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|  | **Exact Valve Solutions** | **SOP #:** | ELB-115 |
| **Revision #:** | 0 |
| **Implementation Date:** |  |
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| **SOP Owner:** | D. Mckim | **Approval:** |  |

**Standard Operating Procedure – Valve Disassembly**

# Purpose

The purpose of this SOP is to provide a general knowledge and process for disassembling gate valves.

# Scope

This SOP is only for Valve Disassembly procedures. For Reassembly or inspection refer to those SOPs.

# Prerequisites

Before disassembling a valve the technician should be have a general understanding of gate valve mechanics and their intended use.

# Responsibilities

Only Qualified Repair Technicians should attempt to disassemble a valve without supervision. It is important to follow the procedures here and in the maintenance manual provided by the manufacturer of the equipment. Great care should be taken to make sure everything is inspected, tagged and logged at to the suitability of reuse. It is also very important to correctly handle the valve body and components to prevent damage when disassembling.

# Procedure

* 1. The valve must be in the half-opened position.
  2. Remove all of the bonnet nuts and remove the bonnet.
  3. If the valve has a balancing stem, remove it at this time.
  4. Now remove the gate.
  5. Clean and inspect the bonnet paying very close attention to the ring groove inspection ELB-113.
  6. Remove all internal parts: seals, seat rings, retainer plates, body bushings, gate guides, etc.
  7. Once all internal parts are removed, clean all of the grease out of the valve body by hand. Any grease remaining in the valve body can now be removed by a pressure washer.
  8. Dispose of all grease in the proper receptacle.
  9. Finish cleaning out the valve body using WD-40 or Varsol. Use 200 grit emery cloth on the seat pockets to clean them if necessary.
  10. Inspect **All** sealing surfaces: seat pockets, bonnet grooves, ring grooves, and stuffing box. (or packing housing).

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* 1. Make sure all studs are buffed and cleaned and inspected before reuse.
  2. After the body is cleaned and inspected, lubricate the threads on the stem protector with never seeze
  3. Now, reinstall the stem protector without packing (that will be installed later).
  4. At this time, clean all internal parts with varsol or WD-40. Parts must be completely clean to show all flaws. Remove all seals and inspect for any damaged parts. (gate, body bushings, seat rings, retainer plates, gate guides etc.).
  5. When inspecting parts, you are looking for scratches, washouts, roughness, rust, bows and chips. If any part has any of these problems you can try using 200 grit emery cloth to clean it. If scratches, chips etc. cannot be fixed, replace the parts
  6. The valve body, bonnet and all parts need to be inspected by the Quality Control Manager.
  7. When disassembling the Hydraulic Cylinder count the number of turns to unscrew the hydraulic actuator and write this number on the cylinder with a paint pen or attach a label.
  8. Be sure to fill out router for every valve with date, serial numbers, asset numbers etc. (**THIS IS NOT AN OPTION** ).

# References

Load out forms (ELB-1xx.x) Manaufacturer manuals

ELB-113 Ring Groove Inspection ELB-114 Shop Router