



CIVIL AVIATION AUTHORITY
CZECH REPUBLIC

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AIRWORTHINESS DIRECTIVE

Number: CAA-AD-027/2003R1

Supersedes CAA-AD-027/2003

Date of issue: April 16, 2004

AIRBUS

A300, A310, A300-600

AIRCRAFT - ELECTRICAL POWER - TRANSFORMER RECTIFIER UNITS - REPLACEMENT

Applicability: AIRBUS aircraft:

- A300, A310 all certified models and all serial numbers except for aircraft on which AIRBUS Service Bulletin (SB) A300-24-0099 or A310-24-2088 (AIRBUS modification No. 12540) has been embodied.

- A300-600 all certified models and all serial numbers, except for aircraft on which AIRBUS modification No. 12540 has been embodied in production (or SB A300-24-6082 in service).

| [...]

| **Effective date:** June 10, 2004

| **Compliance:** Required as indicated F-2003-082 R1.

Remarks: The compliance of this AD must be recorded in Aircraft Logbook, where applicable the requirements of this AD must be integrated into Aircraft Technical Documentation. Address inquiries concerning this AD to: Civil Aviation Authority, Airworthiness Division, Ruzyně Airport, 160 08 Prague 6, Czech Republic, tel.: 420 2 33320922, fax: 420 2 20562270.

Ing. Pavel MATOUŠEK
Director of Airworthiness Division
CAA CZ

DGAC AD No.: F-2003-082 R1

AD replaced: 2003-082 originale issue

Issue date: March 31, 2004

AIRBUS

A300, A310 and A300-600 aircraft

Type certificate(s) No. 145

TCDS No. 145

ATA chapter: 24

Subject: Electrical power - Transformer Rectifier Units (TRU's)

1. EFFECTIVITY:

AIRBUS aircraft:

- A300, A310 all certified models and all serial numbers except for aircraft on which AIRBUS Service Bulletin (SB) A300-24-0099 or A310-24-2088 (AIRBUS modification No. 12540) has been embodied.

- A300-600 all certified models and all serial numbers, except for aircraft on which AIRBUS modification No. 12540 has been embodied in production (or SB A300-24-6082 in service).

[...]

2. REASONS:

Following the in flight loss of the DC NORMAL BUS on an A310 on November, 1996, attributed to a double failure of transformers rectifiers (TRU) caused by an internal overheating, the manufacturer launched a design change of these TRU's, which aimed at lowering the temperature threshold of internal fan starting.

Airworthiness Directives (AD) 1999-435-296 rendered mandatory the installation of TRU P/N F11QY3121 (in place of TRU P/N F11QB3121), before September 30, 2001, by embodiment of SB's A300-24-0089, A310-24-2077 and A300-24-6068 linked to AIRBUS Modification No. 11771.

On 2000 and 2001, despite this modification, a low reliability of TRU 'QY' was still observed. Additional manufacturer analysis and test pointed out the rectifier diodes P/N F120N0018/19 as the main contributing factor to TRU 'QY' poor reliability.

A new modification was then launched which includes the followings improvements:

- temperature threshold of the internal fan modification,
- "C" diodes installation (in place of "A" and "B" diodes),
- new primary transformer filter capacitor,
- new location of above capacitor (less warm TRU area),
- change of secondary transformer filter.

In parallel, the operation of the aircraft was rendered more restrictive and a temporary revision of the Master Minimum Equipment List (MMEL) was issued and rendered mandatory by AD 2002-185(B) since April 2002.

This new AD resumes the requirements of AD 2002-185 and renders mandatory the terminative action consisting in installing new certified THALES AES TRU's on aircraft (AIRBUS modifications 12540).

Revision 1 of this AD aims at:

- introducing a clarification concerning applicable publications listed at paragraph 4 of this AD,
- excluding A300-600ST (BELUGA) aircraft which is dealt with by AD F-2004-041.

3. MANDATORY ACTION AND COMPLIANCE TIME:

3.1. Operational restriction

From April 13, 2002 (effective date of AD 2002-185(B) at original issue), introduce the following manufacturer's MMEL temporary revision into the aircraft Minimum Equipment List (MEL):

- A300 TR No. 1-24/02F issue 01 approved by the DGAC on June 22, 2001,
- A310TR No. 01-24/01J issue 02 approved by the DGAC on June 14, 2001,
- A300-600 TR No. 01-24-/01I issue 02 approved by the DGAC on June 14, 2001,

[...]

and conform with these directives until accomplishment of actions in paragraph 3.2. below.

3.2. Terminative action

On April 30, 2006 at the latest, replace THALES AES TRU's P/N F11QY3121 by THALES AES TRU's P/N F11QY3714 in accordance with the instructions of SB A300-24-0099 or A310-24-2088 or A300-24-6082 as applicable.

4. REFERENCE PUBLICATIONS:

AIRBUS Service Bulletins:

A300-24-0099

A310-24-2088

A300-24-6082

[...]

Any later approved revision of these SBs is acceptable).

MMEL Temporary Revisions:

A300 TR No. 1-24/02F issue 01

A310TR No. 01-24/01J issue 02

A300-600 TR No. 01-24-/01I issue 02

[...]

Any later approved revision of these MMEL is acceptable.

EFFECTIVE DATE:

Original issue: March 01, 2003

Revision 1: April 10, 2004.

6. REMARK

For questions concerning the technical contents of this AD's requirements, contact:
AIRBUS - Hubert Angelier - Facimile: 33561934580.

7. APPROVAL:

This AD Revision is approved under EASA reference No 2004-3055 dated March 23, 2004.