

The MEL—Friend or Foe?

This Safety Matters article discusses how the Minimum Equipment List (MEL) can be a benefit but how misuse – either accidental or intentional, can create significant problems to an Operator and may result in an illegal flight.

An operating aircraft must be airworthy in all respects, but suspected or actual in-service defects do occur. A lack of engineering support, spare parts or other constraints may make it unfeasible to troubleshoot or rectify the defect before the next flight. Using the MEL to defer the defect can avoid disruption whilst ensuring that the safety of the aircraft is not impaired and the airworthiness is restored, *but only if used correctly.*

WHAT IS AN MEL?

The MEL is essentially a list of pre-approved permissions which enables the PIC to defer a defect and restore the certificate of airworthiness.

The MEL is developed by the Operator and approved by the IOMAR. The Operational (O) Procedures are provided in part by the manufacturer, with many requiring customisation by the Operator. As these procedures form part of the mitigations to maintain an acceptable level of safety, the Flight Operations Representative (FOR) is responsible under the Isle of Man system for the management of the MEL.

If the defective equipment, instrument or system is **not** included in the MEL, it is a **NO GO** item — in this case dispatch is not permitted without corrective maintenance action or involvement from the Registry.

However, if the defective equipment, instrument or system **is** included in the MEL, it provides two options:

GO - when the dispatch is permitted for a limited period of time without specific dispatch conditions;

OR

GO IF - when the dispatch is permitted for a limited period of time with specific dispatch conditions.

These will be included in the MEL Remarks/or Exceptions column and may be supplemented by (O) Operational and/or (M) Maintenance Procedures (O&Ms).

- (M) Procedures enable the deferment to take place, whereas
- (O) Procedures are required to identify how the aircraft is operated with the defect deferred.



Whilst an MEL can provide operational benefit, incorrect use of the MEL can leave the aircraft still in an unairworthy condition and therefore may **compromise the safety of the aircraft.**

SUSPECTED OR ACTUAL DEFECT?

Correct recording of suspected or actual defects is essential and must be completed either prior to dispatch or if detected after dispatch, at the termination of the flight during in which they were detected. Operating an aircraft which is unairworthy (either suspected or actual) is in breach of our legislation, and may invalidate the Certificate of Airworthiness and/or the aircraft insurance.

CORRECT USE OF AN MEL

Once a defect is suspected or confirmed, annotate the aircraft/technical log and review the MEL to determine whether there is any alleviation for the defect, i.e. **GO** or **GO IF**.

If **GO**:

- **Defer** the defect i.a.w. the MEL;
- **Comply** with the Remarks and/or Exceptions, and
- **Advise** the Nominated Airworthiness Technical Representative (NATR).

If **GO IF**:

- **Contact** the NATR to arrange for suitably validated individual to perform any (M) Procedure. (**Note:** the IOMAR can issue an Authorisation to appropriately trained individuals to perform some (M) procedures which will provide greater flexibility for the Operator);
- **Defer** the defect i.a.w. the MEL;
- **Comply** with the Remarks and/or Exceptions,
- **Comply** with any (O) Procedures, and
- **Advise** the NATR (if not already done so).

However, if the defect is a **NO GO** item, (i.e. it can't be deferred i.a.w. the MEL), or can't be fixed in situ:

- **Contact** the NATR who will discuss any alternative options with the IOMAR, (the IOMAR may be able to issue a Permission to continue operating with a defect, although in some extreme cases a Permit to Fly may be required).

WHAT AN MEL IS NOT FOR...

We have discussed what an MEL is, and how to use it, but there are some things the MEL is not to be used for.

Example 1 – to remove an item of unserviceable equipment.

In some cases the MEL permits dispatch with a defective item removed, provided operations do not require its use, e.g. HUD Optical Coupler Unit. The MEL may provide an AMM reference of how to remove equipment, but this will not identify aspects such as Weight and Balance changes, blanking, stowing cables etc. or provide any consideration of operation of the aircraft with that part missing. Therefore the MEL does not in itself authorise the removal of the equipment - but can be used to support a modification change document. As with all defects the NATR must manage the airworthiness of the aircraft and will follow the correct procedure for the de-modification of the equipment i.a.w approved data and appropriate authorisation from the State of Registry (SoR) if applicable.

Example 2 – to defer an item because it does not comply with National Regulations.

For example, an Emergency Locator Transmitter (ELT) which has not been coded to the SoR requirements, but is functioning in every other way is not defective – therefore it cannot be 'deferred' i.a.w. the MEL. Where there is a legitimate reason why an ELT cannot be coded in situ, the IOMAR may on occasions issue an Exemption (with conditions) in order for the aircraft to be positioned to a location where the ELT can be correctly coded.



A SUMMARY FROM THE REGISTRY

The pre-approved Permissions which are contained in the approved MEL can be a very useful tool to help minimise disruption – but only if used correctly.

Construction of an MEL is a very complex task which should be managed with great care. The IOMAR recognises this and has therefore published [Registry Leaflet 1 – MEL Preparation Guidance](#) to support FOR's (and the MEL author) in constructing an MEL.

As the MEL is an operational document, the customisation of the (O) Procedures are critical to maintaining an acceptable level of safety. Once the MEL is approved, ongoing constructive feedback from the operating crew can assist the Operator in improving the effectiveness of the MEL, especially the (O) Procedures.

The MEL must always be kept up to date in accordance with the latest revision of the applicable MMEL and Manufacturers M&O Procedures as well as when additional modifications to the aircraft equipment are embodied or additional operating approvals are granted. All amendments to the MEL must be approved by the IOMAR within the timescales laid down in [Registry Publication 4](#).

Safety is paramount, and it is ultimately the PIC's responsibility to decide whether or not to dispatch the aircraft when a defect is deferred using the MEL.

