 Direction générale de l'aviation civile France GSAC publication	AIRWORTHINESS DIRECTIVE No F-2005-159		Distribution: A	Issue date: September 14, 2005	Page : 1/2
	This Airworthiness Directive is published by the DGAC on behalf of EASA, Airworthiness Authority of the State of Design for the affected product, part or appliance.			<i>Translation of « Consigne de Navigabilité » of same number. In case of difficulty, reference should be made to the French issue.</i>	
<p align="center">No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive, unless otherwise agreed with the Authority of the State of Registry.</p>					
Corresponding foreign Airworthiness Directive(s): Not applicable			Airworthiness Directive(s) replaced: None		
Person in charge of airworthiness: TURBOMECA			Type(s): ARRIUS 2B and 2K turboshaft engines		
Type certificate(s) No. M20 TCDS No M20					
ATA chapter: 79		Subject: Oil - Replacement of check-valve piston o-ring			

1. EFFECTIVITY:

This Airworthiness Directive (AD) applies to TURBOMECA turboshaft engines ARRIUS 2B1/2B1A and 2B2 which equip EC135 T1 and T2 rotorcraft, ARRIUS 2K1 and 2K2 which equip A 109 Power and A 109 LUH rotorcraft.

2. REASONS:

Investigations of incidents which occurred on ARRIUS 2 turboshaft engines have revealed the interruption of engine lubrication further to a passage blockage within the lubrication unit check valve. This blockage comes from the excessive swelling of the check valve piston o-ring. The level of swelling of the o-ring depends from the class of the oil used (STD or HTS) and the engine operating time.


A simultaneous interruption of the lubrication on both engines may lead to a double uncommanded in-flight shutdown. The oil usually being the same on both engines, to day available data put into evidence that this risk has to be considered and that measures to restore the level of safety have to be imposed.

3. MANDATORY ACTIONS AND COMPLIANCE TIMES:

The following actions are made mandatory, unless already done, from the effective date of this AD :

3.1. Replace the check-valve piston o-ring according to paragraph 2 of Alert Service Bulletin No A319 79 2832 (ARRIUS 2B1/2B1A/2B2) or Alert Service Bulletin No A319 79 2833 (ARRIUS 2K1/2K2) within the next 50 operating hours if the number of operating hours is greater than:

- 300 hours for engines operating with HTS-class oil and engines for which the history of the oils used is not available or engines which used to operate with HTS-class oil and which no longer do so;
- 450 hours for engines operating with STD class-oil since their introduction into service.

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3.2. Repeat operation of § 3.1:

- every 300 hours for engines operating with HTS-class oil and engines for which the history of the oils used is not available or engines which used to operate with HTS-class oil and which no longer do so;
- every 500 hours for engines operating with STD class-oil since their introduction into service.

4. REFERENCE PUBLICATIONS:

Mandatory Alert Service Bulletin No A319 79 2832 original issue or approved subsequent issue
Mandatory Alert Service Bulletin No A319 79 2833 original issue or approved subsequent issue

5. EFFECTIVE DATE:

September 24, 2005.

6. REMARK:

For any questions concerning the technical content of the requirements of this AD, please contact :

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7. APPROVAL:

This AD is approved under EASA reference No 2005-6223 dated September 06, 2005.

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