

Aircraft Maintenance Programme Guidance and Instructions

1. Introduction

- 1.1. The Air Navigation (Isle of Man) Order (as available on our website at the address stated above) identifies the requirement for an approved maintenance programme (AMP).

“An aircraft registered in the Isle of Man for which a certificate of airworthiness is in force must not fly unless the aircraft (including its engines), together with its equipment and radio station, is maintained in accordance with a maintenance programme approved by the Department for that aircraft”.

- 1.2. It is required that all maintenance tasks, be identified and included within the approved AMP, covering the designations here within.
- 1.3. The maintenance of the aircraft including its engines, propellers and equipment (as applicable) will normally be in accordance with the Type Certificate (TC) Holders recommendations, identifying instructions for continuing airworthiness (IFCA), these are designated by the IOMAR as the Primary IFCAs.
- 1.4. Any other IFCA requirements of specific detail from ADs, Modifications, Repairs, IOMAR additional requirements etc. are identified as Supplementary IFCA's.
- 1.5. It is the responsibility of the operator (usually the NATR) to ensure that application form F100 is completed and submitted to the IOMAR at the earliest opportunity, this will ensure an AMP is in place at the time of the CoA Initial survey.
- 1.6. All declared IFCAs should be reviewed on a regular basis but no later than annually to ensure continuing compliance.

2. IFCA (Primary) Source Information

- 2.1. Maintenance of the aircraft, engines, propellers and equipment are usually in accordance with the TC Holder IFCA. The AMP submission requires these Primary source documents to be identified. The revision status of the documents must not be entered as it is required that only the latest revisions will be applicable and used.
- 2.2. The Information should be identified and entered on page 1 of Form 100 Section 2

3. IFCA (Supplementary) Source Information

- 3.1. All other IFCA not accounted for in the primary information, must also be identified, this is classified as Supplementary IFCA. (SIFCA).

There is no requirement to list individual SIFCA's on Form 100. Section 3 of that form should only be annotated with the method of recording SIFCA's.

- 3.2. The Operator is required to prepare a suitable method of recording the originating Supplementary IFCA document(s) and managing the supplementary IFCAs details – Examples, propriety software

such as CAMP, CAFAM, CESCO, TECHSOFT etc. or generic computer spread sheets, hard copy document (booklet, cardex).

3.3. This detail should be identified and entered on page 1 of Form 100 Section 3

3.4. The applied recording medium shall make provision to include sections:

3.4.1. Airworthiness Directives (repetitive)

3.4.2. Modifications (SBs , STC etc.)

3.4.3. Repairs

3.4.4. IOMAR Additional requirements

- CVR analysis – Frequency of task set at **12 Months** – RP9 provides guidance
- FDR analysis – Frequency of Task set at **12 Months** – RP9 provides guidance

NOTE- The Operator must ensure that the CVR / FDR check as applicable, is completed within 12 months of the initial Certificate of Airworthiness issue, and reforecast to a 12 month frequency from that date.

- Mandatory Placards inspection for condition and complete accountability. – Frequency of Task set at **12 Months**
- Aircraft Weighing – The Aircraft should have accurate data to determine the basic Mass and corresponding Centre of Gravity (CoG).

If the TC Holder does not identify a weigh frequency of task within its recommendations, the frequency information below is to be followed and at any subsequent period the IOMAR shall require.

For **aircraft not exceeding 2000 Kg MTOM**, no actual weigh frequency is mandated. It is required that at a **10 year frequency** from the last weigh, a review and evaluation task is made of all repairs and all modifications that have had no individual, or classified as negligible W & B data, to assess if any accumulative significant factor of change would be relevant, to consider if an aircraft weigh would be appropriate.

For aircraft of 2001Kgs MTOM and above, but **not exceeding 10,000 kg MTOM**, weighing is required at a **frequency not exceeding 10 years**.

For aircraft **exceeding 10,000 kg** Maximum Take-off Mass (MTOM), weighing is required at a **frequency not exceeding 5 years**.

3.4.5. Operational Approvals with associated IFCA (i.e RVSM skin wave checks).

3.4.6. Operator elective maintenance tasks (Service Letters etc.).

3.4.7. TC Holders additional tasks (Refer to section 7 for further details).

3.4.8. Safety Equipment: Should follow the manufacturer's recommendations if not included within the Primary IFCA or included in Supplementary IFCAs by Modification embodiment.

See following example sheets for F100 Entries for SIFCAs

Examples of different methods of recording SIFCA details

Airworthiness management recording media that demonstrate acceptable methods of recording the defined SIFCA

Spread Sheets

AD Number	Rpt Frq	Complied with	Next Due			
2016-44-11	100 hrs	187 hrs	287 hrs			
2011-22-16	1 Yr	20-Sep-16	20-Sep-17			

3.4.1 AD's 3.4.2 MOD 3.4.3 Repairs 3.4.4 IOM NAA 3.4.5 OP Spec 3.4.6 Op Elect 3.4.7 TC Holder + 3.4.8 Safety Equipt

IOM NAA	Rpt Frq	Complied with	Next Due			
CVR	12 Months	23-Apr-15	23-Apr-16			
FDR	12 Months	23-Apr-15	23-Apr-16			
Placards	12 Months	23-Apr-15	23-Apr-16			
Weigh	5 Yrs	23-Apr-15	23-Apr-20			

3.4.1 AD's 3.4.2 MOD 3.4.3 Repairs 3.4.4 IOM NAA 3.4.5 OP Spec 3.4.6 Op Elect 3.4.7 TC Holder + 3.4.8 Safety Equipt

Example if using Spreadsheet, for Form 100 Entry section 3

3. SUPPLEMENTARY INSTRUCTIONS FOR CONTINUING AIRWORTHINESS (SIFCAs)

Identify the method and location of all SIFCAs. (RP11 Para 3 provides required subjects for consideration)

M-ZZZZ-Spreadsheet –SIFCA/1

Propriety Software – Example 1

CAFAM

EASA 2014-0254		S/S BY EASA 2015-0069		M	Job: [VARIOUS]
N/A S/S Action: INSP Ref EASA 2015-0069 also refers	Group: A Scheduled Last done Remaining EASA 2015-0069	Hours N/A 0.0 N/A	Calendar N/A // //	Landing/Cycles N/A 0 N/A	N/A S/S -REPETITIVE-
EASA 2015-0069		S/S BY EASA 2015-0160		M	Job: 010775/LL [VARIOUS]
N/A BY EQUIP Action: INSP	Group: A Scheduled Last done Remaining	Hours N/A 931.5 N/A	Calendar N/A 11/06/2015 //	Landing/Cycles N/A 0 N/A	Applicable to Goodrich Hoist, refer to EASA AD for Pfn.
EASA 2015-0160		HOIST INSPECTION		M	Job: [VARIOUS]
N.F.A. Action: INSP	Group: A Scheduled Last done Remaining s/s by easa 2015-0226	Hours N/A 0.0 N/A	Calendar N/A // //	Landing/Cycles N/A 0 N/A	Applicable to Goodrich Hoist, refer to EASA AD for Pfn.
EASA 2015-0226R3		HOIST INSPECTION		M	Job: 010795/LL [VARIOUS]
N/A BY EQUIP Action: INSP	Group: A Scheduled Last done Remaining	Hours N/A 946.3 N/A	Calendar N/A 18/12/2015 //	Landing/Cycles N/A 0 N/A	Applicable to Goodrich Hoist, refer to EASA AD for Pfn.

Example if using propriety software, for Form 100 Entry section 3

<p>3. SUPPLEMENTARY INSTRUCTIONS FOR CONTINUING AIRWORTHINESS (SIFCAs)</p> <p>Identify the method and location of all SIFCAs. (RP11 Para 3 provides required subjects for consideration)</p> <div style="border: 1px solid black; padding: 10px; text-align: center;"> <p>SIFCA/CAFAM/M-ZZZZ</p> </div>

Propriety Software – Example 2**CESCOM**

Item Code	Description	Part Number	C/W Time 1	Adj.	TBO 1	TSO 1 (ENG) DUE 1	Remains		
Position	Drawing # / Task #	City	Mod Lvl	Part Serial No	C/W Time 2	+ or -	TBO 2	TSO 2 (ENG) DUE 2	Remains
05-USER-18	PERFORM CPCP-PROGRAM (IN CONJUNCTION WITH DOC. 26) I.A.W. AMP CHECKLIST		MTH 07-Nov-2016				6	31-May-2017	6 m 22 d

Example if using propriety software, for Form 100 Entry section 3**3. SUPPLEMENTARY INSTRUCTIONS FOR CONTINUING AIRWORTHINESS (SIFCAs)**

Identify the method and location of all SIFCAs. (RP11 Para 3 provides required subjects for consideration)

CESCOM-M-ZZZZ- SIFCA

4. Maintenance Programme Variations

- a) Variations should not be used routinely to extend maintenance periods in lieu of adequate pre-planning. Abuse of the variation permission may result in the withdrawal of this facility.
- b) The IOMAR enabled variation factors as detailed below, are provided for use where the TC Holder does not issue any approved data.
- c) Where a TC Holder identifies variations within the source data identified on page 1 of the Form 100, the TC Holders periods take precedent over any factor enabled within this document.
- d) Any variation required which will exceed the tolerance published in the TC holder's source data or the IOMAR Variation data as applicable, will require IOMAR involvement to issue appropriate documentation.
- e) Fatigue Lives, Mandatory Life Limitations and Certification Maintenance Requirements (including engines)
All fatigue lives, mandatory life limits and Certification Maintenance Requirements published by the Type Certificate Holder or by the IOMAR shall be applicable and no extension or variation will be permitted without the express permission of the IOMAR.
- f) AMP tasks that require components to be maintained to approved data in CMM format, and are required to have workshop maintenance task and subsequent approved release paperwork (EASA Form 1 / 8130-3 etc.) cannot be varied under this programme unless the equipment manufacturer enables it in its source data.
- g) Every Variation shall be entered in the appropriate Log Book(s), identifying the aircraft is operating with a Variation applied and to which task (s) it applies (It is not required to identify the period of extension as this may change). There is no requirement to contact the IOMAR.
- h) In all cases any variation factor utilised must be deducted from the reforecast "next due" to restore the continuity of the program.

a) **Items controlled by Flying Hours :**

	Period Involved	Maximum Variation of the Prescribed Period
(i)	5000 flying hours or less	10%
(ii)	More than 5000 flying hours	500 flying hours

b) **Items controlled by Calendar Time:**

	Period Involved	Maximum Variation of the Prescribed Period
(i)	1 year or less	10% or 1 month, whichever is the lesser
(ii)	More than 1 year but not exceeding 3 years	2 months
(iii)	More than 3 years	3 months

c) **Items controlled by Landings/Cycles:**

	Period Involved	Maximum Variation of the Prescribed Period
(i)	500 landings/cycles or less	10% or 25 landings/cycles, whichever is the lesser
(ii)	More than 500 landings/cycles	10% or 50 landings/cycles, whichever is the lesser

5. Changes to an Approved AMP

Where there is a change to the maintenance programme Primary IFCA source documents, for example, move to a LUMP from the existing recommendations, a new Form 100 (initial) must be completed and submitted to the Aircraft Registry. A new AMP number will be given to the approval.

Where there has been a change or addition to the aircraft details, supplementary IFCA source documents, NATR or Operator details, Form 101 must be completed and submitted to the Aircraft Registry. The programme will retain its' original core number with the next sequential revision number applied.

6. Inspection Standards

The maintenance and inspection standards applicable to individual tasks must meet the requirements of the Design Approval Holder's (DAH) identified standards and practices.

In the absence of specific DAH data, the standards published by the Issuing state of the individual's licence, or as contained within the approved MRO exposition (or equivalent), should be followed.

7. Systems and Structural Integrity Programmes

Operators shall ensure that consideration is given to issued data and recommended system or structural integrity programmes published by the Aircraft, Engine and Propeller TC Holder's for inclusion as part of this Maintenance Programme. These programmes may include Supplementary Structural Inspection, Repair Assessment, Corrosion Prevention and Control, Ageing Structures and Systems, Fuel Tank Safety etc. Where considered relevant the details should be entered in the section mentioned in 3.4.7

8. Pre – Flight Inspections

Unless identified within the Primary and Supplementary IFCA's the IOMAR does not consider Pre-Flight inspections to be an AMP task for tracking and monitoring for compliance purposes.

9. Human Factors

Human Factors Principles should be taken in to account for all AMP management and maintenance actions.

Attention should be paid to maintenance task break down and where applicable, safety critical tasks, should be identified and managed appropriately.

This includes (These examples are not exhaustive, and other principles and factors will be applicable to individual operators).

a) Planning:

1. Consideration in preparing maintenance check requirements, completed specifically by Validated Engineers / Authorised Persons, or by AMOs, that includes the scheduling tasks in a manner that avoids possible conflict of maintenance activities, that could lead to duplication of error.
2. CMR Tasks: clear visibility of such tasks preventing any unauthorised variation.
3. Confirmation Reporting: Tasks associated with closed loop reporting such as SB embodiment, SSID, are identified in the AMP recording media and monitored.
4. Safety Critical Tasks Ensuring tasks that are critical in nature are planned and allocated in a segregated manner that prevents the possibility of multiple error.

b) Maintenance.

1. Persons working on aircraft should discuss any human factors principles and human performance issues that may affect their ability to carry out the task, including tasks of a safety critical status as below,

- i. Engines, engine mounts and controls (including electronic & fuel controls)
- ii. Propellers
- iii. Flight controls and flight control systems (including electronic controls)
- iv. Aircraft and engine fuel systems
- v. Oil uplifts on more than one engine oil system

c) Fatigue factors, work pattern duration, night working, delays etc.

d) Environmental Conditions, external working climatic conditions etc.