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>7</td>
<td>4</td>
<td>Springs</td>
</tr>
<tr>
<td>8R</td>
<td>1</td>
<td>Gasket</td>
</tr>
<tr>
<td>18</td>
<td>4</td>
<td>Retainer Rings</td>
</tr>
<tr>
<td>25</td>
<td>2</td>
<td>O-Rings</td>
</tr>
<tr>
<td>-</td>
<td>1</td>
<td>O-Ring Lube</td>
</tr>
</tbody>
</table>

REMOVAL:

STEP 1. Release residual pressure in the system. Disconnect the piping from the rotary joint. Support the flexible hose to prevent damage to it by excess twisting or bending.

STEP 2. During this step prepare to capture the seal ring (6), when it falls free. Remove the end cap assembly (3 and 4) by removing hex nuts (3B). As the hex nuts are loosened, the end cap assembly will move away from joint mounting bracket (20).

SERVICING THE ROTARY JOINT:

STEP 3. Inspect the spherical face machined into the face of the wear plate (16). If it is scored, steam cut, or otherwise damaged, it must be replaced. Replace the wear plate by removing the socket head cap screws (16A) and freeing it from the filler flange (5). Clean the gasket surface where the wear plate gasket (8R) seats against the filler flange. Install a new wear plate using a new wear plate gasket.

STEP 4. Place the end cap assembly (3 and 4) on a suitable work surface with the nipple (4) facing up. Compress the nipple (4) into the end cap (3) and remove the four retainer rings (18) from the hex pins (19). Remove the nipple from the end cap. Discard four springs (7).

STEP 5. Clean the nipple (4) using solvent and a Scotch Brite® pad. Inspect the flat sealing surface of the nipple and the end of the nipple where the o-rings seal. If either area is steam cut or worn, replace the nipple.

STEP 6. Remove the o-rings (25) from the from the end cap (3). Clean the end cap using solvent and a Scotch Brite pad. Inspect the following areas for wear, scoring, or steam cuts: the o-ring glands, the bore where nipple (4) resides, and the gasket surface where the piping attaches. If any area is damaged, replace the end cap.

STEP 7. Inspect the four hex pins (19). Make sure they are not worn or bent. Replace as required by un-threading them from the end cap (3). Apply Loctite 242 to the threads of a new hex pin and re-install.
ASSEMBLING THE ROTARY JOINT:

STEP 8.
Place the end cap (3) on a suitable work surface. Lubricate two new o-rings (25) with silicone o-ring lubricant and place them into the o-ring glands. Position four new springs (7) over the hex pins (19). Protect the flat sealing surface of the nipple (4) and slide the nipple into the bore of the end cap, while aligning the holes in the nipple flange with the hex pins. Continue to push the nipple into the end cap. Secure the nipple by installing the four retainer rings (18) into the grooves on the hex pins and release the nipple.

STEP 9.
Position the seal ring (4) with its spherical surface mated with the spherical surface machined into the wear plate (16). Wetting the seal ring with water will help hold it in position.

STEP 10.
Place the end cap assembly (3 and 4) over the studs (3A) on the joint mounting bracket (20). Continue to slide the end cap assembly into position until the flat sealing surface of the nipple (4) contacts the flat sealing surface of the seal ring (6). Make sure the seal ring is in place and secure the end cap assembly using hex nuts (3B). Note: As the hex nuts are tightened, the springs will compress, pushing the nipple into the end cap and loading the seal ring. The seal ring will be contained between the nipple and wear plate (16).

STEP 11.
Make sure the seal ring (6) is centered on the nipple (4). Check the “X” dimension. The “X” dimension should be 0.31” (8 mm). If the seal ring is off-center or the “X” dimension is not correct, align the joint by loosening the bolts (22) and adjusting the joint mounting bracket (20). Make sure the joint mounting bracket is parallel to the filler flange (5). See Figure 1.

STEP 12.
Attach the piping to the rotary joint using a new gasket. The Kadant Johnson rotary joint is now ready to be placed in service.

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.

The Kadant Johnson Warranty
Kadant Johnson products are built to a high standard of quality. Performance is what you desire: that is what we provide. Kadant Johnson products are warranted against defects in materials and workmanship for a period of one year after date of shipment. It is expressly understood and agreed that the limit of Kadant Johnson’s liability shall, at Kadant Johnson’s sole option, be the repair or resupply of a like quantity of non-defective product.