


EASA	AIRWORTHINESS DIRECTIVE	
	<p style="text-align: center;">AD No.: 2006 - 0287</p> <p style="text-align: center;">Date: 15 September 2006</p>	
<p>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.</p>		
<p>Type Approval Holder's Name : AIRBUS SAS</p>	<p>Type/Model designation(s) : Aircraft A340-500/600 Series</p>	
<p>TCDS Number : EASA A.015</p>		
<p>Foreign AD : None</p>		
<p>Supersedure : None</p>		
<p>ATA 28, 31</p>	<p>Fuel, Indicating & Recording System - Fuel Control and Monitoring System (FCMS) and Flight Warning Computer (FWC) - Modification</p>	
<p>Manufacturer:</p>	<p>AIRBUS (formerly AIRBUS INDUSTRIE)</p>	
<p>Applicability:</p>	<p>AIRBUS A340 aircraft, models -541 and -642 , all serial numbers except those on which the three following AIRBUS modifications 54807 and 54624 and 54611 have been embodied in production or the three following AIRBUS Service Bulletins (SB) A340-28-5033 and SB A340-28-5031 and SB A340-31-5022 have been embodied in service.</p>	
<p>Reason:</p>	<p>An A340-642 operator reported a diversion following engine 1 in-flight shut down and near-rundown of engine 4 due to fuel starvation.</p> <p>It has been confirmed that some fuel cautions were triggered during the beginning of the flight without any warnings to bring the flight crews attention about:</p> <ul style="list-style-type: none"> - lack of automatic fuel transfer, - low level quantities in inner tanks 1 and 4, - pump results in inner tanks 1 and 4 when the fuel reached a very low quantity. <p>The analysis concluded that fuel starvation was caused by an unannounced problem with Fuel Control and Monitoring Computer (FCMC) 2 that resulted in a loss of warnings and automatic transfers.</p>	

	<p>This was exacerbated by an issue with the implementation of the low level monitor such that it did not disconnect the faulty FCMC2 and therefore did not cause switchover to FCMC1 or allow the FWC to generate an FCMC2 fault warning.</p> <p>Unannounced total loss of fuel transfer from outer tanks to inner tanks or inability to provide low level warning when required can lead to catastrophic situation.</p> <p>The aim of this Airworthiness Directive (AD) is to mandate implementation of operational procedures via temporary flight manual revisions (AFM TRs) until the accomplishment of the final fix by the package FCMC software changes, installation of new FWC software standard and modification of wiring between Fuel Data Concentrator (FDC) and FWC.</p>
<p>Effective Date:</p>	<p>29 September 2006</p>
<p>Compliance:</p>	<p>The following measures are rendered mandatory from the effective date of this AD :</p> <p>1- Apply the two following operational procedures :</p> <ul style="list-style-type: none"> • <u>“FUEL FCMC 1(2) FAULT</u> Reset the affected FCMC and re-initialise the actual Gross Weight and CG.” <p>Note 1: This operational procedure is covered by the A340 Temporary Revision (TR) of the Aircraft Flight Manual (AFM) 4.02.00/49.</p> <ul style="list-style-type: none"> • <u>“FUEL MONITORING</u> During the ECAM FUEL PAGE check, if the fuel quantity in any INNER tank is below 1 500 kg, transfer fuel manually from all the other tanks. • Then, if the fuel quantity in any INNER tank goes below 1 000 kg, open all X-FEED valves.” <p>Note 2: This operational procedure is covered by the A340 AFM TR 4.03.00/36.</p> <p>Note 3: The incorporation of the AFM TR 4.02.00/49 and 4.03.00/36 (or any later approved revision) or insertion of this AD into the AFM and application of these procedures by the flight crew allow complying with paragraph 1 above.</p> <p>2- Unless already accomplished,</p>

	<p>Prior to 31 December 2007, apply all the following modifications :</p> <ul style="list-style-type: none"> - install two new FCMCs software standard FL 8.1 in accordance with instructions defined in AIRBUS SB A340 -28-5033, - amend wiring between FDC and FWC in accordance with instructions defined in AIRBUS SB A340 -28-5031 and - install two new FWC software standard W4-1 in accordance with instructions defined in AIRBUS SB A340-31-5022. <p>Embodiment of the three following AIRBUS Service Bulletins A340-28-5033 and SB A340-28-5031 and SB A340-31-5022 will cancel the operational procedures associated to A340 AFM TR's 4.02.00/49 and 4.03.00/36, mandated in paragraph 1. above.</p>
<p>Ref. Publications:</p>	<p>AIRBUS A340 AFM TR 4.02.00/49 approved by EASA on 14 July 2006 AIRBUS A340 AFM TR 4.03.00/36 approved by EASA on 14 July 2006</p> <p>Or later approved revisions of these AFM TRs or any general AFM revision including these procedures;</p> <p>AIRBUS Service Bulletin A340 -28-5031 AIRBUS Service Bulletin A340 -28-5033 AIRBUS Service Bulletin A340 -31-5022</p> <p>or later approved revisions.</p>
<p>Remarks :</p>	<ol style="list-style-type: none"> 1. If requested and appropriately substantiated the responsible EASA manager for the related product has the authority to accept Alternative Methods of Compliance (AMOCs) for this AD. 2. This AD was posted as PAD 06-199 for consultation on 07 August 2006 with a comment period until 21 August 2006. No comments were received during the consultation period. 3. Enquiries regarding this Airworthiness Directive should be referred to the AD Focal Point - Certification Directorate, EASA. E-mail: ADs@easa.europa.eu 4. For any question concerning the technical content of the requirements in this AD, please contact AIRBUS SAS – Airworthiness Office - EAL Fax: +33 5 61 93 45 80.