



Explanatory Note to Decision 2020/012/R

Regular update of CS-MMEL and CS-GEN-MMEL

RELATED NPA/CRD 2018-08 — RMT.0499

EXECUTIVE SUMMARY

The specific objective of this Decision is to introduce amendments to the Certification Specifications for Master Minimum Equipment List (CS-MMEL) and for the Generic Master Minimum Equipment List (CS-GEN-MMEL) following the selection of non-complex, non-controversial and mature subjects.

In particular, this Decision introduces amendments to the following items:

- Item 1: A generic safety methodology for the development of MMEL candidate items,
- Item 2: Quantitative assessment criteria for aircraft certified against requirements other than CS 25/29.1309,
- Item 3: Engine time-limited dispatch (TLD) update,
- Item 4: Updated guidance for items involved in non-normal and emergency procedures,
- Item 5: Clarification of the applicable MMEL operational suitability certification basis,
- Item 6: Additional and updated definitions,
- Item 7: Updated and new items in the MMEL ITEMS GUIDANCE BOOK (CS-MMEL),
- Item 8: Editorial corrections to CS-MMEL, and
- Item 9: Update of CS-GEN-MMEL and CS-MMEL applicability.

The amendments will contribute to updating CS-MMEL and CS-GEN-MMEL to reflect the state of the art of MMEL certification.

Action area:	Design and production		
Related rules:	CS-MMEL and related CS-GEN-MMEL		
Affected stakeholders:	<ul style="list-style-type: none"> — Design organisations producing complex motor-powered aircraft and other design organisations dealing with changes or supplemental type certificates to these aircraft; — Design organisations producing other-than-complex motor-powered aircraft 		
Driver:	Efficiency/proportionality	Rulemaking group:	No
Impact assessment:	None	Rulemaking Procedure:	Standard



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1. About this Decision

The European Union Aviation Safety Agency (EASA) developed ED Decision 2020/012/R in line with Regulation (EU) 2018/1139¹ ('Basic Regulation') and the Rulemaking Procedure².

This rulemaking activity is included in the European Plan for Aviation Safety (EPAS) [2020-2024](#) under rulemaking task (RMT).0499. The scope and timescales of the task were defined in the related Terms of Reference³

The draft text of this Decision has been developed by EASA. All interested parties were consulted through Notice of Proposed Amendment (NPA) 2018-08⁴. 155 comments were received from all the interested parties, including industry and national aviation authorities.

EASA reviewed the comments received during the public consultation. The comments received and EASA's responses to them are presented in Comment-Response Document (CRD) 2018-08⁵.

The final text of this Decision, along with the certification specifications (CS), has been developed by EASA.

It should be noted that in order to avoid inconsistencies between these CSs and the recently published Commission Regulation (EU) 2020/587⁶, two notes have been added in Chapter 34-54 of CS-MMEL and CS-GEN-MMEL in order to indicate that operations in the Single European Sky require that the related items of equipment do not remain inoperative more than 3 days, whereas the CSs allow 10 days for other operations.

The major milestones of this rulemaking activity are presented on the title page.

¹ Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1535612134845&uri=CELEX:32018R1139>).

² EASA is bound to follow a structured rulemaking process as required by Article 115(1) of Regulation (EU) 2018/1139. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 18-2015 of 15 December 2015 replacing Decision 01/2012 concerning the procedure to be applied by EASA for the issuing of opinions, certification specifications and guidance material (<http://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-18-2015-rulemaking-procedure>).

³ <https://www.easa.europa.eu/sites/default/files/dfu/ToR%20RMT.0499%20-%20Issue%201.pdf>

⁴ In accordance with Article 115 of Regulation (EU) 2018/1139 and Articles 6(3) and 7 of the Rulemaking Procedure.

⁵ <https://www.easa.europa.eu/document-library/comment-response-documents>

⁶ Commission Implementing Regulation (EU) 2020/587 of 29 April 2020 amending Implementing Regulation (EU) No 1206/2011 laying down requirements on aircraft identification for surveillance for the single European sky and Implementing Regulation (EU) No 1207/2011 laying down requirements for the performance and the interoperability of surveillance for the single European sky (OJ L 138, 30.4.2020, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1594114531131&uri=CELEX:32020R0587>).

2. In summary — why and what

2.1. Why we need to amend the CSs — issue/rationale

The aviation industry is complex and rapidly evolving. Certification specifications (CSs) need to be updated regularly to ensure that they are fit for purpose, cost-effective, and can be implemented in practice.

The following items have been identified for an Amendment to CS-MMEL and CS-GEN-MMEL:

Item 1: A generic safety methodology for the development of MMEL candidate items,

Item 2: Quantitative assessment criteria for aircraft certified with requirements other than CS 25/29.1309,

Item 3: An engine time-limited dispatch (TLD) update,

Item 4: Updated guidance for items involved in non-normal and emergency procedures,

Item 5: Clarification of the applicable MMEL operational suitability certification basis,

Item 6: Additional and updated definitions,

Item 7: Updated and new items in the MMEL ITEMS GUIDANCE BOOK (CS-MMEL, Appendix 1 to GM1 MMEL.145),

Item 8: Editorial corrections to CS-MMEL, and

Item 9: Update of CS-GEN-MMEL and CS-MMEL applicability.

2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. This Decision will contribute to the achievement of the overall objectives by addressing the issues outlined in Section 2.1.

The specific objective of this Decision is, therefore, to amend CS-MMEL and CS-GEN-MMEL based on the above selection of non-complex, non-controversial and mature subjects, with the ultimate goal being to increase safety.

2.3. How we want to achieve it — overview of the amendments

Item 1: Generic safety methodology for the development of MMEL candidate items

The new guidance material is taken from the generic MMEL development safety methodology that EASA has been using over the past two years to support compliance with CS MMEL.145 (b). In particular, design organisation approval (DOA) holders who do not have past experience with the development of MMEL justifications have been required since 19 December 2016 to address the MMEL impact of their design changes in compliance with Part 21, 21.A.93 (c). This material is, therefore, considered to be mature enough to be included in this Decision.

It is proposed to add paragraphs (c) and (d) to GM4 MMEL.145(c) and create a new GM5 MMEL.145(c)(1).



Item 2: Quantitative assessment criteria for aircraft certified against requirements other than CS 25/29.1309

This updates GM1 MMEL.145(d) to resolve the inconsistencies between it and the applicable requirements, so that CS-MMEL may be used as a certification basis for aircraft certified under a type-certification basis other than CS 25/29.1309.

A new paragraph is introduced in GM MMEL 145(d) as an alternative to the existing paragraphs, and it allows the applicant to demonstrate compliance with the CS MMEL 145 (d) requirement using methods similar to those authorised during the type-design certification, thus restoring the consistency between the operational suitability data (OSD) certification basis and the type-certification basis.

Item 3: Engine time-limited dispatch (TLD) update

This includes the content of EASA CM-MMEL-001 that is relevant to CS-MMEL as an update of the existing GM3 MMEL.145.

Item 4: Updated guidance for items involved in non-normal and emergency procedures

The current GM is revised to indicate that relief may be granted for items that are powered by an emergency bus, provided that the applicant demonstrates by flight test, analysis, or a combination of both, that the MMEL relief neither affects the successful intended completion and outcome of the procedure, nor increases the complexity of the procedure for the crew.

Item 5: Clarification of the applicable MMEL operational suitability certification basis

The current GM is updated to clarify that the applicable MMEL operational suitability certification basis is determined by the aircraft type.

Item 6: Additional and updated definitions

This introduces/updates the definitions as follows:

GM5 MMEL.120 Format and content of an MMEL

1. Definition for 'flight' for rotorcraft: the lack of certainty in the current definition of flight for rotorcraft has led to different interpretations at the national level regarding the applicability of the MEL if a failure occurs during a flight to a remote location (e.g. an offshore platform). This clarifies the definition of 'flight' for rotorcraft in the absence of any other regulation that provides such a definition for the purpose of defining the applicability of the MEL. The definition is derived from the flight time definition in Part-FCL of Regulation (EU) No 1178/2011⁷.
2. This provides guidance on how the elapsed time is to be measured if the rectification interval is given in flight hours. In particular, it is indicated that the taxi time is to be accounted for.
3. The definition for 'operative' is added based on the Federal Aviation Administration (FAA)/Transport Canada Civil Aviation (TCCA) definition.
4. The definition for 'Day' is added.

⁷ Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 2018/1139 of the European Parliament and of the Council (OJ L 311, 25.11.2011, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1592410668912&uri=CELEX:32011R1178>).

5. The definition for ‘Extended overwater operations’ is added based on CAT.IDE.A.285(d) of Annex IV (Part-CAT) to Regulation (EU) No 965/2012⁸.
6. The definition for the ‘***’ symbol for optional items is added.
7. The MMEL preamble specimen refers to the use of the ‘#’ symbol to identify items which have been based only on European operational requirements using the associated guidance developed by EASA. This does not specify a specific symbol, but rather leaves it open to the applicant to use an alternate means to identify those items (e.g. listing them in a table as part of the MMEL preamble).

GM4 MMEL.130 Rectification Interval

8. The definition for the ‘#’ symbol for the repair interval category reference to an associated ‘considered inoperative’ item is added, consistent with the already published GM3 MMEL.130.

Item 7: Updated and new items in the MMEL ITEMS GUIDANCE BOOK (CS-MMEL, Appendix 1 to GM1 MMEL.145) updates

25-65-1 Underwater locating devices (ULDs)

This provides guidance for MMEL relief on the 8.8 kHz underwater locating device (ULD) that is required to be fitted to some large aeroplanes operated for commercial air transport over oceanic areas (refer to CAT.IDE.285 of Annex IV (Part-CAT) to Regulation (EU) No 965/2012) (by 1 January 2019 at the latest). The dispatch conditions and the rectification interval consider the current relief provided for emergency locator transmitters (ELTs) (another type of system to facilitate the determination of the location of an accident site) and flight recorders (because by facilitating the determination of the location of aircraft wreckage, the 8.8 kHz ULD facilitates the recovery of evidence for safety investigation purposes). A rectification interval of C (10 days) is introduced, considering that the 8.8 kHz ULD is useful only in case of an accident that occurs in a remote and deep water area (whereas flight recorders are useful in most accidents), and it has no effect on the survivability of the occupants, whereas an ELT has.

As a consequence of the introduction of the new item above, this clarifies that if a ULD is attached to a cockpit voice recorder (CVR) or a flight data recorder (FDR) that is inoperative, the associated item (CVR or FDR) has to be considered to be inoperative. This is to avoid the 8.8 kHz ULD item being referred to erroneously.

23-70-1 Flight crew compartment door surveillance system (e.g. CCTV) update

This provides guidance for MMEL alternate procedures to be established that are consistent with the approach applied for aircraft that do not have a cockpit door surveillance system (CDSS) installed.

34-55-1 Aircraft tracking system

This provides guidance for MMEL relief on the aircraft tracking system required to be installed (by 16 December 2018 at the latest) on some large aeroplanes (refer to CAT.GEN.MPA.205 of Annex IV (Part-CAT) to Regulation (EU) No 965/2012), and on some helicopters that perform offshore

⁸ Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1592410754033&uri=CELEX:32012R0965>)

operations (refer to SPA.HOFO.150 of Annex V (Part-SPA) to Regulation (EU) No 965/2012). The dispatch conditions and the rectification interval consider the current relief provided for emergency locator transmitters and flight data recorders. A rectification interval of C (10 days) is introduced, considering that the loss of the system has no effect on the safe conduct of the flight.

However, the aircraft tracking function could have an effect on survivability, since it would enhance the detection of abnormal situations, and could help search and rescue personnel in locating an accident. In order to ensure that a means of locating the aircraft in case of an emergency remains available, it requires that at least one automatic ELT should remain operative.

46-20-1 Electronic flight bag (EFB) systems update

The definition of Class 1, 2 and 3 Electronic Flight Bags is no longer current, and has been amended in AMC 20-25 to refer to installed and portable EFBs with or without installed resources. The MMEL policy has been revised accordingly.

Furthermore, additional provisions for relief have been added under 46-20-1B to ensure that when a dispatch is authorised with a single remaining EFB on board, dispatch considerations mitigate the loss of redundancy in case of a further failure in flight.

In addition, a more flexible repair category 'D' is proposed under 46-20-1C when the EFB is installed but is not required to be used by the operator's procedures.

Item 8: CS-MMEL editorial corrections

The reference to GM1 MMEL.105(g) was omitted in the definition of a catastrophic failure condition, and this is corrected.

App 9 Book 2: the table of contents does not show '(MC)' under headset, even though it is shown on the page for headset relief. The same applies for ATA 25 for flight crew seats, observers, and passenger seats. This corrects these editorial errors.

App-74 Book 2 item 30-80-2, Ice Protection System: this corrects the item numbering error.

App 90 Book 2: 33-41-1-2A should be 33-42-1-2A. This corrects this item numbering error.

App 93 Book 2: 33-50-1-3, Exit Area Lighting, should be 33-50-1-4. Everything below in 33-50-1 should be subsequently renumbered. It corrects this item numbering error.

App 120 Book2: 34-32-1ILS (or MLS) sub-items should be 34-32-1A&B. This corrects this item numbering error.

App 143 Book 2: the second item under 46-20-2-2A is missing an item number, so it corrects this item numbering error.

App 152 Book 2 condition (f) to 52-11-1A: the end of the sentence is missing. This completes it.



Item 9: Update of CS-GEN-MMEL and CS-MMEL applicability

In order to ensure consistency between the content of GM No 1 to 21A.15(d)⁹ and the applicability of CS-GEN-MMEL, it excludes ELA 1 and ELA 2 from the applicability of CS-GEN-MMEL (in paragraph CS GEN.MMEL.100).

In order to incorporate the content of the special condition for other-than-complex motor-powered helicopters, SC-GEN-MMEL-H, published in October 2015, amends the applicability of CS-GEN-MMEL to include non-complex helicopters, except helicopters that have been certified for instrument flight rules (IFR) or icing conditions or according to Category A requirements. The latter are then dealt with in the applicability of CS-MMEL, which is consequently also modified.

The fact that an alternate method of compliance with CS MMEL.145 is introduced under item 2 above permits EASA to integrate the new applicability to other-than-complex motor-powered helicopters certified for IFR or icing conditions, or according to Category A requirements. It will not create an undue burden, as the reference for the level of safety will be based on the applicable certification basis of the rotorcraft concerned.

2.4. What are the stakeholders' views

155 comments were received from European manufacturers, operators and NAAs, and from manufacturers and the FAA from the USA.

Most of them, except FNAM as detailed below, were supportive of this regular update, proposing some clarifications or wording improvements which were used for the text of this amendment.

FNAM issued 69 comments (out of the 155 comments received on the NPA) in which they showed a lack of knowledge of CS-MMEL, the MMEL/MEL process development and the EASA rulemaking process. This explains most of their disagreements with NPA 2018-08. In order to avoid a similar misunderstanding for future revisions, EASA will contact FNAM to explain the MMEL/MEL process.

2.5. What are the benefits and drawbacks

The amendments will facilitate compliance with the OSD by integrating additional content in CS-MMEL and CS-GEN-MMEL. Overall, this will provide a moderate safety benefit, will have no social or environmental impacts, and will provide some economic benefits by streamlining the certification process.

As the amendments result from the selection of non-complex, non-controversial and mature subjects, there was no need to develop a regulatory impact assessment (RIA).

⁹ Decision 2014/007/R of the Executive Director of the Agency of 31 January 2014 amending Acceptable Means of Compliance and Guidance Material to Part 21 of Regulation (EU) No 748/2012 (<https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2014007r>).

3. How do we monitor and evaluate the rules

As the amendments result from the selection of non-complex, non-controversial and mature subjects, there is no need to monitor or evaluate them.



4. References

4.1. Related regulations

n/a

4.2. Related decisions

- ED Decision 2014/004/R of the Executive Director of the Agency of 31 January 2014 adopting Certification Specifications and Guidance Material for Master Minimum Equipment List ‘CS-MMEL – Initial issue’
- ED Decision 2014/005/R of the Executive Director of the Agency of 31 January 2014 adopting Certification Specifications and Guidance Material for Generic Master Minimum Equipment List ‘CS-GEN-MMEL — Initial issue’

4.3. Other reference documents

- SC-CS-GEN-MMEL-H Special Condition to define the MMEL requirements as Certification Basis for non-complex motor-powered helicopters, published for consultation on 8 October 2015:

<https://www.easa.europa.eu/document-library/product-certification-consultations/sc-cs-gen-mmel-h-special-condition-define-mmel>



5. Related document

CRD to NPA 2018-08 'Regular update of CS-MMEL and CS-GEN-MMEL'¹⁰

¹⁰ Available at <https://www.easa.europa.eu/document-library/comment-response-documents>.

