



## STANDARD MAINTENANCE CLAUSE

### STANDARD CLAUSES FOR INSERTION IN MAINTENANCE PROGRAMME INTRODUCTORY PAGES

The purpose of this Standard Maintenance Practice is to ensure that the introductory pages of Maintenance Programmes are reasonably consistent and, where applicable, include the following items. Minor variations in the wording is acceptable providing that the intent remains clear.

#### 1. ANNUAL UTILISATION AND MAINTENANCE REVIEW

- 1.1 In the preparation of this Maintenance Programme Reference ..... to meet the requirements of the Civil Aviation (Airworthiness) Regulations and the Civil Aviation (Air Operator Certification & Administration) Regulations, the recommendations made by the constructors and manufacturers have been evaluated and, where appropriate, have been incorporated. It is agreed that it is the duty of the Operator or his contracted Approved Maintenance Organisation (AMO) that subsequent maintenance recommendations, including airworthiness information promulgated in Service Bulletins, Service Letters, etc., issued by the constructors and manufacturers, should be evaluated and, where appropriate, should be incorporated in this Programme by approved amendments procedure.
- 1.2 The periods/frequencies of the maintenance tasks in this Programme are generally based on an anticipated annual utilisation of ..... flying hours and large variations in the annual utilisation of individual aircraft could invalidate the effectiveness of certain tasks. If the annual utilisation varies by more than 25% from that anticipated, the Operator accepts that he, or his contracted AMO, must advise the BCAD and review the maintenance tasks and periods with a view to making any necessary adjustments.
- 1.3 In addition to variations in utilisation, the data contained in this Programme will be reviewed at least annually by the Operator, or his contracted AMO, to ensure that the detailed requirements continue to be valid in the light of operating experience.

#### 2. MAINTENANCE PROGRAMME APPLICABILITY

This Maintenance Programme is applicable only to the following aircraft:-

Registration	Type	Serial No.

**Note:** Any changes in aircraft applicability must have prior approval by the BCAD.

### **3. FLYING TIMES**

All periods in this Programme quoted in “hours flying” are to be calculated and recorded on a “Take-Off to Touch-Down” basis.

### **4. CERTIFICATION OF MAINTENANCE**

Attention is drawn to the necessity of ensuring that the appropriate Certification of Maintenance is completed. The requirements are specified in the BCAD Approval Document and Endorsements relating to this Programme.

### **5. PERMITTED VARIATIONS TO MAINTENANCE PERIODS**

The periods prescribed by this Programme may be varied subject to the conditions and limits contained in the Programme approval document.

### **6. AIRWORTHINESS DIRECTIVES AND MANUFACTURER’S SERVICE INFORMATION**

6.1 AOC & Administration Regulation 73 (1) (f) requires operators to institute a system for the assessment of continuing airworthiness information. This information will originate from the responsible authority of the State of Manufacturer in the form of Airworthiness Directives (or documents of comparable intent) and, from the constructor/manufacturer in the form of Service Bulletins, Letters, Information Leaflets, etc. resulting from in-service experience.

6.2 Compliance with the mandatory requirements of the responsible authority of the State of Origin must be achieved unless this requirement is varied by the BCAD.

6.3 Continuing airworthiness and other Service Information must be continuously evaluated by the operator or the contracted AMO and, where necessary, appropriate action must be taken to amend the maintenance programme.

### **7. GAS TURBINE ENGINE PARTS SUBJECT TO RETIREMENT OR ULTIMATE (SCRAP) LIVES**

The operator is responsible for ensuring that parts fitted to the engines being operated do not exceed the published lives. Therefore accurate up to date records of the life consumed by each engine are required to be maintained, and this may involve recording flying hours, number of landings, “touch and go” landings and take offs, air restarts, etc., dependent upon each manufacturers definition of a unit of life.

### **8. FATIGUE LIVES AND MANDATORY LIFE LIMITATIONS**

8.1 Structural “fatigue” lives published by the constructor/manufacturer or by the BCAD are mandatory for aircraft on the Barbados register.

8.2 All other life limitations classified as mandatory by the constructor/manufacturer must also be observed unless varied by the BCAD.

## **9. MAINTENANCE PRACTICES AND PROCEDURES**

The practices and procedures necessary to accomplish the requirement of this Programme, or work resulting from its application, should be, as a minimum, to the standards recommended in:

- (a) relevant Maintenance, Overhaul and Repair Manuals and
- (b) Barbados Civil Aviation Regulations.

## **10. ALL VITAL POINTS AND CONTROL SYSTEMS**

10.1 Wherever inspections are made or work is undertaken in flying or engine control systems, a detailed investigation must be made on completion of the task to ensure that all tools, rags and any other loose articles which could impede the free movement and safe operation of the system(s) have been removed and that the system(s) and installation in the work area are clean and unobstructed.

10.2 If, as a result of the application of this Programme, any part of either the main or any associated system is dismantled, adjusted, repaired or renewed, that part of the system(s) which has been disturbed shall be subjected to a duplicate inspection, with free movement, range, direction and tension checks and shall be certified in accordance with the Civil Aviation (Airworthiness) Regulation.

## **11. FUEL SYSTEM CONTAMINATION CHECKS**

The following check must be made to establish that fuel systems are free from contamination:-

Fuel system water drain checks are to be carried out prior to flight if the aircraft has not flown for 24 hours or more and in accordance with Company Procedures.

**NOTE:** the operator must be satisfied with the quality of all fuel taken on board his aircraft, particularly in respect of water contamination and, monitor the supplier's quality performance.

## **12. PORTABLE VALISE TYPE LIFERAFTS**

At the appropriate Overhaul Period 10% ten percent of all liferafts installed in fleets using aircraft deployment systems are to be inflated and the systems tested. Ensure that the aircraft is protected against consequential damage and that deployment and inflation is satisfactory.

## **13. AREA OR ZONAL INSPECTION**

Where the term "AREA" or "ZONAL" is used in this Programme, this is to be interpreted to mean that a general visual inspection is made for general condition, security and leaks in the structure, systems and components and their installation in the specified zone or area. The inspection must be of sufficient depth to establish that any significant deterioration is identified and rectified, to ensure that the general quality/condition of the zone/area is satisfactory until the next higher inspection becomes due.

## **14. INSPECTION STANDARDS**

14.1 Unless otherwise stated, all inspection requirements are to be applied without removing an item from the aircraft or dismantling the item, group or sub-assembly unless dismantling is considered essential in order to ensure order to ensure airworthiness. Where dismantling is required by this Programme, this is stated against the item concerned.

14.2 Throughout this Programme where the abbreviation “CHK” or term Check has been used to signify the inspection requirements, it is to be interpreted to mean:-

14.2.1 That the item is to be inspected (Externally and “in-situ” unless otherwise stated) to a degree at least sufficient to ensure that it will remain serviceable until the next Programmed inspection of the item becomes due.

14.2.2 That the item is, at the time of inspection, free from any observed or reported defects likely to affect airworthiness.

14.3 Inspections to the above requirements must comply with the minimum standards set out hereunder having regard to the material from which the item is made and applying these Standards wherever physically possible. The depth or degree of application being at the discretion of the signatory.

14.3.1 **Metal Parts:** eg. Applicable to all metal parts, bodies or casings of units in systems and in electrical, instrument and radio installations, metal pipes, ducting, tubes, rods, levers.

Inspect for: Cleanliness. External evidence of damage, leaks, overheating or discharge. Fluid ingress. Obstruction of drainage or vent holes or overflow pipe orifices. Correct seating of fairings and serviceability of fasteners.

Freedom from: Distortion, dents, scores, chafing, pulled or missing fasteners, rivets, bolts, screws. Evidence of cracks and wear. Separation of bond, failure of welds and spot welds. Deterioration of protective treatment and corrosion.

Security of attachments, fasteners, connections, latching and bonding.

14.3.2 **Wooden Parts:** eg. Structural members.

Inspect for: Cleanliness. External evidence of damage. Obstruction of drainage or vent holes. No evidence of fluid soakage or failure of joints. Protective treatment or finish intact.

Freedom from: Splits, cracks, shakes, scores, distortion, mould, shrinkage or crushing. Distortion of attachment bolt holes – if dismantled.

Security of attachments and bonding.

14.3.3 **Rubber, Fabric, Glass Fibre and Plastic Parts:** e.g. coverings, ducting, flexible pipes, flexible mountings, seals, insulation of electrical cables, windows, etc.

Inspect for: Cleanliness, cracks, cuts, chafing, kinking, twisting, crushing, contraction – sufficient free length. Deterioration. Crazing. Loss of flexibility (other than fabric covered components). Overheating. Fluid soakage.

Security of attachment (supports, packings and electrical bonding correctly positioned, serviceable and secure) connections and locking.

#### 14.3.4 Control System components

Inspect for: Correct alignment – no fouling. Free movement. Distortion. Evidence of bowing. Scores. Chafing. Fraying. Kinking. Evidence of wear. Flattening. Cracks, loose rivets. Deterioration of protective treatment and corrosion. Electrical bonding correctly positioned, undamaged and secure. Attachments, end connections and locking secure.

#### 14.3.5 Electrical Motors, Alternators, Generators and Actuators

Inspect for: Cleanliness, obvious damage, evidence of overheating, corrosion and security of attachments and connections. If protective covers are required to be removed.

Cleanliness, scoring, pitting, brushes free in holders, not excessively worn and correct bedding. Adequate spring tension. Overheating. Fluid ingress.

#### 14.3.6 Relays, Solenoids and Contactors

Inspect for: Cleanliness, obvious damage, evidence of overheating, corrosion and security of attachments and connections. If protective covers are required to be removed.

Cleanliness, pitting or burning of contacts, evidence of overheating and security of contacts exposed.

**NOTE:** Any other inspection or work requirements not covered by the above standards must be specifically written into the approved Programme.

### 15. CONDITION MONITORED MAINTENANCE/RELIABILITY PROGRAMME

The method of data collection, analysis, corrective actions and reporting specified for the implementation of this programme is prescribed in the Maintenance Procedures Manual/Maintenance Control Manual Chapter ....., which constitutes part of this Approved Maintenance Programme

### 16. ABBREVIATIONS< TERMS AND DEFINITIONS

All significant terms and abbreviations used within this Programme are defined in accordance with the Type Certificate Holders definitions, current BCAR definitions or, in the absence of formal definitions, those quoted in the World Airlines Technical Operations Glossary are used.