EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2011-0135 **Date: 20 July 2011** 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.

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].

Type Approval Holder's Name :	**Type/Model designation(s) :**
Aircraft Industries, a.s.	L-13 and L-13 A BLANÍK sailplanes

TCDS Number:	EASA.A.024
Foreign AD:	Not applicable
Supersedure:	This AD supersedes EASA Emergency AD 2010-0185-E dated 03 September 2010.

ATA 57	**– Prohibition of all flights –** **Wings – Wing Main Spar – Inspection / Operational Limitation / Operational Records Check**
Manufacturer(s):	Aircraft Industries, a.s, LET k.p., LET a.s. and LETECKÉ ZÁVODY a.s.
Applicability:	L-13 and L-13 A BLANÍK sailplanes, all serial numbers.
Reason:	In June 2010, a fatal accident occurred to an L-13 BLANÍK sailplane, in which the main spar of the right wing failed near the root due to positive load. The right wing detached from the aircraft and the pilots lost control of the sailplane. The result of the preliminary investigation revealed that the fracture was likely due to fatigue. Consequently, EASA issued Emergency AD 2010-0119-E to require an inspection of the main spar at the root of the wing to detect fatigue cracking and the accomplishment of the relevant corrective actions, depending on findings. In addition, EASA AD 2010-0119-E imposed operational limitations. EASA AD 2010-0122-E retained the requirements of AD 2010-0119-E, which was superseded, and expanded the applicability to L-13 A BLANÍK sailplanes. The requirements of AD 2010-0122-E were considered as interim action to immediately address the unsafe condition. After issuance of AD 2010-0122-E, based on further information provided by the Austrian Accident Investigation Board (AIB), EASA re-assessed the inspection method as described in Aircraft Industries Mandatory Bulletin (MB) L13/109a and concluded that the inspection method might not be sufficient for detecting a crack similar to those observed on the accident sailplane.

	Based on these conclusions, EASA issued AD 2010-0160-E, retaining as an interim measure the requirements of AD 2010-0122-E, which was superseded, and required determination of compliance, depending on the specific usage of the sailplane, i.e. the time ratio between normal flight and aerobatics. Since issuance of AD 2010-0160-E, further analysis indicated that the L-13 BLANÍK accident occurred in June 2010 occured before the sailplane wing main spar reached its theoretical estimated fatigue safe life limit. Consequently, the action as required by AD 2010-0160-E was considered insufficient to ensure safe operation. Indeed, there is high variability of the load levels and the frequency of load application during aerobatics flight time, and therefore a high variability of the induced fatigue damage. This concern is accentuated when doubt exists on the completeness or accuracy of aerobatic flight time records. Based on this new insight and knowing that the inspection method as described in Aircraft Industries MB L13/109a is possibly insufficient to detect the potential fatigue cracks, as a conservative measure, EASA issued Emergency AD 2010-0185-E, superseding AD 2010-0160-E, to prohibit any operations of L-13 and L-13 A BLANÍK sailplanes. Since issuance of AD 2010-0185-E, it has been determined that Model L-13 A BLANÍK sailplanes have a wing installed which is structurally less sensitive to fatigue than the wing installed on Model L-13 BLANÍK sailplanes. It is known that some L-13 BLANÍK sailplanes have been modified in service to conform to the L-13 A BLANÍK type design, although the design status of their wing structure is uncertain. Thus, it is necessary to identify the design of wing critical parts installed on the sailplane. Aircraft Industries have recently issued MB L13/112a which contains instructions to enable identification of L-13 BLANÍK sailplanes that have a reinforced wing structure in conformity with the L-13 A BLANÍK type design. For the reasons described above, this new AD retains the flight prohibition requirement of AD 2010-0185-E, which is superseded, and allows sailplanes to return to flight, under certain operating limitations, provided certain actions are successfully accomplished, as described in Aircraft Industries MB L13/112a, and depending on the sailplane usage ratio. In addition, this AD includes reference to Aircraft Design and Certification Ltd. modification ADxC-DC-39-001, which has been approved under EASA Supplemental Type Certification (STC) 10035295, as an acceptable alternative method to comply with the requirement of this AD. After modification of a sailplane in accordance with this STC, flights can be resumed. This AD is still considered to be an interim measure, until a modification and/or a proper inspection programme has been developed, approved and made available by the approval holder of the design change for in-service application.
Effective Date:	20 July 2011
Required Action(s) and Compliance Time(s):	Required as indicated, unless accomplished previously: **Restatement of requirement of AD 2010-0185-E:** (1) From 05 September 2010 [the effective date of AD 2010-0185-E], all flights are prohibited. **New requirements of this AD:** (2) After the effective date of this AD, inspect the sailplane to determine whether the wing structure is in conformity to the L-13 A BLANÍK design specification, or in conformity to the L-13 BLANÍK 'reinforced' design specification, in accordance with the instructions of Aircraft Industries a.s.(AI) Mandatory Bulletin (MB) No. L13/112a. (3) If, as a result of the inspection required by paragraph (2) of this AD, conformity is NOT demonstrated, all flights are prohibited.

(4) If, as a result of the inspection required by paragraph (2) of this AD, conformity is demonstrated, accomplish all the additional actions specified in paragraphs (4.1), (4.2) and (4.3) of this AD. Only after all actions have successfully been accomplished, flights can be resumed.

(4.1) Determine whether the sailplane records show compliance with each of the maximum operation usage limits as detailed in Table 1 of this AD.

Table 1

Type of operations	Maximum limit in flight hours (FH) or winch launches (WL)
Aerobatic Flights	100 FH
Winch launches	25 000 WL
Dual Flights	2 500 FH

If the sailplane records are inconclusive, or if any of the types of operation exceeds the maximum limit, contact the TC holder for approved instructions and accomplish those instructions accordingly.

(4.2) Inspect the areas of wing skin joints (ribs No. 7 and 13 of the wing) for cracks at ribs and stringers in accordance with the instructions of AI MB L13/108a. In case a failed stringer or rib is detected, accomplish a repair in accordance with the instructions of AI Information Bulletin (IB) L13/107b.

(4.3) Amend the Aircraft Flight Manual (AFM) as follows:

All aerobatics manoeuvres, e.g. Roll (Výkrut), Loop (přemet), Stalled turn (souvrat), Immelmann turn (překrut), Half roll (zvrat) and Inverted flight (let na zádech) are prohibited. This can be accomplished by inserting a copy of this AD into the AFM and invalidating the following “aerobatics” chapter of the AFM, as applicable:

- Do-L13.1111.1 (In Czech language),
- L13.1111.3 (In English language),
- Do-L13.1111.2 (In German language),
- Do-L13.1111.4 (In Spanish language), or
- Do-L13.1111.5 (In Russian language)

(5) As an alternative to the inspection required by paragraph (2) of this AD and the corrective actions required by paragraph (4) of this AD, inspect and modify the sailplane in accordance with the instructions of Aircraft Design and Certification Ltd. modification ADxC-DC-39-001.

After inspection and modification of a sailplane in accordance with paragraph (5) of this AD, flights can be resumed with that sailplane, provided the applicable AFM and Maintenance Manual (MM) are amended, in accordance with the instructions contained in Supplement ADxC-39-001-AFM and ADxC-39-001-AMM, respectively.

Ref. Publications:

Aircraft Industries IB L13/107b, dated 18 July 2011.

Aircraft Industries MB L13/108a, dated 14 July 2011.

Aircraft Industries MB L13/112a, dated 16 May 2011.

Aircraft Design and Certification Ltd. modification ADxC-DC-39-001, approved by EASA through STC 10035295, which includes associated documentation:

- ADxC-39-EO-013, Issue A, dated 01 April 11 (Template for installation of structural modification),

	- ADxC-39-001-AFM dated 30 March 11 (AFM supplement), and - ADxC-39-001-AMM dated 11 June 11 (MM supplement). The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
Remarks :	1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. The required actions and the risk allowance have granted the issuance of a Final AD with Request for Comments, postponing the public consultation process after publication. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu. 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: ots@let.cz For any question concerning the technical content of Aircraft Design and Certification Ltd. modification ADxC-DC-39-001, please contact: Aircraft Design and Certification Ltd, Reichenstein Straße 48, 69151 Neckargemünd, Germany. Telephone: +49 176 322 69825, Email: blanik@aircraftdc.de.