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Maintenance and Repair of a FLEX-900® Ball Joint

If any maintenance or repair is required, the FLEX-900 may be sent back to the manufacturer for refurbishment. If field refurbishment is necessary, the following steps below should be taken.

⚠ CAUTION: For the safety of the operator and to prevent damage, injury and or loss of life, be sure the line pressure has been released before attempting removal.

Items needed for refurbishment:

- Gasket Kit, provided by EBAA Iron
 - Two O-rings (flange seal)
 - One ball gasket
 - New Snap Ring Retainer
- Clean work area
- Mechanism for safely removing tack welds of snap ring (later models are not welded)
- NSF 61 safe lubricant, such as Dow Corning 111 Valve Lubricant
- Rags for cleaning off old lubricant
- Large pliers to install snap ring.
- Touch up epoxy compatible with Fusion Bonded Epoxy. If potable water, touch up epoxy must be NSF 61 Approved.

Disassembly, Refurbishment and Reassembly:

1. Using a paint marker or other means, mark area(s) where leak is occurring
2. Verify no line pressure is present in pipeline system
3. Remove the FLEX-900 from the pipeline.
4. Move FLEX-900 to clean work environment.
5. Locate tack welds holding snap ring into place if applicable.
6. Carefully remove snap ring, keep for re-use.
7. Remove ball retaining "I" parts found between snap ring and ball.
8. Separate Ball from socket, some pull out force may be required.
9. Remove ball gasket from gasket cavity found in socket. Discard all used gaskets.
10. Through clean and inspect, all mating surfaces of both ball and socket joints. Especially were previous marks were placed where leaks were.
11. If required, fix any chipped or damaged coating with a field applied epoxy. Epoxy must be compatible with existing fusion bonded epoxy. Some sanding or feathering might be required. Finished surface should be smooth.
12. If non-repairable wear or damage is found, stop refurbishment as a new FLEX-900 maybe required.
13. Place new ball gasket into the gasket cavity making sure gasket snaps and locks into place.
14. Lubricate socket, ball gasket and ball with an approved lubricant.
15. Re-insert ball into socket. Some force maybe required to compress new gasket and get a proper seating.
16. Re-insert ball retaining parts.
17. Re-insert snap ring. C-clamps, or similar, may facilitate holding snap ring into place as the ends are drawn in using pliers.
18. Reassemble joint into pipelines using the new O-rings provided. Tighten flange bolts sufficiently to prevent leaking. It might be preferable to hydrotest unit prior to re-installation. All hydrostatic tests should be done in accordance to either AWWA C600 or ASTM D2774.