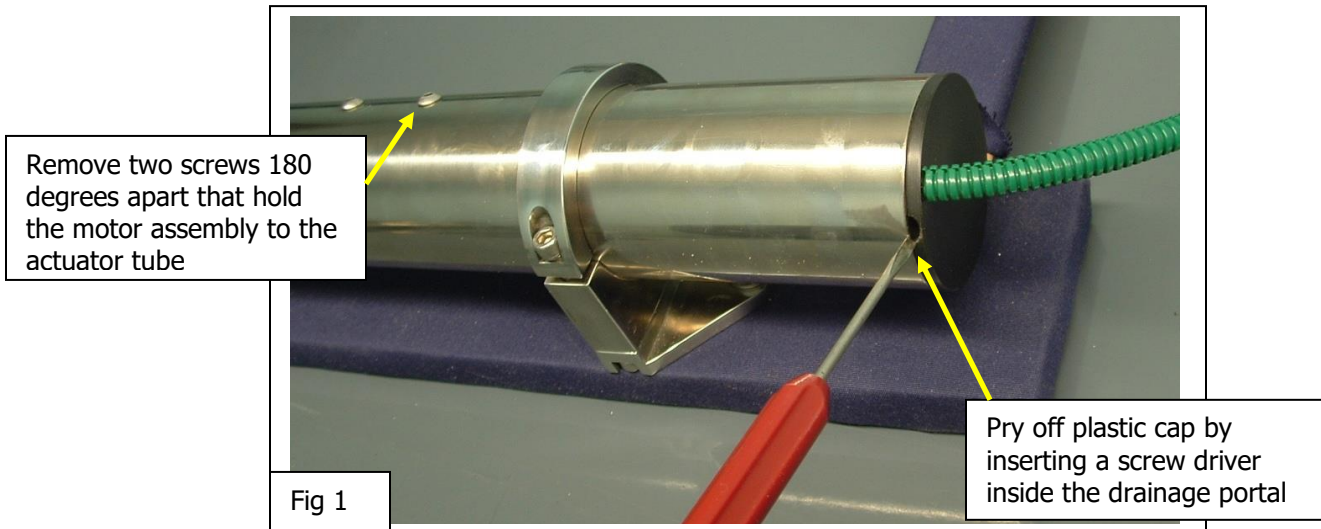


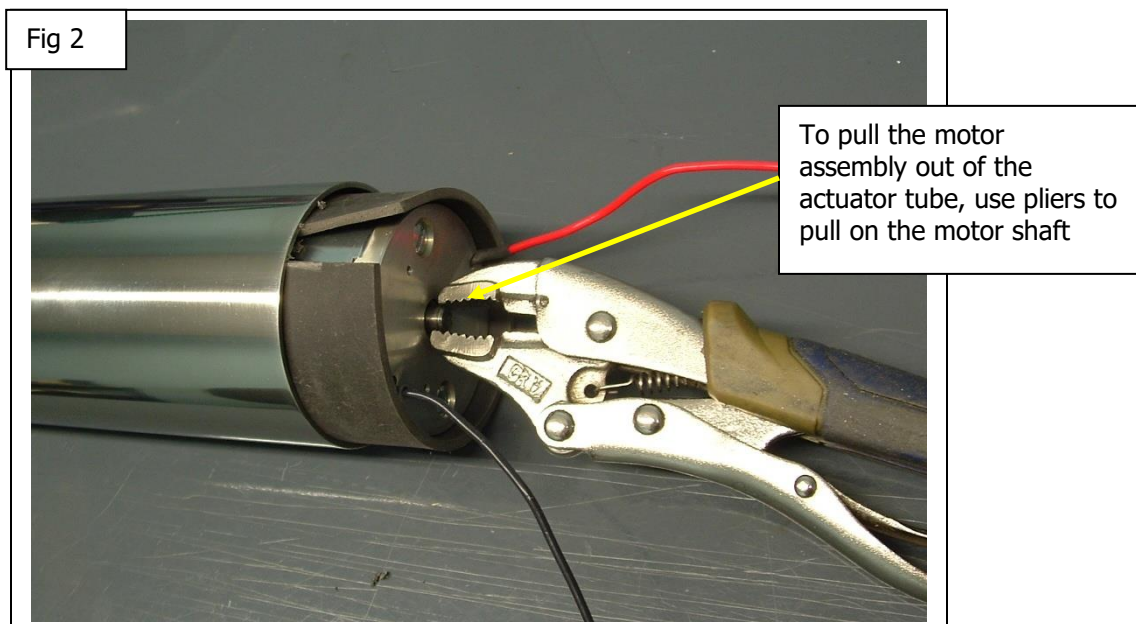
## **SureShade – Internal Actuator Drive Inspection**

For reference in the event the motor and drive assembly seem to be disengaged from each other due to over-retraction of the actuator. If the actuator bottoms out from over retraction, it is possible with continued retracting of the framework the screw mechanism can be pulled away from the motor engagement. This document describes the steps in disassembling the internal components so a technician can inspect and correct the issue. If the SureShade system is integrated inside a hardtop cavity, the actuator should be removed from the hardtop.

To remove the motor assembly from the actuator's stationary tube, insert a screw driver into the drainage portal and pry off the plastic cap. Then remove the two screws (180 degrees apart) that hold the motor assembly in place (Fig 1).

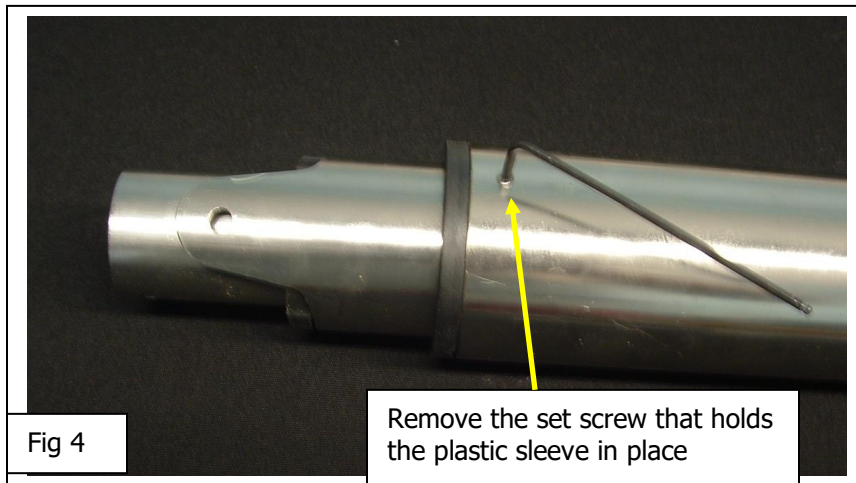
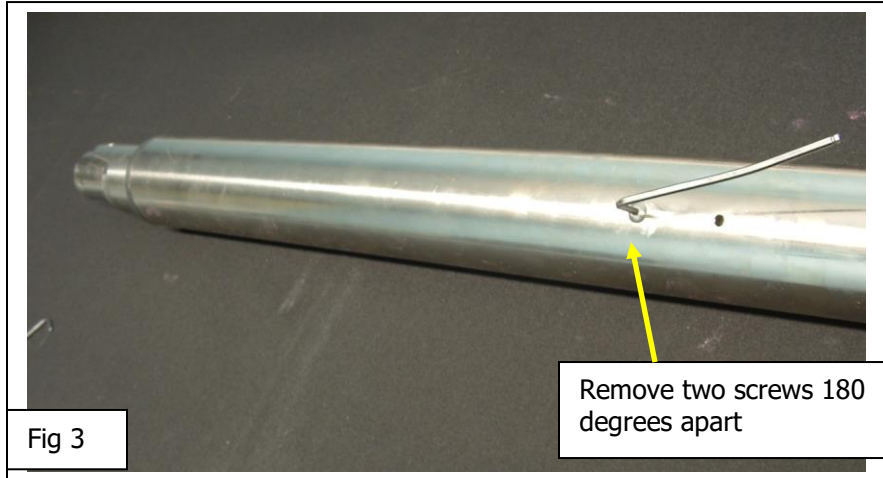


Grab the back end of the motor shaft with pliers to pull the motor assembly out from the actuator tube (Fig 2).

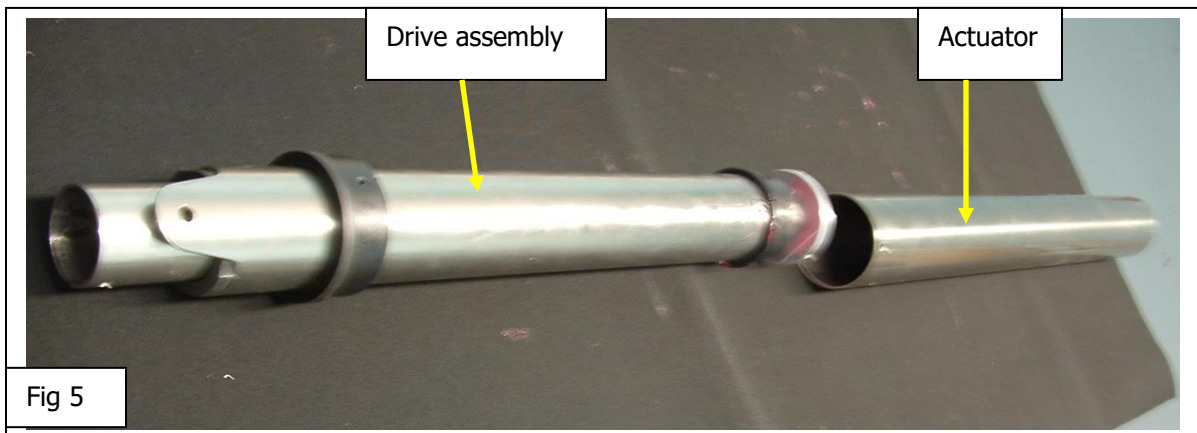




To remove the drive from the actuator tube, remove the two screws (180 degrees apart) as shown in Fig 3 and remove the set screw that holds the plastic sleeve in place (Fig 4).



With the screws removed, you can pull the entire drive from the actuator tube (Fig 5).





Inspect the end of the drive system to see if the lead screw has been pulled from the locking collar shown in Fig 6 creating a disengagement from the motor.



Fig 6

Inspect the end of the drive assembly

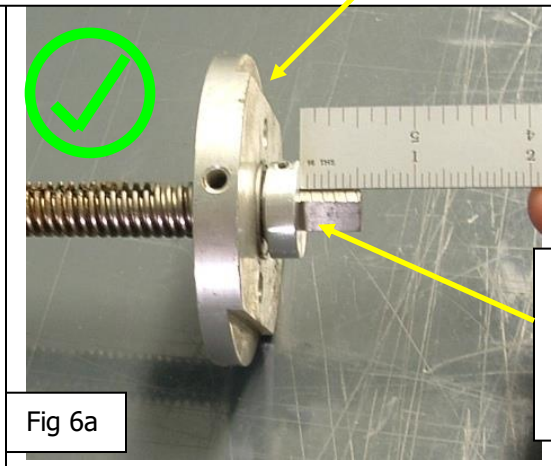


Fig 6a

The lead screw should stick out approximately 1/2 from the shaft collar

If the lead screw is flush with the collar as shown in Fig 7, the screw has been pulled from engagement to the motor due to over retraction. In this situation you will need to remove the collar from the shaft (Fig 7a) and press the lead screw mount along with the bearing down to its proper position and then secure the collar back to the shaft.

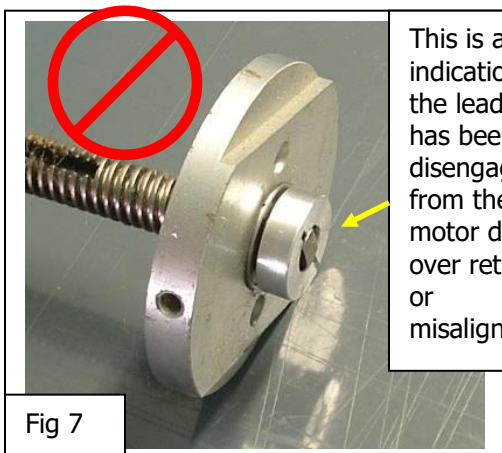
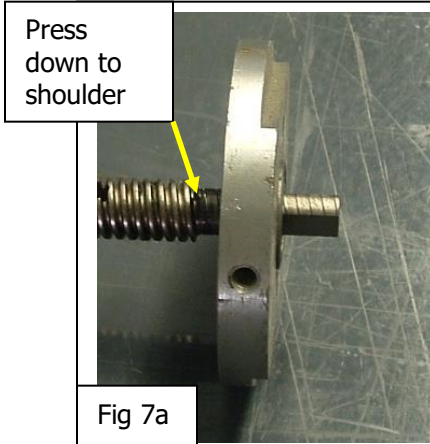


Fig 7

This is an indication that the lead screw has been disengaged from the motor due to over retraction or misalignment.



Press down to shoulder

Fig 7a

To correct the issue, remove the collar and press the mount along with the bearing down to the shoulder on the lead screw. Then resecure the collar.



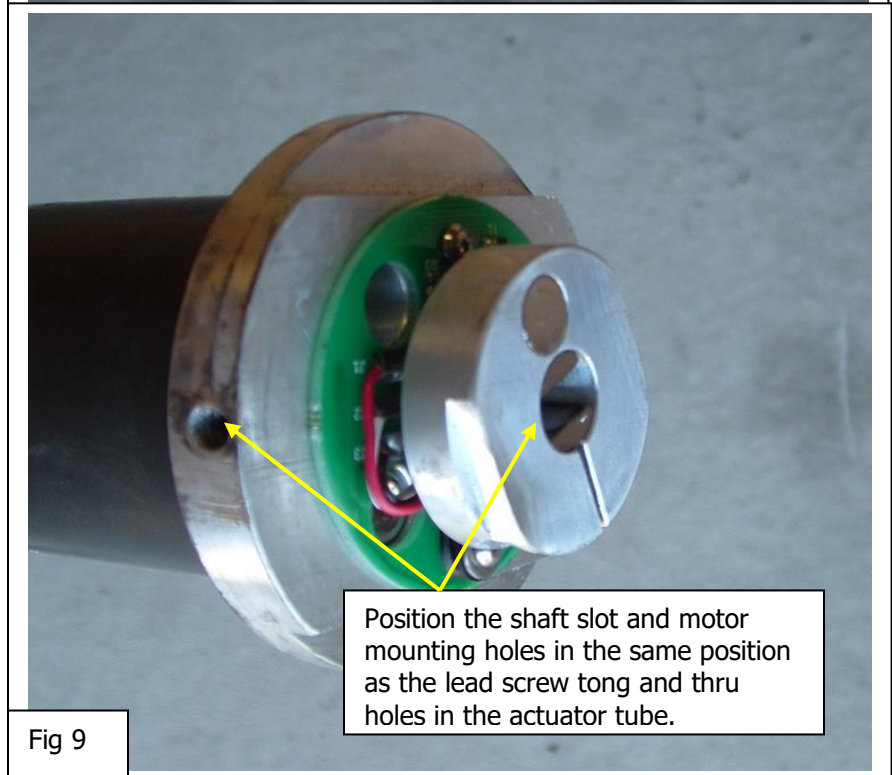
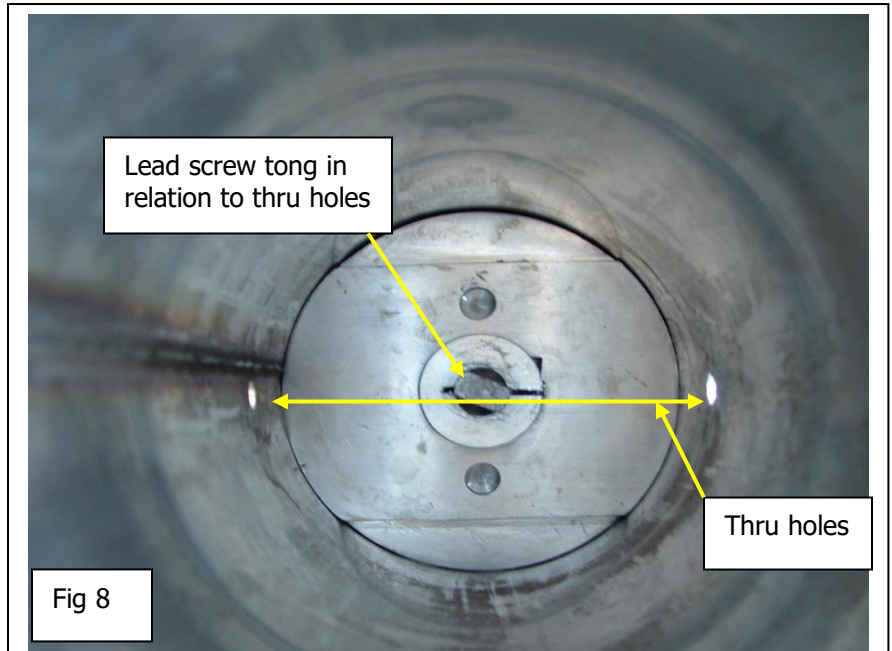
## Reassembly of the Actuator

Reassemble the drive into the actuator and secure mounting screws (Fig 3 on Page 2) and set screw for the plastic sleeve (Fig 4 on Page 2). Then reinstall the motor assembly with the below instructions (Fig 8 thru 13).

### Reinstalling the motors

Fig 8 – Look into the actuator tube to determine the position of the lead screw tong in relation to the position of the thru holes for securing the motor to the tube.

Fig 9 – Rotate the motor shaft slot to line up with the lead screw tong in relation to the position of the thru holes.





Reinstalling the motors - continued

Fig 10 – Wrap damping material around motor. Slide the motor assembly with the damping material around the motor into the actuator tube until motor is engaged with the lead screw and mounting holes line up with thru holes.

Fig 11 – Secure motor in place with screws.

Fig 12 – When positioning the end cap on the end of the tube, place drainage portal at the bottom.

Fig 13 – Use a mallet to hit and secure the end cap into the stationary tube.

Fig 10

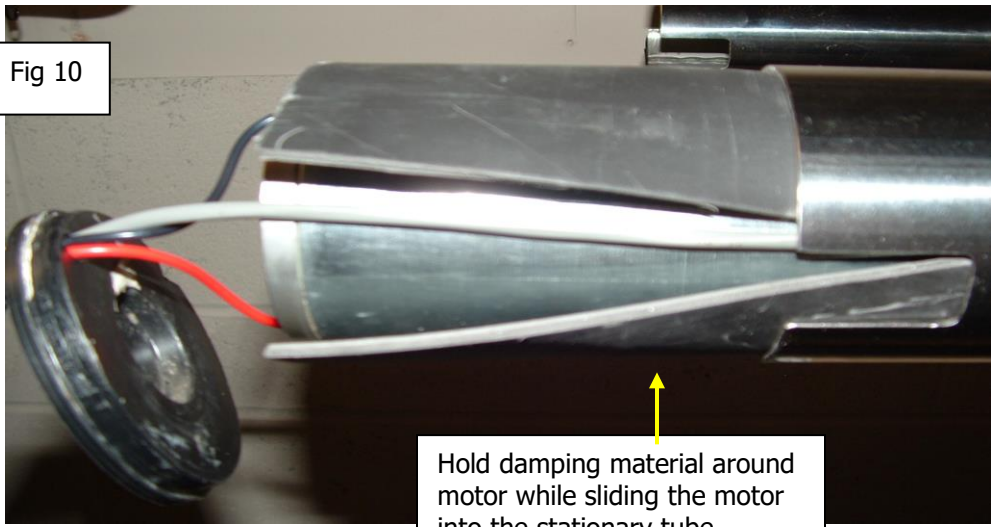


Fig 11



Fig 12

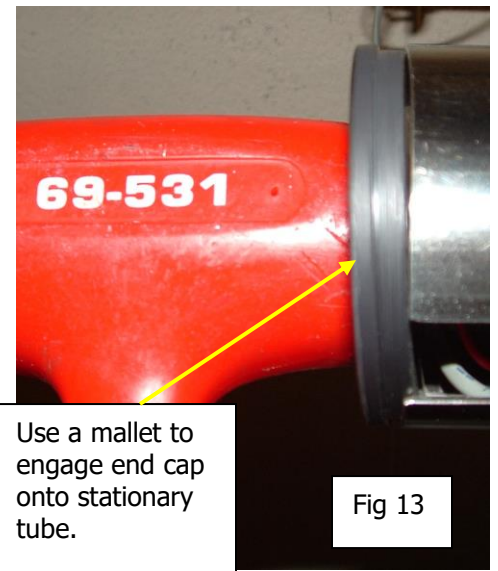
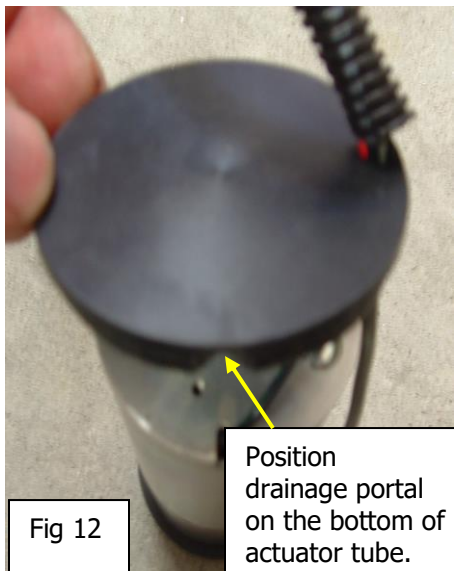


Fig 13



Reinstall the actuator to the hardtop, then adjust the actuators extending tubes so both port and starboard are at the same length to each other using the below instructions (Fig 14 thru 17).

When fully retracted, this dimension should be 1 1/8" from the face of each black plastic sleeve.

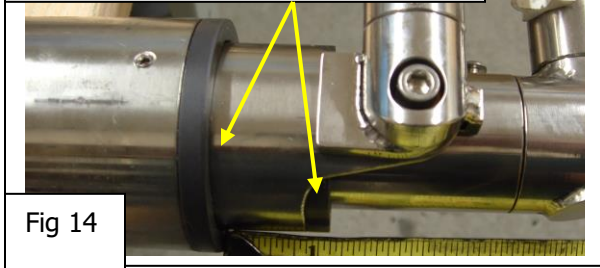


Fig 14

When fully retracted, this dimension should be 1 7/8" from the end of the tube (not including the crossbar insert) to the face of the black plastic sleeve.

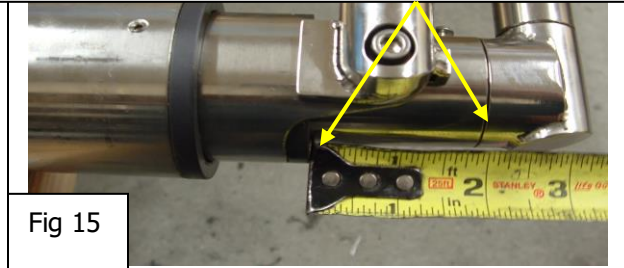


Fig 15

With the crossbars disconnected, adjust the tubes by turning off the power to the unit and rotate the tubes to match each other in extension. Rotating the tubes clockwise will screw the tube into the stationary tube (reducing the length) and counterclockwise rotation will screw the tube out of the stationary tube (increasing the length). Once both actuators are at the same length, reassemble the crossbars and power.

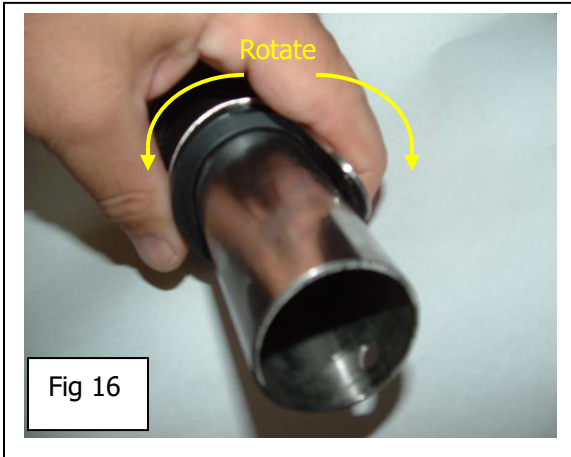


Fig 16

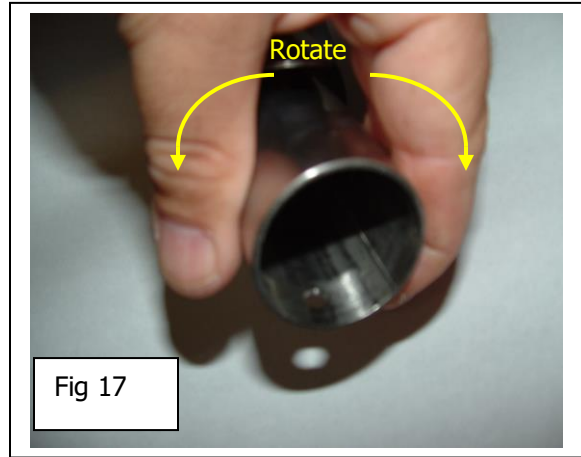


Fig 17

With the framework and actuators back together we will reset the controller, reset the correct home position and begin normal operation. Please call 267-968-7533 to assist with the reset functionality.