

Practical Use Of The MEL

The use of the MEL provides a window of opportunity to make you look really good...or really bad.

It all depends on how well you know the stuff in the MEL, the abbreviations and how methodical you are in applying the MEL constraints. Don't rush and stuff it up. If unsure contact HAECO, ENG (via VHF) or discuss it with the ground engineer. However, always remember that it is you who is ultimately responsible.

Reading this handout or the MEL is easy; practically applying it is not so easy and requires practise. As with most things in aviation *WHAT* to do is laid out in black and white, but *HOW* to do it is a grey area and much more difficult. Get your Trainer (or pose for yourself) some scenarios which require the use of the ECAM and then the MEL.

I advocate that whenever it looks like the MEL may be required (e.g. after an ECAM) that you briefly review the aircraft systems involved and take a "Big Picture" look at how it will affect your flight and whether safety is compromised or not. For example – you get an ECAM – *F/CTL Flap Sys 2 Fault* during taxi. Think "Big Picture" – Flap System 2 only is affected and there are two of them (one of which is not functioning). End result – the flaps will still work, but they will be slow. Is it a safety issue? Probably not, so you might be happy to get airborne with it rather than going back to the bay. Now you can dig out the MEL and confirm your original assessment with the guidance that the MEL provides.

MEL Chapters

The MEL is divided into three broad chapters:

- Introductory
- MEL (with four sub chapters)
- CDL (in ATA chapters)

Take some time to get familiar with the layout of the paper MEL as this will make it easier to quickly and efficiently locate information when the pressure is on (usually your Line Check!)

Introductory

This chapter is of academic interest, except perhaps that it has a cross reference of MSN (Manufacturer's Serial Number) for each Aircraft Registration.

MEL – ATA Chapters

The main MEL chapter is further sub divided into the following four chapters:

- 00 General
- 00E ECAM Warning/MEL Entry
- 01 Main MEL in ATA chapters, and
- 02 Operational Procedures

00 General

Ensure that you have a firm understanding of the information contained in chapter 00. It contains definitions, MEL categories, abbreviations and operations outside of the MEL (dispensation/concession) and explains "Apply" and "Consider" and how to use chapter 00E ECAM Warning/MEL Entry.

Ensure that you are thoroughly familiar with the Commander's responsibilities (00-02, P1) and failures prior to take off (00-02, P2 para 5). When you get an ECAM at the holding point, you'd better be confident about what action you decide on in a pressure situation. The MEL provides some guidance to help you make that decision.

00E ECAM Warning/MEL Entry

Know the information in the General section (e.g. ETOPS, Actual vs. False Warning, No Dispatch and Not Applicable).

Practise using this chapter as it is usually your point of entry into the MEL when an ECAM occurs.

01 Main MEL (in ATA Chapters)

This is where the main information for MEL actions or requirements is contained. It is divided into ATA Chapters and everything that you ever wanted to know about the information in here is explained in chapter 00 General.

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02 Operational Procedures

If (o) is indicated in the main MEL 01 chapter, then this chapter is where you will find the Operational Procedure to apply to dispatch under that particular MEL.

This chapter also has the ACARS MEL codes to input in the ACARS RTOW.

CDL

This chapter has a brief introduction before the main CDL list which is also arranged in ATA Chapters.

The CDL is usually concerned with bits that are missing off the aircraft (e.g. winglets, flap fairings and doors or panels etc.)

MEL Traps

As I already said, the MEL can make you look good...or bad.

The following are some traps that the MEL has built into it:

- Be very careful with Actual vs. False Warnings when using chapter 00E ECAM Warning/MEL Entry. It is easy to dive into the MEL with a reference given for a False Warning, when the Actual Warning has No Dispatch. Make sure you determine if it is in fact a False Warning. If you can't determine if it is actually a False Warning then you have to assume that it is an Actual Warning and apply that procedure.
- Also be careful with items in the main MEL chapter that are "Indication" problems. Make sure that it is in fact an indication malfunction (the MEL is full of ECAM indication items e.g. 73-30).
- Make sure you get the right page. The MEL has numerous T/R's that are constantly changing. Use the T/R as it is the applicable MEL item to use. Look either side of the page to ensure that there is not further information buried there and that you have the correct MEL code.
- Check the bottom of the MEL page for aircraft applicability (e.g. 52-10-01 Cabin Passenger Doors for the A330 is spread over several pages and there are two 52-10-01 entries depending on the door types fitted).
- Read any entry carefully to check if it is applicable for A330 Basic or Enhanced, Trent 772 or Trent 772B (A330 engines). The A340 MEL is split into two separate books, one for the A343 and one for the A346 (thank god!)
- Buried within MEL entries may be ETOPS and/or NOTES in bold type. Read these carefully and apply them as appropriate. To further complicate matters NOTES can also be hidden in normal type fonts which are easy to miss. Read everything carefully.
- Watch out for "– or –" between the same MEL entry. This gives you a choice of either MEL item depending on the actual circumstances (e.g. one may be if a maintenance procedure has been completed and the other if not).
- Make sure you enter MEL 28-42-01 Fuel Quantity Indicating in the correct place. It is not displayed very clearly and there are two entry points, one for Degraded Mode and one for Inoperative Indication. They are two very different procedures – use the correct one. Have a practise at the Operational Procedure for the Degraded Mode. It looks complicated but it is relatively easy, provided you know what you're doing.
- Know the difference between *Rubber Seal Under Slats*, *Slat End Blade Seal*, *Blade Seals* and *Slat End Filling* in the CDL. Even HAECO and the Engineers get these mixed up.
- MEL items with a (m) require a maintenance procedure. The procedure can be from either the Aircraft Deactivation Procedures Manual (ADPM – which is kept in the locker in the cockpit closet) or the Maintenance Manual.
- The MEL can not possibly cover every eventuality. This is where Systems Knowledge, common sense, airmanship and experience come to the fore. Involve all the crew (possibly even the Cabin Crew) and use the CLEAR model. This is when you start earning your money!
- Use the "Big Picture" to sort out any multiple MEL/ECAM items. Individually they might not be too serious, but in combination they could be a serious threat. See the above paragraph.

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MEL Scenarios

- F/CTL FLAP SYS 2 FAULT

- No ECAM actions
- STS – FLAPS SLOW

During preflight ECAM F/CTL FLAP SYS 2 FAULT annunciates. The HEACO Engineer is sitting in the jump seat filling out the AML.

The ECAM subsequently self clears after a few minutes.

What would be your actions if this ECAM occurred during taxi.

- F/CTL FLAPS FAULT

- FLAPS LEVER.....RECYCLE
- STS – INOP SYS, FLAPS

While on radar vectors and cleared for an ILS approach and told to contact the tower, just prior to LOC capture ECAM F/CTL FLAPS FAULT annunciates just after F2 selected. Slats are at 2 and Flaps stuck at about 1 in amber with the 2 in blue.

What are your thought processes? What are your actions?

- AIR BLEED LO TEMP

- ON BLEED 1 ENG PWR.....INCREASE
- If Unsuccessful ENG BLEED 1.....OFF
- STS – AVIOD ICING CONDITIONS

Just after thrust reduction ECAM AIR BLEED LO TEMP annunciates.

What are your thought processes? What are your actions? Develop into the actions if you know it is a spurious ECAM.

- SMOKE AFT/BULK CRG SMOKE

- AFT AGENT.....DISCH
- STS – INOP SYS, BULK VENT

CRC and ECAM SMOKE AFT/BULK CRG SMOKE while on the ground. Aft cargo door has just been opened.

Develop scenario and explain how this is likely condensation on the sensor. Point out the FCOM 3.02.26 notes for Aft/Bulk (which point to Fwd notes).

- ENG 2 FUEL FILTER CLOG

- No ECAM actions
- No STS

At the holding point ECAM ENG 2 FUEL FILTER CLOG with ENG SD page with amber CLOG for Eng 2.

What are your thought processes? What are your actions? Point out the ambiguity between Actual and False Warnings (Indications).

- RIGHT PARKING BRAKE IND

- Right brake triple indicator reads 150 PSI with Park Brake set

After push back the ground engineer requests "Set Park Brake". The right brake triple indicator reads 150 PSI, the left 3,000 PSI and the accumulator pressure is normal. While you sort this out the tug has been disconnected and is positioned off to the side, the ground engineer is still connected.

How can you trouble shoot this? Can you taxi? What do you do if ATC required you to move? Point out the difference between an Actual problem and the MEL Indication item. Is it both Green and Blue systems?