

SERVICE BULLETIN 59 (Revision A)

SUBJECT: TRIM CONTROL WHEEL SHAFT MODIFICATION

APPLICATION: All Glasair II and III elevator trim control assemblies shipped prior to 9/26/88.

DESCRIPTION: Instances have been reported in which the trim control wheel shaft has failed in the area of the hole for the roll pin that secures the worm drive gear. Failure of the shaft disables the trim system. The elevator control system still functions normally in the event of trim system failure, but the pilot must hold the desired airspeed by exerting continuous pressure against the control stick.

SOLUTION: We recommend replacing the trim control wheel shaft with a 1/4" diameter shaft to provide the necessary strength to resist failure, as described below. The following modification kit will be available from Stoddard-Hamilton Aircraft by November 30; the price of the kit is \$20.00 (includes shipping). Please call our Parts Order Desk to order the Trim Control Wheel Shaft Modification Kit (Stock Number 382-3500-502).

Trim Control Wheel Shaft Modification Kit--Parts List:

1 ea.	472-3510-101	Elevator Trim Wheel Shaft (1/4")
2 ea.	172-0077-306	Bushing
1 ea.	452-3525-001	Worm Drive Gear
1 ea.	NAS43DD4-160	Spacer
2 ea.	AN960-416L	Washer

Trim Control Wheel Shaft Replacement

1. Remove the original trim wheel, trim wheel shaft, worm drive gear, and spacers from the trim control housing, if they have already been installed.
2. Enlarge the existing shaft hole in the trim control wheel by drilling to 1/4" diameter.
3. Assemble the trim control wheel to the new trim control wheel shaft, as described in the Instruction Manuals. (If the control wheel was previously assembled to the original shaft, drill two new mounting holes through the wheel 90° from the original holes.)
4. Press out the original two NAS77-3-06 bushings, if previously installed in the trim housing and discard.

  
**STODDARD-HAMILTON**  
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5. Use the procedures described in the Instruction Manuals to press the new 172-0077-306 bushings into the existing holes in the trim housing. Use Loktite to secure the bushings if they do not fit tightly.
6. Assemble the trim control housing as described in the Instruction Manuals, using the new worm drive gear and the NAS43DD4-160 spacer stock supplied in the Modification Kit. Cut two sections from the NAS43DD4-160 spacer stock the same length as the original NAS42DD6-36 and 6-44 spacers to center the worm drive gear relative to the main gear.

**NOTE:** Use the AN960-416L washers, as required, to eliminate any end play between the trimmed spacers and the 172-0077-306 bushings.

7. All other aspects of trim control are the same as described in the Instruction Manuals.



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