

Continuation Training Letter



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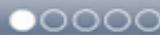
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Editorial

Dear Readers,



Welcome to our February edition.

Well, here we are again. Another month is over and it looks like spring is just around the corner.

At the beginning of March the QCM Team will spend a weekend up in the mountains. Some of us are going to enjoy excellent skiing conditions while others are going to soak up much needed sunshine.

All in all we are looking forward to an enjoyable weekend away filled with fun and sun.

This month Georg Stöcker explains what exactly the MEL is in the **main article**.

Also included are a couple of **short topics**.

In the not so distant future there are our courses, of course. Please have a look at the **open course status** and our course updates.

This month we have several **job offers** and you can of course continue to send us your job offers.

Enjoy the beginning of spring.

Tina Cameron
Q.C.M

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Applicable Master Minimum Equipment List (MMEL) – Question to EASA

This month I would like to write about the "Minimum Equipment List", usually referred to as "MEL".

Even if this document is very well known and used correctly, a lot of people have problems to explain what the MEL actually is.

Here is an explanation of what the document is, where it comes from and when it is required.

As a conclusion you will find a question which was raised from one of my colleagues to EASA regarding "applicable MMEL" and the corresponding statement from EASA.

DISCUSSION: MMEL/MEL:

What does "MMEL" stand for ?

"MMEL" stands for "Master Minimum Equipment List".

What does "MEL" stand for ?

"MEL" stands for "Minimum Equipment List".

What is the "MMEL"?

(a) The MMEL is a document that lists the equipment which may be temporarily inoperative, subject to certain conditions, while maintaining an acceptable level of safety as intended in the applicable JAR or equivalent Requirement. Each MMEL is specific to an aircraft type.

(b) All items related to the airworthiness of the aircraft and not included in the list are automatically required to be operative.

(c) Non-safety related equipment such as galley equipment and passenger convenience items, need not be listed. [Ref.: JAR-MMEL/MEL.010 General]

What is the "MEL"?

(a) The MEL is a document that lists the equipment which may be temporarily inoperative, subject to certain conditions, at the commencement of flight. This document is prepared by the operator for his/their own particular aircraft taking account of their aircraft configuration and the relevant operational and maintenance conditions in accordance with a procedure approved by the Authority.

(b) All items related to the airworthiness of the aircraft and not included in the list are automatically required to be operative.

(c) Non-safety related equipment, such as galley equipment and passenger convenience items, need not be listed. Operators shall establish an effective decision making process for failures that are not listed to determine if they are related to airworthiness and required for safe operation.

(d) The MEL may contain additional advisory material or modified operational and maintenance procedures. [Ref.: JAR-MMEL/MEL.050 General]

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Who issues the "MMEL"?

The "MMEL" is issued by the type certificate holder/supplemental type certificate holder.

Who issues the "MEL"?

The "MEL" is issued by the owner/operator.

Who publishes the "MMEL"?

The "MMEL" is published initially by the authority responsible for the type certificate/supplemental type certificate.

Any authority can publish their own "MMEL" based on the "original" "MMEL".

Who publishes the "MEL"?

The "MEL" is published by the owner/operator.

What is the applicability of the "MMEL"?

The "MMEL" is specific to an aircraft type.

[see: JAR-MMEL/MEL.010 General]

What is the applicability of the "MEL"?

The "MEL" is specific for a particular aircraft taking account of the aircraft configuration and the relevant operational and maintenance conditions.

[See: JAR-MMEL/MEL.010 General]

What is the purpose of the MMEL? What is the purpose of the MEL ?

The purpose of both documents is

1. to list all equipment which can be inoperative during operation and still provide an acceptable level of safety
2. to describe the specific procedures and conditions to be followed during operation of an aircraft with such an inoperative equipment
3. to define the rectification time for such inoperative equipment

This is possible because of the installation of additional and redundant instruments, equipment and/or systems.

How do we have access to the "MMEL"?

The "MMEL" is available through the authority responsible for the type certificate/supplemental type certificate.

Today, usually, the authorities place the MMELs on their homepages.

How do we have access to the "MEL"?

In case of commercial air transport the MEL must be placed onboard of the aircraft.



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When do we need a MEL?

Annex IV to Regulation (EC) No 216/2008 (Basic Regulation) defines "Essential requirements for air operations referred to in Article 8".

Based on this Annex IV independent from the type of operation the following applies:

2. Flight preparation

2.a. A flight must not be commenced unless it has been ascertained by every reasonable means available that all the following conditions are complied with:

...

2.a.3. The pilot in command must be satisfied that:

- (i) the aircraft is airworthy as specified in point 6;
- (ii) if required, the aircraft is duly registered and that appropriate certificates with respect thereto are aboard the aircraft;
- (iii) instruments and equipment as specified in point 5 required for the execution of that flight are installed in the aircraft and are operative, unless waived by the applicable Minimum Equipment List (MEL) or equivalent document;

If the aircraft is used in commercial operation or if a complex motor-powered aircraft is operated the following applies in addition:

8. Additional requirements for operation for commercial purposes and operation of complex motor-powered aircraft

...

8.a.3. the operator must establish a MEL or equivalent document, taking account of the following:

- (i) the document must provide for the operation of the aircraft, under specified conditions, with particular instruments, items of equipment or functions inoperative at the commencement of the flight;
- (ii) the document must be prepared for each individual aircraft, taking account of the operator's relevant operational and maintenance conditions; and
- (iii) the MEL must be based on the Master Minimum Equipment List (MMEL), if available, and must not be less restrictive than the MMEL;

With respect to that it is evident that for any type of operation the flight can only be commenced when the aircraft condition is within the limitations of the "MEL" or equivalent document, consequently such a document must be available.

But, for commercial air transport operation that is nothing new. It was already required under Regulation (EC) No 859/2008 (commonly called "EU OPS 1") in the following way: *OPS 1.030*

Minimum equipment lists — Operator's responsibilities

(a) An operator shall establish, for each aeroplane, a minimum equipment list (MEL) approved by the Authority. This shall be based upon, but no less restrictive than, the relevant master minimum equipment list (MMEL) (if this exists) accepted by the Authority.

(b) An operator shall not operate an aeroplane other than in accordance with the MEL unless permitted by the Authority.

Any such permission will in no circumstances permit operation outside the constraints of the MMEL.

This requirement has also been transferred to the new Regulation (EU) No 965/2012 (commonly called "EASA-OPS") in the following way:



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Commercial air transport aeroplanes:

CAT.IDE.A.105 Minimum equipment for flight

A flight shall not be commenced when any of the aeroplane's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

- (a) the aeroplane is operated in accordance with the operator's MEL; or
- (b) the operator is approved by the competent authority to operate the aeroplane within the constraints of the master minimum equipment list (MMEL).

Commercial air transport helicopters:

CAT.IDE.H.105 Minimum equipment for flight

A flight shall not be commenced when any of the helicopter's instruments, items of equipment or functions required for the intended flight are inoperative or missing, unless:

- (a) the helicopter is operated in accordance with the operator's MEL; or
- (b) the operator is approved by the competent authority to operate the helicopter within the constraints of the MMEL.

What are specific requirements regarding the "MEL"?

In this new "EASA-OPS" there are more detailed requirements specified regarding this document:

ORO.MLR.105 Minimum equipment list

(a) A minimum equipment list (MEL) shall be established as specified under 8.a.3 of Annex IV to Regulation (EC) No 216/2008, based on the relevant master minimum equipment list (MMEL) as defined in the data established in accordance with Regulation (EC) No 1702/2003.

(b) The MEL and any amendment thereto shall be approved by the competent authority.

(c) The operator shall amend the MEL after any applicable change to the MMEL within the acceptable timescales.

(d) In addition to the list of items, the MEL shall contain:

(1) a preamble, including guidance and definitions for flight crews and maintenance personnel using the MEL;

(2) the revision status of the MMEL upon which the MEL is based and the revision status of the MEL;

(3) the scope, extent and purpose of the MEL.

(e) The operator shall:

(1) establish rectification intervals for each inoperative instrument, item of equipment or function listed in the MEL. The rectification interval in the MEL shall not be less restrictive than the corresponding rectification interval in the MMEL;

(2) establish an effective rectification programme;



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- (3) only operate the aircraft after expiry of the rectification interval specified in the MEL when:
- (i) the defect has been rectified; or
 - (ii) the rectification interval has been extended in accordance with (f).
- (f) Subject to approval of the competent authority, the operator may use a procedure for the one time extension of category B, C and D rectification intervals, provided that:
- (1) the extension of the rectification interval is within the scope of the MMEL for the aircraft type;
 - (2) the extension of the rectification interval is, as a maximum, of the same duration as the rectification interval specified in the MEL;
 - (3) the rectification interval extension is not used as a normal means of conducting MEL item rectification and is used only when events beyond the control of the operator have precluded rectification;
 - (4) a description of specific duties and responsibilities for controlling extensions is established by the operator;
 - (5) the competent authority is notified of any extension of the applicable rectification interval; and
 - (6) a plan to accomplish the rectification at the earliest opportunity is established.
- (g) The operator shall establish the operational and maintenance procedures referenced in the MEL taking into account the operational and maintenance procedures referenced in the MMEL. These procedures shall be part of the operator's manuals or the MEL.
- (h) The operator shall amend the operational and maintenance procedures referenced in the MEL after any applicable change to the operational and maintenance procedures referenced in the MMEL.
- (i) Unless otherwise specified in the MEL, the operator shall complete:
- (1) the operational procedures referenced in the MEL when planning for and/or operating with the listed item inoperative; and
 - (2) the maintenance procedures referenced in the MEL prior to operating with the listed item inoperative.
- (j) Subject to a specific case-by-case approval by the competent authority, the operator may operate an aircraft with inoperative instruments, items of equipment or functions outside the constraints of the MEL but within the constraints of the MMEL, provided that:
- (1) the concerned instruments, items of equipment or functions are within the scope of the MMEL as defined in the data established in accordance with Regulation (EC) No 1702/2003;
 - (2) the approval is not used as a normal means of conducting operations outside the constraints of the approved MEL and is used only when events beyond the control of the operator have precluded the MEL compliance;
 - (3) a description of specific duties and responsibilities for controlling the operation of the aircraft under such approval is established by the operator; and
 - (4) a plan to rectify the inoperative instruments, items of equipment or functions or to return operating the aircraft under the MEL constraints at the earliest opportunity is established.



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CONCLUSION

Question to EASA:

I have noticed that several EASA approved MMEL Revisions are older than those of the TC Holder / National Authority of TC Holder.

Example: EASA approved MMEL is Revision 1 dated March 2011. The TC Holder and National Authority's MMEL is Revision 4 dated September 2011.

Which MMEL takes precedence of an aircraft operating under EASA requirements?

On your web-site it is stated "“Each MMEL document is the property of the (S)TC holder, and only made available here in full if requested by the (S)TC holder”

Statement from EASA:

For operators operating under EASA requirements then the applicable MMEL is the EASA MMEL as indicated on the EASA webpage. EASA MMEL revisions are not always synchronised with those of the TC authority, but until the associated changes have been proposed by the TC Holder and reviewed by EASA we cannot accept the associated changes.

Human Factor Issues "Midnight Nugget "

Real Life Tips for Improving Alertness on the Night Shift“Whoops!”

Slip-ups are a fact of life during the overnight hours, when most people are at greater risk of **lapses in concentration** compared with day-hours.

An alertness lapse may simply cause you to trip over your own feet or spill a cup of coffee. On the other hand fatigue can lead to bad decisions, sloppy work and accidents. Studies have found that accidents on the night shift tend to be **more serious-and the resulting injuries more severe**-than those that occur during the daytime.

It's vital to take extra precautions on the night shift. The '**danger zone**' for most people occurs around **4 to 5 a.m.** when alertness dips to its daily low point. At this time it can be difficult to concentrate on the task at hand, you may feel chilly, and all you can think about is finding someplace to lie down.

Shiftworkers, physiologists and researchers, have collected a list of '**fatigue counter-measures**' that can help you stay alert during the nightshift:

- anticipate points of low alertness. If you know when you usually hit a low-point in your shift, you can take steps to minimize your alertness dip.
- Take naps before work and/or during break (if allowed). Naps are a great and healthy way to boost energy for hours.



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- Use caffeine effectively. A cup of coffee or tea at the right time can be a great energy boost – just don't consume caffeine too close to your bedtime.
- Exercise or take a walk around the site – exercise gives you energy.
- Talk to co-worker or make a phone call. Nothing stimulates the mind like talking to another person.
- Listen to music or a talk show.
- Vary your normal routine when possible.
- Change posture frequently – alternate sitting, standing, and walking.
- Play mental games. Keep your mind alert, your body will follow.
- Read interesting material (if allowed).
- Wear layer of clothing that can be added or shed depending on your core body temperature.
- Increase workplace environment lighting. Watch out for too much glare, which can tire your eyes.
- Develop healthier eating habits. Some snack food, like candy bars, can make you more tired.

Keep healthy snacks nearby like pretzels, fruit or vegetables (if allowed).



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Notice of Proposed Amendments (NPAs)

TITLE	DATE PUBLISHED	END OF COMMENT
NPA 2013-02 Protection from debris impacts	22/01/2013	22/04/2013
NPA 2013-01 Embodiment of Safety Management System (SMS) requirements into Commission Regulation (EC) No 2042/2003	21/01/2013	21/04/2013
NPA 2012-24 Certification Specifications, Acceptable Means of Compliance and Guidance Material for Tethered Gas Balloons ("CS-31TGB") Turbine Engine CSs in Icing Conditions - Advisory Material	2012-12-06	2013-03-06
NPA 2012-23 Turbine Engine CSs in Icing Conditions - Advisory Material	2012-12-06	2013-03-06
NPA 2012-22 Large Aeroplane Certification Specifications in Supercooled Large Drop, Mixed phase, and Ice Crystal Icing Conditions - Advisory Material	2012-11-29	2013-03-01

FAA Statement

Deputy Transportation Secretary John Porcari, FAA Administrator Michael P. Huerta and other FAA officials met with senior executives from The Boeing Company to discuss the status of on-going work to address 787 battery issues. The FAA is reviewing a Boeing proposal and will analyse it closely. The safety of the flying public is our top priority and we won't allow the 787 to return to commercial service until we're confident that any proposed solution has addressed the battery failure risks.



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Please find below our open courses with seats available.

Train the Trainer

This year we offer Train the Trainer courses. You can either participate in our full course or visit the course in two sessions. The two sessions will address Module 1 and Module 2 at two dates while the full course addresses both Modules in one session. Both versions amount to a total duration of 5 days.

The course dates are as follows:

Two sessions: 09.-11. April (Module 1) and 29.-30. May 2013 (Module 2)

One session: 15.-19. July 2013 (both Modules)

Airbus A320/A330/A340 Interfamily General Familiarization

We are organising a 3-day course here at our location in Belp in co-operation with Lufthansa Technical Training. The date will be 22.-24. April 2013. Please contact us directly for more information and registration.

If you are interested in participating in these or any other training please do not hesitate to contact us.

Course title	Date	Seats available	Instructor
EASA Part-M Subpart G	11. - 13.03.13	full	Paul Baumann
Airworthiness Review for ARC Signatories	14.03.13	4	Paul Baumann
EASA-OPS / EASA-FCL (Airplanes)	18.-13.03.13	8	Patric Sutter
Fuel Tank Safety (Phases 1 and 2)	25.03.13	10	Paul Baumann
EWIS	26.03.13	4	Paul Baumann
EASA Part-M Subpart G Refresher	08.04.13	11	Paul Baumann
Train the Trainer (1)	09. - 11.04.13	5	Matthias Werner
EASA Part-66 / Part-147	15. - 16.04.13	11	Jürgen Feldhoff
Stock Management	17. - 18.04.13	9	Georg Stöcker
EASA Part-21 DOA Expert	23. - 24.04.13	12	C. Schusser
Train the Trainer (2)	29. - 30.05.13	5	Matthias Werner

Open Course Status EASA Part-147 Type Trainings

Course title	Date	Seats available	Instructor
Learjet 55 B1/T1	27.05. - 14.06.2013	6	Walter Brisch
Dassault Falcon 900EX, L1/T4	05. - 07.08.2013	5	Chris Tamerius

If not stated otherwise, courses take place in our facilities in Belp/Berne.
Please click on the Course title for detailed information

Course update



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CAMO ENGINEER (m/f)

Tyrol For more than 30 years Tyrolean Jet Services TJS as Austria's first Executive Air Operator have been providing Business Jet Services to valuable clients on the worldwide Executive Air Charter Market. Our own CAMO Organisation is looking for

>> CAMO ENGINEER (m/f)

- Qualified Aeronautical Engineer or equivalent
- Knowledge about the Part M, Part 145
- Substantial experience in airworthiness monitoring (Airbus A320 Family)
- Technical knowledge of aircraft types supported (Airbus A320 Family)
- In-depth knowledge of EASA technical legislation
- Communication skills with the customers in English
- Advanced PC and Microsoft office skills
- Full Time Employment based in Innsbruck/ Austria

Applicants must have the right to live and work in EU

To apply please send a copy of the following to **robert.strahalm@tjs.at**

- CV
- Copy of License & Passport

ROBERT STRAHALM
Manager Maintenance
robert.strahalm@tjs.at
+43 512 22577 34

Tyrolean Jet Service Nfg GmbH & CoKG
Fürstenweg 180
A-6020 Innsbruck-Airport
www.tjs.aero



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is looking for

Falcon and PC12 Instructor (m/f) respectively

Tasks:

- Perform Technical Type Training to EASA Part 147 Standards
- Maintain training documents, exam questions, etc.

Requirements:

- Experience on aircraft types (licenced)
- English in written and spoken form (Russian as another language is of advantage)
- Training experience is of advantage

Freelance basis

Application:

Please send you application complete with cover letter, updated CV and certificates to:
train@qcm.ch.



is looking for

Aircraft Structures (x1), Avionics(x1) and Design(x1) Engineer (m/f) respectively

Qualification

- graduated from a technical aviation school with an academical degree (BSc or MSc)
- familiar with Microsoft Office applications
- familiar with CAE systems (preferably with SolidEdge) and methods of design
- high level of English communication skills both written and spoken
- ability to work independently
- willingness to travel and work on-site
- willingness to relocate to Switzerland
- ability to work in an international multicultural team
- willingness to gain German communication skills

Description/Tasks

- the design and development of aviation products
- assisting interior and avionic modifications of aviation products
- concept optimization after analysing customer needs
- developing compliance with aviation standards
- life-time management of developed products

Please provide a motivation letter with an updated copy of your CV in Word format and send it to:

design@part-21.ch



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We hope that you have found this month's continuation report informative. Do not hesitate to contact us for further information.

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We send this Newsletter as information to our customers and friends.



Contact



Phone: +41 31 960 40 60

Fax: +41 31 960 40 65

E-mail: info@qcm.ch

www.qcm.ch

Our mailing address is:

QCM

Eichholzweg 20-24

Belp 3123

Switzerland

Contact



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Took notice of continuation training report

Name	3 Letter	Date	Sign