

APPROVAL OF MAINTENANCE SCHEDULE OR PROGRAMME

1. OBJECTIVE

This notice provides requirements for developing and applying approval of maintenance program/Schedule (as required) by an operator/applicant subject to Myanmar Aircraft Rules and Myanmar Civil Aviation Requirements Part M.

2. GENERAL

A Maintenance Schedule contains details of what is to be maintained on an aircraft and how often. A Maintenance Programme is Maintenance Schedule together with a host of procedures that are designed to continually review its applicability and effectiveness for the aircraft it is approved for.

- 2.1 The aircraft should only be maintained to one approved maintenance programme at a given point in time. Where an Owner or Operator wishes to change from one approved programme to another, a bridging program or inspection may need to be performed in order to implement the change. The age of an aircraft may affect the number and frequency of tasks, particularly if it has ageing structural inspections and significant repairs.
- 2.2 The maintenance programme/schedule details should be reviewed at least annually or interval as DCA may require. Any changes to the Maintenance Review Board Report/ Maintenance Planning Document, or equivalent, should be reviewed by the operator and based on operator's reliability data (if any) and operational experience, changes implemented as required. Applicable mandatory requirements for compliance with applicable regulations should be incorporated into the Owner or Operator's maintenance programme as soon as possible.
- 2.3 The aircraft maintenance programme/schedule should contain a preface which will define the 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.
- 2.4 The Inspection Rules in terms of GVI, DVI, L/HIRF, EMI, STRUCTURAL and ZONAL Inspections etc. generated from the MSG-3 definitions should be explained in the preface as well, if applicable.
- 2.5 The approved aircraft maintenance programme/schedule should reflect applicable mandatory regulatory requirements addressed in documents issued by the manufacturer to comply with DCA Regulations.

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- 2.6 Repetitive maintenance tasks derived from modifications and repairs should be incorporated into the approved maintenance programme.
- 2.7 A maintenance program combines the maintenance and inspection functions used to fulfill an operator/applicant's total maintenance needs.

3. DEFINITIONS

- 3.1 **Maintenance.** The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or a repair.
- 3.2 **General Visual Inspection (GVI):** A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight or droplight and may require removal or opening of access panels or doors. Stands, ladders or platforms may be required to gain proximity to the area being checked.
- 3.3 **Detailed Inspection (DET):** An intensive examination of a specific item, installation, or assembly to detect damage, failure or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirrors, magnifying lenses or other means may be necessary. Surface cleaning and elaborate access procedures may be required.
- 3.4 **EMI:** Electro Magnetic Interference.
- 3.5 **L/HIRF:** Lightning and High Intensity Radiated Fields.
- 3.6 **Zonal Inspection:** A collective term comprising selected General Visual Inspections and visual checks that are applied to each zone, defined by access and area, to check system and power plant installations and structure for security and general condition.
- 3.7 **Stand-alone GVI:** A General Visual Inspection which is not performed as part of a zonal inspection. Even in cases where the interval coincides with the zonal inspection, the Stand-alone GVI shall remain an independent step within the work card.
- 3.8 **Scheduled (routine) Maintenance:** Performance of maintenance tasks at prescribed intervals to ensure the continuing airworthiness of an aircraft.
- 3.9 **Unscheduled (Non-routine) Maintenance:** Performance of maintenance tasks when mechanical irregularities occur.

3.10 **Structural program:** Structural inspection programs (SIP) are developed by the aircraft manufacturer to meet the inspection requirements for damage tolerance. The types of damage considered during program development are environmental deterioration (ED) (corrosion, stress corrosion), accidental, and fatigue.

4. PROGRAM REQUIREMENTS.

4.1 A maintenance programme/schedule is applicable to Aircraft, Engines, Propellers and Parts for each Aircraft and Helicopter and should contain the following information:

- (a) Maintenance tasks and the intervals at which these are to be performed, taking into account the anticipated utilization of the aircraft and operating environment of the aircraft. The maintenance programme/schedule must be based on information made available by the State of Design or by the Organization responsible for the Type Design and any additional applicable experience. The basic requirements for a maintenance programme/schedule include but are not limited to:
 - (i) Inspection;
 - (ii) Scheduled Maintenance;
 - (iii) Overhaul and Repairs;
 - (iv) Structural Inspection; and
 - (v) Maintenance tasks and intervals specified and identified as mandatory in approval of the type design;
- (b) When applicable, a continuing structural integrity programme (SIP) which includes at least:
 - (i) Supplemental inspections;
 - (ii) Corrosion prevention and control;
 - (iii) Structural modification and associated inspections;
 - (iv) Repair assessment methodology; and
 - (v) Widespread fatigue damage (WFD) review; and
- (c) When applicable, condition monitoring and reliability programme descriptions for aircraft systems, components and engines.

5. MAINTENANCE PROGRAMME DEVELOPMENT BASIS

5.1 Air operators' maintenance programme/schedule should normally be based upon the manufacturer recommended instructions for continued airworthiness (ICAs) such as, but not limited to, the maintenance review board (MRB) report, where available, and the type certificate holder's maintenance planning document (MPD) and/or any appropriate chapter in the Maintenance Manual (i.e., the manufacturer's recommended maintenance programme).

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- 5.2 For a newly type-certificated aircraft, where no previously approved maintenance programme exists, it will be necessary for the air operator 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.
- 5.3 During the approval of the proposed maintenance programme, the Air operator should require to submit the following documents to the DCA to consider for the content of the maintenance programme;
- (a) MRB report approved by the State of Design;
 - (b) MPD issued by the type certificate holder or manufacturer;
 - (c) Airworthiness limitation items (ALIs) specified in the type certificate data sheet. These may include CMR, safe life airworthiness limitation items, and Damage-Tolerant ALIs;
 - (d) Specific operational requirements. These requirements may relate to maintenance of additional configuration items required for the type of operations approved and to any additional maintenance tasks required by National Regulations. Examples include maintenance requirements relating to operations over uninhabited terrain, operations over water, extended diversion time operations (EDTO), reduced vertical separation minima (RVSM) operations, all-weather operations (AWOPS) and navigation system requirements relating to polar operations and minimum navigation performance specifications (MNPS). Additional maintenance requirements relating to extreme climates (temperature, humidity, salt spray, ice or dust) in the area of operations may also be required by national regulations. Also, specific maintenance requirements relating to the flight data recorder (FDR) system, the cockpit voice recorder (CVR) system, emergency equipment and other systems;
 - (e) Mandatory life limits for engine life-limited parts specified by the Manufacturer;
 - (f) Engine and auxiliary power unit (APU) off-wing maintenance as specified in the engine and APU work scope planning guides; and
 - (g) ICAs specified for air-operator-installed equipment or required by supplemental type certificate (STC) modifications, including emergency equipment. All items in the maintenance programme should have the source document clearly identified and mandatory items (such as CMRs, ALIs and ADs) must be clearly distinguished from items that are subject to adjustments or changes based on operating experience.
- 5.4 Where an aircraft is maintained in accordance with an aircraft maintenance programme based upon the MRBR, a reliability monitoring program or equivalent shall be considered as part of the aircraft maintenance programme.

- 5.5 This does not mean that the approved aircraft maintenance programme has to be identical to the MRBR or MPD. Initially the MRBR/MPD intervals should be respected, but after the program matures, the operator should use his reliability data to adjust the program to make it more effective. It is also the operator responsibility to continuously monitor the effectiveness of the maintenance program using the reliability data, and amend the program as required.
- 5.6 Some Approved Aircraft Maintenance Programmes, not developed from the MRB/MPD, may also utilize reliability programmes. Such reliability programmes should be also considered as a part of the Approved Maintenance Programme.

6. STRUCTURAL INSPECTION

Each level of inspection must be clearly defined in the operator/applicant's maintenance program. For example, a specific area of the aircraft may require only a general visual inspection during pre-flight or zonal inspection but will require a detailed or special detailed during higher level checks or structural inspection.

Some older aircraft are subject to a supplemental structural inspection document or separate CPCP, which requires additional age-related structural inspections to be incorporated into the maintenance program.

7. DUPLICATE OR INDEPENDENT INSPECTIONS must be carried out in accordance with the approved maintenance program.

- 7.1 The maintenance program document should identify the tasks that require duplicate or independent inspections. These will include, at a minimum, those items that could result in failure, malfunction, or defect endangering the safe operation of the aircraft if maintenance is not performed properly or if improper parts or materials are used.
- 7.2 In determining the work items which require a duplicate inspection, the operator should consider the importance of the following:
- (a) Installation, rigging, and adjustments of flight control.
 - (b) Installation and repair of major structural components.
 - (c) Installation of aircraft engines, propellers and rotors.
 - (d) Overhaul, Calibration or Rigging of components such as engines, propellers, transmissions, gear boxes, or navigation equipment.

8. APPROVAL PROCESS

- 8.1 Two copies of the proposed Maintenance Programme/Scheduled are prepared and submitted for approval to Airworthiness Division.

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8.2 The Maintenance Programme/Scheduled must contain;

- (a) Initial intervals should comply with those described in MRBR, MPD or any other documents provided by manufacturer as the instruction for Continued Airworthiness.
- (b) If there is(are) any difference(s) between tasks and intervals with those described in MRBR, MPD or any other documents provided by manufacturer as the instruction for Continued Airworthiness or previous operator's maintenance program for used aircraft, the difference(s) must be stated with review and recommendation of appropriate Qualified Personnel.
- (c) The List of Effective Pages (LEPs) which should cover all pages included in the whole document and DCA acceptable format with the recommendation of appropriate Qualified Personnel including Head of Quality Department.
- (d) Authorization for short term escalations, if authorized by DCA.
- (e) Duplicate or Independent inspection task identifications.
- (f) Identification of tasks which are mandatory and cannot be escalated, such as CMR, AWL, CDCCLs, FAL,...
- (g) Work cards and detailed procedures for the tasks in the program.

8.3 Evaluate the Structural Inspection Program (this may be as part of the normal Maintenance Program, especially if the maintenance program was based on a MRBR which had been developed using MSG-3 revision 2 or later). This part of the maintenance program must include the following:

- (a) CPCP, unless contained on a separate document.
- (b) A detailed inspection of areas where maintenance is being performed to detect cracks, distortion, and corrosion, to examine attachment of parts, and to determine the condition of the area.
- (c) MRB/MPD routine structural inspection requirements.

8.4 After completion of the evaluation process, DCA will issue the approval letter and also approval reference with a signed and stamp on the LEP pages.

8.5 Evaluate all deficiencies to determine what, if any, corrective actions will be required. If there are deficiencies in the maintenance program, schedule a meeting with the operator/applicant to discuss needed program changes and deficiency resolutions.