

Turbomeca Turbine Engines - Arriel Series

AD/ARRIEL/32 Amdt 2 (continued)

Note 3: Serial numbers of PT wheel assemblies and Modules M04 (PT) as listed in Figure 1 of the referenced MSB are the confirmed location of the affected PT blades. The engine serial numbers are also provided for information when available. In case of conflicts between serial numbers Turboméca should be contacted for resolution.

Note 4: EASA AD 2009-0112R1 dated 30 July 2009 refers. This AD supersedes EASA AD 2009-0112.

Compliance: For Requirement 1 - Before further flight after the effective date of the AD, unless previously accomplished.

For Requirement 2a - Before accomplishment of Requirement 2b. of this AD.

For Requirement 2b - Before accumulation of 5,000 Total PT Cycles on a given Module M04.

This Amendment becomes effective on 14 August 2009.

Background: During production of Arriel 1 and Arriel 2 Power Turbine (PT) wheels, geometric non-conformities on blade fir-tree roots have been detected by Turboméca. Potentially non-conforming PT blades have been traced as having been installed on Module M04 (PT) listed in Mandatory Service Bulletin (MSB) A292 72 0827 for Arriel 1 engines and A292 72 2833 for Arriel 2 engines.

The geometric non-conformities of the blades may potentially lead to a reduction in the fatigue resistance of PT blades to a lower level than their authorized in service use limit. This reduction of fatigue resistance can potentially result in blade release, which could cause an uncommanded in-flight shut down. On a single-engine helicopter, the result may be an emergency autorotation landing.

For the reasons stated above, the original issue of this AD required a restriction of the cyclic use limit of these PT blades to 1,000 flight cycles. For PT blades having reached a number of flight cycles superior or equal to 1,000, removal of Module M04, or PT wheel assembly, or PT blades was required prior to next flight.

Amendment 1 revised the reference documents to version B. Version B includes additional modules that are affected. Additional testing has also been conducted which allowed increasing the cyclic limit to 2,000 cycles.

Amendment 2 revises the reference documents to version C. Version C includes information regarding additional testing that has been conducted which allows increasing the cyclic limit to 5,000 cycles.

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AD/ARRIEL/32 Amdt 2 (continued)

The original issue of this AD became effective on 27 March 2009.

Amendment 1 of this AD became effective on 1 June 2009.

A handwritten signature in black ink, appearing to read 'James Coyne', with a stylized flourish at the end.

James Coyne
Delegate of the Civil Aviation Safety Authority

12 August 2009