



TechTip #8

Auxiliary Actuator Installation Procedure for Bottom Unheading Valve

The auxiliary actuator is used to open and close the unheading valve in the event of a main actuator failure. The auxiliary actuator bolts to the end of the lockout tower and is pinned to the end of the lockout stem.

The auxiliary actuator requires approximately 95 inches of clearance beyond the end of the lockout tower for installation and removal (see figure 1).

Installation

1. Remove the end cover on the back of the lockout tower (see figure 2).
2. Remove the screw securing the cylinder hub pin.
3. Withdraw the cylinder hub pin.
4. Remove the coupler support.
5. Prepare the auxiliary cylinder by threading the cylinder hub onto the cylinder shaft (see figures 2 and 3). The cylinder hub should engage the cylinder shaft by 4-1/2 inches to accommodate maximum stroke.
6. Connect hydraulic lines to the auxiliary actuator and bleed the system.
7. Lift the auxiliary actuator and align the center line of the auxiliary actuator with the center line of the coupler.
8. Extend the auxiliary actuator until the cylinder hub contacts the coupler plus approximately 11 inches.
9. Insert the cylinder hub into the coupler.
10. Insert the cylinder hub pin and secure with screw (see figures 2 and 3).
11. Align the auxiliary actuator mounting holes with the lockout tower end plate and retract the auxiliary actuator slowly until the auxiliary actuator contacts the lockout tower's end flange.
12. Bolt the auxiliary actuator to the lockout tower using 2 inch 8UN studs and nuts. Apply anti-seize to stud threads and torque to 1700 ft-lbs. The auxiliary cylinder can now be used to stroke the valve.

Removal

1. Support the auxiliary actuator in preparation for removal.
2. Remove the 2 inch 8UN studs connecting the auxiliary cylinder to the lockout tower.
3. Extend the auxiliary cylinder approximately one inch to remove any bind on the cylinder hub pin.
4. Remove the screw securing the cylinder hub pin and withdraw the cylinder hub pin.
5. Disengage the cylinder hub from the coupler.
6. Fully retract the auxiliary cylinder and remove from the end of the lockout tower.
7. Insert the coupler support into the coupler.
8. Insert the cylinder hub pin and secure with screw.
9. Install the end cover on the back of the lockout tower.
10. Store the cylinder hub with the auxiliary cylinder for future use.

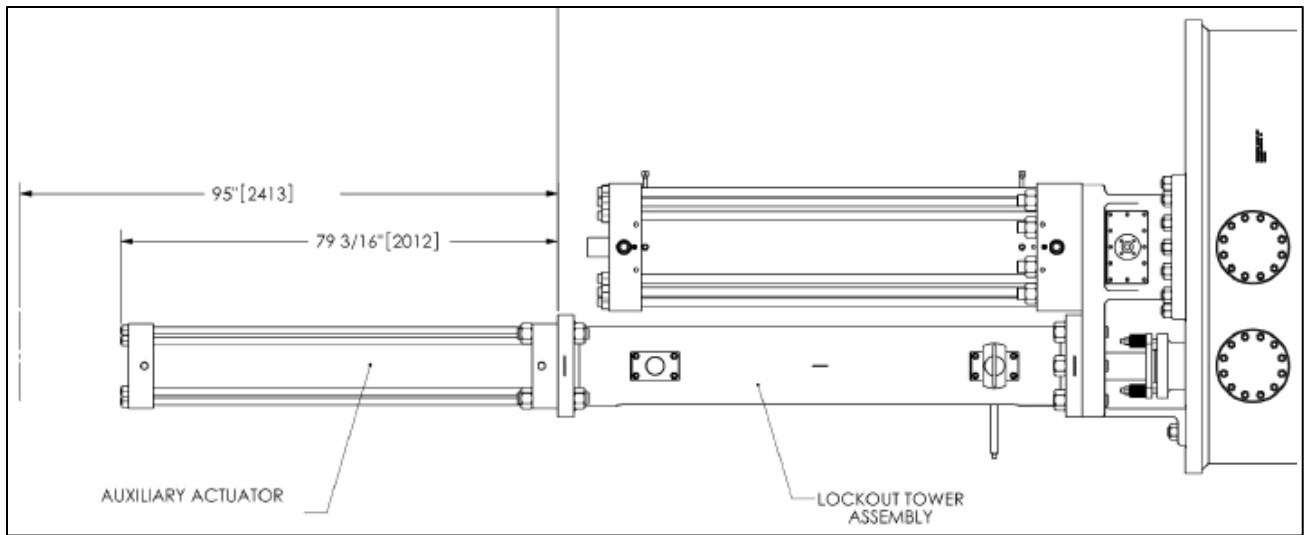


Figure 1: Auxiliary Cylinder Install Clearance

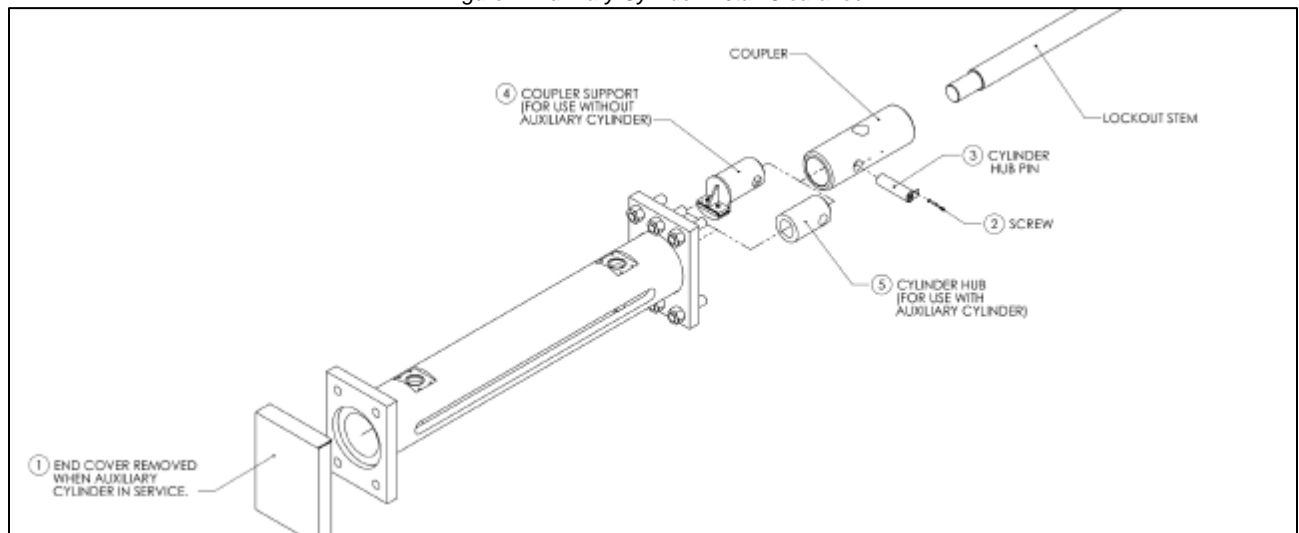


Figure 2: Lockout Tower Assembly

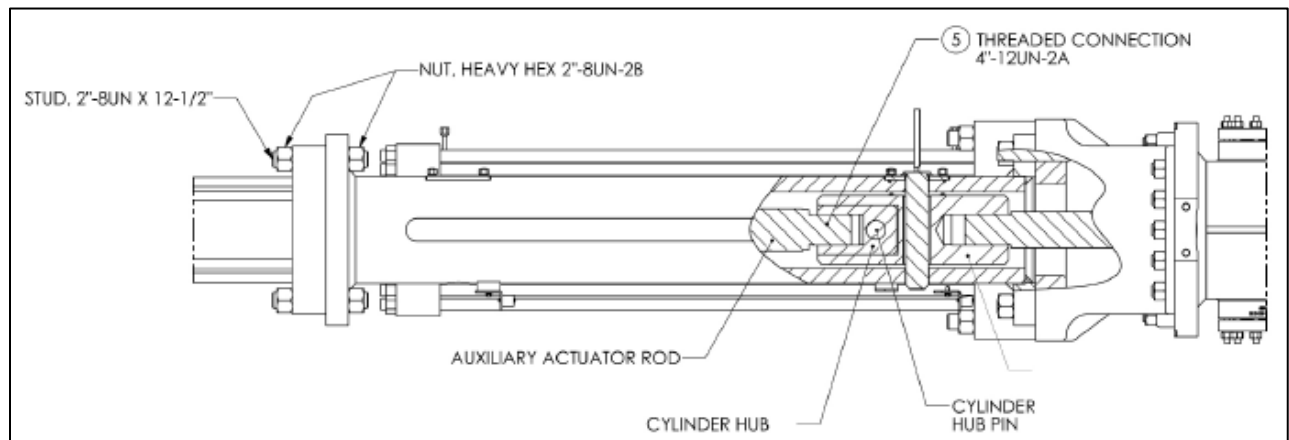


Figure 3: Auxiliary Actuator to Lockout Tower Connection