AIRWORTHINESS MANAGEMENT REQUIREMENTS & INFORMATION
Chapter 9: OPERATING AN 'M' REGISTERED AIRCRAFT WITH A KNOWN DEFECT OR INCOMPLETE MAINTENANCE

9.1 Introduction (previously IN 012)
9.2 Minimum equipment requirements
9.3 Instruction for operating the aircraft with a known defect
9.4 Instruction for incomplete maintenance task following maintenance input
Chapter 1: INTRODUCTION

1.1 All references to The “Air Navigation (Isle of Man) Order”:
or ANO are applicable to the current issue as published and available on our website.

1.2 An aircraft is considered to be Airworthy:

When it,

1.2.1 Continues to comply with its Type Design;

Complying to the type design is considered achieved when the aircraft configuration and the components installed are in accordance with the drawings, specifications, and other data that are part of the TC, and also includes conforming to additional factors such as STC and IOMAR approved modifications embodied on the aircraft.

1.2.2 The aircraft must be in a condition for safe operation;

1.2.3 Nil apparent defects, unless considered acceptable for continued service under the appropriate release of an IOMAR Approved MEL or individual permission.

END CHAPTER 1
Chapter 2: MAINTENANCE CERTIFICATION

All “persons” identified within the ANO as to who can issue a certificate of Release to Service (CRS) must only use the statement identified below,

"Certifies that the work specified, except as otherwise specified, was carried out in accordance with the Air Navigation (Isle of Man) Order 2015 and in respect to that work, the aircraft/aircraft component is considered ready for release to service”.

The following information identifies differing scope of AMEL holders and those persons authorised under an Aircraft Maintenance Organisation of the standard:

- **EASA** Part 145 (Part M Sub Part F)
- **FAR** Part 145,
- **UK CAA** Part 145 (Part M Subpart F) issued by the UK CAA after the date that the UK leaves the EU.
- **IOMAR AMO approval holder.**

**Note** –

The UK CAA have identified that an EASA Part 145 approval (Part M Subpart F) issued by the UK CAA, prior to the date that the UK leaves the EU, is identified as an acceptable document of standard for the period currently considered to be 2 years, and therefore those UK Based AMOs, continuing to hold that document will also be a recognised standard, to issue a CRS for M- aircraft.

2.1 Base Maintenance & Line Maintenance

The Isle of Man Aircraft Registry identifies a generic “Class Validation” status to enable all approved maintenance organisations, stated above, working within the scope of a valid approval, to certify maintenance on Isle of Man registered aircraft. Pilots or other individual authorised by an approved maintenance organisation QA department, may exercise the privileges of their authorisation.

A CRS issued by a person internally authorised by a company of the standard accepted above will be issued in accordance with the Air Navigation (Isle of Man) Order 2015 statement above and **not** under the EASA approval to the Basic regulation; or the CFR 14 Part 43, or the UK system of regulation of AMOs. The annotation of the EASA, FAA, or UK approval number is required **for tracking only** and indicates the AMO continues to hold that approval.

However, as the aircraft will be certified in accordance with IOM legislation, the IOMAR may enhance or limit the scope, as detailed within the approved exposition on a case by case basis.

Using the company authorisation number on the form, and following the company MOE procedures, but must include as a minimum, signature, name, and the individuals issued company Authorisation number & date.

**IOMAR AMO Approval** - the organisation will issue the CRS and annotate the document with their IOMAR company issued approval number, and individuals will annotate, the method of individual identification as is applicable.

2.2 Line Maintenance & Defect Rectification Only

**IOMAR Validated Engineer or Authorised Individual**

The certifier must sign, print their name, date and append their current validation or authorisation number (as applicable) to each certificate.

END CHAPTER 2
Chapter 3: AIRCRAFT MAINTENANCE PROGRAMME

3.1 Introduction:

The Air Navigation (Isle of Man) Order 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”.

It is required that all maintenance tasks be identified and included within the approved AMP, covering the designations here within.

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 IFCA’s.

Any other IFCA requirements of specific detail from ADs, Modifications, Repairs, IOMAR additional requirements etc. are identified as Supplementary IFCA’s.

It is the responsibility of the operator (usually the NATR) to ensure that application Form 100 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.

All declared IFCA’s should be reviewed on a regular basis but no later than annually to ensure continuing compliance.

Calendar based maintenance, usually begins from the issue of the first CoA, there may be occasions to consider a deferred “start date” should an aircraft be in maintenance for interior cabin installations. Manufacturers issued or published data can be used to support the application to the IOMAR for such circumstances, and permission to implement the delayed start of calendar maintenance.

3.2 IFCA (Primary) Source Information

3.2.1 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.

3.2.2 The Information should be identified and entered on page 1 of Form 100 Section 2.

3.3 IFCA (Supplementary) Source Information

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

3.3.2 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.

3.3.3 The Operator is required to prepare a suitable method of recording the originating Supplementary IFCA document(s) and managing the supplementary IFCA’s details – Examples, propriety software such as CAMP, CAFAM, CESCOM, TECHSOFT etc. or generic computer spread sheets, hard copy document (booklet, cardex).
This detail should be identified and entered on page 1 of Form 100 Section 3.

**3.4 SIFCA Sections.**

The recording method shall make provision to include the 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** – Section 3.14 provides further information;
- FDR analysis – Frequency of task set at **12 Months** – Section 3.15 provides further information.

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

- Mandatory Markings (includes any required by modifications, AFM, and other approved data) 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 **120 months 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 **120 months**.

  For aircraft **exceeding 10,000 kg MTOM,** weighing is required at a frequency not exceeding **60 months**.

- **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 3.10 for further details).**

**3.5 Safety Equipment:**

Should follow the manufacturer’s recommendations if not included within the Primary IFCA or included in Supplementary IFCAs by modification embodiment.
3.6 Example sheets for F100 Entries for SIFCAs:

**Examples of different methods of recording SIFCA details.** (There are many more options available, the choice rests with the Operator to use one that meets their requirements – inclusion here makes no IOMAR endorsement or approval).

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

**Spread Sheets**

<table>
<thead>
<tr>
<th>AD Number</th>
<th>Rpt Freq</th>
<th>Complied with</th>
<th>Next Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016-44-11</td>
<td>100 hrs</td>
<td>187 hrs</td>
<td>287 hrs</td>
</tr>
<tr>
<td>2011-22-16</td>
<td>1 Yr</td>
<td>20-Sep-16</td>
<td>20-Sep-17</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>EASA 2014-0254</th>
<th>S/S BY EASA 2015-0069</th>
<th>M</th>
<th>Job:</th>
<th>[VARIOUS ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A S/S</td>
<td>Group: A</td>
<td>Hours</td>
<td>Calendar</td>
<td>Landing/Cycles</td>
</tr>
<tr>
<td>Action:</td>
<td>Scheduled</td>
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<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Ref</td>
<td>Last done</td>
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<td>/</td>
<td>/</td>
</tr>
<tr>
<td>EASA 2015-0069</td>
<td>Remaining</td>
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<td>/</td>
<td>/</td>
</tr>
</tbody>
</table>

**EASA 2015-0069**

<table>
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<th>Hours</th>
<th>Calendar</th>
<th>Landing/Cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action:</td>
<td>Scheduled</td>
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<td>11/06/2015</td>
<td>N/A</td>
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<tr>
<td></td>
<td>Last done</td>
<td>931.5</td>
<td>/</td>
<td>/</td>
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</tbody>
</table>

**EASA 2015-0160**

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<tr>
<th>N/A BY EQUIP</th>
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<th>Hours</th>
<th>Calendar</th>
<th>Landing/Cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action:</td>
<td>Scheduled</td>
<td>N/A</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td>Last done</td>
<td>0.0</td>
<td>/</td>
<td>/</td>
</tr>
</tbody>
</table>

**EASA 2015-0226R3**

<table>
<thead>
<tr>
<th>N/A BY EQUIP</th>
<th>Group: A</th>
<th>Hours</th>
<th>Calendar</th>
<th>Landing/Cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action:</td>
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<td>/</td>
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<td></td>
<td>Last done</td>
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<td>/</td>
</tr>
</tbody>
</table>

**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)

SIFCA/CAFAM/M-ZZZZ
### Propriety Software – Example 2

**CESCOM**

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
<th>Part Number</th>
<th>CW Time 1</th>
<th>Adj.</th>
<th>TBO 1</th>
<th>TSO 1 (ENG) DUE 1</th>
<th>Remains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position</td>
<td>Drawing # / Task #</td>
<td>City</td>
<td>Mod Lvl</td>
<td>Part Serial No</td>
<td>CW Time 2</td>
<td>+ or -</td>
<td>TBO 2</td>
</tr>
</tbody>
</table>

| 05-USER-18 | PERFORM CPCP-PROGRAM (IN CONJUNCTION WITH DOC. 26) I.A.W. AMP CHECKLIST | 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**
3.7 Maintenance Programme Variations

3.7.1 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.

3.7.2 The IOMAR enabled variation factors as detailed below, are provided for use where the TC Holder does not issue any approved data.

3.7.3 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.

3.7.4 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.

3.7.5 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.

3.7.6 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.

3.7.7 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.

3.7.8 In all cases any variation factor utilised must be deducted from the reforecast “next due” to restore the continuity of the program.

- 3.7.8.1 Items controlled by Flying Hours:

<table>
<thead>
<tr>
<th>Period Involved</th>
<th>Maximum Variation of the Prescribed Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) 5000 flying hours or less</td>
<td>10%</td>
</tr>
<tr>
<td>(ii) More than 5000 flying hours</td>
<td>500 flying hours</td>
</tr>
</tbody>
</table>

3.7.8.2 Items controlled by Calendar Time:

<table>
<thead>
<tr>
<th>Period Involved</th>
<th>Maximum Variation of the Prescribed Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) 1 year or less</td>
<td>10% or 1 month, whichever is the lesser</td>
</tr>
<tr>
<td>(ii) More than 12 months but not exceeding 36 months</td>
<td>2 months</td>
</tr>
<tr>
<td>(iii) More than 36 months</td>
<td>3 months</td>
</tr>
</tbody>
</table>

3.7.8.3 Items controlled by Landings/Cycles:

<table>
<thead>
<tr>
<th>Period Involved</th>
<th>Maximum Variation of the Prescribed Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) 500 landings/cycles or less</td>
<td>10% or 25 landings/cycles, whichever is the lesser</td>
</tr>
<tr>
<td>(ii) More than 500 landings/cycles</td>
<td>10% or 50 landings/cycles, whichever is the lesser</td>
</tr>
</tbody>
</table>
3.8 Changes to 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, a 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.

3.9 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.

3.10 Systems and structural integrity programs

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.

3.11 Pre-flight Inspections

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

3.12 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).

3.12.1 Planning, 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.

3.12.2 CMR Tasks: clear visibility of such tasks preventing any unauthorised variation.

3.12.3 Confirmation Reporting: Tasks associated with closed loop reporting such as SB embodiment, SSID, are identified in the AMP recording media and monitored.

3.12.4 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.
3.12.5 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:

a) Engines, engine mounts and controls (including electronic & fuel controls).
b) Propellers.
c) Flight controls and flight control systems (including electronic controls).
d) Aircraft and engine fuel systems.
e) Oil uplifts on more than one engine oil system.

3.12.6 Fatigue factors, work pattern duration, night working, delays etc.

3.12.7 Environmental conditions, external working climatic conditions etc.

3.13 Cockpit Voice Recorder (CVR) – Flight Data Recorder (FDR)

• 3.13.1 It is the aircraft owner’s responsibility to ensure that applicable maintenance recommendations and requirements specified by the TC/STC holder to ensure the continued serviceability of the CVR/FDR system are followed.

• 3.13.2 However, Safety Investigation Authorities (SIA) have identified that on occasion CVR & FDR data being analysed has not recorded as expected & fails to provide enough clarity or is totally unusable to serve the needs during an investigation.

• 3.13.3 Unserviceability’s, due to a malfunction of the dedicated equipment, may remain hidden for a certain amount of time, (dormant failure) as it may be impossible to determine the full system functionality on board the aircraft, examples such as CVR microphone pickups and associated parts, may actually be unable to provide sufficient audio input quality to make the actual recordings robust, FDR input systems may have defective channel inputs such as broken wires, defective targets etc.

• 3.13.4 SIAs recommend that States of Register (SoR) should consider enhancing AMPs to encompass specific tests and checks to ensure not only the serviceability of the CVR unit itself (usually by a BITE function), but also to include the performance of the audio pickup equipment that feeds audio data to the unit for recording.

• 3.13.5 The IOMAR therefore has accepted this recommendation (as have other SoR) to include a national maintenance requirement for all operators, to carry out a system analysis of the actual CVR Audio quality of data being recorded, and for FDR to ensure a full channel serviceability test is carried out on a repetitive 12 Calendar months from the date of last testing.

• 3.13.6 The operator will need to arrange for a recording(s) from the CVR and FDR to be evaluated for acceptable performance at the time frames identified in section 3.4 for inclusion in the SIFCA under IOMAR Requirements.

(Note: It is possible that a removal of the CVR or FDR unit for Bench Check will be required to assess the system, please note the aircraft should not operate without discussing the options with the IOMAR.)
3.14 CVR

Where no approved data exists (AMM etc.) for accomplishing the maintenance task, the following information is therefore provided as guidance for the IOMAR specific AMP requirement of section 3.4, where appropriate.

**To assess the serviceability of the CVR system the following checks and functional tests are provided:**

For each audio channel ensure that the quality of recording has not deteriorated below an optimal audible level.

3.14.1 Confirm the proper recording on each voice channel of all the required audio inputs, details (3.14.1.1) to (3.14.1.8).

- 3.14.1.1 voice communications transmitted from or received by the aircraft communications equipment.
- 3.14.1.2 conversation on the flight deck.
- 3.14.1.3 voice communications on the flight deck, using the aircraft’s interphone system.
- 3.14.1.4 voice or audio signals identifying navigation aids introduced into the aircraft audio system.
- 3.14.1.5 audio signals from alerting or warning devices on the flight deck, both fully integrated with the aircraft audio system and non-integrated.
- 3.14.1.6 general flight deck sounds, monitor the cockpit area microphone (CAM) to ensure that it satisfactorily picks up all cockpit sounds.
- 3.14.1.7 voice communications using the passenger address system.
- 3.14.1.8 ensure that the 'Hot Mic' or 'live boom microphone' facility is operational for each boom microphone station that the aircraft is equipped with.

3.15 FDR

The FDR readout from a representative flight must be evaluated annually to ensure that the FDR system is functioning correctly. This will require access to the Data Frame Layout Document (DFL) for the FDR system and Conversion Data (to enable translation of FDR data to engineering units).

The DFL and Conversion Data should be supplied to the appropriate readout facility to enable them to confirm the correct operation of the system.

END CHAPTER 3
Chapter 4: AIRWORTHINESS DIRECTIVES

4.1 Introduction:

For the purposes of the Air Navigation (Isle of Man) Order, the statement: 
*made mandatory by the Department* includes Airworthiness Directives (ADs), for the Aircraft, Engine, Propeller or Component.

An Airworthiness Directive (AD) is a document issued by the State of Type Certification that, the applicable TCDS for the aircraft, engine, propeller (or State of Manufacture, in the case of equipment) conforms to;

As identified above, the IOMAR mandates the issued AD, that includes actions to be performed on an aircraft, its engines or equipment to restore an acceptable level of safety, when evidence shows that the level of safety of the aircraft, its engines or equipment may be compromised;

An AD contains at least the following information;

- the date the AD comes into force;
- the compliance time for the required actions;
- the identification of aircraft, engine or equipment affected by the AD;
- the identification of the unsafe condition;
- a description of the required actions.

The Department may vary the requirements of AD’s published by the State of Type Certification,

- and issue its own IOMAR AD, defined as an Additional Airworthiness Directives (AAD). In this case
- the AAD will take precedence over the original AD;
- With the exception of AADs, the Isle of Man Aircraft Registry will not notify operators of Airworthiness Directives;

Aircraft operators, usually tasked to the NATR, **MUST** subscribe for electronic notification of Airworthiness Directives & EADs, with the respective state of Certification standards applicable for the aircraft, its engines and propellers, and have access to the relevant AD’s to assess when published, for applicability to their specific aircraft to be complied to as required.

- The operator or their nominated representatives are strongly advised to register with the respective State issuing the AD, for automated notification of AD publication;
- An aircraft shall not be flown unless each applicable Airworthiness Directive; compliance can be demonstrated by:
  - the specific AD compliance criteria,
    or
  - Alternative Method of Compliance (AMOC).

AMOC - Where identified that an issued AD, is applicable to the specific IOMAR aircraft, a possibility can exist of an alternative method of compliance, with the following considerations.
An alternate method of compliance is accepted by The Department if;
A service bulletin previously accomplished provides full AD compliance. The Operator must be able
to demonstrate full compliance of the AD, by comparison to the SB where necessary. (On occasion
an SB certification does not enable a full compliance for an AD, for example the SB may not
identify an AFM or MEL change but the mandated AD would make such an additional change, in
this case the SB only provides partial compliance.)

The NAA that issued the AD and subsequently accepts a proposed alternative method, either
generically or specifically, for the aircraft serial number, and provides documentation accordingly
identifying acceptance of the alternative.

4.2 Which ADs?

Aircraft registered in The Isle of Man, are only accepted when conforming to one of the accepted
State of Certification standards, FAA, EASA (member states) or TCCA.

The aircraft conformity TC is declared by the Operator at initial application, and MUST be to one of
the specifications above, and the aircraft is expected to be compliant during the Certificate of
Airworthiness initial survey.

The TC status, and associated TCDS requirements will be retained for the whole of the period that
the aircraft remains registered with the Isle of Man Aircraft Registry.

The State of Certification (TCDS) from the 3 possible States identified above therefore identifies
the applicable mandated Airworthiness Directives (ADs) to be followed.

Examples only –

4.2.1 Context as applicable to all aircraft:

a) Gulfstream Aerospace Corporation - GVI – Exporting State of Registry is a
member state of EASA, the aircraft would therefore be expected to be compliant at
that time to an EASA TCDS - EASA.IM.A.169, and would be surveyed by an
appointed IOMAR Airworthiness Surveyor, sampling the Aircraft EASA published
ADs.

b) Gulfstream Aerospace Corporation - GVI - Exporting State of Registry is FAA,
the aircraft would therefore be expected to be compliant at that time to an FAA
TCDS - T00015AT, and would be surveyed by an appointed IOMAR Airworthiness
Surveyor, sampling the Aircraft FAA published ADs.

c) Gulfstream Aerospace Corporation - GVI - Exporting State of Registry is
TCCA, the aircraft would therefore be expected to be compliant at that time to an
TCCA TCDS – A-226, and would be surveyed by an appointed IOMAR Airworthiness
Surveyor, sampling the Aircraft TCCA published ADs.

d) Gulfstream Aerospace Corporation - GVI - Exporting State of Registry is not
directly from one of the G03 above. This will require additional work to confirm the
NAA standard (most usually the original SoD) the aircraft would therefore be
expected to be compliant at that time to the relevant TCDS and associated NAA
issued ADs. Further clarity can be reached with Registry Services Section at the
initial contact period.
4.2.2 Context as applicable for Engines/Propellers

a) The Type Certificate standard of the Engine and Propeller (if applicable) of aircraft joining the IOMAR will be determined from the Aircraft’s TCDS. Where the TCDS number of the Engine/Propeller is not stated on the Aircraft TCDS, the default will be the State of Design of the Engine/Propeller, if multiple TCDS numbers are stated, the engine specific log book documents must be reviewed to ascertain the TCDS information.

b) Gulfstream Aerospace Corporation - GVI – the aircraft TCDS - FAA TCDS - T00015AT, clearly states Engines – BR700-725A1-12 (Engine Type Certificate No E.00057EN), therefore AD compliance would be for those issued by FAA and would be surveyed by an appointed IOMAR Airworthiness Surveyor, sampling the Aircraft FAA published ADs.

c) Gulfstream Aerospace Corporation - GVI – the aircraft TCDS – TCCA-TCDS – A-226, clearly states the specific TCDS to be against the FAA aircraft TCDS, so Engines – BR700-725A1-12 (Engine Type Certificate No E.00057EN), therefore AD compliance would be for those issued by FAA and would be surveyed by an appointed IOMAR Airworthiness Surveyor, sampling the Aircraft FAA published ADs.

It can be seen from the above that the NATR must make a review of the Aircraft TCDS and have access to a list of the equipment fitted to the aircraft to enable them to determine which ADs are applicable. If an ECoA (or valid EASA ARC) is being received from one of the Go3 States this is an acceptable demonstration that all requirements would be to that TC standard (e.g Modifications). However, if an ECoA is being received from a Non Go3, it may be required to have the TC State of issue confirm it would be acceptable to meet that Specific Register.

4.3 Records:

Aircraft, engine and propeller log books required by Article 29 should be updated to record Airworthiness Directive compliance, including the means of compliance where options exist. Entries relating to any phased termination permitted by Directives should be clearly recorded to ensure adequate control. Entries should additionally be made for generally applicable Directives non-applicable to particular aircraft, engine, propellers, equipment, including the reason for non-applicability.

4.4 Compliance period - Calendar Dates

There can be some confusion as to the terminology used within AD’s, and recommendations of the AMP, this entry is provided to ensure a correct understanding, of the requirements under the IOMAR when specific wording is used on the above mentioned data.

(e.g., “within six months after the effective date of this AD”, or Frequency of 12 Months)

- Calendar times may be used to express compliance times when a direct relationship between calendar time and airworthiness (including corrosion) can be established; a product’s utilisation rate varies greatly throughout the fleet; or logistical support considerations (parts availability, repair facility availability) dictate that compliance be accomplished on an attrition basis with a calendar deadline established to minimise impact on operators (that is, avoid unnecessary grounding of products).

- Where compliance times are specified as a period of time after the effective date, the time is measured from the effective date. For example, if the compliance time is "within 12 months
after the effective date" and the effective date is 15 January 2008, the deadline for compliance is 15 January 2009. Where compliance times are specified as a number of calendar months after the effective date, the time is measured from the end of the month during which the AD becomes effective. For example, if the compliance time is “within 12 calendar months after the effective date" and the effective date is 15 January 2008, the deadline for compliance is 31 January 2009. However, usage of expression of “calendar months” is rare and is usually now avoided and used only in a substantiated cases, or historical issued ADs

4.5  Isle of Man Issued Additional Airworthiness Directives

None issued at this time

END CHAPTER 4
Chapter 5: ENGINEER VALIDATION

The IOMAR-ANO identifies **who** may issue a certificate of release to service, this includes the holder of an AMEL rendered **valid** under the ANO.

The department may, subject to any conditions as it thinks fit, issue a certificate of validation of an aircraft maintenance engineers licence granted in accordance with the laws and procedures of a contracting state.

The AMEL validation process by the IOMAR, falls in to 2 methods of licence status:

1) Type Rated (eg. EASA / CASA Part 66)
2) Non Type Rated (eg FAA A&P / TCCA "M")

The following tables identify the requirements to be satisfied and relevant documents required to reach a validation issue.

Please note examples of the prevalent errors historically made when submitting an application that delay the issue, and cause unnecessary administration for all parties;

- Incomplete **Form 7** application;
- Not sending the documents indicated as attached;
- Licence not signed;
- Insufficient ATA range (or only listing a group e.g. Base Check – Line Check, 100hrs, 400hrs, this needs to identify the content, not just the frequency as all manufactures ICA recommendations are different);
- Insufficient example of inspections, functions, component replacement;
- Type rated licence that does not include the aircraft type required.

The Engineer **MUST** ensure all the documents required indicated on the Form 7 are submitted.

**Note:**

Only the documents requested should be submitted, **do NOT** send any other documents (e.g. EWIS, HF, Ground Run, Taxy etc.) These are not relevant to a validation application or decision to issue.

An incomplete Form 7 or incorrect submission will result in a rejected application, & notification emailed to the applicant.

No documents will be retained from incomplete applications, and subsequent submissions must include all documents in the application.

**Please note that Isle of Man Government IT Policy does not allow us to download any document from internet storage locations, for example "Dropbox" or the "Cloud Storage" etc. therefore all single emails including the total of documents must be of a size of less than 15Mb.**
<table>
<thead>
<tr>
<th>IOMAR requirements to issue a validation &amp; AMCs that Demonstrate this:</th>
<th>Type Rated</th>
<th>Non Type Rated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technical Aircraft Generic Knowledge (ICAO Annex 1 Licence)</strong></td>
<td>Example - EASA / CASA PART 66</td>
<td>Example - FAA A&amp;P / Transport Canada &quot;M&quot;</td>
</tr>
<tr>
<td><strong>Type Rated Evidence</strong></td>
<td>Type Rating included</td>
<td>Aircraft Type Course (Demonstration by Differences Courses will need to have originating Aircraft Type certificates included with submission)</td>
</tr>
<tr>
<td><strong>Type Practical Experience</strong></td>
<td>Type rating added within the last 6 months - acceptable. Type rating added more than 6 months ago, practical work demonstration of varied ATA chapter range, ATA 21 onwards, no further back than 2 years with a minimum of 3 ATA CH examples being carried out within 6 months of application. Must be presented in ATA chapter order, NOT date order. <strong>NOTE:</strong> Examples of trouble shooting are a definite advantage but must be specific in detail identifying stages from initial assessment to resolution of the defect.</td>
<td>Varied ATA chapter range, ATA 21 onwards, no further back than 2 years with a minimum of 3 ATA CH examples being carried out within 6 months of application. Must be presented in ATA chapter order, NOT date order. OR Part 147 course cert stating practical, issued within the last 6 months. <strong>NOTE:</strong> Examples of trouble shooting are a definite advantage but must be specific in detail identifying stages from initial assessment to resolution of the defect.</td>
</tr>
</tbody>
</table>

END CHAPTER 5
Chapter 6: PERMIT TO FLY (PtF)

6.1 Introduction:

6.1.1 A valid Certificate of Airworthiness (The Air Navigation (Isle of Man) Order 2015, Part 3 Article 17 refers to the validity of Certificate of Airworthiness); or

6.1.2 An IOMAR issued Permit to Fly (The Air Navigation (Isle of Man) Order 2015, Part 3 Article 18 refers to issue of a national Permit to Fly).

Note: A PtF is a National Standard Document and any flight under a PtF must also be operated with the express permission of the NAA for the airspace that the flight(s) will occur.

6.2 General information:

Article 17 (Validity of Certificates of Airworthiness) of the ANO describes that a Certificate of Airworthiness issued in respect of an aircraft registered in the Isle of Man shall cease to be in force if;

6.2.1 the aircraft or a part of it or such of its equipment as is necessary for its airworthiness has been overhauled, repaired, replaced, modified or maintained;

6.2.2 maintenance or an inspection of the aircraft or of equipment necessary for its airworthiness is required by a maintenance program approved by the Department for the aircraft under article 22;

6.2.3 maintenance of the aircraft or of equipment necessary for its airworthiness has been made mandatory by a directive issued by the Department;

6.2.4 an inspection for the purpose of ascertaining whether the aircraft remains airworthy has been made mandatory by a directive issued by the Department; or

6.2.5 any modification of the aircraft or of any equipment is necessary for its airworthiness has been made mandatory by a directive issued by the Department for the purpose of ensuring that the aircraft remains airworthy.

6.3 Operators responsibilities

It is therefore the responsibility of the operator of an aircraft registered in the Isle of Man to determine the need to submit an application for the issue of a PtF for an aircraft falling into paragraphs (b) and (c) of Article 17 of the ANO enabling that aircraft to fly to a location where maintenance/rectification work may be carried out thereby restoring the validity of the aircraft’s Certificate of Airworthiness.

6.3.1 Article 18 (Issue, validity etc., of National Permits to Fly) of the ANO prescribes the conditions under which a National Permit to Fly may be issued and set limitations that may be applied by the Aircraft Registry.

6.3.2 The Aircraft Registry can apply additional limitations to a PtF certificate and these will be discussed with the NATR when applicable.
6.4 Maintenance Test flight, Modification Test flight or Permit to Fly

It is not possible for an EASA/National Aviation Authority or any other organisation to issue a permit to fly or equivalent, on an Isle of Man registered aircraft. If there is an open maintenance entry which invalidates the CoA, and a check/positioning flight is required to complete a maintenance task/modification or as a result of damage, then an IOMAR issued Permit to Fly will be required.

6.5 Procedure

Prior to submitting any application for a PtF, the NATR of the aircraft should contact the IOMAR Airworthiness Section to discuss the circumstances which have invalidated their CoA, and discuss a course of action.

Should it be determined that a PtF will be required the NATR should follow the guidance provided by the IOMAR and submit the application Form 42-Application for a Permit to Fly to the Isle of Man Aircraft Registry, accompanied by any supporting data requested at the time of the initial contact.

Following the receipt and a review of the Form 42, resulting in an acceptable application, the Aircraft Registry will issue a PtF. It is the Operators responsibility to ensure permission has been obtained from the NAA where the flight is to take place prior to any dispatch.

A PtF will be issued for a maximum time frame of 14 days, and this should be considered when making the application.

The Aircraft Registry reserves the right to survey the aircraft prior to the issue of a PtF.

END CHAPTER 6
Chapter 7: LIGHT AIRCRAFT OWNER MAINTENANCE

The Air Navigation (Isle of Man) Order states that:

"A certificate of release to service is not required to be in force for a private aircraft to which article 24 applies that has a maximum total mass authorised of not more than 2730kg if it flies in the circumstances specified in paragraph (2)."

Paragraph 2:

(2) Those circumstances are:

(a) the only repairs or replacements for which a certificate of release to service is not in force are of such a description as may be prescribed;

(b) such repairs or replacements have been carried out personally by the holder of a pilot’s licence granted or rendered valid under this Order who is the owner or operator of the aircraft;

(c) the person carrying out the repairs or replacements, keeps in the aircraft log book, for the aircraft under article 29, a record that identifies the repairs or replacements and signs and dates the entries;

and

(d) any equipment or parts used in carrying out the repairs or replacements are of a type approved by the Department, either generally or in relation to a class of aircraft or the particular aircraft.

7.1 ANO (Interpretation) describes “replacement”

"Replacement" in respect of a part of an aircraft or its equipment:

(a) includes the removal and replacement of the part whether or not by the same part, and whether or not any work is done on it; but

(b) does not include the removal and replacement of a part that is designed to be removable solely for the purpose of enabling another part to be inspected, repaired, removed or replaced or cargo to be loaded;

7.2 The IOMAR expects that anybody carrying out such pilot maintenance does so only if they are confident that they have the necessary knowledge, skill, tools and facilities to complete the task to a satisfactory standard.

Safety and airworthiness is the prime concern and abuse of these privileges may lead to their limitation.

If you encounter any technical difficulty or you have trouble in understanding the requirements of pilot maintenance then please seek advice from the IOMAR, or an individual validated Engineer.
Ref to Paragraph 2 (a)

7.3 In respect of Article 25 (2) (a) the only repairs or replacements permitted by the owner operator of a private aircraft are as follows;
• Replacement of defective safety wiring or split pins excluding those in engine, transmission, flight control and rotor systems;
• Making simple fabric patches not requiring rib stitching or the removal of structural parts or control surfaces;
• Repairing decorative upholstery and decorative furnishings of the cabin or cockpit;
• Making small simple repairs to fairings, non-structural cover plates, cowlings and small patches and reinforcements not changing the contour so as to interfere with proper air flow;
• Replacing side windows where that work does not interfere with the structure or any operating system such as controls, electrical equipment etc.;
• Replacement of safety belts or safety harness;
• Replacing seats or seat parts with replacement parts approved for the aircraft, not involving disassembly of any primary structure or operating system;
• Replacing bulbs, reflectors, and lenses of position and landing lights;
• Replacing wheels and skis where no weight and balance computation is involved;
• Replacing any cowling not requiring removal of the propeller or disconnection of flight controls;
• Replacing or cleaning spark plugs and setting of spark plug clearance;
• Replacing any hose connection except hydraulic connections;
• Replacing prefabricated fuel lines;
• Replacing self-contained, front instrument panel-mounted navigation and communication devices that employ tray-mounted connectors that connect the unit when the unit is installed into the instrument panel, (excluding automatic flight control systems, transponders, and microwave frequency distance measuring equipment (DME)). The approved unit must be designed to be readily and repeatedly removed and replaced, not require specialist test equipment and pertinent instructions must be provided. Prior to the unit’s intended use, an operational check must be performed;
• Replacement of wings and tail surfaces and controls, the attachment of which are designed for assembly immediately before each flight and dismantled after each flight;
• Replacement of main rotor blades that are designed for removal where specialist tools are not required;
• Replacement of batteries (Including maintenance of lead acid batteries);
• Lubrication of aircraft;
• Changing of engine oil (To include Removal, replacement, cleaning of oil filter).

END CHAPTER 7
Chapter 8: PAINTING OF AIRCRAFT

8.1 Introduction:

The task of painting aircraft can include associated tasks, not just the application of paint itself.

These can, for example, include

- Control surface balance
- Structural inspections (including NDT)
- Panel removal / Refit
- Functions / Operational checks
- Mandatory placards re-application.

Therefore it is evident that a measure of appropriate management has to be exercised by the Operator when considering painting of aircraft, as existing paint removal and application of new paint may not be part of TC Holders instructions.

8.2 Information

Manufacturer’s Instructions MUST be followed, when available or where no such issued instructions exist, an assessment by the Operator (NATR) must be made for impact on airworthiness.

Where specific instructions are provided in approved documentation, for changes to an aircraft surface finish these would be considered maintenance tasks and therefore the task will require a CRS to be made stating the “in accordance with” (IAW) reference.

The Operator (NATR) must always be satisfied of the standard of work being carried out, and therefore should ensure that the actual allocated task of painting is under the direct supervision of an appropriate IOMAR Validated Engineer, IOMAR Authorised person, or AMO, and provide them with the specific work requirement to issue a CRS when the task is complete.

8.3 Potential damage/errors. (Examples only, not exhaustive)

- Preparation for painting:
  Masking and Recording – Pitot/Static, bearings, transparencies.

- Removal of Paint:
  Incorrect tools, chemicals, over aggressive/abrasive practices, Degraded Integrity:
  Scratched/ Scored Metal, reduced fastener material (Rivet heads), Transparency (Crazing, hardening, scratching), Water ingress due pressure washing.

- Post Paint:
  Insufficient blank / masking removal, missing placards, control surface balancing, weigh consideration.

END CHAPTER 8
Chapter 9: OPERATING AN ‘M’ REGISTERED AIRCRAFT WITH A KNOWN DEFECT OR INCOMPLETE MAINTENANCE

9.1 Introduction (previously IN 012)
We have recently received several occurrence reports where Operators have failed to review or manage incomplete maintenance tasks or defects at the end of a maintenance input; the aircraft being released to service without the defect being deferred in accordance with approved data.

We have also noticed an increase with Operators operating Isle of Man Registered aircraft with a known defect outside of the Type Certificate (TC) Holder’s source data, based only on a No Technical Objection (NTO) issued by the TC Holder, and not holding an Isle of Man Aircraft Registry Issued certificate.

In both examples the above actions cancelled the validity of the Certificate of Airworthiness (CoA) and as a result the aircraft was operated in an unairworthy condition; and may have invalidated the aircraft insurance.

9.2 Minimum equipment requirements
The latest issue of Air Navigation (Isle of Man) Order defines the legislation applicable to minimum equipment requirements on Isle of Man registered aircraft.

"An aircraft must not commence a private flight if any of the equipment that must by or under this Order be carried in the circumstances of the intended flight is not carried or is not in a fit condition for use unless the aircraft does so under and in accordance with the terms of a permission granted under paragraph (2) to the operator”.

9.3 Instruction for operating the aircraft with a known defect
The Air Navigation (Isle of Man) Order, allows defects to be deferred in accordance with an Isle of Man approved Minimum Equipment List (MEL). If a defect is outside of the TC Holder’s published source data, including the MEL, then a permission certificate will be required from the Isle of Man Aircraft Registry (IOMAR). An NTO issued by the TC Holder alone does NOT constitute permission to operate the aircraft and is only a supporting document to the issue of a permission certificate by the office of the IOMAR.

9.4 Instruction for incomplete maintenance task following maintenance input
The Operator (NATR) must ensure they are notified of any maintenance tasks which may not be accomplished or defects that have not been rectified; who will ensure the necessary permission or deferment is in place prior to the aircraft being operated. It is not acceptable for the oversight to be discovered once the maintenance organisation provides the completed work pack at a later date. NATR’s would be advised to make this clear to the AMO.

Upon the issue of an IOMAR permission certificate or deferment the C of A will be restored and the aircraft can continue to operate in accordance with the conditions of the relevant permission or MEL.

END CHAPTER 9