

Positioning Relay Mounting Kit No. 147-314



Product Description

This kit contains the parts needed to field mount the RL 147 Positioning Relay on the No. 4 Pneumatic Damper Actuator.

Product Number

147-314

Warning/Caution Notations

WARNING		Personal injury/loss of life may occur if a procedure is not performed as specified.
CAUTION		Equipment damage, or loss of data may occur if the user does not follow a procedure as specified.

Required Tools

- Flat-blade screwdriver
- Two 5/8-inch (16 mm) open-end hex wrenches

Expected Installation Time

10 minutes

Prerequisites

- Clean, dry, oil-free air supply
- RL 147 Positioning Relay
- If the actuator is already mounted to the damper, disconnect the crank arm by pulling the clevis pin before mounting the relay.

Installation



WARNING:

Do not remove the jam nut. Spring is under heavy load.

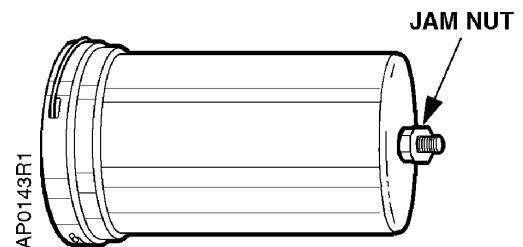


Figure 1.

1. Attach the mounting bracket (*Figure 2, Item 1*) to the lower housing of the actuator with the slotted hex screw (10).
2. Attach the relay to the mounting bracket with two captive screws furnished on the relay body. Loosen the cover screw to remove the cover for access to one of the screws.
3. Attach the relay feedback arm to the lever assembly of the relay using the two lock washers and two screws provided. The feedback arm must clear the mounting bracket and the actuator lower housing.
4. Thread the hex nut (8) onto the actuator shaft within 1/16-inch (1.5 mm) from the jam nut on the shaft of the actuator. Put spring arm (7) against the nut (8) and thread the clevis (9) onto the shaft as shown in *Figure 2*.

Installation, Continued

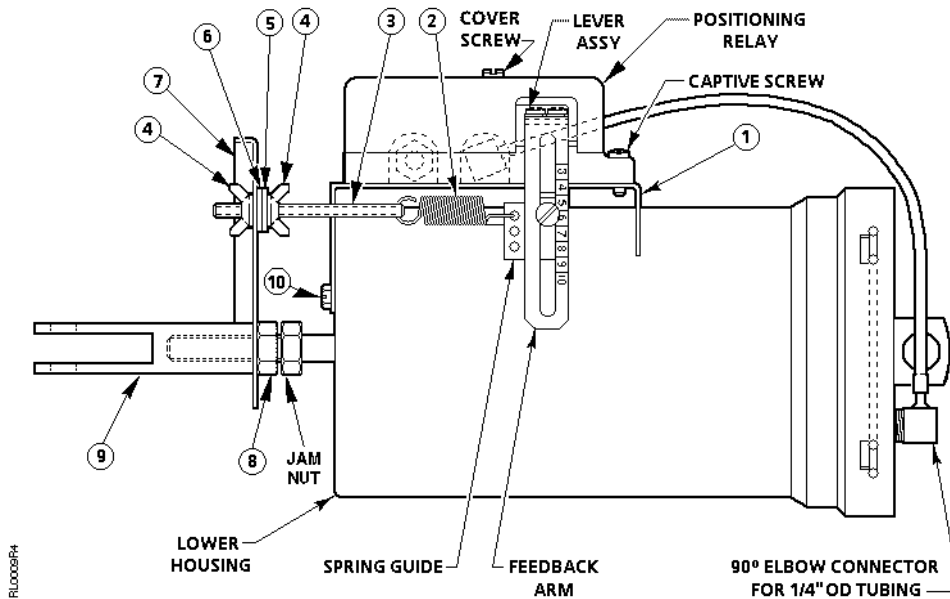


Figure 2. Positioning Relay Mounting Kit 147-314 on the No. 4 Damper Actuator.

Item	Description	Qty.
1	Mounting bracket	1
2	Feedback spring	1
3	Adjusting screw 1-3/4" (44 mm) long	1
4	Wing nut	2
5	Lock washer	1

Item	Description	Qty.
6	Flat washer	1
7	Spring arm	1
8	3/8-24 Hex nut	1
9	Clevis	1
10	#10-16 1/2" (13 mm) Slotted hex screw	1

- Align the opening in the spring arm with the spring guide. Tighten the hex nuts to hold the spring arm in position.
- Connect the feedback spring (2) between the spring guide and the adjusting screw (3). See *Figure 3*.

- Thread one wing nut (4), the lock washer (5) and the flat washer (6) onto the adjusting screw. See *Figure 3*.
- Slide the adjusting screw through the spring arm. Thread the remaining wing nut onto the adjusting screw. Tighten the wing nuts so that there is no slack in the spring, but do not stretch the spring.

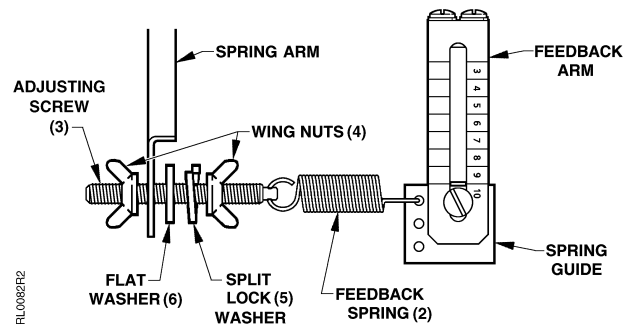


Figure 3. Attaching the Adjusting Screw to the Spring Arm.

NOTE: Adjust the spring arm so that the adjusting screw and the feedback spring are parallel to the actuator shaft.

Installation, Continued

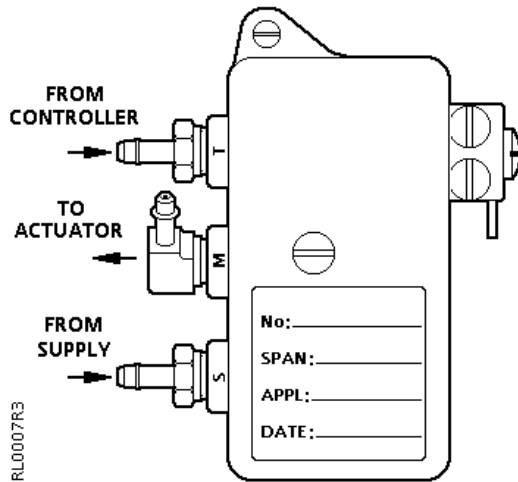


Figure 4. Relay Ports.

9. Make pneumatic piping connections to the actuator and relay. The "S" Port is the air supply port. The "M" Port goes to the connector on the actuator. The "T" Port is the signal from the controller. See *Figure 4*.
10. Place the calibration label on the cover as shown in *Figure 4*. Mark for reference. (Optional) Attach the relay cover if you are not calibrating immediately.
11. Calibrate the relay by following the instructions included with the positioning relay.

The installation is now complete.

Reference

Technical Instructions 155-038
Powers™ Controls RL 147 Positioning Relay

Installation Instructions 129-125
RL 147 Positioning Relay Calibration

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