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|  | AIRWORTHINESS DIRECTIVE No F-2004-068 | Distribution: B | Issue date: May 26, 2004 | Page : 1/3 |
| Direction générale de l'aviation civile France GSAC publication | This Airworthiness Directive is published by the DGAC : <input checked="checked" type="checkbox"/> on behalf of EASA, the Primary Airworthiness Authority for the affected product. <input type="checkbox"/> as the Registration Airworthiness Authority for the affected aircraft.. | | <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: AIRBUS SAS | | Type(s): A340-200/-300 aircraft | | |
| Type certificate(s) No. 183 TCDS No 183 | | | | |
| ATA chapter: 57, 27 | Subject: Wings - Modification of aileron servo-controls and inspection / modification of aileron servo-control fittings | | | |

1. EFFECTIVITY:

AIRBUS A340 aircraft, models -211, -212, -213, -311, -312 and -313, all serial numbers, on which the following AIRBUS Service Bulletins (SB) or modifications (Mod) have been embodied in service or in production:

- SB A340-27-4039 (Mod 44012&44157) or SB A340-27-4045 (Mod 44162) or SB A340-27-4044 (Mod 43637&44158) (installation of ECP 7) or,
- SB A340-27-4081 (installation of ECP 8) or,
- SB A340-27-4062 (Mod 45512) (installation of standard ECP 9).

Note 1: No action is requested for aircraft fitted with aileron servo-controls standard ECP 9 with large head attachment bolts installed in production by Mod 50660.


2. REASONS:

Several cases of bush migration (two cases of total loss) on the inboard and outboard aileron servo-controls actuator fitting and a crack at aileron servo control fitting have been reported by the operators.

It has been clearly identified that the aircraft affected are those equipped with aileron servo-controls ECP 8 or ECP 9 installed in service. These aileron servo-controls are equipped with new attachment bolts with a reduced diameter and a small head.

Analyses have shown that the crack is due to a fatigue phenomenon initiated by very high dissymmetrical loads in case of bush migration.

This situation, if not corrected, could lead in the most critical case to the rupture of the attachments of the two outboard aileron servo-controls thus leading to a flutter phenomenon.

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This Airworthiness Directive (AD) renders mandatory:

- the replacement of all active and damping aileron servo-controls standard ECP 7 by servo-controls standard ECP 9,
- a repetitive inspection of the bush and subsequent corrective actions for servo-controls ECP8/ECP9 installed in-service by SBs,
- the replacement of reduced body - small head attachment bolts by larger head bolts for aileron servo-controls ECP 9 installed in production by Mod 45512.

3. **MANDATORY ACTIONS AND COMPLIANCE TIMES:**

3.1. **Aircraft on which AIRBUS SB A340-27-4039/Mod 44012&44157 or SB A340-27-4045/Mod 44162 or SB A340-27-4044/Mod 43637 & 44158 has been embodied in service/production:**

At latest on December 31, 2004, replace all active and damping aileron servo-controls ECP 7 standard by aileron servo-controls ECP 9 standard in accordance with the instructions of SB A340-27-4062 and simultaneously perform inspection and modification described in paragraph 3.2. of this AD.

3.2. **Aircraft on which SB A340-27-4081 or SB A340-27-4062 has been embodied:**

Unless already accomplished,

Within 600 Flight Hours (FH) following the effective date of this AD, perform a detailed visual inspection of the bush of each inboard and outboard aileron servo-control fitting in accordance with the instructions of SB A340-57-4083 Revision 02.

Note 2: Refer to SB A340-57-4083 Revision 02 figure 2 flow chart for next paragraphs of this AD.

3.2.1. If partial migration of the bush is detected, replace the bush and replace the small head attachment bolt by one with a larger head in accordance with SB A340-57-4083 Revision 02 figure 2 sheet 1. Large head attachment bolts are installed by SB A340-57-4084.

3.2.2. If the bush is missing (full migration), before next flight,

For the aileron servo-controls positions 7CS1/7CS2, 9CS1/9CS2 and 10CS1/10CS2, perform a Eddy Current (HFEC) inspection to detect cracks in the fitting and apply if necessary the required corrective actions in accordance with the instructions of SB A340-57-4083 Revision 02 figure 2 sheet 5.


For the aileron servo-controls positions 8CS1/8CS2, contact AIRBUS.

3.2.3. If no bush migration has been detected at initial detailed visual inspection,

3.2.3.1. Apply paint marking on the fitting and bush in accordance with SB A340-57-4083 Revision 02.

3.2.3.2. Repeat the detailed visual inspection to monitor bush rotation and/or partial migration at intervals not to exceed 600 FH, in accordance with SB A340-57-4083 Revision 02 figure 2 sheets 2 and 4.

If, after three consecutive detailed visual inspections, no rotation and/or partial migration of the bush has been detected, replace the small head attachment bolt by a larger head bolt in accordance with the instructions of SB A340-57-4084.

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Or,

Directly replace the small head attachment bolt by a larger head bolt in accordance with the instructions of SB A340-57-4084, and perform a detailed visual inspection to detect bush rotation at 1800 FH after embodiment of SB A340-57-4084, but no later than 18 months after SB A340-57-4084 embodiment. Apply repair instructions if necessary.

3.2.3.3. If bush rotation and/or partial migration is detected during the repetitive inspections, apply corrective actions in accordance with SB A340-57-4083 Revision 02 figure 2 sheet 4.

3.3. Aircraft on which Mod 45512 has been embodied in production (and on which Mod 50660 has not been embodied in production):

Within 18 months following the effective date of this AD, replace all the attachment bolts of aileron servo-controls standard ECP 9 with large head bolts in accordance with the instructions of SB A340-57-4084.

4. REFERENCE PUBLICATIONS:

AIRBUS Service Bulletin A340-27-4081
AIRBUS Service Bulletin A340-27-4062
AIRBUS Service Bulletin A340-57-4083 Revision 02
AIRBUS Service Bulletin A340-57-4084
AIRBUS Service Bulletin A340-27-4039
AIRBUS Service Bulletin A340-27-4045
AIRBUS Service Bulletin A340-27-4044
(Any later approved Revision of these SB 's is acceptable).

5. EFFECTIVE DATE:

June 05, 2004.

6. REMARK:

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

AIRBUS SAS – Gérard MEUREY – Fax : 33 5 61 93 45 80.

7. APPROVAL:

This AD is approved under EASA reference No 2004-5332 dated May 17, 2004.