SERVICE BULLETIN 80 MANDATORY

SUBJECT: NOSE GEAR SHIMMY DAMPER COMPRESSION SPACER REMOVAL

APPLICATION: Rubber compression spacers used with nose gear shimmy dampers on Glasair I RG, II RG, and III aircraft.

DESCRIPTION: The machined aluminum nose gear shimmy damper assembly, which is split laterally with clamp bolts on the sides, was sold as an upgrade for Glasair I RG kits and is supplied as original equipment on Glasair II RG and Glasair III kits. These shimmy dampers originally used rubber compression spacers installed under the heads of the shimmy damper clamp bolts. The purpose was to maintain a constant clamping pressure as the shimmy damper friction material wore. When exposed to heat in the engine compartment, however, the compression spacers have been found to lose their resilience, decreasing the shimmy damper clamping pressure and possibly resulting in damaging nose gear shimmy. In a worst case, the rubber spacers can split and fall off completely; the very loose shimmy damper clamps could permit severe shimmy to occur, resulting in considerable expensive damage. Consequently, we are requiring that the compression spacers be removed from all nose gear shimmy dampers that still have them. Since the nylon shimmy damper friction material used with this style shimmy damper wears very little, periodic shimmy damper adjustment is all that is required to maintain the proper clamping pressure.

NOTE: The compression spacers have been deleted in later production runs of the shimmy damper assembly.

SOLUTION:

******* WARNING: This procedure is MANDATORY for all shimmy dampers ******* that still have the rubber compression spacers. Do not fly the airplane until the compression spacers have been removed.

Remove the two AN4-20A shimmy damper clamp bolts and the compression spacers. Replace the clamp bolts with AN4-14A bolts, using AN960-416 washers under the nuts as required to achieve the correct bolt length and shimmy damper clamp pressure adjustment. The AN4-14A bolts and AN960-416 washers are available from Stoddard-Hamilton Aircraft if you do not have a local supplier.

To adjust the shimmy damper clamp pressure, loosen the clamp bolts just enough so that the clamps do not generate any resistance to rotation. Connect the Stoddard-Hamilton RG tow bar (or an equivalent 29-1/2" long lever) to the lower scissors pin, and hook a fish scale (spring balance) to the "T" handle end of the tow bar. Measure the internal friction of the nose gear strut by lowering the tail of the aircraft and rotating the nose gear with the fish scale on the end of the tow bar. Now tighten the clamp bolts equally until a force of 6 to 12 lbs. more than the internal friction measurement is required to steer the nose gear with the tow bar. This adjustment provides the optimum clamp friction to resist nose gear shimmy while still providing good steering.

NOTE: It is the builder's responsibility to maintain proper shimmy damper clamp tension. Builders should be aware that engine oils and sovents can decrease the effectiveness of the shimmy damper by reducing friction. Periodic checking of the shimmy damper condition and tension is strongly advised.