Repair Instructions for the 9800 PTX® Rotary Joint

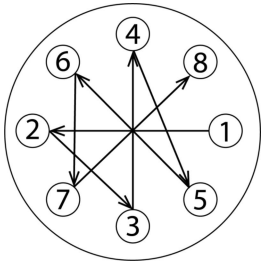
fluidhandling.kadant.com/en/knowledge-center/installation-and-repair-instructions/piston-type-pt-ptx-pt2x-rotary-joints/repair-instructions-for-the-9800-ptx-rotary-joint

Effective: December 1, 2021

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.



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.

Tools

Tools Per Crew

(2) 9/16" Combination Wrenches
(2) 3/4" Combination Wrenches
15/16" Combination Wrench
15/16" Shallow Socket
1/4" Hex Head Socket
5/16" Hex Head Socket
3/8" Hex Head Socket
1/2" Hex Head Socket
(2) 6 1/2" Drive Extension
0 to 150 lbs Torque Wrench
1/2 to 3/8" Square Drive Reducer
3 lbs Hammer
Gasket Scraper

Endcap Assembly Repair

5 mm Hex Head Socket
6 mm Hex Head Socket with extension
O-ring Pick

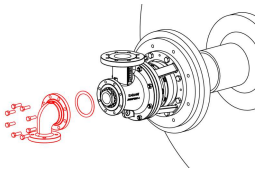
To Pass Between Crews

400 lbs Torque Wrench
3 3/4" Socket and Adapters for Torque Wrench

Step 1 - Removal

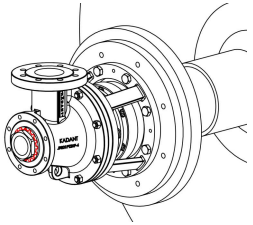
Disconnect piping. Remove the head and set aside.

⚠ Equipment must be cool and free of pressure.



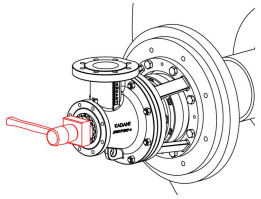
Step 2

Bend tabs back from support tube nut.



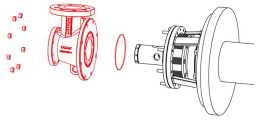
Step 3

Unthread the support tube nut approximately 1/4" (6.4 mm). Place a block of wood over the support tube nut and strike it with a hammer. This will break the tapered seal inside of the rotary joint. Remove the support tube nut and set aside for reuse.



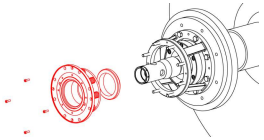
Step 4

Remove the body and set aside with O-ring side up. Remove and discard the O-ring (26).



Step 5

Remove the end cap assembly and seal ring. Place the end cap assembly with the seal ring surface facing up. If working on the dryer bearing, move the support tube into the journal.



⚠ Spring force present during end cap assembly removal.

Step 6

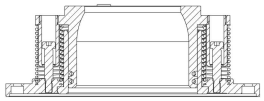
Remove the ring bracket and wear plate.

Tip: If dryer bearing work is needed, remove the journal flange (if necessary) and bearing cover to access the bearing. Reinstall after bearing work is complete.

Note: There are two types of repair kits. If using the preassembled end cap assembly kit, proceed to step 12.

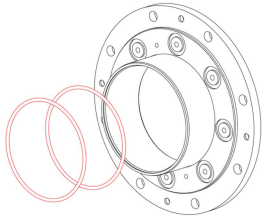
Step 7 - End Cap Assembly Repair

Place the assembly in a press with the seal ring surface facing up. Compress the nipple and remove the cap screws. Release the press and separate the nipple from the end cap.



Step 8

Remove the O-rings and discard. Inspect the nipple groove(s) and sealing surfaces. Replace if damaged. Install and lubricate new O-rings.

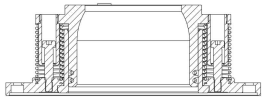


Step 9

Inspect and clean the end cap, torque tubes, cap screws, and springs. Replace if damaged.

Step 10

Reinstall the nipple by placing over the springs and passing the torque tubes through the springs. Use a press to compress the nipple into the end cap. Lubricate the shoulder cap screws with Loctite® and install. Release the press.



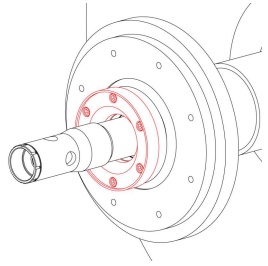
Step 11

Clean and inspect the head, body, and wear plate. Replace if damaged.

Step 12 - Installation

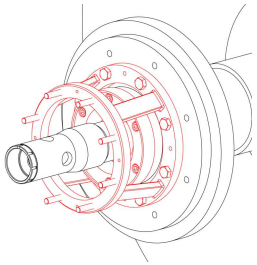
Using a new gasket, reinstall the wear plate (8A) with cap screws (16A).

Tip: Pull the support tube out of the journal if it was pushed in during the previous step.



Step 13

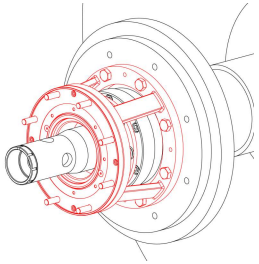
Install the ring bracket with cap screws (20C).



Step 14

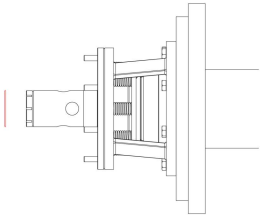
Clean the mating surfaces of the wear plate, new seal ring (6), and nipple. Attach the seal ring and end cap assembly with four cap screws (3C).

Important: After fastening the end cap assembly, confirm the "X" dimension is correct. Refer to the Kadant Johnson drawing.



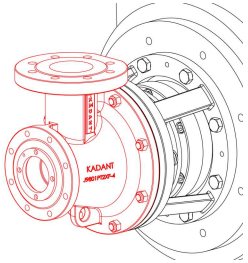
Step 15

If there is an O-ring present on the support tube, remove it. Lubricate and install a new O-ring with silicone lubricant. Apply anti-seize to the tapered portion of the tube.



Step 16

Install a new O-ring (26) into the body. Position the body over the support tube. Align the pin(s) with the support tube indexing slots. Position both over the studs on the ring bracket and secure with hex nuts (20B).

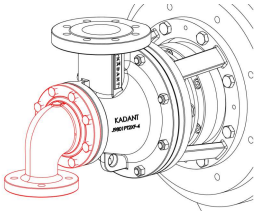


Step 17

Replace the O-ring located inside the large hollow bolt. Apply anti-seize to the threads of the support tube nut. Insert two bent lock washer tabs into the body and install support tube nut, torque to 400 ft-lbs (542 Nm). Bend two lock washer tabs over the bolt flats to prevent bolt loosening.

Step 18

Place gasket (8) on head and install head on body with cap screws (2A). Connect piping.



R-9800PTX-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 are could be subject to European Pressure Equipment Directive 2014/68/EU (PED). Modifications or changes to the 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 cause thereby.