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|  | AIRWORTHINESS DIRECTIVE No F-2005-026 | Distribution: B | Issue date: February 16, 2005 | Page : 1/2 |
| | Direction générale de l'aviation civile France GSAC publication | 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> |
| 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. | | | | |
| Corresponding foreign Airworthiness Directive(s): Not applicable | | Airworthiness Directive(s) replaced: UF-2005-026 | | |
| Person in charge of airworthiness: AIRBUS SAS | | Type(s): A340-200/300 aircraft | | |
| Type certificate(s) No. A.015 TCDS No A.015 | | | | |
| ATA chapter: 27 | Subject: Flight controls - Rush-button switches replacement and FCPC standard upgrade | | | |

1. **EFFECTIVITY:**

AIRBUS aircraft A340-200 and A340-300 series, all certified models, all serial numbers, except those fitted with Flight Control Primary Computer (FCPC) standard L16 or L16A or subsequent.

The FCPC standard L16 or L16A are embodied in production by AIRBUS modification 48753 or 48754 or 51356 or 51340 or embodied in service by AIRBUS Service Bulletin (SB) A340-27-4101 or A340-27-4102 or A340-27-4116 or A340-27-4117.

Reminder: It is the responsibility of the operator to ensure that any spare part that could be installed on the aircraft does not question the compliance of the aircraft with the requirements of this Airworthiness Directive.


2. **REASONS:**

One operator has reported recently a temporary multiple FCPC's (Flight Control Primary Computer) and FCSC's (Flight Control Secondary Computer) failure in cruise on one A340-200 fitted with FCPC's standard L15. Inboard ailerons and elevators electrical control was then lost. Crew reset the affected computers, and normal flight condition was resumed without further anomalies.

The investigations launched on the FCPC's, FCSC's and PRIM push button switches (P/BSW's) removed from aircraft pointed out a PRIM2 P/BSW (related to FCPC2) as the origin of the multiple FCPC's and FCSC's failures, due to the degradation of the P/BSW.

Further analyses have demonstrated that, as a result of the oscillatory input received from the P/BSW, the related FCPC may fail. However, prior to its failure, the affected FCPC may itself transmit oscillatory signals to the other flight controls computers leading to their failure.

This situation, if not corrected, could lead in the worst case to the loss of all flight control computers.

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The aim of this Airworthiness Directive (AD) is to render mandatory:

- a replacement of the three PRIM push buttons switches (P/BSW), and
- the installation of a FCPC standard that prevents the failure of flight control computers other than the one receiving the oscillatory input from the affected push button switch.

3. MANDATORY ACTIONS AND COMPLIANCE TIMES:

Unless already accomplished:

3.1. For all affected A340-200/-300 delivered before end of December 1999:

At the earliest maintenance opportunity, but not later than February 04, 2005, replace the three PRIM push button switches in accordance with AIRBUS All Operator Telex (AOT) A340-27A4133 dated January 31, 2005 with a new unit of the same PN or with alternative PN listed in paragraph 4.2.1 of the AOT.

Following the replacement of the push button switches, perform an operational test of the three FCPC's in accordance with AIRBUS All Operator Telex (AOT) A340-27A4133 dated January 31, 2005.

3.2. For all affected A340-200/-300:

Not later than March 11, 2005, upgrade the three FCPC's standard in accordance with AIRBUS SB A340-27-4116 or A340-27-4117.

4. REFERENCE PUBLICATIONS:

AIRBUS All Operator Telex A340-27A4133 dated January 31, 2005
 AIRBUS Service Bulletin A340-27-4116
 AIRBUS Service Bulletin A340-27-4117
 AIRBUS Service Bulletin A340-27-4101
 AIRBUS Service Bulletin A340-27-4102
 (Any later approved revision of these documents is acceptable).

5. EFFECTIVE DATE:

Upon receipt of the Emergency AD issued on February 01, 2005.

6. REMARKS:

This AD has been the subject of an emergency diffusion on February 01, 2005.

For questions concerning the technical contents of this AD's requirements, contact:

AIRBUS SAS - Airworthiness Office - EAL - Fax: 33 5 61 93 45 80.

7. APPROVAL:

This AD is approved under EASA reference No 2005-1004 dated February 01, 2005.