

# **DEZURIK MO MANUAL OVERRIDE FOR ROTARY DIAPHRAGM ACTUATORS**

**Instruction D10114**

**August 2012**

## Instructions

These instructions are for use by personnel who are responsible for the installation, operation and maintenance of DeZURIK valves, actuators or accessories.

## Safety Messages

All safety messages in the instructions are identified by a general warning sign and the signal word CAUTION, WARNING or DANGER. These messages indicate procedures to avoid injury or death.

Safety label(s) on the product indicate hazards that can cause 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).

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### **⚠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.**

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## Inspection

Your DeZURIK product has been packaged to provide protection during shipment; however, items 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

Replaceable wear parts are listed on the assembly drawing. These parts can be stocked to minimize downtime. Order parts from your local DeZURIK sales representative or directly from DeZURIK. When ordering parts please provide the following information:

**If the valve has a data plate:** please include the 7-digit part number with either 4-digit revision number (example: 9999999R000) or 8-digit serial number (example: S1900001) whichever is applicable. The data plate will be 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.

**If there isn't any data plate visible on the valve:** please include valve model number, part name, and item number from the assembly drawing. You may contact your local DeZURIK Representative to help you identify your valve.

## DeZURIK Service

DeZURIK service personnel are available to 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 [DeZURIK.com](http://DeZURIK.com).

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### Description

This manual override is designed specifically to manually operate the valve if the air supply to the actuator is interrupted. This manual override contains no customer serviceable components and should not be disassembled.



#### **WARNING!**

**The Rotary Diaphragm Actuator includes a compressed spring. Death or serious injury can result if the spring cover is removed incorrectly.**

**FOLLOW THE INSTRUCTIONS CAREFULLY TO ENSURE SAFETY!**

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### Operation

If the actuator action has been changed from spring-to-open to spring-to-close or vice-versa, the direction of the handwheel rotation will be opposite from that described below.

#### ***To Open The Valve***

Turn the manual override handwheel counter-clockwise. The pointer on the actuator will indicate valve position.

#### ***To Close The Valve***

Turn the manual override handwheel clockwise. The pointer on the actuator will indicate valve position.

**NOTE:** Before returning the actuator to automatic operation, make sure the manual override is turned all the way out so it does not interfere with actuator operation.

## Removing the Manual Override

1. Shut down the flow in the pipeline.

**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.**

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2. Disconnect and lock out the pneumatic power to the actuator to prevent accidental operation of the actuator.

**WARNING!**

**Moving parts from unexpected operation of a powered actuator can cause personal injury or equipment damage. Disconnect and lock out power to the actuator before servicing.**

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3. Make sure the manual override is turned all the way out, then relieve the air pressure to the actuator.

**WARNING!**

**The Rotary Diaphragm Actuator includes a compressed spring. Death or serious injury can result if the spring cover is removed incorrectly.**

**FOLLOW THE INSTRUCTIONS CAREFULLY TO ENSURE SAFETY!**

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4. Remove three screws, nuts and washers that fasten the diaphragm cover to the spring case.

**Note:** The three screws removed must be equally spaced as shown in Figures 1 and 2.

5. **For DR40 actuators:** Obtain three 5/16" diameter threaded rods, each at least 3" (75 mm) long, and nine 5/16" nuts. As shown in Figure 1, assemble one rod and three nuts in each of the three holes from which the screws were removed in the previous step. Jam the double nuts together by tightening to  $14 \pm 2$  foot pounds ( $19 \pm 3$  Nm); tighten the single nuts finger tight against the cover.

**For DR55 and DR85 actuators:** Obtain three 3/8" diameter threaded rods, each at least 8" (200 mm) long, and nine 3/8" nuts. As shown in Figure 2, assemble one rod and three nuts in each of the holes from which the screws were removed in the previous step. Jam the double nuts together by tightening to  $26 \pm 3$  foot pounds ( $35 \pm 4$  Nm); tighten the single nuts finger tight against the cover.

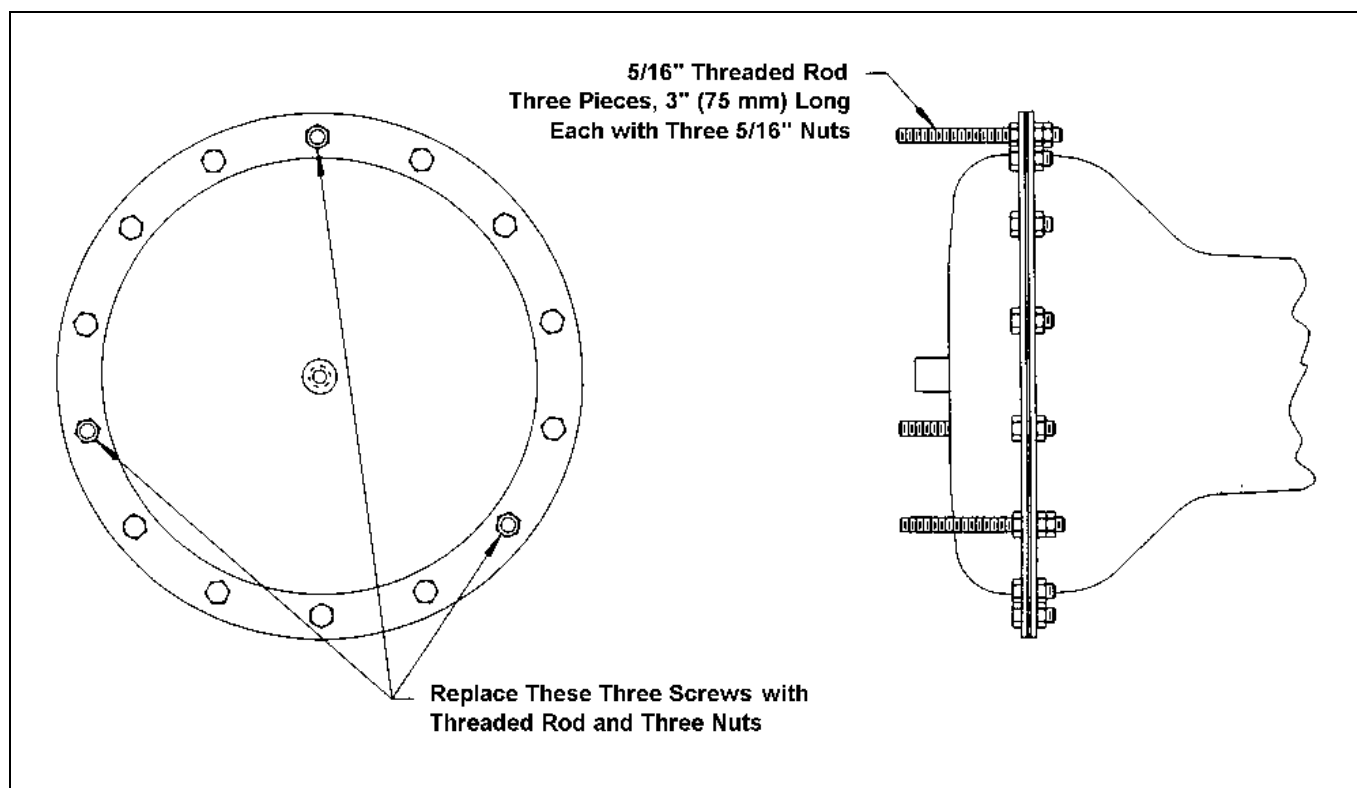
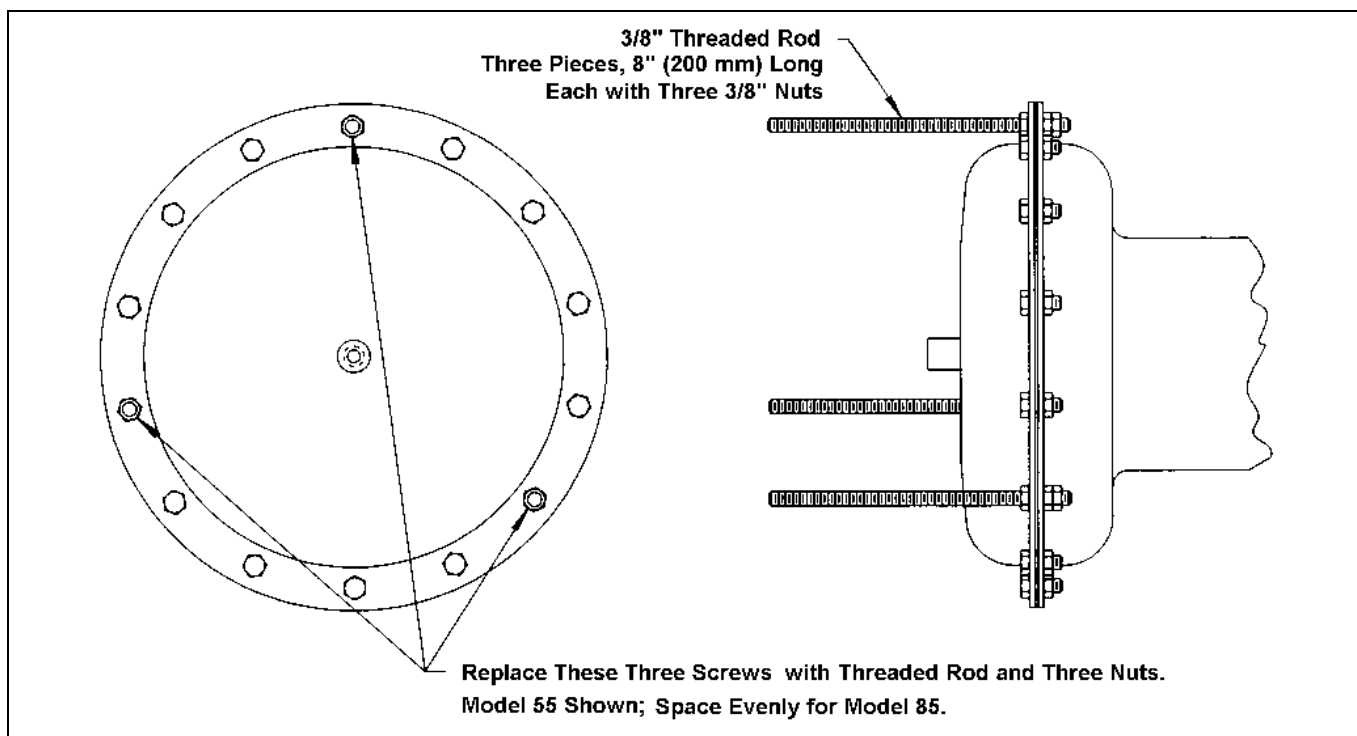
6. Remove the remaining screws, nuts and washers that fasten the diaphragm cover to the spring case.
7. Turn the single nuts counterclockwise—carefully, evenly, and slowly—from each of the three threaded rods. Continue turning each nut until the spring force is fully relieved from the diaphragm cover. Then remove the nuts, the threaded rods, and the diaphragm cover from the actuator.

### Installing the Manual Override

1. If the manual override was removed from the diaphragm cover, apply a bead of non-hardening sealant such as Loctite Permatex Form-A-Gasket #2 to the mating surfaces of the manual override housing and diaphragm cover, then fasten the manual override to the diaphragm cover.
2. **For DR40 actuators:** Mount the diaphragm cover to the spring case with screws, nuts, and washers. Place the caution tag and washer under one of the screws. Tighten the screws evenly until the rubber diaphragm is in contact with the cover and the spring case. Then tighten the screws in a crisscross pattern to  $80 \pm 2$  inch pounds ( $9.0 \pm 0.2$  Nm).

**For DR55 and DR85 actuators:** Mount the diaphragm cover to the spring case with screws, nuts and washers. Place the caution tag and washer under one of the screws. Tighten the screws evenly until the rubber diaphragm is in contact with the cover and the spring case. Then tighten the screws in a crisscross pattern to  $12 \pm 2$  foot pounds ( $16 \pm 3$  Nm) for the DR55, or  $18 \pm 2$  foot pounds ( $24 \pm 3$  Nm) for the DR85.

3. Connect the actuator piping.
4. Pipeline flow may now be restored.

**Figure 1—Stud Requirements For DR40 Diaphragm Cover Removal****Figure 2—Stud Requirements For DR55 and DR85 Diaphragm Cover Removal**

## Limited Warranty

DeZURIK, Inc. ("Seller") manufactured products, auxiliaries and parts thereof that we manufacture for a period of twenty-four (24) months from date of shipment from Seller's factory, are warranted to the original purchaser only against defective workmanship and material, but only if properly stored, installed, operated, and serviced in accordance with Seller's recommendations and instructions.

For items proven to be defective within the warranty period, your exclusive remedy under this limited warranty is repair or replacement of the defective item, at Seller's option, FCA Incoterms 2020 Seller's facility with removal, transportation, and installation at your cost.

Products or parts manufactured by others but furnished by Seller are not covered by this limited warranty. Seller may provide repair or replacement for other's products or parts only to the extent provided in and honored by the original manufacturer's warranty to Seller, in each case subject to the limitations contained in the original manufacturer's warranty.

No claim for transportation, labor, or special or consequential damages or any other loss, cost or damage is being provided in this limited warranty. You shall be solely responsible for determining suitability for use and in no event shall Seller be liable in this respect.

This limited warranty does not warrant that any Seller product or part is resistant to corrosion, erosion, abrasion or other sources of failure, nor does Seller warrant a minimum length of service.

Your failure to give written notice to us of any alleged defect under this warranty within twenty (20) days of its discovery, or attempts by someone other than Seller or its authorized representatives to remedy the alleged defects therein, or failure to return product or parts for repair or replacement as herein provided, or failure to store, install, or operate said products and parts according to the recommendations and instructions furnished by Seller shall be a waiver by you of all rights under this limited warranty.

This limited warranty is voided by any misuse, modification, abuse or alteration of Seller's product or part, accident, fire, flood or other Act of God, or your failure to pay entire contract price when due.

The foregoing limited warranty shall be null and void if, after shipment from our factory, the item is modified in any way or a component of another manufacturer, such as but not limited to; an actuator is attached to the item by anyone other than a Seller factory authorized service personnel.

All orders accepted shall be deemed accepted subject to this limited warranty, which shall be exclusive of any other or previous warranty, and this shall be the only effective guarantee or warranty binding on Seller, despite anything to the contrary contained in the purchase order or represented by any agent or employee of Seller in writing or otherwise, notwithstanding, including but not limited to implied warranties.

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## Sales and Service

For information about our worldwide locations, approvals, certifications and local representative:

Web site: [www.dezurik.com](http://www.dezurik.com) E-Mail: [info@dezurik.com](mailto:info@dezurik.com)



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