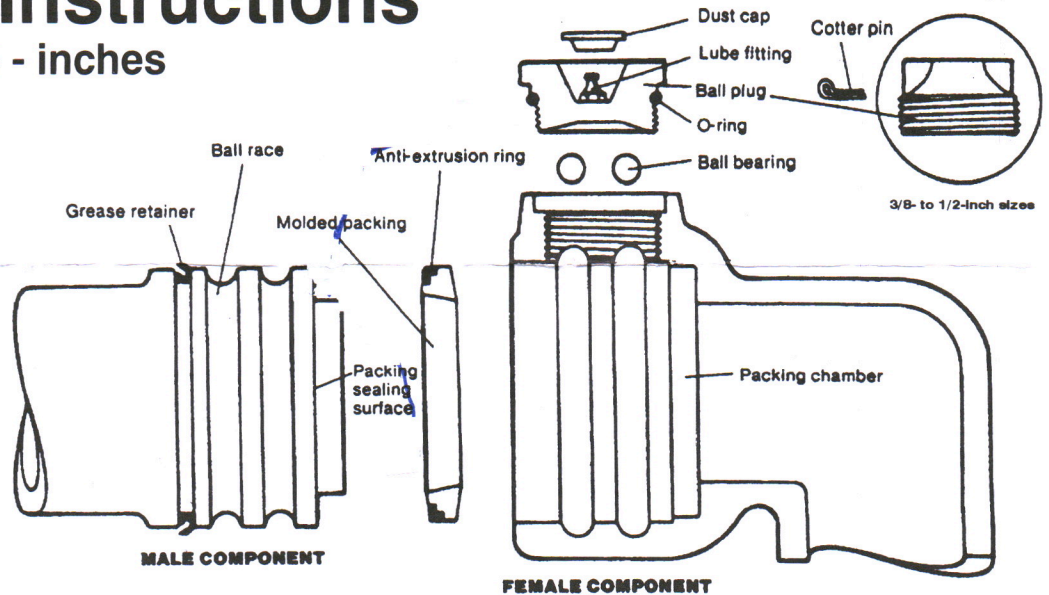


Chiksan[®] Swivel Joints Repacking Instructions Model LPS, 3/8 - to 4 - inches



Tools Required

Adjustable wrench, pliers,
screwdriver, vise

DISASSEMBLY

1. Remove the dust cap on the ball plug.
2. Remove ball plug and O-ring using adjustable wrench.
- NOTE: If castellated ball plug is used, first remove the cotter pin using pliers.**
3. Secure female component in vise with ball plug hole positioned over a suitable container.
4. Rotate male component. Ball bearings should drop out.
- NOTE: It may be necessary to thin hardened lubricant with petroleum solvent.**
5. Separate male and female components after 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 using

CAUTION: Use extreme care in removing old packing to prevent damage to sealing surfaces.

7. Remove grease retainer from male component.
8. Clean all parts with petroleum solvent.
9. Inspect parts for excessive wear, corrosion or other damage.
 - a. Inspect ball races for dents, grooves or other damage.
 - b. Check male and female components for excessive erosion or corrosion.
 - c. Carefully inspect the inside surfaces of elbows for evidence of erosion or corrosion.
- WARNING: Replace all parts that show evidence of damage in the ball races, packing seal surfaces, or other areas.**
10. Sealing surface must be completely smooth. Remove minor scratches or pitting by polishing with fine abrasive.

ASSEMBLY

1. For 1 inch and smaller swivels, refer to notes 3 and 4 on the reverse side before proceeding.
2. Apply a thin coat of lubricant to ball races, sealing surfaces and new packing.
- CAUTION: Make sure correct lubricant is used for intended service conditions (See Lubricant Data).**
3. Install new grease retainer on male component by gently stretching it over the ball races.
- CAUTION: Retainer lip must face away from ball races.**
4. Install new packing in female component packing chamber.
- CAUTION: Anti-extrusion ring must face outward, toward ball races.**
5. Secure female component in vise with ball plug hole on top.
6. Insert male component into female component.
7. Look through ball plug hole to align ball races.
8. Drop balls into races. Rotate male component, adding balls until both races are filled with the proper number of balls (see Replacement Parts for exact number of balls).
- WARNING: Count the number of balls installed in each race to be certain that exactly the right number of balls are installed. Incorrect number will cause binding or excessive wear and reduced pressure or structural capacity.**
9. Install new O-ring on ball plug.

10. Insert ball plug.
- NOTE: For castellated ball plug, tighten until snug. Then, loosen one-quarter turn and insert cotter pin. For hexagon ball plug, tighten to approximately 50 ft-lbs.**
11. Lubricate bearings as follows:
 - a. Use small, hand-held grease gun to force small amount of lubricant through fitting.
 - CAUTION: Make sure correct lubricant is used for intended service conditions (See Lubricant Data).**
 - b. Rotate male component 90° (quarter turn) and add more grease.
 - c. Repeat step b (above) two more times, lubricating at each quarter turn.
 - d. Check smoothness of rotation.
- CAUTION: Excessive lubrication can cause swivel to bind, distort the anti-extrusion ring and displace the packing. Use only enough lubricant to obtain smooth rotation. If the swivel is more difficult to rotate after greasing than before, or if lubricant is detected on inside of primary packing, or if distortion of packing is noted on inner diameter, disassemble joint and carefully inspect all seals for damage. Replace damaged seals and any packing which has been distorted or displaced into the bore.**
12. Install dust cap.
13. After assembly the swivel joint should be pressure tested to the full rated pressure.