Disassembly and Repair of Type LJ 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 effective January 2010. These instructions apply to all units purchased since January 2010.

REPAIR KITS ARE AVAILABLE CONSISTING OF:

<table>
<thead>
<tr>
<th>Item #</th>
<th>Qty</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2B</td>
<td>1</td>
<td>O-Ring</td>
</tr>
<tr>
<td>2C</td>
<td>1</td>
<td>O-Ring</td>
</tr>
<tr>
<td>2D</td>
<td>1</td>
<td>O-Ring</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>Seal Ring</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>Gasket</td>
</tr>
<tr>
<td>8Q</td>
<td>1</td>
<td>Copper Gasket</td>
</tr>
<tr>
<td>10A</td>
<td>1</td>
<td>Packing Gland</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 Q-flange retaining nuts (5A). Slide Q-flange (5) away from roll to release split wedges (55). Slide the rotary joint and syphon assembly off the support rods. Note: The syphon (42) will come out of the roll as the rotary joint is removed. Remove and discard copper gasket (8Q).

JOINT DISASSEMBLY AND SYPHON REMOVAL:

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

STEP 4.
Remove screws (30) and remove packing gland (10). Remove o-ring (2B) and discard. Remove head bolts (2A) and remove head (2). Inspect the o-ring gland in the head and the o-ring surface on the end of the retaining plate. Replace head or retaining plate if necessary. Remove gasket (8) and clean gasket surfaces.

STEP 5.
Remove socket head cap screws and lockwashers (30A and 30B) and remove packing gland (10A) Remove o-rings (2C) and (2D) and discard. Inspect both o-ring glands. Replace packing gland or assembly plate (31), if o-ring glands are damaged. Prepare to contain spring force behind the assembly plate (31). Remove two screws and lockwashers (31A and 31B) and remove assembly plate. Remove gasket (8A) and clean both gasket surfaces.

STEP 6.
Remove parts in the following order: seal ring (6), thrust collar (3), spring (7), nipple 4, and seal ring (6A).

INSPECTION:

STEP 7.
Thoroughly clean the body (1). Inspect the seal ring contact surface at the bottom of the body. It should be smooth, not scored or worn. Inspect the holes in the body for the support rods. They should be round not oval shaped. If either area is worn, the body needs to be replaced. Inspect the support rods that hold the joint into position, if they appear worn replace them.

Inspect the nipple (4). The seal ring contact area should be smooth, not scored or worn. Inspect the keys for wear. If either area is worn, replace the nipple.
Inspect the thrust collar (3). The seal ring contact area should be smooth, not scored or worn. Inspect the keyways for wear. If either area is worn, replace the thrust collar.

Inspect the spring (7) for stress cracks. If the spring is not stressed cracked or broken, the spring may be reused.

**REASSEMBLY AND SYPHON INSTALLATION:**

**STEP 8.**
Position body (1) on a work surface so that the nipple (4) will be able to pass through it.

Install parts into the body (1) in the following order: seal ring (6A) with flat face down, nipple (4) with the spherical face positioned to contact the spherical face of the seal ring, and spring (7).

Position the thrust collar (3) over the nipple while aligning the keyways in the thrust collar to the keys in the nipple (4).

Place seal ring (6) with its spherical surface against the spherical surface on the thrust collar (3).

Place a new gasket (8A) onto the body (1). Position assembly plate (31) against seal ring (6). Push down on the assembly plate compressing spring (7) while making sure the key and keyways are aligned. Secure into position with screws and lockwashers (31A and 31B).

Lubricate and place a new o-ring (2D) into the bore of the assembly plate (31). Lubricate and place a new o-ring (2C) into packing gland (10A). Install packing gland into the assembly plate and secure with socket head cap screws and washers (30A and 30B).

**STEP 9.**
Place a new gasket (8) onto the assembly plate (31). Place head (2) on body (1) and secure with bolts (2A).

**STEP 10.**
Slide syphon (42) assembly through the nipple (4) and into the head while engaging the o-rings (2C and 2D). When the syphon is correctly installed, the end of it will protrude from the head.

**STEP 11.**
Lubricate and install a new o-ring (2B) over the protruding shaft of the syphon. Install packing gland (10) and secure with screws (30).

**STEP 12.**
Install the indexing handle (46) while engaging the key in the syphon. The red knob on the handle should be in the up position when the syphon is facing down.

**STEP 13.**
Place spring (45) into bore on the indexing handle (46). Compress the spring using the spring shoulder (44) and install the retaining ring (43). 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 14.**
Place a new copper gasket (8Q) into the counter bore of the journal flange. Position the nipple flange (5) over the end of the nipple (4) with the taper facing away from the joint body (1).

**STEP 15.**
Position the joint/syphon assembly into the roll and onto the support rods.

**STEP 16.**
Engage the end of the nipple (4) into the counterbore of the journal flange. Place two split wedges (55) into the recess in the nipple. Slide the nipple flange over split wedges and over the studs on the journal flange. Secure nipple flange using nuts (5A). Tighten the nipple flange evenly. Note that the quick release nipple flange (5) will not seat tightly against the face of the journal flange. When tight, there should be 1/8” to 3/16” (3 to 5 mm) space between the two flanges.

**STEP 17.**
Install two jam nuts on each support rod. Position the first jam nut until there is a 5/16” (8 mm) gap between the face of the nut and the lug on the joint body. Tighten the second nut to secure the first one.

**STEP 18.**
Check joint alignment. The joint should be level and square to the machine. The nipple (4) should be centered in the body (1). View the nipple where it passes through the body. The gap between the nipple and body should be equal around the circumference of the nipple. Adjust the joint support structure as required to align the body to the nipple.

**STEP 19.**
Reattach the piping and open the valves. The Kadant Johnson 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.

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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.

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