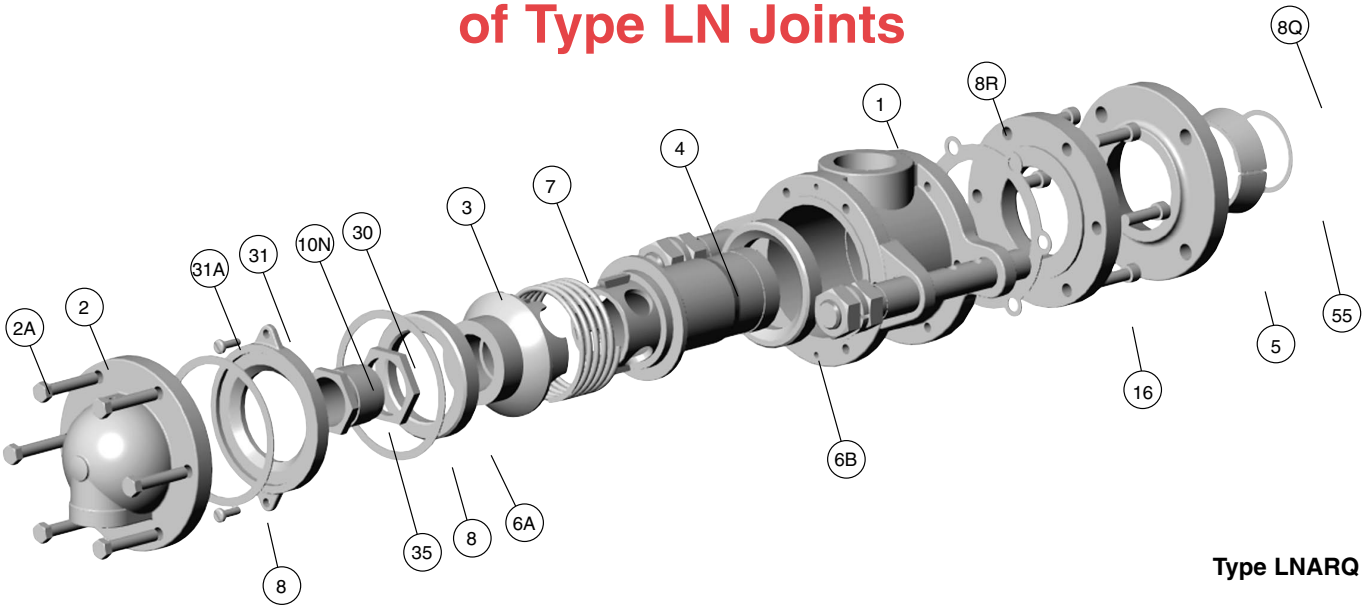
Disassembly and Repair of Type LN Joints



Type LNARQ

REPAIR KITS ARE AVAILABLE CONSISTING OF:

Item #	Qty.	Name
6	2	Carbon Seal Ring
8	2	Gasket
8Q	1	Copper Gasket
8R	1	Gasket - Full Face
35	*	Packing

*Qty. and size varies with joint size.

NOTE: 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 any further questions, please contact your Representative or Kadant Johnson.

REMOVAL:

STEP 1.
Close the inlet and outlet valves and allow the joint to cool down.

STEP 2.
Disconnect the inlet piping from the Joint. Be careful of any pressure still in the system as this may be dangerous.

STEP 3.
Remove outlet head casting bolts (2A) freeing head casting (2) from the body. Tie or secure it to any adjacent support so that the flexible metal hose is not strained or bent.

STEP 4.
Loosen locknut (30) and packing gland (10N).

STEP 5.
Remove the hex nuts from the studs at quick release nipple flange (5).

STEP 6.
Remove the hex nuts from the end of each support rod.

STEP 7.
If so equipped, remove the support stands that hold the rotary joint in place.

STEP 8.
The rotary joint should now be free to slide out away from the machine. Discard copper gasket (8Q) from the journal flange.

STEP 9.
Remove 'Q' nipple flange (5) and its two split tapered wedges (55). Be sure to keep the split wedges for reuse.

The joint is now ready for disassembly.

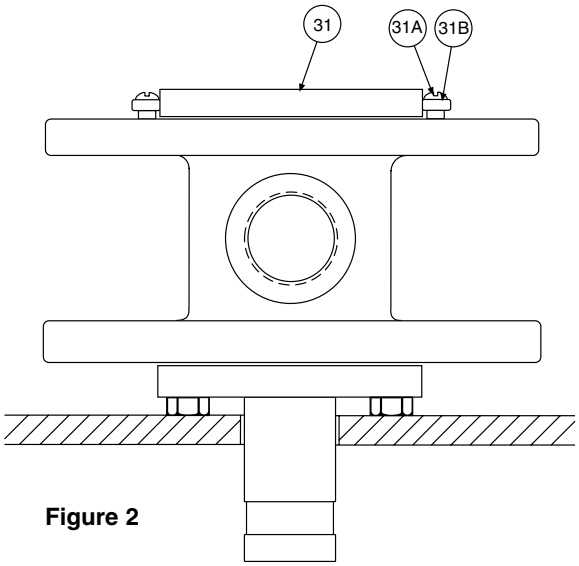


Figure 2

DISASSEMBLY:

STEP 10.
Position the rotary joint upright (see Fig. 2) with nipple (4) extending down into a piece of pipe or through a hole in the workbench. In that position joint body housing (1) will be resting on wear plate (16).

In the next step you will be removing the two assembly plate screws (31A). The internal joint spring force is contained by the assembly plate (31); be alert as its tension is released.

STEP 11.
Using a small press apply pressure on packing gland (10N) while removing the two round head screws (31A). Remove the two screws and the gasket.

STEP 12.
Lift off assembly plate (31) exposing the internal parts. Caution is advised as there is an internal spring force present.

STEP 13.
Remove the first carbon seal (6A), thrust collar (3), spring (7), nipple (4), and the second carbon seal (6B). Once out on the bench remove the packing from thrust collar (3).

STEP 14.
Inspect the metal wear surfaces for scratches, grooving and pitting. They are: wear plate (16), nipple (4), thrust collar (3) and assembly plate (31). Replace any of these items if damaged.

STEP 15.
Clean all the gasket surfaces.

REASSEMBLY:

STEP 16.
Place a new carbon seal ring (6B), (concave side facing outward) into the body housing.

STEP 17.
Set nipple (4) into the body housing followed by spring (7) and thrust collar (3).

STEP 18.
Place gasket (8) on body opening.

STEP 19.
Place carbon seal (6A) on top of thrust collar (3) followed by assembly plate (31).

STEP 20.
Once again using the press, recompress the spring. Be sure the keyways in the thrust collar are aligned with the cap keys on the nipple tube. Use the body inlet opening as a viewing port. Reattach assembly plate (31) to body (1) with the two round head screws and lockwashers (31A).

REINSTALLATION:

STEP 21.
Slide 'Q' nipple flange (5) over nipple (4) with its taper facing outward away from the body.

STEP 22.
Place the two tapered wedges in the groove around nipple (4) then slide 'Q' nipple flange (5) over them to hold in place.

STEP 23.
Place a new copper gasket (8Q) into the recess of the journal flange.

STEP 24.
Lift the joint up and slide it over the syphon pipe until its nipple seats against copper gasket (8Q) and 'Q' nipple flange (5) is aligned over the studs of the journal flange.

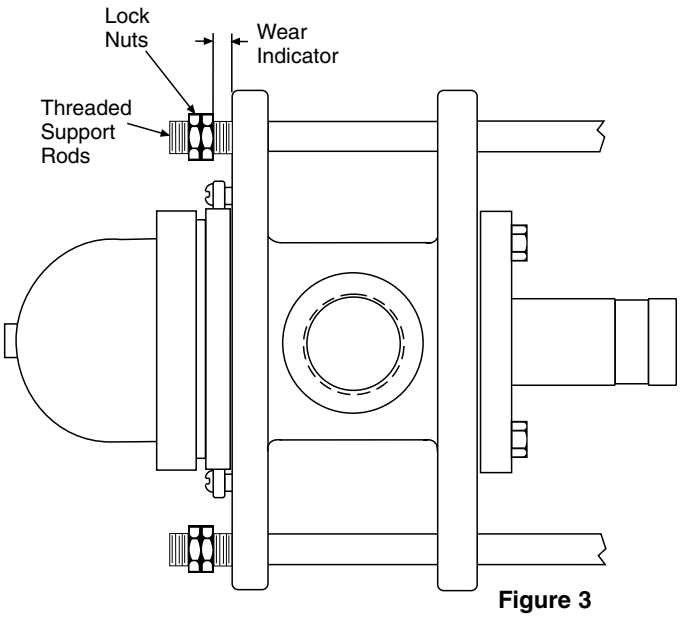


Figure 3

STEP 25.
Thread the hex nuts onto the journal flange studs tightening evenly. 'Q' nipple flange (5) will not seat flush against the journal flange. There will usually be 1/16˝ to 1/8˝ space. Measure the gap. This space should be the same around its 360° circumference.

STEP 26.
Place new packing (35) into thrust collar (3) then install packing gland (10N) and tighten to approximately 30 ft. lbs. The number of pieces varies with joint size. Consult a parts assembly drawing.

NOTE: This style rotary joint is supported by external support rods and it is very important that the joint be centered on the axis of the journal. Check the space or gap between the wear plate opening and the joint's nipple. It should be even. Also check the opening around the packing gland before reattaching the outlet head fitting.

STEP 27.
Once the rotary joint is in position and properly aligned, reset the wear indicators, i.e., set the hex nuts on each support rod to the prescribed distance out away from the rotary joints outboard lugs (see fig. 3). As the carbon seal rings wear this space will decrease.

STEP 28.
Clean the gasket surface on head casting (2), install a new gasket (8) and secure in place with the hex head cap screw. Kadant Johnson joints use Grade 5 fasteners or higher.

Reattach the piping and the Kadant Johnson joint is 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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