

AIRWORTHINESS DIRECTIVE

03.2004

Gyro Tech Rotor Blades

Background.

ASRA has recently investigated an incidence of severe blade skin de-lamination in flight involving Gyro Tech Rotor Blades.

Research has indicated that towards the end of Gyro Tech's business activities there may have been a number of rotor blades produced using defective adhesive to bond the skins. Anecdotal evidence suggests that Gyro Tech undertook to carry out a voluntary recall of such blades and repair the faults at their cost. ASRA has been unable to confirm with the former proprietors of Gyro Tech that this recall was completed.

Based on the above mentioned investigation and testing of another set of Gyro Tech blades it has been determined that this AD 04.2004 will be released grounding Gyro Tech Rotor Blades subject to inspection and insertion of additional rivets to leading edge and trailing edges of both upper and lower skins. This advice is in addition to the previous 03.2003 regarding Pre Flight Inspections of Rotor Blades.

Mandatory Action

All Gyro Tech blades are to be grounded immediately and not flown until the following mandatory inspection and repairs are carried out:

Inspection: Skins are to be inspected carefully for signs of change/movement around all areas where the skin is bonded to the spar.

Action 1.; Should any signs of stress, cracks, lifting or bubbling of skins, or distortion around rivet heads be identified owners are required to contact the ASRA Technical Manager or competent TA for advice on an appropriate repair strategy or replace the blades immediately.

Action 2. Should the above inspection not identify any visual evidence of a problem it is mandatory that the skins have additional rivets inserted along the leading and trailing edges of both the upper and lower blade skins to prevent any future possibility of de-lamination. The inspection and testing of a set of Gyro Tech rotor blades has indicated that sufficient additional fastening of skins can be achieved by the following:

- Additional Riveting on Leading Edge of skins; placement of additional aircraft quality blind rivets to be located at the mid point between the current rivet spacing, this should provide approximately 75mm spacing along the leading edges of the skin starting from outboard end of the blade moving inwards stopping at the blade strap reinforcements. The

use of countersunk blind aircraft rivets is recommended, as this will minimize the loss of lift through too many protruding rivet heads.

- Additional Riveting on Trailing Edge of skins; placement of additional aircraft quality solid rivets to be located at the mid point between the current rivet spacing, this should provide approximately 75mm spacing along the entire trailing edge of the skin. The use of countersunk solid aircraft rivets is recommended, as this will minimize the loss of lift through too many protruding rivet heads.

Please contact the Technical Manager for further advice if required.

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Technical Manager
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