



2244 Airport Way, Redmond, Oregon 97756 Phone 541 923-2233 Fax 541 923-2255

**SERVICE BULLETIN**

**SB038-0997**

Subject: Lancair Filter Bypass Doors (IV & IV -P)

Date: September 15<sup>th</sup>, 1997

Ref: Construction Manual

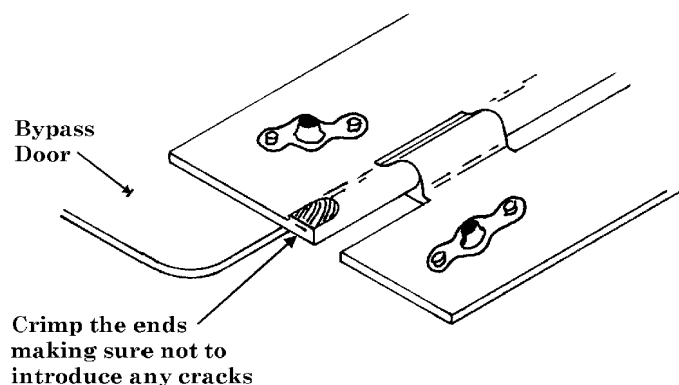
Pages: 3

Status: Mandatory Replacement & Inspection

**Background:** Recently we have discovered that the springs which hold the Filter Bypass Doors closed may have insufficient tension and could consequently cause the doors to open and flutter during flight. This flutter can cause wear on the safety wire resulting in a release of the pin and loss of the bypass doors and springs. **The flutter also may cause the springs to fatigue and break, causing the doors to malfunction and or release debris into the engine induction system.** If you have this system installed, the aircraft should be grounded until this bulletin is complied with.

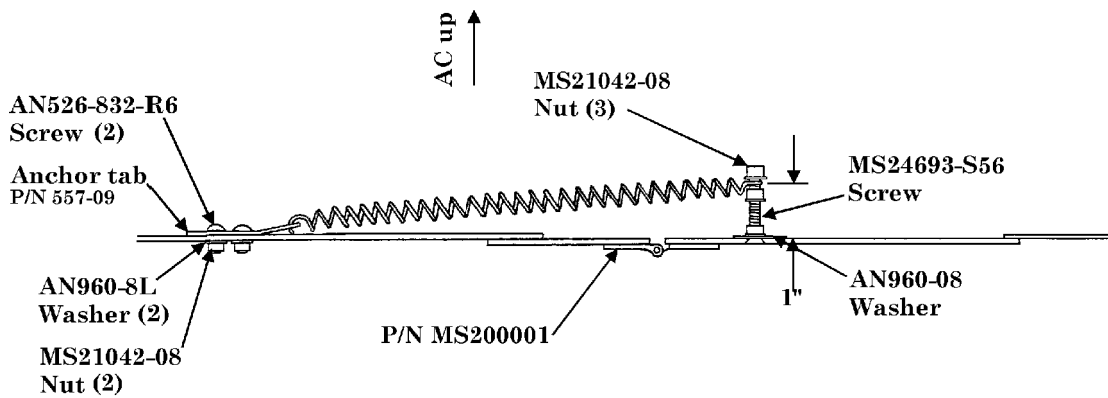
**Action:** Remove the bypass doors and hinges and the left side micro switch assembly from the aircraft. Only the right side door will be used from now on. Put release tape on the left Bypass Door and use it as a temporary form for a 4 BID patch over the left door opening. Remove the door after the 4 BID has cured. Check the hinge for integrity and replace it if necessary. Remove the safety wire from both ends of the hinge on the right side door. Pull the hinge pin and remove the spring. Reinsert the pin through both hinge flaps and crimp the ends of the hinge to hold the pin in place.

**Crimping the Hinge**  
**Figure 1**

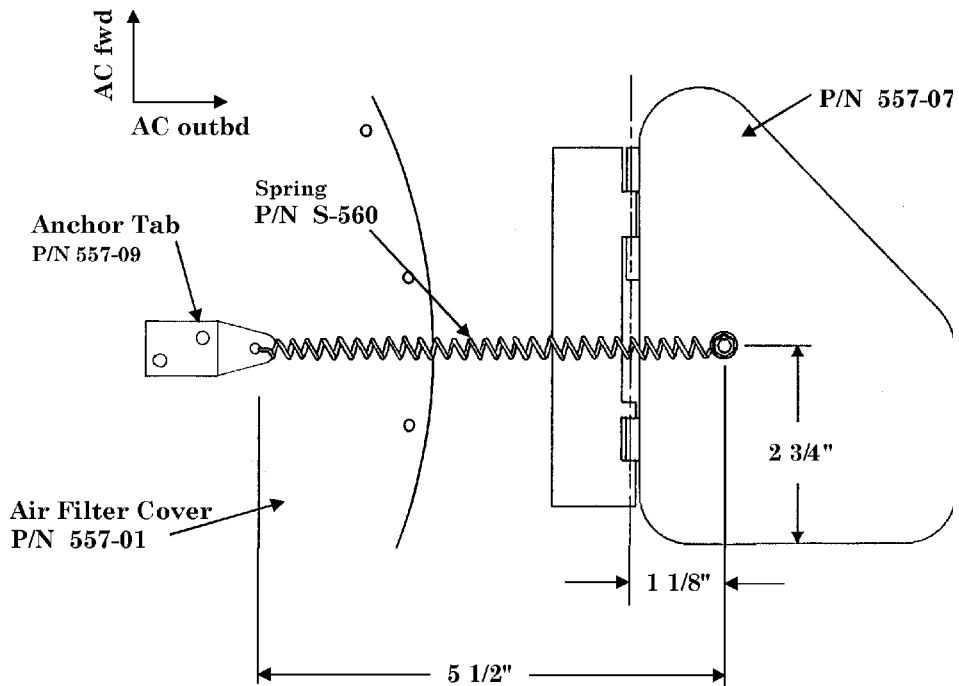


Drill a hole in the bypass door with a #18 drill bit and countersink the hole. Insert a MS24693-S56 screw through the underside and place an AN960-08 washer and three MS21042-08 nuts on it (refer to the following figures).

**Side View Installation  
Figure 2**

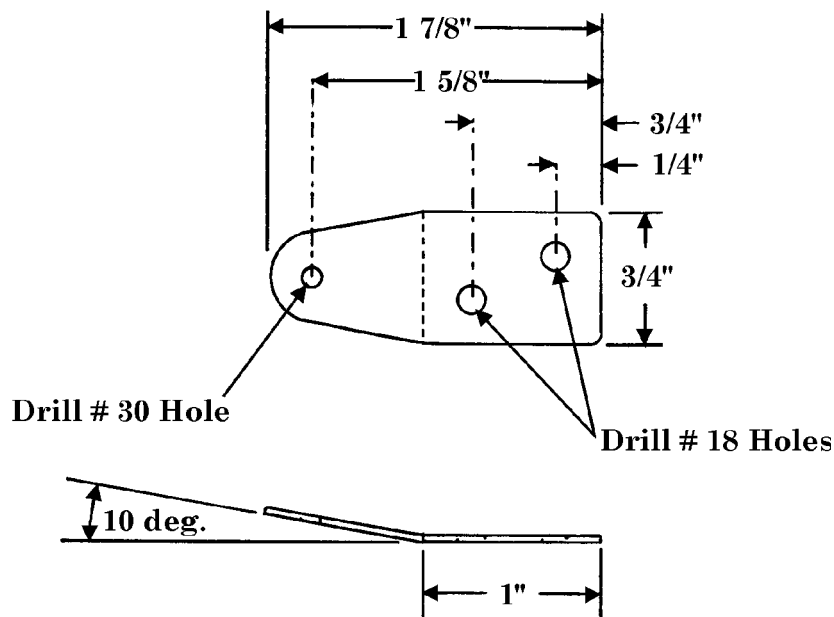


**Top View Assembly  
Figure 3**



Make the anchor tab as per the following diagram out of .036" stainless steel.

### Anchor Tab (557-09) Figure 4



Place the anchor tab in place on the air filter cover (refer to Fig. 3) and drill two holes with a #18 drill bit for the anchor tab screws. Install the anchor tab as shown in the preceding figures. Reinstall the bypass door assembly on the right side only. Hook a 5/16" X .030" X 2 1/2" spring over the end of the screw in the bypass door, stretch it to 5 1/2" and hook it into the anchor tab hole. The door should now have plenty of tension to remain in place during flight.

Note: Due to builder variances, the clearance between the oil pan and the anchor tab and spring may be critical in some installations, so make sure there is no interference between the new installation and the oil pan during engine operation. This is done by simply checking the oil pan for marks after running the engine for a brief period of time in flight.

Note: There is a kit containing the parts for this modification including the anchor tab in the works, and it will be sent out to you by October 1<sup>st</sup>, 1997. However if you wish, you have the option of acquiring the parts yourself.