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**AIRWORTHINESS DIRECTIVE**

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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.

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**Turbomeca Turbine Engines - Arrius Series****AD/ARRIUS/14****Engine Electronic Control Units****3/2008  
DM**

**Applicability:** Arrius 2B1, 2B1A, 2B2, 2K1 and 2K2 engines, all serial numbers.

*Note 1: These engines are known to be installed on, but not limited to, Eurocopter Deutschland EC135 and Agusta A109 twin-engine helicopters.*

- Requirement:**
1. Determine if the serial number of the installed engine electronic control (EEC) units is listed in the Appendix to Turbomeca Service Bulletin (SB) N° 319 73 2835 Update 1 dated 21 December 2006.
  2. If, as a result of the Requirement 1 determination, both EEC units installed on the helicopter's engines are found to be listed in the Appendix to SB N° 319 73 2835 Update 1 modify at least one unit in accordance with the instructions of SB N° 319 73 2835 Update 1.
  3. Modify all remaining affected EEC units in accordance with the instructions of SB N° 319 73 2835 Update 1.
  4. EEC units with a serial number as listed in the Appendix to SB N° 319 73 2835 Update 1 may not be installed on any engine as a replacement spare, unless it has been modified in accordance with the instructions of SB N° 319 73 2835 Update 1.

Later revisions of SB N° 319 73 2835 Update 1 approved by the European Aviation Safety Agency (EASA) are acceptable for compliance with the requirements of this Directive.

Modifications accomplished before the effective date of this Directive in accordance with SB N° 319 73 2835 dated 9 November 2006 are acceptable for compliance with requirements of this Directive.

*Note 2: EASA AD 2008-0018 refers.*

**Compliance:** For Requirements 1 and 2 - Within the next 100 hours time in service (TIS) or two months, whichever occurs first after the effective date of this Directive.

For Requirement 3 - Within 300 hours TIS or 12 months, whichever occurs first after the effective date of this Directive.

## Turbomeca Turbine Engines - Arrius Series

AD/ARRIUS/14 (continued)

For Requirement 4 - After 7 February 2009.

This Airworthiness Directive becomes effective on 7 February 2008.

**Background:** The engine manufacturer has advised that a short circuit of some tantalum capacitors inside certain EEC units may lead to an in-flight shutdown on one of the two engines. Investigations have indicated that the tantalum capacitors may have become embrittled during acceptance tests performed by the supplier and are liable to short circuit.

This Directive requires the identification and modification of EEC units that have the tantalum capacitors installed that could have become brittle during their acceptance test.



David Punshon  
Delegate of the Civil Aviation Safety Authority

29 January 2008