CIVIL AVIATION GUIDANCE MATERIAL – 6804

AIRCRAFT MAINTENANCE PROGRAMME

CIVIL AVIATION AUTHORITY OF MALAYSIA

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Introduction

This Civil Aviation Guidance Material 6804 (CAGM – 6804) is issued by the Civil Aviation Authority of Malaysia (CAAM) to provide guidance for the application of Aircraft Maintenance Programme approval, pursuant to Civil Aviation Directives 6 Part 1 – Commercial Air Transport (CAD 6 Part 1 – CAT) and Civil Aviation Directives 6 Part 2 – General Aviation (CAD 6 Part 2 – GA).

Organisations may use these guidelines to demonstrate compliance with the provisions of the relevant CAD's issued. Notwithstanding the Regulation 204 and Regulation 205 of the Malaysian Civil Aviation Regulations 2016 (MCAR 2016), when the CAGMs issued by the CAAM are used, the related requirements of the CAD's are considered as met, and further demonstration of compliance may not be required.

(Captain Chester Voo Chee Soon)
Chief Executive Officer
Civil Aviation Authority of Malaysia

Civil Aviation Guidance Material components and Editorial practices.

This Civil Aviation Guidance Material is made up of the following components and are defined as follows:

Standards: Usually preceded by words such as “shall” or “must”, are any specification for physical characteristics, configuration, performance, personnel or procedure, where uniform application is necessary for the safety or regularity of air navigation and to which Operators must conform. In the event of impossibility of compliance, notification to the CAAM is compulsory.

Recommended Practices: Usually preceded by the words such as “should” or “may”, are any specification for physical characteristics, configuration, performance, personnel or procedure, where the uniform application is desirable in the interest of safety, regularity or efficiency of air navigation, and to which Operators will endeavour to conform.

Appendices: Material grouped separately for convenience but forms part of the Standards and Recommended Practices stipulated by the CAAM.

Definitions: Terms used in the Standards and Recommended Practices which are not self-explanatory in that they do not have accepted dictionary meanings. A definition does not have an independent status but is an essential part of each Standard and Recommended Practice in which the term is used, since a change in the meaning of the term would affect the specification.

Tables and Figures: These add to or illustrate a Standard or Recommended Practice and which are referred to therein, form part of the associated Standard or Recommended Practice and have the same status.

Notes: Included in the text, where appropriate, Notes give factual information or references bearing on the Standards or Recommended Practices in question but not constituting part of the Standards or Recommended Practices;

Attachments: Material supplementary to the Standards and Recommended Practices or included as a guide to their application.

It is to be noted that some Standards in this Civil Aviation Guidance Material incorporates, by reference, other specifications having the status of Recommended Practices. In such cases, the text of the Recommended Practice becomes part of the Standard.
The units of measurement used in this document are in accordance with the International System of Units (SI) as specified in CAD 5. Where CAD 5 permits the use of non-SI alternative units, these are shown in parentheses following the basic units. Where two sets of units are quoted it must not be assumed that the pairs of values are equal and interchangeable. It may, however, be inferred that an equivalent level of safety is achieved when either set of units is used exclusively.

Any reference to a portion of this document, which is identified by a number and/or title, includes all subdivisions of that portion.

Throughout this Civil Aviation Guidance Material, the use of the male gender should be understood to include male and female persons.

Record of Revisions

Revisions to this CAGM shall be made by authorised personnel only. After inserting the revision, enter the required data in the revision sheet below. The 'Initials' has to be signed off by the personnel responsible for the change.

Rev No.	Revision Date	Revision Details	Initials

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Table of Contents

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1 Continuing Airworthiness (CAD 6801 3)

1.1 CAD 6801 3.2 – Aircraft Maintenance Programme (AMP)

1.1.1 The term “maintenance programme” is intended to include scheduled maintenance tasks, the associated procedures and standard maintenance practices. The term “maintenance schedule” is intended to embrace the scheduled maintenance tasks alone.

1.1.2 The aircraft should only be maintained to one approved maintenance programme at a given point in time. Where a Continuing Airworthiness Management Organization (CAMO) wishes to change from one approved programme to other, a transfer check or inspection may need to be performed in order to implement the change.

1.1.3 The maintenance programme details should be reviewed at least annually. As a minimum, revisions of documents affecting the programme basis need to be considered by the CAMO for inclusion in the maintenance programme during the annual review. Applicable mandatory requirements for compliance to paragraph 3.4 of CAD 6801 should be incorporated into the CAMO maintenance programme as soon as possible.

1.1.4 The aircraft maintenance programme should contain a preface which will define the maintenance programme contents, the inspection standards to be applied, permitted variations to task frequencies and, where applicable, any procedure to manage the evolution of established check or inspection intervals.

1.1.5 Repetitive maintenance tasks derived from modifications and repairs should be incorporated into the approved maintenance programme.

1.1.6 Appendix 1 to CAGM 6804 provides detailed information on the contents of an approved aircraft maintenance programme.

1.1.7 Appendix 3 to CAGM 6804 provides a sample of the approval page that should be inserted in the maintenance programme approval page as part of the AMP document.

1.2 CAD 6801 3.2.1 – Applicability of AMP to several aircraft

1.2.1 A maintenance programme may indicate that it applies to several aircraft registrations as long as the maintenance programme clearly identifies the effectivity of the tasks and procedures that are not applicable to all of the listed registrations.

1.3 CAD 6801 3.2.3 – AMP basis

1.3.1 An aircraft maintenance programme should normally be based upon the maintenance review board (MRB) report where applicable, the maintenance planning document (MPD), the relevant chapters of the maintenance manual or any other maintenance data containing information on scheduling. Furthermore, an aircraft maintenance

programme should also take into account any maintenance data containing information on scheduling for components.

1.3.2 Instructions issued by CAAM can encompass all types of instructions from a specific task for a particular aircraft to complete recommended maintenance schedules for certain aircraft types that can be used by the operator directly. These instructions may be issued by CAAM in the following cases:

a) in the absence of specific recommendations of the Type Certificate Holder.

b) to provide alternate instructions to those described in the subparagraph a) above, with the objective of providing flexibility to the operator.

1.3.3 Where an aircraft type has been subjected to the MRB report process, a CAMO should normally develop the initial aircraft maintenance programme based upon the MRB report.

1.3.4 Where an aircraft is maintained in accordance with an aircraft maintenance programme based upon the MRB report process, any associated programme for the continuous surveillance of the reliability, or health monitoring of the aircraft should be considered as part of the aircraft maintenance programme.

1.3.5 Aircraft maintenance programmes for aircraft types subjected to the MRB report process should contain identification cross reference to the MRB report tasks such that it is always possible to relate such tasks to the current approved aircraft maintenance programme. This does not prevent the approved aircraft maintenance programme from being developed in the light of service experience to beyond the MRB report recommendations but will show the relationship to such recommendations.

1.3.6 Some approved aircraft maintenance programmes, not developed from the MRB process, utilise reliability programmes. Such reliability programmes should be considered as a part of the approved maintenance programme. Appendix 2 to CAGM 6804 detail the contents of the Reliability Programme.

1.3.7 Alternate and/or additional instructions to those defined in paragraphs 3.2.3 of CAD 6801 proposed by the CAMO, may include but are not limited to the following:

a) Escalation of the interval for certain tasks based on reliability data or other supporting information. Appendix 1 to CAGM 6804 recommends that the maintenance programme contains the corresponding escalation procedures. The escalation of these tasks including Airworthiness Limitations (ALIs) is directly approved by the CAAM.

b) Escalation of the interval for certain tasks based on reliability data or other supporting information. Appendix 1 to CAGM 6804 recommends that the maintenance programme contains the corresponding escalation procedures. The escalation of these tasks including Airworthiness Limitations (ALIs) is directly approved by the CAAM.

c) More restrictive intervals than those proposed by the TC holder as a result of the reliability data or because of a more stringent operational environment.

d) Additional tasks at the discretion of the operator.

1.4 CAD 6801 3.2.5 – Reliability Programme

1.4.1 Reliability programmes should be developed for aircraft maintenance programmes based upon maintenance steering group (MSG) logic or those that include condition monitored components or that do not contain overhaul time periods for all significant system components.

1.4.2 Reliability programmes need not be developed for aircraft not considered as large aircraft as defined in paragraph 1.4.1 of CAD 6801 or that contain overhaul time periods for all significant aircraft system components.

1.4.3 The purpose of a reliability programme is to ensure that the aircraft maintenance programme tasks are effective and their periodicity is adequate.

1.4.4 The reliability programme may result in the escalation or deletion of a maintenance task, as well as the de-escalation or addition of a maintenance task.

1.4.5 A reliability programme provides an appropriate means of monitoring the effectiveness of the maintenance programme.

1.4.6 Appendix 2 to CAGM 6804 gives further guidance on the reliability programme.

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2 Appendices

2.1 Appendix 1 – Content of the maintenance programme

1 General requirements of the maintenance programme should contain the following basic information.

a) The type/model and registration number of the aircraft, engines and, where applicable, auxiliary power units and propellers.

b) The name and address of the operator, and CAMO managing the aircraft airworthiness.

c) The reference, the date of issue and issue number of the approved maintenance programme.

d) A statement signed by the CAMO managing the aircraft airworthiness to the effect that the specified aircraft will be maintained to the programme and that the programme will be reviewed and updated as required.

e) Contents/list of effective pages and their revision status of the document.

f) Check periods, which reflect the anticipated utilisation of the aircraft. Such utilisation should be stated and include a tolerance of not more than 25%. Where utilisation cannot be anticipated, calendar time limits should also be included.

g) Procedures for the escalation of established check periods, where applicable and acceptable to the CAAM.

h) Provision to record the date and reference of approved amendments incorporated in the maintenance programme.

i) Details of pre-flight maintenance tasks that are accomplished by maintenance staff.

j) The tasks and the periods (intervals/frequencies) at which each part of the aircraft, engines, APU's, propellers, components, accessories, equipment, instruments, electrical and radio apparatus, together with the associated systems and installations should be inspected. This should include the type and degree of inspection required.

k) For aircraft recording system:

1) For each installed CVR/FDR, the programme shall include the arrangements for data acquisition and verification of recorded data should be established with a recognised playback facility.

2) The type acceptance standards should be applied with regard to periods of testing and recorded data verification for each installed CVR/FDR.

3) Records should be maintained for a minimum period of 24 months for all testing undertaken.

4) Instructions from equipment manufacturers and continued airworthiness organisations shall be integrated as scheduled requirements of the Maintenance Programme.

l) The periods at which components should be checked, cleaned, lubricated, replenished, adjusted and tested.

m) If applicable details of ageing aircraft system requirements together with any specified sampling programmes.

n) If applicable details of specific structural maintenance programmes where issued by the type certificate holder including but not limited to:

1) (supplemental) structural inspection programmes ((S)SIPs or (supplemental) structural inspection documents (S)SIDs) issued by the design approval holder.

2) Corrosion prevention and control programmes (CPCPs) taking into account the baseline CPCP issued by the design approval holder.

3) For large aeroplanes, maintenance data arising from compliance with the ageing structure requirements as recommended by the OEM.

o) If applicable, details of Critical Design Configuration Control Limitations together with appropriate procedures.

p) If applicable a statement of the limit of validity in terms of total flight cycles/calendar date/flight hours for the structural programme in paragraph m) above.

q) The periods at which overhauls and/or replacements by new or overhauled components should be made.

r) A cross-reference to other documents approved by the State of Design which contain the details of maintenance tasks related to mandatory life limitations, Certification Maintenance Requirements (CMR's) and ADs.

Note: To prevent inadvertent variations to such tasks or intervals these items should not be included in the main portion of the maintenance programme document, or any planning control system, without specific identification of their mandatory status.

s) Details of, or cross-reference to, any required reliability programme or statistical methods of continuous surveillance.

t) A statement that practices and procedures to satisfy the programme should be to the standards specified in the TC holder's Maintenance Instructions. In the case of approved practices and procedures that differ, the statement should refer to them.

u) Each maintenance task quoted should be defined in a definition section of the programme.

2 Programme basis

2.1 Aircraft maintenance programme should normally be based upon the MRB report, where applicable, and the TC holder's maintenance planning document or Chapter 5 of the maintenance manual, (i.e. the manufacturer's recommended maintenance programme). The structure and format of these maintenance recommendations may be re-written by the owner or the CAMO to better suit the operation and control of the particular maintenance programme.

2.2 For a newly type-certificated aircraft where no previously approved maintenance programme exists, it will be necessary for the CAMO to comprehensively appraise the manufacturer's recommendations (and the MRB report where applicable), together with other airworthiness information, in order to produce a realistic programme for approval.

2.3 For existing aircraft types, it is permissible for the CAMO to make comparisons with maintenance programmes previously approved. It should not be assumed that a programme approved for one CAMO would automatically be approved for another.

Evaluation should be made of the aircraft/fleet utilisation, landing rate, equipment fit and, in particular, the experience of the CAMO when assessing an existing programme.

When CAAM is not satisfied that the proposed maintenance programme can be used as is, CAAM shall request appropriate changes such as additional maintenance tasks or de-escalation of check frequencies as necessary.

2.4 Critical Design Configuration Control Limitations (CDCCL)

If CDCCL have been identified for the aircraft type by the TC/STC holder, maintenance instructions should be developed. CDCCL's are characterised by features in an aircraft installation or component that should be retained during modification, change, repair, or scheduled maintenance for the operational life of the aircraft or applicable component or part.

3 Amendments

3.1 Amendments (revisions) to the approved maintenance programme should be made by the CAMO, to reflect changes in the TC holder's recommendations, modifications, service experience, or as required by the CAAM.

3.2 Amendments are mainly categorized into 3 types:

a) 'A' - Mandatory amendments promulgated by the CAAM.

b) 'B' - Amendments requested by the Operator and approved by the CAAM.

c) ‘C’ - Amendments made and approved by the CAMO/CAO internal department/unit that managing the AMP by using the approved procedures by the CAMO/CAO's Quality Manager for minor editorial changes/correction of typing errors/inclusion of additional task cards / changes to part numbers. However, this amendment shall not result in an increase in an aircraft component life / cycle or reduction in the degree/frequency of previously approved routine maintenance.

4 Permitted variations to maintenance periods

4.1 The CAMO may only vary the periods prescribed by the programme with the approval of the CAAM or through a procedure developed in the maintenance programme and approved by the CAAM.

5 Periodic review of maintenance programme contents.

5.1 The approved maintenance programmes should be subject to periodic review to ensure that they reflect current TC holder’s recommendations, revisions to the MRB report if applicable, mandatory requirements and the maintenance needs of the aircraft.

5.2 CAMO should review the detailed requirements at least annually for continued validity in the light of operating experience.

2.2 Appendix 2 – Reliability Programmes

1 Applicability

1.1 A reliability programme be developed in the following cases:

a) the aircraft maintenance programme is based upon MSG-3 logic.

b) the aircraft maintenance programme includes condition monitored components;

c) the aircraft maintenance programme does not contain overhaul time periods for all significant system components;

d) when specified by the Manufacturer's maintenance planning document or MRB.

1.2 A reliability programme need not be developed in the following cases:

a) the maintenance programme is based upon the MSG-1 or 2 logic but only contains hard time or on condition items;

b) the aircraft maintenance programme provides overhaul time periods for all significant system components.

Note: For the purpose of this paragraph, a significant system is a system the failure of which could hazard the aircraft safety

1.3 Notwithstanding paragraphs 2.2.1.1 and 2.2.1.2 above, a CAMO may however, develop its own reliability monitoring programme when it may be deemed beneficial from a maintenance planning point of view.

2 Applicability for CAMO/operator of small fleets of aircraft.

2.1 For the purpose of this paragraph, a small fleet of aircraft is a fleet of less than 6 aircraft of the same type.

2.2 The requirement for a reliability programme is irrespective of the CAMO fleet size

2.3 Complex reliability programmes could be inappropriate for a small fleet. It is recommended that such CAMOs tailor their reliability programmes to suit the size and complexity of operation

2.4 One difficulty with a small fleet of aircraft consists in the amount of available data which can be processed: when this amount is too low, the calculation of alert level is very coarse. Therefore 'alert levels' should be used carefully.

2.5 A CAMO of a small fleet of aircraft, when establishing a reliability programme, should consider the following: The programme should focus on areas where a sufficient amount of data is likely to be processed.

a) The programme should focus on areas where a sufficient amount of data is likely to be processed.

b) When the amount of available data is very limited, the CAMO engineering judgement is then a vital element. In the following examples, careful engineering analysis should be exercised before taking decisions

1) A '0' rate in the statistical calculation may possibly simply reveal that enough statistical data is missing, rather that there is no potential problem.

2) When alert levels are used, a single event may have the figures reach the alert level. Engineering judgement is necessary so as to discriminate an artefact from an actual need for a corrective action.

In making his engineering judgement, a CAMO is encouraged to establish contact and make comparisons with other CAMOs of the same aircraft, where possible and relevant. Making comparison with data provided by the manufacturer may also be possible.

2.6 In order to obtain accurate reliability data, it should be recommended to pool data and analysis with one or more other CAMO(s). Paragraph 2.2.6 of this CAGM specifies under which conditions it is acceptable that CAMOs share reliability data.

2.7 Notwithstanding the above there are cases where the CAMO will be unable to pool data with other CAMO, e.g. at the introduction to service of a new type. In that case the CAAM should impose additional restrictions on the MRB/MPD tasks intervals (e.g. no variations or only minor evolution are possible, and with the CAAM approval).

3 Engineering judgement

3.1 Engineering judgement is itself inherent to reliability programmes as no interpretation of data is possible without judgement. In approving the CAMO maintenance and reliability programmes, CAAM expects the organisation which runs the programme (it may be CAMO, or an Part-145 organisation under contract) hires sufficiently qualified personnel with appropriate engineering experience and understanding of reliability concept. (see paragraph 4.1 of CAGM 6802).

3.2 It follows that failure to provide appropriately qualified personnel for the reliability programme may lead the CAAM to reject the approval of the reliability programme and therefore the aircraft maintenance programme.

4 Contracted maintenance

4.1 Whereas paragraph 3.2 of CAD 6801 specifies that, the aircraft maintenance programme which includes the associated reliability programme, should be managed and presented by the CAMO to the CAAM, the CAMO may subcontract certain functions to the maintenance organisation under contract, provided this organisation proves to have the appropriate expertise

4.2 These functions are:

a) Developing the aircraft maintenance and reliability programmes,

b) Performing the collection and analysis of the reliability data,

c) Providing reliability reports, and

d) Proposing corrective actions to the CAMO.

4.3 Notwithstanding the above decision to implement a corrective action (or the decision to request from the CAAM the approval to implement a corrective action) remains the CAMO prerogative and responsibility. In relation to paragraph 2.2.4.2 d) above, a decision not to implement a corrective action should be justified and documented.

4.4 The arrangement between the CAMO and the maintenance organisation should be specified in the maintenance contract (see Appendix 14.3 of CAGM 6802) and the relevant CAME, and maintenance organisation procedures.

5 Reliability programme development

In preparing the programme details, account should be taken of this paragraph. All associated procedures should be clearly defined.

5.1 Objectives

a) A statement should be included summarising as precisely as possible the prime objectives of the programme. To the minimum it should include the following:

1) to recognise the need for corrective action,

2) to establish what corrective action is needed and,

3) to determine the effectiveness of that action.

b) The extent of the objectives should be directly related to the scope of the programme. Its scope could vary from a component defect monitoring system for a small CAMO, to an integrated maintenance management programme for a big CAMO. The manufacturer’s maintenance planning documents may give guidance on the objectives and should be consulted in every case.

c) In case of a MSG-3 based maintenance programme, the reliability programme should provide a monitor that all MSG-3 related tasks from the maintenance programme are effective and their periodicity is adequate.

5.2 Identification of items.

The items controlled by the programme should be stated, e.g. by ATA Chapters. Where some items (e.g. aircraft structure, engines, APU) are controlled by separate programmes, the associated procedures (e.g. individual sampling or life development programmes, constructor’s structure sampling programmes) should be cross referenced in the programme.

5.3 Terms and definitions.

The significant terms and definitions applicable to the Programme should be clearly identified. Terms are already defined in MSG-3, Part-145 and Part-M.

5.4 Information sources and collection.

a) Sources of information should be listed and procedures for the transmission of information from the sources, together with the procedure for collecting and receiving it, should be set out in detail in the CAME or MOE as appropriate.

b) The type of information to be collected should be related to the objectives of the Programme and should be such that it enables both an overall broad based assessment of the information to be made and also allow for assessments to be made as to whether any reaction, both to trends and to individual events, is necessary. The following are examples of the normal prime sources:

1) Pilots Reports.

2) Technical Logs.

3) Aircraft Maintenance Access Terminal / On-board Maintenance System readouts.

4) Maintenance Worksheets.

5) Workshop Reports.

6) Reports on Functional Checks.

7) Reports on Special Inspections.

8) Stores Issues/Reports.

9) Air Safety Reports.

10) Reports on Technical Delays and Incidents.

11) Other sources: EDTO, RVSM, CAT II/III.

c) In addition to the normal prime sources of information, due account should be taken of continuing airworthiness and safety information promulgated under Part-21.

5.5 Display of information.

Collected information may be displayed graphically or in a tabular format or a combination of both. The rules governing any separation or discarding of information prior to incorporation into these formats should be stated. The format should be such

that the identification of trends, specific highlights and related events would be readily apparent.

a) The above display of information should include provisions for ‘nil returns’ to aid the examination of the total information.

b) Where ‘standards’ or ‘alert levels’ are included in the programme, the display of information should be oriented accordingly.

5.6 Examination analysis and interpretation of the information

The method employed for examining, analysing and interpreting the programme information should be explained.

a) Examination.

Methods of examination of information may be varied according to the content and quantity of information of individual programmes. These can range from examination of the initial indication of performance variations to formalised detailed procedures at specific periods, and the methods should be fully described in the programme documentation.

b) Analysis and Interpretation.

The procedures for analysis and interpretation of information should be such as to enable the performance of the items controlled by the programme to be measured; they should also facilitate recognition, diagnosis and recording of significant problems. The whole process should be such as to enable a critical assessment to be made of the effectiveness of the programme as a total activity. Such a process may involve:

1) Comparisons of operational reliability with established or allocated standards (in the initial period these could be obtained from in-service experience of similar equipment of aircraft types).

2) Analysis and interpretation of trends.

3) The evaluation of repetitive defects.

4) Confidence testing of expected and achieved results.

5) Studies of life-bands and survival characteristics.

6) Reliability predictions.

7) Other methods of assessment.

c) The range and depth of engineering analysis and interpretation should be related to the particular programme and to the facilities available. The following, at least, should be taken into account:

1) Flight defects and reductions in operational reliability.

2) Defects occurring on-line and at main base.

3) Deterioration observed during routine maintenance.

4) Workshop and overhaul facility findings.

5) Modification evaluations.

6) Sampling programmes.

7) The adequacy of maintenance equipment and publications.

8) The effectiveness of maintenance procedures.

9) Staff training.

10) Service bulletins, technical instructions, etc.

d) Where the CAMO relies upon contracted maintenance and/or overhaul facilities as an information input to the programme, the arrangements for availability and continuity of such information should be established and details should be included.

5.7 Corrective Actions.

a) The procedures and time scales both for implementing corrective actions and for monitoring the effects of corrective actions should be fully described. Corrective actions shall correct any reduction in reliability revealed by the programme and could take the form of:

1) Changes to maintenance, operational procedures or techniques.

2) Maintenance changes involving inspection frequency and content, function checks, overhaul requirements and time limits, which will require amendment of the scheduled maintenance periods or tasks in the approved maintenance programme. This may include escalation or de-escalation of tasks, addition, modification or deletion of tasks.

3) Amendments to approved manuals (e.g. maintenance manual, crew manual).

4) Initiation of modifications.

5) Special inspections of fleet campaigns.

6) Spares provisioning.

7) Staff training.

8) Manpower and equipment planning.

Note: Some of the above corrective actions may need the CAAM's approval before implementation.

b) The procedures for effecting changes to the maintenance programme should be described, and the associated documentation should include a planned completion date for each corrective action, where applicable.

5.8 Organisational Responsibilities.

The organisational structure and the department responsible for the administration of the programme should be stated. The chains of responsibility for individuals and departments (Engineering, Production, Quality, Operations etc.) in respect of the programme, together with the information and functions of any programme control committees (reliability group), should be defined. Participation of the CAAM should be stated. This information should be contained in the CAME as appropriate.

5.9 Presentation of information to the CAAM.

The following information should be submitted to the CAAM for approval as part of the reliability programme:

a) The format and content of routine reports.

b) The time scales for the production of reports together with their distribution.

c) The format and content of reports supporting request for increases in periods between maintenance (escalation) and for amendments to the approved maintenance programme. These reports should contain sufficient detailed information to enable the CAAM to make its own evaluation where necessary.

5.10 Evaluation and review.

Each programme should describe the procedures and individual responsibilities in respect of continuous monitoring of the effectiveness of the programme as a whole. The time periods and the procedures for both routine and non-routine reviews of maintenance control should be detailed (progressive, monthly, quarterly, or annual reviews, procedures following reliability 'standards' or 'alert levels' being exceeded, etc.).

a) Each Programme should contain procedures for monitoring and, as necessary, revising the reliability 'standards' or 'alert levels'. The organisational responsibilities for monitoring and revising the 'standards' should be specified together with associated time scales.

b) Although not exclusive, the following list gives guidance on the criteria to be taken into account during the review.

1) Utilisation (high/low/seasonal).

2) Fleet commonality.

3) Alert Level adjustment criteria.

4) Adequacy of data.

5) Reliability procedure audit.

6) Staff training.

7) Operational and maintenance procedures.

5.11 Approval of maintenance programme amendment

The CAAM may authorise the CAMO to implement in the maintenance programme changes arising from the reliability programme results prior to their formal approval by the authority when satisfied that;

a) the Reliability Programme monitors the content of the Maintenance Programme in a comprehensive manner, and

b) the procedures associated with the functioning of the 'Reliability Group' provide the assurance that appropriate control is exercised by the CAMO over the internal validation of such changes.

6 Pooling Arrangements.

6.1 In some cases, in order that sufficient data may be analysed it may be desirable to 'pool' data: i.e. collate data from a number of CAMOs of the same type of aircraft. For the analysis to be valid, the aircraft concerned, mode of operation, and maintenance procedures applied should be substantially the same: variations in utilisation between two CAMOs may, more than anything, fundamentally corrupt the analysis. Although not exhaustive, the following list gives guidance on the primary factors which need to be taken into account.

a) Certification factors, such as: aircraft TCDS compliance (variant)/modification status, including SB compliance.

b) Operational Factors, such as: operational environment/utilisation, e.g. low/high/seasonal, etc./respective fleet size operating rules applicable (e.g. EDTO/RVSM/Low Visibility Operation etc.)/operating procedures/MEL and MEL utilisation.

c) Maintenance factors, such as: aircraft age maintenance procedures; maintenance standards applicable; lubrication procedures and programme; MPD revision or escalation applied or maintenance programme applicable

6.2 Although it may not be necessary for all of the foregoing to be completely common, it is necessary for a substantial amount of commonality to prevail. Decision should be taken by the CAAM on a case by case basis.

6.3 In case of a short term lease agreement (less than 6 month) more flexibility against the paragraph 2.2.6.1 criteria may be granted by the CAAM, so as to allow the CAMO to operate the aircraft under the same programme during the lease agreement effectivity.

6.4 Changes by any one of the CAMO to the above, requires assessment in order that the pooling benefits can be maintained. Where a CAMO wishes to pool data in this way, the approval of the CAAM should be sought prior to any formal agreement being signed between CAMOs.

6.5 Whereas this paragraph 2.2.6 is intended to address the pooling of data directly between CAMOs, it is acceptable that the CAMO participates in a reliability programme managed by the aircraft manufacturer, when the CAAM is satisfied that the manufacturer manages a reliability programme which complies with the intent of this paragraph.

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2.3 Appendix 3 – Maintenance Programme Approval page

Civil Aviation Authority of Malaysia

AIRWORTHINESS DIVISION

MAINTENANCE PROGRAMME APPROVAL

Programme Reference	:	[AMP Reference]				
Issue No.	:	[Issue No]	Rev No.	:	[Rev. No.]	Date : [Date]
Aircraft Applicability	:	Click or tap here to enter text.				
Owner/ Operator	:	Click or tap here to enter text.				
CAMO	:	Click or tap here to enter text.				
For the purpose of	:	Click or tap here to enter text.				

Approved by	:	
Date	:	

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