

WARNING: Installation, usage and maintenance of this product must be in compliance with all RegO® instruction as well as requirements and provisions of NFPA #54, NFPA #58, DOT and all applicable federal, state, provincial and local standards, codes, rules, regulations and laws.

Inspection and maintenance on a periodic basis is essential.

Installation and maintenance should be performed only by qualified personnel.

Be sure all instructions are read and understood before installation and operation.

Thermal links or thermal fuses must not be painted or have any type of ornamental finish applied. Doing so could prevent the thermal device from activation when exposed to a temperature of 250°F.

CAUTION: Contact or inhalation of liquid propane, ammonia and their vapors can cause serious injury or death! NH₃ and LP-Gas must be released outdoors in air currents that will insure dispersion to prevent exposure to people and livestock. LP-Gas must be kept far enough from any open flame or other source of ignition to prevent fire or explosion! LP-Gas is heavier than air and will not disperse or evaporate rapidly if released in still air.

Foreword

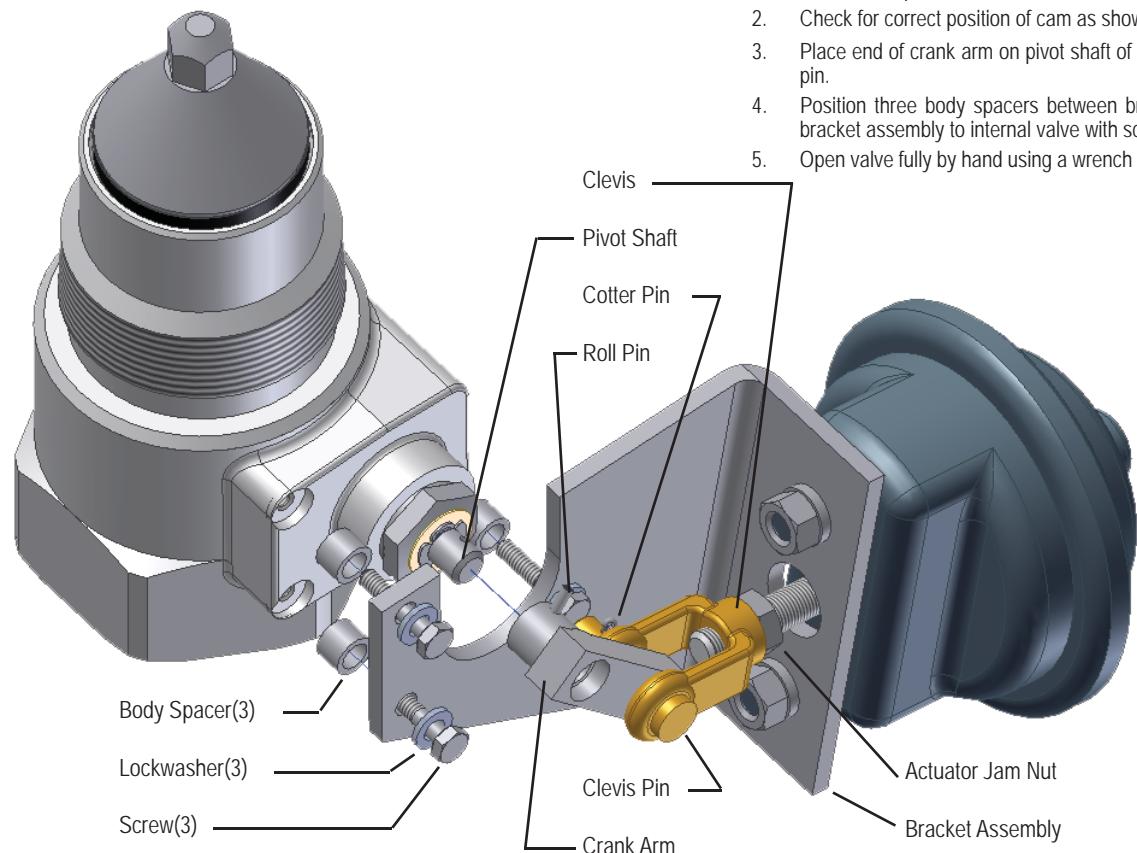
The A3213PA Pneumatic Actuator is designed especially for use with the A3212R, A3212RT, A3213A, A3213R, A3213RT, A3213T, A3213D and A3213DT Series Internal Valves. It is designed to provide a convenient means for opening and closing the valve from a remote location. Responsibility for proper installation must be met by the installer.

How the Pneumatic Actuator Works

The pneumatic actuator can be pressurized with either air, nitrogen, or propane vapor. The actuator's diaphragm rod moves the valve's operating lever to the open position when pressure is applied. Upon loss of pressure, the valve's operation lever returns to the closed position. The A3213PA Pneumatic Actuator operates with a minimum pressure of 35 psig and a maximum operation pressure of 100 psig.

The A3213PA Pneumatic Actuator is compatible with existing air interlock systems. It also provides a convenient means of operating a number of internal valves on stationary storage tanks at bulk plants from remote locations.

Figure 1
Pneumatic Actuator Installation



A3213PA Pneumatic Actuator for A3212R, A3212RT, A3213D, A3213DT & Obsolete A3213A, A3213R, A3213RT, A3213T Series Internal Valves



NOTE: The A3213PA is factory set to operate the A3213A, A3213R, A3213RT & A3213T Series Internal Valves, no field adjustment is necessary. If you are installing this actuator on the A3212R & A3212RT Series the following adjustments are required.

1. Loosen jam nut from the clevis.
2. Turn the clevis 2 full turns counterclockwise (out). See Figure 3.
3. Hold the clevis to keep it from turning, then tighten jam nut against the clevis.
4. This readjusted dimension (figure 3) should be approximately .500".

Pneumatic Actuator Installation

NOTE: Before attaching actuator to valve, be sure cam is in contact with nylon wear button on bottom of stem. See Figure 2.

1. Remove roll pin from lever and remove lever from pivot shaft.
2. Check for correct position of cam as shown in Figure 2.
3. Place end of crank arm on pivot shaft of internal valve and install (drive) roll pin.
4. Position three body spacers between bracket and internal valve. Secure bracket assembly to internal valve with screws and lock washers.
5. Open valve fully by hand using a wrench to rotate crank arm. Pressurize the



- actuator to fully extend actuator rod.
- The clevis should be preset to fully open the valve (A3213 Series valves only).
 - Verify the actuator does not overstroke the valve. If any adjustment is necessary then continue with Step 9, otherwise proceed to Step 8.
 - Remove pressure from the actuator and release valve to close position.
 - Remove clevis pin and loosen jam nut. Turn clevis one turn clockwise if valve overstrokes. Tighten jam nut. See Figure 3.
 - Reinstall clevis pin. Secure with cotter pin.

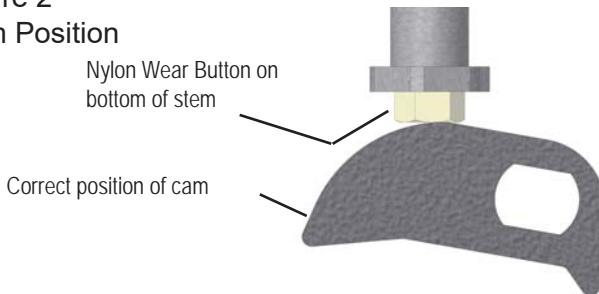
Functional Testing

Connect a 50 to 60 psig air line through a pressure regulated valve to the actuator.

Bench Test

Figure 2

Cam Position



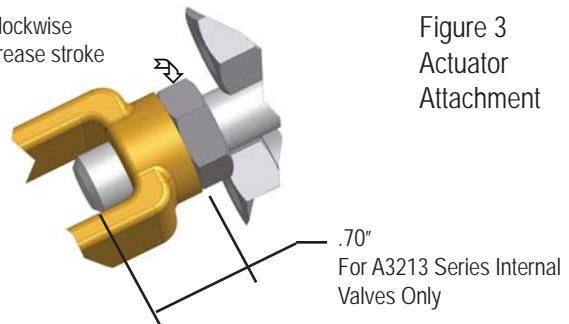
Slowly and alternately apply 0 to 35 psig air pressure to the actuator two or three times while checking for binding and any interference. Make any necessary adjustment so the actuator opens freely.

Installed Test

Same as the bench test, except a higher air pressure may be necessary if tank pressure is present.

Figure 3

Actuator Attachment



NOTICE

LP-Gas is extremely flammable and explosive. Failure to install parts exactly as described in the instructions could result in a product that will not perform satisfactorily. Even if parts are correctly installed, the product might fail to perform satisfactorily, if other parts are worn, corroded or dirty. Improper repair can cause leaks and malfunction, which could result in bodily injury and property damage. Any such use or installation of parts must ONLY be done by experienced and trained personnel using accepted governmental and industrial safety procedures.

Most RegO® products are listed with Underwriters Laboratories as manufactured. If repaired, the continued validity of the UL listing is contingent upon proper inspection to determine what needs repairing, proper repair using RegO® parts and procedures, and proper testing for leakage and performance following repairs and installation.

RegO® assumes no responsibility or liability for performance of products repaired in the field. It must be clearly understood that the person or organization repairing the product assumes total responsibility for performance of the product.

LIMITED 10 YEAR WARRANTY

RegO® warrants to the original purchasers the products and repair kits manufactured by it to be free from defects in materials and workmanship under normal use and service for a period of 10 years from the date of manufacture. If within thirty days after buyer's discovery of what buyer believes is a defect, buyer notifies in writing and ships the product to RegO® at 100 RegO Drive, Elon, N.C. 27244, RegO®, at its option, and within forty-five days of receipt, will repair, replace F.O.B. point of manufacture, or refund the purchase price of that part or product found by RegO® to be defective. Failure of buyer to give such written notice and ship the product within thirty days shall be deemed an absolute and unconditional waiver of any and all claims of buyer arising out of such defect.

This warranty does not extend to any product or part that is not installed and used continuously after installation in accordance with RegO®'s printed instructions, all applicable state and local regulations, and all applicable national standards, such as those promulgated by NFPA, DOT and ANSI. This warranty does not extend to any product or part that has been damaged by accident, misuse, abuse, failure to maintain, or neglect, nor does it extend to any product or part which has been modified, altered, disassembled, or repaired in the field. This warranty does not cover any cosmetic issues, such as scratches, dents, marring, fading of colors or discoloration.

Except as expressly set forth above, and subject to the limitation of liability below, RegO® MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, with respect to its products and parts, whether used alone or in combination with others. RegO® disclaims all warranties not stated herein.

LIMITATION OF LIABILITY

RegO® total liability for any and all losses and damages arising out of any cause whatsoever shall in

no event exceed the purchase price of the products or parts in respect of which such cause arises, whether such causes be based on theories of contract, negligence, strict liability, tort or otherwise.

RegO® shall not be liable for incidental, consequential or punitive damages or other losses. RegO® shall not be liable for, and buyer assumes any liability for all personal injury and property damage connected with the handling, transportation, possession, further manufacture, other use or resale of products, whether used alone or in combination with any other products or materials.

From time to time buyers might call to ask RegO® for technical advice base upon limited facts disclosed to RegO®. If RegO® furnishes technical advice to buyer, whether or not a buyer's request, with respect to application, further manufacture or other use of the products and parts, RegO® shall not be liable for such technical advice or any such advice provided to buyer by any third party and buyer assumes all risks of such advice and the results thereof.

NOTE: Some states do not allow the exclusion or limitation of incidental, consequential or punitive damages, so the above limitation or exclusion may not apply to you. The warranty gives you specific legal rights, and you may have other rights that vary from state to state. The portions of the limited warranty and limitation of liability shall be considered severable and all portions which are not disallowed by applicable law shall remain in full force and effect.

WARNING

All RegO® products are mechanical devices that will eventually become inoperative due to wear, corrosion and aging of components made of materials such as rubber, etc. The environment and conditions of use will determine the safe service life of these products. Periodic inspection and maintenance are essential to avoid serious injury and property damage.

Many RegO® products are manufactured components which are incorporated by others on or in other products or systems used for storage, transport, transfer and otherwise for use of toxic, flammable and dangerous liquids and gases. Such substances must be handled by experienced and trained personnel only, using accepted governmental in industrial safety procedures.

NOTICE TO USERS OF PRODUCTS

The Limited Warranty stated above is a factory warranty to the first purchasers of RegO® products. Since most users have purchased these products from RegO® distributors, the user must within thirty (30) days after the user's discovery of what user believes is a defect, notify in writing and return the product to the distributor from whom he purchased the product/part. The distributor may or may not at the distributor's option choose to submit the product/part to RegO®, pursuant to this Limited Warranty. Failure by buyer to give such written notice within thirty (30) days shall be deemed an absolute and unconditional waiver of buyer's claim for such defects. Acceptance of any alleged defective product/part by RegO®'s distributor for replacement or repairs under the terms of RegO®'s Limited Warranty in no way determines RegO®'s obligations under this Limited Warranty.

Because of a policy of continuous product improvement, RegO® reserves the right to change designs, materials or specifications without notice.

REGO®

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