

DEZURIK MO MANUAL OVERRIDE FOR ROTARY DIAPHRAGM ACTUATORS

Instruction D10114
August 2012

Instructions

These instructions provide information about the MO manual override used with the DR40, DR55 and DR85 Rotary Diaphragm actuators. They are for use by personnel who are responsible for installation, operation and maintenance of Rotary Diaphragm 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 that have been removed from service with the assumption of pipeline material within the valve.

Inspection

Your MO manual override 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 local 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.

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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!

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.

MO Manual Override for Rotary Diaphragm Actuators

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.

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.

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!

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 ± 2 foot pounds (19 ± 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 ± 3 foot pounds (35 ± 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 ± 2 inch pounds (9.0 ± 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 ± 2 foot pounds (16 ± 3 Nm) for the DR55, or 18 ± 2 foot pounds (24 ± 3 Nm) for the DR85.

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

MO Manual Override for Rotary Diaphragm Actuators

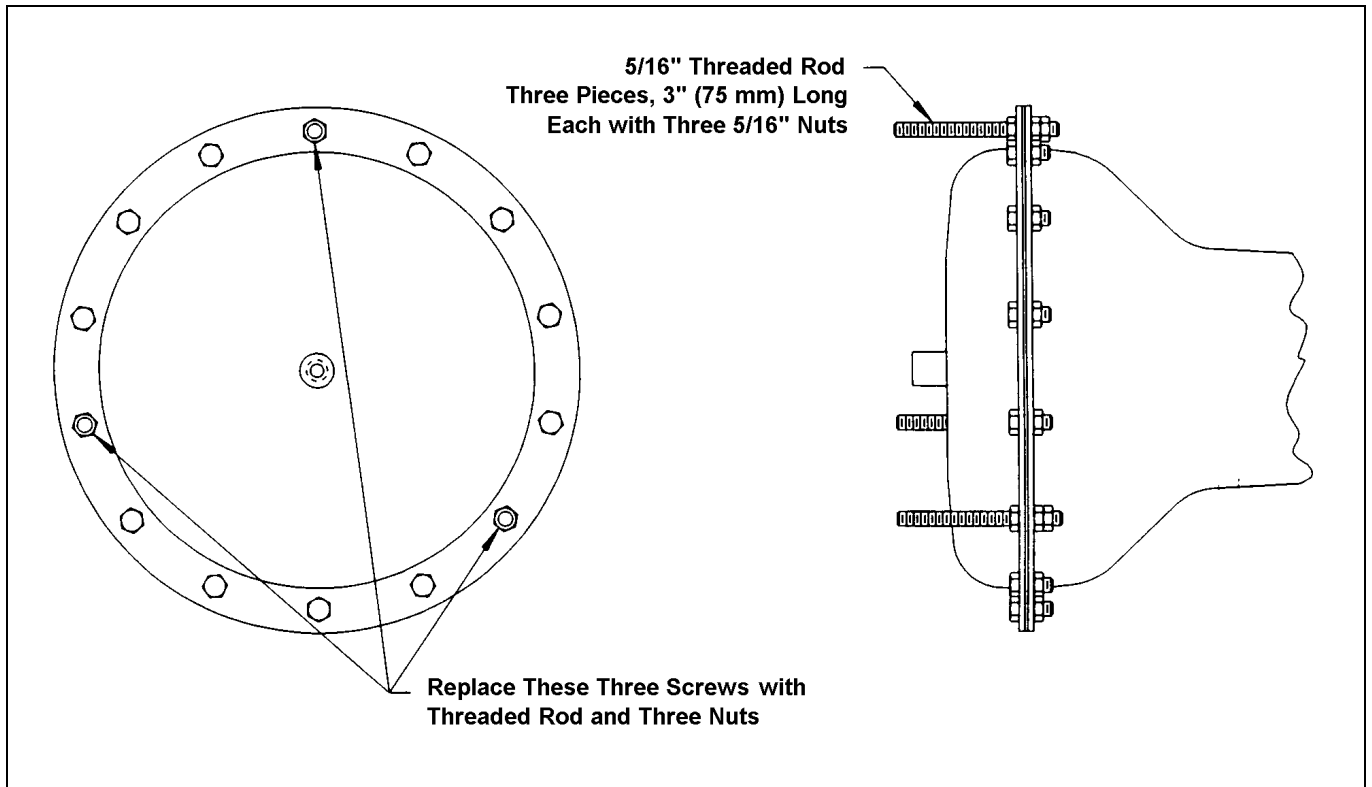


Figure 1—Stud Requirements For DR40 Diaphragm Cover Removal

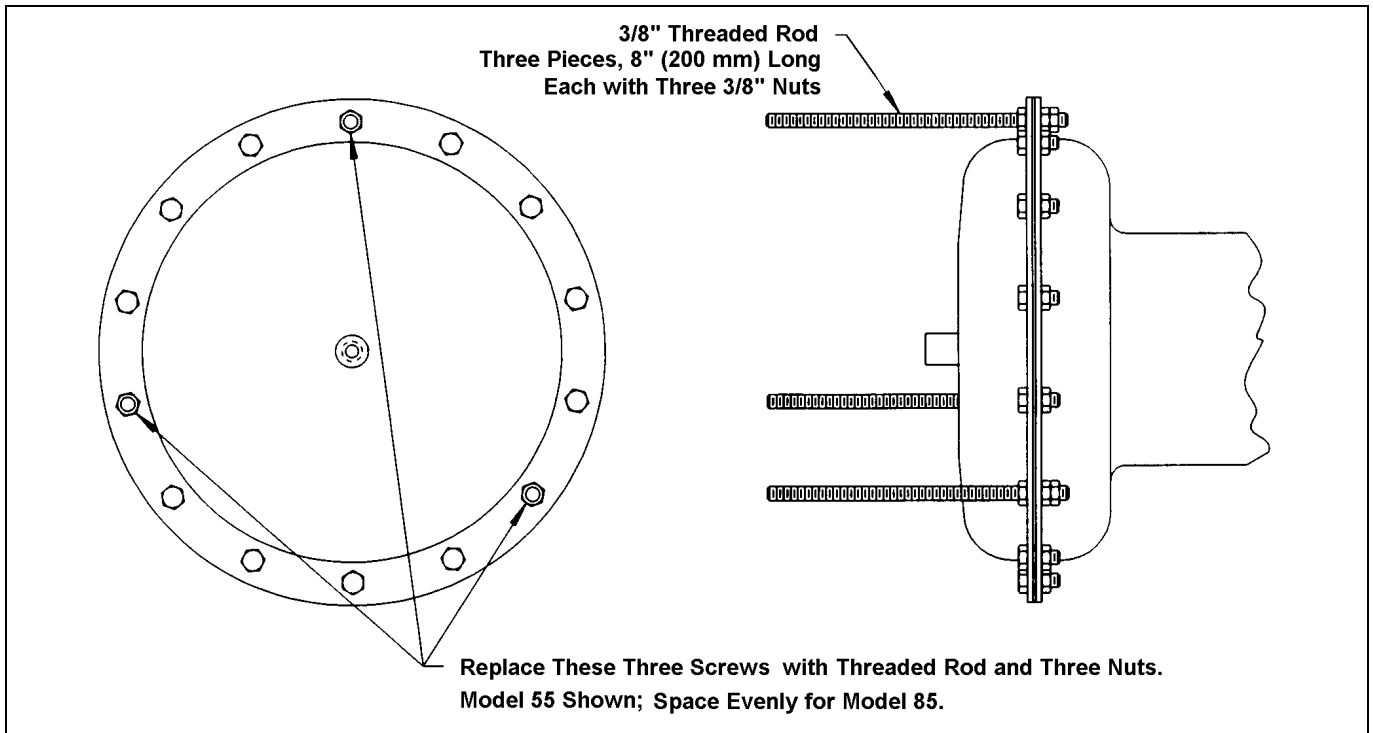


Figure 2—Stud Requirements For DR55 and DR85 Diaphragm Cover Removal

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Sales and Service

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

Web site: www.dezurik.com E-Mail: info@dezurik.com



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