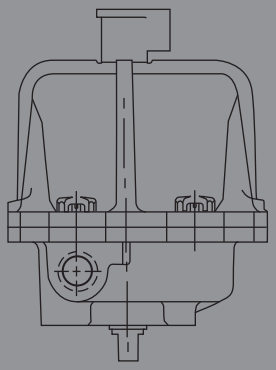


Mechanical Brake to 10-23 75 120 and 240 VAC Actuators

FCD WCENIM2072-01 AQ (Part 16434)

Installation, Operation and Maintenance

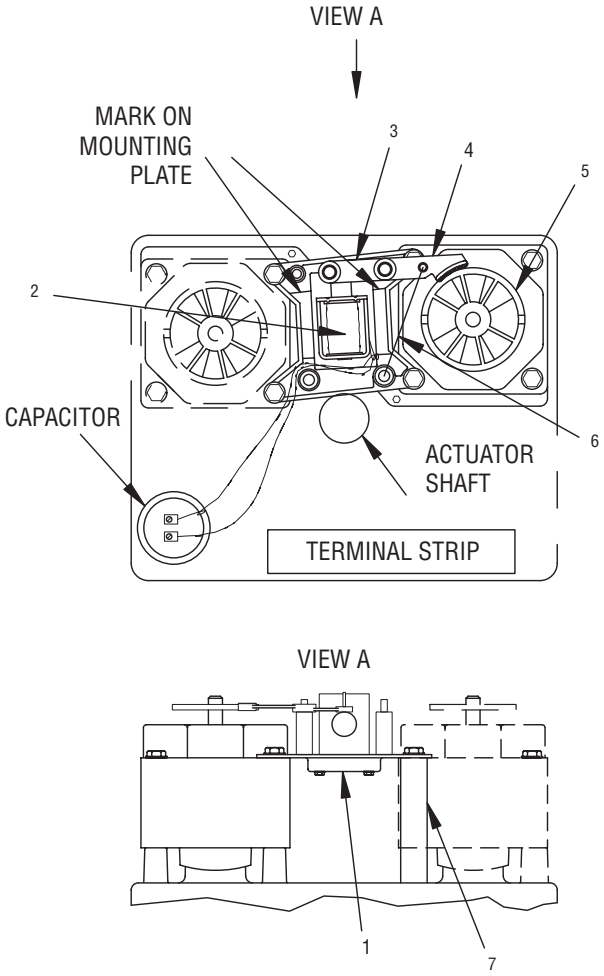
I. Assembly

⚠ **CAUTION:** The actuator's rated voltage must be the same as the brake coil's rated voltage as marked on the brake coil housing.

1. Remove the actuator cover.
2. Mount the coil housing (2) parallel to the sides of the mounting plate (1), using the two small pan head screws and their lockwashers. Locate the front edge of the coil housing onto the brake mounting plate so that the coil housing lines up with the two cast lines on the mounting plate. (See Figure 1.)
3. The mounting plate is preliminarily secured loosely by the existing motor screws (4 screws) on the inner sides of motor stators), as shown in Figure 1. For single motor actuators, two spacers (7) and screws are provided to support the brake mounting plate.
4. Insert the coil plunger (3) into the coil housing with the coil plunger pin facing up.
5. Mount the brake arm (4), as shown in Figure 1, so that the middle hole of the arm fits over the taller mounting plate post and the end hole in the arm fits over the coil plunger pin.
6. Install the retaining clip over the brake arm post using a tool similar to a nut driver. DO NOT force the retaining clip onto the post so that the brake arm binds. Once the clip is in position, the brake arm must be able to move freely in either direction, with no binding.
7. Install the set screws into the brake disc(s) (5). Place disc over the motor shaft, align it with brake arm pad, and secure set screws. Be sure that the brake disc fits securely onto the motor shaft extension.

NOTE: Actuator sizes 20-23 use two brake discs and one brake arm, as shown in Figure 1. The second brake disc acts as a fan to cool the motor.

Figure 1 – Size 1023 75 120 VAC



FLOWSERVE®

Worcester Actuation Systems

8. Connect the open loop end of the spring (6) to the smaller hole in the brake arm. Place the closed loop end of the spring over the smaller post (closer to actuator shaft) of the brake mounting plate and secure into position with the retaining clip.

9. Check that the brake arm clears the brake disc when the coil plunger is bottomed into the coil housing. Clearance between brake arm and brake disc should be .020" to .030" (check with feeler gage). Also ensure that pad on brake arm fully contacts brake disc when plunger is released. Securely tighten the 4 motor screws holding the brake solenoid mounting plate in proper/final location. Releasing the plunger causes the springs to return the brake arm to the brake disc, which provides the braking action.

II. Wiring

1. Connect the two brake coil leads having the ¼" quick connect to the actuator's motor capacitor. Refer to schematic-wiring diagram inside actuator cover.

2. Using the cable tie, fix coil leads into a position away from any rotating parts.

III. Testing

1. Energize actuator for rotation in both open and closed directions. At the rated actuator voltage, the brake coil is energized and moves the plunger to release brake arm. Clearance of .020" to .030" **must exist** between the brake arm and the brake disc when power is applied to the actuator.

2. If the brake arm is too close to the brake disc, realign the coil housing so that coil plunger can move farther toward the center of the actuator, permitting more movement of the brake arm.

3. Plunger chattering indicates a low supply voltage. If actuator voltage is at the rated conditions, realign coil housing so that coil moves away from the center of the actuator to reduce plunger movement.

4. All coil adjustment is done in **small increments** of .015 inches or less.

5. Additional adjustment may be done by moving mounting plate toward/away from actuator shaft.

6. Once proper operation of the brake is verified, replace actuator cover.

FLOWSERVE CORPORATION
1978 Foreman Drive
Cookeville, TN38501
Phone 931-432-4021
Fax 931-432-5518
www.flowserve.com

FLOWSERVE®

Worcester Actuation Systems

(Part IOM 16434)
FCD WCENIM2072-01 AQ 08/18 Printed in USA.