 <b>Direction générale de l'aviation civile France</b>  <b>GSAC publication</b>	<b>AIRWORTHINESS DIRECTIVE</b>  <b>No F-2005-068</b>		Distribution:  <b>B</b>	Issue date:  <b>April 27, 2005</b>	Page :  <b>1/3</b>
	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>		
<p style="text-align: center;"><b>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.</b></p>					
Corresponding foreign Airworthiness Directive(s): <b>Not applicable</b>			Airworthiness Directive(s) replaced: <b>2003-122 cancelled by its Revision 1</b>		
Person in charge of airworthiness: <b>AIRBUS SAS</b>			Type(s): <b>A340-200/300 aircraft</b>		
Type certificate(s) No. <b>A.015</b> TCDS No <b>A.015</b>					
ATA chapter:  <b>27</b>		Subject: <b>Leading edge slat - Inspection and replacement of rotary actuator Type A</b>			

#### 1. **EFFECTIVITY:**

AIRBUS A340-200 and A340-300 aircraft, all certified models and all serial numbers, equipped with rotary actuator Type A PN 954A0000-01 or PN 954A0000-02 or PN 954B0000-01.

This Airworthiness Directive (AD) is not applicable to aircraft on which AIRBUS modification 50138 has been embodied in production or AIRBUS Service Bulletin (SB) A340-27-4106 or SB A340-27-4110 has been embodied in service.

#### 2. **REASONS:**


The aim of this AD dealing with the same subject as AD 2003-122, is:

- to replace AD 2003-122 which is cancelled,
- to repeat the actions already rendered mandatory by AD 2003-122, that is:
  - the inspection of the torque limiter for grease contamination, and to carry out all necessary corrective actions at the threshold and intervals defined in paragraph 3 of AD 2003-122,
  - the interruption of the repetitive lubrication task of affected rotary actuators Type A,
- to render mandatory the replacement of affected rotary actuators Type A by modified actuators.

#### **Reminder of the reasons given in AD 2003-122:**

An excessive leak at the torque limiter output shaft seal of rotary actuator Type A of leading edge slat No. 1 was reported during a scheduled check on an A340 aircraft.

Investigations performed by the supplier of the removed rotary actuator revealed that the parts of the torque limiter were totally contaminated with grease, further to migration of the grease from the power gear stage. This grease migration was only possible after a re-greasing, the quantity of grease fitted in production being insufficient to migrate to the torque limiter.

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Consequently, the inspection required by the paragraph 3.1 of this AD does not apply for all aircraft on which Maintenance Review Board (MRB) task 27.80.00-07 ("Lubrication of Slats Rotary Actuators" is a greasing task only scheduled from 5 years) has never been performed since delivery.

This grease contamination would affect the torque limiter performance. In case of jam of the linkage drive, this performance degradation would lead to structural damage at the bolts attaching leading edge slat No. 1 to the aircraft structure and to a potential loss of leading edge slat No. 1 if the torque limiter of the second rotary actuator is also affected by grease contamination.

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

The following measures are rendered mandatory from the effective date of this AD:

#### 3.1. **Inspection**

Unless already accomplished or unless the operator can ensure that MRB task 27.80.00-07 "Lubrication of Slats Rotary Actuators" has never been performed since delivery:

**3.1.1.** Within 1,000 Flight Hours (FH) following March 29, 2003, the effective date of AD 2003-122, perform an inspection of the torque limiter assembly for grease contamination, in accordance with the instructions of SB A340-27-4109 Revision 1 and inform AIRBUS.

**Note 1:** No additional work is required for aircraft inspected in accordance with the instructions of AIRBUS SB A340-27-4109 at revision 0.

**3.1.2.** Should grease be found in the torque limiter during the inspection defined in paragraph 3.1.1, replace the rotary actuator within 7,500 FH following March 29, 2003, the effective date of AD 2003-122, in accordance with the instructions of SB A340-27-4109 Revision 1 and inform AIRBUS.

If a rotary actuator is replaced by a non modified actuator which is clear of torque limiter grease contamination, as permitted by SB A340-27-4109 Revision 1 paragraph 3 B (2), this non modified actuator has to be inspected at intervals not exceeding 7,500 FH in accordance with the instructions of AIRBUS SB A340-27-4109 Revision 1.

**3.1.3.** Should no grease be found in the torque limiter during the inspection defined in paragraph 3.1.1, repeat the inspection at intervals not exceeding 7,500 FH in accordance with the instructions of SB A340-27-4109 Revision 1 and inform AIRBUS.

**3.1.4.** Should grease be found in the torque limiter during one of the repetitive inspections required in paragraph 3.1.3, replace the rotary actuator not later than 2,500 FH after this inspection in accordance with the instructions of SB A340-27-4109 Revision 1 and inform AIRBUS.


If a rotary actuator is replaced by a non modified actuator which is clear of torque limiter grease contamination, as permitted by SB A340-27-4109 Revision 1 paragraph 3 B (2), this non modified actuator has to be inspected at intervals not exceeding 7,500 FH in accordance with the instructions of AIRBUS SB A340-27-4109 Revision 1.

#### 3.2. **Lubrication**

Stop the MRB task 27.80.00-07 repetitive lubrication on rotary actuators Type A PN 954A0000-01 or PN 954A0000-02 or PN 954B0000-01 in leading edge slat No. 1.

**Note 2:** Rotary actuators Type B in leading edge slats are not affected by the cancellation of this repetitive lubrication task.

**Note 3:** Modified rotary actuators Type A in leading edge slats post mod 50138 or SB A340-27-4106 or SB A340-27-4110 are not affected by the cancellation of this repetitive lubrication task.

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### 3.3. Replacement of actuators

At latest on June 30th, 2008, remove rotary actuators Type A PN 954A0000-01 or PN 954A0000-02 or PN 954B0000-01 and replace them by modified rotary actuators in accordance with the instructions of SB A340-27-4106.

The embodiment of SB A340-27-4110 is an acceptable alternative solution for the replacement of rotary actuators Type A PN 954B0000-01.

### 4. REFERENCE PUBLICATIONS:

AIRBUS Service Bulletin A340-27-4109 Revision 1  
AIRBUS Service Bulletin A340-27-4106  
AIRBUS Service Bulletin A340-27-4110  
(Any later approved revision of these SBs is acceptable).

### 5. EFFECTIVE DATE:

May 07, 2005.

### 6. REMARK:

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

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

### 7. APPROVAL:

This AD is approved under EASA reference No 2005-3630 dated April 20, 2005.