



**SUBJ: Flight controls: Unauthorized Configuration
of Flight Control Primary Computer (FCPC)**

**SAIB: NM-09-33
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This is information only. Recommendations aren't mandatory.

Introduction

This Special Airworthiness Information Bulletin (SAIB) alerts you, as owner or operator of **Airbus Model A330-201, -202, -203, -223, -243, -301, -302, -303, -321, -322, -323, -341, -342, and -343 series airplanes (all serial numbers); and Airbus Model A340-211, -212, -213, -311, -312, -313, -541, and -642 airplanes (all serial numbers)**; that an unauthorized configuration of the Flight Control Primary Computer (FCPC) was installed on a Model A330 airplane. This led to an unexpected systems operation.

Background

In September 2008, during the flare phase of flight, the elevators of a Model A330 airplane remained at neutral position for several seconds, whereas the pilots had ordered a pitch-up movement through the side stick controls. This resulted in a hard landing and subsequent main landing gear replacement. While troubleshooting the event, the following FCPC configuration was found:

- Part Number (P/N) LA2K1A100DA0000 (P8/M17 standard) was fitted in FCPC1 and FCPC3 positions.
- P/N LA2K2B100D80000 (P7/M16 standard) was fitted in FCPC2 position.

Investigations and testing have demonstrated that, with this unauthorized FCPC configuration, FCPC2 sent erroneous orders to the elevator servo-controls, leading to force fighting between the actuators and unwanted elevator movement.

A similar event occurred in 2004, where during the power-up sequence of an A340, all ground spoilers partially extended, whereas they have to remain fully retracted. While troubleshooting the event, the following FCPC configuration was found:

- FCPC1 was of P/N LA2K1A100220000 (standard L15);
- FCPC2 was of P/N LA2K1A100240000 (standard L16A);
- FCPC3 was of P/N LA2K1A100230000 (standard L16).

According to AIRBUS documentation (Illustrated Parts Catalog; Airbus Service Bulletins; and Service Information Letter SIL 27-150, Revision 01, dated October 31, 2008), both events are due to unauthorized mixed FCPC configurations. European Aviation Safety Agency (EASA) released the Safety Information Bulletin No. 2008-86, dated November 18, 2008, with recommendations to adhere to Airbus Type Certificate Holder documentation.

To prevent unauthorized FCPC configuration, new monitoring has been already implemented or is planned to be implemented in the year 2009 in certain FCPC standards. With these new FCPC

standards, an ECAM warning "F/CTL PRIM x FAULT" associated with maintenance message "FCPCx (2CEx)" is triggered in case of unauthorized FCPC configuration.

At this time, the above described airworthiness concern is not considered an unsafe condition that would warrant airworthiness directive (AD) action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

Recommendations

We recommend that aircraft owners and operators follow the Airbus and EASA recommendations with respect to interchangeability and mixability between P/Ns of the FCPCs to prevent an unauthorized configuration that may result in unexpected operation of the aircraft systems. Airbus Service Information Letter SIL 27-150, Revision 01, dated October 31, 2008, along with other Airbus documentation, provides the latest status on the interchangeabilities between all existing FCPC part numbers. We also recommend implementation of the FCPC standards, which include the new monitoring system for aircraft having electrical and mechanical rudders.

For Further Information Contact

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