



Service Bulletin No: 43
Issue: 2
Date: 20th June 2000

Applicability: Gemini Flash 2, Gemini Flash 2 Alpha & Mainair Mercury

CAA Classification: Mandatory

Action: Before Next Flight

Details

The Gemini Flash 2, Gemini Flash 2 Alpha and Mainair Mercury wings have a number of adjustments that can be made to the wing settings, this enables owners to fine tune the handling of the aircraft. However because of the large number of adjustments that can be made it is also possible to adjust the wing such that the characteristics of the aircraft can be altered beyond that which has been tested and approved. There must be no extra shackles at the ends of any of the leech lines, and any such additions are not approved and invalidate the Permit to Fly. It is therefore required that all owners of the above aircraft check that the wing settings are as per the factory settings and that the basic handling is within the correct limits.

The procedure to ensure that the wing settings are correct are as follows:

Wing Battens: Ensure that these match the wing batten profile, slight variation is allowed as indicated on the batten sheet, this is to correct any turn. All owners should have a copy of the batten sheet, as this is a requirement of the Permit to Fly renewal.

Index Tips: These should be set in the normal position, which is marked with an 'N' and is the second hole from the top. See enclosed diagram.

Leech Lines: These must be set to within the limits as shown on the attached sheet. These can only be measured with the wing rigged, and after the batten profiles have been checked. The method for measuring these is to tie some string around the wing tip and routing beneath the wing sail towards the keel. This must then be pulled tight to remove all slack and looped around the keel, from beneath, at the front of the fin, and then carried onto the other wing tip where it must be tied off. As indicated on the enclosed diagram. The wing must be approximately level. Using a retractable tape, the settings can be measured by hooking the tape over the trailing edge of the wing at the leech line in question and sighting the string in-line with the bottom of the keel. The reading from the tape must be taken and the corresponding reading from the other side of the wing must also be measured and the average

calculated. This gives the setting for the leech line. This must be checked against the range as indicated on the attached sheet. All three leech lines must be measured and compared to the required readings. Adjustments can be made by altering the settings using the seven hole adjuster near the king post. Remember that altering one line can affect the other settings so all three will require measuring again. If the settings cannot be made to match the correct figures then the factory must be consulted, for advise.

All settings must be recorded in the Airframe Log Book.

Flight Test: This must be carried out on a calm day. The aircraft must be rigged correctly as indicated in the operators manual. The aircraft must be flown dual and solo, remember to keep above the minimum cockpit load of 70kg. The hands off speed must be checked for the aircraft and for the Gemini Flash 2 must be between 43 and 53 mph and for the Gemini Flash 2 Alpha & Mainair Mercury must be between 45 and 55mph. There must also be a positive bar pressure when the bar is pulled back and speed increased. **A pull back force of at least 5kg must be required for a speed increase of 10mph.** A record of the figures found must be recorded in the aircraft log book. The trim speed can be adjusted by altering the hang point position, which has three adjustment holes, and typically gives a change of upto 5 mph to the hands of speed.

If there is any doubt in checking any of the above your BMAA inspector should be able to carry out the ground checks for you and a BMAA check pilot should be able to conduct the simple flight test. Alternatively the wing can be returned to Mainair Sports for the checks to be carried out, contact the factory for details.

Upon completing the above an entry must be made in the airframe log book, stating that you have checked your wing against Service Bulletin 43, and that the wing settings are as per the factory setting.

At the next Permit Inspection Renewal, the BMAA inspector should be made aware of the Service Bulletin and should confirm that you have carried out the above procedure correctly, also during the check flight the BMAA Check Pilot should confirm that there is a positive pitch force change with change in airspeed.

Owners are reminded that no flex wing microlight is aerobatic and must only be flown within the prescribed limits as contained in the aircraft manual. Failure to fly within the correct limits may cause loss of control.

If you are no longer the owner of the Gemini Flash 2, Flash 2 Alpha or Mercury referenced on the address label, please forward this bulletin onto the new owner.

Inc. Drawings FGA-77 & FGA-78

A handwritten signature in black ink, consisting of stylized initials and a surname, located at the bottom of the page.

DWG NO. FGA-77

TITLE LEECH LINE MEASUREMENT

DATE 20th APR 00

SUPERCEDES

DRAWN BY *[Signature]* CHECKED BY *RECOR*

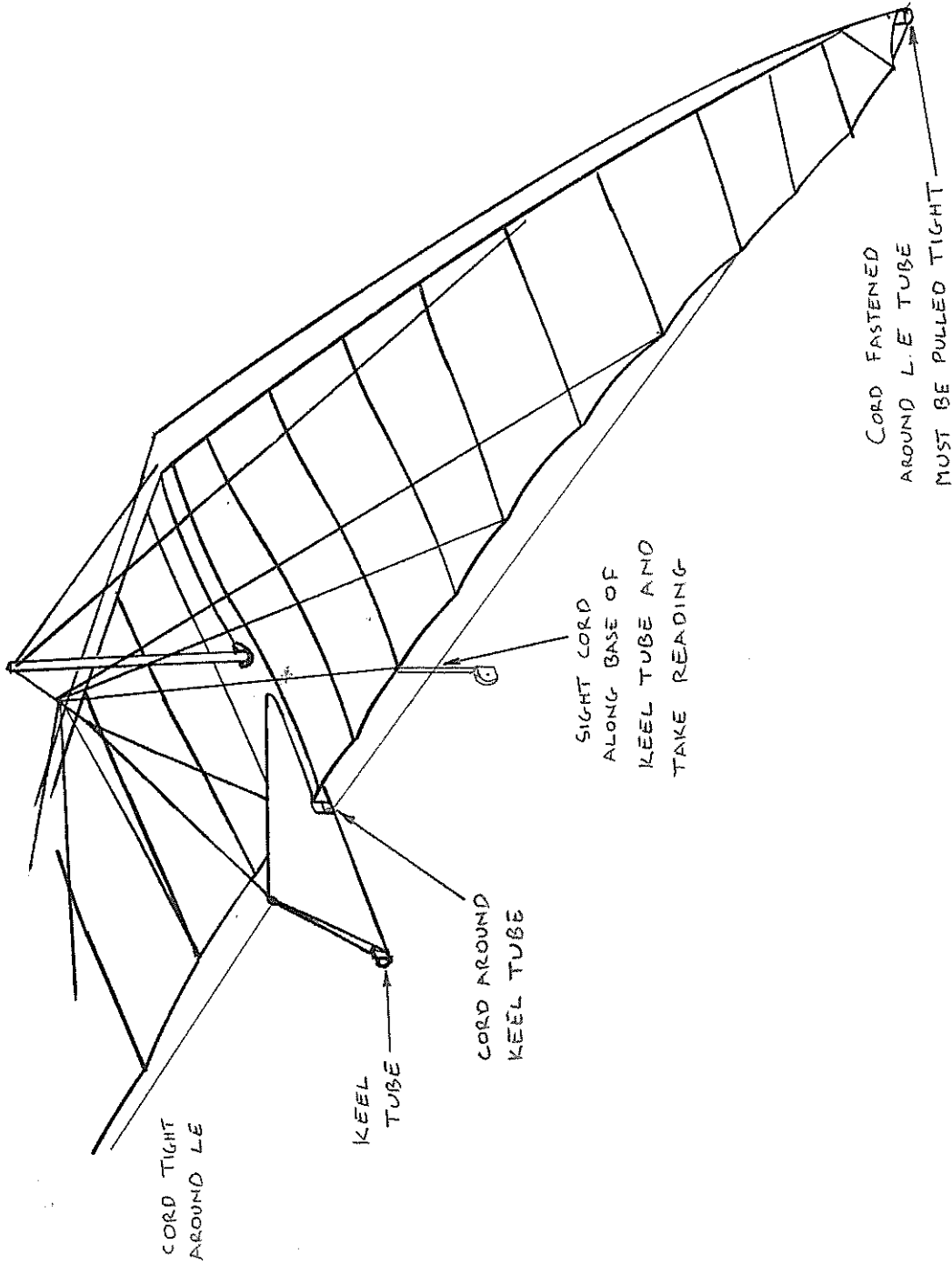
REF	DATE	AMENDMENT
A	21-6-00	NEW DRAWING FOR SETTINGS ISSUED

SEE FGA-76 FGA 78

FOR SETTINGS

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