

AIRWORTHINESS DIRECTIVE

released by DIRECTION GENERALE DE L'AVIATION CIVILE

Inspection and/or modifications described below are mandatory. No person may operate a product to which this Airworthiness Directive applies except in accordance with the requirements of this Airworthiness Directive.

Translation of 'Consigne de Navigabilité' ref. : 2001-503(B) R3
In case of any difficulty, reference should be made to the French original issue.

AIRBUS

A340-200/-300 aircraft

Nose landing gear - Inspection for corrosion under nose wheel steering system -
Rotating sleeve (ATA 32)

1. APPLICABILITY:

AIRBUS A340 aircraft, models -211, -212, -213, -311, -312 and -313, 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 the paragraph 3.1.

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

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Revision 3 of this AD introduces 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/SB A340-32-4204 (addition of seal to prevent the migration of grease in the RVDT gearboxes).

3. MANDATORY ACTIONS AND COMPLIANCE TIMES:

3.1. For aircraft on which AIRBUS modification 51381 has not been embodied in production (AIRBUS Service Bulletin (SB) A340-32-4204 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 A340-32-4172.

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 A340-32-4172.

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 (AIRBUS SB A340-32-4204 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 A340-32-4204:

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 A340-32-4172.

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

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REF.: AIRBUS Service Bulletin A340-32-4172
AIRBUS Service Bulletin A340-32-4204
(Any later approved revision of these SBs is acceptable).

This Revision 3 replaces AD 2001-503(B) R2 issued on March 06, 2002.

EFFECTIVE DATES :

Original AD : OCTOBER 27, 2001
Revisions 1 and 2 : DECEMBER 08, 2001
Revision 3 : OCTOBER 11, 2003

SUPERSEDED