

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

SERVICE BULLETIN

SB017-494

Subject: Lancair IV Date: 7th April, 1994

Ref: None Pages: 2

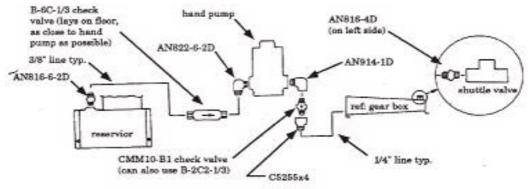
Status: Advisory

1. HAND PUMP CHECK VALVE LOCATIONS:

We are now recommending a modification to the hydraulic hand pump installation. The originally shipped instructions indicated installation of the hand pump check valve as being remoted (on the reservoir for the supply side and at the shuttle valve for the pressure side).

While this works very well on our aircraft, failure analysis shows that a safer installation does exist and for this reason of increasing safety/reliability, we are recommending the installation change.

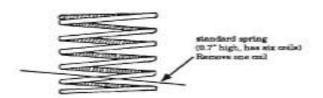
We will briefly highlight the installation changes in this writing in an effort to provide you the earliest possible notice and will follow with revised plans. The changes are quite easy to make and we strongly recommend that you opt for this revised installation.



2. LANDING GEAR SOLENOID SWITCH LOCK

We have had some reports in already regarding the sticking of the solenoid pin which is used to lock the gear handle into the down position. It appears that tolerance variations can indeed cause this to occur. If this occurs, the recommended correction is as follows:

- L Enlarge the hole in the gear handle drum to a size.
- 2. Snip one coil off the solenoid coil spring (on original supplied early style springs only). To identify: Original springs are .7" high and have 6 coils. Cut this spring down to 5 coils. (Later style springs will have seven coils of a thinner wire are do not require snipping.)

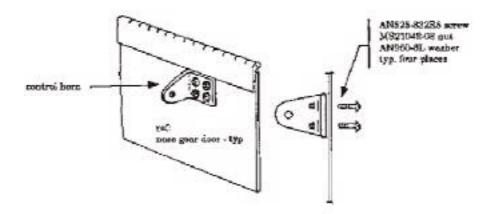


3. WINDOW INSTALLATIONS

We have had discussions with our window manufacturers and industry specialists regarding the best methods of protecting the stretched plexiglass panels. The recommendation is that in the bonding process, if possible, no solvents should be used. The edges should be sanded, blown or wiped free of particles and bonded no wiping down with MC, aceton or alcohol. Having just suffered the consequences of crazing due to MC which was inadvertently allowed to soak into the edge area of our windshield, all of which caused us to replace the entire windshield, we are quite "sensitive" to this issue and therefore wish to pass this information along.

4. NOSE GEAR DOOR CONTROL HORNS

We recently noticed that the rivets which hold the small nose gear door control horns in position have been stretched causing the horns to loosen. Eventually the control horns would likely break completely free of the door panel – not good. Since over tightening of the doors in the retract position places the rivets in tension, we are now recommending that the control horns be attached with machine screws - use AN525-832-R8 with AN960-8L thin washer and MS21042-08 metal lock nuts.



5. NOSE GEAR RETRACT CYLINDER

Between the three Lancair I flying to date, two have required a shift in the fwd hydraulic fitting (AN822-4D) due to interference with the engine oil pan. If this is a problem with your installation, the fix is very simple.

- a.) Remove the cylinder aft "plug" by first removing the aft HKS22-4D fitting. Then push the end of the cylinder plug slightly fwd into the cylinder body thus providing easy access to the retaining ring-clip. Remove the ring-clip and pull the end plug out being careful to not cut the 0-ring as you extract the plug from the cylinder tube.
- b.) Mark and drill a new clearance hole in the cylinder tube. This hole should be identical to the existing hole EXCEPT it should be located 45° inboard around the circumference of the tube. This will have the effect, when reassembling, of rotating the fwd port 45° outboard which will then provide adequate fitting clearance from the engine oil pan.
- c.) Be careful to remove any burrs along the inside of the new clearance hole. Clean the tube of any debris and then reassemble by pushing the end plug back into position. Align its threaded pipe fitting hole with the new holed drilled in the tube wall. The old hole will have no consequence whatsoever since the cylinder is sealed fwd of this position by the O-Ring. Reinstall the retaining ring-clip and reinstall the HK822-4D restrictor fitting.

