



Public Authority for Civil Aviation

CAR-MEL

Civil Aviation Regulation

Minimum Equipment List

Effective: 1STDecember 2019

Approved by: HE Dr. Mohamed bin Nasser Al-Zaabi (CEO)

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FOREWORD

- (1) This CAR-MEL establishes MEL regulatory requirements for Omani operators, provides relevant information to the public and clarifies the rules regarding the MMEL as the PACA at this point in time is not approving the MMEL but is accepting the approved MMEL from the State of Design.
- (2) Where there is a contradiction between MEL procedures in the organization manuals such as Operations Manual and Continuing Airworthiness Management Exposition contradict the procedures contained in the MEL Preamble, then the latter shall prevail.
- (3) The MEL shall be based upon the manufacturer's MMEL which has been approved by the State of Design and recognized by the PACA. (e.g. Boeing MMEL approved by FAA, Airbus MMEL approved by EASA). Notwithstanding paragraph (1), exception would be Embraer MMEL where the approval by the Brazilian Authority is not accepted by the PACA and EASA's approved MMEL would be acceptable.
- (4) This CAR shall enter into force on the 1st of December 2019. A transition period will be accepted up to 30th of November 2019 with regards to CAR MEL.009 (a) for initial MEL approvals and for amendments.
- (5) The editing practices used in this document are as follows:
 - (a) 'Shall' is used to indicate a mandatory requirement and may appear in CARs.
 - (b) 'Should' is used to indicate a recommendation
 - (c) 'May' is used to indicate discretion by the Authority, or the industry as appropriate.
 - (d) 'Will' indicates a mandatory requirement and is used to advise of action incumbent on the Public Authority for Civil Aviation (PACA).

Note: The use of the male gender implies the female gender and vice versa.

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SUBPART A - GENERAL

Article 1

Objectives and scope

- (1) This regulation establishes procedures for ensuring the compliance of standards and requirements in applying for a Minimum Equipment List (MEL) in pursuant of the enabling Law, for the time being enforce.
- (2) The provision in this Regulation shall be applied to operator registered in the Sultanate of Oman.
- (3) This Regulation shall be known as CAR – MEL, and prescribes the requirement for establishing a Minimum Equipment List.

Article 2

Definitions

For the purpose of this CAR the following specific definitions shall apply and all the other definitions are included in CAR-1:

Definitions for the purpose of this MEL:

‘Alternate procedures are established and used’ or similar statement, shall be taken to mean that alternate procedures (if applicable) to the affected process must be drawn up by the operator as part of the MEL approval process, so that they have been established before the MEL document has been approved. Such alternate procedures are normally included in the associated operations (O) procedure and/or an acceptable reference document.

‘Any in excess of those required by regulations’ means that the item required by applicable legislation (e.g. CAR OPS-1 or applicable airspace requirements) must be operative and only excess equipment may be inoperative. When the item is not required, it may be inoperative for the time specified by its rectification interval category. Whenever this condition is used in the MMEL, the applicable regulations for the intended routes and the resulting dispatching restrictions need to be clarified at operator’s MEL level.

‘Authority’ means Public Authority for Civil Aviation (PACA).

‘Calendar day’: means a twenty-four (24) hour period from midnight to midnight based on either UTC or local time, as selected by the operator. All calendar days are considered to run consecutively.

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

‘Considered inoperative’, as used in the dispatch conditions, means that the item must be treated for dispatch, taxi and flight purposes as though it were inoperative. The item shall not be used or operated until the original deferred item is repaired. Additional actions include documenting the item on the dispatch release (if applicable), placarding, and complying with all remarks, exceptions, and related MEL provisions, including any (M) and (O) procedures and observing the rectification interval.

‘Daylight’ corresponds to the period between the beginning of morning civil twilight and the end of evening civil twilight relevant to the local aeronautical airspace; or such other period, as maybe prescribed by the appropriate authority.

‘Day of discovery’ means the calendar day that a malfunction was recorded in the aircraft maintenance record/logbook.

‘Deactivated and secured’ means that the specified item must be put into an acceptable condition for safe flight.

‘Item’ means equipment, system, component or function.

‘Icing conditions’ means an atmospheric environment that may cause ice to form on the aircraft or in the engine(s) as defined in the AFM. In the absence of any AFM limitations, icing conditions should be taken as visible moisture or precipitation, when the OAT is less than +5°C.

‘If installed’ means that the item is either optional or is not required to be installed on all aircrafts covered by the MEL.

‘Inoperative’ means that the item does not accomplish its intended purpose or is not consistently functioning within its approved operating limits or tolerances.

‘Is not used’ in the dispatch conditions, remarks or exceptions for an MEL item may specify that another item relieved in the MEL ‘is not used’. In such cases, crew members should not activate, actuate, or otherwise utilize that item under normal operations. It is not necessary for the operators to accomplish the (M) procedures associated with the item. However, operations related provisions, (O) procedures and rectification interval must be complied with. An additional placard must be affixed, to the extent practical, adjacent to the control or indicator for the item that is not used to inform crew members that an item is not to be used under normal operations.

‘Master Minimum Equipment List (MMEL)’ means a list established for a particular aircraft type by the organization responsible for the type design with the approval of the State of Design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures.

‘Minimum Equipment List (MEL)’ means a list which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the MMEL established for the aircraft type.

‘Visible moisture’ means an atmospheric environment containing water in any form that can be seen in natural or artificial light; for example, clouds, fog, rain, sleet, hail, or snow.

‘Non-Essential Equipment & Furnishings (NEF)’: those items installed on the aircraft as part of the original certification, supplemental type certificate, or engineering order that have no effect on the safe operation of flight and would not be required by the applicable certification rules or operational rules.

Article 3

Abbreviations

AFM:	Aircraft Flight Manual
AMO:	Approved Maintenance Organization
AWI:	Airworthiness Inspector
BFE:	Buyer Furnished Equipment
CARs:	Civil Aviation Regulations
CDL:	Configuration Deviation List
DDG:	Dispatch Deviation Guide
DDPG:	Dispatch Deviation Procedures Guide
ETOPS:	Extended Range Twin Operations
FOI:	Flight Operations Inspector
IFR:	Instrument Flight Rules
IMC:	Instrument Meteorological Conditions
MEL:	Minimum Equipment List
MMEL:	Master Minimum Equipment List
NEF:	Nonessential Equipment and Furnishings
RI:	Rectification Interval
RIE:	Rectification Interval Extension
Seq:	Sequence number
VFR:	Visual Flight Rules
VMC:	Visual Meteorological Conditions

Article 4

Amendment and revision

- (1) Revision may be made by the PACA to the technical requirements and administrative procedures contained in this Regulation resulting from any future International Standards changes in the airworthiness related Annexes in ICAO that the PACA may adopt.
- (2) When such revision is made, the PACA shall ensure that the aeronautical industry shall be made aware of such revision in accordance with the Civil Aviation Regulation Change Procedures or process that the Authority may establish.
- (3) By derogation from paragraphs (1) and (2), the PACA may however, amend, revise, supersede, revoke or cancel this Regulation in this CAR or in whole in accordance with established Civil Aviation Regulation Change Procedures.

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SUBPART B — REQUIREMENTS**CAR MEL.000 Applicability**

This CAR-MEL prescribes the requirements concerning MEL for Aircraft registered in the Sultanate of Oman.

CAR MEL.001 General

(See GM to CAR MEL.001(a) & AMC to CAR MEL.001(b))

- (a) Unless permitted by the PACA, an operator shall not operate an aircraft other than in accordance with the MEL.
- (b) Any such permission will not permit operation outside the constraints of the MMEL without a flight permit.
- (c) Items required by the PACA and are not listed in the MMEL must be operative prior to dispatch of the aircraft.
- (d) Notwithstanding (a) and (b) above, under certain circumstances, the Pilot-In-Command may take immediate action to fly with inoperative equipment outside MEL constraints if he /she believe that leaving the aircraft on ground will likely jeopardize the aircraft and/ or its occupant's safety.
- (e) When an item is found to be inoperative, it is reported by an entry in the operator's technical log. Following sufficient fault identification, the item is either rectified immediately or may be deferred following the MEL or other means of compliance approved by the PACA prior to further operation. MEL conditions and limitations do not relieve the operator from determining that the aircraft is in a condition for safe operation with items inoperative.
- (f) The MEL shall be consistent with all operational documents, and consistent with regulations, manufacturer requirements and Human Factors principles.
- (g) The operator's MEL shall be based on an approved MMEL by the state of the design to develop a Non-Essential Equipment & Furnishing (NEF) process.

CAR MEL.003 Applicability

- (a) An Operator shall establish a Minimum Equipment List (MEL) for each aircraft as required by CAR OPS-1.030 and CAR OPS-3.030. This shall be based upon, but no less restrictive than, the relevant Master Minimum Equipment List (MMEL).
- (b) The MEL shall also be applicable to Leased Foreign Registered Aircraft operating under AOC issued by PACA.

CAR MEL.005 PACA Approval

(AMC-1 to CAR MEL.005(a) and GM to CAR MEL.005(a))

- (a) The MEL shall be approved by the PACA.
- (b) The MEL and any amendment shall be submitted to the Flight Safety Department for approval.
- (c) On a case by case basis, the PACA may approve operations without an MEL in exceptional circumstances, such as; newly designed, under validation aircraft or when not practically possible for the operator to have an approved MEL by the time its starts its operation, in which

case there will be a letter of No MMEL or MEL issued with the consequences that any unserviceability or any failure will result in an AOG, this condition shall also be limited to thirty (30) days during first entry of new aircraft which has not been certificated or accepted in the Sultanate of Oman.

- (d) MEL approvals and amendments are to be considered a priority for PACA. Depending on existing tasking and resource availability PACA personnel in-charge of the MEL, review shall attempt to minimize the approval process and urgently action MEL amendment related to Airworthiness Directives or Mandatory documents.

CAR MEL.007 Amendment of MEL

(See AMC & GM TO CAR MEL.007)

- (a) The Operator shall amend the MEL after any applicable change to the MMEL within ninety (90) days from the published date.
- (b) Following the embodiment of a modification having an impact on the MEL, the operator shall amend the MEL accordingly.

CAR MEL.009 Content

(See AMC-1 to 3 for CAR MEL.009, GM-1 to 6 for CAR MEL.009 & Appendix 3)

The MEL shall be in an acceptable format and shall contain the following:

- (a) A Preamble, including guidance, organizational procedures and definitions for flight crew and maintenance personnel using the MEL. The procedures contained in the preamble shall have precedence over any other organizational procedures related to MEL usage and implementation.
- (b) The revision status of the MMEL upon which the MEL is based on.
- (c) The revision status of the MEL Item or page.
- (d) All items installed in an operator's aircraft which are addressed in the most recent accepted version of the source MMEL shall be included in the MEL. At the same time, an operator or pilot retains the option to refuse any alleviation, and may choose not to dispatch with any particular MEL item inoperative.

CAR MEL.011 Rectification Intervals

(See AMC to CAR MEL.011)

The Operator shall:

- (a) Establish rectification intervals for each inoperative instrument, item of equipment or function listed in the MEL. The rectification interval in the MEL shall not be less restrictive than the MMEL.

- (1) The following categories shall be used unless otherwise specified in the MMEL:

Category A

No standard interval is specified; however, items in this category shall be rectified in accordance with the conditions stated in the MEL:

- i. Where a time period is specified in days, the interval excludes the day of discovery.

- ii. Where a time period is specified other than in days, it shall start at the point when the defect is deferred in accordance with the operator’s approved MEL.

Category B

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

Category C

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

Category D

Items in this category shall be rectified within one hundred twenty (120) calendar days, excluding the day of discovery. Items in this category meet the following criteria:

- i. The absence of the item does not adversely affect crew workload;
- ii. The crew do not rely on the function of that item on a routine or continuous basis; and
- iii. The crew’s training, subsequent habit patterns and procedures do not rely on the use of that item.

(b) Establish an effective rectification programme

(c) Only operate the aircraft after expiry of the rectification interval specified in the MEL when:

- i. The defect has been rectified; or
- ii. The rectification interval has been extended in accordance with CAR MEL.013.

CAR MEL.013 Rectification Interval Extension (RIE)

(See AMC-1 to 3 for CAR MEL.013 & GM to CAR MEL.013)

(a) Subject to RIE procedures approved by the PACA, the operator may internally approve only a one-time extension of category B and C only (CAR MEL.011) rectification intervals in accordance with the MMEL, provided that:

- (1) The extension of the rectification interval is, as a maximum, of the same duration as the rectification interval specified in the MEL item;
- (2) The rectification interval extension is not used as a normal means of conducting MEL item rectification and is used only when events beyond the control of the operator have precluded rectification;
- (3) A description of specific duties and responsibilities for controlling extensions is established by the operator;
- (4) PACA is notified of any extension of the applicable rectification interval within seventy-two (72) Hours or three (3) workings days;
- (5) A plan to accomplish the rectification at the earliest opportunity is established.

(b) In cases where the operator does not hold internal RIE approval privileges, the operator may apply for an extension of category B and C only, in accordance with the MMEL rectification intervals to PACA and within a timescale acceptable to the PACA.

CAR MEL.015 Operational and Maintenance (O&M) Procedures

(See AMC -1 & 2 for CAR MEL.015(a) & (b) & GM to CAR MEL.015(a))

(a) The operator shall establish the operational and maintenance procedures in the MEL taking into account the operational and maintenance procedures referenced in the MMEL.

- (b) The operator shall amend the operational and maintenance procedures referenced in the MEL after any applicable change to the operational and maintenance procedures referenced in the MMEL.
- (c) Unless otherwise specified in the MEL, the operator shall complete:
 - (1) The operational procedures referenced in the MEL when planning for and/or operating with the listed item inoperative; and
 - (2) The maintenance procedures referenced in the MEL prior to operating with the listed item inoperative.

CAR MEL.016 Training Program

(See GM to CAR MEL.016)

- (a) Operators shall ensure that personnel engaged in any MEL related tasks shall be provided with adequate training on the use the purpose and use of the manual and company policy regarding MEL Item.
- (b) A recurrent training for the operator’s personnel shall be carried-out periodically (at least every two (2) years) to refresh awareness of MEL usage and any changes in the related policies and procedures.

Note: Refer to Appendix 2 for training syllabus.

CAR MEL.017 Operations Outside the Constraints of the MEL

(See GM to CAR MEL.017)

- (a) Subject to a specific case-by-case approval by the PACA, the operator may operate an aircraft with an inoperative instrument, item of the equipment or functions outside the constraints of the MEL but within the constraints of the MMEL provided that:
 - (1) The concerned instruments, items of equipment or functions are within the scope of the MMEL;
 - (2) The approval is not used as a normal means of conducting operations outside the constraints of the approved MEL and is used only when events beyond the control of the operator have precluded the MEL compliance;
 - (3) A description of specific duties and responsibilities for controlling the operation of the aircraft under such approval is established by the operator; and
 - (4) A plan to rectify the inoperative instruments, items of equipment or functions, or to return operating the aircraft under the MEL constraints at the earliest opportunity is established.

SUBPART C — GUIDANCE MATERIAL (GM) & ACCEPTABLE MEANS OF COMPLIANCE (AMC)

GM to CAR MEL.001 (a) Applicability

The MEL is a document that provides a list of the equipment that may be temporarily inoperative for a particular aircraft configuration and all those individual variables that cannot be addressed at MMEL level, such as operating environment, route structure, geographic location, aerodromes where spare parts and maintenance capabilities are available etc., in accordance with a procedure approved by the PACA.

AMC to CAR MEL.001 (b) General

The MEL cannot deviate from Airworthiness Directives, Safety Directives or any other additional mandatory requirements. Where there is a conflict between the MMEL or MEL and an Airworthiness Directive or any other Mandatory Requirement, it is the data or information contained in the Airworthiness Directive or the Mandatory Requirement (e.g. Continued Airworthiness requirement, or AFM requirements) which shall prevail.

AMC-1 to CAR MEL.005 (a) PACA Approval

- a) A revised MEL is deemed to be in force upon receipt of approval from PACA. However, the operator has ten (10) calendar days or as specified in the operator's approved procedures, to distribute and implement the new document. In all cases, copies are required for:
 - (a) Each concerned aircraft;
 - (b) Post holder -Maintenance;
 - (c) Post holder -Operations;
 - (d) PACA.
 - (e) Flight operations / Dispatch office;
 - (f) Any other personnel as required;
- b) MEL items should be in line with the limitations as per PACA Application form AWR 036 for MEL Approval.
- c) If all technical data has been provided with the MEL and accepted, PACA will:
 - (1) Accept MEL application form,
 - (2) Issue the stamped List of Effective Pages,
 - (3) Issue a Stamped Letter of approval to the operator.

GM to CAR MEL.005 (a) PACA Approval

With the approval of the PACA, the MEL may include specific provisions for particular types of operation carried out by the operator (e.g. crew training, positioning flights, demonstration flights etc.).

AMC to CAR MEL.007 Amendment of MEL

- (a) The following changes to the MMEL that requires amendment of the MEL (as applicable):
 - (1) A reduction of the rectification interval;

- (2) Change of an item, only when the change is applicable to the aircraft or type of operations and it is more restrictive than PACA requirements.
 - (3) Inclusion of a new applicable MMEL item.
- (b) The amended MEL should be submitted to the PACA within 30 days after the publication date of the MMEL or effectivity date of any Airworthiness Directive or Mandatory Document which affect the MMEL/MEL item.

GM to CAR MEL.007 Amendment to MEL

Operators may disagree with the content of the MMEL and request changes to their MEL. These suggestions for changes, accompanied by appropriate substantiation, should be forwarded through the Flight Safety Department for assessment. During the evaluation, the PACA might approach the foreign Authority (approving authority of the source MMEL) or the manufacturer for assistance and comments prior to making a final decision.

AMC-1 to CAR MEL.009 (a) Content

(See GM-6 to AMC-1 for CAR MEL.009(a))

With effect from 1st December 2019, any application for MEL initial or revision approval submitted to the PACA should include the following organizational procedures in the preamble of the MEL:

- (a) Procedures related to RI and RIE's.
- (b) Procedures for the operation of an aircraft outside the constraints of the MEL but within the constraints of the MMEL and within the PACA regulatory requirements.
- (c) Placarding procedures.
- (d) Operational and Maintenance procedures
- (e) Procedures related to internal approval of the MEL
- (f) Procedures related to the NEF program (Only for FAA approved MMEL's)
- (g) Non Safety related equipment procedure.

AMC-2 to CAR MEL.009 (a) Content

The operator should ensure that the MEL, including the Preamble, reflects the guidance given in the MMEL on the effects of Multiple Inoperative Items.

AMC-3 to CAR MEL.009 (a) Content

The operator should include guidance in the MEL on how to deal with any failures that occur between the commencement of the flight (initial taxi) and the start of the take-off. If a failure occurs between the commencement of the flight and the start of the take-off, any decision to continue the flight should be subject to pilot judgment and good airmanship. The pilot-in-command/commander may refer to the MEL before any decision to continue the flight is taken.

GM-1 to CAR MEL.009 (a) Content

For further guidance please see Appendix 3.

GM-2 to CAR MEL.009 Content

MEL format is at the discretion of the operator, provided that it is clear and unambiguous. However, it is recommended that the MEL page format follow the MMEL page format. (See Appendix 1 – Sample of MEL format)

- (a) The page numbering and individual MEL items should be in accordance with the ATA 100 code system.
- (b) The MEL may incorporate only one item per page or as considered appropriate by the operator when operations and/or maintenance procedures are required. If no procedures are required, or the required action is simple, multiple items may appear on a single page.
- (c) The operational and maintenance procedures are normally located immediately below the inoperative item of equipment to reduce error in cross referencing.
- (d) As applicable, MEL Items with Placard, Operation (O) and (M) Maintenance procedures requirement are clearly mark.

GM-3 to CAR MEL.009 Content

The Table of Contents page normally lists the section of the MEL or List each aircraft system as per ATA 100 listing. Pages will ideally be numbered with the Section - ATA Chapter/Item or 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).

GM-4 to CAR MEL.009 (a) Content

The purpose of the Minimum Equipment List Preamble is to provide direction to company personnel on the philosophy and use of the MEL.

GM-5 to AMC-1 to CAR MEL.009 (a) Content

- (a) Placarding should be carried out in accordance with the placarding procedures established and set out in the preamble of the MEL.
- (b) The operator should provide the capability and instructions to the flight/maintenance crew to ensure that the placard(s) is (are) in place prior to the aircraft being dispatched, in order to inform crew members of the equipment condition.
- (c) It should also ensure that the placard(s) is (are) removed and accounted for once the defect has been rectified.
- (d) To the extent practicable, placards should be located as indicated in the MEL or adjacent to the control or indicator affected and should be self-adhesive.
- (e) While the MEL for some items may require specific wording, the majority of items leave the placard wording and location to be determined by the operator.
- (f) The placard may be in two parts.
 - (1) **Part One** lists a description of the defect and the defect control number and is attached to the log book for crew reference.
 - (2) **Part Two** lists the system affected and the defect control number and is fixed in the appropriate location. A MEL control sheet attached to the log book could serve the same purpose as Part One above.
- (g) If a defect occurs at a station where maintenance personnel are not available and no maintenance action is required, the flight or cabin crew may install a temporary placard as required by the MEL. The aircraft may continue on the planned itinerary and upon reaching a

base where maintenance is available; the defect should be rectified or re-defer in accordance with the approved deferral system.

- (h) The exclusion of an asterisk in a MMEL does not preclude the requirement for placarding.
- (i) Most aircraft are designed and certified with a significant amount of equipment redundancy, such that the airworthiness requirements are satisfied by a substantial margin. In addition, aircraft are generally fitted with equipment that is not required for safe operation under all operating conditions, e.g. instrument lighting in day VMC.
- (j) All items related to the airworthiness or required for the safe operation of the aircraft and not included in the MEL list of equipment are automatically required to be operative.
- (k) Equipment such as entertainment systems or galley equipment may be installed for passenger convenience which are non-safety related equipment that does not affect the airworthiness or safe operation of the aircraft when inoperative. Passenger convenience items do not carry a specific repair interval, and need not be listed in an operators MEL, if they are not addressed in the MMEL. The exceptions to this are as follows:
 - (1) Where related equipment serves a second function, such as movie equipment being used for cabin safety briefings, operators should develop and include operational contingency procedures in the MEL in case of an equipment malfunction.
 - (2) Where related equipment is part of another aircraft system, for example the electrical system, procedures should be developed and included in the MEL for deactivating and securing in case of malfunction. In these cases, the item should 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.
- (l) If the operator chooses to list non-safety related equipment in the MEL, not listed in the MMEL, they should include a rectification interval category. These items may be given a 'D' category rectification interval provided any applicable (M) & (O) procedure is applied.
- (m) Operators should establish an effective decision making process for failures that are not listed in the MEL to determine if they are related to airworthiness and required for safe operation. In order for inoperative installed equipment to be considered non-safety related, the following criteria should be considered:
 - (1) The operation of the aircraft is not adversely affected, such that standard operating procedures related to ground personnel, and crew members are impeded;
 - (2) The condition of the aircraft is not adversely affected such that the safety of passengers and/or personnel is jeopardized;
 - (3) The condition of the aircraft is configured to minimize the probability of a subsequent failure that may cause injury to passengers/personnel and/or cause damage to the aircraft;
 - (4) The condition does not include the use of required emergency equipment and does not impact emergency procedures such that personnel could not perform them.

AMC to CAR MEL.011 Rectification intervals (RI)

- (a) The operator should establish procedures whereby it periodically reviews the deferred items, in order to ensure that any accumulation of deferred items neither conflict with each other nor present an unacceptable increase in flight or cabin crew workload.
- (b) Notwithstanding the categorization of item repair intervals, it should be the aim of each MEL document holder to ensure that inoperative items are repaired as quickly as possible.
- (c) The operator should also specify the time zone which will be used for the calculation of Repair Intervals to begin and expire.

AMC-1 to CAR MEL.013 (a) Rectification Interval Extension (RIE)

- (a) The operator's procedures to address the extension of rectification intervals and on-going surveillance to ensure compliance should provide PACA with details of the position of the nominated personnel responsible for the control of the operator's Rectification Interval Extension (RIE) procedures and details of the specific duties and responsibilities established to control the use of RIEs. These procedures should be included in the MEL preamble.
- (b) Personnel authorizing RIEs should be adequately trained in technical and/or operational disciplines to accomplish their duties. They should have necessary operational knowledge in terms of operational use of the MEL as alleviating documents by flight crew and maintenance personnel and engineering competence.
- (c) The operator should notify PACA within one (1) month of the applicable Rectification Interval Extension or within the appropriated time scales specified by the approved procedure for the RIE.
- (d) The notification should specify the original defect, all such uses, the reason for the RIE and the reasons why rectification was not carried out within the original rectification interval.
- (e) The PACA may decide not to grant or revoke the internal RIE approval privilege to a particular operator, if in the view of the PACA, the operator is not fit to exercise such a privilege.
- (f) For all internally approved extensions the operator should record the information in an acceptable format. A copy of the completed document should accompany the tech log entry as follows: "this aircraft is operating on a MEL item repair interval extension as specified in the attached document".
- (g) A copy of the completed form (or the equivalent document) should be retained and filed by the operator for a period of thirty-six (36) months, for auditing purposes. A review may result in changes to the period of the extension, or may be used to determine abuse of the process.

AMC-2 to CAR MEL.013 (b) Rectification Interval Extension (RIE)

- (a) In cases where the operator does not hold internal RIE approval privileges, the operator should submit a completed PACA Application Form AWR 047 for Repair Interval Extension (R.I.E) to the PACA with all required information for PACA approval process.
- (b) A copy of the completed and PACA approved form should be retained on file by the operator for a period of thirty-six (36) months, for auditing purposes.

GM to CAR MEL.013 Rectification Interval Extension (RIE)

Procedures for the extension of rectification intervals are meant to be applied under certain conditions such as a shortage of parts from manufacturers or other unforeseen situations (e.g.inability to obtain equipment necessary for proper troubleshooting and repair), in which case the operator may be unable to comply with the specified rectification intervals.

AMC-1 to CAR MEL.015 (a) Operational and Maintenance (O&M) Procedures

- (a) Any item in the MEL requiring an operational or maintenance procedure to ensure an acceptable level of safety should be so identified in the 'remarks' or 'exceptions' column/part/section 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) The satisfactory accomplishment of all procedures is the responsibility of the operator.

GM to CAR MEL.015 (a) Operational and Maintenance (O&M) Procedures

- (a) Operational and maintenance procedures are an integral part of the compensating conditions needed to maintain an acceptable level of safety, enabling the competent authority to approve the MEL. The PACA may request presentation of fully developed (O) and/or (M) procedures in the course of the MEL approval process.
- (b) Normally, operational procedures are accomplished by the flight and/or cabin crew; however, other personnel may be qualified to perform certain functions.
- (c) Normally, maintenance procedures are accomplished by the maintenance personnel; however, other personnel may be qualified to perform certain functions.
- (d) Unless specifically permitted by a maintenance procedure, an inoperative item may not be removed from the aircraft.

AMC-2 to CAR MEL.015 (b) Operational and Maintenance (O&M) Procedures

- (a) Changes to the operational and maintenance procedures referenced in the MMEL are considered applicable and require the amendment of the maintenance and operating procedures referenced in the MEL when the:
 - (1) Modified procedure is applicable to the operator's MEL; and
 - (2) Purpose of this change is to improve safety with the intent of the associated MMEL dispatch condition.

GM to CAR MEL.016 Training Programme

Appendix 2 Sample of MEL training syllabus provides guidance of typical training syllabus. "Personnel engaged" means crew members, dispatchers, maintenance engineers etc.

GM to CAR MEL.017 Operations Outside the Constraints of the MEL

Procedures for the operation of an aircraft outside the constraints of the MEL but within the constraints of the MMEL and are meant to be applied under certain conditions, such as a shortage of parts from manufacturers or other unforeseen situations (e.g. inability to obtain equipment necessary for proper troubleshooting and repair), in which case the operator may be unable to comply with the constraints specified in the MEL.

Appendix 1– Sample of MEL Format

(See also next table) as another alternative format

Sample 1.

AIRCRAFT : Boeing MODEL : B717-200		MINIMUM EQUIPMENT LIST				COMPANY NAME or LOGO
1. SYSTEM & SEQUENCE NUMBER ITEM		REPAIR INTERVAL				
21 AIR CONDITIONING		2. NUMBER INSTALLED				
		3. NUMBER REQUIRED FOR DISPATCH				
		MAINTENANCE				
		OPERATIONS				
		4. REMARKS / EXCEPTIONS				
21.8 Air Conditioning Pressure Regulator Valves		C	2	1	M	O
PLACARD : As APPROPRIATE MAINTENANCE (M) 1. Dispatch with one Air Conditioning Pilot Pressure Regulators Valve Inoperative: A. Select affected AIR CONDITIONING SUPPLY switch to OFF. B. Placard switch appropriately so as to prevent its use. OPERATIONS (O) 1. Dispatch with one or both Air Conditioning Pilot Pressure Regulator Valves Inoperative						
21.9 Air Conditioning Pressure Regulator warning						Not installed

Sample 2.

(Company's Name or Logo)		MINIMUM EQUIPMENT LIST			PAGE
Boeing B797 Series :100/300		Amendment: 4 DATE: 01 Apr 95			21-3-1
1.ATA System and Sequence Number		2. NUMBER INSTALLED 3. NUMBER REQUIRED			
21.	Air Conditioning	4. REMARKS OR EXCEPTIONS			
21-3 Equipment Cooling Fan (wardrobe)		D	1	0	(M) May be inoperative provided the equipment cooling fan is deactivated.

Alternate format may be acceptable with **separate Maintenance and operations procedures in a single document.**

Both Format shall include Maintenance and operating procedures or may refer to another operating procedures within the manual, except when the procedures is exceptionally lengthy and time consuming that require maintenance document in separate control.

Sample 3.

**25-29-01 Overhead Flight Crew Rest (OFCR)
25-29-01A Deactivated Closed**

Interval	Installed	Required	Procedure
C	1	0	(M)(O)

May be inoperative provided:

- a. OFCR is deactivated closed.
- b. Appropriate adjustment to flight crew Flight Duty Period (FDP) times are applied.

NOTE: This provision is not intended to prohibit OFCR inspections by crew members.

MAINTENANCE (M)

Deactivate overhead flight crew rest (OFCR) closed (AMM DDG 25-29-01).

- 1. Remove all baggage and personal items from the OFCR.
NOTE: Blankets, pillows and other items normally used may remain.
- 2. Close the OFCR entrance door.

OPERATIONS (O)

The OFCR is not available for in flight use. Remove personal items and do not enter except for inspections by crew members.

Appendix 2– Sample of MEL training syllabus

(1) **MEL Origin and Philosophy**

- (a) MMEL background and development.
- (b) MEL background and development.

(2) **General MEL Content**

- (a) Approval Letter
- (b) List of effective pages
- (c) Table of contents
- (d) Preamble
- (e) Definitions/Abbreviations
- (f) ATA Chapters, Page format, Page numbering, System and item titles, categorization, columns, remarks and exceptions, placarding, (O) and (M) procedures.

(3) **Specific Use of the MEL**

- (a) A review of items from a variety of systems including those with or without an (O) and/or (M) procedures as applicable.
- (b) Practical demonstration of MEL use versus hypothetical situations at and away from a maintenance base.
- (c) Supervised 'hands on' use of a MEL, until familiar with the location, contents and procedures, including those at or away from a maintenance based.
- (d) Specific procedures for pilot to dispatch under MEL without engineer release; as applicable,
- (e) Repair Interval Extension.

(4) **Company Forms**

Adequate company records must be developed to document MEL training to be added to the Employee's training records. If the aircrew is to exercise elementary maintenance privileges, training forms must include an area describing what is being certified, and a place for sign-off by an AME.

- (5) The MEL training should be consistent with other operational documents, and consistent with regulations, manufacturer requirements and Human Factors principles.

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Appendix 3– MEL OPERATIONS MANUAL AMENDMENT GUIDE

Defect Deferral Recommended Procedures

Disclaimer

- (1) This sample is provided to operators as a means of defect control.*
- (2) It is not intended to be used as a guide or checklist for those air operators who have existing procedures that currently meet the intent of regulatory requirements.*
- (3) These procedures should be identical to those found in the operator’s exposition and should also be included in the MEL Preamble.*

MEL DEFECT DEFERRAL PROCEDURES

- (1) Defects and their control – General**
- (2) Deferred Defect Restrictions**
- (3) Deferring Procedures and Control -Maintenance**
- (4) Use of MEL -Flight Crew**
- (5) Aircraft Log Book Procedure**