



# MICROLIGHT WEIGHT AND BALANCE REPORT

FORM LAA/WB/  
MICROLIGHT  
(METRIC)

Date: FEB 2017

Aircraft Type \_\_\_\_\_ Serial No. \_\_\_\_\_ Reg \_\_\_\_\_

Datum \_\_\_\_\_ Levelling Reference \_\_\_\_\_

CofG: Fwd Limit \_\_\_\_\_ mm      Aft Limit \_\_\_\_\_ mm      \*Fwd/Aft of datum  
(\*Delete as required)

Maximum Total Weight Authorised (MTWA) \_\_\_\_\_ kg

## Section 1 Weighing Results

The aircraft should be weighed in its fully equipped state including all optional removable items normally carried for flight e.g. radio, cushions, wheel spats, cabin doors, etc, and a full engine oil tank, but empty of crew, baggage and fuel (other than unusable fuel).

At the time of weighing, list in the table provided in section 5 all such optional removable items that were in place when the aircraft was weighed, along with the individual weights of each of these items.

### FULLY EQUIPPED EMPTY WEIGHT

ITEM	SCALE READING (kg)	CORRECTION (kg)	NET WEIGHT (kg)	ARM (mm)	MOMENT (kg.mm)
LEFT WHEEL					
RIGHT WHEEL					
NOSE/TAILWHEEL					
LESS USABLE FUEL			-		
FULLY EQUIPPED EMPTY WEIGHT				TOTAL MOMENT	

FULLY EQUIPPED EMPTY CofG =  $\frac{\text{TOTAL MOMENT FULLY EQUIPPED EMPTY WEIGHT}}{\text{FULLY EQUIPPED EMPTY WEIGHT}}$  = \_\_\_\_\_ = \_\_\_\_\_ mm      \*Fwd/Aft of Datum  
(\*Delete as required)

Aircraft Weighed By: \_\_\_\_\_

Date of Weighing: \_\_\_\_\_

Scales Calibration Date: \_\_\_\_\_



IT IS REQUIRED THAT MICROLIGHT AEROPLANES ARE RE-WEIGHED AND A NEW WEIGHT AND BALANCE REPORT CREATED FOLLOWING SIGNIFICANT MODIFICATION OR AFTER RE-COVERING OR PAINTING.

IT IS ALSO RECOMMENDED THAT MICROLIGHT AIRCRAFT ARE RE-WEIGHED AT INTERVALS NOT EXCEEDING 10 YEARS TO MONITOR WEIGHT GROWTH.

**Section 2 Variable Load Items**

ITEM	QTY	WEIGHT (kg)	ARM (mm)	MOMENT (kg.mm)
PILOT	1	-----		-----
PASSENGER		-----		-----
PASSENGER		-----		-----
MAXIMUM FUEL – MAIN TANK	Litres			
MAXIMUM FUEL – Aux. TANK(S)	Litres			
MAXIMUM ALLOWED BAGGAGE				
OTHER				
OTHER				

**Section 3 Weight and Balance Changes in Service**

	FULLY EQUIPPED EMPTY WEIGHT (kg)	CG/ARM (mm)	MOMENT (kg.mm)
<b>DATA FROM LAST WEIGHING =</b>			
CHANGE DUE TO:	(± wt change)	(item CG position) <b>X</b>	=
CHANGE DUE TO:	(± wt change)	(item CG position) <b>X</b>	=
CHANGE DUE TO:	(± wt change)	(item CG position) <b>X</b>	=
<b>REVISED FULLY EQUIPPED EMPTY WEIGHT =</b>		<b>REVISED TOTAL MOMENT =</b>	

**REVISED EMPTY CofG =**  $\frac{\text{REVISED TOTAL MOMENT}}{\text{REVISED FULLY EQUIPPED EMPTY WEIGHT}}$  = \_\_\_\_\_ mm \*Fwd/Aft of Datum  
 (\*Delete as required)

**Section 4 Loading examples**

NOTE: Use this section to check whether pilot weights of between 55 and 86 kg, passenger weights of 0 to 86 kg, and 'worst case' choices of fuel and baggage weight can be accommodated without exceeding the aircraft's MTWA or loaded cg limits – or if not, how the pilot must limit these variable weight items to keep inside the permitted weight and cg envelope. See TL 3.16 Guidance on Weight and Balance and example sheets.

ITEM	MOST FORWARD CofG LOADING		
	WEIGHT (kg)	ARM (mm)	MOMENT (Kg.mm)
FULLY EQUIPPED A/C EMPTY WEIGHT			
PILOT			
PASSENGER			
BAGGAGE			
OTHER			
ZERO FUEL TOTALS		X	
ZERO FUEL CG =	$\frac{\text{MOMENT}}{\text{WEIGHT}}$		
FUEL (TO GROSS WEIGHT MAX)			
TOTALS		X	
LOADED CofG =	$\frac{\text{MOMENT}}{\text{WEIGHT}}$		

	MOST REARWARD CofG LOADING		
	WEIGHT (kg)	ARM (mm)	MOMENT (kg.mm)
		X	
	$\frac{\text{MOMENT}}{\text{WEIGHT}}$		
		X	
	$\frac{\text{MOMENT}}{\text{WEIGHT}}$		

### Section 5 Calculation of Basic Empty Weight

List below all optional equipment fitted at the time of weighing (For example Headsets, Cushions, Ballistic Parachute, Fire Extinguisher, First Aid Kit, etc.) Add up the weights of all these items and write down the total in the space below.

OPTIONAL ITEM	TYPE	WEIGHT kg
Total Weight of optional equipment		kg

Basic Empty Weight = Fully Equipped Empty Weight – Total Weight of Optional Equipment

= \_\_\_\_\_ - \_\_\_\_\_ kg

= \_\_\_\_\_ kg

### Section 6 Maximum Permitted Basic Empty Weight

For most common microlight types, the maximum permitted basic empty weight when fitted with the standard engine type(s) is listed in the TADS for the type. Where a TADS is not available this can be calculated as described in TL 3.16 'Guidance on Weight and Balance'.

Max Permitted Basic Empty Weight = \_\_\_\_\_ kg

Check that the Basic Empty Weight in Section 5 above is less than this Max Permitted Basic Empty Weight.

### Section 7 Data for Microlight Weight Placard – see notes overleaf

		See note #
<b>FULLY EQUIPPED EMPTY WEIGHT</b>	kg	1
<b>DATE OF WEIGHING</b>	/ /	2
<b>MAXIMUM PERMITTED BASIC EMPTY WEIGHT</b>	kg	3
<b>MAXIMUM PERMITTED TOTAL WEIGHT AUTHORISED</b>	kg	4
<b>MAXIMUM FUEL LOAD WITH TWO CREW OF 86 Kg EACH (ZERO BAGGAGE)</b>	litres	5
<b>MAXIMUM COMBINED CREW WEIGHT WITH FULL FUEL TANKS (ZERO BAGGAGE)</b>	kg	6

Notes for completing the microlight weight placard

1. Fully Equipped Empty Weight - as recorded in Section 1 above
2. Date of weighing - as recorded in Section 1 above
3. Maximum Permitted Basic Empty Weight – see section 6 above.
4. Maximum Total Weight Authorised. This is the figure specified on the Operating Limitations document of the Permit to Fly.
5. Maximum fuel load with two average weight crew (86 Kg each). To obtain this figure, subtract the fully equipped empty weight of the aircraft from the maximum total weight authorised, then subtract 172 Kg from the remainder. Divide by 0.74 to convert to litres (If the resulting fuel quantity exceeds the full tank capacity, write 'full tanks')
6. Maximum combined crew weight that can be carried with full fuel tanks. To calculate this, subtract the fully equipped empty weight of the aircraft from the maximum permitted total weight authorised. Then from the remainder subtract the weight of the full quantity of useable fuel that can be carried, as stated in Section 2.

**I confirm that the above information is correct to the best of my knowledge**

**Supervising LAA Inspector:** \_\_\_\_\_  
or Licensed Engineer

**Signature:** \_\_\_\_\_

**LAA Inspectors Number:** \_\_\_\_\_  
or CAA Approval No.

**Dated:** \_\_\_\_\_