



LUFTFARTSVERKET

Luftfartsinspektionen

**LUFTVÄRDIGHETSDIREKTIV
(LVD)**

D. Motor
Turbomeca Arriel 1
LVD Nr 2896 R1
Upphäver LVD 2896

Sektion 2. Utlandstillverkad flygmateriel

TITEL: **Kontroll av fri rotation av gasgeneratorn**

GÄLLER: Turbomeca Arriel enligt punkt 1 och 2 i bifogad kopia av DGAC AD 98-311(A) R1.

ÅTGÄRD: Utför åtgärder i enlighet med angivet underlag.

TID FÖR ÅTGÄRD Vid tillfällen angivna i bifogad kopia av DGAC AD 98-311(A) R1

UNDERLAG: DGAC AD 98-311(A) R1
Service Bulletin TURBOMECA Nr 292 72 0181 och 292 72 0212
Revision 4 daterad 20 augusti 1998 eller senare utgåva

REFERENS: DGAC AD 98-311(A) R1

BESLUTSDATUM: 1998-11-04

LFS 1998:72

Åtgärder enligt LVD utgör nödvändig förutsättning för ifrågavarande flygmateriels luftvärdighet. Referens BCL M 1.11.

Anteckning om åtgärd, som vidtagits i enlighet med LVD, skall införas i teknisk journal för berörd flygmateriel med hänvisning till ifrågavarande LVD-nummer. Angivet underlag refererar till senast gällande revision/utgåva. LVD utges i luftfartsverkets författningssamlingar LFS.

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AIRWORTHINESS DIRECTIVE

released by DIRECTION GENERALE DE L'AVIATION CIVILE

Inspection and/or modifications described below are mandatory. No person may operate a product to which this Airworthiness Directive applies except in accordance with the requirements of this Airworthiness Directive.

Translation of 'Consigne de Navigabilité' ref. : 98-311(A) R1
In case of any difficulty, reference should be made to the French original issue.

TURBOMECA

ARRIEL 1 turbo-shaft engines

2nd stage nozzle guide vanes (NGV2)

This Airworthiness Directive is applicable to all variants of ARRIEL 1 turbo-shaft engines.

Deteriorations of the 2nd stage nozzle guide vanes, at TU 76 standard, in the gas generator module (M03) have resulted, in some cases, in engine shutdowns in flight. One case of deterioration of a post-TU 197 nozzle guide vane resulting in an in-flight shut down was also noted although the degradation mode different. These deteriorations cannot be detected by inspections when the engine is installed on the aircraft, the module M03 has to be disassembled to check the NGV's condition.

However, when the engine is installed on the aircraft, there is a premonitory indication of deterioration : an abnormal rubbing noise can be heard, either during the gas generator rundown after engine shutdown, or during the daily check of the gas generator free rotation, performed after the last flight of the day.

As for the NGV's post-mod TU 197, it is possible to detect a possible beginning of NGV degradation by the mean of a borescopic inspection after having removed the engine and separated modules 3 and 4.

Consequently, in order to minimize the risk of occurrence of an In-Flight Shut Down, it is mandatory to apply the following measures :

1. FOR ARRIEL 1A, 1A1, 1A2, 1B, WHICH HAVE TU 76 AND WHICH HAVE NOT TU 197 OR TU 202, AND FOR ARRIEL 1C, 1C1, 1C2, 1D, 1D1, 1S, 1K, 1K1 WHICH HAVE NOT TU 197 OR TU 202.

1.1. Carry out the noise inspection in accordance with the periodicity and method of Service Bulletin 292 72 0181, Revision 3 dated September 15, 1995 (or later).

1.2. As from the date of effectiveness of the Airworthiness Directive 93-114(B) Revision 3, it is forbidden to use any Module 3 from ARRIEL 1B, 1D, 1D1 which have TU 76 and which have not TU 197 or TU 202.

2. FOR ARRIEL 1, ALL VARIANTS POST-MOD TU 197

Carry out the inspections and actions indicated in SB 292 72 0212 Revision 4 dated August 20, 1998 or later update, within the cycle limit specified by this Service Bulletin.

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October 07, 1998

TURBOMECA
ARRIEL 1 Turbo-shaft engines

98-311(A) R1

* **ATTENTION** : Starting from revision 3 of SB 232 72 0212, inspection intervals are specified in cycles and no longer in hours.

Ref. : TURBOMECA Service Bulletin N° 292 72 0181 and 292 72 0212.

This revision 1 replaces original airworthiness directive 98-311(A) dated July 29, 1998.

EFFECTIVE DATES :

Original AD : AUGUST 08, 1998
Revision 1 : OCTOBER 17, 1998