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EASA.21J.117

## SERVICE BULLETIN No BO-27/2020 MDM-1 FOX

CONCERNS:

Correction of noticed errors in glider Manuals, as well as in placards and in airspeed indicator marking installed on the MDM-1 "FOX" glider

The technical content of this document is approved  
under the authority of DOA No EASA.21J.117

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Bielsko-Biała, 30.11.2020  
rev1, 16.06.2023

**1. TYPE/ MODEL/ ORIGINAL APPROVAL**

MDM-1 "FOX" glider has been approved with Type Certificate (TC) in accordance with JAR-22 Change 4, iss. 7 May 1987, original approval by Polish CAA Doc. No: BG-197 of 1994, replaced by TC No: EASA.A.039 of 2005.

**2. SERIAL NOS COVERED WITH THIS BULLETIN**

This Bulletin concerns these MDM-1 FOX glider Serial Numbers (S/N) up to #254 inclusive, (in both MDM-1 "FOX" and MDM-1P "FOX-P" variants), which are operated with the listed below Manuals (referred to in the Type Certificate Data Sheet for TC No EASA.A.039), as appropriate:

for MDM-1 "FOX" variant

- Flight Manual (FM), iss. III, December 1996
- Technical Service Manual (TSM) iss. III, December 1996

for MDM-1P "FOX-P" variant

- Flight Manual (FM), iss. IV, December 1998
- Technical Service Manual (TSM), iss. I, December 1998

**3. REASON FOR ISSUING THE BULLETIN**

Verification of the glider Manuals, and of the installed in a glider placards and instrument markings made by Aviation Authorities / by Manufacturer, as well as comments from operators revealed some errors relating to incorrect numerical data, imprecise wording or translation errors.

Since the original approval, a number of changes to design and production process have been developed for the FOX glider which are not fully included in the current issue of glider Manuals.

After the original approval of design, the air operation regulations in the countries of glider operation were changed or supplemented, which made certain provisions in the glider Manuals obsolete.

#### **4. APPROVAL**

The revisions resulting of reasons given in item 3 above, have been verified/ approved during the review of glider Manuals in the MDM-1 FOX Type Validation process by the Federal Aviation Administration, USA, and introduced into a separate edition of the Manuals for the territory of US.

No one of the identified errors is critical for the safe operation of the glider, and the changes introduced by this Bulletin do not constitute a major change to the design.

The revisions have been approved under the authorization of the Design Organization (Ref: EASA.21J.117), and the Manufacturer recommends introducing these on each S/N covered by this Bulletin in order to precisely define the characteristics and operating limitations of the glider.

#### **5. INTENT OF THIS BULLETIN**

Correction of the noticed errors and supplementing the information relating to new elements of the design in the glider Manuals, so that the Manuals amended as described in this Bulletin can be used by operators of all FOX gliders (both currently manufactured and those previously built), with each component of equipment approved for the design.

At the same time, bringing the information in the placards / badges applied on the glider and the instrument markings to conformity with the corrected Manuals.

#### **6. CONFIGURATION CHANGES**

A. MANUALS: introduction of this Bulletin consists in introducing to the glider Manuals a set of revisions identified below, respectively

for MDM-1 "FOX" variant

- to FM, iss. III October 1996, with Revisions up to No 6 of 09.01.2014 - Revision No 7 of 21.06.2019, and
- to TSM iss. III December 1996, with Revisions up to No 10 of 10.10.2012 - Revision No 11 of 25.11.2020

for MDM-1P "FOX-P" variant

- to FM iss. IV December 1998, with Revisions up to No 2 of 09.01.2014 - Revision No 3 of 21.06.2019, and
- to TSM iss.I December 1998, with Revisions up to No 2 of 10.10.2012 - Revision No 3 of 25.11.2020

*NOTE:*

*in the Revisions to Manuals described in this Bulletin, introduced are:*

- *page numbering with the index „i, ii, iii, iv ...” to identify a new page, not appearing in the original edition, added now to the Manual after a page with the same base number (without an index),*
- *Example: in TSM pages 2, 2i, 29, 29i*

*Information related to additional elements of glider equipment, from Rev No 7 – transferred from the glider Manual to the Supplement to Manual.*

B. PLACARDS ON A GLIDER: introduction of the above revisions to Manuals of the concerned glider requires that the below-mentioned placards, applied on the same S/N glider, are simultaneously brought to conformity with the template included in the revised Manuals.

- LIMITATIONS
- LOADING PLAN
- V<sub>NE</sub> flight altitude limits

C. INSTRUMENT MARKINGS: the introduction of the Bulletin also requires to bring to conformity with data in the revised Flight Manual (Rev No 7 to FM) the markings of airspeed indicator installed on the glider.

D. WEIGHT AND BALANCE: not affected, verification not required

## 7. **ACTION**

A. **glider Manuals:** introduce a pack of Revisions with Nos listed below, as appropriate for MDM-1 “FOX” variant

- Revision No 7 to FM, iss. III, covering the pages given in Enclosure No 1 to this Bulletin, and
- Revision No 11 to TSM, iss. III, covering the pages given in Enclosure No 2 to this Bulletin

for MDM-1P “FOX-P” variant

- Revision No 3 to FM, iss. IV, covering the pages given in Enclosure No 3 to this Bulletin, and
- Revision No 3 to TSM, iss. I, covering the pages given in Enclosure No 4 to this Bulletin

B. **placards on a glider:** remove the listed below placards, currently applied on the relevant glider, replace with placards conforming to template in the amended Manuals:

- LIMITATIONS
- LOADING PLAN

*NOTE:*

*allowed payload limits given in the Table are established individually for each S/N based on current weighing, verify/ transfer from the hitherto used copy of Manual*

- V<sub>NE</sub> flight altitude limits

C. **instrument markings on the glider:** verify the current marking of airspeed indicator(s) installed on the glider in relation to the revised Manual,

For a certain group of S/Nos, the boundary between the green and yellow arc actually applied on the instrument dial may be different from the value specified in the amended Flight Manual.

In case of divergence – change the instrument dial marking as specified in the revised Flight Manual.

*NOTE:*

*Value marked on the instrument dial is lower than one allowed for the design (214 km/h instead of 225 km/h {116 kts instead of 122 kts}), hence considered conservative. Since in some cases this markings might have been applied by producer directly on the instrument dial and its modification is troublesome, it is acceptable to leave the existing marking of the instrument(s) installed on the glider. In such case, compatibility between the provisions in Manual and the instrument marking is ensured by the foot note on the relevant page in FM..*

**D. LABOUR DEMAND**

Time required to implement this modification 2 days/1 person

**E. LIST OF ENCLOSURES**

Enclosure No 1, Revision No 7 of 21.06.2019, to FM iss. III

Revised pages, according to information given in:

0.1 RECORD OF REVISIONS

0.2 LIST OF EFFECTIVE PAGES

of the concerned document

Enclosure No 2, Revision No 11 of 25.11.2020, to TSM iss. III

Revised pages, according to information given in:

0.1 RECORD OF REVISIONS

0.2 LIST OF EFFECTIVE PAGES

of the concerned document

Enclosure No 3, Revision No 3 of 21.06.2019, to FM iss. IV

Revised pages, according to information given in:

0.1 RECORD OF REVISIONS

0.2 LIST OF EFFECTIVE PAGES

of the concerned document

Enclosure No 4, Revision No 3, of 25.11.2020, to TSM iss. I

Revised pages, according to information given in:

0.1 RECORD OF REVISIONS

0.2 LIST OF EFFECTIVE PAGES

of the concerned document

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