



ACT-156 Service Instructions

I. Introduction

ACT-156 is a pressure operated pneumatic linear actuator. It is designed to work with driving (operating) pressures of up to 125 psig on the backside of its diaphragm. It features a maximum stroke of approximately .27-inches. In its normal or relaxed mode, the shaft is retracted fully into the housing, extending when pressurized.

Providing reasonable care and cleanliness standards are maintained, the valve should provide many years of trouble free operation. Should the need for disassembly and inspection and/or maintenance be required, the following instructions are provided to guide you through the necessary steps.

II. Disassembly

1. Screw two ¼-20 bolts into the retaining threads on the face of the Male Housing.
2. Place a screwdriver between the two 14-20 bolts to act as a wrench.
3. Place a 5/8 end wrench on the bung on the backside of the Female Housing. Loosen by turning in a CCW direction.

Note: The Male and Female Housing are Loctited together and may require a bit of elbow grease to loosen/separate.

4. Separate Male Housing from Female Housing.
5. Remove Piston Assembly, Spring and Diaphragm.
6. Rotate (wiggle) Shaft and Ball Assembly in Piston to determine if the ball/socket joint is excessively loose (Ball should rotate freely but, you should not be able to feel any “slop” or clearance in the socket).

If disassembly of the Ball/Socket assembly is required, perform Steps 7 & 8. Otherwise proceed to Step 9.

7. Remove “C” clip from piston with a pair of internal snap ring pliers.
8. Remove Ball Socket and Shaft Assembly from Piston.
9. Clean components with a light solvent such as mineral spirits if required. Dry with compressed air.

III. Inspection

1. Examine Diaphragm and (if necessary) Ball for wear and/or damage.
2. Replace damaged or worn components. Refer to ACT-156 assembly drawing for component part number information.

IV. Re-assembly

1. Thread Shaft into Ball, hand tight, bottoming threads.
2. Place Ball/Shaft assembly into Piston receiver pocket.
3. Slide Socket over shaft, concave face towards piston and seat fully in Piston.
4. Replace Internal Snap Ring in Piston receiver groove, seat fully.
5. Place Diaphragm in Female Housing, ensuring that Diaphragm lip is fully seated in receiver groove and that Diaphragm is not puckered or wrinkled.
6. Place Piston Assembly in Diaphragm, seat fully inside Diaphragm/Female Housing Assembly.
7. Place several drops of Blue Loctite on Male Housing thread.
8. Insert Spring in Piston receiver pocket.
9. Hand tighten Male Housing in Female Housing.
10. Torque housings together to 50-in lb.

Note: Do not over-torque Male Housing – Female Housing joint. Diaphragm distortion and ultimately failure will occur.

