



**BU-3153**  
**MAINTENANCE INSTRUCTIONS FOR DA AIR ACTUATORS**

TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE NO.</u>
1.0	References	2
2.0	Purpose	2
3.0	Scope	2
4.0	Instructions	2 - 3
5.0	Record of Revisions	4



## 1.0 REFERENCE

- 1.1 Drawings B-2425 and B-2427 valve actuator assembly drawings.

## 2.0 PURPOSE

- 2.1 To establish maintenance instructions when replacing "o" rings in valve actuators.

## 3.0 SCOPE

- 3.1 These maintenance instructions are to be used for all DA actuators.

## 4.0 INSTRUCTIONS

### 4.1 DA ACTUATOR DISASSEMBLY.

- 4.1.1 Place valve assembly in a vise equipped with "soft jaws" and tighten vise.
- 4.1.2 Connect an air supply to the top of the actuator and pressurize to fully seat valve. Depressurize and disconnect air supply.
- 4.1.3 Loosen and remove the hex socket set screws that hold the valve body and bottom plate together.
- 4.1.4 Loosen and back off the hex jam nut from the stem coupling (item 6).
- 4.1.5 Rotate actuator and bottom plate subassembly until coupling is disengaged from the upper stem.
- 4.1.6 Remove valve subassembly from vise.
- 4.1.7 Place valve actuator and bottom plate subassembly in vise equipped with "soft jaws" and tighten vise.
- 4.1.8 Place appropriate spanner wrench on air actuator cover (item 2), turn counterclockwise to loosen.
- 4.1.9 Rotate counterclockwise until cover (item 2) is disengaged from the housing (item 1).
- 4.1.10 Remove piston (item 3) and rod (item 4) subassembly from actuator subassembly. Using a packing puller, pierce "o" ring (item 7) and pull through the bottom of housing (item 1).



4.1.11 Remove "o" ring (item 8) from piston (item 3) and "o" ring (item 9) from housing (item 1).

4.1.12 Check all "o" ring grooves and sealing surfaces for damage.

#### 4.2 DA ACTUATOR ASSEMBLY

General Note: Lightly grease all replacement "o" rings before reassembling actuator.

4.2.1 Insert "o" ring (item 7) through the bottom of housing (item 1).

4.2.2 Place "o" ring (item 8) into piston (item 3) "o" ring groove.

4.2.3 Carefully align piston (item 3) and rod (item 4) subassembly with housing (item 1) then press into place.

4.2.4 Place "o" ring (item 9) into housing (item 1) "o" ring groove.

4.2.5 Carefully align cover (item 2) threads with housing (item 1) threads. Rotate clockwise and engage threads. Turn cover until finger tight.

4.2.6 Place appropriate spanner wrench on air actuator cover (item 2) turn clockwise until cover bottoms out on the housing (item 1) and then tighten.

4.2.7 Connect an air supply line to the top of the actuator. Slowly pressurize to bring the piston to the bottom of the available stroke. Measure and record the length of the exposed rod. Depressurize. With a rubber mallet, tap the rod back into the cylinder approximately 1/8".

4.2.8 Carefully align the upper stem of the valve assembly with the coupling attached to the hex socket set screw (item 6) on the air actuator and screw valve subassembly into place.

4.2.9 Install the hex socket set screws that hold the bottom plate and valve body together. Tighten screws as required.

4.2.10 Tighten locknut against the coupling attached to air actuator.

NOTE: Connect air supply line to side port and top port and check travel. The length of the exposed rod should be at least 1/8" less than the length recorded in step 4.2.7. Adjust coupling as necessary to achieve that maximum exposed length. Valve and actuator assembly is now ready for use.



**RECORD OF REVISIONS**

REV NO	DESCRIPTION OF CHANGES	DATE	BY	APPR
0	Original document	8/23/02	DTG	DTG