F-12972 FAIL CLOSED PNEUMATIC CYLINDER ACTUATOR ASSEMBLY

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REMOVAL INSTRUCTIONS

Caution!
Prior to servicing, confirm no system pressure is present in the valve. Do not attempt to re-adjust the spring tension or remove the spring from the actuator assembly as personal injury may occur.

1. Pneumatically pressurize the actuator air cylinder to open the valve to mid-stroke.
2. Disengage any supports attached to the actuator assembly.
3. Loosen the ½-20 valve stem jam nut (11).
4. Unscrew the valve stem from the spring holder (5), using the flats provided on the valve stem. Push the valve stem down on the valve body seat. You may need to loosen the packing lock nut and packing gland to allow the stem to move freely.
5. Remove the yoke lock nut (6), from the actuator adapter. You may need to use a hammer and punch to loosen the yoke lock nut.
6. Once the valve stem is disengaged and the yoke lock nut is removed, carefully lift and remove the actuator assembly from the valve while maintaining the pneumatic pressure in the air cylinder. In a safe manner, lay the actuator assembly down on a horizontal, level surface.
7. Slowly bleed off the pneumatic pressure in the air cylinder allowing the spring and spring holder to fully extend. Caution should be taken to ensure the spring assembly does not rapidly extend due to sudden loss of pneumatic supply.

Caution!
Make certain no obstructions, fingers, etc. are present over spring movement within the yoke area as these situations may result in personal injury.

8. Make sure to remove and discard the original actuator spacer, (7).

Caution!
The actuator must be adequately supported to prevent extraordinary loads to the pressure equipment.

INSTALLATION INSTRUCTIONS

Warning!
Prior to servicing, confirm no system pressure is present in the valve. The actuator assembly is provided with the spring tension pre-adjusted from the factory. Do not attempt to re-adjust the spring tension or remove the spring from the actuator assembly as personal injury may occur.

1. Place the newly provided actuator spacer (7), on the actuator adapter per Figure 1.
2. Make sure the valve stem is pushed down onto the valve body seat. Care should be taken not to scratch or bend the valve stem during the actuator assembly installation process.
3. Pneumatically pressurize the actuator air cylinder to the fully open position.
4. Carefully lift the actuator assembly over the top of the valve and rest squarely on the actuator spacer.
5. Install the yoke lock nut (6), over the valve stem and screw down hand tight onto the actuator adapter threads (Coat the threads with nickel never seize compound or equivalent for ease of disassembly in the future). Further tighten the yoke lock nut using a punch and hammer to secure the actuator cage (2), to the actuator adapter.
6. Screw the ½-20 jam nut (11), all the way down on the valve stem threads. Lift the valve stem, and fully engage the remaining threads into the spring holder (5). Be certain to maintain the pneumatic pressure within the air cylinder. Do not lock the valve stem threads with the jam nut at this time.
7. Once the valve stem is fully engaged into the spring holder, slowly bleed off the pressure within the air cylinder until completely exhausted, and the spring assembly is fully extended.
8. Unscrew the valve stem from the spring holder until it stops against the valve body seat.
9. To establish the actuator pre-load, apply enough pneumatic pressure in order to lift the valve stem off the valve body seat and unscrew the valve stem one to two full threads. Lock the valve stem in this position by tightening the jam nut against the spring holder. Do not allow the spring holder to rotate while tightening the jam nut.
10. Slowly bleed off the pressure within the air cylinder allowing the valve to close completely. The valve should be tested for leak tightness across the seat and should begin opening with a 55 ±5 psig pneumatic signal. If valve is not leak tight, repeat steps 9 and 10 as necessary to achieve desired leak tightness.

TROUBLESHOOTING GUIDE

PROBLEM	SOLUTION
When pneumatic source is applied to supply port, actuator stem does not retract.	Ensure vent port is free and clear of all obstructions.
After attaching actuator to valve, the valve does not shut-off against the fluid pressure	See steps 9 & 10 in the Installation Instructions section.
After attaching actuator to valve, the valve does not fully open.	Ensure the spacer (7) was installed between the valve and actuator.
For other problems	Contact factory in USA at 813-978-1000

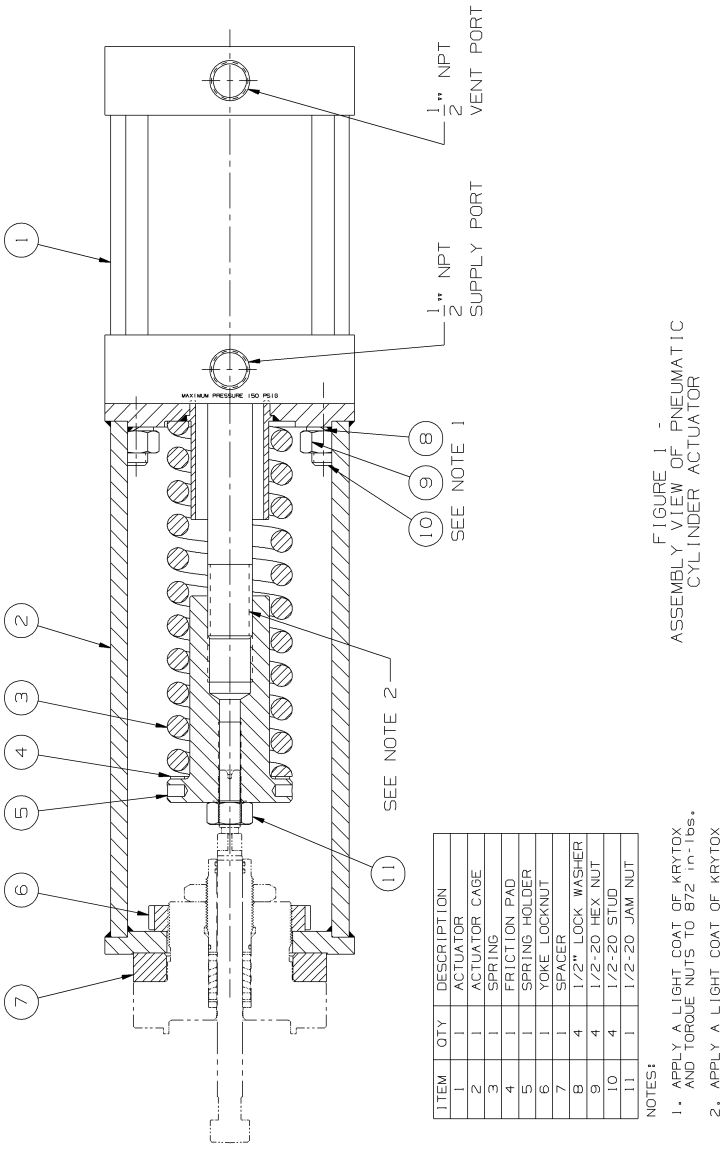

FIGURE 1 -
ASSEMBLY VIEW OF PNEUMATIC
CYLINDER ACTUATOR

ITEM	QTY	DESCRIPTION
1	1	ACTUATOR
2	1	ACTUATOR CAGE
3	1	SPRING
4	1	FRICTION PAD
5	1	SPRING HOLDER
6	1	YOKE LOCKNUT
7	1	SPACER
8	4	1/2" LOCK WASHER
9	4	1/2-20 HEX NUT
10	4	1/2-20 STUD
11	1	1/2-20 JAM NUT

NOTES:
1. APPLY A LIGHT COAT OF KRYTOX AND TORQUE NUTS TO 872 in-lbs.
2. APPLY A LIGHT COAT OF KRYTOX

It is solely the responsibility of the system designer and user to select products and materials suitable for their specific application requirements and to ensure proper installation, operation and maintenance of these products. Assistance shall be afforded with selection of materials based on technical information supplied to CPC-Cryolab™; however, system designer and user retain final responsibility. The designer should consider applicable Codes, material compatibility, product ratings and application details in selection and application. Improper selection, application or use of products described herein can cause personal injury or property damage. If designer or user intends to use product for an application or use other than originally specified, he must reconfirm that the selection is suitable for new operating conditions

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