

MICROLIGHT AIRWORTHINESS APPROVAL NOTE

MAAN NO: 2159

ISSUE 2

DATE: 27 JUNE 2008

TITLE: Microlight Airworthiness Approval Note 2159: inspection and modification of the elevator bias spring attachment bracket SUP8

APPLICABILITY: UK Savannah aircraft with the manual (bungee) pitch trimmer fitted

STAGE: AUTHORISATION

1. INTRODUCTION

The Savannah is an amateur built microlight aeroplane described in Microlight HADS HM10.

This MAAN authorises the issue of a service bulletin in response to in-service experience of this type. The service bulletin relates to inspection and modification (if necessary) of the elevator bias spring mechanism, which is fitted to aircraft with the manual (bungee) pitch trimmer. The bulletin is appended to this MAAN.

This MAAN is raised to issue 2 to change the requirement for initial inspection from 'before flight' to 'within 10 hours or before the next Permit revalidation inspection, whichever is the sooner'. As the service bulletin has not been circulated to owners it is raised to issue 1.1 (rather than issue 2) to avoid confusion.

2. BASIS FOR APPROVAL

The basis for approval of these modifications is BCAR Section S issue 4. Paragraph affected S395a2.

3. DESCRIPTION

UK Savannah aircraft with the manual (bungee) pitch trimmer fitted have an elevator bias spring mechanism fitted in the tail. See figure 1 in appendix A to the service bulletin. This mechanism includes a plate, SUP8, that is attached to the elevator control horn, SE028. On one aircraft it was discovered that the elevator control cable came into contact with SUP8 at one extreme of elevator movement (elevator fully down; stick fully forward). See figure 2 in appendix A to the service bulletin. This is unsatisfactory because the elevator control cable will wear over time and could eventually fail. As the location of SUP8 on SE028 is not specified precisely in the build manual it is possible that other aircraft have a similar fault.

The problem is remedied by filing SUP8 at the point of contact until the control cable remains clear.

UK Savannah Service Bulletin 2159 introduces an inspection schedule for UK Savannah aircraft with the manual (bungee) pitch trimmer fitted. If the installation is defective the service bulletin requires remedial action to be taken within 10 hours of the effective date of the service bulletin or the next permit revalidation, whichever is sooner. If the elevator control cable is damaged the service bulletin requires remedial action to be taken before further flight.

4. TECHNICAL INVESTIGATION

The plate SUP8 is only subject to loads from the elevator bias spring. Removing a small amount of material at the point of potential contact with the elevator cable has no effect on its ability to support these loads.

5. FLIGHT TESTING

No flight-testing is required.

6. MANUALS, PLACARDS AND INFORMATION

Not affected.

7. NOISE CERTIFICATION

Not affected.

8. RADIO

Any radio installation is not affected.

9. INSPECTION

To the service bulletin appended to this MAAN and HADS HM10 in its latest version.

10. WEIGHT AND BALANCE

Not affected.

11. SIGNIFICANT FEATURES AND LIMITATIONS

See section 3. All limitations remain unchanged.

12. CERTIFICATION

I authorise issue of UK Savannah Service Bulletin 2159 issue 1.1, as appended to this MAAN.

I request that the CAA issue a Mandatory Permit Directive to support UK Savannah Service Bulletin 2159 (suggested MPD text is at Annex 1 to this MAAN).

I authorise amendment of HADS HM10 to reflect the instructions contained within this MAAN.

Prepared by:

Authorised by:

B J Syson
Chief Technical Officer
British Microlight Aircraft Association

B J Syson
Chief Technical Officer
British Microlight Aircraft Association

Initial Distribution.

MAAN (including SB):

Mr A Love, CAA Aircraft Projects Dept (Gatwick)
Mr M Shortman, CAA Southern Regional Office (Gatwick)
CAA Applications and Approvals Section (Gatwick)
Mr S Whittaker, Sandtoft Ultralights Partnership
Savannah post approval file
MAAN File 2159

Service bulletin:

All Savannah registered owners

MAAN 2159 ANNEX 1
MPD SUGGESTED TEXT

Subject

Inspection and modification of the elevator bias spring attachment bracket SUP8.

Applicability

UK Savannah aircraft with the manual (bungee) pitch trimmer fitted.

Reason

UK Savannah aircraft with the manual (bungee) pitch trimmer fitted have an elevator bias spring mechanism fitted in the tail. This mechanism includes a plate, SUP8, that is attached to the elevator control horn, SE028. On one aircraft it was discovered that the elevator control cable came into contact with SUP8 at one extreme of elevator movement. This is unsatisfactory because the elevator control cable will wear over time and could eventually fail.

Compliance

Within 10 hours (or before the next Permit revalidation inspection if sooner) inspect the elevator bias spring mechanism in accordance with UK Savannah Service Bulletin 2159 issue 1.1.

A copy of UK Savannah Service Bulletin 2159 and further information can be obtained from:

British Microlight Aircraft Association
Bullring, Deddington
Banbury
OX15 0TT

Tel: 01869 336 006
Fax: 01869 337 116
Email: cto@bmaa.org

Record compliance with this MPD in the aircraft's airframe logbook.

This MPD becomes effective on ***

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<i>Reference: UK Savannah Service Bulletin 2159 issue 1.1</i>	<i>Applicability: UK Savannah aircraft with the manual (bungee) pitch trimmer fitted</i>
<i>Issue date: 27 June 2008</i>	
Inspection and modification (if necessary)	
This SB requires inspection of the affected part WITHIN 10 HOURS (or before the next Permit revalidation inspection if sooner)	

1. Introduction

Why has this Service Bulletin been issued?

UK Savannah aircraft with the manual (bungee) pitch trimmer fitted have an elevator bias spring mechanism fitted in the tail. See figure 1 in appendix A. This mechanism includes a plate, SUP8, that is attached to the elevator control horn, SE028. On one aircraft it was discovered that the elevator control cable came into contact with SUP8 at one extreme of elevator movement (elevator fully down; stick fully forward). See figure 2 in appendix A. This is unsatisfactory because the elevator control cable will wear over time and could eventually fail. As the location of SUP8 on SE028 is not specified precisely in the build manual it is possible that other aircraft have a similar fault.

What aircraft are affected?

UK Savannah aircraft with elevator bias spring mechanism fitted in tail: mandatory modification 11 in HADS HM10. This is part of the manual (bungee) pitch trimmer; aircraft with electric trim, approved optional modification 4, should not have this fitted and are therefore not affected by this service bulletin.

What parts are affected?

SUP8 and elevator control cable (see figure 1 in appendix A).

What documents are affected?

None.

2. Qualifications

Who may implement this Service Bulletin?

The owner/operator or their employee may implement this service bulletin.

Who may certify that this Service Bulletin has been properly carried out?

If remedial action is required the aircraft must be inspected before flight by a BMAA Inspector with a 3-axis rating.

Where must record be made of the Service Bulletin?

An entry must be made in the aircraft's airframe logbook.

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3. What is required to implement this Service Bulletin?

Inspection

A bright electric torch

Modification (if necessary)

Long nosed pliers (to remove split pin).

Two 3/8" AF spanners.

A suitable (e.g. half-round) file.

Paint to protect filed area.

A new split pin.

4. How to implement this Service Bulletin

1. Within 10 hours or before the next inspection for revalidation of the Permit to Fly, whichever is the sooner, remove the inspection panel and inspect the attachment of the elevator control cable to the elevator control horn, SE018. See figure 1 in appendix A. The control cable should **not** contact bracket SUP8 through the full range of elevator movement: stick fully forward to stick fully back. See figure 2 in appendix A.
2. If the control cable **does** contact the bracket remedial action must be taken:
 - If the elevator control cable is damaged remedial action must be taken before flight (see paragraphs 2.1, 2.2 and 2.3 below).
 - If the elevator control cable is not damaged remedial action must be taken within a further 10 hours or before the next inspection for revalidation of the Permit to Fly, whichever is the sooner (see paragraphs 2.1 and 2.3 below).
- 2.1 To ensure the elevator control cable does not contact SUP8 the elevator cable should be disconnected and SUP8 filed down at the point of contact until the control cable remains clear. The final profile must be smooth without any sharp steps. The filed area should be protected using a non-flexible paint and the elevator control cable reconnected. A new split pin must be used. Under no circumstances must the elevator control horn, SE028, be modified.
- 2.2 If the control cable is damaged – for example if the cable is badly worn or any strand broken – it must be replaced in accordance with the approved build manual. Slight ‘polishing’ or a slight flattening of the control cable at the point of contact is not considered significant.
- 2.3 An entry must be made in the aircraft’s airframe logbook stating that “*UK Savannah Service Bulletin 2159 issue 1.1 (check of correct installation of elevator bias spring) has been*

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carried out", along with details of the remedial action required, and the name and signature of the person implementing the service bulletin. Before flight the modified bracket and reassembled control system must be inspected by an independent BMAA Inspector (not the person who implemented the service bulletin) with a 3-axis rating. The Inspector must also countersign the logbook entry.

3. If the control cable does **not** contact the bracket an entry must be made in the aircraft's airframe logbook stating that "*UK Savannah Service Bulletin 2159 issue 1.1 (check of correct installation of elevator bias spring) has been carried out and found to be satisfactory – no remedial action was required*", along with the name and signature of the person implementing the service bulletin.

5. Changes to operating data

Changes to Weight and Balance

None

Changes to the Operator's Manual

A copy of this service bulletin must be retained with the Operator's Manual.

Changes to the Maintenance Manual

None.

Changes to Placards

None.

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6. Authorisation

This Service Bulletin has been authorised by the BMAA Chief Technical Officer.

Authorised by



B J Syson
Chief Technical Officer
British Microlight Aircraft Association

Initial Distribution: all Savannah registered owners.

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7. List of Appendices to this Service Bulletin

Ref:	Title:	No. Pages
Appendix A	Explanatory diagrams and photographs	1
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Appendix A – Explanatory diagrams and photographs

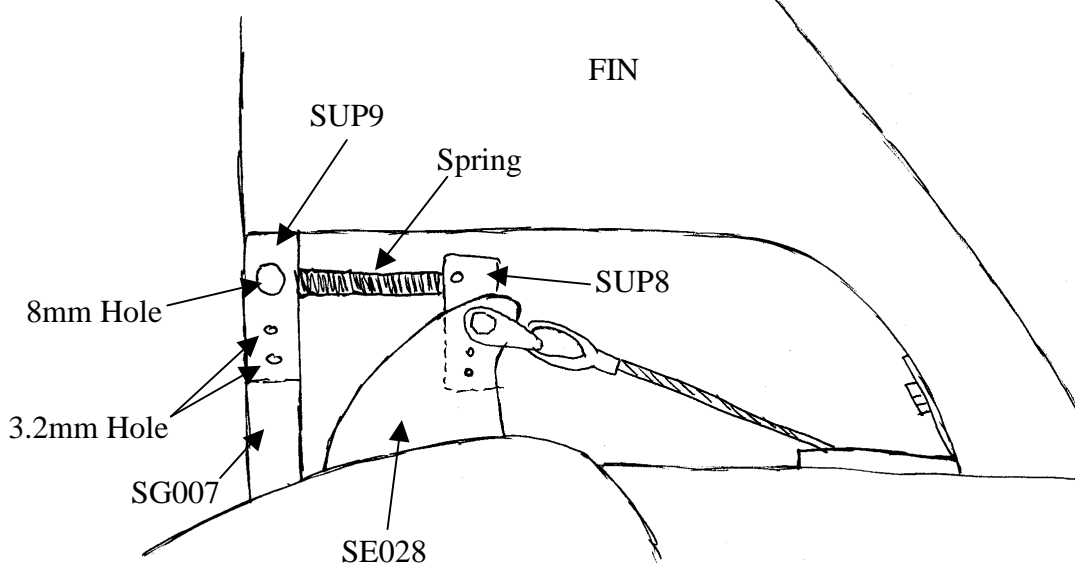


Figure 1: schematic of elevator 'down' spring installation.

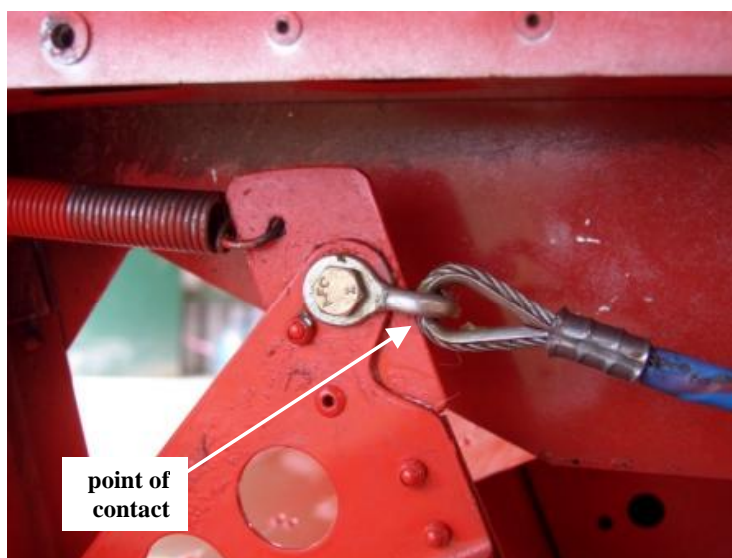


Figure 2: photograph showing contact between elevator control wire and SUP8.

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Appendix B – Contact Details

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