

## THD-SERIES S11SR280 THRU S27SR1020 DOUBLE ACTING SCOTCH YOKE ACTUATORS WITH HYDRAULIC MANUAL OVERRIDE

### INTRODUCTION

A-T Controls THD scotch yoke actuators have been designed and engineered to provide high cycle-life to meet the demands of our customers. The actuators are equipped with dual travel stops and accessory mounting.

### !!!WARNING!!!

**FOR YOUR SAFETY, PLEASE READ THESE DIRECTIONS CAREFULLY AND REVIEW THE DRAWING ATTACHED BEFORE USING THE HYDRAULIC MANUAL OVERRIDE. PLEASE CONSULT FACTORY IF YOU HAVE ANY QUESTIONS ON ANY OF THE PROCEDURES LISTED BELOW.**

#### 1. Normal Pneumatic Operation

Before the actuator can be used for standard pneumatic operation the three way valves on the end cap and adapter must be in the pneumatic position. Generally the handle is parallel to the cylinder bore. The hydraulic selector valve must be in the center position labeled "Pneumatic Auto". Also cycle the actuator fully in both directions to check for proper operation.

#### 2. Hydraulic Manual Override Operation

Check the reservoir and insure the oil level is filled to the correct level. Make sure the Pump Release Knob is rotated full clockwise (Do not over tighten). Rotate the handle on the 3 way Dump valve on the end cap and adapter to exhaust any air in the cylinder. Move the selector valve to the position required depending on the orientation of the actuator. For Clockwise operation lift the knob and position the handle to the Clockwise position (CW). Reposition the detent to rotate the actuator Counter-Clockwise in the Counter-Clockwise (CCW). Place handle in the pump and begin pumping to move the actuator to the desired position.

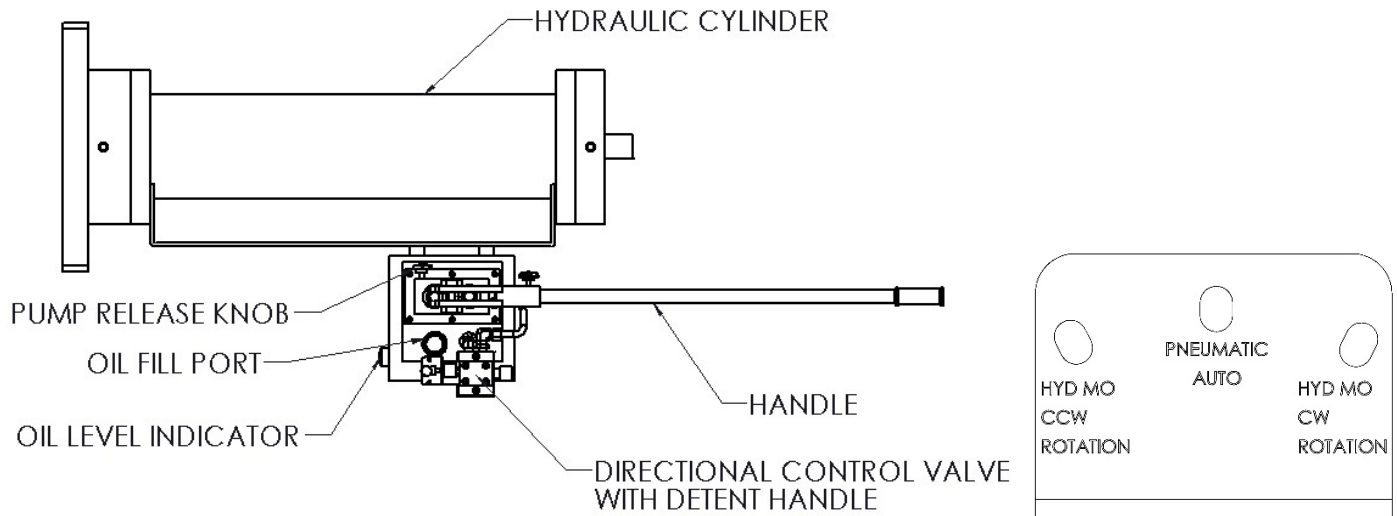
#### 3. Return to Pneumatic Operation

Move the selector valve back to the center position by raising the knob for the locking detent and moving to the center position and reengaging the detent. The actuator will remain in the last position. Place 3 way dump valve back in the normal pneumatic position. Place handle back in storage clips and unit is ready for pneumatic service. Also cycle the actuator fully in both directions to check for proper operation.

#### 4. Routine Maintenance

The following operation can only be performed if the actuator is not in the fail safe mode. If this operation is performed in the valve safe mode the valve position will be changed. Once every six months move the selector valve to the position that would extend the piston rod or move the actuator to the non-fail safe mode. Operate the pump approx. 25 strokes then move the Selector Valve back to the opposite direction and operate the pump till a slight resistance is felt in the pump handle. Move the selector valve back to the center position and reengage detent and restore handle to storage clips. This can be done without interrupting the normal operation of the actuator. This keeps the pumps seals and the override piston seals from taking a long term set. During this process no visible movement will be detected in the actuator as long as the actuator is not in the fail safe mode.

Use Mobil DTE-25 or equal for replacement oil.



ACTUATOR MUST ALWAYS BE MOUNTED SO THAT OIL FILL PORT IS UPRIGHT.  
RESERVOIR/PUMP ASSEMBLY CAN BE ROTATED AS NEEDED IN 90 DEGREE INCREMENTS.

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For product specifications go to <http://download.a-tcontrols.com/>

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