



**Service public fédéral Mobilité et Transport**  
**Federale Overheidsdienst Mobiliteit en Vervoer**

*Direction générale Transport aérien – Directoraat-generaal Luchtvaart*

## CIRCULAIRE

### CIR/OPS-16

**Objet : Liste minimale d'équipement  
(MMEL/MEL)**

**Betreft : Minimum lijst van de uitrusting  
(MMEL/MEL)**

**Réf. :**

- 1) Annexe III au règlement (CEE) n° 3922/91 du Conseil relatif à l'harmonisation de règles techniques et de procédures administratives dans le domaine de l'aviation civile, ainsi que les règlements portant modification à ce règlement, référence OPS 1.030 Listes minimales d'équipements – Responsabilités de l'exploitant
- 2) JAR-OPS 3.030 Minimum Equipment List – Operator's responsibility.
- 3) JAR-MMEL/MEL : Master Minimum Equipment List / Minimum Equipment List.
- 4) Temporary Guidance Leaflet (OPS) – Leaflet N° 26: Guidance document for MEL Policy.
- 5) Arrêté Ministériel du 12 septembre 1991 fixant les mesures techniques d'exploitation des aéronefs utilisés dans le transport aérien commercial, dont la masse totale maximale autorisée est inférieure à 5.700 kg, en particulier les § 7.1.1 et 8.2.2 e).

**Ref. :**

- 1) Bijlage III aan de Verordening (EEG) nr.3922/91 van de Raad inzake de harmonisatie van technische voorschriften en administratieve procedures op het gebied van de burgerluchtvaart, alsmede de verordeningen tot wijziging van die verordening, referentie OPS 1.030 Minimumuitrustingslijsten – Verantwoordelijkheden van de exploitant.
- 2) JAR-OPS 3.030 Minimum Equipment List – Operator's responsibility.
- 3) JAR-MMEL/MEL : Master Minimum Equipment List / Minimum Equipment List.
- 4) Temporary Guidance Leaflet (OPS) – Leaflet N° 26: Guidance document for MEL Policy.
- 5) Ministerieel Besluit. van 12 september 1991 tot vaststelling van de technische maatregelen voor de exploitatie van de in het handelsluchtvervoer gebruikte luchtvaartuigen waarvan de hoogst toegelaten totale massa lager is dan 5.700 kg, in het bijzonder §.7.1.1 en 8.2.2 e).

Le Directeur Général,  
De Directeur-generaal,

F. DURINCKX

L'édition 4 comprend  
De 4de uitgave bevat  
14 pages datées  
blz. gedagtekend

: 16/09/2009

## **1. Règle générale**

1.1 L'exploitant établit, pour chaque avion, une liste minimale d'équipements (LME), approuvée par l'autorité..

1.2 La LME est fondée sur:  
– la liste minimale d'équipements de référence (LMER), correspondant au certificat de type, (si elle existe) acceptée par l'autorité,  
– les suppléments à la LMER relatifs aux Certificats de Type Supplémentaires et  
– les suppléments à la LMER relatifs à des modifications, approuvées par un Organisme de Conception Agréé Partie-21.

1.3 La LME ne peut être moins restrictive que les documents sur lesquels elle est fondée.

1.4 L'exploitant n'exploite un avion qu'en conformité avec la LME, sauf autorisation de l'autorité. Une telle autorisation ne permet en aucun cas une exploitation ne respectant pas les contraintes imposées par la LMER.

## **2. Manuel d'exploitation**

L'exploitant inclut cette LME dans son manuel d'exploitation (voir circulaire CIR/OPS-01).

## **3. Application**

3.1 Cette circulaire est applicable à tous les exploitants d'aéronefs utilisés en transport commercial

3.2 Les exigences de la quatrième édition de cette circulaire sont applicables à partir du 1<sup>er</sup> décembre 2009.

## **1. Algemene regel**

1.1 De exploitant dient voor elk vliegtuig een door de autoriteit goedgekeurde minimumuitrustingslijst (MUL) vast te stellen.

1.2 De MUL dient gebaseerd te zijn op:  
– de betreffende basis-minimumuitrustingslijst (BMUL), overeenkomende met de typecertificaat, (indien deze bestaat) welke door de autoriteit is aanvaard,  
– de BMUL aanvullingen betrekking hebbend op de Aanvullende Typecertificaten en  
– de BMUL aanvullingen betrekking hebbend op wijzigingen, goedgekeurd door een krachtens Deel-21 Erkende Ontwerporganisatie.

1.3 De MUL mag niet minder beperkend zijn dan de documenten waarop ze is gebaseerd.

1.4 De exploitant mag geen vliegtuig in bedrijf hebben anders dan in overeenstemming met de MUL, tenzij daarvoor toestemming verkregen is van de autoriteit. Een dergelijke toestemming houdt in geen geval toestemming in tot gebruik van het vliegtuig buiten de beperkingen van de BMUL.

## **2. Vluchthandboek**

De exploitant voegt deze MUL bij het vluchthandboek (zie circulaire CIR/OPS-01).

## **3. Toepassing**

3.1 Deze circulaire is van toepassing op alle exploitanten van luchtvaartuigen gebruikt in het handelsvervoer.

3.2 De vereisten van de vierde uitgave van deze circulaire zijn van toepassing vanaf 1 december 2009.

***BELGIAN CIVIL AVIATION AUTHORITY***



**MINIMUM  
EQUIPMENT  
LIST**

## **1. FOREWORD**

- 1.1. Whenever the EASA Regulations and Implementing Rules consider aircraft design, or installation and operation of equipment, it is assumed that no known failure exist at the commencement of flight. However, with various levels of redundancy designed into aircraft, operation of certain systems or installed equipment may not be required if the remaining operative equipment can maintain an acceptable level of safety.
- 1.2. The JAA document "JAR-MMEL/MEL" prescribes the conditions for approval of documents called "Master Minimum Equipment List" (MMEL) and "Minimum Equipment List" (MEL).
- 1.3. The Master Minimum Equipment List (MMEL) and associated MEL are alleviating documents to be used when a failure has been identified. Their purpose is not, however, to encourage the operation of aircraft with inoperative equipment. Such operations are permitted only as a result of careful analysis of each item to ensure that an acceptable level of safety is maintained. A fundamental consideration in permitting the dispatch of aircraft with inoperative equipment is that the continued operation of an aircraft in this condition should be limited. The limitations governing rectification intervals are specified later in this circular – see paragraph 5.6. Rectification Intervals.
- 1.4. OPS 1.030/JAR-OPS 3.030 require that an operator shall establish, for each aircraft, a Minimum Equipment List (MEL) approved by his Authority. It shall be based upon, but not less restrictive than, the relevant Master Minimum Equipment List (MMEL), if this exists, accepted by the Authority. It will therefore be necessary for each operator to prepare and seek Belgian CAA agreement to his own Minimum Equipment List (MEL).<sup>1</sup>
- 1.5. OPS 1.630(a)(2)/JAR-OPS 3.630(a)(2) and OPS 1.845(a)(3)/JAR-OPS 3.845(a)(3) prescribe that a flight shall not commence unless the instruments and equipment required under subparts K and L are in operable condition for the kind of operations being conducted, except as provided in the MEL.<sup>1</sup>
- 1.6. Temporary Guidance Leaflet (JAR-OPS) N° 26 gives operators the guidance necessary to develop the MEL provisions for equipment, and conditions for its unserviceability, in order that OPS 1 or JAR-OPS 3, as applicable, and JAR-MMEL/MEL are properly complied with. Application of this TGL should ensure a harmonisation of MELs among EU operators and assist Authorities in the MEL evaluation and approval. However, TGL 26 is guidance material only, and should not be used to overwrite the MMEL unless specifically agreed with the Belgian CAA – refer to Appendix 1 for a flow diagram for the use of TGL 26 in a company MEL.
- 1.7. Configuration Deviation Lists (CDL) or their equivalent, are not a part of the MMEL/MEL and are not dealt with in this Circular.

## **2. APPLICABILITY**

### **2.1. Limit of MEL Applicability.**

The MEL is applicable up to the commencement of flight.

If a failure occurs during the taxi phase before the start of the take-off roll, any decision to continue the flight should be subject to pilot judgment and good airmanship. The commander may refer to the MEL before any decision to continue the flight is taken.

The operator's MEL shall include procedures to deal with any failures which occur between the start of taxi and take-off brake release.

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<sup>1</sup> When referring to OPS 1, it means the Annex III to the Council regulation (EEC) N° 3922/91 on the harmonization of technical requirements and administrative procedures in the field of civil aviation, as amended by subsequent regulations.

2.2. Airworthiness Directives and other 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) which shall override.

### **3. TERMINOLOGY**

Terms and abbreviations provided in JAR-MMEL/MEL and TGL 26 have the following meaning:

- 3.1. "*As required by operating requirements*" The listed item of equipment is subject to certain provisions (restrictive or permissive) expressed in the applicable operational requirements.
- 3.2. "*Approved by the Authority*" means documented by the Authority as suitable for the purpose intended.
- 3.3. "*Approved Part-21 Design Organisation*" is defined in Part-21.<sup>2</sup>
- 3.4. "*Authority*": the competent body responsible for the safety regulation and oversight of Civil Aviation. In the context of the MMEL, this means the Authority of the State of Design. In the context of this circular and the MEL approval, this means the Authority of the State of the Operator. In the context of this circular, Authority of the State of the Operator means the Belgian CAA.
- 3.5. "*Calendar Day*": A 24 hour period from midnight to midnight based on either UTC or local time, as selected by the operator.
- 3.6. "*CAME*" Continuing Airworthiness Management Exposition as prescribed in Part M<sup>3</sup>
- 3.7. "*Combustible Material*": is material which is capable of catching fire and burning.
- 3.8. "*Commencement of flight*": The point when an aircraft begins to move under its own power for the purpose of preparing for take off.
- 3.9. "*Dash (-)*": in columns 3 and 4 indicates a variable quantity.
- 3.10. "*Day of discovery*": The calendar day that a malfunction was recorded in the aircraft maintenance record/log book.
- 3.11. "*Equipment*": means item, function, component or system.
- 3.12. "*Flight*": For the purpose of a MEL, a flight is the period of time between the moment when an aeroplane begins to move by its own means, for the purpose of preparing for take off, until the moment the aeroplane comes to a complete stop on its parking area, after the subsequent landing (and no subsequent take off).
- 3.13. "*Flight Day*": means a 24 hour period (from midnight to midnight) either UTC or local time, as established by the operator, during which at least one flight is initiated for the affected aircraft.
- 3.14. "*If installed*" means that the equipment is either optional or is not required to be installed on all aircraft covered by the MMEL.
- 3.15. "*Inoperative*" means that the equipment does not accomplish its intended purpose or is not consistently functioning within its design operating limits or tolerances. Some equipments have been designed to be fault tolerant and are monitored by computers which transmit fault messages to a centralised computer for the purpose

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<sup>2</sup> When referring to Part 21, it means Annex Part 21 of Commission Regulation (EC) N°1702/2003 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, part and appliances, as well as for the certification of design and production organisations, as amended by subsequent regulations

<sup>3</sup> When referring to Part M, it means Annex I to Commission Regulation (EC) N°2042/2003, on the continuing airworthiness of aircraft and aeronautical products, parts and appliances and on the approval of organisations and personnel involved in these tasks, as amended by subsequent regulations.

of maintenance. The presence of this category of message does not necessarily mean that the equipment is inoperative.

- 3.16. "EASA MMEL" means the MMEL (including MMEL Supplement) which is recommended by the EASA for acceptance by the Authority. In the context of this circular, Authority means the Belgian CAA.
- 3.17. "MEL": An abbreviation for Minimum Equipment List.
- 3.18. "MMEL": An abbreviation for Master Minimum Equipment List.
- 3.19. "MMEL Supplement": A list associated with MMELs for aircraft for which application for first type certification is made to a non-EASA Authority. The Supplement identifies any differences from the MMEL approved by the State of Design. The MMEL approved by the State of Design and the Supplement constitutes the EASA MMEL.
- 3.20. "Rectification interval": A limitation on the duration of operations with inoperative equipment.
- 3.21. "RIE": An abbreviation for Rectification Interval Extension.
- 3.22. "Supplemental Type Certificate" is defined in Part-21.
- 3.22. "Supplemental Type Certificate holder" is the holder of (or the applicant for) a Supplemental Type Certificate.
- 3.23. "Type Certificate" is defined in Part-21.
- 3.24. "Type Certificate holder" is the holder of, or the applicant for, a Type Certificate.

## **4. MMEL**

### **4.1. General**

- 4.1.1. The MMEL is a document that lists the equipment which may be temporarily inoperative, subject to certain conditions, while maintaining an acceptable level of safety as intended in the applicable OPS-1, JAR/OPS-3 or equivalent Requirement. Each MMEL is specific to an aircraft type.
- 4.1.2. All items related to the airworthiness of the aircraft and not included in the list are automatically required to be operative.
- 4.1.3. Non-safety related equipment such as galley equipment and passenger convenience items, need not be listed.  
Non-safety related equipment refers to equipment that is not required for airworthiness or operational reasons. In order for inoperative installed equipment to be considered non-safety, the following criteria should be considered:
  - The operation of the aircraft is not adversely affected such that standard operating procedures related to ground personnel, in-flight personnel and/or flight personnel are impeded.
  - The condition of the aircraft is not adversely affected such that the safety of passengers and/or personnel is jeopardised.
  - The condition of the aircraft is configured to minimise the probability of a subsequent failure that may cause injury to passengers / personnel and/or cause damage to the aircraft.
  - The condition does not include the use of required emergency equipment and does not impact emergency procedures such that personnel could not perform them.

### **4.2. Types of Operations**

The MMEL shall cover the types of operation for which the aircraft type is certificated.

### **4.3. Preparation of MMEL**

The initial MMELs are issued by the Type Certificate Holder. Subsequent revisions or amendments to MMELs are issued by the Type Certificate Holder, by the Supplemental Type Certificate Holders or by modification data approved by an Approved Part-21 Design Organisation, as appropriate.

#### **4.4. MMEL Acceptance**

It is the responsibility of Belgian CAA to accept the MMEL for use by the Belgian operators.

#### **4.5. Multiple Unserviceabilities**

The MMEL shall take into account the effects of multiple unserviceabilities. However the MMEL cannot include all combinations of unserviceabilities. Therefore it has to be accepted that because of the variety of multiple unserviceabilities which could arise, it is likely that many will not be covered in the MMEL.

#### **4.6. Operational and Maintenance Procedures**

Operational and Maintenance Procedures are necessary to support certain MMEL items. These Procedures are produced and published by the Type Certificate Holder, the Supplemental Type Certificate Holder or the DOA Holder, as appropriate.

These procedures are published concurrently with the MMEL. However, if the MMELs are subject to Belgian CAA acceptance, the operational and maintenance procedures themselves are neither subject to approval nor acceptance.

### **5. MEL**

#### **5.1. General**

- 5.1.1. The MEL is a document that lists the equipment that may be temporarily inoperative, subject to certain conditions, at the commencement of flight. This document is prepared by the operator for his/their own particular aircraft taking account of the configuration of each of their aircraft and the relevant operational and maintenance conditions in accordance with a procedure approved by the Belgian CAA.
- 5.1.2. All items related to the airworthiness of the aircraft and not included in the list are automatically required to be operative prior to flight.
- 5.1.3. Non-safety related equipment, such as galley equipment and passenger convenience items, need not be listed. Operators shall 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 (see paragraph 4.1.3. above)
- 5.1.4. The MEL may contain additional advisory material or modified operational and maintenance procedures.

#### **5.2. Types of Operations**

- 5.2.1. With the agreement of the Authority, 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.).
- 5.2.2. The MEL must include the dispatch conditions associated with flights conducted in accordance with the Special Authorisations list shown in the Air Operator's Certificate e.g. MNPS, RVSM, RNAV, ETOPS, All weather operations, etc.

#### **5.3. MEL Preparation**

- 5.3.1. The MEL, including the Definitions, shall be based upon, but no less restrictive than, the relevant MMEL (if this exists) accepted by the Belgian CAA. The MEL may not deviate from any applicable Airworthiness Directive or any other Mandatory Requirements (e.g. Continued Airworthiness requirement).
- 5.3.2. The Temporary Guidance Leaflet N°26 (Guidance Document for MEL Policy) shall be used in conjunction with EASA MMELs or MMELs produced by the Type Certificate Holder, STC Holder and DOA holder and approved by the Authority of the State of Design plus the related EASA MMEL Supplements if applicable.
- 5.3.3. When no such EASA MMEL nor EASA MMEL Supplement exist, the Temporary Guidance Leaflet N°26 shall be used in conjunction with the MMEL approved by the State of Design. However, when properly justified, the Belgian CAA may exceptionally accept as base for the MEL an MMEL approved by the Authority of a state other than the State of Design Certification.
- 5.3.4. The flow diagram, in Appendix 1, explains how to use TGL 26 when preparing an MEL.
- 5.3.5. Operators must ensure that they use the latest version of the appropriate MMEL to develop their MEL. The latest MMELs and MMEL Supplements are available for viewing or downloading (where these are available at no cost) from the JAA or other Authorities websites. Alternatively, operators may obtain MMELs directly from the Type Certificate Holder, who normally provides MMELs along with a revision service, on a commercial basis.
- 5.3.6. Operators must ensure that the additional MMEL items included in Supplemental Type Certificate(s), Airworthiness Directives and in modification data approved by the Type Certification Holder or by an Approved Part-21 Design Organisation, as appropriate, are taken into consideration when developing their MEL.
- 5.3.7. Any configuration change must also be taken into consideration and the operator's MEL amended, as appropriate, before returning the affected aircraft to service
- 5.3.8. When a MMEL revision is issued, an operator will have 90 days from the date of revision to submit the revised MEL to the Belgian CAA. Reduced time scales for implementation of safety related revisions might be required.

#### **5.4. Format of MEL**

- 5.4.1. The MEL must contain a List of Effective Pages, a Table of contents, amendment record page(s), a List of the Airworthiness Directives (AD), Supplemental Type Certificates (STC), Modifications (MOD), Service Bulletins (SB) affecting the MEL, a relevant Preamble, Definitions and, if appropriate, clarifying Notes (which shall adequately reflect the scope, extent and purpose of the MEL).
- 5.4.2. Operators must specify the revision status of the MMEL upon which it is based.
- 5.4.3. The page format must follow the JAA MMEL page format of five column (see document JAR-MMEL/MEL, Appendix 1 to ACJ-MMEL/MEL.025), must be used for all the operator's MEL.
- 5.4.4. The List of Effective Pages (LEP) will be used to ensure that each MEL is up-to-date. It must list the date and revision status 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.
- 5.4.5. The Table of Contents page will list the section for each aircraft system using the ATA 100/2200 Specification numbering system. 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).
- 5.4.6. The list of the AD, STC, MOD, SB affecting the MEL will be used to ensure that these AD, STC, MOD, SB have been taken into consideration by the operator when developing the MEL.
- 5.4.7. The MEL Preamble shall contain guidance for flight crews and maintenance personnel using the MEL. The model of MEL preamble shown in Appendix 1 to ACJ-MMEL/MEL.065 is intended only as an example of what is required. Operators may, with the agreement of the Belgian CAA, vary the format and content of their MEL Preambles to suit their own needs and requirements.

- 5.4.8 The MEL Definitions must include the procedure related to the extension of the Rectification Intervals, when applicable.
- 5.4.9. The operator shall ensure that the MEL, including the Preamble, reflects the guidance given in the MMEL on the effects of multiple unserviceabilities.
- 5.4.10. Where the MMEL shows a variable number installed and/or required for dispatch, the MEL must reflect the actual number installed and the actual number required for dispatch.
- 5.4.11. Where the MMEL column 5 states "as required by Operating Requirements", this wording shall not appear in the MEL. The flow diagram, in Appendix 1 must be used to determine the content of the column 5 of the MMEL.
- 5.4.12. MMEL may include equipments not required by regulation but installed on some models of aircraft. If this equipment is not installed on the aircraft of the operator's fleet, the MMEL statement of column 1 (System & sequence numbers and item) must be kept as is and the wording "Not applicable" will replace the statement of column 5 (Remarks or exceptions).
- 5.4.13. Where an operator's fleet includes aircraft fitted with optional equipment this equipment must be operable for dispatch except if these items are included in the MEL.

## **5.5. Operational and Maintenance Procedures**

- 5.5.1. Operational and Maintenance Procedures are necessary to support certain MEL items. These Procedures are produced and published by the Type Certificate Holder, the Supplemental Type Certificate Holder or the DOA Holder, as appropriate. These procedures are not subject to Belgian CAA approval.
- 5.5.2. The Operational and Maintenance procedures are part of the MEL They are an integral part of the compensating conditions needed to maintain an acceptable level of safety, enabling the Belgian CAA to approve the MEL. Where the Operational and Maintenance Procedures, instead of being included in the operator's MEL, are indicated by the symbols "(O)" or "(M)", the separate document containing these procedures must be made available to the Belgian CAA, at its request in the course of the MEL approval process.
- 5.5.3. Operators shall take Operational and Maintenance procedures referenced in the MMEL into account when preparing an MEL. An operator shall be prepared to present these procedures to the Authority during the MEL approval process.
- 5.5.4. Aircraft with inoperative equipment requiring an operational (O) and/or a maintenance (M) procedure may not be dispatched unless the (O) and/or (M) procedures required by the MEL have been carried out.
- 5.5.5. Operational Procedures are normally accomplished by qualified flight crew; however, other personnel may be qualified and authorised to perform certain functions in accordance with a procedure approved by the BCAA. The satisfactory accomplishment of all procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are required to be published as a part of the operator's Operations Manuals, CAME or MEL as relevant
- 5.5.6. Maintenance Procedures are normally accomplished by maintenance personnel; however, other personnel may be qualified and authorised to perform certain functions as far as authorised by an approved procedure in accordance with Part M, paragraph M.A.801 or Part 145<sup>4</sup>, paragraph 145.A.30 (j). The satisfactory accomplishment of all maintenance procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are required to be published in the CAME as a part of the Operator's CAME or MEL.
- 5.5.7. The procedures themselves, or symbols indicating their need and reference to their location, are required in the operator's MEL.

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<sup>4</sup> When referring to Part 145, it means Annex II to Commission Regulation (EC) N°2042/2003, on the continuing airworthiness of aircraft and aeronautical products, parts and appliances and on the approval of organisations and personnel involved in these tasks, as amended by subsequent regulations.

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

## **5.6. Rectification Intervals**

- 5.6.1. The maximum time an aircraft may be operated between the deferral of an inoperative item and its rectification will be specified in the MEL. Non-safety related equipment, such as reading lights and entertainment units, don't need to 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 – refer to paragraph 5.5 above
- 5.6.2. The Rectification Interval Categories are defined in JAR-MMEL/MEL.040 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 MMEL. Whenever the time interval is specified in calendar days, it shall start at 00h01 on the calendar day following the day of discovery.
- Category B**  
Items in this category shall be rectified within three consecutive calendar days, excluding the day of discovery.
- Category C**  
Items in this category shall be rectified within 10 consecutive calendar days, excluding the day of discovery
- Category D**  
Items in this category shall be rectified within 120 consecutive calendar days, excluding the day of discovery.
- 5.6.3. The operator must take account of the Rectification Interval given in the MMEL when preparing an MEL. The Rectification Interval in the MEL may not be less restrictive than the corresponding Rectification Interval in the MMEL.
- 5.6.4. 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.
- 5.6.5. Operation of the aircraft is not allowed after expiry of the Rectification Interval specified in the MEL, unless:
- (i) The defect has been rectified, or
  - (ii) The Rectification Interval is extended in accordance with paragraph 5.7 below.

## **5.7. Rectification Interval Extension (RIE)**

- 5.7.1. It is recognized that while MEL item rectification interval categories have been established, it may not be possible in every case to rectify aircraft in the time allotted for each MEL item. Several factors may influence the operator's ability to comply with the specified interval. These factors include :
- Parts shortages from manufacturers that affect all operators equally. Parts shortages can result from material, labour, or shipping problems but must be clearly outside the operator's control.
  - Inability to obtain equipment necessary for proper troubleshooting and repair. Operators should, to the maximum extent possible, have the necessary equipment available to perform troubleshooting and rectification of MEL items. Equipment shortages or unserviceabilities may be encountered that cannot be directly controlled by the operator for the specified MEL item.
- 5.7.2. Subject to the approval of the Belgian CAA, the operator may use a procedure for the extension of the applicable Rectification Intervals B, C and D provided the following conditions are complied with:
- (a) The MMEL explicitly allows the use of Rectification Interval Extension.

- (b) A description of specific duties and responsibilities for controlling extensions is established by the operator and accepted by the Belgian CAA.
- (c) The operator only grants a one-time extension of the applicable Rectification Interval.
- (d) The Belgian CAA is notified of any extension granted within a timescale not to exceed 10 calendar days.
- (e) Rectification is accomplished at the earliest opportunity.
- (f) The procedure for the extension of the applicable Rectification Interval must be incorporated in the operator's CAME.
- (g) The approval of Rectification Interval Extension granted by the BCAA must be included in the MEL Definitions .

**Notes :**

1. Rectification interval extension is not permitted for Category A rectification intervals.
2. Category D rectification intervals are limited by the BCAA to 10 calendar days. However no rectification interval extension is permitted for Category D rectification intervals when not explicitly allowed by the applicable MMEL.

- 5.7.3. The operator must ensure that rectifications are accomplished at the earliest opportunity.
- 5.7.4. Operators may not substitute rectification interval extensions as a means to reduce or eliminate the need to rectify MEL defects in accordance with the established category limit. Operators may not use the extension process as a normal means of conducting MEL item rectification. Rectification interval extensions will only be considered valid and justifiable when events beyond the operator's control have precluded rectification.
- 5.7.5. Unwillingness on the part of the operator to obtain parts or equipment to rectify the defect in the timeliest manner possible will be grounds for review and could result in the withdrawal of the operator's privilege to use Rectification interval extensions.
- 5.7.6. Operators are responsible for establishing and implementing a sound programme to address this authorisation and that ongoing surveillance ensures compliance with approved procedures. The number of times this privilege is used is expected to be low. The actual number of rectification interval extensions will vary from one operator to another due to individual circumstances.
- 5.7.7. The rectification programme will include tracking of the inoperative items and co-ordinating parts, personnel, facilities, and procedures necessary to ensure timely rectification.

## **5.8. MEL Approval**

- 5.8.1. The Belgian CAA shall only approve the MEL and all changes when it is satisfied that compliance has been shown with the applicable requirements of this Circular, JAR-MMEL/MEL Subpart C and Temporary Guidance Leaflet (JAR-OPS) N°26.
- 5.8.2. The Temporary revisions to an approved MEL are also submitted to Belgian CAA approval, except for corrections of obvious typographical errors.
- 5.8.3. An audit of the MEL must be conducted by the Operator's Quality Manager before the presentation of the MEL to Belgian CAA approval. This must be indicated by the signature of the Quality Manager on top of the List of Effective Page.
- 5.8.4. Where the Operational and Maintenance Procedures (see paragraph 5.5 above) instead of being included in the operator's MEL are indicated by the symbols "(O)" or "(M)", the separate document containing these procedures must be made available to the Belgian CAA, at its request, before the approval of the MEL.

## **5.9. Operations Outside the Scope of the MEL**

Operations outside the scope of the MEL will only be approved in accordance with JAR-MMEL/MEL.090 and Appendix 1 to JAR-MMEL/MEL.090.

**6. DISPATCH**

- 6.1. "Dispatch" for the purpose of the MEL/MMEL refers to the commencement of flight, which is defined in subparagraph 3.6 above 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.
- 6.2. The operator's 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 Operation Manual, if necessary.

**7. TRAINING**

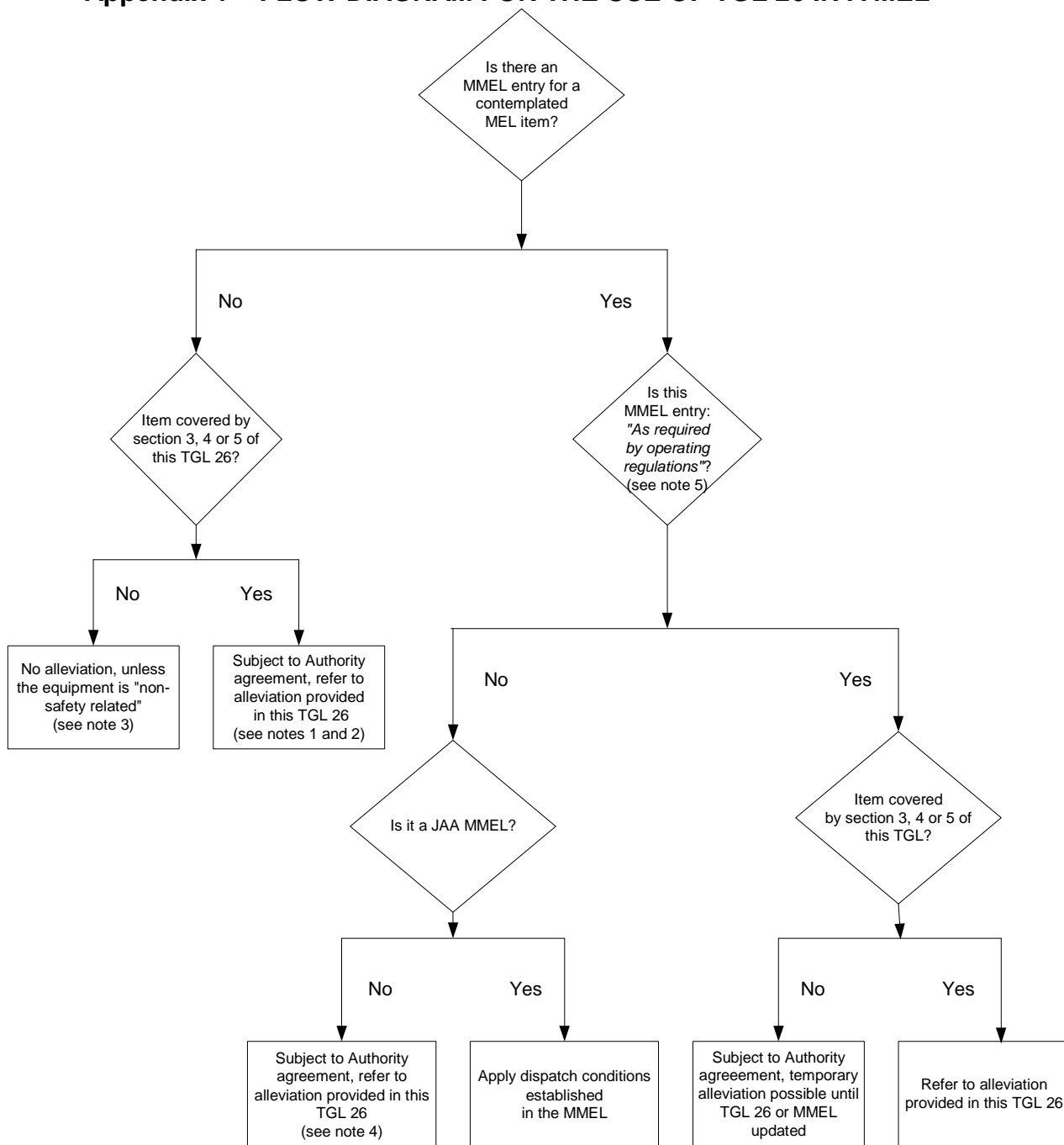
7.1. Training Programme – Ground Personnel

Operators must develop a MEL training programme for ground personnel, to be included in the Continuous Airworthiness Management Exposition (CAME), which must be approved prior to an operator receiving approval to operate with a MEL. The training should include those sections of the CAME procedures dealing with the use of the MEL, placarding of inoperative equipment, deferral procedures, dispatching, and any other MEL related procedures. Ground personnel include dispatchers and maintenance engineers.

7.2. Training Programme – Crew Members

Operators must provide crew members with MEL training and detail such training in their Operations Manual. The training must include the purpose and use of a MEL, instruction on company MEL procedures, elementary maintenance procedures, and pilot-in-command responsibility. Crew members, as far as this paragraph is concerned, include pilots, flight engineers, and flight attendants.

**Appendix 1 – FLOW DIAGRAM FOR THE USE OF TGL 26 IN A MEL**



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

Note 2: All items required by OPS 1 or JAR OPS 3 must be operative unless alleviation is provided in the MMEL or this TGL 26.

Note 3: Equipment obviously not required for safe operation of the aeroplane may not be listed. Operators 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: For non-EASA MMELs, TGL 26 should be used to overwrite the MMEL entry where it is based on non-EASA policy and not design considerations.
- Note 5: In non-EASA MMELs, similar statements such as “As required by FARs” or “As required by Regulations” etc. should be interpreted as meaning the same as “As required by Operating Regulations”.