


<b>EASA</b>	<b>AIRWORTHINESS DIRECTIVE</b>	
	<b>AD No.: 2013-0097</b>	
	<b>Date: 24 April 2013</b>	
<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 EU 748/2012, Part 21.A.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>		
<b>Design Approval Holder's Name:</b>		<b>Type/Model designation(s):</b>
AIRCRAFT INDUSTRIES, a.s.		L-410 and L-420 aeroplanes
TCDS Number:	EASA.A.026	
Foreign AD:	Not applicable	
Supersedure:	None	
<b>ATA</b>	<b>Aircraft Flight Manual – Procedure Manually Switching Off Water Injection System – Introduction</b>	
Manufacturer(s):	Aircraft Industries, a.s, formerly Strojírny první pětiletky n.p., LET n.p., LET a.s. and LETECKÉ ZÁVODY a.s.	
Applicability:	L-410 UVP-E, L-410 UVP-E9, L-410 UVP-E-LW, L-410 UVP-E20, L-410 UVP-E20 CARGO and L-420 aeroplanes, all serial numbers.	
Reason:	<p>Currently, the automatic switching off of the water injection system as installed on L-410 and L-420 aeroplanes stops the water injection into the engines during engine power reduction when throttle control levers pass the position corresponding to 88-92 % of gas generator speed.</p> <p>During a recent event, in-flight engine flame out occurred at take-off with water injection after reduction of engine power.</p> <p>This condition, if not corrected, could lead to further events of uncommanded in-flight engine shut-down or power loss, possibly resulting in forced landing, with consequent damage to the aeroplane and injury to occupants.</p> <p>Prompted by this occurrence, a procedure has been developed, instructing the flight crew to switch off the water injection system, prior to engine power reduction, to prevent any possible engine flame out.</p> <p>For the reasons described above, this AD requires an amendment of the Aircraft Flight Manual (AFM) by implementation of a procedure to manually switch off the water injection system, prior to any engine power reduction.</p>	
Effective Date:	08 May 2013	

<p>Required Action(s) and Compliance Time(s):</p>	<p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> <li>(1) Within 30 days after the effective date of this AD, amend the applicable AFM by inserting a copy of Appendix 1 of this AD, opposite the appropriate AFM page on which the water injection procedure is described.</li> <li>(2) Amending the applicable AFM (see Table 1 of this AD) to incorporate a later revision which includes the procedure as required by this AD is acceptable to comply with the requirement of paragraph (1) of this AD.</li> </ol> <p style="text-align: center;">Table 1 – Applicable AFMs</p> <table border="1" data-bbox="635 477 1311 963"> <thead> <tr> <th>Aeroplane Model(s)</th> <th>AFM Document(s)</th> </tr> </thead> <tbody> <tr> <td>L-410 UVP-E, L-410 UVP-E-LW</td> <td>Do-L410-1215.0 Do-L410-1215.2 Do-L410-1211.1</td> </tr> <tr> <td>L-410 UVP-E9</td> <td>Do-L410-1211.2 Do-L410-1213.2</td> </tr> <tr> <td>L-410 UVP-E20</td> <td>Do-L410-1211.2 Do-L410-1214.2 Do-L410-1212.2 Do-L410-1216.2 Do-L410-1217.2</td> </tr> <tr> <td>L-420</td> <td>Do-L410-1311.0 Do-L410-1311.2</td> </tr> </tbody> </table> <ol style="list-style-type: none"> <li>(3) After revising the applicable AFM of an aeroplane, as specified in paragraph (2) of this AD, Appendix 1 of this AD must be removed from the AFM of that aeroplane.</li> </ol>	Aeroplane Model(s)	AFM Document(s)	L-410 UVP-E, L-410 UVP-E-LW	Do-L410-1215.0 Do-L410-1215.2 Do-L410-1211.1	L-410 UVP-E9	Do-L410-1211.2 Do-L410-1213.2	L-410 UVP-E20	Do-L410-1211.2 Do-L410-1214.2 Do-L410-1212.2 Do-L410-1216.2 Do-L410-1217.2	L-420	Do-L410-1311.0 Do-L410-1311.2
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<p>Ref. Publications:</p>	<p>A revision to each individual AFM (see Table 1 of this AD), as applicable to aeroplane model, containing changed procedure for manually switching off the water injection system, will be issued through a Documentation Bulletin specific to each AFM by Aircraft Industries a.s. The affected Documentation Bulletins will be made available on the web page <a href="http://clientzone.let.cz">http://clientzone.let.cz</a>.</p>										
<p>Remarks:</p>	<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. This AD was posted on 22 March 2013 as PAD 13-048 for consultation until 19 April 2013. No comments were received during the consultation period.</li> <li>3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive 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: Aircraft Industries, a.s. - Na záhonech 1177, 686 04 Kunovice, Czech Republic Telephone: +420 572 817 660, Fax: +420 572 816 112 Email: <a href="mailto:ots@let.cz">ots@let.cz</a>.</li> </ol>										

## Appendix 1 – AFM procedure

**PROCEDURE TO CONTROL OF WATER INJECTION SYSTEM**

WATER INJECTION circuit breaker .....ON

TCL .....T<sub>Q</sub> = min. 60%

WATER INJECTION / ON push-button.....Push and hold till amber  
WATER INJECTION signal  
comes on (on the front control  
panel)

Before throttling back power:

WATER INJECTION / OFF push-button .....Push and check amber  
WATER INJECTION signal  
extinguishes

**WARNING**

**IF IT IS NECESSARY TO CHANGE TAKE-OFF RATING WITH WATER INJECTION TO LOWER RATING, WATER INJECTION MUST BE STOPPED PRIOR ENGINE POWER DECREASE OTHERWISE ENGINE FLAME OUT CAN OCCUR.**

**CAUTION**

ITT RISES WHEN WATER INJECTION IS TERMINATED. THEREFORE MONITOR ITT AFTER WATER INJECTION TERMINATION AND THROTTLE BACK THE ENGINES AS REQUIRED TO AVOID EXCEEDING THE MAXIMUM PERMISSIBLE LIMIT OF ITT.

**NOTE**

If water injection pump was set to appropriate degree according to graph in AFM and corresponding amount of water was filled in into water injection tank, the water injection will not last longer than the permissible time for take-off rating using. After exhaustion of the water supply the injection system pressure drops, the injection pump is shut down automatically, and the WATER INJECTION signal on the CWD goes out.