LUFTFARTSVERKET
Luftfartsinspektionen

LUFTVÄRDIGHETSDIREKTIV (LVD)

A Motordrivna Luftfartyg
Eurocopter Deutschland
LVD Nr 2-3274

Sektion 2. Utlandstillverkad flygmateriel

TITEL: **"Synchronization Procedure for Fuel Control Components for sustaining the Automatic Engine Control".**

GÄLLER: Eurocopter EC 135 T1.

ÅTGÄRD: Utför åtgärd enligt LBA AD 2002-333

TID FÖR ÅTGÄRD: Före flygning.

UNDERLAG: Eurocopter Alert Service Bulletin No. EC135-71A-024 daterad 8 juni, 2002 eller senare utgåva.

REFERENS: LBA AD 2002-333

BESLUTSDATUM: 17 september 2002

LFS 2002:99

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.

Postadress	Gatuadress	Telefonnummer	Faxnummer	Telegram	Telex
601 79 NORRKÖPING	Vikobplan 11	011-19 20 00	011-19 25 75	Civilair Norrköping	62450

Airworthiness Directive

2002-333

Luftfahrt-Bundesamt
Airworthiness Directive Section
Hermann-Blenk-Str. 26
38108 Braunschweig
Federal Republic of Germany

Eurocopter Deutschland

Effective Date: September 16, 2002

Affected:

Kind of aeronautical product:	Helicopter
Manufacturer:	Eurocopter Deutschland, Ottobrunn, Germany
Type:	EC 135
Models affected:	EC 135 T1
Serial numbers affected:	all
German Type Certificate No.:	3061

Subject:
Power Plant EC 135 T1 - automatic engine control - synchronisation procedure for fuel control components for sustaining the automatic engine control

Reason:
In the past, a few cases occurred on EC135 T1 helicopters, by which a FADEC FAIL caution indication was displayed, caused by a discrepancy in the parameters which were generated within the fuel main metering unit and transmitted to the FADEC. This discrepancy lead, on appearance of the FADEC FAIL caution indication, to „freezing" of the fuel main metering valve at its momentary position, resulting in loss of the automatic engine control in the affected system. Despite measures undertaken by Turbomeca for elimination of the problem (software improvements TU19C, TU23C and TU45C), a few further FADEC FAIL cases have occurred on EC 135 T1 helicopters, for which no explanation hat yet been found and by which a discrepancy in parameters at the cause cannot be ruled out.
With this Airworthiness Directive a synchronisation procedure for pilots, which was already used in the past, is being introduced, which prevents the parameter discrepancy arising and thus sustains the automatic engine control.

Action:
Insert pages into the Flight Manual in accordance with the instructions of the referenced Alert Service Bulletin.

Compliance:
Before the next flight.

Technical publication of the manufacturer:
Eurocopter Deutschland Alert Service Bulletin No. EC135-71A-024 dated June 08, 2002 which becomes herewith part of this AD and must be obtained from Messrs.:

Eurocopter Deutschland
P.O. Box
81663 München
Federal Republic of Germany

Phone: + 49 (0) 89 6000-9137 Fax: + 49 (0) 89 6000 6060

Holders of affected aircraft registered in Germany have to observe the following:
Action has to be accomplished by the owner of the aircraft or an approved service station and to be checked and entered in the log book by a licensed inspector.

As a result of the a.m. deficiencies, the airworthiness of the aircraft is affected to such an extent that after the expiry of the a.m. dates the aircraft may be operated only after proper accomplishment of the prescribed actions. In the interest of aviation safety outweighing the interest of the receiver in a postponement of the prescribed actions, the immediate compliance with this AD is to be directed.

Enquiries regarding this Airworthiness Directive should be referred to Mr. Olaf Schneider, Airworthiness Directive Section at the above address, fax-no. 0049 531/2355-720. Please note, that in case of any difficulty, reference should be made to the German issue!

An appeal to this notice may be raised within a period of one month following notification. Appeals are to be raised with the Luftfahrt-Bundesamt, Hermann-Blenk-Str. 26, 38108 Braunschweig, in writing or for the purpose of drawing up minutes.

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EC135

ALERT SERVICE BULLETIN

URGENT – for immediate attention !!!

To all holders and pilots of the EC135 T1

Subject: Power Plant EC135 T1 – Automatic Engine Control – Synchronization Procedure for Fuel Control Components for sustaining the Automatic Engine Control

1. Planning Information

In the past, a few cases occurred on EC135 T1 helicopters, by which a FADEC FAIL caution indication was displayed, caused by a discrepancy in the parameters which were generated within the fuel main metering unit and transmitted to the FADEC. This discrepancy lead, on appearance of the FADEC FAIL caution indication, to "freezing" of the fuel main metering valve at its momentary position, resulting in loss of the automatic engine control in the affected system. Despite measures undertaken by Turbomeca for elimination of the problem (software improvements TU19C, TU23C and TU45C), a few further FADEC FAIL cases have occurred on EC135 T1 helicopters, for which no explanation has yet been found and by which a discrepancy in parameters as the cause cannot be ruled out.

By way of this Alert Service Bulletin, a synchronization procedure for pilots, which was already used in the past, is being introduced, which prevents the parameter discrepancy arising and thus sustains the automatic engine control.

2. Action

Make copies of the flight manual pages attached to this Alert Service Bulletin. Cut them out and file them into the model–related flight manual(s).

3. Compliance

Before the next flight.

4. Appendix

Changed pages of the flight manual:

Appendix 1 to 2:	EC135 T1 CDS
Appendix 3 to 4:	EC135 T1 CPDS

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ALERT SERVICE BULLETIN

SECTION 4

NORMAL PROCEDURES

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Changed pages of FLM EC135 T1, Appendix 1

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ALERT SERVICE BULLETIN

4.7.A **SPECIAL INFORMATION FOR OEI / AUTOROTATION TRAINING AND APPROACH / LANDING PREPARATION**

In order to prevent malfunction which could lead to a FADEC FAIL situation, the following procedure is mandatory.

The procedure shown below shall be performed while in a steady flight condition and in safe altitude:

- **before initiation of every approach (with or without landing)**
- **during training of OEI or Autorotation before every switch-over to IDLE**

CAUTION DURING ACCOMPLISHMENT OF THE RESET PROCEDURE DESCRIBED IN THE FOLLOWING, NO INPUTS ARE TO BE MADE AT THE COLLECTIVE LEVER OR AT THE TWIST GRIP FOR MANUAL ENGINE CONTROL, SINCE THIS CAN LEAD TO THE SYNCHRONIZATION PROCEDURE BECOMING INEFFECTIVE.

NOTE The reset procedure is identical for each of two systems and is to be applied for both engines, one after the other.

Procedure

1. ENG MODE SEL switch	– Set from NORM to MAN

After illumination of the ENG MANUAL caution:

2. ENG MODE SEL switch	– Set from MAN to NORM; ENG MANUAL caution must go off

Repeat procedure for second engine.

LBA APPROVED
Attachment to ASB EC 135–71A–024

Changed pages of FLM EC135 T1, Appendix 2

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ALERT SERVICE BULLETIN

SECTION 4

NORMAL PROCEDURES

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ALERT SERVICE BULLETIN

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Changed pages of FLM EC135 T1, Appendix 4