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BY EMBRAER

LEGACY 450/500

ANAC

MASTER MINIMUM EQUIPMENT LIST

EMBRAER S.A.

THIS DOCUMENT IS APPLICABLE TO ALL EMB-545 AND EMB-550 MODELS CERTIFIED FOR OPERATION UNDER ANAC AIRWORTHINESS REQUIREMENTS.

NOTE: THE EMB-545 AND EMB-550 HAVE THE COMMERCIAL DESIGNATION OF LEGACY 450 AND LEGACY 500 RESPECTIVELY.

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DATE: 13 out 2014

MMEL–5000

OCTOBER 13, 2014
REVISION 3 – FEBRUARY 23, 2016

MASTER MINIMUM EQUIPMENT LIST

(MMEL–5000)

LOG OF REVISIONS

REVISION NUMBER AND DATE	REVISED PAGES	DESCRIPTION OF REVISION	ANAC APPROVAL
1 MAR 04, 15	Section 1: 21-4, 21-5 Section 1: 24-1 Section 1: 28-1, 28-2, 28-3 Section 1: 34-1 Section 1: 34-5 Section 2: ADV-1, ADV-2	Update remarks for item 21-31-00. Update remarks for item 24-31-01. Include new item 28-21-03. Include new item 34-23-01. Update remarks for item 34-31-00. Include new item 34-42-00. Include new item LG-HYD MAINT REQD advisory message.	MMEL-5000 Revision 1 approved by ANAC on March 04, 2015.
2 JUL 03, 15	Section 1: 34-9	Remove dispatch with two FMS-TOLD Function inoperative.	MMEL-5000 Revision 2 approved by ANAC on July 03, 2015.

MASTER MINIMUM EQUIPMENT LIST

(MMEL–5000)

LOG OF REVISIONS

REVISION NUMBER AND DATE	REVISED PAGES	DESCRIPTION OF REVISION	ANAC APPROVAL
2 JUL 03, 15	Section 2: ADV-1, ADV-2 Section 2: STA-1	Include new item FLTCTRL FAULT advisory message. Include new item ELEC SDU FAULT status message.	MMEL-5000 Revision 2 approved by ANAC on July 03, 2015.
3 FEB 23, 16	Section 1: 23-1 Section 1: 27-1 Section 1: 28-2 Section 1: 32-1	Include new item 23-15-00. Include new item 27-03-01. Update remarks for item 28-21-03. Include new item 32-41-00 and update remarks for item 32-47-00.	MMEL-5000 Revision 3 approved by ANAC on February 23, 2016.

MASTER MINIMUM EQUIPMENT LIST

(MMEL–5000)

LOG OF REVISIONS

REVISION NUMBER AND DATE	REVISED PAGES	DESCRIPTION OF REVISION	ANAC APPROVAL
3 FEB 23, 16	Section 1: 34-1, 34-2, 34-5, 34-6, 34-7, 34-8, 34-10, 34-11	Update remarks for items 34-23-01, 34-31-00, 34-41-00, 34-43-00, 34-52-00, 34-61-00 and include new item 34-61-01.	MMEL-5000 Revision 3 approved by ANAC on February 23, 2016.
	Section 1: 36-3	Update remarks for item 36-14-04.	
	Section 1: 42-1	Include new item 42-31-00.	
	Section 1: 45-1	Update remarks for item 45-00-01.	
	Section 1: 46-1	Update remarks for item 46-22-00.	
	Section 1: 49-1	Include new item 49-00-00.	
	Section 2: CAU-1	Include new items APU FIRE DET FAIL, APU FIREXBTL B FAIL and AUTOBRAKE FAIL caution messages.	

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HIGHLIGHTS OF CHANGE

REVISION 3 – FEBRUARY 23, 2016

Revision 3	Reissued to include EMB-545.
SECTION 1:	
23-15-00	New Item.
27-03-01	New Item.
28-21-03	Updated the remarks and/or exceptions.
32-41-00	New Item.
32-47-00	Updated the remarks and/or exceptions.
34-23-01	Updated the remarks and/or exceptions.
34-31-00	Update the effectivity of the item.
34-41-00	Update the effectivity of the item.
34-43-00	Update the effectivity of the item.
34-52-00	Update the effectivity of the item.
34-61-00	Updated the relief.
34-61-01	New Item.
36-14-04	Updated the remarks and/or exceptions.
42-31-00	New Item.
45-00-01	Updated the remarks and/or exceptions.
46-22-00	Updated the remarks and/or exceptions.
49-00-00	New Item.

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HIGHLIGHTS OF CHANGE

REVISION 3 – FEBRUARY 23, 2016

SECTION 2:

APU FIRE DET FAIL CAUTION message	New Item.
APU FIREXBTL B FAIL CAUTION message	New Item.
AUTOBRAKE FAIL CAUTION message	New Item.

LIST OF EFFECTIVE PAGES

ORIGINAL ..... 0 ..... OCT 13, 2014
REVISION ..... 1 ..... MAR 04, 2015
REVISION ..... 2 ..... JUL 03, 2015
REVISION ..... 3 ..... FEB 23, 2016

* Title ..... REVISION 3

* LOR-0-1 ..... REVISION 3
* LOR-0-2 ..... REVISION 3
* LOR-0-3 ..... REVISION 3

* LEP-0-1 ..... REVISION 3
* LEP-0-2 ..... REVISION 3

* COV-1-1 ..... REVISION 3

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SECTION 1

SYSTEM/LRU – ORIENTED MMEL ITEMS

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DEFINITIONS – SECTION 1 (LRU-Oriented)

1) System Definitions.

System numbers are based on the Air Transport Association (ATA) Specification Number 2200 and items are numbered sequentially.

a) "Item" (Column 1) means the equipment, system, component, or function listed in the "Item" column.

b) "Number Installed" (Column 2) is the number (quantity) of items normally installed in the airplane. This number represents the airplane configuration considered in developing this MMEL. Should the number be a variable (e.g., passenger cabin items) a number is not required.

c) "Number Required for Dispatch" (Column 3) is the minimum number (quantity) of items required for operation provided the conditions specified in Column 4 are met.

NOTE: Where the MMEL shows a variable number required for dispatch, the MEL must reflect the actual number required for dispatch or an alternate means of configuration control approved by the Administrator.

d) "Remarks or Exceptions" (Column 4) in this column includes a statement either prohibiting or permitting operation with a specific number of items inoperative, provisos (conditions and limitations) for such operation, and appropriate notes.

e) A vertical bar (change bar) in the margin indicates a change, addition or deletion in the adjacent text for the current revision of that page only. The change bar is dropped at the next revision of that page.

2) "Airplane/Rotorcraft Flight Manual" (AFM/RFM) is the document required for type certification and approved by the responsible ANAC Airplane Certification Office. The ANAC approved AFM/RFM for the specific airplane is listed on the applicable Type Certificate Data Sheet.

3) "As required by local regulations" means that the listed item is subject to certain provisions (restrictive or permissive) expressed in the RBHA/RBAC operating rules. The number of items required by the RBHA/RBAC must be operative. When the listed item is not required by RBHA/RBAC it may be inoperative for time specified by repair category.

4) Each inoperative item must be placarded to inform and remind the crewmembers and maintenance personnel of the equipment condition.

NOTE: 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.

5) "-" symbol in Column 2 and/or Column 3 indicates a variable number (quantity) of the item installed.

6) "Deleted" in the remarks column after a sequence item indicates that the item was previously listed but is now required to be operative if installed in the airplane.

7) NOT APPLICABLE.

8) "Regulamento Brasileiro de Homologação Aeronáutica (RBHA)/Regulamento Brasileiro de Aviação Civil (RBAC)" means the applicable requirement for the certified airplane.

9) "Flight Day" means a 24 hour period (from midnight to midnight) either Universal Coordinated Time (UCT) or local time, as established by the operator, during which at least one flight is initiated for the affected airplane.

10) "Icing Conditions" means an atmospheric environment that may cause ice to form on the airplane or in the engine(s).

11) Alphabetical symbol in Column 4 indicates a proviso (condition or limitation) that must be complied with for operation with the listed item inoperative.

12) "Inoperative" means a system and/or component malfunction to the extent that it does not accomplish its intended purpose and/or is not consistently functioning normally within its approved operating limit(s) or tolerance(s).

13) "Notes:" in Column 4 provides additional information for crewmember 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 provisos.

14) Inoperative components of an inoperative system:

Inoperative items which are components of a system which is inoperative are usually considered components directly associated with and having no other function than to support that system (Warning/Caution systems associated with the inoperative system must be operative unless relief is specifically authorized per the MMEL).

15) "(M)" symbol 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 authorized to perform certain functions. Procedures requiring specialized knowledge or skill, or requiring the use of tools or test equipment should be accomplished by maintenance personnel. 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 manual or MEL.

16) "(O)" symbol 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 authorized 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 manual or MEL.

NOTE: The (M) and (O) symbols are required in the operator's MEL unless otherwise authorized by the Administrator.

17) "Deactivated" and "Secured" means that the specified component must be put into an acceptable condition for safe flight. An acceptable method of securing or deactivating will be established by the operator.

18) "Visual Flight Rules" (VFR) is as defined in RBHA/RBAC Part 91. This precludes a pilot from filing an Instrument Flight Rules (IFR) flight plan.

19) "Visual Meteorological Conditions" (VMC) means the atmospheric environment is such that would allow a flight to proceed under the visual flight rules applicable to the flight. This does not preclude operating under Instrument Flight Rules.

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

21) "Passenger Convenience Items" means those items related to passenger convenience, comfort or entertainment such as, but not limited to, galley equipment, movie equipment, ash trays, stereo equipment, overhead reading lamps, etc.

22) Repair Intervals: All users of an MEL approved under RBHA/RBAC 91, 121, 129 and 135 must effect repairs of inoperative systems or components, deferred in accordance with the MEL, at or prior to the repair times established by the following letter designators:

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

Category B. Items in this category shall be repaired within three (3) consecutive calendar days (72 hours), excluding the day the malfunction was recorded in the airplane maintenance record/logbook. For example, if it were recorded at 10 a.m. on January 26th, the three day interval would begin at midnight the 26th and end at midnight the 29th.

Category C. Items in this category shall be repaired within ten (10) consecutive calendar days (240 hours), excluding the day the malfunction was recorded in the airplane maintenance record/logbook. For example, if it were recorded at 10 a.m. on January 26th, the 10 day interval would begin at midnight the 26th and end at midnight February 5th.

Category D. Items in this category shall be repaired within one hundred and twenty (120) consecutive calendar days (2880 hours), excluding the day the malfunction was recorded in the airplane maintenance log and/or record.

The letter designators are inserted adjacent to Column 2.

23) Electronic fault alerting system - General

New generation airplane display system fault indications to the flight crew by use of computerized display systems. Each airplane manufacturer has incorporated individual design philosophies in determining the data that would be represented. The following are customized definitions (specific to each manufacturer) to help determine the level of messages affecting the airplane's dispatch status. When preparing the MEL document, operators are to select the proper definition for their airplane, if appropriate.

The EMB-545/550 airplane are equipped with an Crew Alerting System (CAS) that provides four different message levels: WARNING, CAUTION, ADVISORY and STATUS. Failures that effect dispatchability are presented to the flight crew at one of these levels. Other failures may be presented only to the maintenance personnel on the Multi Function Display (MFD) maintenance pages or through the download of the Onboard Maintenance System (OMS). System conditions that result only in a maintenance level message, i.e. no correlation with a higher level CAS message, do not affect dispatch and do not require action other than as addressed within an operator's standard maintenance program.

24) "Administrative control item" means an item listed by the operator in the MEL for tracking and informational purposes. It may be added to an operator's MEL by approval of the Principal Operations Inspector provided no relief is granted, or provided conditions and limitations are contained in an approved document (i.e. Structural Repair Manual, airworthiness directive, etc). If relief other than that granted by an approved document is sought for an administrative control item, a request must be submitted to the Administrator. If the request results in review and approval by the OEB, the item becomes an MMEL item rather than an administrative control item.

25) "***" symbol in Column 1 indicates an item which is not required by regulation but which may have been installed on some models of airplane covered by this MMEL. This item may be included on the operator's MEL after the approving office has determined that the item has been installed on one or more of the operator's airplane. The symbol, however, shall not be carried forward into the operator's MEL. It should be noted that neither this policy nor the use of this symbol provide authority to install or remove an item from an airplane.

26) "Excess Items" means those items that have been installed that are redundant to the requirements of the RBHA/RBACs.

27) "Day of Discovery" is the calendar day an equipment/instrument malfunction was recorded in the airplane maintenance log and or record. This day is excluded from the calendar days or flight days specified in the MMEL for the repair of an inoperative item of equipment. This provision is applicable to all MMEL items, i.e., categories "A, B, C, and D".

28) "Considered Inoperative", as used in the provisos means that item must be treated for dispatch, taxi and flight purposes as though it were inoperative. The item should not be used or operated until the deferred item is repaired. Additional 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 repair category.

29) "Is not used" in the provisos, remarks or exceptions for an MMEL item may specify that another item relieved in the MMEL "is not used". In such cases, crewmembers should not activate, actuate, or otherwise utilize that component or system under normal operations. It is not necessary for the operator to accomplish the (M) procedures associated with the item. However, operational requirements must be complied with, and 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 crewmembers that a component or system is not to be used under normal operations.

30) Nonessential equipment and furnishings (NEF) are those items installed on the airplane as part of the original certification, supplemental type certificate, or engineering order that have no effect on the safe operation of flight and would not be required by the applicable certification rules or operational rules. They are those items that if inoperative, damaged or missing have no effect on the airplane's ability to be operated safely under all operational conditions. These nonessential items may be in areas including, but not limited to, the passenger compartment, flight deck area, service areas, cargo areas, crew rest areas, lavatories and galley areas. NEF items are not items already identified in the MEL or CDL of the applicable airplane. They do not include items that are functionally required to meet the certification rule or for compliance with any operational rule. Operator's NEF process shall not provide for deferral of items within serviceable limits identified in the manufacture's maintenance manual or operator's approved maintenance program such as wear limits, fuel/hydraulic leak rates, oil consumption, etc. Cosmetic items that are fully serviceable but worn or soiled may be deferred under an operator's NEF process.

31) "Operative" means a system and/or component will accomplish its intended purpose and is consistently functioning normally within its design operating limit(s) and tolerance(s). When an MMEL item specifies that an item of equipment must be operative, it does not mean that it's operational status must be verified; it's to be considered operative unless reported or known to be malfunctioning. When an MMEL item specifies that an item of equipment must be verified operative, it means that it must be checked and confirmed operative at the interval(s) specified for that MMEL item. When an MMEL item specifies that an item of equipment must be verified but no interval is specified, verification is required only at the time of deferral. Other terminology sometimes used interchangeably with "operative" within the MMEL is "operates normally", "fully operative", and "considered operative". The airplane operator's MEL may incorporate standardized terminology of the airplane operator's choice to specify that an item of equipment must be operative, provided the airplane operator's MEL definitions indicate that the selected "operative" terminology means that the required item of equipment will accomplish its intended purpose and is consistently functioning normally within its design operating limit(s) and tolerance(s).

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

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

b) Fly away kits (excluding e.g. cans of hydraulic fluid, cleaning solvents, batteries, capacitors, chemical generators, etc);

NOTE: If serviceable tyres are included, they should only be inflated to a minimum pressure that preserves their serviceability; and

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

PREAMBLE – SECTION 1 (LRU-Oriented)

The Airworthiness Regulations require that all equipment installed on an airplane in compliance with the Airworthiness Standards and the Operating Rules must be operative. However, the Rules also permit the publication of a Minimum Equipment List (MEL) where compliance with certain equipment requirements is not necessary in the interests of safety under all operating conditions. Experience has shown that with the various levels of redundancy designed into airplane, operation of every system or installed component may not be necessary when the remaining operative equipment can provide an acceptable level of safety. A Master Minimum Equipment List (MMEL) is developed by the Airworthiness Authority, with participation by the aviation industry, to improve airplane utilization and thereby provide more convenient and economic air transportation for the public. The Airworthiness Authority approved MMEL includes those items of equipment related to airworthiness and operating regulations and other items of equipment which the Administrator finds may be inoperative and yet maintain an acceptable level of safety by appropriate conditions and limitations; it does not contain obviously required items such as wings, flaps, and rudders. The MMEL is the basis for development of individual operator MELs which take into consideration the operator's particular airplane equipment configuration and operational conditions. Operator MELS, for administrative control, may include items not contained in the MMEL; however, relief for administrative control items must be approved by the Administrator. An operator's MEL may differ in format from the MMEL, but cannot be less restrictive than the MMEL. The individual operator's MEL, when approved and authorized, permits operation of the airplane with inoperative equipment.

Equipment not required by the operation being conducted and equipment in excess of Airworthiness Regulations requirements are included in the MEL with appropriate conditions and limitations. The MEL must not deviate from the Airplane Flight Manual Limitations, Emergency Procedures or with Airworthiness Directives. It is important to remember that all equipment related to the airworthiness and the operating regulations of the airplane not listed on the MMEL must be operative.

Suitable conditions and limitations in the form of placards, maintenance procedures, crew operating procedures and other restrictions as necessary are specified in the MEL to ensure that an acceptable level of safety is maintained.

The MEL is intended to permit operation with inoperative items of equipment for a period of time until repairs can be accomplished. It is important that repairs be accomplished at the earliest opportunity. In order to maintain an acceptable level of safety and reliability the MMEL establishes limitations on the duration of and conditions for operation with inoperative equipment. The MEL provides for release of the airplane for flight with inoperative equipment. When an item of equipment is discovered to be inoperative, it is reported by making an entry in the Airplane Maintenance Record/Logbook as prescribed by Airworthiness Regulations. The item is then either repaired or may be deferred per the MEL or other approved means acceptable to the Administrator prior to further operation. MEL conditions and limitations, do not relieve the operator from determining that the airplane is in condition for safe operation with items of equipment inoperative.

When these requirements are met, an Airworthiness Release, Airplane Maintenance Record/Logbook entry, or other approved documentation is issued as prescribed by Airworthiness Regulations. Such documentation is required prior to operation with any item of equipment inoperative.

Operators are responsible for exercising the necessary operational control to ensure that an acceptable level of safety is maintained. When operating with multiple inoperative items, the interrelationships between those items and the effect on airplane operation and crew workload will be considered.

Operators are to establish a controlled and sound repair program including the parts, personnel, facilities, procedures, and schedules to ensure timely repair.

WHEN USING THE MEL, COMPLIANCE WITH THE STATED INTENT OF THE PREAMBLE, DEFINITIONS, AND THE CONDITIONS AND LIMITATIONS SPECIFIED IN THE MEL IS REQUIRED.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
21 AIR CONDITIONING					
00-00	ECS Synoptic	C	1	0	Synoptic Indications not required elsewhere in the MMEL may be inoperative.
00-03	Air Conditioning Controller (ACC)	C	1	0	(O) (M) May be inoperative provided: a) Pack is selected OFF, b) Pack Backup is selected OFF, c) Ram air door is secured open, d) Ram air check valve is verified operative, e) Ground operations with passenger door closed are limited to 30 minutes, f) Airplane is operated unpressurized at or below 10000 ft, g) Outflow valve indication on ECS synoptic operates normally, and h) Departure airport SAT is at or above -5°C (23°F).

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
21 AIR CONDITIONING					
21-01	Pack Inlet Valve (PIV)	C	1	0	(O) (M) May be inoperative provided: a) Pack is selected OFF, b) Pack Backup is selected OFF, c) BLEED 1 is selected OFF and is not used, d) Ram air door is secured open, e) Ram air check valve is verified operative, f) Cross bleed is selected OFF after engine 1 start and is not used, g) Ground operations with passenger door closed are limited to 30 minutes, h) Outflow valve indication on ECS synoptic operates normally, i) Airplane is operated unpressurized at or below 10000 ft, j) Airplane is not operated into known or forecast icing conditions, and k) Departure airport SAT is at or above -5°C (23°F).
21-02	Pack Delta Pressure (DP) Sensor	C	1	0	
23-00	Gasper	D	-	0	

System & Sequence Number	ITEM	1.	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
21 AIR CONDITIONING					
24-01	Recirculation Fan	C	1	0	(O) May be inoperative provided the Recirculation Fan is confirmed OFF.
		C	1	0	(O) (M) May be inoperative provided: a) Recirculation Fan is selected OFF, and b) Recirculation Fan is deactivated.
24-02	Recirculation Fan Shutoff Valve (RESOV)	C	1	0	(O) (M) May be inoperative closed provided: a) Recirculation Fan is selected OFF, and b) RESOV is deactivated.
		C	1	0	May be inoperative open provided airplane is operated at or below 15000 ft.
24-03 ***	Recirculation Fan Filter (HEPA Filter)	C	1	0	(O) (M) May be missing, or clogged provided: a) Filter is removed, and b) Recirculation Fan is selected OFF.
25-00	Emergency Ram Air Ventilation Actuation System	C	1	0	(M) May be inoperative provided the Emergency Ram Air Actuator is confirmed on retracted position (Ram Air door open) and deactivated.
26-01	Forward E-Bay Fan	C	2	1	One may be inoperative provided messages FWD EBAY OVERHEAT and/or EBAY SMOKE DET FAIL are not shown.

System & Sequence Number	ITEM	1.	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
21 AIR CONDITIONING					
26-02	Center E-Bay Fan	C	2	0	One or both may be inoperative provided the messages CENTER LH (RH) OVERHEAT are not shown on the side of affected fan.
31-00	Cabin Pressure Control System				
	1) Automatic Control	C	1	0	(O) (M) May be inoperative provided: a) Outflow Valve indication on ECS synoptic operates normally, b) Manual control is used and verified operative before each flight, c) Auto control channel cabin pressurization indications on EIS are verified operative before each flight, d) Cabin pressure indications are operative, and e) The airplane is operated at or below FL 250.
	2) Manual Control	C	1	0	May be inoperative provided: a) Automatic mode is operative, and b) The airplane is operated at or below 15000 ft.
		C	1	0	May be inoperative provided OFV is considered inoperative.

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
21 AIR CONDITIONING					
31-00	Cabin Pressure Control System (Continued)				
	3) Cabin Pressure Parameters (Altitude, Rate, Delta-P) Indication	C	1	0	(O) May be inoperative provided: a) Flight is conducted unpressurized at or below 10000 ft, and b) Outflow valve indication on ECS synoptic operates normally.
	4) Landing Field Elevation (LFE) Indication	C	1	0	May be inoperative provided airplane is not operated at landing field elevations above 8000 ft.
31-02	Outflow Valve (OFV)	C	1	0	(M) May be inoperative provided: a) NPRV is removed, and b) Flight is conducted unpressurized at or below 10000 ft.
32-01	Pressure Relief Valve (PRV)	C	1	0	(O) May be inoperative provided: a) Flight is conducted unpressurized at or below 10000 ft, and b) Outflow valve indication on ECS synoptic operates normally.
32-02	Negative Pressure Relief Valve (NPRV)	C	1	0	(O) May be inoperative provided: a) Flight is conducted unpressurized at or below 10000 ft, and b) Outflow valve indication on ECS synoptic operates normally.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
21 AIR CONDITIONING					
32-04	Static Port Line	C	1	0	(O) May be inoperative provided: a) Flight is conducted unpressurized at or below 10000 ft, and b) Outflow valve indication on ECS synoptic operates normally.
41-00 ***	Aft Cargo Heating System	D	1	0	(M) May be inoperative provided Cargo Heating SOV is secure closed and system deactivated.
51-00	Cooling Pack System (Air Conditioning Pack)	C	1	0	(O) (M) May be inoperative provided: a) Pack is selected OFF, b) Pack Backup is selected OFF, c) Ram air door is secured open, d) Ram air check valve is verified operative, e) Ground operations with passenger door closed are limited to 30 minutes, f) Outflow valve indication on ECS synoptic operates normally, g) Airplane is operated unpressurized at or below 10000 ft, and h) Departure airport SAT is at or above -5°C (23°F).

System & Sequence Number	ITEM 1.	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
21 AIR CONDITIONING				
53-00 Pack Back-Up System	C	1	0	(O) (M) May be inoperative provided: a) Pack Backup is selected OFF, b) Pack Backup Shutoff Valve is secured closed and deactivated, c) Cooling Pack system is operative, d) Airplane is operated at or below FL 250, and e) Airplane is operated up to 60 minutes of a suitable airport.
	C	1	0	(O) (M) May be inoperative provided: a) Pack Backup is selected OFF, b) Pack Backup Shutoff Valve is secured closed and deactivated, c) Cooling Pack system is operative, d) Airplane is operated at or below FL 250, e) Ram air door is secured open, and f) Ram air check valve is verified operative.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
21 AIR CONDITIONING					
60-01	Trim Air Valve (TAV)	C	2	1	(M) Cabin TAV may be inoperative provided: a) Airplane is operated with no passengers, and b) Cabin TAV is verified and secured closed.
		C	2	0	(O) (M) Both may be inoperative provided: a) Pack is selected OFF, b) Pack Backup is selected OFF, c) Ram air door is secured open, d) Ram air check valve is verified operative, e) Ground operations with passenger door closed are limited to 30 minutes, f) Outflow valve indication on ECS synoptic operates normally, g) Airplane is operated unpressurized at or below 10000 ft, and h) Departure airport SAT is at or above -5°C (23°F).

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
21 AIR CONDITIONING					
61-00	Cockpit Temperature Control System				
	1) Automatic Control	C	1	0	(O) May be inoperative provided: a) ECS synoptic duct temperature indication is operative, b) Manual control is used and verified operative before each flight, and c) Pack Backup is operative.
	2) Manual Control	C	1	0	May be inoperative provided: a) Auto mode is operative, and b) Pack Backup is operative.
62-00	Passenger-Cabin Temperature Control System				
	1) Automatic Control	C	1	0	(O) May be inoperative provided: a) ECS synoptic duct temperature indication is operative, b) Manual control is used and verified operative before each flight, and c) Pack Backup is operative.
	2) Manual Control	C	1	0	May be inoperative provided: a) Auto mode is operative, and b) Pack Backup is operative.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
22 AUTO FLIGHT					
10-00	Autopilot System	B	1	0	(O) May be inoperative provided operations do not require its use.
11-00	Flight Director	C	2	1	(O) One may be inoperative provided operations do not require its use.
		B	2	0	(O) Both may be inoperative provided: a) Operations do not require its use, b) Alternate procedures are established and used, and c) Autopilot is considered inoperative.
11-01	AFCS Panel				
	1) Flight Director (FD) Buttons	C	2	0	One or both may be inoperative provided operations do not require its use.
	2) Course Knobs (CRS)	C	2	0	One or both may be inoperative provided operations do not require its use.
	3) Course (PUSH DIRECT) Button	C	2	0	
	4) Auto Throttle (AT) Button	C	1	0	May be inoperative provided auto throttle is not used.
	5) Speed (SPD) Switch (MAN/FMS Selector)	C	1	0	(O) May be inoperative stuck on MAN position provided alternate procedures are established and used.

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
22 AUTO FLIGHT					
11-01	AFCS Panel (Continued)				
	6) Airspeed to Mach (PUSH IAS MACH) Change Button	C	1	0	May be inoperative provided operations do not require its use.
	7) Lateral Navigation (LNAV) Button	C	1	0	May be inoperative provided operations do not require its use.
	8) Half Bank Limit (BANK) Button	C	1	0	
	9) Heading (HDG) Mode Button	C	1	0	May be inoperative provided autopilot is considered inoperative.
	10) Heading Synchronization (PUSH SYNC) Button	C	1	0	
	11) Approach (APPR) Mode Button	C	1	0	May be inoperative provided operations do not require its use.
	12) Autopilot (AP) Button	C	1	0	May be inoperative provided autopilot is considered inoperative.
	13) Source (SRC) Button	C	1	0	May be inoperative provided operations do not require its use.
	14) Altitude (ALT) Button	C	1	0	(O) May be inoperative provided alternate procedures are established and used.

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
22 AUTO FLIGHT					
11-01	AFCS Panel (Continued)				
	15) Vertical Navigation (VNAV) Button	C	1	0	May be inoperative provided operations do not require its use.
	16) Flight Level Change (FLCH) Button	C	1	0	May be inoperative provided operations do not require its use.
	17) Flight Path Angle (FPA) Button	C	1	0	May be inoperative provided operations do not require its use.
	18) Flight Path Angle Selector (FPA) Knob	C	1	0	May be inoperative provided operations do not require its use.
	19) Vertical Speed (VS DN UP) Thumb Wheel	C	1	0	May be inoperative provided operations do not require its use.
	20) Vertical Speed (VS) Button	C	1	0	May be inoperative provided operations do not require its use.
11-03	Takeoff/Go-Around (TO/GA) Button	C	2	1	One may be inoperative provided operative button is on flying pilot's side for takeoff and approach.
		C	2	0	(O) May be inoperative provided alternate procedures are established and used.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
22 AUTO FLIGHT					
30-00	Auto Throttle Channel	C	-	0	
	1) Takeoff Hold Mode	C	1	0	(O) May be inoperative provided auto throttle is not engaged during takeoff.
	2) Retard Mode	C	1	0	(O) May be inoperative provided auto throttle is disengaged at 100 ft before landing.
30-01	Auto Throttle Quick Disconnect (AT DISC) Button	C	2	1	One may be inoperative provided operative button is on flying pilot's side for takeoff and approach.
		C	2	0	One or both may be inoperative provided auto throttle system is not used.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
23 COMMUNICATIONS					
11-00 ***	High Frequency (HF) Communication System	D	-	-	Any in excess of those required by local regulations may be inoperative.
12-00	Very High Frequency (VHF) Communication System	C	-	1	Any in excess of VHF 2 may be inoperative provided not required by local regulations. **NOTE:** ACARS and CPDLC are inoperative with VHF 3 inoperative.
15-00 ***	Satellite Telephone System – IRIDIUM	D	1	0	(M) May be inoperative provided the Satellite Telephone System – IRIDIUM is deactivated.
21-00 ***	Selective Call System (SELCAL)	D	1	0	
22-00 ***	Airplane Communications Addressing and Reporting System (ACARS)	D	1	0	
23-00 ***	Controller Pilot Data Link Communication (CPDLC) System	D	1	0	May be inoperative provided is not required by local regulations.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
23 COMMUNICATIONS					
51-01	Audio Control Panel (ACP)				
	1) COM1 Select/Volume Knob	C	2	0	One or both volume controls may be inoperative provided VHF 1 is considered inoperative.
	2) COM3 Push Button	D	2	1	One may be inoperative provided: a) It is not stuck in the pushed-in position, and b) VHF 3 is not required for the intended flight for voice communications.
		D	2	0	Both may be inoperative provided: a) It is not stuck in the pushed-in position, b) VHF 3 is not used for voice communications, and c) VHF 3 is not required for the intended flight for voice communications.
	3) COM3 Select/Volume Knob	D	2	0	One or both volume controls may be inoperative provided: a) VHF 3 is not used for voice communications by the affected crewmember, and b) VHF 3 is not required for the intended flight for voice communications.

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
23 COMMUNICATIONS					
51-01	Audio Control Panel (ACP) (Continued)				
	4) HF1 Button	D	2	0	One or both may be inoperative provided: a) It is not stuck in the pushed-in position, and b) HF 1, if installed, is considered inoperative.
	5) HF1 Select/Volume Knob	D	2	0	One or both volume controls may be inoperative provided HF 1, if installed, is considered inoperative.
	6) HF2 Button	D	2	0	One or both may be inoperative provided: a) It is not stuck in the pushed-in position, and b) HF 2, if installed, is considered inoperative.
	7) HF2 Select/Volume Knob	D	2	0	One or both volume controls may be inoperative provided HF 2, if installed, is considered inoperative.
	8) SAT Button	D	2	0	One or both may be inoperative provided it is not stuck in the pushed-in position. **NOTE:** SATCOM will be unavailable to affected crewmember.

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
23 COMMUNICATIONS					
51-01	Audio Control Panel (ACP) (Continued)				
	9) SAT Select/Volume Knob	D	2	0	One or both volume control may be inoperative provided SATCOM is not used by affected crewmember.
	10) CAB Button	D	2	1	One may be inoperative provided it is not stuck in the pushed-in position.
		D	2	0	Both may be inoperative provided: a) It is not stuck in the pushed-in position, and b) Cabin Announcement is considered inoperative, if installed.
	11) CAB Select/Volume Knob	D	2	0	One or both volume control may be inoperative provided cabin announcement, if installed, is not used by affected crewmember.
	12) DME1 Select/Volume Knob	C	2	1	(O) One may be inoperative.
		C	2	0	Both may be inoperative provided DME 1 is considered inoperative.
	13) DME2 Volume Knob	D	2	1	(O) One may be inoperative.
		D	2	0	Both may be inoperative provided DME 2, if installed, is considered inoperative.

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
23 COMMUNICATIONS					
51-01	Audio Control Panel (ACP) (Continued)				
	14) NAV1 Volume Knob	C	2	1	(O) One may be inoperative.
		C	2	0	Both may be inoperative provided VHF 1 navigation radio is considered inoperative.
	15) NAV2 Volume Knob	C	2	1	(O) One may be inoperative.
		C	2	0	Both may be inoperative provided VHF 2 navigation radio is considered inoperative.
	16) MKR Volume Knob	C	2	1	(O) One may be inoperative.
		C	2	0	Both may be inoperative provided Marker Beacon is considered inoperative.
	17) ADF1 Volume Knob	D	2	1	(O) One may be inoperative.
		D	2	0	Both may be inoperative provided ADF 1, if installed, is considered inoperative.
	18) ADF2 Volume Knob	D	2	1	(O) One may be inoperative
		D	2	0	Both may be inoperative provided ADF 2, if installed, is considered inoperative.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
23 COMMUNICATIONS					
51-03	PTT Switch	C	6	4	(O) One for each pilot may be inoperative provided affected switch is verified not stuck in transmit position.
		B	6	2	(O) Any in excess of one for each pilot may be inoperative provided affected switch is verified not stuck in transmit position.
51-05	Hand Microphone	D	2	0	Any in excess of those required by local regulations may be inoperative.
		C	2	0	May be inoperative provided affected side boom microphone is operative.
51-06	Flight Deck Headsets				
	1) Headset Boom Microphones	A	2	0	One or both may be inoperative provided: a) Associated hand microphone is installed and operates normally, and b) Repairs are made within the same time intervals established for CVR repair.
	2) Headset Headphones	C	2	1	May be inoperative provided associated flight deck speaker operates normally.
	3) Active Noise Reduction Function	D	2	0	May be inoperative provided normal audio function operates normally.
52-00	Ramp Interphone System	D	1	0	

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
23 COMMUNICATIONS					
53-01	Radio Interface Unit (RIU)	B	2	1	(O) RIU 1 may be inoperative provided: a) Airplane is limited to day VMC operations, b) XPDR 2 is selected as the active transponder, c) COM 1 radio BACKUP mode is verified operative and operated by pilot on left seat, and d) All channels of RIU 2 are operative. **NOTE:** XPDR 1, VHF 3, HF 1, NAV 1 (VOR/LOC 1, MB 1, ADF 1) and DME 1 are inoperative with RIU 1 inoperative.
	1) RIU Channel	C	4	2	Channel A from each RIU may be inoperative.
		B	4	3	Channel B of RIU 1 may be inoperative provided airplane is limited to day VMC operations.
71-00	Cockpit Voice Recorder (CVR) System	A	1	0	May be inoperative provided repairs are made in accordance with local regulations.
	1) Independent Power Supply	C	1	0	

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
24 ELECTRICAL POWER					
31-01	Main DC Generator	B	2	1	(O) One may be inoperative provided: a) Affected DC Generator is selected OFF, b) Fuel pump 2A is operative, c) APU DC Generator is operative and used throughout the flight, d) Airplane is not operated on contaminated runways, and e) Airplane is operated at or below 31000 ft.
41-00	External DC Power System	C	1	0	May be inoperative provided operations do not require its use.
	1) AVAIL/IN USE Switch Lights	C	2	0	(O) One or both may be inoperative provided alternate procedures are established and used.
62-09	Secondary Power Distribution System (SPDS) Display Unit (DU)	D	2	1	(O) Cockpit DU may be inoperative provided DU is verified OFF.
		D	2	1	(M) Electronic bay DU may be inoperative provided DU is verified OFF.
		C	2	0	(M) Both may be inoperative provided DUs are verified OFF.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
25 EQUIPMENT AND FURNISHINGS					
00-00	Non-Essential Equipments and Furnishings	-	-	0	May be inoperative, damaged, or missing provided that the item(s) is deferred in accordance with the operator's NEF deferral program. The NEF program, procedures, and processes are outlined in the operators (insert name) Manual. (O) and (M) procedures, if required, must be available to the flight crew and included in the operator's appropriate document.
11-01	Pilot Seat				
	1) Lumbar In/Out Adjustment	C	2	0	May be inoperative provided seat is acceptable to affected crewmember.
	2) Armrests	C	4	2	(M) Inboard armrests may be inoperative provided they are secured in the retracted (up) position or removed.
	3) Armrests Tilt Adjustment	D	4	2	Inboard tilt adjustments may be inoperative.
	4) Recline Function	C	2	0	May be inoperative provided: a) Affected seat has failed locked in a position that permits normal pilot visibility, b) Full flight control movement is available, and c) Seat is acceptable to the affected crewmember.

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
25 EQUIPMENT AND FURNISHINGS					
11-01	Pilot Seat (Continued)				
	5) Headrests Adjustment	C	2	0	One or both may be inoperative provided it is adequate to the occupant.
	6) Vertical Seat Adjustment	C	2	0	May be inoperative provided: a) Affected seat has failed locked in a position that permits normal pilot visibility, b) Full flight control movement is available, and c) Seat is acceptable to the affected crewmember.
11-02 ***	Observer Seat (Including Associated Equipment)	C	1	0	(O) May be inoperative provided Seat is stowed and oxygen mask is checked for no permanent flow.
21-01	Passenger Seat	D	-	-	(M) May be inoperative provided: a) Seat does not block an Emergency Exit, b) Seat does not restrict any passenger from access to the main airplane aisle, and c) The affected seat(s) are blocked and placarded "DO NOT OCCUPY". **NOTE:** A seat with an inoperative seat belt is considered inoperative.

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
25 EQUIPMENT AND FURNISHINGS					
21-01	Passenger Seat (Continued)				
	1) Recline Function	D	-	-	May be inoperative provided the seat is failed locked in the upright position.
***	2) Lumbar Adjustment	D	-	-	
***	3) Leg Rest	D	-	-	(M) May be inoperative provided leg rest is secured on retracted position or removed.
***	4) Combined Heating and Vibrating functions	D	-	-	(M) May be inoperative provided function is deactivated.
61-00	Emergency Locator Transmitter	A	1	0	(M) May be inoperative provided: a) System is deactivated, and b) Repairs are made within 90 days.
		A	1	0	May be missing provided repairs are made within 90 days.

System & Sequence Number	ITEM 1.	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
25 EQUIPMENT AND FURNISHINGS				
62-01 First Aid Kit (FAK)	A	-	-	(O) If more than one is required by local regulations, only one of the required first aid kits may be incomplete, missing or inoperative provided: a) FAK is resealed in a manner that will identify it as a unit that can not be mistaken for a fully serviceable unit, and b) Repairs or replacements are made within 1 flight.
	D	-	-	Any in excess of those required by local regulations may be incomplete, inoperative or missing.
62-02 Life Vest	D	-	-	(O) (M) Any in excess of those required may be inoperative or missing, provided that: a) Required distribution is maintained, b) Inoperative life vest and its installed location are placarded inoperative, c) Inoperative life vest is secured out of sight, and d) Procedures are established and used to alert crewmembers of inoperative or missing equipment.

System & Sequence Number	1. ITEM	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
25 EQUIPMENT AND FURNISHINGS				
62-03 Life Raft ***	D	-	-	(O) May be inoperative or missing provided that: a) Extended overwater operations are not conducted, and b) Procedures are established and used to alert crewmembers of inoperative or missing equipment.
	C	-	-	(O) (M) Any in excess of those required for the intended flight may be inoperative or missing for extended overwater flights provided that: a) Required distribution is maintained, b) Inoperative life raft and its installed location are placarded inoperative, c) When practical, the inoperative life raft is secured out of sight, and d) Procedures are established and used to alert crewmembers of inoperative or missing equipment.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
26 FIRE PROTECTION					
13-01	Aft Cargo Compartment Smoke Detector Channel	C	2	1	
		C	2	0	(M) Both channels may be inoperative provided: a) Aft cargo remains empty or not loaded with combustible or flammable materials, and b) Cargo heating system is deactivated, if installed.
13-02	Internal Stowage Compartment Smoke Detector	C	1	0	May be inoperative provided the internal stowage compartment remains empty or not loaded with combustible or flammable materials.
14-01 ***	Lavatory Smoke Detector	C	1	0	
23-00	Aft Cargo Compartment Fire Extinguisher System	C	1	0	(M) May be inoperative provided: a) Aft cargo remains empty or not loaded with combustible or flammable materials, and b) Cargo heating system is deactivated, if installed.
25-01 ***	Lavatory Auto-Discharge Fire Extinguisher Bottle	C	1	0	

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
27 FLIGHT CONTROLS					
03-01 ***	Steep Approach Switch (EMB-550)	C	1	0	May be inoperative in not activated position provided operations do not require its use.
	1) ARMED Switch Light	C	1	0	**NOTE:** The steep approach indications are available on PFD.
21-02	Rudder Pedal Assembly (RPA)				
	1) Pedal Electrical Adjustment	C	2	0	(M) One or both may be inoperative provided rudder pedal position is mechanically adjusted to the desired position.
		C	2	0	One or both may be inoperative provided: a) Rudder pedal position is acceptable for the affected flight crewmember, and b) Full movement on pedals for rudder and brakes actuation is available.

System & Sequence Number	ITEM	1.	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
28 FUEL					
00-00	Fuel System Synoptic	C	1	0	Synoptic Indications not addressed elsewhere in the MMEL may be inoperative.
11-03	Drain Valve	C	4	3	(M) One may be inoperative provided: a) Affected valve is checked for no leaks, and b) No water is found at any drainage point before each flight day.
		C	4	2	(M) The inner valve of one tank and the outer valve of the opposite tank may be inoperative, provided: a) Affected valves are checked for no leaks, and b) No water is found at any drainage point before each flight day.

System & Sequence Number	1. ITEM	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
28 FUEL				
21-03 Fuel Pumps	A	4	3	(O) (M) Pumps 1B or 2A may be inoperative provided: a) The fuel GOST 10227-86 is not used, b) Affected pump is deactivated, c) Both PUMP knobs are set to ON, d) Pumps synoptic indication is operative, e) Both engine DC generators are operative if pump 2A is affected, f) Airplane is not operated into known or forecast icing conditions, g) Airplane is operated up to 60 minutes of a suitable airport, h) Airplane operation is limited to 19000 ft, and i) Repairs are made within 3 calendar days.
23-00 Pressure Refueling System	C	1	0	(O) May be inoperative provided Airplane is refueled by gravity for both tanks.

System & Sequence Number	ITEM	1.	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
28 FUEL					
23-03	Refueling Shutoff Valve	C	2	0	One or both may be inoperative CLOSED provided pressure refueling system is considered inoperative.
		C	2	0	(M) One or both may be inoperative OPEN provided: a) Affected valves are secured in closed position and deactivated, and b) Pressure refueling system is considered inoperative.
23-05	Defueling Shutoff Valve	C	1	0	May be inoperative CLOSED.
		C	1	0	(M) May be inoperative OPEN provided valve is secured in closed position and deactivated.
23-08	Pressure Refueling Adapter Cap	C	1	0	(M) May be missing provided: a) Adapter is checked for no contamination prior to each refueling/defueling operation, and b) Adapter is checked for no leaks after each refueling/defueling operation.
24-01 ***	Gravity Refueling Cap Key Lock	C	2	0	

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
28 FUEL					
43-02	Fuel Low Pressure Switch	C	2	0	(O) One or both may be inoperative: a) Both fuel pumps of affected side are verified operative, b) Both PUMP knobs are set to ON, and c) Pumps synoptic indication is operative.
43-03	Fuel Low Level Sensor	C	2	1	May be inoperative provided FUEL USED synoptic indication is operative.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
29 HYDRAULICS					
11-08	System 1 Reservoir				
	1) Fluid Quantity Indication on Cockpit	C	1	0	(O) May be inoperative provided fluid level is checked on reservoir gauge before each flight.
12-08	System 2 Reservoir				
	1) Fluid Quantity Indication on Cockpit	C	1	0	(O) May be inoperative provided fluid level is checked on reservoir gauge before each flight.
13-08	System 3 Reservoir				
	1) Fluid Quantity Indication on Cockpit	C	1	0	(O) May be inoperative provided fluid level is checked on reservoir gauge before each flight.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
30 ICE AND RAIN PROTECTION					
00-00	Anti-Ice System Synoptic	C	1	0	Synoptic Indications not required elsewhere in the MMEL may be inoperative.
12-00	Wing and Horizontal Stabilizer Anti-Icing System (WHSAIS)	C	1	0	(O) (M) May be inoperative provided: a) WINGSTAB system is selected OFF, b) Anti-Icing Valve (AISOV) is secured closed and deactivated, and c) Airplane is not operated in known or forecast icing conditions.
21-00	Engine Anti-Icing System	C	2	1	(O) May be inoperative provided: a) Airplane is not operated in known or forecast icing conditions, and b) Affected side Engine Anti-Ice system remains selected OFF and Anti-Icing valve is confirmed closed.
21-01	Engine Anti-Icing Valve	C	2	0	(O) One or both may be inoperative (open) provided: a) Both engine Anti-icing valves are selected open, and b) AFM engine anti-icing ON performance is used.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
30 ICE AND RAIN PROTECTION					
42-00	Windshield Heating System	C	2	1	(O) Left or right windshield system may be inoperative provided: a) Airplane is not operated into known or forecast icing conditions, and b) Affected windshield button is selected OFF.
42-03	Windshield Heater	C	4	3	Left windshield inboard heater or right windshield inboard heater may be inoperative.
		C	4	2	Left windshield inboard heater and right windshield inboard heater may be inoperative.
43-01	Windshield Rain-Repellent Coating	C	2	0	May be inoperative provided: a) No precipitation is forecasted during a period from one hour before until one hour after the estimated time of departure and arrival at the take-off and destination aerodromes, and b) Windshield rain protection is not part of the equipment required for the intended operation. **NOTE:** Take-off and destination aerodromes include any take-off and destination alternate aerodromes required by local regulations.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
30 ICE AND RAIN PROTECTION					
81-00	Ice Detection System	C	2	1	(O) One may be inoperative provided Wing and Horizontal Stabilizer and Engine Anti-Icing Systems are operated manually.
		C	2	0	Both may be inoperative provided airplane is not operated into known or forecast icing conditions.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
31 INDICATING AND RECORDING SYSTEMS					
31-00	Flight Data Recorder (FDR) System	A	1	0	May be inoperative provided repairs are made in accordance with local regulations.
32-00 ***	Quick Access Recorder (QAR)	D	-	0	
60-00	Electronic Checklist (ECL)	C	1	0	(O) May be inoperative provided alternate procedures are established and used.
		D	1	0	May be inoperative provided procedures do not require its use.
61-01	Adaptive Flight Display (AFD)	C	4	3	(O) Lower AFD may be inoperative provided it is turned OFF.
61-02	Display Control Panel (DCP)				
	1) CVS Button	C	2	0	
	2) FPV CAGE Button	C	2	0	
	3) ET Button	C	2	0	One or both may be inoperative provided: a) Timer is not shown on affected PFD HSI, b) An accurate timepiece is operative in the flight crew compartment indicating the time in hours, minutes and seconds, and c) It is not required by local regulations.

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
31 INDICATING AND RECORDING SYSTEMS					
61-02	Display Control Panel (DCP) (Continued)				
	4) TCAS Button	C	2	0	(O) May be inoperative provided alternate procedures are established and used.
	5) WX Button	C	2	0	(O) May be inoperative provided alternate procedures are established and used.
	6) BARO SET STD Button	C	2	0	May be inoperative provided BARO knob operates normally.
	7) V/L Button	C	2	0	May be inoperative provided operations do not require its use.
	8) FMS Button	C	2	0	May be inoperative provided operations do not require its use.
61-03	Reversionary Switch Panel (RSP)				
	1) DUs Brightness Knobs	C	4	0	May be inoperative provided affected AFD brightness is acceptable to flight crew.
	2) EICAS Button	C	2	1	
61-04	Cursor Control Panel (CCP)				
	1) Trackball	C	2	0	(O) May be inoperative provided alternate procedures are established and used.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
31 INDICATING AND RECORDING SYSTEMS					
61-06	Adaptive Flight Display (AFD) Mounting Tray Fan	C	8	6	(O) One or both fans of lower AFD may be inoperative provided the lower AFD is turned OFF.
62-00	Synthetic Vision System (SVS)	C	1	0	(O) May be inoperative provided SVS is disabled.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
32 LANDING GEAR					
41-00	Main Brake System				
***	1) Auto Brake System	C	1	0	(O) May be inoperative provided: a) Auto brake knob remains selected OFF, and b) Alternate procedures are established and used.
47-00	Brake Temperature Monitoring System	C	4	0	(O) May be inoperative provided: a) A brake cooling time of 44 minutes is used prior to airplane dispatch, **NOTE:** For optimized brake cooling time refer to Airplane Operations Manual. b) Landing gear retraction is delayed for 7 minutes after takeoff, and c) Appropriate performance penalties are applied.
49-06	Brake Assembly				
	1) Wear Pin Indicator	C	8	4	One wear pin indicator per brake assembly may be missing.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
32 LANDING GEAR					
50-00	Steering System				
	1) Steering External Disengage Switch	C	1	0	(O) May be inoperative provided: a) Steering is confirmed engaged for normal operations, and b) Steering disconnect button operates normally if towing is required.
	2) Towing Light	C	1	0	(O) May be inoperative provided steering and parking brake status are verified in the cockpit before towing.
53-13	Nose Wheel Steering Overtravel Sensor	C	1	0	(O) May be inoperative provided steering overtravel sensor target is checked for integrity before each flight.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
33 LIGHTS					
10-00	Cockpit and Instruments Panel Lighting Systems	C	-	-	Individual lights may be inoperative provided remaining lights are: a) Sufficient to clearly illuminate all required instruments, controls, and other devices for which they are provided, b) Positioned so that direct rays are shielded from flight crewmembers' eyes, c) Lighting configuration and intensity is acceptable to the flight crew, and d) Dome Light operates normally.
23-00	Passenger Warning Signs	C	-	-	(O) May be inoperative provided alternate procedures are established and used to notify cabin occupants.
41-00	Landing/Taxi Light				
	1) Taxi Light	C	2	0	
	2) Landing Light	C	2	0	One or both may be inoperative for day operations.
		B	2	1	**NOTE:** If any landing light array is failed, the affected landing light must be considered inoperative.
43-00	Navigation Lights	C	4	0	One or more may be inoperative for day operations.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
33 LIGHTS					
44-01	Wing Inspection Light	C	1	0	May be inoperative provided the airplane is not operated in known or forecast icing conditions at night.
45-01	Red Beacon	C	1	0	(O) May be inoperative provided strobe lights are operative and turned ON before engine operation.
46-01 ***	Logo Lights	D	1	0	
47-00	Strobe Lights	C	3	0	May be inoperative for day operations.
51-07	Overwing Emergency Lights	C	2	0	May be inoperative for day operations.
51-09	Underwing Emergency Lights	C	1	0	May be inoperative for day operations.
51-11	Fuselage-to-Ground Emergency Lights	C	1	0	May be inoperative for day operations.
52-01	Flashlights	D	2	-	Any in excess of those required by local regulations may be inoperative or missing.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
34 NAVIGATION					
11-01	Standby Flight Instrument System (SFIS)				
	1) STD Baro Button	C	1	0	May be inoperative provided BARO knob on the SFIS operates normally.
23-01	Standby Magnetic Compass Unit	B	1	0	(O) May be inoperative provided: a) The airplane is operated with dual independent navigation capability and under positive radar control by ATC on the en route portion of the flight, and b) It is not required by local regulations.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
34 NAVIGATION					
31-00	Radio Altimeter System (EMB-545 and EMB-550 Post-Mod. SB 550-42-0005)	D	-	1	(M) Affected radio altimeter is deactivated.
		A	-	0	(O) (M) May be inoperative provided: a) Affected radio altimeter is deactivated, b) Operations do not require its use, c) Approach minimums are set to BARO, if required, d) Auto throttle Retard Mode and TAWS modes 1-6 are considered inoperative, and e) Repairs are made within 2 flight days. **NOTE:** Message FLTCTRL FAULT will be displayed and the dispatch condition on Section 2 is not applicable.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
34 NAVIGATION					
32-00	VHF Navigation System				
	1) VOR	C	2	1	(O) One may be inoperative provided alternate procedures are established and used.
		C	2	0	Both may be inoperative provided it is not required by the intended route. **NOTE:** The intended route corresponds to any point on the route including diversions to reach alternate aerodromes required to be selected by the operational rules.
		D	2	0	Both may be inoperative provided operations are conducted under VFR.
	2) Marker Beacon	C	2	1	(O) One may be inoperative provided alternate procedures are established and used.
		C	2	0	May be inoperative provided that approach procedures do not require marker fixes.
		D	2	0	Both may be inoperative provided operations are conducted under VFR.
***	3) ADF	C	-	1	(O) One may be inoperative provided alternate procedures are established and used.

(Continued)

System & Sequence Number	ITEM	1.	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
34 NAVIGATION					
32-00	VHF Navigation System (Continued)				
***	3) ADF	C	-	0	One or more may be inoperative provided it is not required by the intended route. **NOTE:** The intended route corresponds to any point on the route including diversions to reach alternate aerodromes required to be selected by the operational rules.
		D	-	0	One or more may be inoperative provided operations are conducted under VFR.
	4) ILS	C	2	1	(O) One may be inoperative provided: a) Operations do not require its use, and b) Alternate procedures are established and used.
		B	2	0	May be inoperative under IFR operations provided that approaches and missed approaches where navigation is based on ILS are not included in the flight plan.
		D	2	0	One or more may be inoperative provided operations are conducted under VFR.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
34 NAVIGATION					
41-00	Terrain Awareness and Warning System (TAWS) A (EMB-545 and EMB-550 Post-Mod. SB 550-42-0005)				
	1) GPWS	A	1	0	(O) May be inoperative provided: a) Alternate procedures are established and used, and b) Repairs are made within 2 flight days.
	a) Modes 1-4	A	4	0	(O) May be inoperative provided: a) Alternate procedures are established and used, and b) Repairs are made within 2 flight days.
	b) Test Mode	A	1	0	May be inoperative provided: a) GPWS is considered inoperative, and b) Repairs are made within 2 flight days.
	c) Glideslope Deviation (Mode 5)	B	1	0	

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
34 NAVIGATION					
41-00	Terrain Awareness and Warning System (TAWS) A (Continued)				
	(EMB-545 and EMB-550 Post-Mod. SB 550-42-0005)				
	1) GPWS				
	d) Advisory Callouts (Mode 6)	B	1	0	(O) May be inoperative provided alternate procedures are established and used.
		C	1	0	(O) May be inoperative provided: a) Advisory callout not required by local regulations, and b) Alternate procedures are established and used.
	2) Terrain System - Forward Looking Terrain Avoidance (FLTA) And Premature Descent Alert (PDA) Function	B	1	0	
	3) Terrain Overlays	C	1	0	
42-00	Weather Radar	C	1	0	May be inoperative provided it is not required by local regulations.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
34 NAVIGATION					
43-00	Traffic Collision and Avoidance System (TCAS II) (EMB-545 and EMB-550 Post-Mod. SB 550-42-0005)	B	1	0	(M) May be inoperative provided: a) System is deactivated and secured, and b) Enroute or approach procedures do not require its use.
		C	1	0	(M) May be inoperative provided: a) Not required by local regulations, b) System is deactivated and secured, and c) Enroute or approach procedures do not require its use.
44-00 ***	Lightning Detection System	C	1	0	
51-00	DME System	C	-	0	One or more may be inoperative provided operations do not require its use.
		D	-	1	Any in excess of those required by local regulations may be inoperative.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
34 NAVIGATION					
52-00	Transponder (EMB-545 and EMB-550 Post-Mod. SB 550-42-0005)	D	2	1	(O) One may be inoperative provided operative transponder is selected as the active by crew, if required.
		B	2	0	Both may be inoperative provided: a) Operations do not require its use, and b) Prior to flight, approval is obtained from ATC facilities having jurisdiction over the planned route of flight. **NOTE:** TCAS II and ADS-B OUT are inoperative with both transponders inoperative.
***	1) ADS-B OUT Function	D	2	0	One or both may be inoperative provided it is not required by local regulations.
56-00	Global Positioning System (GPS)	C	2	1	(O) One may be inoperative provided: a) Affected side flight director is considered inoperative, and b) Operations do not require its use.

(Continued)

System & Sequence Number	ITEM	1.	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
34 NAVIGATION					
56-00	Global Positioning System (GPS) (Continued)	B	2	0	May be inoperative provided: a) Operations do not require its use, b) Both flight directors are considered inoperative, and c) One VHF Navigation system and one DME is operative. **NOTE:** TAWS FLTA and PDA functions, SVS and ADS-B OUT are inoperative with GPSs inoperative.
		B	2	0	May be inoperative provided: a) Operations do not require its use, b) Both flight directors are considered inoperative, and c) Two DMEs are installed and operative. **NOTE:** TAWS FLTA and PDA functions, SVS and ADS-B OUT are inoperative with GPSs inoperative.
		B	2	0	May be inoperative provided: a) Operations do not require its use, b) Both flight directors are considered inoperative, and c) FMS is not used. **NOTE:** TAWS FLTA and PDA functions, SVS and ADS-B OUT are inoperative with GPSs inoperative.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
34 NAVIGATION					
57-00 ***	Satellite Weather System	D	1	0	
61-00	Flight Management System (FMS)	C	2	1	(O) One may be inoperative provided: a) TOLD performance information shall be checked for consistency with other approved performance data, b) Performance data other than TOLD shall be available to flight crew, c) Operations do not require use of both GPS, and d) Alternate procedures are established and used. **NOTE:** No intermixing of data sources is permitted during a specific phase of flight.
	1) Navigation Databases	C	-	-	(O) May be out of date provided: a) Current Aeronautical Charts are used to verify Navigation Fixes prior to dispatch, b) Procedures are established and used to verify status and suitability of Navigation Facilities used to define route of flight, and c) Approach Navigation Radios are manually tuned and identified.

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
34 NAVIGATION					
61-00	Flight Management System (FMS) (Continued)				
***	2) Takeoff and Landing (TOLD) Function	C	2	1	(O) One may be inoperative provided: a) TOLD performance information shall be checked for consistency with other approved performance data, b) Performance data other than TOLD shall be available to flight crew, c) Alternate procedures are established and used. **NOTE 1:** No intermixing of data sources is permitted during a specific phase of flight. **NOTE 2:** TOLD must be considered inoperative if VSPEED database is out of date.
61-01 ***	Surface Management System (SMS)	C	1	0	(O) May be inoperative provided SMS is inhibited. **NOTE:** SMS must be considered inoperative if any airport moving map database is out of date.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
35 OXYGEN					
01-01	Cylinder Pressure Gauge	C	1	0	(M) May be inoperative provided: a) Gauge is inspected for no leakage, and b) Alternate procedures to measure the oxygen cylinder pressure for servicing are established and used.
01-02	Pressure and Temperature Transducer	C	1	0	(O) May be inoperative provided: a) Cylinder pressure gauge is operative, b) Oxygen pressure is checked in cylinder before each flight, and c) Airplane is operated at or below FL 250.
02-02	Cylinder Fill Valve	C	1	0	(M) May be inoperative provided: a) Valve is inspected for no leakage, and b) If oxygen cylinder refilling is necessary, it must be done outside airplane or cylinder replaced for a fully charged one.
20-00	Passenger Oxygen System	C	1	0	May be inoperative provided the airplane is operated with no passengers.
		C	1	0	(O) May be inoperative provided flight is conducted unpressurized at or below 10000 ft.

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
35 OXYGEN					
20-00	Passenger Oxygen System (Continued)				
	1) Passenger Auto Deployment Function	C	1	0	(M) May be inoperative provided: a) Flight is conducted at or below 30000 ft, and b) Manual deployment function is verified operative.
20-01	Passenger Oxygen Masks	C	-	-	(M) May be inoperative provided affected seat is placarded and blocked to prevent occupancy.
30-01	Protective Breathing Equipment (PBE)	D	-	-	(O) (M) Any in excess of those required may be inoperative provided: a) Required distribution is maintained, b) Inoperative PBE and its installed location are placarded inoperative, c) Inoperative PBE is removed from its location or from the airplane, and d) Procedures are established and used to alert crewmembers of inoperative or missing equipment. **NOTE:** Inoperative PBE units may be subject to dangerous goods requirements.

System & Sequence Number	ITEM	1.	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
36 PNEUMATIC					
11-00	Engine Pneumatic Bleed System	C	2	1	(O) (M) One may be inoperative provided: a) Affected bleed system is selected OFF, b) WHSAIS is manually tested before each flight, c) Cross-bleed valve is operative if bleed 1 is affected, d) Single Bleed Shuttof Valve is confirmed open before each flight into known or forecast icing conditions, e) Airplane is operated at or below 20000 ft, and f) Airplane is operated up to 60 minutes of a suitable airport.
		C	2	1	(O) One may be inoperative provided: a) Affected bleed system is selected OFF, b) Airplane is operated at or below FL 250, c) Cross-bleed valve is operative if bleed 1 is affected, d) Airplane is not operated into known or forecast icing conditions, and e) Airplane is operated up to 60 minutes of a suitable airport.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
36 PNEUMATIC					
11-01	High Stage Bleed Shutoff Valve	C	2	1	(O) (M) One may be inoperative provided: a) Affected high stage bleed valve is secured closed and deactivated, and b) Associated bleed system is considered inoperative.
11-03	Pressure Regulating Shutoff Valve (PRSOV)	C	2	1	(O) (M) One may be inoperative provided: a) Affected PRSOV is secured closed and deactivated, and b) Associated bleed system is considered inoperative.
11-06	Cross-Bleed Valve	C	1	0	(O) (M) May be inoperative provided: a) Cross bleed valve is selected OFF, b) Cross-bleed valve is secured closed except for left engine start, c) Single Bleed Shuttof Valve is confirmed open before each flight into known or forecast icing conditions, d) Airplane is operated at or below 20000 ft, and e) Airplane is operated up to 60 minutes of a suitable airport. **NOTE:** For in-flight left engine start refer to AFM windmilling start procedure.

(Continued)

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
36 PNEUMATIC					
11-06	Cross-Bleed Valve (Continued)	C	1	0	(O) (M) May be inoperative provided: a) Cross bleed valve is selected OFF, b) Cross-bleed valve is secured closed except for left engine start, c) Airplane is operated at or below FL 250, d) Airplane is not operated into known or forecast icing conditions, and e) Airplane is operated up to 60 minutes of a suitable airport. **NOTE:** For in-flight left engine start refer to AFM windmilling start procedure.
14-04	Pneumatic System Controller (PSC) Channel	C	2	1	One may be inoperative provided: a) Airplane is operated at or below FL 250, and b) Airplane is operated up to 60 minutes of a suitable airport. **NOTE:** Message FLTCTRL FAULT may be displayed and the dispatch condition on Section 2 is not applicable.

System & Sequence Number	1. ITEM	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
36 PNEUMATIC				
16-00	Main Door Pressurization System C	1	0	(M) May be inoperative provided: a) The non-inflatable seal is checked for no damage, b) The main door pressurization system is deactivated, and c) The airplane is not operated above 40000 ft.

System & Sequence Number	ITEM	1.	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
38 WATER AND WASTE					
11-00	Galley Potable Water System	C	1	0	(M) May be inoperative provided: a) System is drained, and b) Procedures are established to ensure that system is not serviced.
11-24 ***	Galley Water-Level Sensor	D	1	0	
12-00	Lavatory Potable Water System	C	1	0	(M) May be inoperative provided: a) System is drained, and b) Procedures are established to ensure that system is not serviced.
12-24 ***	Lavatory-Water Level Sensor	D	1	0	
32-00	Vacuum Waste System	C	1	0	(M) May be inoperative provided: a) Waste system is deactivated, and b) System components are verified not to have leaks.
32-21	Vacuum Pump	C	1	0	(O) (M) May be inoperative provided: a) Pump is deactivated, and b) Procedure is established to advise passengers not to use lavatory on ground and below 14000 ft in flight.
32-32	Waste Tank Level Sensor	C	2	1	85% or 100% sensor may be inoperative.

System & Sequence Number	1. ITEM	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
42 INTEGRATED MODULAR AVIONICS				
31-00	Information Management System (IMS) C	1	0	(M) May be inoperative provided: a) IMS is deactivated, and b) AVNX DATALOAD ENBL message is not shown. **NOTE:** It will not be possible to update FMS, charts, and map databases.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
44 CABIN SYSTEMS					
16-00 ***	Cabin Announcement System	D	1	0	

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
45 CENTRAL MAINTENANCE SYSTEM					
00-01	Cockpit Maintenance Panel				
	1) ENGINES MODE Switch	D	1	0	(O) May be inoperative provided: a) Switch is confirmed in NORMAL position, and b) Engines are confirmed in NORMAL mode.
	2) LG/HYD/BRK MODE Switch	D	1	0	(O) May be inoperative provided: a) Switch is confirmed in NORMAL position, and b) LG-HYD-BRK MAINT MODE message is not shown.
	3) AVIONICS LOADER Switch	C	2	0	(O) May be inoperative provided: a) Switches are confirmed in OFF position, and b) AVNX DATALOAD ENBL message is not shown. **NOTE:** FMS, charts, and maps databases can not be updated if any AVIONICS LOADER Switch is inoperative.
	4) WSHLD IBIT Switch	D	1	0	
45-01	Onboard Maintenance System (OMS)	D	1	0	

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
46 INFORMATION SYSTEMS					
22-00	Integrated Flight Information System (IFIS)	C	-	1	
		C	-	0	(O) May be inoperative provided alternate procedures are established and used.
	1) Charts and Maps Databases	C	-	0	(O) May be out of date or inoperative provided alternate procedures are established and used.
	2) Weather Databases	C	-	0	(O) May be out of date or inoperative provided alternate procedures are established and used.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
49 AIRBORNE AUXILIARY POWER					
00-00	Auxiliary Power Unit (APU) (EMB-545 and EMB-550 Post-Mod. SB 550-78-0001)	C	1	0	(M) May be inoperative provided: a) APU is not used, and b) APU is deactivated.
73-01	Hour Meter	C	1	0	(O) May be inoperative provided alternate procedures for APU hours recording are established.
73-02	Start Counter	C	1	0	(O) May be inoperative provided alternate procedures for APU starts recording are established.
93-03	Remote Oil Level Sensor (Cockpit Indication)	C	1	0	(M) May be inoperative provided oil quantity is checked through the oil sight glass before each flight day.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
50 CARGO AND ACCESSORY COMPARTMENTS					
22-00	Aft Compartment Cargo Net	D	1	0	May be inoperative or missing provided cargo compartment remains empty.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
52 DOORS					
71-00	Main Door Warning System (CAS Indication)	C	1	0	(O) May be inoperative provided, before each flight: a) The door is verified closed, latched and locked, and b) The 2 latches and 2 lock indicator flags are checked and confirmed green.
72-00	Aft Cargo Compartment Door Warning System (CAS Indication)	C	1	0	(O) May be inoperative provided, before each flight: a) The door is verified closed and latched, and b) The 3 Locking latches are inspected for correct engagement.
73-00	Overwing Emergency Exit Hatch Warning System (CAS Indication)	C	1	0	(O) May be inoperative provided the Emergency Exit Hatch is inspected for correct engagement before each flight.
74-00	Electronic Bay Access Hatch Warning System (CAS Indication)	C	1	0	(O) May be inoperative provided the Electronic Bay Access Hatch is inspected for correct latching before each flight.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
73 ENGINE FUEL AND CONTROL					
21-00	Engine Full Authority Digital Electronic Control (FADEC) System				
	1) System Faults	A	-	-	May be dispatched with system faults provided repairs are made in 40 flight hours.
30-01	Engine Fuel Low Pressure Switch	C	2	0	(O) One or both may be inoperative provided: a) Both fuel pumps of affected side are operative, b) Both PUMP knobs are set to ON, and c) Pumps synoptic indication is operative.
30-05	Dual Function Fuel Switch				
	1) Fuel Impending Bypass Indication	A	2	1	(O) (M) May be inoperative provided: a) Fuel filter element of affected engine is replaced prior to the first flight under this item and then every 20 flight hours, and b) Repairs are made within 10 calendar days.

System & Sequence Number	1. ITEM	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
76 ENGINE CONTROL				
10-05	Thrust Control Quadrant (TCQ) Idle Lock Switch C	2	0	One or both may be inoperative provided affected side thrust reverser is considered inoperative.

System & Sequence Number	1. ITEM	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
77 ENGINE INDICATING				
31-00	Engine Vibration Indication on EICAS C	2	1	One may be inoperative provided operations are not conducted in known or forecast icing conditions.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
78 ENGINE EXHAUST					
30-00	Thrust Reverser System	C	2	0	(O) (M) One or both may be inoperative provided: a) Affected thrust reverser is locked in the forward thrust position and deactivated, and b) Appropriate procedures and performance penalties are applied.

System & Sequence Number	1. ITEM		2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
79 ENGINE OIL					
32-00	Engine Remote Oil Quantity Indication System	C	2	0	(O) May be inoperative provided oil quantity is checked through associated oil sight glasses before each flight.
34-00	Engine Oil Impending Bypass Indication System	A	2	1	(M) May be inoperative provided: a) Affected oil filter is replaced, and b) Repairs are made within 10 flight hours.

System & Sequence Number	1. ITEM	2. Number installed	3. Number required for dispatch	4. Remarks and/or exceptions
80 ENGINE STARTING				
10-02	Starter Control Valve (SCV) C	2	1	(O) (M) One may be inoperative (fail to open) provided manual override procedures are used. **NOTE:** Assisted airstart is not available. See AFM for Windmilling air start on affected engine, if required.

SECTION 2

MESSAGE – ORIENTED MMEL ITEMS

MASTER MINIMUM EQUIPMENT LIST

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ADV	ADVISORY Messages	ADV-2-1
STA	STATUS Messages	STA-2-1

DEFINITIONS – SECTION 2 (Message-Oriented)

The following definitions replace or complement the Definitions stated in Section 1.

1) Failure Definitions.

Failures are divided into WARNING, CAUTION, ADVISORY and STATUS messages and are shown alphabetically.

a) "Failure Indication" (Column 1) is the message displayed to flight crew on EICAS.

b) Repair interval is also on Column 1.

c) "Remarks or Exceptions" (Column 2) in this column includes a statement either prohibiting or permitting operation with a specific message displayed, provisos (conditions and limitations) for such operation, and appropriate notes.

d) A vertical bar (change bar) in the margin indicates a change, addition or deletion in the adjacent text for the current revision of that page only. The change bar is dropped at the next revision of that page.

2) Same definition stated in Section 1 is applicable.

3) Same definition stated in Section 1 is applicable.

4) Same definition stated in Section 1 is applicable.

5) Not applicable to Section 2.

6) Same definition stated in Section 1 is applicable.

7) Same definition stated in Section 1 is applicable.

8) Same definition stated in Section 1 is applicable.

9) Same definition stated in Section 1 is applicable.

10) Same definition stated in Section 1 is applicable.

11) Same definition stated in Section 1 is applicable.

12) Same definition stated in Section 1 is applicable.

13) Same definition stated in Section 1 is applicable.

14) Same definition stated in Section 1 is applicable.

15) Same definition stated in Section 1 is applicable.

16) Same definition stated in Section 1 is applicable.

17) Same definition stated in Section 1 is applicable.

18) Same definition stated in Section 1 is applicable.

19) Same definition stated in Section 1 is applicable.

20) Same definition stated in Section 1 is applicable.

21) Same definition stated in Section 1 is applicable.

22) Same definition stated in Section 1 is applicable.

23) Same definition stated in Section 1 is applicable.

24) Same definition stated in Section 1 is applicable.

25) Not applicable to Section 2.

26) Same definition stated in Section 1 is applicable.

27) Same definition stated in Section 1 is applicable.

28) Same definition stated in Section 1 is applicable.

29) Same definition stated in Section 1 is applicable.

30) Same definition stated in Section 1 is applicable.

31) Same definition stated in Section 1 is applicable.

32) Same definition stated in Section 1 is applicable.

PREAMBLE – SECTION 2 (Message-Oriented)

The following statements complement the Preamble of Section 1, which remains valid for MMEL/MEL usage.

Based on FAA Policy Letter 119, the MMEL item may grant relief for a failure indication (a message on EICAS) rather than a failed equipment, in which case the determination of whether or not the airplane can be dispatched in accordance with MMEL will be based on this failure indication.

No failure isolation procedures are required to be carried out by maintenance personnel for such MMEL items ("message-oriented" MMEL items) to determine the failed equipment.

Such relief is granted based on the fact that justification supporting those MMEL candidates considers all potential failures triggering those failure indications and it is shown that the provisos of those MMEL items ensure safe operation of airplane with any one/combination of those failure(s) present.

Such failures include:
- loss of redundancy within the system/component,
- loss of system function,
- failure of a single system/component,
- failure of multiple components.

Failure indications combinations is not supported. Therefore, except when indicated, only one failure indication is allowed to be displayed on EICAS in order to grant relief.

Combination of one Failure Indication (Section 2) with inoperative items (Section 1) is not considered. As for inoperative items combinations (Section 1), is operators responsibility for exercising the necessary operational control to ensure that an acceptable level of safety is maintained. When such combinations are made, the interrelationships between those failures indications and items and the effect on airplane operation and crew workload should be considered.

EICAS messages Dispatch Policy

To grant the dispatch related to WARNING, CAUTION, ADVISORY and STATUS CAS messages that indicate that a system is in an abnormal status, degraded, faulted, failed or inhibited, the Fault Isolation Manual (FIM) shall be used for proper troubleshooting of the associated messages. MMEL Section 1 should then be referred to establish dispatchability status.

Alternatively, and **only** for messages listed on this Section 2, the dispatch may be granted without troubleshooting according to applicable provisos (Remarks or Exceptions).

MMEL is not the applicable document to be used for CAS messages that indicate a system condition that is normally mitigated by applicable crew procedures (e.g. armed, configuration disagreement, not on auto position, not installed).

1. FAILURE INDICATION		2. REMARKS OR EXCEPTIONS
APU FIRE DET FAIL CAUTION message (EMB-545 and EMB-550 Post-Mod. SB 550-78-0001)	C	Airplane may be dispatched provided APU is not used.
APU FIREXBTL B FAIL CAUTION message (EMB-545 and EMB-550 Post-Mod. SB 550-78-0001)	C	Airplane may be dispatched provided: a) APU is not used, and b) ENG 1 FIREXBTL B FAIL and ENG 2 FIREXBTL B FAIL CAUTION messages are not displayed.
AUTOBRAKE FAIL CAUTION message	C	(O) Airplane may be dispatched provided: a) AUTO BRAKE knob remains selected OFF, and b) Alternate procedures are established and used.
CARGO FIREX FAIL CAUTION message	C	(M) Airplane may be dispatched provided: a) The aft cargo compartment remains empty or not loaded with combustible or flammable material, b) Cargo heating system is deactivated, if installed, c) AVNX DMC A (B) FAIL CAUTION messages are not displayed, and d) Cargo compartment is inspected for no damage.

1. FAILURE INDICATION		2. REMARKS OR EXCEPTIONS
CARGO SMK DET FAIL CAUTION message	C	(M) Airplane may be dispatched provided: a) The aft cargo compartment remains empty or not loaded with combustible or flammable material, b) Cargo heating system is deactivated, if installed, c) AVNX DMC A (B) FAIL CAUTION messages are not displayed, and d) ELEC SDU FAIL ADVISORY message is not displayed.
STWG INT SMK DET FAIL CAUTION message	C	Airplane may be dispatched provided: a) The internal stowage compartment remains empty or not loaded with combustible or flammable material, b) AVNX DMC A (B) FAIL CAUTION messages are not displayed, and c) ELEC SDU FAIL ADVISORY message is not displayed.

1. FAILURE INDICATION		2. REMARKS OR EXCEPTIONS
CARGO SMK DET FAULT ADVISORY message	C	
ENG 1 (2) FADEC FAULT ADVISORY message	A	Airplane may be dispatched with message on one or both engines provided repairs are made within 40 flight hours. **NOTE:** Message ENG 1 (2) SHORT DISPATCH for associated engine will show.
ENG 1 (2) LO MARGIN ADVISORY message	A	Airplane may be dispatched with message on one or both engines provided: a) ENG 1 (2) EXCEEDANCE messages are not displayed, and b) Repairs are made within 200 flight hours.
ENG 1 (2) SHORT DISPATCH ADVISORY message	A	Airplane may be dispatched with message on one or both engines provided repairs are made within 40 flight hours.
FLTCTRL FAULT ADVISORY message	C	Airplane may be dispatched provided: a) Steep approach operation is not required for the intended route, and b) AVNX DMC A (B) FAIL CAUTION messages are not displayed.
LAV SMK DET FAIL ADVISORY message	C	Airplane may be dispatched provided: a) AVNX DMC A (B) FAIL CAUTION messages are not displayed, and b) ELEC SDU FAIL ADVISORY message is not displayed.

1. FAILURE INDICATION		2. REMARKS OR EXCEPTIONS
LG-HYD MAINT REQD ADVISORY message	A	(O) Airplane may be dispatched provided: a) PTU is checked for correct operation before each flight, b) Takeoff is limited to pressure altitude of 2000 ft and temperature of ISA+15°C maximum, and c) Repairs are made within one flight day.
PACK FAULT ADVISORY message	C	Airplane may be dispatched provided Pack Back-Up system is operative.

1. FAILURE INDICATION		2. REMARKS OR EXCEPTIONS
ELEC SDU FAULT STATUS message	C	**NOTE:** The message may be presented on CAS during ground operations.
ENG 1 (2) REV INHIBIT STATUS message	C	Airplane may be dispatched with message on one or both engines provided affected thrust reverser is considered inoperative.
ENG DOWNLOAD REQD STATUS message	C	