

SERVICE BULLETIN 9C

SUBJECT: GLASAIR I RG SHIMMY DAMPER MODIFICATION

APPLICATION: ALL GLASAIR I RG AIRCRAFT

DESCRIPTION: The R&D department at Stoddard-Hamilton has continued to investigate the causes of nosewheel shimmy found on some Glasair I RG aircraft. From the questionnaire sent with Service Bulletin 9B and numerous taxi tests on several different aircraft, we have found a combination that produces the best results in eliminating nosewheel shimmy.

DISCUSSION: We are recommending the installation of the following parts:

1. New machined aluminum shimmy damper collar with new UHMW friction material.
2. Machined aluminum retainer ring.
3. Hydraulic shimmy damper.
4. The 4.63" (long) nose gear drag link.
5. New machined scissor links.

1. The new shimmy damper collar, is machined out of aluminum (to hold a perfectly round inside diameter) and is made with a single piece scissor attach point to minimize play. The forward and rear halves are bolted together on each side with a compression spacer under the head of the bolt to hold a constant clamping pressure. The new UHMW friction tape will not deteriorate from oil or grease and wears very well. It also allows very smooth rotation for steering during taxiing.

A flange is incorporated on the shimmy damper clamp forward half for the attachment of a hydraulic shimmy damper if desired.

2. The retainer ring clamps to the strut below the shimmy damper collar to retain it and prevent any rocking action. This combination gives smoother steering and yields less play in the system.

3. We recommend the use of a hydraulic shimmy damper as a backup safety measure. Its use will reduce the possibility of expensive damage if serious nosewheel shimmy should occur.

4. In addition to the new style shimmy damper collars, we have found that the 4.63" long drag links have a positive effect in reducing shimmy. Although we have had reports of nosewheel shimmy with the long link, the frequency of reports of instances of shimmy with the long link are much less. Also, none of the reports of shimmy with the long link have resulted in nose wheel assembly damage.



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During taxi tests using the new style shimmy damper collars, retainer ring, hydraulic shimmy damper, and the 4.63" drag link, we were able to eliminate any hint of shimmy with much improved steering.

5. To reduce play to the minimum possible, new machined aluminum scissors are also available. The new scissors are designed with a stronger double-knuckle joint between the two scissor halves instead of the single-knuckle on the original design and uses aluminum bronze bushings to reduce play.

Stoddard Hamilton is offering the new shimmy damper parts as replacements for the existing shimmy damper parts. We will offer a \$70 credit for builders who previously sent their friction collars back to Stoddard Hamilton for modification per Service Bulletin 9A. We will also give \$10 credit for those builders who purchased the friction collar components and modification instructions, then completed the rework themselves.

Component cost: Date Available

(1) Aluminum Shimmy Damper Friction Collar	2 pcs			
Aluminum Shimmy Damper Retainer Ring	2 pcs			
Installation Hardware and UHMW material included				
	Kit	\$118.50	10/28/87	
(2) 4.63" long drag link	1 pcs	\$17.50	10/28/87	
(3) Machined Aluminum Scissor Kit.	Kit	\$127.00	11/16/87	
(4) Hydraulic Shimmy Damper to Collar Attach kit*	Kit	\$20.00	10/28/87	

* (required to adapt existing hydraulic shimmy damper to the new style collar)

A complete kit containing all the items listed above and installation instructions can be purchased for a combined price of \$259.00.

(5) Hydraulic Shimmy Damper Assy. Kit (Installation Kit Item 4 [above] Included)	Kit	\$150.00	10/28/87	
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The credit offers and prices listed are effective through 1/31/88 only.

Contact Roy Matson, Stoddard Hamilton parts department (206/435-8533), if you wish to order either the complete kit or various components.


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