Disassembly and Repair of Type 1150ELSN Joints

REPAIR KITS ARE AVAILABLE CONSISTING OF:

<table>
<thead>
<tr>
<th>Item #</th>
<th>Qty</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3A</td>
<td>1</td>
<td>O-ring</td>
</tr>
<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>8</td>
<td>1</td>
<td>Ring Gasket</td>
</tr>
<tr>
<td>8R</td>
<td>2</td>
<td>Full Face Gasket</td>
</tr>
<tr>
<td>10A</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.
Remove head (2) by removing the hex head cap screws (2C). Remove lock wire from bolts (11A). Remove the bolts (11A), remove packing gland (11) and the packing (35).

STEP 3.
Remove hex nuts allowing flange (5) to slide out, away from the journal flange, exposing the two tapered split wedges (55).

Using a crane or hoist, you can now pull the rotary joint away from the machine for rebuilding. Separate the split wedge and remove flange (5). Use caution as not to drop the split wedge. Set aside for reuse. The joint is now ready to be serviced.

SERVICING THE JOINT:

STEP 4.
Loosen and remove the four socket head screws (31A) freeing assembly plate (31). Caution: There is spring tension behind the assembly plate. Please remove with care.

STEP 5.
Lift off the assembly plate and remove the remaining parts in the following order: the nipple (4) with guide (6A) and spring shoulder (3), spring (7), and the seal ring (6).

STEP 6.
Separate the wear plate (16) from the body (1) by removing the bolts (16B). Inspect the spherical 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 (10A) freeing the rear carbon guide.

STEP 7.
Clean all gasket surfaces.

STEP 8.
Slide the spring shoulder (3) and spring (7) off the nipple (4).

STEP 9.
Inspect the nipple’s O-ring surface, seal ring, and bearing surfaces for scratches, grooves or pits. Inspect the drive keys. If there is deterioration in these areas, replace the nipple.

STEP 10.
Install a new rear carbon guide (6B) into the wear plate (16). Install the retainer ring (10A) into the groove to secure the rear carbon guide. Install the wear plate onto the body (1) using a new gasket (8). Secure wear plate with hex bolts (16B) using a...
Note: The quick release nipple flange (5) will not seat tightly against the face of the journal flange. When tight there will be a space between the flanges. Make sure this gap is equal around the circumference of the flanges.

STEP 22.
Reinstall the packing (35), packing gland (11) and bolts (11A). Tighten bolts (11A) to 30 ft-lbs and install lock wire.

STEP 23.
Make sure gasket (8) is in position between the body (1) and head assembly (2 and 2A). Install head (2) and elbow assembly (2A) over gasket and secure into position using bolts (2C). Tighten bolts evenly using a star pattern and proper torque. Please refer to Kadant Johnson Drawing Number A37640 for recommended torque specifications.

STEP 24.
Connect piping to joint using Kadant Johnson stainless steel flexible metal hose. The hose(s) should be long enough so no binding or tension will move the joint off the journal centerline. The joint must be free to move outward to compensate for seal ring wear. (See recommended flexible metal hose length chart in Table 1).


STEP 25.
Install anti-rotation rod in the anti-rotation rod hole. Attach anti-rotation rod to anchor point per OEM's recommendations. Please refer to Kadant Johnson Drawing Number A-41836. No more than two joints should be joined with one anti-rotation rod. Secure the rod to the rod hole of one joint and let it float in the second joint. This will absorb the torque generated by the joint, and prevent premature hose failure by reducing stresses. Please contact Kadant Johnson if there are questions regarding anti-rotation devices.

STEP 26.
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.

TABLE 1

<table>
<thead>
<tr>
<th>Hose Size</th>
<th>Minimum Length</th>
</tr>
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<tbody>
<tr>
<td>6”</td>
<td>30”</td>
</tr>
<tr>
<td>8”</td>
<td>36”</td>
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</tbody>
</table>

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.