

Temporary Revisions (TRs) apply to this MMEL, which have been placed at the front of the document for convenience. All TRs overwrite and supersede the corresponding entry in the MMEL, and therefore must be incorporated in the document.

Please follow the instructions on each TR carefully, ensuring that the TR pages are inserted facing the effective page(s) in the MMEL.

The TRs should be incorporated in the order in which they were issued, as it is possible that a TR may be superseded by a later one.

Additionally please incorporate/amend the temporary revision record page and amend the list of effective pages accordingly.

CIVIL AVIATION AUTHORITY

29 October 2001

**MASTER MINIMUM EQUIPMENT LIST
TEMPORARY REVISION**

APPLICABLE TO CAA MMEL FOR THE FOLLOWING AIRCRAFT TYPES:

AIRCRAFT TYPE:	MMEL NORMAL REVISION No:
Airbus Industrie A300-600	2
Airbus Industrie A319/A320/A321	2
ATR 42	4
ATR 72	Initial issue
BAC 1-11	2
BAe (HS) 125 series B up to 800B	Initial issue
BAe (HS) 748	Initial issue
Beech F90/200/B200/B200C series	1
Beech B90/C90/C90A/E90	Initial issue
Beech 100/A100	Initial issue
Beechjet 400/400A and MU300	3
Boeing 707-300 series	Initial issue
Boeing 727-100 and 200 series	1
Boeing 737-100/200/300/400/500 series	3
Boeing 747-100/200 series	2
Boeing 747-400	3
Boeing 757	12
Boeing 767	Initial issue
Canadair Challenger	2
Cessna Citation CE-500 series	Initial issue
Cessna CE-525	Initial issue
Cessna Citation CE-650	Initial issue
Cessna CE-208/208A/208B	1
Cessna 401/402/404/411	Initial issue
Reims / Cessna 406/F406	Initial issue
Cessna 414/421	Initial issue
Cessna 425/441	Initial issue
Dassault Aviation Fan Jet (Falcon 20)	1
Dassault Aviation Mystere Falcon 900	Initial issue
Dassault Aviation Falcon 900EX	Initial issue
De Havilland DHC-6	3

Cont...

CIVIL AVIATION AUTHORITY

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**MASTER MINIMUM EQUIPMENT LIST
TEMPORARY REVISION**

APPLICABLE TO CAA MMEL FOR THE FOLLOWING AIRCRAFT TYPES:

AIRCRAFT TYPE:	MMEL NORMAL REVISION No:
De Havilland DHC-7	3
De Havilland DHC-8	1
Dornier 228	1
Embraer EMB-110	2
Embraer EMB-120	2
Fokker F27	1
Fokker F100/F70	2
Gulfstream Aerospace Gulfstream IV	3
Islander BN-2A/BN-2B	1
Learjet 35/36/55	Initial issue
Lockheed L-188 Electra	2
Lockheed L-1011 Tristar	1
MCDonnell Douglas DC-10 (Models 10 and 30)	Initial issue
McDonnell Douglas DC-3	Initial issue
Piper PA31	3
Saab SF340A and 340B	1

CIVIL AVIATION AUTHORITY

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MASTER MINIMUM EQUIPMENT LIST TEMPORARY REVISION

ACTION:

Insert pages 1, 2 and 3 of this TR after the TR Record page.
Insert page 4 of this TR at the front of the Preamble section.
Insert page 5 of this TR at the front of the Definitions section.
Insert page 6 of this TR immediately before and facing page 23-1.
Insert page 7 of this TR immediately before and facing page 25-1.
Insert page 8 of this TR immediately before and facing page 31-1.
Insert page 9 of this TR immediately before and facing page 34-1.
Insert page 10 of this TR immediately before and facing page 34-1.

Record the incorporation on the temporary revision record page and amend the list of effective pages accordingly.

REASON FOR ISSUE:

The TR reflects current CAA MMEL Policy for Cockpit Voice Recorders, Emergency Locator Transmitters, Flight Data Recorders, ACAS II and GPWS.

The Definitions and Preamble sections have also been updated to reflect current CAA MMEL Policy.

NOTES

1. This TR replaces any existing alleviation given in the MMEL normal revision and/or any previous TR on the same subject.
2. The existing MMEL numbering should be retained where applicable. In the absence of an applicable MMEL entry, the alleviation given in this TR should be added at the end of the relevant ATA chapter in the MMEL.

CIVIL AVIATION AUTHORITY

29 October 2001

MASTER MINIMUM EQUIPMENT LIST TEMPORARY REVISION

PREAMBLE

Insert this page facing at the front of the Preamble section in the MMEL.

The CAA MMELs and Supplements are produced in conjunction with a base document, generally either the MMEL issued/approved by a Foreign Airworthiness Authority or the aircraft manufacturer at a specific quoted revision number and date. There may be occasions whereby the CAA MMEL or Supplement has not been updated to consider later revisions of the base document. This could lead to instances where there are alleviations in the base MMEL which have either been revised or deleted and are now more restrictive than the corresponding CAA MMEL or Supplement entry. Operators are invited to review all new base document MMEL revisions and where necessary advise the CAA MMEL section of any significantly more restrictive alleviations introduced by the revision. The CAA will then expedite review of these variations and, where required, issue amendments to the CAA MMEL or Supplement.

New or amended alleviations given in later issues of the base document shall not be used until the CAA MMEL or Supplement has been updated to confirm that issue of the base document is acceptable.

CIVIL AVIATION AUTHORITY

29 October 2001

MASTER MINIMUM EQUIPMENT LIST TEMPORARY REVISION

DEFINITIONS

Insert this page facing at the front of the Definitions section in the MMEL.

"As required by Air Navigation Legislation / Operating Requirements": The associated item must comply with legal provisions such as the Air Navigation Order or any other legislation (JAR-OPS 1) in force during the flight.

Operators should refer to the JAR-OPS 1 MEL Policy document (Temporary Guidance Leaflet number 26) for suitable alleviations based upon the required equipment identified within JAR-OPS 1, subparts K and L (published in the JAA Administrative and Guidance, section four, Operations, part three).

"It is not reasonably practicable for repairs or replacements to be made": This statement is intended to cover situations whereby there is a lack of a replacement part(s), inadequate engineering resources or manpower to enable the defect to be rectified.

Flight: For the purpose of a MEL, a flight is the period of time between the moment when an aeroplane begins to move by its own means, for the purpose of preparing for take-off, until the moment the aeroplane comes to a complete stop on its parking area, after the subsequent landing (and no subsequent take-off).

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MASTER MINIMUM EQUIPMENT LIST
TEMPORARY REVISION

ATA 23 - COMMUNICATIONS

Insert this page facing page 23-1 of the MMEL.

Cockpit Voice Recorder (CVR) | - | - | - | As required by Operating Requirements.

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29 October 2001

**MASTER MINIMUM EQUIPMENT LIST
TEMPORARY REVISION****ATA 25 - EQUIPMENT / FURNISHINGS**

Insert this page facing page 25-1 of the MMEL.

Emergency Locator Transmitter (ELT) (If installed)	A	-	-	May be inoperative provided repairs or replacements are made within 6 further flights or 25 flying hours, whichever occurs first.
	D	-	-	Any in excess of those required may be inoperative.

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29 October 2001

MASTER MINIMUM EQUIPMENT LIST
TEMPORARY REVISION

ATA 31 - INDICATING / RECORDING SYSTEMS

Insert this page facing page 31-1 of the MMEL.

Flight Data Recorder (FDR)		-		-		-		As required by Operating Requirements.
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MASTER MINIMUM EQUIPMENT LIST
TEMPORARY REVISION

ATA 34 - NAVIGATION

Insert this page facing page 34-1 of the MMEL.

Airborne Collision and Avoidance System (ACAS II) (If installed)				
(1) ACAS II System	A	-	0	<p>(O) (M) As required by Air Navigation Legislation. May be inoperative provided the system is deactivated and secured, and</p> <p>(a) The aircraft may continue the flight or series of flights but shall not depart an airport where it is reasonably practicable for repairs or replacements to be made, and</p> <p>(b) Repairs or replacements must be carried out within 10 calendar days.</p> <p><u>Note:</u> Local airspace requirements may require a permission to proceed or impose a more restrictive rectification interval.</p>
(2) Combined Traffic Alert (TA) Resolution Advisory (RA) Dual Displays	C	-	1	<p>(O) May be inoperative on the non-flying pilot side provided TA and RA elements and audio functions are operative on the flying pilot side.</p> <p>(Cont.)</p>

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MASTER MINIMUM EQUIPMENT LIST
TEMPORARY REVISION

ATA 34 - NAVIGATION

Insert this page facing page 34-1 of the MMEL.

Airborne Collision and Avoidance System (ACAS II) (If installed) (Cont.)				
(3) Resolution Advisory (RA) Display System(s)	C	-	1	(O) One may be inoperative on the non-flying pilot side . OR
	C	-	0	(O) May be inoperative provided: (a) All Traffic Alert (TA) display elements and voice command audio functions are operative, and (b) TA only mode is selected by the crew.
(4) Traffic Alert (TA) Display System(s)	C	-	0	(O) May be inoperative provided all installed RA display and audio functions are operative.
Ground Proximity Warning System (GPWS) (including TAWS)	-	-	-	As required by Operating Requirements.

CIVIL AVIATION AUTHORITY

20 March 2002

**MASTER MINIMUM EQUIPMENT LIST
TEMPORARY REVISION**

TR-G6 APPLICABLE TO CAA MMEL FOR THE FOLLOWING AIRCRAFT TYPES:

GLOBAL TEMPORARY REVISION INDEX

AIRCRAFT TYPE:	G1	G2	G3	G4	G5	G6
Airbus Industrie A300-600				√	√	√
Airbus Industrie A319/A320/A321 Supplement				√	√	
ATR 42				√		
ATR 72				√	√	
BAC 1-11		√		√		√
BAe (HS) 125 series B up to 800B				√		√
BAe (HS) 748		√		√		√
Beech F90/200/B200/B200C series	√			√		√
Beech B90/C90/C90A/E90	√			√		√
Beech 100/A100	√			√		√
Beechjet 400/400A and MU300				√		√
Boeing 707-300 series				√		√
Boeing 727-100 and 200 series				√		
Boeing 737-100/200/300/400/500 series Supplement				√	√	
Boeing 747-100/200 series				√	√	
Boeing 747-400 Supplement				√	√	
Boeing 757 Supplement				√	√	
Boeing 767 Supplement				√	√	√
Canadair Challenger				√		√
Cessna Citation CE-500 series Supplement				√		
Cessna CE-525 Supplement				√		
Cessna Citation CE-650 Supplement				√		
Cessna CE-208/208A/208B	√			√		√
Cessna 401/402/404/411	√			√		√
Reims / Cessna 406/F406	√			√		√
Cessna 414/421	√			√		√
Cessna 425/441	√			√		√

CIVIL AVIATION AUTHORITY

20 March 2002

**MASTER MINIMUM EQUIPMENT LIST
TEMPORARY REVISION****GLOBAL TEMPORARY REVISION INDEX (Cont.)**

AIRCRAFT TYPE:	G1	G2	G3	G4	G5	G6
Dassault Aviation Fan Jet (Falcon 20)				√		√
Dassault Aviation Mystere Falcon 900		√		√		√
Dassault Aviation Falcon 900EX				√		
De Havilland DHC-6	√			√		√
De Havilland DHC-7	√	√		√		√
De Havilland DHC-8				√	√	
Dornier 228	√			√		√
Embraer EMB-110	√			√		√
Embraer EMB-120				√		
Fokker F27	√	√		√	√	√
Fokker F100/F70 Supplement				√	√	
Gulfstream Aerospace Gulfstream IV				√		√
Islander BN-2A/BN-2B	√			√		√
Learjet 35/36/55				√		√
Lockheed L-188 Electra				√		√
Lockheed L-1011 Tristar				√		√
MCDonnell Douglas DC-10 (Models 10 and 30)				√	√	√
McDonnell Douglas DC-3				√		
Piper PA31	√			√		√
Saab SF340A and 340B Supplement				√	√	

Note: The TR-G prefix designates a global Temporary Revision which is a policy change applicable to several aircraft types. Please note that revisions of the MMEL may have incorporated (and superseded) the Temporary Revisions previously issued.

CIVIL AVIATION AUTHORITY

20 March 2002

MASTER MINIMUM EQUIPMENT LIST TEMPORARY REVISION

ACTION : Insert pages 1 and 2 of this TR immediately after the TR record page.

Insert page 3 of this TR immediately before and facing page 34-1 of the MMEL (or S34-1 for MMEL Supplements).

Record the incorporation on the temporary revision record page and amend the list of effective pages accordingly.

REASON FOR ISSUE: Update MMELs to include current CAA MMEL Policy on Radio Altimeters. Two notes have been introduced in order to ensure that the applicable dispatch deviations are used if the GPWS/TAWS and ACAS systems are also inoperative.

If either of these notes already exists in the current MMEL entry (as a note or as part of the alleviation), the existing wording in the MMEL should remain. These notes should be incorporated only if the current MMEL entry does not refer to these systems. If the MMEL entry refers to GPWS but not ACAS, then only the note for ACAS need be incorporated.

ATA 34 – NAVIGATION

Insert this page facing page 34-1 of the MMEL.

The following notes should be added to the entry for Radio Altimeters:

Note 1: If the loss of the radio altimeter prohibits normal operation of the GPWS/TAWS, the dispatch deviation and rectification interval for an inoperative GPWS/TAWS must be observed.

Note 2: If the loss of the radio altimeter prohibits normal operation of the ACAS, the dispatch deviation and rectification interval for an inoperative ACAS must be observed.

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MASTER MINIMUM EQUIPMENT LIST

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Civil Aviation Authority

MASTER MINIMUM EQUIPMENT LIST

Revision 1
15 April 1994

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This Master Minimum Equipment List (MMEL) is issued by the Civil Aviation Authority at the above revision and is approved as the basis for the preparation and approval of individual operator's Minimum Equipment Lists (MELs) for aircraft of this Type.

Correspondence concerning this document should be addressed to the office listed below:-

Civil Aviation Authority
Safety Regulations Group
Aviation House
South Area
Gatwick Airport
Gatwick
West Sussex
RH6 0YR

Attention: Aircraft Projects
MMEL Section

Civil Aviation Authority

MASTER MINIMUM EQUIPMENT LIST

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REVISION RECORD

REVISION No.	ISSUE DATE	INCORPORATED BY	DATE
Original	10 March 1993		
1	15 April 1994		

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PREAMBLE

1. The CAA approved Master Minimum Equipment List (MMEL) provides owners/operators of United Kingdom registered aircraft, of the relevant type, with the basis for the preparation of their individual Minimum Equipment List (MELs). In the case of holders of Air Operators Certificates the MEL will be included in that Company's Operations Manual.
2. The approved MMEL represents a list of items of equipment which, under particular circumstances, can, to the satisfaction of the CAA, be unserviceable when the aircraft is despatched, while still retaining the required level of safety.
3. The CAA recognises that in some respects the standard and scale of equipment provided in the aircraft may exceed the minimum required to satisfy airworthiness or Air Navigation Legislation requirements. Where necessary to achieve a satisfactory level of safety with an inoperative item, appropriate limitations are imposed or the function transferred to another component.
4. The MMEL does not include items such as wings, engines and landing gear that are always required, nor is reference made to equipment such as passenger convenience and entertainment items which when inoperative obviously do not affect airworthiness. It is important to note therefore that **ANY ITEM WHICH IS RELATED TO THE AIRWORTHINESS OF THE AIRCRAFT AND WHICH IS NOT INCLUDED IN THE MMEL IS ALWAYS REQUIRED TO BE OPERATIVE BEFORE A FLIGHT IS DESPATCHED.** Likewise items required by Air Navigation Legislation. Additional Certification Requirements as appropriate, which are not listed must be operative.
5. The MMEL may not waive a limitation or an emergency procedure which is given in the Flight Manual (FM) or override an Airworthiness Directive (AD) /Mandatory Inspection unless the FM/AD provides otherwise. Similarly any Additional Certification Requirements, or other special provisions, as appropriate which have been determined as necessary by the CAA shall not be waived unless otherwise agreed or varied by the CAA.
6. An Owner/Operators MEL must receive CAA approval which thereby conveys the permission, required by the UK Air Navigation Order, to the Commander, for operation of the aircraft with specified items of equipment unserviceable.
7. The MEL may not be less restrictive than the MMEL therefore the number of items required for despatch shall not be less than the corresponding number in column 3 of the MMEL and any associated conditions shall be at least as severe as those specified in column 4.

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PREAMBLE (Cont...)

8. The MMEL does not anticipate the effects of combinations of apparently unrelated unserviceabilities or allow for situations where systems are made inoperative for special purposes such as demonstration, test or crew training. Other provisions may apply to positioning or ferrying flights but these may not necessarily be included in the MMEL.
9. The MEL should indicate that a decision to operate the aircraft with multiple unserviceabilities should only be made after due consideration of possible interrelated or additive effects and, if necessary, following consultation with appropriate engineering specialists.
10. It is not the purpose of the MMEL to allow defects of other than optional items to remain unrectified indefinitely. The operational flexibility provided under the MMEL policy is justified only within a framework of controlled and sound programmes of repairs, replacement and servicing. Defects should be rectified expeditiously thus retaining the intended overall level of safety and reducing the possibility of a subsequent failure necessitating the removal of the aircraft from service. Some particular items in the MMEL may be subject to a limitation of flight hours, number of flights or consecutive calendar days, and these must be transferred into the MEL. A limit of three calendar days for completion of repairs or replacements has been applied to some items. Other time limits for rectification, such as those specified by the ANO, may also be applied as appropriate. Operators with established routes shall specify in the MEL at which stations, in addition to the main maintenance base, repair facilities exist.
11. This MMEL is based upon UK legislation and some of the alleviations it provides may not therefore necessarily comply with foreign legislation.

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MASTER MINIMUM EQUIPMENT LIST

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DEFINITIONS

1. In this list, the items of equipment are classified in systems according to the ATA 100 specification. Individual items within a given ATA classification are numbered sequentially.
2. "Item" (Column 1): The equipment, system, components or function as listed in Column 1.

NOTE: Items annotated in UPPER CASE letters indicates the precise flight deck legend used.
3. "Number Installed" (Column 2): The number of the specified items normally installed in the aircraft. This number identifies the aircraft configuration considered in developing the MMEL.

NOTE: The operator's MEL should list the number installed in a particular aircraft.
4. "Number Required for Despatch" (Column 3): The minimum number of the specified items required for operation provided the conditions defined in Column 4 are met.
5. "Remarks or Exceptions" (Column 4): This column includes a statement prohibiting operation or permitting operation with a specific number of items inoperative, provisos (conditions and limitations) for such operation and appropriate notes.
6. Dash (-): This symbol indicates a variable quantity when used in Columns 2 or 3.

NOTE: The operator's MEL should list the numbers appropriate to his particular aircraft in Columns 2 and 3.
7. Each inoperative item must be placarded to inform and remind the crew members and maintenance personnel of the equipment condition. To the extent practicable, placards should be located adjacent to the control or indicator for the item affected such that it is clear to the operating crew that it or its associated system is inoperative.
8. "Inoperative": A system or item of equipment is deemed inoperative if it malfunctions such that it does not accomplish its intended purpose and/or is not consistently functioning within its designed operating limit(s) or tolerance(s).
9. "(0)": The use of this symbol in Column 4 indicates that an appropriate operating procedure (or change to an existing procedure) must be established, published and utilised to maintain the required level of safety while operating under the terms of the (M)MEL.

Normally, these procedures are accomplished by the flight crew. However, other personnel may be qualified and authorised to perform certain functions.

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DEFINITIONS (Cont...)

10. "(M)": The use of this symbol in Column 4 indicates that an appropriate maintenance procedure must be established, published and utilised prior to the first flight undertaken following discovery of the defect and, if necessary, repeated at specified intervals during operation under the terms of the (M)MEL to maintain the required level of safety.

Normally, these procedures are accomplished by maintenance personnel. However, other personnel may be qualified and authorised to perform certain functions.

NOTE: Where an item is annotated (0)/(M), the "/" is defined as "and/or", which shows that there may be different options available in respect of the MEL procedures.

11. "As required by Air Navigation Legislation": The associated item must comply with legal provisions such as the Air Navigation Order or any other legislation in force during the flight.
12. "VMC" and "IMC": The definitions of these terms are those used in Section 2 of the Air Navigation Order - Rules of the air.
13. "Icing Conditions": An atmospheric condition that may cause ice to form on the aircraft or in the engines.
14. "Visible Moisture": An atmospheric environment containing water in any form that can be seen in natural or artificial light, i.e. clouds, fog, rain, sleet, hail, snow.
15. "Flight Hour": The time from the moment an aircraft leaves the surface of the earth until it touches it at the next point of landing.

NOTE: The definition differs from that given in the Air Navigation Order.

16. "ETOPS": Refers to "extended range" operations which may be defined as "operation of a two-engined aeroplane over a route that contains a point farther than one hour flying time at the normal one-engined inoperative cruise speed (in still air) from an adequate airport".

In the MEL, for an operator who has received approval to extend maximum diversion time from 120 minutes to 138 minutes, unless otherwise stated, "120 minutes" may be interpreted as "138 minutes".

17. "Flight day": A 24 hour period (from midnight to midnight) during which at least one flight is scheduled for the affected aircraft.
18. "Authority": The competent regulatory authority according to the country of registry; for aircraft registered in the U.K. this is the Civil Aviation Authority.

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DEFINITIONS (Cont...)

19. "Deleted": When applied to an item number, indicates that the item was previously listed but is now required to be operative.
20. "Combustible (Material)": is defined as material which is capable of catching fire and burning.
- When an MMEL item specifies the condition that only non-combustible materials are to be carried, it is the operator's responsibility to determine that all material (including containers, packing material and pallets etc) in the associated compartments is of a non-combustible nature.
- If it cannot be determined whether any proposed cargo is non-combustible, it must not be loaded in compartments where combustible materials are prohibited.
21. "System": System means the group of directly related components which together performs a specified function, for example 'RPM indication system' would include the RPM indicator, tachometer generator, circuit breaker and associated circuitry.
22. "Extended Overwater Flight": Refers to an operation overwater at a horizontal distance of more than 50 nautical miles from the nearest shoreline.
23. Repair Intervals
Calendar Day
A period of 24 hours elapsed time, commencing at midnight on the day of discovery and recording of a malfunction in the aircraft's maintenance/logbook and ending at midnight on the next day. For example, if it were recorded at 10 am on January 26th that a malfunction had occurred, and the MMEL allowed three calendar days for completion of repairs or replacements, the three day interval would commence at midnight on 26th January and end at midnight on 29th January.
24. "Despatch": The point at which an aircraft first moves under its own power for the purpose of commencing a flight.

NOTE: The definition above is in accordance with that given in Article 106(2)(a) of the ANO and it is at the point of despatch that the provisions of the MMEL cease to apply. They come into effect again when the aircraft next comes to rest at the end of its flight. In the case of a helicopter which comes to rest without stopping rotors, it is deemed to have ended its flight and the provisions of the MMEL then apply until it is next despatched.

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DEFINITIONS (Cont...)

25. Aircraft Model Designations and Equipment Configurations:

<u>Model</u>	<u>Common Reference</u>	<u>MMEL Designation</u>
L-1011-385-1	Dash 1 and Dash 50	-1
L-1011-385-1-14	Dash 100 or 200	-14
L-1011-385-1-15	Dash 100 or 200	-15
L-1011-385-3 (ACS)	Dash 500	-3

Each listed item of equipment in this MMEL is applicable to all of the above models unless otherwise specified. For example, (-1, -14, -15) in Column 1 indicates that the item is applicable to those models only. If a listed item of equipment has alternate configurations, these will be specified, usually in Column 1.

26. Base Documents used for the preparation of this MMEL are:

- (a) FAA Lockheed L-1011 MMEL Revision 20D dated 6 May 1993.
- (b) CAA Policy Statements, as effective at 31 March 1994.

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HIGHLIGHTS TO REVISION 1

General

1. In response to recent FAA policy, the * has been deleted - see Definitions Item 7.
2. A three day limit for repair or replacement of inoperative items has been introduced - see Preamble item 10.

ATA 21 AIR CONDITIONING

21-25-03	FESC Exhaust Fans	3 day repair policy applied.
21-25-21	Instrument Cooling Fan	3 day repair policy applied.

ATA 22 AUTO FLIGHT

22-00-03(7)	Course Set Knobs	3 day repair policy applied.
22-10-02	Nav Mode Select Panels	3 day repair policy applied.

ATA 23 COMMUNICATIONS

23-71-00	CVR	Latest CAA Policy applied - 48 hours becomes 24 hours.
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ATA 24 ELECTRICAL POWER

24-21-01	IDG	3 day repair policy applied.
24-21-05	IDG Generator Controller Units	3 day repair policy applied.
24-21-07	IDG Generator Breakers	3 day repair policy applied.
24-31-01	Transformer Rectifiers	3 day repair policy applied.

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HIGHLIGHTS TO REVISION 1

ATA 25 - EQUIPMENT/FURNISHINGS

25-11-01	Flight Deck Crew Seats	3 day repair policy applied.
25-11-08	Flight Crew Shoulder Harness	3 day repair policy applied.
25-32-00	Lower Galley Lift Systems	3 day repair policy applied.

ATA 263 FIRE PROTECTION

26-15-10	Cargo Compartment Smoke Detection Systems (2) & (5)	Reference to Definition 20 added.
26-23-00	Cargo Compartment Fire Extinguisher Systems	Proviso revised and reference to Definition 20 added.
26-25-00	Toilet Compartment Smoke Detection Systems	3 day repair policy applied.

ATA 27 FLIGHT CONTROLS

<u>27-21-02</u>	Rudder Pedal Adjustment Systems	3 day repair policy applied.
27-21-18	Rudder Mechanical Limiter System	3 day repair policy applied.

ATA 28 FUEL

28-27-01	Fuel Transfer Valves	3 day repair policy applied.
28-21-07	Fuel Level Control Switches	Additional relief. - item (4).

ATA 30 ICE AND RAIN PROTECTION

30-31-00	Air Data Sensor Heat Systems	3 day repair policy applied.
26-23-02	<<DISCH>> Light	New / replacement entry for 26-16-05.

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HIGHLIGHTS TO REVISION 1

ATA 31 INDICATING/RECORDING SYSTEMS

31-31-01	FDR	Latest CAA policy applied - 48 hours becomes 24 hours
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ATA 33 LIGHTS

33-10-00	Flight Compartment and Instrument Lighting System	Latest CAA policy applied.
33-29-12	Passenger Notice System	Third alleviation added
33-51-08	Exterior Emergency Light System	3 day repair policy applied and proviso (c) added.
33-52-00	Floor Proximity Lights	Remarks revised.

ATA 34 NAVIGATION

34-22-00	Magnetic Heading Reference Systems	In accordance with FAA MMEL alleviation removed.
34-22-07	Standby Compass	3 day repair policy applied.
34-45-00	Weather Radar	NOTE expanded.
34-61-02	TCAS	6 sectors/48 hours becomes 10 calendar days.

ATA 35 OXYGEN

35-21-00	Passenger Oxygen System	Revised to reflect latest CAA policy.
35-31-07	Lower Galley oxygen Cylinder	3 day repair policy applied.

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HIGHLIGHTS TO REVISION 1

ATA 52 DOORS

52-11-00	Emergency Exits	3 day repair policy applied.
52-51-02	Lockable Flight Deck Door	3 day repair policy applied.

ATA 73 ENGINE FUEL AND CONTROL

73-31-00	Engine FUEL PRESSURE Light Systems	3 day repair policy applied.
73-34-00	Engine Fuel Flow and Fuel Used Indicating Systems	3 day repair policy applied.

ATA 77 ENGINE INDICATING

77-12-04	NI RPM Indicating Systems	3 day repair policy applied.
77-12-06	N2 RPM Indicators	3 day repair policy applied.
77-12-07	N3 RPM Indicators	3 day repair policy applied.

ATA 79 ENGINE OIL

79-31-03	ENG OIL PRESS lights	3 day repair policy applied.
79-34-00	Oil Temperature Indicating Systems	3 day repair policy applied.
79-37-00	Oil Quantity Indicating Systems	3 day repair policy applied.

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<u>21 AIR CONDITIONING</u>				
21-01	Pack Flow Control Valves	3	2	(M) (O) One may be inoperative provided associated valve is secured CLOSED.
21-21	Compressor Overheat Trip Systems	3	2	(O) One may be inoperative provided associated ECS Temperature Indicating Systems for CPRSR DISCH and ACM DISCH are operative. NOTE: For inoperative compressor over-temperature switch, limit the associated CPRSR DISCH temperature to +200oC maximum.
21-24	Pack Discharge Overheat Trip Systems	3	2	(O) One may be inoperative provided associated ECS Temperature Indicating Systems for CPRSR DISCH and ACM DISCH are operative. NOTE: For inoperative pack discharge over-temperature switch, limit the associated ACM DISCH temperature to +80oC maximum.
21-37	Ozone Converters (If Installed)	3	0	All may be inoperative.
23-15	Cabin Overhead Exhaust Flow Control Valve (-3)	1	0	(M) May be inoperative provided: (a) Associated valve is secured CLOSED, and (b) Cabin Overhead Exhaust Fan System is deactivated. OR (c) Associated valve is secured OPEN, and (d) Cabin Galley Exhaust Flow Control Valve is operative or secured CLOSED.
23-17	Cabin Overhead Exhaust Fan System (If Installed)	1	0	May be inoperative.
23-18	CABIN OVHD EXHAUST FAN Annunciator Light System (If Installed)	1	0	May be inoperative.

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<u>21 AIR CONDITIONING</u>				
<u>(Cont...)</u>				
24-02 Galley Exhaust Flow Control Valves				
(1) Lower Galley (-1, -14, -15)	1	0		(M) May be inoperative provided: (a) Associated valve is secured CLOSED, and (b) Galley ovens not used. OR
	1	0		May be inoperative provided: (a) Associated valve is OPEN, and (b) Extended overwater flight is prohibited.
(2) Cabin Galley (If Installed)	1	0		(M) May be inoperative provided: (a) Associated valve is secured CLOSED, and (b) Cabin Galley Exhaust Fan is deactivated. OR (c) Associated valve is OPEN, and (d) Cabin Overhead Exhaust Flow Control Valve is operative or secured CLOSED.
24-06 Exhaust Fan				
(1) Lower Galley (-1, -14, -15)	1	0		(M) May be inoperative provided: (a) Lower Galley Exhaust Flow Control Valve is operative, and (b) Mid Electrical Service Centre (MESC) Exhaust Fan is operative during ground operations.
(2) Cabin Galley (If Installed)	1	0		May be inoperative.
(3) Cabin Circuit Breaker Panel (-3)	1	0		May be inoperative.

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<u>21 AIR CONDITIONING</u> <u>(Cont...)</u>				
25-01	Forward Electronic Service Centre (FESC) AVIONIC AIR-FWD-LO FLO Light System	1	0	(M) May be inoperative provided: (a) FESC Exhaust Fans are operative, (b) FESC Exhaust Fan Differential Pressure Switch is operative, and (c) FESC Exhaust Air Flow Control Valve is operative.
25-02	Mid Electrical Service Centre (MESC) AVIONIC AIR-MID-LO FLO Light System	1	0	(M) May be inoperative provided:
		1	0	(a) MESC Exhaust Fan is operative, (b) MESC Exhaust Fan Differential Pressure Switch is operative, and (c) MESC Exhaust Air Flow Control Valve is operative.
25-03	Forward Electronic Service Centre (FESC) Exhaust Fans	2	1	(O) One may be inoperative.
		2	0	(M) (O) One or both may be inoperative provided: (a) Associated fan is deactivated and is free to windmill, (b) FESC AVIONIC AIR-FWD-LO FLO Light System is operative, (c) During maintenance/passenger loading operations the electrical system is in the Ground Service mode, (d) Within 15 minutes of switching from Ground Service mode to main busses, the aircraft is pressurised to obtain a cabin altitude 250-300 feet below field elevation, and (e) Repairs or replacements are carried out within three calendar days.
NOTE 1: Above procedures are required in order to provide adequate FESC equipment cooling.				
(Cont...)				

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		(4) Remarks or Exceptions		
<u>21 AIR CONDITIONING</u> <u>(Cont...)</u>				
25-03	Forward Electronic Service Centre			NOTE 2: DO NOT EXCEED A CABIN DIFFERENTIAL PRESSURE OF 0.15 PSI DURING GROUND PRESSURISATIONS.
25-04	Mid Electrical Service Centre (MESC) Exhaust Fan	1	0	(M) (O) May be inoperative provided: (a) Battery Charger is operative but is deactivated when cabin differential pressure is less than 1.0 psi, (b) Unattended on-ground use of lower galley ovens is prohibited, and (c) Lower galley modules are not serviced with dry ice. NOTE 1: Inoperative MESC Exhaust Fan renders Lower Galley or Lounge Smoke Detection System Ineffective on the ground. NOTE 2: Refer to Flight Manual Limitations for galley occupancy on ground.
25-05	Forward Electronic Service Centre (FESC) Exhaust Fan Differential Pressure Switch	1	0	(M) (O) May be inoperative provided: (a) FESC Fan Differential Pressure Sensing System is placed in the NO PRESSURE position, (b) FESC Exhaust Air Flow Control Valve is operative, and (c) FESC Exhaust Fan is operative. NOTE: The FESC Exhaust Air Flow Control Valve will remain open in flight and on the ground, and AVIONIC AIR-FWD-OVBD Light will remain illuminated. Valve can be closed by unlatching COOL AIR OVBD switchlight.
25-06	Mid Electrical Service Centre (MESC) Exhaust Fan Differential Pressure Switch	1	0	(M) (O) May be inoperative provided (a) MESC fan differential pressure sensing circuit is placed in the NORMAL PRESSURE position, (Cont...)

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<u>21 AIR CONDITIONING</u> <u>(Cont...)</u>			
25-06 Mid Electrical Service Centre (MESC) Exhaust Fan Differential Pressure Switch (Cont...)			<p>(b) MESC Exhaust Air Flow Control Valve is electrically held OPEN, and can be CLOSED with the COOL AIR OVBD switchlight.</p> <p>(c) MESC Exhaust Fan is operative, and</p> <p>(d) MESC AVIONIC AIR-MID--LO FLO Light System is operative.</p> <p>NOTE: MESC Exhaust Air Flow Control Valve must be operative in order to allow it to be closed for ditching and for pressurisation control.</p>
25-09 Forward Electronic Service Centre (FESC) Exhaust Air Flow Control Valve	1	0	<p>(M) (O) May be inoperative OPEN provided:</p> <p>(a) All Pack Air Cycle Machines (ACM) are operative, and</p> <p>(b) MESC Exhaust Air Flow Control Valve is operative.</p> <p>NOTE: With the FESC Exhaust Air Flow Control Valve open the AVIONIC AIR-FWD-OVBD Light will remain illuminated in flight.</p>
25-10 Mid Electrical Service Centre (MESC) Exhaust Air Flow Control Valve	1	0	<p>(M) (O) Exhaust for extended overwater operation, may be inoperative OPEN provided:</p> <p>(a) All Pack Air Cycle Machines (ACM) are operative,</p> <p>(b) FESC Exhaust Air Flow Control Valve is operative, and</p> <p>(c) Extended overwater flight is prohibited.</p> <p>NOTE: With the MESC Exhaust Air Flow Control Valve open, the AVIONIC AIR-MID-OVBD Light will remain illuminated in flight.</p>
25-17 Inertial Navigation System Exhaust Fan	1	0	<p>May be inoperative provided FESC Exhaust Fan is operative.</p>

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		(4) Remarks or Exceptions		
<u>21 AIR CONDITIONING</u> <u>(Cont...)</u>				
25-20	Instrument Cooling Annunciator Light System			
	(1) PILOT INSTR COOL SYS	1	0	(M) May be inoperative provided: (a) Instrument Cooling System Diverter Valve is operative. OR (b) Instrument Cooling System Diverter Valve is secured in the NORMAL (cold air plenum) position.
	(2) PILOT INSTR COOL FAN	1	0	(M) May be inoperative provided Instrument Cooling Fan is operative. NOTE: Fan is audible in the flight station.
25-21	Instrument Cooling Fan			
	(1) SB 093-21-121 Not Incorporated	1	0	(O) May be inoperative provided: (a) Electrical system is maintained in GND SERVICE mode while loading and unloading passengers, and (b) Repairs or replacements are carried out within three calendar days.
	(2) SB 093-21-121 or Production Equivalent Incorporated	1	0	May be inoperative.
25-22	Battery Cooling System	1	0	May be inoperative.

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<u>21 AIR CONDITIONING</u> <u>(Cont...)</u>				
25-34	Instrument Cooling System Diverter Valve	1	0	(M) May be inoperative provided: (a) Instrument Cooling Fan is operative. OR (b) Instrument Cooling System Diverter Valve is secured in the Normal (cold air plenum) position.
25-35	Instrument Cooling System Differential Pressure Switch	1	0	(M) May be inoperative provided the Instrument Cooling Annunciator Light System is operative.
25-40	Instrument Cooling System Moisture Control Valve	1	0	(M) May be inoperative: (a) Instrument Cooling System Diverter Valve is operative. OR (b) Instrument Cooling System Diverter Valve is secured OPEN (FESC air), and (c) The Instrument Cooling Fan is operative.
27-00	Aft Cargo Compartment Ventilation System	1	0	(M) (O) May be inoperative provided: (a) Associated ventilation system airflow control valves for Inlet Shutoff, Overboard Shutoff, and Overboard Bypass are secured CLOSED, and (b) Live animals are not carried in Aft Cargo Compartment.
31-00	Cabin Pressure Control System (1) Normal and Standby Outflow Valve Control and Actuation (AC Powered)	-	-	(O) May be inoperative for either the Forward or Aft Outflow Valve provided Manual Control and Actuation is operative for both the Forward and Aft Cargo Compartment. (Cont...)

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			(4) Remarks or Exceptions
<u>21 AIR CONDITIONING</u>			
<u>(Cont...)</u>			
31-00 Cabin Pressure Control System (Cont...)			
(2) Manual Outflow Valve Control and Actuation (DC Powered)	-	-	(O) May be inoperative for the Forward or Aft Outflow Valve provided both Normal and Standby Control and Actuation is operative for both the Forward and Aft Outflow Valves.
(3) Normal, Standby and Manual Outflow Valve Control and Actuation (AC and DC Powered)	-	-	(M) (O) May be inoperative for either the Forward or Aft outflow Valve provided: (a) Associated valve is secured CLOSED. (b) Normal, Standby and Manual Control and Actuation is operative for unaffected valve, (c) Both Cabin Safety Valves are operative, and (d) If Forward Outflow Valve is inoperative, FESC Fan Differential PRESSURE Sensing System is placed in the NO PRESSURE position.
	-	-	(M) (O) Except for extended overwater operation, may be inoperative for both the Forward and Aft Outflow Valves provided: (a) Both the Forward and Aft Outflow Valves are positioned OPEN to 12 o'clock as indicated in the flight station indicator, (b) FESC Fan Differential Pressure Sensing Circuit is placed in the NO PRESSURE position, and (c) The aircraft is operated unpressurised. NOTE: Refer to Flight Manual Limitations.
32-01 Cabin Safety Valves	2	1	(M) One may be inoperative provided: (a) Associated valve is secured CLOSED, and (b) Cabin Pressure Control System Normal, Standby and Manual Control and Actuation is operative for both the Forward and Aft Outflow Valves.

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<u>21 AIR CONDITIONING</u>				
<u>(Cont...)</u>				
32-05	Cabin Safety Valve OPEN Lights	2	0	One or both may be inoperative.
33-01	Cabin Altitude and Differential Pressure Indicator	1	0	(M) May be inoperative provided
	(a) Flight is conducted unpressurised, and			
	(b) The Cabin Outflow Valve is secured OPEN.			
	(1) ALTITUDE Indication	1	0	(O) May be inoperative provided:
	(a) Cabin DIFFERENTIAL PRESSURE portion of the indicator is operative, and			
	(b) A chart is provided to the crew to convert cabin differential pressure to cabin altitude.			
	(2) DIFFERENTIAL PRESSURE Indication	1	0	(O) May be inoperative provided:
	(a) Cabin ALTITUDE portion of the indicator is operative, and			
	(b) A chart is provided to the crew to convert cabin altitude to cabin differential pressure.			
33-02	Cabin Rate-of-Climb Indicator	1	0	May be inoperative provided:
	(a) Cabin Pressure Control Systems Normal and Standby Control and Actuation is operative for both Forward and Aft Outflow Valves, and			
	(b) Cabin Altitude and Differential Pressure Indications are operative.			
41-02	Hot Air Manifold Temperature Control Valves	2	0	(M) (O) One or both may be inoperative provided:
	(a) Associated valve is secured CLOSED.			
	OR			
	(b) Associated Hot Air Manifold Isolation Valve is secured CLOSED.			

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<u>21 AIR CONDITIONING</u> <u>(Cont...)</u>				
41-05	Hot Air Manifold Temperature Control Sensors	2	0	(M) (O) One or both may be inoperative provided: (a) Associated Hot Air Manifold Temperature Control Valve is secured CLOSED. OR (b) Associated Hot Air Manifold Isolation Valve is secured CLOSED.
41-17	Hot Air Manifold Isolation Valves	2	1	(M) (O) One may be inoperative provided associated valve is determined to be either OPEN or CLOSED.
		2	0	(M) (O) One or both may be inoperative provided: (a) Associated valves are secured CLOSED, and (b) Associated ECS Temperature Indicating System for HOT MANF is operative.
41-19	Hot Air Manifold Duct Overtemperature Switch	1	0	(M) May be inoperative provided both Hot Air Manifold Temperature Control Valves are secured CLOSED.
43-00	Floor Heat System	1	0	(M) May be inoperative provided associated circuit breakers are OPEN and COLLARED.
44-00	Cargo Heating Systems			
	(1) Fans	3	0	(M) All may be inoperative provided: (a) Associated Fan is deactivated, and (b) Live animals are not carried in associated cargo compartment.
	(2) Cycling Switches	3	0	(M) All may be inoperative provided associated switch is OPEN.
	(3) Overtemperature Switches	3	0	(M) All may be inoperative provided associated fan circuit breaker is OPEN and COLLARED.
(Cont...)				

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<u>21 AIR CONDITIONING</u> <u>(Cont...)</u>				
44-00 Cargo Heating Systems (Cont...)				
(4) Cold Indication Switches	3	0		All may be inoperative provided live animals are not carried in the Aft Cargo area when the Aft Cargo Heating System is operative.
51-01 Pack Heat Exchangers	3	2		(M) One may be inoperative provided the associated Pack Flow Control Valve is secured CLOSED.
51-04 Ram Cooling Header and Check Valves	3	0		(M) All may be inoperative provided the associated Pack ACM is not operated on the ground.
51-07 Pack Air Cycle Machines (ACM)	3	2		(M) (O) One may be inoperative provided: (a) Associated Pack Flow Control Valve is operative and is OPEN only in flight, (b) Associated Pack Ram Air Exhaust System is operative, (c) Associated Pack Turbine Bypass Valve is deactivated OPEN or remains OPEN using pack MNL control, and (d) Associated ECS Temperature Indicating System for ACM DISCH is operative.
(3	1		(M) (O) Two may be inoperative provided: (a) The operative ACM Pack Turbine Bypass Valve is operative, (b) Associated Pack Flow Control Valves are operative and are OPEN only in flight, (c) Associated Pack Ram Air Exhaust Systems are operative, (Cont...)

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<u>21 AIR CONDITIONING</u> <u>(Cont...)</u>			
51-07 Pack Air Cycle Machines (ACM) (Cont...)			(d) Associated Pack Turbine Bypass Valves are deactivated OPEN or remain OPEN using pack MNL Control (e) Associated ECS Temperature Indicating System for ACM DISCH is operative, and (f) Aircraft is not operated more than 400 nautical miles from a suitable airport. NOTE: A pack is considered to be operative even though the following are inoperative: PACK INLET, CMPR DISCH, TURB INLET indications, and AUTO temperature control.
51-22 Pack Water Separators	3	0	(O) All may be inoperative provided the associated PACK TEMPERATURE CONTROL is operated in manual mode on the ground.
61-00 Zone Trim Control Systems	-	0	(M) (O) May be inoperative provided: (a) Associated Zone Trim Control Valve is CLOSED. OR (b) Both Hot Air Manifold Isolation Valves are CLOSED. OR (c) Zone Trim Pressure Regulator and Shutoff Valve is CLOSED.
61-27 Zone Trim Pressure Regulator and Shutoff Valve	1	0	(M) (O) May be inoperative provided: (a) Valve is determined to be OPEN or CLOSED, and (b) Valve position is noted on placard. NOTE: When valve is CLOSED all trim air is shut off.

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<u>21 AIR CONDITIONING</u> <u>(Cont...)</u>				
62-01 Pack Temperature Controllers	3	0		(O) All may be inoperative provided: (a) Associated ECS Temperature Indicating Systems for CPRSR DISCH and ACM DISCH are operative, and (b) Associated Pack Manual Control System is verified operative.
62-04 Pack Ram Air Exhaust Systems (Actuator and Louvers)	3	2		(M) One may be inoperative provided associated Exhaust System is deactivated.
	3	1		(M) Two may be inoperative provided: (a) One associated system is secured in the MID position, and (b) Other associated system is CLOSED.
62-16 Pack Turbine Bypass Valves	3	1		(M) (O) Two may be inoperative provided: (a) All three Pack ACM's and associated components are operative, (b) Associated valve is secured OPEN, (c) Associated Pack Ram Air Exhaust System is operative, (d) Associated Turbine Bypass Position Indicating System is operative, and (e) Associated ACM DISCH temperature is monitored.
62-19 Pack Ice Sensors	3	0		(O) All may be inoperative provided associated ECS Temperature Indicating System for ACM DISCH is operative.
62-22 Auto Control Pack Discharge	3	0		(O) All may be inoperative provided associated Pack Temperature Controller is considered inoperative.

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<u>21 AIR CONDITIONING</u> <u>(Cont...)</u>				
62-28 Valve Position Indicating Systems				
(1) RAM AIR	3	1		Two may be inoperative provided associated RAM AIR indicator is operative if only one Pack Ram Air Exhaust System is operative.
(2) TURB BYP	3	1		Two may be inoperative provided associated TURB BYP indicator is operative if only one Pack Turbine Bypass Valve is operative.
62-31 Humidity Control System (Dehumidification)	1	0		May be inoperative
63-03 Pack Flow Indicating Systems	3	0		All may be inoperative.
63-09 Environmental Control System (ECS) Temperature Indicating Systems	15	0		All may be inoperative.
63-27 Cabin Temperature Indicating	1	0		May be inoperative provided associated ECS Temperature Indicating System for ACM DISCH is operative.
70-00 Humidity Regulation System	1	0		May be inoperative.

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<u>22 AUTO FLIGHT</u>				
00-01 Flight Control Electronics System (FCES) Computers (Digital AFCS)	2	1		(O) May be inoperative provided: (a) A YAW SAS Channel is operative, and (b) Approach minima do not require dual autopilot use.
00-03 Glareshield Mode Control Panel Functions (Digital AFCS)				
(1) Autothrottle Alpha and Numeric Displays	2	0		(O) One or both may be inoperative provided: (a) AT mode is considered inoperative, and (b) Approach minima do not require autothrottle use. NOTE: If TM Mode is available, it may be selected using PMS or FMS CDU.
(2) Pitch Alpha and Numeric Displays	2	0		(O) One or both may be inoperative provided: (a) Glareshield panel switchlight illuminations for each operative pitch mode selected, (b) AFCS Mode Annunciators for each Pitch mode used are operative on both pilot's panels. (c) Vertical Speed Control Wheel properly displaces the flight director pitch command or VS Mode is considered inoperative, and (d) If VNAV Mode is used, PMS or FMS CDU is operative.
(3) Heading Numeric Display	1	0		(O) May be inoperative provided: (a) Glareshield panel HDG mode switchlight illuminates if selected, (b) AFCS Mode Annunciators for HDG mode are operative on both pilot's panels or the HDG Mode is considered inoperative, and (c) Heading select knob operates both HSI headings bugs. (cont...)

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<u>22 AUTO FLIGHT (Cont...)</u>			
00-03 Glareshield Mode Control Panel Functions (Digital AFCS) (Cont...)			
(4) Course Numeric Displays	2	0	(O) One or both may be inoperative provided: (a) Glareshield panel switchlight illuminates for each operative Navigation Mode selected, (b) AFCS Mode Annunciators for each Navigation mode used are operative on both pilot's panels, and (c) Each Course-Set Knob operates its respective HSI Course Pointer.
(5) Select Altitude Numeric Display	1	0	(O) May be inoperative provided FMS or PMS is operative and selected altitude is continuously displayed on the FMS or PMS CDU.
(6) AFCS Mode Selectors AT TM VNAV VS ALT IAS MACH HDG TURB ILS LOC VOR INS BC	1	0	(O) May be inoperative provided FMS or PMS is operative and selected altitude is continuously displayed on the FMS or PMS CDU.
	-	0	May be inoperative provided approach minima do not require its use. NOTE: Refer to Flight Manual Procedures for approach and landing equipment requirements.
(7) Course-Set Knobs (COURSE 1, COURSE 2)	2	1	(O) One may be inoperative provided: (a) Associated knob properly controls associated HSI Course Pointer, (b) RDDMI VOR function is operative for bearing to station display on associated pilot's panel, (c) Aircraft is operated in VMC only, and (d) Repairs or replacements are carried out within three calendar days.
			(Cont...)

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<u>22 AUTO FLIGHT (Cont...)</u>				
00-03 Glareshield Mode Control Panel Functions (Digital AFCS) (Cont...)				
(8) Autopilot Engage Switches (Bat Handles)	2	0		One or both may be inoperative provided: (a) Associated autopilot system is considered inoperative, and (b) Approach minima do not require autopilot use.
00-05 Power Supply Units (Digital AFCS)	2	1		(O) One may be inoperative provided: (a) A YAW SAS Channel is operative, (b) Associated APFDS is considered inoperative, and (c) Approach minima do not require autopilot use.
10-00 Autopilot and Flight Director Systems (APFDS)				
(1) Autopilots	2	0		One or both may be inoperative provided approach minima do not require autopilot use.
(2) Flight Directors	2	0		One or both may be inoperative provided approach minima do not require flight director use.
10-01 Autopilot Engage Switches (Bat Handles) (Analog AFCS)	2	0		One or both may be inoperative provided: (a) Associated autopilot is considered inoperative, and (b) Approach minima do not require autopilot use.
10-02 Nav Mode Select Panels (Analog AFCS) COURSE 1, 2 Set Knob	2	1		(O) One may be inoperative provided: (a) Associated knob properly controls associated HSI Course Pointer or glareshield panel course display, (b) VOR SPLIT-1-2 function is operative, (Cont...)

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<u>22 AUTO FLIGHT (Cont...)</u>			
10-02 Nav Mode Select Panels (Analog AFCS) COURSE 1, 2 Set Knob (Cont...)	-	0	(c) RDDMI VOR function is operative for bearing to station display on associated pilot's panel, (d) Aircraft is operated in VMC only, and (e) Repairs or replacements are carried out within three calendar days.
10-03 AFCS Mode Selectors (Analog AFCS) TM (THR MGT) VS ALT IAS VNAV or MACH HDGTURB A/L APR LOC NAV GLARESHIELD VERTICAL SPEED INDICATOR	-	0	(O) May be inoperative provided approach minima do not require its use. <u>NOTE:</u> Refer to Flight Manual Procedures for Approach and Landing equipment requirements.
10-05 AFCS Mode Annunciators (1) Analog AFCS HDG SEL V NAV or R NAV VS TURB IAS THR MGT MACH TEST (2) Digital AFCS HDG V NAV VS TURB M/IAS THR MGT INS BCK CRS	-	0	(O) May be inoperative provided: (a) Associated AFCS Mode or engage switchlight is operative, and (b) Approach minima do not require use of associated annunciator. <u>NOTE:</u> Refer to Flight Manual Procedures for approach and landing equipment requirements.
10-06 AFCS Warning Annunciators (1) ALERT Lights	2	1	First Officer's may be inoperative provided all remaining AFCS Warning Annunciators on both indicators are operative. (Cont...)

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<u>22 AUTO FLIGHT (Cont...)</u>				
10-06	AFCS Warning Annunciators (Cont...)			
	(1) ALERT Lights (Cont...)	2	0	One or both may be inoperative provided: (a) Both Autopilot Systems are considered inoperative and not used, (b) ATS/AT/TM Systems are considered inoperative, and (c) Approach minima do not require use of Autopilot, Autothrottle or Speed Control Systems.
	(2) AP DISC	2	0	One or both may be inoperative provided: (a) Captain's ALERT light and autopilot disconnect aural warning is operative. OR (b) Both Autopilot Systems are considered inoperative.
	(3) NO DUAL	2	0	One or both may be inoperative provided approach minima do not require use of dual autoland.
	(4) AP LIMIT	2	0	One or both may be inoperative provided: (a) Associated Auto-Trim Out-of-Trim Warning Indicators are operative. OR (b) Both Autopilot Systems are considered inoperative.
	(5) NO ALIGN	2	0	One or both may be inoperative provided approach minima do not require use of Align mode.
	(6) ATS DISC	2	1	One may be inoperative provided both ALERT Lights are operative.
		2	0	One or both may be inoperative provided ATS/AT/TM Systems are considered inoperative. (Cont...)

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<u>22 AUTO FLIGHT (Cont...)</u>				
10-06	AFCS Warning Annunciators (Cont...)			
	(7) NO GA	2	1	First Officer's may be inoperative provided both ALERT Lights are operative.
		2	0	One or both may be inoperative provided automatic go-around placarded inoperative and not used.
	(8) SPLIT (Digital AFCS)	2	1	First Officer's may be inoperative provided both ALERT Lights are operative.
		2	0	One or both may be inoperative provided all AFCS Mode Annunciators are operative.
	(9) NO FLARE (Analog AFCS)	2	0	One or both may be inoperative.
	(10) CMD DISC	2	1	First Officer's may be inoperative provided both ALERT Lights are operative.
		2	0	One or both may be inoperative provided both Autopilot Systems are considered inoperative.
10-07	Flight Control Electronic Systems (FCES) Panel Switchlights			
	(1) Pitch Trim/Mach Trim/ATS OFF Lights	6	0	Any or all may be inoperative.
	(2) Pitch Trim/Mach Trim/ATS/MDLC/DLC/ Auto SPLR FAIL Lights	-	0	May be inoperative provided associated FCES Channel is considered inoperative and is not engaged.
	(3) YAW FIRST FAIL Light (-3)	1	0	May be inoperative provided two YAW SAS Channels are operative.

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22 AUTO FLIGHT (Cont...)				
10-12 Flight Control Auxiliary Unit (FCAU) Switches and Status Flight Lights	15	0	(M) May be inoperative provided: (a) Surface Position Indicator (SPI) System is operative, and (b) Associated switch or status/fault light does not render any other system or equipment inoperative.	
10-21 Autopilot Disconnect Switches (Control Wheel)	2	1	One may be inoperative provided: (a) Pilot using Autopilot has an operative wheel disconnect switch, and (b) Autopilot is not used below 1,500 feet AGL.	
10-24 ILS Deviation Lights	2	0	One or both may be inoperative.	
11-00 Autopilot and Flight Director Pitch Systems (Digital AFCS)				
(1) Pitch Axis Channels	2	0	One or both may be inoperative provided associated APFDS is considered inoperative.	
11-01 Pitch AFCS Computers (Analog AFCS)	2	0	One or both may be inoperative provided associated APFDS is considered inoperative.	
11-03 Altitude Alert Systems (Analog and Digital AFCS)				
(1) NORM and STBY Modes	2	1	(O) One may be inoperative provided: (a) Remaining system is verified operative before each takeoff, and (b) All altitude alert functions of the operative system (altitude select, alert lights, and aural signal) are operative.	
(2) Autopilot and Flight Director Altitude Capture Functions	2	0	One or both may be inoperative.	

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<u>22 AUTO FLIGHT (Cont...)</u>										
11-05	Autopilot Pitch Servos (Dual Servo Assembly)	2	0	One or both may be inoperative provided associated APFDS is considered inoperative.						
13-00	Autopilot and Flight Director Roll Axis Channels (Digital AFCS)	2	0	One or both may be inoperative provided associated APFDS is considered inoperative.						
13-01	Roll AFCS Computers (Analog AFCS)	2	0	One or both may be inoperative associated APFDS is considered inoperative.						
13-02	Roll Lateral Accelerometers (Triple)	3	0	(M) (O) Any or all may be inoperative provided approach minima do not require the use of APFDS modes which are rendered inoperative. NOTE: Modes rendered inoperative: <table style="margin-left: 40px;"> <tr> <td>(Analog AFCS)</td> <td>(Digital AFCS)</td> </tr> <tr> <td>A/L</td> <td>ILS</td> </tr> <tr> <td>APR</td> <td></td> </tr> </table>	(Analog AFCS)	(Digital AFCS)	A/L	ILS	APR	
(Analog AFCS)	(Digital AFCS)									
A/L	ILS									
APR										
13-03	Roll AFCS Transducers (Left Inboard Aileron)	2	1	(M) (O) One may be inoperative provided (a) Associated autopilot is considered inoperative and is not used, and (b) YAW SAS Channel is operative. NOTE 1: Digital AFCS - Do not pull associated AFCS CMPTR circuit breaker, since that will activate ACS FIRST FAIL annunciator light. Associated Altitude Alert System and Autothrottle System Channel will be rendered inoperative. NOTE 2: Analog AFCS - Do not pull associated YAW SAS circuit breaker, since that will activate ACS FIRST FAIL annunciator light.						

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<u>22 AUTO FLIGHT (Cont...)</u>			
15-00 YAW SAS Computers (Analog AFCS) or YAW SAS Channels (Digital AFCS)	2	1	<p>(O) May be inoperative provided approach minima do not require its use.</p> <p>NOTE 1: Digital AFCS - Do not pull associated AFCS CMPTR circuit breaker, since that will activate ACS FIRST FAIL annunciator light. Associated Altitude Alert System and Autothrottle System Channel will be rendered inoperative.</p> <p>NOTE 2: Analog AFCS - Do not pull associated YAW SAS circuit breaker, since that will activate ACS FIRST FAIL annunciator light.</p> <p>NOTE 3: Depending on the failure:</p> <p>(1) Associated APFDS may be inoperative. Despatch in accordance with MMEL.</p> <p>(2) Some AFCS Mode Annunciators or AFCS Warning Annunciators on the associated side may be inoperative. Despatch in accordance with MMEL.</p> <p>NOTE 4: Refer to Flight Manual Procedures for approach and landing equipment requirements.</p>
15-02 Yaw Rate Gyros	3	2	<p>One may be inoperative provided approach minima do not require dual autopilot use.</p> <p>NOTE 1: For analog autopilots, the DUAL A/L NOT AVAIL light on the Caution/Warning Panel will be illuminated.</p> <p>NOTE 2: For digital autopilots, the APFDS FIRST FAIL light on the Caution/Warning Panel will be illuminated.</p> <p>NOTE 3: Refer to Flight Manual Procedures for approach and landing equipment requirements.</p>

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<u>22 AUTO FLIGHT (Cont...)</u>				
15-03 Rudder Position Transducers (Dual)	2	0		One or both may be inoperative provided approach minima do not require the use of ALIGN or ROLLOUT modes.
17-00 Spoiler Control Systems				
(1) Direct Lift Control (DLC) Systems (-1, -14, -15)	2	0		(O) One or both may be inoperative provided: (a) Associated Auto Ground Spoiler System is considered inoperative, and (b) Approach minima do not require use of autoland. NOTE: See Flight Manual Performance when operating with both DLC Systems inoperative.
(2) Direct Lift Control/Manoeuvring Direct Lift Control (DLC/MDLC) Systems (-3)				NOT USED
(3) Auto Ground Spoiler (AGS) Systems	2	0		(M) (O) One or both may be inoperative provided MDLC System is verified operative before each flight. NOTE: Refer to Flight Manual Performance for operation with AGS System inoperative and landing with 42 degrees flap.
17-01 G-Sensitive Stick Shaker Channels (Activation Circuit) (-3)				NOT USED
17-02 Primary Flight Control system (PFCS) Monitors				
(1) Roll Channels	2	1		(O) One may be inoperative provided: (a) Associated channel switchlight remains OFF, (b) Surface Position Indicating System is operative, and (c) Operative channel switchlight is latched IN, and the FAIL and OFF lights are operative. (Cont...)

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<u>22 AUTO FLIGHT (Cont...)</u>				
17-02 Primary Flight Control System (PFCS) Monitors (Cont...)				
(2) Pitch Channels	2	1		(M) (O) One may be inoperative provided: (a) Associated channel switchlight remains OFF, (b) Surface Position Indicating System is operative, (c) Operative channel switchlight is latched IN, and the FAIL and OFF Lights are operative, and (d) Jam and Open Cable Detectors of the operative channel are verified operative before the first flight of each day.
17-16 Stall Warning Systems				NOT USED.
18-00 Trim Augmentation Systems				
(1) Proportional/Auto Pitch Trim System Channels	2	1		(O) One may be inoperative provided Auto-Trim is monitored during Auto Pilot use.
(2) Surface Position Indicator Auto-Trim Out-of-Trim Warning Indicators	2	0		(O) One or both may be inoperative provided Auto-Trim is monitored during Auto Pilot use.
21-01 Mach Trim System Channels	2	1		(O) One may be inoperative provided one autopilot is operative.
	2	0		(O) One or both may be inoperative provided both autopilots are operative.
				NOTE: Refer to Flight Manual Limitations for operation with both Mach Trim Systems inoperative.

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<u>22 AUTO FLIGHT (Cont...)</u>				
21-02 Mach Feel System Channels	2	1	(O) One may be inoperative provided: (a) Operative channel switchlight is latched IN, and (b) FAIL and OFF Lights are operative. NOTE: Refer to Flight Manual Limitations for operational information should operative channel fail en-route.	
31-00 Autothrottle System (ATS) Channels (Analog AFCS) or Autothrottle and Thrust Management System (AT & TM) Channels (Digital AFCS)	2	0	(M) (O) One or both may be inoperative provided: (a) Approach minima do not require use of associated autothrottle system, and (b) Throttle handling characteristics are not adversely affected (binding, creeping, etc) by ATS or AT and TM deactivation. NOTE: With AT & TM Channels inoperative the associated Speed Control System SLO-FAST indication will be inoperative.	
31-05 Longitudinal Accelerometers	2	0	(O) One or both may be inoperative provided: (a) Associated ATS or AT & TM Channel is considered inoperative, (b) Associated TO & GA modes are considered inoperative, and (c) Automatic Braking System is considered inoperative.	
31-07 Speed Control System (SCS) Computer (Analog AFCS)	1	0	(O) May be inoperative provided: (a) Both Autothrottle System Channels are considered inoperative, and (b) Automatic Braking System is considered inoperative.	

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<u>22 AUTO FLIGHT (Cont...)</u>			
31-08 ATS DISC Switches (On Throttles)	2	0	(O) One or both may be inoperative provided Autothrottles are controlled using glareshield or FCES control switches. NOTE: ATS or AT & TM may be operated with ATS DISC Switches inoperative.
31-09 Flight Management System Thrust Management Mode	1	0	May be inoperative.
40-00 Fault Isolation Data Display System (FIDDS) (Digital AFCS) (-3)	1	0	May be inoperative.
70-00 Active Control System (ACS) Channels (-3)	2	1	(O) One may be inoperative, or an ACS FIRST FAIL light may be illuminated provided operations are conducted in accordance with appropriate Flight Manual Appendix.
	2	0	(M) (O) One or both may be inoperative provided operations and maintenance are conducted in accordance with appropriate Flight Manual Appendix.

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<u>23 COMMUNICATIONS</u>			
11-00 Communications Systems			
(1) VHF	-	-	As required by Air Navigation Legislation.
(2) HF	-	-	As required by Air Navigation Legislation.
(3) UHF	-	-	As required by Air Navigation Legislation.
22-00 SELCAL	-	0	(O) May be inoperative provided: (a) Procedures do not require its use. OR (b) Flight Crew continuously monitors appropriate radio frequencies.
31-00 Passenger Address (PA) System	1	0	(O) As required by Air Navigation Legislation. May be inoperative provided: (a) Cabin Interphone System is operative, and (b) Chime System is operative, and (c) Alternate normal and emergency procedures are established and utilised, and (d) Aircraft may continue the flight or series of flights but shall not depart an airport where repairs can be made and shall not exceed 25 flight hours prior to completion of repairs.
	1	0	May be inoperative for all-cargo operations unless cargo carriage requires persons to be in attendance.

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<u>23 COMMUNICATIONS</u> <u>(Cont...)</u>				
41-00 Interphone System				
(1) Cabin	1	0	(O) May be inoperative provided: (a) Alternate, Normal and Emergency procedures are established and used, and (b) The Passenger Address System is operative.	
(2) Lower Galley	1	0	May be inoperative provided: (a) Lower Galley is not occupied during taxi, (b) Cabin Interphone System is operative, and (c) Passenger Address System is operative.	
(3) Lower Passenger Lounge	1	0	(O) May be inoperative provided lounge is not occupied.	
41-04 Flight Attendant Cockpit Call Signal System	1	0	(O) May be inoperative provided: (a) Alternate, Normal and Emergency procedures are established and used, (b) Passenger Address System is operative, and (c) Cabin Interphone System is operative.	
43-00 Ground Service Interphone System	1	0	(O) May be inoperative provided: (a) Procedures are not dependant upon its use. OR (b) Alternate procedures are established and used.	
51-00 Flight Interphone System				
(1) Flight Deck Intercom	1	1	As required by Air Navigation Legislation. Must be operative for all crew members on Flight Deck duty.	
(2) Flight Deck to Ground	1	0	May be inoperative provided procedures are not dependent upon its use.	

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<u>23 COMMUNICATIONS</u> <u>(Cont...)</u>				
51-03	Audio Distribution Unit			NOT USED.
51-04	Audio Selector Panels	-	-	One required for each crew member on flight deck duty.
51-05	Headsets	-	-	One headset (including boom microphone) must be operative for each crew member on flight deck duty.
51-07	Hand Held Microphones	-	-	Any or all may be inoperative.
51-08	Flight Station Oxygen Mask Microphones	-	-	As required by Air Navigation Legislation.
51-11	Flight Deck Speaker System			
	(1) Communications	-	-	May be inoperative for communications purposes provided each required crew member has an operative headset.
	(2) Aural Warning Alerts	-	-	May be inoperative provided all appropriate aural alert functions are operating normally and the associated audible warnings are available to the crew, by means other than loudspeakers.
71-00	Cockpit Voice Recorder System (CVR)	1	0	As required by Air Navigation Legislation. May be inoperative provided: (a) It is not reasonably practical to repair or replace before commencement of the flight. (b) The aircraft shall not exceed six (6) consecutive flights with the CVR unserviceable beginning with the first flight after the CVR was last operating throughout the flight. (c) The aircraft shall not fly for more than 16 hours after the CVR becomes unserviceable. (d) Not more than 24 hours have elapsed since the CVR becomes unserviceable.
(Cont...)				

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<u>23 COMMUNICATIONS</u> <u>(Cont...)</u>			
71-00 Cockpit Voice Recorder System (CVR) (Cont...)			(e) The aircraft must not depart from its maintenance base with the CVR unserviceable, and (f) The Flight Data Recorder must be operating normally.
99-00 ARINC Communications Addressing and Reporting Systems (ACARS)	1	0	May be inoperative provided: (a) Procedures do not require its use. OR (b) Alternate procedures are established and used.

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<u>24 ELECTRICAL POWER</u>				
11-10 IDG Oil Temperature Indicating Systems	3	2	One may be inoperative provided: (a) Associated IDG Load Indicating System is operative, (b) Associated IDG Oil LOW PRESS Light System is operative, and (c) Associated IDG Oil Overtemperature Switch is operative. NOTE: Sundstrand Aviation SB 24-1436 installs IDG Oil Overtemperature Switch to IDG Oil LOW PRESS Light System.	
11-11 IDG Real Load Division Controllers	3	0	(O) All may be inoperative provided each associated generator and its bus is operated isolated from the AC Tie Bus.	
14-03 IDG Oil Overtemperature Switches				
(1) Sundstrand Aviation SB 24-1436 or Production Equivalent Incorporated	3	0	All may be inoperative provided associated IDG is considered inoperative.	
14-04 IDG Oil LOW PRESS Light Systems	3	2	One may be inoperative provided associated IDG is considered inoperative.	
20-01 Generator Fault Annunciator Panel (Service Centre)	1	0	May be inoperative provided maintenance procedures do not require its use.	
21-01 Integrated Driven Generators (IDG)				
(1) APU Generator Operative [Lockheed Test Report EL/83-75-072 (British Airways Mod 24C270) Incorporated]	3	2	(M) (O) One may be inoperative provided: (a) APU Generator System is placed on the tie bus at or or below 10,000 feet MSL, (b) Auto-Manual Control Functions are verified operative for operative systems, (Cont...)	

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<p><u>24 ELECTRICAL POWER</u> <u>(Cont...)</u></p>			
<p>21-01 Integrated Driven Generators (IDG) (Cont...)</p> <p>(1) APU Generator Operative [Lockheed Test Report EL/83-75-072 (British Airways Mod 24C270) Incorporated] (Cont...)</p>			<p>(c) Total electrical load remains below 120 KW when APU Generator is not operating, and</p> <p>(d) Repairs or replacements are carried out within three calendar days.</p>
<p>(2) APU Generator Inoperative [Lockheed Test Report EL/83-75-072 (British Airways Mod 24C270) Incorporated]</p>	3	2	<p>NOTE: Refer to Flight Manual for operation with an inoperative IDG and for electrical load reduction should an additional IDG become inoperative.</p> <p>(M) (O) One may be inoperative provided:</p> <p>(a) Aircraft is not operated more than 400 NM from a suitable airport,</p> <p>(b) Auto/Manual Control Functions are verified operative on operative systems,</p> <p>(c) Bus tie and over load protection systems are verified operative,</p> <p>(d) Total electrical load remains below 81 KW at or below 10,000 feet MSL, and below 120 KW when above 10,000 feet MSL, and</p> <p>(e) Repairs or replacements are carried out within three calendar days.</p> <p>NOTE: Refer to Flight Manual for operation with an inoperative IDG and for electrical load reduction should an additional IDG become inoperative.</p>

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<u>24 ELECTRICAL POWER</u> <u>(Cont...)</u>				
21-05	IDG Generator Controller Units (GCU) [Lockheed Test Report EL/83-75-072 (British Airways Mod 24C270) Incorporated]	3	2	One may be inoperative provided: (a) Associated IDG is considered inoperative, and (b) Repairs or replacements are carried out within three calendar days.
21-07	IDG Generator Breakers (GB) [Lockheed Test Report EL/83-75-072 (British Airways Mod 24C270) Incorporated]	3	2	(M) (O) One may be inoperative provided: (a) Affected GB is verified OPEN, (b) Associated IDG is considered inoperative, (c) Auto/Manual Control Functions are verified operative for operative systems, (d) Bus tie and overload protection systems are verified operative, and (e) Repairs or replacements are carried out within three calendar days. NOTE 1: Refer to Flight Manual Limitations and Procedures for operation with a failed GB. NOTE 2: With GB-1 or 2 failed open, the associated IDG continues to provide essential AC power. NOTE 3: With GB-3 failed open, the associated IDG is unavailable as a power source.
21-09	IDG Load Indicating Systems (1) KW Indications	3	2	(O) One may be inoperative provided: (a) Associated IDG Oil Temperature Indicating System is operative, and (b) Associated Frequency Indicating System is operative. (Cont...)

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<u>24 ELECTRICAL POWER</u> <u>(Cont...)</u>				
21-09 IDG Load Indicating Systems (Cont...)				
(2) KVAR Indication and Select Functions	3	0		All may be inoperative.
21-10 AC Voltage Indicating Systems				
(1) AC Voltmeter				NOT USED.
(2) PMG TEST System	1	0		May be inoperative provided:
				(a) IDG Load Indicating System is operative for operative IDG,
				(b) APU Load Indicating System is operative for operative APU generator, and
				(c) Frequency Indicating System is operative.
21-11 Frequency Indicating System	1	0		(O) May be inoperative provided:
				(a) All IDG's are operative and are operated in parallel,
				(b) APU Generator is not operated in parallel, and
				(c) All three IDG Load Indicating Systems are operative.
24-01 APU Generator System	1	0		May be inoperative provided:
				(a) All IDG's are operative.
				OR
				(b) MMEL requirements for an inoperative IDG are observed. (Refer to item 24-21-01)

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<u>24 ELECTRICAL POWER</u>				
<u>(Cont...)</u>				
24-02	APU Generator Control Unit (GCU)	1	0	May be inoperative provided APU Generator System is considered inoperative.
24-04	APU Generator Breaker (GB)	1	0	(M) May be inoperative provided: (a) Affected GB is verified OPEN, and (b) APU Generator System is considered inoperative.
24-05	Generator Bearing Lights	4	0	All may be inoperative.
24-06	APU Load Indicating System			
	(1) KW Indication	1	0	May be inoperative provided APU Generator System is considered inoperative.
	(2) KVAR Indication and Select Function	1	0	May be inoperative.
31-01	Transformer Rectifiers (TR)			
	(1) No. 1, 2, 3	3	2	One may be inoperative provided: (a) All DC busses and DC bus tie relays are verified operative, (b) Total TR DC electrical load does not exceed 145 amps, and (c) Repairs or replacements are carried out within three calendar days.
	(2) Essential			NOT USED.
31-08	DC Voltage Indicating System			NOT USED.
32-04	Battery Charger			NOT USED.

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<u>24 ELECTRICAL POWER</u> <u>(Cont...)</u>				
32-20	Main BATTERY CONDITION Light	1	0	(O) May be inoperative provided aircraft is despatched ONLY to an airport where repair can be made.
32-21	Aux Battery Charger	1	0	(M) May be inoperative provided: (a) Aux Battery Charger is secured, and (b) Main Battery is used for starting APU.
32-22	Aux BATTERY CONDITION Light	1	0	(M) May be inoperative provided: (a) Aux Battery Charger is secured, and (b) Main Battery is used for starting APU.
32-23	Battery Charger Alternate Mode System	1	0	May be inoperative provided: (a) The Standby Power System is operative, and (b) The Battery Charger Normal Mode is operative.
32-24	Aux Battery	1	0	(M) May be inoperative provided: (a) Aux Battery is appropriately secured, and (b) Aux Battery Charger is secured.

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<u>25 EQUIPMENT/ FURNISHINGS</u>				
11-01 Flight Deck Crew Seats				
(1) Electrical Adjustment Systems	3	0	All may be inoperative provided: (a) Electrical connector is disconnected. OR (b) Appropriate circuit breaker is pulled and collared.	
(2) Manual Adjustment System	3	3	Fore and Aft adjustment must operate normally.	
	3	3	(M) Vertical and/or recline adjustments may be inoperative provided: (a) The seat is secured and locked in a position to suit the individual pilots requirements, and (b) Repairs or replacements are carried out within three calendar days.	
11-06 Flight Deck Observer Seats and Harnesses	-	0	May be inoperative provided seat is not required and is correctly stowed.	
11-08 Flight Crew Shoulder Harness	-	-	As required by Air Navigation Legislation.	
(1) Inertia Reels	-	-	(M) May be inoperative provided: (a) The affected harness is adjusted and locked by an approved means to suit the individual flight crew member, and (b) Repairs or replacements are carried out within three calendar days.	
12-07 Eye Locator System	1	0	May be inoperative.	

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<u>25 EQUIPMENT/ FURNISHINGS (Cont...)</u>			
21-00 Passenger Seats	-	-	(M) May be inoperative secured in the upright position provided:
	-	0	(M) One or more may be inoperative provided: (a) Affected seat(s) does not block an Emergency Exit, (b) Does not restrict any passenger from access to the aisle, and (c) Affected seat(s) is blocked and placarded "DO NOT OCCUPY". Note 1: A seat with an inoperative seat belt is considered inoperative. Note 2: A seat with an inoperative recline mechanism is considered to be inoperative if the seat cannot be secured upright. Note 3: Inoperative seats do not affect the number of Cabin Crew required by Air Navigation Legislation.
21-01 Cabin Attendant Seat Assemblies and Shoulder Harness	-	-	(M) (O) As required by Air Navigation Legislation. Any in excess of those required by legislation may be inoperative (see notes below). NOTE 1: A folding seat that will not stow automatically or remain stowed is considered to be inoperative and shall be secured in the retracted position or removed. NOTE 2: A seat with a defective harness is considered to be inoperative and shall be placarded to prohibit occupancy.
21-02 Lower Lounge Flight Attendant Seats			NOT USED.
21-08 Flight Attendant Shoulder Harness			Refer to item 25-21-01.

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<u>25 EQUIPMENT/ FURNISHINGS (Cont...)</u>				
21-26	Passenger Seat Ashtrays			Refer to item 25-99-06.
26-30	Cabin Sidewall Articulated Vent Box	-	-	(M) Two in each cabin zone may be inoperative provided: (a) Affected vent is secured OPEN, and (b) Seats adjacent to the affected vent are blocked to prevent occupancy.
31-03	Lower Galley Flight Attendant Seats (-1, -14, -15)			Refer to item 25-21-01.
32.00	Lower Galley Flight Attendant Seats (-1, -14, -15)	2	1	(O) One may be inoperative provided: (a) Affected lift is in the full down position at all times, (b) Remaining lift is in the full down position during taxi, (c) The number of serving carts that may be removed from galley at any time is limited to the number of main deck cart tie-downs that are permitted to be used for takeoff and landing, (d) Upper door of inoperative lift is placarded to prohibit stowing of carts on top of the inoperative lift when galley is occupied, (e) Interphone Systems for Cabin and Lower Galley are operative, (f) Flight Attendant Cockpit Call Signal System is operative, and (g) Chimes function of the PA System is operative.
		2	0	(O) Both may be inoperative provided: (a) Galley is not occupied or used, and (b) Repairs or replacements are carried out within three calendar days. (Cont...)

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<u>25 EQUIPMENT/ FURNISHINGS (Cont...)</u>				
32-00 Lower Galley Lift Systems (-1, -14, -15) (Cont...)				NOTE 1: When one lift is inoperative, see FLIGHT MANUAL Limitations for galley occupancy during taxi. NOTE 2: When both lifts are inoperative, they may be used for cart stowage.
52-00 Automatic Cargo Handling Systems	2	0		One or both may be inoperative.
60-00 First Aid Kits	-	-		As required by Air Navigation Legislation.
61-08 Flight Station Egress Emergency Descent Devices	5	4		(O) One may be inoperative or missing provided during takeoff and landing, the flight station is not occupied by more than four persons.
61-10 Cabin Doors and Slide/Slide Rafts				
(1) Cabin Doors				Refer to item 52-11-00.
(2) Emergency Evacuation Devices (Slides/Slide Rafts) Including Inflation Medium	-	-		(M) (O) As required by Air Navigation Legislation, one device may be inoperative provided all the conditions associated with an inoperative exit/door are observed and applied (see 52-11-00).
62-01 Self Powered Portable Megaphone	-	3		As required by Air Navigation Legislation. Any in excess of those required by legislation may be inoperative or missing provided the inoperative megaphones is removed from the passenger cabin.
62-04 Evacuation Signal Systems				
(1) Cabin	1	0		(O) May be inoperative provided: (a) Procedures are not dependant upon its use as the primary means of initiating an emergency evacuation, and (b) Flight Attendants are advised that the system is inoperative. (Cont...)

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<u>25 EQUIPMENT/ FURNISHINGS (Cont...)</u>			
62-04 Evacuation Signal Systems (Cont...)			
(2) Lower Galley or Lower Lounge	1	0	(O) May be inoperative provided: (a) Lower Galley is not occupied during taxi, (b) Lower Lounge is not occupied at any time, (c) Procedures are not dependant upon its use as the primary means of initiating an emergency evacuation, and (d) Flight Attendants are advised that the system is inoperative.
63-01 Protective Breathing Equipment (PBE)			
(1) Flight Crew Smoke Protection Equipment (Basic & Portable)	-	-	As required by Air Navigation Legislation. Individual specified items may be missing or inoperative in accordance with arrangements approved by the Authority.
(2) Cabin Attendants Portable Smoke Protection Equipment	-	-	As required by Air Navigation Legislation. Individual specified items may be missing or inoperative in accordance with arrangements approved by the Authority.
66-00 Flotation Devices (Lifejackets & Liferrafts)	-	-	As required by Air Navigation Legislation.
63-19 Cabin Emergency Flashlights/ Holders	-	0	All may be inoperative or missing provided cabin crewmember assigned to associated position has an operable flashlight readily available.
99-01 FASTEN SEAT BELT WHILE SEATED Signs Or Placards (Unlit)	-	-	As required by Air Navigation Legislation. One or more signs or placards may be illegible or missing provided a legible sign or placard is readable from each occupied passenger seat.
99-02 Emergency Locator Transmitters (ELT)	-	-	As required by Air Navigation Legislation.

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25	<u>EQUIPMENT/ FURNISHINGS (Cont...)</u>			
99-03	Aft Lavatory Door Ashtrays	5	3	Two may be inoperative provided ashtrays are not on adjacent Lavatory Doors.
99-04	Forward Lavatory Ashtrays (Adjacent to Cockpit Door)	2	2	Both must be operative.
99-05	Underseat Baggage Restraining Bars	-	-	(M) (O) May be inoperative provided: (a) Baggage is not stowed under seat with inoperative restraint bar, (b) Associated seat is placarded "DO NOT STOW BAGGAGE UNDER THIS SEAT", and (c) Procedures are established to alert the Cabin Crew of inoperative restraining bar.
99-06	Passenger Convenience Items			Refer to Preamble item 4.
99-07	Second Observer Seat			Refer to item 25-11-06.
99-08	First Observer Seat			Refer to item 25-11-06.

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<u>26 FIRE PROTECTION</u>				
11-01 Engine Fire Detection System Loops	6	3		One complete loop (A or B) on each engine may be inoperative provided detector loop selector is positioned to the operative loop.
11-06 APU Fire Detection System Loops	2	1		One complete loop (A or B) may be inoperative provided detector loop selector is positioned to the operative loop.
	2	0		(M) One or both loops (A and B) may be inoperative provided APU is considered inoperative and not used.
11-09 Fire Alarm Bell				NOT USED.
11-14 APU Automatic Fire Shutdown System	1	0		(M) May be inoperative provided APU Fire Warning System is monitored during APU ground operation.
11-28 Wheel-Well Fire Detection System Loops	2	1		One complete loop (A or B) may be inoperative provided detector loop selector is positioned to the operative loop.
11-30 Fuel and Ignition Switch Barrier Lights	6	0		(M) All may be inoperative provided: (a) Associated light is not illuminated, and (b) Fault is determined to affect barrier light only.
15-00 Smoke and Overheat Detection Systems				
(1) Lower Galley Overheat Detection System (-1, -14, -15)	1	0		(M) May be inoperative provided lower galley ovens are deactivated and placarded to prevent use. NOTE: Use of Closed Convection type ovens which are not connected to the lower galley exhaust system is permitted.
(2) Lower Galley or Lounge Smoke Detection System				NOT USED
(3) Cabin Galley Overheat Detection System (-3)	1	0		May be inoperative. (Cont...)

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<u>26 FIRE PROTECTION</u> <u>(Cont...)</u>			
15-00 Smoke and Overheat Detection Systems (Cont...)			
(4) FESC and MESC Smoke Detection System	1	0	May be inoperative.
15-10 Cargo Compartment Smoke Detection Systems			
(1) Forward Cargo Compartment Smoke Detectors (Class D Classification)	2	0	One or both may be inoperative.
(2) Forward Cargo Compartment Smoke Detectors (Class C Classification)	4	2	(O) Two may be inoperative provided detector selector switch is positioned to operative smoke detection system.
	4	0	(O) All may be inoperative provided compartment remains empty or contains only non-combustible material. NOTE: See Definitions (Item 20)
(3) Centre Cargo Compartment Smoke Detectors	2	0	One or both may be inoperative.
(4) Aft Cargo Compartment Smoke Detector Systems (-1, -14, -15)	2	1	(O) One system (A or B) may be inoperative provided detector selector switch is positioned to an operative detection system. NOTE: When detector selector switch is positioned to A, the FESC and MESC Smoke Detector System is rendered inoperative.
	2	0	(M) (O) One or both A and B systems may be inoperative provided Aft Cargo Compartment Ventilation System Airflow Control Valves (inlet, shutoff, and overboard bypass) are secured CLOSED.
(5) Aft Cargo Compartment Smoke Detectors (-3)	4	2	(O) Two may be inoperative provided detector selector switch is positioned to an operative smoke detection system.
			(Cont...)

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<u>26 FIRE PROTECTION</u> <u>(Cont...)</u>				
(5) Aft Cargo Compartment Smoke Detectors (3)	4	0		(O) Two may be inoperative provided detector selector switch is positioned to an operative smoke detection system.
				(O) All may be inoperative provided compartment remains empty or contains only non-combustible material.
				NOTE: See Definitions (Item 20)
21-00 APU Fire Extinguisher Test	1	0		May be inoperative provided APU is considered inoperative and is not used.
21-03 Fire Extinguisher Bottle Thermal Discharge Indicators (-1, -14, -15)	6	0		(M) All may be missing provided associated fire extinguisher bottle pressure is verified before the first flight of each day.
				NOTE: Indicators are not installed in RB.211-524 (G-8) wing engine inlets, or in aircraft with hermetically sealed fire extinguisher containers installed in the No. 2 engine/APU position.
21-06 Fire Extinguisher Discharge Indicator Light Systems				
(1) Engines	6	3		(M) (O) One system (MAIN or ALTN) on each engine may be inoperative provided associated extinguisher bottle is verified to be properly charged before the first flight of each day.
(2) APU	2	1		(M) (O) One system (MAIN or ALTN) may be inoperative provided associated extinguisher bottle is verified to be properly charged before first flight of each day.
	2	0		(M) (O) One or both systems (MAIN or ALTN) may be inoperative provided APU is considered inoperative and not used.

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<u>26 FIRE PROTECTION</u> <u>(Cont...)</u>				
21-09	Fire Extinguisher SHORT TEST Systems			
	(1) Engines	6	3	(M) (O) One system (MAIN or ALTN) on each engine may be inoperative provided associated fire extinguisher discharge circuit is determined to be operative before each flight.
	(2) APU	2	1	(M) (O) One system (MAIN or ALTN) may be inoperative provided associated fire extinguisher discharge circuit is determined to be operative before each flight.
		2	0	(M) (O) One or both systems (MAIN or ALTN) may be inoperative provided APU is considered inoperative and not used.
22-01	Portable Fire Extinguishers	-	-	(M) As required by Airworthiness Notice No. 60. Any in excess of those required by Legislation may be inoperative provided: (a) Procedures are established to remove the affected Portable Fire Extinguisher, and (b) Required distribution is maintained.
23-00	Cargo Compartment Fire Extinguisher Systems (-3)			
	(1) MAIN Bottles (2500 cu. In.)	1	0	(M) (O) May be inoperative provided: (a) Aircraft is operated within 1 hour and 40 minutes from a suitable airport, (b) Cabin Pressure Control System is operative, and (c) Aircraft is operated pressurised.
(Cont...)				

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<u>26 FIRE PROTECTION (Cont...)</u>			
23-00 Cargo Compartment Fire Extinguisher Systems (-3) (Cont...)			
(2) ALTN Bottle (1400 cu. In.)	1	0	(M) (O) May be inoperative provided: (a) Aircraft is operated within 1 hour and 40 minutes from a suitable airport, (b) Cabin Pressure Control System is operative, and (c) Aircraft is operated pressurised.
(3) MAIN and ALTN Bottles	2	0	(M) (O) One or both may be inoperative provided the associated cargo compartment remains empty or contains only non-combustible material. NOTE: See Definitions (Item 20)
(4) Forward Cargo Compartment Fire Extinguisher Discharge Indicator Light Systems	2	1	(M) (O) One System (MAIN or ALTN) may be inoperative provided associated extinguisher bottle pressure is verified before first flight of each day. NOTE: On aircraft with aft cargo compartment fire extinguisher systems, FWD cargo compartment Bottle pressure may be verified by testing associated discharge indicator (MAIN or ALTN) for aft cargo compartment.
(5) Forward Cargo Compartment Fire Extinguisher SHORT TEST Systems	2	1	(M) (O) One system (MAIN or ALTN) may be inoperative provided associated fire extinguisher bottle discharge circuit is determined to be operative before each flight.

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<u>26 FIRE PROTECTION</u> <u>(Cont...)</u>				
23-00 Cargo Compartment Fire Extinguisher Systems (-3) (Cont...)				
(6) Aft Cargo Compartment Fire Extinguisher Discharge Indicator Light Systems	2	1		(M) (O) One System (MAIN or ALTN) may be inoperative provided associated extinguisher bottle pressure is verified before first flight of each day. NOTE: On aircraft with forward cargo compartment fire extinguisher systems, AFT cargo compartment Bottle pressure may be verified by testing associated discharge indicator (MAIN or ALTN) for forward cargo compartment.
(7) Aft Cargo Compartment Fire Extinguisher SHORT TEST Systems	2	1		(M) (O) One system (MAIN or ALTN) may be inoperative provided associated fire extinguisher bottle discharge circuit is determined to be operative before each flight.
24-00 Toilet Compartment Fire Extinguisher Systems	-	-		Any or all may be inoperative.

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<p><u>26 FIRE PROTECTION</u> <u>(Cont...)</u></p>			
<p>25-00 Toilet Compartment Smoke Detection Systems</p>	<p>-</p>	<p>-</p>	<p>(M) May be inoperative. The toilet compartment must be electrically isolated, the waste-bin must be emptied and the toilet must be locked and appropriately placarded.</p>
	<p>-</p>	<p>-</p>	<p>OR (M) May be inoperative provided:</p>
			<p>(a) The toilet compartment is checked at 20 (twenty) minute intervals for evidence of fire or smoke, and</p>
			<p>(b) Repairs or replacements are carried out within three calendar days.</p>
			<p>OR (O) May be inoperative provided:</p>
			<p>(a) Toilet Compartment fire extinguishers are fitted and operating normally,</p>
			<p>(b) The toilet compartment is checked at regular intervals for evidence of fire and smoke, and</p>
			<p>(c) Repairs or replacements are carried out within three calendar days.</p>

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<u>27 FLIGHT CONTROLS</u>				
00-01	Surface Position Indicating (SPI) System	1	0	(M) (O) May be inoperative provided proper movement of the associated surface is visually verified before each flight. NOTE: For Auto-Trim Out-of-Trim Warning Indicator requirements, see limitations in ATA 22.
11-04	Pitch and Roll Disconnect T-Handle Light Systems	2	0	(O) One or both may be inoperative provided connect function and control coupled status is verified before each flight.
21-02	Rudder Pedal Adjustment Systems	2	1	(M) One may be inoperative provided: (a) Pedals are adjusted and secured in a suitable position for the individual crewmember assigned to that seat, (b) Crewmember for which pedals are adjusted occupies that seat during takeoff and landing, and (c) Repairs or replacements are carried out within three calendar days.
21-09	YAW SAS Engage Valves	2	1	One may be inoperative.
21-14	Rudder Dampers	4	3	(M) One may be inoperative provided associated Rudder Damper is verified not to be jammed or losing fluid.
21-17	Rudder Hydraulic Limiter			NOT USED.

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<u>27 FLIGHT CONTROLS</u> <u>(Cont...)</u>				
21-18 Rudder Mechanical Limiter System				
(1) Auto Mode (-1, -14, -15)	1	0	(O) May be inoperative provided:	
			(a) System is operated in MNL mode,	
			(b) Mechanical Limiter is positioned in accordance with speed schedule, and	
			(c) Repairs or replacements are carried out within three calendar days.	
(2) Limiter Actuators (-14, -15) (-1 with SB 093-27-139 Incorporated)	2	0	(M) (O) One or both may be inoperative provided:	
			(a) Mechanical Limiter is verified to be in the +/- 30 position, and	
			(b) Auto-Manual switchlight remains in the MNL position.	
31-00 Elevator Drive Warning System (Aural Warning and ELEVATOR Annunciator Light)	1	0	(M) (O) May be inoperative provided the control system check contained in the Maintenance is completed before each flight.	
41-00 PFCS Panel Stabiliser Control INOP Lights	4	3	(O) One may be inoperative provided proper operation and control of the associated channel is verified before each flight.	
41-02 Stick Shaker Motors			NOT USED.	
42-00 Electrical Pitch Trim Thumbwheel Systems	2	1	(M) First Officer's may be inoperative provided:	
			(a) Associated thumbwheel is suitably covered, and	
			(b) All takeoffs and landings are accomplished from the Captain's side.	

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<u>27 FLIGHT CONTROLS</u> <u>(Cont...)</u>				
51-06 Flap Load Relief System (FLRS)	1	0	(M) (O) May be inoperative provided: (a) Soft-stop and placard is installed on the flap quadrant in accordance with Conversion Kit 1604566-101, (b) System is deactivated using FLAP LRS OVRD switch, and (c) Repair is accomplished within 25 flight hours. NOTE 1: Refer to Flight Manual Procedures for FLRS inoperative procedures. NOTE 2: Refer to Flight Manual Performance for flaps 33 landing performance.	
51-67 TE FLAP LOCK Annunciator Light (FE Panel) (SB 093-27-214 Not Incorporated)	1	0	(M) May be inoperative provided: (a) Flap Position Indicating System is operative, and (b) LE SLAT LOCK Annunciator Light is operative.	
51-70 FLAP/SLAT LOCK Annunciator Light (FE Panel) (SB 093-27-214 or Production Equivalent Incorporated)	1	0	(M) May be inoperative provided: (a) Flap Position Indicating System is operative, and (b) All Slat Position Monitoring Systems are operative.	
52-00 Flap Position Indicating Systems	2	1	(M) (O) One may be inoperative provided: (a) Flap asymmetry system is verified to operative normally, (b) All Slat Position Monitoring Systems are operative, (c) TE FLAP LOCK Annunciator Light or FLAP/SLAT LOCK Annunciator Light is operative, (d) Flap Position is visually verified before each flight and no asymmetry exists, and (e) Repair is made within 25 flight hours.	

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<u>27 FLIGHT CONTROLS</u> <u>(Cont...)</u>				
61-08 Spoiler Hydraulic Assist Systems	2	1		(O) One system (A or B) may be inoperative provided the speed brake automatic disable switch on the speed brake lever is operative.
81-46 LE SLAT LOCK Annunciator Light (FE Panel) (SB 093-27-214 Not Incorporated)	1	0		(M) May be inoperative provided: (a) TE FLAP LOCK Annunciator Light is operative, (b) All Slat Position Monitoring Systems are operative, and (c) Slats Degrees Gauge is operative.
82-00 Slat Position Monitoring Systems				
(1) Slat Monitor Lights	14	0		All may be inoperative provided: (a) LE SLAT LOCK Annunciator Light or FLAP/SLAT LOCK Annunciator Light is operative, and (b) Both Slat Monitor Lights on TE Flaps Indicator are operative.
(2) LE EXT and LE TRANS Lights	2	1		LE EXT light may be inoperative provided: (a) LE TRANS light is operative, and (b) All Slat Monitor Lights are operative.
(3) LE EXT and SLAT Lights	2	1		LE EXT light may be inoperative provided: (a) SLAT light is operative, and (b) All Slat Monitor Lights are operative.
82-02 Slats Degrees Gauge	1	0		May be inoperative.

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<u>28 FUEL</u>			
11-08 Tanks 1 and 3 Scavenge Valves (-3)	2	1	(O) One may be inoperative provided: (a) Associated valve is OPEN. OR (b) Associated valve is CLOSED, and (c) Repair is made within 25 flight hours. NOTE 1: With associated valve OPEN, normal transfer rate from associated tank 1A or 3A is impaired. To transfer fuel it will be necessary to use the gravity transfer system. NOTE 2: With associated valve CLOSED, associated tank 1 or 3 scavenge system is inoperative.
11-13 Tanks 1A and 3A Scavenge Pumps (-3, -15)	-	-	(O) One in each tank (1A and 3A) may be inoperative. OR (O) All in either tank 1A or in tank 3A may be inoperative provided repair is made within 25 flight hours. OR All in both tanks (1A and 3A) may be inoperative provided fuel in tanks 1A and 3A is not required.
11-14 Tanks 1A and 3A Scavenge Valves (-15)	2	1	(O) One may be inoperative provided: (a) Associated valve is OPEN. OR (b) Associated valve is CLOSED, and (c) Repair is made within 25 flight hours.
	2	0	One or both may be inoperative provided fuel in tanks 1A and 3A is not required for flight.

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<u>28 FUEL (Cont...)</u>				
21-01 Refuelling Adapters	4	1		Three may be inoperative.
	4	0		(M) All may be inoperative provided: (a) Tanks 2L and 2R Defuel-Jettison Valves are operative, and (b) An approved alternate Refuelling procedure is used.
21-03 Refuelling Cross-Ship Isolation Valve	1	0		(M) May be inoperative provided: (a) Valve is deactivated OPEN, and (b) The aircraft is not refuelled from both underwing stations simultaneously.
21-05 Refuel Shutoff Valves				
(1) Tanks 1, 2L, 2R and 3 (-1, -3, -14, -15)	6	2		(M) One in each tank may be inoperative provided: (a) Inoperative valve is deactivated and verified CLOSED, and (b) An approved alternate Refuelling procedure is used.
(2) Tanks 1 and 3 (-3, -15)	4	0		(M) Two in each tank (1 and/or 3) may be inoperative provided: (a) Inoperative valve is deactivated and verified CLOSED, (b) Associated tank 1A and/or 3A Normal Fuel Transfer Valve is operative, and (c) An approved alternate Refuelling procedure is used.
(2) Tanks 1A and 3A (-3, -15)	2	0		(M) (O) One or both may be inoperative provided: (a) Inoperative valve is deactivated and verified CLOSED, and (Cont...)

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<u>28 FUEL (Cont...)</u>				
21-05 Refuel Shutoff Valves (Cont...)				
(2) Tanks 1A and 3A (-3, -15) (Cont...)				(b) Associated tank fuel is considered UNUSABLE. NOTE: Valve may be considered operative if it can be opened and closed using its associated fuel level control switch or fuel level bypass switch.
21-07 Fuel Level Control Switches				
(1) Tanks 1, 2L, 2R and 3	6	2		(M) One in each tank may be inoperative provided an approved alternate Refuelling procedure is used.
	6	0		(M) All may be inoperative provided: (a) Aircraft is equipped with tanks 1A and 3A. OR (b) Aircraft is equipped with Refuel Bypass Switches.
(2) Tanks 1A and 3A (-3, -15)	2	0		(M) One or both may be inoperative provided an approved alternate Refuelling procedure is used.
(3) Tank 4 (if installed)	1	0		(M) May be inoperative provided an approved alternate Refuelling procedure is used.
22-01 Tanks 1, 2L, 2R and 3 Defuel Jettison Valves	4	0		(M) (O) All may be inoperative provided: (a) Associated valve is deactivated CLOSED, and (b) En route engine inoperative performance does not require fuel jettison system. NOTE 1: Refer to Flight Manual Limitations for lateral imbalance limits when jettisoning fuel with asymmetrical valves inoperative. NOTE 2: Refer to Flight Manual Performance for engine inoperative performance.
24-01 Tanks 1, 2L, 2R, and 3 Fuel Boost Pump Systems	8	4		(O) One in each tank may be inoperative.

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28 FUEL (Cont...)			
24-13 Fuel Flow Equaliser	1	0	(M) (O) May be inoperative provided: (a) Equaliser bypass system is verified operative, (b) Tanks 2L and 2R Fuel Quantity Indicating Systems are operative, and (c) All Tanks 2L and 2R Fuel Boost Pump systems are operative. NOTE: Refer to Flight Manual Limitations for lateral imbalance limits during fuel usage.
24-17 Continuous Scavenge Systems			
(1) Tanks 1 and 3	2	0	(M) One or both may be inoperative provided associated tank sump is drained at least once each day.
(2) Tanks 2L and 2R	2	0	(M) (O) One or both may be inoperative provided: (a) Associated tank sump is drained at least once each day, and (b) All Fuel Quantity Indicating Systems are operative. NOTE 1: Refer to Flight Manual Procedures for zero fuel weight and alternate fuel loading requirements. NOTE 2: Zero fuel weight is limited to a maximum of 138,385 kg (305,000 lb) when using standard fuel loading, or 142,920 kg (315,000 lb) when using alternate fuel loading. NOTE 3: Alternate fuel loading is used at takeoff gross weights over 191,470 kg (422,000 lb) or takeoff fuel loads less than 34,480 kg (76,000 lb).
25-01 APU Boost Pump (-1)	1	0	(O) May be inoperative provided APU is operated from engine No.2 tank feed.
25-04 APU Tank Valve (-1)	1	0	(O) May be inoperative provided APU is operated from engine No.2 tank feed.

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<u>28 FUEL (Cont...)</u>				
26-01	Crossfeed Valves	3	2	(M) One may be inoperative provided: (a) Associated valve is deactivated CLOSED, and (b) En route fuel management does not require crossfeed.
27-01	Tanks 2L and 2R Float Operated Fuel Transfer Valves	2	0	(M) (O) One or both may be inoperative provided: (a) Associated valve is deactivated CLOSED, (b) Fuel in outboard section of associated tank is considered UNUSABLE, and (c) Repairs or replacements are carried out within three calendar days. NOTE: Refer to Flight Manual limitations for minimum fuel for flight for tanks 2L and 2R, and Lateral imbalance limits.
27-02	Tanks 1A and 3A Normal Fuel Transfer Valves (-3, -15)	2	1	(M) (O) One may be inoperative provided: (a) Associated valve is deactivated CLOSED, and (b) Associated Gravity Fuel Transfer Valve is operative.
		2	0	(M) (O) One or both may be inoperative provided: (a) Associated valves are deactivated CLOSED, and (b) Tanks 1A and 3A fuel is not required for flight.
27-07	Tanks 1A and 3A Gravity Fuel Transfer Valves (-3, -15)	2	1	(M) (O) One may be inoperative provided: (a) Associated valve is deactivated CLOSED, and (b) Associated Normal Fuel Transfer Valve is operative. (Cont...)

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<u>28 FUEL (Cont...)</u>				
27-07 Tanks 1A and 3A Gravity Fuel Transfer Valves (-3, -15) (Cont...)	2	0	(M) (O) One or both may be inoperative provided:	<ul style="list-style-type: none"> (a) Associated valves are deactivated CLOSED, and (b) Tanks 1A and 3A fuel is not required for flight.
31-01 Fuel Jettison Valves	2	0	(M) (O) One or both may be inoperative provided:	<ul style="list-style-type: none"> (a) Associated valve is deactivated CLOSED, and (b) En-route engine inoperative performance does not require fuel jettison system. <p>NOTE 1: Refer to Flight Manual Limitations for lateral imbalance limits when jettisoning fuel with asymmetrical valves inoperative.</p> <p>NOTE 2: Refer to Flight Manual Performance for engine inoperative performance.</p>
41-00 Flight Station Fuel Quantity Indicating Systems				
(1) Tank 1, 2L, 2R and 3 Indicating Systems	4	3	(M) (O) One may be inoperative provided:	<ul style="list-style-type: none"> (a) Associated Fuel Used and Fuel Flow Indicating Systems are operative, (b) Fuel Flow Equaliser is operative if tank 2L or 2R Fuel Quantity Indicating System is affected, (c) Fuel quantity in associated tank is determined by an alternate approved method. (d) En-route engine inoperative performance does not require fuel jettison, and (e) A record of fuel used is kept, and remains in the aircraft until associated tank is refuelled. <p>NOTE 1: Refer to Flight Manual Limitations for lateral imbalance limits during Refuelling and inflight.</p>
(Cont...)				

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<u>28 FUEL (Cont...)</u>			
41-00 Flight Station Fuel Quantity Indicating Systems (Cont...)			
(1) Tank 1, 2L, 2R and 3 Indicating Systems (Cont...)			NOTE 2: Refer to Flight Manual Performance for engine inoperative performance. NOTE 3: Fuel used record enables flight crew to accurately calculate fuel remaining in associated tank at any time.
(2) Tank 2L and 2R INBD LOW Lights	2	1	(O) One may be inoperative provided: (a) Associated Tank 2L or 2R Fuel Quantity Indicating System is operative, and (b) Associated Float Operated Fuel Transfer Valve is operative.
(3) Tank 1A and 3A Indicating Systems (-3, -15)	2	0	(M) (O) One or both may be inoperative provided: (a) Associated tank is empty, and (b) Associated Normal Fuel Transfer Valve is deactivated CLOSED. NOTE: Refer to Flight Manual Limitations for lateral imbalance limits.
(4) Tank 1A and 3A LOW Lights (-15)	2	0	(M) (O) One or both may be inoperative provided: (a) Associated Tank Fuel Quantity Indicating System is operative. OR (b) Associated tank is empty, and (c) Associated Normal Fuel Transfer Valve is deactivated CLOSED. NOTE: Refer to Flight Manual Limitations for lateral imbalance limits.
			(Cont...)

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<u>28 FUEL (Cont...)</u>				
41-00 Flight Station Fuel Quantity Indicating Systems (Cont...)				
(5) Tank 4 Auxiliary Fuel Tank Quantity Indicator (-3) (If Installed)	1	0	(M) (O) May be inoperative provided: (a) Fuel quantity in tank is verified using Drip Stick, (b) Tank 4 Fuel Quantity Gauge is placarded inoperative at the flight station, (c) Tank 1A and 3A Indicating Systems must be operative, (d) A record of fuel used is kept and remains in the aircraft until associated tank is refuelled, and (e) Aircraft is operated in accordance with Flight Manual Limitations.	
41-19 Fuel Totaliser System	1	0	May be inoperative provided procedures do not depend on its use.	
41-20 Refuelling Panel Fuel Quantity Indicating Systems	4	0	All may be inoperative provided associated Refuel Shutoff Valve is operative.	
41-24 Fuel Level Sight Gauges (Drip Sticks)	-	0	(M) All may be inoperative provided: (a) Flight Deck Fuel Quantity Indicating system for associated tank is operative, and (b) There is no evidence of leakage. NOTE: Refer to CDL.	
41-25 Tank 4 Auxiliary Fuel Tank Outlet Valves (-3) (If Installed)	2	0	(M) One or both may be inoperative provided: (a) Auxiliary Fuel Tank System is placarded inoperative at the flight station, (b) Auxiliary Fuel Tank is verified empty, and (c) Inlet and Outlet Valves are verified CLOSED.	

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<u>28 FUEL (Cont...)</u>				
41-26 Tank 4 Auxiliary Fuel Tank Inlet Valves (-3) (If Installed)	2	0	(M) One or both may be inoperative provided: (a) Auxiliary Fuel Tank System is placarded inoperative at the flight station, (b) Auxiliary Fuel Tank is verified empty, and (c) Inlet and Outlet Valves are verified CLOSED.	
41-27 Tank 4 Auxiliary Fuel Tank Boost Pumps (-3) (If Installed)	2	0	(M) One or both may be inoperative provided: (a) Auxiliary Fuel Tank System is placarded inoperative at the flight station, (b) Auxiliary Fuel Tank is verified empty, and (c) Inlet and Outlet Valves are verified CLOSED.	
44-01 Boost Pump LOW Pressure Indicating Light Systems	8	4	(O) Four may be inoperative provided a light is operative for each operative Fuel Boost Pump System.	

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<u>29 HYDRAULIC POWER</u>				
11-07 B1 and C1 Engine Driven Hydraulic Pumps	2	1	(M) (O) One may be inoperative provided: (a) Engine Driven Pumps A1 and D1 are operative, (b) Air Turbine Motor Driven Pumps B2 and C2 are operative, and (c) System is repaired within 25 flight hours.	
11-08 B3 and C3 AC Motor Driven Hydraulic Pumps	2	0	(O) One or both may be inoperative provided associated Air Turbine Motor (ATM) is used to pressurise brakes and accumulators prior to engine start.	
11-32 B1 and C1 Hydraulic Firewal Shutoff Valves (Suction Shutoff Valves)	2	1	(M) (O) One may be inoperative provided: (a) Associated valve is secured CLOSED, and (b) Associated Engine Driven Hydraulic Pump is deactivated in accordance with approved maintenance procedures.	
11-33 Power Transfer Units (PTU)	2	0	One or both may be inoperative provided: (a) If B-A PTU is inoperative, Engine Driven Pumps A1, B1 and Air Turbine Motor Driven Pump B2 must be operative, and (b) If C-D PTU is inoperative, Engine Driven Pumps C1, D1 and Air Turbine Motor Driven Pump C2 must be operative.	
11-40 Air Turbine Motor (ATM) Control Systems				
(1) Automatic (AUTO) Control Functions	2	1	(M) (O) One may be inoperative provided: (a) Associated Manual (ON-OFF) Control Function is operative, and (b) If C2 system is affected, C2 ATM is ON for takeoff and landing.	
			(Cont...)	

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<u>29 HYDRAULIC POWER (Cont...)</u>				
11-40 Air Turbine Motor (ATM) Control System (Cont...)				
(2) Manual (ON-OFF) Control Functions	2	1	(O) One may be inoperative provided:	
			(a) Associated ATM Driven Pump is considered inoperative, and	
			(b) System is repaired within 25 flight hours.	
11-51 Engine Driven Pump S/P Switches	4	3	One may be inoperative provided associated Engine Driven Pump is considered inoperative and is not used.	
11-71 B2 and C2 Air Turbine Motor (ATM) Driven Pumps	2	1	(M) (O) One may be inoperative provided:	
			(a) All Engine Driven Pumps are operative,	
			(b) If C1 pump is inoperative, the performance criteria in Flight Manual Appendix titled: Landing gear Extended is used, and	
			(c) System is repaired within 25 flight hours.	
21-01 Ram Air Turbine (RAT) Deployment Systems (Auto, Manual)	2	0	(M) (O) One or both may be inoperative provided:	
			(a) RAT is extended,	
			(b) Operations are conducted in accordance with Flight Manual Appendix titled: RAT Extended,	
			(c) The aircraft is not operated from slush covered runways, and	
			(d) The aircraft may continue the flight or series of flights not to exceed 40 flight hours prior to the completion of replacements or repairs.	
31-04 Flight Station Hydraulic Fluid Temperature Indicator	1	0	May be inoperative.	

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<u>29 HYDRAULIC POWER</u> <u>(Cont...)</u>				
31-06	Service Centre Hydraulic Quantity Indicator	1	0	May be inoperative.
31-07	Service Centre Hydraulic Fluid Temperature Indicator	1	0	May be inoperative.
31-08	Flight Station Hydraulic Pressure Indicating Systems	4	3	(O) One may be inoperative provided associated Pump LO PR Caution Light System is operative.
31-10	Flight Station Hydraulic Fluid Quantity Indicating Systems	4	3	(M) One may be inoperative provided: (a) Associated Reservoir quantity is verified adequate before each flight, and (b) Associated Reservoir LO QTY Caution Light System is operative.
31-14	Service Centre Hydraulic Reservoir Pressure Indicating Systems	4	0	(M) May be inoperative provided reservoir is determined to be pressurised.
31-15	Service Centre Hydraulic Pressure Indicating Systems			
	(1) Single Needle Gauges	2	1	One may be inoperative.
	(2) Dual Needle Gauges	2	1	One may be inoperative.
32-00	Hydraulic Reservoir LO QTY Caution Light Systems	4	0	All may be inoperative provided associated Hydraulic Fluid Quantity Indicating System is operative.
32-01	Pump LO PR Caution Light Systems	6	4	Two may be inoperative provided associated Hydraulic Pressure Indicating System is operative.
32-02	Pump HI TEM Caution Light Systems	6	2	Four may be inoperative provided associated Hydraulic Reservoir HI TEM Caution Light System is operative.

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<u>29 HYDRAULIC POWER (Cont...)</u>			
32-03 Hydraulic Reservoir HI TEM Caution Light Systems	4	0	All may be inoperative provided: (a) Associated Pump HI TEM Caution Light System is operative. OR (b) Associated Hydraulic Fluid Temperature Indicating System is operative.
33-00 Air Turbine Motor (ATM) RPM Indicating Systems (Includes Lights)	2	0	(M) (O) One or both may be inoperative provided associated ATM Driven Pump and associated ATM Control System are verified operative before each flight.

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<u>30 ICE AND RAIN PROTECTION</u>				
13-00	Wing Anti-Ice System	1	0	May be inoperative provided flight is not made in known or forecast icing conditions.
13-01	Wing Anti-Ice System Modes (AUTO, MANUAL)	2	1	(O) One mode may be inoperative provided a preflight check verifies that the Wing Anti-Ice System is operative.
		2	0	One or both modes may be inoperative provided Wing Anti-Ice System is considered inoperative.
13-02	Wing Anti-Ice System Regulating and Shutoff Valves	2	0	(M) One or both may be inoperative provided: (a) Associated valve is verified CLOSED, and (b) Wing Anti-Ice System is considered inoperative.
13-04	Wing Anti-Ice System Dual Temperature Sensors	2	0	One or both may be inoperative provided Wing Anti-Ice system is considered inoperative.
-35	Wing Anti-Ice System DUCT FAIL Detection Systems	2	1	One may be inoperative.
21-01	Engine Anti-Ice Control Valves	3	2	(M) One may be inoperative provided: (a) Associated valve is secured CLOSED, and (b) Flight is not made in known or forecast icing conditions.
		3	0	(M) All may be inoperative provided: (a) Associated valve is secured OPEN, (b) Associated pressure relief valve is verified operative, and (c) An overboard vent duct system is installed on the associated engine.
(Cont...)				

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30 ICE AND RAIN PROTECTION (Cont...)			
21-01 Engine Anti-Ice Control Valves (Cont...)			NOTE 1: Refer to Flight Manual Performance for operation with anti-ice on. NOTE 2: Rolls Royce SB RB.211-30-2178 installs an overboard vent duct system for the pressure relief valve.
21-13 Engine Anti-Ice Indicating Systems	3	0	All may be inoperative provided Associated Engine Anti-Ice Control Valve is considered inoperative and secured OPEN.
(1) HI PR Light Systems	3	2	One may be inoperative provided: (a) An overboard vent duct system is installed on the associated engine. OR (b) Associated Engine Anti-Ice System is considered inoperative and not used, and (c) Flight is not made in known or forecast icing conditions. NOTE: Rolls Royce SB RB.211-30-2178 installs an overboard vent duct for the pressure relief valve.
(2) HEAT Light Systems	3	2	One may be inoperative provided Flight is not made in known or forecast icing conditions.
31-00 Air Data Sensor Heat Systems			
(1) Pitot Heater and Switchlight OFF Systems	4	3	One may be inoperative provided: (a) Flight is not made in visible moisture with Static Air Temperature (SAT) below +4oC, and in known or forecast icing conditions, and (b) Repairs or replacements are carried out within three calendar days. (Cont...)

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<u>30 ICE AND RAIN PROTECTION (Cont...)</u>				
31-00	Air Data Sensor Heat Systems (Cont...)			
	(2) Pitot Mast Heater Systems	4	2	Two may be inoperative.
	(3) Alpha Heater and Switchlight OFF Systems			NOT USED
	(4) Air Temp Probe Heater and Switchlight OFF Systems	2	1	One may be inoperative provided associated Air Temperature Probe is considered inoperative.
41-01	Windshield Heat Systems	2	1	(M) (O) One may be inoperative provided: (a) Windshield Defogging Fan is operative, (b) Flight is not made in known or forecast icing conditions, and (c) Temperature at arrival airport is +10oC or warmer.
41-03	Forward and Aft Side Window Heat Systems	4	1	Three may be inoperative provided Left Forward Side Window Heat System is operative.
41-07	Windshield Defogging Fan	1	0	May be inoperative provided both Windshield Heat Systems are operative.
42-00	Windshield Rain Repellent System	1	0	May be inoperative provided both Windshield Wiper Systems are operative.

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<u>30 ICE AND RAIN PROTECTION (Cont...)</u>				
43-00	Windshield Washer System	1	0	May be inoperative provided: (a) Both windshields are fitted with 0.085" or 0.105" thick outer glass. OR (b) If either windshield is fitted with 0.050" thick outer glass, aircraft is not operated in areas of known or forecast thunderstorm activity.
44-00	Windshield Wiper Systems	2	1	One may be inoperative provided the aircraft is not operated in precipitation within arrival and departure areas.
51-00	VHF Antenna Anti-Ice Systems	2	0	(M) One or both may be inoperative provided the associated system is deactivated.
51-28	APU Load Compressor Inlet Duct Anti-Icing System	1	0	May be inoperative.
71-00	Potable Water Drain Mast Heaters	4	2	Two may be inoperative provided at least one heater in each mast is operative.
81-00	Ice Detection System	1	0	May be inoperative.

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<u>31 INDICATING/RECORDING SYSTEMS</u>				
21-01	Pilot/Co-Pilot Electric Clocks	2	1	One may be inoperative.
		2	0	One or both may be inoperative provided an accurate timepiece is available on the flight deck displaying hours, minutes and seconds.
21-02	Clock Time Base	1	0	May be inoperative provided an accurate timepiece is available on the flight deck displaying hours, minutes and seconds.
21-07	FE Panel Electric Clock	1	0	May be inoperative.
22-03	Aural Warning System			
	(1) Flap LRS Aural (Buzzer)	1	0	May be inoperative provided FLAP LRS INOP Light on Caution/Warning Annunciator panel is operative.
	(2) Unsafe Landing Aural Signal			NOT USED.
	(3) Steady Horn			NOT USED.
	(4) Gear Warning Horn Airspeed/Altitude Inhibit Function	1	0	May be inoperative provided gear horn cutout function is verified operative.
	(5) Unsafe Takeoff Signal			NOT USED.
	(6) Elevator Drive Aural Signal			Moved to ATA 27.
	(7) Altitude Alert Aural Signal			Moved to ATA 27.
31-00	Quick Access Recorder System	1	0	May be inoperative.

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<u>31 INDICATING/RECORDING SYSTEMS (Cont...)</u>				
31-01	Flight Data Recorder (FDR)	1	1	As required by Air Navigation Legislation. May be inoperative provided: (a) It is not reasonably practical to repair or replace before commencement of flight. (b) The aircraft shall not exceed six (6) consecutive flights with the FDR unserviceable beginning with the first flight after the FDR was last operating throughout the flight. (c) The aircraft shall not fly for more than 16 hours after the FDR becomes unserviceable. (d) Not more than 24 hours have elapsed since the FDR became unserviceable. (e) The aircraft may not depart from its maintenance base with the FDR unserviceable. (f) The Cockpit Voice Recorder must be operating normally.
31-02	Flight Data Entry Panel	1	0	May be inoperative.
32-00	Electronic Flight Data Acquisition Recording System (EFDARS)	1	0	May be inoperative.
32-02	Aircraft Integrated Data System (AIDS)	1	0	May be inoperative.
41-00	On-Board Weight and Balance system	1	0	May be inoperative.

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<u>32 LANDING GEAR</u>				
31-02 Landing Gear Normal Extension and Retraction System	1	0	(M) (O) Except for extended overwater operation may be inoperative provided: (a) Aircraft is operated in accordance with Flight Manual Appendix Titled: Landing Gear Extended, and (b) Associated deactivation of the gear control/actuation system does not adversely affect other functions of the C hydraulic system.	
36-00 Landing Gear Alternate Hydraulic Extension System	1	0	(M) (O) Except for extended overwater operation, may be inoperative provided: (a) Operation is in accordance with Flight Manual Appendix Titled: Landing Gear Extended, and (b) All other C hydraulic system functions are operative.	
37-00 Landing Gear Uplock Mechanical Release Systems	3	0	(M) (O) All except for extended overwater operations may be inoperative provided operation is in accordance with Flight Manual Appendix Titled: Landing Gear Extended.	
43-00 Brake Assembly	8	7	One may be inoperative provided: (a) All remaining retardation devices operate normally, (b) The brake is hydraulically disconnected and capped utilising an approved maintenance procedure, (c) Flight Manual procedures and performance decrements are applied, and (d) Remaining brake units are verified to be operating normally.	

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<u>32 LANDING GEAR (Cont...)</u>			
43-01 Brake Adjuster Assembly Systems			
(1) Brake Temperature Indicating System Installed and Operative	48	40	(M) One for each wheel brake may be inoperative provided pressure plate is verified to retract sufficiently to prevent dragging brakes.
	48	32	(M) Two for each wheel brake assembly may be inoperative provided: (a) Affected adjusters are not adjacent, (b) Pressure plate is verified to retract sufficiently to prevent dragging brakes, and (c) Associated system is repaired within ten landings.
(2) Brake Temperature Indication System Inoperative or not Installed	48	40	(M) One for each wheel brake may be inoperative provided prior to each departure pressure plate is verified to retract sufficiently to prevent dragging brakes.
	48	32	(M) Two for each wheel brake assembly may be inoperative provided: (a) Affected adjusters are not adjacent, (b) Prior to each departure pressure plate is verified to retract sufficiently to prevent dragging brakes, and (c) Associated system is repaired within ten landings.
43-13 Service Centre Brake Accumulator Air Charges Gauges	2	0	(M) (O) One or both may be inoperative provided: (a) Accumulator air charge is verified to be within approved limits, and (b) A minimum of 4 full brake applications from the B system accumulator, and 8 from the C system accumulator are verified to be available.

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<u>32 LANDING GEAR (Cont...)</u>				
44-00 Anti-Skid Systems (NORM, ALT)	2	1		(O) One may be inoperative provided alternate Anti-Skid System is verified to be functioning properly.
	2	0		(O) One or both systems may be inoperative provided: (a) All Reverser Systems are operative, and (b) Operations are in accordance with Flight Manual Appendix Titled: Anti-Skid Inoperative.
44-06 Flight Station Anti-Skid Norm and Alt TEST Systems	2	0		(M) (O) One or both may be inoperative provided: (a) Associated Anti-Skid System is verified operative before the first flight of each day, using the Electronic Control Unit in the MESC, OR (b) Associated Anti-Skid System is considered inoperative.
45-00 Brake Temperature Indicating System	1	0		May be inoperative.
46-00 Pilots Panel Brake Pressure Norm/Alt Indication Systems	2	1		(M) (O) One may be inoperative provided: (a) Associated Brake Accumulator LOW PRESS Light is operative, (b) Associated Hydraulic Pressure Indicating System is operative, and (c) A minimum of 4 full brake applications from the B system accumulator, and 8 from the C system accumulator or are verified to be available.
46-04 Brake Accumulator Norm and Alt LOW PRESS lights	2	1		One may be inoperative provided associated Brake Pressure Indication system is operative.
47-00 Automatic Braking System	1	0		May be inoperative.

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<u>32 LANDING GEAR (Cont...)</u>				
48-01 Parking Brake Indicator Lights	2	0		(O) One or both may be inoperative provided pilot monitors parking brakes when chocks are not in place.
51-03 Rudder Pedal Steering System	1	0		(M) (O) May be inoperative provided steering wheel system for nose wheel steering is verified to be operative.
61-00 Gear Position and Warning Systems				
(1) Pilots Panel GEAR and INTRANS Annunciator Lights	4	0		(M) (O) All may be inoperative provided: (a) Operation is in accordance with Flight Manual Titled: Landing Gear Extended, and (b) With the landing gear handle blocking device installed, alternate means are used to ensure gear is locked down before each landing.
(2) Pilots Panel TRUCK Annunciator Light	1	0		(M) (O) May be inoperative provided: (a) Operation is in accordance with Flight Manual Appendix Titled: Landing Gear Extended, (b) All Landing Gear downlock pins are installed, and (c) Tyre inflation pressure is verified before each flight.
(3) Pilots Panel DOOR Annunciator light	1	0		May be inoperative provided three GEAR OR DOOR Annunciator lights on FE panel are operative.
(4) FE Panel GEAR OR DOOR Annunciator Lights	3	0		All may be inoperative provided all GEAR, INTRANS and DOOR Annunciator Lights on Pilots panel are operative.
61-12 Tail Skid Light (-1, -14, -15)	1	0		May be inoperative.
71-00 Tail Skid Control System (-1, -14, -15)	1	0		(M) May be inoperative provided tail skid is extended.
NOTE: Observe additional fuel burn penalty.				

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<u>33 LIGHTS</u>				
10-00 Flight Compartment and Instrument Lighting System	-	0	As required by Air Navigation Legislation. May be inoperative for daylight operations only.	
	-	-	OR	
	-	-	As required by Air Navigation Legislation. Individual lights may be inoperative provided:	
			(a) Sufficient lighting is operative to make each required instrument, control and other device for which it is provided easily readable.	
			(b) Sufficient flight deck emergency lighting is verified operative.	
			(c) Lighting configuration at dispatch is acceptable to the flight crew.	
12-00 Thunderstorm Lighting System	1	0	May be inoperative provided despatch is in accordance with Flight Station and Instrument Lighting Systems.	
17-00 Caution/Warning (CW) Annunciator Panel Flasher Unit	1	0	May be inoperative provided individual light operation is not affected.	
17-99 CW Annunciator Panel Lights			NOTE: A maximum of three of the following Lights (ITEMS 1 through 7) may be inoperative.	
(1) ANTI-SKID or ANTI SKID/ABS	1	0	May be inoperative provided:	
			(a) All lights on Anti-Skid System panel are operative, and	
			(b) All lights on Automatic Braking System panel are operative.	
(2) ECS	1	0	May be inoperative.	
(Cont...)				

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<u>33 LIGHTS (Cont...)</u>				
17-99	CW Annunciator Panel Lights (Cont...)			
	(3) ELECTRICAL SYSTEM	1	0	(O) May be inoperative provided: (a) Three IDG systems are operative, (b) Three IDG Oil LOW PRESS Light Systems are operative, and (c) All associated electrical system warning, caution and advisory lights on FE Panel are verified operative before each flight.
	(4) FUEL SYSTEM	1	0	May be inoperative.
	(5) LOW BRAKE PRESSURE	1	0	May be inoperative provided: (a) Both Brake Pressure Indicating Systems are operative, and (b) Both Brake Accumulator LOW PRESS Lights are operative.
	(6) OIL Press Eng			(Moved to ATA 79).
	(7) RUDDER HYDR LMTR	1	0	May be inoperative.
	(8) AUTO GND SPLRS INOP (-1, -14, -15)	1	0	NOTE: All of the following Lights (items 8 through 18) may be inoperative. May be inoperative provided both Spoiler Control Systems are considered inoperative and are deactivated.
	(9) AUTOMATIC BRAKING	1	0	May be inoperative provided: (a) All lights on Automatic Braking System panel are operative. OR (Cont...)

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33 LIGHTS (Cont...)				
17-99 CW Annunciator Panel Lights (Cont...)				
(9) AUTOMATIC BRAKING (Cont...)				(b) Automatic Braking system is considered to be inoperative.
(10) BRAKE TEMP	1	0		May be inoperative.
(11) DUAL A/L NOT AVAIL or APFDS FIRST FAIL (Whichever is installed)	1	0		One may be inoperative OFF.
	1	0		One may be inoperative ON provided approach minima do not require use of dual Autoload.
(12) FIRE DET LOOP	1	0		(O) May be inoperative provided: (a) Fire Detection System is verified operative before each flight, and (b) Loop selectors remain in the A or B position.
(13) FLAP LRS INOP	1	0		May be inoperative provided FLAP LRS Aural Signal is operative.
(14) FLAP LRS LIMITING	1	0		May be inoperative provided Flap Position Indicating System is operative.
(15) ICING	1	0		May be inoperative.
(16) NAV POSITION	1	0		May be inoperative.
(17) RUDDER MECH LIMITER	1	0		May be inoperative.
(18) Vertical GYRO 3 or ATT 3	1	0		May be inoperative provided associated No. 3 Vertical Gyro or Inertial Navigation System is considered inoperative.
21-00 Aisle and Ceiling Lighting	-	-		May be inoperative provided: (a) Cabin Emergency Lighting is operative, (b) Sufficient lighting is operative for crew to perform required duties, and (Cont...)

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<u>33 LIGHTS (Cont...)</u>			
21-00 Aisle and Ceiling Lighting (Cont...)			(c) Lighting configuration at despatch is acceptable to the flight crew.
25-01 Galley Lighting Systems			
(1) Lower Galley	-	0	May be inoperative provided lower galley is not occupied.
(2) Cabin Galley	-	0	May be inoperative.
29-02 Lavatory RETURN TO CABIN Signs			Refer to Item33-29-12.
29-12 Passenger Notice System ("NO SMOKING/FASTEN SEAT BELTS/RETURN TO CABIN") Signs			
	-		(M) (O) As required by Air Navigation Legislation. No passenger seat, cabin attendant seat or lavatory may be occupied from which a "No Smoking/Fasten Seat Belt/Return to Cabin" sign is not readily legible or that seat or lavatory must be blocked and placarded - "DO NOT OCCUPY"
			OR
	-	-	(O) No Smoking/Fasten Seat Belt/Return to Cabin signs may be inoperative and the affected passenger seat(s), cabin attendant seat(s) or lavatories may be occupied provided:
			(a) The PA system operates normally and can be clearly heard throughout the cabin during flight, and
			(b) An acceptable procedure is used to notify passengers when seat belts must be fastened, smoking is prohibited and (if applicable) when passengers should return to cabin from toilet compartments.
			OR
			(c) Passengers are not carried.
31-00 Cargo Compartment Lighting Systems	-	0	May be inoperative.

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<u>33 LIGHTS (Cont...)</u>				
33-00	Wheel Well Lighting Systems			
	(1) Main Lights	6	0	Any or all may be inoperative.
	(2) Nose	1	0	May be inoperative provided aircraft is not operated at night.
41-01	Anti-Collision Lights (Red)	4	2	Two may be inoperative provided one upper and one lower Anti-Collision Light is operative.
	(1) Daylight Operations	-	0	As required by Air Navigation Legislation. Any or all may be inoperative provided the light(s) is repaired at the earliest practicable opportunity.
	(2) Night Operations	-	1	As required by Air Navigation Legislation. One must be operative, and a high intensity strobe light system must be installed and operative. Note 1: Daylight operations with unserviceable anti-collision lights are limited to flights within the UK FIR only. Note 2: For operations outside the UK FIR operators should check with the appropriate ATCC's (Air Traffic Control Centres)
41-03	High Intensity Strobe Light Systems	4	0	All may be inoperative.
43-01	Wing and Nose Landing Lights	4	2	Two may be inoperative for night operations provided one is operative on each side.
		4	0	All may be inoperative provided aircraft is not operated at night.
43-03	Nose Gear Taxi Lights	2	0	One or both may be inoperative.
43-04	Runway Turnoff Lights	2	0	One or both may be inoperative.

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<u>33 LIGHTS (Cont...)</u>				
44-00	Navigational Position Light Systems	-	-	One light bulb in each light assembly may be inoperative for night operations.
		-	0	All may be inoperative provided aircraft is not operated at night.
45-00	Wing Flood Lights	2	0	One or both may be inoperative for daylight operations.
		2	1	One may be inoperative for night operations.
		2	0	(O) Both may be inoperative for night operations provided an alternate means is available and utilised to adequately illuminate ice accretion on another outside surface visible from the flight deck.
51-02	Interior Emergency Lighting Systems			
	(1) Flight Station			NOT USED.
	(2) Cabin Emergency Exit, Evacuation and Aisle Lights	-	-	Up to 13 (11 in -3 aircraft) may be inoperative provided:
				(a) Inoperative lights are not adjacent or opposite, and
				(b) Two of three lights at each entry door are operative.
	(3) Cabin EXIT Locator Signs (-1, -3, -14, -15)	-	-	One may be inoperative provided adjacent Cabin Door EXIT Sign is operative.
	(4) Cabin Door Exit Signs			NOT USED.
(Cont...)				

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<u>33 LIGHTS (Cont...)</u>				
51-02	Interior Emergency Lighting Systems (Cont...)			
	(5) Lower Passenger Lounge Lights (-1, -14)	30	17	Up to 13 may be inoperative provided: <ul style="list-style-type: none"> (a) One door EXIT or EXIT Locator Sign is operative at each exit, cabin stairway and lounge partition, (b) One ceiling mounted light is operative at each exit cross aisle, and at two locations in the lounge, (c) One stairway lower tread light, and the stairway mid-landing light is operative, (d) Six airstair tread lights are operative, and no two adjacent lights are inoperative, and (except mid-span and base [deboarding] lights), and (e) One bulb in the exterior RH slide light is operative.
	(6) Lower Galley Lights (-1, -14, -15)	6	3	Three may be inoperative provided galley is not occupied during taxi operations.
51-08	Exterior Emergency Lighting System	1	0	May be inoperative provided: <ul style="list-style-type: none"> (a) The aircraft is not operated at night, and (b) Repairs or replacements are carried out within three calendar days. OR <ul style="list-style-type: none"> (c) Passengers are not carried.
52-00	Floor Proximity Emergency Escape Path Marking System	1	1	As required by Air Navigation Legislation. Specific lights may be inoperative in accordance with arrangements approved by the Authority for a particular lighting configuration. If the equipment becomes unserviceable the aircraft may continue the flight or series of flights but shall not depart an airport where repairs or replacements can be made.
99-01	Logo Light System	1	0	May be inoperative.

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<u>34 NAVIGATION</u>				
00-01	Instrument Source Select Switches	-	0	(O) May be inoperative provided: (a) Associated instruments function properly from independent sources, and (b) Inoperative switches are not repositioned during flight.
13-03	Standby Airspeed Indicator			NOT USED.
13-04	Standby Altimeter			NOT USED.
14-01	Air Data Computer			NOT USED.
14-03	Servoed Altimeter Systems	-	2	May be inoperative provided one remains operative in each pilot's panel.
14-04	Speed Indicating and Warning Systems			
	(1) Airspeed Indicating	-	-	As required by Air Navigation Legislation.
	(2) Mach Indicating	2	1	One may be inoperative.
	(3) Airspeed/Mach Aura Overspeed Warning	2	1	One may be inoperative.
14-05	Vertical Speed Indicating Systems	-	-	As required by Air Navigation Legislation.
14-06	Air Temp Probes			
	(1) -3 aircraft or -1, -14, -15 Aircraft With SB 093-34-054 or Production Equivalent Incorporated	2	1	One may be inoperative.
(Cont...)				

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34 NAVIGATION (Cont...)				
14-06 Air Temp Probes (Cont...)				
(2) -1, -14, -15 Aircraft Without SB 093-34-054 Incorporated	2	1	<p>The left probe may be inoperative provided associated APFD-A system considered inoperative, and is not used.</p> <p>NOTE: On -3 aircraft on -1, -14, -15 aircraft with SB 093-34-054 or production equivalent incorporated, TAT is from the left probe, and SAT is from the right probe. On -1, -14, -15 aircraft without SB 093-34-054 incorporated, both TAT and SAT are from the right probe.</p>	
14-08 True Airspeed (TAS) Indicating System	1	0	<p>May be inoperative.</p> <p>NOTE: Other systems such as Omega AHRS, FMS, and APFMS may be affected.</p>	
15-01 Static Air Temperature (SAT) Indicating System	1	0	<p>May be inoperative provided:</p> <p>(a) TAT Indicating System is operative, and</p> <p>(b) Associated TAT Air Temp Probe is operative.</p>	
15-02 Total Air Temperature (TAT) Indicating System	1	0	<p>May be inoperative provided:</p> <p>(a) SAT Indicating System is operative, and</p> <p>(b) Associated SAT Air Temp Probe is operative.</p>	
16-01 Instrument Comparator Monitor and Warning System	1	0	<p>May be inoperative provided Attitude Heading Reference System (AHRS) is not installed.</p>	
16-02 Altitude Alerting System	-	0	<p>As required by Air Navigation Legislation. May be inoperative. The aircraft may continue the flight or series of flights but shall not depart an airport where it is reasonably practicable for repairs or replacements to be made.</p>	

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<u>34 NAVIGATION (Cont...)</u>				
21-04 Vertical Gyros	2	1		As required by Air Navigation Legislation. One may be inoperative provided: (a) Approach minima do not require their use, and (b) Both ADI's are operating normally from separate sources.
21-07 Attitude Director Indicators	2	1		As required by Air Navigation Legislation. One may be inoperative provided: (a) Flight is conducted in day VMC, and (b) Standby attitude indicator is operative.
21-08 Standby Horizon Indicator	1	0		May be inoperative provided the aircraft is operated in day VMC only.
22-00 Magnetic Heading Reference Systems	2	2		Both must be operative.
22-07 Non-Stabilised Magnetic (Standby) Compass	1	0		(O) Except for extended overwater operations, may be inoperative provided: (a) At least two independent magnetic stabilised compass systems are installed and operative, and (b) Repairs or replacements are carried out within three calendar days.

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<u>34 NAVIGATION (Cont...)</u>			
32-00 Radio Altimeter Systems	2	0	Both may be inoperative provided approach minima or operational procedures do not require its use. NOTE 1: GPWS may be affected. NOTE 2: One operative Radio Altimeter System is required to conduct CAT II ILS approaches using APFDS.
33-00 Instrument Landing Systems (ILS)	2	-	As required by Air Navigation Legislation.
35-00 Marker Beacon System	1	0	As required by Air Navigation Legislation. May be inoperative provided approach minima do not require its use.
(1) ADI Repeater Lights	6	0	All may be inoperative.
42-00 Area Navigation Systems	-	-	As required by Air Navigation Legislation.
43-00 Inertial Navigation Systems (INS)	-	-	May be inoperative provided: (a) Associated system is not required for attitude and heading information, (b) Associated system is not required for operation being conducted, and (c) Approach minima do not require its use. NOTE: Other systems such as FMS may be affected.

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34 NAVIGATION (Cont...)			
44-00 Weather Radar Systems	-	-	(O) As required by Air Navigation Legislation. Required when flying for the purposes of public transport, except that a flight may commence if the system is unserviceable such that: (a) The weather radar display is provided to only one pilot, so long as the aircraft is flying only to the place at which it first becomes reasonably practicable for the system to be repaired; or (b) When the weather report or forecasts available to the commander of the aircraft indicate that cumulo-nimbus clouds or other potentially hazardous weather conditions, which can be detected by the system when in working order, are unlikely to be encountered on the intended route or any planned diversion therefrom or the commander has satisfied himself that any such weather conditions will be encountered in daylight and can be seen and avoided, and the aircraft is in either case operated throughout the flight in accordance with any relevant instruction given in the operations manual.
45-00 Ground Proximity Warning System (GPWS)	-	-	As required by Air Navigation Legislation. May be inoperative. The aircraft may continue the flight or series of flights but shall not depart an airport where it is reasonably practicable for repairs or replacements to be made. NOTE: Particular circumstances may require the use of additional or alternate procedures. The alternate procedures would require the operator to consider the routes over which he is flying and ensure that the pilot adopted a flight path which would give him the protection which would otherwise be afforded.
51-00 Distance Measuring Equipment (DME) Systems	-	-	As required by Air Navigation Legislation.
53-00 ATC Transponder Systems	-	-	As required by Air Navigation Legislation.

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34 NAVIGATION (Cont...)				
55-00 VHF Navigation Systems (VOR/ILS)	-	-	-	As required by Air Navigation Legislation.
55-03 VOR Preamplifiers	2	0	0	(M) One or both may be inoperative provided associated VOR preamplifier is deactivated.
55-04 Horizontal Situation Indicators	2	1	1	(O) One may be inoperative provided: (a) At least one independent compass heading indication is available on each pilots instrument panel. (b) Approach minima do not require their use. NOTE: Particular circumstances may require the use of additional or alternate procedures.
57-00 Automatic Direction Finding (ADF) Systems	-	-	-	As required by Air Navigation Legislation.
57-08 Radio Magnetic Indicator (RMI/RDDMI) Systems	-	-	-	May be inoperative provided associated system is not required by operation conducted.
58-00 OMEGA Systems	-	-	-	As required by Air Navigation Legislation.
61-00 Performance Management System (PMS)	1	0	0	May be inoperative.
61-01 Flight Management Systems (FMS)	-	0	0	May be inoperative provided: (a) Associated system is not required on Digital AFCS aircraft to support inoperative Glareshield Panel Alpha Displays, and (b) Associated System is not required for operation being conducted.

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34 NAVIGATION (Cont...)				
61-02 Traffic Alert Collision Avoidance System (TCAS)				
(1) TCAS System	-	0		May be inoperative provided the system is deactivated and secured.
				If the aircraft is intended to be flown in airspace in which TCAS operation is required, it may fly for not more than 10 calendar days with the equipment completely unserviceable, but shall not depart from an aerodrome where it is reasonably practical for the equipment to be repaired or replaced.
(2) Combined TA and RA Dual Displays	2	1		(O) May be inoperative on the non-flying pilot side provided:
				(a) TA and RA elements and audio functions are operative on flying pilot side, and
				(b) TA and RA display indications are visible to the non-flying pilot.
(3) Resolution Advisory (RA) Display System(s)	2	1		(O) One may be inoperative on non-flying pilot side.
	-	0		(O) May be inoperative provided:
				(a) All Traffic Alert (TA) display elements and voice command audio functions are operative, and
				(b) TA only mode is selected by the crew.
(4) TA Displays System(s)	-	0		(O) May be inoperative provided all installed RA display and audio functions are operative.
62-00 Windshear System	1	0		May be inoperative.

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<u>35 OXYGEN</u>			
10-00 Flight Station Oxygen System	1	-	As required by Air Navigation Legislation.
21-00 Passenger Oxygen Systems	1	0	(M)(O) As required by Air Navigation Legislation. The automatic presentation system may be inoperative provided:- (a) The manual deployment system operates normally. (b) The flight is limited to FL 300 or below.
	-	-	(M)(O) One or more passenger service units (PSUs) may be inoperative without flight altitude restriction provided:- (a) Affected seats are blocked and placarded to prevent occupancy, and (b) Units operate normally for all usable passenger seats, toilet compartments and flight attendants locations.
			OR

(Cont...)

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35 OXYGEN (Cont...)			
21-00 Passenger Oxygen Systems (cont..)	1	0	<p>(O) May be inoperative provided:</p> <ul style="list-style-type: none"> (a) Flight is not conducted where the minimum en route altitude is above 12,000 feet MSL. (b) Both air conditioning packs operate normally. (c) All other components of the pressurisation system operate normally. (d) Maximum flight altitude does not exceed FL 250. (e) Portable oxygen units containing sufficient oxygen for 30 minutes endurance are provided for 10% of the passengers. (f) Passengers are appropriately briefed, and (g) Repair or replacement is carried out within three calendar days. <p>NOTE: The ANO oxygen requirements are given in Schedule 4 Scales L1 and L2. The effectivity depends upon date of first issue of a certificate of airworthiness. Therefore a given type of aircraft may have examples subject to either of the two scales of requirements.</p> <p>The amount of oxygen required varies considerably between L1 and L2, particularly for operations above FL250/300. Provided the operator supplies the required amount of oxygen, despatch is considered acceptable.</p>

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35 OXYGEN (Cont...)			
21-00 Passenger Oxygen Systems (cont..)			<p>Since there are a large number of permutations, it is proposed to refer to Air Navigation Legislation to allow the operator to adapt the MEL as necessary within the constraints applicable. The main constraints are:-</p> <p>(a) The date of first issue of a Certificate of Airworthiness for individual aircraft.</p> <p>(b) The aircraft altitude and cabin altitude on routes flown, and</p> <p>(c) The numbers of passengers and crew carried.</p>
31-00 Portable Oxygen Dispensing Units (Bottle & Mask) (Therapeutic)	-	-	<p>As required by Air Navigation Legislation. Any in excess of those required by Air Navigation Legislation may be unserviceable.</p> <p>Note: The portable oxygen supplies required by Scales L1 and L2 are totally separate from the requirements of Scale R2.</p>
31-07 Lower Galley Portable Gaseous Oxygen Cylinder with Demand Regulator and Full-Face Smoke Mask	2	0	<p>(O) Both may be inoperative provided:</p> <p>(a) Lower galley is not occupied, and</p> <p>(b) Repairs or replacements are carried out within three calendar days.</p>
31-08 Protective Breathing Equipment (PBE)	-	-	<p>As required by Air Navigation Legislation. (Refer to 25-63-01)</p>

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<u>36 PNEUMATIC</u>				
11-00 Engine Bleed Minimum Pressure Control System (MPCS)	2	1		(O) One may be inoperative provided takeoff and landing is accomplished with either all packs OFF or only No. 2 pack ON.
(1) (524) Series Wing Engines Only With SB 093-36-044 or Production Equivalent Incorporated	2	0		(O) One or both may be inoperative provided: (a) Ambient temperature at both departure and arrival airports is at or below +30oC. OR (b) Ambient temperature at departure or arrival airport is above +30oC, and (c) APU air is available to the B2 and C2 ATM during takeoff and landing.
11-01 High Pressure (HP) Bleed Valve	3	2		(M) (O) One may be inoperative provided: (a) HP Bleed Valves and Engine Isolation Valves associated with the remaining two bleed channels are operative, and (b) If affected valve is associated with a 524 series wing-mounted engine, associated Engine Bleed System is considered to be inoperative. NOTE 1: If valve has failed CLOSED, or can be CLOSED using the HI PRESS switchlight, NO maintenance action is required. NOTE 2: Do not open associated HP valve circuit breaker, unless valve is mechanically secured CLOSED.
11-04 High Pressure (HP) Bleed Valve Controllers	3	2		(M) One may be inoperative provided associated HP Bleed Valve is secured CLOSED.

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<u>36 PNEUMATIC (Cont...)</u>			
11-08 Bleed Air Ejectors	3	2	(M) (O) One may be inoperative provided: (a) Ejector is secured CLOSED. OR (b) Associated HP Bleed Valve is secured CLOSED or remains CLOSED using the HI PRESS switchlight.
11-11 Bleed Air Temperature Sensors	3	2	(M) (O) One may be inoperative provided associated HP Bleed Valve is secured CLOSED or remains CLOSED using the HI PRESS switchlight.
11-14 Bleed Air Temp Limiting System Sequencing and Overtemp Switches	6	4	(M) (O) Both switches in any one bleed air system may be inoperative provided: (a) Associated HP Bleed Valve is secured CLOSED. OR (b) Associated HP Bleed Valve remains CLOSED using the HI PRESS switchlight.
	6	3	(M) One switch in each bleed air system may be inoperative.
11-18 Engine Isolation Valves	3	2	(M) (O) One may be inoperative provided: (a) HP Bleed Valve and Engine Isolation Valve of the remaining two bleed channels are operative, (b) Affected valve is verified CLOSED after engine start, (c) Both Crossbleed Valves are operative, and (d) Opposite side Pack Flow Control Valve is operative if either No. 1 or No. 3 Engine Isolation Valve is inoperative. NOTE 1: Starter assist relight will not be available on an engine with an inoperative CLOSED Engine Isolation Valve. (Cont...)

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36 PNEUMATICS (Cont...)			
11-18 Engine Isolation Valves (Cont...)			<p>NOTE 2: One Engine Isolation Valve may be considered operative with the reverse flow feature inoperative.</p> <p>NOTE 3: Refer to Flight Manual Limitations for operation with Engine Isolation Valve and Air Control Valve (slugger) inoperative.</p>
11-41 Over-Pressure Shutoff Valves	3	2	<p>(O) One may be inoperative provided:</p> <p>(a) Associated HP Bleed Valve is operative,</p> <p>(b) Associated HP Over-Pressure Switch is operative, and</p> <p>(c) Associated Engine Isolation Valve is operative.</p>
11-44 High Pressure (HP) Over-Pressure Switches	3	2	<p>One may be inoperative provided:</p> <p>(a) Associated Engine Isolation Valve is operative, and</p> <p>(b) Associated Over-Pressure Shutoff Valve is operative.</p> <p>OR</p> <p>(c) Associated HP Bleed Valve is secured CLOSED or remains CLOSED using the HI PRESS switchlight.</p>
12-02 APU Bleed Air Shutoff Valve	1	0	<p>(M) May be inoperative provided valve is secured CLOSED for flight.</p> <p>NOTE 1: Valve may be manually opened to provide APU air for ground use.</p> <p>NOTE 2: APU air will not be available for inflight use.</p>

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<u>36 PNEUMATICS (Cont...)</u>				
14-01	Aft Fuselage Isolation Valve	1	0	(M) (O) May be inoperative provided: (a) Associated valve is secured OPEN, and (b) All Engine Isolation Valves and both Crossbled Valves are operative. OR (c) Associated valve is secured CLOSED, (d) All Engine Isolation Valves and both Crossfeed Valves are operative, and (e) Both A and B Area Overheat Detection System loops for areas H and J are operative.
14-02	Crossbled Valves	2	1	(M) One may be inoperative provided: (a) Associated valve is secured OPEN, and (b) Opposite (No. 1 or 3) HP Bleed Valve, Engine Isolation Valve, Bleed Air Ejector and Pack ACM are operative.
21-00	Bleed Air Pressure Indicating Systems	3	2	One may be inoperative provided both Crossfeed Valves are operative.
22-00	A and B Area Overheat Detection Systems	2	1	(O) One System (A or B) may be inoperative provided Loop Selector is positioned to the operative Loop.
22-99	Overheat Detection Systems			
	(1) Detection Loops Nacelle/ Pylon	6	3	(O) One complete Loop (A or B) for each engine may be inoperative provided Loop Selector is positioned to the operative Loop.

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<u>49 AIRBORNE AUXILIARY POWER</u>				
00-01	Auxiliary Power Unit (APU)	1	0	(M) May be inoperative provided: (a) APU Bleed Air Shutoff Valve is secured CLOSED, (b) APU is not required for Electrical Power or Pneumatic Air, and (c) Procedures do not require its use.
00-03	APU Fault Flag Reset	1	0	May be inoperative.
11-05	APU Air Inlet Door Actuator	1	0	(M) May be inoperative provided door is secured OPEN when APU is operated.
11-15	VENT CLOSED Light	1	0	(M) (O) May be inoperative provided vent is secured OPEN.
11-16	DOORS IN TRANSIT Light	1	0	May be inoperative.
31-14	FUEL FILTER Light or IGV OPEN Light	1	0	May be inoperative.
31-15	LOW FUEL PRESS Light	1	0	May be inoperative.
31-16	APU Primary and Secondary Emergency Fuel Shutoff Valves	2	0	(M) One or both may be inoperative provided: (a) Associated valve is secured CLOSED, and (b) APU is considered inoperative and not used.
51-18	DON'T LOAD Light	1	0	(O) May be inoperative provided APU generator frequency is verified within limits before loading generator.
51-21	APU Differential Pressure Switch	1	0	May be inoperative.

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<u>49 AIRBORNE AUXILIARY POWER (Cont...)</u>				
51-22	APU Manual Mode Select Functions (MIN MODE, NORM, MAX MODE)	3	0	(O) All may be inoperative provided: (a) APU operates properly, and (b) Automatic mode change function (MIN to MAX) is operative.
71-03	OVER TEMP TGT Fault Flap	1	0	(M) May be inoperative provided it is verified that the auto-shutdown function is operative.
75-03	OVER SPEED N2 Fault Flat	1	0	(M) May be inoperative provided it is verified that the auto-shutdown function is operative.
91-05	HIGH TEMP OIL Fault Flag	1	0	(M) May be inoperative provided it is verified that the auto-shutdown function is operative.
91-06	LOW PRESS OIL Fault Flag	1	0	(M) May be inoperative provided it is verified that the auto-shutdown function is operative.
91-07	LOW OIL QUANTITY Light	1	0	May be inoperative provided oil tank quantity is verified adequate for operation being conducted.

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<u>52 DOORS</u>			
11-00 Emergency Exits (Including Cabin Doors, Galley Service Doors)	-	-	<p>(M) (O) As required by Air Navigation Legislation. One exit may be inoperative provided:</p> <p>(a) The exit is secured closed prior to passenger boarding and is not used for any purpose whilst passengers are on board.</p> <p>(b) All other exits and escape slides are fully operative,</p> <p>(c) The number of passengers carried and the position of the seats which they occupy is in accordance with arrangements approved by the Authority in relation to the particular aircraft configuration,</p> <p>(d) All the emergency exit and/or exit markings, signs and lights associated with the affected door must be obscured,</p> <p>(e) The exit is marked by a red disc at least 23 cm in diameter with a horizontal white bar across it bearing the work "NO EXIT" in red letters,</p> <p>(f) Passengers are not seated near the unserviceable exit - subject to aircraft centre of gravity limitations,</p> <p>(g) The pre-take-off briefing to passengers must accurately represent the current state and condition of the aircraft's escape facilities. An oral briefing by cabin staff, or a briefing using automatic audio-visual means, or a briefing by reference to a briefing card, must be immediately qualified by an oral announcement to draw the attention of passengers to the fact that a particular exit is inoperative and displays a red "NO EXIT" disc,</p> <p>(h) Where the evacuation drill calls for cabin crew to be seated by the inoperative exit, they are briefed to direct passengers to a serviceable exit, and</p> <p>(i) Repairs or replacements are carried out within three calendar days.</p>

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<u>52 DOORS (Cont...)</u>			
12-00 Cabin Door Actuation Systems			
(1) Emergency Open Actuation Systems	-	-	One may be inoperative provided associated Cabin Door is considered inoperative.
(2) Electrical Actuation Systems	-	-	(M) (O) Two may be inoperative provided: (a) Emergency Open Actuation is operative, and (b) Mechanical Actuation is verified operative. OR (c) Associated Cabin Door is considered inoperative.
(3) Mechanical Actuation System Handcrank	-	-	NOTE: Some aircraft have electrical actuation systems installed on all eight doors. (M) Two may be inoperative provided: (a) Emergency Open Actuation is operative, and (b) Electrical Actuation is verified operative. OR (c) Associated Cabin Door is considered inoperative.

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<u>52 DOORS (Cont...)</u>			
34-00 Lower Cargo Door Normal and Manual Actuation Systems (C1, C2, C3 DOORS)	6	3	<p>(M) One Normal or Manual System on each door may be inoperative provided associated door is verified CLOSED and LOCKED.</p> <p>NOTE 1: Cargo Door Lock Actuator Indicating Light (External Green Light) and centre viewing port cannot be used to verify that door is CLOSED and LOCKED.</p> <p>NOTE 2: Cargo Door Direct View System (SB 093-52-105 or production equivalent) can be used to verify that door is CLOSED and LOCKED.</p> <p>NOTE 3: Refer to Maintenance Manual or Lockheed MMEL Procedures Manual.</p>
34-52 Lower Cargo Door Guides (C1, C2, C3)	6	5	<p>(M) One lower corner fitting on each door may be inoperative or missing provided:</p> <p>(a) Associated door is manually CLOSED, and</p> <p>(b) Door is verified CLOSED and LOCKED in accordance with approved procedures.</p> <p>NOTE 1: Refer to Maintenance Manual or Lockheed MMEL Procedures Manual.</p> <p>NOTE 2: Any damage to the fuselage/door structure must be repaired in accordance with approved procedures contained in the structural repair manual before flight.</p>
36-00 Lower Cargo Door Normal and Manual Actuation System (C-1A Door)	2	1	<p>(M) One Normal or Manual System may be inoperative provided door is verified CLOSED and LOCKED.</p> <p>NOTE: Refer to Maintenance Manual or Lockheed MMEL Procedures Manual.</p>

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<u>52 DOORS (Cont...)</u>				
42-00 Lower Galley Door Retractors (-1, -14, -15)	2	0		(M) (O) Both may be inoperative provided: (a) Cabin crew is briefed accordingly, and (b) Placards are provided both in the flight station, and at the galley door.
51-02 Lockable Flight Deck Door (1) Door Lock	1	0		As required by Air Navigation Legislation. The door lock may be inoperative provided: (a) The latch is operative and the door can be secured in the appropriate position, either closed or open, and, (b) Repairs or replacements are carried out within three calendar days.
(2) Door and Door Latch	1	0		(M) As required by Air Navigation Legislation. The door or door latch may be inoperative provided: (a) If the door cannot be secured in the appropriate position, either closed or open, it shall be removed, and (b) Repairs or replacements are carried out within three calendar days.

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<u>52 DOORS (Cont...)</u>				
64-00 Lower Lounge Air Stair System				
(1) Manual Actuation	1	0		May be inoperative provided lower lounge is not occupied.
(2) Electrical Actuation	1	0		(M) May be inoperative provided: (a) Manual Actuation is operative, and (b) After each use, the air stair is checked for proper security when CLOSED.
71-00 Door Warning Light Systems				
(1) DOOR OPEN Annunciator Light				NOT USED.
(2) Cabin Door, Service Door, Duct Door, Galley Door and Escape Hatch Annunciator Lights (FE Annunciator Panel)	-	-		(M/O) Six may be inoperative provided: (a) All doors and hatches are confirmed by visual inspection to be closed and locked immediately prior to each departure and, (b) Fasten seat belt sign remains on, and passengers are verbally briefed prior to departure to remain seated with their seat belts fastened throughout the flight.
(3) C1, C2, C3 Cargo Lock Actuator Indicating Lights (External Green Light)	3	0		NOTE: Refer to Maintenance Manual or Lockheed MMEL Procedures Manual. All may be inoperative.

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<u>52 DOORS (Cont...)</u>			
(4) C1, C2, C3 Cargo Door Annunciator Light (FE Annunciator Panel)	3	0	(M) All may be inoperative provided: (a) Associated door is verified CLOSED and LOCKED in accordance with approved procedures, and (b) Associated door actuator circuit breaker is OPEN and COLLARED. NOTE 1: Refer to Maintenance Manual or Lockheed MMEL Procedures Manual. NOTE 2: Cargo Door Lock Actuator Indicating Light (External Green Light) and centre viewing port cannot be used to determine that door is CLOSED and LOCKED. NOTE 3: Cargo Door Direct View System (SB 093-52-105) or production equivalent) can be used to determine that door is CLOSED and LOCKED.
(5) C1A Cargo Door Annunciator Lights			NOT USED.

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<p><u>56</u> <u>WINDOWS</u></p> <p>10-01 Windshield</p>			<p>Refer to Maintenance Manual.</p>

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<u>73 ENGINE FUEL AND CONTROL</u>				
21-00 Engine Overtemp/Overspeed Control Systems	3	0		(M) (O) All may be inoperative provided: (a) Associated N1, N2, N3 and TGT Indicating Systems are operative, (b) Engine parameters are manually maintained within operating limits, (c) Associated Fuel Control Amplifier override switch is in OVRD, or the electrical connector on the variable trim orifice (engine fuel pump assembly) is disconnected, and (d) System is repaired within 25 flight hours.
21-01 Fuel Flow Regulator Ground Idle Control Systems	3	2		(O) One may be inoperative provided associated Thrust Reverser System is operative.
21-23 Air Control Valve (Altitude Slugger Valve) (-3, -13, -14)	3	0		(O) All may be inoperative provided bleed air from associated engine is maintained for flights above FL 350. NOTE: Refer to Flight Manual Limitations for operation with both the Engine Isolation Valve and the Air Control (Slugger) inoperative.
31-00 Engine FUEL PRESSURE Light Systems (FE Panel)	3	2		(M) One may be inoperative provided: (a) Fuel filter is replaced, (b) Associated engine fuel pump is verified operative, and (c) Repairs or replacements are carried out within three calendar days. NOTE: It may be necessary to install a known operative fuel low pressure switch in order to verify engine fuel pump operation.

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<u>73 ENGINE FUEL AND CONTROL (Cont...)</u>			
34-00 Engine Fuel Flow and Fuel Used Indicating Systems	3	2	(O) One may be inoperative provided: (a) Associated Fuel Quantity Indicating system is operative, and (b) Repairs or replacements are carried out within three calendar days.
37-00 Fuel Temperature Indicating Systems			
(1) TANK	1	0	May be inoperative.
(2) ENG 1, 2, 3	3	0	All may be inoperative provided associated Oil Temperature Indicating System is operative.

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<u>74 IGNITION</u>			
11-01 High Energy Ignition Systems	6	3	(M) (O) One system (A or B) for each engine may be inoperative provided not more than one B system is inoperative.
11-02 Continuous Ignition Systems	6	3	(M) One system (A or B) for each engine may be inoperative.

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<u>75 BLEED AIR</u>			
21-00 Zone 1 Vent Valves	3	0	(M) All may be inoperative provided associated valve is OPEN or CLOSED.

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<u>77 ENGINE INDICATING</u>				
11-00 EPR Indicating Systems	3	2	(O) One may be inoperative provided: (a) An intermix of engines is not installed, (b) All other engine parameters are normal, (c) Associated N1, N2, N3 and Fuel Flow Indicating Systems are operative, (d) Appropriate N1 thrust setting data is available, (e) Limited gross weights contained in the Flight Manual for takeoff and or climb are reduced by 2,722 kgs (6,000 lb), (f) Reduced thrust operation is not used, and (g) System is repaired within 25 flight hours.	
(1) Digital Indicators	3	0	All may be inoperative.	
12-00 Instrument Limit Lights (N1, N2, TGT)	12	0	All may be inoperative.	
12-04 N1 RPM Indicating Systems	3	2	(O) One may be inoperative provided: (a) Associated EPR, N2, N3 and Fuel Flow Indicating Systems are operative, and (b) Repairs or replacements are carried out within three calendar days.	
(1) Digital Indicators	3	0	All may be inoperative.	
12-06 N2 RPM Indicators	3	2	(M) One may be inoperative provided: (a) Associated EPR, N1, N3, TGT and Fuel Flow are operative, (b) Associated Engine Overtemp/Overspeed Control System is verified operative before each flight, (Cont...)	

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<u>77 ENGINE INDICATING</u> <u>(Cont...)</u>			
12-06 N2 RPM Indicators (Cont...)			<p>(c) If Engine 2 N2 RPM Indicator is inoperative, Engine 2 FAIL LIGHT is considered inoperative, and</p> <p>(d) Repairs or replacements are carried out within three calendar days.</p> <p>NOTE 1: Components of the N2 RPM Indicating System other than the Indicator are required to support the Engine Overtemp/Overspeed Control System.</p> <p>NOTE 2: With Engine 2 N2 RPM Indicator inoperative, Refer to Flight Manual Performance for inoperative Engine 2 Fail Light.</p>
12-07 N3 RPM Indicating Systems	3	2	<p>(M) (O) One may be inoperative provided:</p> <p>(a) Associated EPR, N1, N2 and Fuel Flow Indicating Systems are operative, and</p> <p>(b) Repairs or replacements are carried out within three calendar days.</p>
(1) Auto-cutoff Engine Starting Functions	3	0	(O) May be inoperative provided engine start switches manually disengage starter.
(2) Digital Indicators	3	0	All may be inoperative.
			NOTE: For starting procedure when operating with an N3 indicating system inoperative, see Lockheed MMEL Procedures Manual or Operating Manual.
13-00 Rated EPR Computer System	1	0	May be inoperative.
14-00 ENG 2 FAIL Indicating Light System	1	0	May be inoperative provided aircraft is operated in accordance with Flight Manual for performance penalty.

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<u>77 ENGINE INDICATING</u> <u>(Cont...)</u>				
21-00	TGT Indicating Systems			
	(1) Needle Indications			NOT USED.
	(2) Digital Indications	3	0	All may be inoperative.
22-00	Channels A & B Turbine Cooling Air Overheat Detection Systems	6	3	(M) (O) One Channel (A or B) for each engine may be inoperative provided: (a) Circuit breaker for affected channel is OPEN and COLLARED, and (b) Remaining channel is verified operative before each departure.
31-00	Channels A and B-Airborne Vibration Monitor (AVM) Systems	6	3	(M) (O) One Channel (A or B) for each engine may be inoperative provided: (a) Operator has established flight crew procedures for monitoring the AVM level for all engines, and recording them for succeeding flights, (b) OIL FILTER PRESSURE Light system for associated engine is operative, (c) OIL PRESS ENG Light System for associated engine is operative, and (d) Aircraft is operated in accordance with Flight Manual limitations.

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<u>78 ENGINE EXHAUST</u>				
31-00 Reverser Systems	3	2		(M) (O) One may be inoperative provided: (a) Associated reverser is deactivated and secured in the forward thrust position, and (b) Operations are conducted in accordance with the Flight Manual.
31-33 Reverser Indicating Light Systems				
(1) UNLOCK, or TRANSIT, or REVERSER UNLOCK (Pilot Panel)	3	2		(M) (O) One may be inoperative provided: (a) All other reverser indicating lights are operative, (b) Associated reverser is verified STOWED and LOCKED after each actuation, and (c) Associated light is either OFF or is covered.
(2) REVERSE, or OPERATING, or FULL REVERSE, or REVERSER IN TRANSIT (Pilot Panel)	3	2		(M) (O) One may be inoperative provided: (a) All other reverser indicating lights are operative, (b) Associated reverser is verified STOWED and LOCKED after each actuation, and (c) Light is either OFF or is covered.
(3) Reverser Pressure or Reversers Operating				NOT USED.

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<u>79 ENGINE OIL</u>				
31-02 OIL Filter Pressure Lights				NOT USED.
31-03 ENG OIL PRESS Lights (Pilot Annunciator Panel)	3	2		(O) One may be inoperative provided: (a) Both AVM Channels A and B for the associated engine are operative, (b) Associated Oil Temperature Indicating System is operative, (c) Associated Oil Quantity Indicating System is operative, and (d) Repairs or replacements are carried out within three calendar days.
34-00 Oil Temperature Indicating Systems	3	2		(O) One may be inoperative provided: (a) Oil Quantity Indicating Systems for associated engine is operative, (b) Fuel Temperature Indicating System for associated engine is operative, and (c) Repairs or replacements are carried out within three calendar days. NOTE 1: Approximate oil temperature of an RB 211-22B series engines can be obtained by adding 15øC to associated engine fuel temperature indicator. NOTE 2: Approximate oil temperature of an RB 211-524B Series engine can be obtained by adding the following appropriate value to associated engine fuel temperature indicator: Takeoff: +85øC Climb +70øC Cruise +50øC

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<u>79 ENGINE OIL (Cont...)</u>			
37-00 Oil Quantity Indicating Systems	3	2	<p>(M) (O) One may be inoperative provided:</p> <p>(a) Associated oil tank is filled to the manufacturers maximum recommended quantity in accordance with the manufacturers servicing instructions prior to each departure, and</p> <p>(b) Repairs or replacements are carried out within three calendar days.</p>

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<u>80 STARTING</u>			
11-02 Starter VALVE OPEN Light Systems	3	2	(M) (O) One may be inoperative provided associated Starter Control Valve is verified CLOSED after engine start.
11-08 Starter Control Valve Systems	3	2	(M) (O) One may be inoperative provided associated valve is manually CLOSED after engine start.

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