Disassembly and Repair of Type SJI Indexing Joints

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.

The following items are required to repair the indexing joint. The packing material has been replaced with o-rings on all models.

REPAIR KITS ARE AVAILABLE CONSISTING OF:

<table>
<thead>
<tr>
<th>Item #</th>
<th>Qty</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>1</td>
<td>O-Ring</td>
</tr>
<tr>
<td>2C</td>
<td>1</td>
<td>Gasket</td>
</tr>
<tr>
<td>2D</td>
<td>1</td>
<td>O-Ring</td>
</tr>
<tr>
<td>5C</td>
<td>4</td>
<td>Copper Gasket</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>Seal Ring</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>Gasket</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>Guide</td>
</tr>
<tr>
<td>11B</td>
<td>1</td>
<td>O-Ring</td>
</tr>
<tr>
<td>11C</td>
<td>1</td>
<td>O-Ring</td>
</tr>
</tbody>
</table>

REMOVAL:

STEP 1.
Remove two jam nuts (66) from each support rod.

STEP 2.
To remove rotary joint from roll, remove socket head cap screws (Not supplied from Kadant) from cage (1B) by turning the roll and exposing each of them through the slot in the bottom of the rotary joint. This will release the rotary joint from the roll. Slide the rotary joint assembly off the support rods. Note: The syphon (42) will come out of the roll as the rotary joint is removed.

JOINT DISASSEMBLY AND SYPHON REMOVAL:

STEP 3.
Prepare to contain spring force behind spring shoulder (44). Remove retaining ring (43), spring shoulder (44), spring (45), and indexing handle (46). Slide the syphon (42) out of the head (2) and through the nipple (4).

STEP 4.
Remove socket head cap screws (12A) and packing gland (12). Remove o-ring (2D) and discard. Remove head bolts (2A) and head (2). Inspect the o-ring surfaces in the head and on the end of the packing gland. Replace head or packing gland if necessary. Remove gasket (2C) and discard. Clean gasket surfaces.

STEP 5.
Remove socket head cap screws (11A) and packing gland (11) Remove o-rings (11B) and (11C) and discard. Inspect both o-ring surfaces, replace packing gland if necessary.

STEP 6.
Remove socket head cap screws (5B) and copper gaskets (5C) to release nipple flange (5). Remove body (1) from end of nipple (4). Remove o-ring (1A) and discard.

STEP 7.
Release nipple flange (5) by lightly tapping on it with a mallet. Remove split wedges (5A) and nipple flange from nipple (4).

STEP 8.
Remove the nipple (4) and seal ring (6) by sliding them out of the cage (1B). Remove retaining ring (1C) and guide (10).

INSPECTION:

STEP 9.
Clean the body (1). Inspect the o-ring surfaces for o-ring (1A) and (11C). Inspect the holes in the body for the support rods.
They should be round not oval shaped. If either area is worn, replace the body. Inspect the support rods that hold the joint into position, if they appear worn replace them.

Clean the nipple (4). Inspect the seal ring (6) contact area and the guide surface (10). They should be smooth. If either area is worn, replace the nipple.

Clean the sealing surface for gasket (8) on the cage (1B) and on the journal end. Thoroughly clean the cage and inspect the seal ring (6) contact area and the guide surface (10). They should be smooth. If any area is worn or steam cut, replace the cage.

REASSEMBLY AND SYPHON INSTALLATION:

STEP 10.
Position cage (1B) on a work surface and install new guide (10) and snap ring (1C).

STEP 11.
Turn cage (1B) over. Place the seal ring (6) with the spherical face against the spherical face of the nipple (4). Slide nipple/seal ring through the cage and into the guide (10).

STEP 12.
Position nipple flange (5) over the nipple (4) with its taper facing away from the cage (10). Place the split wedge (5A) into the recess in the nipple (4) and slide the nipple flange over them.

Lubricate and install a new o-ring (1A) into the body (1). While holding the nipple (4), slide the body onto the end of the nipple engaging the o-ring. Secure the body by passing four socket head cap screws (5B) and copper gaskets (5C) through the body and into the nipple flange (5). Tighten the screws evenly. There should be a 1/8˝ (3 mm) gap around the circumference of the nipple flange (5) and the body.

STEP 13.
Lubricate and place a new o-ring (11C) into the bore of the body (1). Lubricate and place a new o-ring (11B) into packing gland (11). Install packing gland into the body and secure with socket head cap screws (11A).

STEP 14.
Place a new gasket (2C) onto the body (1). Place head (2) on body (1) and secure with bolts (2A).

STEP 15.
Slide syphon (42) assembly through the nipple (4) and into the head (2) while engaging the o-ring (11B). When the syphon is correctly installed, the end of it will protrude from the head.

STEP 16.
Lubricate and install a new o-ring (2D) over the protruding shaft of the syphon. Install packing gland (12) and secure with socket head cap screws (12A).

STEP 17.
Install the indexing handle (46) while engaging the key in the syphon (42). The red knob on the handle should be in the up position when the syphon is facing down.

STEP 18.
Place spring (45) into bore on the indexing handle (46). Compress the spring using the spring shoulder (44) and install the retaining ring (43). If necessary, a piece of 1/4˝ all-thread rod may be inserted into the end of the syphon to help hold it into position during this step.

INSTALLATION:

STEP 19.
Place two new springs (7), one on each of the support rods. Place gasket (8) into the counterbore on the cage (1B). Position the joint/syphon assembly into the roll and onto the support rods.

STEP 20.
Install socket head cap screws (Not supplied by Kadant) through the cage (1B) by turning the roll to expose the bolt hole in the bottom of the rotary joint. Tighten the bolts evenly.

STEP 21.
Tighten jam nut (66A) evenly on each support rod until the spring (7) is compressed to 0.69˝ (18 mm). Tighten the second jam nut to secure the first one maintaining the 0.69˝ (18 mm) setup dimension. Make sure the rotary joint is square and level to the machine. Thread two remaining jam nuts (66) onto each support rod until there is a 0.25˝ (6 mm) gap between the face of the nut and the lug on the joint body. Tighten the second nut to secure the first one. See dimension “R” on the joint assembly drawing. The “R” dimension is the seal ring wear indicator.

STEP 22.
Reattach the piping and open the valves. The Kadant Johnson rotary joint is now ready to be placed back 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.