Follow your company’s safety procedures whenever working on Kadant Johnson products. Read all of the instructions before proceeding with the installation or repair.

Please refer to the Kadant Johnson assembly drawings for part identification. Assembly drawings are available on request from Kadant Johnson.

Lubricate all fasteners with anti-seize compound. Tighten all fasteners in a star pattern. Torque specifications are listed on the product assembly drawing and are available from Kadant Johnson.

**NOTE:** Do not use anti-seize or petroleum-based products on o-rings. Only lubricate the o-rings with the silicone lubricant supplied with the Kadant Johnson repair kit. Prior to handling lubricants, consult MSDS information.

**REPAIR KITS ARE AVAILABLE CONSISTING OF:**

<table>
<thead>
<tr>
<th>Item #</th>
<th>Qty</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>1</td>
<td>Seal Ring</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>Gasket</td>
</tr>
<tr>
<td>25</td>
<td>2</td>
<td>O-Ring</td>
</tr>
<tr>
<td>26</td>
<td>1</td>
<td>O-Ring</td>
</tr>
<tr>
<td>--</td>
<td>1</td>
<td>O-Ring Lube</td>
</tr>
</tbody>
</table>

**REMOVAL AND DISASSEMBLY:**

**STEP 1.**
Release residual pressure in the system. Close the inlet and outlet valve. Allow the joint to cool sufficiently and then disconnect the inlet and outlet piping from the joint.

**STEP 2.**
Remove head bolts (2B) and head (2).

**STEP 3.**
Remove four support tube locking bolts (1C) that hold the cantilever syphon tube (40) to the joint body (1). Install two 9/16” bolts (head bolts, 2B) as jacking screws into the threaded holes (1C) and turn to push the syphon support tube out of its locking taper. See page 2 for part identification.

**STEP 4.**
To remove the body (1), remove hex nuts (20B). Prepare to support the weight of the body. Remove the body. Discard the o-ring (26) that is located between the body and the end cap (3). Clean o-ring groove.

**SERVICING THE JOINT:**

**STEP 5.**
Working around the support tube (40), remove socket head cap screws (3A) that hold the end cap (3) to the ring bracket (20). As the screws are loosened, the seal ring (6) will be free to fall out of the wear plate (16). Remove end cap assembly (3 and 4).

**STEP 6.**
Inspect the sealing surfaces of the wear plate (16) for scratches, wear, and steam cutting. Replace if necessary. The wear plate is not part of the repair kit. It is ordered separately.

**STEP 7.**
Remove the nipple (4) from the end cap (3) by placing the assembly in a press with the nipple’s flat sealing surface facing up. Place a wooden block on the nipple sealing surface to protect it. Push down on the nipple to compress the springs (7), then remove the retainer rings (18). Release the press and the nipple will slide out of the end cap.

**STEP 8.**
Remove nipple o-rings or teflon lip seal (25) and discard. Inspect the nipple’s (4) flat sealing surface for damage or wear. Clean the o-ring grooves, using solvent and mild abrasive. If any surface is worn, pitted, or steam cut, replace the nipple. The nipple is not part of the repair kit. It is ordered separately.

Inspect the spring guide pins (19). Replace if worn. Use Lock Tite on the threads during replacement.

**If there is a teflon lip seal in position 25, skip Step 9 and go to Step 10.**

**STEP 9.**
Lubricate two new o-rings (25) with silicone lube and install into the o-ring grooves in the nipple (4). Apply a thin coating of o-ring lubricant to the bore of the end cap (3).

**STEP 10.**
Assemble the repair kit to the end cap (3). Install and tighten the head bolts (2B). Place the o-rings (25) in their grooves in the end cap (3). Install and tighten the head bolts (2B). Install the head (2) and close the inlet and outlet valves. Release the residual pressure in the system.

**NOTE:** Use Lock Tite lockant on the threads during assembly.

Effective March 2012

Replaces R-9000AFYSC19-PT-5
STEP 10.
Examine the springs (7). If the springs have taken a slight set and are no more than a 1/4” (6 mm) shorter in length than a new spring, they may be reused.

STEP 11.
Remove old gasket (8), and clean all gasket material from mating surfaces on body (1) and head (2).

REASSEMBLY AND REINSTALLATION:
If there is a teflon lip seal in position 25, skip Step 12 and go to Step 12A.

STEP 12.
Place the end cap (3) back into the press with the guide pins (19) facing up. Place the springs (7) over the guide pins. Position the nipple (4) back into the bore of the end cap and align the holes in the nipple flange with the spring guide pins. While protecting the sealing (flat) surface of the nipple, push the o-rings and nipple into the end cap bore, compressing the springs. Install retaining rings (18).

STEP 12A.
Place the end cap (3) back into the press with the guide pins (19) facing up. Make sure of the end cap bore opposite the guide pins is clear. Place the springs (7) over the guide pins. Position the nipple (4) into the bore of the end cap and align the holes in the nipple flange with the spring guide pins. While protecting the sealing (flat) surface of the nipple, push the nipple into the end cap bore, compressing the springs and install the retaining rings (18). Continue to push the nipple through the bore of the end cap until the teflon lip seal groove is exposed. Install the lip seal with the cup or U shaped portion facing the steam (down). Lubricate the lip seal with silicone lubricant. Slowly release the press, this will draw the lip seal into the end cap bore, be careful not to damage the lip seal. Fully release the press so the nipple flange rests against the retainer rings.

STEP 13.
Position a new seal ring (6) into the recess of the wear plate (16). Position the end cap assembly (4-5) into the ring bracket (20) while holding onto the seal ring. Install end cap retaining bolts (3A) and tighten. This will compress the nipple (4) into the end cap. The X dimension should be 0.450” ± 0.050” (11 ± 1 mm) at this time. Make sure the seal ring is centered on the flat face of the nipple.

NOTE: As the seal ring wears, the space between the retainer ring and the nipple will decrease to zero. When this occurs, the joint will start to leak. The metal wearing surfaces will not be in contact with each other, preventing damage to them.

STEP 14.
Apply Never Seize to the tapered portion of the support tube (40).

STEP 15.
Support tubes (40) purchased after April 1, 2000 have been upgrade to include a groove pin (30) and a filler flange (35). If a new support tube is being installed into a joint body (1) purchased before April 1, 2000 omit the use of the groove pin. For joint bodies purchased after April 1, 2000 install the groove pin into the end of the support tube in the non threaded hole.

STEP 16.
Lubricate a new o-ring (26) with silicone o-ring lubricant and place it into the o-ring groove in the body (1). Position the body over the support tube (40). Make sure the end of the support tube is fully engaged into the recess in the body. Install four new support tube locking bolts, lock washers (1C), and filler flange (35) if equipped. Position body and support tube assembly over the studs on the support bracket (20) and secure with hex nuts. Tighten support tube locking bolts using a star pattern. Tighten grade 8 locking bolts to 105 ft-lbs (142 Nm). Tighten grade 5 locking bolts to 85 ft-lbs (115 Nm).

STEP 17.
Attach the head (2) to joint body (1) using new gasket (8). Secure with fasteners (2B). Hook up piping and turn valves on. The Kadant Johnson joint is now ready to be placed back in service.

NOTE: If the support tube (40) is in the way, (e.g. during bearing replacement) attach the Syphon Retracting Tool (RT-6750) to the end of the support tube in the non threaded hole. Use the four supplied bolts and then slide the support tube into the dryer journal. If the dryer is equipped with Turbulator™ Bars, the support tube will have to be rotated 180 degrees to gain syphon clearance inside the dryer. After work is completed, attach the Syphon Retracting Tool and reposition the support tube as required.

Dimensions are for reference only and subject to change. Certified drawings are available on request. Please refer to Kadant Johnson Drawing Number A37640 for torque specifications.