

Service Bulletin 59

Subject: Spinner back-plate fatigue cracking.

Applicability: Sportsman & GlaStar Kits with Spinner back-plate part # 611-0130-006 included with compact hub constant speed propeller spinner kit # 301-0260-508 delivered between July 2006 and March 2007.

Note: The back-plate reinforcements were introduced early in the development of the Glasair design as a means of addressing the fatigue stresses on the back-plate. As this issue is of concern to all spinner installations, we strongly suggest all spinner back-plates be inspected at each annual condition inspection as a suggested minimum interval.


Compliance Time: For this batch of back-plates: before the first flight or next flight (if previously flown) and every 25 hours thereafter.
For all spinner kits: at each annual condition inspection.

Discussion and Background Information:

(Refer to Spinner Option Kit Instructions #063-09056-01 for details pertaining to this Service Bulletin)

We received two reports of fatigue cracking of the rivets securing the (4) reinforcement plates to the spinner back-plate. In the worst case, over half of the rivets securing the reinforcement plates had fatigue cracked off and a crack had developed on the back-plate beneath the reinforcement plate within a total time of 60 flight hours.

Several factors may introduce high stress on the back-plate, the worst being a spinner that is wobbly or off-center. An off-center spinner was not the case in the above example, so on further examination we determined that some back-plates from a production run in July 2006 were manufactured with a slight cupping of the surface bolted to the prop hub. That is; when the back-plate is set on a flat surface, the inner hole diameter is raised off the surface from .070 to .010". As the back-plate is bolted to the prop hub, it induces stress into the back plate and reinforcement plates that are compounded by the rotational and vibration forces of the engine and propeller.

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Required Action:

- A) If you have not installed the spinner or prop yet, and your spinner back-plate matches the part number and the cupping problem exists, call our parts desk at 360-435-8533 x221 or email parts@glasairaviation.com for a replacement back-plate. These will be supplied at no cost. You will need to return your current back-plate in order to receive the no-cost replacement. If you would like the replacement sent prior to returning your current back-plate, you will be charged for the replacement. The cost will be refunded once the original back-plate is returned to Glasair.

- B) If you have installed the prop and spinner, you should inspect the spinner back-plate at 25-hour intervals or sooner. The first sign of problems will be rivets that show signs of fatigue and/or pop off the back-plate. Inspect the back-plate from the back for signs of fretting rivets (as seen by signs of black deposits surrounding the heads of rivets) or rivets missing.

Note: As there is a significant amount of work to replace the back-plate with the objective of installing nut-plates properly aligned with the existing spinner holes, our recommended solution is to replace the reinforcement plate rivets with larger -5 (5/32 diameter) rivets and maintain a 25-hour or periodic inspection period with the existing back-plate.

- C) If the problem reoccurs with the larger rivets, the back-plate must be replaced. Please call our parts desk at 360-435-8533 x221 or email parts@glasairaviation.com for a replacement back-plate. These will be supplied at no cost. You will need to return your current back-plate in order to receive the no-cost replacement. If you would like the replacement sent prior to returning your current back-plate, you will be charged for the replacement. The cost will be refunded once the original back-plate is returned to Glasair.

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