**Tech Tips**

**Service Call:** Telescoping Tube Seal Installation

**Tools Required:** Rod-Seal installers are available from McMaster-Carr for U-cups and O-rings. The installers are recommended for use with rubber and urethane seals, not for use with rigid plastic materials such as PTFE and nylon.

<table>
<thead>
<tr>
<th>Seal Inner Diameter</th>
<th>Approximate Minimum Opening Required</th>
<th>Part Number</th>
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<tbody>
<tr>
<td>1&quot;-1.5&quot;</td>
<td>1&quot;</td>
<td>45015K21</td>
</tr>
<tr>
<td>1.5&quot;-2&quot;</td>
<td>1.5&quot;</td>
<td>45015K22</td>
</tr>
<tr>
<td>2&quot;-3&quot;</td>
<td>2&quot;</td>
<td>45015K23</td>
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**Model(s):** C3000 through C6000
Tech Tip Safety Rules

Danger
Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury. Many of the hazards identified in the operator’s manual are also safety hazards when maintenance and repair procedures are performed.

Do Not Perform Maintenance Unless:

- You are trained and qualified to perform maintenance on this machine.
- You read, understand and obey:
  - manufacturer’s instructions and safety rules
  - employer’s safety rules and worksite regulations
  - applicable governmental regulations
- You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this tech tip is a supplement to the service manual. Consult the appropriate service manual of your machine for safety rules and hazards.
**Step 1**
Inspect the area where the seal will be installed, ensuring it is clean and defect free.

**Step 2**
Position seal in the installation tool as shown below.
Step 3
Rotate handles toward one another to flex the seal into the configuration shown.
Step 4
Position the seal into the retaining groove and reverse the position of the handles to release the seal.
Step 5
Using the tip of your finger, gently press the seal into place. Inspect to ensure seal is seated properly and undamaged. Install wiper seal using the same procedure.

Lubricate the seal with hydraulic oil before inserting the chrome inner telescoping tube.