European Union Aviation Safety Agency

Comment-Response Document 2018-08

RELATED NPA: 2018-08 — RMT.0499 — 17.8.2020

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1. Summary of the outcome of the consultation

Please refer to Section 2.4 of the Explanatory Note to Decision 2020/012/R.

2. Individual comments and responses

In responding to the comments, the following terminology has been applied to attest EASA's position:

(a) **Accepted** — EASA agrees with the comment and any proposed amendment is wholly transferred to the revised text.

(b) **Partially accepted** — EASA either partially agrees with the comment, or agrees with it but the proposed amendment is only partially transferred to the revised text.

(c) **Noted** — EASA acknowledges the comment, but no change to the existing text is considered to be necessary.

(d) **Not accepted** — The comment or proposed amendment is not agreed by EASA.

CRD table of comments, responses and resulting text

(General Comments)	-

comment	*8* comment by: *Mazzocchi A. (Mecaer Aviation Group)* Mecaer Aviation Group thanks EASA so much for your excellent work and the opportunity we were given to submit case comments on the NPA 2018-08
response	Noted

comment	*24* comment by: *DGAC France* DGAC France would like to thanks EASA for this NPA. As a general comment, DGAC France would like to recall a comment made when ToR of RMT.0499 were developed. At the OPS TeB on May 2017, WP 05 was presented. A number of implementation issues related to Minimum Equipment Lists (MEL) and Master Minimum Equipment Lists (MMEL) had been highlighted by industry and NAAs, especially. EASA has intended to provide guidance on the correct interpretation of the current rules on MEL/MMEL, solutions to some of the identified issues and an outlook of on-going or possible future actions. The update of the CS-MMEL should be a good chance to propose solutions to the highlighted issues and to clarify the connection between ORO.MLR.105 and CS-MMEL requirements.
response	Noted. EASA appreciates the DGAC suggestion, but the intention of EASA on this topic is to publish a FAQs section in order to help NAAs and operators to better understand and

	apply the rules. This list is under development and we do not believe that CS-MMEL is the right document to implement that list.
comment	*26* comment by: *DGAC France* CS-GEN-MMEL Noting that the Single Engine Airplane MMEL developed by FAA may be used by european operators, the CS-GEN-MMEL should be harmonized as far as possible with this generic MMEL (for example the item 77-22-01 could be added in the CS-GEN-MMEL for the reciprocating engine-powered airplanes).
response	Noted The FAA Single Engine Airplane MMEL has been taken into consideration during the initial development of CS-GEN-MMEL. Nevertheless, the ATA chapters of CS-GEN-MMEL have been limited to match with CS-MMEL. It was not the purpose of this revision to expand the MMEL of CS-GEN-MMEL.
comment	*44* comment by: *UK CAA* Thank you for the opportunity to comment on this NPA 2018- 08, please be advised that there are no comments from the UK CAA.
response	Noted
comment	*52* comment by: *FNAM* The FNAM (Fédération Nationale de l'Aviation Marchande) is the French Aviation Industry Federation/ Trade Association for Air Transport, gathering the following members: • CSTA: French Airlines Professional Union (incl. Air France) • **SNEH: French Helicopters Operators Professional Union** • CSAE: French Handling Operators Professional Union • **GIPAG: French General Aviation Operators Professional Union** • GPMA: French Ground Operations Operators Professional Union • EBAA France: French Business Airlines Professional Union And the following associated members: • FPDC: French Drone Professional Union • UAF: French Airports Professional Union

The comments hereafter shall be considered as an identification of some of the major issues the French industry asks EASA to discuss with third-parties before any publication of the proposed regulation. In consequence, the following comments shall not be considered:

- As a recognition of the third-parties consultation process carried out by the European Parliament and of the Council;
- As an acceptance or an acknowledgement of the proposed regulation, as a whole or of any part of it;
- As exhaustive: the fact that some articles (or any part of them) are not commented does not mean the FNAM has (or may have) no comments about them, neither the FNAM accepts or acknowledges them. All the following comments are thus limited to our understanding of the effectively published proposed regulation, notwithstanding their consistency with any other pieces of regulation.

FNAM thanks EASA for updating applicable European requirements to obtain more flexibility for potential technology changes. Requirements are proposed to update MMEL requirements for all types of aircraft: aeroplanes & helicopters. In particular, other-than-complex motor-powered helicopters have been added in the scope of CS-GEN.MMEL.

Nevertheless, this consultation is described to be affecting only manufacturers and designers. Since MMEL could be modified, MEL would *de facto* be changed. All CAT and SPO operators but also CAMO organizations would therefore be impacted by these proposals. CAT and SPO operators shall make approved their MEL, which should be based on manufacturer MMEL; and CAMO organizations create maintenance programme on MEL items requirements, which should be based on manufacturer MMEL. The scope of affected stakeholders should have included also all CAT and SPO operators and also CAMO organizations but not only equipment and aircraft designers.

Plus, MMEL requirements are currently not adapted for some operations. Time to repair a technical issue may variate depending on its gravity and the damaged part. Depending on the aircraft, it may be more or less easy to repair or to obtain a new part. In particular, for small aircraft and legacy aircraft, it may take a long time before finding the replacing part. The rectification interval is often exceeded and the operations are blocked. The economic impact of this issue is significant for Small and Medium Enterprises performing SPO operations with small aircraft for which manufacturer are not active (not producing parts, etc.).

Consequently, a sound impact assessment should be provided in order to allow all affected stakeholders (including operators and maintenance organizations) to judge how much their activities would be affected.

Therefore, in order that all stakeholders benefit of new CS-MMEL, CS-GEN.MMEL and improve the flight safety level, FNAM would appreciate that EASA's proposed disposals:

- Ensure that a sound impact assessment is provided;
- Consult all affected stakeholders including CAT and SPO operators and CAMO organizations;
- Allow flexible methods and rectification interval depending the type of technical issue on the part/equipment, the type of activities and the type of aircraft;
- Avoid any reference to repealed Regulation (EC) No 216/2008;
- Ensure that all definitions are harmonized in all European regulations;
- Provide MEL requirements and guidance in Regulation (EU) N°965/2012 rather than in CS-MMEL and CS-GEN.MMEL.

These main objectives would ensure a better understanding from operators but also from competent authorities. It is necessary to warrantee a harmonized implementation of regulations. Therefore, the level-playing-field and the level of flight safety would be improved by a homogeneous implementation of CS-MMEL and CS-GEN.MMEL requirements.

response

Partially accepted.

EASA thanks FNAM for the comments provided and the attention paid to this NPA. We have in any case to underline that CS-MMEL and CS-GEN-MMEL are specifications for initial airworthiness (Part 21) and consequently designed more for design organisations than for operators and CAMOs. Specific entries for other-than-CAT operations are already in both CSs, but at that level a deep customisation is not always possible. We encourage the operators to highlight their needs to the manufacturers and to take advantage of the benefits that Part 21 offers in terms of change to the OSD constituents.

comment

148 comment by: *European Powered Flying Union*

General comment
EPFU thanks the Agency for preparing this NPA, and for extended the comment period. The members of our community identified three major concerns in the past:
1) 1) The applicability of MMEL in general.
2) 2) The applicability of MMEL to CS-23 aircraft.
3) 3) As a question: Do all involved parties make use of the same terms and definitions?

We highly appreciate the effort undertaking as regards removing inconsistencies because not so clear texts or different formulae chosen make it often very difficult to produce crystal-clear translations, a fact of particular importance to countries obliged to produce official texts in more than one language. Fortunately, the text proposed by the Agency, proposes additional terms and definitions, clarifying, by doing so most of the uncertainties, but some remain, provoking questions, comments, and remarks.

response	Noted. Thank you for the comment.

Applicabiltity and timeline p. 1

comment	*53* comment by: *FNAM* **ISSUE – Affected Stakeholders** FNAM disagrees with EASA: not only equipment and aircraft designers are impacted by EASA's proposed disposals. Operators, in particular SPO operators, should define and make approved their MEL before operating. MEL is based on MMEL. Therefore, as soon as MMEL items are modified, MEL should be updated by all operators. Plus, all CAMO would also be indirectly impacted since their maintenance management should take into account the new MEL requirements. **PROPOSAL** Change the scope of affected stakeholders to extend it to CAT and SPO operators and CAMO organizations
response	Not accepted. This is out of the scope of this RMT. EASA thanks FNAM for the comments provided and the attention paid to this NPA. We have in any case to underline that CS-MMEL and CS-GEN-MMEL are specifications for initial airworthiness (Part 21) and consequently designed more for design organisations than for operators and CAMOs. Specific entries for other-than-CAT operations are already in both CSs, but at that level a deep customisation is not always possible. We encourage the operators to highlight their needs to the manufacturers and to take advantage of the benefits that Part 21 offers in terms of change to the OSD constituents.

comment	*54* comment by: *FNAM* **ISSUE – Impact Assessment** It is not acceptable that no impact assessment is provided. In order to analyse the potential impact on all affected stakeholders, EASA should provide a sound study on economic, social and technical impacts. FNAM fears that, without this study, comments would not be representative. **PROPOSAL** Propose Impact Assessments
response	Not accepted

The amendments proposed through this NPA are expected to result in a moderate safety benefit, have no social or environmental impacts, and provide some economic benefits by streamlining the certification process. There is no need to develop a regulatory impact assessment.

comment *55* comment by: *FNAM*

ISSUE
FNAM does not understand the Rulemaking process of this NPA. On one hand in page 1, EASA presents that no rulemaking group was settled for this NPA; on the other, Chapter 1.1 presents that RMT.0499 is the origin of this NPA.
PROPOSAL
Clarify the rule making process for NPA 2018-08

response Not accepted

In accordance with the EASA Management Board Decision No 18-2015, this task is a 'systematic rulemaking project' which does not require a Rulemaking group. This NPA has been developed by EASA using the feedback received since the initial publication of CS-MMEL.

1. About this NPA p. 3

comment *56* comment by: *FNAM*

ISSUE – Basic Regulation reference
This introduction refers to the repealed Basic Regulation (EU) N°216/2008. FNAM suggests to replace this reference to the published and applicable new Basic Regulation (EU) N°2018/1139.
PROPOSAL
Replace Basic Regulation (EU) N°216/2008 to Basic Regulation (EU) N°2018/1139

response

Accepted

The ED Decision will refer to the new Basic Regulation.

comment *57* comment by: *FNAM*

ISSUE

FNAM does not understand the Rulemaking process of this NPA. On one hand in page 1, EASA presents that no rulemaking group was settled for this NPA; on the other, Chapter 1.1 presents that RMT.0499 is the origin of this NPA.
PROPOSAL
Clarify the rule making process for NPA 2018-08

response

See comment 55

Not accepted

In accordance with the EASA Management Board Decision No 18-2015, this task is a 'systematic rulemaking project' which does not require a Rulemaking group. This NPA has been developed by EASA using the feedback received since the initial publication of CS-MMEL.

2. In summary — why and what | 2.1. Why we need to change the rules — issue/ratio p. 4-6

comment *58* comment by: *FNAM*

ISSUE – item 1
FNAM agrees that more guidance should be provided in order to support DOA holder for developing methods to show compliance with CS-MMEL. Plus, FNAM would like that this method ensures enough flexibilities depending on the type of the aircraft and its operation. Indeed, depending on the aircraft, it may be more or less easy to repair parts or to obtain new parts. In particular, for small aircraft, it may take a long time before finding the replacing part since manufacturers are sometimes not able to supply new parts or does not exist anymore. GM1 ORO.MLR.105(f) is not sufficient for recurrent and regular delay to the required rectification interval.
For example, the copilot seat is broken in a small aircraft: to continue its operations, operator should demonstrate to its competent authority that he is able to repair the seat within 10 days and should perform single-pilot activities. The 10 days requirements may sometimes be impossible to catch. Depending on the technical issue, some aircraft part may take a while to receive new parts or to repair parts since aircraft manufacturer may not produce this exact part anymore and since Certifying Staff authorized to release the aircraft may be rare (*cf.* first issue of EASA General Aviation Part-145 Taskforce).
Therefore, FNAM suggests that the developing methods to comply with CS-MMEL should remain flexible depending the type of technical issues on the part/equipment, the type of activities and the type of aircraft.
Moreover, in the same way than in CS-MMEL and CS-GEN.MMEL, methods should be developed in GM in Regulation (EU) N°965/2012 in order to guide operators (but also competent authorities) to create properly a MEL.
PROPOSAL
Provide flexible methods depending the type of technical issues on the part/equipment, the type of activities and the type of aircraft; and

	Provide a GM in Regulation (EU) N°965/2012 to guide operators for creating their MEL
response	Noted. We noted the comments and proposals, but they are outside the scope of this NPA. In CS-GEN-MMEL, it is mentioned that for NCO operators the RI is just a recommendation.

comment	*59* comment by: *FNAM* **AGREEMENT – item 2** FNAM agrees that differentiation should be done between newly certified rotorcraft and the others.
response	Noted

comment	*60* comment by: *FNAM* **ISSUE – item 2** FNAM wonders what is the meaning for general aviation. This term is not defined in European regulations. In order to ensure a proper understanding of EASA's proposed regulation, FNAM suggests that general aviation should be defined depending on the type of activities and the type of aircraft. **PROPOSAL** Define general aviation
response	Not accepted The main purpose of this item is to adapt CS-MMEL to aircraft certified with requirements other than CS-25. The reference to CS-23 is only given as an example. According to Annex I to 2017/373, 'general aviation' means any civil aircraft operation other than aerial work or commercial air transport

comment	*61* comment by: *FNAM* **ISSUE – item 3** FNAM agrees that GM should be provided in order to precise time limited dispatch assessment. Plus, FNAM suggests that this time limited dispatch should be flexible depending on the technical issues. Indeed, the time to repair a technical issue may variate depending on its gravity and the damaged part. Depending on the aircraft, it may be more or less easy to repair parts or to obtain new parts. In particular, for small aircraft, it may take a long time before finding the replacing part since

	manufacturers are sometimes not able to supply new parts or does not exist anymore. GM1 ORO.MLR.105(f) is not sufficient for recurrent and regular delay to the required rectification interval. For example, when a part is damaged in a small aircraft: to continue its operations, operator should demonstrate to its competent authority that he is able to repair this part or find a new part within a limited rectification interval. This rectification interval requirements may sometimes be impossible to catch. Depending on the technical issue, some aircraft part may take a while to receive and to repair since aircraft manufacturer may not produce this exact part anymore and since Certifying Staff authorized to release the aircraft may be rare (*cf.* first issue of EASA General Aviation Part-145 Taskforce). Therefore, FNAM suggests that the developing methods to comply with CS-MMEL should remain flexible depending the type of technical issue on the part/equipment, the type of activities and the type of aircraft. Moreover, in the same way than in CS-MMEL and CS-GEN.MMEL, methods should be developed in GM in Regulation (EU) N°965/2012 in order to guide operators (but also competent authorities) to create properly a MEL. **PROPOSAL** Provide flexible methods depending the type of technical issues on the part/equipment, the type of activities and the type of aircraft; and Provide a GM in Regulation (EU) N°965/2012 to guide operators for creating their MEL
response	Not accepted. The time limited dispatch (TLD) referred to in item 3 is the TLD defined in CS-E 1030.

comment	*62* comment by: *FNAM* **AGREEMENT – item 5** FNAM thanks to allow the possibility to base MMEL proposals on previous MMEL certifications.
response	Noted

comment	*63* comment by: *FNAM* **ISSUE – item 6** FNAM would like to warn about the risk to have several interpretations of European requirements. If definitions are not the same or are not provided for each European regulations (Regulation (EU) N°965/2012, Regulation (EU) N°1178/2011, etc.), FNAM fears that no efficient interpretation and no efficient implementation would be possible. It would therefore impact the main European objective of level-playing-field. **PROPOSAL**

Ensure that all definitions are harmonized in all European regulations (Regulation (EU) N°965/2012, Regulation (EU) N°1178/2011, etc.)

response

Not accepted

The definitions introduced with this NPA are specific to MMEL.

comment *64* comment by: *FNAM*

ISSUE – item 7
New items in MMEL would imply new items in MEL. Therefore operators and CAMO are also impacted by EASA's proposed regulation.
PROPOSAL
Include operators and CAMO as affected stakeholders

response

Not accepted.

The inclusion of a new item in the CS-MMEL and/or CS-GEN-MMEL Guidance Book forces neither the manufacturers to include it in the respective MMEL nor the operators in the respective MEL. Including or updating items in the Guidance Book is an advantage for all the stakeholders and for the standardisation of the MMELs.

comment *65* comment by: *FNAM*

ISSUE – item 7
« *guidance material on Night Vision Imaging Systems (NVIS)* »
The night vision imagining system will depends on the operations of the aircraft. Therefore, this system should not be included in CS-MMEL but in Regulation (EU) N°965/2012 requirements.
PROPOSAL
Ensure that new items used only for certain operations are included in Regulation (EU) N°965/2012 rather than in CS-MMEL

response

Not accepted.

The CS-MMEL is the right document to provide the information on how to release an aircraft when an item of equipment becomes inoperative. It does not define the kind of operations the aircraft can perform.

comment *66* comment by: *FNAM*

ISSUE

FNAM agrees that ELA1 and ELA2 should be excluded from CS MMEL and CS GEN MMEL.
Nevertheless, FNAM wonders what would be the regulatory basis for ELA1 and ELA2 aircraft for MMEL requirements, but also for MEL requirements since these requirements are correlated.
PROPOSAL
Precise the regulatory basis for ELA1 and ELA2 aircraft

response

Noted

The legal basis for ELA1 and ELA2 aircraft in terms of MMEL is contained in Regulation (EU) No 748/2012.

comment *67* comment by: *FNAM*

ISSUE – item 7
FNAM agrees that MMEL requirements should be provided for other-than-complex motor-powered helicopters. Nevertheless, requirements should remain flexible and be adapted depending on the technical issue, the type of activities or the type of helicopters. Depending on the aircraft, it may be more or less easy to repair parts or to obtain new parts. In particular, for small aircraft, it may take a long time before finding the replacing part since manufacturers are sometimes not able to supply new parts or does not exist anymore. GM1 ORO.MLR.105(f) is not sufficient for recurrent and regular delay to the required rectification interval.
For example, when a part is damaged in a small aircraft: to continue its operations, operator should demonstrate to its competent authority that he is able to repair this part or find a new part within a limited rectification interval. This rectification interval requirements may sometimes be impossible to catch. Depending on the technical issue, some aircraft part may take a while to receive and to repair since aircraft manufacturer may not produce this exact part anymore and since Certifying Staff authorized to release the aircraft may be rare (*cf.* first issue of EASA General Aviation Part-145 Taskforce).
Therefore, FNAM suggests that the developing methods to comply with CS-MMEL should remain flexible depending the type of technical issue on the part/equipment, the type of activities and the type of aircraft.
Moreover, in the same way than in CS-MMEL and CS-GEN.MMEL, methods should be developed in GM in Regulation (EU) N°965/2012 in order to guide operators (but also competent authorities) to create properly a MEL.
PROPOSAL
Provide flexible methods depending the type of technical issues on the part/equipment, the type of activities and the type of aircraft; and
Provide a GM in Regulation (EU) N°965/2012 to guide operators for creating their MEL

response

Noted.

The legal basis for ELA1 and ELA2 aircraft in terms of MMEL is contained in the regulation EU N°748/2012.

The comment is any case outside the scope of this NPA.

comment *149* comment by: *European Powered Flying Union*

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Item 2, last paragraph, the Agency writes:
"Furthermore, following the adoption of CS-23 Amendment 5, and its AMC & GM, the safety continuum for general aviation allows compliance with 23.2500 (formerly 23.1309) to be demonstrated by using adapted safety objectives. As defined in ASTM F3230-17 (Standard Practice for Safety Assessment of Systems and Equipment in Small Aircraft), it depends on the aircraft classes."

My question: What "aircraft classes" are meant?

response

Noted.

'Aircraft classes' refer to the previous amendments of CS-23 and correspond to categories of aircraft based on MTOW, number of seats, number and type of engines. With Amendment 5, it is more appropriate to refer to airworthiness levels that correspond to the assessment levels of safety defined in the ASTM F3230-17.

comment *150* comment by: *European Powered Flying Union*

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Item 9: Update of CS-GEN-MMEL and CS-MMEL applicability:
"There is currently an inconsistency between the applicability of OSD MMEL at the Part 21 level and the applicability paragraph of CS-GEN-MMEL regarding ELA 1 and ELA 2.
There are currently no MMEL certification specifications for other-than-complex motor powered helicopters. However, EASA issued a special condition for some of these aircraft in 2015 in order to provide a basis for MMEL development."

A second question, when it comes to CS-23: Would it be possible to make use of the "levels" proposed by the text used, e.g. in Amendment 5, CS-23.2005 instead of ELA and ELA2?

Rationale: Referring to the CS-23 "levels" only, not making use of the ELA1/ELA2 definition would in our eyes enhance understanding the texts.

response	Not accepted ELA1 and ELA2 aircraft are defined by Regulation (EU) No 748/2012 which is also implementing the OSD. Consequently, it makes sense that the applicability of CS-GEN-MMEL is defined at this level and not at CS-23 level.

2.2. What we want to achieve — objectiv p. 6

comment	*10* comment by: *Luftfahrt-Bundesamt* Page 6, first sentence under heading of section 2.2: The use of the reference *"Article 2 of the Basic Regulation"* is unclear if we take into consideration that the Basic Regulation changed and Article 2 of Reg. 216/2008 has another meaning than Article 2 of Reg. 2018/1139. So the expression *"Basic Regulation"* should be detailed in the reference document section.
response	Accepted. The reference should be Article 1 of the Basic Regulation (Regulation (EU) 2018/1139).

comment	*68* comment by: *FNAM* **ISSUE – Basic Regulation reference** This introduction refers to the repealed Basic Regulation (EU) N°216/2008. FNAM suggests to replace this reference to the published and applicable new Basic Regulation (EU) N°2018/1139. **PROPOSAL** Replace Basic Regulation (EU) N°216/2008 to Basic Regulation (EU) N°2018/1139
response	Accepted

2.3. How we want to achieve it — overview of the proposa p. 7-10

comment	*14* comment by: *Luftfahrt-Bundesamt* Page 10, Item 9: General comments

1. CS-GEN-MMEL uses the word helicopter. CS-27 and CS-VLR use the word rotorcraft. As far as we know, the word helicopter describes a specific configuration of a rotorcraft (one or more driven main rotors) and the general expression is rotorcraft (aircraft which produce lift by rotating airfoils). So it seems that you limit the applicability of CS-GEN-MMEL in some kind.
2. CS-MMEL should draw a distinction between CAT, NCC and SPO consistent with the distinction between CAT, NCO and SPO in CS-GEN-MMEL.

response

Not accepted

1) This is correct. The applicability of CS-GEN-MMEL is extended just to other-than-complex helicopters, where helicopters 'means a heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes'. Other rotorcraft are at the moment not included.

   The applicability of CS-GEN-MMEL has been extended specifically to integrate the SC-CS-GEN-MMEL-helicopter referring to other-than-complex helicopters.

2) In the CS-MMEL Guidance Book, there are entries for other-than-CAT operations covering NCC and SPO.

comment

38 comment by: *KLM*

It is proposed to delete the word "flight" from point 2 belonging to GM5 MMEL.120 Format and content of an MMEL as stated below:
2. It is also proposed to provide guidance on how the elapsed time is to be measured if the Rectification Interval is given in ~~flight~~ hours. In particular, it will be indicated that the taxi time is to be accounted for.

KLM comment;
Elapsed time as indicated here seems to be the time the aircraft is moving under its own power with the intention of take-off until it has come to a full stop at the end of the complete 'flight'.
This is commonly referred to as the time between off-blocks and on-blocks. Flight hours are a measure of the time the aircraft is actually off the ground between the moment of take-off and the moment of landing.
The times the aircraft is driving around on the ground is not adding to the 'flight hour' count.
In order to prevent misunderstanding by introducing this new definition in de CS-MMEL we propose to use the measurement of 'block hours' to indicate the elapsed time between the moment the aircraft is moving under its own power with the intention of take-off (off-blocks) until it has come to a full stop at the end of the cycle and the engines are shut down (on-blocks).
It is for us quite important not to introduce any misunderstanding with the use of 'Flight Hours', since in the development of all aircraft maintenance programs this

measurement in 'Flight Hour' is already commonly used. It actually describes the time the aircraft is doing what it is designed to do, being off the ground and in the air.
In short, the aircraft is then ***in flight*** accumulating its ***flight time*** measured in hours and minutes.

response

Not accepted.

The definition of 'flight' and consequently of 'flight hours' for aeroplanes is not changed and it is the usual definition for MMEL (off-block – on-block). This NPA affects the definition of 'flight' only for helicopters.

comment *51* comment by: *European Helicopter Association (EHA)*

GM4 MMEL.130 Rectification Interval (ref. pag. 8)

The proposed new definition for helicopters creates clarity in when the MEL is applicable as intended. However, using this same definition for the counting of any release i.a.w. the MEL which has a flight hour limit introduces a new issue.

Flight hours for any technical purpose (maintenance, extensions, MEL waivers etc,) have always been defined as the airborne phase of the flight (from physical take-off to landing) in OEMs and CAMO definitions. Implementing this non-technical flight time definition for a MMEL category A purpose only, would create additional burden and will not be practical. Neither does it serves its purpose. It is therefore proposed to modify the GM4 MMEL.130 as indicated below.
This proposal is supported by the following OEMs and Helicopter Operators within EASA:

Airbus	- BelAir	- Babcock
Bell	- Bristow	- PHI
Leonardo	- CHC	- Weststar
Sikorsky	- ERA	

We suggest to modify the text as follows:

If a time period is specified in flight hours for an item whose rectification interval category is A, unless specified differently in the MMEL dispatch conditions, the flight hours are defined as those hours accumulated from take-off to landing and thus corresponds to the airborne phase of the flight.
Should the risk exposure under MMEL be also related to the ground phase of the flight and requires limitation, dedicated provisions regarding the maximum duration of the ground phase should be introduced in the dispatch conditions of the associated item.

response

Not accepted.

The definition of flight hours for helicopters proposed in this NPA is 'the period of time between the moment when the rotor of the helicopter starts to turn for the purpose of taking off, until the moment when the rotor is stopped after the helicopter finally comes to rest at the end of the flight'. This is derived from the flight time definition of Part-FCL of Regulation (EU) No 1178/2011.

The rectification interval, when specified in flight hours, has to be compliant with the above definition.

comment

69 comment by: *FNAM*

ISSUE – item 3
FNAM agrees that GM should be provided in order to precise time limited dispatch assessment. Plus, FNAM suggests that this time limited dispatch should be flexible depending on the technical issues. Indeed, the time to repair a technical issue may variate depending on its gravity and the damaged part. Depending on the aircraft, it may be more or less easy to repair parts or to obtain new parts. In particular, for small aircraft, it may take a long time before finding the replacing part since manufacturers are sometimes not able to supply new parts or does not exist anymore. GM1 ORO.MLR.105(f) is not sufficient for recurrent and regular delay to the required rectification interval.
For example, when a part is damaged in a small aircraft: to continue its operations, operator should demonstrate to its competent authority that he is able to repair this part or find a new part within a limited rectification interval. This rectification interval requirements may sometimes be impossible to catch. Depending on the technical issue, some aircraft part may take a while to receive and to repair since aircraft manufacturer may not produce this exact part anymore and since Certifying Staff authorized to release the aircraft may be rare (*cf.* first issue of EASA General Aviation Part-145 Taskforce).
Therefore, FNAM suggests that the developing methods to comply with CS-MMEL should remain flexible depending the type of technical issue on the part/equipment, the type of activities and the type of aircraft.
Moreover, in the same way than in CS-MMEL and CS-GEN.MMEL, methods should be developed in GM in Regulation (EU) N°965/2012 in order to guide operators (but also competent authorities) to create properly a MEL.
PROPOSAL
Provide flexible methods depending the type of technical issues on the part/equipment, the type of activities and the type of aircraft; and
Provide a GM in Regulation (EU) N°965/2012 to guide operators for creating their MEL

response

Not accepted.

Please consider that the time limited dispatch referred to in this item is that one defined in CS-E 1030.

comment	*70* comment by: *FNAM* **AGREEMENT** FNAM agrees that« *the applicable MMEL operational suitability certification basis is determined by the aircraft type.* »
response	Noted

comment	*71* comment by: *FNAM* **ISSUE – item 6** FNAM would like to warn about the risk to have several interpretations of European requirements. If definitions are not the same or are not provided for each European regulations (Regulation (EU) N°965/2012, Regulation (EU) N°1178/2011, etc.), FNAM fears that no efficient interpretation and no efficient implementation would be possible. It would therefore impact the main European objective of level-playing-field. **PROPOSAL** Ensure that all definitions are harmonized in all European regulations (Regulation (EU) N°965/2012, Regulation (EU) N°1178/2011, etc.)
response	Noted

comment	*72* comment by: *FNAM* **ISSUE - Modification of Part-CAT – item 6** Since Part-CAT is modified, all CAT operators may be impacted. EASA's proposed disposals impact therefore CAT operators and not only designers. **PROPOSAL** Change the scope of affected stakeholders to extend it to CAT and SPO operators and CAMO organizations
response	Not accepted. EASA thanks FNAM for the comments provided and the attention paid to this NPA. We have in any case to underline that CS-MMEL and CS-GEN-MMEL are specifications for initial airworthiness (Part 21) and consequently designed more for design organisations than for operators and CAMOs. Specific entries for other-than-CAT operations are already in both CSs, but at that level a deep customisation is not always possible. We encourage the operators to highlight their needs to the manufacturers and to take advantage of the benefits that Part 21 offers in terms of change to the OSD constituents.

comment	*73* comment by: *FNAM* **ISSUE – item 6** The wording "*not required by the regulation*" may be confusing and introduces complexity. Precisions should be added that triple asterisk is only a tool for adding precision on the mandatory statue of each MEL and MMEL equipment. Plus, since this tool is applicable for MEL, EASA's proposed disposal should also be transposed in Regulation (EU) N°965/2012. Regulation (EU) N°965/2012 describes MEL requirements and guidance, thus, all tools linked to MEL should be described in Regulation (EU) N°965/2012. **PROPOSAL** Specify that the triple asterisk is a tool to be used for MMEL or MEL redaction only; and Transpose this new tool for MEL in Regulation (EU) N°965/2012
response	Not accepted. The triple asterisk is another method to refer to an optional item that may have been installed on some aircraft. The use of this symbol is limited to the MMEL and not foreseen for the MEL.

comment	*75* comment by: *FNAM* **ISSUE – item 7** This disposal would impact all CAT operators performing transport over oceanic areas. The scope of affected stakeholders should be changed. This requirement seems to be specific to a type of operation. FNAM wonders if it could be better to provide this item requirement in Regulation (EU) N°965/2012 requirement rather than in CS-MMEL. According to our understanding, this CS-MMEL requirement would be applicable for all large aircraft. Thus, FNAM suggests that requirements may be provided in Regulation (EU) N°965/2012 for specific operation equipment. **PROPOSAL** Change the scope of affected stakeholders to extend it to CAT and SPO operators and CAMO organizations Study the benefit to provide the for operation specific equipment requirement in Regulation (EU) N°965/2012
response	Not accepted. EASA thanks FNAM for the comments provided and the attention paid to this NPA. We have in any case to underline that CS-MMEL and CS-GEN-MMEL are specifications for initial airworthiness (Part 21) and consequently designed more for design organisations than for operators and CAMOs. Specific entries for other-than-CAT operations are already in both CSs, but at that level a deep customisation is not always possible. We encourage the operators to highlight their needs to the manufacturers and to take advantage of the benefits that Part 21 offers in terms of

	change to the OSD constituents. The scope of Regulation (EU) No°965/2012 is to provide the requirements to perform such operations, not MMEL alleviations.
comment	*76* comment by: *FNAM* **ISSUE – item 7** This disposal would impact all CAT operators with large aeroplanes and helicopter operators performing offshore operations. The scope of affected stakeholders should be changed. This requirement seems to be specific to a type of operation. FNAM wonders if it could be better to provide this item requirement in Regulation (EU) N°965/2012 requirement rather than in CS-MMEL. According to our understanding, this CS-MMEL requirement would be applicable for all large aircraft. Thus, FNAM suggests that requirements may be provided in Regulation (EU) N°965/2012 for specific operation equipment. **PROPOSAL** Change the scope of affected stakeholders to extend it to CAT and SPO operators and CAMO organizations Study the benefit to provide the for operation specific equipment requirement in Regulation (EU) N°965/2012
response	Not accepted. EASA thanks FNAM for the comments provided and the attention paid to this NPA. We have in any case to underline that CS-MMEL and CS-GEN-MMEL are specifications for initial airworthiness (Part 21) and consequently designed more for design organisations than for operators and CAMOs. Specific entries for other-than-CAT operations are already in both CSs, but at that level a deep customisation is not always possible. We encourage the operators to highlight their needs to the manufacturers and to take advantage of the benefits that Part 21 offers in terms of change to the OSD constituents. The scope of Regulation (EU) No°965/2012 is to provide the requirements to perform such operations not MMEL alleviations.
comment	*77* comment by: *FNAM* **ISSUE – item 9** FNAM agrees that ELA1 and ELA2 should be excluded from CS MMEL and CS GEN MMEL. Nevertheless, FNAM wonders what would be the regulatory basis for ELA1 and ELA2 aircraft for MMEL requirements, but also for MEL requirements since these requirements are correlated. **PROPOSAL** Precise the regulatory basis for ELA1 and ELA2 aircraft
response	

	Noted The legal basis for ELA1 and ELA2 aircraft in terms of MMEL is contained in the regulation EU N°748/2012.

comment	*78*	comment by: *FNAM*
	ISSUE – item 9 This EASA's proposed disposal impacts helicopter operators. Plus, requirements should remain flexible and be adapted depending on the technical issue, the type of activities or the type of helicopters. FNAM suggests that this time limited dispatch should be flexible depending on the technical issues. Indeed, the time to repair a technical issue may variate depending on its gravity and the damaged part. Depending on the aircraft, it may be more or less easy to repair parts or to obtain new parts. In particular, for small aircraft, it may take a long time before finding the replacing part since manufacturers are sometimes not able to supply new parts or does not exist anymore. GM1 ORO.MLR.105(f) is not sufficient for recurrent and regular delay to the required rectification interval. For example, when a part is damaged in a small aircraft: to continue its operations, operator should demonstrate to its competent authority that he is able to repair this part or find a new part within a limited rectification interval. This rectification interval requirements may sometimes be impossible to catch. Depending on the technical issue, some aircraft part may take a while to receive and to repair since aircraft manufacturer may not produce this exact part anymore and since Certifying Staff authorized to release the aircraft may be rare (*cf.* first issue of EASA General Aviation Part-145 Taskforce). Therefore, FNAM suggests that the developing methods to comply with CS-MMEL should remain flexible depending the type of technical issue on the part/equipment, the type of activities and the type of aircraft. Moreover, in the same way than in CS-MMEL and CS-GEN.MMEL, methods should be developed in GM in Regulation (EU) N°965/2012 in order to guide operators (but also competent authorities) to create properly a MEL. **PROPOSAL** Provide flexible methods depending the type of technical issues on the part/equipment, the type of activities and the type of aircraft; and Provide a GM in Regulation (EU) N°965/2012 to guide operators for creating their MEL	
response	Noted. The proposal is outside the scope of this NPA.	

comment	*79*	comment by: *FNAM*

ISSUE – item 9
« *certified for IFR or icing conditions* »
This disposal would impact operators performing IFR operations or faced to a risk of icing. The scope of affected stakeholders should be changed since it would impact operators.
This requirement seems to be specific to a type of operation. FNAM wonders if it could be better to provide this item requirement in Regulation (EU) N°965/2012 requirement rather than in CS-MMEL. According to our understanding, this CS-MMEL requirement would be applicable for all aircraft. Thus, FNAM suggests that requirements may be provided in Regulation (EU) N°965/2012 for specific operation equipment.
PROPOSAL
Change the scope of affected stakeholders to extend it to CAT and SPO operators and CAMO organizations
Study the benefit to provide the for operation specific equipment requirement in Regulation (EU) N°965/2012

response

EASA thanks FNAM for the comments provided and the attention paid to this NPA. We have in any case to underline that CS-MMEL and CS-GEN-MMEL are specifications for initial airworthiness (Part 21) and consequently designed more for design organisations than for operators and CAMOs. Specific entries for other-than-CAT operations are already in both CSs, but at that level a deep customisation is not always possible. We encourage the operators to highlight their needs to the manufacturers and to take advantage of the benefits that Part 21 offers in terms of change to the OSD constituents. The scope of Regulation (EU) No°965/2012 is to provide the requirements to perform such operations not MMEL alleviations.

comment

139 comment by: *Leonardo helicopters*

For helicopter operation the use of a dedicated “E” category for Rectification Interval is required for “mission” (i.e.: role equipment, mission consoles, etc…) items whose inoperability only impacts the inability to perform a dedicated mission requiring the use of that item. For those specific cases the Category “E” can be considered until needed because of planned mission, without a calendar constrain in terms of number of days, provided that the items are adequately deactivated and /or secured as applicable, such that the safety of flight cannot be compromised by their faults or malfunctions.

response

Not accepted.

The introduction of a new rectification interval would represent a dis-harmonisation with all the MMELs approved by other Authorities with a big impact in terms of reciprocal acceptance. The aim of the MMEL is not to deactivate a system or equipment installed for a specific scope. The rectification interval D with a total of 120 calendar days, which can be extended, covers the proposed ‘E’ rectification interval.

comment	*140* comment by: *Bell Helicopter Textron Inc* The NPA proposes to revise the definition of Flight" to align with the definition of flight time used in Part FCL. The proposed new definition will be in conflict with the accepted maintenance practices for most rotorcraft products. Maintenance activities are scheduled, and hours measured, based on in-flight time and not based on the amount of time from when the rotors start turning. The Bell definition provided to its maintainers is: *"Time-in-Service (Flight Time) – The measured time that starts the moment the helicopter leaves the ground and continues until it touches the ground at the next point of landing. The time when the helicopter is on the ground, with the engine and the rotor turning, is not included."* The definition proposed by EASA will create a dis-harmonization with the definition provided by TCCA in their MMEL policy which defines flight as "means a movement of the aircraft that includes one take-off and one landing". Bell recommends that a definition consistent with rotorcraft maintenance practices, and flight hours tracking and measurement systems, be used for CS-MMEL and CS-GEN-MMEL as opposed to a definition used for pilot flight time limitations.
response	Not accepted. The definition of flight for rotorcraft has been clarified to avoid lack of certainty in the current definition, applicable more for aeroplane than for rotorcraft, in case a failure occurs during a flight to a remote location. The proposed 'time in service' from an MMEL point of view is difficult to count.

2.4. What are the expected benefits and drawbacks of the proposals p. 10

comment	*80* comment by: *FNAM* **ISSUE** This impact assessment is not acceptable. Operators, in particular SPO operators, should define and make approved their MEL before operating. MEL is based on MMEL. Therefore, as soon as MMEL items are modified, MEL should be updated by all operators. Plus, all CAMO would also be indirectly impacted since their maintenance management should take into account the new MEL requirements. Since all operators (CAT, SPO, helicopters) would be impacted be also CAMO organizations, a sound study should be provided by EASA on social, economic and environmental impacts. **PROPOSAL** Provide a sound impact assessment

response | Not accepted.

The amendments proposed through this NPA are expected to result in a moderate safety benefit, have no social or environmental impacts, and provide some economic benefits by streamlining the certification process. There is no need to develop a regulatory impact assessment.

3. Proposed amendments and rationale in detail | 3.1 Draft decision amending CS-MMEL and CS-GEN-MMEL p. 11

comment | *81* comment by: *FNAM*

ISSUE – item 1
FNAM agrees that more guidance should be provided in order to support DOA holder for developing methods to show compliance with CS-MMEL. Plus, FNAM would like that this method ensures enough flexibilities depending on the type of the aircraft and its operation. Indeed, depending on the aircraft, it may be more or less easy to repair parts or to obtain new parts. In particular, for small aircraft, it may take a long time before finding the replacing part since manufacturers are sometimes not able to supply new parts or does not exist anymore. GM1 ORO.MLR.105(f) is not sufficient for recurrent and regular delay to the required rectification interval.
For example, the copilot seat is broken in a small aircraft: to continue its operations, operator should demonstrate to its competent authority that he is able to repair the seat within 10 days and should perform single-pilot activities. The 10 days requirements may sometimes be impossible to catch. Depending on the technical issue, some aircraft part may take a while to receive new parts or to repair parts since aircraft manufacturer may not produce this exact part anymore and since Certifying Staff authorized to release the aircraft may be rare (*cf.* first issue of EASA General Aviation Part-145 Taskforce).
Therefore, FNAM suggests that the developing methods to comply with CS-MMEL should remain flexible depending the type of technical issues on the part/equipment, the type of activities and the type of aircraft.
Moreover, in the same way than in CS-MMEL and CS-GEN.MMEL, methods should be developed in GM in Regulation (EU) N°965/2012 in order to guide operators (but also competent authorities) to create properly a MEL.
PROPOSAL
Provide flexible methods depending the type of technical issues on the part/equipment, the type of activities and the type of aircraft; and
Provide a GM in Regulation (EU) N°965/2012 to guide operators for creating their MEL

response | Noted

We noted the comments and proposals, but they are outside the scope of this NPA.

GM5 MMEL.145(c)(1) Justification of MMEL items p. 11-12

comment *21* comment by: *FAA*

Page Number 12
Paragraph Number(c)1)i
Referenced Text "It will take into account that the reliability of the involved systems, based on experienced engineering judgment and service history, would allow the occurrence of the failure condition to continue to meet the probability range used for the type design certification."
Comment/Rationale or Question
As the proposed new paragraph (c) intention is to allow qualitative analysis of failure conditions under MMEL configurations, the wording "continue to meet the probability range" may be (mis)understood as still requiring numerical analysis per the existing paragraph (b) of GM1 MMEL.145(d).
Proposed Resolution
To clearly indicate qualitative analysis (only) is acceptable (if that is truly the intent), please consider deleting the term "range" and reword the clause to " … continue to meet the qualitative probability objective used for type design certification."

response

Partially accepted.
The word ‘range’ is not appropriate. The term ‘qualitative probability objective’ is not acceptable. The intention of this paragraph is to permit for simple and conventional installations involved in HAZ or CAT failure conditions, a qualitative assessment to establish whether the failure condition probability defined during the type design certification is still met during the MMEL dispatch application. The proposal has been changed in the following way: ‘continue to meet the qualitative objective used for type design certification’.

comment *22* comment by: *FAA*

Page Number 12
Paragraph Number(c)1)ii
Referenced Text
Entire paragraph
Comment/Rationale or Question
I believe the intent of this paragraph is to clearly state that under MMEL configurations, no single failure shall lead to a catastrophic outcome. The first sentence clearly states that. However, the additional sentences can cause confusion, granted they are similar to the sentences in the "Single Failure Considerations" section 11.b of AMC 25.1309. The confusion is caused by going back and forth between stating "no single failure" and then stating 'some single failure mode is not a practical possibility', and then back again to 'no single failure if catastrophic.'
Proposed Resolution
As the intent of 'no catastrophic single failure is allowed under MMEL configurations' is clearly stated by the first sentence of the paragraph, we propose to slightly modify

	the first sentence as follows, and remove the rest of the sentences. Proposed revision "Under any MMEL configuration, no Catastrophic failure condition should result from the failure of a single component, part, or element of a system."
response	Partially accepted. The paragraph has been simplified for clarification.

comment	*32* comment by: *Pilatus* **Description:** NPA Section 2.1 describes DOA holders who did not have established methods to develop and justify the content of the MMEL. These DOA holders had to develop the methods from scratch. The only guidance available were the regulatory requirements and GM contained in CS-MMEL Initial issue. Pilatus was one of these DOA holders. Developing the MMEL development methodology was a lengthy, difficult and very inefficient process. The CS paragraphs prescribe only the essential requirements to comply with, and the GM provides only isolated areas of help. The GM does refer to the building blocks of the methodology (condition at dispatch, next failure, additional failure, one or two failures away from HAZ or CAT, etc.), but it does so in a fragmented way, assuming that the fundamentals are known. The GM is also somewhat confusing because on certain corner-case issues it goes into very much detail (e.g. GM1 MMEL.145(d) spends two pages on quantitative assessment), implying that this is a very important aspect of the analysis - but the GM does not make the simple statement that EASA expects an attempt of mitigation before resorting to quantitative assessments, hence quantitative assessments are only a "last resort". In hindsight, everything is now clear, but at the time, it definitely was not. Pilatus therefore strongly agrees with the rationale stated in 2.1 that "it would be beneficial for the industry to be provided with more guidance at the CS-MMEL level to support some DOA holders in developing methods to show compliance with CS-MMEL". **Issue:** Even though this problem is described in Item 1, the proposed new GM5 MMEL.145(c)(1) is still missing a concise 'big picture' description of the fundamental approach how to demonstrate an acceptable level of safety when dispatching with known inoperative equipment. The proposed new GM5 MMEL.145(c)(1)(b) and (c) provide a useful hint on a specific part of the justification process to a knowledgeable analyst, but it is something that comes out of a proper analysis anyway. In any case, it does not provide much support to DOA holders who are new to the process in developing methods to show compliance with CS-MMEL". Hence, although useful, the proposed changes are not effective to resolve NPA Item 1. **Proposal:** Pilatus proposes that a GM section is added for CS MMEL.145 which concisely and in one place summarizes the fundamental approach how to demonstrate an acceptable level of safety under MMEL dispatch conditions - namely the severities which must be demonstrated (and if necessary mitigated) under dispatch conditions, after the next worst safety related failure and then considering one more failure. At each stage, it should clearly describe the highest acceptable severity, which severities are not acceptable under any circumstances, and which

may be acceptable if supported by a quantitative analysis after an attempt to mitigate is demonstrated but shown not to be possible. Pilatus internal training has shown that a graphical depiction is very helpful, for example:

	MIN/ no safety effect	**MAJ**	**HAZ**	**CAT**
At dispatch	OK	Not acceptable	Not acceptable	Not acceptable
Next failure	OK	OK	Quant. Analysis	Not acceptable
Additional failure	OK	OK	OK	Quantit. Analysis

Pilatus proposes to include such a table in the CS-MMEL Guidance Material.

response

Partially accepted.

Additional guidance will be given regarding the acceptable level of severity which should be targeted when justifying an MMEL item. Nevertheless, the table, as proposed, will not be included as it is not correct. The first two lines reflect indeed the bottom-up approach used at dispatch and for the next critical failure, but the third line does not exist. There is a parallel analysis of the failure conditions classified CAT and HAZ in which the MMEL event is on the minimum the minimum set of events that result in a certain failure condition, and this is part of the quantitative analysis.

It will be also highlighted that items involved in CAT or HAZ failure conditions should be preferably mitigated by special operating conditions, limitations or procedures, as much as feasible, before going to a quantitative analysis.

comment *82* comment by: *FNAM*

ISSUE –(b)
FNAM agrees that known failures may have less impact than unknown failure before the flight.
Nevertheless, this should be assess by the operators. Indeed, depending on the type of the operations, the number of crew member, their specific trainings, etc., the risk may variate. Therefore, possibilities depending on assessment on the dispatch or the gravity of the failure should be also transposed in the MEL requirements in Regulation (EU) N°965/2012. Plus, since MEL would have to assess the dispatch depending on the operations and the operators resources and means, requirements should be described in a dedicated GM in Regulation (EU) N°965/2012 regulation.
Moreover, in the same way than CS-MMEL and CS-GEN.MMEL, methods should be developed in GM in Regulation (EU) N°965/2012 in order to guide operators (but also competent authorities) to create properly a MEL.
PROPOSAL

Change the scope of affected stakeholders to extend it to CAT and SPO operators and CAMO organizations; and
Provide this guidance in Regulation (EU) N°965/2012 for operation specific equipment

response

Noted.

The proposal is outside the scope of this NPA.

comment *83* comment by: *FNAM*

ISSUE – (c)
EASA proposed example on the effects on the crew workload and potential fatigue highlights that EASA proposed disposals are in the scope of all operators. Therefore, it is not in CS-MMEL that possibility depending on the crew workload fatigue should also be transposed in the MEL requirements in Regulation (EU) N°965/2012. Plus, since MEL would have to assess the dispatch depending on the operations and the operators resources and means, requirements should be described in a dedicated GM in Regulation (EU) N°965/2012 regulation.
Moreover, in the same way than CS-MMEL and CS-GEN.MMEL, methods should be developed in GM in Regulation (EU) N°965/2012 in order to guide operators (but also competent authorities) to create properly a MEL.
PROPOSAL
Change the scope of affected stakeholders to extend it to CAT and SPO operators and CAMO organizations; and
Provide this guidance in Regulation (EU) N°965/2012 for operation specific equipment

response

Noted.

EASA thanks FNAM for the comments provided and the attention paid to this NPA. We have in any case to underline that CS-MMEL and CS-GEN-MMEL are specifications for initial airworthiness (Part 21) and consequently designed more for design organisations than for operators and CAMOs. Specific entries for other-than-CAT operations are already in both CSs, but at that level a deep customisation is not always possible. We encourage the operators to highlight their needs to the manufacturers and to take advantage of the benefits that Part 21 offers in terms of change to the OSD constituents.

comment *143* comment by: *Gulfstream Aerospace Corporation*

With regard to paragraph (b) statement: "The classification of failure conditions... for type certification purposes. This first sentence references the FHA/SSA. The intention of the paragraph seems to be to highlight that the mitigation might soften the failure condition if the crew is aware of the failure prior to the flight and the mitigation is in place. The failure condition hazard should be assessed at the aircraft

level, hence reference to the AFHA should be made. The SSA or ASA is the verification step of the process to evaluate the implemented system to show that the safety requirements are met. Hence, only mention to the FHA is required in this paragraph since the hazard classification is being discussed.
Proposal: *The classification of failure conditions established in the* **Safety Assessment** ~~FHA/SSA~~ process **through the aircraft and system FHA** should *be used carefully, [..]*

response Accepted.

The wording has been corrected accordingly.

GM1 MMEL.145(d) Justification of MMEL items p. 12-13

comment *15* comment by: *Jonathan Almeida*

On item 1. iii. "If there is no reduction in safety margins compared to the full-up configuration, Category C may be acceptable".

- What would be the definition of 'safety margins' in this context? Are the results of probability of the quantitative analysis? Or is it equivalent to 'acceptable level of safety'?
- This applies for 2. iii. as well.

For 2. i. "a combination of two independent failure(s) or external event(s) is necessary to lead to the Hazardous failure condition".

- CS-MMEL previously allowed it to be one failure away from a hazardous condition. Subitem iii. states "or a more restrictive interval for items that leave the aircraft one failure(s) or external event(s) away from a Hazardous failure condition."
- Question is: is EASA tightning the requirement or the criteria for Hazardous will remain "one failure away from top event"?

response Noted

1. The proposed modification affects those items involved in a CAT or HAZ failure condition where a qualitative analysis may be used to show compliance with CS MMEL.145(d). Consequently, 'safety margin' is intended as 'equivalent level of safety' like in the full-up configuration.
2. The requirement for HAZ failure condition substantiated with quantitative analysis remains the same. This paragraph is applicable to those items

involved in a CAT or HAZ failure condition where a qualitative analysis may be used to show compliance with CS MMEL.145(d).

comment *23* NOtedcomment by: *FAA*

Page Number 13
Paragraph Number (2)ii
Referenced Text
"It should be demonstrated, using experienced engineering judgment and service history, that the single failure or external event has a probability of occurrence that is compatible with the probability range used for the type design certification, taking into account the proposed rectification interval."
Comment/Rationale or Question
It appears the intent of this paragraph is to clearly state that under MMEL configurations, no single failure shall lead to a catastrophic outcome. The first sentence clearly states that. However, the additional sentences can cause confusion, granted they are similar to the sentences in the "Single Failure Considerations" section 11.b of AMC 25.1309. The confusion is caused by going back and forth between stating "no single failure" and then stating 'some single failure mode is not a practical possibility', and then back again to 'no single failure if catastrophic.'
Proposed Resolution
Propose to reword to "…compatible with the qualitative probability objective used for type design certification …"

response Partially accepted.

The term 'probability range' has been replaced by the term 'safety objectives' so the text now reads '… compatible with the safety objectives used for the type design…'.

comment *33* comment by: *Pilatus*

Description: NPA Section 2.1 describes that the 'normal' XX.1309-type safety assessment methodology may not be applicable to some small rotorcraft DOA holders. The proposed new section GM1 MMEL.145(d)(c) is therefore assumed by Pilatus to be intended to provide a means that such DOA holders may, in the absence of probabilistic failure data, use a "quantitative-only" rationale-based approach to demonstrate an acceptable level of safety for conditions where a quantitative assessment is mandated by CS MMEL.145(d).

Issue: The applicability of the proposed new section GM1 MMEL.145(d)(c) is considered to be unclear, leaving several questions.
CS MMEL.145(d)(2) strictly requires a quantitative safety assessment when the operation leaves the aircraft one failure away from a hazardous, or one or two failures away from a catastrophic condition. The proposed new GM to this paragraph, however, provides the option to just perform a qualitative analysis. A question that arises from this is: Is it formally possible that GM provides an

acceptable means of compliance that is in contradiction with the requirement? Would this alternative justification not have to be included by a change to the CS?
Also, the proposed new GM is described in 2.3 as an alternative to the existing paragraph, but it is vague as to who may apply this alternative. The first two paragraphs of the proposed new GM generally describe the background that some TC bases permit certification of installations involved in HAZ or CAT failure conditions using only qualitative analyses. The proposed new GM then states that "A similar approach may be used for the justification of MMEL items". This implies that any TCH may apply this methodology. Is this the intent? If not, (i.e. XX.1309-based designs must still use quantitative analyses) then the proposed new section should very clearly state this. Otherwise there is a similar situation as described in the comments to Item 1, where the GM adds more than one page of text describing a specific detail (for only a limited number of TCH) to what is already a corner case, thus creating much confusion to the TCH who may not use the methodology.
The placement of the word "only" in the first sentence of the proposed new GM1 MMEL.145(d) is unclear ("a qualitative analysis may only be used for…"). As written, this implies that the regulations permit both qualitative and quantitative analyses, but qualitative analyses are only allowed under certain circumstances. However, CS MMEL.145(d) does not provide these options - it explicitly requires a quantitative analysis in addition to the qualitative assessment of CS MMEL.145(c).
If the intent is that the GM provides some TCH with the option to use just a qualitative analysis instead of a quantitative analysis then the wording should be changed to "a qualitative-only analysis may be used…" or similar (notwithstanding the contradiction with the CS which requires quantitative analyses).
It is noted that NPA section 2.1 describes that Item 2 relates to non-complex single engine helicopters for scenarios where no Cat A operations or IFR apply. There would appear to be a discrepancy with the proposed amendments to CS MMEL.100 and CS GEN.MMEL.100 (under Item 9) where CS-MMEL is not applicable at all to those helicopters.

Proposal: Pilatus proposes that the new GM is amended to address the questions raised above, or clarified if the questions above are based on an incorrect interpretation of the proposed changes.

response

Partially accepted

CS MMEL.145 will be amended to take in consideration the cases described in the proposed GM and valid for aircraft certified with requirements other than CS 25/29.1309.

comment *50* comment by: *AIRBUS*

1. PAGE / PARAGRAPH / SECTION THE COMMENT IS RELATED TO:
GM1 MMEL.145(d) Justification of MMEL items

2. PROPOSED TEXT / COMMENT :

The proposed wording states in section (c)(1)(iii) and (c)(2)(iii): "If there is no reduction in safety margins compared to the full-up configuration, Category C may be acceptable". This requirement is not possible to comply with, as under MMEL there will always be a reduction in safety margins.

3. RATIONALE / REASON / JUSTIFICATION for the Comment:
The guidance material should propose a compliance method that is possible to comply with.

response

Not accepted.

This paragraph refers to specific items of conventional and simple systems where the use of a qualitative analysis is enough to assess the probability of a Hazardous or Catastrophic failure condition as being extremely remote or extremely improbable. For some of such items, it is possible that the reduction of safety margins is null.

comment *84* comment by: *FNAM*

ISSUE - (c)
FNAM wonders what would be the measures for MMEL already written. Should all constructors update their MMEL? It would therefore impact all operators
PROPOSAL
Explain transition measures for manufacturers but also for operators and maintenance organizations

response

Noted

In general, unless an MMEL revision is more restrictive than the previous one, the operators are not forced to change their MEL. Furthermore, we do not introduce in this NPA more restrictive requirements for MMEL. The revision of CS-MMEL does not mean that the manufacturers will have to update their MMEL.

comment *133* comment by: *Airbus Helicopters*

AH welcome the alleviation of the criteria for the assessment of the consequence of a single next failure leading to hazardous consequences.
Regarding the evaluation of the consequence of the failure of the concerned MMEL item, and in particular when credit has been taken on that candidate item for DAL level allocation when dealing with hazardous or catastrophic failure condition, would it be acceptable to obtain an alleviation which is reduced compared to the certification (e.g. redundancy maintained but no residual full independency)?
Although the EASA position has been provided to AH in the past, it is suggested that the subject is clarified at CS MMEL level at the opportunity of this update.

response | Not accepted.

GM should be as generic as possible. Specific alleviation for certain failure conditions is always possible to be discussed during the review process of an MMEL.

comment | *134* comment by: *Airbus Helicopters*

Airbus Helicopters supports Airbus S.A.S comment on this paragraph related to the fact safety margins will always be reduced which seems to mean that the proposed wording in section (c)(1)(iii) and (c)(2)(iii) would be impossible to apply. Please consider re-phrasing the statement.

response | Not accepted.

This paragraph refers to specific items of conventional and simple systems where the use of a qualitative analysis is enough to assess the probability of a Hazardous or Catastrophic failure condition as being extremely remote or extremely improbable. For some of such items, it is possible that the reduction of safety margins is null.

comment | *138* comment by: *Leonardo helicopters*

Considering the paragraphs assess a quantitative analysis showing that the degree of redundancies or integration of design is such that, under MMEL dispatch configuration, the safety targets are still satisfied for Catastrophic and/or Hazardous failure conditions (already taking into account the limitations with respect to the number of failures away to these such of conditions), the proposed “standard” Rectification Interval of B seems very restrictive.

response | Not accepted.

The paragraph refers to the use of a qualitative analysis instead of a quantitative analysis, when this is required. We believe that, in these circumstances, rectification B is not restrictive.

The MMEL entry should use standard Rectification Interval B, or a more restrictive interval, for items that leave the aircraft two independent failure(s) or external event(s) away from a Catastrophic failure condition. If there is no reduction in safety margins compared to the full-up configuration, Category C may be acceptable.

GM3 MMEL.145 Justification of MMEL items p. 13-14

comment | *16* comment by: *Jonathan Almeida*

This section is very good.

Thank you for the close attention on this matter.

response Noted

comment *85* comment by: *FNAM*

ISSUE – 1.
Requirements should remain flexible and be adapted depending on the technical issue, the type of activities or the type of aircraft. Plus, FNAM would like that this method ensures enough flexibilities depending on the type of the aircraft and its operation. Indeed, depending on the aircraft, it may be more or less easy to repair parts or to obtain new parts. In particular, for small aircraft, it may take a long time before finding the replacing part since manufacturers are sometimes not able to supply new parts or does not exist anymore. GM1 ORO.MLR.105(f) is not sufficient for recurrent and regular delay to the required rectification interval.
For example, the copilot seat is broken in a small aircraft: to continue its operations, operator should demonstrate to its competent authority that he is able to repair the seat within 10 days and should perform single-pilot activities. The 10 days requirements may sometimes be impossible to catch. Depending on the technical issue, some aircraft part may take a while to receive new parts or to repair parts since aircraft manufacturer may not produce this exact part anymore and since Certifying Staff authorized to release the aircraft may be rare (*cf.* first issue of EASA General Aviation Part-145 Taskforce).
Therefore, FNAM suggests that the developing methods to comply with CS-MMEL should remain flexible depending the type of technical issues on the part/equipment, the type of activities and the type of aircraft.
Moreover, in the same way than in CS-MMEL and CS-GEN.MMEL, methods should be developed in GM in Regulation (EU) N°965/2012 in order to guide operators (but also competent authorities) to create properly a MEL.
PROPOSAL
Provide flexible methods depending the type of technical issues on the part/equipment, the type of activities and the type of aircraft; and
Provide a GM in Regulation (EU) N°965/2012 to guide operators for creating their MEL

response Noted.

We noted the comments and proposals, but they are outside the scope of this NPA.

comment *86* comment by: *FNAM*

ISSUE – 2.(a)

« *In such cases, coordination between the aircraft and the engine manufacturers is necessary to complete the demonstration of compliance for the MMEL.* »
FNAM wonders what would be the measures for MMEL already written. Should all constructors update their MMEL? It would therefore impact all operators
Plus, FNAM wonders what would be the measures for legacy aircraft or constructors not able to modify their MMEL according to such requirements.
PROPOSAL
Add measure for legacy aircraft and constructors not able to update their MMEL; and Explain transition measures for manufacturers (engine or aircraft) but also for operators and maintenance organizations

response

Not accepted.

The item 3 Engine time limited dispatch (TLD) update includes the content of CM-MMEL-001 in CS-MMEL. There is no impact on the MMEL already approved.

comment *144* comment by: *Gulfstream Aerospace Corporation*

With respect to the 2(a) statement "Contributions from the Engine Control System to the aircraft FHA/SSA may be affected...", the use of SSA implies a system level document, not an aircraft level document.
Propose changing to "Contributions from the Engine Control System to the aircraft FHA**and Aircraft Safety Assessment** may be affected...".

response

Accepted.

The wording has been corrected accordingly.

GM4 MMEL.145(c) Justification of MMEL items p. 14-15

comment *17* comment by: *Jonathan Almeida*

This section is also very good now. It is very clear and helpful.

Thank you.

response

Noted

comment *87* comment by: *FNAM*

ISSUE
FNAM would like to highlight the case where manufacturers propose equipment options, which therefore are not mandatory for the flight, without modifying their

	MMEL. In such cases, it should be possible for operators to add these non-mandatory items in their MEL although there are not in MMEL. Since they are non-mandatory for the flight, the safety would not be impacted. For example, VFR flight adding lights should not be blocked on the ground for changing the light although it is not mandatory. **PROPOSAL** Add the possibility for operators to add non mandatory items installed by manufacturer in their MEL although there are not in MMEL
response	Not accepted. This possibility is already available in accordance with GM1 ORO.MLR.105(a).

comment	*88* comment by: *FNAM* **AGREEMENT – (d)** FNAM agrees that *« Emergency procedures are aircraft-specific »*
response	Noted

GM2 MMEL.145(c) Justification of MMEL items p. 15

comment	*89* comment by: *FNAM* **AGREEMENT – item 5** FNAM thanks to allow the possibility to base MMEL proposals on previous MMEL certifications and demonstrations.
response	Noted

comment	*90* comment by: *FNAM* **ISSUE - (b)** FNAM agrees that *« The applicable certification specifications often depend on the applicable type design certification basis of the aircraft model, and therefore may vary from one aircraft type/model to another. »* Nevertheless, this point presents a contrary provision with (a). In order to ensure efficient understanding and interpretation of the proposed regulation, FNAM suggests to complete (a) instead to provide contrary provision. **PROPOSAL** Complete (a) instead of providing contrary provision in (b)

response | No accepted

The intent of paragraph (b) is to add a clarification on the applicable certification basis and does not contradict paragraph (a).

GM5 MMEL.120 Format and content of MMEL p. 15-17

comment | *3* comment by: *dahg ramy*

the dash symbol "-" ,the sharp symbol "#".

response | Noted

The use of a symbol instead of another is always permitted provided that the meaning is clarified in the MMEL Definitions.

comment | *7* comment by: *Mazzocchi A. (Mecaer Aviation Group)*

We experienced a lack of clarity from some customers and operators as to their eligibility to remove inoperative items from the aircraft for dispatch. In order to avoid any additional misunderstanding, it is our opinion that the rationale behind the statement reported in GM5 MMEL.120 “Format and content of MMEL” --> MMEL PREAMBLE --> Purpose and limitations:

“(…) Unless specifically allowed by this MMEL, an inoperative item may not be removed from the aircraft. (…)”,

should be reported directly in CS MMEL.105 or GM1 MMEL.105 in an equivalent form: for example it could be part of the definition CS MMEL.105(i) or detailed in a new GM1 CS MMEL.105(i).

response | Not accepted

The definitions contained in CS MMEL.105 are referring to the content of CS-MMEL itself. The sentence reported in GM5 MMEL.120 is part of the content of the acceptable Preamble of an MMEL and needs to be carried over the MEL. Consequently, from the preamble it is clear that an inoperative item may not be removed unless otherwise specified in the MEL item itself.

comment | *18* comment by: *Luftfahrt-Bundesamt*

Page 16, last paragraph:

To avoid an unsafe situation, please change the highlighted wording *"This item may be"* to *"This item shall be"*, because an operator's MEL has to be established based on the MMEL regulation:

*"Triple Asterisk '*** ' means an item which is not required by the regulations, but which may have been installed on some models of aircraft that are covered by this MMEL. ~~This item may be~~ This item shall be included on the aircraft operator's MEL after it has been determined that the item has been installed on one or more of the aircraft operator's aircraft. [...]."*

response

Not accepted.

The introduction of an MMEL item in the operator's MEL is always on a voluntary basis. The MEL can be more restrictive than the relative MMEL.

comment *46* comment by: *AIRBUS*

1. PAGE / PARAGRAPH / SECTION THE COMMENT IS RELATED TO:
GM5 CS-MMEL.120, page 16, definition of "operative"

2. PROPOSED TEXT / COMMENT :
Modify the last sentence as follows for clarification
"When an MMEL item specifies that an item of equipment must be verified, but no interval is specified, verification is only required:
- At the time of deferral if the check is performed by maintenance procedure, or
- Before each flight if the check is performed by operational procedure."

3. RATIONALE / REASON / JUSTIFICATION for the Comment:

The comment reflects the way the Airbus MMEL is used by its operators.

response

Not accepted

This is already included in GM1 MMEL.120 Format and content of MMEL (l).

comment *47* comment by: *AIRBUS*

Attachment #1

1. PAGE / PARAGRAPH / SECTION THE COMMENT IS RELATED TO:
GM5 CS-MMEL.120, page 16, definition of "*"**

2. PROPOSED TEXT / COMMENT :

Other symbols may be used. In Airbus MMEL, the attached Airbus symbol

is used and defined in MMEL.

3. RATIONALE / REASON / JUSTIFICATION for the Comment:

The comment reflects the way the Airbus MMEL is designed.

response

Noted.

This is GM and an alternative symbol may be accepted and used as long as it is defined.

comment *48* comment by: *AIRBUS*

1. PAGE / PARAGRAPH / SECTION THE COMMENT IS RELATED TO:
GM5 CS-MMEL.120, page 16, definition of "Flight hours"

2. PROPOSED TEXT / COMMENT :

This definition of "Flight Hours" is in line with Airbus MMEL. However, this is not in line with the "Flight Hours" definition given in Airbus MPD and defined by the ATA and widely used in the industry. We have received many complaints from operators on this FH definition and the difference with the Maintenance definition. The "Maintenance" definition used is "time from lift-off and landing". Is would be worth mentioning this difference.

3. RATIONALE / REASON / JUSTIFICATION for the Comment:

To advise the industry that different definition of "Flight Hour" exists.

response

Not accepted

The additional guidance given on flight hours in GM4 MMEL.130 is consistent with the definition of flight given in GM5 MMEL.120.

This is also only additional guidance.

comment *91* comment by: *FNAM*

ISSUE – item 6
FNAM would like to warn about the risk to have several interpretations of European requirements. If definitions are not the same or are not provided for each European regulations (Regulation (EU) N°965/2012, Regulation (EU) N°1178/2011, etc.), FNAM fears that no efficient interpretation and no efficient implementation would be possible. It would therefore impact the main European objective of level-playing-field.
PROPOSAL
Ensure that all definitions are harmonized in all European regulations (Regulation (EU) N°965/2012, Regulation (EU) N°1178/2011, etc.)

response

Accepted.

The reference should be Article 1 of the Basic Regulation (Regulation (EU) 2018/1139).

comment *92* comment by: *FNAM*

ISSUE
FNAM wonders what are the measures for aircraft with no more applicant and holder of TC or STC: « *applicant and holders of the (Supplemental) Type Certificate* »
FNAM wonders what would be the measures for MMEL already written. Should all constructors update their MMEL? It would therefore impact all operators
PROPOSAL
Explain transition measures for manufacturers but also for operators and maintenance organizations

response

Noted

As for Part 21, there is no OSD requirement for this kind of aircraft.

comment *93* comment by: *FNAM*

ISSUE
« *(indicate here)* »
FNAM does not understand this change? Which symbol would identify MMEL items?
PROPOSAL
Precise the symbol with which MMEL items would be identified

response

Noted

EASA does not want to indicate a specific symbol. It is left to the manufacturers to select the symbol that they want to use.

comment	*94* comment by: *FNAM* **AGREEMENT** FNAM agrees that MMEL items should be adapted in MEL depending on operational requirements and conditions
response	Noted

comment	*95* comment by: *FNAM* **ISSUE - MEL** « *In this such a case, the MEL content is still considered to be in conformity with the content of this MMEL* » EASA's proposed guidance describes MEL possibilities. Since MEL requirements are described in Regulation (EU) N°965/2012, this EASA's proposed guidance should be transposed in Regulation (EU) N°965/2012. Plus, Operators, in particular SPO operators, should define and make approved their MEL before operating. MEL is based on MMEL. Therefore, as soon as MMEL items are modified, MEL should be updated by all operators. Plus, all CAMO would also be indirectly impacted since their maintenance management should take into account the new MEL requirements. Moreover, in the same way than in CS-MMEL and CS-GEN.MMEL, methods should be developed in GM in Regulation (EU) N°965/2012 in order to guide operators (but also competent authorities) to create properly a MEL. **PROPOSAL** Transpose MEL guidance in Regulation (EU) N°965/2012 rather than in CS-MMEL and CS-GEN.MMEL; and Change affected stakeholders scope to extend it to CAT and SPO operators and CAMO organizations; and Provide a GM in Regulation (EU) N°965/2012 to guide operators for creating their MEL
response	Not accepted The reported sentence refers to non-EU operators. The other comments are outside the scope of this NPA.

comment	*96* comment by: *FNAM* **ISSUE - 'Extended overwater flight'** FNAM suggests to harmonize all definitions. Overwater flights is defined differently in Regulation (EU) N°965/2012: "*for overwater operations, the open sea area north of 45 N and south of 45 S, unless any part is designated as non-hostile by the responsible authority of the State in which the operations take place*". Extended overwater flight should also be defined in Regulation (EU) N°965/2012, since it is specific to this type of operation. In order to harmonize and ensure effective

understanding and interpretation, FNAM suggests to define this operation specific definition in Regulation (EU) N°965/2012.
PROPOSAL
Define extended overwater flight in Regulation (EU) N°965/2012

response

Not accepted

The proposal is outside the scope of this NPA.

comment *97* comment by: *FNAM*

ISSUE- harmonization of definition
FNAM agrees that helicopter flight definition should be provided in order to ensure an efficient understanding of requirements. Nevertheless, this definition should also be transposed in Regulation (EU) N°965/2012 and Regulation (EU) N°1178/2011 requirements in order to endure an harmonized understanding of this term.
PROPOSAL
Add this definition in Regulation (EU) N°965/2012 and Regulation (EU) N°1178/2011 regulations

response

Not accepted

The proposal is outside the scope of this NPA.

comment *98* comment by: *FNAM*

ISSUE
*« Triple Asterisk '*** ' means an item which is not required by the regulation »*
The wording "*not required by the regulation*" may be confusing and introduces complexity. Precisions should be added that triple asterisk is only a tool for adding precision on the mandatory statue of each MEL and MMEL equipment.
Plus, since this tool is applicable for MEL, EASA's proposed disposal should also be transposed in Regulation (EU) N°965/2012. Regulation (EU) N°965/2012 describes MEL requirements and guidance, thus, all tools linked to MEL should be described in Regulation (EU) N°965/2012.
PROPOSAL
Specify that the triple asterisk is a tool to be used for MMEL or MEL redaction only; and
Transpose this new tool for MEL in Regulation (EU) N°965/2012

response

Not accepted

The triple asterisk is a symbol to be used only at MMEL level. At MEL level, it should be adapted to the aircraft configuration.

comment	*99* comment by: *FNAM* **ISSUE - MEL** *« This item may be included on the aircraft operator's MEL after it has been determined that the item has been installed on one or more of the aircraft operator's aircraft. »* EASA's proposed guidance describes MEL possibilities. Since MEL requirements are described in Regulation (EU) N°965/2012, this EASA's proposed guidance should be transposed in Regulation (EU) N°965/2012. Plus, Operators, in particular SPO operators, should define and make approved their MEL before operating. MEL is based on MMEL. Therefore, as soon as MMEL items are modified, MEL should be updated by all operators. Plus, all CAMO would also be indirectly impacted since their maintenance management should take into account the new MEL requirements. Moreover, in the same way than in CS-MMEL and CS-GEN.MMEL, methods should be developed in GM in Regulation (EU) N°965/2012 in order to guide operators (but also competent authorities) to create properly a MEL. **PROPOSAL** Transpose MEL guidance in Regulation (EU) N°965/2012 rather than in CS-MMEL and CS-GEN.MMEL; and Change affected stakeholders scope to extend it to CAT and SPO operators and CAMO organizations; and Provide a GM in Regulation (EU) N°965/2012 to guide operators for creating their MEL
response	Not accepted The proposal is outside the scope of this NPA.

comment	*100* comment by: *FNAM* **ISSUE** EASA's proposed disposals refers to *«column 2»*. Nevertheless, there are no reference to any tables. In order to ensure an efficient understanding of EASA's proposed requirements, FNAM suggests to add the exact and entire reference to the table where hash are used. **PROPOSAL** Add the exact entire reference
response	Accepted. The wording has been corrected accordingly.

comment	*122* comment by: *The Boeing Company* **THE PROPOSED TEXT STATES:**

"Dash '# ' in column 2, or its equivalent in an MMEL, means that the rectification interval is not specified at the level of that item, but rather that it is specified in another MMEL item that is referred to as part of the dispatch conditions (e.g. item B is considered to be inoperative)."

REQUESTED CHANGE:
Boeing requests clarification on changes related to use of the "#" symbol. Could an example be provided showing its implementation?

JUSTIFICATION: It is unclear how the "Dash '# '" symbol is to be implemented in the MMEL.

response

Noted

Whenever an item (A) refers to another item (B) that must be considered inoperative as a consequence of the first (A), the rectification interval of item (A) may be omitted and substituted by the symbol "#". For example, an APU fire extinguisher system may be inoperative provided the APU is considered inoperative. In this case, it is sufficient to report the rectification interval of the complete APU and a "#" for the item relative to the APU fire extinguisher only.

This change makes it easier to update a MMEL item when it refers to others. In any case, this is only an option; it is not mandatory to use this symbol.

comment *135* comment by: *Leonardo helicopters*

With reference to the definition of "flight" for helicopters it is recognized the peculiarity of the helicopter's missions with respect to the airplanes. However, while the new proposed one can be considered a benefit for the customer on the decision to enter into MMEL, when referring to a MMEL limitation, the "flight" to which the dispatch conditions refer to should be considered as the period of time between the moment when the rotor of the helicopter starts to turn for purpose to take off until the moment when the helicopter land (WonW).

response

Partially accepted

The provided definition of flight for helicopters has been discussed with some manufacturers and what has been agreed is to apply the definition contained in Part-FCL of Regulation (EU) No 1178/2011. In any case, the proposed definition is part of GM, therefore it is not compulsory for an applicant to follow it, if needed.

comment *145* comment by: *Gulfstream Aerospace Corporation*

	Under Definitions and Explanatory Notes, item 'Extended overwater flight': typo on (1) '~~arecapable~~'. Add space and correct to '**are capable**'.
response	Accepted

comment	*146* comment by: *Gulfstream Aerospace Corporation* Under 'Operative' description "'Operative' means that the system and/or component will accomplish its intended purpose...," the first sentence should not be in future tense. The use of the word 'will' implies that it is ensured that the component will be operable in the future, whereas the text that follows properly addresses the verification aspects of the component that is operative. One can only determine that a component is operative in the present, not in the future. Propose to remove the word 'will' and putting the sentence in the present tense as follows: "'Operative' means that the system and/or component **can** accomplish its intended purpose..."
response	Accepted The wording has been corrected accordingly.

GM4 MMEL.130 Rectification Interval p. 17

comment	*4* comment by: *dahg ramy* the duration of taxiing phase may vary, depending on airport congestion, is it appropriate to define the starting point by linking it to a phase were the aircraft is moving. it is understood that this starting point is for consistency with the definition of a 'flight', but that means that when the aircrft starts to move under its own power , the taxiing is started ?
response	Noted. The definition of flight refers to the moment when the aircraft starts to move under its own power, for the purpose of taking off. Usually, this is considered taxi out.

comment	*5* comment by: *Douglas McClymont* Attachment #2

GM4 MMEL.130 Rectification Interval.

"If a time period is specified in flight hours for an item whose rectification interval category is A, the flight hours that are counted as part of that period should start at the commencement of taxiing prior to the first flight under the associated MEL item. "

There is no definition in the CSMMEL of what a Flight Hour is but other documents and sources define flight hours as airborne time: "Hence, for Airbus, Flight Hours (F/H)= Flight Time = Airborne Time." See attached file.

This means that most electronic Tech Logs (eTL) are using Take Off to Landing to record and calculate cumulative Flight Hours, often based on ACARS OOOI codes or Airfield Ops reports and this additional requirement to include taxiing prior to first flight will create a very complex change to the recording and calculation of that particular MMEL item.

Flight crews and Airports do not record first taxi times, ACARs does not record start taxi time, only Off Block and Airborne times.

Further, many major airports with complex Regulated Take off times and a limited number boarding gates will instruct aircraft to taxi from the gate at STD (to free up the gate) to a remote holding stand to shut down awaiting a further clearance to taxi for Take Off: using the instruction at GM 4 MMEL.130 this could potentially add hours to recorded Flight Hours where the aircraft is in fact stationary with no engines running.

It is not clear what the benefit of this change is, but, what is clear is that, the number of times that there will be a safety benefit is limited whereas the complexity of recording and calculating this new definition of "Flight Hour" to include first taxi time will be difficult to comply with both manually and automatically with ACARs and eTL and will potentially reduce the benefit of the relief by the lost hours during taxiing at airfields with complicated and regulated slot management.

Please reconsider.

response

Noted

EASA understands your concerns about the use of flight hours in the MMEL, but we want to highlight that there is no change with respect to the current version of the CS-MMEL, and even if flight hours are not defined, a definition of flight is present.

comment

39 comment by: *KLM*

The proposed GM4 MMEL.130 text is not consistent with accepted use of the term 'Flight Hour'.

Please also refer to;

AMC M.A.306(a) – Aircraft Technical Log System:
Section 3 should contain details of all information considered necessary to ensure continued flight safety. Such information includes:
(i) the aircraft type and registration mark,
(ii) the date and place of take-off and landing,
(iii) the times at which the aircraft took off and landed,
And;
FAA CFR, Title 14, Part 1, par. 1.1:
Time in Service. With respect to maintenance time records, means the time from the moment an aircraft leaves the surface of the earth until it touches it at the next point of landing.
The time between take-off and landing is commonly referred to as '**Flight Hours**', another (second) definition would introduce quite a lot of misunderstanding.
Propose to change this text, if taxi time is to be accounted for, as follows;
If a time period is specified in ~~flight~~ block hours for an item whose rectification interval category is A, the ~~flight~~ hours that are counted as part of that period should start at the commencement of taxiing under its own power with the intention of take-off (off-blocks) prior to the first flight under the associated MEL item, until the termination of the complete flight cycle (on-blocks).

response

Not accepted

The definition of flight and consequently of flight hours for aeroplanes is not affected by this NPA. The proposed text is already part of the above definition.

comment *101* comment by: *FNAM*

ISSUE
« If a time period is specified in flight hours for an item whose rectification interval category is A, the flight hours that are counted as part of that period should start at the commencement of taxiing prior to the first flight under the associated MEL item. »
All operators (CAT, SPO, helicopters) would be impacted by this EASA's proposed disposal. This consultation should therefore be submitted to all affected stakeholders.
Indeed, EASA's proposed definition for flight hours would have an impact at operational level. In order to ensure the correct and efficient understanding of this EASA's proposed requirement, FNAM suggests to add this GM in Regulation (EU) N°965/2012.
PROPOSAL
Add this definition in Regulation (EU) N°965/2012 regulation; and
Change affected stakeholders scope to extend it to CAT and SPO operators and CAMO organizations

response

Not accepted.

The definition of flight and consequently of flight hours for aeroplanes is not affected by this NPA. Amendments to Regulation (EU) No 965/2012 are outside the scope of this NPA

comment	*128* comment by: *Dave Clarke/Cathay Pacific Airways Flight Operations* Ref GM4 MMEL.130 Rectification Interval, Cathay Pacific Airways disagrees with the proposed definition. In the absence of regulatory policy, most/all operators use the same definition as used in the MPD (Maintenance Planning Document) i.e. lift off to touch down' for the calculation of FH based repair intervals. The use of ACARS OOOI (OFF/ON) data allows the management of this. The control mechanism to track FH based on your proposal would be complex to establish and difficult to manage, operator systems are already set up to manage maintenance based on FH MPD intervals. - In our opinion EASA is confusing the 'Limit of MEL applicability' concept (which relates to the flight crew operational decision as to when the MEL ceases to apply), with the concept of a FH definition. CPA request that EASA retain the definition of FH as lift off to touchdown down as the industry has been using for many years.
response	Not accepted. The definition of flight and consequently of flight hours for aeroplanes is not affected by this NPA. For the purpose of MMEL, the flight hours have been always associated with the time between block off – block on for aeroplanes.

Appendix 1 to GM1 MMEL.145(d) p. 17-26

comment	*1* comment by: *Douglas McClymont* The item contains additional considerations with the following text: "Means such as a spyhole, in combination with procedures that are based on the minimum number of flight crew members who have to be present in the compartment, may be used as an acceptable alternate method." Some operators will choose to authorise a Cabin Crew member to remain in the Flight Crew Compartment to monitor the spyhole when a flight crew member has to leave the flight crew compartment for the purpose of a physiological comfort break (Toilet). Suggested text to allow this option could be:

"Means such as a spyhole, in combination with procedures that are based on the minimum number of Authorised crew members who have to be present in the compartment, may be used as an acceptable alternate method."

response

Not accepted.

The adjective 'Authorised' can create confusion. 'Crew members' refers both to cabin and flight crew members.

comment *2* comment by: *Douglas McClymont*

23-71-1B and 31-31-1B. Both contain similar Note 2

Note 2: if the means to locate the CVR remotely (using an Underwater Locating Device (ULD) or an associated Emergency Locator Transmitter (ELT) for deployable recorders) is inoperative, the associated CVR is considered to be inoperative.

Its not clear how this note would apply to aicraft not required to be equipped with a ULD (<180 nm overwater) and not equipped with a deployable recorder.

response

Noted.

The intention of the note is only to clarify the relation of the items for the CVR and/or the FDR with other equipment. If these are not installed, the note is not applicable.

comment *6* comment by: *dahg ramy*

should the condition B read "may be inorperative or missing provided that the extended overwater operations are not conducted "

Regarding the structure of such MMEL item we would like to highlight some points :
The item representing : the basic number required equipment + the surplus equipment:
Condition A related to the surplus equipment
Condition B related to the whole set of equipment
If we assume that we started with dispatch under the condition A, and we almost consumed the repair interval , then we got inoperative basic required equipment, then we should log the condition B, interpretations or questions may rise : as the item covered include the surplus equipment, the starting point is when we got inoperative equipment which means when we logged the condition A, if the time is consumed exceeding the interval of the condition B, is it still possible to log the second condition?

The second interpretation, the surplus and the basic required equipment are independent, and then when we got the basic required equipment inoperative , the interval starts as per the condition B.
To resume this point, is the starting point is related to the MMEL item covered, or to the dispatch condition (A, B, …).

response

Noted.

Condition B permits the dispatch for a C rectification interval without restrictions on overwater operations.

In the scenario described, the application of condition A applies to the equipment in surplus, while condition B applies to another item of equipment (the last one) with a separate entry in the Tech log book, so the rectification interval of the two items are independent.

comment

19 comment by: *Luftfahrt-Bundesamt*

Page 18, ATA Chapter: 25 Equipment/Furnishings:

Item 25-65-1B, concerning the remark *"May be inoperative or missing"*:
To avoid a undesirable burden on the Accident Investigation Bureaus, please change the highlighted wording to *"May be inoperative or missing provided not required by operational regulations."*

response

Not accepted.

The suggested wording is already present in condition A with a rectification interval D.

comment

27 comment by: *DGAC France*

Page 19.
Proposal to replace the “note 2” by the following new item :
23-71-1-1 ULD/ELT : C | - | -
the associated recorder is considered inoperative for flights over water at a distance of more that 10NM from land.

Reason :
An ULD could be installed with the CVR but the operator may operate only in IFR above land. The note is too restrictive for this kind of operations. Therefore a specific item for ULD/ELT associated to a recorder should be defined.

	Similar comments : Page 20, note 4 (FDR, item 31-31-1B) should be replace by a new item as proposed for note 2 page 19 applicable to CVR. Page 22, note 4 (Combined CVR-FDR, item 31-31-2B) should be replace by a new item as proposed for note 2 page 19 applicable to CVR. Page 22, note (Combined CVR-FDR, item 31-31-2C) should be replace by a new item as proposed for note 2 page 19 applicable to CVR.
response	Partially accepted EASA agrees that note 2 applies only in case of overwater operation.

comment	*30* comment by: *DGAC France* Page 19 CS-MMEL Item 31-31-1 A note should be added in the item 31-31-1 FDR in order to include Usage Monitoring System in the scope of the equipment.
response	Not accepted. A Usage Monitoring System (UMS) is different equipment from the flight data recorder, and neither CS-29 nor the EU rules for air operations (Regulation (EU) No 965/2012) designate the flight data recorder and the UMS under a common concept.

comment	*31* comment by: *DGAC France* Page 17 CS-MMEL As included in the CS-GEN-MMEL, the applicability should be included in the CS-MMEL for the following items : - Item 25-60-7 Emergency Flotation Equipment - Item 34-15-2 Radio altimeter
response	Noted The applicability for items 25-60-7 and 34-15-2 is already given in CS-MMEL. It is for helicopters only.

comment	*34* comment by: *Pilatus* The new wording "any of this equipment that is surplus…" is used inconsistently in the proposed changes to Appendix 1 to GM1 MMEL.145 (CS-MMEL Book 2). Some provisos state "Any of this equipment that is surplus to the one item required to be…" (e.g. 46-20-1A), whereas others state "Any of this equipment that is surplus to the one item *of equipment* required to be…" (e.g. 46-20-2-2A). The new wording is also used in the proposed changes to CS-GEN-MMEL under NPA Item 9 (e.g. 25-11-1-4 or 25-62-1). Pilatus proposes to review and use consistent terminology. The proposed change to 31-31-2B makes the proviso more restrictive. Deleting the word "and" makes the "Either … or" an exclusive either. However, the higher restrictiveness of the proviso is not necessary because the condition where the other function is required is given by dispatch condition (a). If the condition is intended to be exclusive, i.e. one of the two must be operative, then dispatch condition (a) is superfluous. Pilatus proposes to not make the dispatch condition more restrictive and add again the word "and", or delete dispatch condition (a).
response	Accepted The wording has been be reviewed.

comment	*40* comment by: *KLM* Page 18 – item 23-71-1A (under 5 remarks or exceptions) Please also remove the word ‘those’ and correct to: Any of this equipment that is surplus to the ~~in excess of~~ ~~those~~ equipment required to be operative may be inoperative
response	Accepted The wording has been reviewed.

comment	*102* comment by: *FNAM* **ISSUE – item 7** This disposal would impact all CAT operators performing transport over oceanic areas. The scope of affected stakeholders should be changed. This requirement seems to be specific to a type of operation. FNAM wonders if it could be better to provide this item requirement in Regulation (EU) N°965/2012 requirement rather than in CS-MMEL. According to our understanding, this CS-MMEL requirement would be applicable for all aircraft. Thus, FNAM suggests that

requirements may be provided in Regulation (EU) N°965/2012 for specific operation equipment.
PROPOSAL
Change the scope of affected stakeholders to extend it to CAT and SPO operators and CAMO organizations
Study the benefit to provide the for operation specific equipment requirement in Regulation (EU) N°965/2012

response

Noted.

The proposal is outside the scope of this NPA.

comment *103* comment by: *FNAM*

ISSUE – item 7
This disposal would impact all CAT operators with large airplanes and helicopter operators performing offshore operations. The scope of affected stakeholders should be changed.
This requirement seems to be specific to a type of operation. FNAM wonders if it could be better to provide this item requirement in Regulation (EU) N°965/2012 requirement rather than in CS-MMEL. According to our understanding, this CS-MMEL requirement would be applicable for all aircraft. Thus, FNAM suggests that requirements may be provided in Regulation (EU) N°965/2012 for specific operation equipment.
PROPOSAL
Change the scope of affected stakeholders to extend it to CAT and SPO operators and CAMO organizations
Study the benefit to provide the for operation specific equipment requirement in Regulation (EU) N°965/2012

response

Noted.

The proposal is outside the scope of this NPA.

comment *104* comment by: *FNAM*

ISSUE - Flight Crew Compartment Door Surveillance System
For most of helicopter operations, even on complex motor-powered helicopters, it is not relevant to have requirements on the Flight Crew Compartment Door Surveillance System. FNAM suggests to remove the applicability of this requirement for helicopter operations.
PROPOSAL
Remove the applicability of Flight Crew Compartment Door Surveillance System requirement for helicopter operations.

response

	Accepted

comment	*105* comment by: *FNAM* **ISSUE – Additional consideration for 23-70-1** FNAM wonders why the exact requirement ORO.SEC.100 has not been transposed in CS-MMEL. Indeed, this transposition of ORO.SEC.100 may lead to different interpretation. The presented equipment is only a tool to comply with ORO.SEC.100. Since this equipment may be a means of compliance for ORO.SEC.100, FNAM suggests to transpose exactly ORO.SEC.100 in this additional consideration. **PROPOSAL** Transpose exactly ORO.SEC.100
response	Not accepted. The scope of this additional consideration is not to report ORO.SEC.100, but rather to highlight the link of the CCTV with that requirement.

comment	*106* comment by: *FNAM* **ISSUE – Aircraft applicability 25-65** FNAM does not understand why this requirement is only for Aeroplanes operations although Regulation (EU) N°965/2012 although CAT.IDE.H.185,190&195 and also NCC.IDE.H.160, SPO.IDE.H.140 require also Underwater Locating Device for some helicopter operations. In order to be consistent with current Regulation (EU) N°965/2012 regulation, FNAM suggests to extend the applicability of this requirement to helicopter operations. **PROPOSAL** Extend to helicopter operations
response	Not accepted. Item 25-65 Low-Frequency Underwater Locating Device (ULD) is included as alleviation to the requirement CAT.IDE.A.285 of Annex IV (Part-CAT) to Regulation (EU) No 965/2012; it is not applicable to helicopters.

comment	*107* comment by: *FNAM* **AGREEMENT - Aircraft applicability 25-65** FNAM agrees with *" Any of this equipment that is surplus to the equipment required to be operative may be inoperative or missing."*
response	Noted

comment	*108* comment by: *FNAM* **ISSUE – 31-31 More restrictive measure** FNAM wonders why more restrictive measures are required. Indeed, it is currently possible to have flight data recorder and cockpit voice recorder inoperative in the same time. Since no safety impact has been notified, FNAM suggests to not modified and to keep the possibility to have both equipment inoperative. **PROPOSAL** Keep previous measures since no safety impact assessment have been notified
response	Accepted The text will be kept, even if the intent of the new one was not to limit the dispatch with the FDR and CVR simultaneously inoperative.

comment	*109* comment by: *FNAM* **ISSUE - EDITORIAL** The last note is repeated twice. FNAM suggests to suppress it **PROPOSAL** Suppress the last note page 22
response	Not accepted The first note refers to the dispatch condition 31-31-2B, while the second one even if identical refers to the dispatch condition 31-31-2C, so it has to be repeated.

comment	*110* comment by: *FNAM* **ISSUE – 34-55** This equipment seems to be required only for some specific operations such as offshore operations for helicopters. If this equipment is that specific, it should therefore be defined in Regulation (EU) N°965/2012 operation for the MEL of operators only. **PROPOSAL** Define this equipment specific to one operation in Regulation (EU) N°965/2012 rather than in CS-MMEL
response	Not accepted. In Regulation (EU) No°965/2012, there are the requirements for that kind of operations, according to SPA.HOFO.150 of Annex V (Part-SPA). In CS-MMEL, there are the alleviations in case the equipment becomes inoperative and the requirement is not more satisfied.

comment *123* comment by: *The Boeing Company*

Page: 19, 20, 22
Paragraph: *23-71-1B Note 2, 31-31-1B Note 4, 31-31-2B Note 4, and 31-31-2C Note 1*

THE PROPOSED TEXT STATES:
"…if the means to locate the […] remotely (using an Underwater Locating Device (ULD) or an associated Emergency Locator Transmitter (ELT) for deployable recorders) is inoperative, the associated […] is considered to be inoperative."

REQUESTED CHANGE:
Boeing requests clarification in these Notes whether the ULD mentioned either refers to generic underwater locator beacons/devices/equipment, or specifically to the Low-Frequency ULD item proposed in 25-65-1.

JUSTIFICATION: It is unclear if "ULD" is referring to the new LF-ULD equipment in 25-65-1.

response

Accepted.

The 'Underwater Locating Device (ULD)' mentioned in the new notes of 23-71-1B, 31-31-1B, 31-31-2B and 31-31-2C only designates the ULD which is required to be fitted to the flight recorder, when the flight recorder is not deployable.

The text of the notes has been amended as follows:

'Note:… if an Underwater Locating Device (ULD) is required to be fitted to the […] and this ULD is inoperative, the […] is inoperative. If an Emergency Locator Transmitter (ELT) is required to be fitted to the […] and this ELT is inoperative, the […] is inoperative.'

comment *124* comment by: *The Boeing Company*

Page: 19, 20, 22
Paragraph: *23-71-1B Note 2, 31-31-1B Note 4, 31-31-2B Note 4, and 31-31-2C Note 1*

THE PROPOSED TEXT STATES:
"…if the means to locate the […] remotely (using an Underwater Locating Device (ULD) or an associated Emergency Locator Transmitter (ELT) for deployable recorders) is inoperative, the associated […] is considered to be inoperative."

REQUESTED CHANGE:

Boeing requests clarification in these Notes that they specifically concern locators that are physically attached to the recorders, and not locators that are installed elsewhere on the airplane.

JUSTIFICATION: It is unclear which locators these notes concern.

response

Accepted.

Please see the reply to comment No 123.

comment *125* comment by: *The Boeing Company*

Page: 17-26
Paragraph: *Item 7, column 5 (multiple items)*

THE PROPOSED TEXT STATES:
"Any of this equipment that is surplus to the […] required to be operative may be inoperative…"

REQUESTED CHANGE:
Boeing requests the above statement be changed to:
"Any in excess of […] may be inoperative…"

JUSTIFICATION: The proposed wording is unclear and duplicates information from column 4.

response

Accepted

The wording has been changed accordingly.

comment *126* comment by: *The Boeing Company*

Page: 23
Paragraph: *34-55-1*

THE PROPOSED TEXT STATES:
"Aircraft Tracking Equipment"

REQUESTED CHANGE:

Boeing requests clarification whether “Aircraft Tracking Equipment” refers to Emergency Locator Transmitters (ELTs), or if other types of equipment are included.

JUSTIFICATION: It is unclear what type of equipment is considered “Aircraft Tracking Equipment”.

response

Not accepted.

Item 34-55-1 refers to the equipment required by CAT.GEN.MPA.205(a) of Annex IV (Part-CAT) to Regulation (EU) No 965/2012. The ELT is not part of them.

comment *127* comment by: *The Boeing Company*

Page: 24-26
Paragraph: *46-20-2, 46-20-3*

The proposed text states: *[N/A]*

REQUESTED CHANGE: Please consider adding “D” relief options similar to the EFB relief in 46-20-1C for the EFB Installed Resources (Mounting Device and Data Connectivity) and Power Connection items:

(1)	(2)	(3)	(4)	(5)
46-20-2-1C	D	-	0	May be inoperative provided that procedures do not require the use of the affected Mounting Device.
46-20-2-2C	D	-	0	May be inoperative provided that procedures do not require the use of the affected Data Connectivity.
46-20-03C	D	-	0	May be inoperative provided that procedures do not require the use of the affected Power Connection.

JUSTIFICATION: To provide “D” relief options for EFB Installed Resources and Power Connection if procedures do not require their use, similar to the EFB relief in 46-20-1C.

response

Partially accepted.

The D relief can be included for all the items, but for the Mounting Device, the affected EFB must be considered inoperative and properly stored.

comment	*129* comment by: *European Helicopter Association (EHA)* **Additional considerations (ref. pag. 23)** SPA.HOFO.150 also allows ATC surveillance as aircraft tracking. This means that the equipment here is optional. We suggest to modify the text as follows: An aircraft tracking system is required for helicopter offshore operations in a hostile environment, according to SPA.HOFO.150 of Annex V (Part-SPA) to Regulation (EU) No 965/2012, and for aeroplanes under the conditions given by CAT.GEN.MPA.205(a) of Annex IV (Part-CAT) to Regulation (EU) No 965/2012 *if installed.*
response	Not accepted The requirements for aircraft tracking systems are defined in Regulation (EU) No 956/2012, and they are outside the scope of this NPA.

comment	*147* comment by: *Gulfstream Aerospace Corporation* Item 23-71-1A: At column (5), 'those' should be removed from *'Any of this equipment that is surplus to the ~~those~~ equipment required to be operative may be inoperative'*
response	Accepted The wording has been changed.

CS MMEL.105 Definitions p. 26

comment	*9* comment by: *Mazzocchi A. (Mecaer Aviation Group)* Item 8: Editorial corrections (from the first issue) 1. CS-MMEL BOOK 2: All chapter titles should be harmonized and preferably reported in the form "GMx to CS MMEL.yyy(z)"; 2. There is a mismatch between what is reported in CS MMEL.105 "Definitions" and related GM1 MMEL.105: • CS MMEL.105(a) 'Applicant' --> GM1 MMEL.105(a) 'Calendar Days'; • CS MMEL.105(g) 'Flight Day' --> GM1 MMEL.105(g) 'Inoperative'; • CS MMEL.105(h) 'Hazardous Failure Condition' --> GM1 MMEL.105(h) 'Item'
response	1. Accepted. The titles have been harmonised.

2. Accepted. The mismatch has been corrected.

Appendix 1 to GM1 MMEL.145(d) p. 26-31

comment *111* comment by: *FNAM*

ISSUE
EASA's proposed change for crew member location in case of door or exit failure should also be described in Regulation (EU) N°965/2012 regulation.
PROPOSAL
Describe this precision in GM in Regulation (EU) N°965/2012 since it is linked to operational requirement

response Noted

The proposal is outside the scope of this NPA.

comment *136* comment by: *Leonardo helicopters*

Life Raft is identified into CS-MMEL as (MC) so eligible for MMEL minor changes according to Part 21. Also the Emergency Flotation System can be considered as (MC)?
Under this ATA Chapter there are a lot of systems that are only "mission" related (i.e.: Rescue Hoist System, Cargo Hook System). Due to the fact that they are not included into CS-MMEL and CS-GEN-MMEL they have to be considered as Major changes accordingly to Part 21. The possibility to consider them as (MC) should be evaluated.

response Noted.

Please consider that some items can be considered non-safety-related.

Furthermore, the introduction of a new item is not necessarily major. It has to be evaluated with respect to the criteria established in Part 21 for Major MMEL change.

CS MMEL.100 Applicability p. 31

comment *14* ❖ comment by: *Luftfahrt-Bundesamt*

Page 10, Item 9:

General comments

1. CS-GEN-MMEL uses the word helicopter. CS-27 and CS-VLR use the word rotorcraft. As far as we know, the word helicopter describes a specific configuration of a rotorcraft (one or more driven main rotors) and the general expression is rotorcraft (aircraft which produce lift by rotating airfoils). So it seems that you limit the applicability of CS-GEN-MMEL in some kind.
2. CS-MMEL should draw a distinction between CAT, NCC and SPO consistent with the distinction between CAT, NCO and SPO in CS-GEN-MMEL.

response

Not accepted

1. The applicability of CS-GEN-MMEL has been extended specifically to integrate the SC-CS-GEN-MMEL-helicopter referring to other-than-complex helicopters.
2. The distinction in the CS-MMEL is needed just in few cases. CS-GEN-MMEL has to be more flexible than CS-MMEL, especially for NCO operators.

comment *35* comment by: *Pilatus*

The proposed new wording of CS MMEL.100 is ambiguous. It implies that the CS are applicable both to complex motor powered aircraft, as well as to non-complex helicopters, that are certified operation under IFR, FIKI or CAT A. Pilatus proposes to amend the text to "…are applicable to complex motor-powered aircraft, and to non-complex helicopters that…".

response Accepted

comment *112* comment by: *FNAM*

ISSUE
FNAM does not understand EASA's proposed applicability for CS MMEL. Indeed, the scope is extended from complex motor-powered aircraft (a definition which would be deleted and replaced by future discussion due o NBR) to "*non-complex helicopters"* provided some conditions.
First, FNAM does not understand why complex motor-powered helicopter are not included?
Therefore, in order to ensure proportionality of requirements, FNAM suggests that the applicability of this requirement is only for complex motor-powered airplanes and helicopters although this requirement is applicable for complex motor-powered aircraft.

Plus, what is the definition of non-complex helicopter? Is it other-than-complex motor-powered helicopter? FNAM suggests to define this new term in this regulation but also in Regulation (EU) N°965/2012 where this term is used but not defined.
PROPOSAL
Change the scope to complex motor-powered airplanes and helicopters; and
Define non-complex helicopters

response

Not accepted

Complex motor-powered aircraft include aeroplanes and helicopters.

The definition of complex motor-powered helicopter is in Article 3 of Regulation (EC) No 216/2008. The non-complex helicopters are those not included in the above definition.

CS GEN.MMEL.100 Applicability p. 31

comment *11* comment by: *Luftfahrt-Bundesamt*

Page 31, (Item 9,) second bullet under CS GEN.MMEL.100:

For aeroplanes ELA 1, ELA 2, VLA and LSA are excluded. The argumentation was the GM No 1 to 21A.15(d) (ED Decision 2016/007/R). But this decision excludes for MMEL in general ELA 1 and ELA 2 aircraft. So we miss the exclusion of ELA 2 rotorcraft which includes VLR. Consequently, in our point of view, ELA 2 rotorcraft (VLR) should not be included in the CS-GEN-MMEL applicability.

response

Noted

CS-GEN-MMEL is only applicable to aeroplanes, so the ELA 2 rotorcraft are excluded. The change of applicability of CS-GEN-MMEL is only to cover certain helicopters which were covered by the SC-CS-GEN-MMEL-H.

comment *14* ❖ comment by: *Luftfahrt-Bundesamt*

Page 10, Item 9:

General comments

1. CS-GEN-MMEL uses the word helicopter. CS-27 and CS-VLR use the word rotorcraft. As far as we know, the word helicopter describes a specific configuration of a rotorcraft (one or more driven main rotors) and the general expression is rotorcraft (aircraft which produce lift by rotating

airfoils). So it seems that you limit the applicability of CS-GEN-MMEL in some kind.
2. CS-MMEL should draw a distinction between CAT, NCC and SPO consistent with the distinction between CAT, NCO and SPO in CS-GEN-MMEL.

response

Noted

CS-GEN-MMEL is only applicable to aeroplanes, so the ELA 2 rotorcraft are excluded. The change of applicability of CS-GEN-MMEL is only to cover certain helicopters which were covered by the SC-CS-GEN-MMEL-H.

comment *25* comment by: *DGAC France*

CS GEN.MMEL.100 Applicability
In order to ensure consistency between the content of GM No 1 to 21A.15(d) and the applicability of CS-GEN-MMEL, it is proposed to exclude ELA 1 and ELA 2 from the applicability of CS GEN.MMEL.
Therefore, to facilitate the understanding of CS GEN.MMEL.100 a GM should be added to reflect this link with the content of GM1 to PART21A.15(d).
Proposed GM1 to CS GEN.MMEL.100 :
“Design approval applicants for ELA1 and ELA2 aircraft are not required to establish a MMEL. However, a MMEL may be established by considering that the list of required equipment as included in the TCDS and/or AFM/POH, in combination with equipment required for the flight by the associated implementing rules, such as operational requirements, airspace requirements and any other applicable requirements to the intended operation, establishes the list of equipment that must be operative for all flights. Other equipment may be inoperative and this constitutes the MMEL.”

response

Partially accepted.

ELA 1 and ELA 2 are excluded from the applicability of CS-GEN-MMEL. In any case, the content of the GM to Part 21.A.15 will not be repeated in CS-GEN-MMEL as it would not be appropriate in the CS.

comment *36* comment by: *Pilatus*

The use of upper and lower case is inconsistent in the proposed amendments to CS MMEL.100 and CS GEN.MMEL.100 (e.g. Certification Specifications in CS-MMEL vs. certification specification in CS-GEN-MMEL, or Category A in CS-MMEL vs. category A in CS-GEN-MMEL). Also, CS-GEN-MMEL does not receive the addition "for

	establishing the MMEL". Pilatus proposes to check for editorial consistency in the regulatory text.
response	Accepted The editorial consistency has been checked.

comment	*41* comment by: *KLM* Page 31 – **CS GEN.MMEL.100 Applicability** ~~This~~ These ~~CS~~ certification specifications ~~applies~~ are applicable to: — other-than-complex motor-powered aeroplanes, except for: This is extremely difficult! This sentence consists of a 'double denial'. So in other words, when it is not not true it is true. In our view CS GEN.MMEL.100 Applicability then in fact says: "I am applicable to ELA 1, ELA 2, very light aeroplanes (VLA), light sport aeroplanes (LSA), and powered sailplanes, and. …." We presume this is not what is actually meant here. We suggest to re-phrase the sentence to; — non-complex motor-powered aeroplanes, with the exception of:
response	Not accepted This specific wording is required as there is no definition for non-complex motor-powered aeroplanes.

comment	*113* comment by: *FNAM* **ISSUE - helicopter** CS GEN MMEL is now applicable for all helicopters. What are the consequences? Indeed, no regulation currently applies for MMEL for other-than-complex helicopter. Since no impact assessment is provided, FNAM fears that consequences could not be anticipated. Since no requirement is recurrently requested for MMEL for other-than-complex motor-powered helicopters, FNAM wonders what would be the transition measures for all operators of this type of aircraft. Indeed, their current approved MEL should be therefore reapproved and be based on this new CS-GEN.MMEL. Therefore, FNAM suggests to ensure a long transition period in order to avoid any interruption of operation due to non-approved MEL.

PROPOSAL
Ensure long period of transition; and
Provide a sound impact assessment

response

Not accepted

CS-GEN-MMEL is not applicable to all helicopters but only to a certain category of other-than-complex motor-powered helicopters that were covered until now by SC-CS-GEN-MMEL-H. These helicopters were already required to have an MMEL as per Part 21, but no appropriate certification specification was existing. That situation has created an issue for the type certificate holders falling under this category.

comment *114* comment by: *FNAM*

ISSUE– item 9
FNAM agrees that ELA1 and ELA2 should be excluded from CS MMEL and CS GEN MMEL.
Nevertheless, FNAM wonders what would be the regulatory basis for ELA1 and ELA2 aircraft for MMEL requirements, but also for MEL requirements since these requirements are correlated.
PROPOSAL
Precise the regulatory basis for ELA1 and ELA2 aircraft

response

Noted

The legal basis for ELA1 and ELA2 aircraft in terms of MMEL is contained in the regulation EU N°748/2012.

comment *151* comment by: *European Powered Flying Union*

Page 31/110

CS GEN.MMEL.100 Applicability (stike-throughs unfortunately not visible…)
“This CS applies to other-than-complex motor-powered aeroplanes except for very light aeroplanes (VLA), light sport aeroplanes (LSA) and powered sailplanes.
This These CS certification specifications applies are applicable to:
— other-than-complex motor-powered aeroplanes, except for:
ELA 1,
ELA 2,
very light aeroplanes (VLA),
light sport aeroplanes (LSA), and
powered sailplanes, and…”.

Question 1: Does this fit with CS-23 Amdt 5?

Rationale: As far as I remember CS-VLA is now integrated in CS-23, CS-LSA was not, for some trans-atlantic reasons…

Question 2: Should “touring motor gliders” be added to the texts and tables?

response

Noted

1. This is still valid with the introduction of CS-23 Amdt 5.The reference to the VLA is applicable for the models still in production, while the new models certified in accordance with CS-23 Amdt 5 and equivalent to a VLA would be covered by ELA 1 or ELA 2.
2. This category is included in the powered sailplanes.

CS GEN.MMEL.110 MMEL purpose p. 32

comment *115* comment by: *FNAM*

ISSUE - GM2 CS GEN.MMEL.110
FNAM would like to highlight the case where manufacturers propose equipment options, which therefore are not mandatory for the flight, without modifying their MMEL. In such cases, it should be possible for operators to add these non-mandatory items in their MEL although there are not in MMEL.
Since they are non-mandatory for the flight, the safety would not be impacted.
PROPOSAL
Modify to : “All items not included in the list are required to be operative unless they are considered to be non-safety-related Items and unless they are optional items not required by operational regulation”

response

Not accepted

GM1 ORO.MLR.105 defines the non-safety-related items. Equipment not included in that definition cannot be included in an MEL if not present in the MMEL.

CS GEN.MMEL.145 Item list p. 32

comment *12* comment by: *Luftfahrt-Bundesamt*

	Page 32, (Item 9,) second paragraph under CS GEN.MMEL.145: The last two words are *"aeroplane type"*. It seems that the wording should be changed to *"aircraft type"*.
response	Accepted

comment	*137* comment by: *Leonardo helicopters* Reference to Airworthiness Directives should not be demanded to the Applicant when an item is selected for inclusion within MMEL. Preamble of MMEL already states that the operator's MEL cannot deviate from an Airworthiness Directive or any other mandatory requirement. AFM is part of the material used for the definition of the MMEL because available as certification document, while AD is related to unsafe conditions identified due to in-service issues and potentially it cannot be envisaged at the time of the assessment of an item.
response	Not accepted The manufacturer should be aware of the AD applicable to their aircraft.

Appendix IV to CS-GEN-MMEL p. 38-107

comment	*13* comment by: *Luftfahrt-Bundesamt* Page 38 (Item 9) and following related Appendix IV: The comparison of the new Appendix IV and the SC-CS-GEN-MMEL-H has the following result: 1. Page 47: 23-10-3 is not part of the SC, but above this table the aircraft applicability is defined as *"Aeroplanes & Helicopters"* 2. Page 65, 25-60-1 Protective breathing equipment: It seems to be a typo. The heading of this table is *"ATA CHAPTER 26"*, but the number starts with 25. 3. Page 78, 33-44-1A (CAT aeroplanes): In the other entries the word *"aeroplane"* is marked grey. But at this position it is not. 4. Page 83 and 84, 34-10-3-2A: It seems that item 34-10-3-2A for helicopters is mentioned twice - once for turn indicator and once for slip indicator. 5. Page 84 and 85, 34-10-5: The heading includes helicopters in the applicability. But item 34-10-5 is not part of the SC-CS-GEN-MMEL-H. 6. Page 93/94, 34-41-1-1A and 34-41-1-1: The last definition of the applicability on page 87 includes aeroplanes and helicopters, but the SC-CS-GEN-MMEL-H does not include those items.

response

Noted

The wording has been corrected where applicable. Please consider that it has been proposed to extend the applicability of CS-MMEL to more types of helicopters, so some items applicable just to aeroplanes can be available also for helicopters in this NPA.

comment

20 comment by: *Luftfahrt-Bundesamt*

Page 57, ATA CHAPTER: 25 Equipment and furnishings, Item 25-60-1B Electrical torches/flashlights (incl. holders) (ALL):

The following remarks should be amended:

"Any of this equipment that is surplus to the equipment in excess of those required to be operative for the intended flight may be inoperative or missing."

For reasons of consistency, the remarks should be equivalent to the remarks of CS-MMEL 25-60-2A Independent portable lights:

"May be inoperative or missing provided each required crew member has an operative independent portable light readily available when seated at designated station."

response

Accepted

The wording has been be changed.

comment

28 comment by: *DGAC France*

Page 57
CS-GEN-MMEL
Item 25-60-1
The item 25-60-1B seems too restrictive for items in surplus. The philosophy of the CS-MMEL and CS-GEN-MMEL is to consider the item in surplus with an rectification interval in D. Furthermore a placard mention or maintenance procedure should be included in order to identify the inoperative equipment.

response

Accepted

comment

29 comment by: *DGAC France*

Page 60

CS-GEN-MMEL
25-62-1A
As provided in the CS-MMEL, the CS-GEN-MMEL should consider the case of incomplete kit in order to allow a return to the base.

response

Accepted

A relief for an incomplete kit has been introduced in CS-GEN-MMEL.

comment *37* comment by: *Pilatus*

In some proposed changes to CS-GEN-MMEL dispatch conditions, a new text "of these" is added (e.g. 30-10-1, 30-31-3C or 30-32-1A). However, there is no apparent consistent condition when this text is used. It appears to be applied for MMEL entries where the number installed is (-) and the number required for dispatch is 0. However, it is noted that in many other places this is not used, for example 25-60-1 or 25-11-1-5. Furthermore, the terminology is used inconsistently even within the same MMEL item (e.g. 30-31-3A and 30-31-3C).
Pilatus proposes to check for consistent use of the term "One or more of these…", or to eliminate the text outright and state "May be inoperative…".

In some proposed changes to CS-GEN-MMEL (e.g. in ATA 21) the wording "aeroplanes operations" is used. Elsewhere, (e.g. in ATA 33 and 34) only "aeroplanes" or "helicopters" is used.
Pilatus proposes to check for consistency.

In the proposed changes to CS-GEN-MMEL 46-20-1, 46-20-2 and 46-20-3 it is not understood why the operational applicability "ALL" is deleted.
Pilatus proposes to review. In the case that the operational applicability is deleted then an explanatory note would avoid the same question with other TCH (in this context it is noted that Pilatus does not understand the purpose of the entire "Additional considerations" under ATA 46. It appears to state the obvious which also applies for any other MMEL entry).

Pilatus suggests the following corrections to proposed CS-GEN-MMEL changes:

- In the new 34-10-3-2A and 34-15-3A, add operational applicability.
- In the new 34-20-2G, change "(Helicopters with MCTOM < 3 175 kg)" to "(ALL helicopters with MCTOM < 3 175 kg)".
- In the new 34-20-3B, change "(Helicopters)" to "(ALL helicopters)".

response

Accepted

The wording consistency has been checked and the proposed changes implemented.

comment 42 comment by: *KLM*

Page 78 – item 33-44-1B
Any ~~in excess~~ of this equipment that is surplus to the one item of equipment ~~of one~~ required to be operative may be inoperative for night operation.

Propose to change to:
One item of this equipment is required to be operative for night operation.

response Accepted

The wording has been changed.

comment 43 comment by: *KLM*

Page 104 – item 46-20-2-2 Data Connectivity
Here the complete text belonging to this item seems to be omitted, since page 105 of the document commences with: (continued) **46-20-3**.
Please also refer to the similar item at page 25 of the NPA document where this item 46-20-2-2 Data Connectivity consists of 46-20-2-2A and 46-20-2-2B

response Accepted

The wording consistency has been checked.

comment 45 comment by: *Cengiz Turkoglu*

Changing the 'Rectification Interval' from A to C means that an Operator can possibly operate an aircraft without ACAS protection up to 20 days (by applying RIE). I cannot understand how this can improve safety. I personally would NOT like to fly on any aeroplane without a functioning ACAS. In fact, as a passnger, I would NOT like to fly in any airspace in which other aeroplanes without ACAS are operating.

Furthermore having generic statements such as 'operating procedures do not require its use' creates further risks. Some operators copy and paste such statements to their own MEL and then even get it approved by their NAA's. This will then put operational staff (pilots & engineers) in difficult positions trying to establish under which conditions they can release/accept the aircraft to service. Also it gives opportunity to management to put pressure on frontline operators so that they continue flying without ACAS.

Instead of making a more 'risk tolerant' change (e.g. from A to C), I think CS-MMEL should be amended to introduce a more 'risk averse' change (e.g. from A with 10 days interval to A with perhaps only 1 flight where defect rectification can be accomplished)

response

Not accepted

The release has been changed for harmonisation with the FAA where the item is also proposed as C rectification interval.

comment *49* comment by: *AIRBUS*

1. PAGE / PARAGRAPH / SECTION THE COMMENT IS RELATED TO:
Appendix IV – Item List. ATA 52 – item 52-11-1 Door/Exit

2. PROPOSED TEXT / COMMENT :

This item is not proposed to be modified in the NPA. However we find that there is a discrepancy in the rectification interval A – 5 flights of the item and the rationales of the dispatch conditions stated in the section “additional considerations”. It is indeed stated in this section:

Any aeroplane configured with more than two pairs of exits is considered to be in an airworthy condition with one passenger emergency exit inoperative provided that the number and distribution of passengers is in accordance with the maximum permitted (for the complete aeroplane and in each zone) capacity tables (MPC tables) that are specified in the relevant MEL.

This consideration would indicate that the item is eligible for a B or C repair interval

3. RATIONALE REASON / JUSTIFICATION for the Comment:
The acceptable level of safety ensured by the dispatch conditions will not be impacted by a longer rectification interval.

response

Not accepted

The purpose of this revision is not to discuss items which would require discussions and harmonisation with the industry and the other authorities.

comment *74* comment by: *DGAC France*

Page 51
CS-GEN-MMEL

	Item 24-40-1 External power system Editorial correction : **28**-40-1A should be 24-40-1.
response	Accepted

comment	*116* comment by: *FNAM* **ISSUE – 25-60-7A** What does : *« Other than commercial air transport operation »* means? Why not precise NCC, NCO or SPO?
response	Accepted The wording has been simplified.

comment	*117* comment by: *FNAM* **ISSUE – 25-60** This disposal would impact all CAT operators performing transport over-water areas. The scope of affected stakeholders should be changed. This requirement seems to be specific to a type of operation. FNAM wonders if it could be better to provide this item requirement in Regulation (EU) N°965/2012 requirement rather than in CS-MMEL. According to our understanding, this CS-MMEL requirement would be applicable for all aircraft. Thus, FNAM suggests that requirements may be provided in Regulation (EU) N°965/2012 for specific operation equipment. **PROPOSAL** Change the scope of affected stakeholders to extend it to CAT and SPO operators and CAMO organizations Study the benefit to provide the for operation specific equipment requirement in Regulation (EU) N°965/2012
response	Noted The proposal is outside the scope of this NPA.

comment	*118* comment by: *FNAM* **ISSUE – 34-10** *« Outside Air Temperature »* EASA's proposed requirements define outside temperature indicator in MMEL for aircraft of more than 2722kg or for piston aircraft only.

Nevertheless, this item could be installed on aircraft less than 2722kg. If this equipment is not written in MMEL or MEL, that means that, as soon as the indicator has a failure, the aircraft cannot continue its operations. It is not logical since this items is not mandatory and will not impact the safety of the flight.
Indeed, FNAM would like to highlight the case where manufacturers propose equipment options, which therefore are not mandatory for the flight, without modifying their MMEL. In such cases, it should be possible for operators to add these non-mandatory items in their MEL although there are not in MMEL.
Since they are non-mandatory for the flight, the safety would not be impacted.
PROPOSAL
Add the possibility for operators to add non mandatory items installed by manufacturer in their MEL although there are not in MMEL; and
Remove the "additional consideration"

response

Not accepted

GM1 ORO.MLR.105 defines the non-safety-related items. Equipment not included in that definition cannot be included in an MEL if not present in the MMEL.

comment *119* comment by: *FNAM*

ISSUE – 34-15-03 page 100
« *34-15-03 Radio Altimeter with an Audio Voice Warning: in addition to the equipment required by CAT.IDE.H.145 of Annex IV (Part-CAT) to Regulation (EU) No 965/2012, helicopters involved in NVIS operations shall be equipped with a radio altimeter and a low height warning system that gives visual and audio warnings that are selectable by the pilot and are discernible during NVIS operation.* »
This disposal would impact all operators performing NVIS operations with helicopters. The scope of affected stakeholders should be changed.
This requirement seems to be specific to a type of operation. FNAM wonders if it could be better to provide this item requirement in Regulation (EU) N°965/2012 requirement rather than in CS-MMEL. According to our understanding, this CS-MMEL requirement would be applicable for all helicopter operations. Thus, FNAM suggests that requirements may be provided in Regulation (EU) N°965/2012 for specific operation equipment.
PROPOSAL
Change the scope of affected stakeholders to extend it to CAT and SPO operators and CAMO organizations

response

Not accepted.

The proposal is outside the scope of this RMT.

EASA thanks FNAM for the comments provided and the attention paid to this NPA. We have in any case to underline that CS-MMEL and CS-GEN-MMEL are specifications for initial airworthiness (Part 21) and consequently designed more for design

organisations than for operators and CAMOs. Specific entries for other-than-CAT operations are already in both CSs, but at that level a deep customisation is not always possible. We encourage the operators to highlight their needs to the manufacturers and to take advantage of the benefits that Part 21 offers in terms of change to the OSD constituents.

comment *120* comment by: *FNAM*

ISSUE ATA 34 – Traffic Advisory Systems
Lot of Traffic Advisory Systems are installed on other-than-complex motor-powered aircraft and light aircraft. Nevertheless, EASA's does not proposed specific requirements for this system for this scope.
That means that, as soon as the Traffic Advisory System has a failure, the aircraft cannot continue its operations. It is not logical since this items is not mandatory and will not impact the safety of the flight.
Indeed, FNAM would like to highlight the case where manufacturers propose equipment options, which therefore are not mandatory for the flight, without modifying their MMEL. In such cases, it should be possible for operators to add these non-mandatory items in their MEL although there are not in MMEL.
Since they are non-mandatory for the flight, the safety would not be impacted.
PROPOSAL
Add the possibility for operators to add non mandatory items installed by manufacturer in their MEL although there are not in MMEL

response

Not accepted

GM1 ORO.MLR.105 defines the non-safety-related items. Equipment not included in that definition cannot be included in an MEL if not present in the MMEL.

comment *130* comment by: *European Helicopter Association (EHA)*

34-31-1A (ALL aeroplanes) (ref. pag. 91)
Why does it not refer to helicopters? 1B is penalising

response

Noted

34-31-1A is not applicable to helicopters in CS GEN-MMEL, because this CS does not apply to helicopters that are IFR certified.

comment *131* comment by: *European Helicopter Association (EHA)*

	34-41-1C (CAT pressurised aeroplanes/SPO pressurised aeroplanes) (ref.pag. 93) is that now N/A to helicopters?
response	Noted. 34-41-1A this item is still applicable to helicopters in CS MMEL. Nevertheless this item was not deemed to be useful for the helicopters for which CS GEN MMEL is applicable.

MMEL

comment	*132* comment by: *European Helicopter Association (EHA)* **ATA CHAPTER: 34 Navigation (ref. pag. 94)** Are HTAWS alleviations missing for helicopters?
response	Noted. HTAWS has not been introduced in CS-GEN-MMEL because there is no operational requirement for such helicopters to have this equipment.

comment	*141* comment by: *Bell Helicopter Textron Inc* 25-60-7B: Alleviation should reference to “ALL” to provide alleviation when all flights (commercial or non-commercial) on are scheduled over land.
response	Accepted.

comment	*142* comment by: *Bell Helicopter Textron Inc* 34-20-2G: MTOW listed is redundant as CS-GEN-MMEL only applies to helicopters less than 3,175kg.
response	Accepted This has been corrected.

comment	*152* comment by: *European Powered Flying Union*

Page 38/110

21-20-1	**Fresh air ventilation outlets**
21-20-1A	(ALL)

Question: “outlets” or “inlets”? As most probably the fresh(er) air comes from the outstide the term “inlet” should in my eyes be used, but most probably this remark is an XXXL-peanut…

response

Noted.

In most of the MMELs, this item is identified as ‘outlets’. We prefer to maintain this term to avoid creating confusion.

comment *153* comment by: *European Powered Flying Union*

Page 40/110

ATA CHAPTER: 21 Air conditioning
The proposed text repeatedly states “ALL OPERATIONS”.

Question: Should this text not be adjusted/adapted to the kind/nature/purpose of the planned operation?

response

Not accepted.

When the item is applicable only to a specific kind of operation, this is clearly reported. The text ‘ALL OPERATIONS’ means that the operations do not affect the application of the relative MMEL item.

4. Impact assessment (IA) p. 108

comment *121* comment by: *FNAM*

ISSUE
This impact assessment is not acceptable. Operators, in particular SPO operators, should define and make approved their MEL before operating. MEL is based on

	MMEL. Therefore, as soon as MMEL items are modified, MEL should be updated by all operators. Plus, all CAMO would also be indirectly impacted since their maintenance management should take into account the new MEL requirements. Since all operators (CAT, SPO, helicopters) would be impacted be also CAMO organizations, a sound study should be provided by EASA on social, economic and environmental impacts. **PROPOSAL** Provide a sound impact assessment
response	Not accepted. The amendments proposed through this NPA are expected to result in a moderate safety benefit, have no social or environmental impacts, and provide some economic benefits by streamlining the certification process. There is no need to develop a regulatory impact assessment.

3. Attachments

 Airbus Symbol .PNG

Attachment #1 to comment #47

 Airbus A320 Touch & Go.pdf

Attachment #2 to comment #5