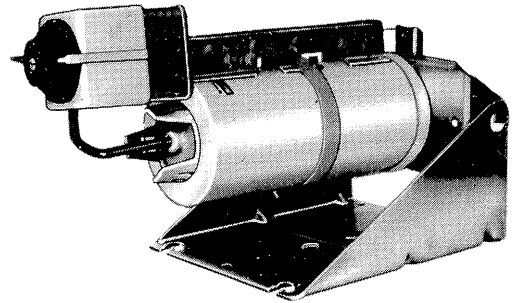


### MP909E POSITIVE POSITIONER RETROFIT KIT

### Installation Instructions

## GENERAL

The MP909E Positive Positioner Retrofit Kit Part No. 14004 137-001 (Fig. I), is designed for upgrading MP909E Damper Operators that have a 5 to 10 psi (34 to 69 kPa) spring range. The addition of the positive positioner converts the MP909E to the equivalent of an MP909H.



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## APPLICATION

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These operators are used for proportional control of variable volume terminal units, mixing boxes, and small or medium sized dampers. Adding the positive positioner

to your 5 to 10 psi (34 to 69 kPa) MP909E updates your operator to the latest model.

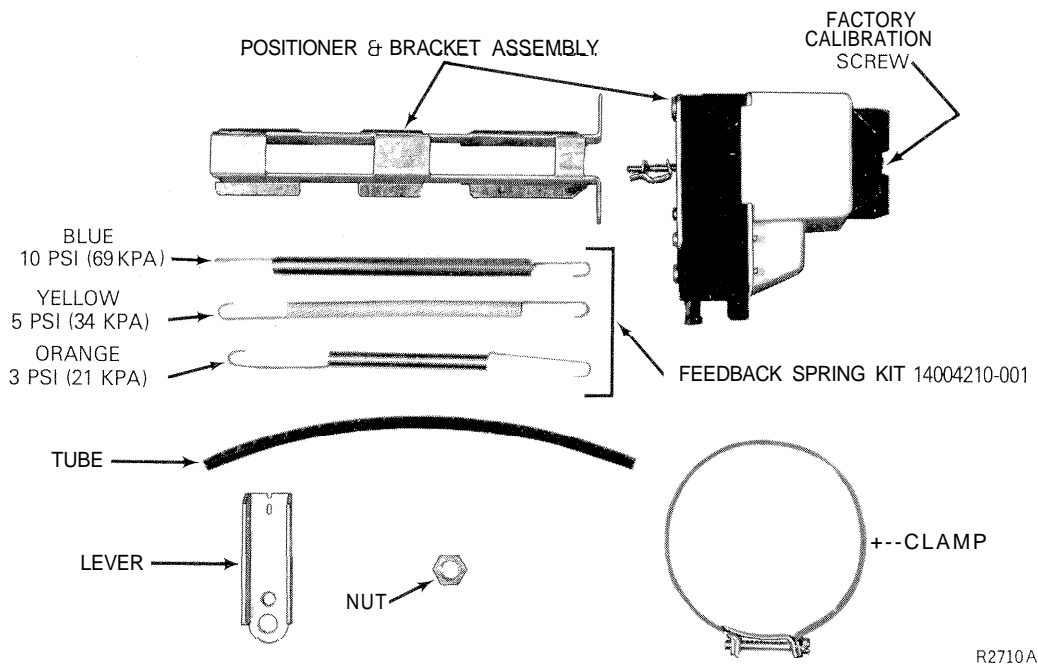


Fig. 1 .MP909E Positive Positioner Retrofit Kit, Part No. 14004137-001.

## POSITIONER INSTALLATION PROCEDURE

1. Reduce branch line air pressure to operator by adjusting controller setpoint to obtain 0 psi (0 kPa) BLP, or by removing connected tubing.
2. Remove linkage from operator shaft.
3. Thread the nut provided in the kit (Fig. 1) all the way onto the operator shaft.
4. Install lever on operator shaft.
5. Reinstall linkage.
6. Secure positioner and bracket assembly in place with clamp as shown in Figure 2.
7. Install tubing from operator inlet fitting to positioner branch port.
8. Slide the desired feedback spring of 3, 5, or 10 psi (21, 34, or 69 kPa) through the bracket and hook it to the lever and to the positioner.
9. Set start point on positioner by turning the knob to any setting between 1-1/2 and 13 psi (10 and 90 kPa), Each detent on the knob equals 1/4 psi (1.8 kPa).
10. Connect main and branch lines and perform operational check.
11. Adjust start point if necessary.

NOTE: Follow same procedure to convert new MP909E operators disregarding Step 1.

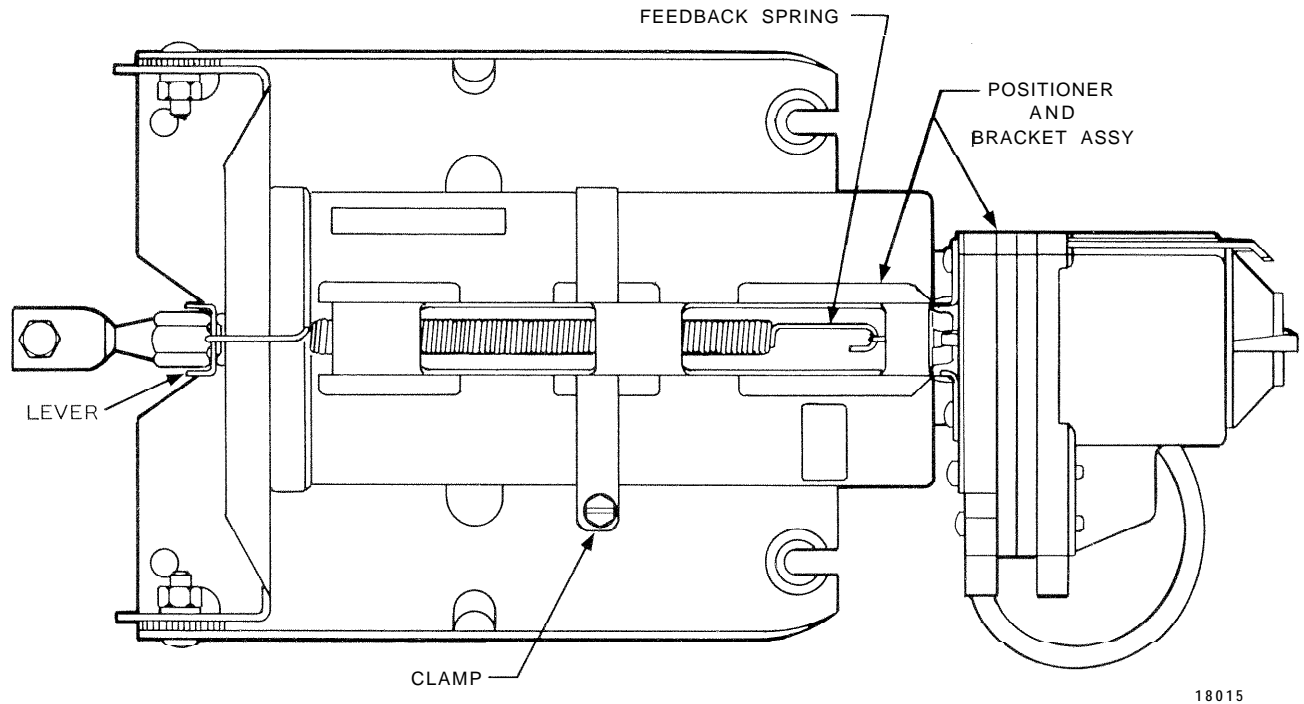


Fig. 2. MP909E Showing Mounted Positive Positioner Retrofit Kit .

## OPERATIONAL CHECK AND POSITIONER START POINT ADJUSTMENT

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1. If none exists, temporarily install a 0 to 30 psi gage in branch line .
2. Visually check air tubing and operator bracket connections to assure they are tight and solid.
3. See that damper blades, linkage, and operator are free from damage or binding.
4. Apply air pressure through operating range by adjusting controller to check system air flow. Normally closed dampers should be fully open at start point plus operating range. They should be closed when pressure is reduced to within 1 psi (7 kPa) of start point. Normally open dampers will operate the same but in a reverse manner.
5. To adjust start point, set knob to any desired start point between 1-1/2 and 13 psi (10 and 90 kPa). Each detent on the knob equals 1/4 psi (1.8 kPa).
6. If positioner calibration is off, recalibrate by adjusting the factory calibration screw (Fig. 1) found in the center of the knob.
7. Set controller to desired setpoint .
8. After adjustment or calibration, recheck operation.

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