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## 1 SCOPE

A-T Controls 3RDGO-46B Declutchable Gear Overrides (DGO) are designed and engineered to provide a manual method of operating the 3R2700, 3R3300, and 3R3500 series of pneumatic actuators both spring return and double acting.

## 2 INSTALLATION

**WARNING: FOR YOUR SAFETY, IT IS IMPORTANT THAT BEFORE OPERATING THE 3RDGO AND 3KDGGO DECLUTCHABLE GEAR OVERRIDE THAT ALL LOCKOUT AND TAGOUT PROCEDURES ARE IMPLEMENTED. PLEASE CONSULT WITH THE FACTORY IF YOU HAVE ANY QUESTIONS ON ANY OF THE PROCEDURES LISTED BELOW.**

The DGO mounts between the valve and the actuator. To install a DGO in the field, the valve must be in a safe position so the actuator can be removed. Ensure all pneumatic and electric lines are locked and tagged out to prevent any accidental movement of the actuator. For spring return actuators, the actuator should be in the failsafe position. Before mounting the DGO, ensure that the DGO is in the proper position either fully clockwise or counterclockwise to agree with the valve and actuator position. The DGO should be in the disengaged position while mounting. Refer to Figure 1 to comply with the standard mounting orientation. The gear can be mounted in all four quadrants provided the handwheel does not interfere with the valve, pipeline, actuator, etc.

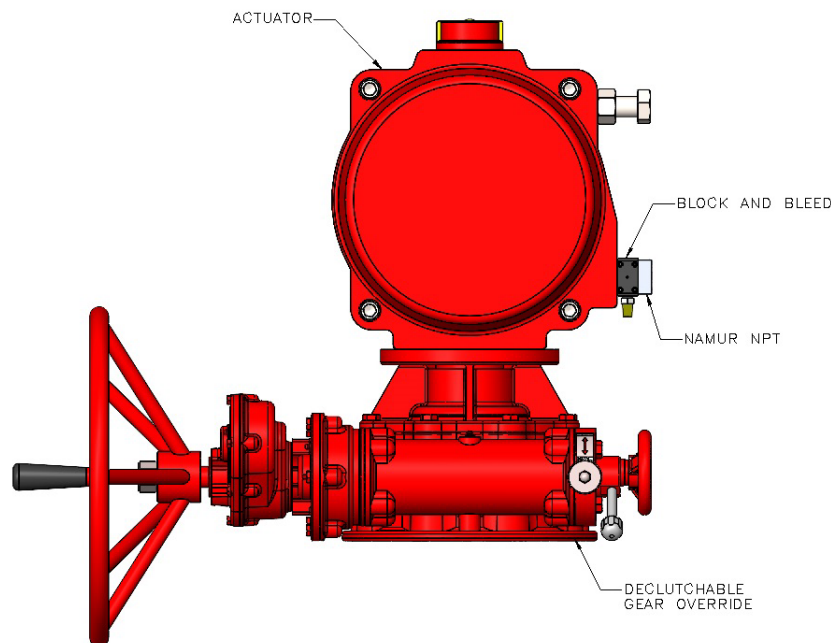


Figure 1

1. With the actuator removed from the valve, the gear will mount directly to the valve or bracket.
2. Mount the actuator to the gear and assemble with studs and nuts.
3. A block and bleed valve is required to exhaust the air from the actuator before the DGO can be used. A Namur solenoid can be bolted directly to the Block and Bleed Valve, or an NPT adapter plate can be attached for a remote solenoid or other device requiring NPT threads.

4. Drawing P1984 (shown on the last page of this document) shows the mounting orientation for the standard solenoids furnished by A-T Controls. Figure 2 shows the actuator with the NPT plate installed with the Block & Bleed Valve.

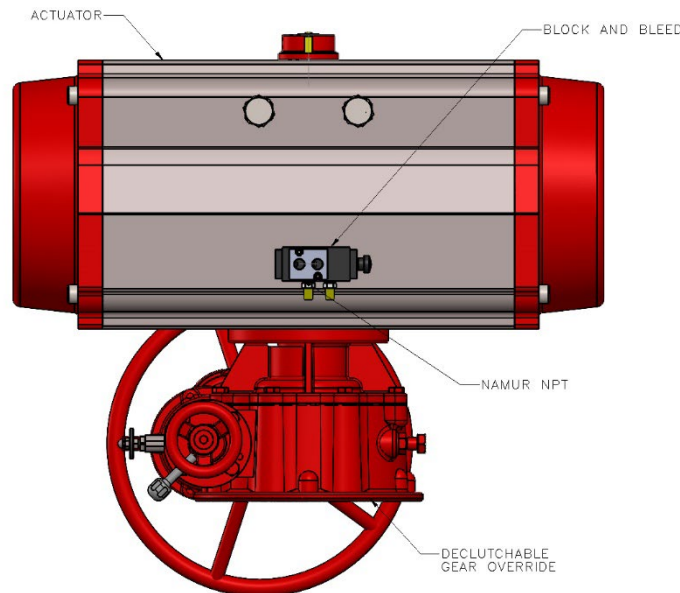


Figure 2

5. Install handwheel on shaft and secure with cap screw.
6. Install the declutch lever into tapped hole on collar. Do not remove the set screw and attempt to use the second hole. The declutch lever when in the remote (disengaged) position should be below the declutch pin which is the locking pin for the declutch lever (See Figure 3). The declutch lever is taped to the handwheel for shipping purposes.

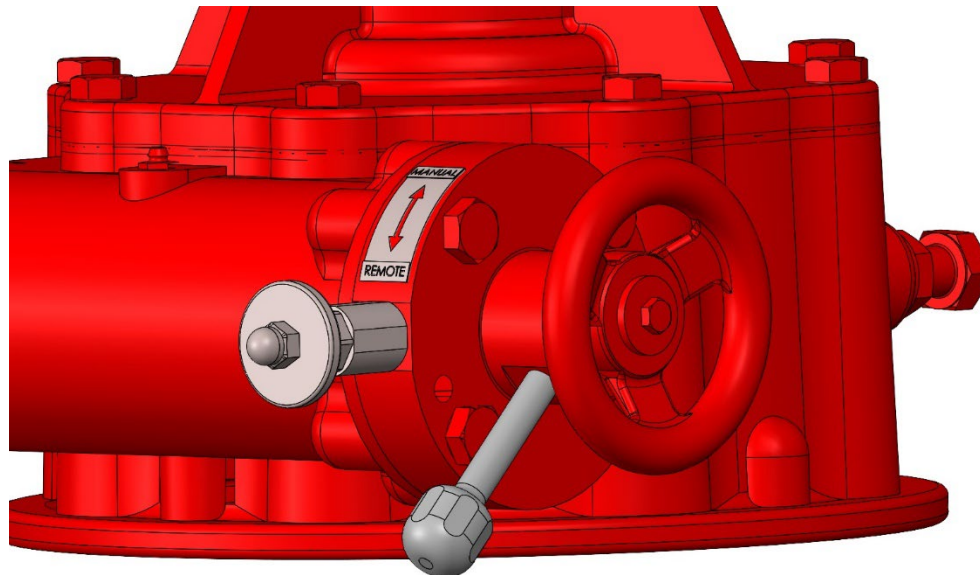


Figure 3

7. Reinstall all electric and pneumatic lines.
8. Verify that the stop bolts in the DGO and actuator are properly set for the open and close positions.
9. Refer to the operating instructions below to engage the manual override and check for proper operation.
10. Push the knob in on the block and bleed valve shown above in Figure 2. This is the remote (disengaged) position for the block and bleed valve.
11. Place the DGO in the remote (disengaged) operating position. This is with the lever down shown in Figure 2.
12. The unit is now ready to place into service.

### 3 OPERATION

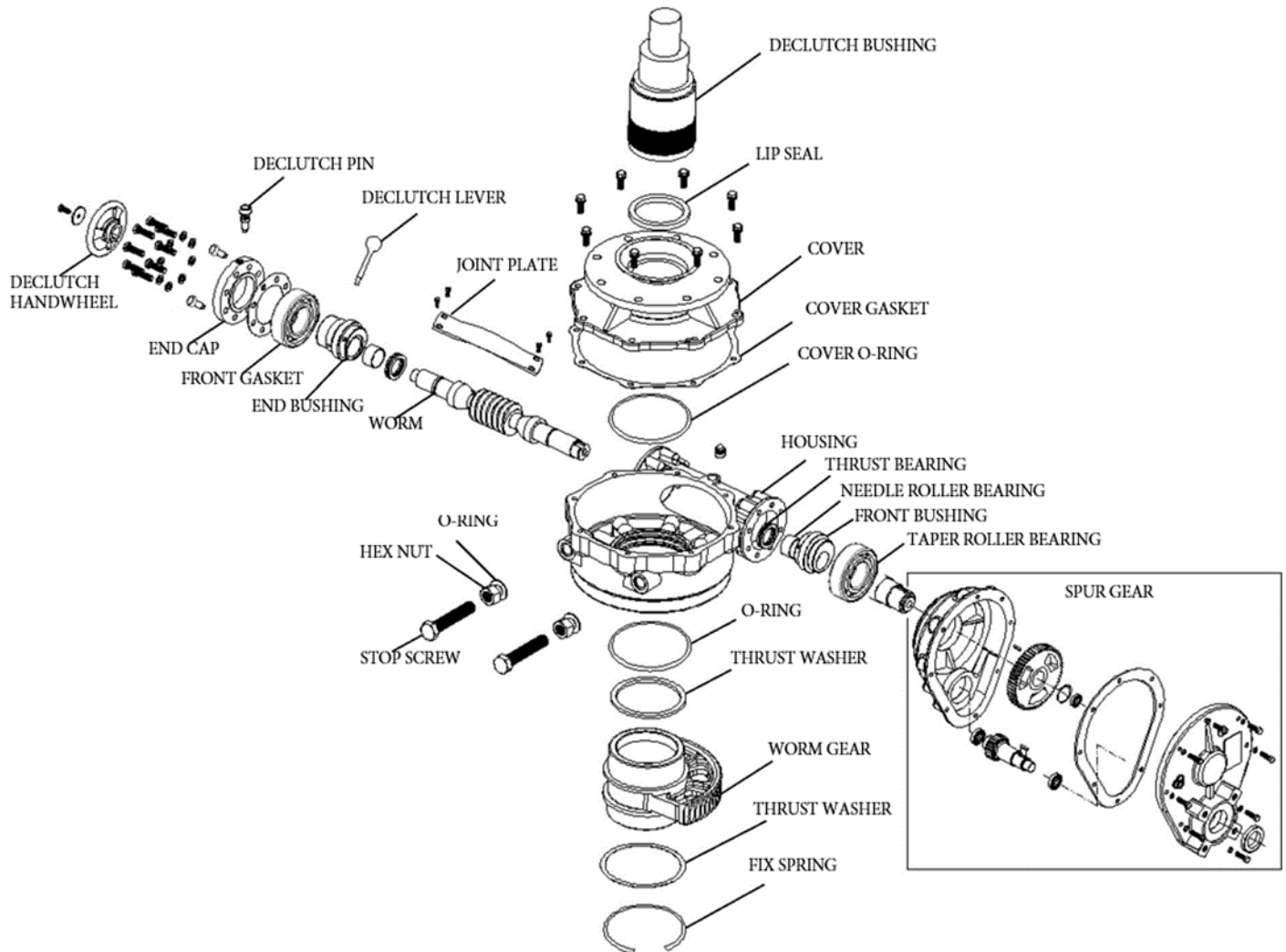
1. Pull out the knob on the block and bleed valve. This will exhaust all the air from the actuator. For a spring return actuator, this will cause the actuator to return to the failsafe position. To prevent the actuator from moving, perform step 2 before pulling the knob on the block and bleed valve
2. Pull on the declutch pin and rotate the declutch lever towards the manual (engaged) position.
3. The small handwheel can be used to help align the internal gears while moving the declutch lever. When the declutch lever is fully rotated, the declutch pin will click back into position.
4. Rotate the larger handwheel counter-clockwise to move the actuator counter-clockwise or clockwise to move the actuator clockwise depending on the desired location. The 1-1/4" hex nut in the center of the handwheel can be used to rotate the handwheel with a motor.
5. To return to remote (disengaged) operation, pull on the declutch pin and rotate the declutch lever to remote (disengaged). Check that the declutch pin clicks back into position.
6. Push the knob in on the block and bleed valve to return to the remote operation (See Figure 2 and 3).

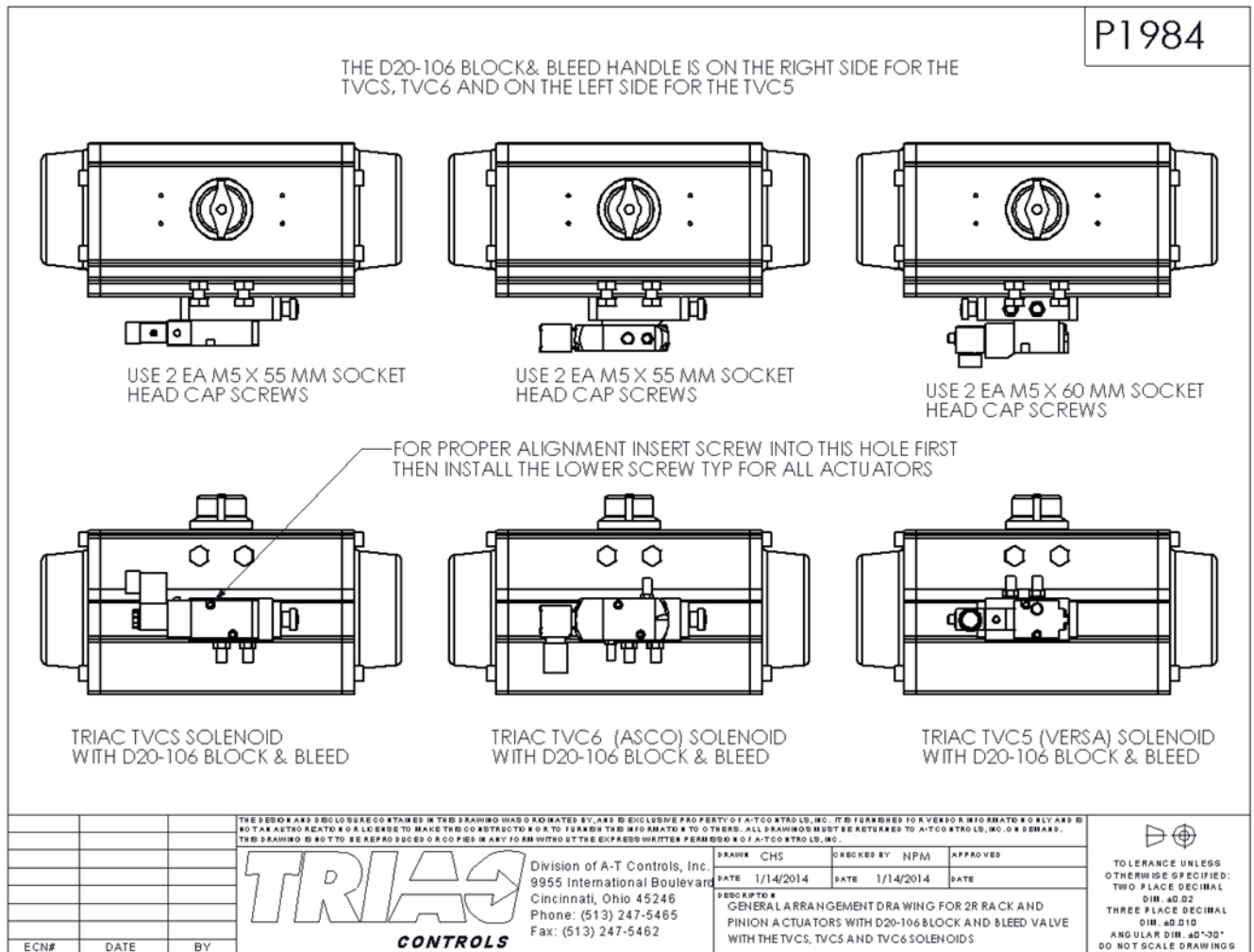
### 4 REPAIR PARTS AND LUBRICATION

There are two grease fittings on the spur gear and one grease fitting on the center housing. The units are lubricated for a lifetime of normal service at the factory. Extremely wet or humid conditions may require additional lubrication.

There are no parts or seals that require replacement during a normal lifetime of service.

5 BILL OF MATERIALS





A-T Controls product, when properly selected, is designed to perform its intended function safely during its useful life. However, the purchaser or user of A-T Controls products should be aware that A-T Controls products might be used in numerous applications under a wide variety of industrial service conditions. Although A-T Controls can provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser / user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of A-T Controls products. The user should read and understand the installation operation maintenance (IOM) instructions included with the product and train its employees and contractors in the safe use of A-T Controls products in connection with the specific application.

While the information and specifications contained in this literature are believed to be accurate, they are supplied for informative purposes only. Because A-T Controls is continually improving and upgrading its product design, the specifications, dimensions and information contained in this literature are subject to change without notice. Should any question arise concerning these specifications, the purchaser/user should contact A-T Controls.

For product specifications go to <https://a-tcontrols.com/downloads/>

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