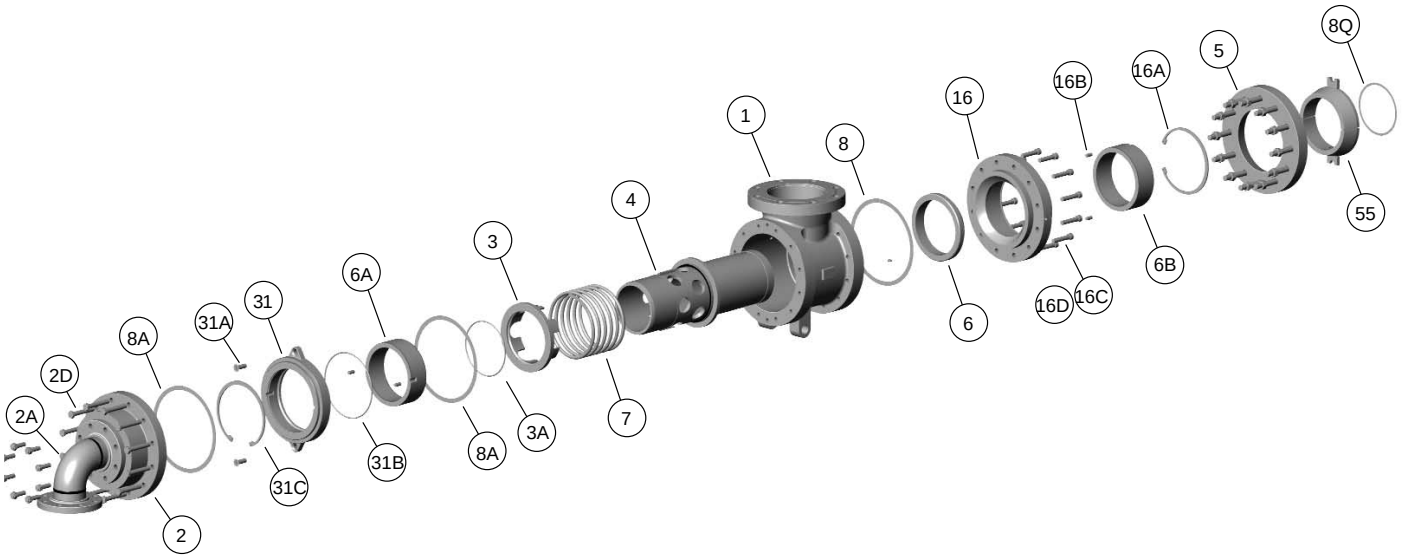
Disassembly and Repair of Type 1050ELSJA Joints



Type ELSJARFQ

REPAIR KITS ARE AVAILABLE CONSISTING OF:

Item #	Qty	Description
6	1	Carbon Seal Ring
6A	1	Front Carbon Guide
6B	1	Rear Carbon Guide
8A	2	Ring Gasket
8R	1	Full Face Gasket
16B	1	Retaining Ring

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 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 socket 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: the nipple (4) with spring shoulder (3) and spring (7) and the seal ring (6).

STEP 7.
Separate the wear plate (16) from the body (1) by removing the bolts (16C & D). 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 (16A) freeing the rear carbon guide. Retain the four dowel pins (16B).

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 seal ring and bearing surfaces for scratch-

es, 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) making sure the dowel pin slots face toward the retainer ring groove. Position the dowel pins (16B) into the slots. Install the retainer ring (16A) into the groove to secure the rear carbon guide. Make sure the retainer ring is positioned to hold (overlap) the dowel pins in their slots. Install the wear plate onto the body (1) using a new gasket (8). Secure wear plate with hex bolts (16C & D) 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), spherical side down, flat 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.
Remove the o-ring (3A) from the spring shoulder (3). Clean and inspect the o-ring gland, the flat sealing surface and the keyway of the spring shoulder (3). If any area is damaged replace the spring shoulder. Lubricate a new o-ring with a silicone lubricant and install it into the o-ring gland. Align the key on the nipple (4) with the keyway on the spring shoulder (3) and slide the spring shoulder onto the nipple.

STEP 15.
Remove the retaining ring (31C) from the assembly plate (31). Remove the front guide (6A). Remove the o-ring (31B). Clean and inspect the o-ring gland and the gasket surfaces on the assembly plate (31), replace the assembly plate if any area is damaged.

Lubricate a new o-ring (31B) with a silicone lubricant and install it into the o-ring gland. Slide a new front guide (6A) into the assembly plate compressing the o-ring then install the retaining ring (16A).

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

STEP 17.

Slide assembly plate/guide over the end of the nipple. Make sure the key and keyway from Step 14 are properly aligned and continue to slide assembly plate/guide into position compressing the spring. Secure into position with two socket head cap screws.

STEP 18.
Thread horizontal pipe into the joint head and tighten with a pipe wrench. Install the head (2) with the bolts (2D) and tighten using a star pattern. Please see Kadant Johnson Drawing A37640 for torque specifications.

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.