


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>
	<p><b>AD No.: 2007-0218R1</b></p> <p><b>Date: 28 February 2011</b></p> <p>Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.</p>
<p>This AD is issued in accordance with EC 1702/2003, Part 21A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].</p>	
<p><b>Type Approval Holder's Name :</b></p> <p>AIRBUS</p>	<p><b>Type/Model designation(s) :</b></p> <p>A318, A319, A320 and A321 aeroplanes</p>
<p>TCDS Number : EASA.A.064</p>	
<p>Foreign AD : Not applicable</p>	
<p>Revision :</p>	<p>This AD revises EASA AD 2007-0218 dated 10 August 2007, which superseded EASA AD 2006-0222 dated 20 July 2006.</p>
<b>ATA 28</b>	<b>Fuel – Main Fuel Pump System / Fuel Pumps – Airworthiness Limitations / Inspection / Replacement</b>
<p>Manufacturer(s):</p>	<p>Airbus (formerly Airbus Industrie)</p>
<p>Applicability:</p>	<p>Airbus A318-111, A318-112, A318-121, A318-122, A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-111, A320-211, A320-212, A320-214, A320-215, A320-216, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231 and A321-232 aeroplanes, all manufacturer serial numbers, if equipped with fuel pumps manufactured by Eaton Aerospace Limited (formerly FR-HITEMP Limited) with Part Number (P/N) 568-1-27202-001, P/N 568-1-27202-002 or P/N 568-1-27202-005.</p> <p>Note: Aeroplanes on which fuel pumps have not been modified or replaced since embodiment of Airbus modification 37508 in production are not affected by the requirements of this AD.</p>
<p>Reason:</p>	<p>An operator reported a failure of a type 8410 fuel pump P/N 568-1-27202-005 in service. Subsequent investigation revealed that the cause of the pump failure was due to one of the two screws and nuts holding the gas return connector to the top of the motor housing had become unscrewed. The screw dropped between the motor rotor and the stator where it caused the short circuit resulting in the circuit breaker tripping. Further investigation concluded that this was due to the inadequate locking mechanism of the nut and the screw being incorrectly torque tightened.</p> <p>Consequently, the integrity of the pump's explosion proof housing is not kept and arcing may occur during the failure. In case the pump is not submerged in fuel, an explosion could occur both in-flight or on ground.</p>

	<p>As a result, on 02 May 2006, EASA issued Emergency AD 2006-0106-E to mandate Aircraft Flight Manual (AFM) limitations and airworthiness limitations.</p> <p>Subsequently, EASA AD 2006-0222 was issued to retain the AFM limitations and airworthiness limitations, superseding EASA AD 2006-0106-E, and to require modification of the affected pumps.</p> <p>Further investigations have revealed that all of the Eaton type 8410 fuel pumps, P/N 568-1-27202-001, P/N 568-1-27202-002 and P/N 568-1-27202-005, can be affected.</p> <p>For that reason, EASA AD 2007-0218 was issued, retaining the requirements of EASA AD 2006-0222, which was superseded, and expanded the applicability to require the modification or replacement of all affected pumps.</p> <p>This AD has been revised to clarify the applicability.</p>
Effective Date:	<p>Revision 1 : 14 March 2011</p> <p>Original issue : 07 September 2007</p>
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p><b>A. AFM and Airworthiness limitations applicable to all aeroplanes:</b></p> <p>Before next flight after 07 September 2007 (the effective date of the original issue of this AD), amend the applicable AFM to incorporate the following procedure, which is to be applied at each fuel loading:</p> <p>A.1 Refuelling :</p> <p>Before refuelling, all pumps must be turned off, in order to prevent them from automatically starting during the refuelling process.</p> <p>A.2 Ground fuel transfer :</p> <p>For all aeroplanes, do not start a fuel transfer from any wing tank, if it contains less than 700 kg (1 550 lbs) of fuel.</p> <p>For A318, A319, and A320 aeroplanes with a centre tank, do not start a fuel transfer from the centre tank, if it contains less than 2 000 kg (4500 lbs) of fuel.</p> <p>If a tank has less than the required quantity, it is necessary to add fuel (via a transfer from another tank or refuelling) to enable a transfer to take place.</p> <p>A.3 Defueling</p> <p>For all aeroplanes, when defueling the wings, do not start the fuel pumps if the fuel quantity in the inner tank (wing tank for A321) is below 700 kg (1 550 lbs). If the fuel on the aeroplanes is not sufficient to achieve the required fuel distribution, then transfer fuel or refuel the aeroplanes to obtain the required fuel quantity in the wing tank.</p> <p>For A318, A319, and A320 aeroplanes with a centre tank, when performing a pressure defuel of the centre tank, make sure that the centre tank contains at least 2 000 kg (4 500 lbs) of fuel. If it has less than the required quantity, then transfer fuel to the centre tank. Defuel the aeroplanes normally, and turn OFF the centre tank pumps immediately after the FAULT light on the corresponding pushbutton-switch comes on.</p> <p><b>B. AFM limitation applicable to aeroplanes fitted with centre tank (mod 20024), excluding A321 aeroplanes, all models:</b></p> <p>Before next flight after 07 September 2007 (the effective date of the original issue of this AD), amend the applicable AFM to incorporate the</p>

following procedure, applicable for all flights:

**Note:** Only if it is confirmed by the maintenance/engineering personnel that the flight is going to be performed with:

- centre tank pumps not in the affected batch, or
- centre tank de-activated in accordance with AMM task 28-21-00-040-00200,

then the following procedure does not apply.

### **CENTRE TANK PUMPS OPERATION PROCEDURE :**

#### **WARNING:**

Do not turn on the centre tank pumps when the centre tank contains less than 2 000 kg (4 500 lb) of fuel, even if it is requested by another procedure.

Before and during refuelling, turn all tank pumps off.

■ If the total FOB after refuelling is less than or equal to 12 000 kg (26 500 lbs):

On ground, after refuelling:

- Check that the centre tank is empty.

*Note: If it is not empty, the fuel contained in the centre tank must be considered unusable.*

- Turn on all wing tank pumps
- Maintain both centre tank pumps off
- Turn FUEL MODE SEL to MAN

■ If the total FOB after refuelling is more than 12 000 kg (26 500 lb):

On ground, after refuelling:

- Check that the centre tank contains at least 2 000 kg (4 500 lbs) of fuel.

*Note: If the fuel quantity is less than 2 000 kg (4 500 lbs), leave both centre tank pumps off for the rest of the flight, consider centre tank fuel unusable and do not apply subsequent procedures.*

- Turn on all wing tank pumps
- If the fuel quantity in the centre tank is above 3 000 kg (6 500 lbs), turn on both centre tank pumps.
- Monitor the fuel quantity in the centre tank.

● When the fuel quantity in the centre tank is between 2 000 kg (4 500 lbs) and 3 000 kg (6 500 lbs):

- Turn FUEL MODE SEL to MAN
- Turn or maintain off both centre tank pumps

*Note: If the fuel quantity in the centre tank inadvertently gets below 2 000 kg (4 500 lbs) prior to being checked and centre tank pumps have not been turned off, the flight crew must perform the following steps :*

- *If the fuel in the centre tank is required for the flight, leave the centre tank pumps in ON position and turn FUEL MODE SEL to MAN. When FUEL CTR TK PUMP 1 or PUMP 2 or PUMPS LO PR is triggered on*

*the ECAM, or, when the centre tank is empty, turn off the centre tank pumps without delay. Do not apply the subsequent procedures.*

- *If the fuel in the centre tank is not required for the flight, turn off both centre tank pumps and do not turn them back on for the rest of the flight. Consider the centre tank fuel unusable. Do not apply the subsequent procedures.*

- When FUEL AUTO FEED FAULT is triggered on the ECAM, or the fuel quantity in one wing tank (inner + outer) is below 5 000 kg (11 000 lbs):

- Turn on both centre tank pumps

- If FUEL CTR TK PUMP 1(2) LO PR is triggered on the ECAM :

- Turn off the associated centre tank pump

CAUTION:

Turn off associated centre tank pumps without delay.

- If no fuel leak:

- Open the crossfeed valve.

- When FUEL CTR TK PUMPS LO PR is triggered on the ECAM, or when the centre tank is empty :

- Turn off both centre tank pumps and close the crossfeed valve.

CAUTION:

Turn off both centre tank pumps without delay

Inserting a copy of this AD, or AFM TR 4.03.00/28 issue 02, into the Aeroplane Operations Manual, as well as in the AFM, and strict adherence by the crew is acceptable to comply with paragraph B of this AD.

### **C. Identification and Replacement of Fuel Pumps :**

Within 5 000 flight hours or 18 months, whichever occurs first after 07 September 2007 (the effective date of the original issue of this AD), identify the P/N of the fuel pumps and, depending on findings, modify or replace the fuel pump(s) in accordance with the instructions of Airbus SB A320-28-1159.

Modification of an aeroplane by installing fuel pumps that have been modified in accordance with Airbus SB A320-28-1159 at all applicable locations constitutes terminating action for the requirements of paragraphs A and B of this AD for that aeroplane, and/or updates pump interchangeability. As a consequence, the AFM changes may be removed from the aeroplane.

From 18 months after 07 September 2007 (the effective date of the original issue of this AD), do not install any Eaton fuel pump type 8410 with P/N 568-1-27202-001, P/N 568-1-27202-002 or P/N 568-1-27202-005 on an aeroplane.

Ref. Publications:	<p>AIRBUS SB A320-28-1159 original issue.</p> <p>The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.</p> <p>AIRBUS AFM TR 4.03.00/28 issue 02.</p>
Remarks :	<ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> <li>2. The original issue of this AD was posted on 13 June 2007 as PAD 07-093 for consultation until 04 July 2007. The Comment Response Document can be found at <a href="http://ad.easa.europa.eu">http://ad.easa.europa.eu</a>.</li> <li>3. Enquiries regarding this AD should be referred to the Airworthiness Directives, Safety Management &amp; Research Section, Certification Directorate, EASA. E-mail <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</li> <li>4. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS – Airworthiness Office – EAS E-mail: <a href="mailto:account.airworth-eas@airbus.com">account.airworth-eas@airbus.com</a>.</li> </ol>