AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Turbomeca Turbine Engines - Makila Series

AD/MAKILA/8 Engine & Fuel Control - Engine Control Unit 7/2006

Applicability: Makila 1A and 1A1 turbo-shaft engines post modifications TU190, TU202 or TU219, which are installed on AS 332 helicopters.

Requirement: Incorporate modification TU 241 by replacing the Anticipator or Pitch/Gas Link LPG board of the Engine Control Unit (ECU) in accordance with Turbomeca Mandatory Service Bulletin no. 298 73 0241.

Note: EASA AD 2006-0070 refers.

Compliance: Before 31 January 2007.

This Airworthiness Directive becomes effective on 6 July 2006.

Background: The control system of Makila 1A and 1A1 engines post modifications TU190, TU202 or TU219 includes an electrical back-up mode at 85% N1 (gas generator speed) activated on the detection of certain occurrences affecting engine control.

The activation of the back-up mode is irreversible and freezes the engine at 85% N1.

An analysis of reported in service occurrences showed that the back-up mode can be activated by an electrostatic discharge or by a malfunction of the collective pitch signal. The two engines fitted on the same helicopter can therefore be frozen in this back-up position at 85% N1.

This Directive requires the incorporation of modification TU241 on the LPG board of the Makila 1A and 1A1 ECU, which reduces the risk by changing the conditions in which the engines switch to, and are maintained, in the 85% NG back-up mode.

James Coyne
Delegate of the Civil Aviation Safety Authority

24 May 2006