



**EASA**  
European Aviation Safety Agency

# Operational Suitability Data Requirements for Master Minimum equipment List

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**Issue 1**

**STC WORKSHOP**  
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## AGENDA

- **Part 1**  
***Requirements for STC MMEL***
- **Part 2**  
***MMEL-S development***
- **Part 3**  
**Stand-alone changes to MMEL**



- Two kinds of STC MMEL requirements
  - “Nice to have”; relief for operational flexibility at operator level
    - Not required; voluntary request from STCH
    - Can be treated as a stand-alone MMEL change, separately from the design change, after the entry into service of the aircraft
    - Example: CCTV installation for cockpit door security



## Part 1- Requirements for STC MMEL

- Two kinds of STC MMEL requirements
  - “Must have”; necessary change to A/C MMEL invalidated by STC
    - Required by Part 21.A.93(c) and 21.A.113(b)
    - Must be made available before the data must be used by an EU operator
    - Not to be confused with Major change
    - Example: public address system requirement on helicopters with more than 9 passengers after installation of a bulkhead between cockpit and passenger cabin(CAT.IDE.H.180).



## Part 1- Requirements for STC MMEL

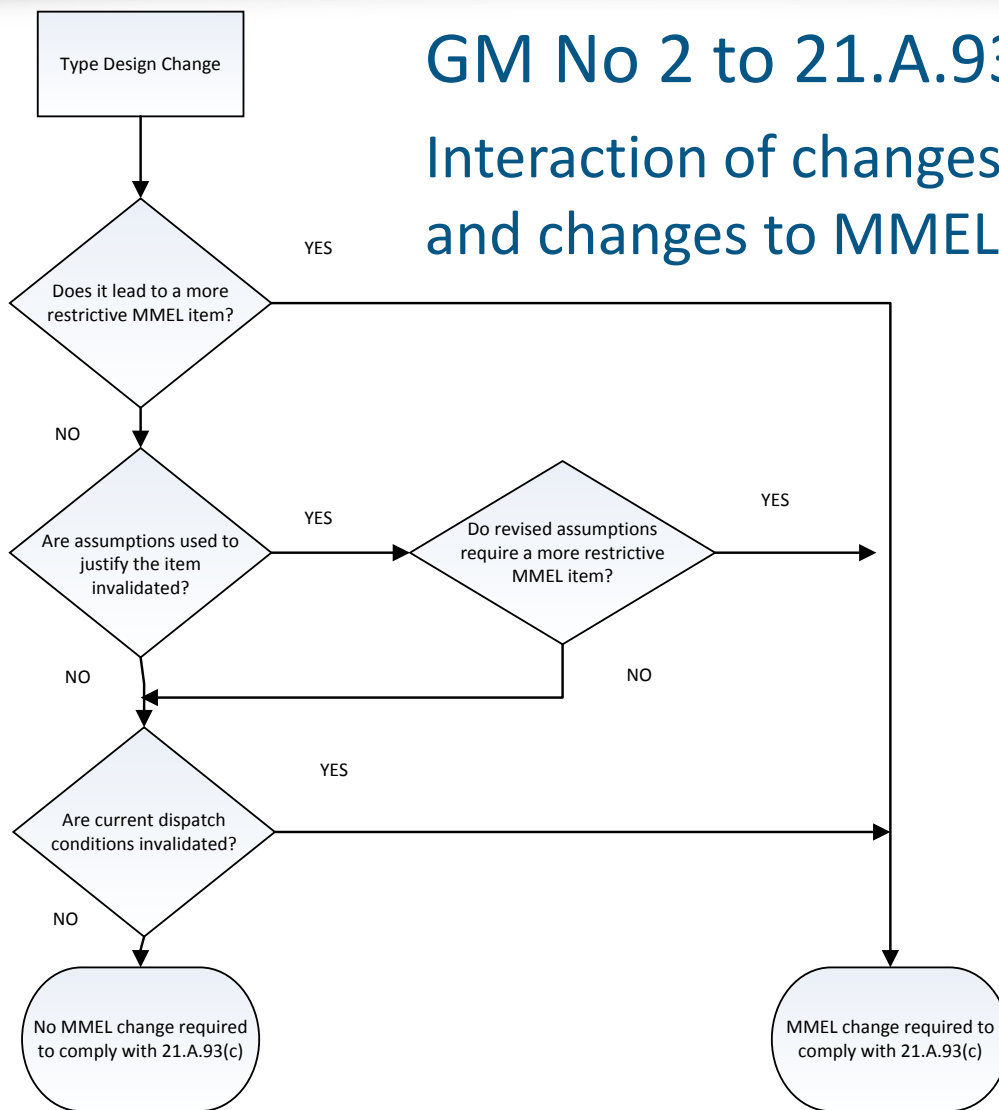
- “Must have” changes to MMEL shall be identified by:
  - Adequate review of existing OSD MMEL content (Ref. EASA TCDS)
  - Potential need to review associated substantiations from the TCH (complex or interconnected systems)
  - Not applicable if no OSD MMEL exists



# Part 1- Requirements for STC MMEL

## GM No 2 to 21.A.93(c)

### Interaction of changes to the type design and changes to MMEL





## Part 1- Requirements for STC MMEL

- For both “Must have” and “Nice to have” changes to MMEL STCH shall:
  - Determine applicable certification specification for the change
    - Latest CS if linked to significant design change and OSD change classified Major, unless exceptions of 21.A.101(b)(3) applied
  - Demonstrate compliance to OSD Certification Basis
    - Level of substantiation proportional to criticality of system functions and applicable requirements
    - As per methods agreed with the Agency CS MMEL 145(b)



# Part 2- STC MMEL development

## ➤ MMEL Methodology Development

### ➤ Means of compliance to CS-MMEL/JAR-MMEL

*“an acceptable level of safety as intended by the applicable requirements is maintained”*

*“The inclusion of each item in the MMEL is justified following one or more methods as agreed with the Agency.”*

### ➤ **Performance based CS:** what is acceptable shall be defined in the MoC

### ➤ The Methodology is an essential aspect of the OSD MMEL as it defines substantiation content/format





# Part 2- STC MMEL development

## ➤ MMEL Methodology Development

- CS MMEL.145 (c)(1) *Consequences of the item failure*
- CS MMEL.145 (c)(2) *Consequences of the next worst failure/event: Not HAZ or CAT except if supported by quantitative assessment*
- CS MMEL.145 (d) *Quantitative assessment for items 2 failures away from CAT or 1 failure away from HAZ failure condition*



## Part 2- STC MMEL development

- MMEL Methodology Development
  - May be project specific or defined at organisation level in DOA Handbook procedures
  - May be determined through an arrangement with the type-certificate holder
  - Justifications may be limited to only demonstrating the non-safety related nature of the item (GM1 MMEL.145 (d))



## Part 2- STC MMEL development

### ➤ ORO.MLR.105 (a) requires EU operators to:

- Base their new MELs on OSD MMEL available directly from the (S)Type Certificate Holder.

***Note:** The MMELs status is no longer published on the EASA website. Data has to be made available by (S)TC Holders as per 21.A.62/108/120B to the end user.*

- Update their MEL as per OSD MMEL at the earliest opportunity and not later than 18 December 2017 or 2 years after the OSD was approved, whichever is the latest.



## Part 2- STC MMEL development

- Pre-OSD approved STC MMEL supplements
  - No dedicated grandfathering provisions in (EU) 69/2014
  - Upon request, catch-up exercise may be conducted resulting in updating STC certificate to list MMEL supplement references



## Part 3- Stand-alone changes to MMEL for STCH

- What is a stand-alone change to MMEL?
  - It is a MMEL change, minor or major, not related to a type design change.
- Who can apply for a MMEL stand-alone change?
  - Part 21.A.92 and 21.A.112A define the eligibility to apply for approval of changes to a type-certificate.
- When is it used?
  - Usually used by TCH to introduce voluntarily a new MMEL item in a “mature” MMEL for operational reasons



## Part 3- Stand-alone changes to MMEL

- Usual application for STCH
  - Introduction of an items “nice to have” and
    - not yet included in the TCH MMEL
    - not related to a design change.
      - Example: introduction of release for passenger seat table not already present in the TCH MMEL.



## Part 3- Stand-alone changes to MMEL

- MMEL change treated as stand-alone
  - When the MMEL change is approved separately from the relative design change.
    - Example: installation of a Cabin Crew Rest with issue of a MMEL-S in a second time after the approval of the STC.



# Conclusion

- With MMEL in OSD we have now:
  - Approval process comparable to Type Design Certification
  - Clearer sharing of duties and responsibilities between Agency and (S)TC Holders
  - Requirements for MMEL necessary changes
  - Allow privileges for DOA holders for MMEL minor changes approval





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