






Jordan Civil Aviation Regulatory Commission


Guidance Procedure: AWS 27

Master Minimum Equipment List (MMEL) and
Minimum Equipment List (MEL)

Prepared by Engr Abdallah Al-Hajel
Airworthiness Inspector
Date: 01/08/2016 Signature: 

Revised by Engr Khalid Al-Zoubi
Chief Aircraft & CAMO
Date: 02/08/2016 Signature: 

Reviewed by Dr. Mohammad Al-Husban
Director Airworthiness Standards
Date: 03/08/2016 Signature: 

Approved by Engr Ahmad Azzam
Acting Chief Commissioner/CEO
Date: Signature: 

8.8.2016

Issue : 02
Rev. : 00
Aug. 2016





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List of Effective Pages

Page	Issue	Rev	Date
1	02	00	Aug. 2016
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1.2 Abbreviations

AOC	Air Operator Certificate.
AWI	Airworthiness Inspector.
AWSD	Airworthiness Standards Department.
CARC	Civil Aviation Regulatory Commission.
CDL	Configuration Deviation List.
FOI	Flight Operations Inspector.
JCAR	Jordan Civil Aviation Regulations.
MEL	Minimum Equipment List.
MMEL	Master Minimum Equipment.
NAA	National Aviation Authority.
RIE	Rectification Interval Extension.





MMELs and MELs

1. Introduction

1.1 Under the provisions of JCARs Part OPS 1, Part M and Part MMEL/MEL no aircraft registered in Jordan may commence a flight if any of the equipment required is not carried or is not in a fit condition for use, unless a permission to do so has been issued by CARC. Similarly, JCAR-OPS 1.030 states that an operator shall establish for each aeroplane, an MEL approved by CARC that will be based upon the relevant MMEL accepted by CARC as part of the aircraft type acceptance. In addition, an operator shall not operate an aeroplane other than in accordance with the MEL unless permitted by CARC. Any such permission or approval will in no circumstances permit operations outside the constraints of the MMEL. CARC carries out its obligations under the terms of JCAR-OPS 1.030, by authorizing the use of Minimum Equipment Lists (MELs).

Such arrangements can only be accepted if operation with specified unserviceable equipment meets the requirements of the JCARs (as appropriate) and the level of safety achieved is not less than the minimum standard either implied or specified by the certification basis (defined in the Type Certificate).

1.2 The basis of the procedures described in this AWS is that each aircraft type with a Maximum Total Weight Authorized (MTWA) exceeding 2730 kg will have an approved Master Minimum Equipment List (MMEL). Where an approved MMEL has not been produced for a particular aircraft type, there may be an equivalent document acceptable to the CARC. In the absence of an approved MMEL (or equivalent document), the Minimum Equipment List (MEL) may only include unserviceabilities as expressly permitted by special limitations and procedures in the approved Flight Manual or by agreement with CARC.

1.3 An MMEL is not an exhaustive list of all equipment items required by law to be carried. An operator may include in an MEL any additional items that are required to be carried where such entries clarify legal requirements. 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.

1.4 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 mandatory for each operator to prepare and seek CARC approval and agreement to their own MEL.





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1.5 The MEL cannot be less restrictive than the appropriate approved MMEL and may have to be more restrictive to reflect an individual operator's circumstances and capabilities.

NOTE: Configuration Deviation Lists (CDL) or their equivalent, are not a part of the MMEL and are not dealt with in this Guidance Procedure. CDLs are used to identify any external components of an aircraft type which may be missing for dispatch. Where necessary, they will provide any associated information on performance corrections for such cases (e.g. missing landing gear doors, flap actuator fairings, etc.). Where dispatch with such items missing is approved, the CDL may be published as part of the approved Flight Manual.

1.6 This Guidance Procedure AWS 27 supersedes CARC/AWSD Airworthiness Instructions AI No. 18/ADMIN/PUB/1098, issue date 08/07/2013.

2. Approval and Amendment of the MMEL

2.1 General

2.1.1 For new aircraft types, the MMEL is prepared during the certification process and is completed before entry into service. It may not be possible for CARC to approve an MEL in order to allow operation with items unserviceable unless an approved MMEL or an equivalent document exists.

2.1.2 The MMEL shall be provided with a relevant preamble, definitions and clarifying notes which shall adequately reflect the scope, extent and purpose of the MMEL.

2.2 Foreign manufactured aircraft

2.2.1 Normally an MMEL is issued by the manufacturer and approved by the National Aviation Authority (NAA) of the State of manufacture. Where such an MMEL already exists, CARC will take due account of this and will normally restrict any differences to those items affected by CARC legislation or those for which CARC applies a different policy.

2.2.2 Proposals to amend the MMEL may be initiated by the manufacturer through a change to the appropriate MMEL, as approved by the foreign aviation authority.





3. Production of the MEL and the Permission

3.0 The MEL is prepared in accordance with CARC Guidance Procedure AWS 27, JCAR Part M, Part –MMEL/MEL, Part OPS 1 and CARC/AWSD MEL Airworthiness Approval Checklist CARC Form 18-0337.

3.1 Preparation of MEL based on MMEL (latest revision) and supplements originated by STC holders, as applicable.

3.1.1 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.

3.1.2 The MEL should contain rectification interval(s) in line with the definitions in Part MMEL/MEL. The MEL should contain a relevant preamble, definitions and clarifying notes which shall adequately reflect the scope, extent and purpose of 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.

3.1.3 An operator who wishes to use the aircraft with unserviceable equipment in accordance with the provisions of Part MMEL/MEL or JCAR-OPS 1.030, must use an MEL compiled on the basis of the approved MMEL.

3.1.4 Operators shall take operational and maintenance procedures referenced in the MMEL into account when preparing an MEL. These procedures, which are subject to approval, shall be identified to CARC during the MEL approval process. The procedures themselves, or symbols to indicate them, are required in the operator's MEL. 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 authorized 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 authorized to perform



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certain functions. The satisfactory accomplishment of all maintenance procedures, regardless of who performs them, is the responsibility of the operator.

3.1.5 Appropriate operational and maintenance procedures are required to be published as a part of the operator's manual(s) or MEL. Operators' manuals may include the Operations Manual, the Maintenance Manual, **Dispatch Deviations Procedures Manual as applicable** or other documents acceptable to CARC.

3.2 MEL Permission or Approval

3.2.1 In order to use an MEL an operator must obtain permission from CARC, in accordance with JCARs as applicable. CARC will accept an MEL for a limited time once the assigned inspector(s) have been satisfied that it is in agreement with the applicable MMEL or equivalent document.

3.2.1.1 Aircraft operated under an Air Operator's Certificate (AOC). Operators are required to complete a compliance document when submitting an initial MEL, or an amendment to the MEL, to CARC. This compliance document shall be submitted, together with the MEL, or the amendment, to the assigned Inspector for approval. The inclusion of references to source material and justification for MEL items will facilitate the efficient processing of draft MEL documents or amendments.

3.2.1.2 When CARC is satisfied that the MEL or the amendment to the MEL is acceptable, the assigned inspector and the director of airworthiness standards department will sign the approval page and send it to the Flight Operation Standards Department for their approval with a memo.

4. Amendments to the MEL

4.1 Amendment Timescales

4.1.1 When the MMEL is amended so as to become more restrictive, operators will be allowed 30 days from the date of notification to amend their MEL.

4.1.2 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.

4.1.3 Voluntary amendment of the MEL may be carried out as required by the operator, provided the proposed change is not less restrictive than the MMEL.

4.2 Amendment Procedures

4.2.1 Any amendment to an MEL necessitates consultation with CARC , as appropriate. An operator may, however, incorporate voluntary amendments to an





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MEL as they wish, subject to the basic condition that the amendment shall not be less restrictive than the MMEL upon which it is based.

4.2.2 An operator must advise CARC as appropriate, of the amendment to an MEL for CARC approval.

5. Non-Standard Operations

5.1 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) Demonstration Flights;
- b) Test Flights - after maintenance;
- c) Training Flights;
- d) Positioning Flights - defined as flights carrying neither passengers nor freight for valuable consideration, operated purely to position aircraft for further revenue service;
- e) Ferry Flights - defined as for positioning flights, except that such flights are flown only to return the aircraft to a place where it can be repaired.

5.2 Minimum equipment requirements may only be reduced by agreement with CARC and normally an operator would have to provide evidence that such flights change the category of use.

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

NOTE: Such non-standard flights may only be undertaken if the aircraft's Flight Manual contains the appropriate procedures and are agreed to by CARC.

6 Operations with Multiple Unserviceabilities

In most cases, multiple unserviceabilities of unrelated aircraft systems cannot be addressed by the MMEL nor 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 Aircraft Commander, taking into consideration advice from the operator's specialists where available.





7. Rectification Intervals

7.1 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.

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

7.3 Operation of the aircraft is not allowed after expiry of the Rectification Interval specified in the MEL, unless:

- a) the defect has been rectified; or
- b) the Rectification Interval is extended in accordance with paragraph 8 below.

7.4 Where the applicable MMEL does not contain Rectification Intervals, all entries included within the MMEL shall be classified with a Rectification Interval category of "C" (relating to 10 calendar days) in the MEL, except where there is an existing repair limit stated within the provision for a particular MMEL entry. The stated limit will remain in force but the entry should be identified as a category "A"

7.5 Once the applicable MMEL has been revised to include Rectification Intervals, this will supersede the guidance given in paragraph 7.4, and operators will need to reflect the revised rectification intervals in their MEL.

8. Rectification Interval Extensions (RIEs)

8.1 Principles of RIEs

8.1.1 Subject to the approval of CARC, the operator may use a procedure for the extension of the applicable Rectification Intervals B, C, and D, for the same duration as specified in the MEL, provided:

- a) a description of specific duties and responsibilities for controlling extensions is established by the operator and accepted by CARC;
- b) the operator only grants a one-time extension of the applicable Rectification Interval;
- c) CARC is notified of the application of any extension within 10 days; and
- d) Rectification is accomplished at the earliest opportunity within the period of the extension.

8.1.2 The operator should ensure that rectifications are accomplished at the earliest opportunity. RIEs are introduced to allow operators to continue to operate an aircraft



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after the Rectification Interval has expired if rectification has not been possible. An operator who utilizes RIEs is required to report all such uses, together with the appropriate justification, to CARC. CARC is ultimately responsible for the oversight of RIEs.

8.2 Application for the use of RIEs

8.2.1 The operator shall make an application to CARC for authorization to be able to use RIEs. The operator should provide CARC with details of the name and position of the nominated person responsible for the control of the company RIE procedure and details of the specific duties and responsibilities established by the operator to control the use of RIEs. Authorizing Managers who must be senior with experience in technical and operations management are to be listed by appointment and name.

CARC will consider the engineering competence of the operator and the acceptability of the Authorizing Managers. Where an operator uses contracted-out maintenance facilities, CARC will judge whether the relationship between an operator and an independent maintenance contractor is adequate for the purposes of RIEs.

8.3 RIE Procedure

8.3.1 An RIE procedure must be defined by the operator and agreed with CARC, and shall consist of:

- a) Consultation - between the operational and technical staff of the operator as to the requirement for the RIE and the recommendation of the proposal.
- b) Decision - made by the Authorizing Manager to accept or reject the proposal based on consultation.
- c) Authorization - formal authorization to inform the aircraft commander of the use of the RIE.
- d) RIE Report - made to CARC within 10 days of the extension being authorized.

8.3.2 A chain or system of consultation must be listed. Authorizing Managers who must be senior with experience in technical and operations management are to be listed by appointment and name.

8.4 Authorization

8.4.1 Authorization letter with Form RIE as specified in Appendix 2 is to be completed when the RIE is authorized and must contain the Authorizing Manager's name.





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8.4.2 CARC requires that Form RIE is sent to CARC within 10 days of being authorized. The form will be used to check that the RIE was properly authorized and that the extension was granted for appropriate reasons.

8.4.3 Form RIE should be in the format as specified in Appendix 2. Modifications, other than box size, are unacceptable although operators are free to include additional boxes where required and by agreement with CARC.

8.5 Use of RIEs

8.5.1 Operators are reminded that they must ensure that rectification is accomplished at the earliest opportunity. This is applicable for both the standard Rectification Interval and for the RIE.

8.5.2 The RIE permits an operator to continue to dispatch an aircraft with particular equipment unserviceable after the standard rectification interval has expired if, in the opinion of the Authorizing Manager, it is not reasonably practicable for the repair to be made within that rectification interval. It is not intended that RIEs should be used purely to double the standard rectification interval.

8.5.3 It is most important that the agreed procedures for the use of RIEs are followed. In the event that operators do not comply with the laid down conditions, CARC will take action by means of warning letters and ultimately (normally a second incident) by removal of the authorization to utilize RIEs on a temporary or permanent basis.

9. Operations Outside the Scope of the MEL

CARC 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 Example MEL Preamble

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

1. Introduction

This 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 CARC.

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 aircraft 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 judgment and good airmanship. The Commander may continue to make reference to and use of the MEL as appropriate.

By approval of the MEL, CARC 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.

NOTE: For dispatch with airframe or engine parts missing, refer to the CONFIGURATION DEVIATION LIST (CDL).

(OPERATOR'S NAME)
MINIMUM EQUIPMENT LIST
(AIRCRAFT TYPE)
PREAMBLE

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





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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 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 judgment 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 a 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 judgment - 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 be released from a maintenance 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 are required:

- a) The technical log book 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. authorized by CARC).





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

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

Where a time period is specified in calendar days or flight days, the period shall start at 00:01 on the calendar 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 within one hundred and twenty (120) consecutive calendar days, excluding the day of discovery.

Rectification Interval Extensions (RIEs)

Subject to the approval of CARC, the operator may use a procedure for the extension of the applicable Rectification Intervals B, C and D, for the same duration as specified in the MEL in accordance with Part MMEL/MEL.

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" 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.

"Day operation" is any flight conducted from the point of take-off to landing between 30 minutes before sunrise and 30 minutes after sunset.

"Icing Condition" the atmospheric environment is such that ice can form on the aircraft or in the 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 centralized 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.





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NOTE: This is not an exhaustive list and operators should include in their MELs any definition which is considered to be relevant.

7. Centralized Message Systems (If appropriate)

This 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, CARC 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. Permission for such a flight, however, must be granted by CARC before the flight takes place.

9. Ferry Flights

Ferry flights are flights carrying neither passengers nor freight for valuable consideration, 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 this MEL, provided all the equipment expected to be utilized in flight is operable and any relevant sections of the Flight Manual are applied. Permission for such a flight, however, must be granted by CARC before the flight takes place.





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Appendix 2 Form RIE - Rectification Interval Extension

(RIE) Report Form

Part 1 - MEL Defect

Part 2 - RIE Application

Part 3 - Authorization

1. Operator

2. Date of Defect

3. Aircraft Registration

4. Aircraft Type

5. RIE Number

6. Detail of Defect

7. Reason for not rectifying

8. Rectification Interval Category

9. Expiry date of Rectification Interval

10. MEL Reference Number

11. Name of Applicant

12. Position

13. Why an RIE is Required

14. Duration of RIE Authorized

15. Latest date that defect is due for rectification

16. Comments of Authorizing Manager (To include history of previous RIE use for this item where appropriate)

17. Name of Authorizing Manager

18. Position

19. Date

