

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. : 2002-553(B)
In case of any difficulty, reference should be made to the French original issue.

AIRBUS

A340 aircraft

Spoiler - Uncommanded movement in flight (ATA 27)

1. APPLICABILITY:

AIRBUS A340 aircraft models -211, -212, -213, -311, -312 and -313, all manufacturer serial numbers (MSN) fitted with at least one spoiler servocontrol (SSC) with Part Number (P/N) 1386A0000-01, P/N 1386B0000-01, P/N 1387A0000-01 or P/N 1387B0000-01.

Note 1: Aircraft that have received accomplishment of AIRBUS Service Bulletin (SB) A340-27-4100 in service or AIRBUS modification 48956 in production are not concerned by this Airworthiness Directive (AD).

Reminder: It is the responsibility of the operator to ensure that any SSC that could be installed, as spare on aircraft after delivery of the aircraft, does not question the compliance of the aircraft with this AD.

2. REASONS:

Several events where the SSC was not locked in the retracted position in flight have been reported. The failure at the origin of all these events was due to the loosening of an insert screw of the Pressure Relief Valve (PRV) located in the SSC. This defect originates from the assembly process of the PRV and the concerned SSC could be installed in any A330 or A340.

This situation of spoiler uncommanded movement may lead to significant fuel consumption increase in flight, necessary to counteract the aerodynamic effect of the spoiler extension.

Further to hydraulic supply lost, the unlocking of the SSC is indicated in cockpit by an amber extended spoiler arrow. If the screw is detached and is blocking the return port (partially or totally), the uncommanded spoiler deployment in flight is indicated in cockpit by an amber extended spoiler arrow and a "F/CTL SPLR FAULT" ECAM caution.

The AD 2002-388(B) R1 was issued to mandate an operational procedure to be applied by crews in case of SSC not locked in the retracted position (further to hydraulic supply lost) or uncommanded limited spoiler deployment in flight and to require, until they are modified according to AIRBUS SB A340-27-4100, an inspection of the affected spoiler servocontrols as per AIRBUS SB A340-27-4096, at threshold and interval given in paragraph 3.

Consecutive to two further findings after accomplishment of the second inspection, this AD requires repetitive inspections of the SSC at intervals not exceeding 2,400 Flight Hours (FH) and introduces a grace period for aircraft having accumulated more than 2,400 FH since second inspection. and takes over all the requirements of AD 2002-388(B) R1.

Consequently, this AD replaces the AD 2002-388(B) R1.

3. COMPLIANCE:

3.1. Operational procedure:

From August 03, 2002 (effective date of AD 2002-388(B) at original issue), enforcement of the following operational procedure by flight crew is rendered mandatory.

This procedure was dispatched by the aircraft manufacturer under AIRBUS OEB 38/1 dated October, 2001.

- **If "F/CTL SPLR FAULT" is triggered**
- F/CTL S/D page..... CHECK

- **If the affected spoiler is not indicated extended amber:**
The spoiler is faulty in the retracted position. In such a case, the specific OEB procedure does not apply.
- LDG DIST PROC..... APPLY

*Multiply the landing distance by 1.1 for 3 or 4 spoilers lost per wing.
Multiply the landing distance by 1.2 for 5 or 6 spoilers lost per wing.*

- **If the affected spoiler is indicated extended amber, apply the following procedure:**

IN CRUISE

CAUTION
Disregard FMGC fuel predictions, as they do not take the increase in fuel consumption into account.

- FUEL CONSUMPTION INCREASE..... APPLY
Apply 18.5% increase in the fuel consumption.
- IN FLIGHT TURN BACK/DIVERSION CONSIDER
In flight turn back or diversion may have to be considered due to this fuel penalty.
- MAX ACHIEVABLE ALTITUDE DECREASE..... CONSIDER
With the maximum spoiler deflection the maximum altitude in ISA conditions, may decrease by 4500 feet.

FOR LANDING

- FOR LDG..... USE FLAP 3
Use CONF 3 for landing to avoid possible buffeting, which, however, may be high depending on the failed spoiler.
- VAPP NORM
- LDG DIST x 1.1

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3.2. Inspection of the spoiler servocontrols:

- 3.2.1.** Unless already accomplished, within 700 FH August 03, 2002 (effective date of AD 2002-388(B) at original issue), inspect the PRV function of the SSC according to AIRBUS SB A340-27-4096.
- 3.2.2.** Repeat the inspection defined in paragraph 3.2.1. one time within 1,600 FH after the first inspection or within 700 FH following from August 03, 2002 (effective date of AD 2002-388(B) at original issue), whichever occurs later.
- 3.2.3.** Repeat the inspection defined in paragraph 3.2.1. within 2,400 FH after the second inspection required in paragraph 3.2.2. or within 1,400 FH from effective date of this AD, whichever occurs later.
- 3.2.4.** Repeat, from the third inspection required in paragraph 3.2.3., the inspection defined in paragraph 3.2.1. at intervals not exceeding 2,400 FH until terminating action defined in paragraph 3.3. hereafter is introduced.

3.3. Modification of the SSC:

Not later than December 31, 2003, modify the SSC P/N 1386A0000-01, P/N 1386B0000-01, P/N 1387A0000-01 or P/N 1387B0000-01 in accordance with instructions of AIRBUS SB A340-27-4100.

Note 2: After modification:

- P/N 1386A0000-01 becomes 1386A0000-02,
- P/N 1386B0000-01 becomes 1386B0000-02,
- P/N 1387A0000-01 becomes 1387A0000-02,
- P/N 1387B0000-01 becomes 1387B0000-02.

Note 3: Accomplishment of this modification cancels the above requirements concerning the repetitive inspections and the operational procedure.

REF.: - OEB AIRBUS 38/1 dated OCTOBER 2001
- AIRBUS Service Bulletin A340-27-4100
- AIRBUS Service Bulletin A340-27-4096
(Any later approved revision is acceptable).

This AD replaces AD 2002-388(B) R1, which is cancelled.

EFFECTIVE DATE : NOVEMBER 23, 2002