GOVERNMENT OF INDIA

DIRECTOR GENERAL OF CIVIL AVIATION

TECHNICAL CENTRE, OPP SAFDURJUNG AIRPORT, NEW DELHI

CIVIL AVIATION REQUIREMENTS
SECTION 2 - AIRWORTHINESS
SERIES 'B', PART I
21ST AUGUST, 1990 **EFFECTIVE: FORTHWITH**

Subject: **Minimum Equipment List (MEL)**

1. Applicability

Sub rule (5) of rule 60 of the Aircraft Rules, 1937 interalia states that no aircraft shall be released for flight with defects/ damage unless these are covered in the approved deficiency list/ Minimum Equipment List (MEL). All Scheduled, Non-scheduled and General Aviation operators shall prepare MEL on the basis of Master Minimum Equipment List (MMEL) issued by the State of design/ manufacture. This part of Civil Aviation Requirements specifies the procedure for framing, approval and the use of the acceptable deficiency list (MEL) for aircraft engaged in scheduled, non-scheduled and general aviation operations. This CAR is issued under the provision of Rule 133A of the Aircraft Rules, 1937.

2. Operator's Minimum Equipment List and responsibilities

2.1 The operator is required to prepare the MEL based on the MMEL issued by the State of design/manufacturer for the use and guidance of flight and ground operations personnel. The MEL should be tailored to the individual operator's routes and procedures within the constraints imposed by the MMEL. The MMEL is not normally part of the required aircraft documentation and it is frequently necessary for an operator utilizing aircraft manufactured in another State to request a copy of the current MMEL and amendments as they occur, in order to develop and maintain an MEL for approval by DGCA.

2.2 In developing an MEL, the philosophy should be to authorize continuation of flight with inoperative equipment only when the inoperative equipment does not render the aircraft unairworthy for the particular flight. Limitations, procedures and substitutions may be used to provide conditions under which the inoperative equipment will not make the operation unsafe or the aircraft unairworthy. This is not a philosophy which permits reduced safety in order to fly to a base where repairs can be made, but rather a philosophy which permits safe operations for a take off from a maintenance base or en-route stop. It is emphasized that the operator should exercise close operational control to ensure that the aircraft are

not dispatched with multiple MEL items inoperative without first determining that any interface or interrelationship between the inoperative systems or components will not result in a degradation in the level of safety or an undue increase in crew workload.

2.3 The MEL is not intended to provide for continued operation of the aircraft for extended periods with MEL items unserviceable. In the case of unserviceable MEL items, the operator should generally make repairs at the first station where repairs or replacement can be made, but in any case repair should be accomplished at the flight termination station, since additional unserviceability may require the aircraft to be removed from service.

2.4 MEL need not include items like wings, flight controls, complete engines, landing gears etc., the airworthiness and correct functioning of which is absolutely necessary before any flight. It may also not include items like galley equipment, entertainment systems, passenger convenience equipment, which do not affect the airworthiness of an aircraft.

2.5 All items which affect the airworthiness of aircraft or safety of those carried on board and are not included in MEL are automatically required to be operative.

3. Framing of MEL

3.1 The operator while framing MEL shall ensure the following:

(i) The MEL is based on the MMEL. It shall be ensured that the MMEL has all the latest revisions approved by the regulatory authority of the country of design/ manufacture.

(ii) The operator shall specify his philosophy for invoking MEL in the preamble to the MEL.

(iii) Where included in the MMEL, the Preamble to the MEL shall define the rectification interval of the defects. In general, the MEL items may be categorized as follows:

Category 'A': Items in this category shall be repaired within the time interval specified in the remarks column of the MEL.

Category 'B': Items in this category shall be repaired within three (3) consecutive calendar days, excluding the day the malfunction was recorded in the aircraft maintenance record/logbook. For example, if it were recorded at 10 a.m. on January 26th, the three-day interval would begin at midnight of the 26th and end at midnight of the 29th.

Category 'C': Items in this category shall be repaired within ten (10) consecutive calendar days, excluding the day the malfunction was recorded in the aircraft maintenance record/logbook. For example, if it were recorded at 10 a.m. on January 26th, the

10 day interval would begin at midnight of the 26th and end at midnight of February 5th.

Category 'D': Items in this category shall be repaired within one hundred and twenty (120) consecutive calendar days, excluding the day the malfunction was recorded in the aircraft maintenance log and/or record.

For the purpose of catgorisation, the 'Flight Day' as used in the MEL shall mean a 24 hour period (from midnight to midnight) either Universal Coordinated time (UTC) or local time, as established by the operator in their preamble, during which at least one flight is initiated for the affected aircraft.

(iv) The preamble of the MEL shall also stipulate that whenever the MEL is invoked, the flight dispatch shall be informed.

(v) The preamble shall include the procedures of acceptance of defects and the requirement of making technical entries in Aircraft Technical log. Procedure for invoking MEL after commencement of flight (chocks off) shall also be included.

(vi) Explanation of the following shall be included in the preamble;

i) 'O' & 'M' items
ii) ETOPS items, RVSM items and other comments on MEL items.

3.2 The regulatory requirements referred to in the MMEL such as TCAS, GPWS, CVR, DFDR, Emergency Escape Path Mark lighting etc. should be included based on the relevant requirements in the CAR. A list of such MEL items shall be submitted to the local Airworthiness Office.

3.4 While seeking approval, the operator shall submit a certificate that the MEL has been prepared in consultation with the operations department.

3.5 The MEL shall include all the maintenance and operational procedures given by the manufacturer in Dispatch and Deviation Procedures Guide (DDPG)/Operations procedures.

3.6 It shall be ensured by the operator that the MEL is not less restrictive than the MMEL.

3.7 For items not included in the MMEL, but forming part of the MEL, due justification for the same shall be provided by the operator.

3.8 The operators MEL shall also include the relevant definitions and abbreviations.

4. Approval of MEL

4.1 The MEL shall be prepared by the operator based on the MMEL. The MEL (in triplicate) along with a copy of the MMEL shall be submitted to the Regional Airworthiness Office (RAO) at the station, where the aircraft is mainly based for approval. While submitting the MEL and its revisions for approval, the operator shall ensure that these conform to the latest revision of MMEL. The MMEL revision number shall be indicated on the MEL.

4.2 After scrutiny, the head of RAO shall submit the MEL to the assigned FOI for further scrutiny from operational angle. The MEL cases, where the operator is based in a sub regional office shall, after thorough scrutiny from the airworthiness angle, be forwarded to RAO for scrutiny by FOI.

4.3 Any deficiency noticed during scrutiny either by Airworthiness office or FOI shall be referred to the operator by the RAO for corrective action.

4.4 On being satisfied that the proposed MEL meets the MMEL and DGCA regulatory provisions from maintenance and operational aspects, the MEL shall be approved by the Regional office under intimation to the DGCA Headquarters (Attn. Airworthiness Directorate) along with a copy of approved MEL.

4.5 Approval of any revision/ amendment to the MEL shall be done following the same procedure as given above.

4.6 A copy of the approved MEL shall be carried on board the aircraft as part of the Operations Manual. The manual will contain procedures for continuation of flight should any items of equipment required for operation of flight become unserviceable.

5. Use of MEL

5.1 Operator shall mention in the Maintenance System Manual as to when or where an inoperative item shall be required to be replaced.

5.2 Operator (Quality Control Manager) shall be responsible for exercising necessary control to ensure that no aircraft is dispatched with multiple items inoperative, which will increase the crew workload. In such cases crew should be consulted.

5.3 Notwithstanding the MEL, an AME need not certify the aircraft for 'Flight' or a Pilot need not accept the aircraft for flight if it is considered that it is unsafe to do so.

5.4 The AME responsible for releasing the aircraft, after invoking the provisions of MEL shall inform the Pilot of the aircraft of the same, and also make a mention of it in the technical log and placard the inoperative system suitably. He should take maintenance action as prescribed in Despatch Deviation Guide/ Procedure Manual and crew should take operation action as mentioned in the above guide. Despatch Deviation Guide should be on board.

5.5 As a normal practice the defects carried forward under MEL shall be rectified and deficiencies made good at the first available opportunity where facilities exist.

5.6 MEL can be invoked by appropriately Licenced AME/ person specifically approved/ approved Basic Licence holder/ approved pilot. However, approved pilot shall invoke MEL in respect of those items only, which do not require maintenance actions/ procedures.

6. Status of MMEL

A link for the MMEL issued by the FAA of USA and Transport Canada of Canada has been provided on the DGCA's website (http://dgca.gov.in). Operators may obtain updated/latest copies of the MMEL from the web site.

7. Maintenance of MEL/MMEL

Operators shall maintain approved MELs and updated copies of MMEL for those aircraft for which manufacturers have issued MMELs. Upon receipt of revision status of MMEL, operators shall revise the MEL for aircraft operated by them accordingly and follow the procedure given in para 4 for approval.

8. Record of defects carried forward under MEL

All other operators shall maintain a record of all releases under MEL. The records shall be checked by airworthiness officers during their surveillance.

(R.P.Sahi)
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