MINIMUM EQUIPMENT LIST (MEL)
PREPARATION GUIDE
## Document Change Record

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Section 0  Introduction

Article 35 of the Air Navigation (Isle of Man) Order 2015 (ANO) provides for an aircraft registered in the Isle of Man to be operated with certain equipment inoperative, through the use of an approved Minimum Equipment List (MEL).

To ensure compliance with the ANO in respect of MELs, this Registry Publication (RP) requires that where no Master Minimum Equipment List (MMEL) exists for the aircraft type, or where an existing MMEL refers to non-Isle of Man regulations, aircraft operators should use this MEL Preparation Guide to produce an MEL specific to their aircraft. However, the material in this MEL Preparation Guide should not be used to overwrite the MMEL other than for the purpose(s) described.

The Isle of Man Aircraft Registry recognises that the preparation of an MEL for submission can take a period of time therefore, would consider applications from aircraft operators to use the Master Minimum Equipment List for up to 90 days from date of issue of a Permission.

This time frame allows for the preparation of an MEL, submission to the Isle of Man Aircraft Registry for approval, and any recommended changes, if required, following the review by a Surveyor.

The MMEL Permission, when granted, will be for a limited period, and a copy of Registry Publication 25 Aircraft Operational and Emergency Equipment Checklist and a copy of Schedule 3 Aircraft Equipment and Schedule 4 Radio Communication and Navigation Equipment of Aircraft must be carried and consulted for guidance when the statements such as “Refer to National Requirements” is made in the “Remarks or Exceptions” column of the MMEL.

0.1  MMEL 90 Day Permission Application

Documents required by the Isle of Man Aircraft Registry (IOMAR):

- Form 8a Master Minimum Equipment List (MMEL) 90 Day Permission Application.

- Electronic copy of the front page of the MMEL. IOMAR policy is to accept the MMEL of the State of Type Certificate Data Sheet (TCDS) compliance of the aircraft.

The charge for a 90 Day MMEL Permission will be in accordance with the current Civil Aviation (Charges) Scheme Part 5.

0.2  MEL Permission Application (Refer to Appendix 2)

Documents required by the IOMAR:

- Form 8, Minimum Equipment List Permission Application. Complete all sections of the form, identifying the MEL title and the source document details.

- Electronic copy of the prepared MEL.

- Electronic copy of the MMEL source document. IOMAR policy is to review the MEL against the MMEL from the State of TCDS compliance of the aircraft. If there are extenuating circumstances that may require deviation from this policy, this should be discussed with the IOMAR prior to the MEL preparation.

- Electronic copy of the source Operational and Maintenance (O&M) procedures, which form the basis of the operators O&M procedures.
0.3 Content of the MEL Preparation Guide

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Section 1  Procedures For The Issue Of An MEL

1.1  Foreword

Under the provisions of Article 35 of the ANO, no aircraft registered in the Isle of Man may commence a flight if any of the equipment required by, or under the Order is not carried or is not in a fit condition for use, unless a Permission to do so has been issued by the Isle of Man Aircraft Registry (IOMAR). The IOMAR carries out its obligations under the terms of this Article by authorising the use of MELs. Any such permission will in no circumstances permit operations outside the constraints of the MMEL. In the context of this document, the term ‘MMEL’ should be interpreted to mean MMEL or MMEL Supplement.

The purpose of this RP is to define and explain the policy of the IOMAR in regard to MELs. It provides guidance and specifies the means for an operator to produce procedures and MELs, so that an aircraft with unserviceable equipment may be dispatched in accordance with Article 35. An MEL Permission Process Flowchart is at Appendix 2.

1.2  Introduction

An ANO Article 35 Permission can only be issued if operation with specified unserviceable equipment, meets the requirements of the ANO and, the level of safety achieved is not less than the minimum standard either implied or specified by the aircraft certification basis (defined in the Type Certificate).

The basis of the procedures described in this RP is that each aircraft type with a Maximum Total Mass Authorised (MTMA) exceeding 2730kgs will have a MMEL. The MMEL may be a standalone document or may be an MMEL Supplement to be used in conjunction with a specific MMEL. A MEL should normally be based on the State of Type Certificate holder accepted at initial registration on to the Isle of Man Aircraft Register, unless extenuating circumstances, which would require contact with the IOMAR. Where no MMEL exists for the type, or where an existing MMEL refers to non-Isle of Man Regulations, operators should use this MEL Preparation Guide to produce appropriate MEL material. Operators should note that where no MMEL (or equivalent document) exists, the MEL may only include unserviceabilities as expressly permitted by the ANO or by special limitations and procedures in the approved Flight Manual, or by agreement with the IOMAR and in accordance with this RP.

An MMEL is not an exhaustive list of all equipment items required by law to be carried. An operator may include in a MEL any additional items that are not required to be carried where such entries clarify legal requirements, for example, an operator may choose to specifically identify those items of equipment that are required for RVSM operations, where there are similar items of equipment that are not and for which an alleviation exists. The MMEL will deal with items of equipment which may safely be permitted to be unserviceable under certain conditions. Those items which are essential for safety under all conditions will not necessarily be included.

The MMEL is applicable to an aircraft type but does not take into account the operating circumstances of individual operators of that type; therefore, it cannot in itself be regarded as providing operational permission. In order to establish whether or not it is acceptable to dispatch with particular equipment unserviceable, it will be necessary for each operator to prepare and seek IOMAR agreement to their own MEL. The MEL cannot be less restrictive than the appropriate MMEL and may have to be more restrictive to reflect an individual operator's circumstances and capabilities.

1.3  Production of the MEL and the Permission

1.3.1  Preparation of MEL

An MEL shall be no less restrictive than the MMEL on which it is based. The MEL should indicate the revision status of the MMEL upon which it is based.
The MEL should contain a relevant preamble, definitions and clarifying notes which shall adequately reflect the scope, extent and purpose of the MEL. The preamble should contain procedures for the guidance of flight crews and maintenance personnel using the MEL. An example of an MEL preamble is shown in Appendix 1.

Note: The preamble, notes and definitions in an MEL should not contradict the applicable sections in the MMEL. Appendix 1 is shown as an example only, and should not be used to overwrite definitions in the MMEL.

Operators shall take operational and maintenance procedures referenced in the MMEL into account when preparing an MEL. The procedures themselves, or symbols to indicate them, are required in the operator’s MEL. (See Section 3, 3.5.7 (d) for acceptable means of compliance regarding Operational and Maintenance procedure details).

The MEL shall be appropriately amended, as and when applicable Operational or Maintenance procedures as referenced in the MMEL are revised. Unless specifically permitted, an inoperative item may not be removed from the aircraft.

a) Operational procedures shall be accomplished in planning for and/or operating with the listed item inoperative. Normally these procedures are accomplished by the flight crew; however, other personnel may be qualified and authorised to perform certain functions. The satisfactory accomplishment of all procedures, regardless of who performs them, is the responsibility of the operator.

b) Maintenance procedures shall be accomplished prior to operating with the listed item inoperative. Normally these procedures are accomplished by maintenance personnel; however, other personnel may be qualified and authorised to perform certain functions. The satisfactory accomplishment of all maintenance procedures, regardless of who performs them, is the responsibility of the operator.

Operators must replace MMEL cross-references to non IOMAR regulations with numeric required quantities in the MEL (as identified from within Schedule 3, Aircraft Equipment and Schedule 4 Radio Communication and Radio Navigation Equipment of Aircraft).

1.3.2 MEL Permission

In order to use an MEL, an operator must obtain a Permission from the IOMAR, in accordance with Article 35 of the ANO. The IOMAR will accept an MEL once satisfied that it is in agreement with the applicable MMEL or equivalent document. The charge for the Permission will be in accordance with the current Civil Aviation (Charges) Scheme Part 5.
1.4 Amendments to the MEL & Timescales

When the MMEL is amended so as to become more restrictive, or when the IOMAR requires immediate amendment of the MEL, operators will be allowed 30 days from the date of notification to amend their MEL.

In all other cases, when an MMEL revision is issued, operators will be allowed 90 days from the date of notification to amend their MEL.

Voluntary amendment of the MEL may be carried out as required by the operator, provided the proposed change is no less restrictive than the MMEL.

1.5 Non-Standard Operations

Aircraft are often flown for purposes other than those associated with their most common use. Such non-standard uses may well allow less stringent minimum equipment requirements. Examples of non-standard use may be:

a) Test Flights – after maintenance;

b) Training Flights;

c) Ferry Flights – carrying neither passengers nor freight, to return the aircraft to a place where it can be repaired.

Any reference to a reduction in minimum equipment requirements in an MEL must be clearly labelled as such, together with the type of non-standard flight applicable.

*Note* Such non-standard flights may only be undertaken if the aircraft Flight Manual contains the appropriate procedures and are agreed to by the IOMAR.

1.6 Operations with Multiple Unserviceabilities

In most cases, multiple unserviceabilities of unrelated aircraft systems cannot be addressed by the MMEL or consequently by the MEL. The decision as to whether or not to dispatch with multiple unserviceabilities, which individually would be allowed by the MEL, will ultimately rest with the pilot in command, taking into consideration advice from the Type Certificate Holder where available.

1.7 Rectification Intervals

The operator shall take account of the Rectification Interval given in the MMEL when preparing an MEL. The Rectification Interval in the MEL shall not be less restrictive than the corresponding Rectification Interval in the MMEL.

The operator is responsible for establishing an effective rectification programme that includes tracking of the inoperative items and co-ordinating parts, personnel, facilities and procedures necessary to ensure timely rectification.

Operation of the aircraft is not allowed after expiry of the Rectification Interval specified in the MEL unless the defect has been rectified.

Where the applicable MMEL or MMEL Supplement does not contain Rectification Intervals, all such entries included with the MMEL shall be classified with a Rectification Interval category ‘C’ (relating to 10 calendar days) in the MEL, except where there is an existing repair limit stated within the proviso for a particular MMEL entry. The stated limit will remain in force but the entry should be identified as a category ‘A’ Rectification Interval in the MEL.
Once the applicable MMEL has been revised to include Rectification Intervals, this will supersede the guidance given in the paragraph above, and operators will need to reflect the rectification intervals in their MEL.

1.8 Repair Interval Extension

There is no provision to include a Repair Interval Extension for an existing deferment about to expire within an IOMAR approved MEL.

Therefore should an aircraft require to operate still with the known defect, contact should be made to the IOMAR prior to the expiry with all details for consideration for an Isle of Man Permission to be issued.

1.9 Operations outside the Scope of the MEL

The IOMAR may exempt an operator from compliance with the appropriate MEL on an individual case by case basis, provided such exemption complies with applicable limitations in the MMEL.

Appendix 1 & 2

Appendix 1 – Example MEL Preamble

Appendix 2 – MEL Permission Process Flowchart

Continued:
Appendix 1

Example MEL Preamble

(OPERATOR’S NAME)

MINIMUM EQUIPMENT LIST

(AIRCRAFT TYPE)

PREAMBLE

Note This specimen Preamble is intended only as an example of what is required and operators may, with the agreement of the IOMAR, vary the format and content of their MEL Preambles to suit their own needs and requirements.

Text in blue font is for guidance, and should not appear in the submitted MEL

Text in red font requires the operator to enter the indicated information

1 Introduction

The Minimum Equipment List (MEL) is based on the (Certificating Authority) Master Minimum Equipment List (MMEL) (Revision, dated).

This MEL takes into consideration (the operator’s) particular aircraft equipment, configuration and operational conditions, routes being flown and requirements set by the IOMAR.

This MEL will not deviate from any applicable Airworthiness Directive or any other Mandatory Requirement and will be no less restrictive than the MMEL.

The MEL is intended to permit operations with inoperative items of equipment for a period of time until rectification can be accomplished.

Rectification is to be accomplished at the earliest opportunity.

MEL Conditions and Limitations do not relieve the Commander from determining that the aircraft is in a fit condition for safe operation with specified unserviceabilities allowed by the MEL.

The provisions of the MEL are applicable until the aircraft commences the flight.

Any decision to continue a flight following a failure or unserviceability which becomes apparent after the commencement of a flight must be the subject of pilot judgement and good airmanship. The Commander may continue to make reference to and use of the MEL as appropriate.

By approving the MEL, the IOMAR permits dispatch of the aircraft for flight with certain items or components inoperative provided an acceptable level of safety is maintained by use of appropriate operational or maintenance procedures, by transfer of the function to another operating component, or by reference to other instruments or components providing the required information.
2 Contents of MEL

The MEL contains only those items required by operating regulations or those items of airworthiness significance which may be inoperative prior to dispatch, provided that appropriate limitations and procedures are observed. Equipment obviously basic to aircraft airworthiness such as wings, rudders, flaps, engines, landing gear, etc. are not listed and must be operative for all flights.

It is important to note that:

ALL ITEMS WHICH ARE RELATED TO THE AIRWORTHINESS OF THE AIRCRAFT AND ARE NOT INCLUDED ON THE LIST ARE AUTOMATICALLY REQUIRED TO BE OPERATIVE.

3 Criteria for Dispatch

The decision of the Commander of the flight to have allowable inoperative items corrected prior to flight will take precedence over the provisions contained in the MEL. The Commander may request requirements above the minimum listed whenever, in his judgement, such added equipment is essential to the safety of a particular flight under the special conditions prevailing at the time.

The MEL cannot take into account all multiple unserviceabilities. Therefore, before dispatching an aircraft with multiple MEL items inoperative, it must be assured that any interface or inter-relationship between inoperative items will not result in degradation in the level of safety and/or an undue increase in crew workload. It is particularly in this area of multiple discrepancies and especially discrepancies in related systems that good judgement – based on the circumstances of the case, including climatic and en-route conditions – must be used.

4 Maintenance Action

Every effort shall be made by Maintenance to correct all technical defects as early as practicable and that the aircraft is released from a maintenance station in fully operational condition. The Commander must be informed by Maintenance as soon as practicable, should it be impossible to rectify the inoperative item prior to departure.

Whenever an aircraft is released by Maintenance for dispatch with items inoperative, the following is required:

a) The log book, or equivalent, aboard the aircraft must contain a detailed description of the inoperative item(s), special advice to the flight crew, if necessary, and information about corrective action taken.

b) When they are accessible to the crew in flight, the control(s), and/or indicator(s) related to inoperative unit(s) or component(s) must be clearly placarded.

c) If inadvertent operation could produce a hazard, such equipment must be rendered inoperative (physically) as given in the appropriate maintenance procedure.

d) The relevant operational and maintenance procedures are contained in (identify the particular Manual, Section, Chapter or Part etc.).
5  Rectification Intervals

Inoperative items or components, deferred in accordance with the MEL, must be rectified at or prior to the Rectification Intervals established by the following letter designators given in the 'Rectification Interval Category' column of the MEL.

Category A

Items in this category shall be rectified within the limitations specified in the MEL entry, commencing at 00:01 on the day following discovery for those items specified in calendar days.

Category B

Items in this category shall be rectified within three (3) consecutive calendar days, excluding the day of discovery.

Category C

Items in this category shall be rectified within ten (10) consecutive calendar days, excluding the day of discovery.

Category D

Items in this category shall be rectified within one hundred and twenty (120) consecutive calendar days, excluding the day of discovery.

6  Definitions

For the purpose of this MEL the following definitions shall apply:

'Combustible Material’ is material which is capable of catching fire and burning.

'Commencement of flight’ is the point when an aircraft begins to move under its own power for the purpose of preparing for take-off.

'Dash’ (-) indicates a variable quantity.

Note:  The operator’s MEL should list the number appropriate to the particular aircraft.

'Day operation’ is any flight conducted from the point of take-off to landing between 30 minutes before sunrise and 30 minutes after sunset being determined at surface level, both times exclusive.

'Icing Condition’ the atmospheric environment is such that ice can form on the aircraft or engine(s).

'Inoperative’ means that the equipment does not accomplish its intended purpose or is not consistently functioning within its design operating limits or tolerances. Some systems have been designed to be fault tolerant and are monitored by digital computers which transmit fault messages to a centralised computer for the purpose of maintenance. The presence of this category of message does not mean that the system is inoperative.

'Visual Meteorological Conditions’ (VMC) means weather permitting flight in accordance with the Visual Flight Rules, as defined in the Rules of the Air Regulations.

Note  This is not an exhaustive list and operators should include in their MELs any definition which is considered to be relevant.
7 Centralised Message Systems (if appropriate)

The aircraft is equipped with a system (such as ECAM/EICAS) which provides different levels of systems information messages (Warning, Caution, Advisory, Status, Maintenance etc.). Any aircraft discrepancy message that affects dispatch will normally be at status message level or higher. Therefore, system conditions that result only in a Maintenance Message are not normally addressed in the MEL as they, in themselves, do not prohibit dispatch of the aircraft. However, maintenance discrepancy messages must be recorded and corrected in accordance with the approved maintenance programme.

8 Operations outside the Scope of the MEL

In exceptional circumstances, the IOMAR may exempt [operator’s name] from compliance with the MEL on an individual case by case basis, provided such exemption complies with the applicable limitations in the MMEL.

9 Ferry Flights

Ferry flights are flights carrying neither passengers nor freight, for the purpose of returning the aircraft to a place where it can be repaired. These flights may be dispatched with less than the equipment specified in the MEL, provided all the equipment expected to be utilised in flight is operable and any relevant Sections of the Flight Manual are applied. Permission for such a flight, however, must be granted by the IOMAR before the flight takes place and also permission from all states which are to be overflown and the state in which the aircraft lands will be required prior to flight.
Appendix 2

MEL Permission Process Flowchart

Does the MEL or MEL amendment include all of the following?
- MMEL Status information
- Preamble
- Notes and Definitions

Submit to IOMAR by email, copies of the MEL (or MEL amendment) MMEL, MEL Permission application form, Source O&M Procedures, e.g. DDG (as applicable)

Operator amends documentation as required

Is MEL or MEL amendment acceptable to the IOMAR?

The IOMAR will add the MEL Permission to the Ops Spec certificate and email the revised certificate to the Operator documents will follow in the post.
Section 2    General Principles For The Development Of An MEL

2.1    Introduction

This MEL Preparation Guide should be used in conjunction with the approved MMEL for the aircraft type. If no MMEL exists, the content of this Guidance Document may be used to develop an MEL, subject to the agreement of the IOMAR.

Aircraft owners should develop their MEL using the following principles:

a) The provisions of the approved MMEL should be used as the basis for their MEL;

b) The MEL may not be less restrictive than the MMEL;

c) The content of the MEL should take into consideration the owners aeroplane equipment, configuration and operational conditions, routes being flown and the requirements of the IOMAR;

d) The MEL may not deviate from any applicable Airworthiness Directive or any other Mandatory Requirement.

The material provided in this MEL Preparation Guide is intended to be generic and is not system (equipment or installation) specific. Therefore the (O) and (M) references are also generic and are included as they may apply to certain cases. It is the responsibility of the aircraft operator to determine the applicability of (O) and (M) references when establishing their MEL. This principle is also applicable in the absence of (O) and/or (M) references.

The flow diagram in Appendix 3 overleaf, explains how to use the MEL Preparation Guide when preparing an MEL.

2.2    MEL Format and Content

The format of the MEL should follow that of the MMEL and the preamble provided in Appendix 1 should be used. The logical sequence of the material in this Guidance Document is based upon the ATA 2200 classification.

Appendix 3 - Flow Diagram for the use of RP 6 when preparing an MEL.

Continued:
Appendix 3

Flow diagram for the use of RP 6 when preparing an MEL

Note 1: All items related to the airworthiness of the aeroplane and not included in the list, are required to be operative.

Note 2: All other items must be operative unless alleviation is provided in the MMEL or this Guidance Document.

Note 3: Equipment obviously not required for the continued safe operation of the aeroplane may not be listed. Aircraft owners should establish an effective decision making process for failures that are not listed to determine if they are related to airworthiness and required for safe operation.

Note 4: Reference to operating requirements, regardless of the regulatory system quoted, should be read as those requirements specified in the Air Navigation (Isle of Man) Order 2015 Articles, Schedules and Regulations.
Section 3  MEL procedures

3.1  Introduction

3.1.1  Dispatch with Inoperative Equipment

The MMEL and associated MEL are alleviating documents. Their purpose is not, however, to encourage the operation of aircraft with inoperative equipment. It is undesirable for aircraft to be dispatched with inoperative equipment and such operations are permitted only as a result of careful analysis of each item to ensure that the acceptable level of safety is maintained. A fundamental consideration is that the continued safe operation of an aircraft in this condition should be minimized. The limitations governing rectification intervals are discussed later in this document.

The pilot in command retains the option to decline the use of MEL alleviations, and may elect not to operate the aircraft with any particular MEL item inoperative.

3.1.2  Legal Basis

The Air Navigation (Isle of Man) Order 2015 provides for the operation of an aircraft with certain equipment inoperative, through the use of an approved MEL. Where an MMEL has been established for a particular type of aircraft, an MEL shall not be approved for that type of aircraft unless it complies with the minimum requirements specified in the accepted MMEL. The IOMAR will determine the acceptability of an MMEL approved by the State of TCDS compliance as the appropriate MMEL for aircraft under its jurisdiction.

3.1.3  Equipment Included in the MMEL/MEL

Most aircraft are designed and certified with a significant amount of equipment redundancy, such that the airworthiness requirements are satisfied by a substantial margin. Additionally, aircraft are generally fitted with equipment that is not required for safe operation under all operating conditions, e.g. instrument lighting in day VMC. Other equipment such as entertainment systems or galley equipment may be installed for passenger convenience. If this non-safety related equipment does not affect the continued airworthiness or safe operation of the aircraft when inoperative, it need not be listed in the MMEL/MEL or be given a rectification interval. However, if the non-safety related equipment has another function related to safety (such as use of the entertainment system for passenger briefings) then this item must be included in the MMEL/MEL with an appropriate rectification interval – see paragraph 3.4.2.

It follows that all items related to the continued airworthiness of the aircraft and not included in the MMEL are automatically required to be operative prior to flight.

3.2  MEL Policy and Procedures

3.2.1  MEL Purpose

The MEL is a joint operations and maintenance document prepared by an aircraft operator to:

a) Identify the minimum equipment and conditions for an aircraft to maintain the validity of the Certificate of Airworthiness in force and to meet the operating rules for the intended flight;

b) Define operational and maintenance procedures necessary to maintain an acceptable level of safety and to deal with inoperative equipment.
3.2.2 MEL Definition

While the MMEL is for an aircraft type, the MEL is tailored to a specific IoM registered aircraft and it's operating environment and may be dependent upon the route structure, geographic location, and number of airports where spares and maintenance capability are available etc. The MMEL cannot address these individual variables, or standard terms such as "As required by Operational Requirements". It is for this reason that an MMEL will not normally be accepted by the IOMAR as a substitute for the MEL. It is the responsibility of the aircraft operator to develop appropriate "(O)" and maintenance "(M)" procedures, or to use documents issued by the Type Certificate Holder, such as a Dispatch Deviations Guide, where these documents are available.

3.2.3 MEL Intent

Except as permitted by the IOMAR in accordance with the ANO, operation of an aircraft with aircraft equipment inoperative or removed is prohibited, unless an aircraft operator does so in compliance with an approved MEL.

3.3 Administrative Procedures

3.3.1 MMEL Acquisition

The aircraft operator must ensure that they use the latest version of the appropriate MMEL to develop their MEL. The latest MMEL’s and any associated Supplements are often available for viewing or downloading from the website of a contracting state Regulatory Authority (usually that of the Type Certificating Authority). Alternatively, aircraft operator may obtain an MMEL directly from the Type Certificate Holder, along with a revision service on a commercial basis.

3.3.2 Operator MEL Development

The aircraft operator should develop their MEL and all subsequent amendments, as a joint operations and maintenance project, based on the current MMEL revision.

3.4 Conformance with the MMEL

3.4.1 MEL Content

a) An aircraft operator’s MEL must reflect the current limitations in the applicable MMEL or associated Supplement. When a revision is issued to a MMEL or associated Supplement, the aircraft operator MEL need not be revised if the change is less restrictive than the existing MEL.

b) Except as noted above, the aircraft operator’s MEL shall be revised to reflect the most recent approved version of the MMEL or MMEL Supplement within 90 days of receipt.

3.4.2 Non-Safety Related Equipment

Non-safety related equipment includes those items related to the convenience, comfort, or entertainment of passengers. They may include items such as galley equipment, entertainment system, ashtrays, stereo equipment, and overhead reading lamps. Non-safety related equipment must not have an effect on the continued airworthiness or safe operation of the aircraft. This equipment does not require a rectification interval and need not be listed in an operator’s MEL if it is not addressed in the MMEL. If an aircraft owner chooses to list this equipment in the MEL, it may be given a ‘D’ Category rectification interval. The exceptions to this rule are:
a) Where non-safety related equipment serves a second function, such as entertainment system being used for passenger briefings, aircraft owners must develop and include operational contingency procedures in the MEL in case of an equipment malfunction.

b) Where non-safety related equipment is part of another aircraft system, for example the electrical system, procedures must be developed and included in the MEL for deactivating and securing in case of malfunction.

In these cases, the item must be listed in the MEL, with compensating provisions and deactivation instructions if applicable. The rectification interval will be dependent on the secondary function of the item and the extent of its effect on other systems.

3.5 MEL Development Procedures

3.5.1 MEL Basic Format

The MEL should include the following: a List of Effective Pages, a Table of Contents, the Preamble, Notes and Definitions, a section for each aircraft system, and amendment record page. The Preamble and Definitions shall be based upon, but no less restrictive than, the relevant MMEL. Aircraft owners must specify the revision status of the MMEL and MMEL Supplement, and any other documents such as a Dispatch Deviations Guide, used in the development of their MEL.

3.5.2 MEL Page Format

It is recommended that the MEL page format should follow the normal MMEL page format of five columns. The page numbering and individual MEL items should be in accordance with the ATA 2200 code system. MEL format is at the discretion of the aircraft operator, provided that it is clear and unambiguous.

3.5.3 List of Effective Pages

A List of Effective Pages (LEP) will be used to ensure that each MEL is up-to-date. It must list the date of the last amendment for each page of the MEL. The date and revision status of each page of the MEL must correspond to that shown on the List of Effective Pages.

3.5.4 Table of Contents

The Table of Contents page should list the section for each aircraft system using the ATA 2200 listing as found in the MMEL. Pages should be numbered with the ATA system number followed by the item number for that system (e.g., the page following 27-2-1 would be 27-2-2).

3.5.5 MEL Preamble

The purpose of the MEL Preamble is to provide direction on its philosophy and use of the MEL. An example MEL preamble for use by an aircraft operator is shown in Appendix 1. Aircraft operators may develop their own preamble, but it should contain at least the information described in Appendix 1.

3.5.6 Notes and Definitions

Notes and Definitions are required to allow the user to interpret the MEL properly. An example of Notes and Definitions can be found in Appendix 1. Additions and deletions to the Notes and Definitions may be applied to the aircraft owners MEL as required.
3.5.7 Operational and Maintenance Procedures

a) Dispatch with inoperative items is often acceptable only with the creation of special operational or maintenance procedures. Where the MMEL indicates that this is the case, the aircraft owner must establish appropriate procedures.

b) Procedures recommended by the Type Certificate Holder in most cases can be adopted for this purpose, but the ultimate responsibility for providing acceptable procedures with the MEL rests with the aircraft operator. These procedures will ensure that an acceptable level of safety will be maintained. The Type Certificate Holder is required to produce operational and maintenance procedures such as Dispatch Deviation Guides, for use by aircraft operators. These procedures may be inserted into the appropriate MEL pages, and submitted by the aircraft operator to form part of the MEL. Dispatch Deviation Guides, and other similar documents are not approved by the IOMAR, nor can they replace the MEL. If the Type Certificate Holder has not published operational or maintenance procedures, the aircraft owner should develop appropriate procedures and, if requested, submit them to the IOMAR.

c) Aircraft operators, when comparing their MEL against the MMEL, should ensure that where the (O) or (M) symbols appear, an operational or maintenance procedure has been developed that provides clear direction to crewmembers and maintenance personnel of the action to be taken. This procedure should be included in the MEL;

d) Alternatively, when the procedure is already contained in another document that is routinely available; e.g. elsewhere in the Operator’s Manuals for “(O)” procedures or the Maintenance Manual for “(M)” procedures, the MEL may refer to a section of the appropriate document;

e) Other than the examples c) and d), it is not acceptable to only make reference to other documents, as these may not be carried on board the aircraft and could be subject to misinterpretation. The objective is to provide personnel with clear, concise direction on how they are to proceed. Where the MMEL column 5 states, "as required by Operating Requirements" or “as per National Regulations”, this wording must not appear in the MEL; instead the content should be developed in consideration of the equipment requirements of Schedule 3 Aircraft Equipment and Schedule 4 Radio Communication and Radio Navigation Equipment of Aircraft of the Air Navigation (Isle of Man) Order 2015..

3.6 Rectification Interval Categories

The maximum time an aircraft may be operated between the deferral of an inoperative item and its rectification must be specified in the MEL. Non-safety related equipment such as reading lights and entertainment units need not be listed. However, if they are listed, they must include a rectification interval category. These items may be given a ’D’ Category rectification interval provided any applicable (M) procedure (in the case of electrically supplied items) is applied – see paragraph 3.4.2.

The Rectification Interval Categories are defined as follows:

Category A

No standard interval is specified, however, items in this category shall be rectified in accordance with the conditions stated in the MEL. Whenever the time interval is specified in calendar days, it shall start at 00:01 on the day following the day of discovery.

Category B

Items in this category shall be rectified within three (3) consecutive calendar days, excluding the day of discovery.
**Category C**

Items in this category shall be rectified within ten (10) consecutive calendar days, excluding the day of discovery.

**Category D**

Items in this category shall be rectified as soon as is reasonably practical but within one hundred and twenty (120) consecutive calendar days, excluding the day of discovery.

### 3.7 Deferral of Items

Procedures for the deferral and management of MEL items should be included in the aircraft operators Technical Log or equivalent document. The aircraft owner should ensure these procedures are referenced in the MEL.

#### 3.7.1 Requirements

These procedures comprise a method for:

- a) Recording deferral, transfer and/or rectification of inoperative equipment;
- b) Placarding requirements as per the MEL;
- c) Dispatching of an aircraft with deferred MEL item(s);
- d) Using a remote deferral system (if applicable);
- e) Controlling categorised times; and
- f) Training of personnel who are responsible for MEL compliance procedures.

#### 3.7.2 Review of Deferred Items

The operator of an aircraft registered in the Isle of Man should ensure that any deferred items are periodically reviewed to ensure that any accumulation of deferred defects neither conflict with each other nor create an unacceptable increase in pilot workload. Notwithstanding the categorization of item rectification intervals, it should be the aim of aircraft operators to ensure that inoperative items are repaired as quickly as possible. It is the policy of the IOMAR that optional inoperative equipment should be rectified or removed from an aircraft.

### 3.8 Placarding

Inoperative items should be placarded to inform crewmembers of equipment condition as appropriate. When they are accessible to the crew in flight, the control(s), and/or indicator(s) related to inoperative unit(s) or component(s) should be clearly placarded.

Though the MEL for some items may require specific wording, the majority of items leave the placard wording and location to be determined by the aircraft operator.

The aircraft operator shall provide the capability and instructions to the pilot in command to ensure that the placard is in place prior to the aircraft being dispatched.

**Note** Some MMEL’s indicate the need for a placard through the use of an asterisk. However, the exclusion of an asterisk in a MMEL does not preclude the requirement for placarding.
3.8.1 Requirements to Placard/Placard Control

Placarding should be carried out in accordance with the placarding procedures established and set out in the aircraft operator’s technical log or equivalent document. The method of placarding should ensure that all inoperative items are placarded and that placards are removed and accounted for when the defect is cleared.

The defective equipment/system shall be placarded so as to inform the pilot in command of the inoperative condition(s) of the item. To the extent practicable, placards must be located as indicated in the MEL, or adjacent to the control or indicator affected.

3.8.2 Placard Criteria

Where possible placards should be self-adhesive and contain sufficient information about the defect such that the pilot in command clearly understands the effect of the defect on the aircraft’s continued safe operation.

3.8.3 Multiple Placards

If more than one placard is required for an MEL item, aircraft operators should ensure that all placards are removed when the defect is cleared.

3.8.4 Temporary Placards

The pilot in command may install a temporary placard as required by the MEL thereby enabling the aircraft to continue to a location where the defect may be rectified or be re-deferred in accordance with the deferral system.

3.9 Dispatch

"Dispatch" for the purpose of the MEL/MMEL refers to the commencement of flight, which is defined as “the point when an aircraft begins to move under its own power for the purpose of preparing for take-off.” In the case of a helicopter, it refers to the moment the helicopter commences air or ground taxi. The MEL is approved on the basis that equipment will be operative for flight unless the appropriate MEL procedures have been carried out.

The MEL should include procedures to deal with any failures which occur between the start of taxi or push back and take-off brake release. Any failure which occurs after take-off commences should be dealt with as an in-flight failure, by reference to the appropriate section of the Aircraft Flight Manual or Operating Manual, as necessary.

3.9.1 Operational and Maintenance Items

a) Any item of equipment in the MEL which, when inoperative, would require an operational or maintenance procedure to ensure an acceptable level of safety should be so identified in the "remarks" or "exceptions" column of the MEL. This will normally be "(O)" for an operational procedure, or "(M)" for a maintenance procedure. (O)(M) means both operational and maintenance procedures are required.

b) (O) Items

1. Aircraft with inoperative equipment requiring an operational procedure may continue in service following completion of the required MEL procedure for deferral.

2. Operational procedures are normally carried out by the operating crew but may be accomplished by other competent personnel.
c) (M) Items

1. Aircraft with inoperative equipment requiring a maintenance procedure may continue in service following completion of the required MEL procedure for deferral.

2. Maintenance procedures are normally accomplished by maintenance personnel, but some elementary maintenance tasks may be carried out by crew members or other qualified personnel.

3.10 Training

3.10.1 Familiarisation Programme — Ground Personnel

Aircraft operators must ensure that when utilising the services of ground personnel, they are familiarised with the MEL when appropriate including placarding inoperative equipment, deferral procedures, aircraft dispatch and any MEL related procedures.

3.10.2 Familiarisation Programme — Pilot in Command

Aircraft operators must ensure that the pilot in command is familiar in the use of his MEL with particular regard to pilot in command responsibilities.
Section 4: Frequently Asked Questions (FAQ's)

1. **What documents do I need to submit with my MEL application?**

   Form 8, MEL Permission Application
   
   Electronic copy of the prepared MEL, including O&M Procedures.
   
   Electronic copy of the source MMEL
   
   Electronic copy of the source O&M Procedures (e.g. Dispatch Deviation Guide)

2. **How long will my MEL take to assess?**

   All MEL submissions will be assessed within 20 working days from our receipt of fully completed applications and supporting documentation.

3. **Can I operate my aircraft using the MMEL?**

   The Isle of Man Aircraft Registry recognises that the preparation of an MEL for submission can take a period of time, and therefore would consider applications from aircraft operators to use the Master Minimum Equipment List in conjunction with Schedule 3 Aircraft Equipment and Schedule 4 Radio Communication and Radio Navigation Equipment of Aircraft of the Air Navigation (Isle of Man) Order 2015 for up to 90 days from date of issue of a Permission.

4. **What documents do I need to submit with my MMEL application?**

   Form 8a, MMEL 90 Day Permission Application
   
   Electronic copy of the front page of the MMEL

5. **Can a 90 day MMEL Permission be extended?**

   The 90 day period is deemed to be adequate for an operator to develop and submit an MEL for approval, extensions are not available.

6. **What Source MMEL should be used for the basis of the MEL?**

   The MEL should be based on the current MMEL from the State of TCDS compliance unless there are extenuating circumstances, which would require contact with the IOMAR.

7. **Do I need to advise the Registry of an MEL amendment?**

   Amendments to MEL’s, as detailed in RP6 Section 1 Page 8, do not need to be sent to the IOMAR for approval. When an MEL Permission is issued, this indicates that the document is to the required standard, and also that the operator has demonstrated the required competency, therefore continued revision updates are not required to be sent to the IOMAR. The MEL may be checked by the surveyor during the annual aircraft survey.

8. **What are the required timescales for amendments?**

   When the MMEL is amended so as to become more restrictive, or when the IOMAR requires immediate amendment of the MEL, operators will be allowed 30 days from the date of notification to amend their MEL.

   In all other cases, when an MMEL revision is issued, operators will be allowed 90 days from the date of notification to amend their MEL.
Voluntary amendment of the MEL may be carried out as required by the operator, provided the proposed change is no less restrictive than the MMEL.

9. Are Repair Interval Extensions permitted?

Rectification Interval Extensions are not permitted, any reference to them should be removed from the submitted MEL. Should an extension be required to an approved deferment limit, contact should be made to the IOMAR with all details for consideration to extend the period of deferment.

10. Can more than one aircraft be approved in an MEL?

An IOMAR MEL can only be approved for a single aircraft registration.

11 The MMEL does not contain a rectification interval

Where the applicable MMEL does not contain Rectification Intervals, all entries included within the MMEL shall be classified with a rectification Interval category ‘C’ (relating to 10 calendar days) in the MEL except where there is an existing repair limit stated within the proviso for a particular MMEL entry.

12. Can an MEL item be deferred following a Base Maintenance input?

Every effort shall be made by Maintenance to correct all technical defects as early as practicable and that the aircraft is released from a maintenance station in fully operational condition. The Commander must be informed by Maintenance as soon as practicable, should it be impossible to rectify the inoperative item prior to departure, the commander in consultation with the NATR may decide that the MEL can be utilised to release the aircraft to service.

13. Can I include Configuration Deviation Limitations (CDL) in my MEL?

You should not include any part or structural component of the aircraft, or the applicable limitations of the CDL within the body of the MEL as developed from the MMEL.
Section 5: Common Items Encountered During Assessment Of The MEL

1. The MEL submission is incomplete

The assessment of the submitted MEL can only take place following receipt of the fully completed application and supporting documentation. Please refer to Section 4 FAQ No.1 for documents required to be submitted.

2. The MEL Preamble does not reflect the intent of RP6 Appendix 1

The MEL Preamble should follow the example offered in Appendix 1. Deviation from the format is acceptable provided the spirit of the intent is met.

Note: The Preamble, notes and definitions in the MEL should not contradict the applicable sections in the MMEL. The Preamble in RP6 Appendix 1 should not be used to overwrite definitions in the MMEL.

3. The Preamble editable fields are not complete

There are numerous entries (indicated in red) throughout the Appendix 1 Preamble that require the operator to enter specific details; these entries must be complete as appropriate.

Notes, in the preamble (indicated in blue) should be observed, but the wording should not feature in the MEL.

4. The MEL refers to other National Aviation Authority Regulations

Where the MMEL refers to other NAA regulations, these should be changed in the submitted MEL to refer to Isle of Man requirements contained in the Air Navigation (Isle of Man) Order 2015 Articles, Schedules and Regulations.

5. The MEL does not take into account Schedule 3 Aircraft Equipment and Schedule 4, Radio Communication and Radio Navigation Equipment of Aircraft of the Air Navigation (Isle of Man) Order 2015 requirements

We require the operator to use the Isle of Man legislation, RP 25 Operational and Emergency Equipment and guidance material to identify specific numbers of equipment and the conditions when they are required.

The legislation, ‘Air Navigation (Isle of Man) Order 2015’, can be found at ‘legislation’.

Where the MMEL column 5 states, “As per National Regulations”, or “Any in excess of those required”, or similar statements, this wording must not appear in the MEL; instead, the content should be developed in consideration of the equipment requirements of Schedule 3 Aircraft Equipment and Schedule 4 Radio Communication and Radio Navigation Equipment of Aircraft of the Air Navigation (Isle of Man) Order 2015.

For example: An automatic ELT would be required to be carried when at a distance of more than 10 minutes flying time at normal cruising speed away from land suitable for making an emergency landing, or when flying over areas which have been designated by the State concerned as areas in which search and rescue would be especially difficult. (Schedule 3 Aircraft Equipment Scale KK refers).

Note: The applicable The Air Navigation (Isle of Man) Order 2015 requirement (as per the example above) is required to be stated in the MEL, it would not be acceptable to only state the regulation reference.
The Air Navigation (Isle of Man) Order 2015 does not state the deferral limitation of inoperative equipment such as ELT, CVR, FDR; therefore the operator may refer to EASA CS MMEL Master Minimum Equipment List for guidance.

For example: The ELT is a Repair Interval ‘A’ item, subject to carriage under Schedule 3 Aircraft Equipment Scale KK as noted above, however if not flying in those conditions the ELT may for instance be ‘inoperative provided repairs are made within 6 further flights or 25 flying hours, whichever occurs first’.

6. The MEL uses references to other documents which may not be on board

The IOM approved MEL is intended to be a single source document to provide personnel with clear, concise direction. It would not be acceptable to make reference to other documents as these may not be carried on board or could be subject to misinterpretation.

Note: It is acceptable to make reference in the MEL to O&M Procedures which are already contained in another document that is routinely available; e.g. elsewhere in the Operators Manuals for ‘O’ procedures or the Maintenance Manual for ‘M’ procedures.

7. The MEL has not been customised to the aircraft

The MEL must take into consideration the particular aircraft equipment and configuration.

For example:

a) The ‘number installed’ and/or ‘number required for dispatch’ must be stated where appropriate.

b) Where optional items i.e. Service Bulletin/Modifications are referenced in the MMEL for the generic aircraft type, only the appropriate entries, which reflect the actual modification status, are required to be included in the aircraft MEL.

c) Where the MMEL and/or TC holders source O&M procedures require the operator to develop ‘Alternate Procedures’ these must be developed and included in the operators MEL or O&M procedure.