

SERVICE BULLETIN 24

SUBJECT: GLASAIR III HORIZONTAL STABILIZER STIFFENING

APPLICATION: GLASAIR III AIRCRAFT SERIAL No. 3002 to 3014.

DESCRIPTION: During the final stages of our computer flutter analysis for the Glasair III, it was found that the horizontal stabilizer was not stiff enough torsionally to provide an adequate margin of safety between V<sub>ne</sub> (redline) and the predicted flutter speed. Further testing and computer analysis have shown that the outer two 45° bidirectional skin layers must be made with graphite rather than the fiberglass cloth used. The upper and lower horizontal stabilizer panels shipped with your kit have fiberglass skins and are therefore, deficient in torsional stiffness.

WARNING: Do not use the supplied horizontal stabilizer fiberglass panels shipped with your Glasair III kit.

PROCEDURES: Contact our shipping department by phone so that we may exchange your existing stabilizer panels with our new graphite ones.  
Tel: 206/435-8533

NOTE: Since graphite material is used in the horizontal stabilizer, it will no longer be a useful location for a navigation antenna.

We also recommend that the com. antenna should be in the fuselage just aft of the baggage bulkhead. Our concern is that an antenna located in the vertical fin will be blanked out to reception by the carbon horizontal stabilizer.

Carbon fiber tends to absorb radio waves and converts them into heat, (though not enough to be detectable) whereas metal reflects radio waves. On a metal airplane, if an antenna is partially blanked out, the radio waves will bounce off the metal structure and eventually get to the antenna.

This is somewhat true on the Glasair because of the metal control rods, bellcranks and other control system metal parts in the tail area.

Since the antennas are lightweight and inexpensive, we would suggest mounting a com antenna into the vertical fin. If it won't work, an alternate location can easily be found further forward in the fuselage. If it is determined at a later date that the vertical fin is an acceptable location, it will be nearly impossible to install one once the fuselage is assembled.

Please use discretion in this matter. If you decide to use a vertical fin antenna, we would appreciate feedback on this matter once your Glasair is flying.



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