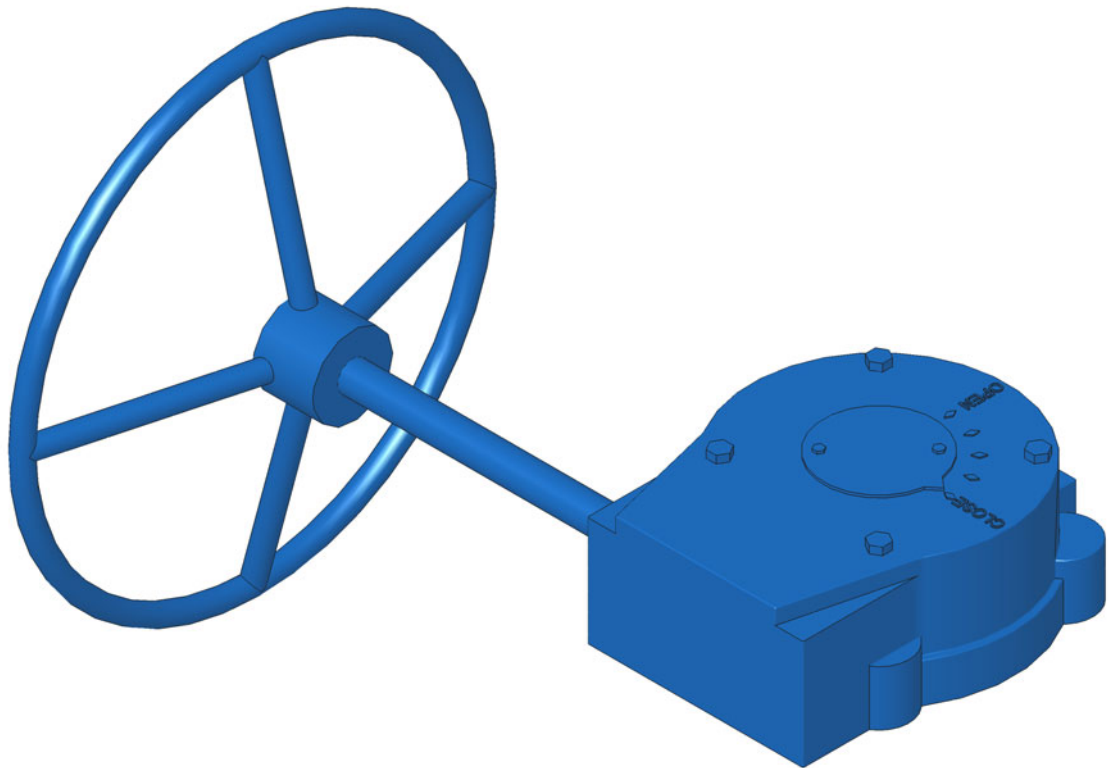




DeZURIK AM-SERIES  
MANUAL GEAR ACTUATOR  
USED ON BUTTERFLY  
VALVES



Instruction D10467  
June 2011

### Instructions

These instructions provide information about AM-Series Manual Actuators used on Butterfly Valves. They are for use by personnel who are responsible for installation, operation and maintenance of AM-Series Manual Actuators.

### Safety Messages

All safety messages in the instructions are flagged with an exclamation symbol and the word Caution, Warning or Danger. These messages indicate procedures that must be followed exactly to avoid equipment damage, personal injury or death.

Safety label(s) on the product indicate hazards that can cause equipment damage, personal injury or death. If a safety label becomes difficult to see or read, or if a label has been removed, please contact DeZURIK for replacement label(s).



#### **WARNING!**

**Personnel involved in the installation or maintenance of valves should be constantly alert to potential emission of pipeline material and take appropriate safety precautions. Always wear suitable protection when dealing with hazardous pipeline materials. Handle valves, which have been removed from service with suitable protection for any potential pipeline material in the valve.**

---

### Inspection

Your AM-Series Manual Actuator has been packaged to provide protection during shipment; however, it can be damaged in transport. Carefully inspect the unit for damage upon arrival and file a claim with the carrier if damage is apparent.

### Parts

Recommended spare parts are listed on the assembly drawing. These parts should be stocked to minimize downtime.

Order parts from your DeZURIK sales representative, or directly from DeZURIK. When ordering parts, please include the 7-digit part number and 4-digit revision number (example: **9999999R000**) located on the data plate attached to the valve assembly. Also include the part name, the assembly drawing number, the balloon number and the quantity stated on the assembly drawing.

### DeZURIK Service

DeZURIK service personnel are available to install, maintain and repair all DeZURIK products. DeZURIK also offers customized training programs and consultation services.

For more information, contact your local DeZURIK sales representative or visit our website at [www.dezurik.com](http://www.dezurik.com).

## Table of Contents

Description .....	4
Operation .....	4
Lubrication .....	4
Position Stops .....	4
Adjusting the Closed Position Stop .....	5
Adjusting the Open Position Stop .....	5
Removing Actuator .....	6
Mounting Actuator .....	6
Changing the Mounting Position .....	6
Lockout .....	6
Operation .....	6
Adding a Lockout to Actuator .....	7
Troubleshooting .....	7

### Description

The AM-Series Manual Actuator is a quarter-turn gear actuator with a choice of handwheel or chainwheel operator. Each actuator has adjustable open and closed position stops, and may be mounted on the valve in any one of two or four positions as indicated on the installation drawing for the valve.

### Operation

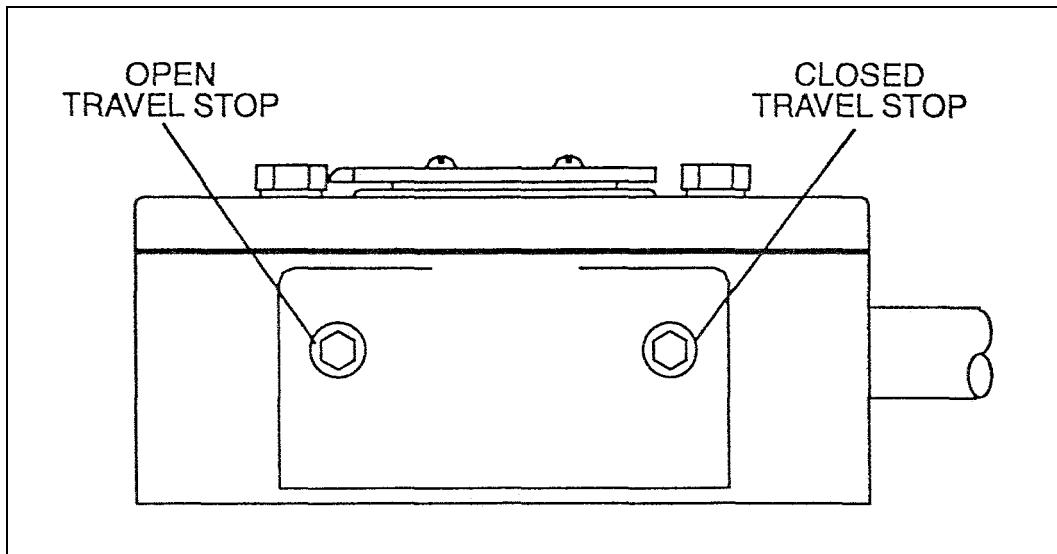
Clockwise rotation of the operator closes the valve; counterclockwise rotation opens the valve.

### Lubrication

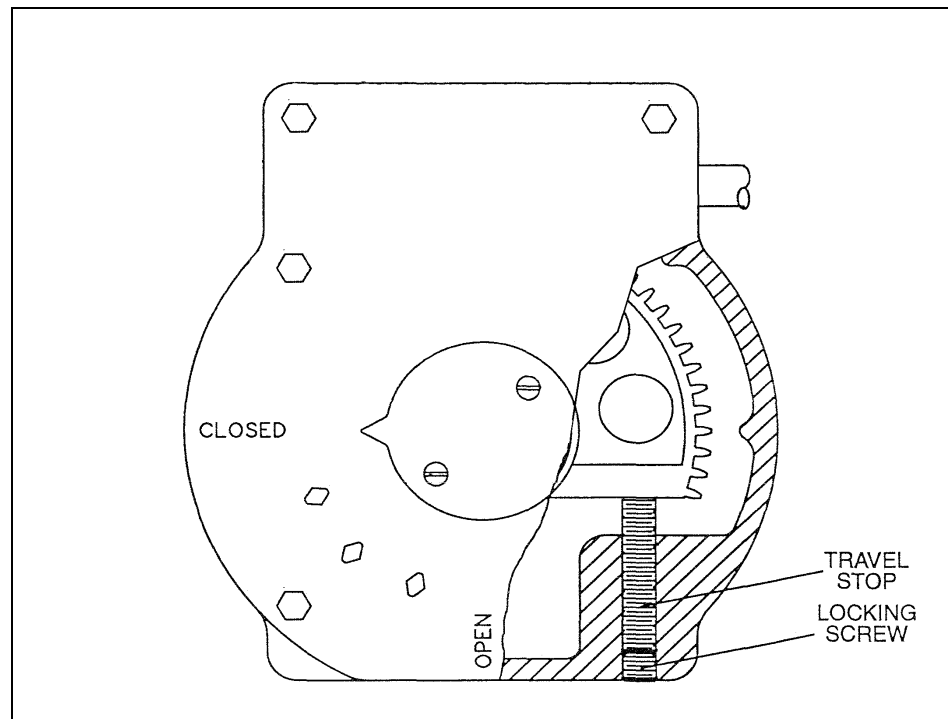
The actuator is lubricated at the factory, and does not require further lubrication. If the actuator has excessive wear or has been damaged, it is recommended that the actuator be replaced.

### Position Stops

The open and closed position stops prevent the actuator from rotating beyond the open and closed positions of the valve. Each stop is adjustable. If the actuator is factory-mounted, the stops do not require adjustment. If the actuator is not factory mounted, or if the actuator has been removed, adjust the stops as described below. See Figure 1 for stop identification.



**Figure 1— Stop Identification**

**Position Stops (Continued)****Figure 2— Locking Screws and Travel Stops****Adjusting the Closed Position Stop**

1. Remove the locking screw in the closed position stop and loosen the travel screw about two turns. See Figure 2.
2. Turn the handwheel or chainwheel so that the valve is in the closed position.
3. Turn the closed position travel screw clockwise until resistance is felt from the screw coming into contact with the gear inside of the actuator.

**Note:** Do not overtighten travel screw.

4. Replace the locking screw in the closed position stop and tighten against the travel screw.

**Adjusting the Open Position Stop**

1. Remove the locking screw in the open position stop and loosen the travel screw about two turns. See Figure 2.
2. Turn the handwheel or chainwheel so that the valve is in the open position.
3. Turn the open position travel screw clockwise until resistance is felt from the screw coming into contact with the gear inside of the actuator.

**Note:** Do not overtighten travel screw.

4. Replace the locking screw in the open position stop and tighten against the travel screw.

### Removing Actuator

---



#### **WARNING!**

**Flow in the pipeline with the actuator removed can slam the valve closed causing personal injury and damaging the flow system. Shut down the flow in the pipeline before removing the actuator from the valve.**

---

1. Discontinue flow in the pipeline.
2. Close the valve.
3. Remove the four mounting screws and lockwashers.
4. Remove the actuator from the valve.

**Note:** Some valve sizes have double-D shafts and some have keyed shafts. Take care not to lose the key on valves with keyed shafts.

### Mounting Actuator

1. Place both the actuator and the valve in the closed position.
2. Select the desired actuator mounting position from the optional positions shown on the installation drawing and mount the actuator to the valve with the four mounting screws and lockwashers.

**Note:** Some valve sizes have double-D shafts and some have keyed shafts. Make sure the key is in the valve shaft before mounting the actuator on valves with keyed shafts.

3. Adjust the open and closed position stops as shown in the Position Stops section.

### Changing the Mounting Position

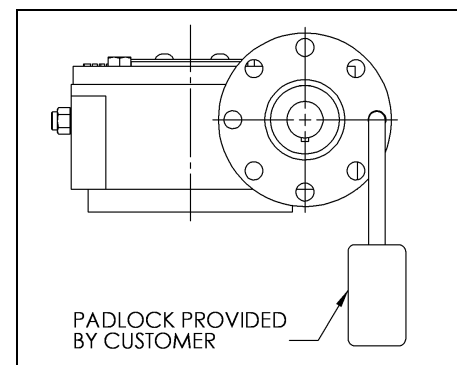
No additional components are needed to change the mounting position of the AM-Series Manual Gear Actuator.

Before changing the actuator mounting position, check to assure that dimensional clearance is available for the proposed actuator location. The actuator may be mounted in any one of two or four positions as indicated on the installation drawing for the valve. To change the position, follow the steps in the “*REMOVING ACTUATOR*” and “*MOUNTING ACTUATOR*” sections.

### Lockout

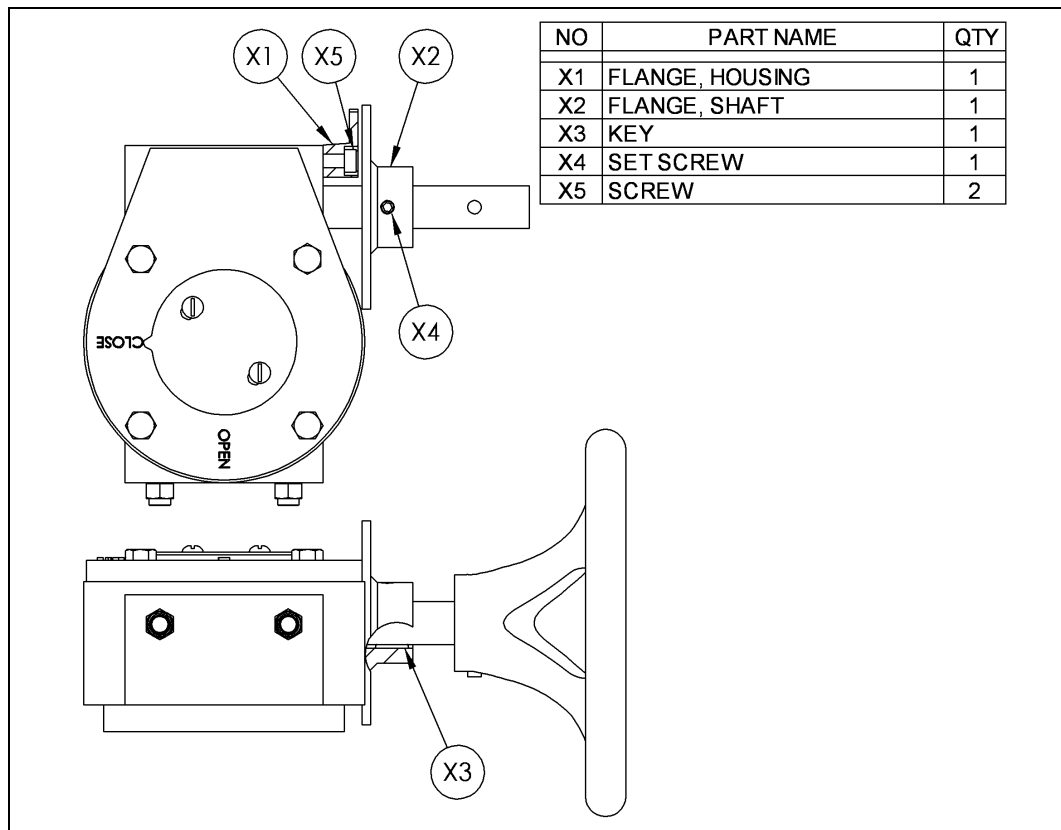
#### **Operation**

The handwheel actuator is available with an optional lockout that allows the handwheel to be locked with a padlock at any 1/8-turn increment. Lockouts may be ordered with a valve or ordered separately as a kit. A padlock is not included with the lockout accessory.



**Figure 3 — Lockout**

### Adding a Lockout to Actuator



**Figure 4 — Lockout Parts**

1. Remove the handwheel pin and handwheel from the actuator shaft.
2. Attach the housing flange (X1) with two screws (X5) to the actuator shown in Figure 4.
3. Insert the key (X3) into the actuator shaft; slide the shaft flange (X2) onto the actuator shaft and over the key. Leave a .030" to .060" space between the housing flange (X1) and shaft flange (X2).
4. Insert the setscrew (X4) into the shaft flange (X2) and secure it to the actuator shaft.
5. Place the handwheel in the original position on the actuator shaft, and secure the handwheel with the handwheel pin.

### Troubleshooting

Condition	Possible Cause	Corrective Action
Actuator closes to wrong position or leakage past the valves disc.	Closed position stop is set incorrectly.	Adjust closed position stop.
Actuator opens to wrong position.	Open position stop is set incorrectly.	Adjust open position stop.
Actuator will not fully operate valve.	Internal pipeline obstruction is preventing closure.	Remove obstruction.