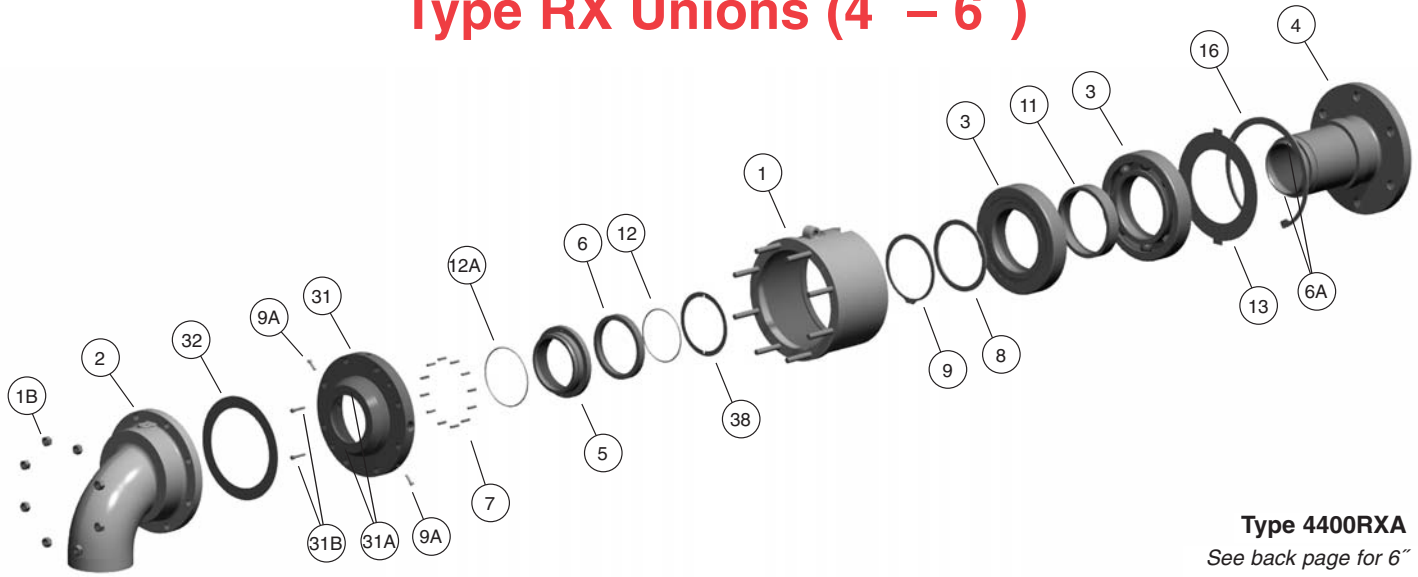


Disassembly and Repair of Type RX Unions (4" – 6")



Type 4400RXA

See back page for 6"

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.

Release residual pressure in the system. Close the inlet and outlet valve. Allow the union to cool sufficiently and then disconnect the inlet and outlet piping from the union.

SEAL REPAIR KITS CONSISTING OF:

Item #	Qty	Description
5	1	Seal Ring
6	1	Counterseat Insert
7	12 *	Spring
10A **	1	O-Ring
12	1	Counterseat O-Ring
12A	1	Seal Ring O-Ring
32	1	Gasket
38	1	Counterseat Gasket
–	1	O-Ring Lube

* 24 springs are included in the 6" Seal Repair Kit

** Included in the 6" Seal Repair Kit only.

NOTE: Do not use anti-seize or petroleum-based products on o-rings. For applications up to 300°F (149°C), use Parker silicone o-ring lubricant. For applications over 300°F (149°C), use the same grease used in the bearings of the union. (Mobilith SHC PM or Krytox GPL 227).

CARBON SEAL REPLACEMENT – ON OR OFF MACHINE

STEP 1.

Loosen and remove hex nuts (1B) and set aside. Remove head (2). Remove and discard head gasket (32).

STEP 2.

Loosen and remove socket head cap screws (31B) and assembly plate (31). Set aside socket head cap screws. The seal ring and counterseat is now exposed.

STEP 3.

Loosen socket head cap screws (9A) in the assembly plate (31). Take care in this, as it will release the seal ring (5) from the assembly plate (31). Remove and discard seal ring (5), springs (7) and o-rings (10A and 12A). Leave socket head cap screws (9A) loosely threaded in assembly plate far enough that they do not protrude into the ID of the assembly plate.

STEP 4.

Remove from nipple (4) and discard the counterseat insert (6), o-ring (12), and counterseat gasket (38).

STEP 5.

Inspect bushing in head (if equipped). Replace if worn. Inspect bearings. If they need replacing, follow "Bearing Replacement" instructions.

STEP 6.

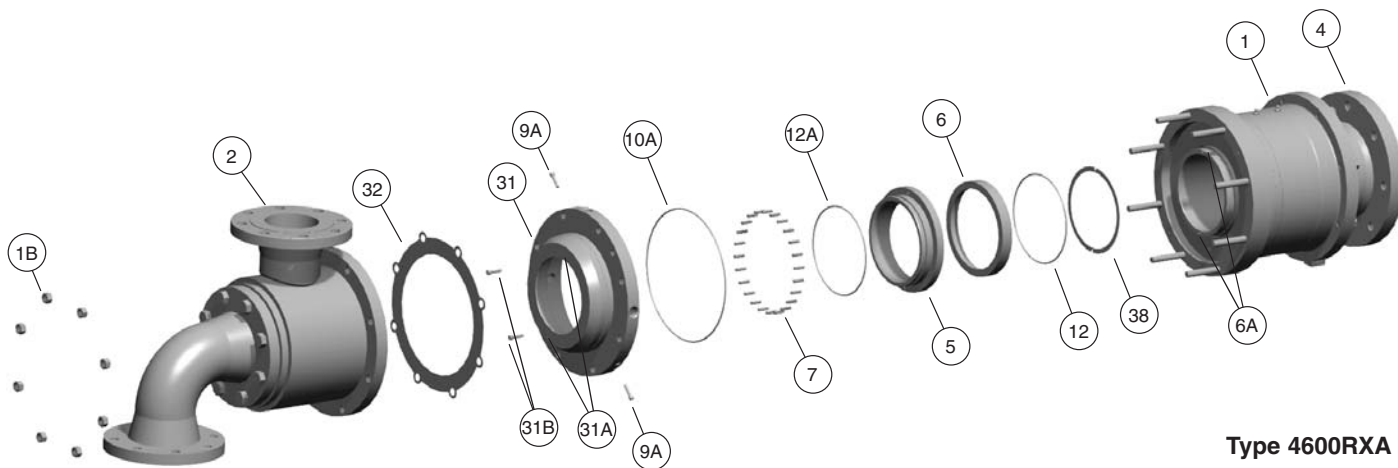
Carefully clean the end of the nipple (4) and the inside of the assembly plate (31) where the seal ring sits. Clean o-ring grooves if applicable. Inspect pins (6A) on the end of the nipple and pins (31A) in the bore of the assembly plate. Replace if necessary. Do not scratch surfaces. Also clean gasket material from head (2) and the assembly plate (31). This can be done using a light wire brush or flat scraper.

STEP 7.

Apply a small amount of o-ring lube to both sides of new o-ring (12A) and fit it over the end of the new seal ring (5). Insert new springs (7) into holes in assembly plate (31).

STEP 8.

Place a clean soft cloth over the sealing face of the seal ring. Align the holes in the seal ring (5) with assembly plate pins (31A) and gently press the seal ring into the bore of assembly plate (31). While holding the seal ring (5) into the assembly plate, retighten socket head cap screws (9A) to hold seal ring in place. Set the assembly plate aside.



Type 4600RXA

STEP 9.

Place counterseat gasket (38) onto end of nipple. Apply a small amount of o-ring lube to both sides of new o-ring (12) and fit it over the end of the nipple (4). Aligning the holes in the new counterseat (6) with the nipple pins (6A), gently press the counterseat over the o-ring and onto the nipple.

STEP 10.

Ensure seal faces are clean. O-ring lube should be cleaned from counterseat (6) and seal ring (5) with acetone and a clean cloth.

STEP 11.

Position the assembly plate (31) onto body (1). Install and tighten socket head cap screws (31B). For 6" RX unions, lubricate both sides of a new o-ring (10A) and place into o-ring groove in assembly plate prior to installing assembly plate.

STEP 12.

Place the new gasket (32) onto the assembly plate (31). Install head (2) and tighten hex nuts (1B) to the proper torque using a star pattern.

Reinstall the union onto the roll. The Kadant Johnson union is now ready to be placed back in service.

BEARING REPLACEMENT (4" and 5" Unions)

The bearing repair kit number includes replacement bearings and the seal repair kit components. **If union is equipped with tapered roller bearings, bearing replacement is done by the factory.**

STEP 1.

Follow steps 1 through 4 under "Carbon Seal Replacement."

STEP 2.

Remove body (1) and bearing assembly (3) from roll.

4" RX: Remove retaining ring (16) and tab washer (13) from body. Keep the retaining ring and tab washer for reuse.

5" RX: Remove retaining bolts (16A). Remove retaining plate (16) from body (1). Keep the bolts and retaining plate for reuse.

Then slide body off of bearing assembly.

STEP 3.

Remove retaining ring (9) and thrust washer (8) from nipple (4). Using a press, remove bearings (3) and bearing spacer (11) from nipple. Set aside retaining ring and thrust washer. Clean and dry the nipple and bearing spacer.

STEP 4.

Grease the new bearings (3) by filling the cavity between each ball with the appropriate grease (Standard Grease is SHC PM). Set the bearings aside and cover.

STEP 5.

4" RX: Slide the retaining ring (16) and the tab washer (13) over the nipple (4) to rest on the nipple flange. 5" RX: Slide the retaining plate (16) over the nipple (4) to rest on the nipple flange. Using a press fixture that will apply pressure only to the inner-race of the bearing, press the first bearing (3) onto the nipple until it is seated against the shoulder of the nipple.

STEP 6.

Slide the bearing spacer (11) onto the nipple (4). Using the same press fixture, press the second bearing (3) onto the nipple, until it contacts the bearing spacer.

NOTE: If the bearings are heated in an oven to 275°F (135°C), they will slide over the nipple, and a press will not be required for assembly.

STEP 7.

Install the thrust washer (8) and retaining ring (9) onto the nipple (4).

STEP 8.

Clean out and dry body (1). Place body over bearing/nipple assembly and slide into place. If the body does not slide freely over the bearings, remove and inspect for burrs. Minimal force should be applied to the body to slide it over the bearings.

STEP 9.

While holding the assemblies together, turn over onto a flat surface. 4" RX: Install tab washer (13) and retaining ring (16). 5" RX: Position retaining plate (16) against body (1) and secure with bolts (16A). Tighten bolts using a star pattern.

STEP 10.

Add 50 grams of grease through the grease fitting (this is approximately 20 pumps of a standard grease gun).

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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