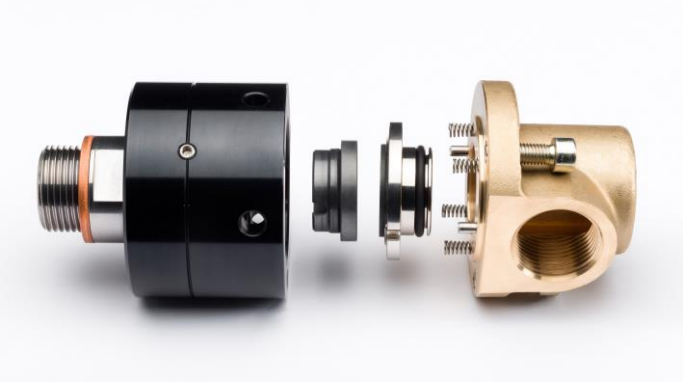
Disassembly and Repair Instructions For Type R-RH Rotary Unions (3/8″ – 2″)

SAFETY INSTRUCTIONS Please follow your company's safety procedures whenever working on Johnson-Fluiten rotary unions and read all of the instructions completely before proceeding. Please refer to the engineer drawings of your Johnson-Fluiten rotary union for part identification. If you have any question, please contact your sales representative or Johnson-Fluiten directly.



NOTICE Lubricate all fasteners with anti-seize compound. Tighten all fasteners in a star pattern. Torque specifications are listed in **Installation Instructions** or at www.johnson-fluiten.com

WARNING Release residual pressure in the system. Close the inlet and outlet valve and allow the union to cool sufficiently.

ORDINARY MAINTENANCE

Ball bearing lubrication

Rotary joint type R does not require re-greasing, since bearings are lubricated for life.

NOTICE Rotary joint type RH needs to be lubricated with Krytox GPL226 or equivalent every 5000 hours for operating temperature up to 150°C, every 2000 hours for temperature over 150°C.
See Table 1 for detail of quantity of needed grease.
Replacement with new prelubricated Johnson-Fluiten bearings is recommended.

Sealrings replacement

- Loosen and remove screws (3V), disengage body (50) from support (5).
- Remove from body (50) stationary sealring (1) with oring (10) and set of springs (13).
- Remove from rotor (2) sealring (2A) with oring (9)

NOTICE *Rotary joints R009 and R012 have seal faces incorporated in the rotor then it need to be replaced (see bearing replacement section)*

- Carefully clean the oring end of the rotor (2) and the bore of the head (50). Do not scratch surfaces.
- Ensure that the sealfaces are clean. In case, clean the faces of stationary ring (1) and sealring (2A) using a lint free cloth and acetone.
- Lubricate gasket with silicon grease SIL133 or equivalent. Gently press new sealring (2A) with oring (9) into rotor (2).
- Insert new springs (13) in relevant holes in body (50)
- Lubricate gasket with silicon grease SIL133 or equivalent. Gently press stationary sealring (1) with oring (10) in housing of body (50).
- Inspect horizontal pipe bushing in elbow (98) if equipped (dual flow version): replace elbow if worn. Inspect bearings. If they need replacing, follow **'Ball bearings replacement'** instructions.
- Secure head (50) to body (5) using lock screws (3V). See torque specifications are listed in **Installation Instructions** or at www.johnson-fluiten.com

The Johnson-Fluiten union is now ready to be placed back in service

NOTICE *Do not use any anti-seize or petroleum-based products on orings. Only lubricate with lubricant grease indicated in these instructions. Use latex gloves when handling oring lubricant.*

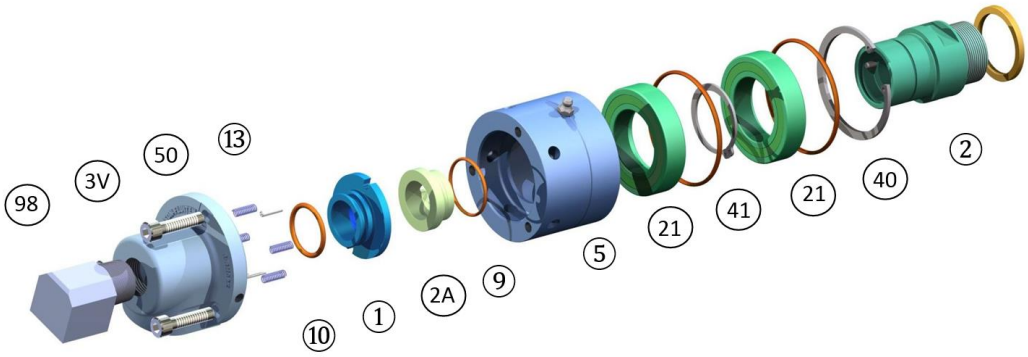
ADVANCED MAINTENANCE

WARNING DISASSEMBLY OF THE SEAL GROUP SHOULD BE CARRIED OUT IN JOHNSON-FLUITEN WORKSHOP. PROCEDURES HEREBELOW SPECIFIED SHOULD BE USED ONLY IN CASE OF EXTREME URGENCY

Ball bearings replacement

- Loosen and remove screws (3V), disengage body (50) from support (5).
- Remove from body (50) stationary sealring (1) with oring (10) and set of springs (13).
- Remove from rotor (2) sealring (2A) with oring (9)
- Remove retaining ring (40)
- Remove rotor (2) with ball bearings (21). If rotor and bearings do not slide out freely, light pressure can be applied to the end of the nipple while holding the body in a press.
- Remove first bearing (21), retaining ring (41) and second bearing (21). Clean and dry the rotor for reuse.

JOHNSON-FLUITEN



- Slide the first new bearing (21) onto the rotor (2) until it is seated against its shoulder. For bearings with one shield (RH joint) the first bearing should be installed with the shield down
- Install the retaining ring (41) onto the rotor (2)
- Slide the second new bearing onto the rotor to rest against the retaining ring. If is used a bearing with just one shield (RH joint) the open side should be facing down. When the assembly is complete, the open sides of the single shielded bearing should be resting against the retaining ring (41).
- Place body (5) over bearing/nipple assembly and slide into place. If body does not slide freely over bearings, remove and inspect for burrs, etc. Minimal force should be applied to the body to slide it over the bearings, to prevent any damage to the bearings.
- While holding assemblies together, turn over onto a flat surface and install retaining ring (40)

- Follow remaining **'Sealrings replacement instructions'** to complete repair.

The Johnson-Fluiten union is now ready to be placed back in service

Table1: quantity of Krytox grease for each bearing (RH joints)

SIZE	Q.ty (c.c.)
RH009	2
RH012	2
RH019	3
RH025	6
RH031	8
RH038	12
RH050	13

TROUBLE SHOOTING

PROBLEM	PROBABLE CAUSE	ACTION
Leakage detected at drain holes	Wear or damage of sealrings Damage of orings 9 and/or 10	Replacement of sealing elements (repairkit)
Overheating or elevated noise	Not sufficient lubrication of bearings (joint RH) Wear of roller bearings	Lubricate as described in table 1 (joint RH) Replacement of bearings