BMAA AIRWORTHINESS APPROVAL NOTE

AAN BMAA-1160 **ISSUE 1** **DATE: 06 FEBRUARY 2026**

TITLE: Ascent Industries Ltd Mod 052 EuroFOX Rudder Pedal Reinforcement

APPLICABILITY: All EuroFox, EuroFOX 2K and EuroFOX 3K aircraft complying with the configurations described in this AAN (BM85 & HM18)

EMBODIMENT: MANDATORY

STAGE: APPROVAL

1. INTRODUCTION

The EuroFOX 2K and 3K are type-approved microlight aeroplanes described in Microlight TADS BM85. Ascent Industries Ltd (AI/10070/15) is the type-approval holder.

The EuroFOX is also an amateur-built type accepted aeroplane, described in Microlight HADS HM18. Ascent Industries Ltd (AI/10070/15) is the manufacturer and supplier of the kit.

Ascent Industries Ltd Mod 052 EuroFOX Rudder Pedal Reinforcement.

2. BASIS FOR MODIFICATION APPROVAL

The basis for approval of this modification is BCAR Section S issue 8. Paragraphs affected are S29, S303, S305, S307, S395, S397, S605, S609, S611, S613, S627, S671, S675, S683 & S685.

3. DESCRIPTION

Ascent Industries Ltd Mod 052 EuroFOX Rudder Pedal Reinforcement.

Due to multiple failures (five) of high-hour/cycle LAA amateur-built towing EuroFOX aircraft, the rudder bar design has been modified to incorporate strengthening fillets at the 'inner' locations where the pedals (near vertical tubes) are welded to the connecting torque tube (horizontal tube).

To date, failures around the weld connection have been exclusive to the right rudder bar, pedals #2 and #4, see figure 1 below for the pedal numbering scheme. There is some deviation in failure direction, in some cases 'away' from the pilot and in others 'towards'.

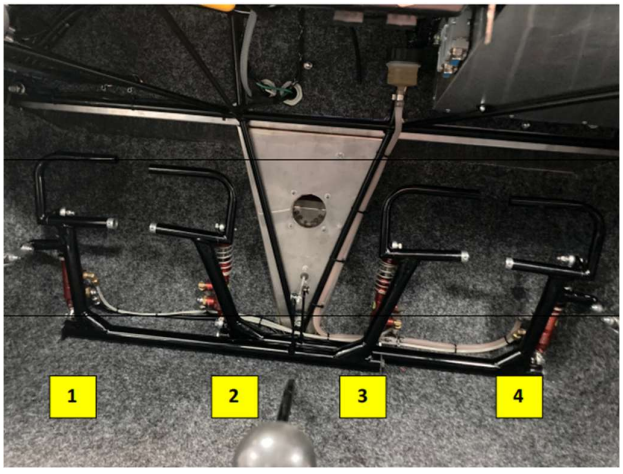


Figure 1 - Pedal numbering scheme.
Pedals #1 & #3 constitute the 'left bar', #2 & #4 constitute the 'right bar'

Both nosewheel and tailwheel variants have seen failures. The current UK fleet comprises 160 aircraft with around 45 tugs. Around 65% are factory-built.

This change is to become one of the mandated options to comply with a CAA MPD issued in response to the failures.

4. TECHNICAL INVESTIGATION

The applicant has submitted engineering reports in support of this modification, which are held in the BMAA AAN file associated with this document.

It is believed the original certification was to ASTM. This modification has been designed and assessed against the current version of BCAR Section S, Issue 8, dated 15th May 2023.

The material specification is unchanged, essentially a Czech equivalent to 4130 chromoly high-strength steel.

Other than the introduction of the folded-steel corner fillet to support the weld between each pedal and the torque tube, no other changes have been made to the design.

A bar fabricated to the new design and an existing bar with 1000+ hrs usage were tested by the manufacturer at their facility. Both bars (new & existing) were mounted on a framework using the standard fixing components, representing aircraft installation. The load was applied incrementally until both yielding and complete failure occurred. The applied forces were measured using a calibrated load cell.

4.1 Testing observations

Due to the practicalities of performing the test, the load could not be applied at the exact point that the pilots' foot would be in contact with the pedal. The results have been adjusted to account for this. The test has been conducted to replicate the main failure mode observed.

No cracking or weld failures were observed. Failure was through torsional buckling of the torque tube near the base of the pedals in both cases.

As the modified design has demonstrated load testing with an increased reserve factor, it is therefore considered acceptable as a direct replacement. The manufacturer declares that the changed design has increased the reserve factor by 44%.

A set of drawings for the modified rudder bars has been produced.

- 04_51-00_02_3Kzosilnenie (nosewheel)
- 04_51-00_02_zosilnenie (tailwheel)
- 04_51-07_21 (fillet)

The rudder bar installation is identical between the factory-built (BM85) and amateur-built (HM18) versions.

5. FLIGHT TESTING

No flight testing was considered necessary.

6. MANUALS, PLACARDS AND INFORMATION

Manuals and placards are not affected by this modification.

7. NOISE CERTIFICATION

Noise certification is not affected by this note.

8. RADIO

Any radio installation is not affected by this note.

9. INSPECTION

Inspection requirements are not affected by this note.

10. WEIGHT AND BALANCE

There is no significant weight and balance change with this modification.

11. SIGNIFICANT FEATURES AND LIMITATIONS

Rudder pedal (bar) reinforcement as referenced in Description, section 3 of this AAN.

Limitations are not affected by this note.

12. CERTIFICATION

I certify that any EuroFOX modified as described in this AAN BMAA-1160 issue 1, is fit for issue, or continued revalidation, of a Permit to Fly as a type-approved Microlight aeroplane.

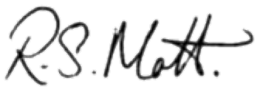
I recommend that this modification be added to BM85.

I recommend that this modification be added to HM18.

Checked by:

R Pattrick
Senior Design Approval Engineer
British Microlight Aircraft Association

Prepared and Authorised by:



R S Mott
Chief Technical Officer/Chief Inspector
British Microlight Aircraft Association

Initial Distribution:

BMAA: AAN File BMAA-1160
Ascent Industries Ltd.

CAA: GA Unit (Gatwick)
Applications and Approvals (Gatwick)

Annex 1 AAN BMAA-1160

Ascent Industries Ltd Mod 052 EuroFOX Rudder Pedal Reinforcement Drawing (2K example)