

757

Fault Isolation Manual

GPA Group plc

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DOCUMENT D633N632

ORIGINAL ISSUE DATE: MARCH 20, 1991

PUBLISHED BY BOEING COMMERCIAL AIRPLANES GROUP, SEATTLE, WASHINGTON, USA

• A DIVISION OF THE BOEING COMPANY •

JANUARY 28, 2007



GPA Group plc GUI REVISION NO. 60 JAN 20, 2009

To: All Holders of Boeing Document D633N632.

Attached is the current revision to Document D633N632, Boeing 757 Fault Isolation Manual for GPA Group plc.

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TRANSMITTAL LETTER

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TEMPORARY REVISIONS

Remove any Temporary Revisions that have a date earlier than the date of this revision.

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GPA Group plc HIGHLIGHTS

CHAPTER	22	- AUTO FLIGHT
22-FAULT CODE DIAGRAM 15		Re-issued the page.
22-FAULT CODE INDEX 25		Re-issued the page.
22-00-03 170		Changed the reference call out in MCDP Ground Test 10.
22–33–00 102		Removed the Transducer call out.
CHAPTER	24	- ELECTRICAL POWER
24-20-00 159		Changed the Table 102 - Left and Right Power Channels data for DP Trip Message procedure.
CHAPTER	26	- FIRE PROTECTION
26-FAULT CODE INDEX 1-14		Changed the format of the data.
CHAPTER	27	- FLIGHT CONTROLS
27-FAULT CODE INDEX 1-14		Changed the format of the procedure.
27–09–00 101		Re-issued the page.
CHAPTER	28	- FUEL
28-21-00 127 28-22-00 115,117 28-41-00 CONFIG 2		Added troubleshooting procedure for unwanted fuel transfer from center tank to main tank(s). Added the data for SB 28A0078 which added ground fault interrupt (GFI) relay feature. Added the wiring check of the hot short protector for the fault message 24.

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28-41-00 CONFIG 3 174	Added the wiring check of the hot short protector for the fault message 24.
CHAPTER 31	- INDICATING/RECORDING SYSTEMS
31-01-36 105 107-108	Added relay to the P36 panel and corrected customized data error.
31-01-37 105,108	Added relay to the P37 panel and corrected custimized data error.
CHAPTER 32	- LANDING GEAR
32-FAULT CODE INDEX 1-16	Changed the format of the data.
CHAPTER 34	- NAVIGATION
34-FAULT CODE INDEX 56	Re-issued the pages.
CHAPTER 71	- POWER PLANT
71-06-00 107	Changed the fault isolation for engine surge in flight during accel/deccel.



GPA Group plc

PAGE	DATE	CODE	PAGE	DATE	CODE	PAGE	DATE	CODE
TITLE PAGE 1 2	E JAN 28/07 BLANK	29	5 6 7 8 9	DEC 20/93 DEC 20/93 DEC 20/93 DEC 20/93 DEC 20/93 DEC 20/93	CONT. 01 01 01 01 01	EICAS MESS 24 25 26 27 28	SEP 28/99 SEP 28/99 SEP 28/99 SEP 28/99 SEP 28/99	CONT. 24 26 26 27 25
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INTRODUCT: 1 2 3 4		01 02 01	1 2 EICAS ME	JUN 15/84 BLANK ESSAGE LIST TAB		50 BITE INDEX	SEP 28/99	12
5 6 7 8 9 10 11 12 13	SEP 28/00 SEP 28/00 SEP 28/00 SEP 28/00 SEP 28/00 SEP 28/00 SEP 28/00 SEP 28/99 SEP 28/00 SEP 28/99	01 01 01	EICAS ME	SSAGE LIST SEP 28/99 SEP 28/99 SEP 28/01 SEP 28/99 SEP 28/99 SEP 28/99		BITE INDEX 1 2 3 4	SEP 28/99 SEP 28/99 SEP 28/99 BLANK	01 01 01
14 15 16 17 18 19 20	SEP 28/00 SEP 28/00 SEP 28/00 SEP 28/00 SEP 28/00 SEP 28/00 BLANK	01 01 01 01 01 01	2 3 4 5 6 7 8 9 10 11 12 13	SEP 28/99 MAY 20/08 SEP 28/99 SEP 28/99 SEP 28/99 SEP 28/99 SEP 28/99 SEP 28/99	19 04 02 17 28 02 02			
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R = REVISED, A = ADDED OR D = DELETED 632 JAN 20/09 D = DELETED 635 N 632

CHAPTER 00 **EFFECTIVE PAGES** PAGE LAST PAGE

REVISION RECORD

All revisions to this manual will be accompanied by a transmittal sheet bearing the revision number. Enter the revision number in numerical order, together with the date filed and the initials of the person filing, in the form below:

REVISION NO.	DATE FILED	ВҮ	REVISION NO.	DATE FILED	ВҮ	REVISION NO.	DATE FILED	вү

Revision Record Figure 1

REVISION RECORD



RECORD OF TEMPORARY REVISIONS

REVISION		INSERTED REMOVED			REVISI	INSERTED		REMOVED			
TR NO.	DATED	BY	DATE	BY	DATE	TR NO.	DATED	ВҮ	DATE	BY	DATE

Record of Temporary Revisions Figure 1

RECORD OF TEMPORARY REVISIONS



TITLE CHAP/S	SEC.	TITLE CHAP/SEC	TITLE CHAP/SEC
ACARS (IF INSTALLED)2 ACCEL RATE, ENG	321 911	AUTO BRAKE	COMPARTMENT TEMPERATURE
ADF	457 421 711	BATTERY	WARNING
AIR CONDITIONING PACKS	412 120	APU	STEERING
AIR LEAK DOORS	412 151 416	VALVE	CREW OXYGEN
ALTITUDE CONTROL, CABIN	130	BRAKES	DISPLAY BRIGHTNESS CONTROL3141
ALTIMETER, RADIO3 ANGLE OF ATTACK	433	BUFFETING OR SEVERE TURBULENCE AMM0551 BUS OFF	DOORS
ANTI-COLLISION LIGHTS3	344	CABIN	APU
ANTI-ICE, ENGINE	011 242	ALTITUDE CONTROL2130 AUTO FAIL2130 CHIME, COCKPIT2342	ENTRY
AOA PROBE		INTERPHONE2342 LIGHTS3321 PRESSURE2130	LEAK
DOOR	915 931	TEMPERATURE	
FIRE	421 994	FROM COCKPIT2342 FROM LAVATORY3325	EADI. 3422 EDP. 2911 EEC . 7321
ATC TRANSPONDER	453	CARGO DOOR	EFIS
FROM COCKPIT2 FROM LAVATORY3	342 325	COMPARTMENT OVHT DETECTOR2616	
FROM SEAT2 ATTENDANT WORK LIGHTS3		OVERHEAT	APU GENERATOR 2421 BATTERY
ATTITUDE DIRECTION INDICATOR	351	CHILLER UNITS	BUS OFF
AUTO DECEL, ENGINE 7 AUTO STABILIZER TRIM 2		COCKPIT WINDOWS 5611 COFFEE MAKERS 2531	GENERATOR CONTROL 2422

FIM Index Figure 1 (Sheet 1)

FIM INDEX



TITLE	CHAP/SEC	TITLE	CHAP/SEC	TITLE	CHAP/SEC
GROUND HA	NDLING	THRUST MA	NAGEMENT 2232	FI TGHT	
BUS	2451		1 7105		ERATURE 2160
GROUND SE	RVICE	V4DDATTA	1	DIRECTOR.	2211
BUS	2451	INDICAT	ORS7741	INTERPHON	E2351
STANDBY P	OWER 2433	WET START	7321		
IR UNII	2431	ENGINE VALV	/ES		R 3461
ELECTRONIC					3131
ATTITUDE	NTREC-		7611		S 3311
	CATOR 3422	ENTREE CART	E3611		
ENGINE CO	NTROL 7321	ENTRY DOORS	55211	FUEL	
FLIGHT IN	STRU-		S3322		P 2822
MENTS .	3422	ESCAPE SLID	ES2565	CONTROL S	
HORIZONTA	L	EQUIPMENT C	COOLING	(ENGINE)
SITUATI		FAN	2158		CATOR 7321
INDICAT	OR 3422	OVERHEAT.	2158	HEAT	7314
ELEVATORS		SMOKE	2158	QUANTITY	2841
	S HYDRAULIC	SMOKE CLE	AR2158		RE 2843
CHECK FA		VALVE	2158	VALVE, AP	U 2825
MIDKIG C	ONDITION AMMO551	EXTERNAL PO	WER 2441		
EMERGENCY I	00RS 5221 IGHTS 3351	FALLET ADIL	4961	GALLEY	NITO 2577
		•	ISS7314		NITS 2533 KER 2531
ANTI-ICE	3021		7933		RTS 2531
CHARTS		FIRE			S 2531
CHECKS	7106	APU	2615		
DISPLAY S	ELECTOR 31/1	CARGO			
DRIVEN PU	MP 2911	COMPART	MENT2616	GASPER FAN	(IF
ELECTRONI	С	FNGTNE	2611	INSTALLED)2120
ENGINE	CONTROL 7322	WHEEL WEL	.L2611	GENERATOR	2411
FIRE	2611	FLAMEOUT, E	NGINE 7321		3446
HUI SIAKI	····· 7106	FLAP SPEED		GROUND	
TMDENDING	T 7105	EXCEEDED	AMMU551	CREW CALL	2351
START	HOT 7106	FLIGHT CONT	ROLS	HANDLING	BUS 2451
INDICATOR	S 7744	AILERONS		SEKVICE B	05 2451
NACELLE D	RAGGED AMMO551		2781	PROXIMITY	SYSTEM 3446
NO LIGHT/	WET START 7321		2781		ICATOR 3421
OVERLIMIT	S 7105		2781	SI LLD THD	ICATOR STET
SEIZURE A	ND STRUT		2781	HANDSET	2351
DAMAGE	AMM0551		2751		2351
SLOW ACCE			2721	HEAT, FUEL.	7314
	7321	SPEED BRA	KES2762	HEATERS	
	7105		2761		2140
	7105		R TRIM2741		3810
SINKI SMI	TCH 7105	STALL WAR	NING2732	SHOULDER.	2140
TIMOST LO	SS 7321				
		FT	M Index		

FIM Index
Figure 1 (Sheet 2)

FIM INDEX



TITLE CHAP/S	EC	TITLE CHAP/SEC	TITLE CHAP/SEC
HF RADIO2	311	FLIGHT2351	TAXI3342
HIGH ENERGY STOP/		SERVICE	
HIGH STAGE VALVE3			
HOT 7			work the state of
PLATES2	531	L-NAV3462	MACH INDICATOR3412
		LANDING GEAR	MAINTENANCE MESSAGES
WATER HEATER3	810	DOWN OVERSPEEDAMMO55	(MDCP EICAS)3141
HSI		EXTENSION326' HARD/OVERWEIGHT	MAP LIGHTS
	321		
HYDRAULIC	044	LANDINGAMMO557 RETRACTION3267	MASTER
ACMP	911	MANUAL EXTENSION 326	CALL LIGHT\$2334 CAUTION LIGHT3151
ELEC PUMP	911 011		
FLUID TITANIUM	711	POSITION AND WARNING326'	(LIGHTS)
REACTION AMMO	551	LANDNG LIGHTS3342	WARNING LIGHT 3151
		LAVATORIES3810	
		LAVATORY DOORS 254	
		LAVATORY LIGHTS3326	
		LEAKS, WATER3810	
ICE OR SNOWAMMO			N-27741
IDG2		STRIKE3490,AMM055	N-3
ILS		LIGHTS	NAVIGATION
IMPENDING HOT START 7			
INDICATORS EGT	7/1	CARTH	NO LIGHT (ENGINE) 7421 NO SMOKING LIGHTS 3324
ENGINE	(41 7/.1	CABIN CEILING3322	NOSE WHEEL STEERING 3251
FUEL FLOW			
FUEL TEMPERATURE 2	843	SIDEWALL332	
FUEL QUANTITY2		CALL	FILTER BYPASS
HYDRAULIC2		CLOSET3322	
MAXIMUM RESET		DOME 331'	PRESSURE, ENGINE 7932
SWITCH3			
N-17		ENTRY3322	
N-2	741	FL00D331′	TEMPERATURE,
N-3		GALLEY	
OIL PRESSURE		INSTRUMENT3313	
OIL QUANTITY7 OIL TEMPERATURE7		LANDING	
RPM, ENGINE7		L0G0	
VIBRATION, ENGINE 7		MAP331	
INERTIAL REFERENCE		MASTER, DIM AND	CREW
SYSTEM3	421	TEST	
INSTRUMENT LIGHTS3		NAVIGATION334	
INTEGRATED DRIVE		NO SMOKING3324	
GENERATOR2	411	POSITION3343	
INTERPHONE	_,_	READING3323	
CABIN2	342	RUNWAY TURNOFF3347	
		SEAT BELT332	CONDITIONING 2151
		FIM Index	1

FIM Index
Figure 1 (Sheet 3)

FIM INDEX

01



TITLE	CHAP/SEC	TITLE	CHAP/SEC	TITLE	CHAP/SEC
CALL LIGH CONTROL UI ENTRY DOOI ENTERTAINI		RAM AIR TURB RAT READING LIGH RECIRCULATIO RECORDER, FL	NT	STALL, ENGINE STANDBY ATTITUDE INDICATOR COMPASS	2732 7105 3424 3423
PITOT HEAT AOA	3032	REVERSERS RDMI	7834 3457		2433 J 4961
TAT PITOT PNEUMATIC		RUDDER	2721 HYDRAULIC	STARTING, ENG	SINE 8011 EMP 3412
		MISRIG CO RUDDER PEDAL	NDITION .AMMO551		3141
		STEERING	3251		
PORTABLE OX	YGEN 3500	RUNWAY TURNO	FF		3011
	GHTS	LIGHTS	3342		AMM0551
PRESSURE	EK	SAT	3412		3412
DUCT, APU		SEAT			3412 EAT 3033
•	INE 3611		2525		
					FUEL 2843
WATER (IF	ED)3810		ENDANTS 2525		-ICE 3011
PRESSURIZAT				THRESHOLD LIG	GHTS 3322
	2130	SELCAL	2321		7105
CABIN LEA			RPHONE 2341		NGINE) 7321
	EAMM0551		3151		7321
		SLIDE ARMING	5211	MANAGEMENT	
	2800		2566		
	ULIC 2911		PE 2565	TIRE BURST/FL	ING 3251
•	_,	SLOW ACCELER	ATION		AMM0551
QUANTITY			7221	TOTAL AIR	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	4994	SMOKE LIGHT. SMOKE CLEAR,			3412
	L		2158	TRANSFORMER	
WATER (IF			AMM0551		JNIT 2431 ATC 3453
	ED 3810		2822		
			2531		2431
	3443		2761		D 3412
RADIO	_,			TURBULENCE	
	3433 STALLED) 2311	SQUIB, EMERG		SEVERE OR	
	2317		DE 2565		AMM0551
		SQUIBS, SPO	ILER2565	TURNOFF LIGHT	· S , 3342
			2621		
		STABILIZER T	RIM 2741	OUTLILA FICH	rs 3314
				1	

FIM Index Figure 1 (Sheet 4)

FIM INDEX



TITLE	CHAP/SEC	TITLE	CHAP/SEC	TITLE	CHAP/SEC
APU FUEL BLEED ISOLA CROSSFEED, ENGINE BLEE ENGINE HI- VERTICAL SPEE INDICATOR. VHF RADIO VIBRATION INVIDEO SYSTEM V-NAV VOLCANIC ASH					
WASTE, LAVATOWATER HEATERS LEAKS POTABLE PRESSURE (INSTALLED WEATHER RADAN WET START, ED WHEEL WELL LE WHEEL WELL LE WHEEL WELL F WINDOW HEAT. WINDOWS, COCH WINDSHEAR WINDSHIELD WEIT WING ANTI-ICE LIGHTS SLIDE	3151 ORY3832 3810 3810				
YAW DAMPERS.	2221				

FIM Index Figure 1 (Sheet 5)

FIM INDEX

01

INTRODUCTION

1. General

A. This publication was prepared by the Boeing Commercial Airplane Group in accordance with Air Transport Association of America Specification No. 100, Specification for Manufacturers' Technical Data. It contains information necessary to isolate and correct faults in systems and equipment installed in the 757 family of airplanes.

NOTE: THIS MANUAL IS PREPARED SPECIFICALLY TO COVER THE BOEING AIRPLANES LISTED IN THE "LIST OF EFFECTIVE AIRPLANES" SECTION, FOR THE OPERATOR NAMED ON THE TITLE PAGE.

IT CONTAINS INSTRUCTIONS AND INFORMATION APPLICABLE TO THOSE SPECIFIC AIRPLANES, IN THEIR AS-DELIVERED CONFIGURATION, PLUS ANY APPLICABLE BOEING SERVICE BULLETINS OR OTHER OPERATOR CHANGES, THE INCORPORATION OF WHICH THE NAMED OPERATOR HAS NOTIFIED BOEING.

THE NAMED OPERATOR IS SOLELY RESPONSIBLE FOR THE ACCURACY AND VALIDITY OF ALL INFORMATION FURNISHED BY THAT NAMED OPERATOR OR ANY OTHER PARTY BESIDES BOEING AND, IF IN RECEIPT OF ACTIVE REVISION SERVICE, THAT ANY MODIFICATIONS TO THE AIRPLANE ARE PROPERLY REFLECTED IN THE MAINTENANCE INSTRUCTIONS CONTAINED IN THIS MANUAL.

OPERATORS ARE RESPONSIBLE FOR ENSURING THAT THE MAINTENANCE DOCUMENTATION THEY ARE USING IS COMPLETE AND MATCHES THE CURRENT CONFIGURATION OF THE AIRPLANE.

THE BOEING COMPANY ASSUMES NO RESPONSIBILITY IN THIS REGARD.

CUSTOMIZATION DOES NOT TRACK THE CONFIGURATION OF AIRCRAFT LISTED ON THE LIST OF EFFECTIVE AIRPLANES PAGE THAT HAVE BEEN CONVEYED TO ANOTHER OPERATOR.

THIS MANUAL IS NOT SUITABLE FOR USE, INCLUDING WITHOUT LIMITATION, GENERAL INSTRUCTIONS OR TRAINING, FOR ANY AIRPLANES NOT LISTED HEREIN, NOR DOES IT NECESSARILY APPLY TO LISTED AIRPLANES THAT HAVE BEEN CONVEYED TO OTHER OPERATORS.



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 - (a) airline name
 - (b) your name
 - (c) phone number
 - (d) e-mail address
 - (e) airplane model-type
 - (f) title of manual or document number
 - (g) ATA Chapter-section-subject
 - (h) description of the change requested.
- C. The Fault Isolation Manual (FIM) and the Fault Reporting Manual (FRM) together provide a structured method for the airplane operator to report and correct faults in the airplane systems.
 - (1) The FRM is primarily for the flight crews. It contains fault code diagrams to help the flight crew identify a unique 8-digit fault code and log book report for a fault.
 - (2) The FIM is primarily for the maintenance crews. It contains numerical indexes of all the fault codes given in the FRM. The indexes will give the corrective action or a reference to a fault isolation procedure for each fault.
- D. For general information about the manual numbering system, arrangement, and revision service refer to the introduction in the Airplane Maintenance Manual (AMM).

2. Types of Faults

- A. EICAS Messages
 - (1) There are different types of messages that show on the flight compartment displays to tell the flight crew of problems or other conditions of the airplane. These are the types (levels) of messages that can show on the display units:
 - (a) Warning (level A)
 - (b) Caution (level B)
 - (c) Advisory (level C)
 - (d) Status (level S)
 - (e) Maintenance (level M)
 - (2) A warning message tells the flight crew of a condition that requires immediate crew action.
 - (3) A caution message tells the flight crew of a condition that requires immediate crew awareness and possible crew action.
 - (4) An advisory message tells the flight crew of a condition that requires crew awareness.



- (5) A status message gives information to the flight crew and maintenance crew about the dispatch status of the airplane. The maintenance crew can use the status messages together with the operator's Minimum Equipment List (MEL).
- (6) A maintenance message is for the maintenance crew. It does not require flight crew attention. There will be a maintenance message for most of the conditions that make a status message show. The maintenance message can be the same as the status message. Typically, maintenance messages are inhibited in flight and will only show when the airplane is on the ground when the ECS/MSG page is selected.

B. Observed Faults

- (1) Observed faults are problem symptoms sensed by the flight crew, maintenance crew, or cabin crew. These are the types of observed faults:
 - (a) Faults that are shown on the flight compartment panels and displays (other than EICAS messages):
 - 1) Fault lights
 - 2) Failure and alert flags
 - 3) Other display messages
 - 4) Indicated values and displays that are not normal
 - (b) Flight crew observations in the flight compartment or during walk around.
 - (c) Servicing crew observations
 - (d) Ground maintenance crew observations
 - (e) Problems with the systems and equipment in the passenger cabin (cabin crew observations).

C. BITE Messages

- (1) Built-in test equipment (BITE) messages are the fault indications that you get from the BITE feature of the system or individual component. They help you find the cause of an EICAS message or observed fault. These are examples of typical types of BITE messages:
 - (a) A specific light or lights
 - (b) An alphanumeric code
 - (c) A group of English words or abbreviations, with or without an associated numeric code.
- (2) You do most BITE tests at the front panel of components in the electronic equipment compartment or other equipment racks on the airplane. You do some BITE tests in the flight compartment.

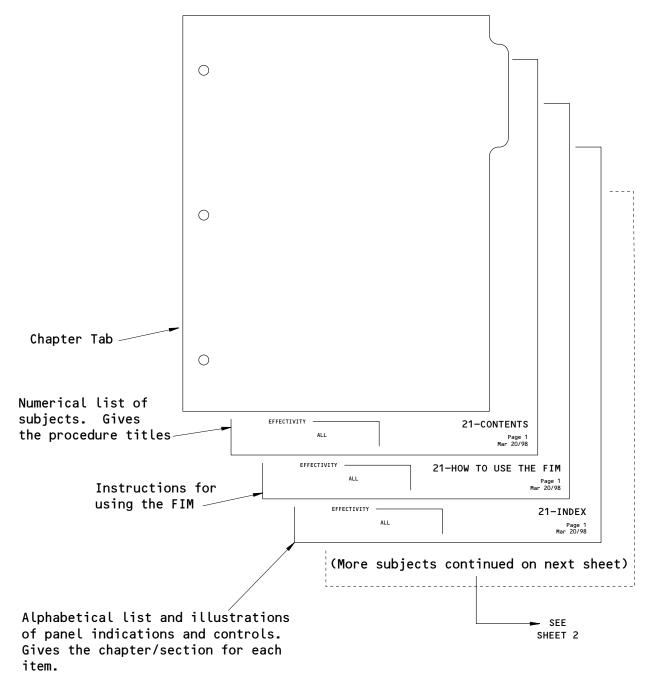
3. <u>FIM Content - Front Matter</u>

- A. The front matter has sections for record keeping, introductory, and general information. These are the sections:
 - (1) Transmittal Letter
 - (2) List of Effective Pages (for front matter)
 - (3) Revision Record
 - (4) Record of Temporary Revisions



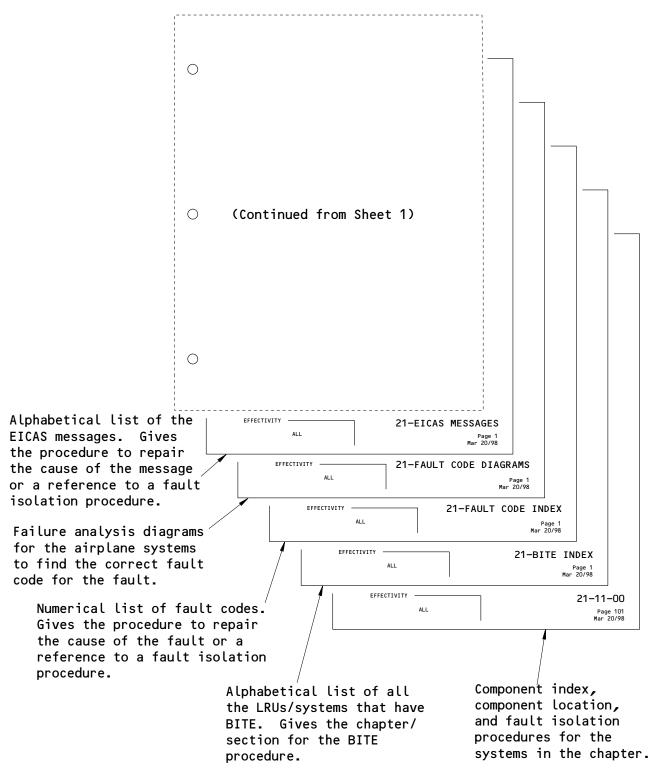
- (5) FIM Index
 - (a) The index is an alphabetical lsit of all subjects included in the FIM. For each subject, the index gives the chapter and the section in the FIM where fault isolation procedures for the subject are found.
- (6) Introduction
 - (a) The introduction has general information about the FIM and describes these items:
 - 1) Types of faults
 - 2) FIM contents
 - 3) Using the FIM to isolate faults
 - 4) Fault isolation procedure features.
- (7) Effectivity
- (8) Abbreviation List
- (9) Panel Locations
 - (a) The Panel Location section has these figures:
 - 1) Flight/Passenger Cabin Panel Locations
 - 2) Equipment Center Rack and Panel Locations
 - 3) Ground Service Points and Panel Locations
 - (b) List of Service Bulletins
 - (c) List of Chapters
- 4. FIM Content Numbered Chapters (Fig. 1)
 - A. Contents
 - B. How to Use the FIM
 - (1) These are simplified illustrations that give a summary of how to use the FIM and the airplane systems BITE to isolate faults. The topics covered are:
 - (a) Basic Fault Isolation Process
 - (b) How To Get Fault Information from BITE
 - (c) Find the Corrective Action or Fault Isolation Procedure in the FIM
 - (d) Do the Fault Isolation Procedure
 - (e) Subjects in Each FIM Chapter
 - C. Index
 - (1) The Index has two parts. The first part shows the panel indications and controls with the chapter and the section in the FIM where the applicable fault isolation procedures are found. The second part has a table that shows the title of each instrument panel in the chapter with the chapter and the section in the FIM where applicable fault isolation procedures are found.





Subjects in Each FIM Chapter Figure 1 (Sheet 1)





Subjects in Each FIM Chapter Figure 1 (Sheet 2)



- (2) The Index pages are the same as the Contents pages in the FRM.
- D. EICAS Messages
 - (1) Most chapters will have an EICAS Message table that shows all the EICAS messages for that chapter. The EICAS Message table gives the EICAS message, the level of the message, and the procedure to correct the fault.
 - (a) The EICAS MESSAGE column shows the messages alphabetically. Messages that start with L (left), R (right), or C (center) are put together in this list starting with L.
- E. Fault Code Diagrams
 - (1) The Fault Code Diagrams give fault codes through problem analysis, for common faults that can occur on the airplane. Most of the diagrams are equivalent to the diagrams in the FRM. Other diagrams, shown by the word "GROUND" in the title, give the problem analysis and fault codes for ground crew operated systems.
 - (2) The Fault Code Diagrams have five areas of data:
 - (a) The top area has the controls and the indicators applicable to each subject. These items are at the top of columns that extend into the analysis part of the diagram immediately below. You can also find questions in the top area.
 - (b) The middle area is an analysis that you can follow to find the applicable fault code. This area is intended to relate the specific system configuration to what has been observed. The analysis starts at an arrow on the left edge of the page and continues to the right and down. A diamond in a column shows where there are two or more answers to a question about the indicator or control. The diagram gives other possible indications or answers on lines that extend down and to the right of the diamond. The analysis continues until all faults that can occur for the diagram are included. Each fault has a line that extends into the Fault Code column at the right of the page.
 - (c) The column at the right of the page has the fault codes. Each fault has a fault code. This fault code is used to communicate a problem that was observed to the person who will do the troubleshooting. Fault codes that end with an X-alpha (XA, XB, etc.) are used for faults that cannot be identified in the FIM.
 - (d) The location part of the fault codes are specified in the top right corner of the page. These codes identify the specific part of the system or location where the fault occurred.
 - (e) Applicable circuit breakers for a system are at the bottom of the diagram.
- F. Fault Code Index
 - (1) The Fault Code Index is a numerical list of all fault codes for the chapter. For each fault code that is used, the index has these items:
 - (a) Item 1 is the problem report. This is a description of the fault. The problem report is equivalent to the logbook report entry in the FRM.



(b) Item 2 shows the steps to correct the fault. If a fault isolation procedure is necessary to correct the fault, then item 2 will refer to the applicable procedure.

G. BITE Index

(1) The BITE Index is an alphabetical list of all the systems and components that have BITE procedures in the FIM. For each system or component, this list gives the chapter-section number where you can find the BITE procedure. Each BITE procedure will give the corrective action or a reference to a fault isolation procedure for each BITE message.

H. Component Location Data

- (1) Component location data is supplied for the major system components. The data is at the front of the applicable FIM chapter-section for the system or subsystem (subject). It is divided into two parts: The Component Index and the Component Location.
 - (a) The Component Index is a table that list the components in a system or subsystem in alphabetical order. Components that are not assigned to the section or subject, but are operationally related, are also included with a reference to its own chapter-section. For each component, the Component Index table can have this data:
 - A reference to the figure and sheet that shows the location of the component
 - 2) Quantity of each component
 - Access number of the door or panel that must be opened to get to the component
 - 4) Area, panel, or grid location (for circuit breakers) where the component is located
 - 5) A reference for the chapter-section-subject in the Airplane Maintenance Manual (AMM) where the component is assigned.
 - (b) The Component Location figure shows the access and location of the major components in the Component Index. The components are shown in relation to any structural or system features that are near.

I. Fault Isolation Procedures

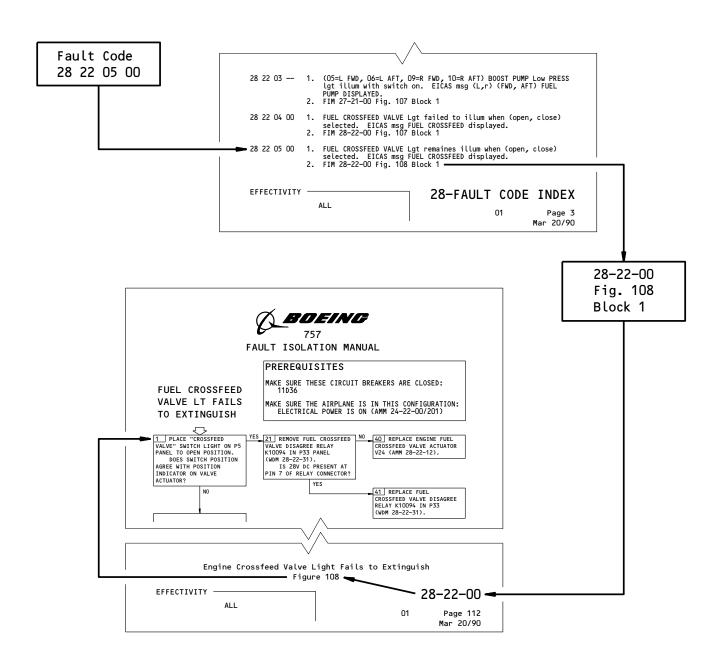
- (1) The Fault Isolation Procedures are used when one or more checks are necessary to find the cause of a fault. They are usually block flow diagrams that start with a description of a fault and end with the corrective action.
- (2) There are some Fault Isolation Procedures that are not block flow diagrams. These procedures can be in a tabular or text format.
- (3) Each Fault Isolation procedure has a "PREREQUISITES" box. The data in this box is used to make sure the systems that are necessary to do the fault isolation are in an operational condition.
- (4) For details on the structure and the content of the Fault Isolation Procedures, refer to the paragraph "Fault Isolation Procedure Features" that follows.



- J. ARINC 429 Data Bus Charts
 - (1) The data bus charts are supplied for many of the units that have an ARINC 429 data bus output transmitter (output port) that gives data to one or more other units with an ARINC 429 bus receiver (input port).
 - (2) These charts show each transmitter data bus, each connector, the pins, the name of the bus, the word octal label, and the type of data. An ARINC 429 data bus transmitter and reader is necessary to monitor the buses for specific transmitted data.
- 5. Using the FIM to Isolate Faults
 - A. <u>IF YOU HAVE A FAULT CODE</u> for an observed fault (possibly reported by the flight crew), then use the Fault Code Index (Fig. 2):
 - (1) Look at the first two digits of the fault code. This is the FIM ATA chapter number you need. Go to that chapter in the FIM and find the Fault Code Index near the front of the chapter.
 - (2) Find the fault code for the observed fault. The fault codes are shown in sequence by numbers with all the chapter X-alpha codes (XA, XB, etc.) shown first.
 - (3) To correct the fault, read the "FAULT ISOLATION REFERENCE" (item 2).
 - (a) If item 2 gives corrective action steps, then do the steps to repair the cause of the fault.
 - (b) If item 2 gives a figure and block reference, then go to the specified Fault Isolation Procedure in the FIM. Start at the referenced block and follow the procedure to isolate and repair the cause of the fault.
 - (c) If the fault code is an X-alpha fault code, then item 2 is usually a reference to the Wiring Diagram Manual (WDM) or System Schematics Manual (SSM). Use the flight crew's description of the fault in the log book, and the referenced WDM or SSM diagram to isolate and correct the fault.
 - (4) If you corrected the fault, then return the airplane to service.
 - B. IF YOU HAVE NO FAULT CODE for an observed fault, then do these steps:
 - (1) EICAS MESSAGE

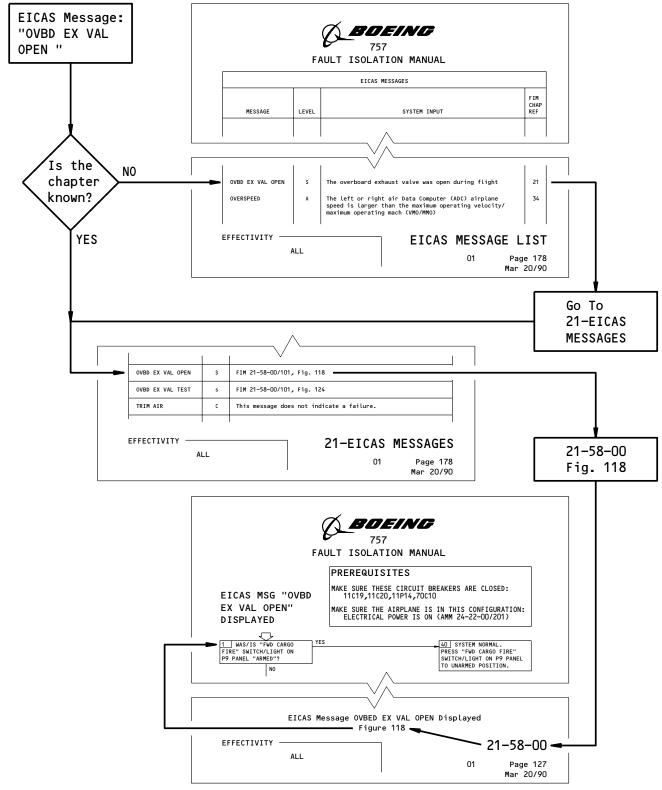
If the problem report has an EICAS message, then use the EICAS Messages list (Fig. 3):





Fault Isolation Process for an Observed Fault or EICAS Message
Using a Fault Code
Figure 2





Fault Isolation Process for an EICAS Message -NO Fault Code Figure 3



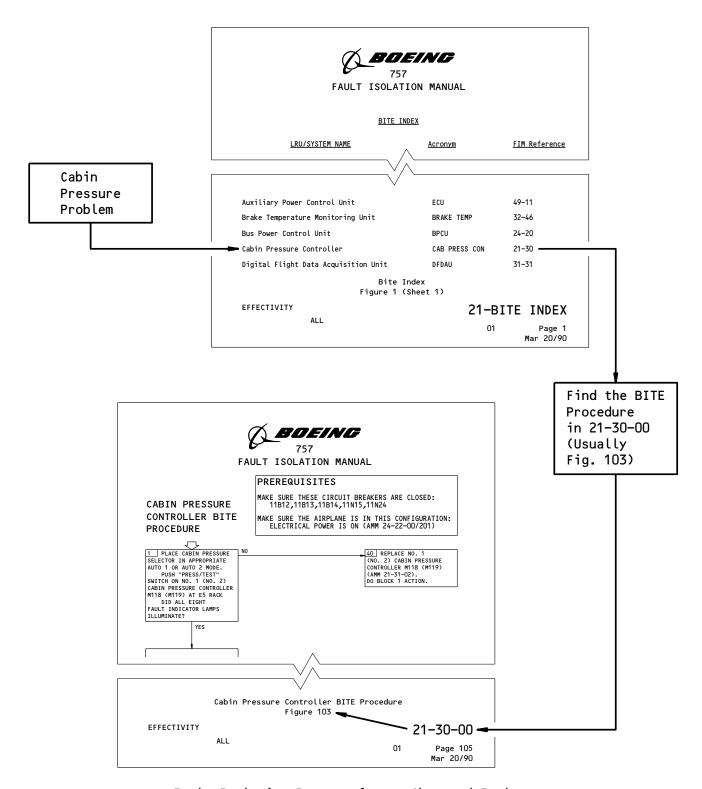
- (a) <u>If you know the chapter</u> for the EICAS message, then do these steps:
 - Go to the applicable chapter in the FIM and find the EICAS Messages list at the front of the chapter.
 - 2) Find the EICAS message in the list.
 - 3) To correct the fault, read the "PROCEDURE" column for the message.
 - a) If the "PROCEDURE" column gives corrective action steps, then do the steps to repair the cause of the fault.
 - b) If the "PROCEDURE" column gives a figure and block reference, then go to the specified Fault Isolation Procedure in the FIM. Start at the referenced block and follow the procedure to isolate and repair the cause of the fault.
- (b) <u>If you do not know the chapter</u> for the EICAS message, then do these steps:
 - 1) Go to the EICAS MESSAGE LIST section in the FIM. This list is found after the INTRODUCTION to the FIM.
 - 2) Find the EICAS message in the table.
 - a) The EICAS MESSAGE column shows the messages alphabetically. Messages that start with L (left), R (right), or C (center) are put together in this list starting with L.
 - Find the FIM Chapter Reference on the same line as the EICAS message.
 - 4) Go to the EICAS Messages list at the front of the chapter.
 - 5) Find the EICAS message in the list.
 - 6) To correct the fault, read the "PROCEDURE".
 - a) If the "PROCEDURE gives corrective action steps, then do the steps to repair the cause of the fault.
 - b) If the "PROCEDURE" gives a figure reference, then go to the specified Fault Isolation Procedure in the FIM and follow the procedure to isolate and repair the cause of the fault.
- (c) If you corrected the fault, then return the airplane to service.

(2) **SYSTEM BITE**

If the problem report is for a system that has BITE, then you can do the BITE procedure (Fig. 4):

- (a) Go to any BITE Index near the front of a FIM chapter.
- (b) Look for the system or a line replaceable unit (LRU) in the system. If the system or an LRU in the system has BITE, then you will find it listed alphabetically.
- (c) On the same line as the LRU or system name, look for the FIM chapter-section reference in the "FIM REFERENCE" column.
- (d) Find the BITE procedure in the specified FIM chapter-section and do the steps to get the BITE message.
- (e) Do the steps in the BITE procedure to repair the cause of the BITE message.





Fault Isolation Process for an Observed Fault -No Fault Code, System Has BITE Figure 4

INTRODUCTION

03



- (f) If you corrected the fault, then return the airplane to service.
- (g) Repair a failure with an MCDP message.
 - 1) If the MCDP message is a flight fault, then go to the Autoflight Flight Faults BITE Fault Isolation Procedure Reference (FIM 22-00-02/101, Fig. 102). If the MCDP message is a ground test fault, then go to the MCDP Ground Test Messages Cross Reference (FIM 22-00-03/101, Fig. 101B).
 - a) Find the MCDP message in the figure.
 - b) Do the applicable isolation procedure.
 - If the problem was repaired, return the airplane to service.
 - If the problem was not repaired, refer to the WDM or the SSM and correct the problem.
 - 4) Return the airplane to service.

(3) NO EICAS MESSAGE, NO SYSTEM BITE

If the problem report does not have an EICAS message and the system does not have BITE, then do these steps (Fig. 5):

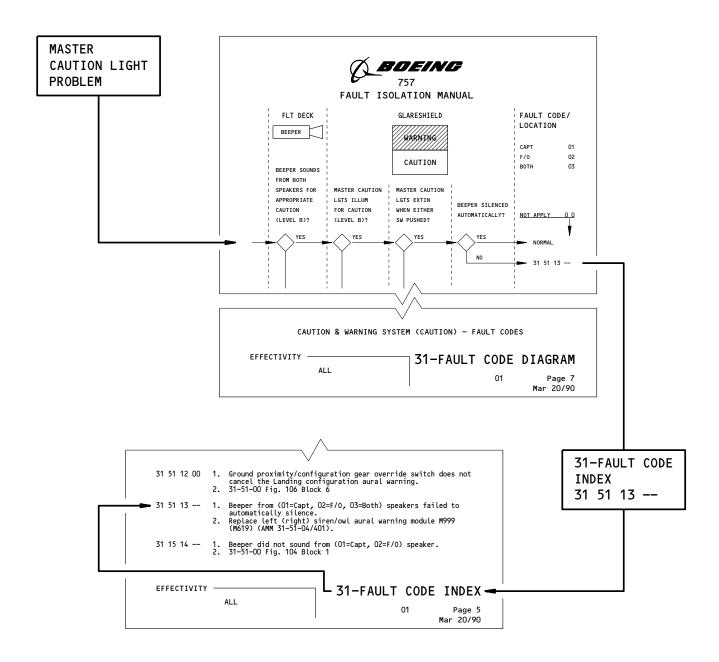
- (a) Go to the Fault Code Diagram at the front of the chapter for the applicable system.
- (b) Start at the arrow at the left edge of the page and follow the analysis to the right and down. Follow the arrow in response to each question or condition.
- (c) Find the fault code for the fault in the right column.
- (d) Look at the first two digits of the fault code. This is the FIM chapter number you need. Go to that chapter in the FIM and find the Fault Code Index near the front of the chapter.
- (e) Find the fault code in the Fault Code Index.
- (f) To correct the fault, read the Fault Isolation Reference (item 2).
 - 1) If item 2 gives corrective action steps, then do the steps to repair the cause of the fault.
 - 2) If item 2 gives a figure reference, then go to the specified Fault Isolation Procedure in the FIM and follow the procedure to isolate and repair the cause of the fault.
- (g) If you corrected the fault, then return the airplane to service.

6. <u>Fault Isolation Procedure Features</u>

A. Format

- (1) Fault Isolation Procedures are given when it is necessary to do one or more checks to find and repair the cause of the fault.
- (2) Each Fault Isolation Procedure is a figure that can have many sheets. The title of the figure is the fault description. The fault description is also at the top left corner on the first sheet of the procedure. This is where the Fault Isolation Procedure starts.
- (3) Fault Isolation Procedures are usually flowcharts with three columns. The flow charts go from top to bottom and from left to right.





Fault Isolation Process for an Observed Fault -No Fault Code, No BITE Figure 5



- (4) There are some Fault Isolation Procedures that are not block flow diagrams. These procedures can be in a tabular or text format.
- B. Assumed Conditions at the Start of the Fault Isolation Procedure
 - (1) Each Fault Isolation Procedure starts with these assumptions (unless the procedure tells you differently):
 - (a) Electrical power is off.
 - (b) Hydraulic power is off.
 - (c) Pneumatic power is off.
 - (d) Engines are shut down.
 - (e) All circuit breakers for the system are closed.
 - (f) No equipment in the system is deactivated.
 - (g) The fault was caused by a single failure, not multiple simultaneous failures.
- C. Prerequisites
 - (1) There is a Prerequisites box at the top of the procedure. The purpose of the Prerequisites box is to get the airplane from the normal shutdown condition to the configuration necessary to do the Fault Isolation Procedure. The Prerequisites box can give data after each of these action steps:
 - (a) MAKE SURE THESE SYSTEMS WILL OPERATE
 - 1) Below this step is a list of other systems that must operate in a normal configuration. The AMM Adjustment/Test (501 page block) or the Maintenance Practces (201 page block) procedures for these systems are referenced but it is not necessary to do these procedures unless you have indications that a system that is necessary will not operate correctly.
 - 2) All circuit breakers for these systems must be closed.
 - 3) If operation of the system is necessary, then it will usually be stated, such as "APU OPERATING" or "ENGINE OPERATING".
 - (b) MAKE SURE THESE CIRCUIT BREAKERS ARE CLOSED
 - 1) Below this step is a list of circuit breakers with their panel and grid location numbers, for the system with the fault. Make sure these circuit breakers are closed before you start the Fault Isolation Procedure.
 - 2) The word "NONE" will show under this step for these conditions:
 - No electrical, pneumatic, or hydraulic power is necessary to do the Fault Isolation Procedure.
 - b) Operation of other systems is not necessary.
 - c) Special test equipment is not necessary.
 - (c) MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION
 - Below this step is the condition that the airplane must be in to do the Fault Isolation Procedure. This condition is different from the assumed conditions of an airplane in the normal shutdown configuration.
 - (2) If there are no prerequisites, then "NONE" will show in the Prerequisites box.



- D. Equivalent Tools, Fixtures and Test Equipment
 - (1) Some of the procedures in this manual identify tools or equipment. But you can use equivalent alternatives unless the procedure tells you the specified tool or equipment item is mandatory. If you use alternative tools or equipment, make sure that they give the same results and are as safe to the parts and personnel as the tools or equipment specified in the procedure.
 - (a) Tools in this manual identified with an "ST" prefix are designed by the Boeing Commercial Company. Detail drawings of these tools are available upon request.
- E. WARNINGS, CAUTIONS, NOTES, and Flag Notes
 - (1) WARNINGS and CAUTIONS will be shown in one of two areas. They will come before a step in a block of an isolation procedure when they apply to only that step of the procedure. WARNINGS and CAUTIONS will also be shown below the "PREREQUISITES" block when they apply to the full procedure.
 - NOTE: Normal safety precautions are to be followed at all times when potentially dangerous maintenance procedures are done. The removal of electrical power, the use of body safety lines when in high areas, or the use of equipment slings are all examples of potentially dangerous maintenance procedures.
 - (2) NOTES will follow a step in a block of an isolation procedure when they apply to only that step of the procedure. NOTES will be shown below the "PREREQUISITES" block or in another area on the page when the NOTE is applicable to the full procedure.
 - (3) Flag Notes
 - (a) A numbered flag is used to show a reference to a flag note. The flag notes supply more data or other necessary steps. Flag notes are usually used in more than one block of an isolation procedure.
 - (b) If a figure has multiple sheets and a flag is shown on more than one sheet, the flag notes will be shown on the first sheet they are referred to.
 - (c) When the flag is shown on only one sheet of the figure, the flag note will be on the same sheet.
- F. Flowchart Blocks
 - (1) Each block in a flowchart has a number. The first block in the procedure has the number "1". It is the first block in the left column under the fault description. A reference to a Fault Isolation Procedure can give the number of the block that you start the fault isolation. This block number is not always "1".
 - (2) Typically, each block in the first two columns of a flowchart gives an action or a check. A question related to the action or check follows. The question can be answered with a "YES" or a "NO". Arrows identified as "YES" or "NO" move the user to the next action block.



- (3) Typically, each block in the right column has the corrective action necessary to repair the cause of the fault. These blocks have a reference to an AMM procedure, another FIM procedure, a WDM diagram, or a SSM diagram.
- (4) Some Fault Isolation Procedures can end at a block that is not a corrective action. This occurs when all the checks are completed and the system operation is normal.
- (5) Components in the Fault Isolation Procedures are identified by the same name as in the AMM and, where applicable, their electrical equipment number the same as in the WDM and SSM.

G. Repair Confirmation

- (1) It is assumed that after you do a repair, you will do a check to make sure the reported fault is gone.
- (2) When the Fault Isolation Procedure tells you to replace an LRU, the block can have an AMM reference. The referenced procedure has a test to make sure the LRU is installed correctly. You must make sure the test is satisfactory and the fault is gone. You can do an operational test to make sure the fault is gone.
- (3) If the Fault Isolation Procedure is for an EICAS message, the procedure will tell you to "Make sure the ---- EICAS message is removed". In most cases, you can look at the EICAS display to make sure that the status or maintenance message does not show. Some EICAS messages are latched. If the message is latched, then it is necessary to do the EICAS message erase procedure that is referenced in the Fault Isolation Procedure.

H. Electrical Checks

- (1) Electrical checks are used at components to find if they have a fault. Electrical checks are also used to find a problem in the wiring (also referred to as wiring checks).
- (2) A step can tell you to do a specific electrical check. When a step tells you to do a wiring check, these are the checks you must do:
 - (a) Examine any connectors that you disconnect for contamination, damage, and bent or pushed back pins.
 - (b) Do these three types of electrical checks for the specified contacts (pins):
 - 1) Continuity from pin to pin
 - 2) Short circuits between pins
 - 3) Short circuits from each pin to structure ground.
- (3) Since many electrical component installations are obvious, a WDM reference is supplied whenever an AMM procedure is not available. The WDM reference supplies the data necessary to confirm voltages in the circuit. This allows you to open the applicable circuit breaker before the component is removed or replaced.
- (4) Standard procedures for connectors and wiring maintenance are shown in the Standard Wiring Practices Manual.



(5) To make electrical measurements at the major card files, use an appropriate extender card to get access to the electrical contacts. These are the part numbers for the extender cards:

CARD FILE	EXTENDER CARD PART NUMBER
P50 Electrical Systems	G26004-39, -40
P51 Warning Electronics	G26004-39, -40
P54 Fire Detection	G26004-39, -40

- (6) ARINC 429 Wiring Checks
 - (a) An ARINC 429 wiring circuit connects a transmitting LRU to one or more receiving LRUs.
 - (b) To check the resistance between two pins of an ARINC 429 wiring circuit, first remove all LRUs that are connected to the circuit (refer to the applicable wiring diagram or schematic to see which LRUs are connected to the circuit).
 - This will prevent effects on the measurement from the resistance of the ARINC 429 receivers and transmitters in the LRUs.
 - 2) This will also prevent damage to connected LRUs by test equipment that operates at a high voltage. For example, when you use an ohmmeter that measures very high resistances to check for insulation problems.
 - (c) To make electrical measurements at ARINC 600 connectors, use the breakout box, A34011 to get access to the electrical contacts. You can find more data on the A34011 breakout box in 34-00-00 of the Illustrated Tools and Equipment Manual.
 - (d) After you complete the wiring checks (and the subsequent wiring repair, if it is necessary), re-install the LRUs you removed.



LIST OF EFFECTIVE AIRPLANES

1. <u>General</u>

A. The following list provides a cross reference table of the airplanes that are applicable to the information contained in this manual.

GPA Group plc

Customer				
Effectivity	Line	Variable	Manufacturing	Registration
Code	No.	<u>Number</u>	<u>Serial Number</u>	<u>Number</u>
MODEL 757-2YO				
GUI 001	388	NB321	25240	XA-MTY
GUI 002	400	NB322	25268	G-CPEP
GUI 003	472	NB323	26151	G-ZAPU
GUI 004	478	NB324	26152	EI-CEY
GUI 005	482	NB325	26153	B-2831
GUI 006	486	NB326	26154	EI-CEZ
GUI 007	495	NB327	26155	B-2826
GUI 008	503	NB328	26156	B-2827
GUI 009	526	NB329	26158	G-000X
GUI 010	555	NB330	26160	G-FCLJ
GUI 011	557	NB331	26161	G-FCLK
MODEL 757-236				
GUI 115	362	NA346	25054	G-000K

EFFECTIVITY-

LIST OF AIRPLANES



A/C air conditioning

A/G air/ground
A/L autoland
A/P autopilot
A/S airspeed

A/T autothrottle, adjustment/test

ABNORM abnormal

AC alternating current

ACARS ARINC Communications Addressing and Reporting System

ACCEL acceleration, accelerate

ACM air cycle machine ADC air data computer

ADF automatic direction finder ADI attitude director indicator

ADP air driven pump, air driven hydraulic pump

ADV advance

AFCS automatic flight control system

AGL above ground level

AI anti-ice

AIDS aircraft integrated data system

AIL aileron
ALT altitude
ALTM altimeter
ALTN alternate

ALTNT alternate AMB ambient

AMM Airplane Maintenance Manual

ANN announcement
ANNUNC annunciator
ANT antenna

AOA angle of attack

APB auxiliary power breaker APD approach progress display

APL airplane
APPR approach
APPROX approximately

ABBREVIATION LIST



APU auxiliary power unit

ARINC Aeronautical Radio Incorporated

ARINC IO ARINC I/O error

ARNC STP ARINC I/O UART data strip error ASA autoland status annunciator

ASP audio selector panel

ASYM asymmetrical

ATC air traffic control

ATC/DABS air traffic control/discrete address beacon system

ATT attitude

ATTND attendant AUTO automatic AUX auxiliary

AVM airborne vibration monitor

B/CRS back course BARO barometric BAT battery

BFO beat frequency oscillator BITE built-in test equipment

BK brake

BKGRD background

BPCU bus power control unit

BRKR breaker BRT bright

BTB bus tie breaker

BTL bottle

C/B circuit breaker

C center

°C degrees Centigrade

CADC central air data computer

CAPT captain

CB circuit breaker

CCA central control actuator



CCW counterclockwise CDU control display unit

CH channel
CHAN channel
CHG change
CHR chronograph

CHRGR charger
CK check
CKT circuit
CL close
CLB climb
CLR clear

CLSD closed
CMD command
CMPTR computer
CNX cancelled
COL column

COMM communication

COMP compressor
COMPT compartment
CON continuous
COND condition
CONFG configuration
CONFIG configuration

CONN connection control

CP control panel

CPCS cabin pressure control system

CPS cycles per second

CRS course

CRT cathode ray tube

CRZ cruise

CSEU control system electronics unit

CT current transformer

CTN caution



CTR center CU control unit

CUST customer CW clockwise

CWS control wheel steering

DA drift angle

DADC digital air data computer

DC direct current
DEC decrease, decrement

DECEL decelerate DECR decrease

DEG degree

DEPR depressurize
DEPT departure
DEST destination
DET detector
DETNT detent
DEV deviation

DFDR digital flight data recorder

DG directional gyro
DH decision height
DIFF differential

DIR direct
DISC disconnect

DISCH discharge
DISCONT discontinued
DISENG disengage
DISP dispatch
DIST distance
DK deck

DME distance measuring equipment

DMU data management unit

DN down

DPCT differential protection current transformer

DR door

DSCRT IO discrete I/O error

DSPLY display DSPY display



EADI electronic attitude director indicator

ECON economy

ECS environmental control system

EDP engine driven pump, engine hydraulic pump

EEC electronic engine control

EFDARS expanded flight data acquisition and reporting system

EFI electronic flight instruments

EFIS electronic flight instrument system

EGT exhaust gas temperature

EHSI electronic horizontal situation indicator EICAS engine indicating and crew alerting system

ELEC electrical
ELEV elevation
EMER emergency
ENG engage, engine
ENT entrance, entry
ENTMT entertainment

EPC external power contactor
EPR engine pressure ratio

EPRL engine pressure ratio limit

EQUIP equipment ERR error ESS essential

EVAC evacuation

EVBC engine vane and bleed control

EXH exhaust EXT external

EXTIN extinguish, extinguished

EXTING extinguishing

F/D flight director
F/F fuel flow
F/O first officer
°F degrees Fahrenheit

FAA Federal Aviation Administration

FCC flight control computer



FCEU flight controls electronic unit

FCU fuel control unit

FDR feeder

FIM Fault Isolation Manual

FL flow

FL/CH flight level change

FLD field
FLT flight
FLUOR fluorescent

FMC flight management computer flight management system

FREQ frequency

FRM Fault Reporting Manual FSEU flap/slat electronic unit

FT feet, foot FWD forward

G/S glide slope, ground slope

GA go-around

GB generator breaker

GCB generator circuit breaker GCR generator control relay GCU generator control unit

GEN generator

GHR ground handling relay

GND ground GP group

GPWS ground proximity warning system

GR gear GRD ground

GS ground speed

GSSR ground service select relay
GSTR ground service transfer relay

GW gross weight



H/L high/low HDG heading

HF high frequency
HORIZ horizontal
HP high pressure

HSI horizontal situation indicator

HTR heater HYD hydraulic

IAS indicated airspeed IDENT identification

IDG integrated drive generator

IGN ignition

ILLUM illuminate, illuminated ILS instrument landing system

IMP imperial
IN in, input
INBD inboard

INC incorporated, increase, increment

INCR increase
IND indicator
INFC interface
INFLT inflight

INHIB inhibit
INIT initiation
INOP inoperative
INPH interphone
INST instrument
INT interphone

INTLK interlock
INTPH interphone
INTMT intermittent

IP intermediate pressure
IRS inertial reference system
IRU inertial reference unit

ISLN isolation ISOL isolation

IVSI instantaneous vertical speed indicator



KG kilograms

KIAS knots indicated airspeed

KTS knots

L left

L/R left/right

L-NAV lateral naviation

LAV lavatory
LB pound
LBS pounds

LCD liquid crystal display

LCR left-center-right

LDG landing
LDG GR langing gear
LE leading edge

LED light emitting diode

LF left front

LGT light
LH left hand
LIM limit
LOC localizer
LN left nose
LR left rear

LRRA low range radio altimeter

LRU line replacable unit

LSB lower side band

LVR lever
LW left wing
LWR lower

M-SPD manual speed
MAG magnetic
MAINT maintenance
MALF malfunction
MAN manual
MAX maximum



MCDP maintenance control display panel

MCP mode control panel modular concept unit

MDA minimum decision altitude

MIC microphone MIN minimum

MM Maintenance Manual

MOD module MON monitor MOT motion

MPU magnetic pickup

MSG message

MSTR master

MSU mode selector unit

MTG miles to go
MU management unit
MUX multiplexer

N/A not applicable

NAC nacelle NAV navigation

NCD no computed data

NEG negative NEUT neutral

NLG nose landing gear

NO. number NORM normal NRM normal

NVMEM RD non-volatile memory read error NVMEM WR non-volatile memory write error

O2 oxygen
OBS observer
OK okay
OPR operate
OPT option
OPRN operation



OUT output
OUTBD outboard
OVHD overhead
OVHT overheat
OVRD override
OXY oxygen

P/RST press to reset
P/S pitot/static
PA passenger address

PASS passenger

PCA power control actuator

PCT percentage

PDI pictorial deviation indicator

PES passenger entertainment system

PLA power level angle

PLT pilot

PMG permananet magnet generator

PNEU pneumatic PNL panel

POR point of regulation POS position, positive PPOS present position

PRESS pressure

PRG FLOW program flow error

PRIM primary

PROC procedure

PROG MEM ROM memory error

PROJ projector PROT protection PS pitot static

PSI pounds per square inch

PSS passenger service system passenger service unit

PTT push to talk

PTU power transfer unit

PWR power



QAD quick-attach-detach

QTS quarts QTY quantity

 $\ensuremath{\mathsf{R/T}}$ rate of turn $\ensuremath{\mathsf{R/W}}$ MEM RAM memory error

R right

RA radio altimeter, radio altitude

RAT ram air turbine

RCVR reciever

RDMI radio distance magnetic indicator

REC recorder
RECIRC recirculate
REF reference
REFRIG refrigeration
REG regulator

REL release

REP representative

REQ required reserve

RESSTART power interrupt restart error

REV reverse

RF right front
RH right hand
RLSE release
RLY relay

RLY/SW relay/switch

RMI radio magnetic indicator

RMT OUT high-speed ARINC output error

RN right nose ROT rotation

RPM revolutions per minute

RPTG reporting RR right rear



RST reset

RTO rejected takeoff

RUD rudder RW right wing RWY runway

SAM stabilizer trim/elevator asymmetry limit module

SAT static air temperature

SEC second

SEI standby engine indicator

SEL select

SELCAL selective calling

SERV service

SG signal generator

SLCTD selected SLCTR selector

SOV shut off valve

SP speed

SPD speed

SPD BK speed brake SQL squelch

SSB single side band

STA station STAB stabilizer STBY standby

STS system status
SURF surface
SW switch

SWITCH IN switch input error

SYNC synchronous SYS system SYST system

T/R thrust reverser

T.O. takeoff TACH tachometer

TAI thermal anti-ice TAS true airspeed

TAT total air temperature



TCC turbine case cooling

ΤE trailing edge **TEMP** temperature TFR transfer THR thrust THROT throttle

threshold **THRSH** THRT thrust THRU through bus tie TIE

TLA thrust lever angle

TMC thrust management computer TMS thrust management system **TMSP** thrust mode select panel

T0/takeoff T0 TOL tolerance

TR transformer rectifier TRP thrust rating panel

TUNE tuner **TURB** turbine

turbulent, turbulence TURBL

UBR utility bus relay

UPR upper

USB upper side band

V/NAV vertical navigation V/S vertical speed

VERT

vertical

VERT SPD vertical speed

VFY verify

VG vertical gyro

VHF very high frequency

VIB vibration VLD valid VLVvalve



VOL volume VOLT voltage

VOR VHF omni range receiver

VOX voice

VTR video tape reproducer

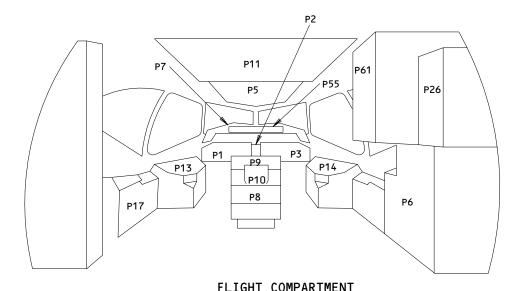
W/D wiring diagram
W/W wheel well
WARN warning
WG wing
WHL wheel

WHLS wheels
WPT waypoint
WSHLD windshield
WX weather
WXR weather

X-CH cross channel X-CHAN cross channel XDCR transducer XMISSION transmission XMIT transmit XMTR transmitter XPNDR transponder

Y/D yaw damper





PANEL NOMENCLATURE

- P1 CAPTAINS INSTRUMENT
- P2 EICAS DISPLAY
- P3 FIRST OFFICERS INSTRUMENTS
- P5 PILOTS' OVERHEAD
- P6 MAIN POWER DISTRIBUTION
- P7 GLARESHIELD
- P8 AFT PILOTS CONTROL STAND
- P9 FORWARD ELECTRICAL CONTROL STAND
- P10 QUADRANT STAND
- P11 OVERHEAD CIRCUIT BREAKER
- P13 FORWARD CAPTAINS AUXILIARY INSTRUMENT
- P14 FORWARD FIRST OFFICERS AUXILIARY INSTRUMENT
- P17 FIRST OBSERVERS CONSOLE
- P21 FORWARD ATTENDANT (NO. 1 LEFT PASSENGER DOOR)
- P22 AFT ATTENDANT (NO. 4 LEFT PASSENGER DOOR)
- P23 MID ATTENDANT (NO. 2 LEFT PASSENGER DOOR)
- P25 WATER SERVICE (AFT LOWER FUSELAGE)
- P26 EQUIPMENT LIGHTING
- P28 FUELING CONTROL (RIGHT WING AREA)
- P30 EXTERNAL POWER RECEPTACLE (FORWARD LOWER RIGHT FUSELAGE)
- P31 LEFT GENERATOR POWER
- P32 RIGHT GENERATOR POWER
- P33 MISCELLANEOUS ELECTRICAL POWER

- P34 APU EXTERNAL POWER MISCELLANEOUS ELECTRICAL EQUIPMENT
- P36 LEFT MISCELLANEOUS ELECTRICAL EQUIPMENT
- P37 RIGHT MISCELLANEOUS ELECTRICAL EQUIPMENT
- P41 FORWARD CARGO DOOR CONTROL (INBOARD OF THE NO.1 CARGO DOOR)
- P42 AFT CARGO DOOR CONTROL (INBOARD OF THE NO. 2 CARGO DOOR)
- P43 FORWARD CARGO DOOR CONTROL (AFT OF THE NO. 1 CARGO DOOR)
- P44 FORWARD CARGO DOOR CONTROL (AFT OF THE NO. 2 CARGO DOOR)
- P50 ELECTRICAL SYSTEMS CARDFILE
- P51 WARNING ELECTRONICS CARDFILE
- P54 FIRE DETECTION CARDFILE
- P55 CENTER GLARESHIELD
- P61 RIGHT SIDEWALL
- P62 NOSE LANDING GEAR CONTROL HOUSING (NOSE LANDING GEAR)
- P63 NOSE LANDING GEAR CONTROL HOUSING (NOSE LANDING GEAR)
- P70 MISCELLANEOUS ELECTRICAL EQUIPMENT
- P72 MAIN WHEEL WELL ELECTRICAL SERVICE (AFT OF THE WHEEL WELL, LOWER FUSELAGE)

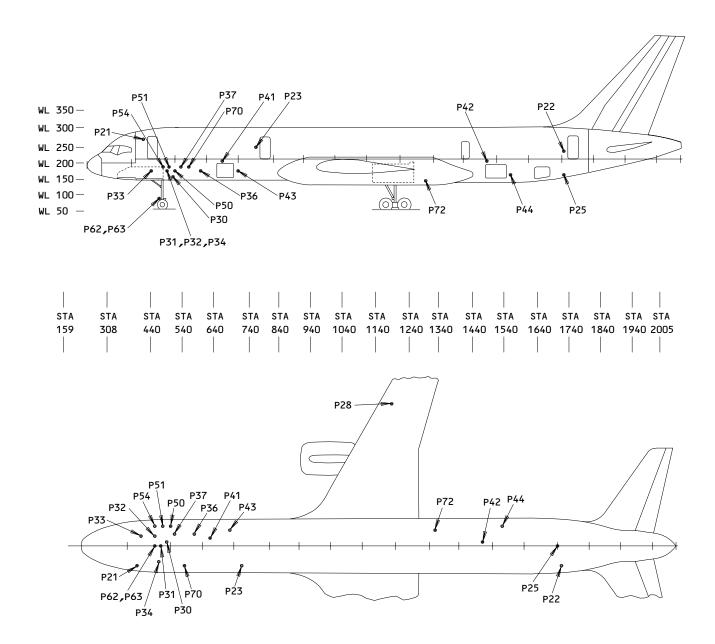
SCHEM. MAN.

00-00-30

Panel Locations
Figure 1 (Sheet 1)

PANEL LOCATIONS





SCHEM. MAN. 00-00-30

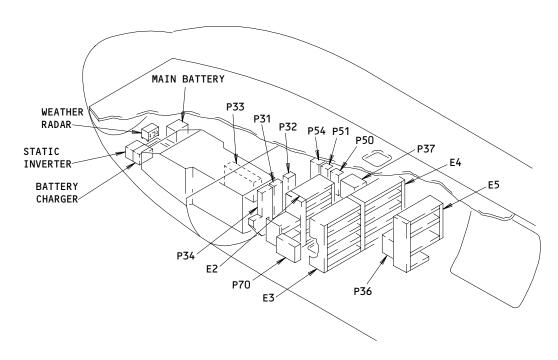
Panel Locations Figure 1 (Sheet 2)

PANEL LOCATIONS

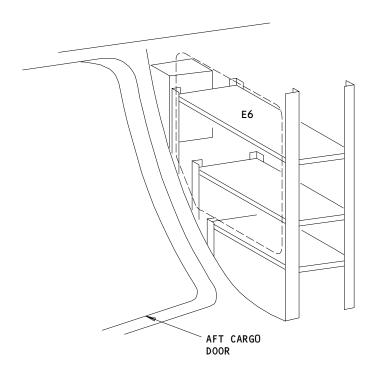
01

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FORWARD AND MAIN EQUIPMENT CENTERS

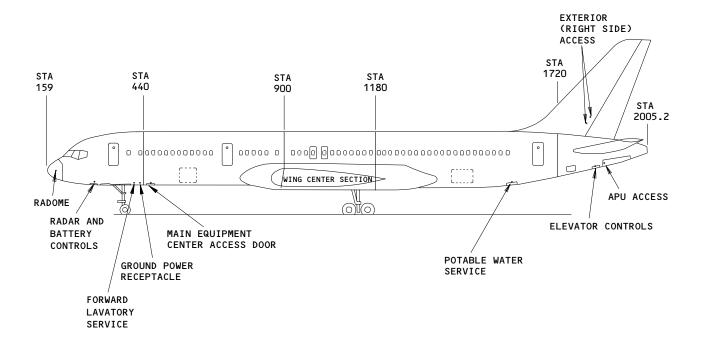


AFT EQUIPMENT CENTER, E6

Equipment Center Locations Figure 2

PANEL LOCATIONS





SCHEM. MAN. 00-00-10

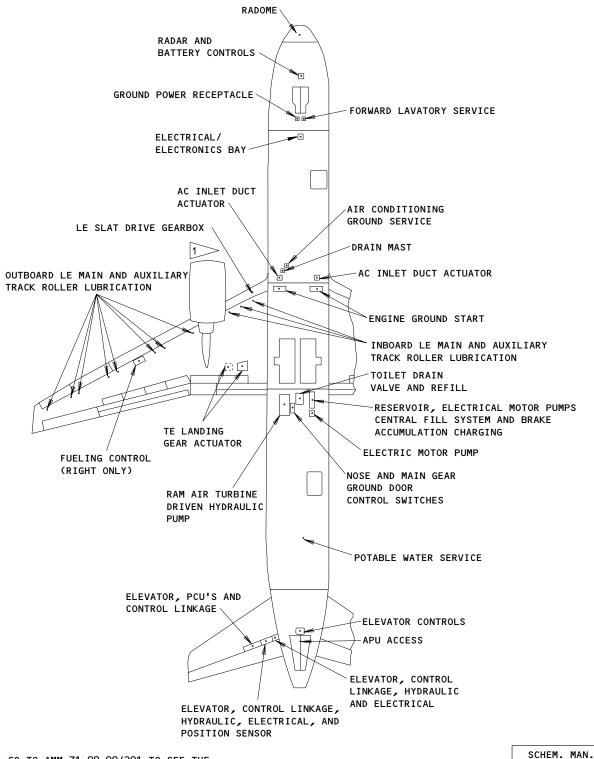
Ground Service Access Panels Figure 3 (Sheet 1)

PANEL LOCATIONS

01

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GO TO AMM 71-00-00/201 TO SEE THE POWER PLANT/NACELLE STRUT SERVICE ACCESS PANELS

00-00-10

Ground Service Access Panels
Figure 3 (Sheet 2)

PANEL LOCATIONS



LIST OF SERVICE BULLETINS

This list tells you which service bulletins (SB) were evaluated for applicability to this manual. The list has this data: the SB number, the chapter affected, the subject of the SB, and the configuration of the change in the manual. S tells you that two configurations, pre- and post-SB, are in the manual. C tells you that the complete configuration, post-SB, is the only configuration that is shown in the manual. The revision date that the SB was, or will be, incorporated (NO EFFECT tells you that no change was necessary for that SB. INCORP tells you that the change for the SB was previously incorporated, and no more changes are necessary.)

SERVICE		INCORP		
BULLETIN	<u>ATA</u>	DATE	SUBJECT	<u>s/c</u>
21-61	21	INCORP	REMOVAL OF THE EXHAUST LOW FLOW DETECTOR	S
21-61R1	21	01/28/00	A/C EQUIPMENT COOLING - EXHAUST LOW FLOW	S
21-61R1	31	05/28/00	A/C EQUIPMENT COOLING - EXHAUST LOW FLOW	S
21-63	21	09/28/04	AIR CONDITIONING EQUIPMENT COOLING	S
22A52	22	03/20/97	AUTOTHROTTLE-THRUST MANAGEMENT COMPUTER	S
22-63	22	01/28/06	AUTOFLIGHT-FLIGHT CONTROL COMPUTER-	S
22-64	22	09/28/01	AUTOFLIGHT-FLIGHT CONTROL COMPUTER-	S
22-74R1	22	05/20/08	AUTOFLIGHT - AUTOPILOT - FLIGHT CONTROL	S
22-74R2	22	01/20/09	AUTOFLIGHT - AUTOPILOT - FLIGHT CONTROL	S
22-79	22	01/20/09	AUTOFLIGHT - AUTOPILOT - FLIGHT CONTROL	S
23-101	23	01/20/08	COMMUNICATIONS - FLIGHT INTERPHONE	S
23-101R1	23	01/20/08	COMMUNICATIONS - FLIGHT INTERPHONE	S
24A79	24	09/20/97	MAIN BATT SHUNT INSPECT/REPLACE & MAIN	S
24A79R1	24	09/20/97	MAIN BATT SHUNT INSPECT/REPLACE & MAIN	S
24A79R2	24	09/20/97	MAIN BATT SHUNT INSPECT/REPLACE & MAIN	S
24-93	31	05/28/05	ELECTRICAL POWER INSTALL OF INFLIGHT	S
24-93	38	01/28/04	ELECTRICAL POWER INSTALL OF INFLIGHT	S
24-125R1	24	09/20/08	ELECTRICAL PWR-MN&AUX PWR UNIT BATTERY	S
24-125R1	31	09/20/08	ELECTRICAL PWR-MN&AUX PWR UNIT BATTERY	S
24-125R2	24	01/20/09	ELECTRICAL PWR-MN&AUX PWR UNIT BATTERY	S

LIST OF SERVICE BULLETINS



SERVICE BULLETIN	<u>ATA</u>	INCORP DATE	<u>SUBJECT</u>	<u>s/c</u>
124-125R2	31	01/20/09	ELECTRICAL PWR-MN&AUX PWR UNIT BATTERY	S
25-269	52	05/28/05	EQUIP/FURN - FLIGHT COMPARTMENT DOOR	S
25-271R2	52	05/28/04	FLIGHT COMPARTMENT DOOR REPLACEMENT	S
26A42	21	01/28/01	CARGO COMPARTMENT SMOKE DETECTION	S
27-104	27	05/28/93	RUDDER RATIO CHANGER CIRCUIT BREAKER	S
27A127	12	01/28/00	TE FLAP TRANSMISSION-TORQUE LIMITER RPLC	S
27A127R1	12	01/28/00	FLT CONTROLS-FLAPS-TRAILING EDGE FLAP	S
27A130	30	01/28/03	AUTO-SPEEDBRAKE CONTROL SYSTEM -	S
27A135	12	05/28/04	ELEVATOR CNTRL SYS-(PCA) & REACTION	S
27A135	27	05/28/04	ELEVATOR CNTRL SYS-(PCA) & REACTION	S
27-137R1	12	01/28/05	FLIGHT CONTROLS STABILIZER TRIM CONTROL	S
27A146	27	05/28/05	FLIGHT CONTROLS - AILERON CONTROL -	S
27A146R1	27	05/28/05	FLIGHT CONTROLS - AILERON CONTROL -	S
28-29	31	INCORP	ENGINE SECOND FUEL CROSSFEED VALVE	S
28-29R1	31	INCORP	SECOND FUEL CROSSFEED VALVE INSTL	S
28-29R2	28	01/28/05	FUEL - DISTRIBUTION - ENGINE FUEL FEED	S
28-29R2	31	01/28/05	FUEL - DISTRIBUTION - ENGINE FUEL FEED	S
28A78	28	01/20/09	ENG FUEL FEED SYS-FUEL PUMP CTRL GROUND	S
28A81	28	05/28/06	FUEL-ENGINE FUEL FEED SYS-CENTER FUEL	S
28A85	28	05/28/06	FUEL-INDICATING-HOT SHORT PROTECTOR	S
28A85R1	28	01/20/08	FUEL - INDICATING - HOT SHORT PROTECTOR	S
28A85R2	28	01/20/08	FUEL - INDICATING - HOT SHORT PROTECTOR	S
28A105	28	05/28/07	FUEL - ENGINE FUEL FEED SYSTEM - CENTER	S
28A105R1	28	05/28/07	FUEL - ENGINE FUEL FEED SYSTEM - CENTER	S
31-34R2	31	05/28/07	EFIS SWITCHING RELAY DIODE INSTALLATION	S
31-59	32	09/28/98	EICAS COMPUTER RPLC	S
31-59R1	32	01/28/00	EICAS COMPUTER RPLC	S
31-59R2	32	01/28/01	CENTRAL COMPUTERS - UPGRADE TO THE	S
31-59R3	31	05/28/01	INDICATING/RECORDING-CENTRAL COMPUTERS-	S
31-66	31	01/28/02	WEU-OVERVOLTAGE TEST PROC	S
31-66R2	31	05/28/00	INDICATING/RECORDING - CENTRAL WARNING	S
31-68	31	09/28/00	INDICATING/RECORDING SYS-CENTRAL WARNING	S
31-68R1	34	09/28/04	INDICATING/RECORDING SYS-CENTRAL	S
31-69	31	05/28/07	EICAS OPS & OPC SOFTWARE CHNG	S
31-78	31	01/28/02	INDICATING/RECORDING SYS-EICAS	S
31-78R1	34 34	01/28/01	INDICATING/RECORDING SYS - EICAS	S
31-104	31	09/28/04	EICAS-UPGRADE THE EICAS OPERATIONAL	S
31-159	31 72	01/20/08	IND/RECORD SYS-ENGINE IND/CREW ALERTING	S
32-175R1	32 77	09/20/08	LANDING GEAR - CRANE/ELDEC PROXIMITY	S
33-35R1	33	01/28/05	LIGHTS - CARGO AND SERVICE COMPARTMENT	S
34-132 34-132R1	34	09/20/96	AIR DATA COMPUTER REPL/WIRE CHANGES TO	S
34-132R1	34 34	01/20/08 INCORP	AIR DATA COMPUTER RPL/WIRE CHANGES TO ALT ALERT MODULE RPLC	S S
1	34 34	09/28/04		s S
34-192R1 34A222	34 34	09/28/04	NAVIGATION - INSTALLATION OF 200K -200 AIR DATA COMPUTING SYS OVERSPEED &	S S
34-228R1	34 34	03/28/03	FLIGHT INSTRUMENT SYSTEM-UPDATE THE	s S
36-23	34 36	12/20/96	AIR SUPPLY PRESS REG AND SHUTOFF VALVE-	s S
52-57	36 32	01/28/00	MLG DOOR CLOSED PROXIMITY SENSOR	s S
1 ⁷²⁻⁷¹	32	01/20/00	LIFA NOOK CEASEN EKANTLITTI SENSAK	3

LIST OF SERVICE BULLETINS



SERVICE		INCORP		_
BULLETIN	<u>ATA</u>	DATE	SUBJECT	<u>s/c</u>
71-58R6	26	01/28/01	ENGINE INTERMIX OF RB211 ENGINES	S
71-58R7	26	01/28/01	ENGINE INTERMIX OF RB211 ENGINES	S
71-58R7	71	01/28/01	ENGINE INTERMIX OF RB211 ENGINES	S
75-5	31	09/28/00	RB211-535 ENGINE BLEED VALVE EICAS	S
75-5	75	01/28/00	RB211-535 ENGINE BLEED VALVE EICAS	S
76-11R1	73	01/28/00	ENG FUEL VALVE INDICATION WIRING CHNGS-	S
77–9	R77	05/28/07	AIRBORNE VIBRATION MONITORING SYSTEM-	S
78-32R3	22	01/28/00	RB211 THRUST REVERSER SYNC LOCK	S
78-32R3	22	05/28/00	RB211 THRUST REVERSER SYNC LOCK	S
78-32R3	31	05/28/00	RB211 THRUST REVERSER SYNC LOCK	S
78-32R3	31	09/28/00	RB211 THRUST REVERSER SYNC LOCK	S
78-39R1	78	09/20/95	THRUST REVERSER POSITION INDICATING	S

LIST OF SERVICE BULLETINS



LIST OF CHAPTERS

<u>Group and Chapters</u>	<u>Chapter No</u> .
AIRFRAME SYSTEMS	
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AUTOFLIGHT	22
COMMUNICATIONS	23
ELECTRICAL POWER	24
EQUIPMENT/FURNISHINGS	25
FIRE PROTECTION	26
FLIGHT CONTROLS	27
FUEL	28
HYDRAULIC POWER	29
ICE AND RAIN PROTECTION	30
INDICATING/RECORDING SYSTEMS	31
LANDING GEAR	32
LIGHTS	33
NAVIGATION	34
OXYGEN	35
PNEUMATIC	36
WATER AND WASTE	38
AIRBORNE AUXILIARY POWER	49
STRUCTURE	
DOORS	52
WINDOWS	56
POWER PLANT	
POWER PLANT	71
ENGINE	72
ENGINE FUEL AND CONTROL	73
IGNITION	74
AIR	75
ENGINE CONTROLS	76
ENGINE INDICATING	
EXHAUST	78
OIL	79
STARTING	80

LIST OF CHAPTERS



1. <u>EICAS Messages</u>

- A. The MESSAGE column shows the message as shown on the EICAS display unit.
 - Number flagnotes show if an Auto Event occurs with that message.
 - (2) Messages with *[5] shown an auto event has occurred because of an engine exceedance. These messages show only on the PERF/APU page.
 - (3) The number flagnotes are as follows:
 - *[1] ECS Auto Event
 - *[2] ELEC Auto Event
 - *[3] HYD Auto Event
 - *[4] APU Auto Event
 - *[5] PERF Auto Event (Auto Event Messages Only)
- B. The LEVEL column shows the letters A, B, C, E, F, S, or M and also if that message is kept in nonvolatile memory (NVM). Levels A, B, and C are Alert messages, level E and F are Communication messages, level S is a Status message, and level M is a Maintenance message.
 - (1) Alert messages, level A, B and C, show automatically in the top left corner of the engine primary page. They show the conditions that follow:
 - (a) Level A (Warning) messages show an incorrect condition that must be corrected immediately. Warning messages are red in color and show at the top of the alert message list.
 - (b) Level B (Caution) messages show an incorrect condition that must be known immediately and corrected subsequently. Caution messages are yellow in color and show below the last warning message.
 - (c) Level C (Advisory) messages show an incorrect condition that only must be known immediately. Advisory messages are also yellow in color and show below the last caution message. Advisory messages start one space to the right of the caution messages.
 - (2) Alert messages (level A, B, and C) show at the top position of each message level area as they occur. When a new message shows, each of the remaining messages move down 1 line. Alert messages show only while there is an incorrect condition; they are not kept in NVM.
 - (3) Communication messages (levels E and F) are displayed on the bottom line of the alert level message field in the order of occurrence. Communication messages indicate arrival of incoming communication. Communication messages are white in color and are preceded by a solid bullet.

<u>NOTE</u>: Levels E and F messages are only applicable on the -1001 series EICAS computer.

(a) Level E messages are accompanied with an aural chime and are displayed above level F messages.

EFFECTIVITY-

EICAS MESSAGE LIST

ALL



- (b) Level F messages are displayed one character space indented to the right of level E messages.
- (4) Level S (status) messages show on the right side of the STATUS page. You must push the STATUS switch on the DISPLAY select panel to see the STATUS page. Status messages show incorrect conditions that the flight crew must know about before flight. Status messages are white in color.
- (5) Level M (maintenance) messages show on the top and right side of the ECS/MSG page. You must push the ECS/MCS switch on the maintenance page to see the ECS/MSG page. Some messages have status and maintenance levels. These messages are important to the flight crew and the maintenance crew. Other messages have only a maintenance level. These are important to the maintenance crew, but the flight crew does not have to know about them.
- C. The SYSTEM INPUT column gives the general conditions that are necessary for the sub-system to send a discrete signal to show the message.
- D. The FIM CHAP REF column gives the primary ATA chapter location of each message in the FIM. There is an EICAS MESSAGE LIST in each chapter which follows the FIM Contents section. This list shows all messages for that chapter and gives a corrective action or the FIM Chapter-Section reference with the applicable figure number.



EICAS MESSAGE LIST				
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF	
ACCESS DOORS	С	Two or more of the access doors are unlatched	52	
AFT CABIN TEMP *[1]	С	A condition that follows continues: 1) The aft cabin supply duct temperature is larger than 190°F (88°C) 2) Zone temperature aft cabin channel failure 3) The zone temperature aft cabin channel is off	21	
AFT CARGO DET 1	S,M	The aft cargo detector loop 1 has an output failure or a test failure	26	
AFT CARGO DET 2	S,M	Aft cargo detector loop 2 has an output failure or test failure	26	
AFT CARGO DOOR	С	The aft cargo door (cargo door No. 2) is not closed and locked	52	
AFT CARGO DR 1	С	The aft cargo door 1 (cargo door No. 2) is not closed and locked	52	
AFT CARGO DR 2	С	The aft cargo door 2 (cargo door No. 3) is not closed and locked	52	
AFT CARGO FAN	S,M (NVM)	Aft cargo compartment fan failure	21	
AFT CARGO FIRE	Α	Aft cargo compartment fire	26	
AFT DET FAN	М	Aft cargo smoke detector blower 1 failure or blower 2 failure	26	



	EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF	
AFT EQ EXH FAN 1	M (NVM)	Aft equipment exhaust fan 1 failure	21	
AFT EQ EXH FAN 1	S,M (NVM)	Aft equipment exhaust fan 1 failure	21	
AFT EQ EXH FAN 2	M (NVM)	Aft equipment exhaust fan 2 failure	21	
AFT EQ EXH FAN 2	S,M (NVM)	Aft equipment exhaust fan 2 failure	21	
AFT EQ FLOW	M	The aft equipment cooling ducts flow is low and the airplane is on the ground	21	
AFT EQ SNSR	M (NVM)	Aft equipment supply duct low flow sensor failure	21	
AFT EQ SUP FAN 1	M (NVM)	Aft equipment supply fan 1 failure	21	
AFT EQ SUP FAN 2	M (NVM)	Aft equipment supply fan 2 failure	21	
AFT EQPT SMOKE	С	Smoke in the aft equipment cooling supply duct	21	
AFT FUEL X-FEED	С	AIRPLANES WITH A DUAL FUEL CROSSFEED SYSTEM; the aft fuel crossfeed switch position does not agree with the aft fuel crossfeed valve position	28	



		EICAS MESSAGE LIST	
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
AIR/GND DISAGREE	S,M (NVM)	The system 1 air/ground logic disagreed with the System 2 air/ground logic because the main gear was put at an angle	32
AIR/GND SYS	С	Air/ground disagree after dispatch and prior to take-off	32
ALL GEAR DOWN	M (NVM)	The landing gear system showed that all the gear were down and locked, but the air/ground system showed that the nose gear was up	32
ALT CALLOUTS	S,M	Loss of the EGPWS altitude callouts	34
ALT DISAGREE	В	The altitude difference between the air data computers is greater than 200 feet and the radio altitude is greater than 200 feet	34
ALTITUDE ALERT	В	The airplane moved away from the altitude selection by more than ± 200 or 300 feet (61-91 meters)	34
ALTN ANTISKID	S,M	The antiskid system found a failure in the alternate antiskid system	32
ANTISKID	М	The antiskid system in operation (normal or alternate) has a failure	32
ANTISKID/AUTOBRK	M (NVM)	The antiskid/autobrake system BITE found a failure	32

EICAS MESSAGE LIST

ALL



	EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF	
APU BAT CHGR	S,M (NVM)	APU battery charger failure	24	
APU BAT NO STBY	S,M (NVM)	Either condition as follows occurred: 1) The APU battery was not connected in parallel during a main DC power supply failure 2) The parallel connection between the APU battery and the main battery was not removed after the main dc power supply became available	24	
APU BITE	M (NVM)	The APU BITE found a failure	49	
APU BLEED VAL	С	The APU bleed valve switch position does not agree with the APU bleed valve position	36	
APU BTL	С	APU bottle low pressure	26	
APU DOOR	S,M	The APU door position does not agree with the position of the APU master control switch	49	
APU FAULT *[4]	С	APU BITE found a failure and did a shutdown	49	
APU FIRE	Α	APU fire	26	
APU FIRE LP 1	S,M	APU fire in loop 1 or failure of loop 1 fire detection	26	
APU FIRE LP 2	S,M	APU fire in loop 2 or failure of loop 2 fire detection	26	

EICAS MESSAGE LIST

Page 6



	EICAS MESSAGE LIST				
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF		
APU FUEL VAL	С	The APU fuel valve position does not agree with the set position	28		
APU GEN OFF	С	APU generator auxiliary power breaker (APB) is open and the external power contactor (EPC) is open during APU operation	24		
APU OIL QTY *E43	S,M (NVM)	The APU oil quantity is low	49		
ATC FAULT	С	Air traffic control transponder failure	34		
ATT DISAGREE	В	Instrument comparator unit (ICU) left attitude does not agree with the ICU right attitude	34		
ATT FAIL	С	Used only during self-test of the ICU. If this message shows during normal operation, replace the instrument comparator unit	34		
AUTO SPEEDBRAKE	С	Auto speedbrake system BITE found a failure	27		
AUTOBRAKES	С	Autobrake disarmed or not operative	32		
AUTOPILOT	В	Air data computer, flight management computer, stabilizer trim, instrument landing system, or radio altimeter input failure to the autopilot which is in operation	22		
AUTOPILOT DISC	А	All autopilots in operation failed	22		
AUTOTHROT DISC	В	The autothrottle was manually or automatically disengaged or the power was not removed from the autothrottle	22		



		EICAS MESSAGE LIST	
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
BATTERY OFF	С	Battery switch off	24
BBAND SYS SMOKE	В	Message is added to indicate cooling system shutdown due to smoke detection	43
BLEED ISLN VAL	С	The bleed isolation valve switch does not agree with the bleed isolation valve position	36
BRAKE SOURCE	С	The accumulator is the only hydraulic brake pressure source	32
BROADBAND SYS	S	Message is added to indicate system failure	43
C FLT CONT HYD	С	The center hydraulic flight control valves are closed	27
C HYD 1 OVHT *[3]	С	The center electrical pump 1 temperature is larger than 225°F (107°C)	29
C HYD 2 OVHT *[3]	С	The center electrical pump 2 temperature temperature is larger than 225°F (107°C)	29
C HYD ELEC 1	С	The center electrical pump 1 output pressure is low	29
C HYD ELEC 2	С	The center electrical pump 2 output pressure is low	29
C HYD QTY *[3]	С	The center hydraulic reservoir quantity is low	29
C HYD RSVR PRES	С	The center hydraulic system reservoir pressure is less than 17 psi (1.15 Kg/cm2) while both engines are in operation	29

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
C HYD SYS MAINT	S,M (NVM)	The center hydraulic system pressure is less than 2800 psi (193 Kg/cm2) while both engines are in operation	29
C HYD SYS PRESS *[3]	В	The center hydraulic system pressure is low	29
C HYD QTY O/FULL	М	The center hydraulic system reservoir quantity is larger than 122%	29
C IRS DC FAIL	С	Center inertial reference system dc power supply failure	34
C IRS FAULT	С	Center inertial reference system failure	34
C IRS ON DC	С	Center inertial reference system ac power supply failure. The IRS changed to dc power supply use	34
CABIN ALERT	E	An alert call has been received over the cabin interphone	23
CABIN ALT AUTO 1	S,M	Automatic pressurization controller 1 BITE found a failure	21
CABIN ALT AUTO 2	S,M	Automatic pressurization controller 2 BITE found a failure	21
CABIN ALTITUDE	А	The cabin altitude is above 10,000 feet feet (3050 meters)	21

ALL



	İ	EICAS MESSAGE LIST	
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
CABIN ALTITUDE	A	The cabin altitude is above 10,000 feet (3050 meters) if the cabin altitude warning switch is in the usual position or the cabin altitude is above 14,500 feet (4420 meters) if the cabin altitude warning switch is in high altitude position	21
CABIN AUTO INOP	В	Failure of No. 1 and 2 automatic pressurization controllers or the pilot changed to manual pressurization control	21
CABIN CALL	E	An interphone call has been received from the passenger cabin	23
CAPT INSTR XFER	S,M	The captain changed to the other instrument data bus supply while the left main data bus operation was satisfactory	24
CAPT PITOT	С	Captain's main pitot heat power supply failure, continuity failure, or power level change	30
CAPT PITOT HEAT	M (NVM)	The captain's pitot heat was high while the airplane was on the ground	30
CARGO BTL 1	С	Cargo bottle 1 pressure is low	26

EICAS MESSAGE LIST

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
CARGO BTL 2	С	Cargo bottle 2 pressure is low	26
CARGO DET AIR	S	The pressure is low at some position downstream of the forward or the aft cargo smoke detector blowers	26
CARGO DOORS	С	Two or more cargo doors are open	52
COMPARATOR BITE	S,M (NVM)	Instrument comparator unit (ICU) BITE found a failure	34
CTR L FUEL PUMP	С	The center left fuel pump output is low	28
CTR R FUEL PUMP	С	The center right fuel pump output pressure is low	28
DC FUEL PUMP ON	М	APU DC fuel pump is operating	28
DUCT LEAK BITE	М	The duct leak/wheel well fire system logic card BITE found a failure	26
E/E ACCESS DOOR	С	The EE bay door is not latched	52
EGT RED *[5]	NA	The left/right engine EGT is equal to or larger than a temperature as follows: 1) 1598°F (870°C) records immediately 2) 1562°F (850°C) for 20 seconds 3) 1058°F (570°C) during engine start	71
EGT YEL *[5]	NA	The left/right engine EGT is equal to or larger than 1463°F (795°C)	71

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
EICAS BITE	М	A condition that follows continues: 1) The left or right EICAS computer BITE found a failure 2) The left and right EICAS computers have a DISAGREE code latched in BITE NVM 3) The computer which is not in use failed 4) The computer which is not in use is off	31
EICAS CONT PNL	С	EICAS DISPLAY select panel failure	31
EICAS DISAGREE	S	A condition that follows continues: 1) EICAS computer failure which caused an ENGINE DISAGREE code be latched in BITE NVM 2) EICAS computer failure which caused a caution alert function failure	31
EICAS DISPLAY	С	A condition that follows continues: 1) EICAS top or bottom display unit failed 2) EICAS top or bottom display unit is off 3) EICAS top or bottom display unit is out of view because of a computer failure	31
EICAS SOFTWARE	S	An incompatibility exists in the EICAS software	31
ELEV ASYM	S,M	Elevator asymmetry protection system failure	27

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
ELEV FEEL	S,M (NVM- AIR)	The elevator feel system has detected a fault	27
ELEV C HYD PRESS	S,M (NVM)	High or low pressure at the center elevator hydraulic system pressure reducer valve	27
ELEV L HYD PRESS	S,M (NVM)	High or low pressure at left elevator hydraulic system pressure reducer valve	27
ELEV R HYD PRESS	S,M (NVM)	High or low pressure at the right elevator hydraulic system pressure reducer valve	27
EMER DOORS	С	Two or more emergency doors are open	52
EMER LIGHTS	С	The emergency light switch is in the OFF or the ON position	N/A
ENG BTL 1	С	Engine bottle 1 pressure is low	26
ENG BTL 2	С	Engine bottle 2 pressure is low	26
EQPT CLG FAN	S	Forward or aft equipment cooling supply fan failure	21
EQPT CLG FLOW	S (NVM)	The forward or aft equipment cooling ducts flow was low while the airplane was on the ground	21
EQPT CLG SENSOR	S	BITE test failure of one or more low flow sensors	21

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
EQPT CLG TEST	S,M (NVM)	Equipment cooling automatic BITE test did not operate or not completed	21
EQPT OVHT	С	A condition that follows continues: 1) Both forward supply fans are off 2) Both aft supply fans are off 3) Left recirculation fan failure and the overboard exhaust valve did not open after 10 seconds	21
EQPT SMOKE TEST	S,M (NVM)	Fwd equipment smoke system test failure	21
F/O INSTR XFER	S,M	The first officer changed to the other instrument data bus supply while the right main data bus was satisfactory	24
F/O PITOT	С	F/O's main pitot heat power supply failure, continuity failure, or power level change	30
F/O PITOT HEAT	M (NVM)	The F/O's pitot heat was high while the airplane was on the ground	30
FAST/SLOW FAIL	С	Used only during self-test of the ICU. If this message shows during normal operation, replace the instrument comparator unit	34
FD COMMAND FAIL	С	Used only during self-test of the ICU. If this message shows during normal operation, replace the instrument comparator unit	34
FIRE/OVHT SYS	С	Fire/overheat system failure	26

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
FLAP LD RELIEF	С	The flaps did not automatically retract at the correct airspeed or they did not extend after the airspeed decreased	27
FLAP ISLN VAL	S,M	The flap isolation valve was open when it should have been closed or there was a flap isolation valve failure	27
FLAP/SLAT BITE	M (NVM)	Flap slat electronics unit (FSEU) BITE found a failure	27
FLAP/SLAT ELEC	S,M	FSEU BITE found a failure because of a disagree alert or unsatisfactory asymmetry	27
FLAPS	A	The LE slots or the TE flaps are not in a takeoff position and at least one engine has takeoff thrust	31
FLT CONT VALS	С	Two or more hydraulic flight control valves are closed	27
FLT DATA ACQ	S,M (NVM- AIR)	DFDAU failure while the left and right engines were operating	31
FLT DATA REC	S,M (NVM- AIR)	The flight recorder was OFF while the left and right engines were operating	31
FLT DECK TEMP [1]*	С	A condition that follows continues: 1) Flight deck supply duct temperature is larger than 190°F (88°C) 2) The zone temperature flight deck channel is off 3) Zone temperature flight deck channel failure	21



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
FMC MESSAGE	С	The flight management system has an important message	34
FUEL CONFIG	С	A condition that follows continues: 1) The left and right fuel tank quantities have a difference of more than 1800 lbs (800 Kg on metric indicators) 2) The center tank fuel pumps are off and the center tank has fuel (approximately 1200 lbs [500 Kg]) that can be used	28
FUEL CROSSFEED	С	AIRPLANES WITH A SINGLE FUEL CROSSFEED SYSTEM; The fuel crossfeed valve position does not agree with the fuel crossfeed switch position	28
FUEL QTY BITE	S,M	Fuel Quantity Indicating System (FQIS) BITE failure	28
FUEL QTY CHANNEL	S	The fuel quantity processor unit has a failure in one or more channels	28
FUEL QTY IND	S	The accuracy of one or more fuel tank quantity indicators is not known	28
FUEL SOV BATTERY	М	The shut-off valve battery is low	28



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
FWD ACCESS DOOR	С	The forward access door is not latched	52
FWD CABIN TEMP *[1]	С	A condition that follows continues: 1) The forward cabin supply duct temperature was larger than 190°F (88°C) 2) The zone temperature forward cabin channel failure 3) The zone temperature forward cabin channel is off	21
FWD CARGO DET 1	S,M	The forward cargo detector loop 1 has an output failure or a test failure	26
FWD CARGO DET 2	S,M	The forward cargo detector loop 2 has an output failure or a test failure	26
FWD CARGO DOOR	С	The forward cargo door (Cargo No. 1) is not closed and locked	52
FWD CARGO FAN	S,M (NVM)	Forward cargo compartment fan failure	21
FWD CARGO FIRE	А	Forward cargo compartment fire	26
FWD DET FAN	М	Forward cargo smoke detector blower 1 failure or blower 2 failure	26
FWD EQ EXH FLOW	М	Low flow detected in the forward flow equipment exhaust duct while the ground airplane is on the ground	21

ALL



	EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF	
FWD EQ EXH SNSR	M (NVM)	Forward equipment exhaust duct low flow sensor BITE failure	21	
FWD EQ SUP FAN 1	M (NVM)	Forward equipment supply fan 1 failure	21	
FWD EQ SUP FAN 2	M (NVM)	Forward equipment supply fan 2 failure	21	
FWD EQ SUP FLOW	M	The forward equipment supply duct flow is low and the airplane is on the ground	21	
FWD EQ SUP SNSR	M (NVM)	Forward equipment supply duct low flow sensor BITE failure	21	
FWD EQPT DET 1	M (NVM)	Forward equipment smoke detector 1 BITE failure	21	
FWD EQPT DET 2	M (NVM)	Forward equipment smoke detector 2 BITE failure	21	
FWD EQPT EXH DET	M (NVM)	Forward equipment exhaust detector failure	21	
FWD EQPT SMOKE	С	Smoke in the forward equipment cooling exhaust or supply ducts	21	
FWD FUEL X-FEED	С	AIRPLANES WITH A DUAL FUEL CROSSFEED SYSTEM; the forward fuel crossfeed switch position does not agree with the forward fuel crossfeed valve position	28	

ALL



		EICAS MESSAGE LIST	
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
G/S DISAGREE	С	Used only during self-test of the ICU. If this message shows during normal operation, replace the instrument comparator unit	34
G/S FAIL	С	Used only during self-test of the ICU. If this message shows during normal operation, replace the instrument comparator unit	34
GEAR DISAGREE	В	System 1 and system 2 landing gear positions do not agree	32
GEAR DISAGREE	M (NVM)	The system 1 and system 2 landing gear indications did not agree	32
GEAR DOORS	С	A landing gear door is not closed and locked (System 1 and System 2)	32
GEAR DOORS	M (NVM)	EICAS COMPUTERS -111 AND SUBSEQUENT; the system 1 and system 2 gear door indications disagree	32
GEAR LEVER	M (NVM)	The system 1 and system 2 landing gear gear lever indications did not agree	32
GEAR NOT DOWN	А	A gear is not down and locked and a condition that follows continues: 1) Trailing edge flaps are set to 25 or 30 degrees 2) The two thrust levers are set to idle and the radio altitude is below below 800 feet (244 meters) 3) At least one thrust lever is set to idle, the radio altitude is below 800 feet, and the 140 second time delay is complete 4) At least one thrust lever is set to idle and a radio altimeter failure occurred	31

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
GND PROX BITE	S,M	Ground proximity system BITE fault	34
GND PROX SYS	С	The basic or enhanced GPWS features have failed	34
GND PROX SYS	S,M	The basic GPWS features have failed	34
GROUND CALL	E	Interphone call received from APU remote control panel on nose gear	23
HDG DISAGREE	С	The instrument comparator unit left heading data does not agree with the right heading data	34
HDG DISAGREE	С	Used only during self-test of the ICU. If this message shows during normal operation, replace the instrument comparator unit	34
HDG FAIL	С	Used only during self-test of the ICU. If this message shows during normal operation, replace the instrument comparator unit	34
HYD GEN ON	S,M (NVM- AIR)	The hydraulic driven generator is in operation	24
HYD GEN VAL	S,M	The hydraulic drive generator supply valve is not fully closed or not fully open	24

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
IAS DISAGREE	В	The airspeed difference between the air data computers is greater than 5 knots and the radio altitude is greater than 400 feet	34
IDG OUT TEMP *[2]	M (NVM)	-107 THRU -110 EICAS COMPUTERS; all of the conditions that follow occurred: 1) The left and right IDG oil out temperatures are different by more than 50°F (10°C) 2) The left and right engine N1 speeds are different by less than 10% of each other 3) The two buses have power from the related generator	24
IDG RISE TEMP *[2]	M (NVM)	-107 THRU -110 EICAS COMPUTERS; The left and right IDG temperatures difference was more than 6°C for 10 minutes with both generators in operation	24
INSTR SWITCH	В	The captain's and the F/O's EFIs are both set to the ALTN position	34
L AC BUS OFF	В	The left AC main bus is not energized	24
L AFT EMER DOOR	С	The left aft emergency door is unlatched on an overwing exit	52

EICAS MESSAGE LIST

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
L AFT ENT DOOR	С	The left aft entry door is not latched	52
L AFT FUEL PUMP	С	The left aft fuel pump output pressure is low	28
L AOA PROBE	С	The left angle of attack probe has a power or continuity failure	30
L AUX PITOT	С	The left auxiliary pitot heater has a power or continuity failure or an incorrect power level	30
L AUX PITOT HEAT	M (NVM)	The left auxiliary pitot heater was set to high heat while the airplane was on the ground	30
L BLD DUCT LEAK	В	Duct leak (overheat) between the left engine and the isolation valve or between the APU and the isolation valve	26
L BUS ISOLATED	С	The left isolation bus tie was opened manually or is kept open automatically	24
L CTR ENT DOOR	С	The left center entry door is not latched	52
L EEC BITE	M (NVM)	Left electronic engine control (EEC) failure in BITE memory	73

ALL

EICAS MESSAGE LIST

26



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
L EEC OFF	В	The left EEC is off and the thrust lever is in the full forward position	73
L EICAS CMPTR	S	Left EICAS computer failure or power supply failure	31
L ELEC HYD OVHT *[3]	С	The left electrical pump temperature is larger than 225°F (107°C)	29
L ELEV PCU	S,M (NVM)	All of the conditions that follow occurred: 1) The airplane was on the ground 2) All hydraulic systems were pressurized 3) The airspeed was less then 50 knots 4) The left ac bus was energized 5) One or more elevator power control units had a valve in a locked position	27
L EMER DOOR	С	The left emergency door is not latched	52
L ENG ANALOG N2	S,M (NVM)	The analog N2 value does not agree with the digital N2 value	77
L ENG ANALOG N3	S,M (NVM)	The analog N3 value does not agree with the digital N3 value	80
L ENG ANTI-ICE	С	The left engine is in operation and the left engine cowl anti-ice valve position does not agree with the left engine cowl anti-ice switch position	30



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
L ENG BB VIB	M (NVM)	The left engine broadband vibration was high	77
L ENG BLEED OFF	С	The left engine is in operation and the left engine pressure regulating and shutoff valve is closed	36
L ENG BLEED VAL	В	The left engine high pressure shutoff valve (HPSOV) and pressure regulating and shutoff valve (PRSOV) are closed because the bleed air is too hot	36
L ENG EEC	С	The left EEC has a failure or the EEC is off while the engine is in operation	73
L ENG FIRE LP 1	S,M	Left engine loop 1 fire or failure output	26
L ENG FIRE LP 2	S,M	Left engine loop 2 fire or failure output	26
L ENG FUEL FILT	С	The differential pressure across the left engine fuel filter was near bypass	73
L ENG FUEL FILT	S,M (NVM)	The differential pressure across the left engine fuel filter was near bypass	73
L ENG FUEL VAL	С	The left engine fuel valve is not in the necessary position	76

ALL



	EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF	
L ENG HI STAGE	С	The left engine high pressure shutoff valve (HPSOV) is closed because the high high stage bleed pressure is too high	36	
L ENG HYD OVHT *[3]	С	The left primary hydraulic pump case drain temperature is too high	29	
L ENG LIMITER	С	The left EEC limiter has a BITE failure and the left engine is in operation	73	
L ENG LOW N1	S,M (NVM)	The left engine fan speed was less than the minimum idle limit while the engine was stable	73	
L ENG LP PUMP	S,M (NVM)	The pressure was low downstream of the left engine LP fuel pump during left engine operation	73	
L ENG OH LP 1	S,M	Left engine nacelle loop 1 detector overheat or failure output	26	
L ENG OH LP 2	S,M	Left engine nacelle loop 2 detector overheat or failure output	26	
L ENG OIL PRESS	В	The left engine oil pressure is less than the low limit during left engine operation	79	
L ENG OIL PRESS	С	The left engine oil pressure is less than the low limit during left engine operation	79	

ALL

EICAS MESSAGE LIST

26



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
L ENG OVHT	В	Left engine strut or nacelle overtemperature	26
L ENG PROBE HEAT	S,M (NVM)	Left engine P1 probe heat failure	30
L ENG SHUTDOWN	В	The left engine fire switch is pulled or the left fuel control switch is in the cutoff position	73
L ENG SPEED CARD	S,M (NVM)	Left engine N2/N3 speed sensing relay failure	77
L ENG STARTER	С	The left starter valve position does not agree with the left starter switch position	80
L ENG STATOR	В	The left EEC is not capable of controlling the left stator vane actuator (SVA) and has de-powered the SVA to the failsafe (full-open) position	80
L ENG SURGE BITE	M (NVM)	The left engine Bleed Valve Control Unit (BVCU) had a BITE failure during engine operation	75
L ENG SURGE CONT	S,M (NVM)	The left engine BVCU found a dispatch critical failure of the bleed valve control system during left engine operation	75

EICAS MESSAGE LIST

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
L ENG SURGE DET	M (NVM)	The left EEC has detected an engine surge	80
L ENG TAI VALVE	S,M (NVM)	The left engine thermal anti-ice pressure was high	30
L ENG VIB	S (NVM)	The left engine Airborne Vibration Monitor (AVM) found a dispatch critical failure	77
L ENG VIB BITE	M (NVM)	AVM left channel BITE failure	77
L ENGINE FIRE	A	Left engine fire or the turbine temperature is too high	26
L ENTRY DOORS	С	Two or more left entry emergency doors are not latched	52
L FLT CONT ELEC	М	Left Control System Electronics Unit (CSEU) power supply module failure	27
L FLT CONT HYD	С	Left hydraulic flight control valves are closed	27
L FMC FAIL	С	Left flight management computer failure	34
L FUEL SPAR VAL	С	The left fuel spar valve is not in the correct position	28

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
L FUEL SYS PRESS	В	A condition that follows continues: 1) All six left system fuel pumps are off 2) All six left system fuel pumps have low pressure 3) The fuel crossfeed valve(s) is closed, the two left main pumps have low pressure, and the center tank pump has low pressure	28
L FWD EMER DOOR	С	The left forward emergency door is unlatched on an overwing exit	52
L FWD ENT DOOR	С	The left forward entry door is not latched	52
L FWD FUEL PUMP	С	The left forward fuel pump output pressure is low	28
L FWD WINDOW	С	The left forward window heat temperature is too high or there is a high power output	30
L GEAR DOWN	M (NVM)	The system 1 left main gear down and locked indication did not agree with system 2	32
L GEN DRIVE *[2]	С	Left generator drive low oil pressure or high oil temperature during engine operation	24
L GEN OFF	С	Left generator control breaker (GCB) open during engine operation	24
L GEN OFF	В	Left generator control breaker (GCB) open during engine operation	24



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
L HYD ELEC PUMP	С	The left electrical pump output pressure is low	29
L HYD ENG PUMP	С	The left engine primary pump output pressure is low during engine operation	29
L HYD QTY *[3]	С	The left hydraulic reservoir quantity is low	29
L HYD QTY O/FULL	М	The left hydraulic reservoir quantity is larger than 1.22	29
L HYD RSVR PRES	С	The left hydraulic reservoir pressure is less than 17 psi (1.15 Kg/cm2) during left and right engine operation	29
L HYD SYS MAINT	S,M (NVM)	The left hydraulic pressure was less than 2800 psi (193 Kg/cm2) during left and right engine operation	29
L HYD SYS PRESS *[3]	В	The left hydraulic system pressure is low	29
L IDG OIL LEVEL	M (NVM)	Left IDG oil level is low	24
L IDG OIL TEMP *[2]	M (NVM)	The left IDG outlet temperature was more than 284°F (140°C)	24
L IDG TEMP SENS	М	Left IDG temperature sensor failure	24
L IGN STBY BUS	M	The left engine ignitors power is from the standby bus	74



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
L IRS DC FAIL	С	Left inertial reference system (IRS) dc power supply failure	34
L IRS FAULT	С	Left IRS failure	34
L IRS ON DC	С	Left IRS ac power supply failure, thus dc power is used	34
L OIL FILTER	С	The left engine oil filter delta pressure is near bypass while the oil temperature is more than 50°F (10°C)	79
L PACK BITE	М	Left pack controller BITE failure or left pack system component failure	21
L PACK OFF	С	The left pack is off or the left pack compressor outlet temperature is larger than 489°F (254°C)	21
L PACK TEMP *[1]	С	A condition that follows continues: 1) The left pack outlet temperature is larger than 190°F (88°C) 2) The left pack compressor outlet temperature is larger than 489°F (254°C) 3) The left pack controller found the failure of a necessary system component	21
L RECIR FAN	С	Left recirculation/electrical equipment exhaust fan failure	21
L REV ISLN VAL	С	Left thrust reverser isolation valve failure	78



		EICAS MESSAGE LIST	
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
L REV ISLN VAL	M (NVM) S,M (NVM)	AIRPLANES WITH -101 THRU -110 EICAS COMPUTERS; left thrust reverser isolation valve failure AIRPLANES WITH -111 AND SUBSEQUENT EICAS COMPUTERS; left thrust reverser isolation valve failure	78
L REV STOW SIG	S,M (NVM)	Left engine reverser auto restore sensor failure	78
L SIDE WINDOW	С	The left side window temperature is too high or there is a high power output	30
L STARTER CUTOUT	В	The left engine starter valve is open at an engine rpm level where it should be closed	80
L STRUT OH DET 1	S,M	Left engine strut overheat detector loop 1 fire output	26
L STRUT OH DET 2	S,M	Left engine strut overheat detector loop 2 fire output	26
L TURB OH DET 1	М	Left turbine overheat at detector 1 or loop 1 failure	26
L TURB OH DET 1	S	Left turbine overheat at detector 1 or loop 1 failure NOTE: Message does not show during L ENGINE FIRE	26



	1	EICAS MESSAGE LIST	
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
L TURB OH DET 2	М	Left turbine overheat at detector 2 or loop 2 failure	26
L TURB OH DET 2	S	Left turbine overheat at detector 2 or loop 2 failure	26
		NOTE: Message does not show during L ENGINE FIRE	
L UTIL BUS OFF	С	The left utility bus is not energized while the left AC main bus is energized	24
L WING ANTI-ICE	С	The left wing anti-ice valve position does not agree with the left wing anti-ice switch position	30
L YAW DAMPER	С	Left yaw damper failure, power supply failure, or the left yaw damper is off	22
LDG GEAR MONITOR	S	System 1 and system 2 landing gear position indications do not agree NOTE: LDG GEAR MONITOR is not in NVM, but LDG GEAR MONITOR shows when	32
		an NVM message that follows shows: ALL GEAR DOWN GEAR DISAGREE GEAR DOORS GEAR LEVER L(R) GEAR DOWN L(R) DRAG BRACE L(R) SIDE BRACE	
		NOSE GEAR DOWN NOSE GEAR LOCKED	

ALL

EICAS MESSAGE LIST

27



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
LE SLAT ASYM	В	Leading edge (LE) slat asymmetry or slat failure	27
LE SLAT DISAGREE	В	A LE slat position does not agree with the necessary position	27
LOC DISAGREE	С	Used only during self-test of the ICU. If this message shows during normal operation, replace the instrument comparator unit	34
LOC FAIL	С	Used only during self-test of the ICU. If this message shows during normal operation, replace the instrument comparator unit	34
LOW FUEL	В	Low fuel quantity in the main tanks (the quantity in a tank is less than 2200 lbs [1000 Kg])	28
MACH/SPD TRIM	С	Mach/speed trim does not operate because of failures of the two mach/speed trim channels or systems	27
MAIN BAT CHGR	S,M (NVM)	Main battery charger failure	24
MAIN BAT DISCH	С	The main battery has a current output of 4-6 amps or more	24

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
MAIN CARGO DOOR	W	Main cargo door is not closed and locked.	31
N1 RED *[5]	NA	The left(right) engine N1 is equal to or larger than a percentage that follows: 1) 110.0% recorded immediately 2) 108.8% for 20 seconds	71
N1 YEL *[5]	NA	The left(right) engine N1 is equal to or larger than 108.4%	71
N2 RED *[5]	NA	The left(right) engine N2 is equal to or larger than a percentage that follows: 1) 101.3% recorded immediately 2) 100.3% for 20 seconds	71
N2 YEL *[5]	NA	The left(right) engine N2 is equal to or larger than 98.0% and the airplane is not in a Go-Around mode	71
N3 RED *[5]	NA	The left(right) engine N3 is equal to or larger than a percentage that follows: 1) 100.2% recorded immediately 2) 99.0% for 20 seconds	71
N3 YEL *[5]	NA	The left(right) engine N3 is equal to or larger than 95.8%	71
NITROGN GEN PERF	S	Message is added to indicate a degraded NGS	47
NITROGN GEN SYS	S	Message is added to indicate an inoperative NGS.	47
NORM ANTISKID	S,M	Antiskid system failure in the normal system	32
NOSE A/G DISAGREE	S,M (NVM)	System 1 and system 2 air/ground logic of the nosegear position did not agree	32



		EICAS MESSAGE LIST	
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
NOSE GEAR DOWN	M (NVM)	System 1 and system 2 nose gear down indications did not agree	32
NOSE GEAR LOCKED	M (NVM)	System 1 and system 2 nose gear locked indications did not agree	32
OIL P RED *[5]	NA	The left(right) engine oil pressure was equal to or less than 18 psi during left(right) engine operation	71
OIL P YEL *[5]	NA	The left(right) engine oil pressure was equal to or less than the yellow low oil pressure limit. The yellow low oil pressure limit is as follows: 1) a linear function from 18 psi at 50% N3 to 25 psi at 70% N3 2) a linear function from 25 psi at 70% N3 to 35 psi at 93% N3 3) a linear function from 35 psi at 93% N3 to 45 psi at 116% N3	71
OIL Q *[5]	NA	The left(right) engine oil quantity was equal to or less than 5 quarts during left(right) engine operation	71
OIL T RED *[5]	NA	The left(right) engine oil temperature was equal to or larger than 338°F (170°C)	71

ALL



	EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF	
OVBD EX VAL OPEN	S,M (NVM)	The overboard exhaust valve was open during flight	21	
OVBD EX VAL TEST	S,M (NVM)	Overboard exhaust valve test failure or overboard exhaust valve control relay failure	21	
OVERSPEED	A	The left or right Air Data Computer (ADC) airplane speed is larger than the maximum operating velocity/maximum operating mach (VMO/MMO)	34	
PARKING BRAKE	А	The parking brake is engaged and one or two engines have takeoff thrust	31	
PARKING BRAKE	С	The parking brake is set (valve closed)	32	
PASS OXYGEN ON	С	Oxygen passenger service unit (PSU) latch energized	35	
PCU MONITOR	M (NVM)	The power control unit (PCU) monitor had an incorrect indication during flight	27	
POWER XFER UNIT	S,M (NVM)	Power transfer unit protection circuit failure	29	
PROBE HEAT	С	Two or more probe heaters have power or continuity failures	30	

ALL



	I	EICAS MESSAGE LIST	
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
PSEU BITE	M (NVM)	-102 THRU -110 EICAS COMPUTERS; System 1 and system 2 landing gear disagree inputs disagree in uplock position or gear door position indications disagree	32
R AC BUS OFF	В	The right AC main bus is not energized	24
R AFT EMER DOOR	С	The right aft emergency door is unlatched on an overwing exit	52
R AFT ENT DOOR	С	The right aft entry door is not latched	52
R AFT FUEL PUMP	С	The right aft fuel pump output pressure is low	28
R AOA PROBE	С	The right angle of attach probe has a power or continuity failure	30
R AUX PITOT	С	The right auxiliary pitot heater has a power or continuity failure or an incorrect power level	30
R AUX PITOT HEAT	M (NVM)	The right auxiliary pitot heater was set to high heat while the airplane was on the ground	30
R BLD DUCT LEAK	В	Duct leak overheat between the right engine and the isolation valve	26
R BUS ISOLATED	С	The right isolation bus tie was opened manually or is kept open automatically	24
R CTR ENT DOOR	С	The right center entry door is not latched	52

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
R EEC BITE	M (NVM)	Right EEC failure in BITE memory	73
R EEC OFF	В	The right EEC is off and the thrust lever is in the full forward position	73
R EICAS CMPTR	S	Right EICAS computer failure or power supply failure	31
R ELEC HYD OVHT *[3]	С	The right electrical pump temperature is larger than 225°F (107°C)	29
R ELEV PCU	S,M (NVM)	All of the conditions that follow occurred: 1) The airplane was on the ground 2) All hydraulic systems were pressurized 3) The airspeed was less than 50 knots 4) The left AC bus was energized 5) One or more elevator power control units had a valve in a locked position	27
R EMER DOOR	С	The right emergency door is not latched	52
R ENG ANALOG N2	S,M (NVM)	The analog N2 value does not agree with the digital N2 value	77
R ENG ANALOG N3	S,M (NVM)	The analog N3 value does not agree with the digital N3 value	80

ALL



	EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF	
R ENG ANTI-ICE	С	The right engine is in operation and the right engine cowl anti-ice valve position does not agree with the left engine cowl anti-ice switch position	30	
R ENG BB VIB	M (NVM)	The right engine broadband vibration was high	77	
R ENG BLEED OFF	С	The right engine is in operation and the right engine PRSOV is closed	36	
R ENG BLEED VAL	В	The right engine HPSOV and PRSOV are closed because the bleed air is too hot	36	
R ENG EEC	С	The right EEC had a failure or the EEC is off and the engine is in operation	73	
R ENG FIRE LP 1	S,M	Right engine loop 1 fire or failure output	26	
R ENG FIRE LP 2	S,M	Right engine loop 2 fire or failure output	26	
R ENG FUEL FILT	С	Differential pressure across the right engine fuel filter was near bypass	73	
R ENG FUEL FILT	S,M (NVM)	Differential pressure across the right engine fuel filter was near bypass	73	
R ENG FUEL VAL	С	The right engine fuel valve was not in the necessary position	76	
R ENG HI STAGE	С	The right engine HPSOV is closed because the high stage bleed pressure is too high	36	
R ENG HYD OVHT *[3]	С	The right primary hydraulic pump case drain temperature is too high	29	



		EICAS MESSAGE LIST	
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
R ENG LIMITER	С	The right EEC has a BITE failure and the right engine is in operation	73
R ENG LOW N1	S,M (NVM)	The right engine fan speed was less than the minimum idle limit while the engine was stable	77
R ENG LP PUMP	S,M (NVM)	The pressure was low downstream of the right engine LP fuel pump during right engine operation	73
R ENG OH LP 1	S,M	Right engine nacelle loop 1 detector overheat or failure output	26
R ENG OH LP 2	S,M	Right engine nacelle loop 2 detector overheat or failure output	26
R ENG OIL PRESS	В	The right engine oil pressure is less than the low limit and the right engine is in operation	79
R ENG OIL PRESS	С	The right engine oil pressure is less than the low limit during right engine operation	79
R ENG OVHT	В	Right engine strut or nacelle overtemperature	26
R ENG PROBE HEAT	S,M (NVM)	Right engine P1 probe heat failure	30
R ENG SHUTDOWN	В	The right engine fire switch is pulled or the right fuel control switch is in the cutoff position	73

EICAS MESSAGE LIST

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
R ENG SPEED CARD	S,M (NVM)	Right engine N2/N3 speed sensing relay failure	77
R ENG STARTER	С	The right starter valve position does not agree with the right starter switch position	80
R ENG STATOR	В	The right EEC is not capable of controlling the right stator vane actuator (SVA) and has de-powered the SVA to the failsafe (full-open)	80
R ENG SURGE BITE	M (NVM)	The right engine BVCU had a BITE failure during engine operation	75
R ENG SURGE CONT	S,M (NVM)	The right engine BVCU found a dispatch critical failure of the bleed valve control system during right engine operation	75
R ENG SURGE DET	M (NVM)	The right EEC detected an engine surge	73
R ENG TAI VALVE	S,M (NVM)	The right engine thermal anti-ice pressure was high	30
R ENG VIB	S (NVM)	The right engine AVM found a dispatch critical failure	77
R ENG VIB BITE	M (NVM)	AVM right channel BITE failure	77
R ENGINE FIRE	А	Right engine fire or the turbine temperature is too high	26

EICAS MESSAGE LIST

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EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
R ENTRY DOORS	С	Two or more right entry doors are not latched	
R FLT CONT ELEC	М	Right CSEU power supply module failure	27
R FLT CONT HYD	С	Right hydraulic flight control valves are closed	27
R FMC FAIL	С	Right flight management computer failure	34
R FUEL SPAR VAL	С	The right fuel spar valve is not in the correct position	28
R FUEL SYS PRESS	В	A condition that follows continues: 1) All six right system fuel pumps are off 2) All six right system fuel pumps have low pressure 3) The fuel crossfeed valve(s) is closed, the two right main fuel pumps have low pressure, and the center tank pump has low pressure	28
R FWD EMER DOOR	С	The right forward emergenct door is unlatched on an overwing exit	52
R FWD ENT DOOR	С	The right forward entry door is not latched	52
R FWD FUEL PUMP	С	The right forward fuel pump output pressure is low	28
R FWD WINDOW	С	The right forward window heat temperature is too high or there is a high power output	30
R GEAR DOWN	M (NVM)	The system 1 right main gear down and locked indication did not agree with system 2	32



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
R GEN DRIVE *[2]	С	Right generator drive low oil pressure or high oil temperature during engine operation	24
R GEN OFF	В	Right generator control breaker (GCB) open during engine operation	24
R HYD ELEC PUMP	С	The right electrical pump output pressure is low	29
R HYD ENG PUMP	С	The right engine primary pump output pressure is low during engine operation	29
R HYD QTY *E3]	С	The right hydraulic reservoir quantity is low	29
R HYD QTY O/FULL	М	The right hydraulic reservoir is larger than 1.22	29
R HYD RSVR PRES	С	The right hydraulic reservoir pressure is less than 17 psi (1.15 Kg/cm2) during left and right engine operation	29
R HYD SYS MAINT	S,M (NVM)	The right hydraulic pressure was less than 2800 psi (193 Kg/cm2) during left and right engine operation	29
R HYD SYS PRESS *[3]	В	The right hydraulic system pressure is low	29

ALL

EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
R IDG OIL LEVEL	M (NVM)	Right IDG oil level is low	24
R IDG OIL TEMP *[2]	M (NVM)	The right IDG outlet temperature was more than 284°F (140°C)	24
R IDG TEMP SENS	М	Right IDG temperature sensor failure	24
R IGN STBY BUS	М	The right engine ignitors power is from the standby bus	74
R IRS DC FAIL	С	Right inertial reference system (IRS) dc power supply failure	34
R IRS FAULT	С	Right IRS failure	34
R IRS ON DC	С	Right IRS ac power supply failure, thus dc power is used	34
R OIL FILTER	С	The right engine oil filter delta pressure is near bypass while the oil temperature is more than 50°F (10°C)	79
R PACK BITE	М	Right pack controller BITE failure or right pack system component failure	21
R PACK OFF	С	The right pack is off or the right pack compressor outlet temperature is larger than 489°F (254°C)	21
R PACK TEMP *[1]	С	A condition that follows continues: 1) The right pack outlet temperature is larger than 190°F (254°C) 2) The right pack compressor outlet temperature is larger than 489°F (254°C) 3) The right pack controller found the failure of a necessary system component	21



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
R RECIRC FAN	С	Right recirculation/electrical equipment exhaust fan failure	21
R REV ISLN VAL	С	Right thrust reverser isolation valve failure	78
R REV ISLN VAL	M (NVM) S,M (NVM)	AIRPLANES WITH -101 THRU -110 EICAS COMPUTERS; left thrust reverser isolation valve failure AIRPLANES WITH -111 AND SUBSEQUENT EICAS COMPUTERS; left thrust reverser isolation valve failure	78
R REV STOW SIG	S,M (NVM)	Right engine reverser auto restore sensor failure	78
R SIDE WINDOW	С	The right side window temperature is too high or there is a high power output	30
R STARTER CUTOUT	В	The right engine starter valve is open at an engine RPM level where it should be closed	80
R STRUT OH DET 1	S,M	Right engine strut overheat detector loop 1 fire output	26
R STRUT OH DET 2	S,M	Right engine strut overheat detector loop 2 fire output	26

EICAS MESSAGE LIST

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		EICAS MESSAGE LIST	
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
R TURB OH DET 1	М	Right turbine overheat at detector 1 or loop 1 failure	26
R TURB OH DET 1	S	Right turbine overheat at detector 1 or loop 1 failure NOTE: Message does not show during	26
		R ENGINE FIRE	
R TURB OH DET 2	М	Right turbine overheat at detector 2 or loop 2 failure	26
R TURB OH DET 2	S	Right turbine overheat at detector 2 or loop 2 failure	26
		NOTE: Message does not show during R ENGINE FIRE	
R UTIL BUS OFF	С	The right utility bus is not energized while the right AC main bus is energized	24
R WING ANTI-ICE	С	The right wing anti-ice valve position does not agree with the right wing anti-ice switch position	30
R YAW DAMPER	С	Right yaw damper failure, power supply failure, or the right yaw damper is off	22
RA DISAGREE	С	Used only during self-test of the ICU. If this message shows during normal operation, replace the instrument comparator unit	34

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EICAS MESSAGE LIST

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EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
RADIO TRANSMIT	С	The VHF or HF radio has been transmitting continuously for 30 seconds or longer	23
RAT	S,M	Ram air turbine system failure or ram air turbine system operation while the airplane is on the ground	29
RAT UNLOCKED	С	The ram air turbine is not locked	29
RSV BRAKE VAL	M (NVM)	One of the Reserve Brake System valves (the Isolated ACMP supply shutoff valve or the Isolated ACMP pressure valve) is not in the correct position	29
RUDDER PCU	S,M (NVM)	All of the conditions that follow occurred: 1) The airplane was on the ground 2) All hydraulic systems were pressurized 3) The airspeed was less than 50 knots 4) The left AC bus was energized 5) One or more rudder power control units had a valve in a locked position	27
RUDDER RATIO	С	Rudder ratio system failure	27
RUDDER RATIO	М	Left or right rudder ratio module failure	27

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
SELCAL	E	SELCAL communication is requested (incoming ground to air call or a requested connection has been established for an air to ground call)	23
SPEEDBRAKES EXT	В	One of the conditions that follow continues: 1) The radio altitude (RA) is larger than 15 feet, the spoilers are extended, and the flaps are in a landing position 2) The RA is larger than 15 feet, but less than 800 feet, and the spoilers are extended	31
SPOILERS	A	An engine is set to takeoff thrust and the spoilers are not in a takeoff position	31
SPOILERS	М	Failure in one of 3 left or 3 right spoiler control modules	27
SPOILERS	С	Spoiler system has two or more electrical failures, or a 767 spoiler control module is installed on a 757	27
STAB TRIM	С	Stabilizer trim system failure (one-half drive speed)	27
STAB TRIM	М	Left or right SAM failure	27

ALL



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
STABILIZER	A	An engine is set to takeoff thrust and the stabilizer is not in a takeoff position	31
STANDBY BUS OFF	С	The standby bus is not energized	24
STBY INVERTER	S,M (NVM)	The standby inverter voltage was not in the correct range while the main battery switch was ON	24
T-R UNIT	S,M	Left or right transformer rectifier unit failure (DC Bus Tie is closed)	24
TAIL STRIKE	В	Landing gear #1 and #2 body contact sensors detect an aft body contact from a tailstrike	32
TAT PROBE	С	Total Air Temperature (TAT) probe heat power supply failure or continuity failure	30
TE FLAP ASYM	В	Flap asymmetry	27
TE FLAP DISAGREE	В	A flap position does not agree with the flaps position selection	27
TRACK DISAGREE	С	Used only during self-test of the ICU. If this message shows during normal operation, replace the instrument comparator unit	34
TRACK FAIL	С	Used only during self-test of the ICU. If this message shows during normal operation, replace the instrument comparator unit	34
TRIM AIR	С	Trim air valve closed	21



EICAS MESSAGE LIST			
MESSAGE	LEVEL	SYSTEM INPUT	FIM CHAP REF
UNSCHD STAB TRIM	В	Unwanted stabilizer motion in the Autopilot or Mach/Speed Trim Modes	27
VIB *[5]	NA	The broadbond vibration is equal to or larger than 2.5	77
WARN ELEX	S,M	Warning electronics unit (WEU) power supply A failure, power supply B failure, or the WEU BITE module has a failure code	31
WHEEL WELL FIRE	А	The wheel well temperature is larger than 400°F (204°C)	26
WINDOW HEAT	С	Two or more individual window heat temperatures are too high or two or more windows have a high power output	30
YAW DAMPER	М	Left or right yaw damper module failure	22
ZONE TEMP BITE	M	Zone temperature controller BITE failure or system component failure	21

EICAS MESSAGE LIST

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BITE Index

1. General

- A. Use this index to find the BITE procedure for the applicable LRU/System.
- B. The BITE procedure will provide the fault isolation instructions for the fault indications/LRU maintenance messages.

Air Data Computer Air Data Inertial Reference Unit Air Traffic Control Transponder Air Data Inertial Reference Unit ADIRU 34-26 AIC 34-53 Airborne Vibration Monitor Signal Conditioner AVM 77-31 Antiskid/Autobrake Control Unit APU Fire Detection System Automatic Direction Finder Receiver ADF 34-57 APU Control Unit ECU 49-11	<u>ce</u>
Air Traffic Control Transponder ATC 34-53 Airborne Vibration Monitor Signal Conditioner AVM 77-31 Antiskid/Autobrake Control Unit 32-42 APU Fire Detection System 26-15 Automatic Direction Finder Receiver ADF 34-57	
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