OPERATION OF THD-SERIES JACKSCREWS FOR SPRING RETURN ACTUATION

INTRODUCTION

A-T Controls THD Jackscrews have been designed and engineered to provide a manual method of operating THD actuators.

!!!WARNING!!!

FOR YOUR SAFETY, IT IS IMPORTANT THAT BEFORE OPERATING THE THD JACKSCREW TO ENSURE THAT ALL LOCKOUT AND TAGOUT PROCEDURES ARE IMPLEMENTED. PLEASE CONSULT FACTORY IF YOU HAVE ANY QUESTIONS ON ANY OF THE PROCEDURES LISTED BELOW.

1) Moving the Position of the Hand Wheel.

WARNING: Before proceeding make sure the jackscrew is supported so that it does not fall when taking it apart.

Remove the bolts on the gearbox (See Figure 1) and rotate the gearbox to the desired position. Reinstall the bolts back in the gearbox.

2) Setting Indicator

The Jackscrew indicator is set by the factory. Ensure that the Jackscrew 0º and 90º position is set properly after installation or if the stop bolts on the actuator have been adjusted. To run the actuator pneumatically the jackscrew must be in the 0º position. Check to make sure that the yoke makes contact with both stop bolts to ensure that the jackscrew is in the neutral position. For information on setting stop bolts refer to the THD IOM. To adjust the indicator, remove the stem cover by unscrewing the set screw and turning the stem cover counter-clockwise (See Figure 1). Once the stem cover is removed, adjust the nuts in the desired direction (See Figure 2).

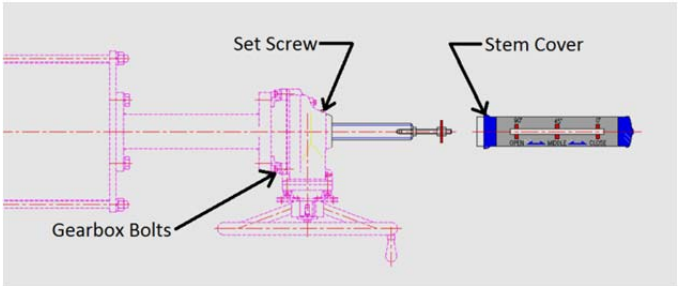

Figure 1

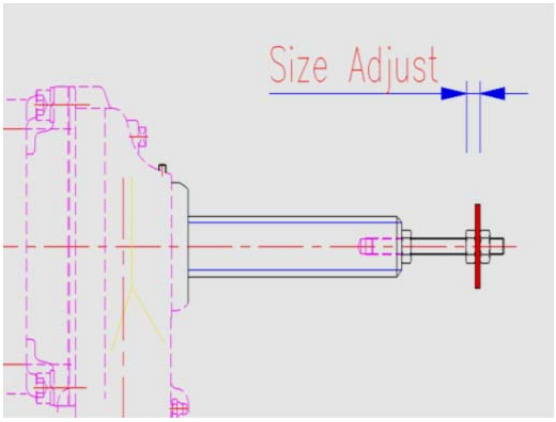

Figure 2

!!!WARNING!!!

NEVER OPERATE THE ACTUATOR WHEN THE JACKSCREW IS **NOT** IN THE NEUTRAL POSITION. THIS COULD CAUSE DAMAGE TO THE ACTUATOR OR JACKSCREW.

3) Operation of the Actuator

A) Verify that the clockwise (CW) and counter-clockwise (CCW) supply ports on the actuator are **not** open to the atmosphere by turning the handles on the 3-way valves so that they are parallel to the air flow (see Figure 3).

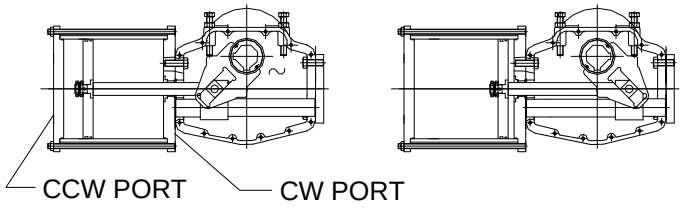

Figure 3

B) Verify that the Jackscrew is in the 0º position (see Figure 4).

C) Applying air pressure to the CCW port drives the piston toward the front flange which turns the yoke counterclockwise when viewed from the accessory side of the actuator. When pressure is applied to the CW Port the piston is driven towards the end cap which turns the yoke clockwise. This is shown in Figure 3.

4) Operation of Jackscrew

A) Verify that the clockwise and counter-clockwise supply ports on the actuator are open to the atmosphere by turning the handles on the 3-way valves so that they are perpendicular to the air flow (see Figure 3).

B) To turn the valve in the clockwise direction, turn the hand wheel in the clockwise direction. To turn the valve in the counter-clockwise direction, turn the hand wheel counter-clockwise.

C) Be sure before going back to pneumatic operation that the Jackscrew is set in the 0º position and both block and bleed valves are **not** open to the atmosphere.

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