Removing Seals Using a Seal Extraction Tool

This procedure explains how to use the Waters Seal Extraction Tool to remove seals from various pump heads. This tool prevents damage to the pump head surfaces caused by prying the seals with screwdrivers or lab tweezers.

You can purchase the tool separately as Waters part number WAT039803. Use this tool with the following Waters seals:

NOTE: To be certain you have the latest version of this procedure, please visit the Waters Service Knowledge Center. [Alternately, if it’s a customer procedure: Please visit the support area of the Waters Website.]

Parts Required

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>WAT031790</td>
<td>O-ring energized seal</td>
<td>616, 626, 625</td>
</tr>
<tr>
<td>WAT034515</td>
<td>Spring-energized seal</td>
<td>616</td>
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<tr>
<td>WAT026613</td>
<td>Spring-energized seal</td>
<td>510, 616</td>
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<tr>
<td>WAT022934</td>
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<td>WAT025384</td>
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<td>WAT069581</td>
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<td>WAT270938</td>
<td>Plunger seal</td>
<td>2695, 2795</td>
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<td>WAT270940</td>
<td>Wash tube seals</td>
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<tr>
<td>WAT271018</td>
<td>Seal wash plunger seal</td>
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</table>

Tools/Materials Required

- Seal extraction tool (WAT039803)

CAUTION: Use care to avoid gouging or scoring surfaces when removing seals.

Procedure

For 616/626/625 pumps with the (old) O-ring energized seal:

1. Use the metal screw end of the tool to remove the three black plunger bearings and seal (gold) from the pump head as follows:
   a. Insert the tip of the tool into the bearing (plunger) hole just enough to grab the part being removed.
   b. Pull back on the bearing to remove it. Repeat these steps as necessary to reach the seal.
   c. Remove the seal using the same technique.
2. Use the plastic screw end to remove the O-ring, which may remain in the bottom of the pump head, as follows:
   a. Slowly turn the plastic screw into the center of the O-ring.
   b. Turn the screw until several threads are engaged.
   c. Slowly pull the O-ring from the pump head.

For 616 pumps with the (new) spring-energized seal:

Use the metal screw end to remove the black bearing and seal (gold) from the pump head as follows:

1. Use the tip of the tool to engage the bearing (plunger) hole.
2. Pull back on the bearing to remove it.
3. Remove the seal using the same technique.

For 510/600 pumps with the spring-energized seal:

Use the plastic screw end to remove the standard seal as follows:

1. Screw the plastic screw end into the plunger seal opening until it engages the seal.
2. Pull back on the tool to remove the seal.

For 2695/2795 pumps with the seals:

Use the plastic screw end to remove the standard seal as follows:

1. Screw the plastic screw end into the plunger seal opening until it engages the seal.
2. Pull back on the tool to remove the seal.