

## **PROCEDURE TO PROPERLY REPLACE THE STEM PACKING IN MOGAS VALVES**

*It is extremely important that these steps are followed to insure the valve will provide maximum performance.*

*(If your valve does not have an Actuator skip to step #5.)*

1. Remove the bolts from the valve to actuator mounting adaptations on the valve side only.
2. Lift the actuator straight up off the valve mounting bracket. It is important to remember not to turn the actuator while the actuator is sitting on the valve mounting bracket. Doing this will cause the valve to be 180 degrees out of proper rotation, so the mate lapped seats will not match the proper side of the ball. This will cause the valve to leak.
3. After the actuator is removed, observe the position of the Valve (Open or Closed) as well as the stem adapter.
4. To remove the stem adapter, remove the Shear Pin located at the bottom of the stem adapter the Stem adapter should lift straight off of the stem.
5. Remove the four Bolts then remove the Mounting Bracket (Note the position of the Bracket) Remove the Retaining Pin from the Thrust Bearing now remove the Thrust Bearing. Note that the Thrust Bearing has the pin hole offset with the hole being closer to the Valve side.
6. Remove the Packing Nuts then remove the Packing Gland
7. With the Packing Gland removed you can now begin removing the packing. There are two types of packing, the Anti-Extrusion Rings and the Stem Packing. You can remove this with a small Scribe or Dental Pick. Be sure not to scratch the packing bore in the Body or the Stem, any scratches could cause a leak. Be sure that all of the packing is removed.
8. Before installing the new packing make sure the packing box is clean. Install one Anti-Extrusion Ring using the Packing Gland to stuff the Anti-Extrusion Ring all the way to the bottom of the packing box. Install the Stem Packing Rings one at a time using the Packing Gland to stuff the Stem Packing Rings all the way down against the previous ring. After both rings of Stem Packing are installed be sure there is enough depth for the final Anti-Extrusion Ring to fit flush in the pocket. (If the final Anti-Extrusion Ring does fit flush in the pocket skip step # 10.)
9. If there is not enough depth for the final Anti-Extrusion Ring to fit flush in the pocket do not install the Anti-Extrusion Ring. Use the Packing Gland to compress the Stem Packing Rings down enough for the final Anti-Extrusion Ring to fit flush in the pocket. To do this install the Packing Gland then replace the Packing Nuts and tighten all four Nuts evenly until there is enough depth for the final Anti-Extrusion Ring to fit flush into the pocket. Once this is accomplished remove the Packing Nuts and the Packing Gland then install the final Anti-Extrusion Ring.
10. Install the Packing Gland then replace the Packing Nuts and torque all four Nuts evenly to required torque. Make sure the Packing Gland is pulled down evenly to prevent Cocking as this could cause damage to the Packing. With the Packing installation complete install the Thrust Bearing with the offset pinhole being closer to the Valve side. Then replace the Retaining Pin be sure to ping the edge of the hole in the Thrust Bearing with a punch to prevent the Pin from coming out.
11. Install the Mounting Bracket in the same position as it was removed. Replace the four Bolts and torque to 43 FT-LBS. Make sure the Thrust Bearing is contacting the Flange Bushing pressed into the Mounting Bracket. If the Thrust Bearing is not contacting the Flange Bushing use two Pry-Bars placed under the Thrust Bearing and on top of the Packing Studs to lift the Stem allowing the Thrust Bearing to contact the Flange Bushing. Check the torque on the Packing Nuts after this operation.

12. Install the Stem adapter in the same position as it was removed then replace the Shear Pin and ping the edge of the hole in the Stem adapter with a punch to prevent the Pin from coming out.
13. Carefully replace the actuator on the mounting bracket and re-install the bolts.
14. After the actuator is re-connected it should be stroked to insure that the stops are properly set and the actuator is rotating properly. ***Clockwise to close and Counter clockwise to open.*** If the stops are out of adjustment they should be re-set at this time.
15. The open stop is the most important stop to set. It is preferred that the open stop be set while the valve is not installed in the pipeline. This will allow for the bore to be properly aligned ensuring that there are no edges exposed to the flow. However, if the valve is installed in the line, look for the scribed lines on the stem and the gland flange. When the actuator stop is properly set the scribed lines on the stem and gland flange match. These lines are approximate locations and are not 100% accurate. For best results make sure the Lines never under travel. A minimum travel of 90° is required. ***Remember the Mogas Valve operates clockwise to close, counter-clockwise to open.*** After open and closed stops are set be sure all bolting is tight and the valve is left in the required position.

*(Note: Misalignment can result in valve under or over stroke thus creating a leak and affecting warranty.)*