AIRWORTHINESS DIRECTIVE

03.2004

Pre Flight Inspection of Rotor Blades

Background.

ASRA has recently investigated an incidence of blade skin de-lamination in flight reminding us of the rapid consequences to the blades ability to produce adequate lift and the limited time the pilot has to take emergency action. We have also fielded a number of informal reports of de lamination being detected on rotor blades that have relied on bonding as a primary method of skin attachment to the main spars and at the trailing edge.
This feedback has identified the need for a directive reminding pilots of the value of a thorough inspection of the rotor blades prior to each flight. Anecdotal evidence confirms that pilots need to pay more attention to all surfaces of the rotor blades prior to each flight and not just at the assembly stage before the days flying.

Preflight Checks

The following checks should be carried out prior to each flight in addition to any other checks specified in the aircraft flight manual or instructions provided by the manufacturer of the rotor blades:

- Inspect carefully for signs of change/movement around all areas where the skin is bonded to the spar. Signs of stress, cracks, lifting or bubbling of skins and distortion around rivet heads
- Inspect carefully the end caps for security to the blade
- Inspect carefully the vent hole ensuring it is clear and able to vent air and drain water condensation

Should any sign of stress, cracks, lifting or bubbling of skins or distortion around rivets be detected don't fly on the blades until they have been inspected by an ASRA TA and if required repaired in an approved manner.

Blades with Bonded Metal Skins

Should you currently operate metal rotor blades that rely on bonding as the sole means of skin adhesion to the main spar and or joining at the trailing edge it is recommended that you consider the addition of rivets to provide an additional means of securing the join as evidence suggests that glue adhesion reduces with age and exposure to severe climatic conditions.

Please contact your ASRA TA or the Technical Manager for advice on appropriate location and spacing of rivets.

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