Disassembly and Repair of Type ELSJA Joints

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 Ring</td>
</tr>
<tr>
<td>6A</td>
<td>1</td>
<td>Front Carbon Guide</td>
</tr>
<tr>
<td>6B</td>
<td>1</td>
<td>Rear Carbon Guide</td>
</tr>
<tr>
<td>8A</td>
<td>2</td>
<td>Ring Gasket</td>
</tr>
<tr>
<td>8R</td>
<td>1</td>
<td>Full Face Gasket</td>
</tr>
<tr>
<td>16B</td>
<td>1</td>
<td>Retaining Ring</td>
</tr>
</tbody>
</table>

NOTE: For applications using thermal oil, see “Special Instructions For Rebuilding Kadant Johnson Rotary Joints Used on Heat Transfer Oils”. This sheet offers additional information on seal ring, nipple and wear plate preparation (lapping) that is recommended for thermal oil service.

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

Please refer to the assembly drawings supplied with your Kadant Johnson Rotary Joint for part identification. If you have further questions, please contact your Representative or Kadant Johnson.

REMOVAL:

STEP 1. Close the inlet and outlet valves and allow the joint to cool. Disconnect piping from the joint, remove anti-rotation rod and restraining yoke (if used).

STEP 2. Uncouple the nipple (4) from the journal flange. For threaded nipple joints, unscrew nipple from journal. For joints with quick release nipples, remove hex nuts from the studs at the nipple flange (5). Slide nipple flange away from journal to expose two split taper wedges (55). Remove wedges.

STEP 3. Slide joint away from the machine to expose horizontal pipe. Using pipe wrench, unscrew the horizontal pipe from the joint head (2), and slide the joint off the pipe. A copper gasket (8Q), located in the journal adapter, should be removed and discarded. The joint is now ready to be serviced.

SERVICING THE JOINT:

STEP 4. Remove head (2) by removing the bolts (2D).

STEP 5. Loosen and remove the two round head screws (31A) freeing assembly plate (31). Caution: There may be spring tension behind the assembly plate.

STEP 6. Lift off the assembly plate and remove the remaining parts in the following order: front carbon guide (6A), nipple (4) with spring shoulder (3) and spring (7), and seal ring (6).

STEP 7. Separate the wear plate (16) from the body (1) by removing the bolts (16A). Inspect the flat surface of the wear plate where the seal ring runs against it. If this surface is scratched or grooved, replace the wear plate. If the wear plate is in serviceable condition, replace the rear guide (6B) by removing the retainer ring (16B) freeing the rear carbon guide. If equipped with a woodruff key (16C), discard. This part is no longer required.

STEP 8. Clean all gasket surfaces.

STEP 9. Slide the spring shoulder (3) and spring (7) off the nipple (4).

STEP 10. Inspect the nipple’s sealing and bearing surfaces for scratches, grooves or pits. Inspect the drive keys. If there is deterioration in these areas, replace the nipple.
STEP 11.
Install a new rear carbon guide (6B) into the wear plate (16). Install the retainer ring (16B) into the groove to secure the rear carbon guide. Install the wear plate onto the body (1) using a new gasket (8R). Secure wear plate with bolts (16A) using a star pattern for a tightening sequence. Please see Kadant Johnson Drawing A37640 for torque specifications.

STEP 12.
Turn the rotary joint housing upright and install a new carbon seal ring (6), flat side down, concave side facing outward. Caution: seal rings are hard but brittle. Please handle with care.

STEP 13.
Reinstall nipple (4) back into the body through the rear guide (6B), followed by the spring (7).

STEP 14.
Align the key on the nipple (4) with the key-way on the spring shoulder (3) and slide the spring shoulder onto the nipple.

STEP 15.
Set the front guide (6A) over the nipple next. The two pinholes should face outward.

STEP 16.
Set gasket (8A) on the end of the body.

STEP 17.
While aligning the two pins with the holes in the front guide, push down on the assembly plate and secure with the round head screws (31A) and lock washers (31B). Keys and keyways, pins and pinholes, should align. Reinstall head (2) with elbow (2A) attached with a new gasket (8A) and tighten bolts (2D) using a star pattern. Please see Kadant Johnson Drawing A37640 for torque specifications.

STEP 18.
Thread horizontal pipe into the joint head and tighten with a pipe wrench.

REINSTALLATION:

STEP 19.
Prior to installing the rotary joint on the machine, place a new metal gasket (8Q) into the recess of the journal.

STEP 20.
Reinstall ‘Q’ nipple flange (5) over nipple (4).

STEP 21.
Place the two tapered split wedges (55) into the recess of nipple (4) and secure by sliding the ‘Q’ nipple flange over the wedges.

STEP 22.
Slide the rotary joint into the recess of the journal flange and engage ‘Q’ nipple flange (5) over the studs. Secure by evenly tightening the jam nuts.

Note that this flange will not fit tightly against the journal. There should be a space between the flanges. Make certain this gap is equal around the circumference of the ‘Q’ nipple flange.

STEP 23.
Reconnect the piping and joint is now ready for 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.