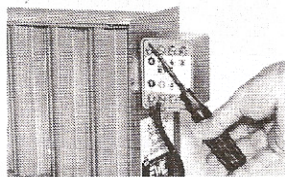
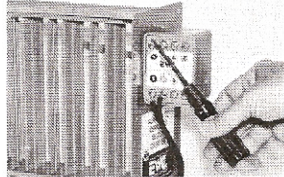


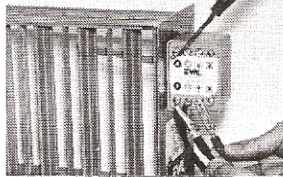
MOTOR ACTUATOR CHECK OUT PROCEDURE



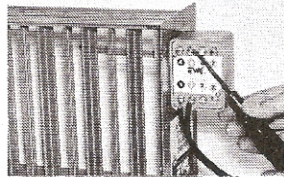
1.) With 24 volts 50/60 Hz connected to motor terminals 1 and 2, short terminals 4 and 5. Damper should open unless it is already open.



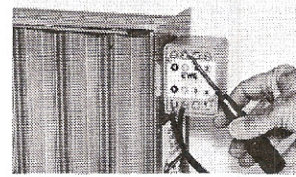
2.) As the damper goes from the closed to the open position, at the halfway point the end switch from terminals 2 to 3 will make.



3.) To check the operation of the end switch, connect a 24 volt test light or voltmeter to terminals 1 and 3. As the damper opens and the switch makes, the test light should light or read transformer voltage on voltmeter.

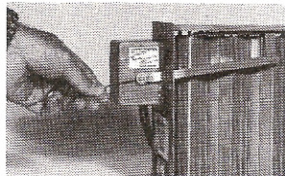


4.) To close the damper short terminals 5-6. The motor shaft should rotate 180° and close the damper.

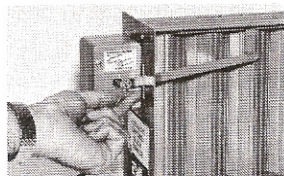


5.) As the damper closes, at the halfway point the end switch will open, and after 30 seconds the motor will stop with the damper in the closed position. If all the above functions performed as indicated the motor actuator is OK.

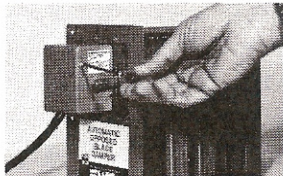
TO REPLACE A MOTOR ACTUATOR



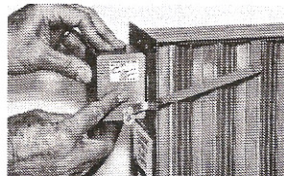
1.) With the small (1/16" hex) Allen wrench loosen the set screw on crank arm.



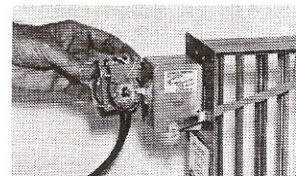
2.) Remove crank arm from motor drive shaft.



3.) Remove the two mounting screws shown that secure the motor to the motor box.



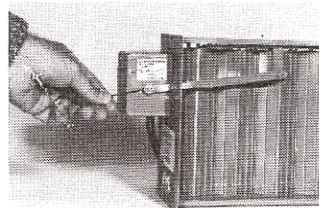
4.) Push in on the motor drive shaft and the entire motor actuator assembly will slip out of the motor box.



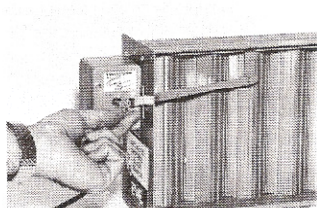
5.) To install replacement motor actuator, reverse the described procedure. Note: Damper motor actuators are shipped from the factory with switch in "closed" damper position.

Note: On damper models that use a gear and gear track to drive the damper the closed and open crank arm positions are reversed from those shown.

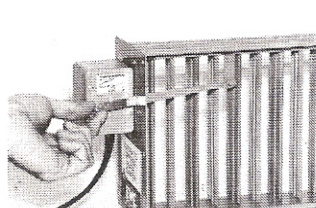
TO CHECK OUT AN OPPOSED BLADE DAMPER



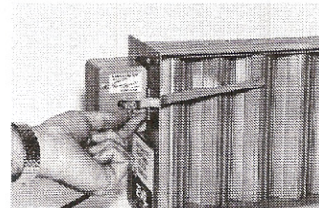
1.) With the small (1/16" hex) Allen wrench loosen the set screw on the crank arm.



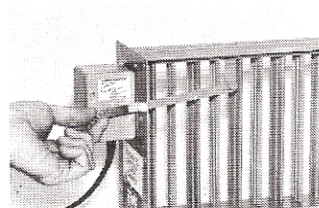
2.) Position the damper so that the damper draw bar is at the top of the damper. Remove the crank arm from the motor drive shaft. Pull on the linkage bar thereby opening the damper.



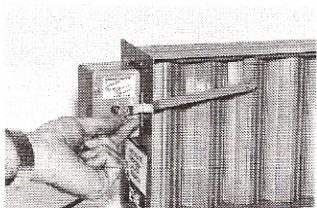
3.) Still holding the crank arm in your fingers, push in on the linkage bar thereby closing the damper.



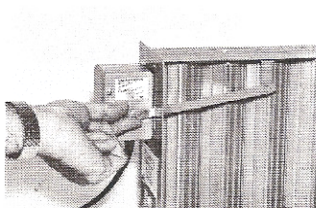
4.) Again pull on the linkage bar opening the damper.



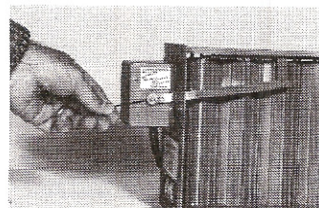
5.) Repeat this action of pushing and pulling in and out on the damper linkage a number of times.



6.) If the linkage and damper move freely and easily the damper is OK. If the damper works roughly or requires considerable effort to move, damper should be replaced.



7.) If damper is OK, drive motor to closed position per motor check-out procedure. With the damper in closed position replace crank arm on motor actuator shaft.*



8.) Tighten the set screw on the crank arm to the motor drive shaft with the Allen wrench.

*Note: On damper models that use a gear and gear track to drive the damper the closed and open crank arm positions are reversed from those shown.