

Damper Actuator Diaphragm Replacement



Product Description

This package contains five diaphragms for replacing the diaphragm on the No. 4 or No. 6 pneumatic damper actuators.

Product Numbers

Damper Actuator	Material	Kit Number
No. 4, P/Ns lower than 331-2885	EPDM	333-072
No. 6, All	Silicone	333-572
No. 4, P/N 331-2888 and higher	EPDM	333-071

Warning/Caution Notations

WARNING:		Personal injury or loss of life may occur if you do not follow a procedure as specified.
CAUTION:		Equipment damage or loss of data may occur if you do not follow a procedure as specified.

KIT 333-071 for 4-inch Damper Actuator

Required Tools

- Two 1/4-inch flat-blade screwdrivers
- Slip joint pliers

Prerequisite

Disconnect the actuator from its linkage.



WARNING:

- Before proceeding, remove and cap the air line.
- The jam nut holds back the entire spring force. Make sure that the jam nut on the shaft is next to the lower housing. See Figure 1.

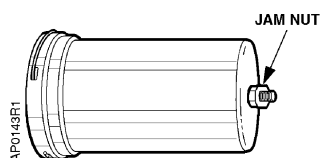


Figure 1.

Installation

1. Before disassembling, place a pencil mark on both the upper and lower housing to help align them when assembling.
2. Pry the prongs of the retainer clip loose using the screwdriver blade. See Figure 2. Note the position of the retainer clip before you remove the retainer clip.

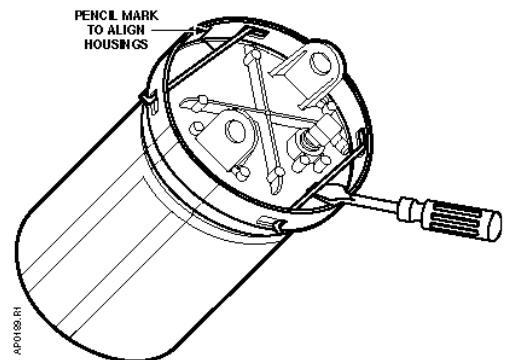


Figure 2.

3. Use the pliers to pull the upper housing and diaphragm out of the lower housing by grasping the pivot post ears or the cross ribs. See Figure 3.

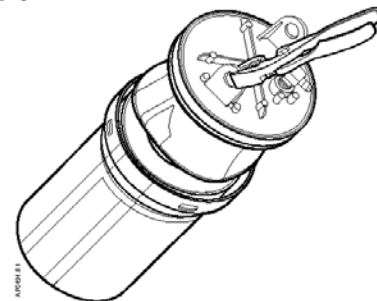


Figure 3.

4. Notice how the diaphragm is attached to the upper housing before you remove the diaphragm from the upper housing.
5. Clean the upper and lower housing, if necessary, so that all surfaces that the diaphragm touches are clean.
6. Insert the new diaphragm inside the upper housing rim with the word "TOP" against the upper housing.

Installation, Continued

7. Fold the diaphragm outward so that the bead of the diaphragm covers the outside of the upper housing rim. See Figure 4.

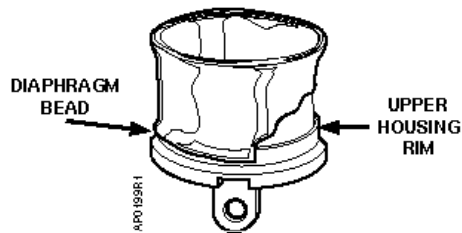


Figure 4.

8. Insert the diaphragm and upper housing assembly into the lower housing as a unit. Align the upper and lower housing at the pencil mark.
9. Slip the retainer clip through the slots in the lower housing.
10. Insert the blades of the two screwdrivers through the open slots in the lower housing to press the upper housing into place. See Figure 5.



Figure 5.

11. Secure the prongs of the retainer clip in place by compressing the retainer clip. This may be done either by hand or with the blade of the screwdriver. See Figure 6.

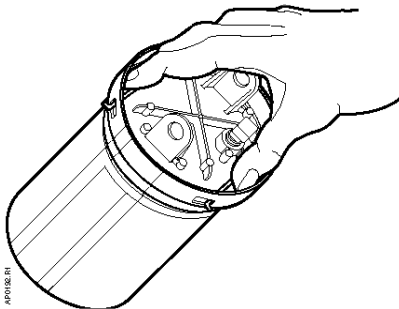


Figure 6.

The installation is now complete.

KIT 333-572 for 6-inch Damper Actuator

Required Tool

9/16-inch hex wrench

Prerequisite

Disconnect the actuator from its linkage.



WARNING:

- Before proceeding, remove and cap the air line.
- The retaining ring holds back the entire spring force. Make sure that the retaining ring on the shaft is next to the lower housing. See Figure 7.

Installation

1. Using the 9/16-inch hex wrench, first loosen and then remove the six bolts holding the upper housing to the lower housing. See Figure 7.

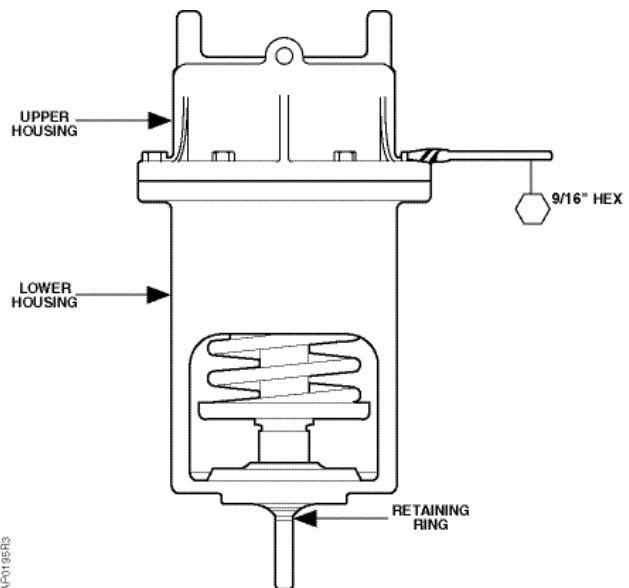


Figure 7.

2. Remove the upper housing.
3. Note how the diaphragm is folded before removing the diaphragm from the piston sleeve.
4. Clean the upper and lower housing, if necessary, so that all surfaces that the diaphragm touches are clean.

Installation, Continued

5. Fold the new diaphragm the same way with the word "TOP" on the diaphragm surface toward the air chamber. See Figure 8.

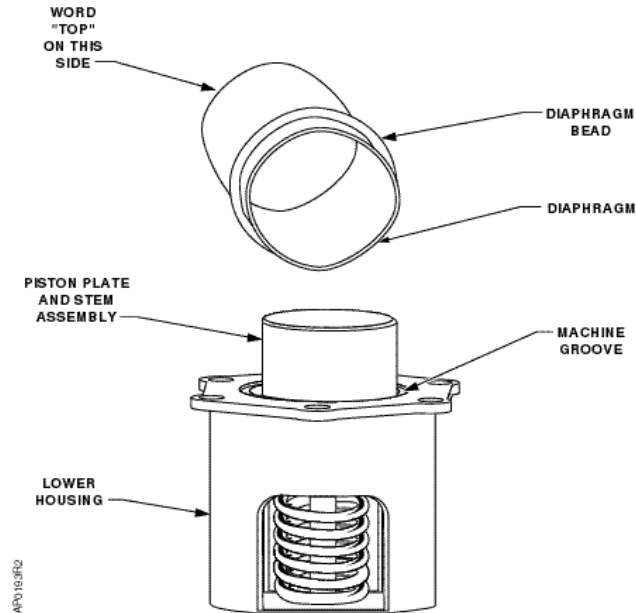


Figure 8.

6. Place the new diaphragm over the piston sleeve.
7. Place the upper housing on the lower housing. Make sure the diaphragm bead fits in the machined grooves in the upper and lower housing. See Figure 8.
8. Cross tighten the six bolts.

The installation is now complete.

KIT 333-072 for Discontinued 4-inch x 3-inch Damper Actuator

Required Tool

1/2-inch hex wrench

Prerequisite

Disconnect the actuator from its linkage.



WARNING:

- Before proceeding, remove and cap the air line.
- The retaining ring holds back the entire spring force. Make sure that the retaining ring on the shaft is next to the lower housing.

Installation

1. Using the 1/2-inch hex wrench, first loosen and then remove the four bolts holding the upper housing to the lower housing.
2. Remove the upper housing.
3. Remove the diaphragm from the piston sleeve noting how the diaphragm is folded. See Figure 9.

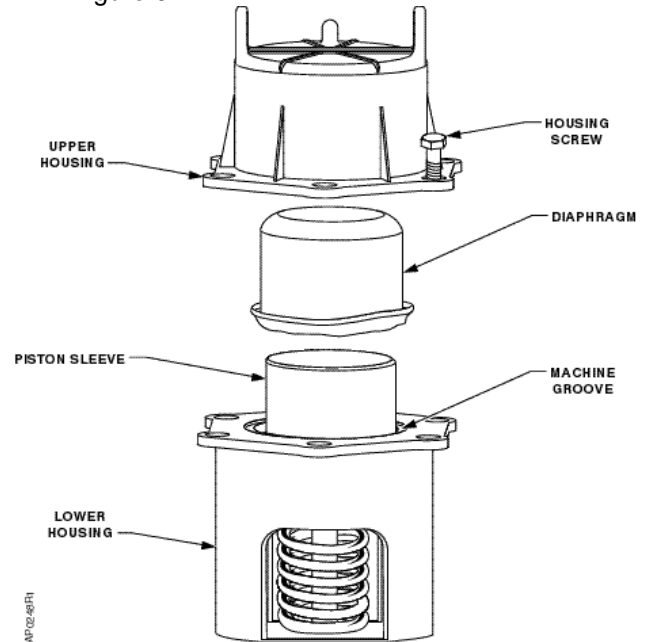


Figure 9.

4. Clean the upper and lower housing, if necessary, so that all surfaces that the diaphragm touches are clean.
5. Fold the new diaphragm the same way with the word "TOP" on the diaphragm surface toward the air chamber. See Figure 10.

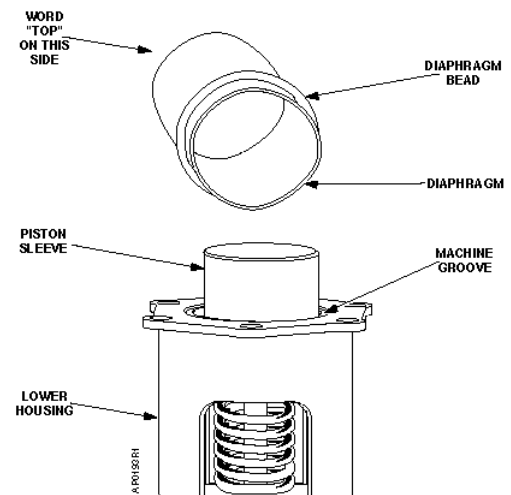


Figure 10.

Installation, Continued

6. Place the new diaphragm over the piston sleeve.
7. Place the upper housing on the lower housing. Make sure the diaphragm bead fits in the machined grooves in the upper and lower housing.
8. Tighten the four bolts.

The installation is now complete.

KIT 333-072 for Discontinued 4-inch x 4-inch Damper Actuator

Required Tool

1/2-inch hex wrench

Prerequisite

Disconnect the actuator from its linkage.



WARNING:

- Before proceeding, remove and cap the air line.
- The retaining ring holds back the entire spring force. Make sure that the retaining ring on the shaft is next to the lower housing

Installation

1. Using the 1/2-inch hex wrench, first loosen and then remove the four bolts holding the upper housing to the lower housing.
2. Remove the upper housing, O-ring, and upper spacer.
3. Remove the diaphragm from the piston sleeve noting how the diaphragm is folded.
4. Clean the upper and lower housing, if necessary, so that all surfaces that the diaphragm touches are clean.
5. Fold the new diaphragm the same way with the word "TOP" on the diaphragm surface toward the air chamber. See Figure 11.

6. Place the new diaphragm over the piston sleeve.
7. Place the upper spacer over the diaphragm bead. Make sure the diaphragm bead fits in the machined grooves in the upper and lower spacers.
8. Install the O-ring between the spacer and the upper housing
9. Tighten the four bolts that hold the upper and lower housing together.

The installation is now complete.

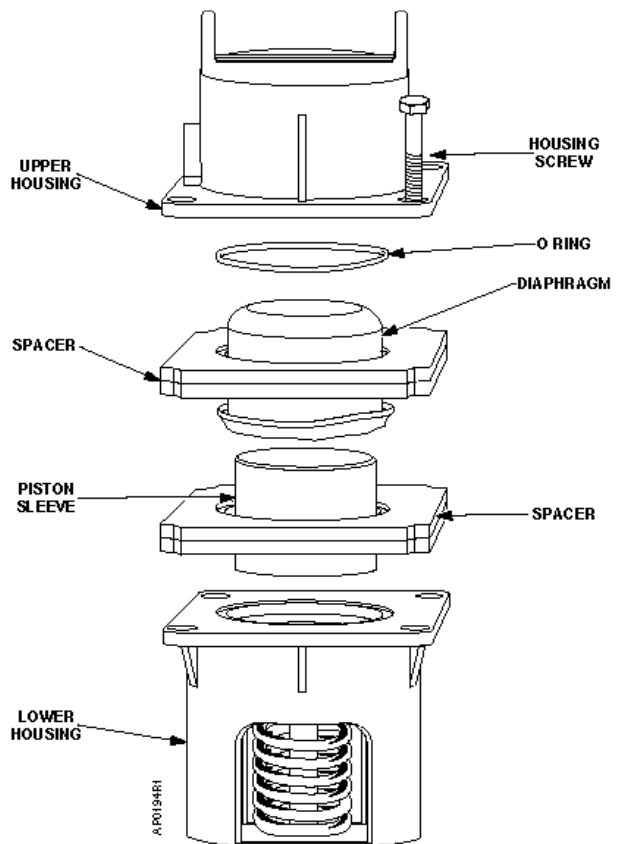


Figure 11.

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