
</tr>
<tr>
<td>1059800</td>
<td>AIR CAP KIT, compliance, pressure feed, HVLP spray, 1.7 mm</td>
<td>A</td>
</tr>
<tr>
<td>1059802</td>
<td>AIR CAP KIT, compliance, pressure feed, HVLP spray, 2.3 mm</td>
<td>A</td>
</tr>
</tbody>
</table>

NOTE A: Compliance kit includes air cap, retaining ring, pressure gage, and tubing. The kit does not include fluid tip or needle.

Figure 3    Maverick HVLP Air Cap, Nozzle/Fluid Tip, and Needle Kit