



U.S. Department of Transportation
Federal Aviation Administration
Washington, D.C.

Master Minimum Equipment List

Revision: 2
Date: 12/20/2012

Boeing

B-747-8, B-747-8F

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FEDERAL AVIATION ADMINISTRATION
MASTER MINIMUM EQUIPMENT LIST

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Highlights of Change

EFFECTIVE ABOVE DATE, the Boeing 747-8 Master Minimum Equipment List has been revised. Throughout this document, "747-8F" refers to a freighter configuration, and "747-8I" refers to a passenger configuration (Intercontinental). The changes in this revision were made to increase dispatch flexibility, and improve consistency. All changes are reflected in the highlights of change listed below and are indicated by revision bars. For any change affecting an ATA section, all pages in the associated ATA section are dated for the current revision.

ATA 21 AIR CONDITIONING

- Item -29-01: Added proviso b to consider the crew rest TAV inoperative.
- Item -31-03: Consolidated two similar dispatch options into one item.

ATA 22 AUTOFLIGHT

- Item -21-03-01: Revised subitem title for consistency. Revised number installed/required to reflect single dispatch condition. Added proviso to clarify dispatch may be made with YSM GROSS WEIGHT status message displayed.
- Item -21-03-02: Revised subitem title for consistency. Revised number installed/required to reflect single dispatch condition. Added proviso to clarify dispatch may be made with YSM INTERFACE status message displayed.

ATA 23 COMMUNICATIONS

- Item -11-01B: Added "voice" to proviso c and "or Iridium numbers" to proviso d per FAA Policy Letter 106, Revision 4.
- Item -31-01-01: Expanded lavatory speaker relief into two dispatch options to include category D repair interval per FAA Policy Letter 9, Revision 10.
- Item -46-01: Added "(747-8F)" to item title since this item is only installed on freighters.
- Item -46-02: Added "(747-8F)" to item title since this item is only installed on freighters.
- Item -51-02-01: Deleted proviso regarding FDR requirement per FAA Policy Letter 58, Revision 4.

ATA 24 ELECTRICAL POWER

- Item -21-02B: Moved (O) requirement to item 49-11-01 since this item considers the APU inoperative.

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ATA 25 EQUIPMENT/FURNISHINGS

- Item -40-01-01: Added "or inoperative" to proviso and extended time limit to ten days per FAA Policy Letter 85, Revision 4.
- Item -40-01-02: Expanded relief into two dispatch options depending on number of ashtrays missing or inoperative per FAA Policy Letter 85, Revision 4.
- Item -40-03: Deleted item from MMEL.

ATA 27 FLIGHT CONTROLS

- Item -09-01: Added proviso to clarify dispatch may be made with LCE INTERFACE status message displayed.
- Item -11-02: Expanded 747-8F relief into two subitems (-01 and -02) depending on installation of SB. Subsequently moved 747-8I relief to subitem -03.
- Item -51-01: For subitems -01, -02, and -03, changed "transformer" to "transducer" in proviso a for consistency with AMM nomenclature.

ATA 28 FUEL

- Item -16-01: Expanded relief into two dispatch options to include reserve tanks empty. For 28-16-01A, changed "2.6%" to "2.2%" in proviso b and deleted fuel density limit requirement.
- Item -16-03C: Added dispatch option for reserve tanks empty.
- Item -21-01: For subitems -01-03 and -02-03, added maintenance requirement to verify associated refuel valve is closed after each refueling.

ATA 29 HYDRAULIC POWER

- Item -17-01: Added new item similar to 747-400 MMEL item 29-31-01.

ATA 31 INDICATING/RECORDING SYSTEMS

- Item -51-01-03: Changed subitem title from "Aural Warning Speakers" to "Aural Warning Speaker Systems".
- Item -61-07-02: Added "or Production Equivalent" to subitem title.
- Item -61-08: Added "****" to item.
- Item -61-10-02: Added "or Production Equivalent" to subitem title.

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ATA 32 LANDING GEAR

Item -31-01-02: Added "or Production Equivalent" to subitem title.

ATA 33 LIGHTS

Item -11-01: Added MMEL note regarding individual button/switch lights and/or annunciations per FAA Policy Letter 77, Revision 3.

Item -43-02: Revised repair category from C to D.

ATA 38 WATER/WASTE

Item -30-01: Deleted provisos regarding acceptable flight duration per FAA Policy Letter 83, Revision 5.

ATA 44 CABIN SYSTEMS

Item -14-02: Deleted reference to wheelchair accessible lavatories in MMEL notes.

ATA 49 AIRBORNE AUXILIARY POWER

Item -11-01: Added (O) requirement and revised proviso from "procedures do not require its use" to "alternate procedures are established and used".

ATA 52 DOORS

Item -71-01: Split into 747-8F and 747-8I subitems. Added relief for Auto/Man EICAS Indications.

ATA 73 ENGINE FUEL AND CONTROL

Item -11-02: Split into two subitems depending on FCOC heat exchanger sensor installation (new item 73-11-03).

Item -11-03: Added new item.

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Definitions

The definitions are as published in FAA Policy Letter 25.

Preamble

The Preamble is as published in FAA Policy Letter 34.

Inactive Doc

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-21-01	Occupant Backup Shutoff Valve (OB SOV)				
-21-01-01	747-8F	C	1	0	(M) May be inoperative provided: a) OB SOV is deactivated closed, b) Packs 1 and 3 operate normally, c) Air cycle machines (ACMs) 1 and 3 operate normally, and d) Pack temperature control valves (TCVs) 1 and 3 operate normally.
-21-01-02	747-8I	C	1	0	(M) May be inoperative provided: a) OB SOV is deactivated closed, b) Pack 1 operates normally, c) Air cycle machine (ACM) 1 operates normally, d) Pack temperature control valve (TCV) 1 operates normally, and e) Alternate ventilation system (AVS) operates normally.
-21-02	Flow Regulating Shutoff Valves (FRSOVs)				
-21-02-01	747-8F				
-21-02-01-01	FRSOV 1	C	1	0	(M) May be inoperative provided: a) FRSOV 1 is deactivated closed, b) FRSOVs 2 and 3 operate normally, and c) Pack 1 is not used.
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SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING				
-21-02 Flow Regulating Shutoff Valves (FRSOVs) (Cont'd)				
-21-02-01 747-8F (Cont'd)				
-21-02-01-02 FRSOV 2				
-21-02-01-02A	C	1	0	<p>(M) May be inoperative provided:</p> <ul style="list-style-type: none"> a) FRSOV 2 is deactivated closed, b) FRSOVs 1 and 3 operate normally, c) Pack differential pressure sensor (PDPS) 2 operates normally, d) All packs operate normally, e) All air cycle machines (ACMs) operate normally, f) All pack temperature control valves (TCVs) operate normally, g) Forward cargo flow regulating shutoff valve (CFRSOV) operates normally, h) Aft cargo flow regulating shutoff valve (CFRSOV) operates normally, i) Both forward cargo overboard exhaust valves operate normally, j) ECS miscellaneous card operates normally, k) ECS freighter card operates normally, l) Both outflow valves operate normally, m) Both aft cargo flapper valves operate normally, n) APU-to-Pack Takeoff Supplementary Procedure is not used, and o) FWD and AFT LOWER LOBE TEMP selectors remain in AUTO. <p>(Continued)</p>

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SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING				
-21-02 Flow Regulating Shutoff Valves (FRSOVs) (Cont'd)				
-21-02-01 747-8F (Cont'd)				
-21-02-01-02 FRSOV 2 (Cont'd)				
-21-02-01-02B	C	1	0	(M) May be inoperative provided: a) FRSOV 2 is deactivated closed, b) FRSOVs 1 and 3 operate normally, and c) Pack 2 is not used. (Continued)

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING					
-21-02 Flow Regulating Shutoff Valves (FRSOVs) (Cont'd)					
-21-02-01 747-8F (Cont'd)					
-21-02-01-03 FRSOV 3					
-21-02-01-03A	C	1	0		(M) May be inoperative provided: <ul style="list-style-type: none"> a) FRSOV 3 is deactivated closed, b) FRSOVs 1 and 2 operate normally, c) Pack differential pressure sensor (PDPS) 3 operates normally, d) All packs operate normally, e) All air cycle machines (ACMs) operate normally, f) All pack temperature control valves (TCVs) operate normally, g) Forward cargo flow regulating shutoff valve (CFRSOV) operates normally, h) Both forward cargo overboard exhaust valves operate normally, i) ECS miscellaneous card operates normally, j) ECS freighter card operates normally, k) Both outflow valves operate normally, and l) FWD LOWER LOBE TEMP selector remains in AUTO.
-21-02-01-03B	C	1	0		(M) May be inoperative provided: <ul style="list-style-type: none"> a) FRSOV 3 is deactivated closed, b) FRSOVs 1 and 2 operate normally, and c) Pack 3 is not used. (Continued)

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
21 AIR CONDITIONING					
-21-02	Flow Regulating Shutoff Valves (FRSOVs) (Cont'd)				
-21-02-02	747-8I without Aft Cargo Air Conditioning	C	1	0	May be inoperative provided pack 1 is not used.
-21-02-03	747-8I with Aft Cargo Air Conditioning				
-21-02-03-01	FRSOV 1	C	1	0	May be inoperative provided: a) FRSOV 2 operates normally, and b) Pack 1 is not used.
-21-02-03-02	FRSOV 2				
-21-02-03-02A		C	1	0	May be inoperative provided: a) FRSOV 1 operates normally, b) Pack differential pressure sensor (PDPS) 2 operates normally, c) All packs operate normally, d) All air cycle machines (ACMs) operate normally, e) All pack temperature control valves (TCVs) operate normally, f) Aft cargo flow regulating shutoff valve (CFRSOV) operates normally, g) Both outflow valves operate normally, h) Aft cargo flapper valve operates normally, and i) AFT CARGO TEMP selector remains in AUTO.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
21 AIR CONDITIONING					
-21-02	Flow Regulating Shutoff Valves (FRSOVs) (Cont'd)				
-21-02-03	747-8I with Aft Cargo Air Conditioning (Cont'd)				
-21-02-03-02	FRSOV 2 (Cont'd)				
-21-02-03-02B		C	1	0	May be inoperative provided: a) FRSOV 1 operates normally, and b) Pack 2 is not used.
-22-01	Alternate Ventilation System (AVS)				
-22-01-01	747-8F	C	1	0	(M) May be inoperative provided AVS valve is deactivated closed.
-22-01-01-01	ON Light	C	1	0	
-22-01-02	747-8I	C	1	0	(M) May be inoperative provided: a) AVS valve is deactivated closed, b) Packs 1 and 2 operate normally, e) Air cycle machines (ACMs) 1 and 2 operate normally, c) Pack temperature control valves (TCVs) 1 and 2 operate normally, and d) Occupant backup shutoff valve (OBSOV) operates normally.
-22-01-02-01	ON Light	C	1	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-25-01	Lower Recirculation Fans	C	3	0	(M) May be inoperative deactivated.
-25-02	Lower Recirculation Shutoff Valves (RSOVs)	C	3	0	(M) May be inoperative locked closed.
-25-03	Upper Recirculation Fans (747-8I)	C	2	0	(M) May be inoperative deactivated.
-26-01	Forward Cargo Overboard Exhaust Valves (747-8F)	C	2	0	(M) May be inoperative provided: a) Forward cargo overboard exhaust backup valve is deactivated closed, and b) FWD LOWER LOBE TEMP selector remains OFF.
-26-02	Flight Deck Ventilation Fan (747-8F)	C	1	0	(M) May be inoperative deactivated.
-26-03	Lower Cargo Ventilation Fans (747-8F)	C	4	0	(M) May be inoperative deactivated.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-26-04 Aft Cargo Flapper Valves						
-26-04-01 747-8F	C	2	0		(O) May be inoperative provided: a) LOWER LOBE AFT CARGO HT selector remains OFF, b) AFT LOWER LOBE TEMP selector remains OFF, and c) Aft lower cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.	
-26-04-02 *** 747-8I	C	1	0		(O) May be inoperative provided: a) LOWER LOBE AFT CARGO HT selector remains OFF, b) AFT CARGO TEMP selector remains OFF, and c) Aft lower cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3.	NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING							
-26-05 Environmental Control System (ECS) Miscellaneous Card							
-26-05-01 747-8F	C	1	0			May be inoperative provided:	<ul style="list-style-type: none"> a) Forward overboard valve is considered inoperative, b) Forward cargo heating system is considered inoperative, c) One pack is not used, d) LOWER LOBE AFT CARGO HT selector remains OFF, and e) FWD LOWER LOBE TEMP selector remains OFF.
-26-05-02 747-8I	C	1	0		(M)	May be inoperative provided:	<ul style="list-style-type: none"> a) One lavatory/galley fan is verified to operate normally once each flight day, b) Forward overboard valve is considered inoperative, c) Forward cargo heating system is considered inoperative, d) Flight crew rest heating system is considered inoperative, e) One pack is not used, and f) LOWER LOBE AFT CARGO HT selector remains OFF.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-26-06	Forward Overboard Valve					
-26-06-01	747-8F					
-26-06-01A		C	1	0		(M)(O) May be inoperative provided: <ul style="list-style-type: none"> a) Forward overboard valve is deactivated closed, and b) Aft lower cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
-26-06-01B		C	1	0		(M)(O) May be inoperative provided: <ul style="list-style-type: none"> a) Forward overboard valve is deactivated open, b) Extended overwater flight is prohibited, and c) Main deck and forward lower cargo compartments remain empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-26-06	Forward Overboard Valve (Cont'd)					
-26-06-02	747-8I					
-26-06-02A		C	1	0	0	(M)(O) May be inoperative provided: a) Forward overboard valve is deactivated closed, and b) Aft lower cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
-26-06-02B		C	1	0	0	(M)(O) May be inoperative provided: a) Forward overboard valve is deactivated open, b) Extended overwater flight is prohibited, and c) Forward lower cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
-26-07 ***	Forward Chiller Boost Fan (747-8I)	C	1	0	0	(M) May be inoperative deactivated.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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21 AIR CONDITIONING					
-26-08 ***	Forward Chiller Exhaust Piccolo Valves (747-8I)	C	2	0	May be inoperative provided forward chiller boost fan is considered inoperative.
-26-09 ***	Forward Chiller Exhaust Overboard Valves (747-8I)	C	4	0	(M) May be inoperative provided all forward chiller exhaust overboard valves are deactivated closed.
-26-10	Lavatory/Galley Fans (747-8I)	C	2	1	(M) One may be inoperative deactivated.
-28-01	Forward Cargo Flow Regulating Shutoff Valve (CFRSOV) (747-8F)	C	1	0	(M) May be inoperative provided: a) Forward CFRSOV is deactivated closed, and b) FWD LOWER LOBE TEMP selector remains OFF.
-28-02	Aft Cargo Flow Regulating Shutoff Valve (CFRSOV)				
-28-02-01	747-8F	C	1	0	(M) May be inoperative provided: a) Aft CFRSOV is deactivated closed, and b) AFT LOWER LOBE TEMP selector remains OFF.
-28-02-02 ***	747-8I	C	1	0	(M) May be inoperative provided: a) Aft CFRSOV is deactivated closed, and b) AFT CARGO TEMP selector remains OFF.

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21 AIR CONDITIONING						
-28-03	Environmental Control System (ECS) Freighter Card (747-8F)					
-28-03A		C	1	0	(M) May be inoperative provided: a) Aft cargo flapper valves are verified open before each departure, b) Flight deck ventilation fan is considered inoperative, c) Lower cargo ventilation fans are considered inoperative, and d) FWD LOWER LOBE TEMP selector remains OFF.	
-28-03B		C	1	0	May be inoperative provided: a) Aft cargo flapper valves are considered inoperative, b) Flight deck ventilation fan is considered inoperative, c) Lower cargo ventilation fans are considered inoperative, and d) FWD LOWER LOBE TEMP selector remains OFF.	
-28-04 ***	Cargo A/C Card (747-8I)	C	1	0	May be inoperative provided: a) Forward chiller boost fan is considered inoperative, and b) Forward chiller exhaust overboard valves are considered inoperative.	
-29-01	Smoke Mode Shutoff Valve (747-8F)	C	1	0	(M)(O) May be inoperative provided: a) Smoke mode shutoff valve is deactivated closed, b) Crew rest trim air valve (TAV) is considered inoperative, and c) For crew rest occupied, crew rest door and bunk privacy curtains remain open.	

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21 AIR CONDITIONING					
-29-02	Door 5 Overhead Crew Rest Shutoff Valves (747-8I)	C	2	0	(M) May be inoperative provided: a) Both door 5 overhead crew rest shutoff valves are deactivated closed, and b) Door 5 overhead crew rest is considered inoperative.
-31-01	Outflow Valves				
-31-01-01	747-8F				
-31-01-01A		C	2	1	(M) One may be inoperative provided: a) Inoperative outflow valve is deactivated closed, b) Manual cabin pressure control system is verified to operate normally on remaining outflow valve, c) Cabin rate of climb indication operates normally, d) Cabin pressure backup sensor system operates normally, and e) One pack is not used.
-31-01-01B		C	2	0	(M)(O) May be inoperative provided: a) Both outflow valves are deactivated open, b) Flight is conducted unpressurized, c) Extended overwater flight is prohibited, d) Flight must remain within 60 minutes of a suitable airport, and e) Main deck and forward and aft lower cargo compartments remain empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components.
NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.					
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21 AIR CONDITIONING					
-31-01	Outflow Valves (Cont'd)				
-31-01-02	747-8I				
-31-01-02A		C	2	1	(M) One may be inoperative provided: a) Inoperative outflow valve is deactivated closed, b) Manual cabin pressure control system is verified to operate normally on remaining outflow valve, c) Cabin rate of climb indication operates normally, d) Cabin pressure backup sensor system operates normally, and e) One pack is not used.
-31-01-02B		C	2	0	(M)(O) May be inoperative provided: a) Both outflow valves are deactivated open, b) Flight is conducted unpressurized, c) Extended overwater flight is prohibited, d) Flight must remain within 60 minutes of a suitable airport, e) Occupancy is limited to essential flight crewmembers, including official observers, and f) Forward and aft lower cargo compartments remain empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components.
NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.					

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
21 AIR CONDITIONING					
-31-02	Automatic Cabin Pressure Controllers				
-31-02A		C	2	1	(M) One may be inoperative provided: a) Manual cabin pressure control system is verified to operate normally on each operative outflow valve, b) Cabin rate of climb indication operates normally, and c) Cabin pressure backup sensor system operates normally.
-31-02B		C	2	0	May be inoperative provided both outflow valves are considered inoperative.
-31-03	Manual Cabin Pressure Control Systems (MAN L and MAN R)	C	2	0	May be inoperative provided associated outflow valve is considered inoperative.
-31-04	Landing Altitude (LDG ALT) Switch	C	1	0	(O) Automatic mode may be inoperative provided alternate procedures are used to set landing altitude.
-32-01	Positive Pressure Relief Valves	C	2	0	May be inoperative provided both outflow valves are considered inoperative.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
21 AIR CONDITIONING					
-33-01	Cabin Rate of Climb Indication				
-33-01A		C	1	0	May be inoperative provided: a) Both outflow valves operate normally, and b) Both automatic cabin pressure controllers operate normally.
-33-01B		C	1	0	May be inoperative provided both outflow valves are considered inoperative.
-33-02	Cabin Differential Pressure Indication				
-33-02A		C	1	0	(O) May be inoperative provided: a) Cabin altitude indication operates normally, and b) A chart is provided to convert cabin altitude to cabin differential pressure.
-33-02B		C	1	0	May be inoperative provided both outflow valves are considered inoperative.
-33-03	Cabin Altitude Indication				
-33-03A		C	1	0	(O) May be inoperative provided: a) Cabin differential pressure indication operates normally, and b) A chart is provided to convert cabin differential pressure to cabin altitude.
-33-03B		C	1	0	May be inoperative provided both outflow valves are considered inoperative.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-33-04	Outflow Valve Position Indicators (Overhead Panel)				
-33-04A		C	2	1	One may be inoperative provided associated outflow valve is considered inoperative.
-33-04B		C	2	0	(O) May be inoperative provided alternate procedures are used to manually move associated outflow valve.
-33-05	Cabin Pressure Backup Sensor System	C	1	0	May be inoperative provided: a) Both outflow valves operate normally, and b) Both automatic cabin pressure controllers operate normally.
-41-01	Flight Crew Rest Heating System (747-8I)	C	1	0	(M) May be inoperative deactivated.
-41-01-01	Heater Control Positions (LOW, MED, HIGH)	C	3	0	
-41-02	Door 5 Overhead Crew Rest Heating System (747-8I)	C	1	0	(M) May be inoperative deactivated.
-41-02-01	Temperature Indicator	C	1	0	
-42-01	Flight Crew Foot Heater Systems	C	2	0	(M) May be inoperative deactivated.
-42-02	Flight Crew Shoulder Heater Systems	C	2	0	(M) May be inoperative deactivated.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-43-01	Forward Cargo Heating System	C	1	0	(M) May be inoperative provided inoperative supplemental heater is deactivated.
-44-01	Aft Cargo Heating System				
-44-01A		C	1	0	(M) May be inoperative provided aft cargo heat shutoff valve is deactivated closed.
-44-01B		C	1	0	(M) May be inoperative provided aft cargo heat temperature control valve is deactivated closed.
-44-01-01	Temperature Control Switches (Low, High, Overheat)	C	3	0	May be inoperative provided LOWER LOBE AFT CARGO HT selector remains OFF.
-51-01	Packs				
-51-01-01	747-8F				
-51-01-01-01	Pack 1	C	1	0	(O) May be inoperative provided: a) Packs 2 and 3 operate normally, b) Air cycle machines (ACMs) 2 and 3 operate normally, c) Pack temperature control valves (TCVs) 2 and 3 operate normally, d) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, e) Pre-trim air valve (TAV) 3 operates normally, f) Occupant backup shutoff valve (OBSOV) operates normally, and g) Right wing isolation valve operates normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3.	NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING							
-51-01 Packs (Cont'd)							
-51-01-01 747-8F (Cont'd)							
-51-01-01-02 Pack 2	C	1	0				(O) May be inoperative provided: a) Packs 1 and 3 operate normally, b) Air cycle machines (ACMs) 1 and 3 operate normally, c) Pack temperature control valves (TCVs) 1 and 3 operate normally, and d) AFT LOWER LOBE TEMP selector remains OFF.
-51-01-01-03 Pack 3	C	1	0				(O) May be inoperative provided: a) Packs 1 and 2 operate normally, b) Air cycle machines (ACMs) 1 and 2 operate normally, c) Pack temperature control valves (TCVs) 1 and 2 operate normally, d) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, e) Pre-trim air valve (TAV) 1 operates normally, f) Occupant backup shutoff valve (OBSOV) operates normally, g) Left wing isolation valve operates normally, and h) FWD LOWER LOBE TEMP selector remains OFF.

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21 AIR CONDITIONING						
-51-01	Packs (Cont'd)					
-51-01-02	747-8I without Aft Cargo Air Conditioning					
-51-01-02-01	Pack 1	C	1	0		(O) May be inoperative provided: a) Packs 2 and 3 operate normally, b) Air cycle machines (ACMs) 2 and 3 operate normally, c) Pack temperature control valves (TCVs) 2 and 3 operate normally, d) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, e) Occupant backup shutoff valve (OBSOV) operates normally, f) Alternate ventilation system (AVS) operates normally, and g) Right wing isolation valve operates normally.
-51-01-02-02	Pack 2	C	1	0		(O) May be inoperative provided: a) Packs 1 and 3 operate normally, b) Air cycle machines (ACMs) 1 and 3 operate normally, c) Pack temperature control valves (TCVs) 1 and 3 operate normally, and d) Alternate ventilation system (AVS) operates normally.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING					
-51-01	Packs (Cont'd)				
-51-01-02	747-8I without Aft Cargo Air Conditioning (Cont'd)				
-51-01-02-03	Pack 3	C	1	0	(O) May be inoperative provided: <ul style="list-style-type: none"> a) Packs 1 and 2 operate normally, b) Air cycle machines (ACMs) 1 and 2 operate normally, c) Pack temperature control valves (TCVs) 1 and 2 operate normally, d) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, and e) Left wing isolation valve operates normally.
-51-01-03	747-8I with Aft Cargo Air Conditioning				
-51-01-03-01	Pack 1	C	1	0	(O) May be inoperative provided: <ul style="list-style-type: none"> a) Packs 2 and 3 operate normally, b) Air cycle machines (ACMs) 2 and 3 operate normally, c) Pack temperature control valves (TCVs) 2 and 3 operate normally, d) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, e) Occupant backup shutoff valve (OBSOV) operates normally, f) Alternate ventilation system (AVS) operates normally, and g) Right wing isolation valve operates normally.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
21 AIR CONDITIONING					
-51-01	Packs (Cont'd)				
-51-01-03	747-8I with Aft Cargo Air Conditioning (Cont'd)				
-51-01-03-02	Pack 2	C	1	0	(O) May be inoperative provided: a) Packs 1 and 3 operate normally, b) Air cycle machines (ACMs) 1 and 3 operate normally, c) Pack temperature control valves (TCVs) 1 and 3 operate normally, d) Alternate ventilation system (AVS) operates normally, and e) AFT CARGO TEMP selector remains OFF.
-51-01-03-03	Pack 3	C	1	0	(O) May be inoperative provided: a) Packs 1 and 2 operate normally, b) Air cycle machines (ACMs) 1 and 2 operate normally, c) Pack temperature control valves (TCVs) 1 and 2 operate normally, d) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, and e) Left wing isolation valve operates normally.
-51-02	Pack Flow Control Valves (FCVs)	C	3	2	(M) One may be inoperative provided: a) Inoperative FCV is locked closed, and b) Associated pack is considered inoperative.
-51-03	Pack HI FLOW Switch	C	1	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-51-04	Air Cycle Machines (ACMs)					
-51-04-01	747-8F	C	3	2	One may be inoperative provided associated pack is not used.	
-51-04-01-01	ACM 1	C	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) ACMs 2 and 3 operate normally, b) Ram air inlet door 1 operates normally, c) Ram air exit door 1 operates normally, d) Packs 2 and 3 operate normally, e) Pack temperature control valves (TCVs) 2 and 3 operate normally, f) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, g) Pre-trim air valve (TAV) 3 operates normally, h) Occupant backup shutoff valve (OBSOV) operates normally, and i) Right wing isolation valve operates normally. 	
-51-04-01-02	ACM 2	C	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) ACMs 1 and 3 operate normally, b) Ram air inlet door 2 operates normally, c) Ram air exit door 2 operates normally, d) Packs 1 and 3 operate normally, e) Pack temperature control valves (TCVs) 1 and 3 operate normally, and f) AFT LOWER LOBE TEMP selector remains OFF. 	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING					
-51-04 Air Cycle Machines (ACMs) (Cont'd)					
-51-04-01 747-8F (Cont'd)					
-51-04-01-03 ACM 3		C	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) ACMs 1 and 2 operate normally, b) Ram air inlet door 3 operates normally, c) Ram air exit door 3 operates normally, d) Packs 1 and 2 operate normally, e) Pack temperature control valves (TCVs) 1 and 2 operate normally, f) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, g) Pre-trim air valve (TAV) 1 operates normally, h) Occupant backup shutoff valve (OBISOV) operates normally, i) Left wing isolation valve operates normally, and j) FWD LOWER LOBE TEMP selector remains OFF.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-51-04	Air Cycle Machines (ACMs) (Cont'd)					
-51-04-02	747-8I without Aft Cargo Air Conditioning	C	3	2	One may be inoperative provided associated pack is not used.	
-51-04-02-01	ACM 1	C	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) ACMs 2 and 3 operate normally, b) Ram air inlet door 1 operates normally, c) Ram air exit door 1 operates normally, d) Packs 2 and 3 operate normally, e) Pack temperature control valves (TCVs) 2 and 3 operate normally, f) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, g) Occupant backup shutoff valve (OBSOV) operates normally, h) Alternate ventilation system (AVS) operates normally, and i) Right wing isolation valve operates normally. 	
-51-04-02-02	ACM 2	C	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) ACMs 1 and 3 operate normally, b) Ram air inlet door 2 operates normally, c) Ram air exit door 2 operates normally, d) Packs 1 and 3 operate normally, e) Pack temperature control valves (TCVs) 1 and 3 operate normally, and f) Alternate ventilation system (AVS) operates normally. 	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-51-04 Air Cycle Machines (ACMs) (Cont'd)						
-51-04-02 747-8I without Aft Cargo Air Conditioning (Cont'd)						
-51-04-02-03 ACM 3		C	1	0		May be inoperative provided: <ul style="list-style-type: none"> a) ACMs 1 and 2 operate normally, b) Ram air inlet door 3 operates normally, c) Ram air exit door 3 operates normally, d) Packs 1 and 2 operate normally, e) Pack temperature control valves (TCVs) 1 and 2 operate normally, f) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, and g) Left wing isolation valve operates normally.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
21 AIR CONDITIONING					
-51-04	Air Cycle Machines (ACMs) (Cont'd)				
-51-04-03	747-8I with Aft Cargo Air Conditioning	C	3	2	One may be inoperative provided associated pack is not used.
-51-04-03-01	ACM 1	C	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) ACMs 2 and 3 operate normally, b) Ram air inlet door 1 operates normally, c) Ram air exit door 1 operates normally, d) Packs 2 and 3 operate normally, e) Pack temperature control valves (TCVs) 2 and 3 operate normally, f) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, g) Occupant backup shutoff valve (OBSOV) operates normally, h) Alternate ventilation system (AVS) operates normally, and i) Right wing isolation valve operates normally.
-51-04-03-02	ACM 2	C	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) ACMs 1 and 3 operate normally, b) Ram air inlet door 2 operates normally, c) Ram air exit door 2 operates normally, d) Packs 1 and 3 operate normally, e) Pack temperature control valves (TCVs) 1 and 3 operate normally, f) Alternate ventilation system (AVS) operates normally, and g) AFT CARGO TEMP selector remains OFF.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING					
-51-04 Air Cycle Machines (ACMs) (Cont'd)					
-51-04-03 747-8I with Aft Cargo Air Conditioning (Cont'd)					
-51-04-03-03 ACM 3		C	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) ACMs 1 and 2 operate normally, b) Ram air inlet door 3 operates normally, c) Ram air exit door 3 operates normally, d) Packs 1 and 2 operate normally, e) Pack temperature control valves (TCVs) 1 and 2 operate normally, f) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, and g) Left wing isolation valve operates normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-51-05	Pack Temperature Control Valves (TCVs)				
-51-05-01	747-8F	C	3	2	One may be inoperative provided associated pack is not used.
-51-05-01-01	TCV 1	C	1	0	(M)(O) May be inoperative provided: a) TCV 1 is deactivated open, b) TCVs 2 and 3 operate normally, c) Ram air inlet door 1 operates normally, d) Ram air exit door 1 operates normally, e) Packs 2 and 3 operate normally, f) Air cycle machines (ACMs) 2 and 3 operate normally, g) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, h) Pre-trim air valve (TAV) 3 operates normally, i) Occupant backup shutoff valve (OBSOV) operates normally, j) Right wing isolation valve operates normally, and k) Alternate procedures are used for pack 1.
-51-05-01-02	TCV 2	C	1	0	(M)(O) May be inoperative provided: a) TCV 2 is deactivated open, b) TCVs 1 and 3 operate normally, c) Ram air inlet door 2 operates normally, d) Ram air exit door 2 operates normally, e) Packs 1 and 3 operate normally, f) Air cycle machines (ACMs) 1 and 3 operate normally, g) AFT LOWER LOBE TEMP selector remains OFF, and h) Alternate procedures are used for pack 2.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING					
-51-05 Pack Temperature Control Valves (TCVs) (Cont'd)					
-51-05-01 747-8F (Cont'd)					
-51-05-01-03 TCV 3	C	1	0		<p>(M)(O) May be inoperative provided:</p> <ul style="list-style-type: none"> a) TCV 3 is deactivated open, b) TCVs 1 and 2 operate normally, c) Ram air inlet door 3 operates normally, d) Ram air exit door 3 operates normally, e) Packs 1 and 2 operate normally, f) Air cycle machines (ACMs) 1 and 2 operate normally, g) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, h) Pre-trim air valve (TAV) 1 operates normally, i) Occupant backup shutoff valve (OBISOV) operates normally, j) Left wing isolation valve operates normally, k) FWD LOWER LOBE TEMP selector remains OFF, and l) Alternate procedures are used for pack 3. <p>(Continued)</p>

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-51-05 Pack Temperature Control Valves (TCVs) (Cont'd)						
-51-05-02 747-8I without Aft Cargo Air Conditioning		C	3	2	2	One may be inoperative provided associated pack is not used.
-51-05-02-01 TCV 1		C	1	0	0	(M)(O) May be inoperative provided: <ul style="list-style-type: none"> a) TCV 1 is deactivated open, b) TCVs 2 and 3 operate normally, c) Ram air inlet door 1 operates normally, d) Ram air exit door 1 operates normally, e) Packs 2 and 3 operate normally, f) Air cycle machines (ACMs) 2 and 3 operate normally, g) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, h) Occupant backup shutoff valve (OBSOV) operates normally, i) Alternate ventilation system (AVS) operates normally, j) Right wing isolation valve operates normally, and k) Alternate procedures are used for pack 1. (Continued)

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-51-05	Pack Temperature Control Valves (TCVs) (Cont'd)					
-51-05-02	747-8I without Aft Cargo Air Conditioning (Cont'd)					
-51-05-02-02	TCV 2	C	1	0		(M)(O) May be inoperative provided: a) TCV 2 is deactivated open, b) TCVs 1 and 3 operate normally, c) Ram air inlet door 2 operates normally, d) Ram air exit door 2 operates normally, e) Packs 1 and 3 operate normally, f) Air cycle machines (ACMs) 1 and 3 operate normally, g) Alternate ventilation system (AVS) operates normally, and h) Alternate procedures are used for pack 2.
-51-05-02-03	TCV 3	C	1	0		(M)(O) May be inoperative provided: a) TCV 3 is deactivated open, b) TCVs 1 and 2 operate normally, c) Ram air inlet door 3 operates normally, d) Ram air exit door 3 operates normally, e) Packs 1 and 2 operate normally, f) Air cycle machines (ACMs) 1 and 2 operate normally, g) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, h) Left wing isolation valve operates normally, and i) Alternate procedures are used for pack 3.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-51-05	Pack Temperature Control Valves (TCVs) (Cont'd)					
-51-05-03	747-8I with Aft Cargo Air Conditioning	C	3	2		One may be inoperative provided associated pack is not used.
-51-05-03-01	TCV 1	C	1	0		(M)(O) May be inoperative provided: <ul style="list-style-type: none"> a) TCV 1 is deactivated open, b) TCVs 2 and 3 operate normally, c) Ram air inlet door 1 operates normally, d) Ram air exit door 1 operates normally, e) Packs 2 and 3 operate normally, f) Air cycle machines (ACMs) 2 and 3 operate normally, g) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, h) Occupant backup shutoff valve (OBSOV) operates normally, i) Alternate ventilation system (AVS) operates normally, j) Right wing isolation valve operates normally, and k) Alternate procedures are used for pack 1. (Continued)

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING					
-51-05	Pack Temperature Control Valves (TCVs) (Cont'd)				
-51-05-03	747-8I with Aft Cargo Air Conditioning (Cont'd)				
-51-05-03-02	TCV 2	C	1	0	(M)(O) May be inoperative provided: a) TCV 2 is deactivated open, b) TCVs 1 and 3 operate normally, c) Ram air inlet door 2 operates normally, d) Ram air exit door 2 operates normally, e) Packs 1 and 3 operate normally, f) Air cycle machines (ACMs) 1 and 3 operate normally, g) Alternate ventilation system (AVS) operates normally, h) AFT CARGO TEMP selector remains OFF, and i) Alternate procedures are used for pack 2.
-51-05-03-03	TCV 3	C	1	0	(M)(O) May be inoperative provided: a) TCV 3 is deactivated open, b) TCVs 1 and 2 operate normally, c) Ram air inlet door 3 operates normally, d) Ram air exit door 3 operates normally, e) Packs 1 and 2 operate normally, f) Air cycle machines (ACMs) 1 and 2 operate normally, g) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, h) Left wing isolation valve operates normally, i) Alternate procedures are used for pack 3.

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21 AIR CONDITIONING					
-51-06	Pack OFF Lights	C	3	0	
-51-07	Pack Temperature Sensors (PTSs)	C	3	2	
-51-08	Mixer Discharge Temperature Sensors (MDTSs)	C	3	2	One may be inoperative provided associated pack is considered inoperative.
-51-09	Compressor Discharge Temperature Sensors (CDTSs)	C	3	2	One may be inoperative provided associated pack is considered inoperative.
-51-10	Pack Inlet Pressure Sensors (PIPSs)				
-51-10A		C	3	2	One may be inoperative provided flow differential pressure sensors (FDPSS) on remaining operating packs operate normally.
-51-10B		C	3	2	One may be inoperative provided associated pack is not used.
-51-11	Flow Differential Pressure Sensors (FDPSS)				
-51-11A		C	3	2	One may be inoperative provided pack inlet pressure sensors (PIPSs) on remaining operating packs operate normally.
-51-11B		C	3	2	One may be inoperative provided associated pack is not used.

U.S. DEPARTMENT OF TRANSPORTATION

MASTER MINIMUM EQUIPMENT LIST

FEDERAL AVIATION ADMINISTRATION

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING					
-51-12	Pack Differential Pressure Sensors (PDPSs)				
-51-12-01	747-8F				
-51-12-01A		C	3	2	One may be inoperative provided: a) Associated flow regulating shutoff valve (FRSOV) operates normally, and b) Associated lower recirculation fan is considered inoperative.
-51-12-01B		C	3	2	One may be inoperative provided associated pack is not used.
-51-12-02	747-8I without Aft Cargo Air Conditioning	C	3	2	One may be inoperative provided associated lower recirculation fan is considered inoperative.
-51-12-03	747-8I with Aft Cargo Air Conditioning				
-51-12-03-01	PDPS 1	C	1	0	May be inoperative provided: a) PDPSs 2 and 3 operate normally, and b) Lower recirculation fan 1 is considered inoperative.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-51-12	Pack Differential Pressure Sensors (PDPSs) (Cont'd)				
-51-12-03	747-8I with Aft Cargo Air Conditioning (Cont'd)				
-51-12-03-02	PDPS 2				
-51-12-03-02A		C	1	0	May be inoperative provided: a) PDPSs 1 and 3 operate normally, b) Flow regulating shutoff valve (FRSOV) 2 operates normally, and c) Lower recirculation fan 2 is considered inoperative.
-51-12-03-02B		C	1	0	May be inoperative provided: a) PDPSs 1 and 3 operate normally, and b) Pack 2 is not used.
-51-12-03-03	PDPS 3	C	1	0	May be inoperative provided: a) PDPSs 1 and 2 operate normally, and b) Lower recirculation fan 3 is considered inoperative.
-51-13	Pack SYS FAULT Light	C	1	0	
-51-14	Ozone Converters				
-51-14-01	747-8F	D	3	0	
-51-14-02	747-8I	C	3	0	As required by FAR.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-58-01	Equipment Cooling Control System (NORM Mode)	C	1	0	May be inoperative provided: a) EQUIP COOLING selector is set to STBY, and b) For ground operations above 41 degrees C OAT, at least one pack is operated or airplane is supplied with conditioned air.
-58-02	Equipment Cooling Inboard Exhaust Valve				
-58-02-01	747-8F				
-58-02-01A		C	1	0	(M) May be inoperative provided: a) Inboard exhaust valve is deactivated closed, and b) One equipment cooling fan is considered inoperative.
-58-02-01B		C	1	0	(M)(O) May be inoperative provided: a) Inboard exhaust valve is deactivated open, b) Equipment cooling supply fan operates normally, c) Equipment cooling exhaust fan operates normally, d) Equipment cooling inboard supply valves are not deactivated closed, e) Equipment cooling barrier filter is not blocked, and f) Main deck and forward lower cargo compartments remain empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components.
NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.					
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING					
-58-02	Equipment Cooling Inboard Exhaust Valve (Cont'd)				
-58-02-02	747-8I				
-58-02-02A		C	1	0	(M) May be inoperative provided: a) Inboard exhaust valve is deactivated closed, and b) One equipment cooling fan is considered inoperative.
-58-02-02B		C	1	0	(M)(O) May be inoperative provided: a) Inboard exhaust valve is deactivated open, b) Equipment cooling supply fan operates normally, c) Equipment cooling exhaust fan operates normally, d) Equipment cooling inboard supply valves are not deactivated closed, e) Equipment cooling barrier filter is not blocked, and f) Forward lower cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-58-03	Equipment Cooling Bypass Valve					
-58-03-01	747-8F					
-58-03-01A		C	1	0		(M)(O) May be inoperative provided:
						<ul style="list-style-type: none"> a) Bypass valve is deactivated closed, b) Equipment cooling supply fan operates normally, c) Equipment cooling exhaust fan operates normally, d) Equipment cooling inboard exhaust valve is not deactivated closed, e) Equipment cooling inboard supply valves are not deactivated closed, f) Equipment cooling barrier filter is not blocked, g) FWD LOWER LOBE TEMP selector remains OFF, and h) Main deck cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components.
						NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
						(Continued)

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING					
-58-03 Equipment Cooling Bypass Valve (Cont'd)					
-58-03-01 747-8F (Cont'd)					
-58-03-01B	C	1	0	(M)(O) May be inoperative provided: a) Bypass valve is deactivated closed, b) Equipment cooling supply fan operates normally, c) Equipment cooling exhaust fan operates normally, d) Equipment cooling inboard exhaust valve is not deactivated closed, e) Equipment cooling inboard supply valves are not deactivated closed, f) Equipment cooling barrier filter is not blocked, g) FWD LOWER LOBE TEMP selector remains above 50 degrees F (10 degrees C), and h) Main deck cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-58-03	Equipment Cooling Bypass Valve (Cont'd)				
-58-03-02	747-8I	C	1	0	(M) May be inoperative provided: a) Bypass valve is deactivated closed, b) Equipment cooling supply fan operates normally, c) Equipment cooling exhaust fan operates normally, d) Equipment cooling inboard exhaust valve is not deactivated closed, e) Equipment cooling inboard supply valves are not deactivated closed, and f) Equipment cooling barrier filter is not blocked.
-58-04	Equipment Cooling Exhaust Fan	C	1	0	(M) May be inoperative provided: a) Exhaust fan is deactivated, b) Equipment cooling supply fan operates normally, c) Equipment cooling bypass valve operates normally, d) Equipment cooling inboard exhaust valve is not deactivated open, and e) For ground operations above 29 degrees C OAT, at least one pack is operated or airplane is supplied with conditioned air.
-58-05	Equipment Cooling Inboard Supply Valves				
-58-05A		C	2	0	(M) May be inoperative provided: a) Inoperative inboard supply valve is deactivated closed, and b) One equipment cooling fan is considered inoperative.
-58-05B		C	2	1	(M) One may be inoperative deactivated open.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
			1	2		3. NUMBER REQUIRED FOR DISPATCH
						3
21 AIR CONDITIONING						
-58-06	Equipment Cooling Supply Fan	C	1	0	(M) May be inoperative provided: a) Supply fan is deactivated, b) Equipment cooling exhaust fan operates normally, c) Equipment cooling bypass valve operates normally, d) Equipment cooling inboard exhaust valve is not deactivated open, and e) For ground operations above 29 degrees C OAT, at least one pack is operated or airplane is supplied with conditioned air.	
-58-07	Equipment Cooling Ground Exhaust Valve	C	1	0	(M) May be inoperative provided: a) Ground exhaust valve is deactivated closed, b) EQUIP COOLING selector is set to STBY, and c) For ground operations above 41 degrees C OAT, at least one pack is operated or airplane is supplied with conditioned air.	
-58-08	Equipment Cooling Barrier Filter					
-58-08A		C	1	0	(M) May be removed.	
-58-08B		C	1	0	May be blocked provided one equipment cooling fan is considered inoperative.	
-58-09	Aft Equipment Cooling Fans (747-8F)	C	2	1		

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-58-10	Equipment Cooling Three-Way Valve (747-8F)				
-58-10A		C	1	0	(M)(O) May be inoperative provided: a) Three-way valve is deactivated closed (C-B position), and b) Main deck cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
-58-10B		B	1	0	(M) May be inoperative provided: a) Three-way valve is deactivated open (A-B position), and b) At least two packs are operated continuously for flight instrument cooling.
-58-11	In-Flight Entertainment (IFE) Cooling System (747-8I)	D	1	0	(M) May be inoperative provided IFE system is deactivated.
-61-01	Trim Isolation Shutoff Valve (TSOV)	C	1	0	(M) May be inoperative deactivated closed.
-61-02	Trim Air Pressure Sensors (TPSs)	C	2	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3.	NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING							
-61-03	Trim Pressure Regulating Shutoff Valves (TPRSOVs)						
-61-03-01	747-8F						
-61-03-01-01	Left TPRS OV	C	1	0			(M) May be inoperative provided: a) Left TPRS OV is deactivated closed, b) Right TPRS OV operates normally, c) Pack 3 operates normally, d) Air cycle machine (ACM) 3 operates normally, e) Pack temperature control valve (TCV) 3 operates normally, and f) Pre-trim air valve (TAV) 3 operates normally.
-61-03-01-02	Right TPRS OV	C	1	0			(M) May be inoperative provided: a) Right TPRS OV is deactivated closed, b) Left TPRS OV operates normally, c) Pack 1 operates normally, d) Air cycle machine (ACM) 1 operates normally, e) Pack temperature control valve (TCV) 1 operates normally, and f) Pre-trim air valve (TAV) 1 operates normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-61-03	Trim Pressure Regulating Shutoff Valves (TPRSOVs) (Cont'd)				
-61-03-02	747-8I				
-61-03-02-01	Left TPRS OV	C	1	0	(M) May be inoperative provided: a) Left TPRS OV is deactivated closed, b) Right TPRS OV operates normally, c) Pack 3 operates normally, d) Air cycle machine (ACM) 3 operates normally, and e) Pack temperature control valve (TCV) 3 operates normally.
-61-03-02-02	Right TPRS OV	C	1	0	(M) May be inoperative provided: a) Right TPRS OV is deactivated closed, b) Left TPRS OV operates normally, c) Pack 1 operates normally, d) Air cycle machine (ACM) 1 operates normally, and e) Pack temperature control valve (TCV) 1 operates normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-61-04	Main Deck Trim Air Valves (TAVs)				
-61-04-01	747-8F	C	2	0	(M) May be inoperative deactivated closed.
-61-04-01-01	Forward Main Deck TAV	C	1	0	May be inoperative provided: a) Pack 1 operates normally, b) Air cycle machine (ACM) 1 operates normally, c) Pack temperature control valve (TCV) 1 operates normally, d) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, e) Pre-TAV 1 operates normally, and f) R TRIM AIR switch remains Off.
-61-04-01-02	Aft Main Deck TAV	C	1	0	May be inoperative provided: a) Pack 3 operates normally, b) Air cycle machine (ACM) 3 operates normally, c) Pack temperature control valve (TCV) 3 operates normally, d) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, e) Pre-TAV 3 operates normally, and f) L TRIM AIR switch remains Off.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
21 AIR CONDITIONING						
-61-04	Main Deck Trim Air Valves (TAVs) (Cont'd)					
-61-04-02	747-8I	C	5	0	(M) May be inoperative deactivated closed.	
-61-04-02-01	Main Deck Zone A TAV	C	1	0	May be inoperative provided: a) Pack 3 operates normally, b) Air cycle machine (ACM) 3 operates normally, c) Pack temperature control valve (TCV) 3 operates normally, d) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, and e) L TRIM AIR switch remains Off.	
-61-04-02-02	Main Deck Zone B TAV	C	1	0	May be inoperative provided: a) Pack 1 operates normally, b) Air cycle machine (ACM) 1 operates normally, c) Pack temperature control valve (TCV) 1 operates normally, d) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, and e) R TRIM AIR switch remains Off.	
-61-04-02-03	Main Deck Zone C TAV	C	1	0	May be inoperative provided: a) Pack 3 operates normally, b) Air cycle machine (ACM) 3 operates normally, c) Pack temperature control valve (TCV) 3 operates normally, d) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, and e) L TRIM AIR switch remains Off.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-61-04	Main Deck Trim Air Valves (TAVs) (Cont'd)				
-61-04-02	747-8I (Cont'd)				
-61-04-02-04	Main Deck Zone D TAV	C	1	0	May be inoperative provided: a) Pack 1 operates normally, b) Air cycle machine (ACM) 1 operates normally, c) Pack temperature control valve (TCV) 1 operates normally, d) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, and e) R TRIM AIR switch remains Off.
-61-04-02-05	Main Deck Zone E TAV	C	1	0	May be inoperative provided: a) Pack 3 operates normally, b) Air cycle machine (ACM) 3 operates normally, c) Pack temperature control valve (TCV) 3 operates normally, d) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, and e) L TRIM AIR switch remains Off.

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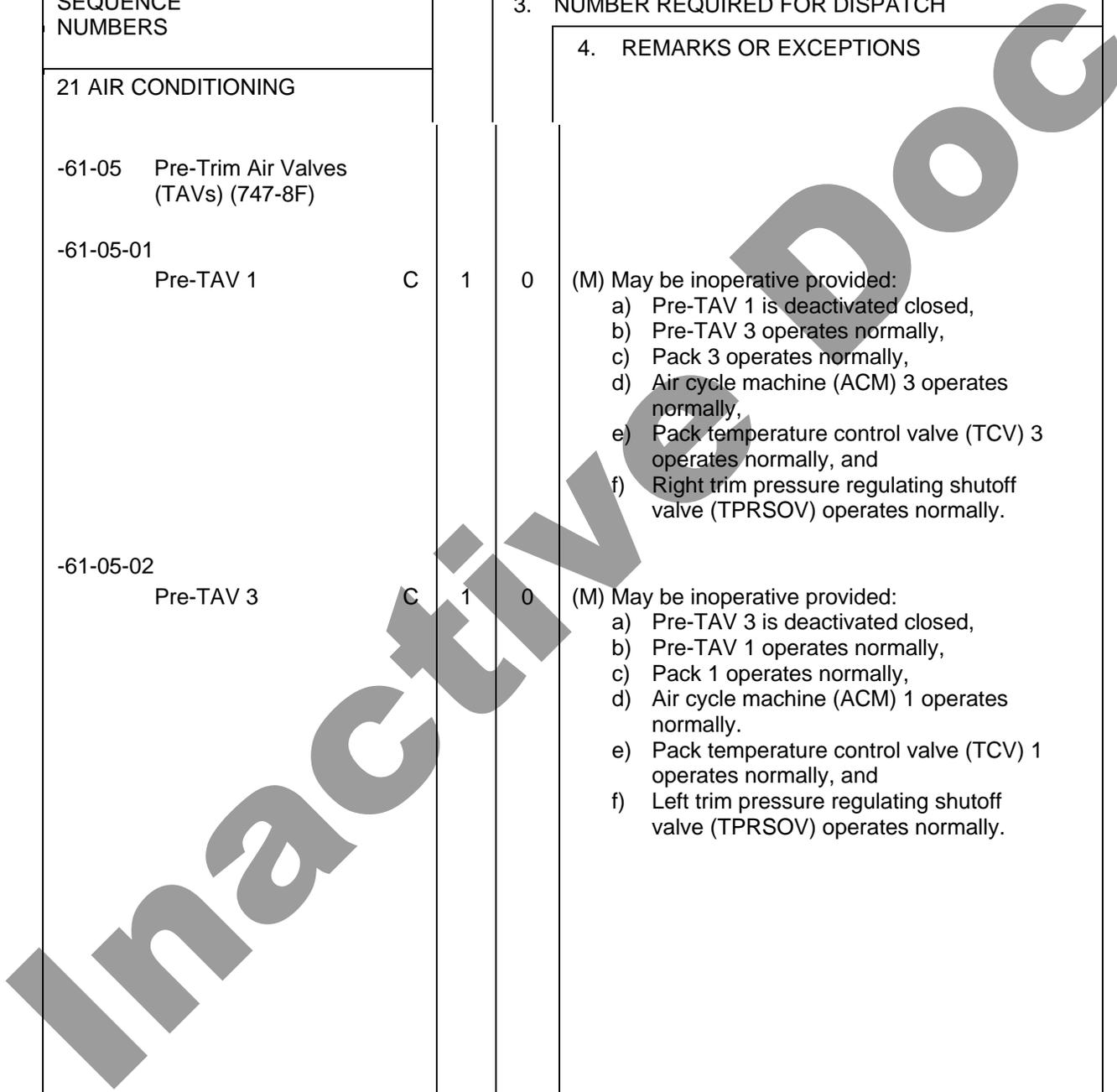
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-61-05	Pre-Trim Air Valves (TAVs) (747-8F)				
-61-05-01	Pre-TAV 1	C	1	0	(M) May be inoperative provided: a) Pre-TAV 1 is deactivated closed, b) Pre-TAV 3 operates normally, c) Pack 3 operates normally, d) Air cycle machine (ACM) 3 operates normally, e) Pack temperature control valve (TCV) 3 operates normally, and f) Right trim pressure regulating shutoff valve (TPRSOV) operates normally.
-61-05-02	Pre-TAV 3	C	1	0	(M) May be inoperative provided: a) Pre-TAV 3 is deactivated closed, b) Pre-TAV 1 operates normally, c) Pack 1 operates normally, d) Air cycle machine (ACM) 1 operates normally. e) Pack temperature control valve (TCV) 1 operates normally, and f) Left trim pressure regulating shutoff valve (TPRSOV) operates normally.



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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING					
-61-06	Flight Deck Trim Air Valve (TAV)				
-61-06-01	747-8F				
-61-06-01A		C	1	0	(M) May be inoperative deactivated closed.
-61-06-01B		C	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) Pack 3 operates normally, b) Air cycle machine (ACM) 3 operates normally, c) Pack temperature control valve (TCV) 3 operates normally, d) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, e) Pre-TAV 3 operates normally, and f) L TRIM AIR switch remains Off.
-61-06-02	747-8I				
-61-06-02A		C	1	0	(M) May be inoperative deactivated closed.
-61-06-02B		C	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) Pack 3 operates normally, b) Air cycle machine (ACM) 3 operates normally, c) Pack temperature control valve (TCV) 3 operates normally, d) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, and e) L TRIM AIR switch remains Off.

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			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-61-07	Upper Deck Trim Air Valve (TAV)				
-61-07-01	747-8F				
-61-07-01A		C	1	0	(M) May be inoperative deactivated closed.
-61-07-01B		C	1	0	May be inoperative provided: a) Pack 3 operates normally, b) Air cycle machine (ACM) 3 operates normally, c) Pack temperature control valve (TCV) 3 operates normally, d) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, e) Pre-TAV 3 operates normally, and f) L TRIM AIR switch remains Off.
-61-07-02	747-8I				
-61-07-02A		C	1	0	(M) May be inoperative deactivated closed.
-61-07-02B		C	1	0	May be inoperative provided: a) Pack 1 operates normally, b) Air cycle machine (ACM) 1 operates normally, c) Pack temperature control valve (TCV) 1 operates normally, d) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, and e) R TRIM AIR switch remains Off.

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			3.	NUMBER REQUIRED FOR DISPATCH	
21 AIR CONDITIONING					
-61-08	Crew Rest Trim Air Valve (TAV) (747-8F)				
-61-08A		C	1	0	(M) May be inoperative deactivated closed.
-61-08B		C	1	0	May be inoperative provided: a) Pack 3 operates normally, b) Air cycle machine (ACM) 3 operates normally, c) Pack temperature control valve (TCV) 3 operates normally, d) Right trim pressure regulating shutoff valve (TPRSOV) operates normally, e) Pre-TAV 3 operates normally, and f) L TRIM AIR switch remains Off.
-61-09	Forward Cargo Trim Air Valve (TAV) (747-8F)				
-61-09A		C	1	0	(M) May be inoperative deactivated closed.
-61-09B		C	1	0	May be inoperative provided: a) Pack 1 operates normally, b) Air cycle machine (ACM) 1 operates normally, c) Pack temperature control valve (TCV) 1 operates normally, d) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, e) Pre-TAV 1 operates normally, and f) R TRIM AIR switch remains Off.

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21 AIR CONDITIONING					
-61-10	Aft Cargo Trim Air Valve (TAV)				
-61-10-01	747-8F				
-61-10-01A		C	1	0	(M) May be inoperative deactivated closed.
-61-10-01B		C	1	0	May be inoperative provided: a) Pack 1 operates normally, b) Air cycle machine (ACM) 1 operates normally, c) Pack temperature control valve (TCV) 1 operates normally, d) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, e) Pre-TAV 1 operates normally, and f) R TRIM AIR switch remains Off.
-61-10-02	*** 747-8I				
-61-10-02A		C	1	0	(M) May be inoperative deactivated closed.
-61-10-02B		C	1	0	May be inoperative provided: a) Pack 1 operates normally, b) Air cycle machine (ACM) 1 operates normally, c) Pack temperature control valve (TCV) 1 operates normally, d) Left trim pressure regulating shutoff valve (TPRSOV) operates normally, and e) R TRIM AIR switch remains Off.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-61-11	Duct Temperature Sensors (DTSs)				
-61-11-01	747-8F				
-61-11-01-01	Pre-Trim DTS	C	2	1	One may be inoperative provided associated pre-trim air valve (TAV) is considered inoperative.
-61-11-01-02	Flight Deck DTS	C	1	0	May be inoperative provided: a) Flight deck zone temperature sensor (ZTS) operates normally, and b) Flight deck trim air valve (TAV) is considered inoperative.
-61-11-01-03	Upper Deck DTS	C	1	0	May be inoperative provided: a) Upper deck zone temperature sensor (ZTS) operates normally, and b) Upper deck trim air valve (TAV) is considered inoperative.
-61-11-01-04	Crew Rest DTS	C	1	0	May be inoperative provided: a) One crew rest zone temperature sensor (ZTS) operates normally, and b) Crew rest trim air valve (TAV) is considered inoperative.
-61-11-01-05	Forward Main Deck DTS	C	1	0	May be inoperative provided: a) One forward main deck zone temperature sensor (ZTS) operates normally, and b) Forward main deck trim air valve (TAV) is considered inoperative.
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21 AIR CONDITIONING						
-61-11	Duct Temperature Sensors (DTSs) (Cont'd)					
-61-11-01	747-8F (Cont'd)					
-61-11-01-06	Aft Main Deck DTS	C	1	0		May be inoperative provided: a) One aft main deck zone temperature sensor (ZTS) operates normally, and b) Aft main deck trim air valve (TAV) is considered inoperative.
-61-11-01-07	Forward Cargo DTS					
-61-11-01-07A		C	1	0		May be inoperative provided: a) Forward cargo zone temperature sensor (ZTS) operates normally, and b) Forward cargo trim air valve (TAV) is considered inoperative.
-61-11-01-07B		C	1	0		May be inoperative provided FWD LOWER LOBE TEMP selector remains OFF.
-61-11-01-08	Aft Cargo DTS					
-61-11-01-08A		C	1	0		May be inoperative provided: a) Aft cargo zone temperature sensor (ZTS) operates normally, and b) Aft cargo trim air valve (TAV) is considered inoperative.
-61-11-01-08B		C	1	0		May be inoperative provided AFT LOWER LOBE TEMP selector remains OFF.
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						3. NUMBER REQUIRED FOR DISPATCH
21 AIR CONDITIONING						
-61-11	Duct Temperature Sensors (DTSS) (Cont'd)					
-61-11-02	747-8I					
-61-11-02-01	Flight Deck DTS	C	1	0	May be inoperative provided: a) Flight deck zone temperature sensor (ZTS) operates normally, and b) Flight deck trim air valve (TAV) is considered inoperative.	
-61-11-02-02	Upper Deck DTS	C	1	0	May be inoperative provided: a) Upper deck zone temperature sensor (ZTS) operates normally, and b) Upper deck trim air valve (TAV) is considered inoperative.	
-61-11-02-03	Main Deck Zone A DTS	C	1	0	May be inoperative provided: a) Main deck zone A zone temperature sensor (ZTS) operates normally, and b) Main deck zone A trim air valve (TAV) is considered inoperative.	
-61-11-02-04	Main Deck Zone B DTS	C	1	0	May be inoperative provided: a) One main deck zone B zone temperature sensor (ZTS) operates normally, and b) Main deck zone B trim air valve (TAV) is considered inoperative.	
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			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-61-11	Duct Temperature Sensors (DTSs) (Cont'd)				
-61-11-02	747-8I (Cont'd)				
-61-11-02-05	Main Deck Zone C DTS	C	1	0	May be inoperative provided: a) One main deck zone C zone temperature sensor (ZTS) operates normally, and b) Main deck zone C trim air valve (TAV) is considered inoperative.
-61-11-02-06	Main Deck Zone D DTS	C	1	0	May be inoperative provided: a) One main deck zone D zone temperature sensor (ZTS) operates normally, and b) Main deck zone D trim air valve (TAV) is considered inoperative.
-61-11-02-07	Main Deck Zone E DTS	C	1	0	May be inoperative provided: a) Main deck zone E zone temperature sensor (ZTS) operates normally, and b) Main deck zone E trim air valve (TAV) is considered inoperative.
-61-11-02-08	*** Aft Cargo DTS				
-61-11-02-08A		C	1	0	May be inoperative provided: a) Aft cargo zone temperature sensor (ZTS) operates normally, and b) Aft cargo trim air valve (TAV) is considered inoperative.
-61-11-02-08B		C	1	0	May be inoperative provided AFT CARGO TEMP selector remains OFF.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-61-12	Zone Temperature Sensors (ZTSs)				
-61-12-01	747-8F				
-61-12-01-01	Flight Deck ZTS	C	1	0	May be inoperative provided flight deck duct temperature sensor (DTS) operates normally.
-61-12-01-02	Upper Deck ZTS	C	1	0	May be inoperative provided upper deck duct temperature sensor (DTS) operates normally.
-61-12-01-03	Crew Rest ZTS				
-61-12-01-03A		C	2	1	
-61-12-01-03B		C	2	0	May be inoperative provided crew rest duct temperature sensor (DTS) operates normally.
-61-12-01-04	Forward Main Deck ZTS				
-61-12-01-04A		C	2	1	
-61-12-01-04B		C	2	0	May be inoperative provided forward main deck duct temperature sensor (DTS) operates normally.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-61-12	Zone Temperature Sensors (ZTSs) (Cont'd)				
-61-12-01	747-8F (Cont'd)				
-61-12-01-05	Aft Main Deck ZTS				
-61-12-01-05A		C	2	1	
-61-12-01-05B		C	2	0	May be inoperative provided aft main deck duct temperature sensor (DTS) operates normally.
-61-12-01-06	Forward Cargo ZTS				
-61-12-01-06A		C	1	0	May be inoperative provided forward cargo duct temperature sensor (DTS) operates normally.
-61-12-01-06B		C	1	0	May be inoperative provided FWD LOWER LOBE TEMP selector remains OFF.
-61-12-01-07	Aft Cargo ZTS				
-61-12-01-07A		C	1	0	May be inoperative provided aft cargo duct temperature sensor (DTS) operates normally.
-61-12-01-07B		C	1	0	May be inoperative provided AFT LOWER LOBE TEMP selector remains OFF.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-61-12	Zone Temperature Sensors (ZTSs) (Cont'd)				
-61-12-02	747-8I				
-61-12-02-01	Flight Deck ZTS	C	1	0	May be inoperative provided flight deck duct temperature sensor (DTS) operates normally.
-61-12-02-02	Upper Deck ZTS	C	1	0	May be inoperative provided upper deck duct temperature sensor (DTS) operates normally.
-61-12-02-03	Main Deck Zone A ZTS	C	1	0	May be inoperative provided main deck zone A duct temperature sensor (DTS) operates normally.
-61-12-02-04	Main Deck Zone B ZTS				
-61-12-02-04A		C	2	1	
-61-12-02-04B		C	2	0	May be inoperative provided main deck zone B duct temperature sensor (DTS) operates normally.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-61-12	Zone Temperature Sensors (ZTSs) (Cont'd)				
-61-12-02	747-8I (Cont'd)				
-61-12-02-05	Main Deck Zone C ZTS				
-61-12-02-05A		C	2	1	
-61-12-02-05B		C	2	0	May be inoperative provided main deck zone C duct temperature sensor (DTS) operates normally.
-61-12-02-06	Main Deck Zone D ZTS				
-61-12-02-06A		C	2	1	
-61-12-02-06B		C	2	0	May be inoperative provided main deck zone D duct temperature sensor (DTS) operates normally.
-61-12-02-07	Main Deck Zone E ZTS	C	1	0	May be inoperative provided main deck zone E duct temperature sensor (DTS) operates normally.
-61-12-02-08	*** Aft Cargo ZTS				
-61-12-02-08A		C	1	0	May be inoperative provided aft cargo duct temperature sensor (DTS) operates normally.
-61-12-02-08B		C	1	0	May be inoperative provided AFT CARGO TEMP selector remains OFF.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-61-13	Flight Deck Temperature Selector	C	1	0	(M) AUTO mode may be inoperative provided MAN control mode is verified to operate normally.
-61-14	Cargo Temperature Selectors				
-61-14-01	747-8F	C	4	0	
-61-14-02	*** 747-8I	C	1	0	
-61-15	Cabin Temperature Selector (747-8F)	C	1	0	NOTE: Any function that operates normally may be used.
-62-01	Ram Air Door Systems	C	3	2	(M) One may be inoperative provided: a) Associated inlet and exit doors are deactivated closed, and b) Associated pack is considered inoperative.
-62-01-01	Inlet Doors	C	3	2	(M) One may be inoperative provided: a) Inoperative inlet door is deactivated 70-75% closed, b) Associated exit door operates normally, c) Associated air cycle machine (ACM) operates normally, and d) Associated pack temperature control valve (TCV) operates normally.
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21 AIR CONDITIONING						
-62-01	Ram Air Door Systems (Cont'd)					
-62-01-02	Exit Doors	C	3	2	(M)(O) One may be inoperative provided:	
					a) Inoperative exit door is deactivated 80-85% closed,	
					b) Associated inlet door operates normally,	
					c) Associated air cycle machine (ACM) operates normally,	
					d) Associated pack temperature control valve (TCV) operates normally, and	
					e) Alternate procedures are used for associated pack.	
-63-01	Integrated Air System Controllers (IASCs)					
-63-01-01	747-8F					
-63-01-01-01	IASC 1 Channels					
-63-01-01-01A		C	2	1	IASC 1 channel A may be inoperative provided:	
					a) Bleed systems on engines 3 and 4 operate normally, and	
					b) APU-to-Pack Takeoff Supplementary Procedure is not used.	
-63-01-01-01B		C	2	1	IASC 1 channel B may be inoperative provided:	
					a) Bleed systems on engines 3 and 4 operate normally,	
					b) Pack 1 is not used, and	
					c) APU-to-Pack Takeoff Supplementary Procedure is not used.	
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3.	NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING							
-63-01	Integrated Air System Controllers (IASCs) (Cont'd)						
-63-01-01	747-8F (Cont'd)						
-63-01-01-02	IASC 2 Channels						
-63-01-01-02A		C	2	1			IASC 2 channel A may be inoperative.
-63-01-01-02B		C	2	1			IASC 2 channel B may be inoperative provided pack 2 is not used.
-63-01-01-02C		C	2	0			May be inoperative provided: <ul style="list-style-type: none"> a) Pack 2 is considered inoperative, b) Trim isolation shutoff valve (TSOV) is considered inoperative, c) Forward main deck trim air valve (TAV) is considered inoperative, d) Aft cargo trim air valve (TAV) is considered inoperative, and e) APU pneumatic function is considered inoperative.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-63-01	Integrated Air System Controllers (IASCs) (Cont'd)					
-63-01-01	747-8F (Cont'd)					
-63-01-01-03	IASC 3 Channels					
-63-01-01-03A		C	2	1		IASC 3 channel A may be inoperative provided: a) Bleed systems on engines 1 and 2 operate normally, and b) APU-to-Pack Takeoff Supplementary Procedure is not used.
-63-01-01-03B		C	2	1		IASC 3 channel B may be inoperative provided: a) Bleed systems on engines 1 and 2 operate normally, b) Pack 3 is not used, and c) APU-to-Pack Takeoff Supplementary Procedure is not used.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3.	NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING							
-63-01	Integrated Air System Controllers (IASCs) (Cont'd)						
-63-01-02	747-8I without Aft Cargo Air Conditioning						
-63-01-02-01	IASC 1 Channels						
-63-01-02-01A		C	2	1			IASC 1 channel A may be inoperative provided: a) Bleed systems on engines 3 and 4 operate normally, and b) APU-to-Pack Takeoff Supplementary Procedure is not used.
-63-01-02-01B		C	2	1			IASC 1 channel B may be inoperative provided: a) Bleed systems on engines 3 and 4 operate normally, b) Pack 1 is not used, and c) APU-to-Pack Takeoff Supplementary Procedure is not used.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-63-01	Integrated Air System Controllers (IASCs) (Cont'd)					
-63-01-02	747-8I without Aft Cargo Air Conditioning (Cont'd)					
-63-01-02-02	IASC 2 Channels					
-63-01-02-02A		C	2	1		IASC 2 channel A may be inoperative.
-63-01-02-02B		C	2	1		IASC 2 channel B may be inoperative provided pack 2 is not used.
-63-01-02-02C		C	2	0		May be inoperative provided: <ul style="list-style-type: none"> a) Pack 2 is considered inoperative, b) Trim isolation shutoff valve (TSOV) is considered inoperative, c) Main deck zone C trim air valve (TAV) is considered inoperative, d) Main deck zone E trim air valve (TAV) is considered inoperative, and e) APU pneumatic function is considered inoperative.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING						
-63-01	Integrated Air System Controllers (IASCs) (Cont'd)					
-63-01-02	747-8I without Aft Cargo Air Conditioning (Cont'd)					
-63-01-02-03	IASC 3 Channels					
-63-01-02-03A		C	2	1		IASC 3 channel A may be inoperative provided: a) Bleed systems on engines 1 and 2 operate normally, and b) APU-to-Pack Takeoff Supplementary Procedure is not used.
-63-01-02-03B		C	2	1		IASC 3 channel B may be inoperative provided: a) Bleed systems on engines 1 and 2 operate normally, b) Pack 3 is not used, and c) APU-to-Pack Takeoff Supplementary Procedure is not used.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3.	NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
21 AIR CONDITIONING							
-63-01	Integrated Air System Controllers (IASCs) (Cont'd)						
-63-01-03	747-8I with Aft Cargo Air Conditioning						
-63-01-03-01	IASC 1 Channels						
-63-01-03-01A		C	2	1		IASC 1 channel A may be inoperative provided:	<ul style="list-style-type: none"> a) Bleed systems on engines 3 and 4 operate normally, and b) APU-to-Pack Takeoff Supplementary Procedure is not used.
-63-01-03-01B		C	2	1		IASC 1 channel B may be inoperative provided:	<ul style="list-style-type: none"> a) Bleed systems on engines 3 and 4 operate normally, b) Pack 1 is not used, and c) APU-to-Pack Takeoff Supplementary Procedure is not used.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-63-01	Integrated Air System Controllers (IASCs) (Cont'd)				
-63-01-03	747-8I with Aft Cargo Air Conditioning (Cont'd)				
-63-01-03-02	IASC 2 Channels				
-63-01-03-02A		C	2	1	IASC 2 channel A may be inoperative.
-63-01-03-02B		C	2	1	IASC 2 channel B may be inoperative provided pack 2 is not used.
-63-01-03-02C		C	2	0	May be inoperative provided: a) Pack 2 is considered inoperative, b) Trim isolation shutoff valve (TSOV) is considered inoperative, c) Main deck zone C trim air valve (TAV) is considered inoperative, d) Main deck zone E trim air valve (TAV) is considered inoperative, e) Aft cargo trim air valve (TAV) is considered inoperative, and f) APU pneumatic function is considered inoperative.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
21 AIR CONDITIONING					
-63-01	Integrated Air System Controllers (IASCs) (Cont'd)				
-63-01-03	747-8I with Aft Cargo Air Conditioning (Cont'd)				
-63-01-03-03	IASC 3 Channels				
-63-01-03-03A		C	2	1	IASC 3 channel A may be inoperative provided: a) Bleed systems on engines 1 and 2 operate normally, and b) APU-to-Pack Takeoff Supplementary Procedure is not used.
-63-01-03-03B		C	2	1	IASC 3 channel B may be inoperative provided: a) Bleed systems on engines 1 and 2 operate normally, b) Pack 3 is not used, and c) APU-to-Pack Takeoff Supplementary Procedure is not used.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
22 AUTOFLIGHT					
-10-01	Autopilot Systems				
-10-01A		C	3	2	(M) One may be inoperative provided: a) Associated autopilot servo is deactivated, and b) Approach minimums do not require use of the autopilot.
-10-01B		C	3	1	(M) May be inoperative provided: a) Associated autopilot servos are deactivated, b) At least two flight control computer (FCC) power circuit breakers remain closed, c) At least two FCCs provide inputs to lateral control electronics (LCE), and d) Approach minimums do not require use of the autopilots.
-11-01	Control Wheel Autopilot Disengage Switches				
-11-01A		C	2	1	One may be inoperative provided: a) Autopilot is not used below 1500 feet AGL, and b) Approach minimums do not require use of the autopilot.
-11-01B		B	2	0	May be inoperative provided: a) Autopilot is not used, b) Enroute operations do not require use of the autopilot, c) Approach minimums do not require use of the autopilot, and d) Number of flight segments and segment duration is acceptable to flight crew.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
22 AUTOFLIGHT					
-11-02	Mode Control Panel Windows				
-11-02-01	Airspeed (IAS/MACH)	C	1	0	
-11-02-02	Heading (HDG)	C	1	0	
-11-02-03	Vertical Speed (VERT SPD)	C	1	0	
-11-02-04	Altitude (ALT)	C	1	0	
-11-02-05	Window Lighting	B	1	0	
-11-03	Mode Control Panel Selectors				
-11-03-01	V/S Selector (DN, UP)	C	1	0	
-11-03-02	BANK LIMIT Selector (AUTO, 5, 10, 15, 20, 25)	C	1	0	
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
22 AUTOFLIGHT					
-11-03	Mode Control Panel Selectors (Cont'd)				
-11-03-03	Selector Push Functions				
-11-03-03-01	ALT	C	1	0	
-11-03-03-02	HDG SEL	C	1	0	
-11-03-03-03	IAS/MACH	C	1	0	
-11-04	Mode Control Panel Switches				
-11-04-01	Autopilot (A/P) ENGAGE Switches				
-11-04-01A		C	3	1	
-11-04-01B		B	3	0	May be inoperative provided: a) Enroute operations do not require use of the autopilots, b) Approach minimums do not require use of the autopilots, and c) Number of flight segments and segment duration is acceptable to flight crew.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
22 AUTOFLIGHT					
-11-04	Mode Control Panel Switches (Cont'd)				
-11-04-02	Autothrottle (A/T) ARM Switch				
-11-04-02A		C	1	0	May be inoperative ARM provided both autothrottle disconnect switches operate normally.
-11-04-02B		C	1	0	May be inoperative OFF provided autothrottle system is considered inoperative.
-11-04-03	A/T Speed Mode Engage Switch (SPD)	C	1	0	May be inoperative provided approach minimums do not require use of the autothrottle.
-11-04-04	Flight Director Switches (F/D)	C	2	0	May be inoperative provided approach minimums do not require use of the flight director.
-11-04-05	IAS/MACH Select (SEL) Switch	C	1	0	May be inoperative provided IAS is displayed in associated window.
-11-04-06	Approach (APP) Switch	C	1	0	May be inoperative provided approach minimums do not require use of the autopilot or flight director.
-11-04-07	Localizer (LOC) Switch	C	1	0	May be inoperative provided integrated approach navigation (IAN) final approach course (FAC) only or localizer only approach is not used.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
22 AUTOFLIGHT					
-11-04	Mode Control Panel Switches (Cont'd)				
-11-04-08	Thrust (THR), Lateral Navigation (LNAV), Vertical Navigation (VNAV), Flight Level Change (FLCH), Heading (HOLD), Vertical Speed (V/S), and Altitude (HOLD) Switches	C	7	0	May be inoperative provided procedures do not require their use.
-11-05	Mode Control Panel Switch Lights				
-11-05-01	Autopilot (A/P) ENGAGE Switch Lights (CMD)	C	3	2	
-11-05-02	Mode Selector Switch Lights	C	10	0	
-11-06	Flight Director Systems	C	2	0	May be inoperative provided procedures do not require their use.
-13-01	Automatic Landing System (Autoland)	C	1	0	May be inoperative provided approach minimums do not require its use.
-13-01-01	Triple Channel Autoland (LAND 3)	C	1	0	May be inoperative provided approach minimums do not require its use.
-13-01-02	Automatic Rollout Control	C	1	0	May be inoperative provided approach minimums do not require its use.

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						3. NUMBER REQUIRED FOR DISPATCH
22 AUTOFLIGHT						
-21-01	Yaw Damper Functions	C	2	1	(M) One may be inoperative provided: a) Remaining yaw damper function is verified to operate normally, and b) Associated YAW DAMPER switch remains Off.	
-21-02	Yaw Damper INOP Lights	C	2	0		
-21-03	Yaw Damper Stabilizer Trim Module (YSM) Monitoring Functions					
-21-03-01	Gross Weight	C	1	0	May be dispatched with YSM GROSS WEIGHT faults.	
-21-03-02	YSM Interface	C	1	0	May be dispatched with YSM INTERFACE faults.	
-31-01	Autothrottle System	C	1	0	May be inoperative provided approach minimums do not require its use. NOTE: Any mode that operates normally may be used.	
-31-02	Autothrottle Disconnect Switches					
-31-02A		C	2	1	One may be inoperative provided autothrottle (A/T) ARM switch operates normally.	
-31-02B		C	2	0	May be inoperative provided: a) Autothrottle is not armed, and b) Approach minimums do not require use of the autothrottle.	

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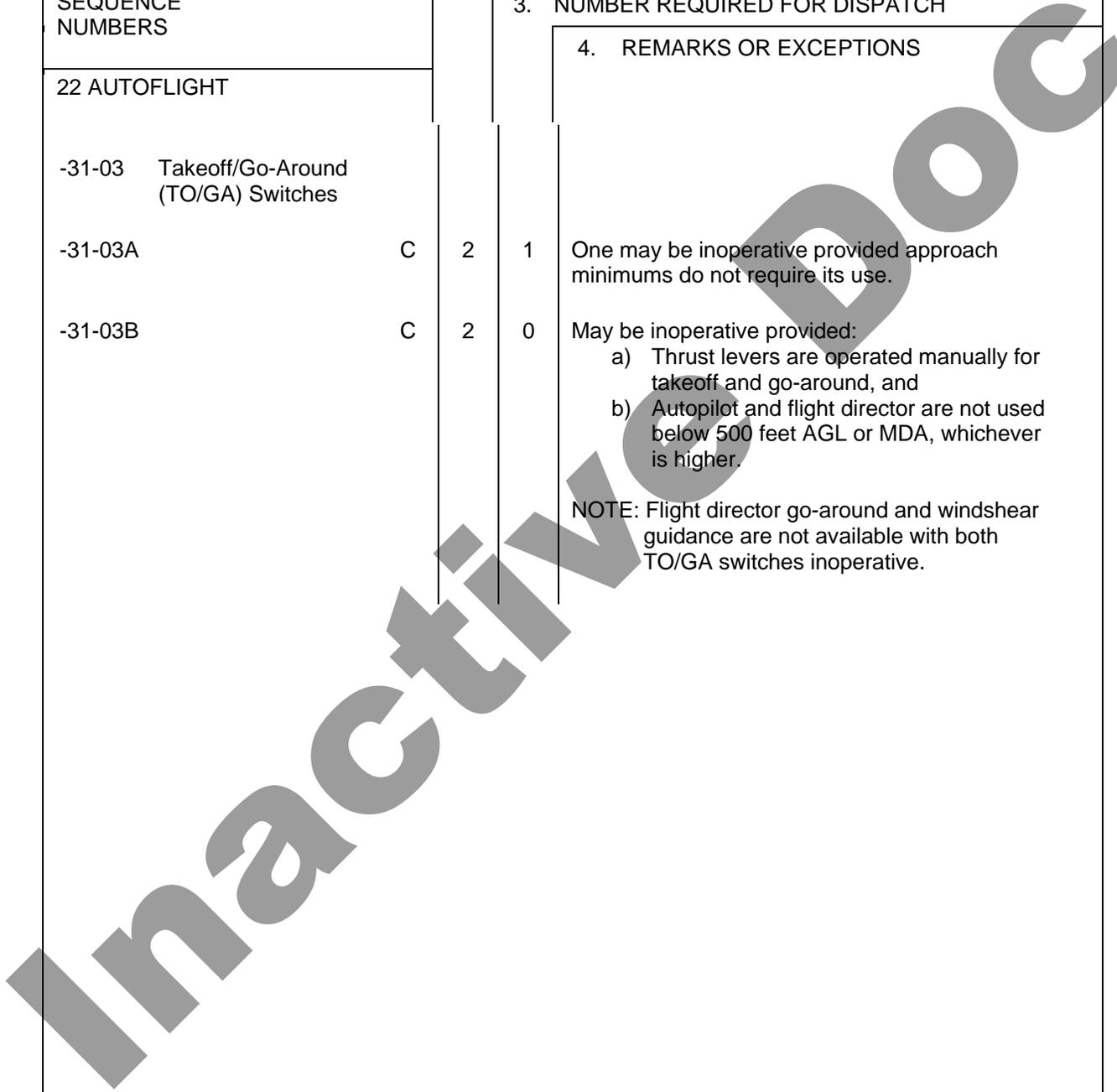
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			3. NUMBER REQUIRED FOR DISPATCH		
22 AUTOFLIGHT					
-31-03	Takeoff/Go-Around (TO/GA) Switches				
-31-03A		C	2	1	One may be inoperative provided approach minimums do not require its use.
-31-03B		C	2	0	May be inoperative provided: a) Thrust levers are operated manually for takeoff and go-around, and b) Autopilot and flight director are not used below 500 feet AGL or MDA, whichever is higher. NOTE: Flight director go-around and windshear guidance are not available with both TO/GA switches inoperative.



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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
23 COMMUNICATIONS						
-10-01	Radio Tuning Panels (RTPs)	C	3	2		Center or right RTP may be inoperative.
-11-01	High Frequency (HF) Communication Systems	D	2	-		Any in excess of those required by FAR may be inoperative.
-11-01B		C	2	1		(O) One may be inoperative while conducting operations that require two long range communication systems (LRCSs) provided:
						a) Satellite communication (SATCOM) voice or datalink system operates normally,
						b) Alternate procedures are established and used,
						c) SATCOM voice coverage is available over the intended route of flight, and
						d) If Inmarsat codes or Iridium numbers are not available while using SATCOM voice, prior coordination with the appropriate ATS facility is required.
						NOTE: SATCOM is to be used only as a backup to normal HF communications unless otherwise authorized by the appropriate ATS facilities.
-11-01-01	HF Datalink Systems	C	2	0		(O) May be inoperative provided alternate procedures are established and used.
-11-01-01A		D	2	0		May be inoperative provided procedures do not require their use.
-11-01-01B						

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			1	0		3. NUMBER REQUIRED FOR DISPATCH
						1
23 COMMUNICATIONS						
-12-01	Very High Frequency (VHF) Communications Systems	D	3	-	Any in excess of those required by FAR may be inoperative provided left VHF radio operates normally.	
-24-01	Fixed Emergency Locator Transmitter (ELT)					
-24-01A		A	1	0	(M) May be inoperative provided: a) ELT is deactivated, and b) Repairs are made within 90 calendar days.	
-24-01B		A	1	0	May be missing provided repairs are made within 90 calendar days.	
-24-01C		D	1	0	(M) Any in excess of those required by FAR may be inoperative provided ELT is deactivated.	
-24-01D		D	1	0	Any in excess of those required by FAR may be missing.	
-25-01	Satellite Communication (SATCOM) System					
-25-01A		C	1	0	(O) Except for ER operations, may be inoperative provided alternate procedures are established and used.	
-25-01B		D	1	0	May be inoperative provided procedures do not require its use.	
(Continued)						

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
23 COMMUNICATIONS						
-25-01	Satellite Communication (SATCOM) System (Cont'd)					
-25-01-01	SATCOM Voice System					
-25-01-01A		C	1	0	(O) Except for ER operations, may be inoperative provided alternate procedures are established and used.	
-25-01-01B		D	1	0	May be inoperative provided procedures do not require its use.	
-25-01-02	SATCOM Datalink System					
-25-01-02A		C	1	0	(O) Except for ER operations, may be inoperative provided alternate procedures are established and used.	
-25-01-02B		D	1	0	May be inoperative provided procedures do not require its use.	
-27-01	Aircraft Communication Addressing and Reporting System (ACARS)					
-27-01A		C	1	0	(O) May be inoperative provided alternate procedures are established and used.	
-27-01B		D	1	0	May be inoperative provided procedures do not require its use.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
23 COMMUNICATIONS					
-28-01	Selective Call System (SELCAL)				
-28-01A		C	1	0	(O) May be inoperative provided alternate procedures are established and used.
-28-01B		D	1	0	May be inoperative provided procedures do not require its use.
-31-01	Personnel Address (PA) System (747-8F)				
-31-01A		C	1	0	(O) May be inoperative provided alternate procedures are established and used.
-31-01B		D	1	0	May be inoperative provided procedures do not require its use.
-31-01-01	Lavatory Speaker				
-31-01-01A		C	1	0	(O) May be inoperative provided alternate procedures are established and used.
-31-01-01B		D	1	0	May be inoperative provided procedures do not require its use.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
23 COMMUNICATIONS					
-41-01	Service Interphone System				
-41-01-01	Nose Gear Jack				
-41-01-01A		C	1	0	(O) Service interphone flight deck to ground/ground to flight deck function may be inoperative provided: a) Nose gear flight interphone jack operates normally, and b) Alternate procedures are established and used.
-41-01-01B		B	1	0	(O) May be inoperative provided alternate procedures are established and used.
-41-01-02	Other Than Nose Gear Jack	D	-	0	May be inoperative provided procedures do not require their use.
-43-01	Ground Crew Call System	C	1	0	(O) May be inoperative provided: a) Equipment cooling system is continuously monitored during ground operations, and b) Alternate procedures are established and used.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
23 COMMUNICATIONS					
-45-01	Upper Deck Call and Communication System (747-8F)				
-45-01-01	Flight Deck to Supernumerary, Supernumerary to Flight Deck Function				
-45-01-01A		C	1	0	(O) May be inoperative provided alternate, normal and emergency procedures, and/or operating restrictions are established and used.
-45-01-01B		D	1	0	May be inoperative provided procedures do not require its use.
-45-01-02	Flight Deck to Crew Rest, Crew Rest to Flight Deck Functions				
-45-01-02A		C	2	0	(O) May be inoperative provided alternate, normal and emergency procedures, and/or operating restrictions are established and used.
-45-01-02B		D	2	0	May be inoperative provided procedures do not require its use.
-45-01-03	Flight Deck Call System (Lights and EICAS Messages)				
-45-01-03A		B	1	0	NOTE: The flight deck chime must always be operative.
-45-01-03B		D	1	0	May be inoperative provided supernumerary area and crew rest remain unoccupied.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
23 COMMUNICATIONS					
-45-01 Upper Deck Call and Communication System (747-8F) (Cont'd)					
-45-01-04 Supernumerary Alerting System (Call Light and Chime)					
-45-01-04A	B	1	0	(O) May be inoperative provided: a) Personnel address (PA) system operates normally, and b) Alternate procedures are established and used.	NOTE: Any function that operates normally may be used.
-45-01-04B	D	1	0	May be inoperative provided supernumerary area remains unoccupied.	
-45-01-05 Crew Rest Alerting System (Call Lights and Chime)					
-45-01-05A	B	1	0	(O) May be inoperative provided: a) Personnel address (PA) system operates normally, and b) Alternate procedures are established and used.	NOTE: Any function that operates normally may be used.
-45-01-05B	D	1	0	May be inoperative provided crew rest remains unoccupied.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
23 COMMUNICATIONS					
-45-02	Crew Rest Handset Systems (747-8F)				
-45-02A		C	2	0	(O) May be inoperative provided alternate procedures for communication with crew rest occupants are established and used.
-45-02B		D	2	0	May be inoperative provided procedures do not require their use.
-46-01	Cargo Interphone/ Intercom System (747-8F)				
-46-01A		C	1	0	(O) May be inoperative provided alternate procedures are established and used.
					NOTE: Any function that operates normally may be used.
-46-01B		D	1	0	May be inoperative provided procedures do not require its use.
-46-02	Loadmaster Handsets (747-8F)				
-46-02A		C	2	0	(O) May be inoperative provided alternate procedures are established and used.
-46-02B		D	2	0	May be inoperative provided procedures do not require their use.
-51-01	Flight Deck Hand Microphones				
-51-01A		C	-	0	May be inoperative or missing provided associated boom microphone operates normally.
-51-01B		D	-	0	May be inoperative or missing provided procedures do not require their use.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
23 COMMUNICATIONS					
-51-02	Flight Deck Headsets/ Headphones	D	-	-	Any in excess of those required by FAR may be inoperative.
-51-02-01	Headset Boom Microphones	A	-	0	May be inoperative provided: a) Associated hand microphone is installed and operates normally, and b) Repairs are made within three flight days.
-51-02-02	Headset Earphones/ Headphones	C	-	1	Either captain's or first officer's earphone/ headphones may be inoperative provided associated flight deck speaker operates normally.
-51-03	Flight Deck Speakers	C	2	0	May be inoperative provided: a) Associated headset earphones or headphones are installed and operate normally, and b) Procedures do not require their use.
-51-04	Audio Control Panels (ACPs)				
-51-04-01	Captain's ACP	C	1	0	(O) May be inoperative provided first observer's ACP operates normally.
-51-04-02	First Observer's ACP	A	1	0	May be inoperative provided: a) Captain's ACP operates normally, and b) Repairs are made within two flight days.
-51-04-03	Second Observer's ACP	D	1	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
23 COMMUNICATIONS					
-51-05	Flight Crew Push-To-Talk (PTT) Switches				
-51-05-01	Control Wheel PTT Switches	C	2	1	(M) One may be inoperative provided: a) Inoperative switch is deactivated open, and b) Associated audio control panel (ACP) PTT switch operates normally.
-51-05-02	Audio Control Panel (ACP) PTT Switches	C	2	1	(M) One may be inoperative provided: a) Inoperative switch is verified open, and b) Associated control wheel PTT switch operates normally.
-51-05-03	Glareshield PTT Switches	C	2	0	(M) May be inoperative deactivated open.
-51-06	Flight Interphone System				
-51-06-01	Nose Gear Jack				
-51-06-01A		C	1	0	(O) Flight interphone flight deck to ground/ground to flight deck function may be inoperative provided: a) Nose gear service interphone jack operates normally, and b) Alternate procedures are established and used.
-51-06-01B		B	1	0	(O) May be inoperative provided alternate procedures are established and used.
-51-06-02	Other Than Nose Gear Jack	D	-	0	May be inoperative provided procedures do not require their use.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
			1	0		3. NUMBER REQUIRED FOR DISPATCH
						1
23 COMMUNICATIONS						
-71-01	Cockpit Voice Recorder (CVR) System	A	1	0	May be inoperative provided: a) Flight data recorder (FDR) system operates normally, and b) Repairs are made within three flight days.	
-75-01	Flight Deck Door Visual Surveillance Systems (747-8I)					
-75-01-01	Flight Deck Door Viewing Port					
-75-01-01A		A	1	0	(O) May be inoperative provided: a) Alternate procedures are established and used, and b) Repairs are made within three flight days.	
-75-01-01B		C	1	0	(O) May be inoperative provided: a) Electronic video surveillance system is installed and operates normally, and b) Alternate procedures are established and used.	
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
23 COMMUNICATIONS					
-75-01 Flight Deck Door Visual Surveillance Systems (747-8I) (Cont'd)					
-75-01-02 *** Electronic Video Surveillance System					
-75-01-02A	A	1	0		(O) May be inoperative and components may be missing provided: a) Alternate procedures are established and used, and b) Repairs are made within three flight days. NOTE: Any portion of the system that operates normally may be used.
-75-01-02B	C	1	0		(O) May be inoperative and components may be missing provided: a) Flight deck door viewing port operates normally, and b) Alternate procedures are established and used. NOTE: Any portion of the system that operates normally may be used.
-75-01-02C	D	1	0		May be inoperative and components may be missing provided procedures do not require its use.

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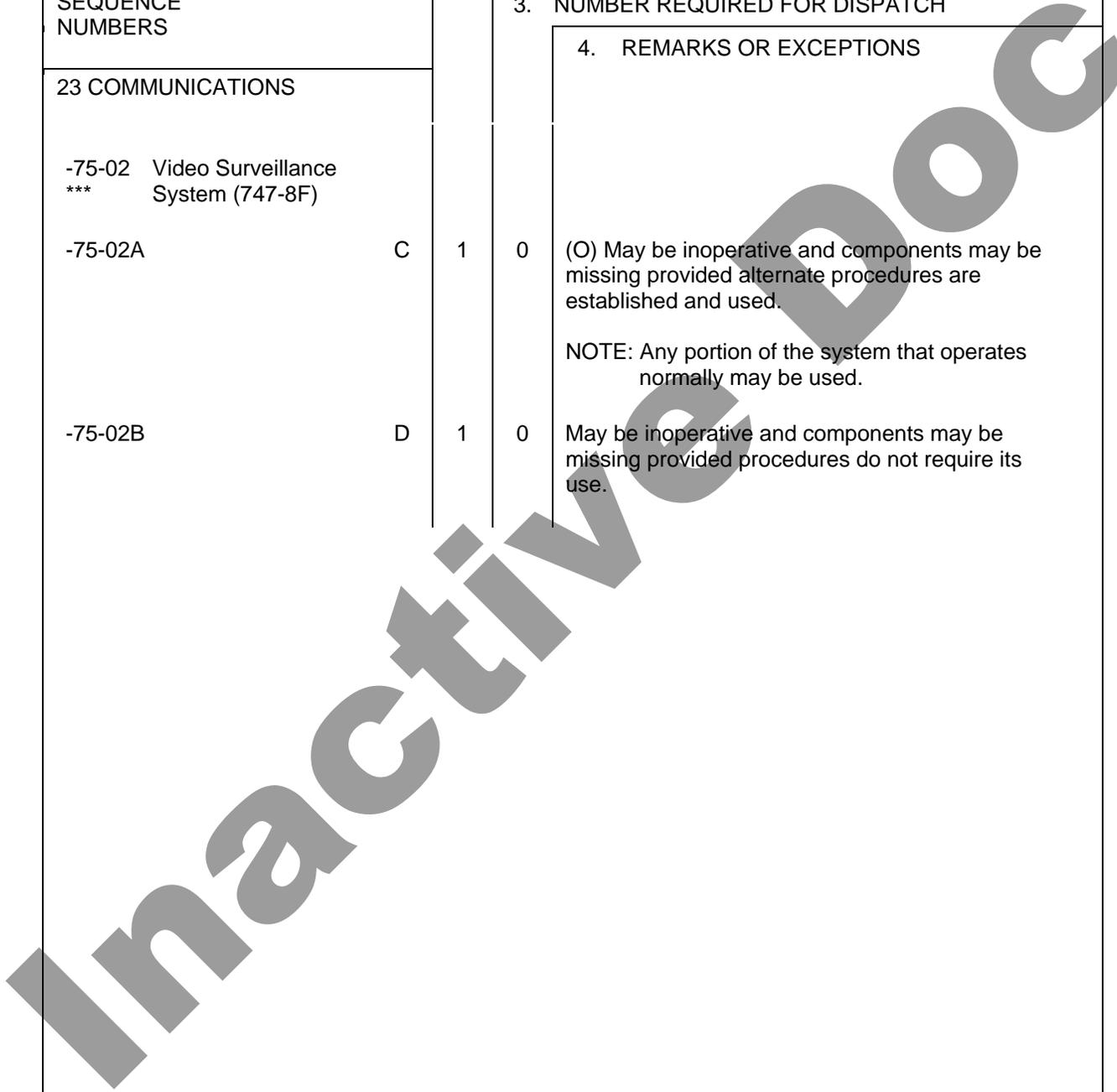
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
23 COMMUNICATIONS					
-75-02 *** Video Surveillance System (747-8F)					
-75-02A	C	1	0		(O) May be inoperative and components may be missing provided alternate procedures are established and used. NOTE: Any portion of the system that operates normally may be used.
-75-02B	D	1	0		May be inoperative and components may be missing provided procedures do not require its use.



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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
24 ELECTRICAL POWER					
-00-01	Electrical System (ELEC) Synoptic Display	C	1	0	
-11-01	Engine Driven Generator Systems (IDG, GCU, GCB)	B	4	3	(M) One may be inoperative provided: a) Associated generator control breaker (GCB) is verified open, and b) Associated integrated drive generator (IDG) is disconnected.
-11-02	Generator DRIVE Lights	C	4	0	
-21-01	Lightning Protectors	C	12	9	One of each phase may be inoperative provided all AC busses are paralleled. NOTE: For triple channel autoland, at least two of the three generators used must have lightning protection on all three phases.
-21-02	APU Driven Generator Systems (Generator, AGCU, APB)				
-21-02A		C	2	0	(M)(O) May be inoperative provided associated auxiliary power breaker (APB) remains open.
-21-02B		C	2	0	(M) May be inoperative and removed provided APU is considered inoperative.
-22-01	Bus Tie Breakers (BTBs)	C	4	3	One may be inoperative closed provided: a) Split system breaker (SSB) operates normally, and b) Approach minimums do not require its use.
-22-02	Split System Breaker (SSB)	C	1	0	(O) May be inoperative provided SSB is verified closed before each departure.

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						3. NUMBER REQUIRED FOR DISPATCH
24 ELECTRICAL POWER						
-23-01	APU Generator Power ON Lights	C	2	0		
-23-02	APU Generator Power AVAIL Lights	C	2	0		
-23-03	AC Bus ISLN Lights	C	4	0		
-23-04	Engine and APU Generator FIELD OFF Lights (Overhead Maintenance Panel)	C	6	0		
-23-05	Split System Breaker OPEN Light (Overhead Maintenance Panel)	C	1	0		
-23-06	GEN CONT Lights	C	4	0		
-32-01	Transformer Rectifier Units (TRUs)					
-32-01-01	Main TRUs	C	4	3		
-32-01-02	APU TRU	C	1	0	(O) May be inoperative provided APU battery is selected for APU start.	
-32-01-03	Ground Handling TRUs	C	2	0		
-32-02	DC Bus Isolation Relays	C	4	3	One may be inoperative closed provided approach minimums do not require its use.	
-33-01	Towing Static Inverter	D	1	0	(M) May be inoperative deactivated or removed.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
24 ELECTRICAL POWER					
-41-01	External Power Systems	C	2	0	
-41-01-01	AVAIL Lights (Flight Deck)	C	2	0	(O) May be inoperative provided alternate procedures are established and used.
-41-01-02	ON Lights (Flight Deck)	C	2	0	(O) May be inoperative provided alternate procedures are established and used.
-41-01-03	AC CONNECTED Lights (External Power Panel)	C	2	0	(O) May be inoperative provided alternate procedures are established and used.
-41-01-04	POWER NOT IN USE Lights (External Power Panel)	C	2	0	(O) May be inoperative provided alternate procedures are established and used.
-51-01	Electrical Load Control Units (ELCUs)				
-51-01-01	747-8F	C	4	3	One may be inoperative provided associated utility bus components are considered inoperative.
-51-01-02	747-8I				
-51-01-02-01	Utility Power ELCUs	C	4	3	One may be inoperative provided associated utility bus components are considered inoperative.
-51-01-02-02	Galley Power ELCUs	C	4	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
24 ELECTRICAL POWER					
-51-02	Utility Power OFF Lights	C	2	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS						
-00-01	Non-Essential Equipment and Furnishings (NEF)		-	0	May be inoperative, damaged, or missing provided the item(s) is deferred in accordance with the operator's NEF deferral program. The NEF program, procedures, and processes are outlined in the operator's (insert name) Manual. (M) and (O) procedures, if required, must be available to the flight crew and included in the operator's appropriate document.	
-11-01	Flight Crew Seats					
-11-01-01	Power Adjustment Systems	D	2	0	(M) May be inoperative deactivated.	
-11-01-02	Manual Adjustment Systems					
-11-01-02-01	Recline Mechanisms	A	2	0	(M) May be inoperative provided: <ul style="list-style-type: none"> a) Seat back is secured in an upright position acceptable to affected crewmember, and b) Repairs are made within two flight days. 	
-11-01-02-02	Armrests	B	4	0	(M) May be inoperative provided: <ul style="list-style-type: none"> a) Armrest is stowed in retracted position or removed, and b) Seat is acceptable to affected crewmember. 	
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
25 EQUIPMENT/FURNISHINGS					
-11-01	Flight Crew Seats (Cont'd)				
-11-01-02	Manual Adjustment Systems (Cont'd)				
-11-01-02-03	Lumbar/Thigh Supports	C	4	0	May be inoperative provided seat is acceptable to affected crewmember.
-11-01-02-04	Headrests	C	2	0	May be inoperative provided seat is acceptable to affected crewmember.
-11-01-02-05	Vertical Adjustments				
-11-01-02-05A		C	2	0	May be inoperative provided associated vertical power adjustment system operates normally.
-11-01-02-05B		A	2	0	(M) May be inoperative provided: a) Seat is secured in a vertical position acceptable to affected crewmember, and b) Repairs are made within two flight days.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS					
-11-02	Observer Seats				
-11-02-01	First Observer Seat (Including Associated Equipment)				
-11-02-01A	A	1	0	May be inoperative provided: a) A supernumerary/passenger seat is made available to an FAA inspector for performance of official duties, and b) Repairs are made within two flight days.	
-11-02-01B	A	1	0	May be inoperative provided: a) Second observer seat is available to an FAA inspector for performance of official duties, and b) Repairs are made within two flight days.	
-11-02-01C	A	1	0	May be inoperative provided: a) Required minimum safety equipment (safety belt and oxygen) is available, b) Seat is acceptable to an FAA inspector for performance of official duties, and c) Repairs are made within two flight days.	
NOTE 1: These provisos are intended to provide for occupancy of the above seat by an FAA inspector when the minimum safety equipment (safety belt and oxygen) is functional and the inspector determines the conditions to be acceptable.					
NOTE 2: The pilot in command will determine if the minimum safety equipment is functional for other persons authorized to occupy an observer seat.					
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
25 EQUIPMENT/FURNISHINGS					
-11-02	Observer Seats (Cont'd)				
-11-02-02	Second Observer Seat (Including Associated Equipment)	D	1	0	NOTE: The pilot in command will determine if the minimum safety equipment is functional for other persons authorized to occupy an observer seat.
-19-01	Flight Crew Rest	C	1	0	(M)(O) May be inoperative deactivated closed. NOTE: This proviso is not intended to prohibit inspections by crewmembers.
-19-01-01	Bunks	C	-	0	(M)(O) May be inoperative provided inoperative bunk is blocked and placarded, DO NOT OCCUPY.
-25-01	Supernumerary Seats (747-8F)	D	6	0	(M) May be inoperative provided seat is blocked and placarded, DO NOT OCCUPY. NOTE: A seat with an inoperative or missing seat belt is considered inoperative.
-25-01-01	Recline Mechanisms				
-25-01-01A		D	6	0	(M) May be inoperative and seat occupied provided seat back is secured in the full upright position.
-25-01-01B		D	6	0	May be inoperative and seat occupied provided seat back is immovable in the full upright position.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS					
-25-02	Passenger Seats (747-8I)	D	-	0	(M) May be inoperative provided: <ul style="list-style-type: none"> a) Seat does not block an emergency exit, b) Seat does not restrict any passenger from access to the main aircraft aisle, and c) Affected seat(s) is blocked and placarded, DO NOT OCCUPY. NOTE 1: A seat with an inoperative or missing seat belt is considered inoperative. NOTE 2: Inoperative seats do not affect the required number of flight attendants. NOTE 3: Affected seat(s) may include the seat(s) behind and/or adjacent outboard seats.
-25-02-01	Recline Mechanisms				
-25-02-01A		D	-	0	(M) May be inoperative and seat occupied provided seat back is secured in the full upright position.
-25-02-01B		D	-	0	May be inoperative and seat occupied provided seat back is immovable in the full upright position.
-25-02-02	Underseat Baggage Restraining Bars	C	-	0	(O) May be inoperative or missing provided: <ul style="list-style-type: none"> a) Associated seat is placarded, DO NOT STOW BAGGAGE UNDER THIS SEAT, b) Baggage is not stowed under seat with inoperative restraining bar, and c) Procedures are established to alert cabin crew of inoperative restraining bar.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS					
-25-02	Passenger Seats (747-8I) (Cont'd)				
-25-02-03	Armrests				
-25-02-03-01	Armrests with Recline Mechanism	D	-	0	(M) May be inoperative or missing and seat occupied provided: a) Armrest does not block an emergency exit, b) Armrest does not restrict any passenger from access to the main aircraft aisle, and c) For armrest missing, associated seat back is secured in the full upright position.
-25-02-03-02	Armrests without Recline Mechanism	D	-	0	May be inoperative or missing and seat occupied provided: a) Armrest does not block an emergency exit, and b) Armrest does not restrict any passenger from access to the main aircraft aisle.

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SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS				
-25-03 Flight Attendant Seat Assemblies (Single or Dual Position) (747-8I)				
-25-03-01 Required Flight Attendant Seats	B	-	-	<p>(M)(O) One seat position or assembly (dual position) may be inoperative provided:</p> <ul style="list-style-type: none"> a) Folding type seat stows automatically or is secured in the retracted position, b) Inoperative seat position or seat assembly is not occupied, c) Flight attendant(s) displaced by inoperative seat(s) occupies either an adjacent flight attendant seat or the passenger seat which is most accessible to the inoperative seat(s), so as to most effectively perform assigned duties, d) Passenger seat assigned to flight attendant is placarded, FOR FLIGHT ATTENDANT USE ONLY, and e) Alternate procedures are established and used as published in crewmember manuals. <p>NOTE 1: An automatic folding seat that will not stow automatically is considered inoperative.</p> <p>NOTE 2: A seat position with an inoperative or missing restraint system is considered inoperative.</p> <p>NOTE 3: Individual operators, when operating with inoperative seats, will consider the locations and combinations of seats to ensure that proximity to exits and distribution requirements of the applicable regulation are met.</p> <p>(Continued)</p>

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				4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS				
-25-03	Flight Attendant Seat Assemblies (Single or Dual Position) (747-8I) (Cont'd)			
-25-03-01	Required Flight Attendant Seats (Cont'd)			
-25-03-02	Excess Flight Attendant Seats	C	-	0
				(M) May be inoperative provided: <ul style="list-style-type: none"> a) Folding type seat stows automatically or is secured in the retracted position, and b) Inoperative seat position or seat assembly is not occupied. NOTE 1: An automatic folding seat that will not stow automatically is considered inoperative. NOTE 2: A seat position with an inoperative or missing restraint system is considered inoperative. NOTE 4: If one side of a dual seat assembly is inoperative and a flight attendant is displaced to the adjacent seat, the adjacent seat must operate normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
25 EQUIPMENT/FURNISHINGS					
-25-04	Crew Rest Seats (747-8I)	D	-	0	(M) May be inoperative provided seat is blocked and placarded, DO NOT OCCUPY. NOTE: A seat with an inoperative or missing seat belt is considered inoperative.
-25-04-01	Recline Mechanisms				
-25-04-01A		D	-	0	(M) May be inoperative and seat occupied provided seat back is secured in the full upright position.
-25-04-01B		D	-	0	May be inoperative and seat occupied provided seat back is immovable in the full upright position.
-25-04-02	Armrests	D	-	0	(M) May be inoperative and seat occupied provided armrest is stowed in retracted position or removed.

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SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS				
-28-01 Storage Bins/Cabin, Galley, and Lavatory Storage Compartments/ Closets				
-28-01A	C	-	-	<p>(M) May be inoperative provided:</p> <ul style="list-style-type: none"> a) Procedures are established to secure affected bin, compartment, or closet in the closed position, b) Affected bin, compartment, or closet is prominently placarded, DO NOT USE, c) Any emergency equipment located in affected bin, compartment, or closet is considered inoperative, and d) Affected bin, compartment, or closet is not used for storage of any items except those permanently affixed. <p>NOTE: For overhead bins, if no partitions are installed, the entire overhead bin is considered inoperative.</p> <p>(Continued)</p>

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED
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		4. REMARKS OR EXCEPTIONS		
25 EQUIPMENT/FURNISHINGS				
-28-01 Storage Bins/Cabin, Galley, and Lavatory Storage Compartments/ Closets (Cont'd)				
-28-01B	C	-	-	<p>(M)(O) May be inoperative provided:</p> <ul style="list-style-type: none"> a) For non-retractable doors, affected door is removed, b) For retractable doors, affected door is removed or secured in the retracted (fully open) position, c) Affected bin, compartment, or closet is prominently placarded, DO NOT USE, d) Affected bin, compartment, or closet is not used for storage of any items except those permanently affixed, e) Procedures are established and used to alert crewmembers and supernumeraries/passengers of inoperative bins, compartments, or closets, and f) Supernumeraries/passengers are briefed that affected bin, compartment, or closet is not used. <p>NOTE 1: For overhead bins, if no partitions are installed, the entire overhead bin is considered inoperative.</p> <p>NOTE 2: Any emergency equipment located in the affected bin, compartment, or closet (permanently affixed) is available for use.</p> <p>(Continued)</p>

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS						
-28-01	Storage Bins/Cabin, Galley, and Lavatory Storage Compartments/ Closets (Cont'd)					
-28-01-01	Multi Latch/Quarter Turn Lug Installations	C	-	-	-	One latch/lug per compartment may be inoperative provided: a) Remaining latch(es)/lug(s) on affected compartment operates normally, and b) If affected compartment is used for a galley cart, the cart remains empty.
-28-01-02	*** Storage Compartment Key Locks	D	-	0	0	(M) May be inoperative in the unlocked position provided doors can be secured by other means.
-30-01	Galley/Cabin Waste Container Access Doors/Covers	C	-	-	-	(M)(O) May be inoperative provided: a) Associated waste container is empty, b) Access is secured to prevent waste introduction into associated waste container, and c) Procedures are established to ensure that sufficient galley/cabin waste containers are available to accommodate all waste that may be generated on a flight.
-38-01	Galley Cart Lift System (747-8I)	C	1	0	0	(M) May be inoperative provided: a) Galley cart lift system is deactivated, and b) Galley cart lift remains empty.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS					
-40-01 Exterior Lavatory Door Ashtrays					
-40-01-01 747-8F	A	1	0		May be missing or inoperative for ten calendar days.
-40-01-02 747-8I					
-40-01-02A	A	-	-		Up to and including 50 percent may be missing or inoperative for ten calendar days.
					NOTE: Crew lavatories are included in the total aircraft exterior lavatory door ashtray count.
-40-01-02B	A	-	-		More than 50 percent may be missing or inoperative for three calendar days.
					NOTE: Crew lavatories are included in the total aircraft exterior lavatory door ashtray count.
-40-02 Lavatory Waste Container Flappers/ Access Doors					
-40-02-01 747-8F	C	1	0		(M)(O) May be inoperative provided: a) Associated waste container is empty, b) Access is secured to prevent waste introduction into associated waste container, and c) Crewmembers/supernumeraries are appropriately briefed before each departure.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS						
-40-02	Lavatory Waste Container Flappers/ Access Doors (Cont'd)					
-40-02-02	747-81	C	-	-	(M)(O) May be inoperative provided: <ul style="list-style-type: none"> a) Associated waste container is empty, b) Access is secured to prevent waste introduction into associated waste container, c) Associated lavatory door is locked closed and placarded, INOPERATIVE - DO NOT ENTER, and d) Associated lavatory is used only by crewmembers. 	
-40-03	Wheelchair Accessible Lavatory Items (747-81)				Deleted, Revision 2.	
-52-01	Lower Cargo Compartment Lining Panels	C	-	0	(O) May be damaged or missing provided associated lower cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components.	
-53-01	Lower Cargo Handling Systems	D	2	0	NOTE: Any portion of the system that operates normally may be used.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
25 EQUIPMENT/FURNISHINGS					
-54-01	Lower Cargo Restraint Systems				
-54-01A		A	2	0	(M) May be inoperative or missing provided: a) Acceptable cargo loading limits from an approved source, i.e., an approved Cargo Loading Manual, Cargo Handling Manual, or Weight and Balance Manual are observed, and b) Repairs are made prior to completion of the next heavy maintenance visit.
-54-01B		C	2	0	May be inoperative or missing provided associated cargo compartment remains empty.
-57-01	Main Deck Cargo Handling System (747-8F)	D	1	0	NOTE: Any portion of the system that operates normally may be used.
-58-01	Main Deck Cargo Restraint System (747-8F)				
-58-01A		A	1	0	(M) May be inoperative or missing provided: a) Acceptable cargo loading limits from an approved source, i.e., an approved Cargo Loading Manual, Cargo Handling Manual, or Weight and Balance Manual are observed, and b) Repairs are made prior to completion of the next heavy maintenance visit.
-58-01B		C	1	0	May be inoperative or missing provided main deck cargo compartment remains empty.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS						
-59-01	Main Deck Cargo Compartment Lining Panels (747-8F)	C	-	0		(O) May be damaged or missing provided main deck cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define which items are approved for inclusion in the fly away kits and which materials can be used as ballast.
-60-01	Emergency Medical Equipment					
-60-01-01	747-8F					
-60-01-01A		A	-	-		(O) If more than one is required by FAR, only one of the required first aid kits (FAKs) may be incomplete, missing, or inoperative provided: <ul style="list-style-type: none"> a) FAK is resealed in a manner that will identify it as a unit that cannot be mistaken for a fully serviceable unit, and b) Repairs or replacements are made within one flight.
-60-01-01B		D	-	-		Any first aid kits (FAKs) in excess of those required by FAR may be incomplete, missing, or inoperative.
						(Continued)

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS					
-60-01	Emergency Medical Equipment (Cont'd)				
-60-01-02	747-8I				
-60-01-02-01	Automatic External Defibrillator (AED) and/or Associated Equipment				
-60-01-02-01A		A	-	0	(O) May be incomplete, missing, or inoperative provided: a) AED is resealed in a manner that will identify it as a unit that cannot be mistaken for a fully serviceable unit, and b) Repairs or replacements are made within one flight.
-60-01-02-01B		D	-	-	Any in excess of those required by FAR may be incomplete, missing, or inoperative.
-60-01-02-02	*** Emergency Medical Kit (EMK) and/or Associated Equipment				
-60-01-02-02A		A	-	0	(O) May be incomplete, missing, or inoperative provided: a) EMK is resealed in a manner that will identify it as a unit that cannot be mistaken for a fully serviceable unit, and b) Repairs or replacements are made within one flight.
-60-01-02-02B		D	-	-	Any in excess of those required by FAR may be incomplete, missing, or inoperative. (Continued)

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS					
-60-01	Emergency Medical Equipment (Cont'd)				
-60-01-02	747-8I (Cont'd)				
-60-01-02-03	First Aid Kit (FAK) and/or Associated Equipment				
-60-01-02-03A		A	-	-	(O) If more than one is required by FAR, only one of the required first aid kits may be incomplete, missing, or inoperative provided: a) FAK is resealed in a manner that will identify it as a unit that cannot be mistaken for a fully serviceable unit, and b) Repairs or replacements are made within one flight.
-60-01-02-03B		D	-	-	Any in excess of those required by FAR may be incomplete, missing, or inoperative.
-60-02	FASTEN SEAT BELT WHILE SEATED Placards	C	-	-	One or more placards may be illegible or missing provided a legible placard is visible from each occupied supernumerary/passenger seat.
-60-03	Flight Attendant Flashlight Holder Assemblies (Including Flashlight) (747-8I)	C	-	0	May be inoperative or missing provided crewmember has a flashlight of equivalent characteristics readily available.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
25 EQUIPMENT/FURNISHINGS						
-61-01	Emergency Escape Devices					
-61-01-01	747-8F					
-61-01-01-01	Escape Reels	C	8	2		(M) May be inoperative or missing provided: a) Inoperative escape reel is removed from installed location, and b) Number of flight crewmembers plus supernumeraries is limited to number of operative escape reels.
-61-01-01-02	Escape Harnesses	C	8	0		(M) May be inoperative or missing provided: a) Inoperative escape harness is removed from installed location, and b) Number of supernumeraries is limited to number of operative escape harnesses.
-61-01-02	747-8I					
-61-01-02-01	Escape Reels	C	4	2		(M) May be inoperative or missing provided: a) Inoperative escape reel is removed from installed location, and b) Number of flight crewmembers, including official observers, is limited to number of operative escape reels.
-61-01-02-02	Escape Harness	C	1	0		(M) May be inoperative or missing provided escape harness is removed from installed location.
-62-01	Flotation Equipment	D	-	-		Any in excess of those required by FAR may be inoperative or missing provided required distribution is maintained.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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25 EQUIPMENT/FURNISHINGS					
-63-01	Portable Emergency Locator Transmitters (ELT)	D	-	-	Any in excess of those required by FAR may be inoperative or missing.
-63-02	Megaphones (747-8I)	D	-	2	Any in excess of those required by FAR may be inoperative or missing provided: <ul style="list-style-type: none"> a) Inoperative megaphone is removed from passenger cabin, b) Associated location placarding is removed or obscured, and c) Required distribution is maintained.
-63-03 ***	Emergency Evacuation Signal System (747-8I)	C	1	0	(O) May be inoperative provided alternate procedures are established and used to initiate an emergency evacuation.
-64-01	Smoke Barrier (747-8I)	C	1	0	
-68-01 ***	Floor-Mounted Escape Slide (747-8F)	C	1	0	May be inoperative or missing provided upper deck crew service door is considered inoperative.
-76-01	Door 5 Overhead Crew Rest (747-8I)	C	1	0	(M)(O) May be inoperative deactivated closed. NOTE: This proviso is not intended to prohibit inspections by crewmembers.
-76-01-01	Door Lock	C	1	0	(M) May be inoperative provided: <ul style="list-style-type: none"> a) Door lock is deactivated in the unlocked position, and b) Associated door is verified to open and close normally.
-76-01-02	Bunks	C	10	0	(M)(O) May be inoperative provided inoperative bunk is blocked and placarded, DO NOT OCCUPY.

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26 FIRE PROTECTION					
-11-01	Engine Fire Detection System				
-11-01-01	Detection Loops	C	8	4	One per engine may be inoperative.
-11-01-02	Flight Deck Test System	C	1	0	(M) May be inoperative provided an alternate procedure is used to verify system integrity.
-11-02	Engine Overheat Detection System				
-11-02-01	Detection Loops	C	8	4	One per engine may be inoperative.
-11-02-02	Flight Deck Test System	C	1	0	(M) May be inoperative provided an alternate procedure is used to verify system integrity.
-11-03	Fuel Control Switch Fire Light	A	4	3	One may be inoperative provided repairs are made within three flight days.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
26 FIRE PROTECTION						
-13-01	Lavatory Smoke Detection Systems					
-13-01-01	747-8F	D	1	0		
-13-01-02	747-8I	C	-	0		(M)(O) May be inoperative for each lavatory provided: a) Associated waste container is empty, b) Associated lavatory door is locked closed and placarded, INOPERATIVE - DO NOT ENTER, and c) Associated lavatory is used only by crewmembers. NOTE: These provisos are not intended to prohibit lavatory use or inspections by crewmembers.

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SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
26 FIRE PROTECTION				
-14-01	Main Deck Cargo Smoke Detection System (747-8F)			
-14-01-01	Flight Deck Test System			
-14-01-01A	C	1	0	(M) May be inoperative provided an alternate procedure is used to verify system integrity.
-14-01-01B	C	1	0	(O) May be inoperative provided main deck cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
-14-01-02	Controller Channels			
-14-01-02A	C	2	1	(O) One may be inoperative provided associated smoke zones remain empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
26 FIRE PROTECTION					
-14-01	Main Deck Cargo Smoke Detection System (747-8F) (Cont'd)				
-14-01-02	Controller Channels (Cont'd)				
-14-01-02B		C	2	0	(O) May be inoperative provided main deck cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
-14-01-03	Controller to EIU ARINC Data Busses	C	2	1	
-14-01-04	Smoke Detectors				
-14-01-04A		C	67	64	One per smoke zone may be inoperative provided all smoke detectors in adjacent smoke zones operate normally.
-14-01-04B		C	67	0	(O) May be inoperative provided associated smoke zone remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
26 FIRE PROTECTION						
-14-02	Flight Crew Rest Smoke Detection System	C	1	0	(M) May be inoperative provided: a) Flight crew rest smoke detection system is deactivated, and b) Flight crew rest is considered inoperative.	
-14-02-01	Bunk Smoke Detectors	C	-	0	May be inoperative provided associated bunk is considered inoperative.	
-14-03	Door 5 Overhead Crew Rest Smoke Detection System (747-8I)	C	1	0	(M) May be inoperative provided: a) Door 5 overhead crew rest smoke detection system is deactivated, and b) Door 5 overhead crew rest is considered inoperative.	
-14-03-01	Bunk Smoke Detectors	C	10	0	(M) May be inoperative provided associated bunk privacy curtain is secured open or removed.	
-15-01	APU Fire Detection System					
-15-01-01	Detection Loops					
-15-01-01A		C	2	1		
-15-01-01B		C	2	0	(M)(O) May be inoperative provided: a) APU is used for ground operations only, b) APU is continuously monitored by ground personnel when operating, c) APU ground control fire protection panel operates normally, and d) APU is not used during taxi.	
-15-01-01C		C	2	0	May be inoperative provided APU is not used.	
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
26 FIRE PROTECTION					
-15-01	APU Fire Detection System (Cont'd)				
-15-01-02	Flight Deck Test System	C	1	0	(M) May be inoperative provided an alternate procedure is used to verify system integrity.
-15-02	APU Ground Control Fire Protection Panel	C	1	0	
-16-01	Lower Cargo Smoke Detection System				
-16-01-01	Flight Deck Test System				
-16-01-01A		C	1	0	(M) May be inoperative provided an alternate procedure is used to verify system integrity.
-16-01-01B		C	1	0	(O) May be inoperative provided associated lower cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components.
<p>NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.</p> <p>(Continued)</p>					

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26 FIRE PROTECTION						
-16-01	Lower Cargo Smoke Detection System (Cont'd)					
-16-01-02	Controller Channels					
-16-01-02A		C	2	1		(O) One may be inoperative provided associated smoke zones remain empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
-16-01-02B		C	2	0		(O) May be inoperative provided forward and aft lower cargo compartments remain empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
-16-01-03	Controller to EIU ARINC Data Busses	C	2	1		
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
26 FIRE PROTECTION					
-16-01	Lower Cargo Smoke Detection System (Cont'd)				
-16-01-04	Smoke Detectors				
-16-01-04A		C	-	-	One per lower cargo compartment may be inoperative.
-16-01-04B		C	-	0	(O) May be inoperative provided associated smoke zone remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
-17-01	Wheel Well Fire Detection System				
-17-01A		C	1	0	(M) May be inoperative provided: a) Wheel well fire detection system is deactivated, and b) Brake temperature indication system operates normally.
-17-01B		C	1	0	(M)(O) May be inoperative provided: a) Wheel well fire detection system is deactivated, b) Brakes are verified cool before each departure, c) Appropriate performance adjustments are applied, and d) After takeoff, gear remains down for ten minutes before retraction.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
26 FIRE PROTECTION						
-17-01	Wheel Well Fire Detection System (Cont'd)					
-17-01-01	Flight Deck Test System	C	1	0	(M) May be inoperative provided an alternate procedure is used to verify system integrity.	
-18-01	Wing Leading Edge Overheat Detection System					
-18-01-01	Detection Loops	C	4	2	One per wing may be inoperative.	
-18-01-02	Flight Deck Test System	C	1	0	(M) May be inoperative provided an alternate procedure is used to verify system integrity.	
-18-02	Center Duct Leak Detection System					
-18-02-01	Detection Loops	C	2	1		
-18-02-02	Flight Deck Test System	C	1	0	(M) May be inoperative provided an alternate procedure is used to verify system integrity.	
-18-03	Engine Fan Case Overheat Detection Systems	C	4	3	One may be inoperative provided: a) Airplane is not operated in known or forecast icing conditions, and b) Associated ENGINE ANTI-ICE switch remains OFF.	
-19-01	APU Duct Leak Detection System	C	1	0	May be inoperative provided APU is not used.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
26 FIRE PROTECTION					
-20-01	Fire Bottle Pressure Indication Systems (Engine, Lower Cargo, APU)	C	-	0	(M) May be inoperative provided: a) Associated bottle is verified full, and b) Associated bottle squib integrity is verified before each departure.
-20-01-01	Lower Cargo Fire Bottle Pressure Indication Systems	C	-	0	(O) May be inoperative provided forward and aft lower cargo compartments remain empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
-20-01-02	APU Fire Bottle Pressure Indication System	C	1	0	May be inoperative provided APU is not used.
-20-01-03	Fire BTL DISCH Lights	C	6	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
26 FIRE PROTECTION					
-20-02	Fire Extinguisher Squib Test System	C	1	0	(M) May be inoperative provided an alternate procedure is used to verify squib integrity.
-20-02-01	Lower Cargo Squib Test System	C	1	0	(O) May be inoperative provided forward and aft lower cargo compartments remain empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
-20-02-02	APU Squib Test System	C	1	0	May be inoperative provided APU is not used.
-22-01	APU Fire Extinguishing System	C	1	0	May be inoperative provided APU is not used.
-22-01-01	APU Auto Discharge	C	1	0	(M) May be inoperative provided APU is monitored during ground operations for fire warning.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
26 FIRE PROTECTION					
-23-01	Lower Cargo Fire Extinguishing System	C	1	0	(O) May be inoperative provided forward and aft lower cargo compartments remain empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.
-23-01-01	Fire Extinguisher Bottles	C	-	3	(M)(O) May be inoperative provided: a) Inoperative fire extinguisher bottle is deactivated, b) Fire extinguisher bottles A and B operate normally, and c) Maximum diversion time to a suitable airport is less than or equal to total fire extinguisher bottle capability.
-23-01-02	Flow Valves	C	2	1	(M)(O) One may be inoperative provided: a) Inoperative flow valve is deactivated closed, and b) Associated lower cargo compartment remains empty, except for ballast, empty cargo containers (ballast may be loaded in ULDs), fly away kits, pallets, and cargo restraint components. NOTE: Operator MELs must define items which are approved for inclusion in the fly away kits and which materials can be used as ballast.

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26 FIRE PROTECTION					
-26-01	Portable Fire Extinguishers	D	-	-	(M) Any in excess of the those required by FAR may be inoperative or missing provided: a) Inoperative fire extinguisher is tagged inoperative, removed from installed location, and placed out of sight so it cannot be mistaken for a functional unit, and b) Required distribution is maintained.
-27-01	Lavatory Fire Extinguishing Systems				
-27-01-01	747-8F	D	1	0	
-27-01-02	747-8I				
-27-01-02A		C	-	0	May be inoperative for each lavatory provided associated lavatory smoke detection system operates normally.
-27-01-02B		C	-	0	(M)(O) May be inoperative for each lavatory provided: a) Associated waste container is empty, b) Associated lavatory door is locked closed and placarded, INOPERATIVE - DO NOT ENTER, and c) Associated lavatory is used only by crewmembers.
NOTE: These provisos are not intended to prohibit lavatory use or inspections by crewmembers.					

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
27 FLIGHT CONTROLS					
-00-01	Flight Controls (FCTL) Synoptic Display	C	1	0	(O) May be inoperative provided alternate procedures are established and used.
-09-01	Lateral Control Electronics (LCE) Interface	C	1	0	May be dispatched with LCE INTERFACE faults.
-11-01	Aileron Trim System				
-11-01A		C	1	0	(M) May be inoperative provided: a) Aileron trim is verified centered, and b) Aileron trim system is deactivated.
-11-01B		C	1	0	(M) May be inoperative provided: a) Aileron trim actuator is removed, and b) Aileron trim system is deactivated centered.
-11-02	Outboard Aileron Power Control Units (PCUs)				
-11-02-01	747-8F without SB 747-27-2504	B	4	2	(M) Inboard PCU on each outboard aileron may be inoperative deactivated.
-11-02-02	747-8F with SB 747-27-2504 or Production Equivalent	B	4	2	(M) One PCU on each outboard aileron may be inoperative deactivated.
-11-02-03	747-8I	B	4	2	(M) One PCU on each outboard aileron may be inoperative deactivated.
-18-01	Inboard Aileron Position Indicating System	C	1	0	(M) May be inoperative provided visual confirmation of proper aileron movement is made before each departure.

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27 FLIGHT CONTROLS					
-18-02	Control Wheel Position Transducers	C	6	5	
-21-01	Rudder Trim Center Switch	C	1	0	
-23-01	Hydraulic Shutoff VALVE CLOSED Lights	C	8	0	May be inoperative provided associated hydraulic shutoff valve is considered inoperative.
-23-02	Hydraulic Shutoff Valves (Wing and Tail)	C	8	0	(M) May be inoperative secured open.
-28-01	Rudder Position Indicating System	C	1	0	(M) May be inoperative provided visual confirmation of proper rudder movement is made before each departure.
-28-02	Rudder Trim Indicator	C	1	0	(O) May be inoperative provided rudder trim is verified centered before each departure.
-28-03	Rudder Pedal Position Transducer	C	1	0	(O) May be inoperative provided appropriate performance adjustments are applied.
-31-01	Pitch Augmentation Control System (PACS) Force Fight Fatigue Monitor (FFFM)	B	1	0	
-32-01	Stall Warning Systems	C	2	1	(M) One may be inoperative provided remaining system is verified to operate normally before each departure.
-32-01-01	Stick Shakers	C	2	1	(M) One may be inoperative deactivated.
-38-01	Elevator Position indicating System	C	1	0	(M) May be inoperative provided visual confirmation of proper elevator movement is made before each departure.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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27 FLIGHT CONTROLS					
-41-01	Stabilizer Trim Functions	C	2	1	(M)(O) One may be inoperative provided horizontal stabilizer is verified to operate normally with the alternate stabilizer trim switches.
-41-02	Control Wheel Stabilizer Trim Switches	C	2	1	(O) One may be inoperative provided alternate stabilizer trim system is verified to operate normally before each departure.
-48-01	Nose Gear Pressure Switch	C	1	0	(O) May be inoperative provided stabilizer trim position is properly set before each departure for the actual airplane weight, center of gravity, and takeoff thrust setting.
-51-01	Flap Control Units (FCUs)				
-51-01-01	Left FCU	C	1	0	(M) May be inoperative or removed provided: <ul style="list-style-type: none"> a) Flap position rotary variable differential transducer (RVDT) sensors are verified to operate normally before each departure, b) Right and center FCUs operate normally, c) Demand hydraulic pump 4 selector AUTO position is considered inoperative, and d) Leading edge failure indication (LEFI) damage detection circuit L1 on left wing and LEFI damage detection circuit R1 on right wing are considered inoperative.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
27 FLIGHT CONTROLS						
-51-01	Flap Control Units (FCUs) (Cont'd)					
-51-01-02	Right FCU	C	1	0		(M) May be inoperative or removed provided: a) Flap position rotary variable differential transducer (RVDT) sensors are verified to operate normally before each departure, b) Left and center FCUs operate normally, and c) Demand hydraulic pump 1 selector AUTO position is considered inoperative.
-51-01-03	Center FCU	C	1	0		(M) May be inoperative or removed provided: a) Flap position rotary variable differential transducer (RVDT) sensors are verified to operate normally before each departure, b) Left and right FCUs operate normally, and c) Leading edge failure indication (LEFI) damage detection circuit L2 on left wing and LEFI damage detection circuit R2 on right wing are considered inoperative.
-62-01	Auto Spoilers System	C	1	0		(M)(O) May be inoperative provided: a) Auto spoilers system is deactivated, and b) Appropriate performance adjustments are applied.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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27 FLIGHT CONTROLS					
-62-02	Spoiler Power Control Units (PCUs)	A	12	10	(M)(O) One symmetrical spoiler pair may be inoperative provided: a) Symmetrical pair is deactivated in the retracted position, b) Remaining spoilers are verified to operate normally, c) Appropriate performance adjustments are applied, d) Flight remains at or below FL420, and e) Repairs are made within three flight days.
-62-03	Speed Brake Lever Position Transducers	C	4	3	
-81-01	Leading Edge Flaps Drives (Pneumatic Mode)	C	8	7	(M)(O) One may be inoperative provided: a) All electric drives are verified to operate normally, b) Appropriate performance adjustments are applied, and c) Flaps remain in takeoff position until obstacle clearance is assured.
-81-02	Leading Edge Flaps Drives (Electric Mode)	C	8	7	(M) One may be inoperative provided: a) Inoperative electric drive is deactivated, and b) All pneumatic drives operate normally.
-81-03	Leading Edge Flaps Retraction System (Reverser Actuated)	C	1	0	
-89-01	Leading Edge Failure Indication (LEFI) Damage Detection Circuits				
-89-01A		C	4	2	One per wing may be inoperative.
-89-01B		B	4	0	(M) May be inoperative provided the LE flap panel spare traces are connected.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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28 FUEL					
-00-01	Fuel System (FUEL) Synoptic Display	C	1	0	May be inoperative provided individual fuel quantity indications required for dispatch operate normally.
-11-01	Fuel Sump Drain Valves	C	10	0	(M) May be inoperative provided: a) There is no evidence of leakage, and b) Alternate procedures are used to prevent water accumulation in associated tank.
-15-01	Fuel Scavenge Systems				
-15-01A		C	2	1	
-15-01B		C	2	0	(M) May be inoperative provided: a) Center wing tank remains empty, and b) Center wing tank fuel quantity indicating system operates normally.
-15-01C		C	2	0	(O) May be inoperative provided appropriate amount of center wing tank fuel is considered unusable and included as part of zero fuel weight.
-16-01	Reserve Tanks 1 and 4 Transfer Valves				
-16-01A		C	4	2	(M) One per tank may be inoperative provided: a) Inoperative transfer valve is secured closed (with reserve tanks fueled), and b) Zero fuel weight CG limit is 2.2% MAC forward of the aft limit.
-16-01B		C	4	0	(O) May be inoperative provided: a) Reserve tanks 1 and 4 remain empty, b) Center wing tank fuel is included as part of zero fuel weight, and c) Appropriate performance adjustments are applied.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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28 FUEL					
-16-02	Main Tanks 1 and 4 Transfer Valves	C	2	0	(M) May be inoperative provided: a) Inoperative transfer valve is secured closed, b) Both boost pumps for associated tank operate normally, and c) Required fuel to be jettisoned does not deplete inboard main tank below the quantity in the outboard main tanks.
-16-03	Reserve Tanks Transfer Single Point Sensor Systems				
-16-03A		C	2	1	One may be inoperative provided main tanks 1 and 4 fuel quantity indicating systems operate normally.
-16-03B		C	2	0	(O) May be inoperative provided: a) Main tanks 1 and 4 fuel quantity indicating systems operate normally, b) All reserve tanks 1 and 4 transfer valves operate normally, and c) Alternate procedures are established and used.
-16-03C		C	2	0	(O) May be inoperative provided: a) Reserve tanks 1 and 4 remain empty, b) Center wing tank fuel is included as part of zero fuel weight, and c) Appropriate performance adjustments are applied.
-17-01	Horizontal Stabilizer Tank Fuel Isolation Valves (747-81)	C	4	0	(M) May be inoperative provided: a) Inoperative isolation valve is secured closed, and b) Horizontal stabilizer tank remains empty.
-17-02	Horizontal Stabilizer Tank Fuel Pumps (747-81)	C	2	0	(M) May be inoperative provided: a) Inoperative fuel pump is deactivated, and b) Horizontal stabilizer tank remains empty.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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28 FUEL					
-17-03	Horizontal Stabilizer Tank Single Point Sensor Systems (747-8I)				
-17-03A		C	2	1	One may be inoperative provided center wing tank fuel quantity indicating system operates normally.
-17-03B		C	2	0	May be inoperative provided horizontal stabilizer tank remains empty.
-17-04	Horizontal Stabilizer Tank Fuel Transfer Signals (747-8I)	C	2	0	May be inoperative provided horizontal stabilizer tank remains empty.
-21-01	Pressure Fueling System				
-21-01-01	747-8F				
-21-01-01-01	Refuel Valves				
-21-01-01-01A		C	10	0	(M)(O) May be inoperative open provided: a) Alternate procedures are used for refueling, b) Fuel jettison system is considered inoperative, and c) Appropriate performance adjustments are applied.
-21-01-01-01B		C	10	0	(M) May be inoperative closed provided alternate procedures are used for refueling.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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28 FUEL					
-21-01	Pressure Fueling System (Cont'd)				
-21-01-01	747-8F (Cont'd)				
-21-01-01-02	Refuel Power Select Switch				
-21-01-01-02A		C	1	0	(M) May be inoperative provided fueling control panel is deactivated before each departure.
-21-01-01-02B		C	1	0	(M) NORM position may be inoperative provided BATT position is verified to operate normally.
-21-01-01-03	Refuel Valve Lights	C	10	0	(M) May be inoperative provided associated refuel valve is verified closed after each refueling.
-21-01-01-04	Volumetric Top-Off (VTO) Function	C	1	0	(M) May be inoperative provided alternate refueling procedures are established and used.
-21-01-01-05	Preselect Function	C	1	0	(M) May be inoperative provided alternate refueling procedures are established and used.
					NOTE: Any function that operates normally may be used.
-21-01-01-06	Overfill Light	C	1	0	(M) May be inoperative provided: a) Refuel valves are verified closed when appropriate during refueling, and b) Refuel valve lights operate normally.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
28 FUEL						
-21-01	Pressure Fueling System (Cont'd)					
-21-01-01	747-8F (Cont'd)					
-21-01-01-07	Test Functions (Gauges and System)	C	2	0		
-21-01-02	747-8I					
-21-01-02-01	Refuel Valves					
-21-01-02-01A		C	10	0		(M)(O) May be inoperative open provided: a) Alternate procedures are used for refueling, b) Fuel jettison system is considered inoperative, c) Horizontal stabilizer tank remains empty, and d) Appropriate performance adjustments are applied.
-21-01-02-01B		C	10	0		(M) May be inoperative closed provided: a) Alternate procedures are used for refueling, and b) For any center wing tank refuel valve inoperative closed, horizontal stabilizer tank remains empty.
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28 FUEL					
-21-01	Pressure Fueling System (Cont'd)				
-21-01-02	747-8I (Cont'd)				
-21-01-02-02	Refuel Power Select Switch				
-21-01-02-02A		C	1	0	(M) May be inoperative provided fueling control panel is deactivated before each departure.
-21-01-02-02B		C	1	0	(M) NORM position may be inoperative provided BATT position is verified to operate normally.
-21-01-02-03	Refuel Valve Lights	C	10	0	(M) May be inoperative provided associated refuel valve is verified closed after each refueling.
-21-01-02-04	Volumetric Top-Off (VTO) Function	C	1	0	(M) May be inoperative provided alternate refueling procedures are established and used.
-21-01-02-05	Preselect Function	C	1	0	(M) May be inoperative provided alternate refueling procedures are established and used.
-21-01-02-06	Overfill Light	C	1	0	(M) May be inoperative provided: a) Refuel valves are verified closed when appropriate during refueling, and b) Refuel valve lights operate normally.
-21-01-02-07	Test Functions (Gauges and System)	C	2	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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28 FUEL					
-21-02	Fueling Receptacle Caps	C	4	0	May be inoperative or missing provided no leakage can be detected after refueling is complete.
-22-01	Main Tanks Boost Pumps				
-22-01-01	Main Tanks 1 and 4 Boost Pumps				
-22-01-01A		C	4	3	(M)(O) One may be inoperative provided: a) Inoperative boost pump is deactivated, b) Main tanks 1 and 4 transfer valves are verified to operate normally, c) All main tanks 2 and 3 boost pumps operate normally, d) Associated main tank fuel quantity indicating system operates normally, and e) Appropriate minimum fuel quantities are retained in the main tanks.
-22-01-01B		C	4	3	(M)(O) One may be inoperative provided: a) Inoperative boost pump is deactivated, b) Main tanks 1 and 4 transfer valves are verified to operate normally, c) All main tanks 2 and 3 boost pumps operate normally, d) Both center wing tank override/jettison pumps operate normally, e) Associated main tank fuel quantity indicating system operates normally, f) Appropriate minimum fuel quantity is loaded in the center wing tank, g) Center wing tank fuel is included as part of zero fuel weight, h) For takeoff, engines 1 and 4 are manifolded to the center wing tank, and i) Appropriate minimum fuel quantities are retained in the main tanks.

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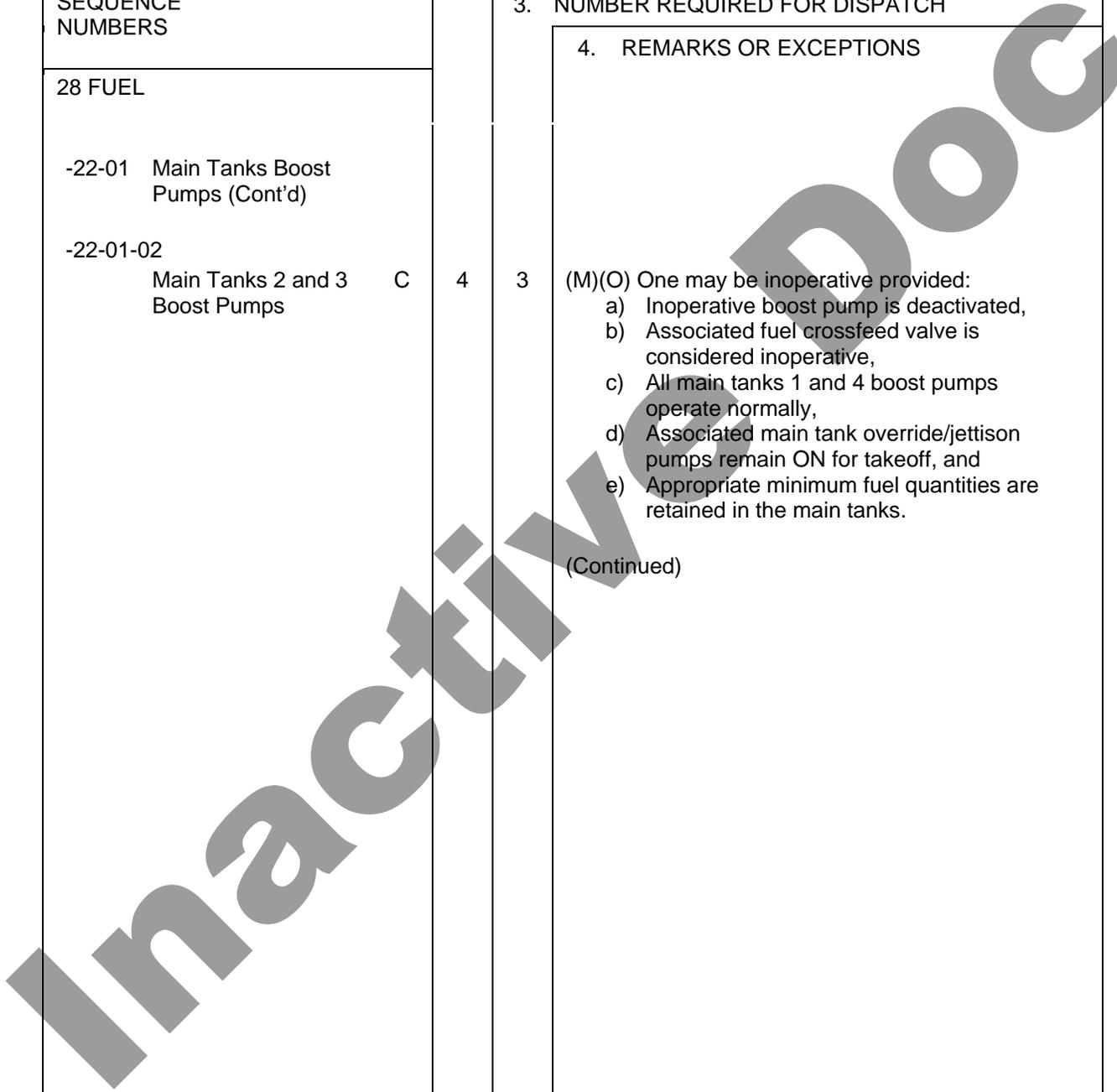
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
28 FUEL						
-22-01	Main Tanks Boost Pumps (Cont'd)					
-22-01-02	Main Tanks 2 and 3 Boost Pumps	C	4	3	(M)(O) One may be inoperative provided: a) Inoperative boost pump is deactivated, b) Associated fuel crossfeed valve is considered inoperative, c) All main tanks 1 and 4 boost pumps operate normally, d) Associated main tank override/jettison pumps remain ON for takeoff, and e) Appropriate minimum fuel quantities are retained in the main tanks.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
28 FUEL						
-22-01	Main Tanks Boost Pumps (Cont'd)					
-22-01-02	Main Tanks 2 and 3 Boost Pumps (Cont'd)					
-22-01-02-01	Aft Boost Pumps					
-22-01-02-01A		C	2	1	(M)(O)	One may be inoperative provided: a) Inoperative boost pump is deactivated, b) All main tanks 1 and 4 boost pumps operate normally, c) Main tanks 2 and 3 forward boost pumps operate normally, d) Associated main tank aft override/jettison pump operates normally, e) Associated main tank fuel quantity indicating system operates normally, and f) Appropriate minimum fuel quantities are retained in the main tanks.
-22-01-02-01B		C	2	1	(M)(O)	One may be inoperative provided: a) Inoperative boost pump is deactivated, b) All main tanks 1 and 4 boost pumps operate normally, c) Main tanks 2 and 3 forward boost pumps operate normally, d) Associated main tank fuel quantity indicating system operates normally, e) All engine driven generator systems operate normally, and f) Appropriate minimum fuel quantities are retained in the main tanks.
(Continued)						

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED			3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
28 FUEL							
-22-01	Main Tanks Boost Pumps (Cont'd)						
-22-01-02	Main Tanks 2 and 3 Boost Pumps (Cont'd)						
-22-01-02-02	Forward Boost Pumps	C	2	1		(M)(O) One may be inoperative provided: a) Inoperative boost pump is deactivated, b) All main tanks 1 and 4 boost pumps operate normally, c) Main tanks 2 and 3 aft boost pumps operate normally, d) Associated main tank fuel quantity indicating system operates normally, and e) Appropriate minimum fuel quantities are retained in the main tanks.	
-22-02	Fuel Crossfeed VALVE Lights	C	4	0			

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
28 FUEL						
-22-03 Fuel Crossfeed Valves						
-22-03-01 747-8F						
-22-03-01-01 Fuel Crossfeed Valves 1 and 4		C	2	1		(M)(O) One may be inoperative provided: a) Inoperative fuel crossfeed valve is secured open, b) Fuel crossfeed valves 2 and 3 operate normally, c) All main tanks fuel quantity indicating systems operate normally, and d) Alternate procedures are established and used.
-22-03-01-02 Fuel Crossfeed Valves 2 and 3		C	2	1		(M)(O) One may be inoperative provided: a) Inoperative fuel crossfeed valve is secured open, b) Fuel crossfeed valves 1 and 4 operate normally, c) All main tanks fuel quantity indicating systems operate normally, and d) Center wing tank fuel is included as part of zero fuel weight.
(Continued)						

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
28 FUEL					
-22-03	Fuel Crossfeed Valves (Cont'd)				
-22-03-02	747-8I				
-22-03-02-01	Fuel Crossfeed Valves 1 and 4	C	2	1	(M)(O) One may be inoperative provided: a) Inoperative fuel crossfeed valve is secured open, b) Fuel crossfeed valves 2 and 3 operate normally, c) All main tanks fuel quantity indicating systems operate normally, and d) Alternate procedures are established and used.
-22-03-02-02	Fuel Crossfeed Valves 2 and 3	C	2	1	(M)(O) One may be inoperative provided: a) Inoperative fuel crossfeed valve is secured open, b) Fuel crossfeed valves 1 and 4 operate normally, c) All main tanks fuel quantity indicating systems operate normally, d) Center wing tank fuel is included as part of zero fuel weight, and e) Horizontal stabilizer tank remains empty.
-22-04	Fuel System Flap Signals				
-22-04-01	747-8F	C	2	1	
-22-04-02	747-8I	C	2	1	One may be inoperative provided horizontal stabilizer tank remains empty.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
28 FUEL					
-22-05	Fuel System In-Air Signals				
-22-05-01	747-8F	C	2	1	
-22-05-02	747-8I	C	2	1	One may be inoperative provided horizontal stabilizer tank remains empty.
-25-01	APU Fuel (DC) Pump	C	1	0	(M) May be inoperative deactivated.
-25-02	APU Fuel Valve	C	1	0	(M) May be inoperative provided: a) APU fuel valve is deactivated closed, and b) APU is considered inoperative.
-26-01	Manually Operated Defuel Valves	C	2	0	(M) May be inoperative secured closed.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
28 FUEL						
-31-01 Fuel Jettison System						
-31-01-01 747-8F		C	1	0	(M)(O) May be inoperative provided: a) Jettison nozzle valves are secured closed, b) Main tanks 1 and 4 transfer valves are considered inoperative, and c) Appropriate performance adjustments are applied.	
-31-01-01-01 Center Wing Tank Jettison/Transfer Valves						
-31-01-01-01A		C	2	0	(M) May be inoperative provided: a) Inoperative jettison/transfer valve is secured closed, and b) Associated inboard main tank jettison/transfer valve operates normally.	
-31-01-01-01B		C	2	0	(M) May be inoperative provided: a) Inoperative jettison/transfer valve is secured open, and b) Both jettison nozzle valves operate normally.	
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
28 FUEL						
-31-01	Fuel Jettison System (Cont'd)					
-31-01-01	747-8F (Cont'd)					
-31-01-01-02	Main Tanks 2 and 3 Jettison/Transfer Valves					
-31-01-01-02A		C	2	0	(M) May be inoperative provided: a) Inoperative jettison/transfer valve is secured closed, and b) Associated center wing tank jettison/transfer valve operates normally.	
-31-01-01-02B		C	2	0	(M) May be inoperative provided: a) Inoperative jettison/transfer valve is secured open, and b) Both jettison nozzle valves operate normally.	
-31-01-01-03	Fuel Jettison Control Cards (FJCCs)	C	2	1	(M) One may be inoperative provided remaining FJCC is verified to operate normally.	
(Continued)						

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
28 FUEL					
-31-01	Fuel Jettison System (Cont'd)				
-31-01-02	747-8l	C	1	0	(M)(O) May be inoperative provided: a) Jettison nozzle valves are secured closed, b) Main tanks 1 and 4 transfer valves are considered inoperative, and c) Appropriate performance adjustments are applied.
-31-01-02-01	Center Wing Tank Jettison/Transfer Valves				
-31-01-02-01A		C	2	0	(M) May be inoperative provided: a) Inoperative jettison/transfer valve is secured closed, and b) Associated inboard main tank jettison/transfer valve operates normally.
-31-01-02-01B		C	2	0	(M) May be inoperative provided: a) Inoperative jettison/transfer valve is secured open, b) Both jettison nozzle valves operate normally, and c) Horizontal stabilizer tank remains empty.
(Continued)					

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
28 FUEL					
-31-01	Fuel Jettison System (Cont'd)				
-31-01-02	747-8I (Cont'd)				
-31-01-02-02	Main Tanks 2 and 3 Jettison/Transfer Valves				
-31-01-02-02A		C	2	0	(M) May be inoperative provided: a) Inoperative jettison/transfer valve is secured closed, and b) Associated center wing tank jettison/transfer valve operates normally.
-31-01-02-02B		C	2	0	(M) May be inoperative provided: a) Inoperative jettison/transfer valve is secured open, b) Both jettison nozzle valves operate normally, and c) Horizontal stabilizer tank remains empty.
-31-01-02-03	Fuel Jettison Control Cards (FJCCs)	C	2	1	(M) One may be inoperative provided remaining FJCC is verified to operate normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			2.	3. NUMBER REQUIRED FOR DISPATCH	
28 FUEL					
-31-02	Main Tanks 2 and 3 Override/Jettison Pumps				
-31-02-01	Forward Override/Jettison Pumps				
-31-02-01A		C	2	1	(M) One may be inoperative provided: a) Inoperative override/jettison pump is deactivated, and b) Main tanks 2 and 3 aft override/jettison pumps operate normally.
-31-02-01B		C	2	0	(M) May be inoperative provided: a) Inoperative override/jettison pump is deactivated, b) Associated main tank aft override/jettison pump operates normally, and c) All main tanks 2 and 3 boost pumps operate normally.
-31-02-02	Aft Override/Jettison Pumps				
-31-02-02A		C	2	1	(M) One may be inoperative provided: a) Inoperative override/jettison pump is deactivated, b) Main tanks 2 and 3 forward override/jettison pumps operate normally, and c) All engine driven generator systems operate normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
28 FUEL					
-31-02	Main Tanks 2 and 3 Override/Jettison Pumps (Cont'd)				
-31-02-02	Aft Override/Jettison Pumps (Cont'd)				
-31-02-02B		C	2	1	(M) One may be inoperative provided: a) Inoperative override/jettison pump is deactivated, b) Main tanks 2 and 3 forward override/jettison pumps operate normally, and c) Associated main tank boost pumps operate normally.
-31-02-02C		C	2	0	(M) May be inoperative provided: a) Inoperative override/jettison pump is deactivated, b) Associated main tank forward override/jettison pump operates normally, c) All main tanks 2 and 3 boost pumps operate normally, and d) All engine driven generator systems operate normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
28 FUEL						
-31-03 Center Wing Tank Override/Jettison Pumps						
-31-03-01 747-8F						
-31-03-01A	C	2	1			(M)(O) One may be inoperative provided: <ul style="list-style-type: none"> a) Inoperative override/jettison pump is deactivated, b) Center wing tank fuel quantity indicating system operates normally, c) Center wing tank fuel is included as part of zero fuel weight, and d) With center wing tank fueled, fuel quantity remaining in main tanks is adequate to reach a suitable airport if remaining center pump fails at any time.
-31-03-01B	C	2	0			(M)(O) May be inoperative provided: <ul style="list-style-type: none"> a) Inoperative override/jettison pump is deactivated, and b) Center wing tank fuel is considered unusable and included as part of zero fuel weight. (Continued)

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
28 FUEL					
-31-03	Center Wing Tank Override/Jettison Pumps (Cont'd)				
-31-03-02	747-8I				
-31-03-02A		C	2	1	(M)(O) One may be inoperative provided: a) Inoperative override/jettison pump is deactivated, b) Center wing tank fuel quantity indicating system operates normally, c) Center wing tank fuel is included as part of zero fuel weight, d) With center wing tank fueled, fuel quantity remaining in main tanks is adequate to reach a suitable airport if remaining center pump fails at any time, and e) Horizontal stabilizer tank remains empty.
-31-03-02B		C	2	0	(M)(O) May be inoperative provided: a) Inoperative override/jettison pump is deactivated, b) Center wing tank fuel is considered unusable and included as part of zero fuel weight, and c) Horizontal stabilizer tank remains empty.
-31-04	Fuel Jettison Single Point Sensor Systems	C	2	1	One may be inoperative provided main tanks 2 and 3 fuel quantity indicating systems operate normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
28 FUEL						
-41-01 Main Tanks Fuel Quantity Indicating Systems (Flight Deck)						
-41-01-01 Main Tanks 1 and 4 Fuel Quantity Indicating Systems	C	2	1	1	(M)(O) Except for ER operations, one may be inoperative provided: <ul style="list-style-type: none"> a) Fuel quantity in associated tank is verified by an alternate procedure, b) Remaining individual tank fuel quantity indicating systems operate normally, c) Both boost pumps for associated tank operate normally, d) All fuel crossfeed valves operate normally, e) Both reserve tanks transfer single point sensor systems operate normally, f) Total fuel quantity indication is considered inoperative, and g) Appropriate procedures are used enroute to identify engine fuel leaks if suspected or confirmed. 	
-41-01-02 Main Tanks 2 and 3 Fuel Quantity Indicating Systems	C	2	1	1	(M)(O) Except for ER operations, one may be inoperative provided: <ul style="list-style-type: none"> a) Fuel quantity in associated tank is verified by an alternate procedure, b) Remaining individual tank fuel quantity indicating systems operate normally, c) Both boost pumps for associated tank operate normally, d) All fuel crossfeed valves operate normally, e) Both fuel jettison single point sensor systems operate normally, f) Total fuel quantity indication is considered inoperative, and g) Appropriate procedures are used enroute to identify engine fuel leaks if suspected or confirmed. 	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
28 FUEL					
-41-02	Wing Fueling Station Quantity Indicating System	C	1	0	(M) May be inoperative provided alternate procedures are used for refueling. NOTE: Any portion of the system that operates normally may be used.
-41-03	Total Fuel Quantity Indication	C	1	0	(O) Except for ER operations, may be inoperative provided: a) Engine fuel flow indication systems operate normally, b) Both FMCs operate normally, and c) FMC is initialized with the known total fuel quantity.
-41-04	Center Wing Tank Fuel Quantity Indicating System (Flight Deck)				
-41-04-01	747-8F	C	1	0	May be inoperative provided: a) Total fuel quantity indication is considered inoperative, and b) Center wing tank remains empty.
-41-04-02	747-8I	C	1	0	Except for ER operations, may be inoperative provided: a) Total fuel quantity indication is considered inoperative, b) Center wing tank remains empty, and c) Horizontal stabilizer tank remains empty.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
28 FUEL					
-41-05	Reserve Tanks Fuel Quantity Indicating Systems (Flight Deck)				
-41-05A		C	2	0	(M) Except for ER operations, may be inoperative provided: <ul style="list-style-type: none"> a) Fuel quantity in associated tank is verified by an alternate procedure, b) Remaining individual tank fuel quantity indicating systems operate normally, and c) Total fuel quantity indication is considered inoperative.
-41-05B		C	2	0	(O) Except for ER operations, may be inoperative provided: <ul style="list-style-type: none"> a) Remaining individual tank fuel quantity indicating systems operate normally, b) Total fuel quantity indication is considered inoperative, c) Reserve tanks 1 and 4 remain empty, d) Center wing tank fuel is included as part of zero fuel weight, and e) Appropriate performance adjustments are applied.
-41-06	Fuel Quantity Indicating System (FQIS) Circuits	C	7	6	Except for ER operations, one may be inoperative.
-41-07	Horizontal Stabilizer Tank Fuel Quantity Indicating System (Flight Deck) (747-8I)	C	1	0	(M) Except for ER operations, may be inoperative provided: <ul style="list-style-type: none"> a) Horizontal stabilizer remote electronics unit is deactivated or removed, b) Remaining individual tank fuel quantity indicating systems operate normally, c) Total fuel quantity indication is considered inoperative, and d) Horizontal stabilizer tank remains empty.

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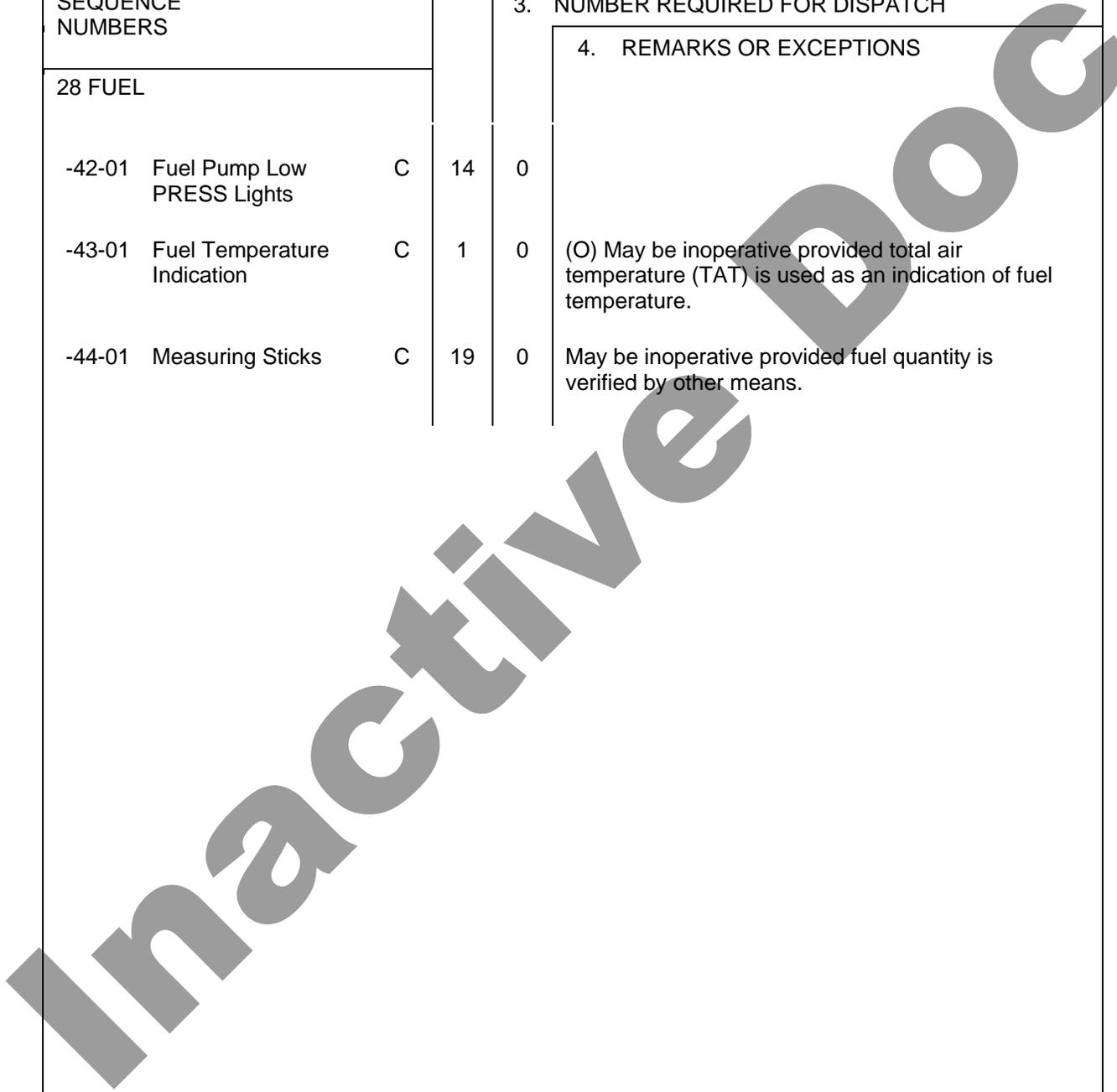
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
28 FUEL					
-42-01	Fuel Pump Low PRESS Lights	C	14	0	
-43-01	Fuel Temperature Indication	C	1	0	(O) May be inoperative provided total air temperature (TAT) is used as an indication of fuel temperature.
-44-01	Measuring Sticks	C	19	0	May be inoperative provided fuel quantity is verified by other means.



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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
29 HYDRAULIC POWER					
-00-01	Hydraulic System (HYD) Synoptic Display	C	1	0	
-11-01	Engine Driven Pump (EDP) Hydraulic Systems				
-11-01A		C	4	3	(M) EDP hydraulic system 1 or 4 may be inoperative provided: a) Associated EDP shutoff valve is verified to operate normally, b) Associated fluid supply and pump case return are verified to operate normally, c) All demand hydraulic pumps operate normally, d) Associated ENGINE HYD PUMP switch remains Off, and e) Associated DEMAND HYD PUMP selector remains ON.
-11-01B		C	4	3	(M) EDP hydraulic system 1 or 4 may be inoperative provided: a) Associated EDP shutoff valve is deactivated closed, b) Associated EDP is removed and cover plate installed, c) All demand hydraulic pumps operate normally, and d) Associated DEMAND HYD PUMP selector remains ON.
-11-01-01	Pump Depressurization Function	C	4	3	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
29 HYDRAULIC POWER						
-11-02	Demand Hydraulic Pumps					
-11-02-01	Demand Hydraulic Pumps 1 and 4	C	2	1	(M)(O) One may be inoperative provided:	<ul style="list-style-type: none"> a) Inoperative demand hydraulic pump is deactivated, b) Demand hydraulic pumps 2 and 3 operate normally, c) Minimum ground operating temperature is limited to -29 degrees C OAT, and d) Appropriate performance adjustments are applied.
-11-02-02	Demand Hydraulic Pumps 2 and 3	C	2	1	(M) One may be inoperative provided:	<ul style="list-style-type: none"> a) Inoperative demand hydraulic pump is deactivated, b) Demand hydraulic pumps 1 and 4 operate normally, and c) Minimum ground operating temperature is limited to -29 degrees C OAT.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
29 HYDRAULIC POWER					
-11-03	Demand Hydraulic Pumps Selectors				
-11-03-01	AUTO Position				
-11-03-01A		C	4	0	(M)(O) May be inoperative provided: a) Associated demand hydraulic pump selector ON and OFF positions are verified to operate normally, and b) Associated DEMAND HYD PUMP selector remains ON for takeoff and landing.
-11-03-01B		C	4	3	One may be inoperative provided associated demand hydraulic pump is considered inoperative.
-11-03-02	ON Position				
-11-03-02A		C	4	0	(M) May be inoperative provided: a) Associated demand hydraulic pump selector AUTO and OFF positions are verified to operate normally, and b) Associated engine driven pump (EDP) hydraulic system operates normally.
-11-03-02B		C	4	3	One may be inoperative provided associated demand hydraulic pump is considered inoperative.
-11-04	Hydraulic Accumulator Systems	C	4	0	NOTE: Any portion of the system that operates normally may be used.
-17-01	Hydraulic Reservoir Low Pressure Warning Systems	C	4	0	(M) May be inoperative provided associated reservoir pressurization is verified to operate normally once each flight day.
-18-01	Reservoir Quantity Fill Indicator	D	1	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
29 HYDRAULIC POWER					
-21-01	Ram Air Turbine (RAT) System				
-21-01-01	UNLKD Light	C	1	0	
-21-01-02	Pressure Indication System	C	1	0	
-21-01-03	Ground Test/Flight Valve Indication System	C	1	0	(M) May be inoperative provided: a) Flight deck RAM AIR TURBINE switch is verified to operate normally, and b) Ground test/flight valve is secured in the flight position.
-21-01-04	Transfer Valve Indication System	C	1	0	(M) May be inoperative provided: a) Transfer valve is verified to operate normally, and b) Transfer valve is verified in the normal position before each departure.
-22-01	Auxiliary Hydraulic Pump Systems	C	2	0	(O) May be inoperative provided alternate procedures are established and used.
-30-01	Hydraulic SYS FAULT Lights				
-30-01A		C	4	3	One may be inoperative provided associated hydraulic quantity indication operates normally.
-30-01B		C	4	3	One may be inoperative provided associated hydraulic temperature indication operates normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
29 HYDRAULIC POWER					
-32-01	Hydraulic Temperature Indications				
-32-01A		C	4	3	One may be inoperative provided associated hydraulic quantity indication operates normally.
-32-01B		C	4	3	(M) One may be inoperative provided associated hydraulic SYS FAULT light is verified to operate normally.
-33-01	Hydraulic Quantity Indications				
-33-01A		C	4	0	(M) May be inoperative provided: a) Associated reservoir level is verified normal before each departure, and b) Associated hydraulic temperature indication operates normally.
-33-01B		C	4	0	(M) May be inoperative provided: a) Associated reservoir level is verified normal before each departure, and b) Associated hydraulic SYS FAULT light is verified to operate normally.
-34-01	Hydraulic Pump PRESS Lights	C	8	4	(M) One per hydraulic system may be inoperative provided associated pump is verified to operate normally before each departure.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
30 ICE AND RAIN PROTECTION						
-11-01	Wing Anti-Ice (WAI) Valves	C	4	0	(M) May be inoperative provided: a) Inoperative WAI valve is locked closed, b) Airplane is not operated in known or forecast icing conditions, and c) WING ANTI-ICE switch remains OFF.	
-11-02	Wing Anti-Ice (WAI) Indications (Primary EICAS Display)	C	2	0		
-21-01	Engine Anti-Ice (EAI) Valves					
-21-01A		C	4	3	(M) One may be inoperative provided: a) Inoperative EAI valve is locked closed, b) Airplane is not operated in known or forecast icing conditions, and c) Associated ENGINE ANTI-ICE switch remains OFF.	
-21-01B		C	4	3	(M)(O) One may be inoperative provided: a) Inoperative EAI valve is locked open, b) Associated high pressure shutoff valve (HPSOV) is considered inoperative, and c) Appropriate performance adjustments are applied.	
-21-02	Engine Anti-Ice (EAI) Indications (Primary EICAS Display)	C	4	0		

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
30 ICE AND RAIN PROTECTION						
-31-01	Pitot-Static Probe Heater Systems	B	4	3	One may be inoperative provided: a) Airplane is not operated in visible moisture, and b) Airplane is not operated in known or forecast icing conditions.	
-31-01-01	Left Main Pitot-Static Probe Heater	C	1	0	May be inoperative provided: a) Left auxiliary, right main, and right auxiliary pitot-static probe heaters operate normally, and b) Left air data computer (ADC) function is considered inoperative.	
-31-01-02	Right Main Pitot-Static Probe Heater	C	1	0	May be inoperative provided: a) Left main, left auxiliary, and right auxiliary pitot-static probe heaters operate normally, and b) Right air data computer (ADC) function is considered inoperative.	
-31-01-03	Right Auxiliary Pitot-Static Probe Heater	C	1	0	May be inoperative provided: a) Left main, left auxiliary, and right main pitot-static probe heaters operate normally, and b) Center air data computer (ADC) function is considered inoperative.	
-31-02	Total Air Temperature (TAT) Probe Heater Systems	C	2	1	One may be inoperative provided associated air data computer (ADC) function is considered inoperative.	
-41-01	Window Heat INOP Lights	C	2	0		

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						3. NUMBER REQUIRED FOR DISPATCH
30 ICE AND RAIN PROTECTION						
-41-02	Flight Deck Forward Window Heater Systems	C	2	1	One may be inoperative provided: a) Associated forward window backup heater system operates normally, b) Both No. 2 side window heater systems operate normally, c) Airplane is not operated in known or forecast icing conditions, and d) Associated WINDOW HEAT switch remains Off.	
-41-03	Flight Deck Side Window Heater Systems					
-41-03-01	No. 2 Windows	C	2	1	One may be inoperative provided: a) Associated SIDE WINDOW HEAT ANTI-FOG PWR switch remains OFF, b) Both forward window heater systems operate normally, and c) Both forward window backup heater systems operate normally.	
-41-03-02	No. 3 Windows	D	2	0		
-41-04	Flight Deck Forward Window Backup Heater Systems	C	2	1	One may be inoperative provided: a) Associated FWD WINDOW HEAT ANTI-FOG PWR switch remains OFF, b) Associated forward window heater system operates normally, and c) Both No. 2 side window heater systems operate normally.	

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			3.	NUMBER REQUIRED FOR DISPATCH	
30 ICE AND RAIN PROTECTION					
-42-01	Windshield Wipers	C	2	0	May be inoperative provided: a) Airplane is not operated in known or forecast precipitation within five statute miles of the airport of departure or intended landing, and b) Approach minimums do not require their use.
-42-01-01	Low Speed Functions	C	2	0	May be inoperative provided associated high speed function operates normally.
-42-01-02	High Speed Functions				
-42-01-02A		C	2	1	One may be inoperative provided associated low speed function operates normally.
-42-01-02B		C	2	0	May be inoperative provided: a) Both low speed functions operate normally, and b) Airplane is not operated in known or forecast precipitation of moderate or greater intensity within five statute miles of the airport of departure or intended landing.
-42-01-03	Intermittent Functions	C	2	0	
-44-01	Windshield Washer Systems	D	2	0	
-71-01	Drain Mast Heaters (747-8I)	C	2	0	(M) May be inoperative provided: a) Associated galley and lavatory sink water supply shutoff valves are closed, and b) Associated galley and lavatory sinks are not used.

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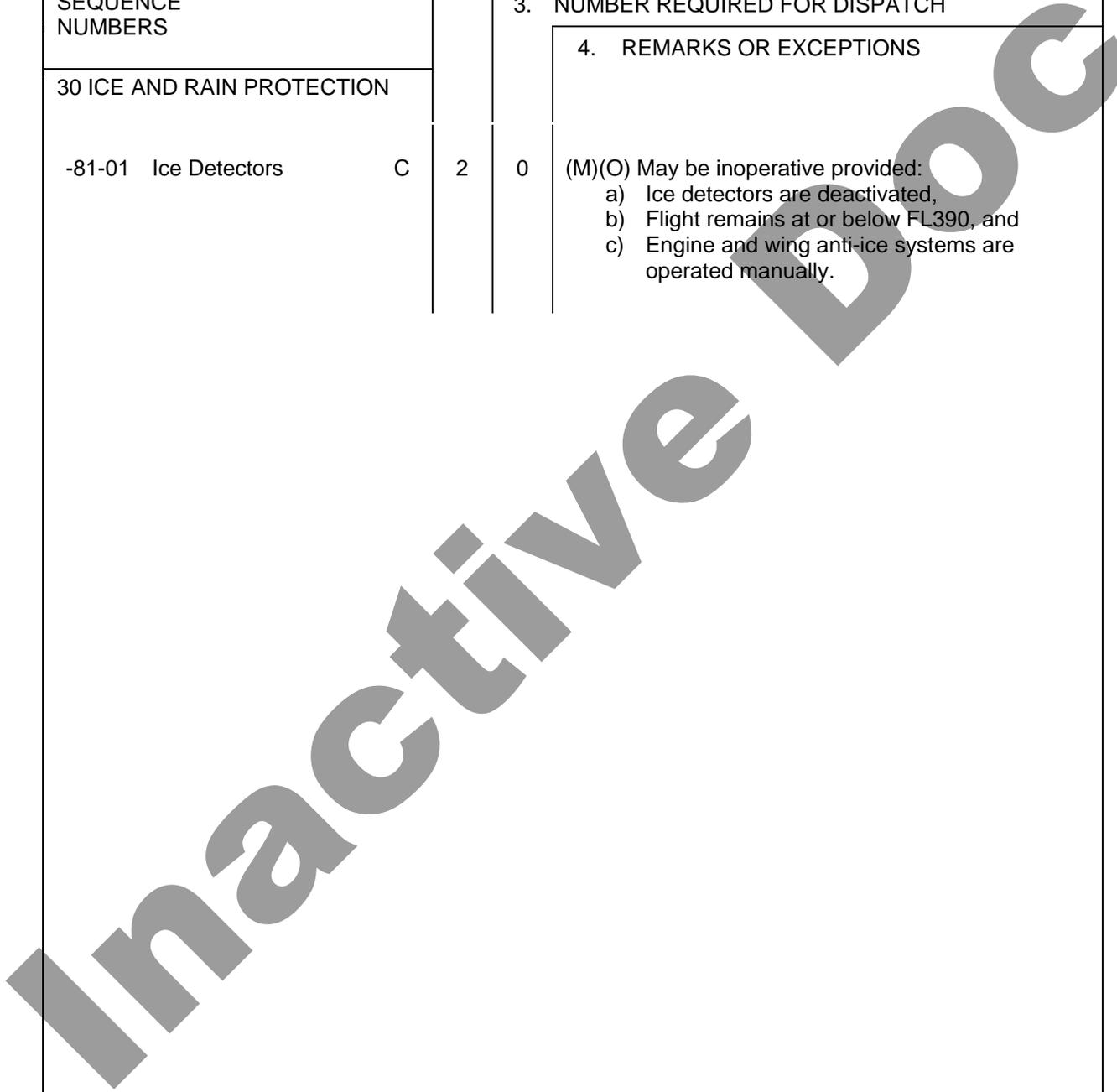
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30 ICE AND RAIN PROTECTION						
-81-01	Ice Detectors	C	2	0		(M)(O) May be inoperative provided: a) Ice detectors are deactivated, b) Flight remains at or below FL390, and c) Engine and wing anti-ice systems are operated manually.



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31 INDICATING/RECORDING SYSTEMS					
-25-01	Clock Switches	C	2	1	
-31-01	Flight Data Recorder (FDR) System	A	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) Cockpit voice recorder (CVR) system operates normally, b) Airplane is not dispatched from a designated airport as listed in operator's MEL unless: <ul style="list-style-type: none"> 1) FDR failure occurs after pushback but prior to takeoff, or 2) FDR repair was attempted but was not successful. c) In those cases where repair is attempted but not successful, the aircraft may be dispatched on a flight or series of flights until the next designated airport where repair must be accomplished prior to dispatch, and d) Repairs are made within three flight days.
-31-01-01	FDR Recording Parameters Required by FAR	A	-	-	Up to three recording parameters may be inoperative provided: <ul style="list-style-type: none"> a) Cockpit voice recorder (CVR) system operates normally, and b) Repairs are made within 20 calendar days.
-31-01-02	FDR Recording Parameters Not Required by FAR	A	-	-	May be inoperative provided repairs are made prior to completion of the next heavy maintenance visit.

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			3.	NUMBER REQUIRED FOR DISPATCH	
31 INDICATING/RECORDING SYSTEMS					
-35-01	Aircraft Condition Monitoring System (ACMS)				
-35-01A		C	1	0	(M) May be inoperative provided alternate procedures are established and used.
-35-01B		D	1	0	May be inoperative provided procedures do not require its use.
-35-02 ***	Quick Access Recorder (QAR) System	D	1	0	
-41-01	Weight and Balance System (WBS)				
-41-01-01	747-8F	D	1	0	
-41-01-02 ***	747-8I	D	1	0	
-51-01	Master Caution/Warning Systems				
-51-01-01	Master Warning Lights (Glareshield)	C	2	1	One may be inoperative provided both aural warning speakers operate normally.
-51-01-02	Master Caution Lights (Glareshield)	C	2	1	One may be inoperative provided both aural warning speakers operate normally.
-51-01-03	Aural Warning Speaker Systems	C	2	1	One may be inoperative provided master warning and master caution lights operate normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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31 INDICATING/RECORDING SYSTEMS					
-51-02	Modularized Avionics Warning Electronics Assembly (MAWEA) ID Card	C	1	0	May be inoperative provided aircraft communication addressing and reporting system (ACARS) is considered inoperative.
-52-01	Mach/Airspeed Warning Systems	C	2	1	
-61-01	Lower Center Display Unit (DU)	C	1	0	(M) May be inoperative provided: a) EICAS is verified capable of switching to an alternate DU, and b) Inboard display selector positions operate normally.
-61-02	Electronic Flight Instrument System (EFIS) Control Panels	C	2	1	(M)(O) One may be inoperative provided alternate EFIS control is verified to operate normally on associated control display unit (CDU). NOTE: Any function that operates normally may be used.
-61-03	Display Select Panel (DSP)	C	1	0	(M)(O) May be inoperative provided alternate DSP control is verified to operate normally on left and right control display units (CDUs). NOTE: Any function that operates normally may be used.
-61-04	Engine Indicating and Crew Alerting System (EICAS) Status Messages				
-61-04A		C	-	0	(M)(O) May be inoperative provided associated equipment is verified to operate normally before each departure.
-61-04B		C	-	0	May be inoperative provided associated equipment is considered inoperative.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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31 INDICATING/RECORDING SYSTEMS					
-61-05	Left and Right Instrument Source Selectors (FLT DIR, NAV, EIU, IRS, and AIR DATA)	C	10	0	(M) May be inoperative provided: a) Associated instruments are verified to operate from isolated sources, and b) Inoperative selectors are not moved in flight.
-61-05-01	EIU Source Selector AUTO Function	C	2	0	(M) May be inoperative provided source is verified.
-61-05-02	IRS Source Selector AUTO Function	C	2	0	(M) May be inoperative provided source is verified.
-61-05-03	AIR DATA Source Selector AUTO Function	C	2	0	(M) May be inoperative provided source is verified.
-61-06	EFIS/EICAS Interface Units (EIUs)	B	3	2	(M) Center or right EIU may be inoperative provided: a) Inoperative EIU is deactivated, b) EIU source selectors are verified to operate normally, and c) EIU selector is verified to operate normally.

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31 INDICATING/RECORDING SYSTEMS					
-61-07	Cursor Control Panels (CCPs)				
-61-07-01	747-8F without SB 747-34-2967	C	2	1	
-61-07-02	747-8F with SB 747-34-2967 or Production Equivalent				
-61-07-02A		C	2	1	
-61-07-02B		C	2	0	May be inoperative provided electronic checklist (ECL) system is considered inoperative.
-61-07-03	747-8I				
-61-07-03A		C	2	1	
-61-07-03B		C	2	0	May be inoperative provided electronic checklist (ECL) system is considered inoperative.
-61-08	Airport Map Function ***				
-61-08A		C	1	0	(O) May be inoperative or database may be out of currency provided alternate procedures are established and used.
-61-08B		D	1	0	May be inoperative or database may be out of currency provided procedures do not require its use.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
31 INDICATING/RECORDING SYSTEMS						
-61-09	Inboard Display Selector Positions	B	8	7	(M)(O) One may be inoperative provided: a) Remaining positions are verified to operate normally on associated selector, b) Lower center display unit (DU) operates normally, and c) Alternate procedures are used when required.	
-61-10	Electronic Checklist (ECL) System					
-61-10-01	747-8F without SB 747-34-2967					
-61-10-01-01	ECL Closed Loop Switch Indications	C	-	1	(O) May be inoperative provided: a) Flap position closed loop switch indication operates normally, and b) ECL line item override procedures are used when required to complete checklists.	
-61-10-02	747-8F with SB 747-34-2967 or Production Equivalent	C	1	0	(M)(O) May be inoperative provided: a) ECL system is deactivated, and b) Alternate procedures are established and used.	
-61-10-02-01	ECL Closed Loop Switch Indications	C	-	0	(O) May be inoperative provided ECL line item override procedures are used when required to complete checklists.	
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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31 INDICATING/RECORDING SYSTEMS					
-61-10	Electronic Checklist (ECL) System (Cont'd)				
-61-10-03	747-8l	C	1	0	(M)(O) May be inoperative provided: a) ECL system is deactivated, and b) Alternate procedures are established and used.
-61-10-03-01	ECL Closed Loop Switch Indications	C	-	0	(O) May be inoperative provided ECL line item override procedures are used when required to complete checklists.
-61-11	Heading Reference (HDG) Switch				
-61-11A		C	1	0	(O) TRUE function may be inoperative provided alternate procedures are established and used.
-61-11B		D	1	0	TRUE function may be inoperative provided enroute procedures do not require its use.
-61-12	EIU Selector (Center Forward Panel)	C	1	0	(M) AUTO position may be inoperative provided L, R, and C positions are verified to operate normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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32 LANDING GEAR					
-00-01	Landing Gear (GEAR) Synoptic Display	C	1	0	
-11-01	Landing Gear Strut Pressure Indicators	D	5	0	(M) May be inoperative provided alternate procedures are used to check strut pressure.
-30-01	Landing Gear Control System	B	1	0	(M)(O) May be partially or completely inoperative provided: a) Inoperative components are properly secured, b) Landing gear to be left extended are secured in the down position, and c) Airplane is dispatched in accordance with the Landing Gear Extended AFM Appendix.
-31-01	Landing Gear Lever Lock Solenoid				
-31-01-01	747-8F without SB 747-31-2455	B	1	0	(M)(O) May be inoperative provided: a) All landing gear are secured in the down position, and b) Airplane is dispatched in accordance with the Landing Gear Extended AFM Appendix.
-31-01-02	747-8F with SB 747-31-2455 or Production Equivalent	C	1	0	(M)(O) May be inoperative provided: a) Lock solenoid is verified latched, b) Override mechanism is verified to operate normally, and c) Alternate procedures are used to retract landing gear.
-31-01-03	747-8I	C	1	0	(M)(O) May be inoperative provided: a) Lock solenoid is verified latched, b) Override mechanism is verified to operate normally, and c) Alternate procedures are used to retract landing gear.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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32 LANDING GEAR					
-31-02	Landing Gear Selector Valve Electrical Control Circuits	C	2	1	(M) One up/down electrical control circuit may be inoperative provided remaining up/down circuit is verified to operate normally once each flight day.
-32-01	Wing Gear Uplock Bungee Springs	B	4	3	(M) One may be missing provided 270 KIAS/.82 Mach is not exceeded.
-33-01	Body Gear Uplock Bungee Springs	B	4	3	(M) One may be missing provided 270 KIAS/.82 Mach is not exceeded.
-41-01	Wheel Brakes				
-41-01A		C	16	14	(M)(O) May be inoperative provided: a) Inoperative brake is deactivated with deactivation tool, and b) Appropriate performance adjustments for two brakes deactivated are applied.
-41-01B		C	16	14	(M)(O) May be inoperative provided: a) Inoperative brake is deactivated by capping associated brake line, b) Appropriate performance adjustments for two brakes deactivated are applied, c) Takeoff performance is based on landing gear extended, and d) After takeoff, gear remains down for two minutes before retraction.
-41-01C		C	16	14	(M)(O) May be inoperative provided: a) Inoperative brake is removed and associated brake line capped, b) Appropriate truck balance is maintained, c) Appropriate performance adjustments for two brakes deactivated are applied, d) Takeoff performance is based on landing gear extended, and e) After takeoff, gear remains down for two minutes before retraction.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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32 LANDING GEAR					
-41-02	Brake Accumulator Pressure Indicator (Wheel Well)	C	1	0	May be inoperative provided brake accumulator pressure indicator (flight deck) operates normally.
-41-03	Brake Accumulator Pressure Indicator (Flight Deck)	C	1	0	(M) May be inoperative provided: a) BRAKE SOURCE caution message is verified to operate normally, b) Brake accumulator charge is verified normal once each flight day, and c) Brake accumulator pressure indicator (wheel well) operates normally.
-41-04	Gear Retraction Braking System	C	1	0	(O) May be inoperative provided: a) Takeoff performance is based on landing gear extended, and b) After takeoff, gear remains down for two minutes before retraction.
-41-05	BRAKE SOURCE Indication System	A	1	0	(M)(O) May be inoperative provided: a) Normal and alternate brake systems are verified to operate normally, b) Brake accumulator isolation valve is verified to operate normally, c) Brake accumulator pressure indicator (flight deck) operates normally, d) Alternate procedures are established and used, and e) Repairs are made within three flight days.
-41-05-01	BRAKE SOURCE Light	C	1	0	(M) May be inoperative provided BRAKE SOURCE caution message is verified to operate normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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32 LANDING GEAR					
-42-01	Antiskid System	C	1	0	(M)(O) May be inoperative provided: a) Antiskid is deactivated on associated wheels, b) Antiskid fault is verified before each departure, c) Autobrake system is considered inoperative, and d) Appropriate performance adjustments are applied.
-42-01-01	Control Channels	C	16	14	(O) May be inoperative provided: a) Associated wheel brake is considered inoperative, and b) ANTISKID indication is not displayed on EICAS.
-42-01-02	Wheelspeed Transducers				
-42-01-02A		C	16	14	(M)(O) May be inoperative provided: a) Antiskid fault is verified before each departure, b) Adjacent transducer on a fore-aft locked wheel protection pair operates normally, c) Autobrake system is considered inoperative, and d) Appropriate performance adjustments for two brakes deactivated are applied.
-42-01-02B		C	16	14	(O) May be inoperative provided: a) Associated wheel brake is considered inoperative, and b) ANTISKID indication is not displayed on EICAS.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
32 LANDING GEAR						
-42-02	Alternate Antiskid Valves	C	8	7	(M)(O)	One may be inoperative provided: <ul style="list-style-type: none"> a) Associated brakes are deactivated by capping associated brake lines, b) Remaining brakes operate normally, c) Appropriate performance adjustments for two brakes deactivated are applied, d) Takeoff performance is based on landing gear extended, e) ANTISKID indication is not displayed on EICAS, and f) After takeoff, gear remains down for two minutes before retraction.
-42-03	Autobrake System					
-42-03A		C	1	0	(M)	May be inoperative provided: <ul style="list-style-type: none"> a) Autobrake solenoid valve is verified closed, b) Approach minimums do not require its use, and c) AUTOBRAKE selector remains OFF.
-42-03B		C	1	0	(M)	May be inoperative provided: <ul style="list-style-type: none"> a) Autobrake pressure control module is deactivated, b) Approach minimums do not require its use, and c) AUTOBRAKE selector remains OFF.

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32 LANDING GEAR					
-42-04	Brake Torque Limiters				
-42-04A		C	16	14	(O) May be inoperative provided: a) Associated wheel brake is considered inoperative, and b) BRAKE LIMITER indication is not displayed on EICAS.
-42-04B		C	16	10	(M)(O) May be inoperative provided: a) Torque limiter fault is verified before each departure, b) Two torque limiters and associated brakes per truck operate normally, c) For two torque limiters inoperative on the same truck, at least one associated wheel brake is considered inoperative, and d) Appropriate performance adjustments are applied.
-44-01	PARK BRAKE SET Indication System	C	1	0	(M)(O) May be inoperative provided: a) Parking brake takeoff configuration warning system is verified to operate normally, b) Parking brake valve is verified to operate normally once each flight day, c) Parking brake/antiskid interface indication is verified to operate normally once each flight day, and d) Alternate procedures are established and used.
-44-02	Brake Status Lights (Nose Gear)				
-44-02A		C	3	0	(O) May be inoperative provided alternate procedures are established and used.
-44-02B		D	3	0	May be inoperative provided procedures do not require their use.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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32 LANDING GEAR					
-45-01	Nose Wheel Snubber Pads	C	2	0	
-45-02	Wheel Tie Bolts	A	356	338	(M) One per wheel may be broken or missing provided: a) Affected wheel is checked for broken parts or damage, and replaced if broken parts or damage is found, b) Associated brake is checked for broken parts or damage, and replaced or deactivated if broken parts or damage is found, c) Wheel is inspected for additional broken or missing tie bolts before each departure, and d) Repairs are made within five flights.
-45-03	Tire Pressure Indication System				
-45-03A		C	1	0	(M) May be inoperative provided alternate procedures are used to check tire pressure. NOTE: Any portion of the system that operates normally may be used.
-45-03B		D	1	0	May be inoperative provided procedures do not require its use.
-46-01	Brake Temperature Indication System	C	1	0	(O) May be inoperative provided AFM Maximum Quick Turnaround Weight limitations are observed. NOTE: Any portion of the system that operates normally may be used.
-51-01	Rudder Pedal Nose Wheel Steering System	C	1	0	(M)(O) May be inoperative provided: a) Tiller nose wheel steering is verified to operate normally, and b) Approach minimums do not require automatic rollout control.

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32 LANDING GEAR					
-53-01	Body Gear Steering System	C	1	0	(M)(O) May be inoperative provided: a) Body gear steering actuators are verified locked, b) Body gear steering is deactivated, and c) Alternate procedures are established and used.
-53-02	Body Gear Steering Indication System	C	1	0	(M)(O) May be inoperative provided: a) Body gear steering is deactivated, b) Body gear steering indication system is deactivated, c) Body gear steering actuators are verified locked before each departure, and d) Alternate procedures are established and used.
-61-01	Body and Wing Landing Gear Uplock Position Sensors				
-61-01A		B	8	7	(M) One may be inoperative provided associated landing gear door warning sensors are verified to operate normally.
-61-01B		B	8	0	(M)(O) May be inoperative provided: a) Associated landing gear and its symmetric gear are secured in the down position, and b) Airplane is dispatched in accordance with the Landing Gear Extended AFM Appendix.
-61-02	Landing Gear Door Warning Sensors	C	10	5	(M) One per door may be inoperative provided remaining sensor is verified to operate normally.

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32 LANDING GEAR					
-61-03	Wing Landing Gear Downlock Position Sensors	B	4	0	(M)(O) May be inoperative provided: a) Both wing landing gear are secured in the down position, and b) Airplane is dispatched in accordance with the Landing Gear Extended AFM Appendix.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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33 LIGHTS					
-11-01	Flight Compartment and Instrument Lighting System	C	-	-	Individual lights or light controls may be inoperative provided: <ul style="list-style-type: none"> a) Remaining lighting is sufficient to clearly illuminate all instruments and switches, b) Left and right flight deck dome lights operate normally, c) Direct rays are shielded from flight crew eyes, and d) Lighting configuration and intensity is acceptable to flight crew. NOTE: Individual button/switch lights and/or annunciators/indications are excluded from this relief.
-11-02	STORM Switch	C	1	0	May be inoperative provided associated lights operate normally.
-12-01	Master Dim and Test System				
-12-01-01	Dim Function	B	1	0	May be inoperative provided light intensity is acceptable to flight crew.
-12-01-02	Test Function				
-12-01-02A		C	1	0	(M) May be inoperative provided alternate procedures are established and used to verify associated light operates normally.
-12-01-02B		C	1	0	May be inoperative provided associated light is considered inoperative.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
33 LIGHTS					
-21-01	Cabin Interior Lights				
-21-01-01	747-8F	D	-	-	Individual lights may be inoperative provided: a) Sufficient lighting remains for couriers/ supernumeraries to perform their duties, and b) Inoperative lights are not part of the interior emergency lighting.
-21-01-02	747-8I with LED Floor Proximity Lights	C	-	-	Individual lights may be inoperative provided: a) Sufficient lighting remains for crewmembers to perform their duties, and b) Inoperative lights are not part of the interior emergency lighting.
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SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
33 LIGHTS				
-21-01 Cabin Interior Lights (Cont'd)				
-21-01-03 747-81 with Photoluminescent Floor Proximity Lights	C	-	-	<p>Individual lights may be inoperative provided:</p> <ul style="list-style-type: none"> a) No more than 12 indirect lighting LED boards are inoperative in each cabin zone aisle, b) No more than four inoperative indirect lighting LED boards are adjacent, c) At least four indirect lighting LED boards operate normally between inoperative LED board sets, d) Inoperative indirect lighting LED boards are not directly opposite of each other in an aisle, e) No more than two non-adjacent door 2 enclosure accent lights are inoperative, f) No more than two non-adjacent stairway tread lights are inoperative, g) Direct down lights on the upper deck operate normally, h) Sufficient lighting remains for crewmembers to perform their duties, and i) Inoperative lights are not part of the interior emergency lighting. <p>NOTE: The six cabin zones are the passenger area on the upper deck, the passenger area forward of door 1, and the passenger areas between two main entry door pairs.</p>

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
33 LIGHTS					
-24-01	Lighted Information Signs				
-24-01-01	747-8F	C	-	0	(O) May be inoperative provided alternate procedures are established and used to notify crewmembers/supernumeraries when associated signs are placed on or off.
-24-01-01-01	Flight Deck Automatic Function	C	1	0	(O) May be inoperative provided alternate procedures are established and used.
-24-01-02	747-8I				
-24-01-02A		C	-	-	(M) May be inoperative provided: a) Associated passenger seat or lavatory is not occupied from which a lighted information sign is not readily legible, and b) Associated seat or lavatory must be blocked and placarded, DO NOT OCCUPY.
NOTE: These provisos are not intended to prohibit lavatory use or inspections by crewmembers.					
-24-01-02B		C	-	-	(O) May be inoperative and associated passenger seat or lavatory may be occupied provided: a) Passenger address system operates normally, and b) Passenger address system is used to notify passengers and cabin crew when associated signs are placed on or off.
-24-01-02-01	Flight Deck Automatic Function	C	1	0	(O) May be inoperative provided alternate procedures are established and used.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
33 LIGHTS					
-31-01	Service Compartment Lights	D	34	0	
-35-01	Main Deck Alert System (747-8F)				
-35-01A		C	1	0	(O) May be inoperative provided alternate procedures are established and used.
-35-01B		D	1	0	NOTE: Any function that operates normally may be used. May be inoperative provided procedures do not require its use.
-35-02	Main Deck Cargo Handling Lights (747-8F)	D	-	-	Individual lights may be inoperative provided sufficient lighting remains for ground personnel and couriers to perform their duties.
-35-03	Nose Cargo Door Ramp Lights (747-8F)	D	2	0	
-37-01	Lower Cargo Compartment Lights	D	31	-	Individual lights may be inoperative provided sufficient lighting remains for ground personnel to perform their duties.
-41-01	Wing Illumination Lights	C	2	0	(O) May be inoperative provided ground deicing procedures do not require their use.
-42-01	Taxi Lights	C	2	0	
-42-02	Landing Lights				
-42-02A		C	4	2	One per side may be inoperative.
-42-02B		C	4	0	May be inoperative for day operations.
-42-02-01	Dim Function	C	4	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
33 LIGHTS					
-42-03	Runway Turnoff Lights	C	2	0	
-43-01	Position Lights				
-43-01A		C	6	3	May be inoperative provided: a) One stationary red wing tip light operates normally, b) One stationary green wing tip light operates normally, and c) One stationary white tail light operates normally.
-43-01B		C	6	0	May be inoperative for day operations.
-43-02	Wing Tip Marker Lights	D	2	0	
-44-01	Anti-Collision Lights	C	5	0	May be inoperative for day operations.
-44-01-01	Red Upper and Lower Fuselage Beacon Lights	C	2	0	May be inoperative provided white tail and wing tip strobe lights operate normally.
-44-01-02	White Tail and Wing Tip Strobe Lights	C	3	0	May be inoperative provided red upper and lower fuselage beacon lights operate normally.
-45-01	LOGO Lights	D	4	0	
-46-01	Exterior Lower Cargo Handling Area Lights	D	3	0	
-46-02	Main Deck Side Cargo Door Ramp Lights (747-8F)	D	4	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
33 LIGHTS					
-51-01 Interior Emergency Lights					
-51-01-01 747-8F					
-51-01-01A	C	-	-		May be inoperative provided: <ul style="list-style-type: none"> a) Inoperative area lights are not adjacent, b) One upper deck crew service door exit sign operates normally, c) One upper deck crew service door sill light operates normally, and d) Flight deck emergency light operates normally.
-51-01-01B	B	-	1	(O)	May be inoperative provided: <ul style="list-style-type: none"> a) Flight deck emergency light operates normally, b) Occupancy is limited to essential flight crewmembers, including official observers, and c) Crewmembers are appropriately briefed before each departure.
-51-01-02 747-81	C	-	-		A random 25% of lights/signs may be inoperative provided: <ul style="list-style-type: none"> a) Inoperative area lights are not adjacent, b) Stairway area light operates normally, c) Area light or exit sign at each door operates normally, d) One door sill light at each main entry door operates normally, e) Cross-aisle exit signs operate normally, and f) Flight deck emergency light operates normally. NOTE: Lights associated with an inoperative door/slide are not required.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
33 LIGHTS						
-51-01	Interior Emergency Lights (Cont'd)					
-51-01-02	747-8I (Cont'd)					
-51-01-02-01	Upper Deck Emergency Lights	B	-	1	(O) May be inoperative provided: <ul style="list-style-type: none"> a) Flight deck emergency light operates normally, b) Upper deck occupancy is limited to essential flight crewmembers, including official observers, during takeoff and landing, and c) Crewmembers/passengers are appropriately briefed before each departure. 	
-51-01-02-02	Door 5 Overhead Crew Rest Emergency Lights	C	-	0	May be inoperative provide door 5 overhead crew rest is considered inoperative.	
-51-02	Exterior Emergency Lights					
-51-02-01	747-8F					
-51-02-01A		B	1	0	(O) May be inoperative provided crewmembers/ supernumeraries are appropriately briefed before each departure.	
-51-02-01B		C	1	0	May be inoperative for day operations.	
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
33 LIGHTS					
-51-02	Exterior Emergency Lights (Cont'd)				
-51-02-02	747-81	C	-	0	May be inoperative for day operations.
-51-02-02-01	Overwing Lights	C	8	6	One per side may be inoperative.
-51-02-02-02	Main Entry Doors Slide Lights	A	10	9	One may be inoperative provided: a) Associated main entry door/slide is considered inoperative, and b) Repairs are made within one flight day.
-51-02-02-03	Upper Deck Doors Slide Lights				
-51-02-02-03A		C	4	2	One per door may be inoperative.
-51-02-02-03B		C	4	0	May be inoperative provided associated upper deck door/slide is considered inoperative.

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SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
33 LIGHTS				
-51-03	Emergency Escape Path Floor Proximity Lighting System (747-8I)			
-51-03-01	LED Floor Proximity Lights (Passenger Cabin)	C	-	<p>May be inoperative provided:</p> <ul style="list-style-type: none"> a) Inoperative proximity lights are not adjacent, b) Inoperative proximity lights are not directly opposite of each other in an aisle, c) Proximity lights marking right angle intersections operate normally, d) Aisle proximity lights within 39 inches (100 cm) of a right angle intersection operate normally. <p>NOTE: Lights associated with an inoperative door/slide are not required.</p> <p>(Continued)</p>

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SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
33 LIGHTS				
-51-03	Emergency Escape Path Floor Proximity Lighting System (747-8I) (Cont'd)			
-51-03-02	Photoluminescent Floor Proximity Lights (Passenger Cabin)	C	-	<p>May be inoperative or missing provided:</p> <ul style="list-style-type: none"> a) No more than two 10-inch (25.4-cm) segments of photoluminescent strip are inoperative or missing in each cabin zone aisle, b) At least 72 inches (182.9 cm) of photoluminescent strip operates normally between inoperative or missing segments, c) Inoperative or missing segments of photoluminescent strip are not directly opposite of each other in an aisle, d) Stairway photoluminescent strips operate normally, e) Photoluminescent strips marking right angle intersections operate normally, and f) Aisle photoluminescent strips within 39 inches (100 cm) of a right angle intersection operate normally. <p>NOTE 1: The six cabin zones are the passenger area on the upper deck, the passenger area forward of door 1, and the passenger areas between two main entry door pairs.</p> <p>NOTE 2: Lights associated with an inoperative door/slide are not required.</p> <p>(Continued)</p>

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SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
33 LIGHTS				
-51-03 Emergency Escape Path Floor Proximity Lighting System (747-8I) (Cont'd)				
-51-03-03 Exit Identifiers	C	24	18	One exit identifier floodlight per exit door pair may be inoperative provided associated exit identifier backlight operates normally. NOTE: Lights associated with an inoperative door/slide are not required.
-51-03-04 Door 5 Overhead Crew Rest Floor Proximity Lights				
-51-03-04A	C	-	-	May be inoperative provided inoperative proximity lights are not adjacent.
-51-03-04B	C	-	0	May be inoperative provide door 5 overhead crew rest is considered inoperative.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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34 NAVIGATION					
-16-01	Altitude Alerting System	A	1	0	(O) May be inoperative provided: a) Autopilot with altitude hold and altitude capture operates normally, b) Enroute operations do not require its use, c) Airplane does not depart from a designated airport (as listed in operator's MEL) where repair or replacement can be made, and d) Repairs are made within three flight days.
-16-01-01	Aural Alert	C	1	0	May be inoperative provided: a) Visual alert operates normally, and b) Autopilot with altitude hold and altitude capture operates normally.
-16-01-02	Visual Alert	C	1	0	May be inoperative provided: a) Aural alert operates normally, and b) Autopilot with altitude hold and altitude capture operates normally.
-22-01	Non-Stabilized Magnetic Compass (Standby)				
-22-01A		B	1	0	May be inoperative provided all inertial reference unit (IRU) functions operate normally.
-22-01B		B	1	0	May be inoperative provided airplane is operated with dual independent navigation capability and under positive radar control by ATC on the enroute portion of the flight.
-22-01C		B	1	0	May be inoperative provided airplane is operated entirely within areas of magnetic unreliability in conjunction with approved free gyro navigation techniques.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
34 NAVIGATION						
-24-01	Integrated Standby Flight Display (ISFD)					
-24-01-01	Attitude Indication	B	1	0	May be inoperative provided: a) Operations are conducted in day VMC only, and b) Operations are not conducted into known or forecast over-the-top conditions.	
-24-01-02	Approach Mode	C	1	0		
-24-01-03	Heading Display	C	1	0		
-24-01-04	Dedicated Battery/Charger System	C	1	0		

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-25-01	Air Data Inertial Reference Unit (ADIRU) Systems				
-25-01-01	Air Data Computer (ADC) Functions				
-25-01-01-01	Left ADC Function	C	1	0	(O) May be inoperative provided: a) Right and center ADC functions operate normally, b) Left and right AIR DATA instrument source selectors operate normally, c) TAT is verified within 6 degrees C of OAT before each departure, and d) Alternate procedures are established and used.
-25-01-01-02	Right ADC Function	C	1	0	(O) May be inoperative provided: a) Left and center ADC functions operate normally, b) Center secondary static air data module (ADM) operates normally, c) Left and right AIR DATA instrument source selectors operate normally, d) TAT is verified within 6 degrees C of OAT before each departure, and e) Alternate procedures are established and used.
-25-01-01-03	Center ADC Function	C	1	0	(O) May be inoperative provided: a) Left and right ADC functions operate normally, b) Left and right AIR DATA instrument source selectors operate normally, and c) Alternate procedures are established and used.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-25-01	Air Data Inertial Reference Unit (ADIRU) Systems (Cont'd)				
-25-01-02	Inertial Reference Unit (IRU) Functions				
-25-01-02-01	Left IRU Function	C	1	0	May be inoperative provided: a) Right and center IRU functions operate normally, b) Left and right IRS instrument source selectors operate normally, c) Center control display unit (CDU) operates normally, d) Integrated standby flight display (ISFD) heading display is considered inoperative, and e) Approach minimums do not require its use.
-25-01-02-02	Right IRU Function	C	1	0	May be inoperative provided: a) Left and center IRU functions operate normally, b) Left and right IRS instrument source selectors operate normally, c) Center control display unit (CDU) operates normally, and d) Approach minimums do not require its use.
-25-01-02-03	Center IRU Function	C	1	0	May be inoperative provided: a) Left and right IRU functions operate normally, b) Left and right IRS instrument source selectors operate normally, and c) Approach minimums do not require its use.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-25-02	Pitot Air Data Modules (ADMs)	C	3	2	One may be inoperative provided associated air data computer (ADC) function is considered inoperative.
-25-03	Static Air Data Modules (ADMs)				
-25-03-01	Left Static ADM	C	1	0	May be inoperative provided left air data computer (ADC) function is considered inoperative.
-25-03-02	Right Static ADM	C	1	0	May be inoperative provided right air data computer (ADC) function is considered inoperative.
-25-03-03	Center Static ADMs				
-25-03-03A		C	2	1	(O) Center secondary static ADM may be inoperative provided: a) Right air data computer (ADC) function operates normally, and b) Left and right AIR DATA instrument source selectors operate normally.
-25-03-03B		C	2	0	May be inoperative provided center air data computer (ADC) function is considered inoperative.
-25-04	Static Air Temperature (SAT) Indication System	C	1	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-25-05	Mach Indications				
-25-05A		C	2	1	One may be inoperative provided flight descends to FL290 or below if failure of second indication occurs in flight.
-25-05B		C	2	0	May be inoperative provided flight remains at or below FL290.
-25-06	True Airspeed Indications	C	2	0	
-25-07	Total Air Temperature (TAT) Probe Systems	C	2	1	One may be inoperative provided associated air data computer (ADC) function is considered inoperative.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34 NAVIGATION						
-31-01	Instrument Landing Systems (ILSs)					
-31-01-01	Left ILS	C	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) Integrated standby flight display (ISFD) approach mode is considered inoperative, and b) Approach minimums do not require its use. 	
-31-01-02	Right ILS					
-31-01-02A		D	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) Left and center ILSs operate normally, and b) Approach minimums do not require its use. 	
-31-01-02B		C	1	0	May be inoperative provided approach minimums do not require its use.	
-31-01-03	Center ILS					
-31-01-03A		D	1	0	May be inoperative provided: <ul style="list-style-type: none"> a) Left and right ILSs operate normally, and b) Approach minimums do not require its use. 	
-31-01-03B		C	1	0	May be inoperative provided approach minimums do not require its use.	

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			3.	3. NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-31-02	Instrument Landing System (ILS) Antenna Switching				
-31-02-01	Glide Slope				
-31-02-01A		D	3	2	One may be inoperative provided approach minimums do not require use of associated ILS receiver.
-31-02-01B		C	3	0	May be inoperative provided approach minimums do not require use of associated ILS receivers.
-31-02-02	Localizer				
-31-02-02A		D	3	2	One may be inoperative provided approach minimums do not require use of associated ILS receiver.
-31-02-02B		C	3	0	May be inoperative provided approach minimums do not require use of associated ILS receivers.
-32-01	Marker Beacon System	C	1	0	May be inoperative provided approach minimums do not require its use.
-33-01	Radio Altimeter Systems	C	3	2	One may be inoperative provided approach minimums or operating procedures do not require its use.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-43-01	Weather Radar Systems				
-43-01A		D	2	1	
-43-01B		C	2	0	(O) May be inoperative provided: a) Weather radar is not required by FAR, b) Enhanced ground proximity warning system (EGPWS) reactive windshear alert mode (mode 7) operates normally, and c) Alternate procedures are established and used.
-43-01C		B	2	0	(O) May be inoperative provided: a) Weather radar is not required by FAR, and b) Alternate procedures are established and used. NOTE: Operator's alternate procedures should include reviewing windshear avoidance and windshear recovery procedures.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-43-01	Weather Radar Systems (Cont'd)				
-43-01-01	Predictive Windshear Alert Mode				
-43-01-01A		C	2	0	(O) May be inoperative provided: a) Enhanced ground proximity warning system (EGPWS) reactive windshear alert mode (mode 7) operates normally, and b) Alternate procedures are established and used.
-43-01-01B		B	2	0	(O) May be inoperative provided alternate procedures are established and used.
-43-01-02	Auto Tilt Function	C	1	0	NOTE: Operator's alternate procedures should include reviewing windshear avoidance and windshear recovery procedures.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-45-01	Traffic Collision and Avoidance System (TCAS)	B	1	0	(M) May be inoperative provided: a) TCAS is deactivated, and b) Enroute or approach procedures do not require its use.
-45-01-01	Resolution Advisory (RA) Display Systems				
-45-01-01A		C	2	1	May be inoperative on pilot monitoring side.
-45-01-01B		C	2	0	(O) May be inoperative provided: a) Traffic alert (TA) display systems operate normally, b) TCAS audio functions operate normally, c) Enroute or approach procedures do not require their use, and d) Transponder Mode selector is set to TA ONLY.
-45-01-02	Traffic Alert (TA) Display Systems	C	2	0	(O) May be inoperative provided: a) Resolution advisory (RA) display systems operate normally, b) TCAS audio functions operate normally, and c) Enroute or approach procedures do not require their use.
-45-01-03	Audio Functions	B	1	0	May be inoperative provided enroute or approach procedures do not require use of TCAS.
-45-01-04	Airspace Selection Function	C	1	0	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-46-01	Enhanced Ground Proximity Warning System (EGPWS)				
-46-01-01	GPWS Function	A	1	0	(O) May be inoperative provided: a) Alternate procedures are established and used, and b) Repairs are made within two flight days.
-46-01-01-01	Modes 1 - 4	A	4	0	(O) May be inoperative provided: a) Alternate procedures are established and used, and b) Repairs are made within two flight days.
-46-01-01-02	Glideslope Deviation (Mode 5)	B	1	0	
-46-01-01-03	Advisory Callouts (Mode 6)				
-46-01-01-03A		C	-	0	(O) May be inoperative provided: a) Advisory callout is not required by FAR, and b) Alternate procedures are established and used.
-46-01-01-03B		B	-	0	(O) May be inoperative provided alternate procedures are established and used.
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-46-01	Enhanced Ground Proximity Warning System (EGPWS) (Cont'd)				
-46-01-01	GPWS Function (Cont'd)				
-46-01-01-04	Reactive Windshear Alert Mode (Mode 7)				
-46-01-01-04A		C	1	0	(O) May be inoperative provided: a) Weather radar system predictive windshear alert mode operates normally, and b) Alternate procedures are established and used.
-46-01-01-04B		B	1	0	(O) May be inoperative provided alternate procedures are established and used. NOTE: Operator's alternate procedures should include reviewing windshear avoidance and windshear recovery procedures.
-46-01-02	Terrain Awareness Function	B	1	0	(O) May be inoperative provided alternate procedures are established and used.
-46-01-02-01	Terrain Displays				
-46-01-02-01A		C	2	1	
-46-01-02-01B		B	2	0	
(Continued)					

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-46-01	Enhanced Ground Proximity Warning System (EGPWS) (Cont'd)				
-46-01-03	Runway Awareness and Advisory System (RAAS)	C	1	0	
-51-01	VHF Omnidirectional Range (VOR) Navigation Systems	D	2	-	Any in excess of those required by FAR may be inoperative.
-53-01	ATC Transponder/ Automatic Altitude Reporting Systems				
-53-01A		D	2	1	Any in excess of those required by FAR may be inoperative.
-53-01B		B	2	0	May be inoperative provided: a) Operations do not require their use, and b) Prior to flight, approval is obtained from ATC facilities having jurisdiction over planned route of flight.
-53-01-01	Elementary and Enhanced Downlink Aircraft Reportable Parameters Not Required by FAR	A	-	0	May be inoperative provided: a) Operations do not require their use, and b) Repairs are made prior to completion of the next heavy maintenance visit.
(Continued)					

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34 NAVIGATION					
-53-01	ATC Transponder/ Automatic Altitude Reporting Systems (Cont'd)				
-53-01-02	Extended Squitter ADS-B Transmissions				
-53-01-02A		D	-	0	May be inoperative provided operations do not require their use.
-53-01-02B		C	-	0	(O) May be inoperative provided alternate procedures are established and used. NOTE: Any function that operates normally may be used.
-53-02 ***	Automatic Dependent Surveillance- Broadcast (ADS-B) System	D	-	0	May be inoperative provided it is not required by FAR. NOTE: If ADS-B is installed in lieu of or as a replacement for FAR required equipment, the repair category in the operator's MEL will be the same as that of the FAR required equipment.
-53-02-01	Cockpit Display and Traffic Information (CDTI)	D	-	0	NOTE: CDTI display of data from other aircraft systems may be used.
-53-02-02	Cockpit Display and Traffic Information (CDTI) Control Panel	D	-	0	May be inoperative provided: a) Flight ID can be set, and b) Screen display is acceptable to flight crew.
(Continued)					

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-53-02 ***	Automatic Dependent Surveillance-Broadcast (ADS-B) System (Cont'd)				
-53-02-03	Datalink Transmitters	D	-	0	NOTE: In some aircraft the datalink transmission is an integral part of the transponder and relief is provided in that section.
-53-02-04	Datalink Receivers	D	-	0	
-53-02-05	ADS-B Applications	D	-	0	
-55-01	Distance Measuring Equipment (DME)	D	2	-	Any in excess of those required by FAR may be inoperative.
-57-01 ***	Automatic Direction Finder (ADF) Systems	D	2	-	Any in excess of those required by FAR may be inoperative.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
34 NAVIGATION						
-58-01	Global Positioning Systems (GPSs)					
-58-01-01	Left and Right GPSs					
-58-01-01A		D	2	1	One may be inoperative provided: a) Associated global navigation satellite system (GNSS) landing system (GLS) is considered inoperative, and b) Enroute operations do not require its use.	
-58-01-01B		C	2	0	May be inoperative provided: a) Associated global navigation satellite system (GNSS) landing systems (GLSs) are considered inoperative, and b) Enroute operations do not require their use.	
-58-01-02	Center GPS	D	1	0	May be inoperative provided associated global navigation satellite system (GNSS) landing system (GLS) is considered inoperative.	
-58-02	Global Navigation Satellite System (GNSS) Landing Systems (GLSs)					
-58-02A		D	3	2	One may be inoperative provided approach minimums do not require its use.	
-58-02B		C	3	0	May be inoperative provided approach minimums do not require their use.	

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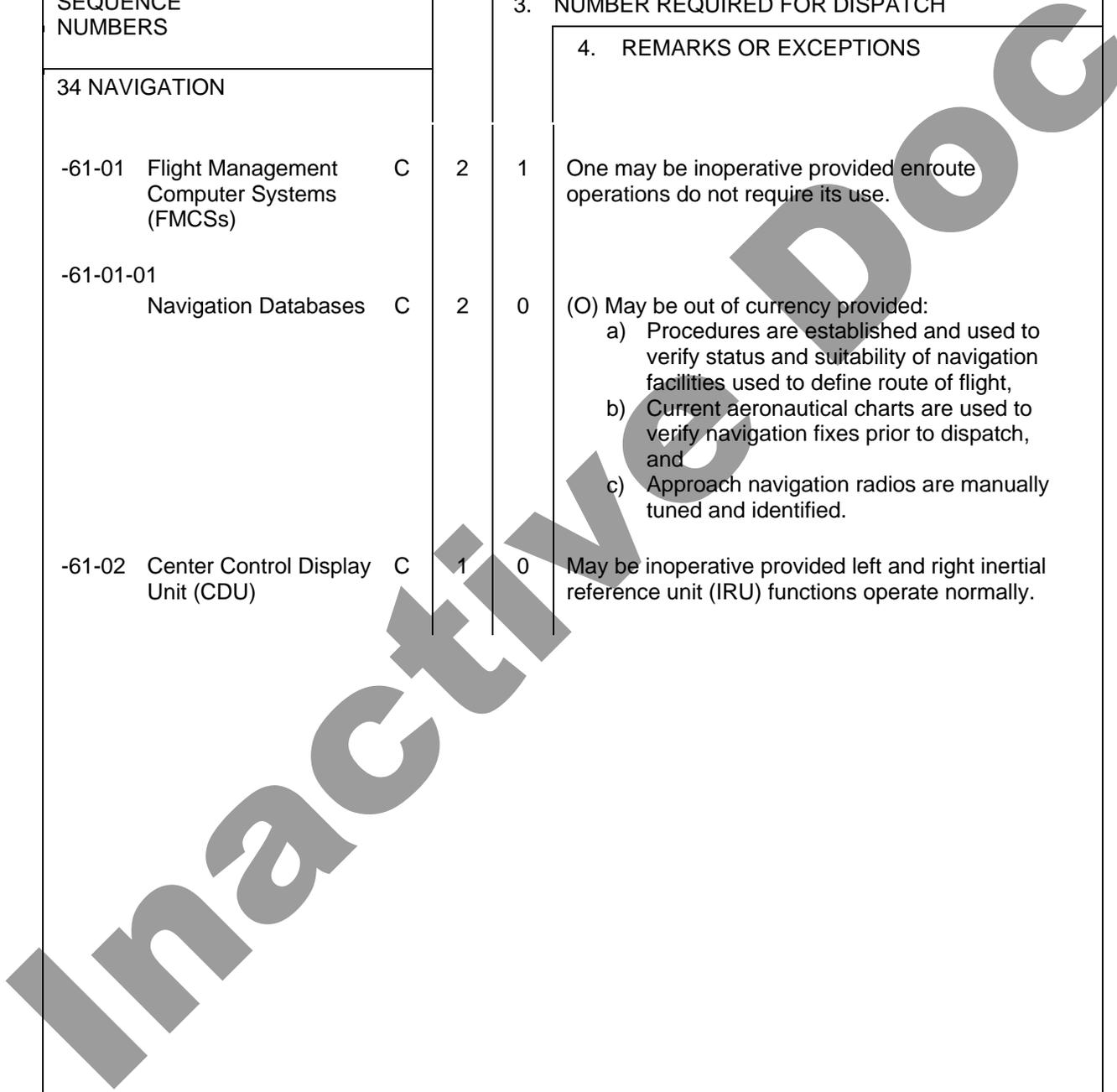
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
34 NAVIGATION					
-61-01	Flight Management Computer Systems (FMCSs)	C	2	1	One may be inoperative provided enroute operations do not require its use.
-61-01-01	Navigation Databases	C	2	0	(O) May be out of currency provided: a) Procedures are established and used to verify status and suitability of navigation facilities used to define route of flight, b) Current aeronautical charts are used to verify navigation fixes prior to dispatch, and c) Approach navigation radios are manually tuned and identified.
-61-02	Center Control Display Unit (CDU)	C	1	0	May be inoperative provided left and right inertial reference unit (IRU) functions operate normally.



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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
35 OXYGEN					
-11-01	Crew Oxygen Pressure Indication System	C	1	0	(M) May be inoperative provided: a) Crew oxygen shutoff valves are verified open, and b) Crew oxygen supply is verified to be above the minimum required before each departure.
-21-01	Supernumerary/Crew Rest/Lavatory Oxygen System (747-8F)				
-21-01A		B	1	0	(M)(O) May be inoperative provided: a) Each supernumerary seat and crew rest bunk without an adequate portable oxygen dispensing unit (bottle and mask) is blocked and placarded, DO NOT OCCUPY, b) Personnel address system operates normally, c) An adequate portable oxygen dispensing unit (bottle and mask) is available in the lavatory, and d) Crewmembers/supernumeraries are appropriately briefed before each departure.
-21-01B		B	1	0	May be inoperative provided flight remains at or below 10,000 feet. (Continued)

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SYSTEM & SEQUENCE NUMBERS	1. ITEM	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
35 OXYGEN				
-21-01 Supernumerary/Crew Rest/Lavatory Oxygen System (747-8F) (Cont'd)				
-21-01-01 Supernumerary Oxygen Service Units	B	6	0	(M)(O) May be inoperative provided: <ul style="list-style-type: none"> a) Inoperative service unit is secured closed, b) Each associated supernumerary seat without an adequate portable oxygen dispensing unit (bottle and mask) is blocked and placarded, DO NOT OCCUPY, c) For associated supernumerary seat used, personnel address system operates normally, and d) Crewmembers/supernumeraries are appropriately briefed before each departure.
-21-01-02 Crew Rest Oxygen Service Units	B	2	0	(M)(O) May be inoperative provided: <ul style="list-style-type: none"> a) Inoperative service unit is secured closed, b) Each associated crew rest bunk without an adequate portable oxygen dispensing unit (bottle and mask) is blocked and placarded, DO NOT OCCUPY, c) For associated crew rest bunk used, personnel address system operates normally, and d) Crewmembers are appropriately briefed before each departure. (Continued)

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
35 OXYGEN					
-21-01	Supernumerary/Crew Rest/Lavatory Oxygen System (747-8F) (Cont'd)				
-21-01-03	Lavatory Oxygen Service Unit	B	1	0	(M)(O) May be inoperative provided: a) Inoperative service unit is secured closed, b) Personnel address system operates normally, c) An adequate portable oxygen dispensing unit (bottle and mask) is available in the lavatory, and d) Crewmembers/supernumeraries are appropriately briefed before each departure.
-21-02	Supernumerary/Passenger Oxygen Automatic Presentation System	C	1	0	(O) May be inoperative provided flight remains at or below FL300.
-21-03	Supernumerary/Passenger Oxygen Pressure Indication System	C	1	0	(M) May be inoperative provided: a) Supernumerary/passenger oxygen shutoff valves are verified open before each departure, and b) Supernumerary/passenger oxygen supply is verified to be above the minimum required before each departure.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
35 OXYGEN					
-21-04	Passenger Oxygen System (747-8I)				
-21-04A		B	1	0	(O) May be inoperative provided: a) All packs operate normally, b) All air cycle machines operate normally, c) All pack temperature control valves operate normally, d) Both outflow valves operate normally, e) Both automatic cabin pressure controllers operate normally, f) Cabin rate of climb indication operates normally, g) Cabin altitude indication operates normally, h) Appropriate altitude limitations are applied, i) Appropriate portable oxygen supplies are available, and j) Passengers are appropriately briefed.
-21-04B		B	1	0	May be inoperative provided flight remains at or below 10,000 feet.
-21-04C		B	1	0	May be inoperative provided occupancy is limited to essential flight crewmembers, including official observers.
(Continued)					

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
35 OXYGEN						
-21-04	Passenger Oxygen System (747-8I) (Cont'd)					
-21-04-01	Lavatory Oxygen Service Units	B	-	0	(M) May be inoperative without flight altitude restriction provided:	<ul style="list-style-type: none"> a) Associated lavatory door is locked closed and placarded, INOPERATIVE - DO NOT ENTER, and b) For all upper deck lavatory oxygen service units inoperative, flight duration is acceptable to the pilot-in-command.
-21-04-02	Passenger Seat Oxygen Service Units	B	-	0	May be inoperative without flight altitude restriction provided associated passenger seat is considered inoperative.	
-21-04-03	Flight Attendant Seat Assembly Oxygen Service Units	B	-	-	May be inoperative without flight altitude restriction provided associated flight attendant seat assembly is considered inoperative.	
-21-04-04	Crew Rest Seat Oxygen Service Units	B	-	0	May be inoperative without flight altitude restriction provided associated crew rest seat is considered inoperative.	
-21-04-05	Crew Rest Bunk Oxygen Service Units	B	-	0	May be inoperative without flight altitude restriction provided associated crew rest bunk is considered inoperative.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
35 OXYGEN					
-31-01	Portable Oxygen Dispensing Units (Bottle and Mask)	D	-	-	(M) Any in excess of those required by FAR may be unserviceable or missing provided: a) Associated location placarding is removed or obscured, b) Required distribution of serviceable bottles is maintained throughout the airplane, and c) Bottles not properly serviced are replaced, serviced, or removed at the next available maintenance facility.
-31-02	Protective Breathing Equipment (PBE)	D	-	-	Any in excess of those required by FAR may be inoperative or removed provided associated location placarding is removed or obscured.
-41-01	Overboard Discharge Indicator Disc	C	1	0	May be damaged or missing.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
36 PNEUMATIC						
-00-01	Air (ECS) Synoptic Display	C	1	0		
-11-01	Pressure Regulating Shutoff Valves (PRSOVs)	C	4	3	(M)(O) One may be inoperative provided: a) Inoperative PRSOV is locked closed, b) Bleed systems on remaining engines operate normally, and c) APU-to-Pack Takeoff Supplementary Procedure is not used.	
-11-02	Intermediate Pressure Check Valves (IPCVs)	C	4	3	One may be inoperative open provided: a) Associated pressure regulating shutoff valve (PRSOV) is considered inoperative, and b) Associated high pressure shutoff valve (HPSOV) is considered inoperative.	
-11-03	High Pressure Shutoff Valves (HPSOVs)	C	4	3	(M)(O) One may be inoperative provided: a) Inoperative HPSOV is locked closed, b) Bleed systems on remaining engines operate normally, c) APU-to-Pack Takeoff Supplementary Procedure is not used, d) Associated engine anti-ice system is operated manually, and e) Appropriate minimum N1 is maintained on associated engine while in icing conditions.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
36 PNEUMATIC					
-11-04	Wing Isolation Valves				
-11-04-01	Left Wing Isolation Valve	C	1	0	(M)(O) May be inoperative provided: a) Left wing isolation valve is deactivated open, b) Right wing isolation valve operates normally, c) Pack 3 operates normally, d) Air cycle machine (ACM) 3 operates normally, e) Pack temperature control valve (TCV) 3 operates normally, and f) Alternate procedures are established and used.
-11-04-02	Right Wing Isolation Valve	C	1	0	(M)(O) May be inoperative provided: a) Right wing isolation valve is deactivated open, b) Left wing isolation valve operates normally, c) Pack 1 operates normally, d) Air cycle machine (ACM) 1 operates normally, e) Pack temperature control valve (TCV) 1 operates normally, and f) Alternate procedures are established and used.
-11-05	APU Bleed Air Check Valve	C	1	0	(O) May be inoperative provided APU bleed air isolation valve remains closed after the first engine starts.
-11-06	APU Bleed Air Isolation Valve	C	1	0	(M) May be inoperative provided APU bleed air isolation valve is deactivated closed after engines are started.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
36 PNEUMATIC						
-11-07	Overpressure Valves (OPVs)	C	4	3	(M) One may be inoperative provided: a) Inoperative OPV is locked open, and b) Associated pressure regulating shutoff valve (PRSOV) is considered inoperative.	
-12-01	Fan Air Modulating Valves (FAMVs)					
-12-01A		C	4	3	(M)(O) One may be inoperative provided: a) Inoperative FAMV is locked open, b) Bleed systems on remaining engines operate normally, c) APU-to-Pack Takeoff Supplementary Procedure is not used in known or forecast icing conditions, d) Appropriate performance adjustments are applied, and e) Alternate procedures are used for wing anti-ice.	
-12-01B		C	4	0	(M)(O) May be inoperative provided: a) Inoperative FAMV is locked open, b) Airplane is not operated in known or forecast icing conditions, and c) Appropriate performance adjustments are applied.	
-20-01	Engine Bleed OFF Lights	C	4	0		
-20-02	Wing Isolation VALVE Lights	C	2	0		
-20-03	APU Bleed Air Isolation VALVE Light	C	1	0		
-21-01	DUCT PRESS Indications	C	3	0		

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
36 PNEUMATIC						
-21-02	Precooler Differential Pressure (DPS) Sensing Systems	C	4	3	(O) One may be inoperative provided: a) Bleed systems on remaining engines operate normally, and b) APU-to-Pack Takeoff Supplementary Procedure is not used.	
-21-03	Bleed Manifold Pressure (PMB) Sensing Systems	C	4	3	(O) One may be inoperative provided: a) Bleed systems on remaining engines operate normally, and b) APU-to-Pack Takeoff Supplementary Procedure is not used.	
-21-04	Intermediate Pressure (PI) Sensing Systems	C	4	3	(O) One may be inoperative provided: a) Bleed systems on remaining engines operate normally, b) APU-to-Pack Takeoff Supplementary Procedure is not used, and c) Appropriate minimum N1 is maintained on associated engine while in icing conditions.	
-22-01	Manifold Temperature (TM) Sensing Systems	C	4	3	(O) One may be inoperative provided: a) Bleed systems on remaining engines operate normally, and b) APU-to-Pack Takeoff Supplementary Procedure is not used.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
38 WATER/WASTE					
-10-01 Potable Water Systems					
-10-01A	C	-	-		(M) Individual components may be inoperative provided: <ul style="list-style-type: none"> a) Associated components are deactivated or isolated, and b) Associated system components are verified not to have leaks. NOTE: Any portion of the system that operates normally may be used.
-10-01B	C	-	-		(M) May be inoperative provided: <ul style="list-style-type: none"> a) System is drained, and b) Procedures are established to ensure that system is not serviced.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
38 WATER/WASTE						
-30-01	Lavatory Waste Systems					
-30-01-01	747-8F					
-30-01-01A		C	1	0	(M) Individual components may be inoperative provided: <ul style="list-style-type: none"> a) Associated components are deactivated or isolated, and b) Associated system components are verified not to have leaks. 	
-30-01-01B		C	1	0	(M) Lavatory system may be inoperative provided: <ul style="list-style-type: none"> a) Associated components are deactivated or isolated to prevent leaks, and b) Lavatory door is locked closed and placarded, INOPERATIVE - DO NOT ENTER. 	
NOTE: Any portion of the system that operates normally may be used.						
NOTE: These provisos are not intended to prohibit inspections by crewmembers.						
(Continued)						

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
38 WATER/WASTE					
-30-01 Lavatory Waste Systems (Cont'd)					
-30-01-02 747-8I					
-30-01-02A	C	-	-		(M) Individual components may be inoperative provided:
					a) Associated components are deactivated or isolated, and
					b) Associated system components are verified not to have leaks.
					NOTE: Any portion of the system that operates normally may be used.
-30-01-02B	C	-	-		(M) Associated lavatory system may be inoperative provided:
					a) Associated components are deactivated or isolated to prevent leaks, and
					b) Lavatory door is locked closed and placarded, INOPERATIVE - DO NOT ENTER.
					NOTE: These provisos are not intended to prohibit inspections by crewmembers.

U.S. DEPARTMENT OF TRANSPORTATION

MASTER MINIMUM EQUIPMENT LIST

FEDERAL AVIATION ADMINISTRATION

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
44 CABIN SYSTEMS					
-11-01	Cabin Attendant Panels (747-8I)	C	5	1	NOTE: Any function that operates normally may be used.
-12-01	Passenger Address (PA) System (747-8I)	B	1	0	(O) May be inoperative provided: a) Flight attendant chime and call lights operate normally, and b) Alternate, normal and emergency procedures, and/or operating restrictions are established and used.
					NOTE: Any function that operates normally may be used.
-12-01-01	Lavatory Speakers	C	-	0	(O) May be inoperative provided alternate procedures are established and used.
-12-01-02	Cabin Speakers	C	-	-	May be inoperative provided no adjacent cabin speaker pairs (forward to aft) are inoperative.
-12-02 ***	Prerecorded Passenger Announcement System (747-8I)				
-12-02A		C	1	0	(O) May be inoperative provided alternate procedures are established and used.
-12-02B		D	1	0	May be inoperative provided procedures do not require its use.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
44 CABIN SYSTEMS						
-14-01	Cabin Interphone System (747-8I)					
-14-01-01	Flight Deck to Cabin, Cabin to Flight Deck Functions	B	-	-		(O) May be inoperative provided: <ul style="list-style-type: none"> a) Flight deck to cabin and cabin to flight deck interphone functions operate normally on at least fifty percent of cabin handsets, b) Flight deck to cabin and cabin to flight deck interphone functions operate normally on at least one handset per exit door pair, and c) Alternate communications procedures between affected flight attendant station(s) and flight deck are established and used. NOTE: Any function that operates normally may be used.
-14-01-02	Cabin to Cabin Functions	B	-	-		(O) May be inoperative provided: <ul style="list-style-type: none"> a) Cabin to cabin interphone functions operate normally on at least fifty percent of cabin handsets, b) Cabin to cabin interphone functions operate normally on at least one handset per exit door pair, and c) Alternate communications procedures between affected flight attendant station(s) are established and used. NOTE: Any function that operates normally may be used.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
44 CABIN SYSTEMS						
-14-02	Cabin Interphone Alerting Systems (747-8I)					
-14-02-01	Flight Deck Call System (Call Lights and EICAS Messages)	B	-	0	NOTE: The flight deck chime must always be operative.	
-14-02-02	Flight Attendant Call Lights	B	-	0	(O) May be inoperative provided: a) Passenger address (PA) system operates normally, b) Lavatory smoke detection systems operate normally, and c) Alternate procedures for contacting flight attendants are established and used.	
					NOTE: Passenger to attendant call system is considered a Non-essential Equipment and Furnishings (NEF) item.	
-14-02-03	Flight Attendant Chime	B	1	0	(O) May be inoperative provided: a) Passenger address (PA) system operates normally, b) Lavatory smoke detection systems operate normally, and c) Alternate procedures for contacting flight attendants are established and used.	
					NOTE: Passenger to attendant call system is considered a Non-essential Equipment and Furnishings (NEF) item.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
44 CABIN SYSTEMS					
-14-03 Cabin Interphone Handset System (747-8I)					
-14-03-01 Flight Deck Handset					
-14-03-01A	C	1	0		(O) May be inoperative provided: a) Flight deck to cabin communication operates normally, and b) Alternate procedures are established and used.
-14-03-01B	D	1	0		May be inoperative provided procedures do not require its use.
-14-03-02 Cabin Handsets	B	-	6		(O) May be inoperative provided: a) One handset per exit door pair operates normally, and b) Alternate communications procedures between affected flight attendant station(s) are established and used. NOTE 1: An operative handset at an inoperative flight attendant seat shall not be counted to satisfy the minimum requirement. NOTE 2: Any function that operates normally may be used.

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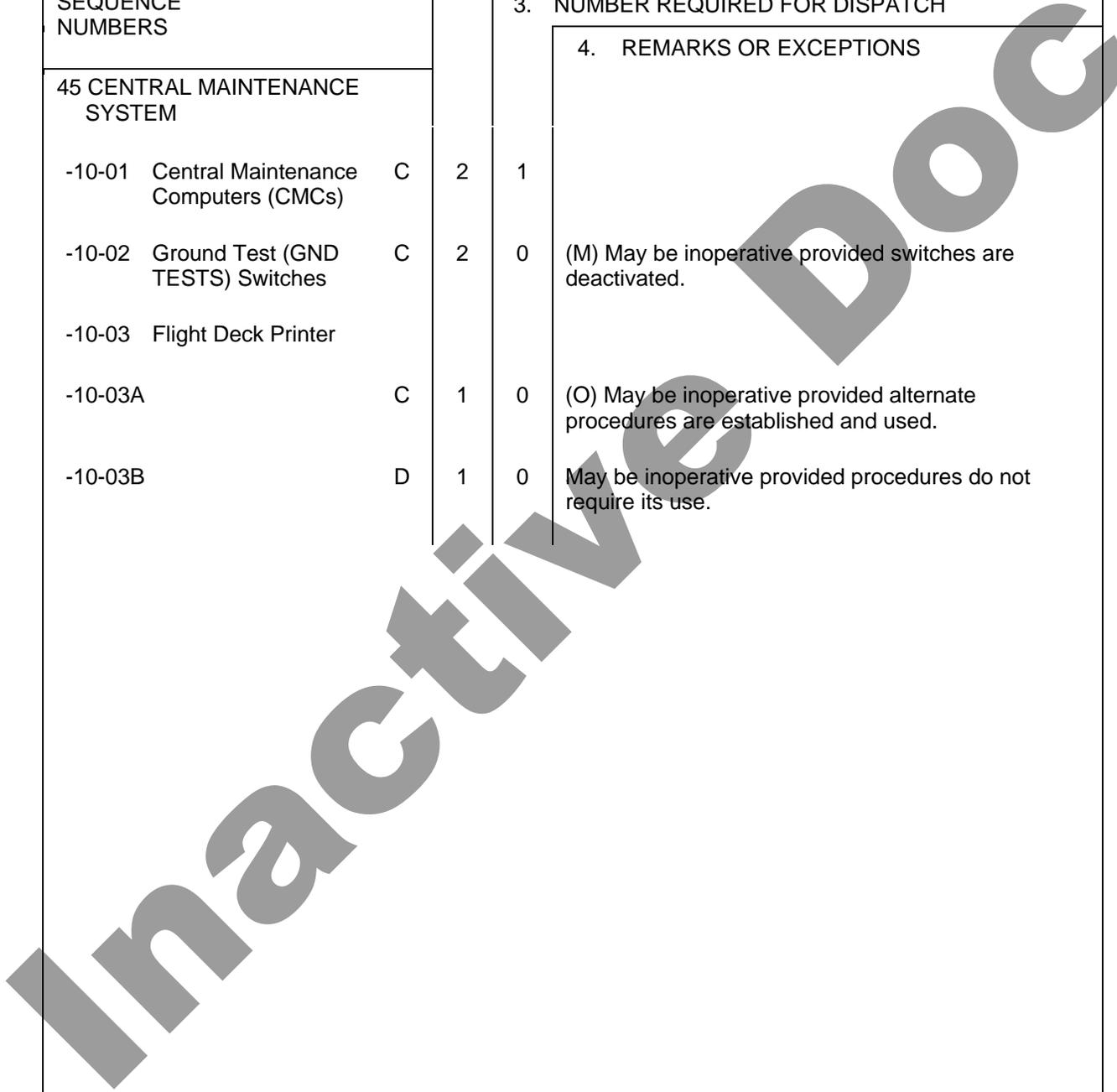
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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
45 CENTRAL MAINTENANCE SYSTEM					
-10-01	Central Maintenance Computers (CMCs)	C	2	1	
-10-02	Ground Test (GND TESTS) Switches	C	2	0	(M) May be inoperative provided switches are deactivated.
-10-03	Flight Deck Printer				
-10-03A		C	1	0	(O) May be inoperative provided alternate procedures are established and used.
-10-03B		D	1	0	May be inoperative provided procedures do not require its use.



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			3. NUMBER REQUIRED FOR DISPATCH		
46 INFORMATION SYSTEMS					
-11-01 ***	Electronic Flight Bag (EFB) Systems				
-11-01-01 ***	Class 3				
-11-01-01A		C	2	1	
-11-01-01B		C	2	0	(O) May be inoperative provided alternate procedures are established and used.
					NOTE: Any function, program, or document which operates normally may be used.
-11-01-01C		D	2	0	May be inoperative provided procedures do not require their use.
-11-01-02 ***	Class 2				
-11-01-02-01	Data Connectivity				
-11-01-02-01A		C	-	-	(O) May be inoperative provided alternate procedures are established and used.
-11-01-02-01B		D	-	0	May be inoperative provided procedures do not require its use.
-11-01-02-02	Power Connection				
-11-01-02-02A		C	-	-	(O) May be inoperative provided alternate procedures are established and used.
-11-01-02-02B		D	-	0	May be inoperative provided procedures do not require its use.
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46 INFORMATION SYSTEMS				
-11-01 ***	Electronic Flight Bag (EFB) Systems (Cont'd)			
-11-01-02 ***	Class 2 (Cont'd)			
-11-01-02-03	Mounting Device			
-11-01-02-03A	C	-	0	(M)(O) May be inoperative provided: a) Associated EFB and hardware is secured by an alternate means or removed from airplane, and b) Alternate procedures are established and used.
-11-01-02-03B	D	-	0	(M) May be inoperative provided: a) Associated EFB and hardware is secured by an alternate means or removed from airplane, and b) Procedures do not require its use.
-11-01-03 ***	Class 1			
-11-01-03-01	Power Connection			
-11-01-03-01A	C	-	-	(O) May be inoperative provided alternate procedures are established and used.
-11-01-03-01B	D	-	0	May be inoperative provided procedures do not require its use.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
46 INFORMATION SYSTEMS						
-11-02	Terminal Wireless LAN Unit (TWLU)					
-11-02A		C	1	0		(O) May be inoperative provided alternate procedures are established and used.
-11-02B		D	1	0		May be inoperative provided procedures do not require its use.
-13-01	Onboard Network System (ONS)					
-13-01A		C	1	0		(O) May be inoperative provided alternate procedures are established and used.
-13-01B		D	1	0		NOTE: Any function that operates normally may be used.
-13-01B						May be inoperative provided procedures do not require its use.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
			1	0		3. NUMBER REQUIRED FOR DISPATCH
						1
47 INERT GAS SYSTEM						
-11-01	Nitrogen Generation System (NGS)	A	1	0	(M) May be inoperative provided: a) NGS shutoff valve is locked closed, and b) Repairs are made within ten flight days.	
-11-01-01	Nitrogen Generation Degraded	C	1	0		

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
49 AIRBORNE AUXILIARY POWER					
-11-01	Auxiliary Power Unit (APU)	C	1	0	(O) May be inoperative provided alternate procedures are established and used.
-11-01-01	Pneumatic Function	C	1	0	May be inoperative provided procedures do not require its use.
-15-01	APU Inlet Door				
-15-01A		C	1	0	(M) May be inoperative provided: a) Inlet door is secured closed, and b) APU is considered inoperative.
-15-01B		C	1	0	(O) May be inoperative open or partially open provided appropriate performance adjustments are applied.
-61-01	APU RPM Indications (N1, N2)	C	2	0	
-71-01	APU EGT Indication	C	1	0	
-94-01	APU Oil Quantity Indication	C	1	0	(M) May be inoperative provided: a) There is no evidence of above normal oil consumption or leakage, b) APU oil quantity is verified adequate, and c) APU oil quantity is verified adequate each five flight days.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
52 DOORS						
-00-01	Doors (DRS) Synoptic Display	C	1	0		
-11-01	Main Entry Door (747-8F)	C	1	0	(M)(O) May be inoperative provided: a) Inoperative door is closed and latched, b) Inoperative door is blocked with a conspicuous barrier strap or rope and placarded, INOPERATIVE, and c) Crewmembers/supernumeraries are appropriately briefed before each departure.	
-11-02	Main Entry Doors Pressure Stop Assemblies					
-11-02-01	747-8F					
-11-02-01A		C	20	18	(M)(O) One forward and/or one aft pressure stop assembly may be missing or inoperative provided: a) Remaining pressure stop assemblies on the main entry door are verified to have no damage, b) Both automatic cabin pressure controllers operate normally, and c) Maximum cabin differential pressure is limited to 5.2 psi.	
-11-02-01B		C	20	18	One forward and/or one aft pressure stop assembly may be missing or inoperative provided both outflow valves are considered inoperative. (Continued)	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
52 DOORS					
-11-02	Main Entry Doors Pressure Stop Assemblies (Cont'd)				
-11-02-02	747-8I				
-11-02-02A		C	200	190	(M)(O) One forward and/or one aft pressure stop assembly per door (maximum of 10 per airplane) may be missing or inoperative provided: a) Remaining pressure stop assemblies on associated main entry door are verified to have no damage, b) Both automatic cabin pressure controllers operate normally, and c) Maximum cabin differential pressure is limited to 5.2 psi.
-11-02-02B		C	200	190	One forward and/or one aft pressure stop assembly per door (maximum of 10 per airplane) may be missing or inoperative provided both outflow valves are considered inoperative.
-11-03	Main Entry Doors Hold-Open Mechanisms	C	-	0	
-11-04	Main Entry Doors Hold-Open Release Handles	C	-	0	(O) May be inoperative provided alternate procedures are established and used.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
52 DOORS					
-11-05	Main Entry Doors/Slides (747-8I)	A	10	9	(M)(O) One may be inoperative or slide missing provided: <ul style="list-style-type: none"> a) Inoperative door is closed and latched, b) Inoperative door is blocked with a conspicuous barrier strap or rope and placarded, INOPERATIVE, c) Associated emergency exit sign, exit identifiers, and floor proximity lights are obscured, d) All passenger seats halfway to the next exit in each direction from the inoperative door, across the entire width of the airplane, are blocked off with conspicuous tapes or ropes that contrast with the airplane interior before loading passengers. Only the seats in these areas shall be blocked; main passenger aisles, cross-aisles, and exit areas must not be blocked. (For an inoperative forward door/slide, the blocked seating area shall extend rearward from the forward cabin end to a line halfway between the inoperative forward door and the next set of doors aft of the inoperative one. For an inoperative rear door/slide, the blocked seating area shall extend forward from the aft cabin end to a line halfway between the inoperative aft door and the next set of doors forward of the inoperative one), e) Conspicuous signs and placards are placed in appropriate locations indicating which seats are not to be occupied by passengers, f) Blocked seating layouts and evacuation procedures must be developed and approved by the FAA certificate holding office for inclusion in the operator's manual, g) Seated capacity does not exceed rated capacity of remaining pairs of exits,

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2.	NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
52 DOORS						
-11-05	Main Entry Doors/Slides (747-8I) (Cont'd)					<p>h) For extended overwater operations, occupancy does not exceed the normal rated capacity of the slide/rafts, or the remaining slide/rafts, or the rated overload capacity of the slide/rafts remaining after loss of one additional slide/raft of greatest capacity, whichever is least,</p> <p>i) Inoperative door is not used for passenger loading,</p> <p>j) Crewmembers/passengers are appropriately briefed before each departure, and</p> <p>k) Repairs are made within one flight day.</p> <p>NOTE 1: Flight attendants may be stationed in the vicinity of each door within blocked areas.</p> <p>NOTE 2: Weight and balance manifest must be revised as necessary to ensure proper loading limits are observed.</p>
-13-01	Upper Deck Crew Service Door (747-8F)	C	1	0		<p>(M)(O) May be inoperative provided:</p> <p>a) Inoperative door is closed and latched,</p> <p>b) Inoperative door is blocked with a conspicuous barrier strap or rope and placarded, INOPERATIVE,</p> <p>c) Associated emergency exit sign is obscured,</p> <p>d) Occupancy is limited to essential flight crewmembers, including official observers, and</p> <p>e) Crewmembers are appropriately briefed before each departure.</p>

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3. NUMBER REQUIRED FOR DISPATCH		
52 DOORS					
-13-02	Upper Deck Crew Service Door Pressure Stop Assemblies (747-8F)				
-13-02A		C	10	8	(M)(O) One forward and/or one aft pressure stop assembly may be missing or inoperative provided: <ul style="list-style-type: none"> a) Remaining pressure stop assemblies on the upper deck crew service door are verified to have no damage, b) Both automatic cabin pressure controllers operate normally, and c) Maximum cabin differential pressure is limited to 6.1 psi.
-13-02B		C	10	8	One forward and/or one aft pressure stop assembly may be missing or inoperative provided both outflow valves are considered inoperative.
-21-01	Crew Compartment Overhead Hatch Latch Pins	C	4	3	(M) One may be removed provided hatch is verified to operate normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
52 DOORS					
-23-01	Upper Deck Doors/Slides (747-8I)				
-23-01A		C	2	1	(M)(O) One may be inoperative or slide missing provided: a) Inoperative door is closed and locked, b) Inoperative door is blocked with a conspicuous barrier strap or rope and placarded, INOPERATIVE, c) Associated emergency exit sign and exit identifiers are obscured, d) Main entry doors/slides 2L and 2R operate normally, e) A maximum of 24 passengers occupy the upper deck during takeoff and landing, f) A maximum of 495 passengers occupy the airplane, and g) Crewmembers/passengers are appropriately briefed before each departure.
-23-01B		C	2	0	(M)(O) May be inoperative or slides missing provided: a) Inoperative doors are closed and locked, b) Inoperative doors are blocked with conspicuous barrier straps or ropes and placarded, INOPERATIVE, c) Associated emergency exit signs and exit identifiers are obscured, d) Upper deck occupancy is limited to essential flight crewmembers, including official observers, during takeoff and landing, and e) Crewmembers/passengers are appropriately briefed before each departure.
-23-02	Upper Deck Doors Lift Systems (Electrical Function) (747-8I)	C	2	0	(O) May be inoperative provided alternate procedures are established and used.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
52 DOORS						
-23-03	Upper Deck Doors Flight Lock Systems (747-8I)	C	2	0	(M)(O) May be inoperative provided: a) Associated upper deck door is verified capable of being unlatched before each departure, and b) Flight attendant monitors the associated upper deck door handle when cabin differential pressure is less than 3.0 psi.	
-23-03-01	DOOR U/D GND MODE Lights	C	2	0	(M) May be inoperative provided: a) DOOR U/D FLT LK indication is verified to operate normally, and b) Associated upper deck door is verified capable of being unlatched before each departure.	
-23-03-02	DOOR U/D FLT LK Indication	C	1	0	(M) May be inoperative provided: a) Both DOOR U/D GND MODE lights are verified to operate normally, and b) Both upper deck doors are verified capable of being unlatched before each departure.	
-23-04	Upper Deck Doors BATTERY OK Lights (747-8I)	C	2	1	(M) One press-to-test system may be inoperative provided associated battery is verified to be adequately charged once each flight day.	
-31-01	Nose Cargo Door Indication System (747-8F)	A	1	0	(M)(O) May be inoperative provided: a) Nose cargo door is verified closed and flush with the fuselage before each departure, b) Nose cargo door latches are verified fully extended before each departure, c) Nose cargo door control system is deactivated before each departure, and d) Repairs are made within 30 flight hours.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
52 DOORS						
-31-02	Nose Cargo Door Lift System (Electrical Function) (747-8F)	C	1	0	(M) May be inoperative provided: a) Nose cargo door lift system (electrical function) is deactivated, and b) Nose cargo door lift actuators are operated manually.	
-31-03	Nose Cargo Door Cam System (Electrical Function) (747-8F)	C	1	0	(M) May be inoperative provided: a) Nose cargo door cam system (electrical function) is deactivated, and b) Nose cargo door push-pull cam actuator is operated manually.	
-31-04	Nose Cargo Door Retractable Latches (747-8F)	C	16	15	(M)(O) One may be inoperative unlatched or missing provided: a) Remaining nose cargo door latches are verified fully extended before each departure, and b) Nose cargo door control system is deactivated before each departure.	
-31-04-01	Latch Actuators (Electrical Function)	C	16	0	(M)(O) May be inoperative provided: a) Associated nose cargo door latch actuator is operated manually, and b) Nose cargo door latches are verified fully extended before each departure.	
-31-05	Nose Cargo Door Control System (747-8F)	A	1	0	(M)(O) May be inoperative provided: a) Nose cargo door control system is deactivated, b) Nose cargo door is operated manually, c) Nose cargo door is verified closed and flush with the fuselage before each departure, d) Nose cargo door latches are verified fully extended before each departure, and e) Repairs are made within 30 flight hours.	
-31-06	Nose Cargo Door Latch Actuator Test System (747-8F)	C	1	0		

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
52 DOORS						
-31-07	Nose Cargo Door Latch Annunciator System (747-8F)	C	1	0	(M)(O) May be inoperative provided nose cargo door latches are verified fully extended before each departure.	
-31-08	Nose Cargo Door Closed Annunciator System (747-8F)	C	1	0	(M)(O) May be inoperative provided nose cargo door is verified closed and flush with the fuselage before each departure.	
-32-01	Main Deck Side Cargo Door Latches and Hinge Sections (747-8F)	C	25	24	(M) One latch or hinge section may be missing or inoperative provided: a) Remaining latches and hinge sections on the main deck side cargo door are verified to have no damage before each departure, and b) Both outflow valves are considered inoperative.	
-32-02	Main Deck Side Cargo Door Latch System (Electrical Function) (747-8F)	C	1	0	(M) May be inoperative provided: a) Main deck side cargo door latch mechanism is verified to have no damage, b) Main deck side cargo door master latch lock mechanism is verified to have no damage, c) Main deck side cargo door latch mechanism is operated manually, and d) Main deck side cargo door latch cams are verified closed before each departure.	
-32-03	Main Deck Side Cargo Door Interior Master Latch Handle Shear Pin (747-8F)	C	1	0	(M) May be inoperative or missing provided: a) Main deck side cargo door master latch lock mechanism is verified to have no damage, and b) Main deck side cargo door is locked and unlocked using the exterior master latch lock handle.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
52 DOORS						
-32-04	Main Deck Side Cargo Door Lift System (747-8F)	C	1	0	(M) May be inoperative provided: a) Main deck side cargo door latch mechanism is verified to have no damage, b) Main deck side cargo door master latch lock mechanism is verified to have no damage, and c) Main deck side cargo door lift mechanism is operated manually.	
-32-05	Main Deck Side Cargo Door Hook System (Electrical Function) (747-8F)	C	1	0	(M) May be inoperative provided: a) Main deck side cargo door hook mechanisms are verified to have no damage, and b) Main deck side cargo door hook mechanisms are operated manually.	
-34-01	Forward/Aft Cargo Doors Latches and Hinge Sections	C	48	46	(M) One latch or hinge section per door may be missing or inoperative provided: a) Remaining latches and hinge sections on associated cargo door are verified to have no damage before each departure, and b) Both outflow valves are considered inoperative.	
-34-02	Forward/Aft Cargo Doors Latch Systems (Electrical Function)	C	2	0	(M) May be inoperative provided: a) Associated cargo door latch mechanism is verified to have no damage, b) Associated cargo door master latch lock mechanism is verified to have no damage, c) Associated cargo door latch mechanism is operated manually, and d) Associated cargo door lower latch cams are verified closed before each departure.	

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
52 DOORS					
-34-03	Forward/Aft Cargo Doors Hook Systems (Electrical Function)	C	2	0	(M) May be inoperative provided: a) Associated cargo door hook mechanism is verified to have no damage, and b) Associated cargo door hook mechanism is operated manually.
-34-04	Forward/Aft Cargo Doors Lift Systems	C	2	0	(M) May be inoperative provided: a) Associated cargo door latch mechanism is verified to have no damage, b) Associated cargo door master latch lock mechanism is verified to have no damage, and c) Associated cargo door lift mechanism is operated manually.
-36-01	Bulk Cargo Door Balance Mechanism	C	1	0	(M) May be inoperative provided a safety hold open device is used when door is in the open position.
-36-02	Bulk Cargo Door Pressure Stop Assemblies				
-36-02A		C	16	15	(M)(O) One forward or aft pressure stop assembly may be missing or inoperative provided: a) Remaining pressure stop assemblies on the bulk cargo door are verified to have no damage, b) Both automatic cabin pressure controllers operate normally, and c) Maximum cabin pressure differential is limited to 5.2 psi.
-36-02B		C	16	15	One forward or aft pressure stop assembly may be missing or inoperative provided both outflow valves are considered inoperative.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
52 DOORS					
-48-01	Main Equipment Center Access Door Latch Pins	C	4	3	(M) One may be inoperative or removed provided: a) Remaining latch pins are verified to have no damage, b) Remaining latch pins are verified fully engaged, and c) Verification procedures are repeated each time door is opened and closed.
-48-02 ***	Main Equipment Center Inflight Access Hatch Lock Screw/Nut Plate Assembly	D	1	0	May be inoperative or missing.
-51-01	Flight Deck Door Automatic Locking System (747-8I)	A	1	0	(M)(O) May be inoperative provided: a) Automatic locking system is deactivated, b) Flight deck door dead bolt operates normally and is used to lock the door, c) Alternate procedures are established and used for locking and unlocking the door using the dead bolt, and d) Repairs are made within two flight days.
-51-01-01	Flight Deck Access System (Keypad, Door Chime)	B	1	0	(M)(O) May be inoperative provided: a) Keypad is deactivated, and b) Alternate procedures are established and used.
-51-01-01-01	LEDs	C	3	0	(O) May be inoperative provided alternate procedures are established and used.
-51-01-01-02 ***	Door Bell Mode	C	1	0	(O) May be inoperative provided alternate procedures are established and used.
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52 DOORS					
-51-01	Flight Deck Door Automatic Locking System (747-8I) (Cont'd)				
-51-01-02	Flight Deck Door LOCK FAIL Light	B	1	0	(M) May be inoperative provided automatic lock controls are verified to operate normally.
-51-01-03	Flight Deck Door AUTO UNLK Light	B	1	0	(M) May be inoperative provided: a) Automatic lock controls are verified to operate normally, and b) Door chime operates normally.
-51-01-04	Flight Deck Door Lock Selector	B	1	0	(M)(O) May be inoperative provided: a) Keypad is deactivated, b) Automatic lock is verified to operate normally, and c) Alternate procedures are established and used.
-51-01-05	Pressure Sensor	A	1	0	(M) May be inoperative provided: a) Pressure sensor is deactivated, and b) Repairs are made within two flight days.
-51-02	Flight Deck Door Dead Bolt (747-8I)	C	1	0	May be inoperative provided flight deck door automatic locking system operates normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
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52 DOORS					
-71-01	Door Indication Systems				
-71-01-01	747-8F	C	9	0	(M) May be inoperative provided associated door is verified closed, latched, and locked before each departure.
-71-01-02	747-8I	C	18	0	(M) May be inoperative provided associated door is verified closed, latched, and locked before each departure.
-71-01-02-01	Auto/Man EICAS Indications				
-71-01-02-01A		C	12	0	(O) May be inoperative provided an alternate procedure is used to verify associated door is in Auto or Man mode as appropriate.
-71-01-02-01B		D	12	0	May be inoperative provided procedures do not require their use.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
73 ENGINE FUEL AND CONTROL					
-11-01	Engine Main Fuel Pump Strainer Sensors	C	4	3	
-11-02	Engine Fuel Filter Bypass Warning Systems				
-11-02-01	Without FCOC Heat Exchanger Sensor Installed	C	4	3	
-11-02-02	With FCOC Heat Exchanger Sensor Installed	C	4	3	One may be inoperative provided associated engine fuel cooled oil cooler (FCOC) heat exchanger sensor operates normally.
-11-03 ***	Engine Fuel Cooled Oil Cooler (FCOC) Heat Exchanger Sensors	C	4	3	One may be inoperative provided associated engine fuel filter bypass warning system operates normally.
-21-01	Engine Fuel Shutoff Valve Indication Systems	C	4	3	(M) One may be inoperative provided associated engine fuel shutoff valve is verified to operate normally once each flight day.
-21-02	Electronic Engine Controls (EECs)	C	4	0	(O) Normal (NORM) mode may be inoperative provided: a) All turbine case cooling air flow systems operate normally, b) Maximum operating temperature is limited to 48 degrees C OAT, and c) All EECs are operated in alternate (ALTN) mode.
-21-03	Electronic Engine Controls (EECs) NORM/ALTN Mode Lights	C	4	0	(M) May be inoperative provided associated EEC mode switch is verified to operate normally.

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SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
73 ENGINE FUEL AND CONTROL					
-21-04	Electronic Engine Controls (EECs) C1 Faults				
-21-04A	A	4	3		May be dispatched with one EEC C1 fault provided repairs are made in accordance with time established by engine manufacturer.
-21-04B	A	4	0		(O) May be dispatched with EEC C1 faults provided: a) TAT is verified within 6 degrees C of OAT before each departure, and b) Repairs are made in accordance with time established by engine manufacturer.
-31-01	Engine Fuel Flow Indication Systems	C	4	3	Except for ER operations, one may be inoperative provided total fuel quantity indication operates normally.

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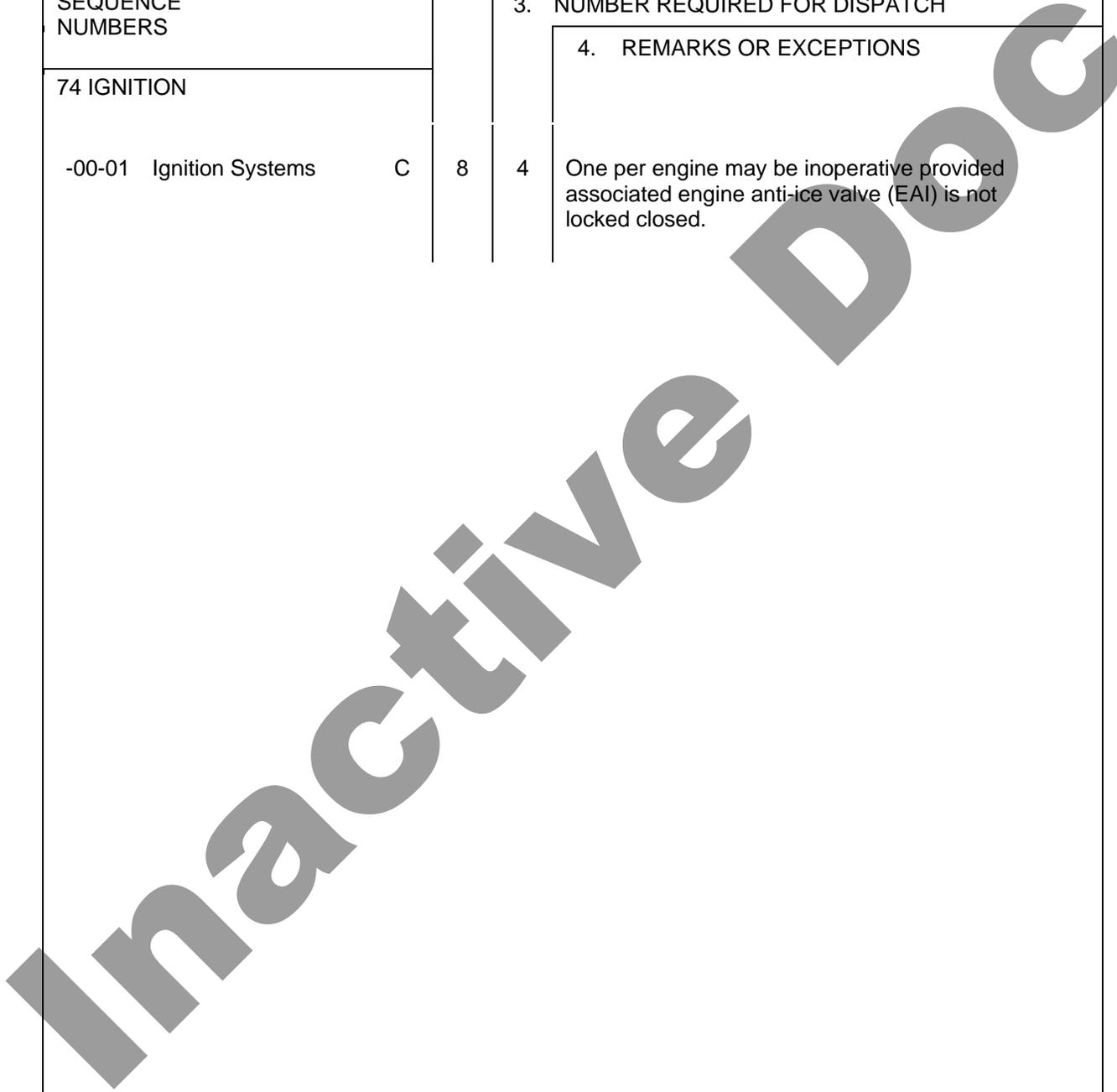
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74-1

SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED	3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
74 IGNITION					
-00-01 Ignition Systems	C	8	4		One per engine may be inoperative provided associated engine anti-ice valve (EAI) is not locked closed.



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75-1

SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
			4	0		3. NUMBER REQUIRED FOR DISPATCH
						0
75 BLEED AIR						
-10-01	Booster Anti-Ice (BAI) Valves	C	4	0	(M)(O) May be inoperative provided: a) Inoperative BAI valve is locked closed, b) Ground operations at or below 3 degrees C OAT in icing conditions are limited to 30 minutes, and c) Alternate procedures are established and used.	
-23-01	Core Compartment Cooling (CCC) Valves	C	4	0	(M) May be inoperative locked open.	
-24-01	Turbine Case Cooling Air Flow Systems					
-24-01-01	High Pressure Turbine Active Clearance Cooling (HPTACC) Valves	C	4	0	(M)(O) May be inoperative provided: a) Inoperative HPTACC valve is locked closed, b) Appropriate performance adjustments are applied, and c) All electronic engine controls (EECs) are operated in normal (NORM) mode.	
-24-01-02	Low Pressure Turbine Active Clearance Cooling (LPTACC) Valves	C	4	0	(M)(O) May be inoperative provided: a) Inoperative LPTACC valve is locked closed, b) Appropriate performance adjustments are applied, and c) All electronic engine controls (EECs) are operated in normal (NORM) mode.	

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77-1

SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		3. NUMBER REQUIRED FOR DISPATCH	4. REMARKS OR EXCEPTIONS
77 ENGINE INDICATING						
-31-01 Engine Vibration Monitoring Systems	C	4	2			May be inoperative provided procedures do not require their use.

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78-1

SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
78 ENGINE EXHAUST					
-31-01	Thrust Reverser Systems				
-31-01A		C	4	3	(M)(O) One may be inoperative provided: a) Inoperative reverser is secured in the forward thrust position, and b) Appropriate performance adjustments are applied.
-31-01B		A	4	2	(M)(O) May be inoperative provided: a) Inoperative reversers are on symmetrical engines only, b) Inoperative reversers are secured in the forward thrust position, c) Antiskid system operates normally, d) Auto spoilers system operates normally, e) Appropriate performance adjustments are applied, and f) Repairs are made within three flight days.
-34-01	Reverse Thrust Lever Interlocks				
-34-01A		C	4	3	(O) One may be inoperative released.
-34-01B		C	4	3	(O) One may be inoperative retracted provided appropriate performance adjustments are applied.
-36-01	Thrust Reverser Proximity Sensors	C	24	20	One per engine may be inoperative.

U.S. DEPARTMENT OF TRANSPORTATION

MASTER MINIMUM EQUIPMENT LIST

FEDERAL AVIATION ADMINISTRATION

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79-1

SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS	
						3. NUMBER REQUIRED FOR DISPATCH
79 ENGINE OIL						
-21-01	Engine Oil Debris Monitoring System (DMS) Sensors	C	4	2	(M) One per side may be inoperative provided: a) Inoperative DMS sensor is checked for contaminants, and b) Associated engine oil filter bypass warning system operates normally.	
-31-01	Engine Oil Quantity Indicating Systems	B	4	3	(M) One may be inoperative provided: a) There is no evidence of above normal oil consumption or leakage, and b) Associated oil tank is verified full before each departure.	
-35-01	Engine Oil Filter Bypass Warning Systems	C	4	2	One per side may be inoperative provided associated engine oil debris monitoring system (DMS) sensor operates normally.	

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80-1

SYSTEM & SEQUENCE NUMBERS	ITEM	1.	2. NUMBER INSTALLED		4. REMARKS OR EXCEPTIONS
			3.	NUMBER REQUIRED FOR DISPATCH	
80 STARTING					
-11-01	Engine Starter Air Valves (SAVs)	C	4	3	(M)(O) One may be inoperative closed provided alternate procedures are used for engine start.
-11-02	Start Switch Holding/Cutout Systems	C	4	0	(O) May be inoperative provided alternate procedures are used for engine start.

