

LAA AWA/12/03
28th March 2012

Dragon Wings Rotors

Inspection of Hub Bar

During a pre-flight inspection of a Montgomery-Bensen B8 Autogyro the inspecting pilot notice a hairline crack in the outside face of the Hub Bar.

During the investigation into this event a number of possible causes for this crack were suggested including, blade flap, over-tightening of the attachment bolt(s), incorrect tolerances during blade assembly, fatigue or incorrect assembly /disassembly methods of the blades from the rotor.



Fig. 1. Close-up of the Hub Bar crack

Unfortunately, it was not possible to obtain the cracked Hub Bar for inspection and so the actual cause of this crack will remain a mystery. After discussions with the manufacturer of this Hub Bar and LAA Inspectors with substantial experience with this rotor assembly, it was agreed that the most probable cause of the event was that, at some time in this Hub Bar's history, an incorrect assembly/disassembly procedure was used.

After discussion with the UK CAA the LAA has issued an Airworthiness Information Leaflet (AIL) requiring pilots of aircraft fitted with Dragon Wings Rotors to visually inspect the rotor head before each flight (LAA/MOD/GYRO/001 issue 1). In addition to this, the AIL requires a close inspection of the Hub Bar at each annual inspection; this annual inspection requires the removal of the blades from the Hub Bar.

This matter was discussed in the July 2011 edition of Safety Spot which you can read online [HERE](#). LAA/MOD/GYRO/001 issue 1 can be downloaded [HERE](#).



Fig. 2. Hub Bar Assembly minus Blades