|  |  |
| --- | --- |
|  | **CIVIL AVIATION AUTHORITY OF MALAYSIA** |
| **CHECKLIST FOR MASS AND BALANCE PROGRAMME DOCUMENT (MBPD)***(Civil Aviation Regulation 2016)* |
|  |
| **SECTION 1 – APPLICANT INFORMATION** |  |
|  |  |
| Status of Application | : | **[ ]**  | Initial Approval | **[ ]**  | Amendment / Revision |
|  |  |
| CAMO Privilege/s: [ ] Continuing Airworthiness Management [ ]  Airworthiness Review Report [ ]  Permit to Fly |
|  |  |
| Organisation’s MBPD Reference :  |       | Issue & Revision Date: |       |  |
|  |  |
| AOC Holder (please tick) | : | [ ]  YES | [ ]  NO |  | AOC Approval Number | : |       |  |
|  |  |  |  |  |
| CAMO Name & Address | : |       |  |
|  |  |  |  |  |
| Provisional Approval Date | : |       |  | Provisional Approval Reference | : |       |  |
|  |  |
| CAMO Approval Number | : |       |  | Prepared by | : |       |  |
|  |  |
| Contact Person Telephone No | : |       |  | Email of Contact | : |       |  |
|  |  |  |  |  |
| **SECTION 2 – MBPD CHECKLIST AND CAMO DECLARATION** |  |
|  |  |
|  | 1. **Structure of the Mass and Balance Programme Document (MBPD)**

The MBPD may be produced in the form of a single document or may consist of several separate documents. * 1. Single document: The standard MBPD produced i.a.w. CAD 6805 is a unique and complete document. It must contain all the information required to show compliance with the regulation including detailed mass and balance control procedures.
	2. Several documents: The MBPD must contain at least the information as detailed in CAD 6805 Paragraph 15 and any required procedures required in CAD 6805. The additional material may be published in separate documents which must be referenced from the MBPD. In this case:
		1. The MBPD should cross refer to the associated procedures, documents, appendices and forms which are managed separately.
		2. These associated documents must meet the same rules as described for the MBPD.
		3. This/these associated document(s), procedure(s) and form(s) etc. must be provided to the CAAM, as part of the MBPD.

For some organizations certain sections of the headings defined within chapter of CAD/CAGM may be ‘not applicable’. In this case they should be annotated as such within the MBPD.1. When completing this document, it is important to make a positive statement showing how the organisation complies with any relevant part of the CAD 6805 requirement through the content by indicating in the MBPD reference, if any part is not relevant then it should indicate with N/A and justify why the part is not applicable. Please tick (√) in the box appropriately.
 |  |
|  |  |  |  |  |
|  |  |  |  |  |

| **Content** | **CAD/ CAGM Reference** | **Operator’s MBPD Reference / Remarks** | **CAAM Review****Satisfactory?** |
| --- | --- | --- | --- |
| **COVER PAGE** |
| The official name of the organisation as defined in the CAMO certificate of approval | CAD 6805 – 15.4 |       | **☐** Yes **☐** NoComment:       |
| The approval reference of the CAMO |  |       | **☐** Yes **☐** NoComment:       |
| MBPD title, reference number and issue/revision level |  |       | **☐** Yes **☐** NoComment:       |
| The copy number from the distribution list |  |       | **☐** Yes **☐** NoComment:       |
| **INTRODUCTION** |
| Foreword |  |       | **☐** Yes **☐** NoComment:       |
| Table of content |  |       | **☐** Yes **☐** NoComment:       |
| List of effective pages (including CAAM Approval column) |  |       | **☐** Yes **☐** NoComment:       |
| List of issues / amendments or record of revision |  |       | **☐** Yes **☐** NoComment:       |
| Internal organisation review and concurrence page signed by QM and CAM* Internal approval statement
* Title, name, date and signature (QM and CAM)
 |  |       | **☐** Yes **☐** NoComment:       |
| Revision highlights / Summary of changes |  |       | **☐** Yes **☐** NoComment:       |
| Effective date of the current revisionNote: The effective date is the date that the amendment introduced in this amendment takes effect |  |       | **☐** Yes **☐** NoComment:       |
| Distribution list* MBPD copy number
* Location of copies
* Holders of the copies
* Format of copies (CD-ROM, electronic data processing (EDP), Paper etc.)
 |  |       | **☐** Yes **☐** NoComment:       |
| Abbreviation, terminology and definitions |  |       | **☐** Yes **☐** NoComment:       |
| CAMO information i.e.:* Address of approved location (Head Office)
* Mailing Address(es)
* Telephone number(s)
* Fax number(s) or E-mail address of the Head Office
 |  |       | **☐** Yes **☐** NoComment:       |
| **Part 0 – MBP Scope and management** |
| * 1. Corporate commitment by the accountable manager (when the AM is not the CEO of the organisation then such CEO shall countersign the statement)

The commitment must include statement that the specified aircraft in the MBPD will comply to the MBP and that the MBP will be reviewed and updated as required.  | CAD 6805 – 15.5 a) |       | **☐** Yes **☐** NoComment:       |
| * 1. General information and scope
* Description of the organisation
* Scope of MBP
	+ Aircraft mass and balance control (mandatory)
	+ Issuance of MBR
	+ Issuance of MCGS
	+ Issuance of loading schedule
* List of applicable aircraft covered by the MBP – see note 1
	+ Aircraft type;
	+ Model;
	+ Serial number;
	+ Nationality; and
	+ Registration mark
* Relationship with other organisation
	+ Aircraft weighing AMO
	+ MBR contract
	+ MCGS contract
	+ MBR / MCGS Signatory contract

*Note 1: All of the aircraft managed by the CAMO should be listed here. The list of applicable aircraft details maybe controlled separately and the reference to the list shall be specified in the MBP document. The list shall be approved by the CAMO manager and submitted to CAAM upon each revision.* | CAD 6805 – 15.5 b), f), i), m) |       | **☐** Yes **☐** NoComment:       |
| * 1. Notification procedure to the CAAM regarding changes to the MBP
* Changes
	+ Organisation name and location
	+ MBP scope, staff and technical arrangements,
	+ Changes of the contracted CAMO / AMO.
* Notification before such changes take place
* Conduct risk assessment for any change requiring prior approval and provide it to CAAM upon request
 | CAD 6805 – 15.5 cc) |       | **☐** Yes **☐** NoComment:       |
| * 1. MBPD amendment procedure
* Amendments that need prior approval
* Amendments not requiring prior approval
* Description of how such amendments will be managed
* Person responsible for amending the MBPD.
	+ Normally the Quality Manager is responsible for the monitoring and amendment of the MBPD, including associated procedures manuals, and the submission of proposed amendments to the CAAM
* Sources of proposed amendments within the organisation
* Internal approval process
	+ Verifying and validation of amended procedures before use
	+ CAM and QM to sign the internal approval page, see introduction
* Approval process with CAAM
* Revision acknowledge receipt process
* Definition of minor amendments to the MBPD that can be amended without the prior approval of the CAAM, if applicable and agreed
	+ In case of minor amendment, the Quality Manager may be delegated for indirect approval provided the appropriate procedure within this paragraph of the MBPD is approved by CAAM.
* Summary of documents, including "lower order" documents, constituting the total MBPD, if applicable
* Effective date of the amendment
 | CAD 6805 – 15.5 cc) |       | **☐** Yes **☐** NoComment:       |
| * 1. Policy on periodic review of the MBP
 | CAD 6805 – 15.7 |       | **☐** Yes **☐** NoComment:       |
| * 1. CAMO surveillance and audit of MBP approval under CAMO quality system:
* Compliance to CAD 6805
* Compliance to MBP document
* Audit / Evaluation of contracted / subcontracted activities in relation to MBP.
 | CAD 6802 – 11, CAD 6805 – 4.9  |        | **☐** Yes **☐** NoComment:       |
| * 1. List of second level documents to the MBPD (if applicable)
* e.g. detailed procedures, list of aircraft managed under the MBP approval, etc.
 |  |       | **☐** Yes **☐** NoComment:       |
| * 1. List of third level documents to the MBPD (if applicable)
* e.g. forms, checklist, etc.
 |  |       | **☐** Yes **☐** NoComment:       |
| **PART 1 aircraft weighing** |
| * 1. Aircraft weighing requirement
* Prior to CofA issuance;
* Whenever CAAM requires;
* Whenever required by aircraft TC holder;
* Whenever CAAM, the CAMO or the operator is of the opinion that adequate mass control has not been exercised over an aircraft during the modification or repair embodiment
 | CAD 6805 – 3, 8.4 |       | **☐** Yes **☐** NoComment:       |
| * 1. Aircraft reweighing interval
* Not exceeding 4 years
 | CAD 6805 – 3.4CAGM 6805 - 2 |       | **☐** Yes **☐** NoComment:       |
| * 1. Aircraft weighing AMO
* Capability for type of aircraft
* Layout of aircraft weighing activity location in the hangar
 | CAD 6805 – 4.1 |       | **☐** Yes **☐** NoComment:       |
| * 1. Aircraft weighing supervisors

Note: The weighing supervisors can be linked to MBR signatories in Part 2.4 | CAD 6805 – 4.2 |       | **☐** Yes **☐** NoComment:       |
| * 1. Aircraft weighing equipment and its control
 | CAD 6805 – 15.5 e) |       | **☐** Yes **☐** NoComment:       |
| * 1. Aircraft weighing equipment calibration policy
* Within two years or within a time period defined by the manufacturer of the weighing equipment, whichever is less
* See also CAGM 6805 paragraph 3.2
 | CAD 6805 – 4.6CAGM 6805 – 3.2 |       | **☐** Yes **☐** NoComment:       |
| * 1. Aircraft weighing procedures for different type of aircraft managed
* Aircraft weighing shall be carried out in accordance with instructions and recommendations of the aircraft type certificate holder, supplemental type certificate holder and weighing scale manufacturer as applicable. If such data is not available, the CAMO shall be responsible for developing appropriate weighing instructions for its particular aircraft
* Process of issuance of weighing task card / work order to AMO
 | CAD 6805 – 4.3 |       | **☐** Yes **☐** NoComment:       |
| * 1. Precautions and good practices of aircraft weighing
* See also CAGM 6805 paragraph 3.1.1
 | CAD 6805 – 4.4CAGM 6805 – 3.1.2 |       | **☐** Yes **☐** NoComment:       |
| * 1. Requirement for independent weighing determination
* at least two independent determinations
* margin of consistency of measurements to be established (see CAGM 6805 paragraph 3.3)
 | CAD 6805 – 4.8CAGM 6805 – 3.3 |       | **☐** Yes **☐** NoComment:       |
| **PART 2 – Mass and balance report (MBR)**  |  |  |  |
| * 1. Procedures for issuance / variance and certification of MBR for the aircraft.
* MBR shall be completed and certified by an MBR signatory
* MBR shall present the derivation of the empty mass and the corresponding CG from the most recent aircraft weighing results and related calculations
* MBR is independently checked prior to certifying it
* MBR shall include the current basic equipment list
* See also CAGM 6805 paragraph 4
 | CAD 6805 – 5.1, 5.2, 5.6, 5.7, 5.8CAGM 6805 – 4 |       | **☐** Yes **☐** NoComment:       |
| * 1. Qualification of MBR signatory
* See minimum criteria in paragraph 4.2 of CAGM 6805
 | CAD 6805 – 5.3CAGM 6805 – 4.2 |       | **☐** Yes **☐** NoComment:       |
| * 1. Procedures for approving MBR signatory
 | CAD 6805 – 5.3 |       | **☐** Yes **☐** NoComment:       |
| * 1. List of MBR signatory and their capability according to aircraft type
* Approval numbers to be specified
 | CAD 6805 – 5.3 |       | **☐** Yes **☐** NoComment:       |
| * 1. Procedures to manage certification of MBR outsourced to contracted CAMO
 | CAD 6805 – 5.4 |       | **☐** Yes **☐** NoComment:       |
| * 1. Procedures to manage request for certification of MBR received from other CAMO
 | CAD 6805 – 5.4 |       | **☐** Yes **☐** NoComment:       |
| * 1. MBR record
* MBR shall be made available to CAAM. Such records shall be retained and produced to CAAM at any material time
* When the aircraft is again weighed, the previous MBR shall be retained with the aircraft records for at least 6 months
 | CAD 6805 – 5.9, 5.10 |       | **☐** Yes **☐** NoComment:       |
| **PART 3 mass and centre of gravity schedule (MCGS)** |
| * 1. Procedures for issuance / variance and certification of MCGS for the aircraft.
* MCGS shall be completed and certified by an MCGS signatory
* MCGS shall present the current empty mass, the variable loads and the disposable loads together with their respective CGs in order to determine the operating mass and CG for which the operator intends to use the aircraft for
* MCGS is independently checked prior to certifying it
* identified by the aircraft designation (make and model), serial number, nationality and registration marks, the date of issue/revision and a statement indicating that the schedule supersedes all earlier issues.
* MCGS kept in the aircraft
* Statement for pilot-in-command responsibility
* See also CAGM 6805 paragraph 5
 | CAD 6805 – 6.1, 6.2, 6.3, 6.8, 6.12CAGM 6805 – 5 |       | **☐** Yes **☐** NoComment:       |
| * 1. Qualification of MCGS signatory
* See minimum criteria in paragraph 5.2 of CAGM 6805
 | CAD 6805 – 6.5CAGM 6805 – 5.2 |       | **☐** Yes **☐** NoComment:       |
| * 1. Procedures for approving MCGS signatory
 | CAD 6805 – 6.5 |       | **☐** Yes **☐** NoComment:       |
| * 1. List of MCGS signatory and their capability according to aircraft type
* Approval numbers to be specified
 | CAD 6805 – 6.5 |       | **☐** Yes **☐** NoComment:       |
| * 1. Procedures to manage certification of MCGS outsourced to contracted CAMO
 | CAD 6805 – 6.6 |       | **☐** Yes **☐** NoComment:       |
| * 1. Procedures to manage request for certification of MCGS received from other CAMO
 | CAD 6805 – 6.6 |       | **☐** Yes **☐** NoComment:       |
| * 1. MCGS record
* MCGS shall be made available to CAAM. Such records shall be retained and produced to CAAM at any material time
* When MCGS, the previous MCGS shall be retained with the aircraft records for at least 6 months
 | CAD 6805 – 6.9, 6.10 |       | **☐** Yes **☐** NoComment:       |
| **PART 4 loading schedule** |
| * 1. The loading schedule used for the aircraft, and instruction for its use
 | CAD 6805 – 7.2, 7.3, 7.4, 7.10, 7.12 |       | **☐** Yes **☐** NoComment:       |
| * 1. Operational procedures to ensure –
* even distribution of passengers in the cabin
* to account significant CG travel during flight caused by passenger/crew movement
* to account significant CG travel during flight caused by fuel consumption/transfer
 | CAD 6805 – 7.1CAGM 6805 – 6.1 |       | **☐** Yes **☐** NoComment:       |
| * 1. The organisation that prepares the loading schedule
 | CAD 6805 – 7.5CAGM 6805 – 6.3 |       | **☐** Yes **☐** NoComment:       |
| * 1. Procedures for preparing or verifying the aircraft loading schedule, as applicable
 | CAD 6805 – 7.5, 7.6, 7.7CAGM 6805 – 6.2 |       | **☐** Yes **☐** NoComment:       |
| * 1. Competency of the personnel preparing and certifying the loading schedule (if applicable)
 | CAD 6805 – 7.5, 7.6 CAGM 6805 – 6.4 |       | **☐** Yes **☐** NoComment:       |
| * 1. Competency of the personnel generating loading schedule from an approved software (if applicable)
 | CAD 6805 – 7.8  |       | **☐** Yes **☐** NoComment:       |
| * 1. The physical loading system of the aircraft
 | CAD 6805 – 7.11 |       | **☐** Yes **☐** NoComment:       |
| **PART 5 mass and balance record system** |
| * 1. Procedures to update and maintain a current and continuous record of the mass and CG of the operated aircraft including updating of MBR and MCGS
 | CAD 6805 – 8  |       | **☐** Yes **☐** NoComment:       |
| **PART 6 On-board mass and balance system** |
| * 1. On-Board mass and balance system equipment and software certification status
 | CAD 6805 – 9, 15 u)  |       | **☐** Yes **☐** NoComment:       |
| * 1. Procedure for on-board mass and balance system by taking into account operational considerations.
* See CAGM 6805 paragraph 7.1.5 for operational considerations
 | CAD 6805 – 9, 15 w)CAGM 6805 – 7 |       | **☐** Yes **☐** NoComment:       |
| * 1. Procedures to calibrate on-board mass and balance system equipment periodically
 | CAD 6805 – 15.5 v)CAGM 6805 – 7.1.3 |       | **☐** Yes **☐** NoComment:       |
| * 1. Training for affected personnel on on-board mass and balance system
* The training should cover on proper usage of on-board mass and balance system and, elements in CAD 6805 paragraph 9 and CAGM 6805 paragraph 7
 | CAD 6805 – 9, 15.5 w)CAGM 6805 – 7 |       | **☐** Yes **☐** NoComment:       |
| **PART 7 operational mass values** |
| * 1. Crew mass including hand-baggage
 | CAD 6805 – 10.1CAGM 6805 – 8.1.2 |       | **☐** Yes **☐** NoComment:       |
| * 1. Procedure when carrying crew whose masses, including hand baggage, are expected to significantly deviate from the standard crew mass
 | CAD 6805 – 10.1CAGM 6805 – 8.1.4 |       | **☐** Yes **☐** NoComment:       |
| * 1. Passenger mass including hand-baggage
 | CAD 6805 – 11.1CAGM 6805 – 9.1 |       | **☐** Yes **☐** NoComment:       |
| * 1. Procedure when carrying a significant number of passengers whose masses, including hand baggage, are expected to significantly deviate from the standard passenger mass
 | CAD 6805 – 11.1CAGM 6805 – 9.1.5 |       | **☐** Yes **☐** NoComment:       |
| * 1. Baggage / cargo mass (actual mass)
 | CAD 6805 – 12.1 |       | **☐** Yes **☐** NoComment:       |
| * 1. Mass of fuel / Fuel Density values
 | CAD 6805 – 13CAGM 6805 – 10 |       | **☐** Yes **☐** NoComment:       |
| **PART 8 passenger weighing survey plan and the statistical analysis method**  |
| * 1. Procedures for establishing revised standard mass values for passengers (survey plan and the statistical analysis method)
 | CAD 6805 – 11.1CAGM 6805 – 9.2 |       | **☐** Yes **☐** NoComment:       |
| **PART 9 Operator’s mass and balance control reporting system** |
| * 1. Policies & procedures with respect to operator’s mass and balance control reporting
 | CAD 6805 – 14 |       | **☐** Yes **☐** NoComment:       |
| **PART 10 Computerised mass and balance control system** |
| * 1. Procedures for verification and validation of the MBP information generated from computerized system
* Procedures to verify the accuracy of the output data at intervals not exceeding 6 months
* Software updates
* Operating Appropriately
 | CAD 6805 – 15.6 |       | **☐** Yes **☐** NoComment:       |

|  |  |
| --- | --- |
| **SECTION 3 – CAMO DECLARATION OF COMPLIANCE**  |  |
|  |  |  |  |  |
| 1. I declare that the information provided in this form is true and correct.
2. I further declare that the declaration(s) provided in Section 2 of this form complies to mass and balance requirements under Malaysian Civil Aviation Regulations 2016 and CAAM CAD 6805.
3. I fully understand that in order for CAAM to approve this submission, on-site visit(s) / audit(s) may be required of which will incurred cost under Civil Aviation (Fees and Charges) Regulations 2016. All related costs shall be borne by the organisation.
 |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | Name of CAMO Manager |  | Signature |  | Date |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **SECTION 4 – CAAM OFFICIAL USE ONLY** |  |
|  |  |  |  |  |
|  | Accepted by: |  |  |  |
|  |  |  |  |  |
|  | Airworthiness Engineer / Inspector’s name | **:** |  | Signature | **:** |  |  |
|  |  |  |  |  |  |  |  |
|  | Official Stamp | **:** |  | Date | **:** |  |  |
|  |  |  |  |  |

|  |
| --- |
|  **FORM INSTRUCTIONS FOR USE** |
| **SECTION 1 – CAMO SECTION** |
|  | Tick (√) in appropriate box. |
|  | Fill up the required information |
| **SECTION 2 : MBPD CHECKLIST AND CAMO DECLARATION** |
|  | Fill up the operator’s MBPD reference/remark in accordance with column. Indicate brief explanation on compliance status |  |
| **SECTION 3 – CAMO DECLARATION** |
|  | Fill up date, stamp of company position and put signature of CAMO Manager. |  |
| **SECTION 4 – CAAM OFFICIAL USE ONLY** |
|  | To be filled up by CAAM |