



Transport Malta

Minimum Equipment List

Clifford Scorey



MEL Origin & Philosophy

▶ Master Minimum Equipment List

- A Master Minimum Equipment List (MMEL) is an approved document by EASA or the FAA and is created specifically by the Aircraft Manufacturer to regulate the dispatch of an aircraft type with inoperative equipment.
- The MMEL along with the Dispatch Deviation Guide (DDG) contains the conditions, limitations and procedures required for operating the aircraft with these items inoperative.
- The MMEL contains the basis for the necessary customization and review of an operator's Minimum Equipment List (MEL).

The MEL Structure

Minimum Equipment List

▶ Table of contents:

- This part of the document will indicate how the MEL is structured as a whole.

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Minimum Equipment List

▶ List of Effective Pages :

- The Operator shall indicate all changes applied to the MEL in the List of Effective Pages.
- The black lines adjacent to the Section No indicates an amendment has occurred.

LIST OF EFFECTIVE PAGES

Section	Pages.	Revision	Date
Introduction	i-xiv	2	29-Mar-2015
21 Air Conditioning	1-28	2	29-Mar-2015
22 Automatic Flight Control	29-34	2	29-Mar-2015
23 Communication	35-53	2	29-Mar-2015
24 Electrical Power	54-64	2	29-Mar-2015
25 Equipment and Furnishings	65-91	2	29-Mar-2015
26 Fire Protection	92-106	2	29-Mar-2015
27 Flight Controls	107-120	2	29-Mar-2015
28 Fuel	121-133	2	29-Mar-2015
29 Hydraulic Power	134-148	2	29-Mar-2015
30 Ice and Rain Protection	149-168	2	29-Mar-2015
31 Indicating and Recording Systems	169-178	2	29-Mar-2015
32 Landing Gear	179-184	2	29-Mar-2015
33 Lights	185-209	2	29-Mar-2015
34 Navigation	210-234	2	29-Mar-2015
35 Oxygen	235-249	2	29-Mar-2015
36 Pneumatics	250-251	2	29-Mar-2015
38 Water/Waste	252-255	2	29-Mar-2015
45 Central Maintenance System	256	2	29-Mar-2015
49 Auxiliary Power Unit	257-258	2	29-Mar-2015
52 Doors	259-278	2	29-Mar-2015
61 Propellers	279-280	2	29-Mar-2015
71 Power Plant	281	2	29-Mar-2015
73 Engine Fuel and Control	282-286	2	29-Mar-2015
76 Engines	287-288	2	29-Mar-2015
77 Engine Indicating	289	2	29-Mar-2015

Minimum Equipment List

▶ Preamble:

- This is an introductory statement for the correct usage and application of the Minimum Equipment List.
- The content of the preamble must be customized as per the operator's requirements.

Minimum Equipment List

- Definitions:
 - ▶ – Also listed in the preamble will be a list of common definitions used throughout the MEL document.
 - ▶ – You should make yourself familiar with these definitions. Please take time now to read the definitions in the MEL supplied.

1.8. Definitions

Affected: refers to the subject item of equipment (component, system or function) listed in the Item column.

Airplane Flight Manual (AFM): means the document required for type certification and approved by the Agency. The AFM for the specific aircraft is listed on the applicable Type Certificate Data Sheet.

Alphabetical symbol: indicates a proviso (condition or limitation) that must be complied with for operation with the listed item inoperative

As required by (operational) regulations means that the listed item of equipment is subject to certain provisions (restrictive or permissive) expressed in the applicable legislation (e.g. regulation Air Operations, Single European Sky legislation or the applicable airspace requirements). When the equipment is not required, it may be inoperative for the time specified by its rectification interval category.

Associated: refers to a related component, system or function, other than the subject one.

Calendar Day: A 24-hour period from midnight to midnight based on either UTC or local time, as selected by the operator.

Combustible Material: is material which is capable of catching fire and burning. In particular: if an MEL item prohibits loading of combustible (or flammable or inflammable) material, no material may be loaded except the following:

a) Cargo handling equipment (unloaded, empty or with ballast);

b) Fly away kits (excluding e.g. cans of hydraulic fluid, cleaning solvents, batteries, capacitors, chemical generators, etc.); Note: If serviceable tyres are included, they should only be inflated to a minimum pressure that preserves their serviceability; and

c) Inflight service material (return catering — only closed catering trolleys/boxes, no newspapers, no alcohol- or duty-free goods).

Commencement of flight: The point when an aircraft begins to move under its own power for the purpose of preparing for take-off.

Considered Inoperative: means that item must be treated for dispatch, taxi and flight purposes as though it were inoperative. The item shall not be used or operated until the deferred item is repaired. Additional actions include documenting the item on the dispatch release (if applicable), placarding, and complying with all remarks, exceptions, and related MEL provisions, including any (M) and (O) procedures and observing the repair category.

Crew Member: means a person assigned to duty in an aircraft during flight time.

Dash (-): in columns 3 and 4 indicates a variable quantity. Used by EAU specifically in cases when the nature of the system or component or display results in alleviation where specific quantification is not strictly necessary.

Day of discovery: The calendar day that a malfunction was recorded in the air-craft maintenance record/logbook.

Remember

All aircraft have their MEL's designed around a standardized format but the content can be very different. Always refer to the MEL that is applicable to the **aircraft type & registration.**

Minimum Equipment List

25 Furnishing / Equipment					ATA 25
1. Sequence Number and Item	2. Repair interval				
	D	3. Number installed			
		6	4. Number required for dispatch		
			4	5. Remarks or Exceptions	
-60-1 Cabin Flash Lights				May be inoperative or missing provided each required crew member has an operative independent portable light readily available when seated at designated station.	
<p>Placard None Required.</p> <p>Operating Procedures None Required.</p> <p>Maintenance Procedures None required.</p>					

ATA Chapter numbering : This is used as the identifier of the different systems within the aircraft.

Minimum Equipment List

25 Furnishing / Equipment		ATA 25		
1. Sequence Number and Item	2. Repair interval			
-60-1 Cabin Flash Lights	D	3. Number installed		
		4. Number required for dispatch		
		5. Remarks or Exceptions		
		6	4	May be inoperative or missing provided each required crew member has an operative independent portable light readily available when seated at designated station.
Placard None Required.				
Maintenance Procedures None required.				

This is a standard MEL format – 5 columns

Minimum Equipment List

25 Furnishing / Equipment		ATA 25		
1. Sequence Number and Item	2. Repair interval			
<div style="background-color: #00aaff; color: red; text-align: center; padding: 20px; font-size: 2em; font-weight: bold;">1</div> <p>-60-1 Cabin Flash Lights</p>	D	3. Number installed		
		6	4. Number required for dispatch	
			4	5. Remarks or Exceptions
<p>Placard None Required.</p> <p>Operating Procedures None Required.</p> <p>Maintenance Procedures None required.</p>				
<p>May be inoperative or missing provided each required crew member has an operative independent portable light readily available when seated at designated station.</p>				

Column 1 – ‘Sequence Number & Item’, identifies the equipment / system, component or function concerned by ATA subchapter.

Minimum Equipment List

25 Furnishing / Equipment		ATA 25	
1. Sequence Number and Item	2. Repair interval	3. Number installed	4. Number required for dispatch
-60-1 Cabin Flash Lights	2 D	6	5. Remarks or Exceptions
			4 May be inoperative or missing provided each required crew member has an operative independent portable light readily available when seated at designated station.
<p>Placard None Required.</p> <p>Operating Procedures None Required.</p> <p>Maintenance Procedures None required.</p>			

Column 2 – ‘Repair Interval’, indicates the maximum time an Item may be inoperative.

Minimum Equipment List

Column 2 –

‘Repair Interval’, indicates the maximum time an Item may be inoperative. The time specified excludes the day of discovery. The category codes are defined as thus:

- A. Items in this category shall be repaired within the time interval specified in the ‘Remarks or Exceptions’ column.
- B. Items in this category shall be repaired within three (3) consecutive calendar days (72 hours) excluding the day of discovery.
- C. Items in this category shall be repaired within ten (10) consecutive calendar days (240 hours) excluding the day of discovery.
- D. Items in this category shall be repaired within one hundred and twenty (120) consecutive calendar days (2880 hours) excluding the day of discovery.

Minimum Equipment List

25 Furnishing / Equipment		ATA 25	
1. Sequence Number and Item	2. Repair interval		
-60-1 Cabin Flash Lights		3. Number installed	4. Number required for dispatch
		3	5. Remarks or Exceptions
	D		6
<p>Placard None Required.</p> <p>Operating Procedures None Required.</p> <p>Maintenance Procedures None required.</p>			

Column 3 – ‘Number Installed’, is the number (quantity) of items normally installed in the aircraft. This number represents the aircraft configuration considered in developing this MEL

Minimum Equipment List

25 Furnishing / Equipment				ATA 25
1. Sequence Number and Item	2. Repair interval	3. Number installed	4. Number required for dispatch	5. Remarks or Exceptions
-60-1 Cabin Flash Lights	D	6	4	May be inoperative or missing provided each required crew member has an operative independent portable light readily available when seated at designated station.
<p>Placard None Required.</p> <p>Operating Procedures None Required.</p> <p>Maintenance Procedures None required.</p>				

Column 4 – ‘Number Required for Dispatch’, is the minimum number (quantity) of items required for operation provided the conditions specified in Column 5 are met.

Minimum Equipment List

25 Furnishing / Equipment				ATA 25
1. Sequence Number and Item	2. Repair interval		3. Number installed	4. Number required for dispatch
-60-1 Cabin Flash Lights	D	6	4	<div style="background-color: #00AEEF; color: white; padding: 5px;"> 5. Remarks or Exceptions 5 May be inoperative or missing provided each required crew member has an operative independent portable light readily available when seated at designated station. </div>
<p>Placard None Required.</p> <p>Operating Procedures None Required.</p> <p>Maintenance Procedures None required.</p>				

Column 5 – ‘Remarks or Exceptions’, may include statements prohibiting or permitting operation with a specific number of items inoperative, provisos (conditions and limitations) for such operation and appropriate “notes”.

Approval Process

Minimum Equipment List

▶ Minimum Equipment List

- After reviewing the MMEL/DDG, the Operator shall customize according to its operational needs the Minimum Equipment List (MEL) and will submit it to the Authority within 90 days from the publication of the MMEL.
- As all Civil Aviation Authorities require that a MEL must be carried onboard the aircraft during operations, the MEL is considered to be a Civil Aviation Approved document.
- If the MEL meets the Authorities requirements it will be endorsed. The Operator shall then include such approval in the MEL.

Minimum Equipment List

- ▶ This is an example of the TM-CAD MEL approval letter.

Administration and Control of Operations Manual

Compliance Statements

a) For Changes that Require Authority Approval

<p>The operator's nominated person hereunder certifies that the list of effective pages and the contents of this (Global 5000, 9H-OJE) MEL Issue 01 Rev 00 satisfy the requirements as specified under Article 30 of Section III to Regulation (EU) No 2018/1139 and its Implementing Rules.</p> <p>The elements of the Operations Manual that are specifically approved by the Transport Malta Civil Aviation Directorate are shown in the Operations Manual Approval Schedule.</p>		
On behalf of the operator		Malta CAD approval
Name: Camilo Sinisterra	Name: Irena Temkova-Mikulec	
Nominated Person Flight Operations	Compliance Monitoring Manager	Clint Taliana Head of Flight Operations
Signature: 	Signature: 	Signature: 
Date: 13th August 2019.....	Date: ...13th August 2019.....	Date:

b) For Changes that Do Not Require Authority Approval

Subsequent to the above Authority approved versions of this manual the following additional revisions were issued incorporating changes that do not require Authority approval.

<p>The operator's nominated person hereunder certifies that the list of effective pages /chapters and the contents of this volume of the Global 5000, 9H-OJE MEL Issue ... Rev ... satisfy the requirements as specified under Article 30 of Section III to Regulation (EU) No 2018/1139 and its Implementing Rules.</p> <p>The elements of the Operations Manual that are specifically approved by the Transport Malta Civil Aviation Directorate are shown in the Operations Manual Approval Schedule.</p>	
On behalf of the operator	
Name: Camilo Sinisterra	Name: Irena Temkova-Mikulec
Nominated Person Flight Operations	Compliance Monitoring Manager (OPS)
Signature:	Signature:
Date	Date:

Cabin Items

Minimum Equipment List

- Cabin Items
 - ▶ ATA 23 Communications :-
 - PA System
 - Cabin Interphone
 - Cabin / Lavatory Speakers
 - Cabin Chimes / ACP (Attendant / Area Call Panel)

Minimum Equipment List

- Cabin Items
 - ▶ ATA 25 Equipment / Furnishings :-
 - Passenger Seats
 - Fasten Seat Belt / No Smoking Signs
 - First Aid Kit / Emergency Medical Kits / AEDs
 - Seat Belts
 - Life Jackets / Rafts
 - Lavatory Door and Interior Ashtrays
 - Galley Waste Bin Access and Flapper Door
 - Protective Breathing Equipment (PBEs)

Minimum Equipment List

- Cabin Items
 - ▶ ATA 26 Fire Protection:-
 - Portable Fire Extinguishers
 - Fire Gloves
 - Lavatory Smoke Detectors

Minimum Equipment List

- Cabin Items
 - ▶ ATA 33 Lights :-
 - Cabin Interior Lights
 - Passenger Information Signs
(Fasten Seat Belt / No Smoking / Return to Seats)
 - Exit Signs
 - Floor Proximity Escape Path Lighting System

Minimum Equipment List

- Cabin Items
 - ▶ ATA 35 Oxygen :-
 - Passenger Drop Down O2 Masks (PSUs)
 - Portable Oxygen Bottles

Minimum Equipment List

- Cabin Items
 - ▶ ATA 38 Water / Waste :-
 - Potable Water System
 - Lavatory Waste System

Minimum Equipment List

- Cabin Items
 - ▶ ATA 52 Passenger Doors :-
 - Passenger Door Indication System
(Indication of Door closure / Slides Armed / Slides Disarmed on FAP)
 - Doors
 - Over-wing Exits

Minimum Equipment List

- ▶ Cabin Defects :-
 - Any Cabin Defects must be reported to the SCCM.
 - Items with a defect that are mainly not listed in the MEL are logged in the Cabin Defect Logbook.

Aircraft Technical & Journey Log																
Operator/Owner Name:					DAY MON YEAR			Aircraft type		Aircraft registration		Flight No:		Page No		
								SX -				0001				
BEFORE FLIGHT																
Daily Check completed:					Sector					GROUND ANTI DE-ICING (IF NIL circle below)			NEXT "100 Hrs" CHECK AT:			
Authorization: _____					Signature: _____					1 NIL or Start Finish Fluid type Mix Ratio			Hours: _____			
*Commander's Name										2 NIL or Start Finish Fluid type Mix Ratio			ARC expires at Date _____			
Arrival Fuel carried forward from last TLP										3 NIL or Start Finish Fluid type Mix Ratio						
										4 NIL or Start Finish Fluid type Mix Ratio						
AFTER FLIGHT																
Sector No		Fuel Uplift		Departure Fuel	Oil Uplift	Pre-flight Inspection Signature	*Acceptance Signature	SECTOR		Totals brought forward from last TLP			Landing Cycles	Arrival Fuel	D/R (No or NIL)	CAPTAIN'S SIGNATURE
	Planned	Actual						FROM	TO	Depart	Arrive	TOTAL HRS	TOTAL LDGS	TOTAL CYCLES		
1										:	:	:				
2										:	:	:				
3										:	:	:				
4										:	:	:				
TOTAL CARRIED FWD TO NEXT TLP																
* Commander's acceptance signature confirms correct completion of pre-flight inspection, ground anti/de-icing, acceptance of aircraft / defect state and sufficient fuel and oil for the planned fuel																
DISCREPANCY DESCRIPTION					ACTION TAKEN			**Authority	DISCREPANCY DESCRIPTION					ACTION TAKEN		**Authority
Thereby certify that the data reported on this page is accurate and correct.					Date Cleared: _____				Thereby certify that the data reported on this page is accurate and correct.					Date Cleared: _____		
Commander's Signature									Commander's Signature							
Thereby certify that the data reported on this page is accurate and correct.					Date Cleared: _____				Thereby certify that the data reported on this page is accurate and correct.					Date Cleared: _____		
Commander's Signature									Commander's Signature							
Signing where two asterisks (**) implies the following: "Certifies that the work specified except as otherwise specified, was carried out in accordance with Part-M and in respect to that work the aircraft is considered ready for release to service". Ded/TLP-03																
White page - Renewal at regular intervals and file aircraft file Rose page - Renewal before each flight and retain till completion Yellow page - DO NOT REMOVE, remains in logbook. When is completed returns to Technical Department																

- Any Items which fall under the MEL are entered in Aircraft Tech log by the Flight Crew.

Minimum Equipment List

▶ Questions :-

- Is a Lavatory Ashtray included in the MEL ?

Yes

Minimum Equipment List



Easy Access Rules for Master Minimum
Equipment List (CS-MMEL)

SUBPART C — LEVEL OF SAFETY AND
JUSTIFICATIONS OF MMEL ITEMS

Aircraft applicability: Aeroplanes

ATA Chapter: 25 Equipment/Furnishings							
(1) System & Sequence Numbers	(2) Rectification Interval	(3) Number installed		(4) Number required for dispatch		(5) Remarks or Exceptions	
ITEM							
25-40-1 Exterior Lavatory Door Ashtrays (MC)							
25-40-1A	A	-	0			One or more may be inoperative or missing provided repairs are made within three consecutive calendar days.	
25-40-1B	A	-	-			One or more may be inoperative or missing provided: (a) One operative exterior lavatory door ashtray can be readily seen and accessed from the affected lavatory door, and (b) Repairs are made within ten consecutive calendar days.	
25-40-1C	D	-	0			(M)(O) One or more may be inoperative or missing provided: (a) Affected lavatory door is locked closed and placarded to prohibit passengers' entrance, and (b) Affected lavatory is used only by crew members. Procedures (M) to provide instructions to lock closed and placard affected lavatory door. (O) to provide procedures to brief crew members.	
25-40-1D	D	-	0			One or more may be inoperative or missing provided flight is non-smoking.	

Additional considerations:

N/A

Minimum Equipment List

- ▶ Questions :-
 - What is a Repair Interval ?

Minimum Equipment List

Column 2 –

‘Repair Interval’, indicates the maximum time an Item may be inoperative. The time specified excludes the day of discovery. The category codes are defined as thus:

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- B. Items in this category shall be repaired within three (3) consecutive calendar days (72 hours) excluding the day of discovery.
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- D. Items in this category shall be repaired within one hundred and twenty (120) consecutive calendar days (2880 hours) excluding the day of discovery.

A photograph taken from the perspective of a pilot in the cockpit of an airplane. The view is looking out through the windshield at an airport tarmac during twilight. In the center, a British Airways Airbus A380-800 is parked. The aircraft's livery is white with blue and red accents, and the words "BRITISH AIRWAYS" are clearly visible on the fuselage. The aircraft's registration number, G8000, is also visible. In the background, a large airport terminal building with a curved roof is illuminated. The sky is a mix of blue and grey, suggesting dusk or dawn. The cockpit's instrument panel is partially visible in the bottom left corner, showing a digital display with the number "03000".

"Focus on the journey, not
the destination."

Chris Hadfield

Thank You

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