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|  | **Exact Valve Solutions** | **SOP #:** | ELB-116 |
| **Revision #:** | 0 |
| **Implementation Date:** |  |
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| **SOP Owner:** | D. Mckim | **Approval:** |  |

**Standard Operating Procedure – Valve Reassembly**

# Purpose

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

# Scope

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

# Prerequisites

Before reassembling 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 reassemble 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 as to the suitability of use. It is also very important to correctly handle the valve body and components to prevent damage when reassembling. All parts must be logged on the shop router ELB-113 and parts room log.

# Procedure

* 1. Place valve on a table. If the valve has a stem protector make sure that it is installed to prevent damage to the stem (When valve goes back together).
	2. Check the seat pockets and bonnet groove for any damages one last time (Use 200 grit emery cloth if necessary).
	3. Body bushing seals, seat seals, seat ring seals, must be installed at this time (Use 200 grit emery cloth on seal grooves if necessary).
	4. Now it is time to install body bushings or seats by applying red grease to the outer edge. The grease will act as a slight adhesive and hold the parts in place. Any red grease on the seal side must be wiped off leaving no more than a slight film.
	5. Check the retainer plates for roughness, bows and sharp edges so they don’t scar up the gate (use 200 grit emery cloth or flapper disk if necessary).
	6. Now install the seat rings into the retainer plates. (Only to the valves that this applies to).

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* 1. Install the retainer plates into the valve body making sure the bevels on the plate are facing the valve body. (The bevels will not be facing the gate). The seat ring seal must be facing the body bushings.
	2. When retainer plates are installed, make sure that they are square and flush up against the body bushings. (At this time, run your hand into bore making sure the alignment is flush and accurate).
	3. Install the gate guides and check the alignment once again. (This only applies to the valves with seat rings and gate guides).
	4. Now spray the whole top of the valve with SP-400 before placing the bonnet gasket into the ring groove.
	5. You are now ready to install the gate on to the bonnet.
	6. Lift the bonnet with the hoist and re-inspect for cleanliness and damage paying close attention to the ring groove. (Use 200 grit emery cloth on groove if necessary) If everything is satisfactory spray it with SP-400.
	7. Now screw or slide the gate on the operating stem.
	8. Now screw or slide the balancing stem on the gate.
	9. Using red grease will help the gate slide into valve.
	10. Line up grease fittings and lower bonnet into place.
	11. Make sure the gate is in the half way position before re-installing and torqueing the bonnet nuts.
	12. Lift valve off the table and lay it on its side. (Not on grease fittings).
	13. Remove stem protector.
	14. Slide the packing over the stem using a thin film of grease for lubrication
	15. Use a packing installation tool with the correct diameter to press the packing evenly into the stuffing box or packing housing.
	16. Lubricate the threads on the stem protector with never seeze then re-install the stem protector.

Make sure the stem protector is flush with the valve body.

* 1. Now test the valve. (Refer to testing procedure ELB-107).

# References

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

ELB-113 Ring Groove Inspection ELB-114 Shop Router

ELB-107 Testing Procedures