

WEIGHING OF AIRCRAFT

1. INTRODUCTION

This Airworthiness Notices prescribes the requirements for the weighing of aircraft, the determination of the corresponding Centre-of-Gravity position and the provision of information from which the loading for flight can be correctly determined.

2. DEFINITIONS

The following is a list of definitions of the terms used in this Notice:

- a) Basic Equipment – is the un-consumable fluids and equipment which is common to all roles for which the operator intends to use the aircraft.
- b) Basic Weight – is the weight of the aircraft and all its Basic Equipment, plus that of the declared quantity of unusable fuel and unusable oil. In the case of turbine-engine aircraft and aircraft the Maximum Total Weight Authorized of which does not exceed 5700 kg, it may also include the weight of usable oil.
- c) Variable Load – is the weight of the crew and of items such as crew baggage, removable units, and other equipment, the carriage of which depends upon the role for which the operator intends to use the aircraft for a particular flight.
- d) Disposable Load – is the weight of all persons and items of load, including fuel and other consumable fluids carried in the aircraft, other than the Basic Equipment and Variable Load.
- e) Maximum Total Weight Authorized (MTWA) – is the Maximum Total Weight Authorized for the aircraft and its contents, at which the aircraft may take off anywhere in the world, in the most favourable circumstances in accordance with the Flight Manual.

3. WEIGHING INTERVALS

- 3.1. All aircraft on the Civil Register of the Republic of the Union of Myanmar shall be weighed when they are initially issued with a Certificate of Airworthiness.
- 3.2. Aircraft, the Maximum Total Weight Authorized of 5700 kg and less, shall be reweighed at such time as the Department of Civil Aviation may require.
- 3.3. Aircraft, the Maximum Total Weight Authorized of which exceeds 5700 kg, shall be reweighed within two years after the date of manufacture, and subsequent check weighing shall be made at intervals not exceeding five years, and at such times as the Department of Civil Aviation may require or at intervals specified in the Approved Maintenance Schedule or Approved Maintenance Program for that particular aircraft.

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4. WEIGHING PROCEDURE

4.1. Aircraft weighing shall be carried out under the control of a person authorized by an Approved Maintenance Organization.

Note. Authorized person should have been adequately trained for the weighing purpose and has had adequate recent practical experience of the duties to be performed.

4.2. Each weighing scale shall have been calibrated by the manufacturer or manufacturer's authorized firm within a period of one year prior to weighing any aircraft.

4.3. Sufficient personnel and equipment, including scales shall be provided to satisfactorily carry out the weighing.

4.4. The Basic weight and Basic Weight Centre-of-Gravity position shall be determined from the results of two consecutive and independent weighing. The load shall be completely removed from the scales between each weighing.

4.5. If the difference between the first two weighing exceeds 0.2percent of the mean weight or 10kg whichever is the greater, further weighing shall be performed until the results of two consecutive and independent weighing agree within that tolerance.

4.6. The basic weight and basic weight centre-of-gravity position shall be certified as corrected by an authorized person of an Approved Maintenance Organization. Weighing details and the determination of the basic weight and basic weight Centre-of-Gravity position shall be entered in Aircraft Weighing Report.

4.7. The Basic Weight and the corresponding C.G. position shall be determined and entered in the Weight and Centre-of-Gravity Schedule or in the Loading and Distribution Schedule as appropriate.

4.8. When the aircraft is weighed, the condition of the aircraft (i.e. the equipment and other items of load such as fluids in tanks) shall be recorded and a list of equipment included in the basic weight shall be prepared for each aircraft. The equipment installed on the aircraft should not differ from that included in the declared list of Basic Equipment associated with the Weight and Centre-of-Gravity Schedule or the Loading and Distribution Schedule as appropriate.

5. WEIGHING REPORT AND WEIGHT AND CENTRE-OF-GRAVITY SCHEDULE

5.1 The person who prepare or check or approve the Weight and Centre-of-Gravity Schedule shall have adequately understood the procedure for Weighing of such Aircraft.

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- 5.2 For each weighing of aircraft, Weighing Report (including weighing method, weighing data, calculation and certificate) and Weight and Centre-of-Gravity Schedule shall be submitted to Department of Civil Aviation, for reviewing whether it is acceptable or not.
- 5.3 Each Weight and Centre-of-Gravity Schedule shall include the following information:-
 - (i) The nationality and registration mark of the aircraft.
 - (ii) The Basic Weight and corresponding Centre-of-Gravity position.
 - (iii) A list of the accessories, instrument, equipment and apparatus (including radio apparatus) and other parts regarded as basic equipment which have been included in the basic weight.
- 5.4 A copy of each issue of the Schedule shall be retained by the Operator, and where the Schedule is re-issued the previous issue shall be retained with the aircraft records.
- 5.5 For aircraft the Maximum Total Weight Authorized of 5700 kg and less, a copy of the Schedule shall be included in the Flight Manual, if a Flight Manual is applicable, and/or displayed in a prominent position inside the aircraft.
- 5.6. For aircraft the Maximum Total Weight Authorized of which exceeds 5700 kg, a copy of the Schedule should be included in the Flight Manual, or in the Weight and Balance Manual of specific aircraft.
- 5.7 Operators shall issue a revised Weight and Centre-of-Gravity Schedule whenever the alteration is made affecting the weight of the aircraft empty or the corresponding Centre-of-Gravity position.
- 5.8 If the aircraft has not been re-weighed, the revised Weight and Centre-of-Gravity Schedule shall contain a statement that calculations have been based on the last Weight and Balance Report, or other information, and the known weight and Centre-of-Gravity changes.
- 5.9 Whenever an aircraft is re-weighed, the particulars entered in the Weight and Centre of Gravity schedule shall be checked, and if any discrepancies are disclosed, the schedule shall be amended or replaced by a revised schedule.
- 5.10. The weight and Centre of Gravity Schedule shall be worded in the form as shown in Appendix of this notice.

Part A Basic Weight. The Basic Weight and the associated position of the C.G. of the aircraft as derived from the most recent Weight and Balance Report or other information together with any subsequent weight and c.g. changes, shall be stated. The position (retracted or extended) of the landing gear associated with this information shall be stated.

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Where the Maximum Total Weight Authorized does not exceed 5700 kg, Part A shall also include the list of Basic Equipment showing the weight and lever arm of each item, or this information may form separate pages attached to the Weight and Centre of Gravity Schedule, with a suitable reference in Part A of the Schedule to this procedure.

Where the Maximum Total Weight Authorized exceeds 5700 kg, Part A shall include the list of Basic Equipment showing the weight, lever arm and moment of each item, or shall make reference to the document in which such a list is included.

Part B Variable Load. The variable Load may be detailed for as many roles as the Operator wishes, but for every role the weights and moments shall be given. Weights of crew members may be assumed, provided that the Maximum Total Weight Authorized exceeds 5700 kg, or the aircraft has a total seating capacity for 12 or more persons. Otherwise the weight of each person must be determined by weighing.

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WEIGHT AND CENTRE-OF-GRAVITY SCHEDULE (SAMPLE)

REFERENCE	:	
PRODUCE BY	:	
AIRCRAFT DESIGNATION	:	
NATIONALITY & REGISTRATION MARK	:	
CONSTRUCTOR	:	
CONSTRUCTOR'S SERIAL NO.	:	
MAXIMUM TOTAL WEIGHT AUTHORIZED	:	
CENTRE-OF-GRAVITY LIMITS	:	Refer to Flight Manual Reference Number

PART-A BASIC WEIGHT

1. The Basic Weight of the aircraft as Calculated from Weighing Report No....., Dated.....is

: (lbs) or (kg)
2. The centre of gravity of the aircraft in the same condition at this weight and with the landing gear extended is (aft of the datum)

: (in) or (m)
3. The total moment about the datum in this condition

: $\frac{(\text{lb.in})}{1000}$ or (kg m)

Note: The datum is at

This is the datum defined in the Flight Manual.

All lever arms are distances in inches / meters aft of the datum.

4. The Basic Weight includes the weight of unusable fuel, the weight of unusable oil and the weight of the following items which comprise the List of Basic Equipment.

Item	Weight (lb or kg)	Lever Arm (in or m)	Moment ($\frac{(\text{lb.in})}{1000}$ or kg m)
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.....
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PART-B VARIABLE LOAD

The weight, lever arm and moment of the Variable Loads are shown below. The Variable Loads depends upon the equipment carried for the particular role.

Item	Weight (lb or kg)	Lever Arm (in or m)	Moment ($\frac{\text{lb.in}}{1000}$ or kg m)
Pilot
Row 1 passenger seats
Table
Life Jackets

This Schedule was prepared (date).....and supersedes all previous issues.

Signed

(Head of Quality Department of Operator or AMO)