

	AIRWORTHINESS DIRECTIVE No F-2001-504 R5	Distribution: B	Issue date: August 18, 2004	Page : 1/3
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: 2001-504 R4		
Person in charge of airworthiness: AIRBUS SAS		Type(s): A330 aircraft		
Type certificate(s) No. A.004 TCDS No A.004				
ATA chapter: 32	Subject: Landing gear - Nose landing gear - Inspection for corrosion under nose wheel steering system - Rotating sleeve			

1. EFFECTIVITY:

AIRBUS A330 aircraft, models -201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342 and -343, all serial numbers.

2. REASONS:

An operator of A340 aircraft reported a failure of the nose wheel steering (NWS) system.

Investigations found abnormal wear of the gear teeth of the RVDT gearbox and the driving gear ring preventing correct operation of the NWS system.

In addition, chrome flaking and extensive corrosion of the nose landing gear (NLG) main fitting barrel was found under the NWS rotating sleeve.

The subsequent analyses conducted on grease samples showed the presence of water in significant quantities.

The wear of the gear teeth of the RVDT gearbox and the driving gear ring was caused by the abrasive effect of metallic particles in the grease. These metallic particles from corroded areas had been carried by the grease during the normal lubrication of the rotating sleeve.

The presence of water could freeze the grease and thus jam the gearboxes.

This situation, if not corrected, could cause the aircraft to deviate from its steered direction and/or allow an uncontrolled corrosion propagation of the main fitting barrel.

Revision 1 of this Airworthiness Directive (AD) was issued in order to clarify paragraph 3.1.

Revision 2 of this AD was issued in order to specify the applicable effective date.



The aim of Revision 3 was to extend the field applicability of this AD to the new A330-201 model.

Revision 4 of this AD was issued to introduce an alternative to the repetitive inspection of the grease and the gear teeth of the RVDT gearbox, with a higher interval, and also introduces inspection methodology for NLG with modification 51381/AIRBUS Service Bulletin (SB) A330-32-3164 (addition of seal to prevent the migration of grease in the RVDT gearboxes).

The aim of this Revision 5 is to extend the applicability to the new models A330-302 and A330-303, recently certified.

3. MANDATORY ACTIONS AND COMPLIANCE TIMES:

3.1. For aircraft on which AIRBUS modification 51381 has not been embodied in production (neither AIRBUS SB A330-32-3164 in service).

Unless already accomplished,

- within 5 years following the NLG installation (new or overhauled, if major overhaul already accomplished),
- or
- within 700 flight hours (FH) following the effective date of this AD at original issue,

whichever occurs later,

3.1.1. Perform inspection of the grease and the gear teeth of the RVDT gearbox and the driving gear ring and depending on the results, carry out the corrective actions in accordance with the instructions of AIRBUS SB A330-32-3134.

3.1.2. Repeat this inspection at intervals not exceeding 8 months.

or

3.1.3. Perform an inspection of the chrome on the bearing surface of the NLG main fitting barrel under the rotating sleeve, in accordance with the instructions of AIRBUS SB A330-32-3134.

3.1.4. Repeat this inspection at intervals not exceeding 18 months.

Note: If the last inspection performed is the inspection defined in paragraph 3.1.1., then the following inspection is to be carried out within 8 months, whatever its type is (inspection of the grease or inspection of the chrome on the bearing surface).
If the last inspection performed is the inspection defined in paragraph 3.1.3., then the following inspection is to be carried out within 18 months, whatever its type is (inspection of the grease or inspection of the chrome on the bearing surface).

3.2. For aircraft on which AIRBUS modification 51381 has been embodied in production (or AIRBUS SB A330-32-3164 in service).

Unless already accomplished,

within 5 years following the NLG installation (new or overhauled, if major overhaul already accomplished), or within 5 years from accomplishment of AIRBUS SB A330-32-3164:



AIRWORTHINESS DIRECTIVE
No F-2001-504 R5

Distribution:
B

Issue date:
August 18, 2004

Page:
3/3

3.2.1. Carry out an inspection of the chrome on the bearing surface of the NLG main fitting barrel under the rotating sleeve in accordance with the instructions of AIRBUS SB A330-32-3134.

3.2.2. Repeat this inspection at intervals not exceeding 18 months.

4. REFERENCE PUBLICATIONS:

AIRBUS Service Bulletin A330-32-3134
AIRBUS Service Bulletin A330-32-3164
(Any further approved revision of these SB's is acceptable).

5. EFFECTIVE DATES:

Original issue : October 27, 2001
Revision 1 and R2 : December 08, 2001
Revision 3 : November 09, 2002
Revision 4 : October 11, 2003
Revision 5 : August 28, 2004.

6. REMARK:

For questions concerning the technical contents of this AD's requirements, contact:
AIRBUS SAS – Bureau de Navigabilité - EAS - Fax : 33 5 61 93 45 80.

7. APPROVAL:

This Revision of AD is approved under EASA reference No 2004-8603 dated August 10, 2004.

SUPERSEDED