Section 10
Filter

NOTE: This section applies to applicators with a Universal in-out filter.

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**WARNING:** Allow only personnel with appropriate training and experience to operate or service the equipment. The use of untrained or inexperienced personnel to operate or service the equipment can result in injury, including death, to themselves and others, and damage to the equipment.

**Introduction**

This section provides maintenance/repair and parts information for applicators with a Universal in-out adhesive filter.

**Filter Overview**

The filter is located in the adhesive manifold portion of the applicator and is screwed into the top of the applicator. A top-loading filter is referred to as a vertical filter.

When adhesive enters the applicator manifold, it flows from the inside of the filter to the outside (in-out), as shown in Figure 10-1, before it is directed towards the dispensing modules. This causes char and debris to collect on the inside of the filter screen.

The filter must be periodically flushed to remove the char and debris from the inside of the screen. When flushing fails to clean the filter screen adequately, it should be replaced.

![Figure 10-1 Flow of adhesive through a Universal in-out filter](image-url)
Filter Service

This part of Section 10 provides filter-related service procedures.

Relieving System Pressure

System pressure must be relieved before you can safely proceed with many of the maintenance, troubleshooting, and repair procedures in this manual. Follow this procedure whenever you need to relieve system pressure.

WARNING: Risk of burns. Failure to relieve system pressure can cause hot adhesive to spray from a connecting point. Relieve system pressure before loosening or removing a hose, module, or any other part of the hot melt system. Wear heat-protective clothing, safety goggles (ANSI Z87.1 or equivalent), and safety gloves.

1. Stop the melter pump(s). Refer to the melter manual.
2. Shut off the module-actuating air.
3. Place drain pans under all melter and applicator drain valves. To determine the location of the drain valves on your applicator, refer to the applicator reference drawing in Applicator-Specific Reference Drawings in Section 8, Parts.
4. Open the melter drain valve. Refer to the melter manual as needed.
5. See Figure 10-2. Open an applicator drain valve by turning the drain valve screw counterclockwise. Some adhesive will drain from the applicator.
   
   NOTE: Single-module applicators have two drain valves and multi-module applicators have three drain valves. Any one of these drain valves may be opened to relieve pressure. For faster and more complete drainage, you can open all the drain valves.

6. Trigger all modules at the solenoid valves.
7. Close the applicator and melter drain valves.
Figure 10-2  Opening an applicator drain valve

1. Location of drain valves on a multi-module applicator
2. Opening the drain valve on a single-module applicator
Flush a Filter

The filter should be flushed

- before initial use
- as needed to maintain your system pressure settings
- if the filter screen is replaced
- if you change the adhesive in your hot melt system

You will need a flat-blade screwdriver and a drain pan.

1. Heat the system to application temperature.
2. Relieve system pressure. Refer to the previous procedure, Relieving System Pressure.
3. Trigger the applicator solenoid valves briefly to relieve any remaining pressure.
4. Shut off the module-actuating air.
5. Decrease the pattern air pressure. Leave just enough air pressure to prevent adhesive from entering the pattern air inlet.
6. Place a drain pan under the applicator drain valves. To determine the location of the drain valves on your applicator, refer to the applicator reference drawing in Applicator-Specific Reference Drawings in Section 8, Parts.
7. See Figure 10-2. Open all applicator drain valves.
8. Start the melter pump(s).
9. When the adhesive flowing from the drain valves is free of contaminants, stop the melter pump(s).
10. Close the drain valves.
Replacing a Filter Screen

Replace the filter screen when the flushing the filter screen no longer solves the problem of diminished adhesive flow or pressure buildup in the system. For most applications, the filter screen should be replaced monthly. You will need the following items:

- drain pans and disposable rags
- flat-blade screwdriver
- socket wrench
- replacement filter screen
- replacement filter O-ring (if needed)

Remove the Filter

1. Heat the system to application temperature.
2. Relieve system pressure. Refer to Relieving System Pressure earlier in this section.
3. Trigger the applicator solenoid valves briefly to relieve any remaining pressure.
4. Shut off the module-actuating air.
5. Decrease the pattern air pressure. Leave just enough air pressure to prevent adhesive from entering the pattern air inlet.
6. See Figure 10-3. Using your hand or an appropriate tool, simultaneously press the filter in and turn it counterclockwise; then remove the filter.

   **NOTE:** A special tool is available to facilitate filter removal. This tool has a filter-removal end and a nut-driver end and can be used for all applicator-related service activities. For the tool part number and illustration, refer to Recommended Spare Parts and Supplies under Parts.

   **NOTE:** If the filter is stuck, grasp it with a pair of pliers to remove it.

   **NOTE:** To continue operation immediately, skip to Install the Filter to install a new filter assembly.
Figure 10-3  Using the filter removal tool to remove a filter
Replace the Filter Screen
1. See Figure 10-4. Disassemble the filter.
2. Inspect the O-ring for cuts, hardening, or other damage and replace as necessary.
3. Apply O-ring lubricant to the O-ring and reassemble the filter.

![Filter components](image)

1. Bung  
2. O-ring  
3. Screen

Install the Filter
1. Heat the system to application temperature.
2. Insert the filter in the adhesive manifold and turn it clockwise by hand until it seats.
3. Remove all nozzles and pump adhesive through the applicator. This removes any loose char remaining in the applicator or modules. Refer to the nozzle installation/removal procedures in Section 10, Module, as needed.
4. Reinstall nozzles and restore the system to normal operation.
**Parts**

This part of Section 10 provides detailed parts lists for the filter. For other applicator parts, including a reference drawing and bill of materials specific to your applicator, refer to Section 8, Parts. The following chart provides guidance for reading the parts lists.

The number in the Item column corresponds to the circled item number in the parts list illustration. A dash in this column indicates that the item is an assembly.

The number in the Part column is the Nordson part number you can use to order the part. A series of dashes indicates that the part is not saleable. In this case, you must order either the assembly in which the part is used or a service kit that includes the part.

The Description column describes the part and sometimes includes dimensions or specifications.

The Note column contains letters that refer to notes at the bottom of the parts list. These notes provide important information about the part.

The Quantity column tells you how many of the part is used to manufacture the assembly shown in the parts list illustration. A dash or AR in this column indicates that the amount of the item required in the assembly is not quantifiable.

<table>
<thead>
<tr>
<th>Item</th>
<th>Part</th>
<th>Description</th>
<th>Quantity</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>—</td>
<td>0000000</td>
<td>Assembly A</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>000000</td>
<td>• Part of assembly A</td>
<td>2</td>
<td>A</td>
</tr>
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<td>2</td>
<td>- - - - -</td>
<td>• • Part of item 1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0000000</td>
<td>• • • Part of item 2</td>
<td>AR</td>
<td></td>
</tr>
<tr>
<td>NS</td>
<td>0000000</td>
<td>• • • • Part of item 3</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE A:** Important information about item 1

**AR:** As Required

**NS:** Not Shown
**Filter Parts**

See Figure 10-5.

<table>
<thead>
<tr>
<th>Item</th>
<th>Part</th>
<th>Description</th>
<th>Quantity</th>
<th>Note</th>
</tr>
</thead>
<tbody>
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<td>—</td>
<td>1049206</td>
<td>Filter, Universal in-out, 0.006 in. mesh screen</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1049208</td>
<td>Screen, 0.006 in. mesh</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1073159</td>
<td>Bung</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>940223</td>
<td>O-ring, Viton, 0.989 ID x 0.070 W in.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>900223</td>
<td>Lubricant, O-ring, Parker, 4 oz</td>
<td>AR</td>
<td></td>
</tr>
</tbody>
</table>

AR: As Required

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*Figure 10-5  Filter parts*
### Recommended Spare Parts and Supplies

For a general spare parts and supplies list, refer to Recommended Spare Parts and Supplies in Section 8, Parts.

<table>
<thead>
<tr>
<th>Part</th>
<th>Description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1049206</td>
<td>Filter, Universal in-out (complete filter assembly with 0.006 in. mesh filter screen)</td>
<td></td>
</tr>
<tr>
<td>1049208</td>
<td>Screen, filter, Universal in-out, 0.006 in. mesh</td>
<td></td>
</tr>
<tr>
<td>1058544</td>
<td>Tool, Universal, filter removal (see Figure 10-6)</td>
<td></td>
</tr>
<tr>
<td>940223</td>
<td>O-ring, Viton, 0.989 ID x 0.070 W in.</td>
<td></td>
</tr>
<tr>
<td>900223</td>
<td>Lubricant, O-ring, Parker, 4 oz (for the filter O-ring)</td>
<td></td>
</tr>
</tbody>
</table>

Figure 10-6  Filter removal tool