

# Repair Instructions for the 3000 Series SX® Rotary Joint

 [fluidhandling.kadant.com/en/knowledge-center/installation-and-repair-instructions/sx-snx-rotary-joint/repair-instructions-for-the-3000-series-sx-rotary-joint](https://fluidhandling.kadant.com/en/knowledge-center/installation-and-repair-instructions/sx-snx-rotary-joint/repair-instructions-for-the-3000-series-sx-rotary-joint)

Effective: April 1, 2022



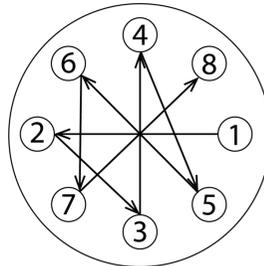
## Introduction

Read all of the instructions before proceeding.

Refer to Kadant Johnson assembly drawing for part identification and to drawing A37640 for torque specifications. For easy identification, parts used in individual steps are often accompanied with their position in the assembly drawing [e.g. gasket (8B)]. Tighten all fasteners in a star pattern. Certified drawings are available upon request. Dimensions are for reference only and subject to change.

**Important:** Minimize running Kadant Johnson steam joints dry. Excessive seal wear may occur. Rotary joints using thermal oil should be run dry for five minutes for break-in. Reference "Thermal Oil Rotary Joint - General Guidelines."

Never apply oil or grease to Kadant Johnson rotary joints. The saturated steam, condensate, or liquid passing through it is the only lubrication required for the carbon-graphite parts.



## Safety

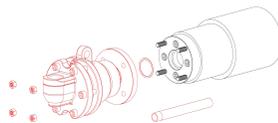


This safety symbol alerts you to risk of death or injury if the instructions are not followed. In all steps, death or injury may result if the machine is not de-energized, depressurized, cooled, and stopped. Death or injury may occur if the product is operated with a fluid type or at a pressure, temperature, or speed that do not meet its specifications. Death or injury may occur if heavy parts and pinch hazards are not handled properly. Follow your company's safety procedures.

## Step 1

Disconnect the piping and anti-rotation device. Remove the rotary joint by loosening the hex nuts on the nipple flange (5). If equipped with a horizontal pipe, unscrew it and set aside for reuse. Discard the metal gasket (8Q).

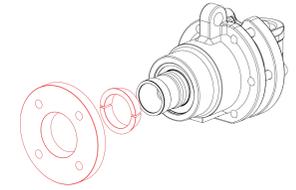
**Note:** If the rotary joint has a threaded nipple connection, simply unthread the nipple from the journal.



Equipment must be cool and free of pressure.

## Step 2

Remove the nipple flange and split wedges and set aside for reuse.



## Step 3

Remove the head (2). If using an assembly plate (31), loosen the cap screws holding it to the body and remove.



Spring force present during head removal.



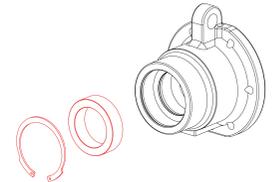
## Step 4

Remove the spring, inboard guide, nipple, and seal ring. Discard all items except the nipple.



## Step 5

Remove and discard the retaining ring on the body and the outboard guide.



## Step 6

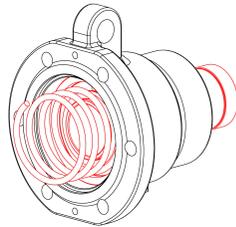
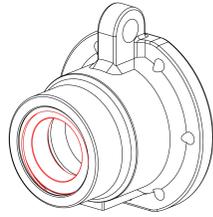
Inspect and clean the body, nipple, assembly plate, and head. Discard if damaged.

## Step 7

Install a new outboard guide and secure with the retaining ring.

## Step 8

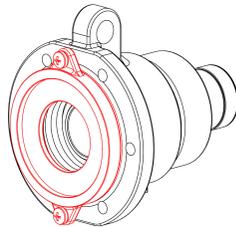
Insert a new seal ring into the body, followed by the nipple, new guide, and spring.



## Step 9

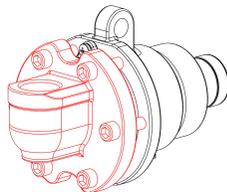
Install the assembly plate using a new gasket.

 Spring force present



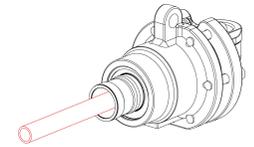
## Step 10

Install the head using a new gasket.



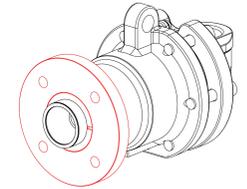
## Step 11

Thread the horizontal pipe into the head.



## Step 12

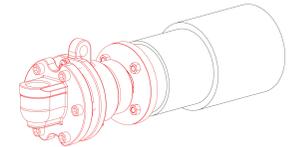
Slide the nipple flange over the rotary joint nipple with the taper facing out. Place the split wedges into the recess of the nipple. Slide the nipple flange over the wedges.



## Step 13

Place a new metal gasket (8Q) into the journal flange. Lift the rotary joint up passing the horizontal pipe into the journal and engaging the nipple with the journal flange. Secure to studs with nuts. An even gap of 1/8" to 3/16" (3 to 5 mm) should remain in between the journal flange and nipple flange.

**Note:** If the rotary joint has a threaded nipple connection, simply thread it into the journal.



## Step 14

Reattach the piping and anti-rotation device.

R-3000SX-1

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 the 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.

Kadant Johnson rotary joints and accessories could be subject to European Pressure Equipment Directive 2014/68/EU (PED). Modifications or changes to rotary joints and/or accessories are only permitted upon approval of Kadant Johnson. Only genuine Kadant parts and original accessories will ensure the safety of these assemblies. The use of other than original parts voids the warranty and will lead to forfeiture of the declaration of conformity and will invalidate any liability for damages caused thereby.

