



EASA

European Aviation Safety Agency

Implementation of OSD-MCS Maintenance Certifying Staff

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Topics



OSD-MCS Applicability

Who and When

OSD-MCS Certification Basis

How

OSD-MCS Content

What



OSD-MCS applicability as per EU 69/2014 Part 21 Amdt

Obligations for a TCH to provide the OSD-MCS:

- [Art. 1 37a1] **Only new TCs**, applications filed **after 17 February 2014**.
 - Limited to **Group 1 a/c**. *GM No. 1 to 21.A.15d*
 - OSD **approval** to obtained **before EIS** of the first a/c by an EU operator or need to use OSD for preparation of such EIS. *GM to 21.A.21f*
- [Art. 1 37a2] **Catch-up** for existing TC or on-going certifications, for which the application was filed before 17 February 2014, **is voluntary**.
- [Art. 1 37a3] No OEB-MCS approved report exists: therefore **no Grandfathering** activity is expected.
- [Art. 1 37a4] DOA scope **extension** before 18 December 2015. **If no OSD-MCS exists, no extension is required**.
- [Art. 2] **Changes** and STCs are exempted until 19 Dec.2016. **If no OSD-MCS exists, no application** for OSD-MCS change is required.



Group 1 aircraft 66.A.5

Aeroplanes

- above 5700 kg MTOM; or
- more than 19 pax; or
- minimum crew 2 pilots; or
- turbojet; or
- two or more turboprops; or
- Op. Alt. > FL290; or
- fly-by-wire.

Helicopters

- above 3175 kg MTOM; or
- more than 9 pax; or
- minimum crew 2 pilots; or
- more than one engine; or
- fly-by-wire.

Tilt rotor aircraft

- All



OSD-MCS Certification Basis

- No CS-MCSD already exists
- Rulemaking Task RMT.106 is in progress to develop the CS-MCSD (expected in 2018).
- To cover the transition phase, the Certification Memorandum CM-MCSD-001 **provides specific guidance** in preparation of the **Special Condition (SC)** as per Part 21.A.16B which will be included in the OSD certification basis to address the MCSD.
- The SC is conveyed through a Certification Review Item (CRI A-MCSD).
- CM-MCSD-001 gathers the outputs of the RMT.106.
- CM-MCSD-001 will be published soon.



Training Organisation Requirements

Art. 6.3

Type training courses approved before the approval of the OSD-MCS shall include the relevant elements defined in the **mandatory part** of that OSD latest between:

- 18 December 2017 or
- **within two years** after the OSD approval.



Amdt EU 1321/2014 (Cont. Airworthiness)

- The introduction of the OSD in the Basic Regulation created the obligation for the Type Certificate Holder to provide the “minimum syllabus” for maintenance certifying staff for certain aircraft.
- As a consequence of this, the Appendix III to Part-66 (in its point 1(a)(ii)) was amended with Regulation (EU) 1321/2014 to state that the theoretical training and examination shall comply with:

“the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012 or, if such elements are not available, the standard described in point 3.1 of this Appendix”



Amdt EU 1321/2014 (Cont. Airworthiness)

- When this requirement was drafted by the Agency, it was done with the assumption that the Type Certificate Holder would provide the syllabus for the full aircraft, including all its systems.
- However, since we cannot anticipate how extensive will be the syllabus produced by the Type Certificate Holder (discussions still being held in Rulemaking Task RMT.0106), the opinion of EASA is that the requirement contained in Appendix III to part-66 should be reworded to state that the theoretical training and examination shall comply with:

"the standard described in point 3.1 of this Appendix plus, if available, the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012"



RMT.106 -Discussions on OSD content

OSD has to bridge Part 21 with Part 147...



“Large” OSD option



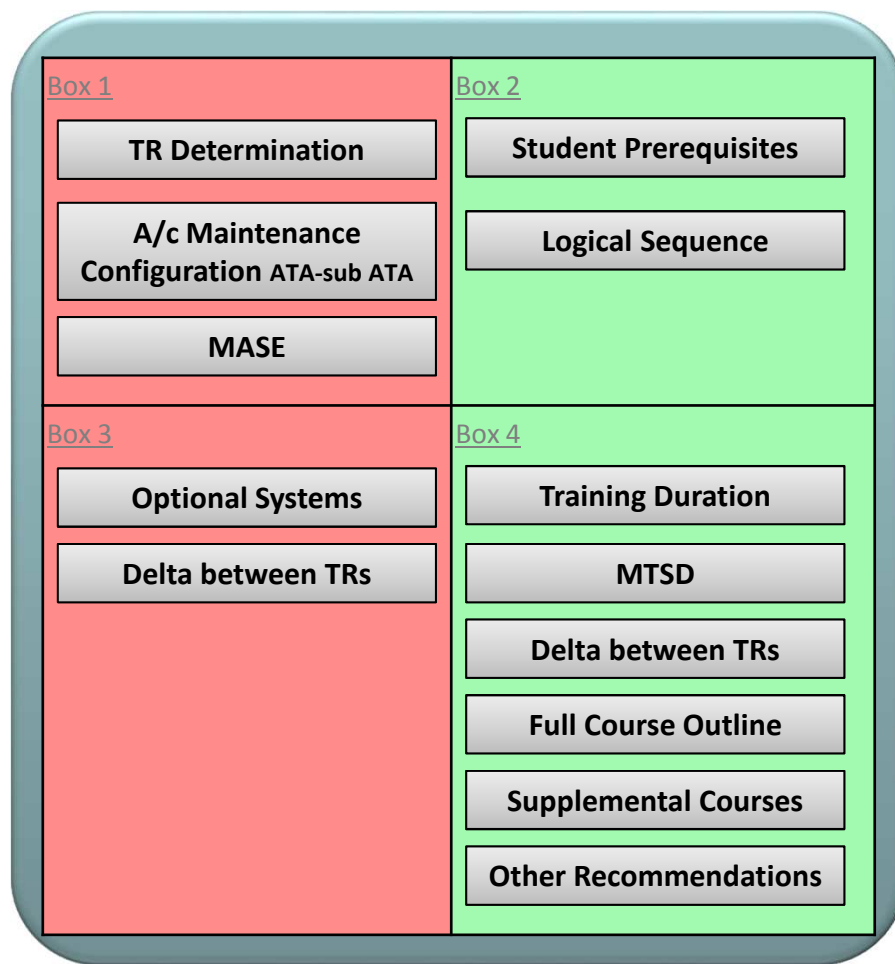
“Light” OSD option





RMT.106 -Discussions on OSD content (cont'd)

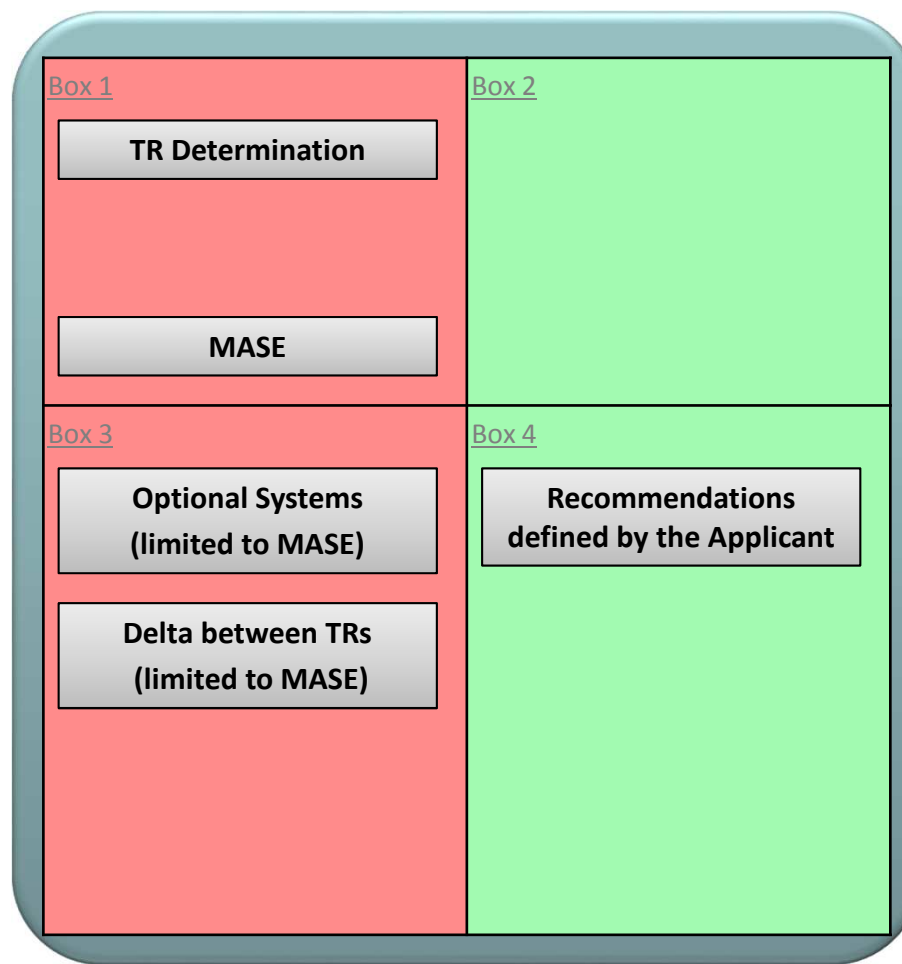
Large OSD



**Mandatory
Elements**

**Not Mandatory
Elements**

Light OSD



**Mandatory
Elements**

**Not Mandatory
Elements**



CRI A-MCSD

Special Condition MCSD

1.1 Type Rating Determination

The Applicant shall provide the type rating for the purpose of Aircraft Maintenance Licence (AML) endorsement. Based on a favourable conclusion of the evaluation, this type rating will be included in the Type Certificate Data Sheet (TCDS).

The type rating(s) determined should address all (new) models/variants specified in the TCDS.

For the purpose of this Special Condition, the following criteria shall be evaluated to require a different maintenance type rating separate from the existing type ratings:

- the aircraft is subject to a different aircraft type certificate; or
- the aircraft is subject to a major modification for installation of another type of engine; or
- the aircraft is subject to a STC for installation of another type of engine; or
- the analysis on the minimum syllabus content and/or training duration results in an evident and substantial difference; or
- such a recommendation is made by the Applicant or the Agency.

1.2 Minimum Syllabus Content

The Applicant shall provide the minimum syllabus content. The minimum syllabus content specified for the type should be clearly identified and allocated to one of the four “box” categories identified in GM No 3 to 21.A.15(d) (see fig. 1) in order to identify its mandatory or non-mandatory status. The contents should address the minimum theoretical and practical type training for Maintenance Certifying Staff.

Whilst the TC Applicant/Holder should be adequately supporting each proposed element and its “box” categorisation, a list of expected content elements is provided below. The Applicant should consider these examples as being neither limiting nor exhaustive for their proposal.

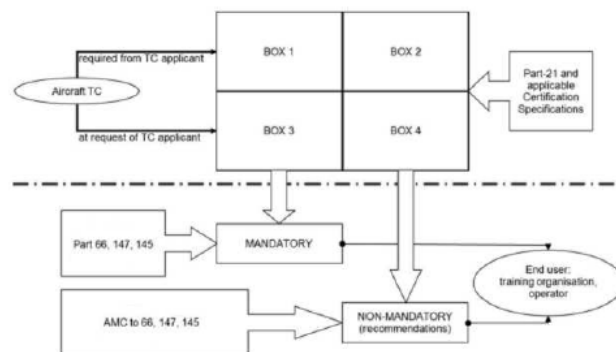


Fig. 1

Box1

- Type rating determination (see 1.1).
- The base aircraft configuration relevant to maintenance type training and which should be addressed in accordance with the certificated type design. This configuration should be detailed to the ATA system – subsystem level and include the categorisation of technical information to be addressed in training (e.g. location, description, indication, normal operation, abnormal operation, MMEL specific maintenance actions called in some MMEL items dispatch condition as maintenance procedure(s) (M)). The list should be detailed to ATA component level in cases when the novelty or other characteristics of the component justify/require such a detail. The certificated a/c configuration detailed in Box1 should cover the complete base aircraft configuration relevant to maintenance type rating training and should leave the certificated configuration options (i.e. options at system, subsystem or equipment/appliance level in addition to/in place of the base configuration) to be addressed in Boxes 3 and 4.
- MASE – any element considered by the applicant as having a degree of novelty, specificity or uniqueness relevant to the maintenance of his product. This could be a technical or operational feature that maintenance personnel need to be aware of and take into consideration.

Refer to Appendix I for further practical guidance on MASE.

Box2

- Student prerequisites (knowledge, experience, qualification) for the particular a/c type training (e.g. previous exposure to and type of a/c maintenance experience; a/c type maintenance related elements for composite repair and bonding and appropriate knowledge, experience, and awareness in accordance with AMC 20-29, SAE AIR 5719)
- The logical sequence (i.e. time wise order) of imparting training elements from minimum syllabus if any (e.g. ATA29 training on hydraulic system(s) configuration should precede ATA27 training on flight controls actuation).

Box3

- All and any elements identified by applying the Box1 type of content rationale and which should be considered in addressing a difference training between types or models under the same type (as categorised in Appendix I to AMCs of Part-66).
- Optional systems.

Box4

- All and any elements identified by applying the Box2 type of content rationale and which should be considered in addressing a difference training between types or models under the same type (as categorised in Appendix I to AMCs of Part-66).
- Course outline, which may include footprints, all learning objectives, examination elements... or full developed course on request when available.
- Potential use of specific Maintenance Simulation Training Devices (MSTD) to be used in imparting some of the type training minimum syllabus elements;
- Type rating training course instructional duration (i.e. consolidated per the whole course and/or segregated per elements of the minimum syllabus);
Note: in the absence of any recommendation about the overall course length, the figures as mentioned in Part66, Appendix III, 3.1 will apply.
- Outlines of any other supplemental courses e.g. for engine run-up, advanced T/S, special complex composite repairs, specific basic knowledge training needed.
- Any other additional elements (i.e. in addition to and beyond the Box1, Box2 and Box3 content) which are recommended by the TCH to the OSD-MCSD user.

An example of the Minimum Syllabus template can be found in Appendix II.



Template for the Minimum Syllabus

Mandatory							Not-Mandatory			
Box 1/3	Box 1/3	Box 1/3	Box 1/3	Box 1/3	Box 1/3	Box 1/3	Box 2/4	Box 2/4	Box 2/4	Box 2/4
ATA Sub. Sys	Subject	Technical Info to be addressed	Theo.	Pract.	MASE?	Opt. sys	Student Prereq.	Logical Seq.	Duration	MSTD
To comp. level if necessary ⁽¹⁾		(2)			(3)		(4)			
...
Ex. 24-20	AC power gen. sys	Location	X	Rem./Inst. of the IDGs,...	No	N/A
Ex. 24-50-10	CB devices	Normal Operation	X	FOT	Yes	N/A
...

¹ In cases when the novelty or other characteristics of the component justify/require such a detail

² e.g., location, description, indication, normal operation, abnormal operation, MMEL specific maintenance action,...

³ any element considered by the applicant as having a degree of novelty, specificity or uniqueness relevant to the maintenance of his product. This could be a technical or operational feature that maintenance personnel needs to be aware of and take into consideration

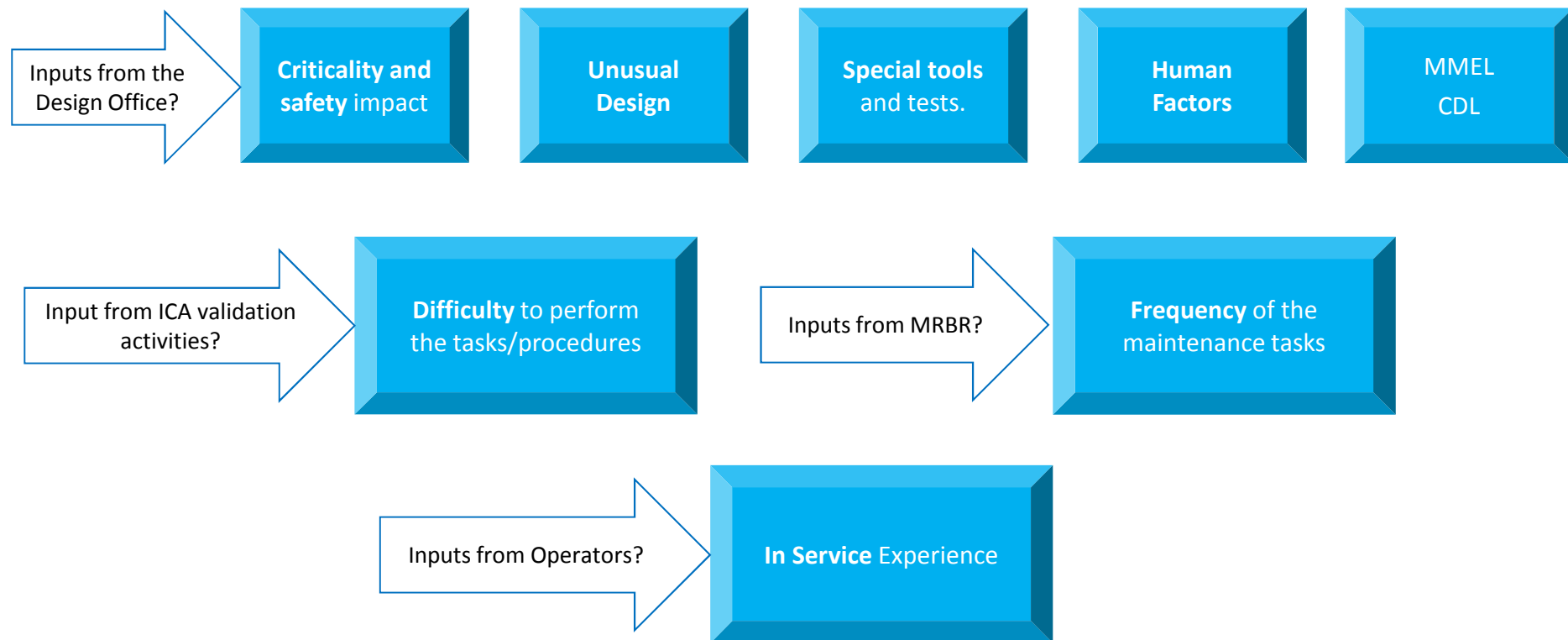
⁴ Knowledge, experience, qualification



Guidelines for MASE

“Any element considered by the applicant as having a degree of novelty, specificity or uniqueness relevant to the maintenance of his product. This could be a technical or operational feature that maintenance personnel needs to be aware of and take into consideration”

Consideration should be given to, as applicable, but not limited to:





Guidelines for MASE

CS 25/29/27 requirements and Part-21 processes may be used as reference in order to address those areas of maintenance interest:

CS25.509 **Towing** procedures and limitations
CS25.571 **Structural inspection** procedures
CS25.603 Maintenance procedures for **composite** materials
CS25.689f **Cable systems** inspections procedures
CS25.611 **Accessibility** provisions
CS25.901b **Engine installation** instructions
CS25.981d **CDCCL** inspections and procedures
CS25.1301 **Labelling/identification/operating limitations**
CS25.1309 Certification Maintenance Requirements (**CMR**)
CS25.1529 Instructions for the Continued Airworthiness
CS25H.3a Aircraft Maintenance Manual (**AMM**)
CS25H.3b1 **Schedule** Maintenance Instructions (**MRBR**)
CS25H.3b2 **Troubleshooting** Instructions
CS25H.3b3 **Removal and Installation** Instructions
CS25H.3b4 Systems **testing** Instructions, ground checks, weighing,...

CS25H.3c Structural **accesses** Instructions
CS25H.3d Special Inspection Instructions (**NDT**)
CS25H.3e **Protective Treatments** Instructions
CS25H.3f Structural **fasteners** Instructions
CS25H.3g **Special Tools** Instructions
CS25H.4 Airworthiness Limitation Section (**ALS**)
CS25H.5 **EWIS** ICA
CS25.1535 **ETOPS** maintenance tasks
CS25.1711 EWIS components labelling Instructions
CS25.1719 EWIS Accessibility Provisions Instructions
CS25.1729 EWIS ICA
CS25M **Fuel Tank FRM** maintenance Instructions
Part 21.A.3 Failures, malfunctions and defects
Part 21.A57 Manuals
Part 21.A61 ICA



Acronyms

ALS	Airworthiness Limitation Section	OSD	Operational Suitability Data
AMO	Approved Maintenance Organization	RMT	Rulemaking Task
ATO	Approved Training Organization	SC	Special Condition
CAW	Continuous Airworthiness	STC	Supplemental Type Certificate
CDCCL	Critical Design Configuration Control Limitation	TCH	Type Certificate Holder
CM	Certification Memoranda	TRT	Type Rating Training
CMR	Certification Maintenance Requirement		
CRI	Certification Review Item		
CRS	Certificate of Release to Service		
CS	Certification Specification		
EIS	Entry Into Service		
FRM	Flammability Reduction Means		
ICA	Instructions for Continued Airworthiness		
MASE	Maintenance Area of Special Emphasis		
MCSD	Maintenance Certifying Staff Data		
MRBR	Maintenance Review Board Report		
NAA	National Aviation Authority		
NDT	Non Destructive Test		
OEB	Operational Evaluation Board		



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Thank you!

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