Follow your company’s safety procedures whenever working on Kadant Johnson products. Read all of the instructions before proceeding with installation or repair.

Please refer to the Kadant Johnson assembly drawing 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.

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>Seal Ring</td>
</tr>
<tr>
<td>6A</td>
<td>1</td>
<td>Inboard Guide</td>
</tr>
<tr>
<td>6B</td>
<td>1</td>
<td>Outboard Guide</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>Gasket</td>
</tr>
<tr>
<td>8R</td>
<td>1</td>
<td>Gasket</td>
</tr>
<tr>
<td>35</td>
<td>3</td>
<td>Packing</td>
</tr>
</tbody>
</table>

REMOVAL:

STEP 1.
Close the inlet and outlet valves and allow the rotary joint to cool down. Disconnect the piping from the rotary joint, remove the anti-rotation device.

STEP 2.
Remove the hex nuts (2B), the head (2), and gasket (8). Remove safety wire. Then remove four cap screws (45), pressure plate (43), and split wedges (42). Set aside. Remove socket head cap screws (47), packing gland (46) and packing (35). Set aside. See Figure 1.

STEP 3.
Remove hex nuts allowing quick release nipple flange (5) to slide away from the journal flange, exposing the two tapered split wedges (55). Remove the rotary joint from the machine for rebuilding. Separate the wedges and remove quick release nipple flange. Save the split wedges and quick release nipple flange for reuse. Remove and discard metal gasket (8Q).

SERVICING THE ROTARY JOINT:

STEP 4.
Please use caution while performing this step. There is spring force present under wear plate (16). Remove two hex head cap screws (16A) from the wear plate. Secure the wear plate by using two M20 x 2.5 x 6” all thread rods and nuts (See Figure 2) or place rotary joint in a press and hold the wear plate in position. Remove remaining hex head cap screws. Back off nuts or release the press that is holding the wear plate. The wear plate gasket (8R) may cause wear plate to stick. Loosen the wear plate as spring tension is released. Inspect the seal ring contact area on the spherical face of the wear plate. If this surface is scratched or grooved, replace the wear plate. Remove retaining ring (16B), freeing outboard guide (6B).

STEP 5.
Remove seal ring (6) from nipple (4). Remove nipple from body (1). Slide spring (7) and spring shoulder (3) off the nipple.

STEP 6.
Remove two socket head cap screws (31A), assembly plate (31) and gasket (8A). Remove retaining ring (16B) and slide guide (6A) out of body (1).

STEP 7.
Clean all parts and gasket surfaces.

STEP 8.
Check the spring shoulder (3) for wear on keyways and the flat sealing surface. Replace spring shoulder if damaged.

STEP 9.
Inspect the nipple (4) sealing and guide surfaces for scratches, grooves, or pits. Inspect the keys on the nipple for wear. If there is deterioration in these areas, replace the nipple.

STEP 10.
Inspect the body (1) guide surfaces. Replace body if damaged. Slide new inboard guide (6A) into body. Install the retaining ring (16B).

STEP 11.
Slide spring (7) and spring shoulder (3) onto nipple (4), lining up keyways. Slide nipple into body (1). Install new seal ring (6) on the nipple in its proper position with the seal ring flat face against the nipple shoulder.

STEP 12.
Insert new outboard guide (6B) into wear plate (16) and secure with retaining ring (16B). Place new gasket (8R) onto body (1). Place wear plate (16) over nipple (4) and onto body. Compress spring/wear plate assembly using method from Step 4. Secure wear plate into position with bolts (16A).
STEP 13.
Place a new gasket (8A) on to the assembly plate (31). Secure assembly plate to body (1) using two socket head cap screws (31A).

REINSTALLATION:

STEP 14.
Place a new metal gasket (8Q) into the recess of the journal.

STEP 15.
Place ‘Q’ nipple flange (5) over nipple (4) with the taper facing outward. Place the two tapered split wedges (55) into the recess of nipple and secure into position by sliding the ‘Q’ nipple flange over the wedges.

STEP 16.
Note: The horizontal pipe handling tool may be required to pull horizontal pipe from the roll journal to obtain the set-up dimension described in this step. See Figure 3.

Position the rotary joint with quick release flange/nipple assembly (4, 5, and 55) pointed towards the journal flange or roll end. Slide the rotary joint over the horizontal pipe while the pipe passes through the assembly plate (31). Insert the nipple into the journal flange counterbore. Slide the quick release nipple flange (5) over the journal flange studs and secure flange with hex nuts. Tighten hex nuts evenly. The end of the horizontal pipe should extend 1” (25 mm) past the assembly plate.

Note: The quick release nipple flange (5) will not seat tightly against the face of the journal flange. When tight there will be approximately a 1/8” to 3/16” (3 to 5 mm) space between the flanges. Make sure this gap is equal around the circumference of the flanges.

STEP 17.
Make sure the horizontal pipe extends 1” (25mm) past the end of the assembly plate (31) and the horizontal pipe is in the correct position inside the roll. Install packing (35) around the horizontal pipe and into the pocket of the assembly plate. Position the packing gland (46) over the horizontal pipe and secure with two cap screws (47). Tighten cap screws evenly to 15 ft-lbs (20 Nm). Place two split wedges (42) into the recess in the packing gland. Place the pressure plate (43) against the split wedges and secure with four cap screws (45). Tighten the cap screws evenly to 15 lbs-ft (20 Nm), tapping the pressure plate occasionally with a hammer to ensure that the split wedges are seated. Thread safety wire through cap screws (45) to prevent them from coming loose.

STEP 18.
Install head (2) using a new gasket (8). Secure head with hex head nuts (2B). Reconnect the piping, turn valves on and rotary joint will be ready for service

Please refer to Kadant Johnson Drawing Number A37640 for recommended torque specifications.