



**BUREAU
VERITAS**
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APPROVED

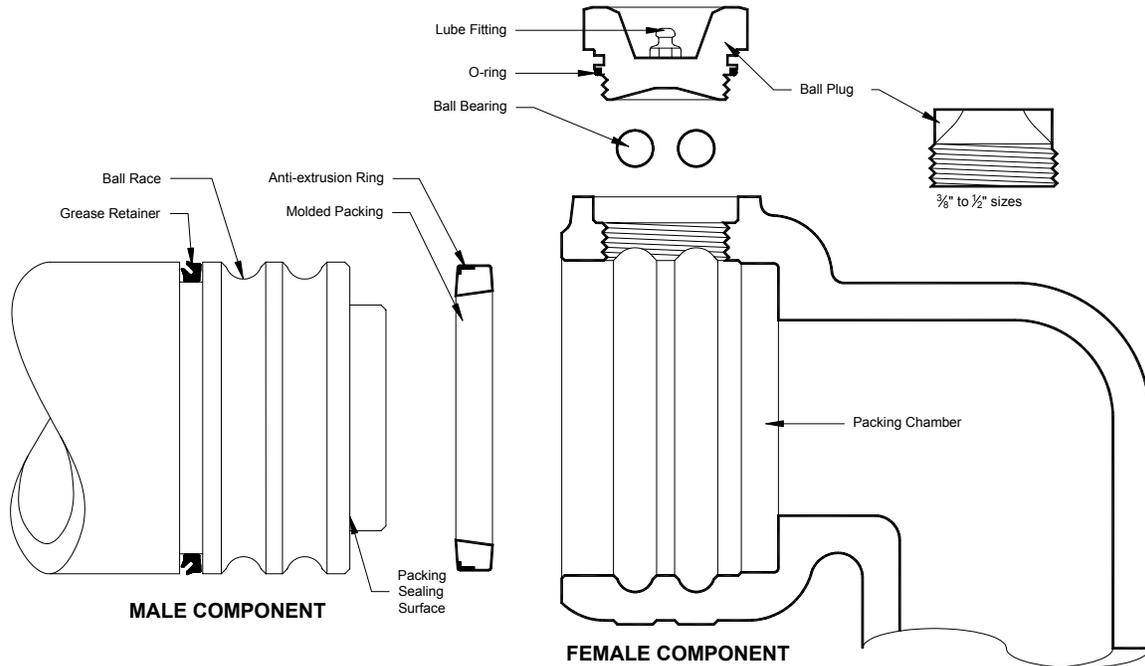


Swivel Joints, L.P.



**ISO 9001
CERTIFIED**

H.P. Swivel Repacking Instructions



Tools: Adjustable Wrench, Pliers, Screwdriver, Vise

DISASSEMBLY:

1. Remove the dust cap from lube fitting (if applied)
 2. Remove ball plug and o-ring using adjustable wrench.
 3. Secure female component in vise with ball plug hole positioned over a suitable container for holding ball bearings.
 4. Rotate male component, ball bearings should drop in container.
Note: *It may be necessary to thin hardened lubricant with solvent.*
 5. Separate male and female components after all ball bearings have been removed.
CAUTION: *Do not damage machined surfaces when separating components. Protect sealing surfaces at all times.*
 6. Carefully remove old packing from female packing chamber with screwdriver.
CAUTION: *Use extreme care in removing old packing to prevent damage to sealing surfaces.*
 7. Remove grease retainer from male component.
 8. Clean all components with petroleum solvents.
 9. Inspect all parts for excessive wear, corrosion or other damage.
 - a. Inspect ball races for dents and grooves.
 - b. Check male and female components for excessive wear or corrosion on ball surfaces.
 - c. Carefully inspect the bore surfaces of all components for evidence of excessive wear or corrosion.
- WARNING:** *Replace all parts that show evidence of damage in the ball race areas, packing chambers, or other critical areas.*
10. Sealing surfaces must be completely smooth. Remove all scratches or pitting by polishing with a mild abrasive.
 11. Re-clean all parts after polishing to remove all particles and abrasives.

ASSEMBLY:

1. Apply a thin coat of lubricant to ball races, sealing surfaces and new packing.
2. Install new grease retainer on male component by gently stretching it over the ball races.
CAUTION: *Grease retainer lip must face away from ball races.*
3. Install new packing in female component packing chamber.
CAUTION: *Anti-extrusion ring must face outward, toward ball races.*
4. Secure female component in vise with ball plug hole facing up.
5. Insert male component into female component carefully. Do not move or cut new packing inside female component.
6. Look down through ball plug hole to align ball races.
7. Drop balls into races, rotating male component, and adding balls until both ball races are filled with the proper number of balls.
CAUTION: *Count the number of balls inserted into each ball race to assure that the correct number of balls are installed. Incorrect number of balls will cause binding or excessive wear and will also reduce pressure and structural capability.*
8. Install new o-ring on ball plug.
9. Insert and tighten new ball plug (approx. 50 ft. lbs. for hex plug design).
10. Lubricate bearings as follows:
 - a. Use small hand held grease gun to force small amount of lube through fitting.
 - b. Rotate male component 90 degrees and add more lube.
 - c. Repeat step "b" two more times, lubricating after each turn.
 - d. Check smoothness of rotation to find any tight spots or restrictions.
CAUTION: *Excessive lubrication can cause swivel to bind, distort anti-extrusion ring and displace packing. Use only enough lube to achieve smooth rotation.*
11. Install the dust cap on lube fitting (if available).