NOTES: Please follow your company’s safety procedures whenever working on Kadant Johnson Rotary Joints. Read all of the instructions completely before proceeding.

Close the inlet and outlet valves and allow the joint to cool down. Disconnect the inlet and outlet piping from the joint. Be careful of any pressure still in the system as this may be dangerous.

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>Carbon Seal</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>Gasket</td>
</tr>
<tr>
<td>25</td>
<td>2</td>
<td>O-Rings or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1) Vari Seal</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.
Disconnect piping and remove the nuts (3C) that secure the body or elbow (1) to the end cap assembly (3, 4, 7). Discard o-ring (26).

STEP 2.
Remove socket head cap screws (3A) to prepare for removal of the end cap assembly. The end cap assembly is under a spring load. Spring load will be released when these bolts are loosen. With assistance, capture seal ring (6) and remove end cap assembly.

STEP 3.
Inspect the spherical sealing surface of the wear plate (16).

The wear plate should be replaced if worn, scratched or steam cut. The wear plate is not furnished as part of the repair kit, it is available separately.

SERVICING THE END CAP ASSEMBLY.

STEP 4.
See Figure 2. Remove the nipple (4) from the end cap (3) by placing the assembly in a small press with the nipple’s flat wear surface facing up. Place a wooden block on the nipple’s flat face to protect it. Push downward 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 5.
Remove nipple o-rings or teflon lip seal (25) and discard. Inspect the nipple’s flat sealing surface for damage or wear. Using solvent and a mild abrasive, clean the grooves in the nipple and their adjacent sealing surfaces in the end cap. Replace any part that is pitted, scratched or steam cut. The nipple or end cap is not part of the repair kit, it is available separately.

If there is a teflon lip seal in position 25, skip Step 6 and go to Step 7.

STEP 6.
Install two new o-rings over the nipple. Apply silicon lubricant to the o-ring and sealing surface for ease of installation.

STEP 7.
Examine the springs (7) and the spring guide pins (19) for wear and replace as necessary. If the springs have taken a slight set and are shorter in length than a new spring, they may still be reused. However, if the springs have been compressed to a solid height, they must be replaced.
STEP 8.
Remove old gasket (8) and clean all gasket material from mating surfaces on body or elbow (1).

If there is a Teflon lip seal in position 25, skip Step 9 and go to Step 9A.

STEP 9.
Place the end cap back into the press with the guide pins facing up. Place the springs over the guide pins. Position the nipple 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, recompressing the springs and secure with the retaining rings. Fully release the press so the nipple flange rests against the retainer rings.

STEP 9A.
Place the end cap back into the press with the guide pins facing up. Make sure the end cap bore opposite the guide pins is clear. Place the springs over the guide pins. Position the nipple 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. 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 10.
Position a new carbon seal ring into the recess of the wear plate. Position the end cap assembly into the ring bracket (20) while holding on to the seal ring. Install end cap retaining bolts (3A) and tighten. This will compress the nipple into the end cap. Check the X dimension. It should match the dimension called out on the assembly drawing. Make sure the seal ring is centered on the flat face of the nipple.

NOTE: As the carbon seal ring wears, the space between the retainer ring and the nipple will decrease to zero. After 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 11.
Place a new o-ring (26) into the o-ring groove on the joint body or elbow (1). A few dabs of silicone grease in the groove will hold the o-ring in place while you position the body on the end cap studs (3B). Once in position, secure the body or elbow to the bracket with hex nuts (3C).

STEP 12.
Attach the piping and turn valves on.

The Kadant Johnson Joint is now ready to be placed back in service.

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.