EASA
European Union Aviation Safety Agency

eRules

CS-GEN-MMEL

(Issue 2)
(CS + GM)

Easy Access Rules for Generic Master Minimum Equipment List (CS-GEN-MMEL) (Issue 2)

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[1] The published date represents the date when the consolidated version of the document was generated.

[2] Euro-Lex, Important Legal Notice: http://eur-lex.europa.eu/content/legal-notice/legal-notice.html.

DISCLAIMER

This document is issued by the European Union Aviation Safety Agency (referred to as both 'EASA' and 'the Agency') to provide its stakeholders with an updated, consolidated, and easy-to-read publication. It has been prepared by putting together the officially published EU regulations with the related EASA acceptable means of compliance (AMC) and guidance material (GM) (including their amendments) adopted so far. However, this document is not an official publication, and EASA accepts no liability for damage of any kind resulting from the risks inherent in its use.

NOTE FROM THE EDITOR

The content of this document is arranged as follows: the certification specifications (CS) are followed by the guidance material (GM).

All elements (i.e. CS and GM) are colour-coded and can be identified according to the illustration below. The EASA Executive Director (ED) decision through which the CS or GM was introduced or last amended is indicated below the CS or GM title *in italics*.

Certification specification

ED decision

Guidance material

ED decision

The format of this document has been adjusted to make it user-friendly and for reference purposes. Any comments should be sent to erules@easa.europa.eu.

INCORPORATED AMENDMENTS

CSs/GM (ED DECISIONS)

Incorporated ED Decision	CS/AMC Issue No, Amendment No	Applicability date
ED Decision 2014/005/R	CS-GEN-MMEL/ Initial issue	31/1/2014
ED Decision 2020/012/R	CS-GEN-MMEL/ Issue 2	1/2/2021

Note: To access the official versions, please click on the hyperlinks provided above.

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CS AND GM FOR GENERIC MASTER MINIMUM EQUIPMENT LIST

CS GEN.MMEL.100 Applicability

ED Decision 2020/012/R

These Certification Specifications are applicable to:

— other-than-complex motor-powered aeroplanes, except:

  — ELA 1,

  — ELA 2,

— other-than-complex motor-powered helicopters, except helicopters certificated for:

  — operation under instrument flight rules (IFR),

  — flight into icing conditions, or

  — Category A operations.

[Issue No: GEN-MMEL/2]

CS GEN.MMEL.105 Definitions

ED Decision 2014/005/R

For the purpose of this CS, the following terms mean:

(a) **'Applicant'**: an applicant for, or a holder of, a type certificate (TC), change approval or supplemental type certificate (STC), applying for the approval by the European Aviation Safety Agency (hereinafter referred to as the 'Agency') of the Operational Suitability Data (OSD) related to MMEL.

(b) **'End user'**: an operator or training organisation having a Minimum Equipment List (MEL) based on the MMEL approved by the Agency.

(c) **'Inoperative'**: an item which does not accomplish its intended purpose or is not consistently functioning within its approved operating limits or tolerances.

(d) **'Item'**: a component, instrument, equipment, system or function.

GM1 GEN.MMEL.105 Definitions

ED Decision 2014/005/R

INOPERATIVE

(a) Some items have been designed to be fault tolerant and are monitored by computers which transmit fault messages for the purpose of maintenance. The presence of this category of message does not necessarily mean that the item is inoperative.

(b) It should be highlighted that unless it is specifically allowed by the MMEL, the item should not be removed.

ITEM

(a) In the context of these Certification Specifications, a component is considered to be a piece of equipment or instrument.

(b) In the context of these Certification Specifications, a system is considered to be a collection of equipment and/or instruments that perform a function.

CS GEN.MMEL.107 Status of provided data

ED Decision 2014/005/R

The MMEL and associated operational and maintenance procedures are part of the Operational Suitability Data (OSD) as defined in Part 21, and means are to be provided to clearly distinguish the mandatory data from the non-mandatory data for the end user. Data provided by the applicant is presented as mandatory or non-mandatory (recommendations) for the end user.

The MMEL content as defined in CS GEN.MMEL.125 is considered as data required from the applicant and mandatory for the end user.

The operational and maintenance procedures referenced in the MMEL are considered as non-mandatory (recommendations) data for the end user.

GM1 GEN.MMEL.107 Status of provided data

ED Decision 2020/012/R

(a) Because of the alleviative nature of the MEL, the fact that the MMEL is mandatory data means that the MEL may not be less restrictive than the MMEL but may be more restrictive. The MEL may contain less items than the MMEL.

(b) The content of the operational and maintenance procedures provided by the applicant is recommended to the end user.

[Issue No: GEN-MMEL/2]

CS GEN.MMEL.110 MMEL purpose

ED Decision 2020/012/R

The MMEL is a document that lists the items which may be temporarily inoperative in association with special operating conditions, limitations or procedures as applicable, for a specific aircraft type or model.

[Issue No: GEN-MMEL/2]

GM1 GEN.MMEL.110 MMEL purpose

ED Decision 2014/005/R

AEROPLANE TYPE

The MMEL may cover more than one aeroplane type provided that benefits on commonality can be taken and the applicability of each item is clearly indicated.

GM2 GEN.MMEL.110 MMEL purpose

ED Decision 2014/005/R

NON-SAFETY-RELATED ITEMS

All items not included in the list are required to be operative unless they are considered to be non-safety-related items.

Non-safety-related items are defined in GM1 ORO.MLR.105(a).

Non-safety-related items include those items related to the convenience, comfort, or entertainment of the passengers and equipment that is used only on ground for maintenance purpose. Convenience, comfort, or entertainment of the passengers may include items such as galley equipment, movie equipment, stereo equipment, overhead reading lamps.

Non-safety-related items need not be included in the MMEL unless so desired by the applicant.

CS GEN.MMEL.115 Addition of MMEL items

ED Decision 2014/005/R

For items installed (other than non-safety-related items) that are not listed in Appendix IV, yet the applicant wishes to provide relief for the end user, may be justified for inclusion into their MMEL.

The justifications should be based on the CS-MMEL Book 1.

CS GEN.MMEL.120 Types of operation

ED Decision 2020/012/R

The MMEL covers all the types of operation for which the aircraft type or model is certified.

[Issue No: GEN-MMEL/2]

CS GEN.MMEL.125 Format and content of the MMEL

ED Decision 2014/005/R

The MMEL contains the following:

(e) a cover page;

(f) a control page to be signed by the Agency with the approval status, including date of approval and effective date;

(g) a 'general' section with:

  (1) a table of contents,

  (2) a list of effective pages, and

  (3) a revision history including a detailed summary of changes at last revision;

(h) a preamble;

(i) definitions and, if appropriate, explanatory notes which adequately reflect the scope, extent and purpose of the item list; and

(j) an 'item list' section.

CS GEN.MMEL.130 MMEL cover page, control page and general section

ED Decision 2014/005/R

The MMEL cover page, control page and general section are prepared in accordance with Appendix I.

Appendix I — MMEL cover page, control page and general section

ED Decision 2020/012/R

1. Cover page:

[Supplemental/Type Certificate Holder Name]

[Aircraft Type]

MASTER MINIMUM EQUIPMENT LIST

ORIGINAL: [Effective date]

(and if applicable)
REVISION [Number]: [Effective date]

[Supplemental/Type Certificate Holder document reference]

2. Control page:

MASTER MINIMUM EQUIPMENT LIST

Type:
[Aircraft type/model]

(and if applicable)

[Aircraft commercial name]

ORIGINAL ISSUE: [Effective date]

(and if applicable)

REVISION [Number]: [Effective date]

This Master Minimum Equipment List (MMEL) is issued by [Supplemental/Type Certificate Holder name] at the above revision and is approved by the European Union Aviation Safety Agency (EASA) as the basis for the preparation and approval of an individual operator's Minimum Equipment List (MEL) for aircraft of this model, as certified by and operated under the jurisdiction of the EASA Member States' national authorities.

Issue: [Revision number]

Date: [Date of approval by EASA]

Signed by: [EASA — signature and stamp]

3. Table of contents:

GENERAL

TABLE OF CONTENTS

[Table of contents with page numbering]

4. List of effective pages:

LIST OF EFFECTIVE PAGES

Section	Page No	Revision No	Applicability
Cover page			
GENERAL			
ITEM LIST			
[ATA chapter]			

5. List of revisions:

LIST OF REVISIONS

ORIGINAL ISSUE: [Effective date]

(If applicable)
REVISION [Number]: [Effective date]

Purpose of revision [Number]:

[Short description of the main purpose of the revision]

GENERAL

[Changes done in the GENERAL section]

ITEM LIST

[Changes done in the ITEM LIST section]

[Issue No: GEN-MMEL/2]

GM1 GEN.MMEL.130 MMEL cover page, control page and 'General' section

ED Decision 2014/005/R

The applicant can also propose its own format provided the contents and structure are respected.

CS GEN.MMEL.135 Preamble

ED Decision 2014/005/R

The MMEL preamble is given in Appendix II.

Appendix II — Preamble

ED Decision 2020/012/R

PREAMBLE

Introduction

The following is applicable for operators subject to Annex IV (Par-CAT), Annex VII (Part-NCO), and Annex VIII (Part-SPO) to Regulation (EU) No 965/2012. Paragraph 1.3.2 of Annex II (Essential requirements for airworthiness) of Regulation (EU) 2018/1139 (hereinafter referred to as the 'Basic Regulation') requires that all the equipment items installed on an aircraft that are required for type certification or by operating rules shall be operative. However, paragraph 2(c)(iii) of Annex V (Essential requirements for air operations) to the Basic Regulation also allows the use of a Minimum Equipment List (MEL) where compliance with certain equipment requirements is not necessary in the interest of safety under all operating conditions. Experience has shown that with the various levels of redundancy designed into aircraft, the operation of every system or installed item may not be necessary when the remaining operative equipment can provide an acceptable level of safety.

Purpose and limitations

This Master Minimum Equipment List (MMEL) is developed by the Type Certificate Holder or the Supplemental Type Certificate Holder and is approved by EASA. This MMEL includes those items that are related to airworthiness and air operations regulations, and other items that EASA finds that may be inoperative while maintaining an acceptable level of safety through appropriate conditions and limitations; it does not contain obviously required items such as wings, flaps, gearboxes, and rotors. In order to maintain an acceptable level of safety, the MMEL establishes limitations on the duration of and conditions for operation with inoperative items. Unless specifically permitted by this MMEL, an inoperative item may not be removed from the aircraft.

Utilisation

The MMEL is the basis for the development of the individual operator's MEL, which takes into consideration the operator's particular aircraft equipment configuration and operational conditions.

An operator's MEL may differ in format from the MMEL, but shall not be less restrictive than the MMEL. The individual operator's MEL, when approved or declared as applicable, allows operation of the aircraft with inoperative items for a certain period of time until rectification can be accomplished.

The MEL cannot deviate from Airworthiness Directives or any other additional mandatory requirements. It is important to remember that all the items that are related to airworthiness and operational regulations of the aircraft but are not listed on the MMEL shall be operative.

Suitable conditions and limitations in the form of placards, maintenance procedures, crew operating procedures and other restrictions as prescribed in this MMEL shall be specified in the MEL to ensure that an acceptable level of safety is maintained. It is important for rectifications to be accomplished at the earliest opportunity.

When an item is discovered to be inoperative, it is reported by making an entry in the continuing airworthiness record system or the operator's technical log as applicable. Following sufficient fault identification, the item is then either rectified or may be deferred by following the MEL or another approved means of compliance that is acceptable to the competent authority and EASA prior to

further operation. MEL conditions and limitations do not relieve the operator from determining that the aircraft is in a condition for safe operation with the items that are inoperative.

Prior to operation, any inoperative item should be made known to the crew in accordance with the continuing airworthiness requirements. For commercial air transport, acceptance by the crew of the inoperative items is required.

Operators shall establish a controlled and sound rectification programme that includes the parts, personnel, facilities, procedures and schedules to ensure timely rectification.

Operators should include guidance in the MEL to deal with any failures which occur between the commencement of the flight and the start of the take-off.

When developing the MEL, compliance is required with the stated intent of the preamble, the definitions and the conditions and limitations specified in this MMEL.

Multiple inoperative items

Operators are responsible for exercising the necessary operational control to ensure that an acceptable level of safety is maintained. The exposure to additional failures during continued operation with inoperative items shall also be considered. Wherever possible, account has been taken in this MMEL of multiple inoperative items. However, it is unlikely that all possible combinations of this nature have been accounted for. Therefore, when operating with multiple inoperative items, the inter-relationships between those items and the effect on aircraft operation and the crew workload shall be considered.

Rectification intervals

For commercial operations under Part-CAT or Part-SPO, operators may be allowed by their competent authority a one-time extension of the applicable rectification intervals B, C or D for the same duration as that specified in their MEL.

This extension policy is only applicable when the applicant has taken it into account during the development of this document.

For operations under Part-NCO, the rectification intervals indicated in the item list are only recommended and should be taken as guidelines for the maximum period of time during which an item would remain inoperative. It is important for repairs to be accomplished at the earliest opportunity.

[Issue No: GEN-MMEL/2]

CS GEN.MMEL.140 Definitions and explanatory notes

ED Decision 2020/012/R

The MMEL contains sufficient definitions and explanatory notes to provide the user (this is primarily the operator when compiling the MEL) with a full and proper understanding of the intent and purpose of the items it contains.

Appendix III to this CS contains the definitions that are common to all MMELs. Other definitions that are specific to particular or individual aircraft types are added as necessary. Also, explanatory notes are provided in sufficient detail wherever the intent and purpose of a term or phrase or abbreviation, etc., is necessary or advisable.

[Issue No: GEN-MMEL/2]

Appendix III — Definitions and explanatory notes

ED Decision 2020/012/R

(a) The systems in the MMEL are described and identified in accordance with the numbering system used in the aircraft manufacturer's documentation.

(b) The MMEL item list provides the list of pieces of equipment/system/function which may be inoperative prior to dispatch. Items are gathered by relevant chapter and provided under a table format. The structure of the MMEL item list table is as follows:

(1) **System and sequence numbers item** — column No 1 — details equipment, system, component or function listed.

The applicability for each item may vary based on the type of operation, and is given, when needed, as follows:

(CAT): for Commercial Air Transport, regulated by Part-CAT;

(SPO): for Specialised Operations, regulated by Part-SPO;

(NCO): for Non-Commercial Operations, regulated by Part-NCO; and

(ALL): for all above types of operations.

(2) **Rectification interval** — column No 2 — Inoperative items or components, deferred in accordance with the MEL, must be rectified at or prior to the rectification intervals established by the following letter designators:

Category A

No standard interval is specified, however, items in this category shall be rectified in accordance with the conditions stated in the MMEL.

Where a time period is specified in days, the interval excludes the day of discovery.

Where a time period is specified in other than days, it shall start at the point when the defect is deferred in accordance with the operator's approved MEL.

Category B

Items in this category shall be rectified within three (3) calendar days, excluding the day of discovery.

Category C

Items in this category shall be rectified within ten (10) calendar days, excluding the day of discovery.

Category D

Items in this category shall be rectified within one hundred and twenty (120) calendar days, excluding the day of discovery.

(3) **Number installed** — column No 3 — is the number (quantity) of items normally installed in the aircraft. This number represents the aircraft configuration that was considered in developing this MMEL. Should the number be a variable or not applicable, a number is not required; a '–' is then inserted.

Where the MMEL shows that a variable number may be installed, the MEL should reflect the actual number installed, if applicable.

(4) **Number required for dispatch** — column No 4 — is the minimum number (quantity) of items required for operation provided the conditions specified are met. Should the number be a variable or not applicable, a number is not required; a '–' is then inserted.

Where the MMEL shows a variable number required for dispatch, the MEL should reflect the actual number required for dispatch, as applicable, or an alternate means of configuration control approved by the competent authority.

(5) **Remarks or exceptions** — column No 5 — include statements either prohibiting or permitting operation with a specific number of items inoperative, provisos (conditions and limitations), notes, (M) and/or (O) symbols, as appropriate for such operation.

'(M)' indicates a requirement for a specific maintenance procedure which must be accomplished prior to operation with the listed item inoperative. Normally, these procedures are accomplished by maintenance personnel, however, other personnel may be qualified and authorised to perform certain functions. The satisfactory accomplishment of all maintenance procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are required to be published as part of the operator's MEL or other documentation, endorsed by the operator and made available to the person(s) authorised to perform the task(s).

'(O)' indicates a requirement for a specific operations procedure which must be accomplished in planning for and/or operating with the listed item inoperative. Normally, these procedures are accomplished by the flight crew, however, other personnel may be qualified and authorised to perform certain functions. The satisfactory accomplishment of all procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are required to be published as a part of the operator's MEL or other documentation, endorsed by the operator and made available to the person(s) authorised to perform the task(s).

'Notes' provide additional information for flight crew or maintenance consideration. Notes are used to identify applicable material which is intended to assist with compliance, but do not relieve the operator of the responsibility for compliance with all applicable requirements. Notes are not a part of the dispatch conditions.

Placarding: each inoperative item must be placarded, as applicable, to inform and remind crew members and maintenance personnel of the items' condition. To the extent practical, placards should be located adjacent to the control or indicator for the item affected, however, unless otherwise specified, placard wording and location will be determined by the operator. These placards do not relieve the operator from the obligation of writing an inoperative item entry into the appropriate document, such as a logbook.

(c) A vertical bar (change bar) in the margin indicates a modification in the adjacent text for the current revision of that section only. The change bar is dropped at the next revision of that page.

(d) Applicability: when a variant of a page is required for certain aircraft, the special applicability is indicated in the lower part of the relevant page as well as in the list of effective pages.

(e) Definitions for the purpose of this MMEL:

'Aircraft Flight Manual (AFM)' is the document required for type certification and approved by EASA.

'Alternate procedures are established and used' or similar statement, shall be taken to mean that alternate procedures (if applicable) to the affected process must be drawn up by the operator as part of the MEL approval process, so that they have been established before the MEL document has been approved. Such alternate procedures are normally included in the associated operations (O) procedure.

'Any in excess of those required by regulations' means that the item required by applicable legislation (e.g. Regulation Air Operations, Single European Sky legislation or applicable airspace requirements) must be operative, and only excess equipment may be inoperative. When the item is not required, it may be inoperative for the time specified by its rectification interval category. Whenever this condition is used in the MMEL, the applicable regulations for the intended flight routes and the resulting dispatching restrictions need to be clarified at operator's MEL level.

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

'Calendar day': a 24-hour period from midnight to midnight based on either UTC or local time, as selected by the operator. All calendar days are considered to run consecutively.

'Commencement of flight' is the point when an aeroplane begins to move under its own power for the purpose of preparing for take-off, or the point when the rotors of a helicopter start to turn for the purpose of taking off.

'Considered inoperative', as used in the dispatch conditions, means that the 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 original 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 MMEL provisions, including any (M) and (O) procedures, and observing the rectification interval.

'Daylight' corresponds to the period between the beginning of morning civil twilight and the end of evening civil twilight relevant to the local aeronautical airspace; or such other period, as may be prescribed by the appropriate authority.

'Day of discovery' means the calendar day when a malfunction was recorded in the aircraft maintenance record/logbook.

'Flight' (for the purposes of this MMEL): a flight is the period of time between the moment when an aircraft begins to move by its own means, for the purpose of preparing for take-off, until the moment the aircraft comes to complete stop on its parking area, after the first landing.

'Icing conditions' means an atmospheric environment that may cause ice to form on the aircraft or in the engine(s) as defined in the AFM.

'If installed' means that the item is either optional or is not required to be installed on all aircraft covered by the MMEL.

'Inoperative' means that the item does not accomplish its intended purpose or does not consistently function within its approved operating limits or tolerances.

'Intended flight route' corresponds to any point on the route, including diversions to reach alternate aerodromes required to be selected by the operational rules.

'Is not used' in the dispatch conditions, remarks or exceptions for an MMEL item may specify that another item relieved in the MMEL 'is not used'. In such cases, crew members should not activate, actuate, or otherwise utilise that item under normal operations. It is not necessary for the operators to accomplish the (M) procedures associated with the item. However, operations-related provisions, (O) procedures and rectification interval must be complied with. An additional placard must be affixed, to the extent practical, adjacent to the control or indicator for the item that is not used to inform crew members that an item is not to be used under normal operations.

'Item' means component, instrument, equipment, system, or function.

'Master Minimum Equipment List (MMEL)' means a document approved by EASA that establishes the aircraft items that are allowed to be inoperative under the conditions specified in the document for a specific type of aircraft.

'Minimum Equipment List (MEL)' means a document approved by or declared to the competent authority, as applicable, that authorises an operator to dispatch an aircraft with aircraft items that are inoperative under the conditions specified in the document.

'Visible moisture' means an atmospheric environment containing water in any form that can be seen in natural or artificial light; for example, clouds, fog, mist, rain, sleet, hail, or snow.

[Issue No: GEN-MMEL/2]

CS GEN.MMEL.145 Item list

ED Decision 2020/012/R

The generic MMEL includes all the items that are permitted to be inoperative.

The MMEL item list is generated by the applicant directly from the generic MMEL by selecting the items from the list in Appendix IV in accordance with their applicability to the aircraft type.

For an aircraft type with different configurations, the applicant can select all the items that are applicable to the various configurations and add under each affected item '(if installed)'.

For the selected items, the applicant verifies they do not deviate from the Aircraft Flight Manual (AFM) Limitations and Airworthiness Directives.

The applicant also verifies that relief is not given for items that are involved in emergency procedures unless the applicant justifies that the emergency procedure can be fulfilled without the failed item (e.g. VHF Communication Systems).

Consistency of terminology and of means of identification should be maintained, as far as possible, with the existing aircraft documentation.

[Issue No: GEN-MMEL/2]

Appendix IV — Item list

ED Decision 2020/012/R

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 21 Air conditioning						PAGE: 21-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
21-20-1	**Fresh air ventilation outlets**					
21-20-1A	(ALL)	C	–	1	Any in excess of one may be inoperative.	
21-30-1	**Pressurisation controller**					
21-30-1A	(CAT aeroplanes)	C	–	0	(O) May be inoperative provided that: (a) the flight is conducted with the cabin unpressurised, and (b) the regulations that require the use of oxygen are complied with. *(O) Procedures must be established to ensure the aeroplane is operated with the cabin unpressurised.*	
21-30-1B	(NCO/SPO aeroplanes)	D	–	0	(O) May be inoperative provided that: (a) the flight is conducted with the cabin unpressurised, and (b) the regulations that require the use of oxygen are complied with. *(O) Procedures must be established to ensure that the aeroplane is operated with the cabin unpressurised.*	
21-30-2	**Outflow/safety valves**					
21-30-2A	(CAT aeroplanes)	C	–	–	(M)(O) May be inoperative provided that: (a) the affected valve(s) is (are) secured OPEN or removed, (b) the flight is conducted with the cabin unpressurised, and (c) the regulations that require the use of oxygen are complied with. *(M) Procedures must be established to secure the valve(s) open or remove it (them).* *(O) Procedures must be established to ensure the aeroplane is operated with the cabin unpressurised.*	

(continued)

ATA CHAPTER: 21 Air conditioning					PAGE: 21-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
(continued)					
21-30-2B	(NCO/SPO aeroplanes)	D	–	–	(M)(O) May be inoperative provided that: (a) the affected valve(s) is(are) secured OPEN or removed, (b) the flight is conducted with the cabin unpressurised, and (c) the regulations that require the use of oxygen are complied with. *(M) Procedures must be established to secure the valve(s) open or remove it(them).* *(O) Procedures must be established to ensure the aeroplane is operated with the cabin unpressurised.*
21-30-3	**Cabin altitude indicator**				
21-30-3A	(ALL aeroplanes)	D	1	0	(O) May be inoperative provided that: (a) the flight is conducted with the cabin unpressurised, and (b) the regulations that require the use of oxygen are complied with. *(O) Procedures must be established to ensure that the aeroplane is operated with the cabin unpressurised.*
21-30-4	**Cabin altitude warning system**				
21-30-4A	(ALL aeroplanes)	C	1	0	May be inoperative provided that the flight is conducted at or below the cabin altitude warning limit, but not above 10 000 feet AMSL.
21-30-4B	(ALL aeroplanes)	D	1	0	(O) May be inoperative provided that: (a) the flight is conducted with the cabin unpressurised, and (b) the regulations that require the use of oxygen are complied with. *(O) Procedures must be established to ensure that the aeroplane is operated with the cabin unpressurised.*

ATA CHAPTER: 21 Air conditioning						PAGE: 21-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
21-30-5	**Cabin rate of climb indicator** (continued)					
21-30-5A	(ALL aeroplanes)	D	1	0	(O) May be inoperative provided that: (a) the flight is conducted with the cabin unpressurised, and (b) the regulations that require the use of oxygen are complied with. *(O) Procedures must be established to ensure that the aeroplane is operated with the cabin unpressurised.*	
21-30-6	**Differential pressure indicator**					
21-30-6A	(ALL aeroplanes)	D	1	0	(O) May be inoperative provided that: (a) the flight is conducted with the cabin unpressurised, and (b) the regulations that require the use of oxygen are complied with. *(O) Procedures must be established to ensure that the aeroplane is operated with the cabin unpressurised.*	
21-40-1	**Heating system**					
21-40-1A	(CAT/SPO)	C	–	0	May be inoperative.	
21-40-1B	(NCO)	D	–	0	May be inoperative.	
21-50-1	**Air conditioning system**					
21-50-1A	(CAT/SPO)	C	1	0	(M) May be inoperative. *(M) Procedures must be established to ensure that the inoperative air conditioning system does not have any adverse effect on engine operation, pressurisation or the cooling of instruments.*	
21-50-1B	(NCO)	D	1	0	(M) May be inoperative. *(M) Procedures must be established to ensure that the inoperative air conditioning system does not have any adverse effect on engine operation, pressurisation or the cooling of instruments.*	

Additional considerations:

— **21-20-1A Fresh air ventilation outlets:** Cockpit and cabin compartments must be suitably ventilated through an adequate supply of fresh air.

— For flights with the cabin unpressurised, the (O) procedure should indicate that when on-board oxygen is not sufficient or oxygen is not used, the flight shall be performed at or below 10 000 ft above Mean Sea Level (AMSL).

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 22 Auto-flight						PAGE: 22-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
22-10-1	**Autopilot/Stability Augmentation System (SAS)**					
22-10-1A	(SPO/NCO)	D	–	0	(M)(O) May be inoperative provided that: (a) the autopilot/SAS is deactivated as applicable, (b) the AFM limitations are observed, and (c) operations do not depend upon its use. *(M) Procedures must be established to ensure that the autopilot/SAS will not engage during the flight.* *(O) Procedures must establish any applicable restrictions (e.g. approach and landing minima, en-route operations, etc.).*	
22-10-1B	(CAT)	B	–	0	(M)(O) May be inoperative provided that: (a) the autopilot/SAS is deactivated as applicable, (b) the flight is conducted under VFR for single pilot operations, (c) AFM limitations are observed, and (d) operations do not depend upon its use. *(M) Procedures must be established to ensure that the autopilot/SAS will not engage during the flight.* *(O) Procedures must establish any applicable restrictions (e.g. approach and landing minima, en-route operations, etc.).*	
(continued)						

ATA CHAPTER: 22 Auto-flight						PAGE: 22-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
(continued)						
22-10-2	**Autopilot/SAS disconnect functions — Quick release controls**					
22-10-2A	(ALL)	C	–	1	(O) Any in excess of one may be inoperative provided that: (a) the operative one is on the pilot flying side, and (b) the approach and landing minima do not require the use of the autopilot/SAS. *(O) Procedures must establish any applicable restrictions (e.g. approach and landing minima, en-route operations, etc.).*	
22-10-2B	(ALL)	B	–	0	May be inoperative provided that the autopilot/SAS is not used (refer to item 22-10-1).	
22-10-4	**Yaw damper**					
22-10-4A	(ALL aeroplanes)	C	1	0	(M) May be inoperative provided that the yaw damper is independent and unrelated to autopilot operation. *(M) Procedures must be established to ensure that no electrical or mechanical fault exists that would have an adverse effect on any flight control system.*	
22-10-4B	(ALL aeroplanes)	-	1	0	May be inoperative provided that the autopilot/SAS is not used (refer to item 22-10-1).	

Additional considerations:

— **22-10-1 Autopilot/SAS:** Any increase in crew workload has to be considered for the intended operations. Any additional limitations, such as the flight duration, may result from this consideration.

— **22-10-1B Autopilot/SAS:** Depending upon the use of the autopilot/SAS in routine procedures, single pilot CAT operations may be restricted to day VMC only.

— **22-10-4 Yaw damper:** AFM limitations must be complied with, if any.

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 23 Communications						PAGE: 23-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
23-10-1	**Headsets**					
23-10-1A	(NCO)	D	–	0	May be inoperative or missing provided that procedures do not depend upon its use.	
23-10-1B	(ALL)	D	–	–	Any in excess of one for each flight crew member may be inoperative or missing. Note: A headset consists of a communication device which includes two earphones to receive and a microphone to transmit audio signals to the aircraft communication system.	
23-10-2	**Audio selector panels**					
23-10-2A	(ALL)	D	–	–	Any in excess of one for each flight crew member may be inoperative or missing.	
23-10-2B	(ALL)	D	–	0	(O) May be inoperative provided that: (a) the flight is conducted under VFR, and (b) alternate procedures are established and used for ensuring the required communication. *(O) Procedures must be established to ensure the required communication.*	

Aircraft applicability: Aeroplanes

ATA CHAPTER: 23 Communications						PAGE: 23-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
23-10-3	**Flight crew compartment speakers**					
23-10-3A	(SPO/NCO)	C	–	0	(O) May be inoperative provided that alternate means are available and used for ensuring the required communication. *(O) Procedures must be established to ensure the required communication*	
23-10-3B	(CAT)	C	–	0	May be inoperative provided that: (a) one headset is operative and used by each flight crew member, and (b) a spare operative headset is readily available in the flight crew compartment.	
23-10-4	**Handheld microphones**					
23-10-4A	(SPO/NCO)	C	–	0	May be inoperative provided that each flight crew member has and uses an operative headset.	
23-10-4B	(CAT)	C	–	0	May be inoperative provided that: (a) each flight crew member has and uses an operative headset, and (b) a spare operative headset is readily available in the flight crew compartment.	
23-10-5	**Stick/yoke mounted push-to-talk switches**					
23-10-5A	(NCO)	D	–	0	May be inoperative provided that the associated handheld microphone is operative.	
23-10-5B	(SPO/CAT)	D	–	0	May be inoperative provided that: (a) the flight is conducted under day VFR, and (b) the associated handheld micro-phone is operative.	

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 23 Communications						PAGE: 23-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
23-11-1	**Long range communication systems**					
23-11-1A	(ALL)	D	–	–	Any in excess of those required by regulations may be inoperative.	
23-12-1	**VHF communication systems**					
23-12-1A	(ALL)	D	–	–	Any in excess of those required by regulations may be inoperative.	
23-20-1	**Datalink**					
23-20-1A	(ALL)	D	–	0	May be inoperative provided that procedures do not require its use.	
23-30-1	**Public address system**					
23-30-1A	(ALL)	D	1	0	May be inoperative provided that procedures do not depend upon its use.	
23-30-1B	(ALL)	C	1	0	(O) May be inoperative provided that alternate procedures are established and used. *(O) Procedures must be established to provide alternate means for communication between the flight crew compartment and the cabin, in normal and emergency situations.*	
23-40-1	**Flight crew interphone system**					
23-40-1	(ALL)	D	-	-	Any in excess of those required by regulations may be inoperative.	

Additional considerations:

— **23-10-2 Audio selection panels:** There may be components of the audio control panel that are inoperative; however, the panel is still adequate for flight. The item does not address subcomponents, and it is considered to be the pilot-in-command's decision to dispatch with necessary equipment that is operative.

— **23-10-3 Flight crew compartment speakers:** It should be ensured that the affected flight crew compartment speaker is not used for crew intercommunication when smoke masks are used unless single pilot operations are conducted. Indeed, with smoke masks on, a typical installation has the pilot talking through the co-pilot's speaker and the co-pilot through the pilot's speaker. If there are emergency procedures (e.g. smoke) which require the crew to establish communication, then relief for both cannot be granted, but depending on the flight test results relief for one may be possible.

All aural alerts, messages and other communication which are normally routed through the flight crew compartment speakers should remain audible through the headsets.

— **23-30-1 Public address system:** 23-30-1B: The alternate procedures will have to be developed to account for any procedures that are based on the use of the public address system, particularly in areas such as lavatories.

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 24 Electrical						PAGE: 24-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
24-40-1 24-40-1A	**External power system** (ALL)	D	1	0	May be inoperative.	

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 25 Equipment and furnishings						PAGE: 25-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
25-11-1	**Flight crew compartment seats**					
25-11-1-1	**Power adjustments**					
25-11-1-1A	(ALL)	D	–	0	May be inoperative.	
25-11-1-2	**Manual adjustments**					
25-11-1-2-1	Horizontal					
25-11-1-2-1A	(ALL)	C	–	0	(M) May be inoperative provided that: (a) the affected seat is secured and locked, (b) the position is acceptable to the flight crew member, and (c) the seat position when the seat is used allows a full travel of the flight controls. *(M) Procedures must be established to secure the seat position.*	
25-11-1-2-2	Vertical					
25-11-1-2-2A	(ALL)	C	–	0	May be inoperative provided that the associated power adjustment of the affected seat is operative.	
25-11-1-2-2B	(ALL)	C	–	0	(M) May be inoperative provided that : (a) the affected seat is secured or locked, and (b) the position is acceptable to the flight crew member. *(M) Procedures must be established to secure the seat position.*	
25-11-1-3	**Other adjustments except horizontal and vertical adjustments**					
25-11-1-3A	(ALL)	C	–	0	(M) May be inoperative provided that: (a) the affected seat is secured or locked, and (b) the position is acceptable to the flight crew member. Note: If an inoperative armrest hinders an emergency evacuation or any other flight crew compartment duties, it should be removed. *(M) Procedures must be established to secure the seat position.*	

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 25 Equipment and furnishings					PAGE: 25-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
(continued)					
25-11-1-4	**Safety harnesses**				
25-11-1-4A	(ALL)	C	–	1	Any in excess of those required by regulations may be inoperative provided that: (a) the flight is conducted in single pilot operations, and (b) the affected seat is not occupied.
25-11-1-5	**Crew seat armrest**				
25-11-1-5A	(ALL)	C	–	0	(M) May be inoperative provided that: (a) it does not hinder emergency egress, and (b) it does not block access to the flight controls or restrict any other flight deck duties. *(M) Procedures must be established to remove an inoperative armrest if it may harm the crew member.*
25-21-1	**Passenger seats**				
25-21-1A	(ALL)	D	–	–	(M) May be inoperative provided that: (a) the inoperative seat does not block an emergency exit, (b) the inoperative seat does not restrict any passenger from access to the main aeroplane aisle, and (c) the affected seat(s) are blocked and placarded 'DO NOT OCCUPY'. Note: A seat with an inoperative or missing occupant restraint system (seat belt, safety harness, as applicable) is considered to be inoperative. *(M) Procedures must be established to:* — provide guidance for identifying the affected seat(s), and — provide a practical means of prohibiting the use of the affected seat(s).
(continued)					

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 25 Equipment and furnishings					PAGE: 25-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
(continued)					
25-21-1-1	Recline functions				
25-21-1-1A	(ALL)	D	–	–	(M) May be inoperative and the seat may be occupied provided that the seat is secured in the take-off and landing position. *(M) Procedures must be established to provide a practical means of securing the seat in the take-off and landing position.*
25-21-1-1B	(ALL)	C	–	–	May be inoperative provided that the seat back is immovable in the take-off and landing position.
25-21-1-2	Under seat baggage restraining bars				
25-21-1-2A	(ALL)	D	–	–	May be inoperative or missing provided that: (a) baggage is not stowed under the associated seat, and (b) the associated seat is placarded 'DO NOT STOW BAGGAGE UNDER THIS SEAT'.
25-21-1-3	Passenger seat armrests with recline control mechanism				
25-21-1-3A	(ALL)	D	–	–	(M) May be inoperative, damaged or missing, provided that: (a) the armrest does not block an emergency exit, (b) the armrest is not in such a position that it restricts any passengers from accessing the aeroplane's aisle, and (c) if the armrest is missing, the associated seat is secured in the full upright position. *(M) Procedures must be established to provide a practical means of securing the associated seat in the full upright position.* *(M) Procedures must be established to remove any damaged armrest which may harm the passenger.*
(continued)					

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 25 Equipment and furnishings					PAGE: 25-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
(continued)					
25-21-1-4	Passenger seat armrests without recline control mechanism				
25-21-1-4A	(ALL)	D	–	–	(M) May be inoperative, damaged or missing, provided that: (a) the armrest does not block an emergency exit, and (b) the armrest is not in such a position that it restricts any passengers from accessing the aeroplane's aisle. *(M) Procedures must be established to remove any damaged armrest which may harm the passenger.*
25-21-1-5	Swivel/travel mechanisms				
25-21-1-5A	(ALL)	D	–	–	(M) May be inoperative provided that: (a) the associated seat is secured in the take-off and landing position, and (b) the associated seat does not restrict emergency egress. *(M) Procedures must be established to provide a practical means of securing the associated seat in the take-off and landing position.*
25-21-1-5B	(ALL)	C	–	–	May be inoperative provided that the associated seat is immovable in the take-off and landing position.
(continued)					

Aircraft applicability: Aeroplanes

ATA CHAPTER: 25 Equipment and furnishings					PAGE: 25-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
(continued)					
25-60-1	**Electrical torches/flashlights (incl. holders)**				
25-60-1A	(SPO/NCO)	D	–	0	May be inoperative or missing for daylight operations.
25-60-1B	(ALL)	C	–	–	(M) May be inoperative or missing provided that: (a) each required flight crew member has an operative independent portable light readily available. (b) the inoperative unit is removed from its installed location, secured out of sight and placarded as inoperative. *(M) Procedures must be established to:* — *provide instructions to placard the inoperative unit and its installed location, and* — *secure the inoperative unit in an out-of-sight location if possible.*
25-60-2	**Life rafts**				
25-60-2A	(ALL)	D	–	–	(M) Any in excess of those required by regulations for the intended flight may be inoperative or missing provided the inoperative unit is removed from the aeroplane, and its installed location is placarded as inoperative; or is removed from the installed location, secured out of sight, and the inoperative unit and its installed location are placarded as inoperative. *(M) Procedures must be established to:* — *provide instructions to placard the inoperative unit and its installed location, and* — *secure the inoperative unit in an out-of-sight location if possible.*
(continued)					

25-60-3	**Protective breathing equipment (PBE)**				
25-60-3A	(ALL)	D	–	–	Any in excess of those required by regulations may be inoperative or missing provided that the inoperative PBE is placarded as inoperative and is removed. Note: Inoperative PBE units may be subject to dangerous goods requirements.
25-60-6	**Survival equipment**				
25-60-6A	(ALL)	D	–	–	(M) Any in excess of those required by regulations for the intended flight may be inoperative or missing provided that the inoperative unit is removed from the aeroplane and its installed location is placarded as inoperative; or is removed from the installed location, secured out of sight, and the inoperative unit and its installed location are placarded as inoperative. *(M) Procedures must be established to:* — *provide instructions to placard the inoperative unit and its installed location, and* — *secure the inoperative unit in an out-of-sight location.*

Aircraft applicability: Helicopters

ATA CHAPTER: 25 Equipment/Furnishings						PAGE: 25-x
(1) System & sequence numbers ITEM		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
25-60-7	**Emergency Flotation Equipment**					
25-60-7A	(NCO/non-commercial SPO)	D	-	0	Any in excess of those required by regulations may be inoperative.	
25-60-7B	(ALL)	D	-	0	May be inoperative for flights over land (including take-offs and landings).	
25-60-7C	(Performance Class 1)	C	-	0	May be inoperative for flights over water at a distance from land not beyond 10 minutes flying time, at normal cruise speed.	
25-60-7D	(Performance Class 2)	C	-	0	May be inoperative provided that: (a) take-offs and landings are not performed over water, and (b) en route operations are not conducted over water at a distance from land that is beyond 10 minutes flying time, at normal cruise speed.	
25-60-7E	(Performance Class 3)	C	-	0	May be inoperative provided that: (a) take-offs and landings are not performed over water, and (b) flights are not conducted over water beyond the safe forced-landing distance.	

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 25 Equipment and furnishings						PAGE: 25-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
(continued)						
25-61-1	**Crash axes and crowbars**					
25-61-1A	(ALL)	D	–	–	Any in excess of those required by regulations may be inoperative or missing.	
25-62-1	**First-aid kits**					
25-62-1A	(ALL)	D	–	1	Any in excess of one may be incomplete or missing.	

ATA CHAPTER: 25 Equipment and furnishings						PAGE: 25-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
25-62-1B	(ALL Helicopters)	A	-	0	May be incomplete for one calendar day.	

ATA CHAPTER: 25 Equipment and furnishings						PAGE: 25-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
	(continued)					
25-63	**Emergency locator transmitters**					
25-63-1	**Automatic emergency locator transmitters ELT(AF)/ELT(AP)/ ELT(AD)**					
25-63-1A	(ALL)	D	–	–	Any in excess of those required by regulations may be inoperative.	
25-63-1B	(ALL aeroplanes)	A	–	0	May be inoperative for a maximum of 6 flights or 25 flight hours, whichever occurs first.	
25-63-1C	ELT(AF)/ELT(AP) (ALL Helicopters)	A	-	0	May be inoperative provided that: (a) the helicopter is not operated for more than 6 hours after the ELT was found to be inoperative, and (b) a maximum of 24 hours have elapsed since the ELT was found to be inoperative.	
25-63-1D	ELT(AD) (ALL helicopters)	C	-	0	May be inoperative for overland operations, or overwater operations at a distance from land that is not beyond 10 minutes flying time at normal cruise speed.	
25-63-2	**Survival emergency locator transmitters ELT(S)**					
25-63-2A	(NCO)	D	–	0	Any in excess of those required by regulations may be inoperative or missing.	

ATA CHAPTER: 25 Equipment and furnishings					PAGE: 25-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
(continued)					
25-63-2B	(CAT/SPO)	D	–	–	(M) Any in excess of those required by regulations for the intended flight may be inoperative or missing provided that the inoperative unit is removed from the aircraft and its installed location is placarded as inoperative; or is removed from the installed location, secured out of sight, and the inoperative unit and its installed location are placarded as inoperative. *(M) Procedures must be established to:* — *provide instructions to placard the inoperative unit and its installed location,* — *secure the inoperative unit in an out-of-sight location.*
(continued)					
25-63-2C	(NCO)	A	–	0	May be inoperative for a maximum of 6 flights or 25 flight hours, whichever occurs first.
25-63-3	**Personal locator beacons (PLB)**				
25-63-3A	(NCO)	D	–	–	Any in excess of those required by regulations may be inoperative or missing.
25-63-3A	(NCO)	A	–	0	May be inoperative for a maximum of 6 flights or 25 flight hours, whichever occurs first.
(continued)					

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 25 Equipment and furnishings						PAGE: 25-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
(continued)						
25-64-1	**Life jackets (or equivalent individual floatation devices)**					
25-64-1A	(ALL)	D	–	–	(M) Any in excess of those required by regulations for the intended flight may be inoperative or missing provided that: (a) the required distribution of operative units is maintained throughout the aircraft, and (b) the inoperative unit is removed from the aircraft and its installed location is placarded as inoperative; or is removed from the installed location, secured out of sight, and the inoperative unit and its installed location are placarded as inoperative. *(M) Procedures must be established to:* — *provide instructions to placard the inoperative unit and its installed location,* — *secure the inoperative unit in an out-of-sight location.*	

Additional considerations:

— **25-11-1-4 Flight crew compartment seats — Safety harnesses:** Padding may be part of the ETSO/TSO and if it is, padding is therefore, required.

— **25-21-1 Passenger seats:**

— 25-21-1A:

Any damage to passenger seats and components must not be detrimental to passenger safety.

This item and the associated sub-items do not include tray tables that may, if they are inoperative in the non-stowed position, render the seat by itself or the seat row (behind the seat to which the tray table is attached) inoperative. A tray table that is inoperative in the stowed position is considered to be a passenger convenience item.

For single aisle configurations, the affected seat(s) may include the seat behind and/or the adjacent outboard seats.

— 25-21-1-1:

Any damage to passenger seats and components must not be detrimental to passenger safety.

The seat recline position can be failed in the take-off and landing position other than the full upright position, if the seat has been certified for this alternate position.

— 25-21-1-2:

Any damage to passenger seats and components must not be detrimental to passenger safety.

The certification basis of the seat or seat assembly will need to be verified to determine whether an inoperative or missing under seat baggage restraining bar affects the integrity of the seat.

— 25-21-1-3/4/5:

Any damage to passenger seats and components must not be detrimental to passenger safety.

— **25-60-7 Emergency Flotation Equipment:** the need for additional deactivation/securing conditions should be considered, based on the design of the system.

— **25-63-1 Automatic emergency locator transmitters ELT(AF)/ELT(AP)/ELT(AD) and**

— **25-63-2 Survival Emergency Locator Transmitters ELT(S):**

An emergency locator transmitter (ELT) is a generic term describing equipment which broadcasts distinctive signals on designated frequencies and, depending on the application, may be activated by impact or manually. An ELT is one of the following:

Automatic fixed (ELT(AF)): an automatically activated ELT which is permanently attached to an aircraft;

Automatic portable (ELT(AP)): an automatically activated ELT which is rigidly attached to an aeroplane but readily removable from the aircraft;

Automatic deployable (ELT(AD)): an ELT which is rigidly attached to the aircraft and which is automatically deployed and activated by impact and, in some cases, also by hydrostatic sensors. Manual deployment is also provided; and

Survival ELT (ELT(S)): an ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

An ELT(S) may be activated manually or automatically (e.g. by water activation). It should be designed to be attached to a life raft or a survivor.

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 26 Fire protection						PAGE: 26-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
26-24-1	**Hand fire extinguishers**					
26-24-1A	(ALL)	D	–	–	Any in excess of those required by regulations may be inoperative or missing.	

Aircraft applicability: Aeroplanes

ATA CHAPTER: 27 Flight controls						PAGE: 27-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
27-10-1	**Aileron trim tab position indication**					
27-10-1A	(ALL)	C	1	0	(O) May be inoperative provided that: (a) the tab is visually checked for its full range of operation, (b) the operation of the tab is not restricted, and (c) the tab is positioned to NEUTRAL (or the recommended AFM setting) and the appropriate setting is verified by visual inspection prior to each departure.	
27-20-1	**Rudder trim tab position indication**					
27-20-1A	(ALL)	C	1	0	(O) May be inoperative provided that: (a) the tab is visually checked for its full range of operation, (b) the operation of the tab is not restricted, and (c) the tab is positioned to NEUTRAL (or recommended AFM setting) and appropriate setting is verified by visual inspection prior to each departure.	

ATA CHAPTER: 27 Flight controls					PAGE: 27-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
27-30-1	**Elevator trim tab position indication**				
27-30-1A	(ALL)	C	1	0	(O) May be inoperative provided that: (a) the tab is visually checked for its full range of operation, (b) the operation of the tab is not restricted, and (c) the tab is positioned to NEUTRAL (or the recommended AFM setting) and the appropriate setting is verified by visual inspection prior to each departure.
(continued)					

Aircraft applicability: Aeroplanes

ATA CHAPTER: 27 Flight controls						PAGE: 27-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
(continued)						
27-31-1	**Electric elevator trim system**					
27-31-1A	(ALL)	C	1	0	(M) May be inoperative provided that: (a) the manual trim is checked to be operative, and (b) the electric trim is deactivated. *(M) Procedures must be established to:* — deactivate the electric trim system, and — ensure that the manual trim is not affected.	
27-50-1	**Flaps position indication**					
27-50-1A	(ALL)	C	1	0	(O) May be inoperative provided that: (a) prior to each flight, the flaps are visually checked for their full travel, (b) the operation of the flaps is not restricted, and (c) the flaps are visually checked for their proper setting prior to each departure.	
27-70-1	**Gust lock**					
27-70-1A	(ALL)	C	1	0	(M) May be inoperative provided that the gust lock is secured in the unlocked position. *(M) Procedures must be established to secure the gust lock in the unlocked position.*	

Additional considerations:

— **27-31-1 Electric elevator trim system:** The autopilot, if installed, may have to be disconnected.

— **27-50-1 Flaps position indication:** The crew should be able to visually check the position of the flaps without having to leave the flight deck.

— **27-70-1 Gust lock:** AFM limitations, if any, must be respected with the gust lock inoperative. Any other systems that are impacted by the gust lock that is failed in the locked position need to be considered.

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 28 Fuel						PAGE: 28-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
28-40-1	**Fuel quantity indication**					
28-40-1A	(ALL)	C	–	1	(O) Any in excess of one may be inoperative provided that a reliable means is established to determine that the fuel quantity on board meets the regulatory requirements for the flight. *(O) Procedures must be established to determine that the fuel quantity on board meets the regulatory requirements for the flight.*	

Additional considerations:

— **28-40-1 Fuel quantity indication:** This proposal is made for tanks with interconnected outlets that function as a single tank, such that individual tanks cannot be isolated. Fuel migration from one wing to the other also needs to be considered.

Aircraft applicability: Aeroplanes

ATA CHAPTER: 30 Ice & rain protection						PAGE: 30-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
30-00-1	**Inertial separators – Position indicating system**					
30-00-1A	(CAT/SPO)	B	–	0	May be inoperative provided that operations are not conducted in known or forecasted icing conditions.	
30-00-1A	(NCO)	C	–	0	May be inoperative provided that operations are not conducted in known or forecasted icing conditions.	
30-10-1	**Airframe aerodynamic surface ice protection**					
30-10-1A	(CAT/SPO)	B	–	0	One or more may be inoperative provided that operations are not conducted in known or forecasted icing conditions.	
30-10-1B	(NCO)	C	–	0	One or more may be inoperative provided that operations are not conducted in known or forecasted icing conditions.	
30-31-1	**Pitot heating system**					
30-31-1A	(CAT)	B	–	1	(O) Any in excess of one may be inoperative provided that: (a) operations are conducted under day VMC, (b) operations are not conducted in visible moisture or into known or forecasted icing conditions, and (c) the operative pitot heater is verified as being operative prior to each flight. *(O) Procedures must be established for the required pre-flight check.*	
30-31-1B	(CAT)	B	–	0	One or more may be inoperative provided that: (a) operations are conducted under day VFR, and (b) operations are not conducted in visible moisture or into known or forecasted icing conditions.	

ATA CHAPTER: 30 Ice & rain protection					PAGE: 30-x
(1) System & sequence numbers item	(2) Rectification interval				
		(3) Number installed			
			(4) Number required for dispatch		
(continued)				(5) Remarks or exceptions	

ATA CHAPTER: 30 Ice & rain protection						PAGE: 30-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
(continued)						
30-31-1C	(NCO/SPO)	B	–	0	May be inoperative provided that: (a) operations are conducted under VFR, and (b) operations are not conducted in visible moisture or into known or forecasted icing conditions.	
30-31-3	**Static port heating system**					
30-31-3A	(CAT)	C	–	0	May be inoperative provided that: (a) operations are conducted under day VFR, and (b) operations are not conducted in known or forecasted icing conditions.	
30-31-3B	(CAT)	B	–	1	(O) Any in excess of one may be inoperative provided that: (a) operations are conducted under day VMC, (b) operations are not conducted in visible moisture or into known or forecasted icing conditions, and (c) the operative static port heater is verified as being operative prior to each flight. *(O) Procedures must be established for the required pre-flight check.*	
30-31-3C	(NCO/SPO)	C	–	0	One or more may be inoperative provided that: (a) operations are conducted under day VFR, and (b) operations are not conducted in known or forecasted icing conditions.	
30-32-1	**Stall warning mounting plate heater**					
30-32-1A	(ALL)	B	–	0	One or more may be inoperative provided that: (a) operations are conducted under day VMC, and (b) operations are not conducted in known or forecasted icing conditions.	
(continued)						

ATA CHAPTER: 30 Ice & rain protection						PAGE: 30-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
(continued)						
30-41-1	**Windshield heating/De-icing system**					
30-41-1A	(ALL)	C	–	0	May be inoperative provided that operations are not conducted in known or forecasted icing conditions.	
30-61-1	**Propeller de-ice/ anti-ice system**					
30-61-1A	(CAT/SPO)	B	–	0	One or more may be inoperative provided that operations are not conducted in known or forecasted icing conditions.	
30-61-1B	(NCO)	C	–	0	One or more may be inoperative provided that operations are not conducted in known or forecasted icing conditions.	

Additional considerations:

Relief for the above-mentioned items should be further restricted or removed when the loss of the heating/anti-icing system would impact other systems which are integrated with the considered item.

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 31 Indicating/Recording systems					PAGE: 31-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
31-21-1	**Clock**				
31-21-1A	(ALL)	C	–	0	May be inoperative provided that an accurate timepiece is operative in the flight crew compartment, and that it indicates the time in hours, minutes and seconds. Note: On the basis that the timepiece required does not need to be approved, an accurate pilot's wristwatch which indicates hours, minutes and seconds is acceptable.
31-22-1	**Hour meter**				
31-22-1A	(ALL)	D	1	0	(O) May be inoperative provided that a procedure is established to record the flight time. *(O) Procedures must be established to record the flight time.*

Aircraft applicability: Aeroplanes

ATA CHAPTER: 32 Landing gear					PAGE: 32-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
32-40-1	**Parking brake**				
32-40-1A	(ALL)	C	1	0	(O) May be inoperative provided that a procedure is established to prevent any movement of the aeroplane when it is stopped or parked. *(O) Procedures must be established to prevent any movement of the aeroplane when it is stopped or parked.*

Additional considerations:

— **32-40-1 Parking brake:** This item is only applicable to aeroplanes for which the parking brake is not required by certification.

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 33 Lights						PAGE: 33-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
33-10-1	**Flight crew compartment lighting** (Excluding internally lighted buttons/switches, emergency lights and annunciations)					
33-10-1A	(ALL)	C	–	0	May be inoperative for daylight operations.	
33-10-1B	(ALL)	C	–	–	Individual lights may be inoperative provided that: (a) sufficient lighting is operative to make each required instrument control and other device for which it is provided easily readable, and (b) the lighting configuration at dispatch is acceptable to the flight crew.	
33-20-1	**Passenger compartment lighting**					
33-20-1A	(ALL)	D	–	0	May be inoperative provided that passengers are not carried when the aircraft operates at night.	
33-20-1B	(ALL)	C	–	–	Individual lights may be inoperative provided that the lighting configuration at dispatch is acceptable to the flight crew.	
33-20-2	**Cabin signs (Fasten seat belt/No smoking)**					
33-20-2A	(ALL)	C	-	0	(O) May be inoperative provided that alternate procedures are established and used for briefing passengers.	
33-20-2B	(ALL)	D	–	0	May be inoperative provided that no passenger is carried.	
33-41-1	**Navigation/ Position lights**					
33-41-1A	(ALL)	C	–	0	One or more may be inoperative for daylight operations.	
33-41-1B	(ALL)	C	–	–	Any in excess of those required by regulations may be inoperative for night operations.	
(continued)						

ATA CHAPTER: 33 Lights						PAGE: 33-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
(continued)						
33-42-1	**Anti-collision light system**					
33-42-1A	(CAT aeroplanes and ALL helicopters)	C	–	1	Any in excess one may be inoperative.	
33-42-1B	(NCO/SPO aeroplanes)	C	–	0	One or more of these may be inoperative for daylight operations.	

Aircraft applicability: Aeroplanes

ATA CHAPTER: 33 Lights						PAGE: 33-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
33-43-1	**Wing illumination light**					
33-43-1A	(ALL)	D	1	0	May be inoperative for daylight operations.	
33-43-1B	(ALL)	C	1	0	May be inoperative provided that operations are not conducted at night into known or forecasted icing conditions.	

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 33 Lights						PAGE: 33-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
33-44-1	**Landing lights**					
33-44-1A	(CAT aeroplanes)	B	–	–	50 % of landing lights may be inoperative for night operations.	
33-44-1B	(NCO/SPO)	C	–	1	Any in excess of one may be inoperative for night operations.	

ATA CHAPTER: 33 Lights					PAGE: 33-x
(1) System & sequence numbers		(2) Rectification interval			
item			(3) Number installed		
				(4) Number required for dispatch	
					(5) Remarks or exceptions
33-44-1C	(ALL)	C	–	0	One or more may be inoperative for daylight operations.

Additional considerations:

— **33-10-1B Flight deck lighting:** Emergency lighting might need to be taken into consideration.

— **33-20-1C Passenger compartment lighting:** No reference is available for the level of required illumination in the cabin.

— **33-20-2 Cabin signs:** A passenger address system might have to be considered.

— **33-42-1 Anti-collision light system:** Strobe lights can be considered to be anti-collision lights only if that was granted by the certification.

— **33-44-1 Landing lights:** Alternate dispatch conditions may be proposed that are based on the use of taxi lights if they are adequate for the intent of the purpose.

— **Additional optional lights:** Additional dispatch relief could be given for optional lights (external courtesy/utility lights, tail logo light, recognition lights).

— **Lighted switches/buttons:** Additional relief could be given on a case-by-case basis for a dedicated item.

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 34 Navigation						PAGE: 34-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
34-10-1	**Primary airspeed indication**				Note: Standby airspeed indication is not considered to be a primary airspeed indication by this guidance.	
34-10-1A	(CAT)	C	–	–	May be inoperative provided that: (a) a primary independent airspeed indication is available at each required pilot's station, and (b) a standby airspeed indication is available.	
34-10-1B	(NCO/SPO)	C	–	1	Any in excess of one available at the pilot's station may be inoperative, provided that it is not associated with emergency procedures.	
34-10-2	**Primary altitude indication**				Note: A secondary/standby altitude indication is not considered to be a primary altitude indication.	
34-10-2A	(CAT)	B	–	–	May be inoperative provided that: (a) the flight is conducted under VFR, (b) an independent altitude indication is available at each required pilot's station, and (c) an additional independent altitude indication is operative for single pilot operations. Note: For single pilot operations, a secondary/standby or off-side indication may satisfy condition (b) or (c) if the visibility requirements are met.	
34-10-2B	(CAT)	B	–	–	May be inoperative provided that: (a) the flight is conducted under VFR in sight of the surface, and (b) a primary altitude indication is available at each required pilot's station.	
34-10-2C	(NCO/SPO)	C	–	–	May be inoperative provided that: (a) the flight is conducted under VFR, and (b) an altitude indication is available at each required pilot's station. Note: For single pilot operations, a secondary/standby or off-side indication may satisfy condition (b) if the visibility requirements are met.	

ATA CHAPTER: 34 Navigation					PAGE: 34-x
(1) System & sequence numbers item	(2) Rectification interval				
		(3) Number installed			
			(4) Number required for dispatch		
(continued)				(5) Remarks or exceptions	

Aircraft applicability: Aeroplanes

ATA CHAPTER: 34 Navigation						PAGE: 34-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
34-10-3	**Turn and slip indicator**					
34-10-3-1	**Turn indication**					
34-10-3-1A	(CAT)	B	–	0	May be inoperative for single pilot operations provided that operations are conducted under day VFR.	
34-10-3-1B	(ALL)	C	–	0	May be inoperative for single pilot operations provided that the standby attitude indication is operative.	
34-10-3-1C	(NCO/SPO)	C	–	0	May be inoperative for single pilot operations provided that operations are conducted under day VFR.	
34-10-3-1D	(ALL)	C	–	1	Any in excess of one may be inoperative provided that: (a) the operative turn indication is on the pilot flying side, and (b) the primary attitude indications are operative at each required pilot's station.	
34-10-3-1E	(ALL)	B	–	1	Any in excess of one may be inoperative provided that: (a) operations are conducted under day VMC, and (b) the primary attitude indications are operative at each required pilot's station.	
34-10-3-2	**Slip indicator**					
34-10-3-2A	(ALL)	C	–	1	Any in excess of one may be inoperative provided the operative slip indicator is on the pilot flying side.	
34-10-3-2B	(NCO/SPO)	D	–	0	May be inoperative provided operations are conducted under day VFR.	
34-10-4	**Vertical speed indicator**					
34-10-4A	(CAT)	C	–	1	Any in excess of one may be inoperative provided the operative VSI is on the pilot flying side.	
34-10-4B	(NCO/SPO)	C	–	0	May be inoperative for day VFR operation.	

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 34 Navigation						PAGE: 34-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
34-10-3	**Turn and slip indicator**					
34-10-3-1	**Turn indication**					
34-10-3-1A	(ALL)	B	–	0	May be inoperative provided that at least one slip indicator is operative on the pilot flying side.	
34-10-3-2	**Slip indicator**					
34-10-3-2A	(ALL)	C	–	1	Any in excess of one may be inoperative provided that the operative slip indicator is on the pilot flying side.	
34-10-3-2B	(NCO/SPO aeroplanes)	D	–	0	May be inoperative provided that operations are conducted under day VFR.	
34-10-4	**Vertical speed indicator**					
34-10-4A	(CAT)	C	–	1	Any in excess of one may be inoperative provided that the operative VSI is on the pilot flying side.	
34-10-4B	(NCO/SPO)	C	–	0	May be inoperative for day VFR operation.	

Aircraft applicability: Aeroplanes & Helicopters

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(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
34-10-5	**Outside Air Temperature (OAT) indicator**				
34-10-5A	(ALL)	C	–	0	(O) May be inoperative provided that another air temperature indication is operative that is convertible into OAT. *(O) Procedures must be established to provide guidance to the crew to convert the alternate temperature indication into OAT.*
34-10-5B	(ALL)	C	–	0	May be inoperative provided that: (a) operations are conducted under VFR, (b) operations are not conducted in known or forecasted icing conditions, and (c) weather reports indicate that at any point of the route that is intended to be flown, the OAT is within the aircraft's operating temperature limitations.
34-15-1	**Altitude alerting system**				
34-15-1A	(ALL)	C	–	0	(O) May be inoperative provided that the altitude alerting system is not part of the equipment required for the intended operation. *(O) Procedures must be established to specify any applicable restriction for operations that require a specific approval.*
34-15-2	**Radio altimeter**				
34-15-2A	(ALL)	C	–	0	May be inoperative provided that the approach minima or the operating procedures are not dependent upon its use.

Aircraft applicability: Helicopters

ATA Chapter: 34 Navigation					
(1) System & sequence numbers ITEM		(2) Rectification Interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or Exceptions
34-15-3	**Radio Altimeter with an Audio Voice Warning (or equivalent)**				
34-15-3A	(CAT)	A	-	0	(O) May be inoperative provided that: (a) the helicopter is not operated for more than 6 hours over water since after the time when the radio altimeter was found to be inoperative, (b) a maximum of 24 hours have elapsed since the radio altimeter was found to be inoperative, (c) the helicopter is not operated over water at an altitude of less than 500 feet except during take-offs and landings, and (d) the helicopter does not descend below an altitude of 500 feet on approach to a landing over water unless the landing site is clearly visible to the pilot. **Procedures** (O) To provide operational procedures to the flight crew to ensure that the applicable dispatch conditions are satisfied.

Aircraft applicability: Aeroplanes & Helicopters

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(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
34-20-1	**Stabilised direction indication**				
34-20-1A	(CAT)	C	–	1	Any in excess of one may be inoperative for single pilot operations provided that: (a) stabilised direction indication is operative on the pilot flying side, and (b) a magnetic/standby compass is operative.
34-20-1B	(CAT)	B	–	1	(O) Any in excess of one may be inoperative for single pilot operations provided that: (a) operations are conducted under day VFR, (b) the stabilised direction indication is displayed at each required pilot's station, and (c) a magnetic/standby compass is operative. *(O) Procedures must be established to ensure that there is an adequate configuration of the displays in accordance with the above condition (b).*
34-20-1C	(NCO/SPO)	C	–	1	Any in excess of one may be inoperative provided that a stabilised direction indication is operative on the pilot flying side.
34-20-1D	(NCO/SPO)	C	–	0	May be inoperative on the pilot flying side for day VFR operations, in sight of the surface with an adequate external attitude reference.
34-20-2	**Primary attitude indication**				Note: A secondary/standby attitude indication is not considered to be a primary indication.
34-20-2A	(CAT)	C	–	1	Any in excess of one may be inoperative for single pilot operations provided that the primary attitude indication is operative on the pilot flying side.
(continued)					

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(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
34-20-2B	(CAT)	B	–	1	(O) Any in excess of one may be inoperative provided that: (a) operations are conducted under VFR, (b) the primary attitude indication is displayed at both pilots' stations, and (c) a standby attitude indication is operative. *(O) Procedures must be established to ensure that there is an adequate configuration of the displays in accordance with the above condition (b).*
34-20-2C	(NCO/SPO)	C	–	1	Any in excess of one may be inoperative for single pilot operations provided that the primary attitude indication is operative on the pilot flying side.
34-20-2D	(NCO/SPO)	B	–	0	May be inoperative provided that: (a) operations are conducted under VFR, and (b) a standby attitude indication is operative.
34-20-2E	(CAT)	B	–	0	May be inoperative for single pilot operations provided that: (a) operations are conducted under day VFR in sight of the surface with an adequate external attitude reference, and (b) a standby attitude indication is operative.
34-20-2F	(NCO/SPO)	C	–	0	May be inoperative for single pilot operations provided that operations are conducted under day VFR and in sight of the surface with an adequate external attitude reference.
34-20-2G	(ALL Helicopters)	C	-	0	May be inoperative provided that: (a) operations are conducted under day VFR, and (b) operations are not conducted over water and out of sight of land, and (c) visibility is more than 1 500 m.
(continued)					

ATA CHAPTER: 34 Navigation						PAGE: 34-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
(continued)						
34-20-3	**Standby attitude indication**					
34-20-3A	(ALL)	C	–	0	May be inoperative provided that the primary attitude indication is not provided through an electronic display indicator.	
34-20-3B	(ALL Helicopters)	C	–	0	May be inoperative for single pilot operations provided that operations are conducted under day VFR and in sight of the surface with an adequate external attitude reference.	
34-22-1	**Magnetic/Standby compass**					
34-22-1A	(ALL aeroplanes and helicopters)	B	–	0	May be inoperative for single pilot operations provided that: (a) a stabilised direction indication is operative on the pilot flying side, and (b) another source of magnetic heading is available and visible by the pilot flying.	
34-22-1B	(ALL aeroplanes)	B	–	0	May be inoperative provided that: (a) operations are conducted under day VFR, and (b) two independent stabilised direction indications are operative.	
34-22-1C	(ALL aeroplanes)	B	–	0	May be inoperative provided that: (a) two independent stabilised direction indications are operative, and (b) another source of magnetic heading is available and visible by the pilot flying.	
34-22-1D	(ALL helicopters)	B	–	0	May be inoperative provided that: (a) operations are conducted under day VFR, and (b) the flight is conducted over routes that are navigated by reference to visual landmarks.	
34-22-1E	(ALL helicopters)	B	–	0	May be inoperative provided that: (a) two independent stabilised direction indications are operative, and (b) the flight is conducted over routes that are navigated by reference to visual landmarks.	
(continued)						

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(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
ATA CHAPTER: 34 Navigation						PAGE: 34-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
(continued)						
34-31-1	**Marker beacon**					
34-31-1A	(ALL aeroplanes)	C	–	0	May be inoperative under IFR operations provided that the approach procedures do not require marker fixes.	
34-31-1B	(ALL aeroplanes and helicopters)	D	–	0	May be inoperative under VFR operations.	
34-32-1	**Approach aids (e.g. ILS, Satellite-Based Augmentation System (SBAS))**					
34-32-1A	(ALL aeroplanes)	B	–	0	May be inoperative under IFR operations provided that approaches and missed approaches in which navigation is based on the affected item, are not included in the flight plan.	
34-32-1B	(ALL aeroplanes and helicopters)	D	–	0	May be inoperative under VFR operations.	
34-40-1	**Airborne collision avoidance system (ACAS)**					
34-40-1A	(CAT)	C	–	0	(O)(M) May be inoperative provided that: (a) the ACAS is deactivated, and (b) operating procedures do not require its use. *(O) Procedures must be established to provide alternate crew procedures, as applicable.* *(M) Procedures must be established to deactivate the ACAS.*	

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(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
34-40-1B	(NCO/SPO)	D	–	0	(O)(M) May be inoperative provided that: (a) the ACAS is deactivated, and (b) operations are not conducted in an airspace where the ACAS is required. *(M) Procedures must be established to deactivate the ACAS.*	
	(continued)					

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(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
	(continued)					
34-41-1	**Weather detection system** (Antenna, transceiver, controllers, displays)					
34-41-1A	(CAT unpressurised /SPO unpressurised /NCO aeroplanes and helicopters)	D	–	0	May be inoperative.	
34-41-1B	(CAT pressurised aeroplanes/SPO pressurised aeroplanes)	C	–	0	May be inoperative provided that operations are conducted in day VMC.	
34-41-1C	(CAT pressurised aeroplanes/SPO pressurised aeroplanes)	C	–	0	May be inoperative provided that no thunderstorm or other potentially hazardous weather conditions, regarded as detectable with the airborne weather detection system, are forecasted along the intended flight route.	
34-41-1-1	Wind shear detection/Warning system predictive function					
34-41-1-1A	(ALL)	C	–	0	May be inoperative.	

Aircraft applicability: Aeroplanes

ATA CHAPTER: 34 Navigation						PAGE: 34-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
34-43-1	**Terrain awareness warning system (Class B TAWS)**					
34-43-1A	(ALL)	D	–	0	May be inoperative.	
34-43-1-1	Modes 1 and 3					
34-43-1-1A	(ALL)	C	–	0	One or more modes may be inoperative provided that the forward looking terrain avoidance (FLTA) and premature descent alert (PDA) functions are operative.	
34-43-1-2	Glideslope deviation (Mode 5)					
34-43-1-2A	(ALL)	B	–	0	May be inoperative.	
34-43-1-2B	(ALL)	C	–	0	May be inoperative for day VMC only.	
34-43-1-3	FLTA and PDA functions					
34-43-1-3A	(ALL)	B	–	0	May be inoperative provided that: (a) modes 1 and 3 are operative, and (b) the approaches procedures do not require it use.	
34-43-1-4	Advisory call-outs					
34-43-1-4A	(ALL)	C	–	0	(O) May be inoperative provided that: (a) low-visibility approaches that require the use of affected call-outs are not performed, and (b) alternate procedures are established and used. Note: Check flight manual limitations for approach minima. *(O) Procedures must be established to provide alternate crew procedures, as applicable.*	
(continued)						

Aircraft applicability: Aeroplanes & Helicopters

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(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
(continued)					
34-51-1	**Navigation systems (based on VOR, DME, ADF, Global Navigation Satellite System, Inertial Navigation System)**				
34-51-1A	(CAT)	C	–	–	(O) One or more may be inoperative provided that: (a) the navigation systems required for each segment of the intended flight route are operative, and (b) alternate procedures are established and used, where applicable. *(O) Procedures must be established to give alternate procedures in case existing operational procedures are affected.*
34-51-1B	(NCO/SPO)	D	–	–	(O) One or more may be inoperative provided that: (a) the navigation systems required for each segment of the intended flight route are operative, and (b) alternate procedures are established and used, where applicable. (O) Procedures must be established to give alternate procedures in case the existing operational procedures are affected.
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(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
(continued)					
34-54-1	**Secondary Surveillance Radar (SSR) transponder mode A/C**				
34-54-1A	(ALL)	D	–	–	Any in excess of those required to be operative by the airspace may be inoperative.
34-54-2	**SSR transponder mode S**				
34-54-2A	(ALL)	D	–	–	Any in excess of those required for the intended flight route may be inoperative. Note: An SSR transponder with an operative mode S function is defined as a transponder which can provide, at least, elementary surveillance capability.
34-54-2B	(ALL)	C	–	0	One or more may be inoperative provided that permission is obtained from the Air Navigation Service Provider(s) when required for the intended flight route. Note 1: An SSR transponder with an operative mode S function is defined as a transponder which can provide, at least, elementary surveillance capability. Note 2: Elementary surveillance (ELS) capability (mode S including aircraft identification and pressure altitude reporting) is required in European mode S designated airspace. Note 3: Altitude reporting, provided by an SSR transponder mode S function, is required for ACAS II operation. Refer to item 34-40-1 for flight with ACAS II inoperative. Note 4: Altitude reporting, provided by an SSR transponder mode S function, is required for flight into RVSM airspace.
(continued)					

ATA CHAPTER: 34 Navigation					PAGE: 34-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
(continued)					
34-54-2-1	**Enhanced surveillance functions**				
34-54-2-1A	(ALL)	D	–	0	One or more downlinked aircraft parameters (DAPs) which provide enhanced surveillance may be inoperative when they are not required for the intended flight route.
34-54-2-1B	(ALL)	C	–	0	One or more downlinked aircraft parameters (DAPs) which provide enhanced surveillance may be inoperative when they are required for the intended flight route. Note 1: Enhanced surveillance capability is required in mode S enhanced notified airspace. Note 2: For operations in the Single European Sky, enhanced surveillance capability cannot remain inoperative more than 3 consecutive days.
34-54-2-2	**Extended squitter (ADS-B out) transmissions**				
34-54-2-2A	(ALL)	D	–	0	One or more extended squitter transmissions may be inoperative when they are not required for the intended flight route.
34-54-2-2B	(ALL)	C	–	0	One or more extended squitter transmissions may be inoperative when they are required for the intended flight route. Note: For operations in the Single European Sky, enhanced surveillance capability cannot remain inoperative more than 3 consecutive days.

Additional considerations:

— **34-10-5 OAT indicator:** This item applies to reciprocating engine-powered aeroplanes of more than 2 722 kg (6 000 lbs) maximum weight and turbine engine-powered aeroplanes.

— **34-15-03 Radio Altimeter with an Audio Voice Warning:** In addition to the equipment required by CAT.IDE.H.145 of Annex IV (Part-CAT) to Regulation (EU) No 965/2012, helicopters involved in NVIS operations shall be equipped with a radio altimeter and a low height warning system that gives visual and audio warnings that are selectable by the pilot and are discernible during NVIS operation.

— **34-20-2A Primary attitude indication:** For electronic cockpits the standby horizon must be operative.

— **34-51-1 Navigation systems:** The listed items are applicable to simple avionics architecture. In case of more complex or more integrated architecture, the dispatch conditions need to be adapted accordingly.

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 35 Oxygen					**PAGE: 35-x**
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
35-00-1	**Supplemental oxygen system Non-pressurised aircraft**				
35-00-1A	(ALL)	D	–	–	Any in excess of those required by regulations may be inoperative.

Aircraft applicability: Aeroplanes

ATA CHAPTER: 35 Oxygen						PAGE: 35-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
35-10-1	**Flight crew fixed oxygen system** (Supplemental)					
35-10-1-1	Flight deck pressure indications					
35-10-1-1A	(ALL)	C	–	–	(O)(M) One or more may be inoperative provided that a procedure is used to ensure that the oxygen supply is above the minimum for the intended flight. *(O)/(M) Procedures must be established to provide an alternate means to compute the available oxygen quantity, e.g. using the pressure gauge located on the bottle.*	
35-10-1-2	Bottle gauges					
35-10-1-2A	(ALL)	C	–	0	One or more may be inoperative provided that the associated flight deck pressure indication is operative.	
35-10-1-3	Additional oxygen masks (e.g. supernumerary)					
35-10-1-3A	(ALL)	D	–	–	Any in excess of those required by regulations may be inoperative.	
(continued)						

ATA CHAPTER: 35 Oxygen						PAGE: 35-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
(continued)						
35-20-1	**Passenger oxygen system (Supplemental oxygen)**					
35-20-1A	(ALL)	C	–	0	(O)(M) May be inoperative provided that: (a) the maximum altitude is limited to 10 000 ft pressure altitude, (b) an adequate supply of fresh air is provided to the cabin, and (c) the passengers are appropriately briefed. *(O)/(M) Procedures must be established to set the aeroplane in a configuration that provides an adequate supply of fresh air to the cabin.* *(O) Procedures must be established to provide a passenger briefing in accordance with the dispatch configuration.*	
35-20-1B	(ALL)	D	–	0	May be inoperative provided that no cabin occupant is carried.	

Additional considerations:

— **35-20-1 Passenger oxygen system:** Fresh air is non-recirculated air.

Aircraft applicability: Aeroplanes

ATA CHAPTER: 38 Water/Waste					PAGE: 38-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
38-30-1	**Lavatory waste system**				
38-30-1A	(ALL)	D	1	0	(M) May be inoperative provided that: (a) any waste is drained, and the system is inspected for leakage, (b) the system components are deactivated, and (c) lavatory access, if applicable, is closed and placarded 'INOPERATIVE — DO NOT USE' or the affected lavatory system is placarded 'INOP – DO NOT USE'. *(M) Procedures must be established to drain, inspect and deactivate the system.*
38-30-2	**Pilot relief tube**				
38-30-2A	(ALL)	D	-	0	May be missing or inoperative provided that it is not used.

Aircraft applicability: Aeroplanes & Helicopters

ATA CHAPTER: 46 Information systems					PAGE: 46-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
46-20-1	**Electronic flight bag (EFB) systems**				
46-20-1A		C	–	0	(M)(O) May be inoperative provided that alternate procedures are established and used where operating procedures require the use of the affected EFB.
46-20-1B		C	-	1	(O) Any in excess of one may be inoperative provided that alternate procedures are established and used to ensure that the required backup means are available to the crew.
46-20-1C		D	-	0	May be inoperative provided that procedures do not require the use of the affected EFB.
46-20-2	**EFB Installed Resources**				
46-20-2-1	Mounting device				
46-20-2-1A		C	–	1	(M)(O) Any in excess of one may be inoperative provided that the affected EFB is secured by an alternative means.
46-20-2-1B		C	–	0	(M)(O) May be inoperative provided that: (a) the associated EFB is used in accordance with the Portable EFB storage criteria, and (b) alternate procedures are established and used where operating procedures require the use of the affected EFB.
46-20-2-1C		D	-	0	(M) May be inoperative provided that: (a) the hardware and the associated EFB are properly stored or removed from the aircraft, and (b) the associated EFB is considered inoperative (Refer to 46-20-1C).
46-20-2-2	Data connectivity				
46-20-2-2A		C	–	1	(M)(O) Any in excess of one may be inoperative provided that an alternate means of data connectivity is used.
46-20-2-2B		C	–	0	(M)(O) May be inoperative provided that alternate procedures are established and used where operating procedures are dependent upon the use of the affected EFB.

ATA CHAPTER: 46 Information systems					PAGE: 46-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
46-20-2-2C		D	-	0	May be inoperative provided that procedures do not require the use of the affected data connectivity.
46-20-3	**Power connection for Portable EFB**				
46-20-3A		C	–	1	(M)(O) Any in excess of one may be inoperative provided that an alternative power source is available and can be used for the planned duration of use of the affected EFB.
46-20-3B		C	–	0	(M)(O) May be inoperative provided that alternate procedures are established and used.
46-20-3C		D	-	-	May be inoperative provided that procedures do not require the use of the affected power connection. *For all entries in ATA 46:* *(M) Procedures must be established to give guidance reference for the deactivation of the affected item, as appropriate, and to provide alternate means, as applicable.* *(O) Procedures must be established to provide instructions to the crew for alternate procedures to be used.*

Additional considerations:

— The purpose of entry 46-20-1 is not to require the inclusion of Portable EFBs in an operator's MEL, but it is a means of controlling inoperative EFB equipment. Other means may also be agreed with the National Aviation Authority (NAA).

Any EFB function which operates normally may be used.

Aircraft applicability: Aeroplanes

ATA CHAPTER: 52 Doors					PAGE: 52-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
52-10-1	**Door key locks**				
52-10-1	(ALL)	D	–	–	(M) May be inoperative provided that the lock is secured in the UNLOCKED position. *(M) Procedures must be established to secure the lock in the unlocked position.*
52-70-1	**Cabin door warning light**				
52-70-1A	(ALL)	C	1	0	(O) May be inoperative provided that: (a) a flight crew member confirms by visual inspection that all doors are properly closed and locked prior to each departure, (b) the doors are not reopened again prior to departure, (c) the 'Fasten Seat Belt' sign remains ON, and (d) the passengers are briefed prior to each departure to have their seat belts fastened during the entire flight. *(O) Procedures must be established to brief the passengers prior to each departure.*

Aircraft applicability: Aeroplanes

ATA CHAPTER: 61 Propellers					PAGE: 61-x
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
61-20-1	**Propeller synchrophasing system**				
61-20-1A	(ALL)	C	1	0	May be inoperative.

CS GEN.MMEL.150 Operational and maintenance procedures

ED Decision 2014/005/R

The operational and maintenance procedures required by the items selected from the item list are developed by the applicant and made available to the end users.

GM1 GEN.MMEL.150 Operational and maintenance procedures

ED Decision 2014/005/R

The periodicity of the performance of the procedures should be clarified either in a generic manner in the MMEL preamble or specifically in the associated dispatch conditions. Maintenance deactivation procedures should normally be performed once prior to the first flight under the associated item. Maintenance verification procedures periodicity may vary and should, therefore, be clarified in the MMEL. Operational procedures should normally be performed or acknowledged by the flight crew members before each flight unless otherwise specified.

Operational and maintenance procedures should be consistent with the existing operational and maintenance instructions (aeroplane flight manual, aeroplane maintenance manual, weight and balance manual, etc.).