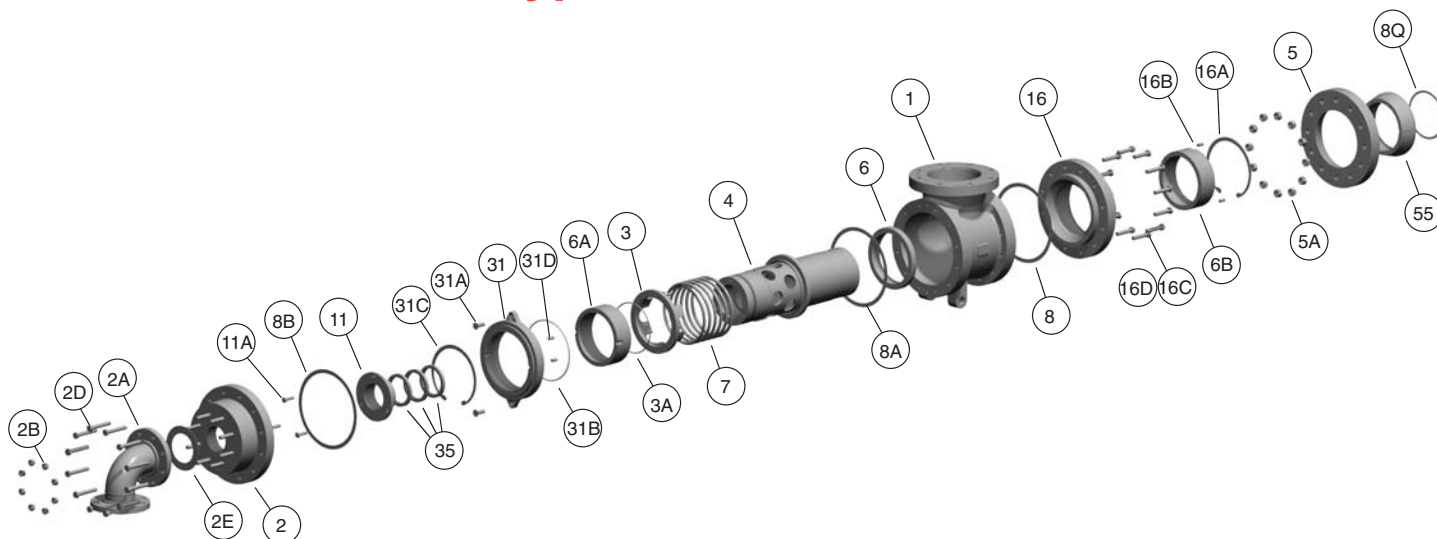


Disassembly and Repair of Type 1050ELSN Joints



REPAIR KITS ARE AVAILABLE CONSISTING OF:

Item #	Qty	Description
6	1	Seal Ring
6A	1	Inboard Guide
6B	1	Outboard Guide
8, 8A, and 8B	3	Ring Gaskets
16B and 31C	2	Retaining Ring

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 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: For applications using thermal oil, see "Special Instructions For Rebuilding Kadant Johnson Rotary Joints Used on Heat Transfer Oils".

REMOVAL:

STEP 1.

Close the inlet and outlet valves and allow the joint to cool. Disconnect piping from the joint and remove anti-rotation device.

STEP 2.

Remove head (2) by removing the hex head cap screws (2D). Remove lock wire from bolts (11A). Remove the bolts (11A), remove packing gland (11) and the packing (35).

STEP 3.

Remove hex nuts (5A) 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 JOINT:

STEP 4.

Place the joint assembly, nipple first (4), through a hole in a workbench or suitable work surface in a vertical position. See Figure 1. There is spring tension behind the assembly plate (31). Capture the assembly plate by using all thread rods or a press. See Figure 2. Remove two socket head screws (31A), freeing assembly plate. Release the press or back off the nuts on the all thread rods while spring tension is relieved.

STEP 5.

Lift off the assembly plate (31). The inboard guide (6A) and o-ring (31B) should come off with the assembly plate. Remove the remaining parts in the following order: the nipple (4) with spring shoulder (3), spring (7), and seal ring (6).

STEP 6.

Place joint on its side and separate the wear plate (16) from the body (1) by removing the bolts (16C & D). **Note:** The bolts are two different lengths. Keep track of their positions. Inspect the seal ring contact area on the spherical surface of the wear plate. If this surface is scratched or grooved, replace the wear plate. If the wear plate is in serviceable condition, replace the outboard guide (6B) by removing the retaining ring (16A) freeing the outboard guide. If present, discard the two dowel pins (16B). They are no longer used.

STEP 7.

Slide the spring shoulder (3) and spring (7) off the nipple (4). Inspect the nipple's 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 8.

Clean all parts and gasket surfaces.

STEP 9.

Install a new outboard guide (6B) into the wear plate (16). Install the retaining ring (16A) into the groove securing the outboard guide. Install the wear plate onto the body (1) using a new gasket (8) and secure wear plate with hex cap screws (16C & D) in their original position from Step 6.

STEP 12.

Turn the rotary joint body (1) upright and install a new seal ring (6), spherical side down, flat side facing outward. Handle the seal ring with care. The seal ring will fracture upon impact.

STEP 13.

Place nipple (4) into the body and through the outboard 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. 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 and slide the spring shoulder onto the nipple.

STEP 15.

Remove the retaining ring (31C) from the assembly plate (31). Remove the inboard guide (6A) and dowel pins (31D). Remove the o-ring (31B). Clean and inspect the o-ring gland and the gasket surfaces on the assembly plate, 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 inboard guide (6A) into the assembly plate compressing the o-ring. Align the dowel pins slots in the inboard guide with the dowel pin slots in the assembly plate. Place two dowel pins (31D) into the slots. Install the retaining ring (31C) into the groove to secure the inboard guide. Make sure the retaining ring is positioned to hold (over-lap) the dowel pins in their slots.

STEP 16.

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

STEP 17.

Slide assembly plate/guide (31 and 6A) over the end of the nipple (4). Make sure the key and keyway from Step 14 are properly aligned and continue to slide assembly plate/guide into position compressing the spring, using the method from Step 4. Secure into position with two socket head cap screws (31A).

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.

Place 'Q' nipple flange (5) with the taper facing out over the nipple (4). Place the two tapered split wedges (55) into the recess of nipple (4) and secure by sliding the 'Q' nipple flange (5) over the wedges.

STEP 21.

Position the joint with quick release flange/nipple assembly (4, 5, and 55) pointed towards the journal flange or roll end. Slide the joint over the horizontal pipe until the pipe passes through the o-rings or packing (4A). 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 3/8" (10 mm) past the end of the nipple or optional packing gland if used.

NOTE: The 'Q' flange will not fit tightly against the journal flange. There should be 1/8" to 3/16" (3 mm to 5 mm) space between the flanges. Make certain this gap is equal around the circumference of the flange.

STEP 22.

Install new packing (35) into the nipple and around the horizontal pipe. Install packing gland (11). Secure packing gland using bolts (11A). Tighten bolts evenly to 30 ft-lbs (41 Nm) using a star pattern. Install stainless steel lock wire to prevent bolts from loosening.

STEP 23.

Place gasket (8B) between the body (1) and head assembly (2 and 2A). Install head assembly (2 and 2A) over gasket and secure into position using bolts (2D).

If gasket (2E) needs to be replaced, do so by removing nuts (2B) and remove head (2A). Clean gasket surfaces and replace gasket.

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

STEP 25.

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.

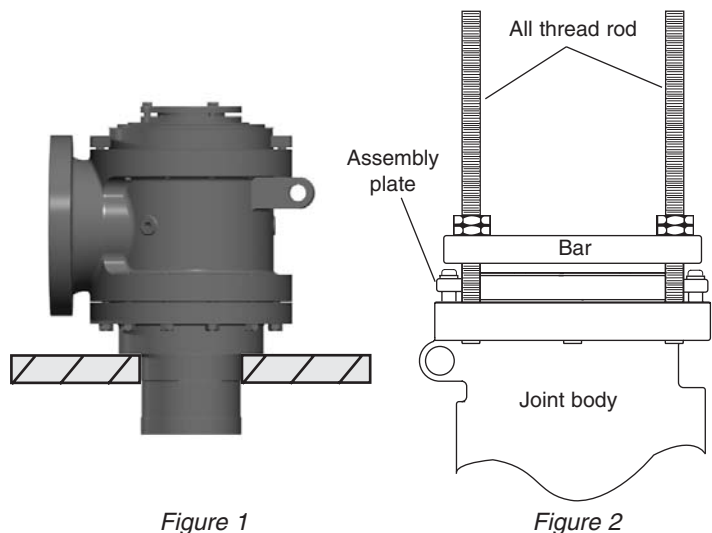


Figure 1

Figure 2

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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