

## Section 10

# Filter

**NOTE:** This section applies to applicators with a short reverse-flush 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

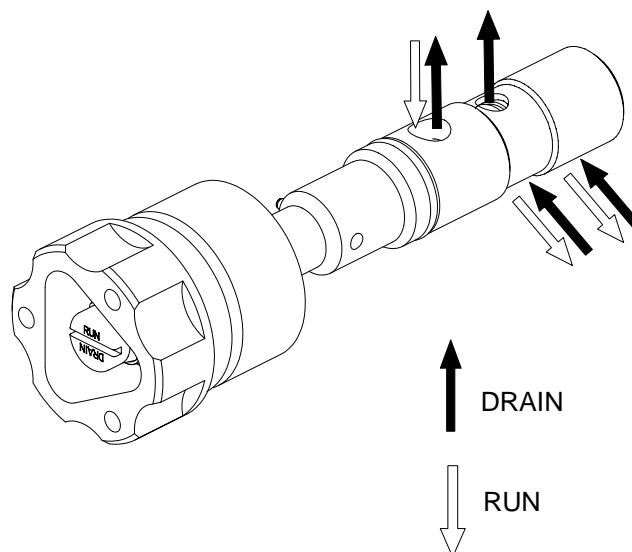
This section provides maintenance/repair and parts information for applicators with a short reverse-flush adhesive filter.

## Filter Overview

The filter is located in the adhesive manifold portion of the applicator. Depending on the configuration of the applicator, the filter may be screwed into the right or left side of the applicator.

During normal operation (run mode), adhesive enters the inside of the filter and flows out through the filter screen, trapping char and debris inside the filter screen. During the filter flushing operation (drain mode), adhesive flows from the outside of the filter screen to inside, forcing char and debris away from the filter screen and out through the applicator drain valve. Figure 10-1 shows the flow of adhesive through a reverse-flush filter.

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



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Figure 10-1 Flow of adhesive through a short reverse-flush filter

## Filter Service

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

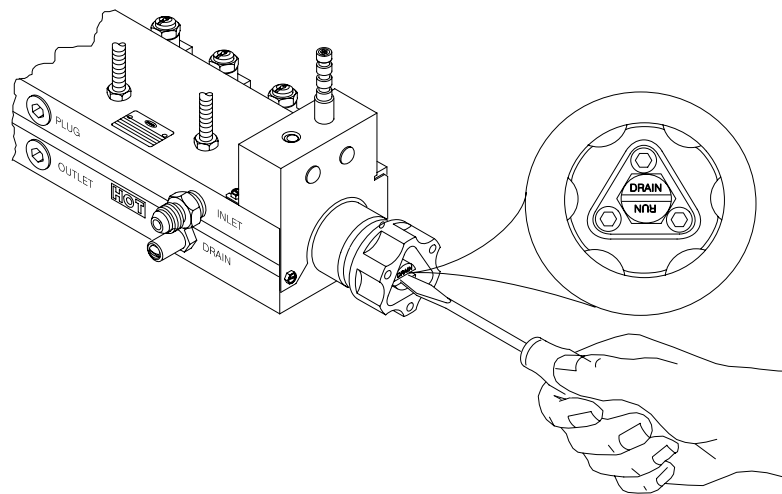
### Relieving System Pressure

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.

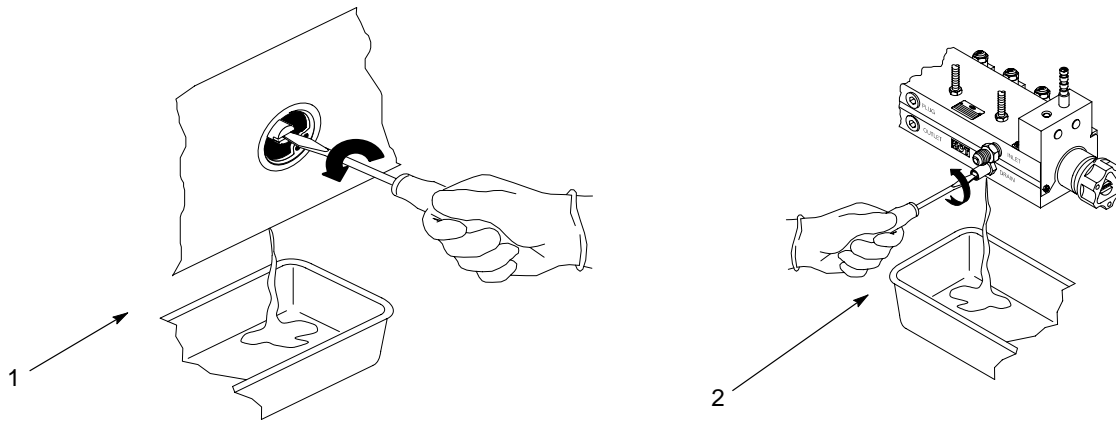
1. Stop the melter pump(s). Refer to the melter manual.
2. Shut off the module-actuating air.
3. Place drain pans under all melter and applicator drain valves. To determine the location of the drain valve on your applicator, refer to the applicator reference drawing in *Applicator-Specific Reference Drawings* in Section 8, *Parts*.
4. See Figure 10-2. Use a flat-blade screwdriver to place the filter handle in the DRAIN position.



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Figure 10-2 Placing the filter handle in the DRAIN position

5. See Figure 10-3. Open the melter and applicator drain valves by turning the drain valve screws counterclockwise. Some adhesive will drain from the valves.



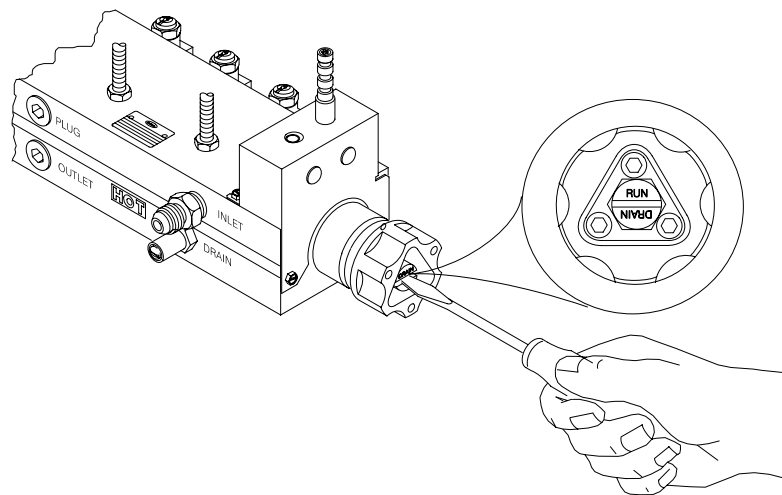
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Figure 10-3 Opening drain valves

1. Typical melter drain valve

2. Typical applicator drain valve

6. Trigger all modules at the solenoid valves.
7. Close the applicator and melter drain valves.
8. See Figure 10-4. Place the filter handle in the RUN position.



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Figure 10-4 Placing the filter handle in the RUN position

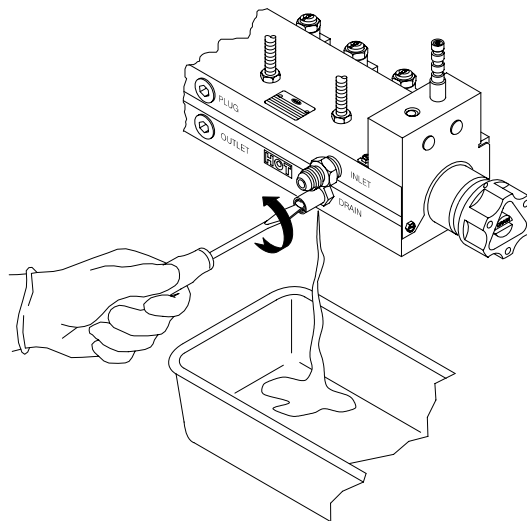
## Flushing a Filter

The filter should be flushed

- before initial use
- as needed to maintain your system pressure settings
- if the filter screen is cleaned or 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 valve. To determine the location of the drain valve on your applicator, refer to the applicator reference drawing in *Applicator-Specific Reference Drawings* in Section 8, *Parts*.
7. Use a flat-blade screwdriver to place the filter handle in the DRAIN position.
8. See Figure 10-5. Open the drain valve.
9. Start the melter pump(s).
10. When the adhesive flowing from the drain valve is free of contaminants, stop the melter pump(s).
11. Close the drain valve.
12. Place the filter handle in the RUN position.



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Figure 10-5 Opening an applicator drain valve (typical)

## Cleaning or Replacing a Filter Screen

Clean or 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 cleaned or replaced monthly. You will need the following items:

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

**NOTE:** To prevent downtime, Nordson Corporation recommends maintaining at least two complete filter assemblies so that a clean filter assembly can be installed and used while the dirty filter screen is being cleaned.

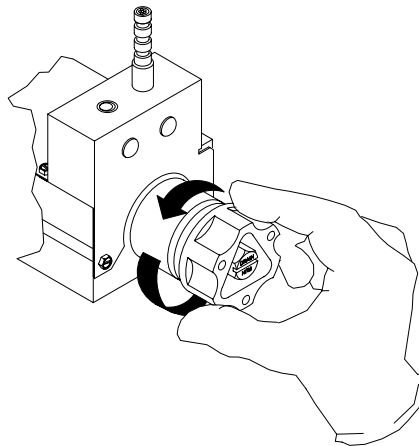
**NOTE:** If you are cleaning melter and applicator filter screens at the same time, clean the melter filter screens first. Refer to the melter manual.

### Remove the Filter

1. Flush the filter. Refer to the previous procedure, *Flushing a Filter*.
2. See Figure 10-6. Unscrew the filter by hand at the filter handle and slowly remove it over a drain pan. To determine the location of the filter on your applicator, refer to the applicator reference drawing in *Applicator-Specific Reference Drawings* in Section 8, *Parts*.

**NOTE:** The filter may be installed in the right or left side of the applicator.

**NOTE:** To continue operation immediately, skip to *Install the Filter* to install a new or cleaned filter assembly.

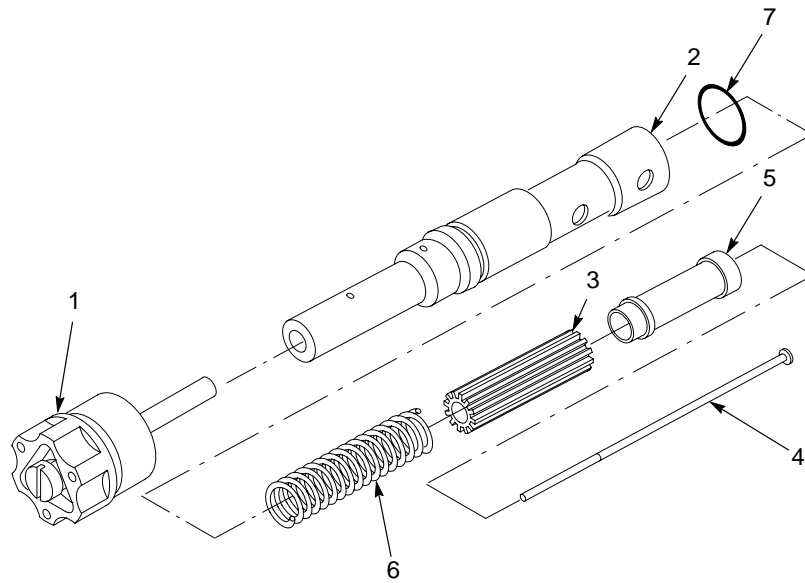


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Figure 10-6 Removing a filter

### Clean or Replace the Filter Screen

1. See Figure 10-7. Disassemble the filter.



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Figure 10-7 Filter components

- |           |           |
|-----------|-----------|
| 1. Handle | 5. Screen |
| 2. Bung   | 6. Spring |
| 3. Core   | 7. O-ring |
| 4. Screw  |           |

2. Inspect the filter screen. If there are any dents or tears in the mesh, obtain a new filter screen and go to step 3. If the screen is in good condition, clean it using one of the methods shown in Table 10-1.



**WARNING:** Risk of fire. Serious injury or property damage could result from uncontrolled heating of Nordson Type-R cleaning fluid with an open flame or in an unregulated heating device. Use a controlled heating device, such as a thermostatically controlled hot plate, to heat the cleaning fluid.

**CAUTION:** Risk of equipment damage. Do not use a metal brush to clean a filter screen. Use only a fine-bristle brush or a clean, dry cloth.

Table 10-1 Filter Screen Cleaning Methods

Cleaning Method	Procedure
Nordson Type-R fluid	<ol style="list-style-type: none"> <li>a. Place the screen in a controlled heating device containing Nordson Type-R fluid and heat it above the melting point of the adhesive.</li> <li>b. Scrub the screen with a fine-bristle brush.</li> </ol>
Electric heat gun	<ol style="list-style-type: none"> <li>a. Heat the screen with a flameless electric heat gun.</li> <li>b. Wipe the screen with a clean, dry cloth.</li> </ol>
Ultrasonic cleaner	<ol style="list-style-type: none"> <li>a. Soak the screen in an ultrasonic cleaner filled with a solvent. Make sure the solvent is compatible with the adhesive being used.</li> <li>b. Wipe the screen with a clean, dry cloth.</li> </ol>

3. Inspect the filter O-ring for cuts, hardening, or other damage and replace as necessary.

**CAUTION:** Risk of equipment failure. If the RUN/DRAIN pin is assembled 180 degrees from the correct assembly position, the filter will work opposite from the RUN/DRAIN indications. Be sure to correctly assemble the RUN/DRAIN pin.

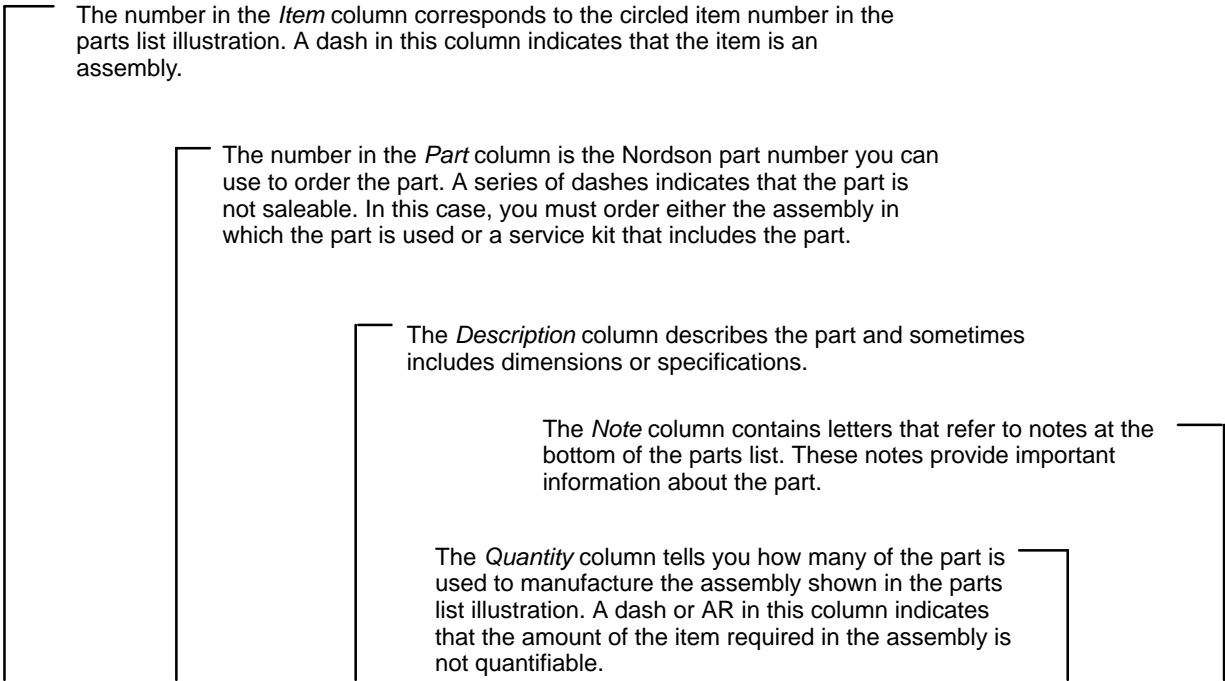
4. See Figure 10-7. Apply O-ring lubricant to the O-ring and reassemble the filter.

### ***Install the Filter***

1. Heat the system to application temperature.
2. Apply anti-seize lubricant to the filter screw threads, insert the filter in the adhesive manifold, and hand-tighten it.
3. Flush the filter again. Refer to *Flushing a Filter* earlier in this section.
4. Tighten the filter again only until it seats.
5. 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.
6. 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.



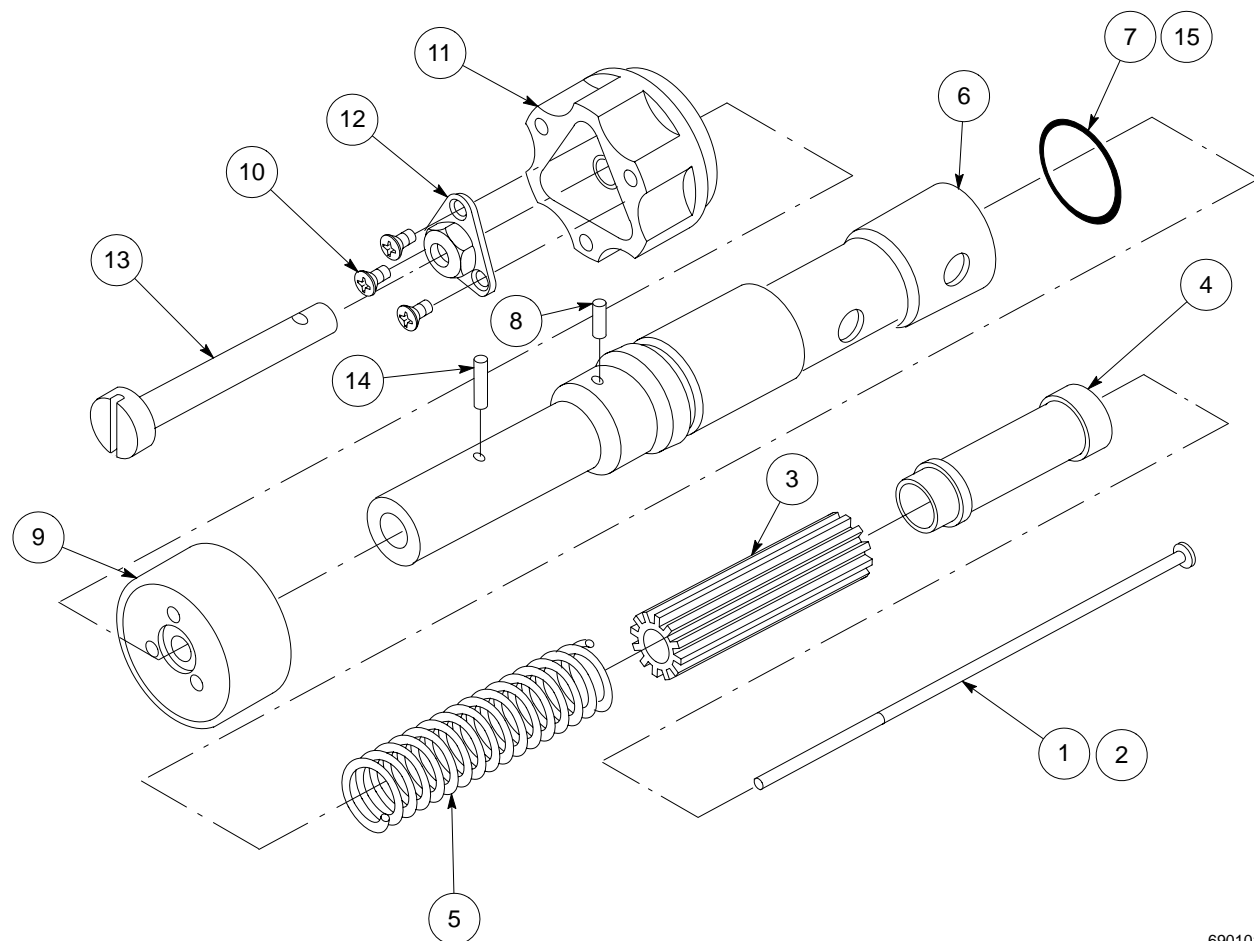
Item	Part	Description	Quantity	Note
—	0000000	Assembly A	—	
1	000000	• Part of assembly A	2	A
2	-----	•• Part of item 1	1	
3	0000000	••• Part of item 2	AR	
NS	000000	•••• Part of item 3	2	
NOTE A: Important information about item 1 AR: As Required NS: Not Shown				

## Filter Parts

See Figure 10-8.

Item	Part	Description	Quantity	Note
—	116829	Filter, reverse-flush, short, 0.006 in mesh screen	—	
1	981157	• Screw, fillister, 10-32 x 2.750 in.	1	
2	900344	• Lubricant, Never-Seez, 8 oz can	AR	
3	116827	• Core	1	
4	166825	• Screen, 0.006 in. mesh, 2.0 in. long	1	
5	116286	• Spring, 1.89 in.	1	
6	116823	• Bung, 6.21 in.	1	
7	941201	• O-ring, Viton, 1.000 x 1.188 x 0.094 in.	1	
8	985302	• Pin, roll, 0.125 x 0.500 in.	1	
9	275475	• Cap	1	
10	982188	• Screw, flat, socket, M5 x 16	3	
11	275479	• Handle	1	
12	275476	• Driver, handle	1	
13	288129	• Pin, adjustable, RUN/DRAIN	1	
14	985303	• Pin, roll, 0.125 x 0.750 in.	1	
15	900223	Lubricant, O-ring, Parker, 4 oz	AR	

AR: As Required



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Figure 10-8 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*.

<b>Part</b>	<b>Description</b>	<b>Note</b>
981157	Filter, reverse-flush, short, 0.006 in. (complete filter assembly with 0.006 in. mesh filter screen)	
116825	Screen, filter, 0.006 in. mesh, 2.0 in. long	
941201	O-ring, Viton, 1.000 x 1.188 x 0.094 in.	
900344	Lubricant, Never-Seez, 8 oz can (for the filter screw)	
900223	Lubricant, O-ring, Parker, 4 oz (for the filter O-ring)	