

Propellers - Variable Pitch - Hartzell

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**AD/PHZL/54**

**Hard Alloy Propeller Blades**

**1/87 DM**

Applicability: All turboprop aircraft fitted with Hartzell propeller blades made from hard alloy.

*Note: Hard alloy blades are identified by the letter "H" immediately following the blade design number eg. T10282 HB.*

Requirement: 1. All turboprop hard alloy propeller blades which are not painted with Polane paint, or have had de-ice boots replaced since manufacture where it cannot be positively determined that the boots have been fitted onto an approved paint surface, are to be removed from service and reworked in accordance with Section V of Hartzell Blade Specification Manual 133-( ) and Hartzell SB No 138.

*Note: All blades are to be anodised before painting (SB 138 Para D refers).*

2. (a) Visually inspect the propeller blades in the area from the blade clamp to six inches outboard of the deice boot for scratches, dents, nicks or other signs of exposed bare metal where surface corrosion could initiate. Also inspect the paint coating for signs of deterioration, for example, cracks, chips, bubbles, flaking, blisters, etc., which might indicate the presence of corrosion underneath the paint.
2. (b) Visually inspect the blade deice boot for looseness, bubbles or detachment of the boot. Visually inspect the deice boot adhesive for adequate coverage with protective paint coating, and sealant protection. No bare metal may be exposed.
2. (c) Propellers with blade surface irregularities as described in A and B above are to be removed from service before further flight and treated in accordance with Para C of Hartzell S.B. 138.

*Note: Because of the critical nature and extremely high propagation rate of cracks in this area, particular care is to be used when carrying out the daily inspection.*

Compliance: 1. Within 25 hours time in service after 30 December 1986.

*Note 1: All hard alloy blades are to be overhauled at 3000 hours time in service or 5 years whichever occurs first.*

*Note 2: Eddy current inspection in accordance with Section V of Manual 133-( ) is to be carried out at each blade rework.*

2. At each daily inspection after 30 December 1986.

*Note: This Directive shall be entered on the Maintenance Release as maintenance required. The inspection required by Para 2 may be performed by the pilot in command in which case certification is to be made by entering AD/PHZL/54 against the daily inspection certification of the Maintenance Release. A copy of this Airworthiness Directive is to be kept in the aircraft.*

**SCHEDULE OF AIRWORTHINESS DIRECTIVES**

Background: A recent after flight incident in which a blade was discovered with a crack across 67% of the chord has highlighted the need for a more critical inspection of hard alloy blades. The need for a more effective corrosion protection of this type blade is also required.

The crack started at a small corrosion pit at the edge of the deice boot and moved rapidly across the blade.