

# ICA

## INSPECTION GUIDE

### SPOILERS, INC. "POWER PAC" SPOILER SYSTEMS

SP4000, SP5000, SP6000, SP7000, SP8000  
SP9000, SP10,000, SP11,000, SP12,000, SP13,000

#### *RECOMMENDED INSPECTION/MAINTENANCE TO BE PERFORMED AT*

#### *ANNUAL OR 100 HOUR INSPECTION:*

(Revised 7-21-2016)

### ACTUATORS

Remove actuator access covers in flap cove skin, if applicable. Piper Malibu; remove the large access panels on the bottom of each wing just under the spoiler panels. If the airplane is equipped with an external radar antenna pod, it will be necessary to remove the pod fairing, first.

- A. Looking at the actuator in each wing, inspect the hydraulic line and attach fitting for leaks.
- B. Look at the actuator assembly for hydraulic fluid leaks.
- C. Check the electrical connections on the actuator (3 screws) on the micro-switch for tightness, and the 3-prong plug for a snug connection.
- D. On top of the wing, visually check the 4 screws fastening each spoiler panel to the actuator arms. If any appear not to be fully seated, remove all four screws, clean both internal and external screw threads (10-32), recoat with Loctite and replace.

## **OPERATIONAL CHECK**

Perform an operational check of the system as follows:

- A. Turn on the airplane "Battery" switch. Check the spoiler annunciator panel to insure that no lights are illuminated.
- B. Push the spoiler system switch to deploy the spoilers. The switch light (Center) should come on and stay on and the hydraulic pump should come on.
- C. Within 3 to 6 seconds, check to insure that both left and right spoiler annunciator lights are on and that both spoiler panels are fully deployed. The hydraulic pump should have shut off.
- D. Push the spoiler system switch a second time and observe that the panels retract.
- E. Deploy the spoilers again, turn off the airplane "Battery" switch and once again insure that the spoilers retract.

## **HYDRAULIC PUMP/MANIFOLD**

Remove necessary floor boards or access panels to gain access to the hydraulic (PowerPac) pump. In the case of the Aerostar, look in the right wheel well area and locate the hydraulic manifold and timer assembly.

- A. Inspect hydraulic line and attach fitting where lines connect to pump manifold to insure there are no leaks.
- B. Inspect for leakage at the check valve, pressure relief valve and the solenoid valve located on the PowerPac manifold.

**ALL EXCEPT AEROSTAR:**

- C. Remove hydraulic reservoir filler plug (hex brass breather vent) located on top aluminum tank. Check hydraulic fluid level and add as necessary per placard located on the motor. Fluid level should be ½” below filler plug opening.
- D. Check all electrical connections on the pump and three-post relay.

**HYDRAULIC FLUID (5606) and BLEEDING:**

Bleed one actuator at a time for 3-5 seconds by opening bleed valve at actuator and applying power to PowerPac by depressing annunciator panel “SPLR PUSH” button. Check reservoir level after each bleeding. Bleed actuator 2-3 times as necessary to get rid of any air in hydraulic system.

**Do not disassemble the hydraulic (PowerPac) pump or actuators. They are not field serviceable. If an internal leak or operational malfunction is found, please contact:**

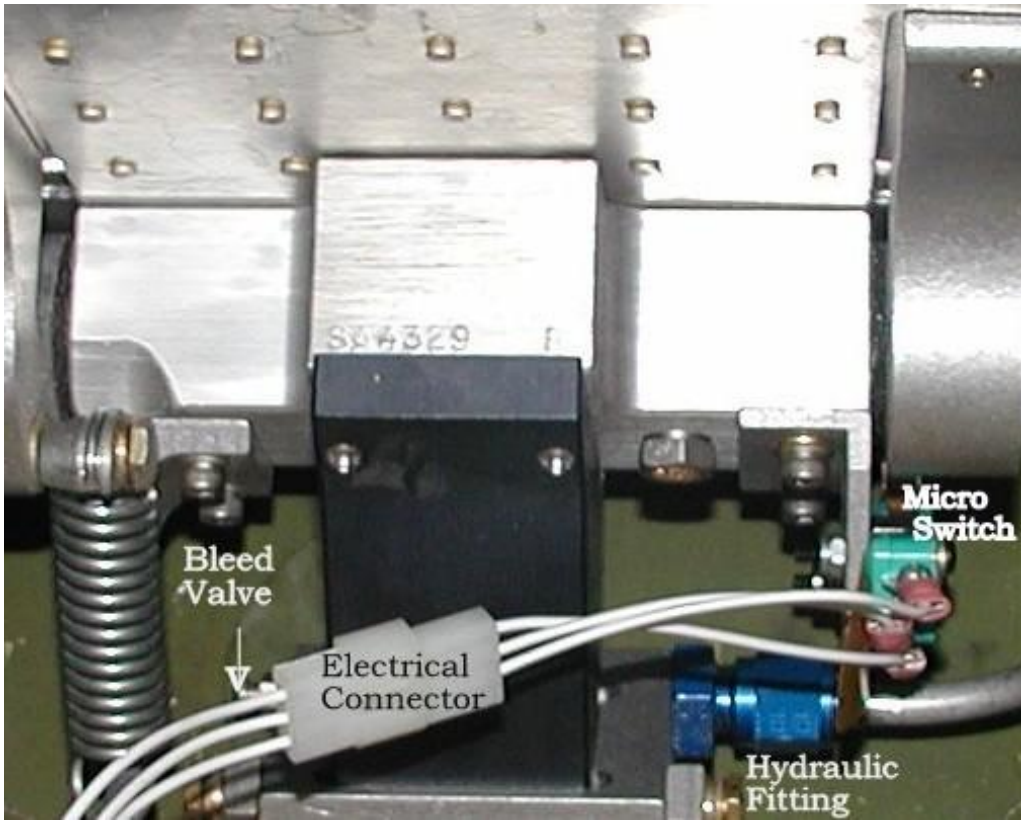
**Jeff Shapiro**

**800-544-0169 or 253-851-1769**

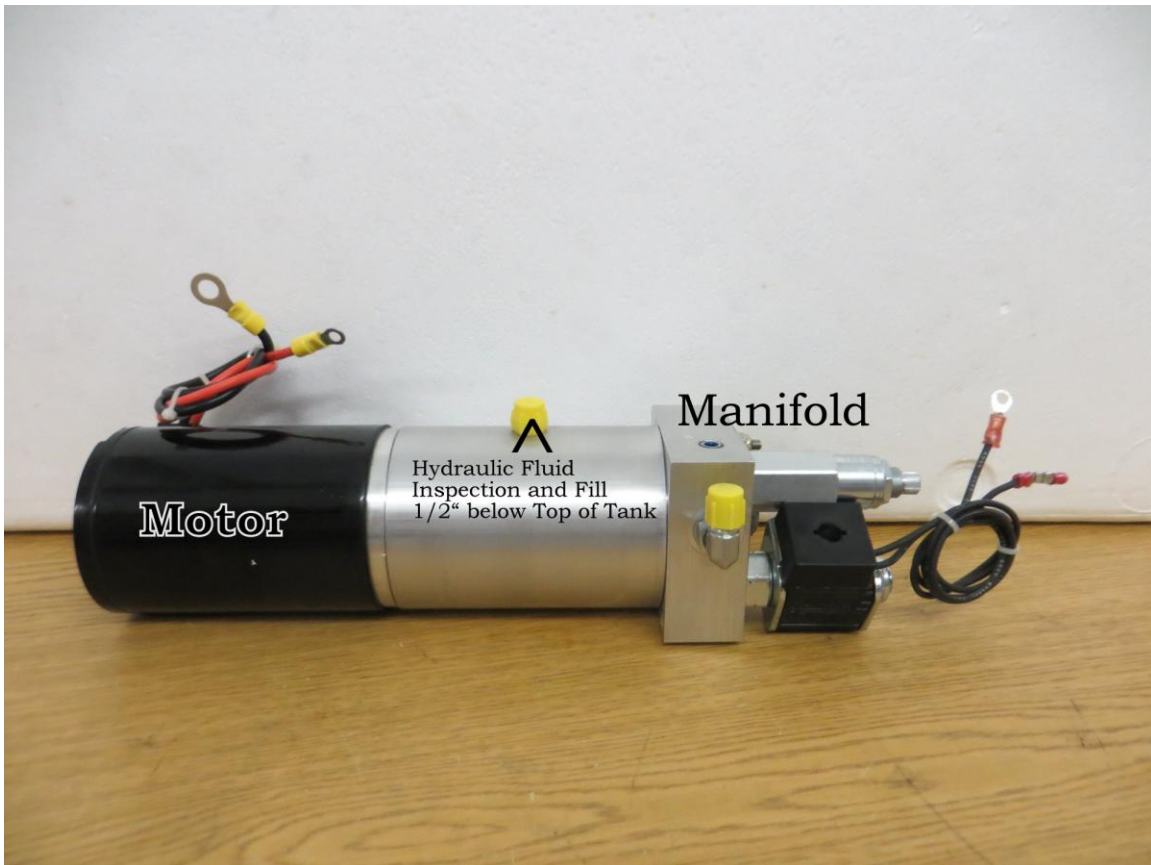
**FAX: 253-858-6281**

**Email: [PowerPacSpoilers@aol.com](mailto:PowerPacSpoilers@aol.com)**

**Website: [www.PowerPacSpoilers.com](http://www.PowerPacSpoilers.com)**



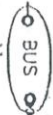
Actuator hydraulic fitting and bleed valve locations vary by aircraft model.



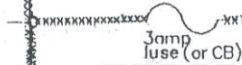
SCHÉMATIC WITH  
SPOILERS RETRACTED

POWERED CIRCUITS xxxxxxxxxxxx

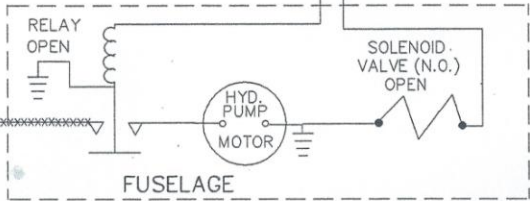
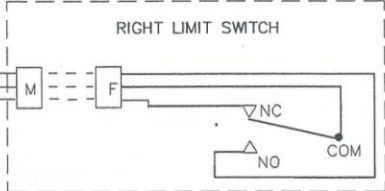
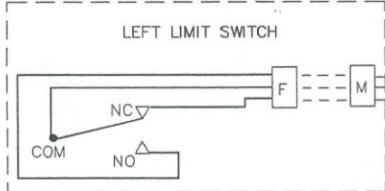
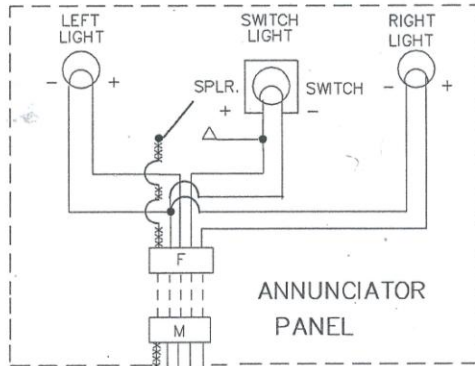
28V



15 amp CB



16 GAUGE WIRE



**Electrical Schematic**

**Model Number:**  
 SP4000, SP6000, SP7000  
 SP8000, SP9000, SP10,000  
 SP11,000, SP12,000, SP13,000