

SERVICE BULLETIN 109 MANDATORY

SUBJECT: Glasair III Nose Gear Hydraulic Actuator Rod

APPLICATION: All Glasair III aircraft.

DESCRIPTION: We recently received a report of an incident in which the threaded end of the nose gear hydraulic actuator rod bent. Since the actuator rod is in tension (pulling) during gear extension, the rod must have bent during gear retraction (pushing). On page G-229 in the Final Assembly section of the Instruction Manuals, we describe a procedure to adjust the position of the rod end bearing on the nose gear actuator rod so that the actuator piston is bottomed in the cylinder when the gear is in the retracted position, ensuring that excessive loads are not placed on the rod. If the rod end bearing is incorrectly adjusted, however, the actuator piston can exert a buckling force on the actuator rod when the gear is in the up position, possibly resulting in damage to the actuator rod. Another possibility for damage exists if the uplock stud fails to engage properly in the uplock hook. In this case, buckling loads can be applied to the actuator rod if the aircraft is flown under high G conditions with the gear retracted.

SOLUTION: To help protect the nose gear actuator rod from damage, install a threaded reinforcement barrel (523-5627-001) in place of the jam nut if the distance between the end of the rod end bearing (not the jam nut) and the shoulder of the actuator rod is more than 1/4" when the position of the rod end bearing is adjusted correctly.

To install the threaded barrel, first complete the final length adjustment of the nose gear hydraulic actuator rod, as described on page G-229 in the Final Assembly section of the Instruction Manuals. Then measure the exposed threaded portion of the actuator rod, including the jam nut thickness. Cut the barrel to the measured length by trimming the SMALL end. Install the barrel onto the actuator rod threads in place of the jam nut, readjust the assembly, and tighten the factory-machined, square end of the threaded barrel against the rod end bearing.

We are offering the threaded barrel (523-5627-001) at our cost of \$4.50 each. One is required per nose gear, and are the same as used on the main gear actuators (as described in Service Bulletin 77). To place your order, call Stoddard-Hamilton and ask for the order desk.



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