BRITISH MICROLIGHT AIRCRAFT ASSOCIATION

TECHNICAL INFORMATION LEAFLET

NO: 105 ISSUE 3 FEB 2011

STANDARD MINOR MODIFICATION
2-SEAT FLEXWING REAR PASSENGER UPPER TORSO RESTRAINT

Introduction

All weightshift microlights in the UK now need a rear seat upper torso restraint. This is for the protection of the pilot, after two accidents where following an aircraft rolling over during landing, the passenger's body was believed to have struck and fatally injured the pilot.

Because this modification is mandatory for safety reasons, no charge is made by the BMAA for approval of a rear passenger upper torso restraint. After 30 April 2002, the BMAA cannot process any permit renewal for a 2-seat flexwing that does not have a restraint fitted.

Whether the restraint is then worn by passengers is at the discretion of the captain of the aircraft, although it's use is strongly encouraged. It is accepted that flying instructors are not passengers, and may not be able to fly the aircraft from the rear seat whilst wearing such a harness.

Applicability

This TIL applies to all 2-seat weightshift microlights, except for the following: -

- All Pegasus type approved aircraft, which should use original Pegasus restraints.
- All Mainair type approved aircraft, which should use restraints supplied by Mainair Sports Ltd and record the Mainair modification number in their logbook.
- All Medway and Southdown "Raven" and "Puma Sprint" type approved aircraft, which should use restraints supplied by Medway Microlights Ltd and record the Medway modification number in their logbook.
- Hornet side-by-side aircraft, which do not require one.
- Huntwing Avon and Hunt-Avon Blade, which should comply with the relevant HADS.

The Air Creation Fun-18 GTbis aircraft already uses an Air Creation inertia-reel shoulder restraint. But, this TIL may be used to replace the original Inertia reel harness if spare parts are unavailable.

This TIL permits simple ways to fit a harness, using standard parts. If you wish to design or make your own harness, or to do things in another way, this is perfectly acceptable – but it is not within the province of this TIL. A normal modification application is required, using a form BMAA/AW/002 for which a charge of £30 will be made and you will need to prove that this mod is acceptable.

How to fit a rear shoulder harness

The harness should be attached to the monopole or equivalent structure, as near as possible to the engine mounts. The webbing should be continuous around the rear of the monopole so as to ensure no weak point, and either tightly fitting or secured to the monopole with a bolt through an existing hole to ensure that it cannot travel along the height of the monopole. The lower part of the restraint should then be attached at (looped around) either side of the rear lapstrap buckle.

If the length of the upper torso restraint is such that, if undone, it could reach the propeller arc when fully lengthened, then it must be permanently attached to the lapstrap, it is recommended by stitching.

What to do once you've fitted your upper torso restraint.

Fill in the form on page 3 of this TIL, have it signed by any flexwing inspector, and return it to the BMAA. The BMAA will return this form to you, with the full modification approval number shown at the bottom of the page. This mod number must then be entered in the aircraft logbook. Also, there should be a certificate of conformity supplied with your harness, please file that in the aircraft logbook or paperwork.

The mod number will also be needed on your permit renewal form (form BMAA/AW/001), otherwise your permit renewal may be refused.

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Acceptable Harnesses
The following lists the harnesses currently approved.

For single round monopole aircraft, with or without a locating bolthole (such as a Hunt-Avon, Puma or Gemini Trike – this is likely to apply to most aircraft)

- Mainair Sports part 99-44-62, or
- Medway Microlights part 1799

For single square monopole aircraft, with or without a locating bolthole (similar to Quantum or EclipseR)

- Medway part 1797

For any aircraft where a single bolthole exists from side to side of the monopole (such as the Air Creation / Ultraflight Fun 18).

- Flylight Airsports KISS 400 Shoulder straps UK Mod. (To be used with 6mm long plainshaft bolt, maximum monopole diameter 67mm or square section monopole maximum 53mm across).

For aircraft with twin monopole (similar to Medway Hybred)

- Medway microlights part 1798

It may be possible that other harnesses will be approved in the future, in which case contact the BMAA for the latest version of this TIL, which will be updated with any new harnesses:

Mainair Sports Ltd, Unit B, Crawford Street, Rochdale, OL16 5NU.
Tel. 01706-655134.

Medway Microlights Ltd, Burrows Lane, Middle Stoke, Rochester, Kent, ME3 9RN.
Tel. 01634-270780

FlyLight Airsports Ltd, Sywell Aerodrome, Sywell, Northampton, NN6 0BT.
Tel. 01604-494459.

It is acceptable to send in the form with your permit renewal form, noting in the modifications box 'TIL 105 submitted'.

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BMAA – STANDARD MINOR MODIFICATION CHECKLIST: TIL 105

Reg: **G-**_ _ _ _	Type:
Harness type being fitted: (list of approved harnesses is on page 2 of the TIL)	

Safety Checks

No.	Check			Inspector's initials
1	Confirm that harness is securely fitted to the monopole and loops correctly either side of the lapstrap buckle			
2	Harness must either be secured to the lapstrap, or is too short at full extension to reach the propeller arc (complete / delete below as applicable):			
	Too short to be a problem.	Secured to lapstrap	Securing method (if used):	
3	Certificate of conformity checked, and filed with aircraft documentation.			
4	Any comments by inspector.			

FLIGHT RELEASE CERTIFICATE

The installation of the rear seat upper torso restraint to this aircraft has been carried out in a satisfactory manner, and in accordance with BMAA TIL 105. I consider the aircraft fit for use with the harness fitted.

Signed: (Name printed):	BMAA Inspector No.: BMAA Membership No.:	Date:

This form must be sent with payment as per current fees in MF or www.bmaa.org, and BMAA Aircraft Ownership Trustee Grid (if applicable) to*:- technical.office@bmaa.org

BMAA Office Approval:	**(signed)**	**(Name)**
Mod No.: G-_ _ _ _ / TIL105 / 20 _ _ /_ _ _ _ _		**(Date)**

**Whilst waiting for this form to be returned by the BMAA the aircraft may be flown for upto one calendar month from the Inspection date above. Once this form is returned to you signed please enter the full modification approval number above in your aircraft logbook and retain this sheet with your aircraft records.*