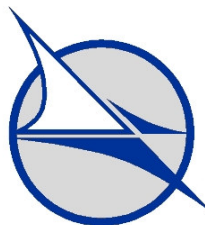


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EASA.21J.117

SERVICE BULLETIN No BO-19/2011 MDM-1 FOX


DESIGNATION-TYPE/MODEL: MDM-1 FOX

SERIA / NUMBER: All MDM-1 FOX model gliders,
variants: MDM-1 FOX, MDM-1P FOX-P

CONCERNS: Possible cases of operating MDM-1 FOX glider with
accelerometer with non-adequate range of indication

COMPLIANCE TIME: On receiving this Bulletin

The technical content of this document is approved
under the authority of DOA ref. EASA.21J.117

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Bielsko-Biała, 02.12.2011

1. GROUNDS FOR ISSUANCE OF THIS BULLETIN

This Bulletin has been issued to ensure compliance of MDM-1 FOX gliders with requirement concerning the range of indication for the required flight instruments.

To the Operational Limitations specified in Type Certificate Data Sheet and in Manuals of the MDM-1 FOX glider, the limit manoeuvring load factor in solo flying /pilot at front seat/ is $+9/-6g$. The indication range of accelerometer for solo flying /instrument panel at front seat/ must ensure acceleration indications over the whole range of allowed flight conditions. At the same time, available information indicates the possible cases of operating the glider with installed in front seat instrument panel accelerometer with the indication range of $+10/-5g$.

To ensure compliance with the concerned requirement, this Bulletin requires to verify the indication range of instrument installed in the glider and, in case of finding the range not covering the $+9/-6g$ values, mandates to implement one of the presented below solutions, to be selected by operator:

- I. Restricting the operational limitations for solo flights to manoeuvres with negative acceleration not exceeding $-5g$
- II. Extending the g-load range of indications by installation in front instrument panel of the additional accelerometer in inverted position, which allows to maintain for solo flying the originally approved operational limitations, with no restrictions

The proposed solutions ensure compliance of the glider with certification requirements.

For the sake of loading condition limitations, the structural loads to be encountered in solo flying, even at maximum value of allowed manoeuvring load factor $+9/-6g$ remain lower than these in flight with 2-person crew at manoeuvring load factors $+7/-5g$. Moreover, flight with acceleration within the -5 through $-6g$ range, which might fall beyond the indication range of single $+10/-5g$ accelerometer is rarely used in glider operation. In aerobatics performed on aircraft with low wing surface load, by a pilot with moderate training in negative acceleration conditions, the manoeuvres with high negative g are performed rarely, both in training- and in competition flights.

2. LIST OF FACTORY NOS COVERED WITH THIS BULLETIN

This Bulletin concerns all MDM-1 FOX gliders,
variants: MDM-1 FOX, MDM-1P FOX-P.

3. PROCEDURE

Check the indication range of the accelerometer installed in instrument panel at front seat. In case of instrument reading not covering the $+10/-6g$ range, operator is obliged to implement on MDM-1 FOX glider one of provided below solutions. Implementation of selected solution means, every action foreseen in the concerned variant – with no exemptions - must be employed, for the selected solution adequately.

ZAKLADY LOTNICZE Marganski&Myslowski	SERVICE BULLETIN No BO-19/2011 MDM-1 FOX	Page: 3/4								
<p>I. <u>Restrictions to operational limitations / solution I/:</u></p> <p>1. Before next aerobatic flight in one-person crew, replace the limitations placards in a cabin with new ones, limiting the maximum allowed manoeuvring loads in solo flying to +9/-5g.</p> <p>2. In Flight Manual, and in Technical Service Manual of the glider replace the pages with limitations with new ones, enclosed to this Bulletin – see item 5. ENCLOSURES, I. Enclosures for operational limitation restrictions</p>										
<p>II. Extension of g-load indication range /solution II/</p> <p>1. Before next aerobatic flight in one-person crew, modify the instrument panel at front seat - according to the Working instruction on instrument panel modification, Enclosure to this Bulletin.</p> <p>Note: For the sake of work scope, the modification is to be completed with assistance of person qualified/ certified for glider/ light airplane servicing – to the regulations in the country of glider registration.</p> <p>2. Record the modification in the glider log book.</p> <p>3. In the Flight Manual and in Technical Service manual, replace the pages with instrument panel description with new ones, enclosed to this Bulletin – see item 5. ENCLOSURES, II. Enclosures for extension of g-load indication range.</p>										
<p>4. <u>MASS (WEIGHT) AND BALANCE</u></p> <p>For the solution including the installation of additional instrument, after installation complete the weighing of empty glider.</p>										
<p>5. <u>ENCLOSURES</u></p> <p>I. <u>Enclosures for operational limitation restrictions</u></p> <p>1. Flight Manual:</p> <table><tr><td>FM, MDM-1 FOX, iss. III, October 1996</td><td>pg No: 1.4, 2.5, 2.6</td></tr><tr><td>FM, MDM-1 FOX MDM-1P FOX-P, iss. IV, December 1996</td><td>pg No: 9, 14, 17</td></tr></table> <p>2. Technical Service Manual:</p> <table><tr><td>TSM, MDM-1 FOX, iss. III, December 1996</td><td>pg No: 6, 46</td></tr><tr><td>TSM, MDM-1 FOX MDM-1P FOX-P, iss. I, December 1998</td><td>pg No: 49</td></tr></table>			FM, MDM-1 FOX, iss. III, October 1996	pg No: 1.4, 2.5, 2.6	FM, MDM-1 FOX MDM-1P FOX-P, iss. IV, December 1996	pg No: 9, 14, 17	TSM, MDM-1 FOX, iss. III, December 1996	pg No: 6, 46	TSM, MDM-1 FOX MDM-1P FOX-P, iss. I, December 1998	pg No: 49
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FM, MDM-1 FOX MDM-1P FOX-P, iss. IV, December 1996	pg No: 9, 14, 17									
TSM, MDM-1 FOX, iss. III, December 1996	pg No: 6, 46									
TSM, MDM-1 FOX MDM-1P FOX-P, iss. I, December 1998	pg No: 49									

II. Enclosures for extension of acceleration indication range

3. Working instruction on instrument panel modification, iss. 02.12.2011.

- #### 4. Flight Manual:

FM, MDM-1 FOX, iss. III, October 1996
7.6a, 9.2, 9.3, 9.4

pg No: 1.4, 2.5, 2.6, 7.3a,

FM, MDM-1 FOX MDM-1P FOX-P, iss. IV, December 1996

pg No: 43, 46

- ## 5. Technical Service Manual:

TSM, MDM-1 FOX, iss. III, December 1996
30A, 46 , 48, 49

pg No: 6, 29B,

TSM, MDM-1 FOX MDM-1P FOX-P, iss. I, December 1998
32A, 49, 51, 52

pg No: 29A, 30A,

Details necessary for modification

- Accelerometer +10/-5g /mechanical type/

Labour consumption: 4 days/ 1 person

6. FINAL CONCLUSIONS

This Bulletin has been elaborated with aim to allow operator, in case of identified inadequacy of installed instrument, for selection the procedure among available solutions – depending on the needs resulting from glider operation model.

At the same time, in case of inadequate indication range of the instrument installed in the glider, actions following one of solutions proposed are mandatory and implementation of these is a condition for maintaining glider airworthiness.

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