	AIRWORTHINESS DIRECTIVE No F-2004-067		Distribution: B	Issue date: May 26, 2004	Page : 1/3
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GSAC publication	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: None			
Person in charge of airworthiness: AIRBUS SAS		Type(s): A330 aircraft			
Type certificate(s) No. 184 TCDS No 184					
ATA chapter: 57, 27	Subject: Wings - Inspection/Modification of aileron servo control fittings				

1. EFFECTIVITY:

AIRBUS A330 aircraft, models -201, -202, -203, -223, -243, -301, -321, -322, -323, -341, -342 and -343, all serial numbers, on which the following AIRBUS Service Bulletins (SB) or modifications (Mod) have been embodied in service or in production:

- SB A330-27-3075 (installation of standard ECP 8) or,
- SB A330-27-3054 (Mod 45512) (installation of standard ECP 9).

Note 1: no action is requested for aircraft fitted with aileron servo-controls standard ECP9 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.

This Airworthiness Directive (AD) therefore renders mandatory:

- a repetitive inspection of the bush and subsequent corrective actions for servo-controls ECP 8 / ECP 9 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.

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3. MANDATORY ACTIONS AND COMPLIANCE TIMES:

3.1. Aircraft on which SB A330-27-3075 or SB A330-27-3054 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 A330-57-3075 Revision 02.

Note 2: Refer to SB A330-57-3075 Revision 02 figure 2 flow chart for next paragraphs of this AD.

3.1.1. 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 A330-57-3075 Revision 02 figure 2 sheet 1. Large head attachment bolts are installed by SB A330-57-3076.

3.1.2. 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 A330-57-3075 Revision 02 figure 2 sheet 5.

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

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

3.1.3.1. Apply paint marking on the fitting and bush in accordance with SB A330-57-3075 Revision 02.

3.1.3.2. Repeat the detailed visual inspection to monitor bush rotation and/or partial migration at intervals not to exceed 600 FH, in accordance with the instructions given in SB A330-57-3075 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 A330-57-3076.


Or

Directly replace the small head attachment bolt by a larger head bolt in accordance with the instructions of SB A330-57-3076, and perform a detailed visual inspection to detect bush rotation at 1800 FH after embodiment of SB A330-57-3076, but no later than 18 months after SB A330-57-3076 embodiment. Apply repair instructions if necessary.

3.1.3.3. If bush rotation and/or partial migration is detected during the repetitive inspections, apply corrective actions in accordance with SB A330-57-3075 Revision 02 figure 2 sheet 4.

3.2. Aircraft on which AIRBUS modification 45512 has been embodied in production (and on which modification 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 A330-57-3076.

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4. REFERENCE PUBLICATIONS:

AIRBUS Service Bulletin A330-27-3075
AIRBUS Service Bulletin A330-27-3054
AIRBUS Service Bulletin A330-57-3075 Révision 02
AIRBUS Service Bulletin A330-57-3076
(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 2004-5331 dated May 17, 2004.