

Disassembly and Repair of Type IC Joints – 2000 Series

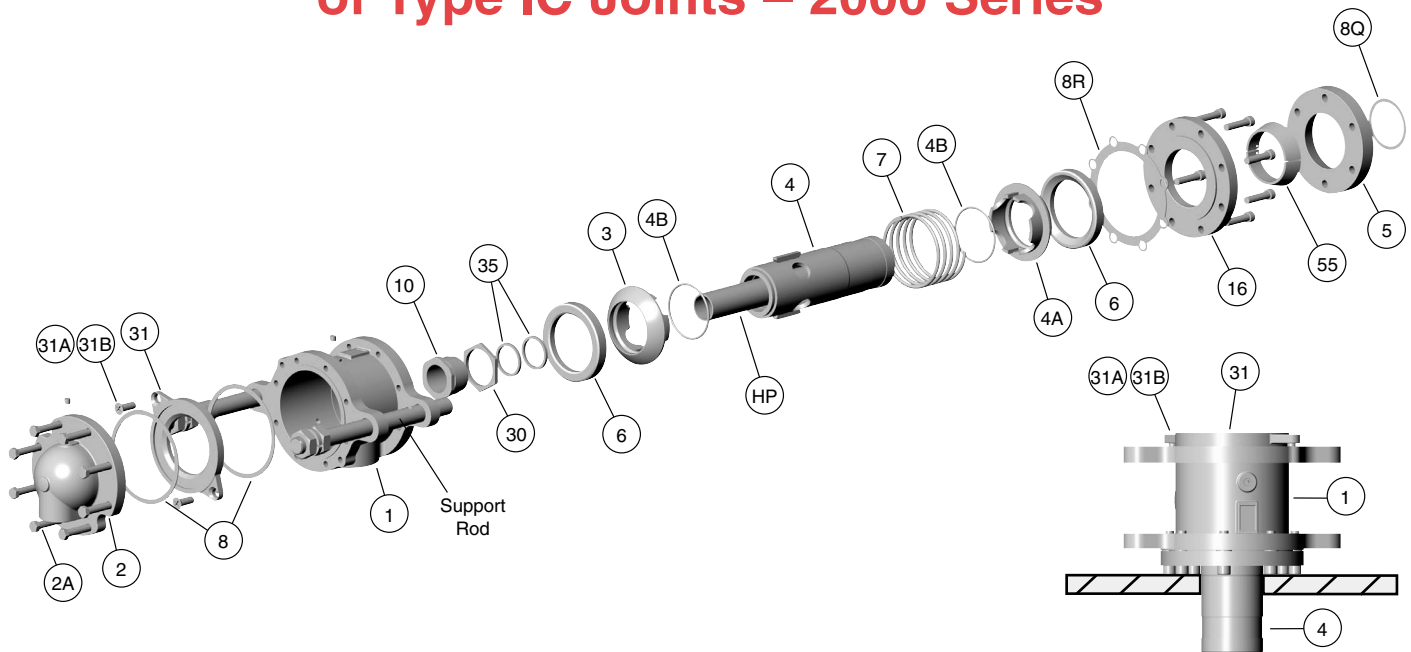


Figure 2

Type L НарQWN-IC

REPAIR KITS ARE AVAILABLE CONSISTING OF:

Item #	Qty	Description
4B	2	O-Ring
6	1	Carbon Seal
8	2	Gasket
8Q	1	Gasket
8R	1	Gasket
35	1	Packing

NOTE: Follow all your company's safety procedures whenever working on Kadant Johnson rotary joints.

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 gland (10).

STEP 5.

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

STEP 6.

Loosen and remove the jam nuts on each support rod which will allow you to slide the joint off the machine.

STEP 7.

Slide the joint away from the roll being careful not to bend the horizontal syphon pipe. Try to keep all weight off of the horizontal pipe. Discard copper gasket (8Q) from inside the journal flange.

STEP 8.

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

The joint is now ready for disassembly.

DISASSEMBLY:

STEP 9.

Position the rotary joint assembly upright (Figure 2) with nipple (4) extending down into a piece of pipe or through a hole in the table. In that position, the joint body housing (1) will be resting on the pipe or table.

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

STEP 10.

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

STEP 11.

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

STEP 12.

Remove the first carbon seal (6), thrust collar (3), spring (7), nipple (4), nipple body (4A) and the second carbon seal ring (6). Also remove the old packing (35) from the thrust collar.

STEP 13.

To replace the o-ring (4B) located in nipple body (4A), you must first slide the nipple body off the nipple (4). You may have to tap the tube on a block of wood to force it off.

Remove and discard the old o-ring. Using steel wool and a solvent, clean the o-ring groove and o-ring sealing surface on the nipple tube.

STEP 14.

Inspect the wear plate (16), nipple body (4A), thrust collar (3) and assembly plate (31) wearing surfaces for scratches, grooving and pitting.

STEP 15.

Install a new o-ring, lubricate the nipple tube and reinstall nipple body (4A) and set aside. Do not machine any of the metal components as it may lower its rated pressure and pose a liability.

STEP 16.

Clean all gasket surfaces.

REASSEMBLY:**STEP 17.**

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

STEP 18.

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

STEP 19.

Place gasket (8) on body opening.

STEP 20.

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

STEP 21.

Using the press as before, recompress the spring (be sure the keyways in the thrust collar are aligned with the keys on the nipple) and attach assembly plate (31) to body (1) with the two round head screws and lockwashers (31A & 31B).

REINSTALLATION:**STEP 22.**

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

STEP 23.

Place the two split tapered wedges (55) in the groove around nipple (4) then slide 'Q' nipple flange (5) over them to hold in place.

STEP 24.

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

STEP 25.

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

STEP 26.

Thread hex nuts onto the studs tightening evenly. The 'Q' nipple flange (5) will not seat flush against the journal flange. There will be 1/16" to 1/8" space between them and this space should be the same around its 360° circumference.

SETTING THE JOINT:**STEP 27.**

Pull the joint housing out away from the roll until it stops, then push it back in 1/8". Then move the two jam nuts on each rod in until they just touch the lugs of the joint housing and lock in place.

STEP 28.

Place new packing (35) into thrust collar (3) followed by gland (10). The number of pieces is listed on the assembly drawing.

STEP 29.

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

CARBON SEAL WEAR:**STEP 30.**

Periodically during machine down-days measure the carbon seal wear. Carbon seal wear measuring tools are available from Kadant Johnson.

The tool is 'L' shaped with a red colored area to indicate a worn carbon.

Insert the red colored part of the tool in between nipple (4) and the I.D. of wear plate (16). With a new carbon the handle of the tool will rest against the wear plate.

As carbon wear takes place, the handle will be further away from the wear plate. When the red shows, the carbon is worn out and should be replaced to prevent metal damage.

Specifications and dimensions are subject to change at manufacturer's discretion.

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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