

747-400

Aircraft Maintenance Manual

KSSU Group

KLM - Royal Dutch Airlines

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OCTOBER 18, 1999



KSSU Group KSS REVISION NO. 40 OCT 18, 2000

To: All Holders of Boeing Document D633U101-98.

Attached is the current revision to Document D633U101-98, Boeing 747-400 Maintenance Manual for KSSU Group.

FILING INSTRUCTIONS

The Maintenance Manual is furnished as a printed manual, on microfilm cartridges, on magnetic tape, or any combination of the three. This revision replaces all previous microfilm cartridges and magnetic tapes; all microfilm cartridges and magnetic tapes are reissued with all obsolete data deleted and all updated data added.

ATTENTION

IF YOU RECEIVE PRINTED REVISIONS, PLEASE VERIFY THAT YOU HAVE RECEIVED AND FILED THE PREVIOUS REVISION.
NOTE: BOEING MUST BE NOTIFIED WITHIN 30 DAYS IF YOU HAVE NOT RECEIVED THE PREVIOUS REVISION. REQUESTS FOR REVISIONS OTHER THAN THE PREVIOUS REVISION WILL REQUIRE A COMPLETE MANUAL REPRINT SUBJECT TO REPRINT CHARGES SHOWN IN THE CSMS CATALOG

For printed manuals this revision should be incorporated into the manual in the order indicated by the List of Effective Pages (LEP). The pages which are revised will be identified on the LEP by an R (Revised), A (Added), or D (Deleted).

Each page in the LEP is identified by Chapter-Section-Subject number, page number, page date, and page code. Pages replaced or obsoleted by this revision should be removed.

NOTE: Pages may be dated earlier, the same as, or later than the replaced page. Therefore, it is important that both the page date and page code in the LEP be used when filing pages. Agreement of the first two digits (left of decimal), between LEP code and page code, assures that the page is correct for the manual. Only revised pages will have the decimal and following number(s) appear on both the page and the LEP. The decimal and following numbers are for Boeing internal use and may appear on an old page but not appear on the LEP.

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TEMPORARY REVISIONS

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

Do not remove any Temporary Revisions (TRs) that have a date later than the date of this revision. TRs with a later date will be incorporated in the next revision of the manual (unless they are superseded by a subsequent TR).

A TR Status Report is sent with each TR. The TR Status Report has a list of all TRs that were sent for this manual during the last two scheduled revisions. At the top of the list are the date and time that the list was created.

When you have more than one TR, the TR Status Report with the latest date and time gives you the most current information.

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KSSU Group HIGHLIGHTS

CHAPTER 00	- INTRODUCTION
INTRODUCTION 1-2 INTRODUCTION 19 21-23	Changed the INTRODUCTION to define the manual effectivity and update preparing organization identification. Changed the format of the data.
INTRODUCTION 29	Changed the description of Temporary Revision Service.
INTRODUCTION -	Changed the reference.
FIM 4	
QUICK REFERENCE GUIDE 5-7	Changed the references.
EICAS MESSAGE LIST 15	Changed the fault code from 31 46 03 00 to 32 46 03 00.
EICAS MESSAGE LIST 49-50	Added data for the -016 IDS software.
EICAS MESSAGE LIST 80D	Added a / to the >SMOKE LAV messages.
CHAPTER 05	- TIME LIMITS/MAINTENANCE CHECKS
05-51-03 202,212	Added cabin overhead electronic rack inspection per PRR85900-238.
05-51-03 202,212	Added data to the general section.
05-51-05 212	Added cabin overhead electronic rack inspection per PRR85900-238.
05-51-13 203,216	Changed the format.
05-51-13 209	Deleted one reference.
05-51-27 201	Changed the title and steps of the conditional inspection from "Spare Air Data Unit" to "Standby Indicator".

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CHAPTER	06	- DIMENSIONS AND AREAS				
06-00-01		Changed the spelling.				
210 06-09-08 210-212 06-09-09 202-204 206-208		Changed access panel number in table, and added line to panel in Figure 204. Added panels 451D, 461D, 471D, and 481D to the illustration.				
CHAPTER	07	- LIFTING AND SHORING				
07-11-02 211-212		Added basic jacking requirements.				
CHAPTER	09	- TOWING AND TAXIING				
09-11-00 203-204		Changed the reference format.				
09-11-00 223 09-21-00 217		Changed the NLG oversteer limit lines "NOTE" by stating the lines may not be on the airplane due to configuration and paint. Changed the format of the circuit breakers.				
CHAPTER	10	- PARKING AND MOORING				
10-11-02 201 203-208 210-216 218-225 227-232 234-236		Changed the reference format.				
10-11-02 223,227 230 232-234		Changed the format of the data.				
CHAPTER	11	- PLACARDS AND MARKINGS				
11-11-01 208-211 11-11-40 205		Added Passenger Cabin Placards and Markings for follow—on airplanes. Added Stowage Bin Placards and Markings for follow—on airplanes.				
11-11-54 202 11-11-55 202-203		Added Upper Deck Stowage Box Placards and Markings for follow-on airplanes. Added Closet Placards and Markings for follow-on airplanes.				

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11-11-70 206-210		Added Cart Lift and Upper Deck Enclosure Placards and Markings for follow-on airplanes.
11-12-43 202		Added Upper Deck Battery Pack Placards and Markings for follow-on airplanes.
11-12-55		Changed the data to Identify Only Significant FAA Placards
201–202 11–12–56		Required. Changed the data to Identify Only Significant FAA Placards
201-203		Required.
11-12-57		Added Bulk Cargo Compartment Placards amd Markings for follow-on
204 11-12-58		airplanes. Added Forward Cargo Compartment Placards and Markings for
201-204		follow-on airplanes.
11-12-59		Added cargo Compartment Loading Placards and Markings for
204		follow-on airplanes.
11-13-08 201		Re-issued the page.
11-13-08		Added Auxiliary Power Unit Oil Placards and Markings for follow-on
202		airplanes.
11–13–12 201–205		Added Fuel System Placards and Markings for follow—on airplanes.
11-13-61		Added Air-Driven Hydraulic Pump Oil Placards and Markings for
202		follow-on airplanes.
11-14-25 201		Added Nose Wheel well Placards and Markings for follow-on
11-25-22		airplanes. Added section 42 Placards and Markings for follow-on airplanes.
204-208		g-
11-25-24		Added Section 46 Placards and Markings for follow-on airplanes
211-218 11-25-25		Added Section 48 Placards and Markings for follow-on airplanes.
202		Adda decertion to read as and harkings for recton on amplances
11-50-01		Added Flight Deck Placards and Markings for follow-on airplanes.
206–208		
CHAPTER	12	- SERVICING
12-11-01		Changed the APU operation warnings.
312 12-11-01		Changed the circuit breaker format.
316,343		onanged the on our breaker formati
12-11-01		Changed the spelling.
336-337 12-11-03		Added data for a visual inspection of the fuel sample.
301-302		Added data for a visual inspection of the fact sample.
305		
12-12-01 303		Changed data to show Reservoir Fill Filter configuration.
12-13-02		Added the location zones and changed the location details for the
301,303		APU oil servicing.

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12-13-05 301,303 305-306	Added the location zones and changed the location detail and forward arrow for the APU starter motor.
12-13-06 301 303-304	Changed the data to reflect removal and installation of the cap of the overflow and filler plugs.
12-13-07 301	Edited the data.
12-13-12 301	Changed data to list MIL-PRF-23699 oil specification rather than oil brand names.
12-13-13 302,304	Changed the format of the circuit breakers.
12-13-13 307	Changed BAB data, (BAB, CIC 00-0098, July 14, 2000).
12-13-13 307-308	Removed the oil quantity from the flag note.
12-15-03 306,310 312	Changed Note to NOTE.
12-15-03 309-310	Changed minimum extension of chrome on the shock strut inner cylinder from 2 inches to 1 inch when performing the shock strut
	servicing fast check.
12-15-04 307-308	Changed minimum extension of chrome from 2 inches to 1 inch when performing shock strut servicing fast check.
12-15-04 308	Changed Note to NOTE.
12-15-05 303,309 312	Changed the format of the note.
12-15-13 303	Changed the location of the door 3 pressure bottle on the illustration.
12-21-01	Changed the format of the data.
314,330	G
353-354	
363-364 366-367	
12-21-11	Changed the wording for the arm/disarm mechanism.
302,304	ondriged the nording for the drin droat in meonantonia
12-21-11	Changed the location of the door 3 pressure bottle on the
303	illustration.
12-21-16 304	Changed data to show lubrication of airplanes incorporating SB 27-2338.
12-21-20 307	Changed the format.
12-21-21 301-302	Changed the format of the circuit breakers.
12-22-02	Changed the data for the APU oil servicing (oil change).
301-312	



12-22-06 303-306 12-22-06 304 12-22-07 301 303-305 12-22-07 301,303 12-25-01 322 12-33-01 302 312-314 319-320 322		Changed the data to reflect removal and installation of the cap of the overflow and filler plugs. Changed the torque value for the magnetic probe. Changed the reference format. Changed the format of the data. Changed the format of the data.
12-33-02 304,309		Changed the reference format.
12–33–02 307		Changed the format.
CHAPTER	20	- STANDARD PRACTICES - AIRFRAME
20-11-03 407 20-11-05		Added cable sag limitations between STA 660 and 1250. Added the BACA14BP fitting repair.
807 20-15-11		Changed the reference for ACESS and CSS.
204-206 20-15-11 206,210 212		Added data loader information.
20-15-11 206 20-21-03 601-602		Added data transfer time for enhanced ground proximity warning computer. Changed the format of the data.
20-21-03 601 20-41-02		Changed the wording from "one wire cross section" to "cable strand". Changed NOTE 1, and NOTE 2 to NOTE.
209		
CHAPTER	21	- AIR CONDITIONING
21-FAULT CODE INDEX 49-52		Changed the PACK 1/2/3 (ADVISORY) and PACK 1/2/3 (STATUS) fault isolation for airplanes with -001 through -008 CMC software.

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21-CMCS MESSAGE INDEX 80T	Changed the step to refer to the Right Pressurization Outflow Valve.
21-CMCS MESSAGE INDEX 80G-80J 80L-80M 800-80Q 80S,84F 84Z 88R-88T 88V	Changed the spelling, punctuation, or grammar.
21-CMCS MESSAGE INDEX 84W-84Z 86K-86N 88A-88G	Changed the format of the data.
21-CMCS MESSAGE INDEX 86L-86M	Added troubleshooting steps for CMCS message 21485 and deleted nuisance message note. CMC software -010 removed the nuisance messge.
21-CMCS MESSAGE INDEX 880,88S 88U	Changed pack discharge temperature sensor to pack compressor discharge temperature sensor.
21-00-00 203-204	Changed the reference.
21-00-01 101-112	Added Air Conditioning System Oil Smoke/Fume Contamination (Removal) - Troubleshooting procedure for isolating the cause of smoke or fumes in the airplane.
21-00-01 201	Changed the procedure title.
21-21-01 204	Changed the check valve inspection steps.
21-21-03 401	Changed the format.
21-22-01 401	Changed the format.
21-23-00 1,5	Changed the format.
21-26-00 501	Changed the format.
21-26-00 501 505-506	Changed the format.

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21-26-00 501-502	Changed the references.
21-26-02	Changed the references.
401,403 21-26-15	Changed the references.
403-404 21-26-16	Changed the references.
403-404 21-26-17	Changed the references.
401,403 21-26-18 403-404	Changed the references.
21-28-00 501	Changed the format.
21-28-01 401,404	Changed the format of the circuit breakers.
21-28-01 403-404	Changed the references.
21-28-02 404-405	Changed the references.
21-28-03 401,403	Changed the references.
21-31-00 507-509	Changed the format of the circuit breakers.
21-31-01 405,407	Changed the references.
21-31-01 701	Changed the format.
21-31-02 403-404	Changed the references.
21-31-06 403,405	Changed the references.
21-31-07 403,405	Changed the references.
21-31-09 403,406	Changed the references.
21-31-10 403,405	Changed the references.
21-42-02 401,403	Changed the format.
21-43-00 1-4	Changed effectivities for coverage of SBs 21-2372 and 21-2380, and PRR 85900-101 which removed and then added the two forward cargo compartment heaters.
21-43-00 4	Changed the format.
21-43-00 501-503	Changed effectivities for coverage of SBs 21-2372 and 21-2380, and PRR 85900-101 which removed and then added the two forward cargo compartment heaters.

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21-43-01 401-404	Changed effectivities for coverage of SBs 21-2372 and 21-2380, and PRR 85900-101 which removed and then added the two forward cargo
21-43-03 401-403	compartment heaters. Changed effectivities for coverage of SBs 21-2372 and 21-2380, and PRR 85900-101 which removed and then added the two forward cargo compartment heaters.
21-44-00 1,5	Changed the data to show that SB 26-2227 which relocates the bulk cargo temp sensor assembly from left sidewall to the ceiling in the bulk cargo compartment for COMBI airplanes installing 90-minute main deck cargo fire extinguishing system (MC 2600MK4020) is completed.
21-44-00 5	Changed the format of the data.
21-44-00 501	Changed the data to show that SB 26-2227 which relocates the bulk cargo temp sensor assembly from left sidewall to the ceiling in the bulk cargo compartment for COMBI airplanes installing 90-minute main deck cargo fire extinguishing system (MC 2600MK4020) is completed.
21-44-01 404-405	Changed the references.
21-44-02 402	Reissued this page with no change.
21-44-04 401 403-405	Changed the format of the data.
21-44-04 401,403	Changed the data to show that SB 26-2227 which relocates the bulk cargo temp sensor assembly from left sidewall to the ceiling in the bulk cargo compartment for COMBI airplanes installing 90-minute main deck cargo fire extinguishing system (MC 2600MK4020) is completed.
21–49–00 1	Added data for SB 21-2370 and PRR 85105 which changed the electrical wiring for the door 1 L and R door heaters. This change provides power to the door heaters when the airplane is in the air or ground mode. This will decrease the possibility of water drippage on the passengers in the area aft of door 1 L and R.
21-49-00 501-503	Added data for SB 21-2370 and PRR 85105 which changed the electrical wiring for the door 1 L and R door heaters. This change provides power to the door heaters when the airplane is in the air or ground mode. This will decrease the possibility of water drippage on the passengers in the area aft of door 1 L and R.
21-50-00 103,107	Added the pack sever relays to the component index.
21-51-01 405	Removed the step that put alodine on the bonding jumper connection.
21-51-03 401	Changed the references.



21-51-03	Removed the step that put alodine on the bonding jumper
409	connection.
21-51-04	Changed the format of the data.
405	
21-51-04	Removed the step that put alodine on the bonding jumper
407-408	connection.
21-51-06	Added steps to visually inspect the check valve.
403	
21-51-08	Added Pack Discharge Overheat Switch - Maintenance Practices
201-206	
21-51-09	Added Compressor Discharge Overheat Switch - Maintenance Practices
201-206	•
21-51-12	Changed the format of the data.
801,803	
21-51-16	Changed the references.
403-404	
21-51-17	Changed the references.
403-404	
21-51-19	Changed the references.
403-404	3·2 · · · · · · · · · · · · · · · · · ·
21-51-20	Changed the references.
404-405	3·2 · · · · · · · · · · · · · · · · · ·
21-58-00	Changed the format.
20	3-1
21-58-00	Changed circuit breaker data.
508-509	3-a
21-58-03	Changed the format of the data.
401	3-2
403-404	
21-58-13	Changed the references.
403-404	3·2 · · · · · · · · · · · · · · · · · ·
21-60-00	Added the pack sever relays to the component index.
103	made the pack core. Forage to the compensate mach
21-61-00	Changed the format.
1,9	onangou ono no muon
12	
24-25	
21-61-00	Changed the format.
9,12	onangou ono no muon
23	
21-61-00	Changed the references.
513-514	onangoa eno roro enoco:
21-61-01	Changed the references and format of the circuit breakers.
403-404	The state of the s
21-61-03	Changed the references and data format.
406-407	The same of the same and adda for mate
21-61-03	Changed Note to NOTE and added underscore to NOTE.
701	The state of the and dadd dilder over the terms



21-61-05 401,404	Changed the data to show SB 26-2227 is completed.
21-61-05 404	Changed the format.
21-61-07 405-406	Changed the format.
21-61-10 401,403 406,408	Changed the references.
21-61-13 401 403-404	Changed the references.
21-61-16 405-406	Changed the references and data format.
21-62-00 1,4 6	Changed the format of the data.
21-62-00	Added the data for SB 21-2388 which changes the Pack Temperature
4	Controller and removes power from the ram air actuators when the
6–8	airplane is on the ground.
21-62-01 401,403	Changed the references.
21-62-01 406	Removed the step that put alodine on the bonding jumper connection.
21-62-03 406	Removed the step that put alodine on the bonding jumper connection.
21-62-05 404,406	Changed the item numbers for the bolt, washer and nut used to connect the bonding jumper to the actuator lug to agree with Figure 401 (Sheet 2).
21-62-05 406	Removed the step that put alodine on the bonding jumper connection.
21-62-12 404	Changed the format of the circuit breakers.



CHAPTER	22	- AUTOFL	_IGH	Г
22-CMCS MESSAGE INDEX 14-21 52-53 72G-72M 720-72V 72X-73 74C-74W 75-76F 78B 78F-78I 78N,78R 78T-78V 82G-82H 82J-82M				references.
22-CMCS MESSAGE INDEX 70W,74 74B,74R 82Q		Changed	the	format of the data.
22-CMCS MESSAGE INDEX 74B-74C		Changed	the	order of the CMCS messages.
22-10-00 1,15		Changed	the	format of the data.
22-10-00 101,109 111 113-114 117,152		Changed	the	references.
22-10-00 501-511 513-514 517,519 521,524 526 576-578 580c		Changed		
22-10-00 558		Changed	the	format of the circuit breakers.

560-561 22-11-01

401-405

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Changed the format of the circuit breakers.

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22-11-02 201-203 205-207		Changed the format of the circuit breakers.
22-11-03 401 403-404 406		Changed the format of the circuit breakers.
22-12-01 405 408-409 411 413-414 417-418		Changed the format of the circuit breakers.
22-12-02 203-204 206-207		Changed the format of the circuit breakers.
22-12-03 404,407 409		Changed the format of the circuit breakers.
22-21-01 403		Changed the format.
CHAPTER	23	- COMMUNICATIONS
23-FAULT CODE INDEX 15		Changed Note to NOTE.
23-FAULT CODE INDEX 16,29		Added FRM changes.
23-FAULT CODE INDEX 33		Changed the format of the data.
23-CMCS MESSAGE INDEX 63		Changed corrective action for CMCS message 23256.
23-CMCS MESSAGE INDEX 69		Changed the pin and reference numbers.
23-10-11 401 403-405		Added a caution and changed installation test to prevent cross connection of radio control panels.
23–11–00 101		Changed the references.

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23-11-03 405	Added data to inspect for evidence of corrosion and electrical arcing at the coupler mount, back of tray connection, when replacing coupler.
23-11-05 403	Changed the step sequence.
23–12–00 7	Changed the format.
23-12-00 10	Changed Note to NOTE and added underscore to NOTE.
23-12-00 506-508	Changed the format of the data.
23-12-03 403-404 408	Added VHF antenna marking data.
23-27-00 101	Changed the references.
23-30-01 1,4 15 18-20 22,24 26-28 35	Changed spelling and grammar for clarification.
39-40 42-46	
23-30-01 16	Changed illustration to conform with graphic standards. No technical change.
23–30–01 113 23–30–01 115 119–121	Changed spelling and grammar for clarification. Added an alternate attendent panel location for CCTM. Changed text in illustration to change switch names and other minor changes.
23-30-01	Added data for ACESS cable inspection procedure
201–210 23–30–01 503–507	(KLM-AMS-00-01028F). Changed the format of the data to clarify intent of text.
23-30-02 403	Changed illustration for minor changes.
23-30-02 423	Added procedures for CSS equipped airplanes.
23-30-04 403	Changed the referenced procedure titles.
23-30-04 404	Changed text to create separate ACESS, ACESS and CSS, and CSS configurations.

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23-30-10 202 204-205 207 209-211 214	Changed format of "any number" amd "any letter" characters in part numbers.
23–30–10 204–213 215–217	Changed text, spelling and grammar for clarification.
23-30-12 2	Changed illustration for minor changes.
23-30-12 3	Changed text to clarify intent.
23-30-12 101	Changed text to clarify intent.
23-30-12 102	Changed text in illustration to add procedure for airplanes with CSS system.
23-31-00 1-3 11 13-14	Changed text to clarify intent.
16	
23-31-00 19	Added ACESS/CSS STATUS test to BIT test description.
23-31-00 112 118-119	Added coverage for customers with CSS-only or mixed CSS/ACESS fleets.
23–31–00 119	Changed text in illustration to comply with standards.
23-31-00 201,203	Changed text to clarify intent and/or correct typographical errors.
23-31-00 502-503 506-507 513	Changed the spelling.
23–31–03 401 403–404	Changed text to clarify intent and/or correct typographical errors
23-31-04 401	Changed text to clarify intent and/or correct typographical errors.
23-31-04 402	Changed illustration to correct minor error.
23-31-05 401,404	Changed the format of the data.
23-31-05 402	Changed illustration to correct minor error.
23-31-05 403	Changed text to clarify intent and/or correct typographical errors.



23-31-06 408	Changed text to correct typographical error.
23-32-00 CONFIG 1 10-11	Changed the format of the data.
23-33-00 1,7 9-12 15,18 20	Changed text to clarify intent.
23-33-00 6	Re-issued page without technical change.
23-33-00 10	Changed reference.
23–33–00 10	Added coverage for customers with CSS-only or mixed CSS/ACESS fleets.
23-33-00 107-108	Changed text to clarify intent.
23-33-00 113 115-116 122-123 127-128 130-132	Changed illustration text to change switch labels.
23-33-00 202	Changed switch names.
23–33–00 501–502	Changed text to create separate ACESS and CSS circuit breaker lists. Changed circuit breaker names and added circuit breakers missing from lists. Reconfigured customer codes to correspond with split circuit breaker lists.
23-33-00 502-504	Changed text to clarify intent.
23-34-03 401,406	Added data for ACESS cable inspection procedure per KLM-AMS-00-01028F.
23-41-00 1	Changed text to clarify intent.
23-41-00 5	Changed the illustration.
23-41-00 102	Changed illustration to show airplane configuration.
23-41-00 501	Changed text, spelling, or grammar for clarification.
23-41-00 502	Removed non-applicable customers from steps concerning dual interphone installations.
23-41-01 401 403-404	Changed text, spelling, or grammar for clarification.
23–42–00 1	Added coverage for customers with CSS-only or mixed CSS/ACESS fleets.



23-42-00 1,6	Changed text to clarify intent.
11-13 15,17 19	
21-22 23-42-00 10	Changed illustration for minor changes.
23–42–00 107	Changed text, spelling or grammar to clarify intent.
23-42-00 108 110-111 113-114	Changed fault isolation blocks to change switch legends.
116,118 23-42-00 501-504 508	Changed text, spelling or grammar to clarify intent.
23-42-00 501	Changed the format of the data.
23-42-03 401,403	Changed text, spelling or grammar to clarify intent.
23-42-04 401-402	Changed the format of the circuit breakers.
23-42-06 401,403	Changed text, spelling or grammar to clarify intent.
23-43-00 104	Changed illustration text to use proper switch names.
23-51-00 1 9-17	Changed text, spelling or grammar to clarify intent.
23-51-00 9	Removed unnecessary data.
23-51-00 18	Changed text for CMC messages.
23-51-00	Changed the procedure format, PTT switch nomenclature on the ACP,
501-512 23-51-00	and Simplified English for clarification. Changed text, spelling or grammar for clarification.
501-502	changed text, specting or grammar for ctarification.
23-51-00	Added a step.
502,510	
23-51-00 503	Changed step level.
23-51-00	Removed non-applicable customers from steps concerning dual
509-510	interphone installations.
23-51-00	Moved Emergency Comm System Check to after Flight Interphone
510-511	System Check. No changes were made to the procedure.
23-51-10	Changed text to incorporate suggestions from review of SB
401,403	747-23-2477.



23-51-10 404		Changed text, spelling or grammar for clarification.
23-51-11 403		Changed text, spelling or grammar for clarification.
23-61-00 210 23-71-00 501-504 506-507		Added a note to indicate that painting is not required in the installation of the static discharger base. Changed the format of the data.
23-71-02 401-402		Changed the format of the data.
23-71-03 208,210		Added step to test the battery to the ULB Battery Installation Procedure.
CHAPTER	24	- ELECTRICAL POWER
24-EICAS MESSAGES 2		Added APU GEN BEARING message.
24-FAULT CODE INDEX 4,32 39		Changed the format of the data.
24-FAULT CODE INDEX 30,32 34		Changed the reference format.
24-FAULT CODE INDEX 34-38		Added Maintenance Tip 24-020 data.
24-CMCS MESSAGE INDEX 17-18		Changed the reference format.
24-CMCS MESSAGE INDEX 23,28 61,86S		Removed -008 CMCS sowftware data.
24-CMCS MESSAGE INDEX 36-39 840-84P 84Y-84Z 900		Changed the format of the data.

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24-11-00	Changed the references.
501,504	
24-11-01	Removed unnecessary data.
401	
24-11-05	Changed the references.
602	
24-11-08	Changed the format of the data.
401	
406-408	
24-11-08	Changed anti-seize compound.
406-408	
24-20-00	Changed the references.
501,508	•
24-21-03	Changed the reference.
412,421	
24-22-00	Changed reference format.
207,210	3
212	
217-223	
24-22-00	Changed data format.
209	
24-22-00	Removed step.
209	
24-23-00	Changed NOTE 1, and NOTE 2 to NOTE and changed referrences to
13	NOTES 1 and 2 to first or second NOTE.
24-23-03	Changed the format.
401	
403-404	
24-23-03	Changed the references.
404	
24-29-00	Revised data for completion of S/B 24-2156.
1,4	
6,11	
24-29-00	Changed reference.
504	
24-30-00	Removed the references.
501,506	
24-31-01	Changed the reference.
404,406	
24-31-01	Changed the references.
501	
24-31-02	Changed equipment number.
401	
24-31-02	Added battery charger stud nut data.
404	,
24-31-02	Changed the references.
404-405	
24-31-06	Removed the reference.
403	



24-31-06		Added CIC drying time data.
405		
24-31-06		Changed the references.
501		
24-31-07		Added plain nut torque values.
404		
24-31-07 404		Changed reference callout.
404 24-31-07		Changed the references.
404,406		thanged the references:
24-32-01		Changed the references.
403-404		
24-41-00		Changed the references.
501,504		
24-50-00		Removed the reference.
501 24-60-00		Changed the references.
502		changed the references.
504-505		
20. 202		
CHAPTER	25	- EQUIPMENT/FURNISHINGS
25-05-01		Changed the references to AMM/FIM.
203-204		.
25-05-01		Added the data for SB 25-2845 which changes the decompression
217		venting between the main and the upper decks for airplanes with
25 20 04		increased decompression venting.
25-20-01 201		Changed the format of the data.
25-21-05		Changed the format.
201		thanged the formati
204-206		
25-21-11		Changed connector and reference data.
401–410		
25-22-01		Changed the format of the data.
401-414		Channel the assument atom attachment plates for addition panels
25-22-01 402		Changed the support strap attachment plates for ceiling panels with monitors, to prevent the panels from falling into the
405-407		passenger cabin due to latch failure during turbulence.
411		passenger submit due to tatom rantale danning tarbatemen
25-22-01		Changed the indentation of the steps.
411		
25-22-04		Changed format of the data
401-420		OL LALL MOTE
25-23-01 208		Changed Note to NOTE.
200 25-24-00		Added the data for SB 25-3064 which changed the smoke barrier
5		decompression panels in COMBI airplanes to eliminate tearing and
-		allow the panels to function in the forward direction.
		•



25-24-01 401	Changed the format.
403-405	
25-24-18	Changed format of the data.
401-404 25-24-19	Changed farmet of the data
401-406	Changed format of the data.
25-24-27	Added the data for SB 25-3064 which changed the smoke barrier
406-407 411	decompression panels in COMBI airplanes to eliminate tearing and allow the panels to function in the forward direction.
25–25–00 3	Re-issued the page.
25-25-04 403	Changed the format.
25-27-03 404	Changed Note to NOTE.
25-27-08	Added the data for SB 25-2845 which changed the decompression
402	venting between the main and the upper deck for airplanes with increased decompression venting.
25-27-09	Changed the format.
401	
405-408	
25-28-22	Changed the format.
407-409	Channel the format
25-31-00 5,7	Changed the format.
25-31-01	
601-602	
25-31-04	Changed the format of the data.
401-434	5··· 5 ··
25-31-04	Added a text reference to Fig. 401A which shows the necessary
431	separation between the wire bundles and the oxygen supply line at the Door No. 4 Galley Complex, added by SB 25A3137.
25-31-09 401-410	Changed the format.
25-32-00 203	Changed Note to NOTE.
25-38-00 601-608	Removed unnecessary data from the procedure.
25-50-00 701-710	Added new corrosion inhibiting compound reference.
25-50-00 706	Changed the format.
25-52-01 409	Changed the format of the data.
25-53-00 1-22	Added WARNING note.
25-53-12 401-414	Changed format of the data.



25-53-13	Changed format of the data.
401-412 25-53-15	Changed the format of the data.
401-406	changed the format of the data.
25-53-18	Changed format of the data.
401-406	changed for mat of the data.
25-54-01	Re-issued the page.
302	No results page:
25-55-03	Edited data
401-408	
25-57-00	Changed format of the data.
101-162	
25-57-01	Changed format of the data.
401–412	
25-57-05	Changed the format to simplify the list of tasks.
401	
25-57-11	Changed the format of the data.
401-408	Channel the format
25-59-00	Changed the format.
1,12 25-60-00	Changed the punctuation.
1	changed the punctuation.
25-61-05	Changed the format.
601	
25-63-00	Changed the format.
1,7	
25-63-00	Changed the format.
1	
25-63-01	Changed the format.
403-404	
407-408	
25-63-01	Changed the format.
502 25-63-03	Changed Note to NOTE.
204	changed Note to Note.
25-65-00	Changed the wording of the procdure.
1-3	ondinged the nording of the productor
5	
25-68-03	Changed the reference format.
401	
25-69-01	Changed the reference format.
401	
25-69-01	Changed the illustrations to better show the tying of the lanyard.
407-411	
25-76-02	Changed the format.
401,406	
409-412	



25-76-02 402 25-76-02 410-411 25-76-03 401 406-407 409		Added the data for SB 25-3144 which adds a No Smoking/Fasten Seat belt Sign visible from the double crew rest seat in the Door 5 overhead crew rest area. Re-issued the page. Changed the format.
CHAPTER	26	- FIRE PROTECTION
26-FAULT CODE DIAGRAMS 5		Added figure 4.
26-CMCS MESSAGE INDEX 1-74		Changed sequence of steps to make sure there is no wire problems before AFOLTS cards are swapped.
26-CMCS MESSAGE INDEX 1-10 13 15-19 21-23 25 33-38 41-46 52-64 71-73		Changed the reference format.
26-10-00 501-504		Changed the format of the data.
26-10-00 501		Changed the reference format.
26-10-01 402		Changed the callout on Figure 401, sheet 1.
26-11-00 506-507 513,516 519		Changed the format of the data.
26-11-02 404,408 414		Changed the torque values of teminal studs A and C for Systron-Donner fire detection system.
26-11-02 601 604-606		Changed the format of the data.

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26-13-00 3-4	Changed the format of the data.
26-13-01	Changed the format of the data.
401	
404-407	
26-14-00	Changed data to show COMBIs without the ZONE SEL switch have the
501-534	detection zones hardwired for 6/7 pallet zone configuration only.
26-14-00	Changed the data for Smoke Sampling Port Air Flow Test.
524-529	
26-14-01	Changed the format.
201,203	
26-14-05	Added data to replace end caps and flex hoses if cracked or worn.
601	
26-14-05	Changed the data for cleaning task.
701-705	
26-16-00	Changed the format of the data.
501,504	
507-516	
518	
520-521	
527	
529-530	
26-16-00	Changed the data for EICAS message.
518	Channel the street breaks from
26-16-01	Changed the circuit breaker format.
201,205 26-16-01	Changed the singuit breaken format
401,405	Changed the circuit breaker format.
26-16-01	Changed the reference format.
701,703	changed the reference format.
26-16-02	Changed the circuit breaker format.
401	onunged the on our breaker formati
403-404	
26-16-04	Changed the circuit breaker format.
401	
403-404	
26-16-05	Added data to replace end caps and flex hoses if cracked or worn.
601	
26-16-05	Changed the format of the data.
701,703	
26-16-51	Changed the format of the data.
401,403	
26-19-01	Changed the data to show there is no need to remove an access
404	panel to get to the S2207 switch.
26-20-00	Changed the format.
1–3	

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26-21-00 501 505-508 512-513	Changed the format of the data.
517,519 26-21-00 514-515	Added reference to the ball in the Check-T in the Cross Connection Tube Check (flow check) and the data to check the flow to the inboard struts.
26-21-01 401 404-408 410 413-415 421-422 424 429-430 432-434 436	Changed the format of the data.
26-21-01 433	Changed circuit breaker data.
26-21-01 502-503 509	Changed the format of the data.
26-21-03 401,404 407,409 411-412	Changed the format of the data.
26-21-03 601,604	Changed the format of the data.
26-21-04 401	Changed the format of the data.
26-21-04 601	Changed the format of the data.
26-22-01 403,405 407	Changed the format of the data.
26-22-02 401,407	Changed the format of the data.
26-23-00 1,5 8	Changed the format of the data.
26-23-00 513	Clarified data to show test is not a System Test.
26-23-01 402-404 406,408 413-414	Changed the format of the data.
26-23-01 601,605	Changed the circuit breaker format.



26-23-02 405-406 26-23-03 401,403 26-23-04 401,403 26-23-05 602,608 26-24-00 501-532 26-24-00 501 26-24-00 518,520 26-24-03 401,403 26-24-04		Added a step to install the packing and changed the text for clarification. Changed the format of the data. Changed the format of the data. Clarified data to show which airplanes have the 180E9, CARGO VENT FLAPPER circuit breaker. Changed data to show COMBIs without the ZONE SEL switch have the detection zones hardwired for Zone D only. Added missing Metered Discharge Line Test data necessary on Combis with the 90 min fire extinguishing system. Removed the duplicate data which connect the electrical connectors to the lower cargo bottle E, F, and G, and changed the Bottle Test Switch as an Operational Test instead of System Test. Changed the format of the data.
401,403		changed the format of the data.
CHAPTER	27	- FLIGHT CONTROLS
27-FIM CONTENTS 1-3		FRM to FIM changes.
27-FAULT CODE DIAGRAMS 1 3-4		Changed the data to show FRM to FIM updates.
27-CMCS MESSAGE INDEX 86J-86K		Changed Note to NOTE.
27-CMCS MESSAGE INDEX 86J-86K		Changed the reference format.
27-11-00 502,506 530		Changed the references.
27-11-00 513,525 529		Changed data to clarify procedure for aileron linkage adjustment.
27-11-00 542		Changed the format.
27-11-05 401-402 409-411		Changed the format.

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27-13-00	Changed the format of the data.
501-503	
27-13-01	Changed the format of the data.
501-502	ŭ
27-20-00	Added the fault isolation for rudder pedal forces low.
123	Madea the radic rootation for radic peace for the toni
27-21-00	Changed the references.
513	changed the references.
	Changed the midden model forces toot
27-21-00	Changed the rudder pedal forces test.
535-536	
27-21-07	Changed the format of the data.
401,403	
405,408	
27-21-07	Added the data for SB 27A2373 which replaced the retainer with the
402,407	cotter pin.
27-21-11	Added the test of the rudder pedal forces follow the installation.
413	
27-21-15	Changed the format.
402,404	·
410	
412-415	
418-420	
422	
27-21-16	Changed the format.
401-403	changed the format:
407-409	
411-413	
415-416	Channel the admire atom for the midden matter than an
27-21-16	Changed the rigging steps for the rudder ratio changer.
504-506	
27-28-03	Changed the circuit breaker location.
403	
27-31-03	Changed the circuit breaker callout.
403,409	
27-31-07	Added step to pressurize the auxiliary pitot system for adjusting
214,216	elevators after installation.
27-31-08	Added step to pressurize pitot systems no. 1 and 2 for the
213,215	adjustment of the elevator.
27-31-14	Changed the references.
208,211	-
27-31-14	Changed the values for the breakout force.
210	.
27-31-17	Changed the references.
210,212	g
27-31-17	Changed the values for breakout force of the control column.
211	villanged the values for bicarout force of the control cotamin.
, i i	



27-40-00 108 111-112 114	Changed the references.
117–118 27–41–00 501	Changed the references.
27-41-07 501 504-508	Changed the format of the data.
27-41-15 402-404	Changed the data to show reset procedure for pressure differential indicator.
27-51-01 408,411 421	Added a note to identify flap position and changed the warning note for hydraulic operation.
27-51-02 410	Add a step to lubricate the flaps.
27-51-04 403,410 419	Added a note to identify flap position and changed the warning note for hydraulic operation.
27-51-04 509-513 515,517 520,523	Added CAUTION note information and illustration view of the geneva cam mechanism to prevent damage to the TE flaps.
27-51-04 515-516	Changed Note to NOTE.
27-51-05 412	Added step to lubricate the foreflap.
27-51-17 408	Changed the ITEM numbers in the table.
27-51-22 410	Changed the format.
27-51-26 601	Added a reference to figure 602 into the text.
27-51-28 403	Added two more detail views (B) of the flap carriage end.
27-51-31 601 605-607 610-612 614-615	Added metric conversion.
27-51-31 601	Added a reference to figures 602 & 603 into the text.
27-51-33 401-403 405,410 413,416 418-422	Added metric conversion and AMM reference format.

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27-51-33 601-602 605-606	Added metric conversion and AMM reference format.
27-51-37 401-402 404-405	Added metric conversion and standard AMM reference format.
27-51-39 401-402 404-406 408-409 411-416 418-426 428-429 431-432 434-441	Changed part reference number and added metric conversion and standard AMM reference format.
27-51-51 402-403	Changed the references.
27-61-00 501,507 532	Added a figure number.
27-61-00 503,511 516-517 520-524 526 528-530 535	Added the metrics.
27-61-00 516	Changed the tolerance values for the cable tension load.
27-61-00 524	Changed the optional procedure for adjustment of the input arm rod assy.
27-61-01 401,405	Added a figure number.
27-61-01 404,410 27-61-01 405 408-410 413-415	Changed View C to show the adjustment washers on the inbd side of the fitting and the bushing on the outbd side of the fitting. Added the metrics.
27-61-01 406	Changed the grease.
27-61-01 601 604-605	Added metrics.
27-61-02 401,406	Added a figure number.

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27-61-02 408-410 412		Added metrics.
414-415 27-61-02 411		Changed the circuit breaker format.
27-61-04 212		Changed the format.
27-80-00 101		Changed the reference.
27-81-00 510,528 27-81-01		Changed data to match G27023 tool gage numbers with tooling drawing OG-27013. Changed the format.
417 27-81-02 414		Re-issued the page.
27-81-03 214 27-81-06 404,408		Changed data to list MIL-PRF-23699 oil specification rather than oil brand names. Changed data to match G27023 tool gage numbers with tooling drawing OG-27013.
CHARTER		
CHAPTER	28	- FUEL
28-FAULT CODE DIAGRAMS	28	- FUEL Added FRM changes.
28-FAULT	28	
28-FAULT CODE DIAGRAMS 1-6 28-FAULT CODE INDEX 8-14 17,19 31-32	28	Added FRM changes.

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Changed the reference format.

28-CMCS **MESSAGE** INDEX 1 3-9 10J,14Y 16T,16W 18U 26U-26Z 27-28Z 29-30Z 31-32U 32X-32Z 34E-34H 34M - 34034V-34Y 38J 39,40B 40D,40K 40R,40T 40V,42A 42J 44U-44V 46,46N 48J,48L 48Y,50W 50Z,52L 520,58G 58I 58L-58Q 58S-58U 58W 58Y-60C 60X-60Z 62B,64B 64D-64E 64G 64I-64J 64W-64X

> 66C,66P 66W



28-CMCS MESSAGE INDEX 10F,10H 10J 34F-34I 34Q 34Z 35-36D 36I-36J 36T-36U 38A,38F 38P-38T 38Z,40H 40Q,40Z 42F,42Q 44-44C 44J,44Q 44X,46B 46I	Changed	the	format	of	the	data.
46P-46Q 58B,58E 28-CMCS MESSAGE INDEX 16C-16E 16L-160 16W-16Z 18D-18J 18W-18Z 19-20C 20U-20Z 21-22 22Q-22W 24I-240 26U-26Z 27-28Z 29-30Z 31-32U	Changed	NOTE	: 1 and	NOT	E 2	to NOTE.
28-CMCS MESSAGE INDEX 68F	Changed	the	referer	nce.		
28-11-00 201	Removed	the	step th	nat	was	repeated.
28-11-00 201 251-253 256-258	Added a	fuel	. tank o	clos	sure	task.

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20 11 00	Changed the format of the data
28-11-00 228-229	Changed the format of the data.
28-11-00	Moved the fuel tank leak detection procedures to AMM 28-11-00/601.
258	moved the fuet tank teak detection procedures to Ann 20-11-00/001.
28-11-00	Changed inspection/check procedures for fuel leaks. Moved the
601-652	sealant repair procedures to AMM 28-11-00/801.
28-11-00	Added a new task, Apply the Corrosion Resistant Finish (Topcoat).
701-734	Madd a non casky apply the correction keepstant i mish kroposativi
28-11-00	Added a step to sterilize the fuel sampling equipment.
702-703	The state of the s
28-11-00	Changed the procedure reference.
705	3
28-11-00	Added data for biocide injection cart.
705	·
28-11-00	Changed the format of the data.
801-852	
28-11-00	Changed the data for the secondary fuel barrier.
845	
848-851	
28-11-02	Added data and illustration for the access door bolt torque
406-408	pattern.
412	
28-11-03	Added data and illustration for the access door bolt torque
402,404	pattern.
406	
28-11-03	Changed the title of the referenced task.
406	
28-13-05	Added data for grounding and bonding.
401	
404-405	
28-13-05	Added a WARNING about the interchangeability of the wing and HST
401,404	surge tank pressure relief valves.
28-13-05	Changed the illlustration and added item number callouts.
401-405	All I HADNITHO (I C')
28-13-05	Added a WARNING to keep fingers away from the poppet spring.
401,405 28-13-10	Added a warning about the interchangeability of the wing and UCT
	Added a warning about the interchangeability of the wing and HST
401,405 28-13-10	surge tank pressure relief valves. Changed the illustration and added item number call outs.
401-405	changed the ittustration and added item number catt outs.
28-13-10	Added a warning to keep your fingers away from the poppet spring.
402,405	Added a warning to keep your ringers away from the popper spring.
28-15-00	Changed the format of the data.
1,4	thanged the format of the data.
28-15-00	Changed the data for the scavenge test to show the fuel scavenge
CONFIG 2	rate.
502-504	. 4401
28-16-08	Changed the procedure reference.
505	



28-17-04 401,413	Added data for SB 28-2222.
28-17-04 425	Changed the format.
28-17-12 401,403	Added data for SB 28-2222 which provides an improved inlet check valve and inlet adapter.
28-17-12 405	Changed the torque valve for the inlet check valve. This change is to prevent possible flange distortion in the area of the ears on the inlet check valve cap.
28-17-12	Added new inspection tasks for the transfer/jettison pump inlet
601-616	check valve and inlet check valve adapter (SB 28-2222).
28-20-01	Changed the illustration figure numbers, and removed the flow
106,108	diagram foldout.
110-111	
113,116	
119-147	
28-21-00	Changed Note to NOTE.
37	
28-21-28	Removed the bonding requirement from the valve body to the forward
405-406	side of the rear spar.
28-21-29	Changed the format of the data.
501,504	
28-21-32	Changed the procedure reference.
502	
28-21-32	Changed the circuit breaker format.
502	
28-22-00	Changed the data to show that SB 31-2271 is completed
15,29	(IDS S/W GE-013).
28-22-00	Changed the format of the data.
501-503	
511-513	
517,521	
526-529	
531	
533-534	
536-537	
547,549	
551-552 558-559	
563-566	
28-22-00	Changed the precedure references
502,512	Changed the procedure references.
526,534	
550,558	
28-22-02	Changed the illustration, AIPC reference, WDM reference and
401-404	warning task call out.
406	waining task tatt but.
28-22-03	Changed the procedure reference.
408	changed the procedure reference.



28-22-10 402-408	Changed the illustration, component callouts, references, and changed the installation procedure.
28-22-11	Changed the illustration, component numbers, AIPC call outs and
401–408 28–22–13	reference call out. Changed the procedure reference.
502 28-22-14 401-402 404-411	Changed the format of the data.
28-22-14 410	Changed the SSM reference.
28-22-14 502,506 510,515	Changed the procedure reference.
28-22-16 410	Added the STAB FUEL XFR SYS ground test to the post installation operational tests.
28-22-17 401-403	Changed the format of the data.
28-25-00 502	Changed the procedure reference.
28-25-00 504	Added a step to check for CMCS message 28767.
28-25-01 406	Added a data to the operational test procedure.
28-26-00 201-246	Revised the format of the pressure defueling and fuel transfer tasks.
28-26-00 201 206-207 218	Added data for center of gravity and lateral imbalance changes during defueling and fuel transfer.
28-26-00 207	Added a WARNING for operation of the APU.
28-26-00 241	Changed the procedure reference.
28-31-00 7	Added data to explain low pressure light illumination during defueling, fuel transfer or in-flight jettison.
28-31-00 502,509 514,517 522,533 545	Changed the procedure reference.
28-31-01 401,413	Added data for SB 28A2212 (Revision 3).
28-31-01 401,413	Added data for SB 28-2222.
28-31-12 401-402 404	Added data for SB 28A2212 Revision 3.



28-31-12 401-402		Added data for SB 28-2222.
28-31-12		Changed the torque valve for the inlet check valve. This change
405		is to prevent possible flange distortion in the area of the ears
		on the inlet check valve cap.
28-31-12		Added a new inspection task for the main tank override/jettison
601-630		inlet check valve and inlet check valve adapter (SB 28-2222).
28-31-12		Added data for SB 747-28A2212, Revision 3.
601-616		•
28-31-15		Changed the procedure reference.
502-503		
28-31-17		Changed the procedure reference.
505		
28-41-00		Changed the procedure reference.
503,507		
509,514		
523		
28-41-04		Changed the format of the data.
401-402		
28-41-13		Changed the format of the data.
401		
403-408		
28-41-14		Changed the format of the data.
401		
403-404		
28-41-14		Changed the reference.
501,503		
28-41-15		Changed the format of the data.
401		
403–405		
28-41-16		Changed the format of the data.
401		
404-405		
28-41-17		Changed the format of the data.
401		
403-405		
28-42-00		Added data to explain low pressure light illumination during
7		defueling, fuel transfer or in-flight jettison.
28-42-01		Added data to perform an operational test of the component after
408–409		pressure switch installation.
CHAPTER	29	- HYDRAULIC POWER
29-FAULT		Changed text from 'HYD PRESS SYS 4' to 'HYD OVHT SYS 4' for
CODE		00 12 93 12 of 29-FAULT CODE INDEX.
INDEX		
6		

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29-CMCS MESSAGE INDEX 2,11 16,23 28,36 41,50	Changed the format of the data.
29-10-00 125,133 141,149	Changed the reference.
29-11-00 201 227-230	Added procedure for bleeding hydraulic system, after hydraulic component(s) or tubing has been removed and replaced.
29-11-00 601 606-607 610,617 625-626 632,635 637-639 650-654 656 667-669 680L 6800-680P	Changed the format of the data.
29-11-05 205 29-11-05	Added step to procedure, to remove the adapter fitting in the drain boss prior to installing the drive pad cover. Added reference to AMM 71-11-06/201, in the 'References' section.
401	· · · · · · · · · · · · · · · · · · ·
29-11-08	Changed data to remove reference to AMM 29-11-12/401, which
204 29-11-15	applies only to airplanes with Rolls Royce series engines. Removed steps of the task which instruct to install the in-line
212	filter for the speed control valve (the task is for installing the in-line filter for the shutoff valve).
29-11-17 407	Changed the format of the data.
29-11-17 501-502 504,508 510	Changed the format.
29-11-26 403	Changed the format.
29-11-29 206	Changed Note to NOTE.
29–18–00 2	Changed data to show Reservoir Fill Filter configuration.



29–18–01 402 29–18–02	Changed data to show Hand Pump configuration in relation to reservoir fill filter installation (airplanes with the filter have pump with a Tee-fitting). Changed data to show Reservoir Fill Filter configuration.
402	ondinged adda to onon Reservoir Free Freed Sonrigarde Toni
29-31-00 509	Changed AMM Reference, from 29-11-19/401 to 29-11-05/401, to show EDP refrence.
CHAPTER 30	- ICE AND RAIN PROTECTION
30-CMCS MESSAGE INDEX 1 3-8 29-32 34	Changed the format of the data.
42-43 30-CMCS MESSAGE INDEX 2,6	Changed the reference format.
30-11-00 101	Changed the reference.
30-31-00 101	Changed the reference.
30-31-00 501,505	Added hydraulic pressure for TAT EICAS messages to be displayed.
30-40-00 101	Changed the reference.
30-40-00 107	Added the data to check for power demand relays for side window heat problems.
30-81-00 101	Changed the reference.
CHAPTER 31	- INDICATING/RECORDING SYSTEMS
31-FAULT CODE INDEX 1-34	Added FRM changes.
31-CMCS MESSAGE INDEX 21	Added the Captain's Master Warn and Caution switch for the corrective action.

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31-CMCS MESSAGE INDEX 28 34-37 84B,84D 84F		Changed the format.
31-00-00 1		Changed the reference.
31–31–00 11		Changed the format of a step.
31–35–00 3		Changed the description of the data management unit.
31-35-00 516-517		Changed the format of the Quick Access Recorder Test.
31-35-02 201-204		Added a procedure to replace the tape based QAR diskette
31-35-02 201		Changed the procedure format.
31-35-02 402		Changed the format.
31-51-00 104		Changed the format of the data.
31-61-00 82A,82G		Changed the format.
31-61-00 510-514 518-522 524-525 528,533 535-536 539		Changed the format of the data.
CHAPTER	32	- LANDING GEAR
32-FAULT CODE INDEX 19		Changed the reference format.
32-CMCS MESSAGE INDEX 1-13 15,17 22-54 84C,84S		Changed the reference format.

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32-CMCS MESSAGE INDEX 12-13	Changed the format of the data.
32-CMCS MESSAGE INDEX 37	Changed MM reference from (MM 32-42-02/401) to (MM 32/42/02/201).
32-00-30 223,225 228 230-231	Added a caution to make sure the shock struts (oleos) for the Body Land Gear have the correct X dimension before closing the gear doors.
32-09-99 201-204 32-11-01	Added the procedure to support the airplane digital maintenance tool (ADMIT) for the HMV test. Added tool G32028-1 Wing Gear Oleo Jack which supersedes tool
401,413 32-11-01 602 32-11-02	9ME65B00163 Wing Gear Oleo Jack. Removed visual inspection of the components on the outer cylinder aft trunnion, reference Service Bulletin 747-32A2465. Changed Note to NOTE.
303 32-11-02 CONFIG 1 807,811 817,823 829,834 839	Added data for Hydraulic Assembly Lubricant AFS-682 as the preferred lubricant to Petrolatum VV-P-236.
32-11-02 CONFIG 1 826	Added a reference to install the tilt sensor target bracket.
32-11-02 CONFIG 2 807,810 812,815 820,825 830,834	Added data for Hydraulic Assembly Lubricant AFS-682 as the preferred lubricant to Petrolatum VV-P-236.
32-11-02 CONFIG 2 823	Added a reference to install the tilt sensor target bracket.
32-11-04 410	Changed the format.
32-11-26 401,405	Changed the format of the data.
32-11-27 401,406 32-11-29 403 32-12-00 532-534 541	Changed tool number 20HME65B00161-1 to G32031 per TCB M-7360-00-1820. Change step to have operator depressurize hydraulic system No. 4 instead of remove hydraulic power from system. Changed Note to NOTE and changed the format of the note.



32-13-01 402,414 32-13-02 216-218	Changed tooling part numbers for the special tools used in the removal and installation of the Body Landing Gear. Changed Note to NOTE.
32-13-02 CONFIG 1 806,810 816,822 827,832 837	Added data for Hydraulic Assembly Lubricant AFS-682 as the preferred lubricant to Petrolatum VV-P-236.
32-13-02 CONFIG 2 806,809 811,814 819,823 828,832	Added data for Hydraulic Assembly Lubricant AFS-682 as the preferred lubricant to Petrolatum VV-P-236.
32–13–06 201 206–208 210	Changed the format of the data.
32-13-24 601-603	Changed the format of the data.
32-14-00 502,514	Changed Note to NOTE.
32-21-01 415-416	Changed the format.
32-21-02 203-205	Changed Note to NOTE.
32-21-02 CONFIG 1 806,812 819 823-824	Added data for Hydraulic Assembly Lubricant AFS-682 as the preferred lubricant to Petrolatum VV-P-236.
32-21-02 CONFIG 1 807	Changed steps so that the shock strut is deflated and drained, before lifting the nose of the airplane to extend the shock strut.
32-21-02 CONFIG 2 807,812 817,821	Added data for Hydraulic Assembly Lubricant AFS-682 as the preferred lubricant to Petrolatum VV-P-236.
32-21-02 CONFIG 2 808	Changed steps so that the shock strut is deflated and drained, before lifting the nose of the airplane to extend the shock strut.
32-22-01 217	Changed Note to NOTE.



32-22-02	Changed Note to NOTE.
401 403–404	
406,411	
413,415	
32-31-00	Changed the reference.
107,110	
32-31-01	Changed Note to NOTE.
409	
32-31-03	Changed Note to NOTE.
415	
32-32-27	Changed illustrations to identify the differential output rod and
405-406	actuator release rod.
32-32-27 412	Changed Note to NOTE.
32-34-14	Changed Note to NOTE.
408	changed note to hore.
32-35-00	Changed the format of the data.
1,5	· ·
8,13	
16	
32-36-00	Changed Note to NOTE.
502,506	
508,510	
539	Channed Nata to NOTE
32-41-00	Changed Note to NOTE.
207,209 211-212	
32-41-03	Changed Note to NOTE.
414-416	changed note to hore.
32-41-15	Changed the format.
606	· ·
32-41-17	Added steps and torque values to tighten and torque the hose half
405	of the hydraulic brake quick disconnect.
32-42-00	Changed the reference.
140	
32-42-00	Change illustration to show 15, 16 instead of 15, 18 for valve A8
170	of the Alternate Antiskid Valve Module.
32-42-00 551	Change data in step to have operators install proximity switch actuators on the alternate air/ground sensors.
32-42-10	Added step to advance thrust levers when doing a test of the
409	autobrake selector switch in the MAX AUTO position.
32-44-00	Changed Note to NOTE.
509	sinangea neces to neces
32-45-01	Added data to make sure the tire pressure sensor packings are
402,409	serviceable and added tire pressure sensor packings to parts list
416	of procedure.
32-45-02	Changed the format of the data.
402,418	

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32-45-02 405,411 417 32-45-02 417		Added data to make sure the tire pressure sensor packings are serviceable and added tire pressure sensor packings to parts list of procedure. Removed note from step.
32-45-04 602,609 32-45-14 402,406		Changed data in tire inspection procedure to make procedure consistent with tire tread conditions and service limits. Changed the format of the data.
408-410 32-51-04 407		Changed Note to NOTE.
32-51-04 604-605 32-51-05		Added data and changed steps to make pressure decreases consistnent with vendor. Changed Note to NOTE.
209 32-51-09 410		Changed Note to NOTE.
32-53-03 401,403		Changed the format of the data.
32-53-11 602		Changed illustration size.
32-53-15 407 32-61-00 507		Added data to make sure that bit 16 of label 003 is 0 (open) when the nose gear angle is 17 degrees. Changed the resistance test on the E1 shelf.
32-61-22 201,205 207-209 212,214 216,220		Changed the format of the data.
32-61-99 501-508		Added the procedure to support the airplane digital maintenance tool (ADMIT) for the HMV test.
CHAPTER	33	- LIGHTS
33-11-05 401,403 405		Added recommended torque values to Install procedures to avoid stud breakage.
33–35–00 1		Changed the format of the data.
33-41-01 401,404		Changed the format of the data.
33-42-02 201		Changed the format of the data.
33-51-03 201		Changed the format of the data.
33-51-03 401,403		Changed the format of the data.



CHAPTER	34	- NAVIGATION
34-FAULT CODE INDEX 4-8 10 52-53		Changed the reference format.
34-FAULT CODE INDEX 54		Changed the format of the data.
34-CMCS MESSAGE INDEX 59,82A 86E		Changed the format of the data.
34-CMCS MESSAGE INDEX 80X-80Y 86S-86Z 87-88Z 89-90G		Changed the references.
34-CMCS MESSAGE INDEX 88X		Changed the pin number from C1 to D1.
34-11-00 207		Changed pitot static differential pressure range data.
34-11-00 301		Changed the format of the data.
34-11-00 503		Added Vinyl Adhesive Tape part number.
34-11-00 510		Added steps to the Pitot-Static System Leak Test.
34-12-00 8,15 42		Changed the format.
34-12-00		Changed a reference.

Removed the data that was unnecessary.

101 34–12–00

108

98 TRANSMITTAL LETTER

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34-12-00 501-502 505-507 536,545 547,557 564	Changed the format of the data.
34-12-01 401-405	Changed the format of the data.
34-12-01 403	Added ADC quick-disconnect installation data.
34-12-02 401 403-407	Changed the format of the data.
34-12-07 401-404	Changed the format of the data.
34-12-99	Added procedure to support of the Airplane Digital Maintenance
201-202	Tool (ADMIT) for the HMV test.
34-21-00	Changed the format of the data.
10,17 21-22 24	
34-21-00 101	Changed a reference.
34-21-00 501-503 507-511 516-518	Changed the format of the data.
34-31-00 1 18-19	Changed the format of the data.
26,36	
34-32-00 6	Changed the format of the data.
34-32-00 502-504	Changed the format of the data.
34-32-00 502	Changed the ground test menu data.
34-33-00 202-205	Changed the format of the data.
34-33-99	Added procedure to support of the Airplane Digital Maintenance
201-204	Tool (ADMIT) for the HMV test.
34-43-00	Changed the format of the data.
14,16	



34-43-00 503,508 512,514 516,518 520,523 525-526 529	Changed the warning to show 15 feet of safe distance between personel and radiating antenna.
34-43-09 201-202 207	Changed the format of the data.
34-45-00 501,507 510-512 516-520 525-527 530-532 534	Changed the format of the data.
34-45-00 501,506 517,526	Removed the references.
34-45-00 511 513-514 516,519 523,525	Changed the TCAS Change 7.0 limits.
34-45-02 401,403 405	Changed the format of the data.
34-45-10 201-202 204	Changed the circuit breaker format.
34-46-00 6	Removed unnecessary data.
34-46-00 15	Added the data for Runway Field Clearance Floor (RFCF).
34-46-00 204-205	Added software verification requirements for enhanced GPWS.
34-46-00 CONFIG 1 508	Added clarification to the data.
34-46-00 CONFIG 1 508	Removed unecessary data.
34-46-01 401-402	Changed the format of the data.
34-46-01 402-403	Added task to verify terrain database part number for airplanes with the Enhanced Ground Proximity Warning Computer.

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34-53-00 501-509 513-517 520 522-526		Changed the format of the data.
34-53-00 501,504 506,514 523		Removed the references.
34-55-00 11-12 20		Changed the format of the data.
34-55-00 504		Removed the references.
34-58-00 9		Changed the name of the GPS Sensor Unit.
34-61-00 201-202		Changed the information for the airborne data loader circuit breaker.
34-61-00 201-203 206-207		Changed the format of the data.
CHAPTER	35	- OXYGEN
35-FIM CONTENTS 1		Changed the data to update the FRM pages.
CONTENTS		Changed the data to update the FRM pages. Changed the data to add a step to reference oxygen cylinder
CONTENTS 1 35-00-00 1		Changed the data to add a step to reference oxygen cylinder servicing.
CONTENTS 1 35-00-00 1 35-00-00 203		Changed the data to add a step to reference oxygen cylinder servicing. Changed Note to NOTE.
CONTENTS 1 35-00-00 1 35-00-00 203 35-00-00 701-702		Changed the data to add a step to reference oxygen cylinder servicing.
CONTENTS 1 35-00-00 1 35-00-00 203 35-00-00		Changed the data to add a step to reference oxygen cylinder servicing. Changed Note to NOTE.
CONTENTS 1 35-00-00 1 35-00-00 203 35-00-00 701-702 35-00-01		Changed the data to add a step to reference oxygen cylinder servicing. Changed Note to NOTE. Changed Note to NOTE.
CONTENTS 1 35-00-00 1 35-00-00 203 35-00-00 701-702 35-00-01 701 35-11-00 510		Changed the data to add a step to reference oxygen cylinder servicing. Changed Note to NOTE. Changed Note to NOTE. Changed Note to NOTE.
CONTENTS 1 35-00-00 1 35-00-00 203 35-00-00 701-702 35-00-01 701 35-11-00 510 513-514 35-11-00		Changed the data to add a step to reference oxygen cylinder servicing. Changed Note to NOTE. Changed Note to NOTE. Changed Note to NOTE. Changed the data to clarify the equipment description.
CONTENTS 1 35-00-00 1 35-00-00 203 35-00-00 701-702 35-00-01 701 35-11-00 510 513-514 35-11-00 521-522 35-11-00		Changed the data to add a step to reference oxygen cylinder servicing. Changed Note to NOTE. Changed Note to NOTE. Changed Note to NOTE. Changed the data to clarify the equipment description. Changed Note to NOTE.
CONTENTS 1 35-00-00 1 35-00-00 203 35-00-00 701-702 35-00-01 701 35-11-00 510 513-514 35-11-00 521-522 35-11-00 601 35-11-03		Changed the data to add a step to reference oxygen cylinder servicing. Changed Note to NOTE. Changed Note to NOTE. Changed Note to NOTE. Changed the data to clarify the equipment description. Changed Note to NOTE. Changed the data to update the title.



35-11-18	Changed the data to update the title and nomenclatures.
201,203 35-11-18	Changed the data to update the title and nomenclature.
401-410	changed the data to appeare the tritte and homeniciature.
35-11-18 401 404-410	Changed the data to clarify the installation of the oxygen hose to the stowage box.
35-11-18 601-604	Changed the data to update the title and nomenclature.
35-21-00 1,9 18	Changed the format.
35-21-00 506-508 532	Changed the data to clarify the reference to portable test cylinder.
35-21-00 601	Change the data to update the title.
35-21-04 401 404-405	Changed the reference format.
407-408	OL LN 4 NOTE
35-21-04	Changed Note to NOTE.
401,404	
406-407	Channel the analism
35-21-04	Changed the spelling.
404,408	Channel the format
35-21-05	Changed the format.
401 75 34 05	Channed Nata to NOTE
35-21-05	Changed Note to NOTE.
411	Changed the data to undate and referent the procedure
35-21-06	Changed the data to update and reformat the procedure.
401-430	Channed the format
35-21-06 404	Changed the format.
35-21-06	Added an additional figure for the 4 mask outboard PSU.
424-425	Added all additionat right e for the 4 mask outboard rso.
424-423 427	
35-21-06	Changed data to add steps to inspect for the presence of liquid
602-603	contaminants in the oxygen mask hoses and bags.
35-21-06	Changed Note to NOTE.
701	
35-21-08 410	Changed Note to NOTE.
35-21-11 403	Changed Note to NOTE.
35-21-12	Changed Note to NOTE.
404-406	
35-21-15	Changed Note to NOTE.
403	

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35-21-18		Changed Note to NOTE.
404–405 35–21–19		Changed the format.
401 35-21-19 406 411-412		Changed Note to NOTE.
35–31–00 503		Changed Note to NOTE.
35–31–00 605		Changed Note to NOTE.
CHAPTER	36	- PNEUMATIC SYSTEM
36-FAULT CODE INDEX		Changed the format of the data.
27-29 36-CMCS MESSAGE INDEX		Changed the reference format.
80Q,82D 36-CMCS MESSAGE INDEX 82U		Changed the format of the data.
36-CMCS MESSAGE INDEX 82D-82E		Added additional APU duct overheat switches.
36-00-21 501-505 507-525		Changed the procedure title. Changed, added and deleted several steps based upon validation comments.
36-10-00 101		Changed CMC module reference from FIM 45-45-00/101 to FIM 45-10-00/101 in Figure 101.
36-10-00 142		Added a note to check for clogged drain holes.
36-11-00 6		Added information for three ground connection check valves.
36-11-00 504		Changed the references and data format.
36-11-00 602,605		Changed the references and data format.
36-11-01 425		Removed reference to lubricant Purolator 10,000 (Purolube 10,000) which is no longer made by PTI Technologies (formerly Purolator, VC 05228). Added lubricant DC 200 - 10,000 which is optional to the lubricant Viscasil 10,000.

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36-11-05 401 405-407		Added steps to loosen surrounding ducting if it is necessary to remove or install the valve.
36-11-07 402		Changed direction of flow arrow and bonding wire position .
36-11-19 401 407-409		Added steps to loosen surrounding ducting if it is necessary to remove or install the valve.
36-11-20 301 303-304		Removed steps to open/close engine core cowl panel to get access to the PRVC for airplanes with GE CF6-80C2 series engines.
36-20-00 107		Changed the references.
36-20-00 109		Added a note to check for clogged drain holes.
36-21-00 1		Changed the references.
36-21-01 403,405		Changed the format.
36-21-02 401 403-405		Changed the format of the data.
36-21-03 402		Removed the drain holes in the tubing.
36-21-03 404-405		Changed the references.
36-21-03 501		Changed the references.
36-22-00 1		Changed the references.
36-22-01 405,407		Changed the references.
36-23-00 1 36-23-01		Changed the references. Changed the references.
404-405 36-23-02		Changed the references.
401,403		onunged the references.
CHAPTER	38	- WATER/WASTE
38-FAULT CODE INDEX 9		Changed the format of the data.

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38-CMCS MESSAGE INDEX 1-4	Changed the format of the data.
6,8 38-11-02 205	Changed the format of the data.
38-15-03 404,406	Changed the format of the data.
38-15-06 201,203 205	Added a CAUTION for water lines.
38-30-00 1	Changed the punctuation.
38-32-00 22	Changed the reference for the CMC.
38-32-00 201-228	Added the task to open the flush valve for maintenanace.
38-32-00 519-521 526	Changed the format of the data.
38-32-01 CONFIG 2 410,424	Changed the spelling.
CHAPTER 45	- CENTRAL MAINTENANCE SYSTEM
45-10-00 15	Added explanation for N/A (non-applicable) engine messages.
45-10-00 28-34 45-10-00	Changed Table C format incorporated ATA Chapter-Section text.
101-106	
101-106 45-10-00 104,106	Changed the format of the data.
	Changed the format of the data. Removed the references to the BITE manual.
45-10-00 104,106 45-10-00	
45-10-00 104,106 45-10-00 220-226 45-10-99	Removed the references to the BITE manual. Added procedure to support the Airplane Digital Maintenance Tool
45-10-00 104,106 45-10-00 220-226 45-10-99 1-2 45-10-99	Removed the references to the BITE manual. Added procedure to support the Airplane Digital Maintenance Tool (ADMIT) for the HMV test. Added procedure to support the Airplane Digital Maintenance Tool (ADMIT) for the HMV test.

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49-CMCS MESSAGE INDEX	Changed the references.
1-71 49-CMCS MESSAGE INDEX 5	Changed the data to show that SB 45-2037 is complete.
8-10 18,27 31-33 38 40-41	
43–45 47 50–51 53–54	
57-58	
49-CMCS	Added an inspection check of the magnetic chip detectors for CMCS
MESSAGE	messages 49037 and 49091.
INDEX	
22,65	
49-CMCS	Changed the data for the cooling air shutoff valve (PWC-SB
MESSAGE	49-16084).
INDEX	
28	
47-48	
52	
49-11-00 1-18	Changed the data for the APU description and operation.
49-11-00 101-102	Changed the data for the APU component location.
49-11-00	Changed the data for the auxiliary power unit and removed the data
201-250	for the APU start and shutdown sequence.
49-11-01	Changed the AMM/AIPC cross-reference data.
421	
49-13-01	Changed the AMM/AIPC cross-reference data.
405,410	
49-13-04 401,405	Changed the AMM/AIPC cross-reference data.
49-13-05 401,405	Changed the AMM/AIPC cross-reference data.
49-13-06 405	Removed the parts from the AMM/AIPC cross—reference table.
49-13-07 405	Removed the parts from the AMM/AIPC cross—reference table.
49-13-08 604	Changed the inspection table for the APU aft mount assembly.

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49-15-00	Changed the data for the APU air inlet.
101-108	ondinged the data for the Albo are interes
49-15-04	Removed the parts from the AMM/AIPC cross—reference table.
405	·
49-15-06	Changed the AMM/AIPC cross-reference data.
404	
49-16-01	Changed the AMM/AIPC cross-reference data.
403	
49-16-03	Changed the AMM/AIPC cross-reference data.
401,403	
49-27-00	Changed the format of the data and added the data for the removal
4-5	of the oil strainer element (POST—PWC—SB 49—A16159).
49-27-01	Changed the AMM/AIPC cross-reference data.
401,406 49-27-02	Changed the AMM/AIPC cross-reference data.
403	changed the Amm/AIFC choss-herenence data.
49-27-03	Changed the AMM/AIPC cross-reference data.
403	thanged the Allin All o or oss reference datas
49-27-05	Changed the AMM/AIPC cross-reference data.
404	
49-27-06	Changed the AMM/AIPC cross-reference data.
404	
49-27-07	Changed the AMM/AIPC cross-reference data.
405-406	
49-31-00	Changed the data for the APU engine fuel system.
201–220	
49-31-01	Changed the AMM/AIPC cross-reference data.
404	Channel the AMM/ATDC annual materials date
49-31-02 403	Changed the AMM/AIPC cross-reference data.
49-31-02	Changed the torque value for the return tube on the fuel metering
404	adapter.
49-31-03	Changed the AMM/AIPC cross-reference data.
404	onangon one man ner o or occorrence and a
49-31-04	Removed the parts from the AMM/AIPC cross—reference table.
403	·
49-31-05	Changed the AMM/AIPC cross-reference data.
403	
49-41-00	Changed the component location data for the APU starting and
101–108	ignition system.
49-41-01	Changed the AMM/AIPC cross-reference data.
401,404	
49-41-03	Changed the AMM/AIPC cross-reference data.
403	Changed the AMM/ATDC and a reference data
49-41-04 401 404	Changed the AMM/AIPC cross-reference data.
401,404 49-41-05	Changed the AMM/AIPC cross-reference data
403	Changed the Arith Atre Cluss-Level elice data
403	



49-51-00 1-2	Changed the data for the APU cooling air system.
49-51-02	Changed the data for the cooling fan.
401-410	
49-51-04	Changed the data for the cooling air inlet screen.
401-408	
49-51-04	Changed the AMM/AIPC cross-reference data.
405	
49-52-00	Changed the data for the APU diverter and IGV control system.
1–8	
49-52-00	Changed the component location data for the APU diverter control
102-104	system.
49-52-03	Changed the AMM/AIPC cross-reference data.
404	Changed the AMM/AIDC areas reference data
49-52-04 403	Changed the AMM/AIPC cross-reference data.
403 49-52-05	Changed the data for the diverter valve muffler.
401-408	changed the data for the diverter valve marrier.
49-52-05	Changed the AMM/AIPC cross-reference data.
401,404	onangea the familiarity of order the discountry adda.
49-52-05	Changed the data for the diverter valve muffler.
601-604	· ·
49-52-06	Changed the AMM/AIPC cross-reference data.
405	
49-52-07	Removed the parts from the AMM/AIPC cross—reference table.
405	
49-52-08	Removed the parts from the AMM/AIPC cross—reference table.
403	
49-61-00	Changed the data for the APU control system.
1-12	Changed the component location data for the ADU controls
49-61-00 102-105	Changed the component location data for the APU controls.
49-61-02	Changed the data for the speed sensor.
401-414	changed the data for the speed sensor.
49-61-02	Changed the AMM/AIPC cross-reference data.
401,403	onanged the family all of order the dide data.
410	
49-61-03	Changed the data for the exhaust gas temperature thermocouple.
401-410	
49-61-03	Changed the AMM/AIPC cross-reference data.
401,407	
49-61-04	Changed the AMM/AIPC cross-reference data.
403	
49-61-05	Changed the AMM/AIPC cross-reference data.
401,407	
410,412	Changed the AMM/ATDC analy neferons date
49-61-06 401,403	Changed the AMM/AIPC cross-reference data.
401,403	



49-61-07 401-406		Changed the data for the APU controller.
49-61-10 203		Changed the AMM/AIPC cross-reference data.
49-61-10 203-204		Changed the reference to get access to the APU maintenance page.
49-71-00 1-14		Changed the data for the APU EICAS indicating system.
49-81-01 401,403		Changed the AMM/AIPC cross-reference data.
49-81-02 401,403		Changed the AMM/AIPC cross-reference data.
49-91-01 403		Changed the AMM/AIPC cross-reference data.
49-91-02 403		Changed the AMM/AIPC cross-reference data.
49-94-01 403		Changed the AMM/AIPC cross-reference data.
49-94-02 403		Changed the AMM/AIPC cross-reference data.
49-94-03 401,403		Changed the AMM/AIPC cross-reference data.
49-94-04 401-406		Changed the data for the oil filter differential pressure indicator.
49-94-04 403		Changed the AMM/AIPC cross-reference data.
CHAPTER	51	- STRUCTURES
51-21-05 702-703		Changed Note to NOTE.
51-24-07 704		Changed the format.
51-51-00 801,805 810-811 813		Changed the format of the data.
CHAPTER	52	- DOORS
52-11-00 5,9 17,21 24-25 28,33 36		Changed the lever nomenclature.

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52-11-00 601-605 608,610 617,619	Changed the lever nomenclature.
625 52-11-01 401-402 404,407 409 412-413	Changed the format of the data.
415-417 52-11-01 404 415-416	Changed the lever nomenclature.
52-11-01 501	Changed the format of the NOTE.
52-11-01 503,519	Changed the lever nomenclature.
52-11-01 602 608-609	Changed the lever nomenclature.
52-11-02 405 408-409	Changed the lever nomenclature.
52-11-05 402	Changed the lever nomenclature.
52-11-05 408 413-414	Changed compounds for actuator connection.
52-11-06 406,418	Changed the lever nomenclature.
52-11-07 501-536	Changed Lockout Cam to Crank Stop dimension to match drawing.
52-11-09 401	Changed the format of the data.
52-11-09 501	Changed the format of the data.
52-11-12 201 205-211	Changed the format of the data.
52-11-14 405	Changed Note to NOTE.
52-21-00 2	Added note to make sure handle installation direction.
52-21-00 602-603	Added note to make sure handle installation direction.
52-21-01 404	Changed the flushness tolerance for the Crew Compartment Overhead Hatch.

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52-30-00		Changed the format.
1		changed the format.
52-32-00 536		Changed the downstop measurement to match the illustrations.
52-32-01 415-417		Created new table for side cargo door flushness limits.
52-34-01 601		Changed the format of the data.
610-612 52-34-03 401,405 408-410 412-413		Changed the format of the data.
52-36-02 402-403 406-408		Changed procedure to call out Hi-Loks instead of bolts.
52-49-09 202,205		Added latch overlap dimension.
52-71-00 521		Changed the continuity measurement on door warning switch.
CHAPTER	53	- FUSELAGE
53-11-02 401-404		Added new procedure.
53-11-02 603		Deleted text for flight engineer's panel.
53-20-00 2		Changed the format.
53-21-02 404		Deleted the floor beam locator tool MIT 65B07993-950.
53-21-02 406,408		Sent page without technical change.
53-52-01 201,208		Changed the format of the data.
53-52-01 205		Changed Note to NOTE.
53-52-01 603		Changed Note to NOTE.
53-52-04 206		Changed Note to NOTE.
CHAPTER	54	- NACELLES/PYLONS
54-51-01 405 409-410 421		Added steps to R/I Thrust Reverser tubes.



54-51-02 CONFIG 2 426	Changed the format of the data.
CHAPTER 55	- STABILIZERS
55-30-01 401 403-408	Changed the format of the data.
CHAPTER 57	- WINGS
57-28-01	Changed the resistance limiit.
801,807 57-51-03 804	Changed the procedure for washing off the alkaline cleaner from the conducting strip.
CHAPTER 70	- STANDARD PRACTICES - ENGINE (CF6-80C SERIES ENGINES)
70–30–00 201–226	Reissued pages to correct table.
70-30-00 214	Changed to add ${\tt CO2-O78}$ Molykote G-n paste to the Standard Practice consumable section.
CHAPTER 71	- POWER PLANT (CF6-80C SERIES ENGINES)
71-FAULT CODE DIAGRAM 23-26 32	Pages sent without change.
71-FAULT CODE INDEX	Changed the reference format.
4-17 71-FAULT CODE INDEX 5-8 10	Changed the format of the data.

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71-CMCS Changed the format of the data.

MESSAGE

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6 8–11

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62E

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62K

62M-62N

62S-62T

62V-62W

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64G,64J

64L-64M

64R-64S

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68G

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68X

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71-CMCS MESSAGE INDEX 17,40 45,47 64,68I 68K 68M-68N 68P 68S-68X 70-70A 70C-70F 70H-70I 70T,72A 72D-72Q	Changed the references.
71-CMCS	Changed the troubleshooting for CMC MSSG 7X328.
MESSAGE	thanged the troubteshooting for the hood response
INDEX	
30-31	
71-CMCS	Removed the data for engines with GE SB 73-252.
MESSAGE	
INDEX	
62Z	
63 440–44B	
64Q-64R 71-00-00	Changed the format.
501	changed the format.
71-00-00	Changed the wording of the statement for acceleration time
528	guidelines in the Acceleration/Deceleration Test.
71-21-01	Changed the procedure to show the data for GE SBs 72-207, 72-612
403-415	and 72-905.
71-71-00	Changed the corrective action for oil leakage from the IDG drive
CONFIG 2	pad (to be the same as configuration 1).
611	
CHAPTER 72	- ENGINE (CF6-80C SERIES ENGINES)
CHAITER TE	ENGINE (CIO COC SERIES ENGINES)
72-00-00	Revised the caution for the reinstallation of the N2 cranking pad
204,207	cover plate.
72-00-00	Changed to update the borescope plug torque table.
605	
72-00-00	Removed the data not needed.
656,680W	
72-31-00	Changed to add new fan lubricant CO2-078 to eliminate excessive
601-602 72-31-00	fan vibration. Changed the format of the data.
601-602	changed the format of the data.
604	

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72-31-01 407 72-31-02 407-408 411-412		Changed to revise the current post fan spinner installation vibration survey requirement. Changed to add fan lubricant CO2-O78 and alternate lubricant CO2-O03 to eliminate excessive fan vibration.
72-31-02 408,412		Revised the data to correct the effectivities.
72-31-02 415 72-31-02 605,609 72-31-02		Changed to clarify wording concerning the difference in moment weight between replacement blade and replaced blade. Changed to add new fan lubricant CO2-O78 and alternate lubricant CO2-O03. Changed the format of the data.
605,609 72-31-03 401 72-53-04 401-409		Added the replacement No. 1 Bearing Manifold fixture P/N 2C6823 as the option for P/N 2C14871. Added the effectivities.
72-63-01 803		Deleted the data not needed.
CHAPTER	73	- ENGINE FUEL AND CONTROL (CF6-80C SERIES ENGINES)
73-11-05 401,411 73-21-02 401,404 406		Changed the CAUTION about dribble flow flow fuel nozzles (AD 2000-11-08, dated 6 July 2000). Removed the steps for airplanes with GE SB 73-252 (Heated CIT Sensor).
73-21-18 401 417-419 424,426 432 437-438 443-445		Removed the data for GE SB 73-252 (Heated CIT Sensor).
73-21-20 405		Removed AMM 73-21-22/401 (HCU - Removal/Installation) which is only for airplanes with GE SB 73-252 (with the Heated CIT Sensor).
CHAPTER	74	- IGNITION (CF6-80C SERIES ENGINES)
74-00-00 504-505		Added the circuit breaker coverage.
74-00-00 525-526 74-21-01		Added the tester equipment illustration for the ignition system test. Removed the airplance IPC references.
401 74-21-01 409,413		Changed the effectivities on the steps for service bulletin GE-SB 73-199.



CHAPTER	75	- AIR (CF6-80C SERIES ENGINES)
75-32-01 406		Added the pressure source tool to the VBV actuator installation procedure.
CHAPTER	76	- ENGINE CONTROLS (CF6-80C SERIES ENGINES)
76-11-00 106 111-114		Changed the format of the FIM data for ENGINE FUEL CONTROL PROBLEM.
76-11-00 107-110 115		Changed the FIM data for ENGINE FUEL CONTROL PROBLEM
76-11-02 502,513		Changed the sentence structure.
76-11-03 248		Changed the table header to reverse thrust lever.
76-12-02 506-507 511-513		Changed the PRE- and POST-SB 22-2216 data which changed the go-around lever and switches.
CHAPTER	77	- ENGINE INDICATING (CF6-80C SERIES ENGINES)
77-FAULT CODE INDEX 4-7		Changed the reference format.
77-21-00 502		Changed the format of the data.
77-31-00 1,5		Changed the effectivity text for the AVMs.
77-34-00 1		Changed the format of the data.
77-34-00 1-4		Changed the sequence of the illustrations.
77-34-01 201-205		Added the effectivity to the procedure.
77-34-03 201-206		Added the effectivity to the procedure.
77–34–07 201–212		Added the effectivity to the procedure.
CHAPTER	78	- EXHAUST (CF6-80C SERIES ENGINES)
78-00-00 101-160		Revised tasks to support current engine configuration.
78-30-00 1-2		Revised the tasks to support current engine configuration.

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78-31-00 1-36	Revised the tasks to support current engine configuration.
78-31-00	Revised the tasks to support current configuration
201–276	
78-31-00 258 261-276	Changed the format of the data. Added data to add antifreeze for the Center Drive Unit.
78-31-00 501-542	Revised the tasks to support current engine configuration.
78-31-00 504	Removed the referenced paragraph.
78-31-00 529,531 538	Changed the references.
78-31-00 533	Sent without technical change.
78-31-00 601-610	Revised the tasks to support current engine configuration.
78-31-00	Changed the unit conversion for the task.
607	thanged the arrive content for the tack!
78-31-01	Revised the tasks to support current engine configuration.
401-420	mericou une cuente ce cappor e cui rente engine com rigar acresis
78-31-18	Revised the tasks to support current engine configuration.
201-212	
78-31-21	Revised the tasks to support current engine configuration.
601-610	mericou une cuente ce cappor e cui rente engine com rigar acresis
78-31-21	Added QAN data, (QAN, PCR 00/19, May 23, 2000).
610	,,,,,,,,,,,,,,,,
78-31-22	Revised tasks to support current engine configuration.
401-414	mer recall cache to capper to can reme engine com rigan acrem.
78-31-22	Changed NOTE text and removed CAUTION note to clarify intent of
410,412	procedure.
78-31-24	Revised the tasks to support current engine configuration.
401-412	
78-31-25	Revised tasks to support current engine configuration.
401-406	
78-34-00	Revised the tasks to support current engine configuration.
1–26	
78-34-01	Revised the tasks to support current engine configuration.
201-208	
78-34-02	Revised the tasks to support current engine configuration.
201-206	
78-34-05	Changed text to correct typographical error.
201,203	
205-207	
78-34-06	Revised the tasks to support current engine configuration.
401-406	The state of the s
78-34-07	Revised the tasks to support current engine configuration.
401-406	

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78-34-07 501-504		Revised the limit block to support current engine configuration.
78-34-10 404-405		Changed the references.
78-36-00 1-22		Revised the tasks to support current engine configuration.
78-36-00 501-520		Revised the tasks to support current engine configuration.
78-36-07 201-212		Revised the limit block to support current engine configuration.
CHAPTER	79	- OIL (CF6-80C SERIES ENGINES)
79-FAULT CODE INDEX 4 7-8		Changed the reference format.
79-00-00 2-3		Changed the data to correct the effectivity.
79-00-00 101,107		Changed the data to correct the effectivity.
79-00-00 114		Changed the fault isolation data "High Oil Consumption" to clarify the existing requirements.
79-21-03 402-403		Added the data for the illustration and effectivity.
79-21-06 202		Changed the data to provide the correct effectivity.
79-21-06 204		Changed the parts data to cover remodeling after GE SB which eliminated the lube supply filter.
79–31–00 1		Revised the data to reduce the effectivities and retain the English or Metric measure.
79-31-00 502 504-505		Revised the data to reduce the effectivities and retain the English or Metric measure.
79-32-00 2		Added the effectivity.
79-32-00 503		Revised the data to change the effectivities.
79-32-01 401-406		Revised the data to change the effectivities.
79-32-01 402-404 406		Changed the data to improve the illustrations.
79–33–00 2		Added the effectivity.
79–33–00 502		Added the efffectivities.

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79–33–01 402		Added the efffectivities.
79-34-00 2		Added the efffectivitY.
79-34-01 402		Added the efffectivitY.
CHAPTER	80	- STARTING (CF6-80C SERIES ENGINES)
80-11-01 602,604		Changed the torque value for the magnetic probe.
80-11-04 203-205		Changed the filter cleaning procedure in start valve filter - MP.
80-11-05		Changed illustration in starter pneumatic duct - R/I to remove
403		earlier bracket configuration.
80-11-06 401 403-406		Changed the format of the data.
80-11-06 403,406		Changed the punctuation.

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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

01

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RECORD OF TEMPORARY REVISIONS

REVI	REVISION		ERTED	REMOVED			REVISION			ERTED	REMOVED	
TR NO.	DATED	ВҮ	DATE	ВҮ	DATE	TR	NO.	DATED	BY	DATE	ВҮ	DATE

Record of Temporary Revisions Figure 1

RECORD OF TEMPORARY REVISIONS

01



TITLE	CHAP/SEC	TITLE	CHAP/SEC	TITLE	CHAP/SEC
AIR DATA COMPLAIR DISTRIBUTE AIRFRAME VIBRATION AIR LEAK DOORS AIRSPEED DISPLAIRSPEED STAND	NG	AUTO DECEL, AUTO STABILI AUTO BRAKE AUTOPILOT AUTOTHROTTLE AUXILIARY PU BATTERY CHAR BEEPER BIRD STRIKE. BLEED AIR APU	ENGINE 7303 ENGINE 7303 ZER TRIM .2210 3242 2210 3461 MP2921 2430 GER24303151 7103,AMM 0551	FROM COCKPE FROM LAVATO FROM SEAT. CARGO DOOR COMPARTMENT HEAT CAUTION SYSTI CHARTS, ENGIN CHECKS, ENGIN CLOCK CLOSET LIGHTS	DANT
ALARM BELL ALTITUDE ALERI			3610 VALVE3610	COFFEE MAKERS	S
ALTITUDE CONTR	ROL, 	VALVE BLOWN/FLAT S TIRES BOARDING MUS BOOST PUMP, BRAKES BRAKE SEIZUR	3610 POTTEDAMM 0551 IC2331 FUEL28223241	TEMPERATURI COMPASS, STAI CONTROLS, ENG CREW SEATS . CREW OXYGEN . CROSSFEED VAI	E2160 NDBY3422 GINE710325103511 LVE,2822
LIGHTS		BUFFETING OR		DEICING DUCT	
ANTI-ICE, ENGI ANTI-ICE, WING ANTI-SKID AOA PROBE APU	3	BULK CARGO D	AMM 0551 OOR5234 VERHEAT2150	DEMAND HYDRAU PUMP DISPLAY BRIG	2911
BLEED AIR VA	ALVES3610	CABIN	ONTROL2130	DME	3455
FAULT FIRE GENERATOR OIL QTY OPERATION ATC TRANSPONDE		AUTO FAIL. CHIME, COC DEPRESSURI ZATION INTERPHONE LIGHTS OVERPRESSU		DOORS AIR LEAK APU BULK CARGO CARGO, FWD. ENTRY FLIGHT DECK	
FROM COCKPIT FROM LAVATOR FROM SEAT ATTENDANT WORK		PRESSURE PRESSURE L EXCESSIVE SERVICE MO (COMMUNI (LIGHTIN	AMM 0551	DRAGGED TAIL DUCT LEAK LEAK TEST. PRESSURE	

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Figure 1 (Sheet 1)

FAULT ISOLATION INDEX

03



1	1	ı		
TITLE CHAP/SEC	<u>TITLE</u>	CHAP/SEC	<u>TITLE</u>	CHAP/SEC
EEC	SEIZURE DAMAGE. SLOW ACC TO IDL STALL	TS7103 AND STRUTAMM 0551 ELERATION E71037103	SPOILERS. STABILIZEI STALL WARI FLIGHT	XES 2760 2760 R TRIM 2740 NING 2730
BATTERY	START SW SURGE THRUST L THRUST M		DIRECTOR. INTERPHONI MANAGEMEN COMPUTEI	R 3461
GENERATOR DRIVE2411 GENERATOR CONTROL2420 GROUND HANDLING BUS2450	VIBRATIO INDICA	N	FLOOD LIGHTS	
GROUND SERVICE BUS	FUEL	VES R	FUEL BOOST PUMI CONTROL SI	P 2822
ELECTRONIC ATTITUDE DIRECTION INDICATOR3161	ENTRY DOOR ENTRY LIGH ESCAPE SLI	S5211 TS3321 DES2569	FLOW INDIO QUANTITY. TEMPERATU	CATOR 2840 2840 RE 2840
ENGINE CONTROL 7303 FLIGHT INSTRUMENTS	EXTERNAL P	COOLING 2150 OWER 2441	GALLEY	J 2825 2531
ENGINE ANTI-ICE3021 CHARTS7103	FILTER BYP FILTER, OI FIRE	ASS7903 L7903	COFFEE MAN HOT CUPS. LIGHTS	KER 2531 2531
CHECKS	CARGO COMPAR		GASPER AIR.	
ENGINE CONTROL 7303 FIRE	FLAMEOUT, FLAP SPEED EXCEEDED. FLIGHT CON	ENGINE 7103 AMM 0551 TROLS	HANDLING	
HOT START7103 HUNG START7103 IMPENDING HOT START7103	ELEVATOR FLAPS		SPEED IND	
INDICATORS7903 NACELLE DRAGGEDAMM 0551 NO LIGHT/WET START7303	LE TE	E	HEADING DIS	G AMM 0551 PLAY3421 2351

FIM Index
Figure 1 (Sheet 2)

FAULT ISOLATION INDEX



		ı		Ī	
TITLE	CHAP/SEC	<u>TITLE</u>	CHAP/SEC	<u>TITLE</u>	CHAP/SEC
HEATERS		SERVICE		RUNWAY TUR	RNOFF 3340
CREW REST	AREA 2140	IRS		SEAT BELT	
			ALVES		
		LANDING GEA			
		DEFLATED			
HIGH ENERGY			UTAMM 0551		ΓOR
	EAMM 0551	DEPARTS H			
HOT	211111111111111111111111111111111111111		AMM 0551		N
			AMM 0551	MASTER	J
			DAMM 0551		ΓS
	TER				IGHT
HOT AIR DUC			N		IGHT3151
	AMM 0551	POSITION			LAGE AMM 0551
HOT OR COLD					
	AMM 0551		HT\$		
	7103	LANDING LIG	1119		
HYDRAULIC	105		AMM 0551		GGED AMM 0551
FND			3810	NACELLE DRAG	
FLUID TIT			ORS	PRESSURE RE	
	AMM 0551		GHTS		AMM 0551
			R		
		LIGHTNING	K		_IGHTS3340
	2411		.3490,AMM 0551		
		LIGHTS	. 3470, APIN 0331		NGINE)7103
	OT START , 7103		ISION		_IGHTS3324
INDICATORS	O 31AK1 , 1103		WORK	NOSE GEAR TO	
FGT		CABIN	#OKK		EDED , AMM 0551
ENGINE		I			STEERING3251
	2840			WILLE S	JILLKING , JEJI
	ERATURE2840		L	OIL	
	TITY			FILTER BYF	2249
					ENGINE 7903
	7103				APU 4911
	URE 7903				ENGINE 7903
	ITY			TEMPERATUR	
	RATURE 7903			ENGINE	
	ENGINE7103		T	OVENS	
INERTIAL RE	•			OVERHEAT	
	LIGHTS 3311			ENGINE	
INTEGRATED					
	2411		N	OVERWEIGHT	
INTERPHONE			IG		AMM 0551
				LANDING.,,	,,,,,,AIII UJJI
i Liuiii , , ,		KENDING,			

FIM Index
Figure 1 (Sheet 3)

FAULT ISOLATION INDEX

02



TITLE	CHAP/SEC	TITLE	CHAP/SEC	TITLE	CHAP/SEC
MASKS PASSENGER. PORTABLE REGULATORS		ENGINE OIL FUEL WATER RADAR		SPOILERS SQUIB TEST STABILIZER TRI STALL, ENGINE STALL WARNING STANDBY	
PACK, AIR CONDITIONI	NG			ALTIMETER	3413
	DISPLAY . 3435		2312	ATTITUDE COMPASS	
PASSENGER ADDRESS			NT		CATOR 7103
CALL LIGHT	S 2334	RECIRCULATION	N FANS2120	POWER STARTING, APU	2420
	IT 2334		.IGHT3131	STARTING, ENGI	
	S			STATIC AIR TEM	
			2720	STATUS DISPLAY	
		RUDDER PEDAL		SELECTOR STICK SHAKER.	
				STRUT OVERHEAT	
		RUNWAY TURNO)FF 3340	SURGE, ENGINE	
PNEUMATIC		SEAT			
		BELTS			
			2510		
	HTS 3340		ENDANTS2520		
	R				
PRESSURE			RPHONE2341		
DEICING DU		SEVERE			
	AMM 0551		AMM 0551		
•	NE 3610	SLIDE ARMING	TERS2120		
		HANDLE			
		SLIDE/RAFTS.			
PRESSURIZATI	•		PE 2568		
CABIN CABIN DEPR		SLOW ACCELER			
	AMM 0551		7103		
CABIN OVER					
	N AMM 0551				
	3031				
•					

FIM Index
Figure 1 (Sheet 4)

FAULT ISOLATION INDEX



		1		1	
<u>TITLE</u>	CHAP/SEC	TITLE	CHAP/SEC	TITLE	CHAP/SEC
TAI TAIL DRAG. TAT, PROBE TAXI LIGHTS TEMPERATURE THERMAL ANT THRESHOLD I THRUST LEVERS LIMITED LOSS MANAGEMEN SYSTEM TILLER STEE TIRE BLOWN, SPOTTED TIRE BURST, LOSS TOTAL AIR TEMPERATU TRANSFORMER RECTIFIER TRANSPONDER TRIM AIR TR UNIT TRUE AIR SE TURBULENCE, OR BUFFETT TURNOFF LIG RUNWAY UTILITY LIG VALVE APU BLEED APU FUEL BLEED ISG CROSSFEED ENGINE BI VERTICAL SI		VHF RADIO VIBRATION VIBRATION, AIRFRAME VIBRATION IN V NAV VOLCANIC ASH VOR WARNING AND SYSTEM WASTE, LAVAT WATER DAMAGE HEATERS LEAKS POTABLE PRESSURE WEATHER RADA WET START, E WHEEL WELL I WHEEL WELL I WHODOW HEAT WINDOWS WINDSHIELD AIR HEAT RAIN REPEL WASHERS WIPERS WIPERS WING ANTI-ICE LIGHTS SLIDE	2312		CHAPTSEC
		I		1	

FIM Index
Figure 1 (Sheet 5)

FAULT ISOLATION INDEX



TABLE OF CONTENTS

Subject <u>Page</u> General 1 Manual Arrangement and Numbering System How to Use the Maintenance Manual Maintenance Manual Features Description and Operation Component Location Fault Isolation Servicing Testing Operational Test Functional Test System Test **AMTOSS** General Special Tools and Equipment Standard Tools and Equipment Consumable Materials Task Oriented Data References Access Circuit Breakers Torque Values Table of Contents List of Effective Pages Crew Station Nomenclature Equivalent Tools, Fixtures, and Test Equipment Chapter Responsibilities Customer Originated Material Revision Service Normal Revision Service Temporary Revision Service Delivery of Data in Digital Format List of Service Bulletins Model and Airplane Identification

INTRO CONTENTS



1. General

A. This publication was prepared by Maintenance Engineering Technical Services (METS) of the Boeing Commercial Airplane Group in accordance with Air Transport Association of America Specification No. 100, Specification for Manufacturers' Technical Data. It contains the data necessary to service, troubleshoot, check, and repair systems and equipment installed in the 747-400 airplane for maintenance done on the line or in the maintenance hangar. The data for maintenance that is done away from the airplane (because of the need for special equipment) is contained in the Boeing 747 Component Maintenance Manual or suppliers' component maintenance manuals. The Airplane Maintenance Manual (AMM) also contains information on inspection and maintenance of airplane structure. But information on repair of airplane structure is contained in the 747-400 Structural Repair Manual.

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.



B. Communications concerning this publication should be directed to Boeing Commercial Airplane Group; Attention: Manager, Maintenance Engineering Technical Services. However, to expedite a reply to your communication, by providing direct routing of your communication to the proper Boeing organization, it is requested that you use the Publications Change Request form. This form, supplied by Boeing, is available to you through your publications organization or access it on the internet at: http://bpn.boeing.com/amde (a Boeing Partners Network [BPN] account is required). You can also e-mail requests directly into the Boeing Communication (BOECOM) system at this address: ame.boecom@boeing.com. Please provide this information: airline name, your name, phone number, e-mail address, airplane model-type, title of manual or document number, ATA Chapter-section-subject, and the description of the change requested.

2. Manual Arrangement and Numbering System

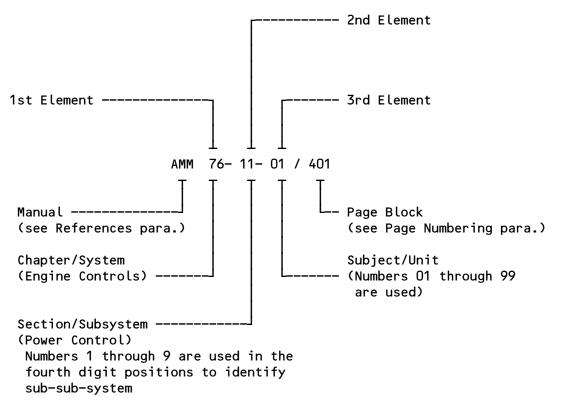
- A. The Maintenance Manual is divided into chapters and groups of chapters. Each group and every chapter has a tab provided for ease of location. The chapterization separates the manual into the primary functions and systems of the airplane. The chapters are further divided into sections and subjects to provide for subsystem and individual unit breakout. Each chapter, section and subject is identified by an assigned number. Each page carries the assigned subject number, page number, page code and the revision date.
 - (1) In addition, the Power Plant chapters are issued in a self-contained set or sets (as applicable, if you have more than one engine type in your model fleet). These pages are further identified by an engine sub-logo, for example CF6-80C SERIES ENGINES, PW4000 SERIES ENGINES, RB211-524 SERIES ENGINES, etc., placed to the right of the Maintenance Manual logo at the top of the page. The numbering system is described in detail in the paragraphs that follow.



(2) Chapter Numbering

(a) Chapterization of the Maintenance Manual has provided a functional breakdown of the entire airplane. The chapter breakdown numbering system uses a three-element number (XX-XX-XX). It provides for dividing the material into Chapters, Sections, and Subjects.

The three elements of the indicator each contain two digits. For example:



(b) The chapter number (1st element) and the first number of the section number (2nd element) are assigned by ATA Specification No. 100. Material which is applicable to a system as a whole uses zeros in the 2nd and 3rd elements of the numbers, that is, the chapter number followed by "-00-00." For example:

AMM 78-00-00 (Exhaust) is used for general description information which provides an outline breakdown of the sections in the chapter.



- (3) Effectivity and Configuration Numbering
 - (a) On each page, there is effectivity data at the lower, inner margin (Fig. 1).
 - (b) When a page applies to all airplanes, the word ALL is in the effectivity block.
 - (c) If the data does not apply to all airplanes or engines, then the effectivity will be one of these types:
 - Physical description A description of the differences that you can see.
 - a) When a physical description is used, a reference to the applicable service bulletin, and PRR (production change) are provided when that is possible. This is done primarily for the benefit of airline engineering, and maintenance planning groups. For example:

AIRPLANES WITH THE -7 BUS CONTROL UNIT (BCU) (PRE-SB 24-2188)

AIRPLANES WITH THE -8 AND SUBSEQUENT DASH NUMBER BUS CONTROL UNIT (BCU) (POST-SB 24-2188 OR PRR81821-3)

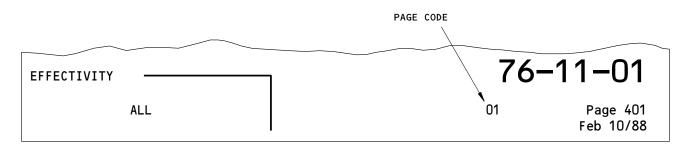
- 2) Component dash number The last digits of the identification number that are on an electrical unit.
- 3) Airplane effectivity numbers The airline three-letter code, and the numbers or letters that Boeing and each airline agreed on to identify each airplane. If the effectivity is applicable to all subsequent airplanes, the last digits will be 999.

For example:

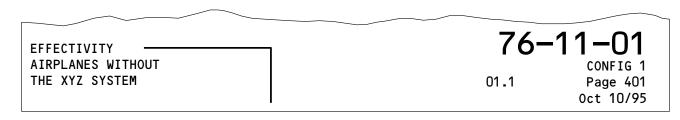
205-999 indicates airplane 205 and all subsequent airplanes.

- (d) Immediately after this introduction, there is a cross-reference table of effectivity numbers, customer numbers, manufacturing serial numbers, and registration numbers.
- (e) Each paragraph can have an effectivity. Each effectivity is in upper-case letters, on the first line of the paragraph.

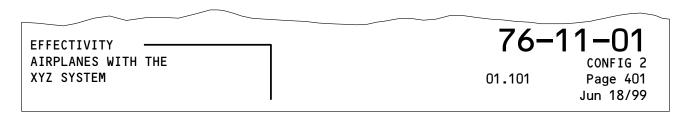




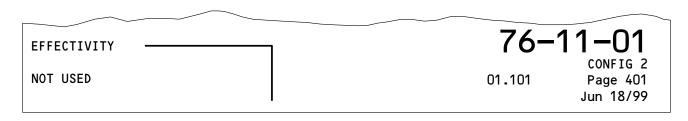
NON-CONFIG PROCEDURE EXAMPLE



CONFIG 1 PROCEDURE EXAMPLE



CONFIG 2 PROCEDURE EXAMPLE



CONFIG - NOT USED EXAMPLE

Effectivity, Page Code and Configuration Procedure Examples
Figure 1



- (f) When effectivity differences are extensive and the preceding method becomes cumbersome, thus distracting from the continuity of subject matter, new page blocks are created. These added page blocks are identified by the addition of a configuration code (CONFIG) immediately above the page number. A previously issued page block is re-issued to incorporate the configuration code as shown in Fig. 1. Configuration codes are issued at page block level only. They are usually used when a change to the airplane results in a major change to the manual. Configuration codes are typically used when there are multiple configurations of page block applicable to a customer's fleet.
 - 1) In some instances, you can have CONFIGs that are provided as place holders. These procedures will be indicated as "NOT USED" in the effectivity block in the lower left corner of the page (Fig. 1).
- (g) For the effectivity information in the power plant (70 series) chapters of the manual, two situations can exist: the word ALL placed in the effectivity block on a page means that the page pertains to either all airplanes or all engines, whichever the case may be. When the effectivity is limited to a system or component that remains with the airplane during the power plant replacement, the effectivity is expressed in a manner described in the preceding paragraphs. When a manual section, page, step or illustration is limited to an engine type or component, the effectivity is given using the engine model, physical difference, or part number.
 - The word "ALL" in the effectivity block on a page means that the page pertains to all airplanes (if you have only one engine type in your model fleet) or
 - All engines (if you have multiple engine types in your model fleet), whichever the case may be.
- (h) When the effectivity is limited to a system or component that remains with the airplane during the power plant replacement, the effectivity is expressed in a manner described in the preceding paragraphs. When a manual section, page, step or illustration is limited to an engine type or component, the effectivity is given using the engine model, physical difference, or part number.
- (4) Page Numbering
 - (a) Each page block has its own page numbers. The page numbers are in the lower right corner of each page.



(b) The page blocks categorize the tasks that they contain. The page blocks are defined by ATA Specification 100:

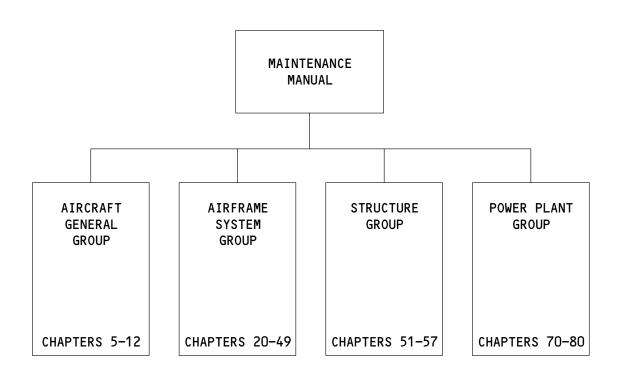
<u>Nomenclature</u>	<u>Page</u>	<u> Block</u>
DESCRIPTION AND OPERATION (D&O)	1	to 99
FAULT ISOLATION (FI)	101	to 199
MAINTENANCE PRACTICES (MP)	201	to 299
SERVICING (SRV)	301	to 399
REMOVAL/INSTALLATION (R/I)	401	to 499
ADJUSTMENT/TEST (A/T)	501	to 599
INSPECTION/CHECK (I/C)	601	to 699
CLEANING/PAINTING (C/P)	701	to 799
APPROVED REPAIRS (AR)	801	to 899
DISPATCH DEVIATION	901	to 999

(c) When it is convenient for the user to have different types of tasks in one page block, MAINTENANCE PRACTICES, the 201-to-299 page block, is used.

3. How to Use the Maintenance Manual

- A. The organizational breakdown of the Maintenance Manual is shown on Fig. 2. All chapters of the manual are grouped under four major headings. To locate information, start with a major heading to identify the group of chapters related to the desired information, then identify the chapter within the group. With the chapter number identified, proceed to the chapter table of contents located at the beginning of each chapter. A tab has been provided for each chapter for ease of location.
 - (1) Fig. 3 lists the the chapters within each group and summarizes the information contained in each chapter to aid in identifying the appropriate chapter.
- B. The Chapter Table of Contents lists all subsystems numerically. It also lists the Maintenance Practices, such as Fault Isolation, Adjustment/Test, etc. These units are listed in alphabetical order using the key noun as the title of the unit. The page number and effectivity are listed for each section or subject for which data is provided. The maintenance topics have assigned page blocks, such as all 501 to 599 numbers are adjustment/test pages. For a description of the complete page numbering system see the previous section and the paragraph on "Page Numbering". After the section or subject has been identified, the information can be located within the chapter numerically per section/subject number.





Organizational Breakdown of Maintenance Manual Figure 2



AIRCRAFT GROUP - CHAPTERS 5-12

CHAPTER NUMBER	TITLE	DATA COVERED
5	TIME LIMITS/MAINTENANCE CHECKS	Manufacturers' recommended time limits, maintenance checks and inspections
6	DIMENSIONS AND AREAS	The area, dimensions, stations, and physical locations of the major structural members of the airplane. Also includes zone locations
7	LIFTING AND SHORING	Charts showing lifting and jacking points for maintenance, overhaul and repair. Standard jacking procedures and lifting and shoring for abnormal conditions
8	LEVELING AND WEIGHING	
9	TOWING AND TAXIING	
10	PARKING AND MOORING	
11	REQUIRED PLACARDS	The location and pictorial illustrations of placards, stencils and markings
12	SERVICING	Replenishment of all airplane system reservoirs (fluid and gaseous), oil changes, lubrication and toilet draining and flushing. Filter types and locations. Also cold weather maintenance and exterior cleaning

Maintenance Manual Chapter Summary Figure 3 (Sheet 1)



AIRFRAME SYSTEMS GROUP - CHAPTERS 20-49

CHAPTER NUMBER	TITLE	DATA COVERED
20	STANDARD PRACTICES - AIRFRAME	Standard maintenance procedures appli- cable to multiple airplane systems
21	AIR CONDITIONING	Airplane heating and cooling including pressurization and ventilation
22	AUTOFLIGHT	Autopilot/flight director system, yaw damper, speed trim, and auto throttle
23	COMMUNICATIONS	HF, VHF, Satcom, ACARS, Selcal, passenger address and entertainment, audio integrating and interphone systems, voice recorder, and static discharger
24	ELECTRICAL POWER	Electrical generation and distribution, 115/200 volts ac, 28 volts ac, 28 volts dc, and battery system
25	EQUIPMENT/FURNISHINGS	Equipment installed for crewmembers and passengers, including galley and lavatory, seats, insulation, storage areas, escape and life saving equipment. Includes procedures for cleaning and repair of furnishings. Also includes cargo compartments, and cargo handling equipment
26	FIRE PROTECTION	Automatic fire and overheat detection for engines and APU, Automatic smoke detection for lavatories and cargo compartments. Fire extinguishing for engines, APU, lavatories, and cargo compartments. Also includes portable fire extinguishers

Maintenance Manual Chapter Summary Figure 3 (Sheet 2)



<u>AIRFRAME SYSTEMS GROUP - CHAPTERS 20-49</u> (Cont)

CHAPTER NUMBER	TITLE	DATA COVERED
27	FLIGHT CONTROLS	Ailerons, rudder, elevators, horizontal stabilizer, trailing edge flaps, spoilers, speed brakes, leading edge flaps, and indicating components of the flight control systems
28	FUEL	Fuel storage, ventilation, distribution, fuel jettison, and indication
29	HYDRAULIC POWER	Main hydraulic power, auxiliary, standby, and indicating components of the systems
30	ICE AND RAIN PROTECTION	Wing, nacelle, pitot probe, window anti- icing; windshield wipers, repellent and washers; water and toilet drain heaters
31	INDICATING/RECORDING SYSTEMS	Instruments, panels, clocks, recorders, computers, aural warning, EICAS, EFIS, MAWEA, ACMS, IDS
32	LANDING GEAR	Body, wing and nose gears, gear doors, hydraulic and electrical extension-retraction, wheels and brakes, antiskid, nose and body gear steering, and position and warning system
33	LIGHTS	Warning, annunciator, anticollision, navigation, and emergency lights. Also includes area lighting and instrument lighting

Maintenance Manual Chapter Summary Figure 3 (Sheet 3)

INTRODUCTION

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<u>AIRFRAME SYSTEMS GROUP - CHAPTERS 20-49</u> (Cont)

CHAPTER NUMBER	TITLE	DATA COVERED
34	NAVIGATION	Pitot-static, ADS, air data standby instruments, altitude alert, windshear alerting, IRS, standby compass, standby attitude reference, ILS, marker beacon, radio altimeter, weather radar, TCAS, GPWS, VOR, ATC, DME, ADF, FMCS
35	OXYGEN	Systems and equipment for storing, regulating, and delivering oxygen
36	PNEUMATIC SYSTEM	Distribution of compressed air from source to using system
38	WATER AND WASTE	Systems and equipment for storing and delivering fresh water, and removal of toilet and water wastes
45	CENTRAL MAINTENANCE SYSTEM	Reports maintenance messages for a number of airplane systems. The messages reported are existing faults, flight leg faults, fault history, BITE, ground tests, etc. The system includes the Central Maintenance Computer
49	AIRBORNE AUXILIARY POWER	APU, fuel control, ignition, starting, air, APU controls, indicating, exhaust, and oil systems

Maintenance Manual Chapter Summary Figure 3 (Sheet 4)



STRUCTURE GROUP - CHAPTERS 51-57

CHAPTER NUMBER	TITLE	DATA COVERED
51	STRUCTURES	Identification of various structural sections along with interior and exterior finishing and sealing
52	DOORS	Entry and exit doors, landing gear doors and doors for cargo access and servicing
53	FUSELAGE	The structural members which make up the compartments for equipment, passengers, crew and cargo including skins, bulkheads, frames, stringers, floor beams, floors, pressure dome, tail cone, fuselage to wing and empennage fairings, etc.
54	NACELLES/PYLONS	Those structural units and associated components/members which furnish a means of housing and mounting power plant. Includes skins, longerons, frames, stringers, clamshells, doors, nacelle fairings, etc.
55	STABILIZERS	Structure of horizontal and vertical stabilizers including the structure of the elevator and rudder
56	WINDOWS	Passenger windows and crew windshields. Includes windows used for observing compartments and equipment
57	WINGS	Structure of the wings, flaps, ailerons and spoilers

Maintenance Manual Chapter Summary Figure 3 (Sheet 5)



POWER PLANT GROUP - CHAPTERS 70-83

CHAPTER NUMBER	TITLE	DATA COVERED
70	STANDARD PRACTICES - ENGINE	Standard maintenance procedures applica- ble to multiple engine systems
71	POWER PLANT	Power plant, cowling, mounts, and drains
72	ENGINE	Compressors, combustion chamber, turbines, and accessory drive gearbox
73	ENGINE FUEL AND CONTROL	Control and distribution of fuel beyond main fuel disconnect on airplane. Includes fuel control, pump, and heater, and fuel flow, temperature, and pressure indicating systems
74	IGNITION	Generation, control, and distribution of ignition current. Includes ignition exciters, igniter plugs, and ignition switches
75	AIR	Accessory cooling and bleed air controls. Includes compressor bleed valves and controls, and variable compressor stator vane actuator and control
76	ENGINE CONTROLS	Engine controls including thrust levers and cables, start levers and switches, and engine fuel shutoff components. Also includes engine fire emergency shutdown
77	ENGINE INDICATING	Engine pressure ratio (EPR), exhaust gas temperature (EGT), and tachometer indicating systems. Also includes airborne vibration monitoring system

Maintenance Manual Chapter Summary Figure 3 (Sheet 6)



POWER PLANT GROUP - CHAPTERS 70-83 (Cont)

CHAPTER NUMBER	TITLE	DATA COVERED
78	EXHAUST	Fan thrust reverser, turbine thrust reverser, thrust reverser controls, and position indicating system
79	OIL	Storage and distribution of engine oil external to engine. Includes oil tank, oil cooler, and quantity, pressure, and temperature indicating systems
80	STARTING	Engine cranking, including starter, start valve, and valve position indicating system

Maintenance Manual Chapter Summary Figure 3 (Sheet 7)



4. Maintenance Manual Features

- A. Description and Operation (page block 001)
 - (1) The description and operation portion of each chapter provides an explanation of system by function, operation, configuration and control. Sufficient information is provided for the maintenance personnel to understand the system construction and function.
- B. Component Location (page block 101)
 - (1) A formal presentation of component location information is included in the fault isolation pages numbered 101 to 199 in the Maintenance Manual. Component location information includes an alphabetical Component Index and Component Location illustrations. The following information is included:
 - (a) The Component Index is a table which alphabetically lists the components assigned to the system or subsystem (subject) and a reference to the figure and sheet showing the locations of the components. Components which are not assigned to the subject, but are operationally related, are also listed. However, cross reference is provided to the system or subsystem where the components are assigned and their location shown.
 - 1) The quantity of each item, access and area, and a reference is provided. The access number identifies the access panel or door that must be opened to get to the component. The reference identifies the maintenance manual assigned subject number for the item (normally the removal/installation procedure), or the section where additional information relative to it may be found. Circuit breakers and other electrical components are referenced to the Wiring Manual Equipment List when a maintenance manual procedure is not provided.
 - a) The access number identifies the access panel or door that must be opened to get to the component.
 - b) The reference identifies the maintenance manual assigned subject number for the item (normally the removal/installation procedure), or the section where additional information relative to it can be found.



- c) Circuit breakers and other electrical components are referenced to the Wiring Manual Equipment List when a maintenance manual procedure is not provided.
- (b) The component location figure illustrates the access and location of components listed in the Component Index. Their physical location to known structural or system features is shown. Circuit breaker and panel locations are shown. However, the circuit breaker position is found using the alphanumeric grid location provided in the index access/area column.
- (2) Use of Component Location information
 - (a) Components are listed in the Component Index in alphabetical sequence. All circuit breakers are listed under the "CIRCUIT BREAKER" designation. Locate the component's name in the left column of the Component Index. Determine the number of components installed on the airplane (or engine) by referring to the "QTY" column. The access door to be opened, or the area of the airplane where the component is located, is determined by referring to the "ACCESS/AREA" column. This information is pictorially provided in the Component Location figures.
 - (b) If detailed information is needed, such as removal/installation, refer to the Maintenance Manual section noted in the "REFERENCE" column. Additional information on circuit breakers and other electrical equipment is found in the wiring manual equipment list.
 - (c) When the area or access noted in the Component Index has been located, use the Component Location figure to recognize and identify the component under investigation.
- C. Fault Isolation (page block 101)
 - (1) Fault isolation information can be provided as an integral part of the maintenance manual, as a separate Fault Isolation Manual (FIM), or both, at the airline's option.
 - (a) Fault isolation provides the information used to identify, locate and correct any fault that is predicted to occur on the airplane from time to time. It also includes a duplication of the data used by flight crews, cabin crews and others to analyze and assign codes to airplane faults.
 - (2) Refer to the FIM Introduction for detailed information about the content and use of the Fault Islation Manual.
 - (a) For airlines with the FIM included with the maintenance manual, this introduction will follow the AMM introduction.
 - (b) For airlines with the FIM as a separate manual, this introduction will be at the beginning of the FIM.
- D. Servicing (page block 301)
 - (1) Chapter 12 of the manual is titled SERVICING. This chapter contains instructions for the replenishment of items such as fuel, oil, hydraulic fluid, water, tire pressure, etc. The tanks and reservoir capacities are indicated, and also, the ANA (Air Force - Navy Aeronautical) or other standard specification and grade of material to be used. The chapter contains scheduled and unscheduled servicing applicable to the whole airplane.

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- (2) Servicing information is also located within the other chapters of the manual. The information is provided as a result of accomplishment of maintenance actions. It includes items such as the inflation or refilling of shock struts, the lubrication of control cables, the sterilizing of potable water system, etc.
- E. Testing Three Levels
 - NOTE: After a unit or units are changed or after work has been done on a portion of a system, it is not intended that the entire adjustment/test procedure for the complete system should be accomplished. Only the portion or portions of the adjustment/test procedure that are applicable need be accomplished.
 - (1) Testing information is divided into three categories Operational Test, Functional Test, and System Test. Following are definitions of the three categories:
 - (a) Operational Test: That procedure required to ascertain only that a system or unit is operable. These tests should require no special equipment or facilities other than that installed on the aircraft and should be comparable to the tests performed by the flight crews. It is not intended that the operational test of the unit shall meet the specifications and tolerances ordinarily established for overhaul or major maintenance periods.
 - (b) <u>Functional Test</u>: That procedure required to ascertain that a system or unit is functioning in all aspects in accordance with minimum acceptable system or unit design specifications. These tests may require supplemental ground support equipment and should be more specific and detailed than an operational test. It should contain all necessary information to perform proficiency tests to maintain system or unit reliability at an acceptable level, without reference to additional documents. A functional test usually occurs at minor maintenance periods.
 - (c) <u>System Test</u>: That procedure containing all adjustment specifications and tolerances required to maintain system and/or unit performance at maximum efficiency and design specifications. It shall be self-contained and may duplicate other tests. It is normally used at major maintenance periods.
 - (2) If you cannot complete a test successfully, record the indication or problem then refer to the Fault Isolation Manual.
 - (3) The Operational Test, Functional Test, and System Test may include steps to make sure that a system is operational or adjusted. These steps include references to procedures that maintenance personnel may need to do only if they have indications that the system is not serviceable or adjusted.



- (4) The operational and system tests are normally accomplished at the system level. The general paragraph at the beginning of each adjustment/test block of pages (page 501 through 599) outlines the test sequence. The functional test relates to component performance after installation and is normally contained with the component maintenance practices. The recommendation to test or not test after a maintenance action is provided at the end of the appropriate maintenance practices subtopic.
- F. Ground Tests
 - (1) Ground Tests are a special category of tests for 747-400 model airplanes. The central maintenance computer (CMC) shows a menu on the control display units (CDUs) that includes <GROUND TESTS as one of the possible selections.
 - (2) Maintenance personnel do these tests from the GROUND TEST menu for many reasons: scheduled maintenance, troubleshooting, or post-installation tests for example.
 - (3) When maintenance personnel make a selection from the GROUND TEST menu, the CMC uses the built-in-test equipment on the airplane.
 - (a) Most of these tests operate automatically.
 - (b) Some tests tell maintenance personnel to measure something or monitor something.
 - (c) Some of these tests cause components on the airplane to move.
 - (4) Refer to AMM 45-10-00/201 for instructions on how to do one of these tests.
- G. AMTOSS (Aircraft Maintenance Task-Oriented Support System)
 - (1) AMTOSS structure makes automated data retrieval easier. Procedures have the structure that is shown below:
 - 1. General
 - 2. (TASK)
 - A. General
 - B. Equipment
 - C. Consumable Materials
 - D. Parts (TOD Items only)
 - E. References
 - F. Access
 - G. (TOPIC)
 - (1) (SUB-TASK)
 - (a) Sub-step
 - (b) Sub-step
 - (c) Sub-step
 - (2) (SUB-TASK)
 - (3) (SUB-TASK)
 - (a) Sub-step

CAUTION: MAKE SURE THAT YOU DO ALL OF THE STEPS TO THE END OF THE TASK.

LARGE BLANK SPACES CAN OCCUR AT THE BOTTOM OF PAGES WHICH DO

NOT ALWAYS INDICATE THAT YOU ARE AT THE END OF THE TASK. IF
YOU DO NOT MAKE SURE THAT YOU COMPLETED THE TASK, DAMAGE TO
EQUIPMENT OR SYSTEM MALFUNCTION COULD OCCUR.

(2) TASKS are procedures for specific maintenance requirements. For example:

R/I page blocks normally contain two tasks:

- 1. Removal of the LRU
- 2. Installation of the LRU

A/T page blocks may contain three tasks:

- 1. Operational Test of the System
- 2. Functional Test of the System
- 3. System Test of the System
- (3) TOPICS are generic headings used in tasks to group sub-tasks. There are one or more topics in each task.

Example topic headings:

Prepare for the Removal

Put the Airplane Back to its Usual Condition

- (a) Less complicated procedures use the topic "Procedure."
- (4) SUB-TASKS are the major action steps in tasks.
 - (a) A sub-task refers to specific equipment. For example, "Disconnect hydraulic lines" is a sub-task.
 - (b) Separate skill requirements are put in separate sub-tasks. For example, a step involving hydraulic tubing is never combined with an action involving electrical wiring.
- (5) AMTOSS Codes
 - (a) All tasks and sub-tasks are coded with an AMTOSS Identification Code. These codes will print in the Maintenance Manual.
 - (b) Typical AMTOSS identification codes:

Task:

TASK 29-11-05-404-001-002

Install Engine Driven Pump (Fig. 401)

Sub-task:

\$874-001-002

(9) Bleed air from system

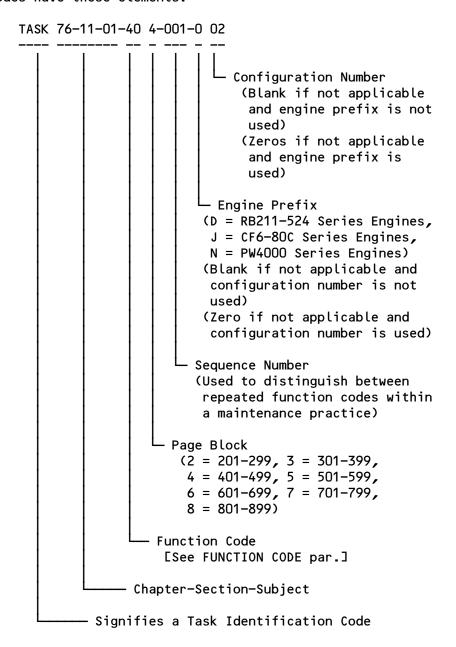
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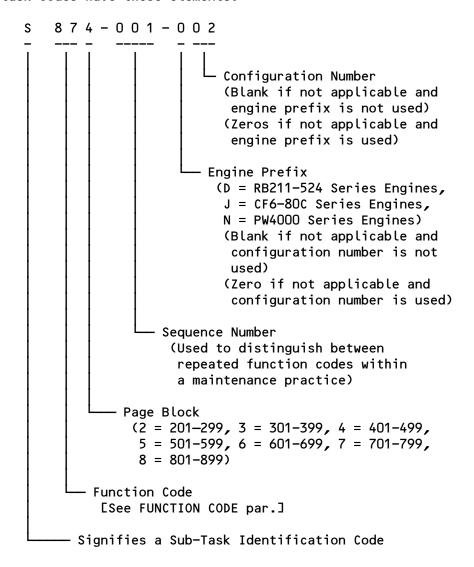


(c) Task codes have these elements:





(d) Sub-task codes have these elements:





- (e) FUNCTION CODES All tasks and sub-tasks have a function code unique to the job being performed. A list of AMTOSS Function Codes with definitions follows this Introduction.
 - Tasks normally use function codes in major categories. For example: Second digit is zero (00, 10, 20, 30, etc.)
 - Sub-tasks always use function codes ending in 1 thru 9.
- H. General
 - (1) This paragraph explains the uses, and limitations of the task.
- I. Special Tools and Equipment
 - (1) A paragraph is provided in each maintenance task to summarize all Boeing, vendor, and engine manufacturer tools and test equipment specifically designed to support the task. All entries in this heading are identified with a part number and source.
- J. Standard Tools and Equipment
 - (1) A paragraph is provided in each maintenance task to summarize all other tools and equipment not normally found in a mechanic's tool box. Examples are:
 - (a) Bonding meter
 - (b) Clean, lint-free cloth
 - (c) Container, 1 Gallon, suitable for collecting fuel
 - (d) Plywood Sheet, 48 x 24 x 1/2 in. approximately
- K. Consumable Materials
 - (1) This paragraph lists the consumable materials that are used in this task.
 - (2) Each material has a six-digit code. The first character identifies the type of material:
 - A Adhesives, Cements, Sealants
 - B Cleaners, Polishes
 - C Finishing Materials
 - D Lubricants (Oils, Greases, Dry Lubes)## E Strippers
 - F Welding Materials
 - G Miscellaneous Materials

Example: D00196 Fluid - Hydraulic, Fire-Resistant, BMS 3-11



- (3) The Boeing Spares Department provides to each airline a listing of all consumable materials used in the Maintenance Manual, Component Maintenance Manual, and Structural Repair Manual. This report is entitled "U-FILE BULK MATERIALS LIST."
- (4) Regulations sometimes make alternatives necessary. To make it easy to find a solvent, there are tables of alternative solvents in the Airplane Maintenance Manual (AMM) and the Standard Overhaul Practices Manual (SOPM). Refer to AMM 20-30-80 for these tables. The tables show the solvents, the material bulk code, and related specifications. For instructions about the tables, refer to AMM 20-30-02/201.
- L. Parts Data (Task Oriented Data (TOD))
 - (1) Task-oriented data (TOD) procedures include a cross-reference table to the Illustrated Parts Catalog (IPC). This table shows the IPC subject, figure, and item numbers for the major components.
 - (2) The table also shows expendable parts. Expendable parts are always replaced by a new part when the the expendable part is removed during the task.
- M. References
 - (1) This paragraph shows the applicable references. The list tells you the other procedures that are referenced in each task.
 - (2) The references can refer to a different manual. The page block is included when it is applicable (e.g., /301, or /501). Examples:

AMM 12-12-01/301, Hydraulic System AMM 29-11-05/501, Engine Driven Pump IPC 29-11-60 Fig. 1 SSM 29-11-01 OHM 29-11-60 CMM 29-11-11

WDM 29-11-17

AMM = Airplane Maintenance Manual

CMM = Component Maintenance Manual

FIM = Fault Isolation Manual

Abbreviations for major manuals:

IPC = Illustrated Parts Catalog

OHM = Overhaul Manual

SRM = Structural Repair Manual
SSM = System Schematics Manual

SWPM = Standard Wiring Practices Manual

WDM = Wiring Diagram Manual



N. Access

- (1) This paragraph lists the locations and access panels.
- (2) There are two sub-paragraphs:
 - (a) Location Zone
 - (b) Access Panel
- (3) Each location zone, and access panel has a three-digit code. The access panel code can also have three other characters.
- (4) Non-powerplant example:
 - (1) Location Zone

335 Left Hand Inboard Elevator

(2) Access Panel

335EBL Left Structure Access Door

Powerplant example:

(1) Location Zone

412 Engine 1 - Fan Case 4 o'clock

(2) Access Panel

414 Right Fan Cowl Panel - Engine 1

(5) Engine position is identified in clock positions standing behind the engine and looking forward.

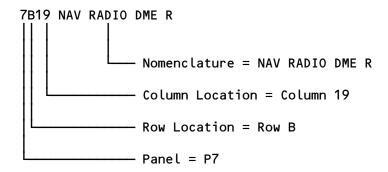
0. Preconditions

- (1) The preconditions is a list of the minimum airplane configuration requirements needed prior to test procedure initiation for successful test procedure completion. The preconditions are used for reference during a Heavy Maintenance Visit when numerous airplane systems will be in various stages of disassembly. A precondition is not a task or a command to perform an action.
- (2) A paragraph is provided in each task on the 500 page blocks to summarize all the conditions that are necessary to complete the task. The heading of this paragraph is entitled "Preconditions" and is followed by a list of all the systems, equipment and/or condition that the airplane must be before you do the task. The intent of this paragraph is to give the airlines a tool to plan the airplane maintenance for a Heavy Maintenance Visit (HMV).



P. Circuit Breakers

- (1) Circuit breaker panels P6, P7, P180, P414, and P415 have grid codes printed on the face of the panels. Circuit breaker rows are identified with alphabetical letters from bottom to top beginning with A. (Rows I, O, and Q are not used.) Columns are identified from left to right with numbers beginning with 1.
- (2) Circuit breakers on these panels are identified with a grid location followed by the circuit breaker nomenclature. A typical example is:



(a) In some cases, the same circuit breaker is at a different grid location on different airplanes. For circuit breakers that can have multiple grid locations, both grid locations are shown. For example:

180B2 or 180M9, FUELING PWR - HOT BAT

(b) The same circuit breaker can also have different nomenclature on different airplanes. For circuit breakers that have multiple nomenclatures, both are shown. For example:

180M9, FUELING LTS - HOT or FUELING PWR - HOT BAT

- Q. Torque Values
 - (1) Standard torque values for airframe maintenance tasks are included in Chapter 20 of Airplane Maintenance Manual (AMM).
 - (2) Standard torque values for electrical terminations are included in Chapter 20 Standard Wiring Practices Manual (SWPM).



- (3) Standard torque values for engine maintenance tasks are included in Chapter 70 of Airplane Maintenance Manual (AMM).
- (4) Non-standard torque values for maintenance tasks are included in the applicable installation step within the task.

5. Equivalent Tools, Fixtures and Test Equipment

- A. 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.
 - (1) 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.

6. Crew Station Nomenclature

- A. The following crew station designations have been established as standard and have been used throughout the Maintenance Manual to identify crew stations and related panels and controls.
 - (1) Captain
 - (2) First Officer
 - (3) First Observer
 - (4) Second Observer
 - (5) Cabin Attendants

7. List of Effective Pages

A. A list of effective pages is provided for each chapter and is located at the beginning of the chapter. The list can be identified by the words "Effective Pages" located in the lower right corner of the page. The pages are numbered sequentially starting with page 1.

8. <u>Table of Contents</u>

- A. Each chapter begins with a Table of Contents.
- B. All sub-sub-systems are listed with the supporting items indentured below these systems. The components are listed alphabetically by the main noun. The major entries show the chapter-section-subject number, the beginning page number, and the effectivity.
- C. Sequence of arrangement and indentation format of the table of contents is as follows:

9. Chapter Responsibilities

A. Boeing Commercial Airplanes is responsible for all chapters of this manual except chapters 1 through 4, which are reserved for individual airline use. The engine manufacturer's data has been combined with Boeing information and released on a page carrying the Boeing masthead. In all chapters, supplier components and units are covered to the extent that information is available from the suppliers.

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10. Revision Service

- A. The Maintenance Manual will be kept current by revision service. A list of effective pages will be provided with each revision. Two revision services will be used to keep the Maintenance Manual current; they are normal and temporary, and are described below.
 - (1) Normal Revision Service
 - (a) Airplane operators who have contracted continuing normal revision service for this manual receive revisions three times each year dated February 18, June 18, or October 18.
 - (b) The sections or pages which are revised will be identified on the list of effective pages by a R (Revised), A (Added), or D (Deleted).
 - (c) On each individual page the revised area is indicated by a revision bar on the left margin. Those pages which have not been technically revised, but have been reprinted due to recomposition are so indicated by a revision bar on the lower left margin opposite the page number and date.
 - (d) Each page is positively identified by a date and code number in the lower right corner. The List of Effective Pages (LEP) carries this information and is to be used as the authority for manual content.
 - (e) The date of a revised page may be earilier, same as, or later than the date of the replaced page.
 - (f) The page code is basically a two-digit number which may have a decimal and up to three numbers following. The two basic numbers (left of decimal) provide technical identification of the page. The decimal and following numbers are for Boeing internal use. Note that the decimal and additional numbers will be dropped from the LEP listing at the next revision if the page is unchanged. In that case, the page code will differ from the LEP page code (i.e., the page itself will still retain the extra digits). However, agreement of the first two digits, between LEP code and page code, assures that the page is correct for the manual.
 - (2) Temporary Revision Service
 - (a) Temporary revision service to this Maintenance Manual will be issued as necessary to alert the customer of configuration differences and to provide temporary instructions prior to the next scheduled revision. Each temporary revision will be incorporated into the manual within 120 days from date of issuance.

(b) A temporary revision will apply to one page block only and will be keyed within the manual so that it will be filed adjacent to the affected pages. Temporary revisions will not be revised. If changes are required, the temporary revision will be superseded by another one.

11. <u>Delivery of Data in Digital Format</u>

- A. The data in this manual is available in digital format on magnetic tape. These tapes are formatted in one of two formats, depending on the content of the tape. The first tape format, which is used to transmit textual information, including LEPs and Highlights is known as the Print File Format. The second format, which is used to transmit graphic data, is known as the Computer Graphic Metafile (CGM) format. A brief description of each of these two formats is presented below.
 - (1) The Print Format tape contains a standard tape header label and an EBCDIC encoded file of printer ready information. The print file contains fixed length (135 characters) records with a coded hierarchy that explains the content of each record. The major hierarchy is represented by the first character of each record as follows:

1=Manual Record 2=Document Record 3=Page Record 4=Line Record

Sub-record and other information, such as revision page dates, are identified within the major record scheme.

(2) The Computer Graphic Metafile (CGM) tape contains a standard tape header label followed by a file containing the merged representations of all of the graphics. These graphics are presented in accordance with ISO standard 8632-1987 (ANSI standard X3.122-1986). The graphic file requires that a splitter program be used which will allow individual graphics to be used.



12. <u>Customer Originated Material</u>

XXX

XXX XXX

XXX

XXX

XXX XXX

XXX

XXX

A. Customer originated material, incorporated into the manual at customer request to reflect data or procedures originated by and peculiar to that specific customer, will be permanently identified by the customer's three-letter designator in the space reserved for the revision bar. (See example to the left of this paragraph, where "XXX" represents the customer designator). In addition, the List of Effective Pages (LEP), will also identify individual pages changed by customer-originated material. Pages will be identified by a page code XXX with XXX representing the customer's three-letter designator. The Boeing Company does not assume responsibility for the validity and/or the technical accuracy of material so identified. The Boeing Company will not undertake to test or evaluate in any form the validity or the technical accuracy of the customer-originated material, and the customer shall have the sole and exclusive responsibility for the validity and accuracy of materials submitted for incorporation into the manual.

THE BOEING COMPANY HEREBY EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES, EXPRESSED OR IMPLIED, ORAL OR WRITTEN, ARISING BY LAW, COURSE OF DEALING, OR OTHERWISE, AND WITHOUT LIMITATION ALL WARRANTIES AS TO QUALITY, OPERATION, MERCHANTABILITY, FITNESS FOR ANY INTENDED PURPOSE, AND ALL OTHER CHARACTERISTICS WHATSOEVER, OF CUSTOMER-ORIGINATED MATERIAL INCORPORATED INTO THE MANUAL. THE FOREGOING DISCLAIMER SHALL ALSO APPLY TO ANY OTHER PORTION OF THE MAINTENANCE MANUAL WHICH MAY BE AFFECTED OR COMPROMISED BY SUCH CUSTOMER-ORIGINATED CHANGES.

13. List of Service Bulletins

A. A list of service bulletins which the customer has indicated they have incorporated, or will incorporate, on their airplanes is provided following the Introduction. The listing provides service bulletin number, ATA chapter(s) affected, status (S/C), incorporation date and customer engineering order number. If the SB does not affect the AMM, "NO EFFECT" will appear in place of an incorporation date. The SB number will be repeated when more than one ATA chapter is affected. The change configuration is shown on the S/C column; S indicating "Start" (dual) configuration and C indicating "Complete" or single configuration.

14. Model and Airplane Identification

A. A list of effective airplanes which provides a cross-reference tabulation of customer effectivity codes, line numbers, variable numbers, manufacturing serial numbers, and registration numbers follows the introduction. A customer effectivity code has been assigned to each airplane and is used in this manual to specify differences between airplane configurations. The code will always be preceded by the airlines three-letter designator. The variable number is assigned to each airplane during design and manufacturing and is used on the engineering drawings and the final airplane assemblies. The manufacturing serial number is the permanent identification number for the airplane and is on the identification plate on the airplane and on the airplane registration and airworthiness certificates. The registration number is the number on the tail of the airplane as required by government regulations.

INTRODUCTION

KSS



B. Certain information contained in this manual may be limited to specified airplanes or airplane models. These differences will be reflected by the use of airplane effectivity numbers or type of equipment.



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 Maintenance Manual.

KLM - Royal Dutch Airlines

Customer					
Effectivity	Line	Variable	Manufacturing	Registration	
Code	<u>No.</u>	<u>Number</u>	<u>Serial Number</u>	<u>Number</u>	
MODEL 747-406					
KLM 001	725	RT531	23999	PH-BFA	
KLM 002	732	RT532	24000	PH-BFB	
KLM 003	782	RT533	24517	PH-BFG	
KLM 004	888	RT534	25356	PH-BFL	
KLM 005	969	RT535	26372	PH-BFN	
KLM 025	735	RT001	23982	PH-BFC	
KLM 026	737	RT002	24001	PH-BFD	
KLM 027	763	RT003	24201	PH-BFE	
KLM 028	770	RT004	24202	PH-BFF	
KLM 029	783	RT005	24518	PH-BFH	
KLM 030	850	RT006	25086	PH-BFI	
KLM 031	854	RT007	25087	PH-BFK	
KLM 032	896	RT008	26373	PH-BFM	
KLM 033	938	RT009	25413	PH-BF0	
KLM 034	992	RT010	26374	PH-BFP	
KLM 035	1014	RT011	27202	PH-BFR	
KLM 036	1090	RT012	28195	PH-BFS	
KLM 037	1112	RT013	28459	PH-BFT	
KLM 038	1127	RT014	28196	PH-BFU	
KLM 039	1225	RM801	28460	PH-BFV	
KLM 040	1258	RM802	30454	PH-BFW	

INTRODUCTION

1. General

- A. The Fault Isolation Manual (FIM) contains information to aid identification, isolation and elimination of faults detected in flight and on the ground.
- B. The FIM is the companion manual to the Fault Reporting Manual (FRM) which provides a systematic method of fault identification and reporting by the flight and cabin crew.
- C. This publication was prepared by Airplane Maintenance Data Engineering of 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 747-400 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 OPERATOR HAS NOTIFIED BOEING.

OPERATORS ARE SOLELY RESPONSIBLE FOR 1) THE ACCURACY AND VALIDITY OF ALL INFORMATION FURNISHED BY THE OPERATOR OR ANY OTHER PARTY BESIDES BOEING; AND 2) ENSURING THE MAINTENANCE DOCUMENTATION THEY ARE USING IS COMPLETE AND MATCHES THE CURRENT CONFIGURATION OF THE AIRPLANE, AND FOR OPERATORS RECEIVING ACTIVE REVISION SERVICE, THAT ANY MODIFICATIONS TO THE AIRPLANE ARE PROPERLY REFLECTED IN THE MAINTENANCE INSTRUCTIONS CONTAINED IN THIS MANUAL. THE BOEING COMPANY ASSUMES NO RESPONSIBILITY IN THIS REGARD.

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.

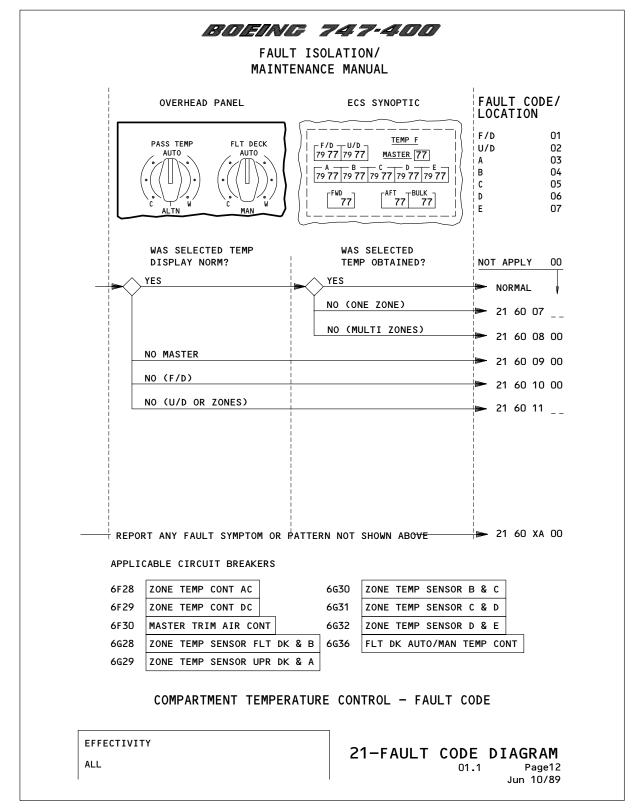
2. Use of the FIM

A. The Fault Isolation Manual data is intended to provide instructions for the isolation of any fault that is likely to occur on the airplane. It is most efficient when used in conjunction with a fault code obtained by the flight crew using the Fault Reporting Manual or the CMCS. The fault code can be sent by radio manually or by using ACARS. It is also effective if the flight crew does not use the FRM, but makes the normal logbook report entry. The FIM can also be used if a fault is detected by ground crew personnel.



- B. Use of the FIM With a Code Provided by the Flight Crew
 - When the flight crew uses the FRM or CMCS, and notifies the receiving station of the code, several time-saving activities are realized. The FRM usually requires a fault analysis process to be performed on a Fault Code Diagram (Fig. 1). If a CMCS code is sent via radio or ACARS, review of the FRM is not necessary. Sending a code eliminates the need for maintenance to obtain a code after the airplane arrives. Early reception of the code by the receiving station, before the airplane arrives, permits maintenance to preplan the necessary tasks to eliminate the fault. With a code available, the FIM material is intended to be used as follows.
 - (a) The first two digits of the code is the chapter number of the system containing the fault. If an FRM code is sent, refer to the chapter Fault Code Index and locate the desired fault code (Fig. 2). The FRM codes are listed in numerical sequence, with all chapter X-alpha codes (XA, XB, etc) listed first. If a CMCS code is sent, for chapters 21 thru 52, refer to the chapter CMCS Message Index and locate the CMCS code (Fig. 3). Codes are listed in numerical sequence. If a CMCS code is sent starting with 71 thru 80, the first two digits are not by ATA chapter; therefore, CMCS engine codes 71 thru 80 are all listed in chapter 71 for easy access.
 - (b) In the Fault Code Index, paragraph 1 usually duplicates the FRM logbook report used by the flight crew. This provides a description of the fault encountered. Paragraph 2 provides the fault isolation reference. If a fault isolation procedure is referenced, go to the specified fault isolation procedure. If a fault isolation procedure is not referenced, perform the corrective action specified, usually a component replacement. Before arrival of the airplane, obtain the components, manpower, and equipment needed.
 - (c) In the CMCS Message Index, the CMCS message and code are listed with the possible flight deck effects and the corrective actions specified. The CMCS message index tries to keep CMCS messages of the same type in a group. Spaces in the number sequence between groups permits new CMCS messages to be added to each group. Corrective actions will reference a fault isolation procedure or indicate the component to replace etc.
 - (d) The Fault Code Diagrams can be reviewed when maintenance personnel want to see how the flight crew established the fault code.
 - (e) Go to the referenced fault isolation procedure (Fig. 4). All components or actions that are necessary to eliminate the reported fault are identified in the right column of blocks. Obtain the parts, manpower and equipment before the airplane arrives to minimize airplane downtime.
 - (f) Locate the components in component location figures 1 and 2 provided in the appropriate section. From this review, determine the stands, etc. that may be necessary.
 - (g) If an understanding of the fault isolation process is needed, refer to the System Schematic Manual.





Fault Code Diagram
Figure 1

BOEING 747-400

FAULT ISOLATION/ MAINTENANCE MANUAL

FAULT CODE	 LOG BOOK REPORT FAULT ISOLATION REFERENCE
21 60 08 00	 Zones (specify zones) failed to maintain selected temp. REPLACE ZONE TEMPERATURE CONTROLLER M7913 (AMM 21-61-01/401). If fault persists, replace F/D (U/D, zone A, zone B, zone C, zone D, zone E) trim air modulation valve V450 (V451, V452, V453, V454, V455, V456) (AMM 21-61-10/401).
21 60 09 00	 Master temp failed to display selected pass temp. Replace zone temperature controller M7913 (AMM 21-61-01/401). If fault persists, replace cabin temperature control module M7329 (WDM 21-61-11).
21 60 10 00	 F/D temp failed to display selected flt deck temp. Replace zone temperature controller M7913 (AMM 21-61-01/401). If fault persists, replace cabin temperature control module M7329 (WDM 21-61-11).
21 60 11	 (02=U/D, 03=A, 04=B, 05=C, 06=D, 07=E) zone failed to display selected temp. Replace zone temperature controller M7913 (AMM 21-61-01/401). If fault persists, replace digital cabin temperature selector M7914 (WDM 21-61-91).
21 60 12 00	 EICAS message >TRIM AIR OFF (ADVISORY) displayed. Access the CMCS Present Leg Faults menu (AMM 45-10-00/201). Find the >TRIM AIR OFF prompt on the menu and determine which of the following CMCS fault message(s) appear for the prompt. If none appear, search for the fault message(s) through the NON-FDE FAULTS prompt on the menu. Perform corrective action per the FIM CMCS Message Index.
	21167 TRIM AIR PRESSURE REGULATING & SHUTOFF VALVE FAIL 21168 TRIM AIR PRESSURE SENSOR FAIL

AIR CONDITIONING - FAULT CODE INDEX

EFFECTIVITY -

ALL

21-FAULT CODE INDEX

02

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Fault Code Index Figure 2

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FAULT ISOLATION/ MAINTENANCE MANUAL

CMCS FAULT MESSAGE	FLIGHT DECK EFFECT	CORRECTIVE ACTION
21164 ZONE C AFT TEMP BULB FAIL		Replace zone C aft temp bulb T1645 (MM 21-61-03/401).
21165 ZONE D AFT TEMP BULB FAIL		Replace zone D aft temp bulb T1646 (MM 21-61-03/401).
21167 TRIM AIR PRESSURE REGULATING & SHUTOFF VALVE FAIL	TEMP ZONE (ADVISORY) >TRIM AIR OFF (ADVISORY) ZONE TEMP (STATUS)	Replace trim air pressure regulating and shutoff valve V110 (MM 21-61-08/401).
21168 TRIM AIR PRESSURE SENSOR FAIL	>TRIM AIR OFF (ADVISORY)	Replace trim air pressure sensor T1616 (MM 21-61-13/401).
21172 PACK 1 OUTLET TEMP SENSOR FAIL (PTC-B)	PACK 1 (STATUS) PACK 1 (ADVISORY)	Replace pack 1 discharge temp sensor B T1612 (MM 21-62-07/401).
21173 PACK 2 OUTLET TEMP SENSOR FAIL (PTC-B)	PACK 2 (STATUS) PACK 2 (ADVISORY)	Replace pack 2 discharge temp sensor B T1613 (MM 21-62-07/401).
21174 PACK 3 OUTLET TEMP SENSOR FAIL (PTC-B)	PACK 3 (STATUS) PACK 3 (ADVISORY)	Replace pack 3 discharge temp sensor B T1614 (MM 21-62-07/401).

AIR CONDITIONING - CMCS MESSAGE INDEX

EFFECTIVITY -----

ALL

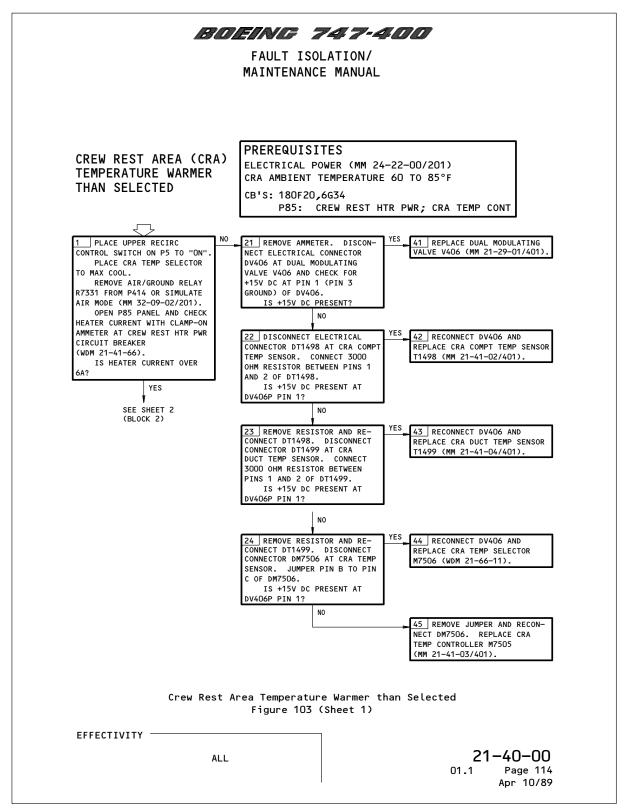
21-CMCS MESSAGE INDEX

02.1

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CMCS Message Index Figure 3





Fault Isolation Procedure Figure 4

- (h) When the airplane arrives, fault isolation and component replacement can be accomplished. Ensure that the PREREQUISITES are met, and that the noted circuit breakers are in (closed). Circuit breakers are identified by their grid location designation. Start the fault isolation process at the block identified in the Fault Code Index or CMCS Message Index. Determine the answer to the question in the block and follow the YES or NO leader to the next block. Accomplish the corrective action. Refer to the referenced Maintenance Manual (MM) or Wiring Diagram Manual (WDM) as desired for assistance. To assist in using the wiring diagram manual, each electrical component is identified with a unique electrical equipment designator (number).
- C. Use of the FIM When a Code Is Not Provided by the Flight Crew
 - (1) If the flight crew does not use the FRM, but makes a normal logbook entry, the initial maintenance task is to develop a code. Once a code has been developed, the fault isolation process is the same as given in previous paragraphs. A code can be developed as follows:
 - (2) Review the logbook entry describing the fault. If the logbook entry is for an item with electrical signals, access the CMC. For logbook entries not monitored by the CMC, use the fault code diagrams to determine a code.
 - (a) Reports Not Associated With the CMCS
 - Determine the name of the system or subsystem experiencing the fault. If the system or subsystem cannot be determined, refer to the FIM Index, at the front of the manual. Compare names in the logbook report with index entries until the appropriate chapter is identified.
 - 2) Refer to the Fault Code Diagrams at the beginning of the identified system chapter (Fig. 1). Each diagram has a descriptive title at the bottom of the page that identifies the system and/or operation covered. Review the Fault Code Diagrams and determine the diagram covering the system or subsystem operation in question. Then using information in the logbook, follow the diagram fault analysis path to arrive at a fault code.
 - 3) If the pilots' logbook report does not allow direct determination of the fault code, the actions and observations given on the fault code diagram must be performed by ground personnel. Enter the fault analysis portion of the fault code diagram at the arrow on the left margin. Perform the checks as required in each column until a code in the right column is determined.
 - 4) An alternative is to consult the system Fault Code Index (Fig. 2) at the beginning of the identified chapter until an entry is found that approximately matches the entry in the airplane logbook. Paragraph 2 of the Fault Code Index entry indicates the corrective action.
 - 5) Continue the fault isolation process as described for when the flight crew provides the code.



- (b) Reports Associated With the CMCS
 - The CMC is accessed through one of the Control Display Units (CDU) on the flight deck. Press the MENU key and then the 4L line select key opposite the <CMC; the CMC menu is then presented.
 - 2) Press the 1L line select key opposite the <PRESENT LEG FAULTS (page 1) or <EXISTING FAULTS (page 2). This presents the Present Leg Faults menu which shows all EICAS messages with FRM codes recorded during the last flight. or EXISTING FAULTS menu which lists the chapter systems with faults. For EXISTING FAULTS menu, press the line select key adjacent to the system to obtain the system CMC fault messages. An asterisk (*) indicates the fault is active.</p>
 - 3) For PESENT LEG FAULTS, press the line select key adjacent to the reported fault or NON-FDE FAULTS to obtain CMC fault messages and CMC codes.
 - 4) Go to the chapter CMCS MESSAGE INDEX, find the code, message and corresponding corrective action. For chapters 21 thru 52, the first two digits of the code is the chapter number. For CMCS codes starting with 71 thru 80, the first two digits are not by ATA chapter; therefore, the CMCS engine codes 71 thru 80 are all listed in chapter 71 for easy access.
- (3) Faults detected by the ground crew are treated in a similar manner. With the system and nature of faulty operation known, consult the index, chapter Fault Code Diagrams and Fault Code Index or the CMCS, as appropriate, for the desired information as previously described.
- (4) Refer to the Quick Reference Guide following this Introduction for specific examples of how to use the FIM.

3. FIM Content - Front Matter

- A. Index
 - (1) An alphabetical index of all subjects covered in the FIM is located at the front of the manual. The index references the chapter and section in the FIM where fault isolation for the item is located.
- B. Introduction
 - (1) The Introduction provides general information concerning the manual and its usage.
- C. Abbreviation List
 - (1) The Abbreviation List contains an explanation of the abbreviations and acronyms used in the FIM.
- D. Panel Locations
 - (1) The Panel Locations section contains the following illustrations:
 - (a) Flight/Passenger Cabin Panel Locations (Fig. 1)
 - (b) Equipment Center Rack and Panel Locations (Fig. 2)
 - (c) Ground Service Points and Panel Locations (Fig. 3)
- E. EICAS Message List
 - (1) The EICAS Message List is a complete list of all EICAS Messages for all airplane systems, with a description and a fault code for each message. The list is in alphabetical order.



4. FIM Data - Chapter Level

- A. Chapter Table of Contents
 - (1) Each chapter of the FIM, except the Power Plant chapters, contains two contents sections.
 - (a) The first, identified CONTENTS, is a text only type chapter table of contents identifying all material in the chapter.
 - (b) The second, identified FIM CONTENTS, is a combined pictorial and alphabetical contents. The pictorial presentation consists of pertinent instrument panel indications with reference arrows to the chapter/section number where related fault isolation information is located. All items are also listed in alphabetical sequence. The chapter/section numbers are provided as four-digit numbers without a hyphen; for example the chapter/section number 2120 may be read 21-20-00. The FIM contents pages for systems operated only by ground crew are identified with the word GROUND in the title and are filed after the other contents pages.
 - (2) Chapter 71 contains two contents sections.
 - (3) The first, identified CONTENTS, is a complete table of contents identifying all material in Chapter 71.
 - (a) The second, identified FIM CONTENTS, is a combined pictorial and alphabetical contents, as described above, that covers all Power Plant subjects, Chapters 71 thru 80. The remaining Power Plant chapters, 72 thru 80, each contain only a text only CONTENTS that identifies all material in the chapter.
 - (b) Except for table of contents pages for airplane systems which operate only on the ground and the FIM chapter/section numbers in lieu of page numbers, pictorial—alphabetical table of contents pages duplicate those in the Fault Reporting Manual.
- B. EICAS MESSAGES Listing
 - (1) All EICAS messages for the chapter are listed in alphabetic order. Included in the listing is the associated level of the message (warning, caution, advisory or status), a message description and an assigned fault code.
 - (2) Certain EICAS messages are information only memo messages. They are listed with an ME in the fault code. No corrective actions are required for these messages.
 - (3) The EICAS Message List at the front of the FIM is a complete list of all EICAS messages from every chapter.



- C. Fault Code Diagrams (Fig. 1)
 - (1) Fault Code Diagrams provide fault analysis and fault codes for faults that are likely to occur on the airplane. The Fault Code Diagram section covers the entire chapter/subject. The majority of diagrams duplicate those in the FRM. Additional diagrams, identified by the word GROUND in their title, are filed at the end of the other Fault Code Diagrams. They identify fault information for ground crew operated systems, such as refueling and cargo loading. Fault Code Diagrams have five areas of information.
 - (a) The upper area contains representations of the controls and indicators applicable to the subject. Questions may also appear in this area. Each element presented is at the top of a column that extends into the analysis diagram immediately below.
 - (b) The analysis diagram presents the analysis that may be followed to identify fault conditions. The analysis begins at an arrow on the left border and proceeds to the right and down. Proceeding from left to right across the page, checks and observations are made in applicable columns, until a normal condition is defined. A diamond is inserted in those columns where two or more answers relating to the indicator or control at the top of the column are possible. Other possible indications or answers are provided on lines extending down and to the right of the diamond. This process repeats until all faults likely to occur have been covered, and each fault is represented by a line that extends into the right fault code column. The bottom line of this area usually contains the statement REPORT ANY FAULT SYMPTOM OR PATTERN NOT SHOWN ABOVE. The right end of the line also extends into the fault code column.
 - (c) The column at the right side of the page has the fault identification codes. Each identified fault is assigned a fault code. This fault code is the connecting link between the fault identification analysis of the flight crew, and the fault isolation activities of the maintenance crew. A fault code contains four elements (two digits each); for example, 21 30 21 02. The first two elements 21 30 identify the FIM chapter/section where fault isolation for the problem is located. The third element, 03, represents a specific fault that is identified on a fault code diagram. In the cases of faults not shown (the bottom line on the diagram), the third element is letters instead of numbers (X-alpha codes). last element, O2 in the example, is the location code. identifies the specific item (such as left or right) that experienced the problem.

NOTE: Due to the limited number of fault codes available within a chapter/section (99) and the requirement to have codes which are unique to each engine series, for engine chapters, only the first two digits of a code agree with the chapter/section assignment where coverage for the sub-system appears.

ENGINE TYPE

710101 thru 800299	PW4000 SERIES
710301 thru 800499	GE CF6-80C2 SERIES
710501 thru 800699	RR RB211-524 SERIES

FRM CODES

- (d) Translation for the location code is found at the top of the right column. If more than one location code could be applicable to an identified fault, a double underscore (_ _) is used on the fault code diagram. If none are applicable, a 00 is used for the last two digits.
- (e) The fifth area of the Fault Code Diagram page is the circuit breaker list at the bottom of the page. Circuit breakers listed are limited to those that are located on the flight deck and associated with the particular system. Circuit breakers are identified by name and location. Location is provided by an alpha-numeric grid system which identifies the panel and vertical-horizontal position of the circuit breaker on the panel.
- (f) The alpha-numeric grid system circuit breaker location is defined by letters (for each row) and numbers (for each column) on the left edge and bottom of the circuit breaker panel. Rows begin with row A at the bottom of the panel, and are lettered sequentially to the top of the panel. Circuit breakers in each row are identified by column numbers, beginning with at the left end of the row with increasing numbers progressing to the right. A circuit breaker with an alpha-numeric location code 7B3 is located on circuit breaker panel P7, row B (second from bottom), No. 3 circuit breaker to the right of the left end.
- D. Fault Code Index (Fig. 2)
 - (1) Each chapter contains a Fault Code Index section that covers all fault codes that begin with the particular chapter's assigned chapter number. Fault codes are listed in alpha-numeric sequence. All X-alpha codes (XA, XB, etc) are listed first.
 - (2) Each code, except codes listed as not used, is followed by two paragraphs. Paragraph 1 duplicates the logbook report entry in the FRM, a reported EICAS message, or contains an explanation of what occurred on the airplane to generate the fault code. Paragraph 2 identifies the corrective action. The FIM chapter/section, figure number, and block number of a fault isolation procedure is provided, or if a fault isolation procedure is not required, the corrective action to be taken is given.



E. CMCS Message Index (Fig. 3)

- (1) The CMCS Message Index lists CMCS fault messages and numbers (code) for the chapter in numerical sequence. Possible flight deck effect EICAS messages which may be associated with the CMCS message are also listed in the second column. The far right column contains the corresponding corrective action.
- (2) When the CMCS messages are downlinked to ground stations using ACARS, only the message number is sent. For chapters 21 thru 52, the first two digits of the message number correspond to the chapter where the CMCS Message Index is located. The CMCS engine codes are unique so that faults can be identified for each engine. All CMCS engine codes are in chapter 71.

CMCS CODES	ENGINE NUMBER
71001 - 71999	1
72001 - 72999	2
73001 - 73999	3
74001 - 74999	4
75001 - 80999	1, 2, 3, or 4

5. FIM Data - Chapter/Section Level (-100 Page Blocks)

- A. Component Location Information
 - (1) Component location information is provided for all components at the system or subsystem level in a standard format. The following information is included:
 - The Component Index is a chart that alphabetically lists all line replaceable components in the system or subsystem (subject) with reference to the figure and sheet that shows the locations of the components. Components which are not part of the subject, but are operationally related, are also listed. A cross-reference is provided to the system or subsystem where the components are shown; the quantity, access and area, and a reference is provided for each component. An access number identifies the access panel or door that must be opened to get to the component. The reference identifies the maintenance manual assigned subject number for the component (normally the removal/installation procedure), or the section where additional information relative to it may be found. Circuit breakers and other electrical components are referenced to the Wiring Diagram Manual Equipment List when a maintenance manual procedure is not provided.
 - (b) The Component Location figure illustrates the access and location of components listed in the Component Index. Their physical location relative to known structural or system features is shown. Panels with circuit breakers are shown. However, the circuit breaker position is found using the alpha-numeric grid location provided in the access/area column on the Component Index.



- (2) Use of Component Location Information
 - (a) Components are listed in the Component Index in alphabetical sequence. All circuit breakers are listed under the CIRCUIT BREAKER designation. Locate the components name in the left column of the Component Index. Determine the number of components installed on the airplane by referring to the QTY column. The access door to be opened, or the area of the airplane where the component is located, is determined by referring to the ACCESS/AREA column. This information is pictorially provided in the Component Location figure.
 - (b) If detailed information is needed, such as removal/installation, refer to the Maintenance Manual section noted in the REFERENCE column. Additional information on circuit breakers and other electrical components is found in the Wiring Diagram Manual electrical equipment list (ELI).
 - (c) When the area or access noted in the Component Index has been located, use the Component Location figure to recognize and identify the component under investigation.
- B. Fault Isolation Procedures
 - (1) If fault isolation procedures are included in the page block, selected topics precede the fault isolation procedure figures.
 - (a) General paragraphs describe the content of the following data and how it should be used.
 - (b) Fault Isolation Tips paragraphs describe possible alternative actions, tools, equipment and provides suggestions which may ease the performance of the maintenance actions.
 - (c) Fault Isolation Procedures Listing provides a numeric listing of the figure titles in the section.
 - (2) Fault isolation procedures are provided to eliminate faults that require two or more checks to determine the corrective action. They are presented in a standard numbered block flow-chart format that contains appropriate actions, checks and fault correction instructions.
 - (3) To be sure that the system is ready for fault isolation, airplane preparation requirements are included under the entry PREREQUISITES at the beginning of the procedure. Any excessive time-consuming operations required during performance of the fault isolation, such as an engine runup, may also be noted.
 - (4) Action instructions and questions are contained within a rectangular block with the monitored results of the action outside of the block. The flow chart proceeds from left to right and top to bottom. The first action block is at the upper left corner of the page. Final corrective action blocks are located at the right margin of the page. Each block is identified by a different number starting with "1." All blocks in the left column are numbered first, then the middle column is numbered, and lastly, the right column is numbered. Discontinuity in the numbering exists to allow for future revision activity without the need to renumber the blocks.



- (5) Each block in the first two columns states an action or check to be made, followed by a question related to the action or check that can be answered with a "yes" or "no." Lines identified "yes" or "no" guide the user to the next action block, depending upon the answer to the question.
- (6) Each block in the right column states the corrective actions to be taken to eliminate the fault. A reference is provided to either the Maintenance Manual (MM) or Wiring Diagram Manual (WDM).
- (7) Components within the procedure are identified by their standard Maintenance Manual nomenclature and, where applicable, their electrical equipment designators. The electrical equipment designator identifies the same component on wiring and schematic diagrams.

6. FIM Procedures Standard Practices

A. The following paragraphs are intended to assist maintenance personnel in understanding the format, assumptions and phraseology used throughout the fault isolation procedures in this manual. Familiarization with these standards will assist maintenance personnel in performing efficient fault isolation corrective actions, verification and return of the airplane to service.

B. Assumptions

- (1) Circuit breakers, system configuration and operation was normal prior to the fault indication. Pilots' actions do not have to be repeated.
- (2) Multiple faults do not exist unless two or more faults are required to generate the flight deck fault indication.



(3) All systems have been shut down in accordance with Boeing Flight Operations Manual procedures:

TYPICAL SHUTDOWN LIST

Hydraulic System - SET
Fuel System - OFF
Flaps-UP
Speedbrake - DOWN
Parking Brake - OFF
Fuel Control - CUTOFF
IRS - OFF
Emergency Exit Lights - OFF
Packs - OFF
APU/External Power - OFF
Battery - OFF

NOTE: The Boeing Flight Operations Manual NORMAL CHECKLIST - SHUTDOWN procedure or any other approved procedure will have priority over the above listing.

Due to a fault in one or more systems, the airplane may be configured per one or or more of the Flight Operations Manual NONNORMAL CHECKLIST procedures. A quick observation of the above switch positions can confirm if non-normal checklist procedures were used. Fault isolation procedures may repeat the switching actions completed by the flight crew to ensure that the airplane is configured for fault isolation.

- (4) All electrical, hydraulic, pneumatic power systems are off and no ground power is applied.
- (5) All circuit breakers are closed.
- (6) The airplane logbook has been reviewed or the reported fault code logbook report has been reviewed in the FIM Fault Code Index. If an x-alpha type of code has been received, it means: review the airplane logbook for specific description of the problem since it could not be identified in the FRM.
- (7) The fault isolation procedure has been quickly reviewed to determine manpower, materials, tools, parts, test equipment and electrical, pneumatic or hydraulic carts required.
- (8) Reference pages from Maintenance Manual, Fault Isolation Manual, Wiring Diagram Manual, Systems Schematic Manual are available.
- (9) Connectors and wiring are assumed good unless in an exposed area or field experience indicates repetitive connector or wiring problems.
- (10) Any newly installed part is assumed good.
- (11) Afte corrective actions are completed, maintenance personnel will confirm that the fault indication is gone or that the problem is corrected.
- (12) The airplane will be returned to its normal shutdown configuration after maintenance actions have been completed.



C. Prerequisites

- (1) The intent of the prerequisite block in the fault isolation procedure is to configure the airplane from the normal shutdown condition to the configuration required to perform the associated fault isolation procedure.
- (2) A step which includes a reference to Electrical Power (AMM 24-22-00/201) Pneumatic Power (AMM 36-00-00/201) or Hydraulic Power (AMM 29-11-00/201) is an instruction to provide power for all systems unless otherwise stated. Either ground carts or APU may be used as specified by responsible maintenance personnel.
- (3) Due to the shutdown configuration of the airplane, certain EICAS messages will appear on the EICAS display when electrical power is applied and the airplane systems are not yet configured for normal operation. The following EICAS messages will normally be displayed prior to pre-flight:
 - (a) >ENG 1 SHUTDOWN
 - (b) >ENG 2 SHUTDOWN
 - (c) >ENG 3 SHUTDOWN
 - (d) >ENG 4 SHUTDOWN
 - (e) FUEL PUMP 2 FWD
 - (f) FUEL PUMP 2 AFT *[1] *[1] Disappears if APU is running.
 - (q) FUEL PUMP 3 FWD
 - (h) FUEL PUMP 3 AFT
 - (i) FUEL OVRD 2 FWD *[2] *[2] Disappears if the inboard main tanks are less than or equal to outboard main tanks.
 - (j) FUEL OVRD 2 AFT *[2]
 - (k) FUEL OVRD 3 FWD *[2]
 - (l) FUEL OVRD 3 AFT *[2]
 - (m) FUEL PRESS ENG 1 *[3] *[3] Disappears if No.1/No.4 X-feed valve is open (closed by parking procedure).
 - (n) FUEL PRESS ENG 4 *[3]
 - (o) FUEL OVRD CTR L *[4]
- *[4] Disappears if center tank fuel is less than 2000 lbs.
- (p) FUEL OVRD CTR R *[4]
- (q) HEAT WINDOW L *[5]
- *[5] Due to crew parking procedure (switches off).
- (r) HEAT WINDOW R *[5]
- (s) >EMER LIGHTS *[5]
- (t) >YAW DAMPER LWR *[6]
- *[6] Appears if IRS is not in the NAV mode.
- (u) YAW DAMPER UPR *[6]
- (v) >NO AUTOLAND *[6]
- (w) DOOR ENTRY L1



(x) >BRAKE SOURCE

NOTE: All of above messages may not be displayed. The EICAS Display Select Panel is on the glareshield. Press CANC button to remove messages. Press RCL button to recall messages. The messages will disappear as the systems become operational.

(4) The listing of other systems in the prerequisites block indicates that the referenced system should have all of its circuit breakers closed and be capable of operating in a normal configuration (i.e., no maintenance is being performed on the referenced system). If operation of the system is required, it will usually be stated as "APU Operating" or "Engine Operating."

NOTE: If a system needs to be turned on and a specific operational mode is required, a statement such as "Place flaps to 30 degrees" or "Place IRUs in NAV Mode" will be included within a numbered block in the fault isolation procedure.

- (5) Circuit breakers listed are only those which are part of the system which is faulty and the listing will be prefixed with CBs:. If some of the system circuit breakers must be opened (pulled out and collared), a CBs OUT: will prefix the listing and CBs IN: will prefix the listing for those circuit breakers to confirm closed.
- (6) If no electrical, pneumatic or hydraulic power or operation of other systems or special test equipment is required to perform the fault isolation procedure, the statement NONE will be listed.
- (7) Engine operation such as "Engine Idle (MM 71-00-00/201)" is listed only when absolutely necessary to perform the fault isolation. Motoring of the engine is referenced when adequate. The requirements of MM 71-00-00/201, Power Plant Maintenance Practices (Operating Procedure) must be observed when either operating or motoring the engine.
- D. Warnings, Cautions and Notes
 - (1) Warnings and cautions will precede the step within a block of the fault isolation procedure when they apply to only that step of the procedure. Warnings and cautions will be listed under the "Prerequisites" block when applicable to the whole procedure. Normal safety precautions such as removing electrical power, wearing body safety lines when in high areas or using equipment slings, etc., are to be observed at all times when performing maintenance actions which are potentially dangerous.
 - (2) Notes, when they apply to only that step of the procedure, will follow a step within a block of the fault isolation procedure.

 Notes will be listed under the "Prerequisites" block or in a convenient area on the page when applicable to the whole procedure.



E. Flag Notes

- (1) A numbered flag is used to provide reference to a flag note. The flag note can provide additional information or required steps. Usually flag notes are referenced with a numbered flag in more than one block of a fault isolation procedure. The use of flag notes prevents repetition and simplifies the fault isolation procedure.
- (2) If a figure has multiple sheets and a flag appears on more than one sheet, the flag notes will be listed on sheet one of the figure.
- (3) When the flag appears on only one sheet of the figure, the flag note will be on the same sheet.
- F. Voltage and Continuity Measurements
 - (1) Most voltage and continuity checks can be done with standard volt/ohm meters. Voltage checks are usually done at Wire Integration Unit (WIU) wire wrap pins which are readily accessible after removing the WIU protective cover. An ESDS grounding wrist strap must be worn before removing the WIU cover. High voltage and ESDS warnings are on the cover. Probing must be done with the protective pin guard covers in place (AMM 20-41-02/201).

WARNING: USE ONLY WRIST STRAPS WITH A GROUNDING LEAD RESISTANCE GREATER THAN ONE MEGOHM. INADVERTENT CONTACT BETWEEN A LOW RESISTANCE WRIST STRAP AND A HIGH VOLTAGE, IS A SHOCK HAZARD TO PERSONNEL.

- (2) The probing of electrical equipment rack ARINC 600 series connectors should only be done using a breakout box and test cables or equivalent. Rack connectors have high pin density and are very expensive. If probing is attempted, there is a high probability of accidentally shorting or damaging the connector pin receptacles. If necessary, a breakout cable can be fabricated quickly using the appropriate size connector, crimped pins and wire.
- (3) 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

M7603	Electrical Systems	G26004-23, -26
M7852	Fuel Systems	G26004-23
M7952	MAWEA	G26004-26
M0826	Fire Detection	G26004-10

(4) Splices are normally sealed and are not readily available for continuity checks. Splices are referenced only when field experience has indicated a problem, such as a poor connection due to inadequate crimping or corrosion, may exist at the splice.



- (5) Voltage checks at most relays are done after removing the relay. They are usually secured by two or three captive screws. The fault isolation procedures reference the appropriate wiring diagram or Maintenance Manual Removal/Installation procedure in the first block of any fault isolation path which requires the circuit to be checked. The following block will normally state to "Install relay." The WDM or MM reference will not be repeated until the corrective action block states to "Replace relay (WDM -- -- --)."
- (6) Since most relay installations are obvious, a WDM reference is provided whenever a Maintenance Manual procedure is not available. The same referencing technique is used for other electrical components for which a Maintenance Manual Removal/Installation procedure does not exist. The Wiring Diagram Manual reference provides a means of confirming voltages through the circuit so that appropriate circuit breakers can be opened before removing or replacing the relay. The maintenance manual will be referenced whenever a removal/installation procedure has been developed.
- (7) Standard procedures for relay connector and wiring maintenance are covered in Chapter 20 of the Wiring Diagram Manual.
- (8) When static sensitive devices are involved in a fault isolation step, a statement such as "Remove EIU (AMM 31-61-01/401)" will be provided before the check voltage statement. The Maintenance Manual Removal/Installation procedure provides specific removal steps and a reference to Chapter 20 for the handling of static sensitive devices. After the item is removed per the referenced procedures, voltage or continuity checks can be accomplished. The following fault isolation step will then state "Install EIU" and the Maintenance Manual reference will not be repeated unless the step is in another block.
- (9) Standard phrasing such as "Check and repair circuit from D123, pin 1 to D456, Pin 2" indicates that a fault of some type exists in connectors or wiring. It may be a bent pin, contamination, corrosion, open circuit or shorted circuit. Inspection of the connectors and pins should be accomplished first, followed by checks for wiring abrasion and shorted or open connections. Grounding studs and pins should be inspected closely for signs of corrosion and poor connection.
- (10) Standard handling and safety precautions must be observed when working with electrical components and circuits. Schematics or wiring diagrams should be reviewed to determine appropriate circuit breakers to open before disconnecting components. Appropriate high voltage warning placards are placed throughout the airplane.
- G. Testing After Corrective Actions are Completed
 - (1) It is assumed that after a corrective action is taken, a check will be made to confirm that the reported fault no longer exists.



- (2) When a replace unit statement is provided with a MM procedure reference, the referenced procedure will include a test to confirm that the unit is installed correctly. It may not check that the fault indication no longer exists. Maintenance personnel must determine whether the test is sufficient to satisfy their requirements. If not, an operational test may be performed to confirm that the problem is corrected. In most cases, if the fault was annunicated by EICAS, a visual check of the EICAS display to confirm that the message is no longer generated is sufficient for dispatch.
- 7. Equivalent Tools, Fixtures and Test Equipment
 - A. The tools, fixtures and test equipment listed in the manual are those recommended by The Boeing Company and the Engine Manufacturer. Airlines may substitute an equivalent tool, fixture or test equipment for those listed in the manual (except as otherwise noted) provided the substitute item is functionally interchangeable, compatible with the related procedures and equally safe from an equipment and user's standpoint.

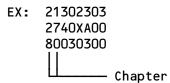


HOW TO USE - QUICK REFERENCE GUIDE

The purpose of this guide is to show line maintenance persons how to use the FIM to determine corrective maintenance actions.

When the failure report is a:

1. FRM Fault Code



A. Find the section with a title XX-FAULT CODE INDEX in the front of the applicable chapter.

EX: 21-FAULT CODE INDEX 27-FAULT CODE INDEX 80-FAULT CODE INDEX

- B. Find the FRM code in the INDEX. Codes are in numerical sequence.
- C. Correct STATUS EICAS messages first, then correct the remaining messages.

NOTE: Many higher level EICAS messages (WARNING, CAUTION, and ADVISORY) also have a STATUS message related to them. If you correct the STATUS level message, the higher level message will be corrected also.

- D. Do the corrective action.
 - (1) If you "access" the CMCS and find a CMCS message and its code XXXXX, refer to par. 2.
 - (2) If you are given a Chapter-Section-Subject, Fig. No., Block No., do as the example shows:

EX: 21-30-00, Figure 103, Block 7

- Go to 21-30-00, page block 100
- Find Figure 103
- Do the prerequisites
- Start trouble shooting at Block 7.
- (3) If you are given a step by step procedure, do the procedure.



2. <u>CMCS Message Code - XXXXX</u>

EX: 21201 CPCS CTLR-A Failure

71532 ENG-1 Right Air Data System Faults 73532 ENG-3 Right Air Data System Faults

- Chapter, except 72-80

A. Find the section with a title XX-CMCS MESSAGE INDEX in the front of the applicable chapter. Note that all message codes which begin with 7 will be found in 71-CMCS MESSAGE INDEX.

EX: 21201 in 21-CMCS Message Index 71532 in 71-CMCS Message Index

73532 in 71-CMCS Message Index

- B. Find the code in the INDEX. The codes are in numerical sequence.
- C. Do the corrective action.
 - (1) If you are given a Chapter-Section-Subject, Fig. No., Block No., do as the example shows:

EX: 21-30-00, Fig. 103, BLock 7

- Go to 21-30-00, page block 100
- Find Fig. 103
- Do the prerequisites
- Start trouble shooting at block 7.
- (2) If you are given a step-by-step procedure, do the procedure.

3. **EICAS Message**

A. Find the section with the title XX-EICAS MESSAGES in the front of the chapter which relates to the message or go to the EICAS MESSAGE LIST in in the front of this manual. (The EICAS MESSAGE LIST has a listing of all EICAS messages.) Note that all messages for power plant systems (chapters 71-80) are in 71-EICAS MESSAGES.

EX: 21-EICAS MESSAGES 27-EICAS MESSAGES 71-EICAS MESSAGES

B. Find the applicable FRM fault code. The EICAS messages are in alphabetical sequence.

EX: BLD DUCT LEAK R 36 10 05 00 ENG 1 FUEL VLV 76 05 02 00

C. With the fault code, refer to paragraph 1 in the GUIDE.



4. Log Book Reports Without Codes

- A. For logbook reports related to systems with electrical power/signals, "access" the CMC. For logbook reports not related to the CMC, refer to paragraph B below.
 - (1) On any of the flight compartment control display units (CDU), push the MENU select key. After the menu comes into view, push the line select key adjacent to CMC.
 - (2) When the CMC menu comes into view, push the line select key adjacent to PRESENT LEG FAULTS.
 - (3) After the present leg faults and related FRM codes are shown, find a fault and FRM code (if any) that has a relation to the logbook report.

NOTE: An asterisk (*) adjacent to the fault shows that the fault is active. Faults without an asterisk (*) are not active and do not appear on the EICAS status page.

- (a) If a fault and FRM code is found, push the line select key adjacent to the fault. This will show any CMC messages and codes XXXXX which caused this fault. With the CMC message code refer to par. 2 in the GUIDE.
- (4) If no fault and FRM code is found that has a relation to the logbook report, select EXISTING FAULTS or FAULT HISTORY leg-00 on the screen. Find the chapter and look for a CMCS message that is related to the logbook report.
 - (a) If a related CMCS message does not show, refer to par. B below.
 - (b) If a CMC message comes into view which has a relation to the logbook report, refer to par. 2.
- B. If the CMC does not provide a fault related to the logbook report, find the section with the title XX-FAULT CODE DIAGRAMS in the front of the applicable chapter. Note that logbook reports which have a relation to power plant systems (chapters 71-80) are found in 71-FAULT CODE DIAGRAMS.

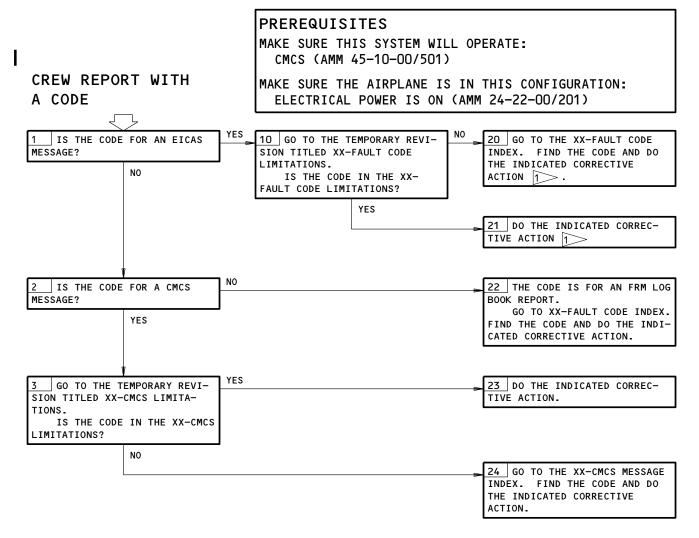
EX: 21-FAULT CODE DIAGRAMS 27-FAULT CODE DIAGRAMS 71-FAULT CODE DIAGRAMS

- C. Find the fault code diagram which best fits the logbook report. A title on each diagram tells you what type of faults are referenced on the diagram.
- D. Use data in the airplane logbook and answer the questions in the diagram to find the correct fault code. If the data is not sufficient, do the steps and checks in the diagram to find the correct fault code.



E. With the fault code, refer to par. 1.





SEE PAGE 2 OF THE XX-FAULT CODE LIMITATIONS FOR USING THE CMCS PRESENT LEG FAULTS.

SEE THE XX-CMCS LIMITATIONS TEMPORARY REVISION FOR CMCS MESSAGE CORRECTIVE ACTIONS.

IF MESSAGE IS NOT FOUND, DO THE CORRECTIVE ACTION IN XX-CMCS MESSAGE INDEX.

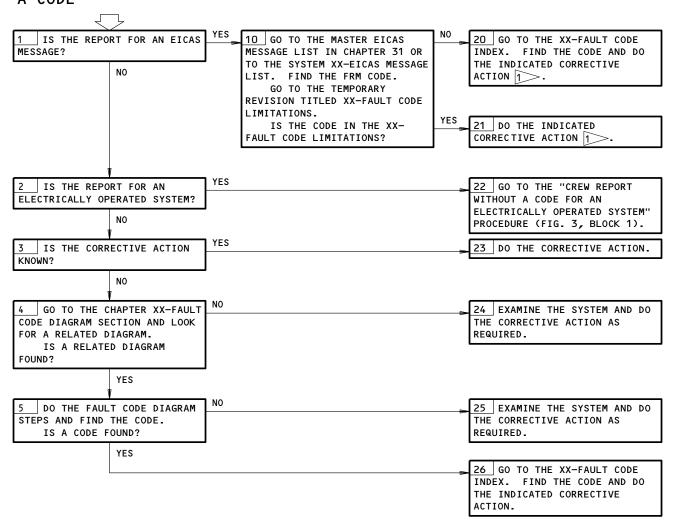
Crew Report with a Code Figure 1

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE: CMCS (AMM 45-10-00/501)

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION: ELECTRICAL POWER IS ON (AMM 24-22-00/201)

CREW REPORT WITHOUT A CODE



SEE PAGE 2 OF THE XX-FAULT CODE LIMITATIONS FOR USING THE CMCS PRESENT LEG FAULTS.

SEE THE XX-CMCS LIMITATION TEMPORARY REVISION FOR CMCS MESSAGE CORRECTIVE ACTIONS.

IF MESSAGE IS NOT FOUND, DO THE CORRECTIVE ACTION IN XX-CMCS MESSAGE INDEX.

Crew Report without a Code Figure 2

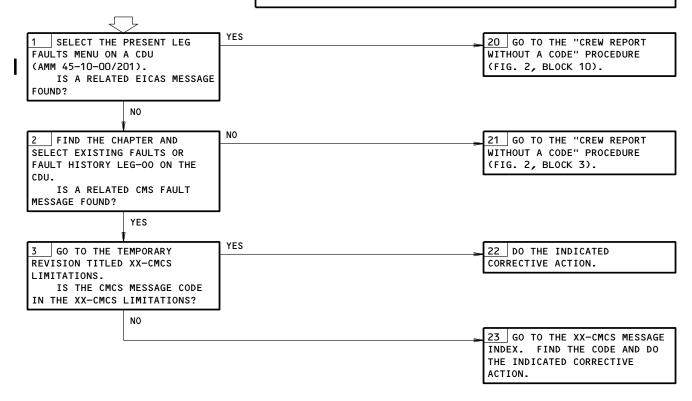


CREW REPORT WITHOUT A CODE FOR AN ELECTRICALLY OPERATED SYSTEM

PREREQUISITES

MAKE SURE THIS SYSTEM WILL OPERATE: CMCS (AMM 45-10-00/501)

MAKE SURE THE AIRPLANE IS IN THIS CONFIGURATION: ELECTRICAL POWER IS ON (AMM 24-22-00/201)



Crew Report without a Code for an Electrically Operated System Figure 3

AMTOSS FUNCTION CODES

OO REMOVAL

O1 REMOVE/OPEN FOR ACCESS

Removal or opening of access plates; opening of doors; removal or disconnection of components, structural members, tubing, or items required to provide access for performing the task.

O2 REMOVE UNIT/COMPONENT

The removal of the unit/component identified as the task, and attaching parts.

03 DISCONNECT/LOOSEN/REMOVE ITEM

Disconnecting/loosening/removal of lines, nuts, clamps, brackets, etc., attached to the component being removed required to accomplish the task. Removal of sub-task items such as light bulbs, sockets, lenses, caps, seals, bearings, screens, screws, etc. This can also include capping of lines, electrical connectors, etc.

04 DEACTIVATE

Action taken to render a system inoperable for maintenance purposes or for operation under dispatch deviations procedures.

07 ERASE ELECTRONICALLY STORED DATA

Action taken to clear the contents of an electronically accessed memory. This includes resetting a microprocessor controlled piece of equipment.

08 REMOVE TEST EQUIPMENT

Removal of any item of test equipment (pitot static tester, flight control rigging quadrant, etc.) attached to the aircraft/system/unit to indicate condition or position of systems/components.

09 REMOVE SUPPORT EQUIPMENT

Removal of any item of support equipment (fish-pole hoist, hydraulic jeep, safety locks, special tools, etc.) attached to the aircraft/system/unit to assist in performing the task/sub-task, excluding test equipment.

10 CLEANING

AMTOSS FUNCTION CODES



11 CHEMICAL

Chemical cleaning is defined as the removal of surface deposits by use of a chemical cleaning agent. Includes any combination of cleaning actions involving chemicals. Also includes preparation of materials.

12 ABRASIVE

Abrasive cleaning consists of the removal of surface deposits from a part by wet or dry particle impingement.

13 ULTRASONIC

Ultrasonic cleaning refers to the removal of surface deposits and entrapped material by use of high frequency sound waves to produce cavitation at the surface of the part. Cleaning is performed in a liquid bath that transmits the sound energy and keeps the removed material in suspension.

14 MECHANICAL

Mechanical cleaning involves the use of a brush, felt bob, or other hand (or machine) action to remove surface deposits from a part.

15 STRIPPING

Stripping consists of removal of paint or coatings by any authorized process from metallic and non-metallic surfaces.

16 MISCELLANEOUS CLEANING

Miscellaneous cleaning consists of the removal of deposits from small passages with a compressed air blast, miscellaneous hand cleaning, etc.

17 FLUSHING

Flushing of a fluid system consists of dirt or debris removal by passage of fluid through the component or system.

20 INSPECTION/CHECKS

Includes checks for wear, physical deterioration, or damage.



21 GENERAL VISUAL

A visual inspection/check is a thorough visual examination of a zone, system, subsystem, component and/or part, to a level defined by the manufacturer, to detect structural failure, deterioration, or damage; and to determine the need for corrective maintenance.

NOTE: Periodic zonal (area) inspections/checks are numbered using ATA Chapter 05 as the first element.

22 DETAILED DIMENSIONAL

A detailed/dimensional inspection/check is a comparison of the dimensions and material condition of parts, subassemblies, or assemblies with the specifications contained in technical manuals and/or blueprints, to detect deviations from established standards and limits, for the purpose of determining the need to discard or repair and/or to verify that proper corrective maintenance has been accomplished. Although some detailed/dimensional inspection/check tasks/sub-tasks may not require measurements, the complete spectrum of detailed dimensional tasks/sub-tasks requires a variety of precision measuring equipment to determine items such as runout, concentricity, flatness, parallelism, hardness, squareness, thickness, clearness, angularity, diameters, radii, depth, etc.

23 PENETRANT

This type of inspection refers to the fluorescent penetrant inspection of parts to detect surface cracks.

24 MAGNETIC

Magnetic inspection is defined as the magnetic particle inspection of parts to detect surface cracks in magnetic materials.

25 EDDY CURRENT

Eddy current inspection consists of inspecting for cracks, porosity, inclusions, or other nonhomogeneous material structure by use of high frequency electromagnetic wave equipment. Parts are scanned and compared to similar parts or test specimens having known material defects.

26 X-RAY/HOLOGRAPHIC

X-ray/holographic inspection involves inspecting for subsurface cracks, porosity, inclusions, or other nonhomogeneous material structure by passing x-ray through a part and recording an image on photographic film.

AMTOSS FUNCTION CODES



27 ULTRASONIC

Ultrasonic inspection involves inspecting for subsurface cracks, porosity, or other nonhomogeneous material structure by use of use of contact pulse echo ultrasonic techniques.

28 SPECIFIC/SPECIAL

Special inspection/checks involving processes not included in codes 21 thru 27 and 29.

29 BOROSCOPE

Boroscope inspection refers to any inspection requiring the use of boroscope equipment.

30 REPAIR

31 WELDING/BRAZING

Welding/brazing refers to the joining by fusion welding, resistance welding, spot welding, furnace brazing, torch brazing, induction brazing, soldering, electron beam welding, plasma arc welding, etc. This category includes hard facing.

32 MACHINING/REAMING/BLENDING

These consist of processing to obtain a desired shape or finish by grinding, lathe turning, boring, reaming, broaching, milling, machine drilling, machine lapping, honing, sizing, machine polishing, machine buffing, machine cutting, electrochemical machining (ECM), electrodischarge machining (EDM), roll forming, stamping, machine punching, blanking, etc.

33 COMPOSITE

Composite repair consists of repairing composite material parts by hand cutting, hand drilling, hand polishing, hand grinding, hand lapping, hand riveting, blending, cutting or routing out materials by hand, cutting and fitting patches, burring, planishing, hand sanding, hand sawing, scraping, stop drilling, hand tapping, installing helical coil inserts, heating and chilling of parts, etc.



34 FIBERGLASS/PLASTIC/HONEYCOMB/EPOXY

Consists of repairing fiberglass/plastic/honeycomb/epoxy material parts by hand cutting, hand drilling, hand polishing, hand grinding, hand lapping, hand riveting, blending, cutting or routing out materials by hand, cutting and fitting patches, burring, planishing, hand sanding, hand sawing, scraping, stop drilling, hand tapping, installing helical coil inserts, heating and chilling of parts, etc. This function code is also used to identify the joining of parts with an adhesive, cementing material or fusible material. Included are silicone rubber bonding and molding, adhesive bonding, fiberglassing, rubber molding, and curing of bonding and molding materials.

35 MISCELLANEOUS REPAIR

Miscellaneous repair consists of repairing any parts not otherwise covered herein by hand cutting, hand drilling, hand polishing, hand grinding, hand lapping, hand riveting, blending, cutting or routing out materials by hand, cutting and fitting patches, burring, planishing, hand sanding, hand sawing, scraping, stop drilling, hand tapping, installing helical coil inserts, etc.

36 LEAKAGE REPAIR

Leakage repairs consist of those activites required to eliminate a detected leakage.

37 PAINTING

Painting consists of the application of primer and/or finish coats for protection or appearance. Includes mixing and preparation of materials.

38 PLATING

Plating consists of the application of chemical plating, chromium, cadmium, etc., to build up worn surfaces or for protection or appearance.

39 SEALING

Application of sealants, fairing compounds, etc., to prevent fluid leakage, control corrosion, fill gaps, provide locking, aerodynamic smoothing, etc. Includes preparation of materials.

40 INSTALLATION

41 INSTALL/CLOSE ITEMS REMOVED/OPENED FOR ACCESS

Installation or closing of access plates, closing of doors, installation of components, structural members, tubing, or any item that was removed or opened in order to provide access for performing the task.

AMTOSS FUNCTION CODES



42 INSTALL UNIT/COMPONENT

The installation of the unit/component identified as the task, and attaching parts.

43 INSTALL ITEM/RECONNECT/TIGHTEN/SAFETY

Installation of sub-task items such as light bulbs, sockets, lenses, seals, bearings, screens, screws, etc. Reconnect/tighten/safety any lines, nuts, clamps, brackets, etc., required to be loosened/disconnected in order to perform the task. This can also include uncapping of lines, electrical connectors, etc.

44 REACTIVATE

Actions taken to restore a system to normal operation which has been previously deactivated.

47 LOAD ELECTRONICALLY STORED DATA

Action taken to enter data into an electronically accessed memory. This includes software loading and initialization of flight parameters.

48 INSTALL TEST EQUIPMENT

Installation of any item of test equipment (pitot static tester, flight control rigging quadrant, etc.) attached to the aircraft/system/unit to determine system/component condition or position.

49 INSTALL SUPPORT EQUIPMENT

Installation of any item of support equipment (fish-pole hoist, hydraulic jeep, safety locks, special tools, etc.) attached to the aircraft/system/unit to assist in performing the task/sub-task. Excludes test equipment.

50 MATERIAL HANDLING

51 SHIPPING

Shipping is defined as the movement of any item, subassembly, or assembly from the time it is packaged until it reaches its intended destination.

52 RECEIVING

Receiving is defined as the receipt activity for any incoming item, subassembly, or assembly.

AMTOSS FUNCTION CODES



53 PACKING

Packing consists of installing parts, subassemblies, components, or units in shipping containers. Includes capping of lines, installation of plugs, etc.

54 UNPACKING

Unpacking is defined as the removal of items, subassemblies, or assemblies from shipping containers. Includes removal of all protection material.

55 STORAGE

Storage is defined as the safekeeping of any item, subassembly, or assembly until required for use. May require unit servicing and special handling. Return to service is defined as the instructions necessary to prepare any item, subassembly, assembly for operation after a period of storage or to prepare the airplane for operation after mooring, parking, or a period of storage.

56 MARSHALLING

Marshalling refers to the collecting of individual parts, subassemblies, or assemblies prior to release for assembly. Positioning refers to movement from one fixed state to another.

57 ENGINE FERRY/POD MAINTENANCE

Engine ferry/pod maintenance pertains to performing necessary preparations before and after transporting an engine by aircraft ferry method.

58 AIRCRAFT HANDLING

Lifting, jacking, shoring, towing, taxing, lowering.

60 SERVICING/PRESERVING/LUBRICATING

61 SERVICING

Servicing is defined as maintenance actions required to sustain a unit or system in proper operating status. (Replenish fluids, gas charging, etc.)



62 PRESERVING

Preserving pertains to preparing an item or aircraft for safekeeping from decomposition or deterioration. This includes preparing for storage by applying a preservative layer to, and desiccants in, hardware. It also includes the prevention of microbial growth in fuel tanks, application of corrosion inhibitants, etc.

63 DEPRESERVING

Depreserving pertains to removing the preservative layer and/or desiccants from the item or aircraft in preparation for installation or operation.

64 LUBRICATING

Lubricating is defined as applying oil, grease, or dry film type lubricant on moving parts in order to reduce friction or wear, or to cool the item.

65 FUELING/DEFUELING

The adjustment of the aircraft fuel level as required to perform the task.

66 DEICING/ANTI-ICING

Ice and snow removal from parked aircraft and applications to prevent the accumulation of ice and snow.

67 DISINFECT/SANITIZE

Procedures provided for health reasons (purification of potable water, etc.).

68 DRAIN FLUID

Used when fluid must be removed during servicing or other maintenance operations.

70 TESTING/CHECKING

Includes checks which determine proper functioning of systems and components.



71 OPERATIONAL

That procedure required to ascertain only that a system or unit is operable. These tests should require no special equipment or facilities other than that installed on the aircraft and should be comparable to the tests performed by the flight crews. It is not intended in the operational test that the unit meet the specifications and tolerances ordinarily established for overhaul or major maintenance periods.

72 FUNCTIONAL

That procedure required to ascertain that a system or unit is functioning in all aspects in accordance with minimum acceptable system or unit design specifications. These tests may require supplemental ground support equipment and should be more specific and detailed than an operational test. They should contain all necessary information to perform proficiency tests to maintain system or unit reliability at an acceptable level without reference to additional documents.

73 SYSTEM

That procedure containing all adjustment specifications and tolerances required to maintain system and/or unit performance at maximum efficiency and design specifications. It shall be self-contained and may duplicate other tests. It is normally used at major maintenance periods.

74 BITE

Those checks conducted using built-in test equipment.

75 SPECIAL

Special checks such as smoke check, sniff check, audible check, etc.

76 ELECTRICAL

Electrical checks to determine continuity, voltage, resistance, etc.

78 PRESSURE

Pressure check involves the measurement of pressure or the effect of pressure, or establishing the ability of a normally pressurized component or system to operate properly.

79 LEAK

Leak check determines the ability of a component or system to operate without leaking or leaking within permissible limits. Includes specific steps such as application of leak check solution.

AMTOSS FUNCTION CODES



80-99 MISCELLANEOUS

81 FAULT ISOLATION

Fault isolation consists of the following procedures: operating the aircraft to locate the prime suspect deficient system; operating an improperly functioning system or component in order to locate the cause of malfunction; or performing a series of prescribed checks to isolate a failed part or component.

82 ADJUSTING/ALIGNING/CALIBRATING

Adjusting/aligning/calibrating consists of making a physical correction to ensure proper placement, operation, or testing of a system or component.

83 RIGGING

Rigging pertains to hooking up, arranging or adjusting cables or linkage for proper system operation.

84 PREPARE FOR ../RESTORE .. TO NORMAL

Used when separate tasks are provided for preparing for maintenance or restoring (XXX) to normal after maintenance, when these procedures are lengthy and identical for several applications. NOTE: System/Hardware identification must be included in task/sub-task title.

85 OPERATOR MODIFICATION INCORPORATION

Operator modification incorporation pertains to performing the work specified in the operator's modification. This provides for identification of modification tasks at the task level with sub-tasks recognizing any functional changes (chemical, detailed/dimensional, cleaning, etc.) necessary to incorporate the modification order.

86 AIRCRAFT/SYSTEM CONFIGURATION

Actions required to bring the aircraft/system/unit/test equipment to a prescribed condition or position using normal functions and operations (opening/closing circuit breakers or switches, positioning controls or control surfaces, calibration or operation of test equipment, pressurizing/depressurizing, raising/lowering landing gear, energizing electrical system, etc. Includes packing flexible parts into normal preoperation configuration (oxygen masks, escape slides, etc.).

87 BLEEDING

Drain fluid, operate system, etc., to remove air bubbles.

AMTOSS FUNCTION CODES



88 HEATING/COOLING

Application of heat or cooling required for removal/installation, adjustment, or testing.

90 CHANGE = REMOVE + INSTALL

<u>For control purposes</u> this function will be used to combine the O2 (Remove unit, component) and 42 (Install unit, component) codes.

91 STANDARD PRACTICES

Simple procedures encountered repeatedly during maintenance which are located in a standard practices section and referenced in other procedures to avoid repetition.

93 MARKING

Temporary or permanent markings required for part location, alignment, or identification during maintenance.

94 JOB SET-UP/CLOSE-UP

Positioning and removal of access platforms, steps, warning notices, fire extinguishers, or other items of ground support equipment; picking up foreign objects prior to engine operation; etc.

95 MASKING

Masking/unmasking required for painting, cleaning, surface protection, etc.

96 REPLACE

Used when removal and installation of small items must be combined in a single task such as relamping, seal replacement, etc. Restricted to items of a minor nature and details replaced as part of a repair task (bushings, bolts, o-rings, seals, etc.).

97 DATA RECORDING/CALCULATING

Recording of data required for monitoring, testing, adjusting, checking, etc.; and subsequent calculations.

98 MANUAL OPERATION OR POSITIONING

Manually positioning or operating a system, component, or unit which is normally powered, such as turning engine rotor, manually translating thrust reverser, etc.

AMTOSS FUNCTION CODES



A/C air conditioning, aircraft

A/D analog to digital

A/P autopilot A/S airspeed

A/T autothrottle, adjustment/test

ABNORM abnormal absolute

AC alternating current

ACARS ARINC Communications Addressing and Reporting System

ACC active clearance control

ACCEL acceleration, accelerate

ACESS advanced cabin entertainment and service system

ACM air cycle machine

ACMS aircraft condition monitoring system

ACP audio control panel

ACQ acquisition

ACS ACESS configuration system

ADC air data computer

ADF automatic direction finder

ADP air driven pump, air driven demand hydraulic pump

AEM audio entertainment multiplexer

AFDS autopilot/flight director system

AFM Airplane Flight Manual

AFOLTS automatic fire overheat logic test system

AFS autoflight system

A/G air/ground

AGB accessory gear box

AGCU auxiliary generator control unit

AGL above ground level

AIDS aircraft integrated data system

AIL aileron

ALL

ALT altitude, alternate

ALT HOLD altitude hold

EFFECTIVITY-



ALTM altimeter ALTN alternate

AM amplitude modulation

AMB ambient

AMM Airplane Maintenance Manual

AMP amperes

AMU audio management unit

ANNUNC annunciator ANT antenna

AOA angle of attack AOC air oil cooler AP autopilot

APB auxiliary power breaker

APL airplane
APP approach
APPR approach
APPROX approximately

APRT airport

APU auxiliary power unit

ARINC Aeronautical Radio Incorporated

ARPT airport

ASC aural synthesizer card ASP audio selector panel

ASSY assembly

ASYM asymmetrical

ATC air traffic control
ATE automatic test equipment

ATS ACESS test system

ATT attitude ATTND attendant

AUG augmentation
AUTO automatic
AUTO DEP auto depower
AUX auxiliary
AVAIL available

AVM airborne vibration monitor

AVS audio visual system

EFFECTIVITY-

ABBREVIATION LIST

01

ALL

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B/A bank angle B/CRS back course

B/D bottom of descent

BAL balance
BARO barometric
BAT battery
BATT battery

BCD binary coded decimal bus control unit

BFE buyer furnished equipment BFO beat frequency oscillator

BIFUR bifurcation BIT built in test

BITE built-in test equipment

BK brake
BKGRD background
BLD bleed

BLG body landing gear brake metering valve

BNR binary numerical representation

BRG bearing
BRK brake
BRKR breaker
BRKT bracket
BRT bright

BTS bus tie breaker

BTL bottle

BVA bleed valve actuator B25 2.5 bleed valve

C center

°C degrees centigrade C/B circuit breaker C/L center line

CAA Civil Aviation Authority (UK)

CAB cabin

ALL

EFFECTIVITY-



CANC cancel
CAP capture
CAPT captain
CAR cargo

CAS calibrated airspeed CB circuit breaker

CBP compressor bleed pressure cCCA central control actuator cabin configuration system

CCTM cabin configuration, test module

CCW couterclockwise

CDP compressor discharge pressure

CDU control display unit, center drive unit CDX controlled differential transformer

CFM cabin feet per minute CG center of gravity

CH channel CHAN channel CHG change

CHR chronograph CHGR charger

CIC cabin interphone controller
CIH cabin interphone handset
CIS cabin interphone system
CIT compressor inlet temperature

CK check
CKT circuit
CL close
CLB climb
CLNG cooling

CLR clear

CLS cabin lighting system

CLSD closed

CMC central maintenance computer

CMCS central maintenance computer system

CMD command

ALL

ABBREVIATION LIST

i

01



CMPTR computer

CMU central management unit

CNX cancelled company

COMM communication
COMP compressor

COMPT compartment
CON continuous
COND condition
CONF configuration
CONFIG configuration
CONN connection
CONT control

CORR correction
CP control panel

CPCS cabin pressure control system

CRF compressor rear frame

CRS course

CRT cathode ray tube

CRZ cruise

CSD constant speed drive CSM cabin service module

CTR center
CU control unit

CW

CWS control wheel steering

clockwise

D/A digital to analog

DA drift angle

DAC digital audio control
DADC digital air data computer
DATR digital audio tape reproducer

DC direct current

DCAS digital controlled audio system

DCV directional control valve

DEC decrease

DECEL decelerate, decelerated

DED dedicated DEG degree

ALL

EFFECTIVITY-



DEL delete

DEM demand, data entry modifier

DEP depressurize
DEPT departure
DEST destination
DET detector

DEV deviation

DFDAC digital flight data acquisition card

DFDR digital flight data recorder

DH decision height

DIFF difference/differential

DIR direct, director

DISC disconnect
DISCH discharge
DISCONT discontinued
DISP dispatch
DISPL display
DIST distance

DK deck

DME distance measuring equipment

DN down

DNA does not apply DNTKFX down track fix

DOT3 No. 3 sensing differential oil temperature

DPCT differential protection

DPCU digital passenger control unit

DPV directional pilot valve

DR door, drain
DTK desired track
DU display unit

EBU engine build up

ECS environmental control system ECU electronic control unit

E/D end of descent

EDP engine driven pump, engine primary hydraulic pump

E/E electrical/electronic

EFFECTIVITY-

ABBREVIATION LIST

ALL

01 Page 6 0ct 10/97



EEC electronic engine control
EES emergency evaluation signal
EFI electronic flight instruments

EFIS electronic flight instrument system

EGT exhaust gas temperature EHSV electrohydraulic servo valve

EICAS engine indicating and crew alerting system

EIU EFIS/EICAS interface unit
ELCU electrical load control unit

ELEC electrical ELECT electronic ELEV elevator

EMER emergency

EMI electromagnetic interference

EMP electromagnetic pulse

ENG engine

ENGLOC engine location

ENT entry

ENTMT entertainment

EPC external power contactor

EPCS electronic propulsion control system

EPP EEC programming plug
EPR engine pressure ratio

EPRL engine pressure ratio limit

EQUIP equipment

ERP eye reference point

ESC entertainment/service controller

ET elapsed time EVAC evacuation

EVBC engine vane & bleed control

EXCD exceedance
EXH exhaust
EXT external

ALL

EXTIN extinguish, extinguished

EXTING extinguishing

EFFECTIVITY-



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

FAA Federal Aviation Administration

FADEC full authority digital electronic engine control

FAFC full authority fuel controller

FCC flight control computer
FCE flight controls electronics

fast/slow

FCU flap control unit FD flight director

FD BK feedback

F/S

FDAU flight data acquisition unit FDEP flight data entry panel

FDH flight deck handset
FDR flight data recorder
FDS flight director system
FEXT fire extinguisher

FGN foreign FIG figure

FIM Fault Isolation Manual FIREX fire extinguisher

FJCC fuel jettison control card

FL flight level

FL CH flight level change FL CHG flight level change

FLD field FLT flight

FLT DIR flight director

FLTR filter

EFFECTIVITY-

ABBREVIATION LIST

ALL

01 Page 8 Jun 10/94



FLUOR fluorescent

FM frequency modulation

FMC flight management computer

FMCS flight management computer system

FMS flight management system

FMU fuel metering unit

FOC fuel oil cooler

FOD foreign object damage

FOD DET foreign object damage detection

FP fuel pressure FPM feet per minute

FQIS fuel quantity indicating system

FREQ frequency

FRM Fault Reporting Manual

FSEIC fuel system/EICAS interface card FSMC fuel system management card

FT feet, foot FTG fitting FWD forward

G one gravitational unit

G/S glideslope GA go around GAL gallon

GCB generator circuit breaker GCU generator control unit GCS ground clutter suppression

GE General Electric

GEN generator GLY galley

GMT Greenwich mean time

GND ground GP group

GPCT ground power current transformer

GPM gallons per minute

GPS global positioning system

GPWS ground proximity warning system

 $\begin{array}{ll} \text{GR} & \text{gear} \\ \text{GRD} & \text{ground} \end{array}$

ALL

EFFECTIVITY-



GS ground speed GTP ground test power GW gross weight

H altitude
HDG heading
HDG HOLD heading h

HDG HOLD heading hold
HDG SEL heading select
HF high frequency

HG mercury

HI high

HMU hydromechanical unit

HOR horizontal HORIZ horizontal HORZ horizon

HP high pressure HPA hecto pascal

HPC high pressure compressor
HPSOV high pressure shut off valve

HPT high pressure turbine

HR hour HT heat HTR heater

HYD hydraulic

HYDQUIM hydraulic digital quantity

HX heat exchanger

HZ hertz (cycles per second)

I-OEU inboard overhead electronic unit

I/C inspection/check
IAS indicated airspeed

ICU instrument comparator unit

IDENT identification

IDG integrated drive generator IDS integrated display system

EFFECTIVITY-

ABBREVIATION LIST

ALL



IFR instrument flight rules

IGB inlet gearbox
IGN ignition, igniter
IGV inlet guide vanes

ILLUM illuminate, illuminated
ILS instrument landing system

IM inner marker
IMBAL imbalance
IMP imperial
IN inch, inches
INBD inboard
INC incorporated

INCR increase
IND indicator
INFLT inflight
INFO information
INHB inhibit

INIT initialize, initialization

INOP inoperative
INPH interphone
INSP inspection
INST instrument
INSTR instrument

INT interphone INTLKS interlocks

INV static inverter, invalid
IP intermediate pressure
IRS inertial reference system
IRU inertial reference unit

ISA international standard atmosphere

ISLN isolation

IVSI instantaneous vertical speed indicator

JETT jettison JTSN jettison

ALL

EFFECTIVITY-



KEAS knots equivalent airspeed

KG kilogram

KGH kiligrams per hour
KHZ kilohertz (kilocycles)
KIAS knots indicated airspeed

KPA kilopascal KTS knots

KVA kilovolt-ampere

KVARS kilovars KW kilowatt

L left

L NAV lateral navigation
LAC local area controller

LAT lateral LAV lavatory LB pound

LCD liquid crystal display

LCL local

LCN load classification number

LDG landing
LDG GR landing gear
LE leading edge

LED light emitting diode

LF left front

LGW landing gross weight

LH left hand LIM limit LK lock LKD locked

LMM localizer middle marker

LN left nose

LNAV lateral navigation

LO low

LOC localizer

ALL

EFFECTIVITY-

ABBREVIATION LIST

01

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LOGO logographic

LOM localizer outer marker

LONG longitudinal

LPC loop, low pressure low pressure compressor

LPM liters per minute

LPT low pressure turbine

LR left gear

LRC long range cruise

LRRA low range radio altimeter
LRU line replaceable unit

LSB lower side band, least significant bit

LSU lavatory service unit

LT light

LVDT linear variable differential,

linear variable differential transformer

LVL level
LW left wing
LWR lower

M mach

M-SPD manual speed M/D main deck

MAC mean aerodynamic chord

MAG magnetic
MAINT maintenance
MALF malfunction
MAN manual

MASI mach airspeed indicator

MAWEA modular avionics and warning electronics assembly

MAX maximum MBS millibars

MCD magnetic chip detector MCP mode control panel

MCT maximum continuous thrust
MCU modular concept unit
MDA minimum descent altitude

MDL module

ALL

MEA minimum enroute altitude

EFFECTIVITY-



MECH mechanism
MED medium
MEM memory

MEW manufacturer's empty weight

MHZ megahertz MI miles

MIC microphone
MID middle
MIN minimum

MISC miscellaneous

MKR marker

MLS microwave landing system

MM Maintenance Manual, middle marker

MSB most significant bit

MSEC millisecond MSG message

MSL mean sea level

MSTR master

MSU mode selector unit

MT mach trim MTG miles to go

MTOW maximum takeoff weight

MTS mach trim system
MTW maximum taxi weight

MU management unit

MUX multiplex

MZFW maximum zero fuel weight

N/A not applicable N1 low pressure rotor

N2 high/intermediate pressure rotor N2C corrected high pressure rotor speed

N3 high pressure rotor

NAC nacelle NAV navigation

EFFECTIVITY-

ABBREVIATION LIST

01

ALL

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NCD no computed data ND navigation display

NEUT neutral NEG negative

NLG nose landing gear NM nautical mile(s)

NO. number NORM normal NOZ nozzle

NVM non-volatile memory

0-0EU outboard overhead electronic unit

0/C on course 0/R override 02 oxygen

OAT outside air temperature

OBS observer

OC on course

OEW operating empty weight

OFST offset

OGV outlet guide vane

0K okay

OM outer marker

OP open
OPR operate
OPRN operation
OUTBD outboard
OVBD overboard
OVHD overhead

OVHT overheat
OVPRESS overpressure
OVRD override
OVS overspeed
OVSP overspeed
OXY oxygen

EFFECTIVITY-



P pressure change (delta pressure)

P-SENSR pressure sensor
P/RST push to reset
P/S pitot/static
P2 inlet pressure
P25 HPC inlet pressure

P49 HPT exhaust pressure P5 exhaust gas pressure PA passenger address

PAC passenger address controller PALCS passenger address level

PARAM parameter

PAS passenger address system

PASS passenger

PB pushbutton, burner pressure PCA power control actuator

PCP pilot call panel

PCU passenger control unit, power control unit

PDI pictorial deviation indicator

PER performance

PES passenger entertainment system

PF pilot flying

PFD primary flight display

PG page

PGM program
PIREP pilot report
PLA power lever angle
PLI pitch limit indicator

PLT pilot

PMA permanent magnet alternator (EEC alternator)

PMG permanent magnet generator

PMP pump

PMUX propulsion multiplexer

PNF pilot not flying

PNL panel

PO outside air pressure, ambient pressure

EFFECTIVITY-

ABBREVIATION LIST

ALL



POS position POT potentiometer PPH pounds per hour

PRESS pressure
PRGM program
PRIM primary

PROC procedure
PROG progress
PROT protection
PROX proximity

PRSOV pressure regulating/shutoff valve

PRV pressure regulating valve PS3 11th stage air pressure

PSC preset course

PSEU proximity switch electronics unit

PSH preset heading

PSI pounds per square inch PSIG pounds per square inch gage

PSM power supply module
PSS passenger service system
PSU passenger service unit
PT2 engine inlet pressure

PT4.95 exhaust gas pressure

PTH pitch

PTT push to talk

PVD paravisual display
PW Pratt & Whitney

PWR power

QAD quick attach detach
QAR quick access recorder
QEC quick engine change
QFE local station pressure

QNH altimeter setting

QTY quantity

EFFECTIVITY-



R right

R/I remove/install

R/T receiver-transmitter, rate of turn radio altitude, resolution advisory

RABS reverse actuated bleed system

RAM random access memory

RCL recall

RCP radio communication panel

RCVR receiver RCDR recorder

RDDMI radio digital distance magnetic indicator

RDMI radio distance magnetic indicator

RDR radar RECD recorded

RECIRC recirculate
REF reference
REFRIG refrigeration
REG regulator
REL release
REP repellent

REPEL repellent
REQ required
RES reserve

REU remote electronics unit reverser, revision

REVR reverser

RF radio frequency

RFL reflected RH right hand

RLY relay

RMI radio magnetic indicator

RN right nose RNG range

ALL

EFFECTIVITY-

ABBREVIATION LIST

01



ROM read only memory

ROT rotation

RP reverser position

RPIG reporting

RPM revolutions per minute

RPTG reporting

RR Rolls-Royce, right rear

RST reset RSVR reservoir

RT receiver-transmitter, rate of turn

RTE route RTN return

RTO rejected takeoff

RUD rudder

RVDT rotary variable differential transducer or transformer

RVR runway visual range

RVSR reverser
RW right wing
RWY runway

S/D shutdown S/W software

SAT static air temperature SATCOM satellite communications

SB service bulletin

SCAV scavenge oil pump delta for No. 3 bearing

SCID signal collection/tail ID card

SEC second

SEL selector

SELCAL selective calling

SEN sensor SENS sensitivity SERV service

ALL

SEU seat electronic unit

SFE seller furnished equipment

EFFECTIVITY-

ABBREVIATION LIST

01

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SG symbol generator

SHRT short

SIS service interphone system

SLCTD selected SLCTR selector

sea level static thrust SLST

SOL solenoid

SOP standard option pin shut off valve SOV

SP speed SPD speed speedbrake

SPDBRK

surface position monitor SPM

SPR suppression **SPRS** suppression SQL squelch SS single shot

SSB single side band, split system breaker

System Schematics Manual, sign status matrix SSM

STA station stabilizer STAB STAT status STBY standby

STC sensitivity time control

STRG steering STRT starter

STS system status

SUP supply

SVA stator vane actuator

SVC service SW switch SYN synchronize

SYNC synchronous SYS system

EFFECTIVITY-

ABBREVIATION LIST

ALL

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T/C top of climb T/D top of descent

T/M W/A torque motor wrap around

T/0 takeoff

T/R transformer rectifier, thrust reverser

TACAN fan inlet temperature tactical air navigation

TACH tachometer

TAI thermal anti-ice
TAP total air pressure
TAS true airspeed

TAT total air temperature

TBF to be furnished TBV thrust balance vent

TC time constant

TCA terminal control area, turbine cooling air

TCAS traffic alert and collision

TCC turbine case cooling, turbine clearance control

TE trailing edge
TEMP temperature
TFUEL fuel temperature
TGB transfer gearbox

TGT target

THR thrust THROT throttle

THR REV thrust reverser

THRSH threshold THRU through

TLA thrust lever angle
TLT thrust lever travel
TMS thrust management system
TMSP thrust mode select panel

TO takeoff

ALL

TOIL oil temperature

EFFECTIVITY-



TOL tolerance
TOT total

TR-CK track check

TRA thrust lever resolver angle TRC thermatic rotor control TRF turbine rear frame

TRK track

TRU transformer rectifier unit

TT2 engine inlet temperature

TURB turbine turbulence

TVBCA turbine vane and blade cooling air

TVC turbine vane cooling

TVOR terminal vor

U/D upper deck
UNLKD unlocked
UNSHD unscheduled

ULC universal logic card

UPR upper

USB upper side band

UTC coordinated universal time

UTIL utility

V volt

V NAV vertical navigation V/S vertical speed

V1 takeoff decision speed

V2 scheduled target speed (T.O.)
VBFLO initial buffet onset speed, low

VBS vertical beam sensor VBV(S) variable bleed bypass

VEF critical engine failure speed

VERT vertical

VFR visual flight rules

VG vertical gyro

VHF very high frequency (30-300 MHZ)

VIB vibration

EFFECTIVITY-

ABBREVIATION LIST

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VLV valve

VMCG ground minimum control speed VMO maximum operating speed VNAV vertical navigation

VOL volume

VOLT voltage

VOR VHF omnidirectional range VORTAC VOR and TACAN co-located

VOX voice

VPLC valve position logic card

VR rotation speed

VREF reference speed

VSI vertical speed indicator VSV variable stator vane

VTK vertical track

VTR video tape reproducer

W warm

W/A wraparound
W/O without
W/W wheel well
WARN warning

WEU warning electronics unit

WPT waypoint

WDM Wiring Diagram Manual

WG wing WGT weight WHL wheel

WIU wire integration unit WLG wing landing gear

WS windshear
WSHLD windshield
WX weather

ALL

WXR weather radar

EFFECTIVITY-



X-FEED crossfeed
XCVR transceiver
XDCR transducer
XDUCER transducer
XFER transfer
XFMR transformer
XLINC cross link

XMISSION transmission
XMIT transmit
XMTR transmitter

XPC external power contactor

XPNDR transponder XTK cross track

XTRN DIS external discretes

Y/D yaw damper

ZFW zero fuel weight

EFFECTIVITY-

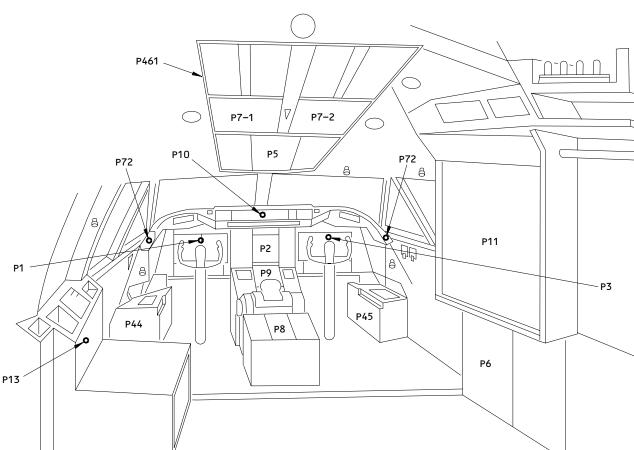
ABBREVIATION LIST

01

ALL

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FLIGHT COMPARTMENT PANELS

- P1 CAPTAIN'S MAIN INSTRUMENT PANEL
- P2 PILOTS' CENTER INSTRUMENT PANEL
- P3 FIRST OFFICER'S INSTRUMENT PANEL
- P5 PILOTS' OVERHEAD PANEL
- P6 MAIN POWER DISTRIBUTION PANEL
- P7 OVERHEAD CIRCUIT BREAKER PANEL
- P8 PILOTS' CONTROL STAND PANEL
- P9 FORWARD ELECTRICAL CONTROL PANEL
- P10 AUTOFLIGHT CONTROL PANEL
- P11 FIRST OBSERVER'S CONSOLE PANEL
- P13 SECOND OBSERVER'S CONSOLE PANEL
- P44 CAPTAIN'S AUXILIARY LOWER PANEL
- P45 FIRST OFFICER'S AUXILIARY LOWER PANEL
- P72 LIGHTSHIELD PANEL
- P461 PILOTS' OVERHEAD MAINTENANCE PANEL

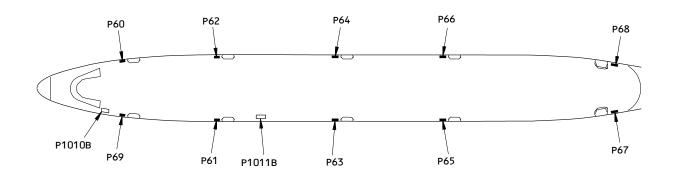
Flight/Passenger Cabin Panel Locations
Figure 1 (Sheet 1)

PANEL LOCATIONS

01

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PASSENGER COMPARTMENT PANELS

P60	ATTENDANT'S	OVERHEAD	1-R	PANEL
P61	ATTENDANT'S	OVERHEAD	2-L	PANEL
P62	ATTENDANT'S	OVERHEAD	2-R	PANEL
P63	ATTENDANT'S	OVERHEAD	3-L	PANEL
P64	ATTENDANT'S	OVERHEAD	3-R	PANEL
P65	ATTENDANT'S	OVERHEAD	4-L	PANEL
P66	ATTENDANT'S	OVERHEAD	4-R	PANEL
P67	ATTENDANT'S	OVERHEAD	5-L	PANEL
P68	ATTENDANT'S	OVERHEAD	5-R	PANEL
P69	ATTENDANT'S	OVERHEAD	1-L	PANEL
P1010B	EQUIPMENT CE	ENTER - FO	ORWAR	D PANEL
P1011B	EQUIPMENT CE	ENTER - CI	ENTER	PANEL

Flight/Passenger Cabin Panel Locations Figure 1 (Sheet 2)

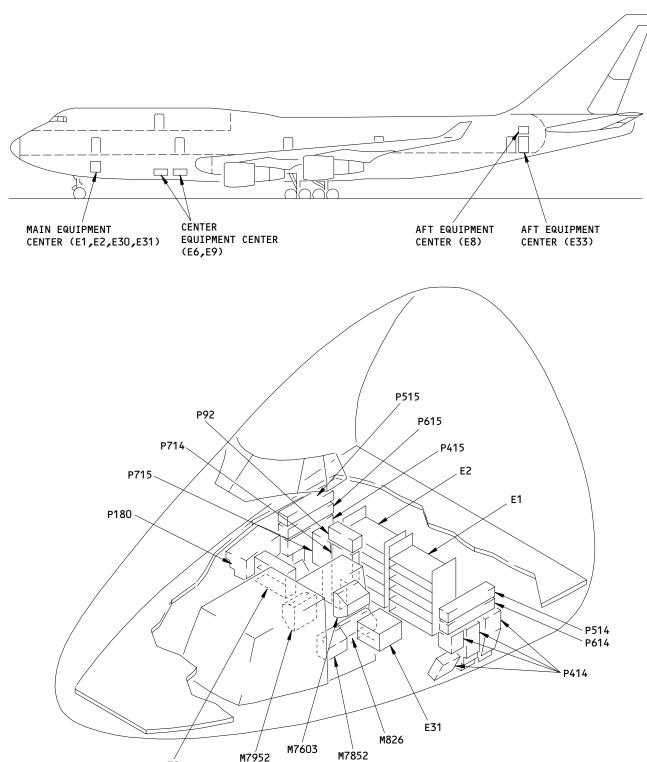
EFFECTIVITY ALL

PANEL LOCATIONS

01

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MAIN EQUIPMENT CENTER

Equipment Center Rack and Panel Locations
Figure 2 (Sheet 1)

E27787

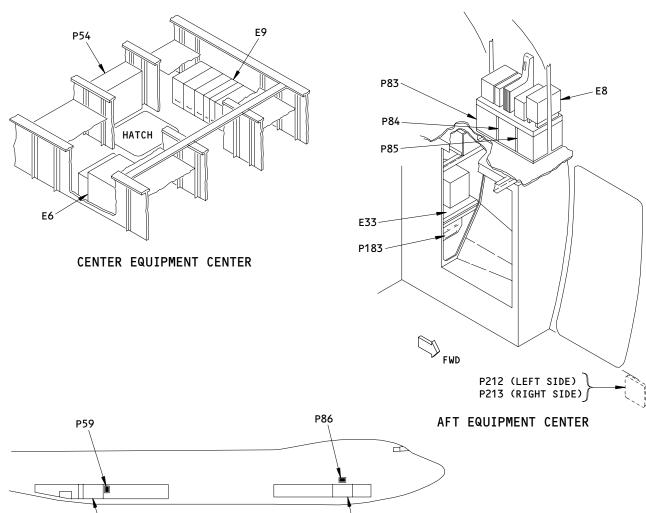
E30

PANEL LOCATIONS

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- P54 CENTER EQUIPMENT PANEL
- P59 AFT EQUIPMENT PANEL
- P83 AFT APU EQUIPMENT CONTROL AND CIRCUIT BREAKER PANEL

FORWARD CARGO DOOR

- P84 AFT CENTER MISCELLANEOUS CIRCUIT BREAKER PANEL
- P85 AFT MISCELLANEOUS CIRCUIT BREAKER PANEL
- P86 FORWARD EQUIPMENT PANEL
- P92 SPLIT SYSTEM CIRCUIT BREAKER PANEL
- P180 DC POWER DISTRIBUTION PANEL
- P183 APU/MISCELLANEOUS CIRCUIT BREAKER AFT PANEL
- P212 OUTFLOW VALVE LEFT PANEL
- P213 OUTFLOW VALVE RIGHT PANEL
- P414 POWER DISTRIBUTION CENTER LEFT PANEL
- P415 POWER DISTRIBUTION CENTER RIGHT PANEL
- P514 GENERATOR 1 POWER CENTER LEFT PANEL
- P515 GENERATOR 3 POWER CENTER RIGHT PANEL P614 GENERATOR 2 POWER CENTER LEFT PANEL
- P615 GENERATOR 4 POWER CENTER RIGHT PANEL
- P714 AUXILIARY/EXTERNAL 1 POWER CENTER LEFT PANEL
- P715 AUXILIARY/EXTERNAL 2 POWER CENTER RIGHT PANEL

Equipment Center Rack and Panel Locations
Figure 2 (Sheet 2)

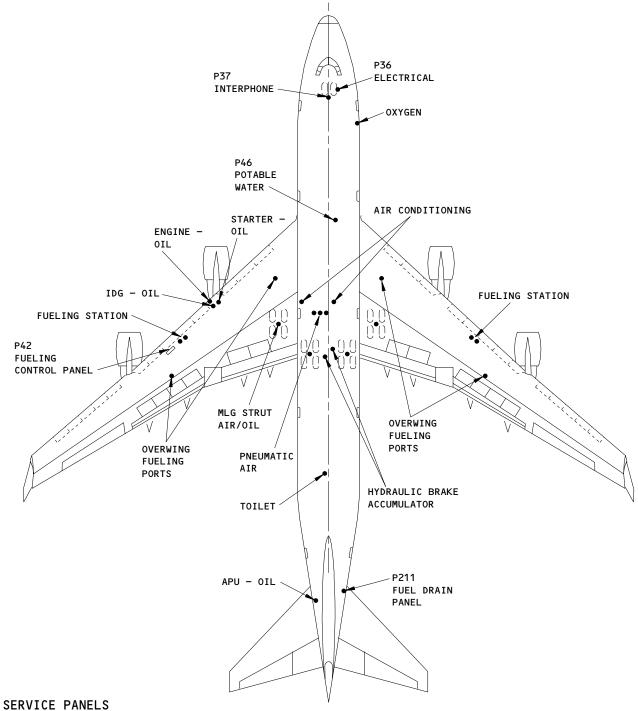
AFT CARGO DOOR

PANEL LOCATIONS

01

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- P36 EXTERNAL POWER RECEPTACLE PANEL
- P37 CONTROL PANEL NOSE WHEEL WELL
- P42 PRESSURE FUELING CONTROL PANEL
- P46 POTABLE WATER SYSTEM PANEL
- P211 HORIZONTAL STABILIZER SUMP

DRAIN CONTOL PANEL

Ground Service Points and Panel Locations Figure 3 (Sheet 1)

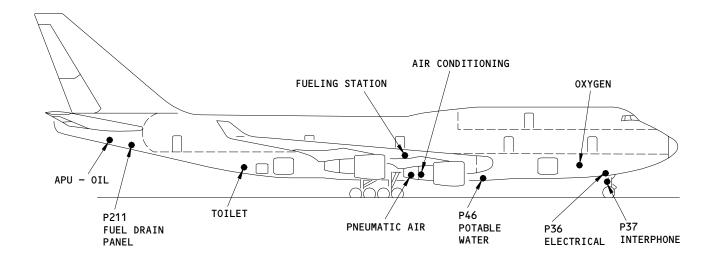
EFFECTIVITY-ALL

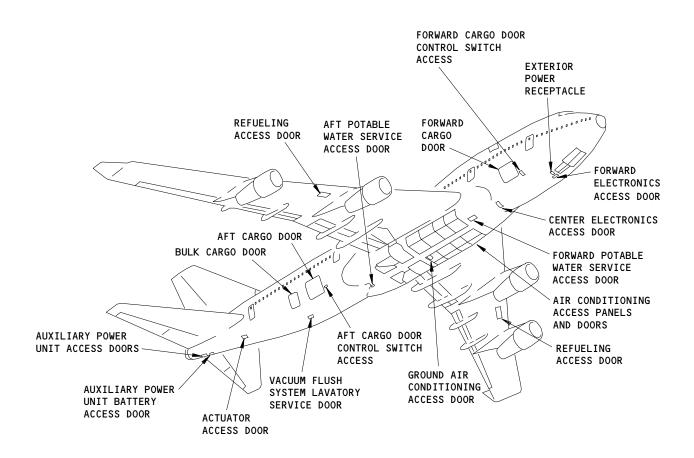
PANEL LOCATIONS

01

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Ground Service Points and Panel Locations Figure 3 (Sheet 2)

PANEL LOCATIONS

01

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E27791



LIST OF SERVICE BULLETINS

This listing is provided to advise the operator which Service Bulletins have been evaluated for manual applicability. The listing consists of: A revision bar (|) which indicates that the data shown has either been revised or added; the Service Bulletin number; the ATA Chapter affected; the configuration of the change in the manual; the date when the revision is scheduled for incorporation; and the customer engineering order. The words NO EFFECT (NO EFF) in the incorporation date column indicates that no change to the manual was necessary for that Service Bulletin. The word INCORP indicates the change to the manual was previously incorporated and no additional changes are required. The change configuration is shown in the S/C column. The S is used to indicate Start or Dual (pre and post) configuration and the C is used to indicate Complete or Final (post) configuration.

LIST OF SERVICE BULLETINS



SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
144.00//	44	•	40/40/04	
11A2O44	11	С	10/10/91	
11-2045	11	C	10/10/93	
11-2048R1	11	S	10/10/91	
11A2052	11	C	06/18/99	
11A2052R1 11-2054	11	S	02/18/00 02/15/99	
11-2054 11-2054R1	11 11	S S	02/15/99	
11-2054R1	11	S S	02/13/99	
21-2260	21	S S	06/10/90	
21-2260	31	S	06/10/90	
21-2260R1	21	C	02/10/92	
21-2260R1	31	C	02/10/92	
21-2260R1	21	S	06/10/90	
21-2260R2	31	S	06/10/90	
21-2268	21	C	06/10/94	
21-2268R1	21	S	06/10/92	
21-2268R2	21	S	10/10/97	
21-2268R3	21	S	10/10/97	
21-2275	21	C	02/10/96	
21-2276	21	·	NO EFFECT	
21-2282	21	С	06/10/94	
21-2283	21	Č	06/10/94	
21-2284	21	·	NO EFFECT	
21-2284R1	21		NO EFFECT	
21A2285	21		NO EFFECT	
21-2287	21		NO EFFECT	
21A2288	21		NO EFFECT	
21A2288R1	21		NO EFFECT	
21-2289	21	S	10/10/92	
21-2289R1	21	S	10/10/92	
21-2289R2	21	С	02/10/96	
21-2290	21		NO EFFECT	
21-2290R1	21		NO EFFECT	
21-2293	21	S	INCORP	
21-2294	21		NO EFFECT	
21-2297	21	С	06/10/94	
21-2297	25	C	06/10/94	
21-2299	21		NO EFFECT	
21-2301	21		NO EFFECT	
21-2302	21	С	10/18/99	
21-2302R1	21	С	10/18/99	
21-2302R2	21	С	10/18/99	
21-2302R3	21	S	02/10/93	
21-2302R4	21	С	06/18/99	MO 21-0394
21-2303	21	S	INCORP	
21-2304	21	S	02/10/92	
21-2315	21		NO EFFECT	
21–2316	21	С	10/10/93	

LIST OF SERVICE BULLETINS

23.1 Page 2 0ct 18/00



SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
21-2316R1 21-2318 21-2319 21-2323 21-2323R1	21 21 21 21 21	S	O2/10/93 NO EFFECT NO EFFECT NO EFFECT NO EFFECT	
21-2323R2 21-2326 21-2333 21-2337	21 21 21 21 21		NO EFFECT NO EFFECT NO EFFECT NO EFFECT	
21-2338 21-2338R1 21-2338R2	21 21 21		NO EFFECT NO EFFECT NO EFFECT	
21-2341 21-2345 21-2347 21-2347R1	21 21 21 21		NO EFFECT NO EFFECT NO EFFECT	
21-2347R2 21-2356 21-2356 21A2357	21 11 21 21	S S	NO EFFECT 02/10/94 10/10/95 NO EFFECT	
21-2360 21-2360R1 21-2363 21-2364	21 21 21 21	S	NO EFFECT 10/10/95 NO EFFECT NO EFFECT	
21-2366R1 21-2368 21-2371 21-2371R1	21 21 21 21	s c c	10/10/97 NO EFFECT 10/18/99 10/18/99	
21–2372 21A2381 21A2381R1 21–2385	21 21 21 21	S S C	02/10/96 10/10/96 10/18/99 INCORP	MO 21-0449 MO 21-1448
21-2385R1 21-2387 21-2388 21-2399	21 21 21 21	S	10/15/98 NO EFFECT NO EFFECT NO EFFECT	
21-2401 21-2403 21A2416 22-2177	21 21 21 22	S S	NO EFFECT NO EFFECT 10/18/00 06/10/91	
22-2177R1 22-2178 22-2184 22-2184R1	22 22 22 22	S S C	06/10/91 NO EFFECT 10/10/91 06/10/93	
22-2184R2 22-2184R3 22A2185 22A2185	22 22 22 31	s s	06/10/92 06/10/92 NO EFFECT INCORP	

LIST OF SERVICE BULLETINS



BULLETIN ATA S/C DATE ORDER NUMBE	<u>:R</u>
22-2193 22 S 06/10/92	
22-2216 22 NO EFFECT	
22-2216 76 S 10/10/97	
22–2210 70 3 10710797 22–2221 22 NO EFFECT	
22–2221R1 22 NO EFFECT	
23–2198 23 NO EFFECT	
23–2208 23 NO EFFECT	
23–2210 23 NO EFFECT	
23–2213 23 NO EFFECT	
23–2214 23 NO EFFECT	
23–2216 23 S 02/10/90	
23–2217 23 NO EFFECT	
23–2218 23 NO EFFECT	
23–2221 23 NO EFFECT	
23–2222 23 NO EFFECT	
23–2223 23 NO EFFECT	
23–2224 23 NO EFFECT	
23–2225 23 NO EFFECT	
23–2227 23 C 06/10/94	
23–2228 23 NO EFFECT	
23–2234 11 C 02/10/92	
23-2234 23 C 02/10/92	
23-2234 45 C 02/10/92	
23–2235 23 NO EFFECT	
23–2235 31 S INCORP	
23–2239 23 NO EFFECT	
23A2241 23 NO EFFECT	
23A2241R1 23 NO EFFECT	
23A2241R2 23 NO EFFECT	
23A2241R3 23 NO EFFECT	
23A2241R4 23 NO EFFECT	
23-2244 23 C 02/10/92	
23-2244 31 c 02/10/92	
23-2244 45 C 02/10/92	
23-2249 23 C 02/10/94	
23-2253 23 S INCORP	
23-2253 45 S 06/10/92	
23-2253R1 23 S 06/10/93	
23-2253R1 45 S 06/10/92	
23-2253R2 23 S 10/10/94	
23-2253R2 45 S INCORP	
23-2254 23 NO EFFECT	
23-2254R1 23 NO EFFECT	
23-2263 23 NO EFFECT	
23-2263R1 23 NO EFFECT	
23-2263R2 23 NO EFFECT	
23-2265 23 NO EFFECT	
23-2265R1 23 NO EFFECT	



SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
23-2266	23		NO EFFECT	
23-2269	23		NO EFFECT	
23-2270	23		NO EFFECT	
23-2272	23		NO EFFECT	
23-2274	23	S	06/10/93	
23-2274R1	23	S	06/10/93	
23-2274R2	23	S	02/10/95	
23-2274R3	23	S	02/10/95	
23-2286	23	J	NO EFFECT	
23-2289	23		NO EFFECT	
23-2293	23		NO EFFECT	
23-2297	23	С	10/15/98	
23-2300	23	_	NO EFFECT	
23-2300R1	23		NO EFFECT	
23-2300R1	45	S	10/10/93	
23-2303	23	_	NO EFFECT	
23-2306	23		NO EFFECT	
23-2306	31	S	10/10/92	
23-2306R1	23		NO EFFECT	
23-2306R1	31	S	02/10/93	
23-2311	23	С	INCORP	
23-2321	23		NO EFFECT	
23-2324	23		NO EFFECT	
23-2326R1	23	S	02/10/95	
23-2333	23		NO EFFECT	
23-2339	23		NO EFFECT	
23-2339R1	23		NO EFFECT	
23-2353	23		NO EFFECT	
23-2407	31		NO EFFECT	
23-2409	23	S	02/15/99	MO 23-0666
23-2409	31	S	INCORP	MO 23-0666
23-2409R1	23	S	02/15/99	MO 23-0666
23-2409R1	31	S	INCORP	MO 23-0666
23-2421	23		NO EFFECT	
23-2422	23		NO EFFECT	
23-2461	23	S	10/18/00	
23-2461R1	23		NO EFFECT	
23-2471	23	S	10/18/00	
24-2119	11	C	10/10/91	
24-2119	54	С	10/10/91	
24-2119	71	С	10/10/91	
24-2120	24	C	02/10/92	
24-2120R1	24	S	02/10/91	
24-2122	24	S	06/10/90	
24-2122R1	24	S	06/10/90	
24-2122R1	31	S	06/10/90	
24-2122R2	24	C	06/10/91	
24-2122R2	31	С	06/10/91	



SERVICE			INCORPORATION	CUSTOMER ENGINEERING
<u>BULLETIN</u>	<u>ATA</u>	<u>s/c</u>	<u>DATE</u>	<u>ORDER NUMBER</u>
10/ 2425	44	•	02 (40 (02	
24-2125	11	С	02/10/92	
24-2125	24	•	NO EFFECT	
24-2125	34	C	02/10/92	
24-2125R1	11	S	06/10/90	
24-2125R1	24	•	NO EFFECT	
24-2125R1	34	S	10/10/90	
24-2130	24		NO EFFECT	
24-2130R1	24		NO EFFECT	
24-2132	24		NO EFFECT	
24-2133	24	S	10/10/89	
24-2133R1	24	С	06/10/91	
24-2134R1	24		NO EFFECT	
24-2135	24		NO EFFECT	
24-2136	24		NO EFFECT	
24-2137	24		NO EFFECT	
24-2137R1	24	•	NO EFFECT	
24-2139	24	C	10/18/99	
24-2139R1	24	C	10/18/99	
24-2139R2	24	C	10/18/99	
24-2139R3	24	С	10/18/99	
24-2140	24	•	NO EFFECT	
24-2141	11	C	10/10/93	
24-2141	31	С	10/10/93	
24-2141	32	С	10/10/93	
24-2141R1	11	С	06/15/98	
24-2141R1	24	С	06/18/00	
24-2141R1	31	С	06/15/98	
24-2141R1	32	С	10/18/99	
24A2143	24		NO EFFECT	
24-2144	24	•	NO EFFECT	
24-2144	31	С	02/10/92	
24-2147	24		NO EFFECT	
24-2147R1	24		NO EFFECT	
24-2147R2	24		NO EFFECT	
24-2148	24		NO EFFECT	
24-2148R1	24		NO EFFECT	
24-2150	24	•	NO EFFECT	
24-2152 24-2152	24	C	06/18/99 06/18/00	
24-2152	24 45	C C	06/18/00	
24-2152 24-2152R1				
24-2152R1 24-2152R1	24 24	C C	02/15/99 06/18/00	
24-2152R1		C		
24-2152K1 24-2153	45 24	C	02/15/98	
24-2153 24-2153R1	24 24		NO EFFECT	
24-2155K1 24-2154	24 24		NO EFFECT NO EFFECT	
24-2154 24-2154R1	24 24		NO EFFECT	
24-215481	24 24		NO EFFECT	
124-6177	24		NO EFFECT	

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24-2156	SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION DATE	CUSTOMER ENGINEERING ORDER NUMBER
24-2156R1 23 S 06/10/92 24-2156R1 24 S 06/10/92 24-2156R2 11 C 02/15/98 24-2156R2 23 C 06/15/98 24-2156R2 23 C 06/15/98 24-2156R2 24 C 06/88/00 24-2163 24 NO EFFECT 24-2164 24 C INCORP 24-2165 24 NO EFFECT 24-2167 24 NO EFFECT 24-2168R1 24 NO EFFECT 24-2168R2 24 NO EFFECT 24-2168R2 24 NO EFFECT 24-2169R1 24 NO EFFECT 24-2169R1 24 NO EFFECT 24-2170 24 NO EFFECT 24-2170 24 NO EFFECT 24-2177 24 NO EFFECT 24-2178 24 NO EFFECT 24-2178 24 NO EFFECT 24-2178 24 NO EFFECT 24-2188 32 S 06/10/94 24-2189 11 S 10/10/93 24-2189R1 24 NO EFFECT 24-2189R3 2 C 10/18/00 CEO 70444 24-2200 24 NO EFFECT 24-220R1 24 NO EFFECT 24-2189R3 2 NO EFFECT 24-220R1 24 NO EFFECT 24-2218R1 24 NO EFFECT 24-220R1 24 NO EFFECT 24-2218R1 24 NO EFFECT	124-2156	23	S	06/10/92	
24-2156R1 23 S 06/10/92 24-2156R2 24 S 06/10/92 24-2156R2 11 C 02/15/98 24-2156R2 23 C 06/18/00 24-2156R2 24 C 06/18/00 24-21663 24 NO EFFECT 24-2165 24 NO EFFECT 24-2165R1 24 NO EFFECT 24-2165R1 24 NO EFFECT 24-2168R1 24 NO EFFECT 24A2168R2 24 NO EFFECT 24A2168R3 24 NO EFFECT 24-2169 24 NO EFFECT 24-2170 24 NO EFFECT 24-2177 24 NO EFFECT 24-2177 24 NO EFFECT 24-2178 24 NO EFFECT 24-2178R1 24 NO EFFECT 24-2178R2 24 NO EFFECT 24-2188 32 S 06/10/94 24-2189 11 S 10/10/93 24-2189R1 21 S 10/10/93 24-2189R1 21 S 10/10/97 24A2193R1 24 NO EFFECT 24-2199 24 NO EFFECT 24-2189 24 NO EFFECT 24-2189 24 NO EFFECT 24-2189R3 2 S 06/10/94 24-2189R3 2 S 06/10/94 24-2189R1 21 S 10/10/93 24-2189R1 21 S 10/10/93 24-2189R1 21 S 10/10/97 24A2193R1 24 NO EFFECT 24-2199R1 24 NO EFFECT 24-2189R3 2 C 10/18/00 CEO 70444 24-2199R1 24 NO EFFECT 24-2199R1 24 NO EFFECT 24-2189R3 2 C 10/18/00 CEO 70444 24-2200R1 24 NO EFFECT 24-220R2 24 NO EFFECT 24-220R2 24 NO EFFECT 24-220R3 24 NO EFFECT 24-220R1 24 NO EFFECT 24-220R1 24 NO EFFECT 24-220R2 24 NO EFFECT 24-220R3 24 NO EFFECT					
24-2156R1					
24-2156R2					
24-2156R2 23 C 06/18/98 24-2156R2 24 C 06/18/00 24-2163 24 NO EFFECT 24-2164 24 C INCORP 24-2165 24 NO EFFECT 24-2165R1 24 NO EFFECT 24-2167 24 NO EFFECT 24-2168 24 NO EFFECT 24A2168R1 24 NO EFFECT 24A2168R2 24 NO EFFECT 24A2168R3 24 NO EFFECT 24-2169 24 NO EFFECT 24-2170 24 NO EFFECT 24-2170 24 NO EFFECT 24-21712 24 NO EFFECT 24-2177 24 NO EFFECT 24-2178 24 NO EFFECT 24-2178 24 NO EFFECT 24-2178 24 NO EFFECT 24-2188 32 S O6/10/94 24-2189 11 S 10/10/93 24-2189R1 24 NO EFFECT 24-2218P1 24 NO EFFECT 24-2218P1 24 NO EFFECT 24-2218P1 24 NO EFFECT 24-2218P1 24 NO EFFECT 24-2200R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT 24-2218R1 24 NO EFFECT 24-2218R1 24 NO EFFECT					
24-2156R2					
24-2163					
24-21651 24 NO EFFECT 24-216571 24 NO EFFECT 24-21677 24 NO EFFECT 24-2168 24 NO EFFECT 24A21688 24 NO EFFECT 24A216881 24 NO EFFECT 24A216883 24 NO EFFECT 24-21699 24 NO EFFECT 24-2170 24 NO EFFECT 24-2177 24 NO EFFECT 24-2177 24 NO EFFECT 24-2177 24 NO EFFECT 24-21788 24 NO EFFECT 24-21788 24 NO EFFECT 24-217881 24 NO EFFECT 24-2188 32 S O6/10/94 24-2188 32 S O6/10/94 24-2189 11 S 10/10/93 24-2189 11 S 10/10/93 24-218971 24 NO EFFECT 24-2189R1 24 NO EFFECT 24-220R1 24 NO EFFECT 24-2218 24 NO EFFECT	24-2163				
24-2165R1 24 NO EFFECT 24-2167 24 NO EFFECT 24A2168 24 NO EFFECT 24A2168R1 24 NO EFFECT 24A2168R2 24 NO EFFECT 24A2168R3 24 NO EFFECT 24A2168R3 24 NO EFFECT 24-2169 24 NO EFFECT 24-2170 24 NO EFFECT 24-2177 24 NO EFFECT 24-2177 24 NO EFFECT 24-2178 24 NO EFFECT 24-2178R1 24 NO EFFECT 24-2178R2 24 NO EFFECT 24-2188 32 S O6/10/94 24-2189 11 S 10/10/93 24-22189 12 NO EFFECT 24-220R1 24 NO EFFECT 24-220R2 24 NO EFFECT 24-220R3 24 NO EFFECT 24-220R3 24 NO EFFECT 24-220R3 24 NO EFFECT 24-220R3 24 NO EFFECT 24-220R4 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2218 24 NO EFFECT	24-2164	24	С	INCORP	
24-2167	24-2165	24		NO EFFECT	
24A2168R1	24-2165R1	24		NO EFFECT	
24A2168R1 24 NO EFFECT 24A2168R2 24 NO EFFECT 24A2168R3 24 NO EFFECT 24-2169 24 NO EFFECT 24-2170 24 NO EFFECT 24-2177 24 NO EFFECT 24-2177 24 NO EFFECT 24-2178 24 NO EFFECT 24-2178R1 24 NO EFFECT 24-2178R2 24 NO EFFECT 24-218R8 32 S O6/10/94 24-2188 32 S O6/10/94 24-2189 11 S 10/10/93 24-2189 11 S 10/10/93 24-2189 11 S 10/10/93 24-2189R1 24 NO EFFECT 24-22189R1 24 NO EFFECT 24-22189R1 24 NO EFFECT 24-2218PR1 24 NO EFFECT 24-2218PR1 24 NO EFFECT 24-2218PR1 24 NO EFFECT 24-2218PR1 24 NO EFFECT 24-220R1 24 NO EFFECT	24-2167	24		NO EFFECT	
24A2168R2 24 NO EFFECT 24A2168R3 24 NO EFFECT 24-2169R1 24 NO EFFECT 24-2170 24 NO EFFECT 24-2177 24 NO EFFECT 24-2177 24 NO EFFECT 24-2178 24 NO EFFECT 24-2178R1 24 NO EFFECT 24-2178R2 24 NO EFFECT 24-2188 24 S O2/10/94 24-2188 32 S O6/10/94 24-2189 11 S 10/10/93 24-2189 11 S 10/10/93 24-2189 11 S 10/10/93 24-2189R1 11 S 10/10/93 24-2189R1 24 NO EFFECT 24-2200R1 24 NO EFFECT 24-2200R1 24 NO EFFECT 24-2200R1 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2218R1 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24A2215 24 S INCORP 24-2218 24 NO EFFECT	24A2168	24		NO EFFECT	
24A2168R3	24A2168R1	24			
24-2169	24A2168R2	24			
24-2169R1 24 NO EFFECT 24-2170 24 NO EFFECT 24-2172 24 NO EFFECT 24-2177 24 NO EFFECT 24-2178 24 NO EFFECT 24-2178 24 NO EFFECT 24-2178R1 24 NO EFFECT 24-2188 24 NO EFFECT 24-2188 32 S O6/10/94 24-2188 32 S O6/10/94 24-2189 11 S 10/10/93 24-2189 24 NO EFFECT 24-2189R1 11 S 10/10/93 24-2189R1 11 S 10/10/93 24-2189R1 24 NO EFFECT 24-2189R3 2 C 10/18/00 CEO 70444 24-2189R3 2 C 10/18/00 CEO 70444 24-2194 24 NO EFFECT 24-2200 24 NO EFFECT 24-2200R1 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2218R1 24 S INCORP 24-2218 24 NO EFFECT		24			
24-2170					
24-2172					
24-2177					
24-21781 24 NO EFFECT 24-2178 24 NO EFFECT 24-2178R1 24 NO EFFECT 24-2178R2 24 NO EFFECT 24-2188 24 S O2/10/94 24-2189 11 S 10/10/93 24-2189 24 NO EFFECT 24-2189R1 11 S 10/10/93 24-2189R1 24 NO EFFECT 24-2189R1 24 NO EFFECT 24-2189R1 24 NO EFFECT 24-2189R3 2 C 10/18/00 CEO 70444 24-2189R1 21 S 10/10/97 24A2193R1 21 S 10/10/97 24A2193R1 24 NO EFFECT 24-2200 24 NO EFFECT 24-2200R1 24 NO EFFECT 24-2200R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2218 24 NO EFFECT 24-2215 24 S INCORP 24-2218 24 NO EFFECT					
24-2178 24 NO EFFECT 24-2178R1 24 NO EFFECT 24-2178R2 24 NO EFFECT 24-2188 24 S 02/10/94 24-2188 32 S 06/10/94 24-2189 11 S 10/10/93 24-2189R1 24 NO EFFECT 24-2189R1 24 NO EFFECT 24-2189R3 2 C 10/18/00 CEO 70444 24-2193R1 21 S 10/10/97 CEO 70444 24-2193R1 24 NO EFFECT 24-22194 24 NO EFFECT 24-2200 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2214 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 N					
24-2178R1 24 NO EFFECT 24-2178R2 24 S 02/10/94 24-2188 32 S 06/10/94 24-2189 11 S 10/10/93 24-2189 24 NO EFFECT 24-2189R1 11 S 10/10/93 24-2189R1 24 NO EFFECT 24-2189R3 2 C 10/18/00 CEO 70444 24-2189R3 2 C 10/18/00 CEO 70444 24-2193R1 21 S 10/10/97 24A2193R1 21 S 10/10/97 24A2193R1 24 NO EFFECT 24-2200 24 NO EFFECT 24-2200R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2204 NO EFFECT 24-22183 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218R1 24 NO EFFECT					
24-2178R2					
24-2188					
24-2188 32 S 06/10/94 24-2189 11 S 10/10/93 24-2189 24 N0 EFFECT 24-2189R1 11 S 10/10/93 24-2189R3 2 C 10/18/00 CEO 70444 24A2193R1 21 S 10/10/97 24A2193R1 24 N0 EFFECT 24-2200 24 N0 EFFECT 24-220R1 24 N0 EFFECT 24-2201R2 24 N0 EFFECT 24-2201R3 24 N0 EFFECT 24-2202 24 N0 EFFECT 24-2202 24 N0 EFFECT 24-2202R1 24 N0 EFFECT 24-2218 24 N0 EFFECT 24-2215 24 S INCORP 24-2218 24 N0 EFFECT 24-2218 24 N0 EFFECT			•		
24-2189 11 S 10/10/93 24-2189R1 11 S 10/10/93 24-2189R1 24 NO EFFECT 24-2189R3 2 C 10/18/00 CEO 70444 24A2193R1 21 S 10/10/97 24A2193R1 24 NO EFFECT 24-2194 24 NO EFFECT 24-2200 24 NO EFFECT 24-220R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218 24 NO EFFECT					
24-2189 24 NO EFFECT 24-2189R1 11 S 10/10/93 24-2189R3 2 C 10/18/00 CEO 70444 24-2193R1 21 S 10/10/97 24A2193R1 24 NO EFFECT 24-2194 24 NO EFFECT 24-2200 24 NO EFFECT 24-220R1 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218 24 NO EFFECT					
24-2189R1 24 NO EFFECT 24-2189R3 2 C 10/18/00 CEO 70444 24A2193R1 21 S 10/10/97 24A2193R1 24 NO EFFECT 24-2194 24 NO EFFECT 24-2200 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT			S		
24-2189R1 24 NO EFFECT 24-2189R3 2 C 10/18/00 CEO 70444 24A2193R1 21 S 10/10/97 24A2193R1 24 NO EFFECT 24-2194 24 NO EFFECT 24-2200 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT			•		
24-2189R3 2 C 10/18/00 CEO 70444 24A2193R1 21 S 10/10/97 24A2193R1 24 NO EFFECT 24-2194 24 NO EFFECT 24-2200 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT		= =	5		
24A2193R1 21 S 10/10/97 24A2193R1 24 NO EFFECT 24-2194 24 NO EFFECT 24-2200 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT			^		CEO 70///
24A2193R1 24 NO EFFECT 24-2194 24 NO EFFECT 24-2200 24 NO EFFECT 24-2200R1 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT					CEO 70444
24-2194 24 NO EFFECT 24-2200 24 NO EFFECT 24-2200R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT			3		
24-2200 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT					
24-2200R1 24 NO EFFECT 24-2201R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT					
24-2201R1 24 NO EFFECT 24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT					
24-2201R2 24 NO EFFECT 24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT					
24-2201R3 24 NO EFFECT 24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 MO 24-0411 24A2214R1 24 C 10/18/00 MO 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT					
24-2202 24 NO EFFECT 24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 M0 24-0411 24A2214R1 24 C 10/18/00 M0 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT					
24-2202R1 24 NO EFFECT 24A2214 24 C 10/18/00 M0 24-0411 24A2214R1 24 C 10/18/00 M0 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT					
24A2214 24 C 10/18/00 M0 24-0411 24A2214R1 24 C 10/18/00 M0 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT					
24A2214R1 24 C 10/18/00 M0 24-0411 24-2215 24 S INCORP 24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT			С		MO 24-0411
24-2215					
24-2218 24 NO EFFECT 24-2218R1 24 NO EFFECT					
24-2218R1 24 NO EFFECT					
		24			
	24-2218R2	24		NO EFFECT	

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SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION DATE	CUSTOMER ENGINEERING ORDER NUMBER
DOLLLIIN	ΔΙΔ	<u>37 C</u>	DATE	ORDER NOMBER
124-2220	24	S	06/18/00	
24-2226	24	S	02/15/99	
24-2226R1	24	S	02/18/00	
24A2227	24	3	NO EFFECT	
24A2227R1	24		NO EFFECT	
24A2227R2	24		NO EFFECT	
24A2227R3	24		NO EFFECT	
24-2229	24	S	10/18/99	
24-2229R1	24	S	10/18/99	
25-2802	25	C	INCORP	
25-2802R1	25	S	INCORP	
25-2807	25	3	NO EFFECT	
25-2807R1	25		NO EFFECT	
25-2807R2	25		NO EFFECT	
25-2809	25		NO EFFECT	
25-2815	25		NO EFFECT	
25A2817	25	С	INCORP	
25-2819	25	C	NO EFFECT	
25-2819R1	25		NO EFFECT	
25A2824	25	С	06/10/91	
25-2826	25	C	NO EFFECT	
25A2831	25		NO EFFECT	
25-2836	11	S	10/10/91	
25-2836	25	S	INCORP	
25-2836R1	11	S	10/10/91	
25-2836R1	25	S	INCORP	
25-2840	25	3	NO EFFECT	
25-2845	25	С	10/18/99	
25-2845R1	25	C	10/18/99	
25A2847	25	S	06/10/90	
25A2847R1	25	S	06/10/90	
25-2848	25	3	NO EFFECT	
25-2849	11	С	10/10/93	
25-2849	25	C	NO EFFECT	
25-2850	25		NO EFFECT	
25-2851	25	S	10/10/91	
25-2851R1	25	C	10/10/91	
25-2851R1 25-2851R2	25	S	10/10/93	
25-2853	25	3	NO EFFECT	
25-2853R1	25		NO EFFECT	
25-2853R2	25		NO EFFECT	
25-2853R3	25		NO EFFECT	
25-2857	25		NO EFFECT	
25A2859	25		NO EFFECT	
25A2862	25		NO EFFECT	
25A2862R1	25		NO EFFECT	
25A2862R1	25		NO EFFECT	
25-2863	25		NO EFFECT	
1-7 - 2003	2)		NO LITECT	

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SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION DATE	CUSTOMER ENGINEERING ORDER NUMBER
DULLLIIN	AIA	<u>37 C</u>	DAIL	ORDER NOMBER
25-2864	25		NO EFFECT	
25-2867	25		NO EFFECT	
25-2871	25		NO EFFECT	
25-2871	38	С	02/10/94	
25-2871R1	25	·	NO EFFECT	
25-2871R1	38	S	06/10/91	
25-2874	25	·	NO EFFECT	
25-2874R1	25		NO EFFECT	
25-2874R2	25		NO EFFECT	
25-2883	25		NO EFFECT	
25-2884	11	С	06/10/94	
25-2884	25	C	06/10/94	
25-2885	25	S	INCORP	
25-2885	52	S	INCORP	
25-2885R1	25	S	INCORP	
25-2885R1	52	S	INCORP	
25-2885R2	25	S	INCORP	
25-2885R2	52	S	INCORP	
25-2885R3	25	S	INCORP	
25-2885R3	52	S	INCORP	
25A2889	25		NO EFFECT	
25A2889R1	25		NO EFFECT	
25A2889R2	25		NO EFFECT	
25-2892	25		NO EFFECT	
25-2894	25	С	06/18/99	
25A2897	25	S	10/10/91	
25A2897R1	25	S	10/10/91	
25A2897R1	52	S	10/10/91	
25A2897R2	25	S	10/10/91	
25A2897R2	52	S	10/10/91	
25A2897R3	25	S	10/10/91	
25A2897R3	52	S	10/10/91	
25-2901	25		NO EFFECT	
25-2903	11	S	06/10/92	
25-2903	25		NO EFFECT	
25-2906	25	S	INCORP	
25-2914	25		NO EFFECT	
25-2919	25	_	NO EFFECT	
25A2927	25	S	INCORP	
25A2927	52	S	INCORP	
25A2927R1	25	S	INCORP	
25A2927R1	52 25	S	INCORP	
25-2931	25 25		NO EFFECT	
25-2931R1	25 25		NO EFFECT	
25-2931R2	25 25		NO EFFECT	
25-2948 25-2949	25 11	c	NO EFFECT	
25-2949 25-2949	11 25	S	06/10/93 NO EFFECT	
167-6343	25		NO EFFECT	



SERVICE BULLETIN	<u> ATA</u>	<u>s/c</u>	INCORPORATION DATE	CUSTOMER ENGINEERING ORDER NUMBER
25-2953	25		NO EFFECT	
25-2953R1	25		NO EFFECT	
25-2953R2	25		NO EFFECT	
25-2953R3	25		NO EFFECT	
25-2959	25		NO EFFECT	
25-2959R1	25		NO EFFECT	
25-2962	25		NO EFFECT	
25-2962R1	25		NO EFFECT	
25-2964	25		NO EFFECT	
25-2970	25		NO EFFECT	
25-2979	25		NO EFFECT	
25-2993	25		NO EFFECT	
25-3015	25		NO EFFECT	
25-3022	25		NO EFFECT	
25-3028	25		NO EFFECT	
25-3032R1	25		NO EFFECT	
25A3052	25	S	INCORP	
25A3052R1	25	S	INCORP	
25A3056	25	С	06/18/99	
25A3056R1	25	S	INCORP	
25-3060	25		NO EFFECT	
25-3061	25	S	INCORP	
25A3064	25	C	10/18/00	MO 25-2941
25-3080	25		NO EFFECT	
25-3080R1	25		NO EFFECT	
25-3080R2	25		NO EFFECT	
25A3096	25		NO EFFECT	
25-3111R1	25		NO EFFECT	
25A3116	11	S	10/10/97	
25A3116	25		NO EFFECT	
25A3116R1	11	S	10/10/97	
25A3116R1	25	S	NO EFFECT	
25A3116R2	11	S	02/18/01	
25A3117	11	S	06/15/98	
25A3117	25	S	10/10/97	
25A3117R1	11	S	06/15/98	
25A3117R1	25	S	10/10/97	
25A3117R2	11	S	06/15/98	
25A3117R2	25	S	10/10/97	
25A3117R3	11	S	10/18/00	
25A3117R3	25	S	10/18/00	
25-3128	25	S	10/10/97	
25-3128R1	25	S	06/18/99	
25A3137	25	С	10/18/00	CEO 71899
25A3137R1	25	С	10/18/00	CEO 71899
25A3137R2	25	S	06/10/97	
25A3137R3	25	C	10/18/00	CEO 71899
25A3142R1	25	S	06/15/98	

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	SERVICE			INCORPORATION	CUSTOMER ENGINEERING
	BULLETIN	<u>ATA</u>	<u>s/c</u>	<u>DATE</u>	ORDER NUMBER
	25 74//	25		NO 55555	
	25-3166	25		NO EFFECT	
	25-3166R1	25		NO EFFECT	
	25A3182	25		NO EFFECT	
	25-3187	25	S	10/18/99	
ı	25-3187	31 25	S	10/18/99	
	25A3187R1	25	S	10/18/99	
ı	25A3187R1	31 25	S	10/18/99	
	25-3197 25-340384	25		NO EFFECT	
	25-3197R1	25		NO EFFECT	
	25-3197R2	25		NO EFFECT	
	25A3211	25		NO EFFECT	
ı	25-3212	25		NO EFFECT	
ı	25A3213	25 25		NO EFFECT	
ı	25-3220	25 25		NO EFFECT	
ı	25-3232	25 25		NO EFFECT	
	25-3253	25 25	•	NO EFFECT	
ı	25-3254 26-2132	25 26	S	10/18/00	
ı	26-2132R1			NO EFFECT NO EFFECT	
	26-2135	26 31	С	06/10/91	
ı	26-2135	49	C	06/10/91	
	26-2135R1	49 31	S	02/10/90	
ı	26-2135R1	49	S	02/10/90	
ı	26-2135R2	49 31	S	02/10/90	
	26-2135R2	49	S	02/10/90	
	26-2135R3	24	S	06/10/91	
	26-2135R3	31	S	02/10/90	
ı	26-2135R3	49	S	02/10/90	
	26-2138	26	S	06/10/90	
	26-2138R1	26	C	02/10/94	
	26-2141	26	S	10/10/90	
ı	26-2141R1	26	C	06/10/93	
	26-2141R2	26	S	10/10/90	
	26-2142	26	·	NO EFFECT	
	26-2142R1	26		NO EFFECT	
	26-2143	11	S	10/10/91	
	26-2143	26	S	10/10/91	
ı	26-2143R1	11	S	02/10/92	
1	26-2143R1	26	S	10/10/91	
	26-2143R1	26	S	02/10/92	
	26-2143R2	11	С	02/10/96	
	26-2143R2	26	C	02/10/96	
	26-2143R3	11	S	02/10/92	
	26-2143R3	26	S	10/10/91	
	26-2143R3	26	S	02/10/92	
	26-2143R4	11	S	02/10/92	
	26-2143R4	26	S	10/10/91	
	26-2143R4	26	S	02/10/92	



SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
26-2147	26	С	02/15/99	MO 26-0117
26-2147	31	Č	02/15/99	MO 26-0117
26-2147R1	26	Č	02/15/99	110 20 0111
26-2147R1	31	C	02/15/99	
26-2152R1	26	C	06/15/98	
26-2154	26	·	NO EFFECT	
26-2157	26	С	06/15/98	
26-2157	36	Č	02/15/98	
26-2157R1	26	Š	02/10/92	
26-2157R1	36	S	02/10/92	
26-2157R2	26	S	02/10/92	
26-2157R2	36	S	02/10/92	
26-2158	26	·	NO EFFECT	
26-2158R1	26	S	10/10/91	
26-2168	26	Ū	NO EFFECT	
26-2168R1	26		NO EFFECT	
26-2168R2	26		NO EFFECT	
26-2168R3	26		NO EFFECT	
26A2170	26		NO EFFECT	
26A2170R1	26		NO EFFECT	
26A2170R2	26		NO EFFECT	
26A2171	26	С	02/10/92	
26A2171R1	26	S	02/10/91	
26A2171R2	26	S	10/10/91	
26-2174	26	C	10/10/95	
26A2179	26	·	NO EFFECT	
26A2179R1	26		NO EFFECT	
26A2179R2	26		NO EFFECT	
26A2180	26		NO EFFECT	
26-2180R1	26		NO EFFECT	
26-2184	26	С	02/10/96	
26-2184R1	26	S	10/10/94	
26-2184R2	26	S	10/10/94	
26-2184R3	26	S	10/10/94	
26-2187	26		NO EFFECT	
26-2187R1	26		NO EFFECT	
26-2187R2	26		NO EFFECT	
26-2188	26		NO EFFECT	
26-2188	71		NO EFFECT	
26-2188R1	26		NO EFFECT	
26-2188R1	71		NO EFFECT	
26-2188R2	26		NO EFFECT	
26-2188R2	71		NO EFFECT	
26-2189	26		NO EFFECT	
26-2189	71		NO EFFECT	
26-2189R1	26	S	02/10/95	
26A2191	26		NO EFFECT	
26A2191R1	26		NO EFFECT	
-				



SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
	ATA 26 26 26 26 26 26 26 26 26 26 27 11 26 26 27 11 26 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28	<u>s/c</u> ccc ccccccccccccss s		
26-2258 27-2275R1	26 27	S	NO EFFECT 06/10/90	
27-2280	27	3	NO EFFECT	
27-2280R1 27-2280R2	27 27		NO EFFECT NO EFFECT	
27-2280R3	27		NO EFFECT	
27-2284	27	S	06/10/90	
27-2287 27-2287R1	27 27		NO EFFECT NO EFFECT	



SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION DATE	CUSTOMER ENGINEERING ORDER NUMBER
_				
27-2287R2	27		NO EFFECT	
27-2289	27		NO EFFECT	
27-2293	27	S	06/10/91	
27-2293R1	27	S	06/10/91	
27-2293R2	27	S	06/10/91	
27-2299	27		NO EFFECT	
27-2301	27		NO EFFECT	
27-2301	34	C	10/10/95	
27-2301R1	27		NO EFFECT	
27-2301R1	34	S	02/10/91	
27-2304	27		NO EFFECT	
27-2304R1	27		NO EFFECT	
27-2307	27		NO EFFECT	
27-2309	27		NO EFFECT	
27-2314	27		NO EFFECT	
27-2314	31	S	02/10/91	
27-2314R1	27		NO EFFECT	
27-2314R1	31	S	02/10/91	
27-2317	27		NO EFFECT	
27-2317R1	27		NO EFFECT	
27-2319	27		NO EFFECT	
27-2321	27	S	06/10/92	
27-2323	27		NO EFFECT	
27-2324	27		NO EFFECT	
27-2326	27	S	06/10/95	
27-2329	27		NO EFFECT	
27-2330	27		NO EFFECT	
27-2330R1	27		NO EFFECT	
27-2332	27		NO EFFECT	
27-2333	27		NO EFFECT	
27-2339	27		NO EFFECT	
27-2339R1	27		NO EFFECT	
27-2339R2	27		NO EFFECT	
27-2339R3	27		NO EFFECT	
27-2341	27		NO EFFECT	
27-2341R1	27		NO EFFECT	
27-2344	27	С	10/10/95	
27-2345	12	S	10/10/95	
27-2345	27		NO EFFECT	
27-2345R1	12	S	10/10/95	
27-2345R1	27		NO EFFECT	
27A2346	27	S	02/10/95	
27A2346R1	27	С	10/10/95	
27-2346R2	27	С	06/18/99	MO 27-0455
27A2348	27		NO EFFECT	
27A2348R1	27		NO EFFECT	
27-2349	27	S	10/10/95	
27-2351R2	27		NO EFFECT	

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SERVICE			INCORPORATION	CUSTOMER ENGINEERING
BULLETIN	<u>ATA</u>	s/c	<u>DATE</u>	ORDER NUMBER
27A2356	27		NO EFFECT	
27A2356	76	S	02/10/97	
27A2356	78	S	02/10/97	
27A2356R1	27		NO EFFECT	
27A2356R1	76	S	02/10/97	
27A2356R1	78	S	02/10/97	
27-2359	27		NO EFFECT	
27A2364	27		NO EFFECT	
27A2364R1	27		NO EFFECT	
27-2365	27	S	10/18/99	
27-2365R1	27	S	10/18/99	
27-2366	27		NO EFFECT	
27-2367	27		NO EFFECT	
27-2367R1	27		NO EFFECT	
27A2368R2	27		NO EFFECT	
27A2373	27	S	10/18/99	
27-2374	27		NO EFFECT	
27-2375	27		NO EFFECT	
27A2376	27	S	10/18/99	
27-2377	27		NO EFFECT	
27A2378	27		NO EFFECT	
27-2379	27		NO EFFECT	
28-2123	28	С	06/10/93	
28-2123	31	С	06/10/93	
28-2123R1	28	S	INCORP	
28-2123R1	31	S	02/10/90	
28-2132	28		NO EFFECT	
28-2134R1	28	S	INCORP	
28-2136	11	С	10/10/93	
28-2136	28		NO EFFECT	
28-2137	28		NO EFFECT	
28-2138	11	С	10/10/93	
28-2138	28		NO EFFECT	
28-2138	31	С	10/10/93	
28-2139	28		NO EFFECT	
28-2140	28	С	06/10/94	
28-2141	28		NO EFFECT	
28A2142	28		NO EFFECT	
28-2144	28		NO EFFECT	
28-2144R1	28		NO EFFECT	
28-2147	28		NO EFFECT	
28-2147R1	28		NO EFFECT	
28-2148	12	S	06/10/92	
28-2148	28	S	06/10/92	
28-2148R1	12	С	02/10/96	
28-2148R1	28	С	02/10/96	
28-2151	28		NO EFFECT	
28-2153	28		NO EFFECT	



SERVICE			INCORPORATION	CUSTOMER ENGINEERING
BULLETIN	<u>ATA</u>	<u>s/c</u>	<u>DATE</u>	ORDER NUMBER
28-2153R1	28		NO EFFECT	
28-2154	28		NO EFFECT	
28-2154R1	28		NO EFFECT	
28-2155	12	С	02/10/96	
28-2155	27	C	02/10/96	
28-2155	28	C	02/10/96	
28-2155R1	12	S	02/10/98	
28-2155R1	28	S	02/10/93	
28-2158	28	C	INCORP	
28-2158R1	28	S	06/10/92	
28-2161	28	3		
28-2161R1	28		NO EFFECT	
28A2163	28		NO EFFECT	
28A2165	28		NO EFFECT	
			NO EFFECT	
28A2165R1	28		NO EFFECT	
28-2170	28	•	NO EFFECT	
28-2173	28	S C	02/10/95	MA 28 0472
28-2173R1 28-2175	28	C	10/18/99	MO 28-0132
	28	•	NO EFFECT	MO 38 0130
28-2182	12	C	06/18/99	MO 28-0129
28-2182R1	12	S	INCORP	
28A2185	28	S	06/10/95	
28A2185R1	28	С	10/18/99	
28A2186	28		NO EFFECT	
28-2187	28		NO EFFECT	
28A2194	28		NO EFFECT	
28A2194R1	28		NO EFFECT	
28A2199	28		NO EFFECT	
28A2199R1	28		NO EFFECT	
28A2199R2	28		NO EFFECT	
28-2201	28		NO EFFECT	
28-2203	28	•	NO EFFECT	
28A2204R1	28	S	10/15/98	
28-2205	28		NO EFFECT	
28-2205R1	28		NO EFFECT	
28-2205R2	28		NO EFFECT	
28A2206	28		NO EFFECT	
28A2209	28		NO EFFECT	
28A2209R1	28	•	NO EFFECT	
28A2210	28	S	INCORP	
28-2211	28	•	NO EFFECT	050 75045
28A2212	28	C	10/18/00	CEO 75815
28A2212R1	28	C	10/18/00	CEO 75815
28A2212R2	28	С	10/18/00	CEO 75815
28A2212R3	28		NO EFFECT	
28-2214	28		NO EFFECT	25050
28A2215	28	C	INCORP	CEO 75852
28A2215R1	28	С	10/18/99	

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SERVICE	A T A	s/c	INCORPORATION	CUSTOMER ENGINEERING ORDER NUMBER
BULLETIN	<u>ATA</u>	<u>s/c</u>	<u>DATE</u>	ORDER NUMBER
28-2217	28	S	02/18/00	
28-2222	28	·	NO EFFECT	
28-2225	28		NO EFFECT	
28-2225R1	28		NO EFFECT	
28-2225R2	28		NO EFFECT	
28-2225R3	28		NO EFFECT	
28-2226	28		NO EFFECT	
28-2228	28	S	06/18/00	
29-2072	29		NO EFFECT	
29-2072	32	С	06/10/93	
29-2079	29	S	06/10/92	
29-2079R1	29	S	06/10/92	
29-2082	29		NO EFFECT	
29-2085	29		NO EFFECT	
29-2086	29	S	06/10/95	MO 29-0159
29-2097	29		NO EFFECT	
29-2097R1	29		NO EFFECT	
29-2101	29		NO EFFECT	
30-2057	30	C	02/10/94	
30-2060	30		NO EFFECT	
30-2060R1	30		NO EFFECT	
30-2062	11	С	02/10/96	
30-2062	30	С	02/10/96	
30-2064	30		NO EFFECT	
30-2066	30		NO EFFECT	
30A2069	30	S	02/10/94	
30A2069R1	30	S	02/10/94	
30-2073	11	S	06/15/98	
30-2073	12	S	10/10/97	
30-2073	30	S	10/10/97	
30-2073R1	11	S	06/15/98	
30-2073R1	12	S	10/10/97	
30-2073R1	30	S	10/10/97	
30-2073R2	11	S	06/15/98	
30-2073R2	12	S	10/10/97	
30-2073R2	30	S	10/10/97	
30-2074	30		NO EFFECT	
30-2074R1	30		NO EFFECT	
30A2078	30	•	NO EFFECT	
31-2140	31 31	S	06/10/90	
31-2141	31 31		NO EFFECT	
31-2142	31 31	C	NO EFFECT	
31-2143 31-2146	31 27	C S	06/10/91 06/10/90	
31-2146	2 <i>1</i> 31	3	NO EFFECT	
31-2146 31-2146R1	27	С	10/10/93	
31-2146R1	31	C	NO EFFECT	
31-2140K1 31-2147	31 31	S	10/10/92	
121 2171	۱ د	3	10/10/72	



SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
31-2147R1	31	S	02/10/93	
31-2147R1	31	S	02/10/93	
31-2147R3	31	C	02/10/94	
31-2147R4	31	S	06/10/93	
31-2148	31	Č	02/10/92	
31-2148	34	Ċ	02/10/92	
31-2149	25	Ċ	06/10/93	
31-2149	31		NO EFFECT	
31-2150	26	С	06/10/92	
31-2150	28	С	06/10/92	
31-2150	32	С	06/10/92	
31-2150R1	21	S	02/10/91	
31-2150R1	26	S	02/10/91	
31-2150R1	28	S	02/10/91	
31-2150R1	31	S	02/10/91	
31-2150R1	32	S	02/10/91	
31-2155	31	S	06/10/91	
31-2157	31		NO EFFECT	
31-2157R1	31	•	NO EFFECT	
31-2163	31 31	C	06/10/93	
31-2167	31 71	C	06/10/93	
31-2177 31-2178	31 31	S C	02/10/92 10/10/96	
31-2178	71	C	10/10/96	
31-2178	71 73	C	10/10/96	
31-2178	74	C	10/10/96	
31-2178	75	C	10/10/96	
31-2178	77	Č	10/10/96	
31-2178	78	Č	10/10/96	
31-2178	79	S	INCORP	
31-2178	80	S	INCORP	
31-2184	31		NO EFFECT	
31-2184R1	31		NO EFFECT	
31-2188	31	С	10/10/93	
31-2191	31	С	02/10/94	
31-2191	71	С	02/10/94	
31-2197	31	С	10/10/95	
31–2207	31		NO EFFECT	
31-2214	31	С	10/15/98	MO 31-0500
31-2221	31	S	10/10/94	
31-2224	31	•	NO EFFECT	MO 74 0507
31-2242	31	С	06/10/97	MO 31-0527
31-2263	31 71		NO EFFECT	
31-2266	31 27	C	NO EFFECT	MO 31_0485
31-2271	23 29	C	10/18/00	MO 31-0685
31-2271 31-2271	29 31	C C	10/18/00 10/18/00	MO 31-0685 MO 31-0685
31-2271	31 34	C	10/18/00	MO 31-0685
	54	C	10/ 10/00	1-10 J1-000J

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SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
31-2279 31-2279 31-2288	31 34 31	С	NO EFFECT 10/18/00 NO EFFECT	MO 34-1203 MO 34-1203
31-2288R1 31-2288R2	31 31		NO EFFECT NO EFFECT	
31-2290	31	C	10/18/00	MO 31-0582
31-2290R1	31	С	10/18/00	MO 31-0582
31-2300 32-2190R4	31 12	S	10/18/00 10/10/90	
32-2190R4 32-2190R4	32	S S	10/10/90	
32-2190R4 32-2190R5	12	S	10/10/90	
32-2190R5	32	S	10/10/90	
32-2190R5	12	S	10/10/90	
32-2190R6	32	S	10/10/90	
32-2190R0	12	S	10/10/90	
32-2190R7	32	S	10/10/90	
32A2320	11	S	06/10/89	
32A2320	32	S	06/10/89	
32A232OR1	11	S	06/10/89	
32A232OR1	32	S	02/10/90	
32A232OR2	11	S	06/10/89	
32A232OR2	32	S	02/10/91	
32-2328	32	S	02/10/90	
32-2328R1	32	S	02/10/90	
32-2331	32	S	10/10/89	
32-2331R1	32	С	06/10/91	
32-2333	32		NO EFFECT	
32-2334	32		NO EFFECT	
32-2337R1	32	S	06/26/89	
32-2337R2	32	S	02/10/90	
32-2337R3	32	S	06/10/90	
32-2337R4	32	S	INCORP	
32-2339	32	S	10/10/89	
32-2340	32	S	INCORP	
32-2340R1	32	S	INCORP	
32-2341	32		NO EFFECT	
32-2348	32		NO EFFECT	
32-2351	32		NO EFFECT	
32-2351R1	32		NO EFFECT	
32-2351R2	32	_	NO EFFECT	
32-2353	32	C	06/10/95	
32-2353R1	32	S	06/10/95	
32-2354	32 32	c	NO EFFECT	
32-2356	32 32	S	02/10/91	
32-2356R1 32-2361	32 32	S	02/10/91	
32-2361 32-2361R1	32 32		NO EFFECT NO EFFECT	
32-2361R1 32-2361R2	32 32		NO EFFECT	
ISE ESOURE	32		NO LITECT	



SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
32-2363	32		NO EFFECT	
32-2363R1	32		NO EFFECT	
32-2363R2	32		NO EFFECT	
32-2365	32	S	06/10/92	
32-2365R1	32	S	06/10/92	
32-2367	32	3	NO EFFECT	
32-2367 32-2367R1	32		NO EFFECT	
32-2367R1	32		NO EFFECT	
32-2367R2	32		NO EFFECT	
32-2367R3	32		NO EFFECT	
32-2368	32	С	02/10/96	
32-2369	32	C	NO EFFECT	
32-2371	32		NO EFFECT	
32-2377	32	S	10/10/92	
32-2377	31	S C	02/10/96	
32-2387	32	C	06/10/97	
32-2387R1	31	S	02/10/94	
32-2387R1	31 32	s S	02/10/94	
32-2388		S C	06/10/94	
32-2388	11 32	C		
32-2390	32 32	c	NO EFFECT 06/10/95	
32-2394	32 32	S	06/10/93	
32-2394 32-2394R1	32 32	C C	06/10/94	
32-2394K1 32-2397	32 32	C		
			NO EFFECT	
32-2401	32 72		NO EFFECT	
32-2402	32 72	•	NO EFFECT	
32-2404	32 72	S	10/10/97	
32A2408	32 72		NO EFFECT	
32-2412	32 72	•	NO EFFECT	
32-2426 32-2432	32 72	S	06/15/98	
1	32 72	•	NO EFFECT	
32-2436 32-2451	32 32	S	02/10/97 NO EFFECT	
	32 32			
32-2461 32-2461R1			NO EFFECT	
32-2461K1	32 12	c	NO EFFECT 06/18/00	
32-2465	32	S S	06/18/00	
1	32 32	3	NO EFFECT	
32-2466 33-2179	32 33	c	06/10/90	
33-2179 33-2179R1	33	S C	02/10/92	
33-2184	33	C		
33-2190	33		NO EFFECT NO EFFECT	
33-2191		c		
33-2191 33-2191	31 33	S	02/10/91 NO EFFECT	
33-2191 33-2191R1	33 31	С		
33-2191R1	31 33	C	INCORP	
33-2191K1 33-2192	33		NO EFFECT	
33-2192 33-2193	33		NO EFFECT	
122-6132	33		NO EFFECT	



	SERVICE BULLETIN	<u> ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
-	33-2203	33		NO EFFECT	
	33-2206	33		NO EFFECT	
	33-2209	33		NO EFFECT	
	33-2212	33		NO EFFECT	
	33-2212R1	33		NO EFFECT	
	33-2214	33		NO EFFECT	
ı	33-2215	33		NO EFFECT	
ı	33-2219	33	С	02/15/98	
ı	33-2219R1	33	С	02/15/98	
- 1	33-2219R2	33	S	06/10/92	
- 1	33-2245	33		NO EFFECT	
- 1	33-2247R2	33	S	INCORP	
-	33-2249	33		NO EFFECT	
-	33-2260	33		NO EFFECT	
-	33-2265	33		NO EFFECT	
-	34-2307	34		NO EFFECT	
ı	34-2309	34		NO EFFECT	
-	34-2309R1	34		NO EFFECT	
-	34-2309R2	34		NO EFFECT	
-	34-2309R3	34		NO EFFECT	
ı	34-2309R4	34		NO EFFECT	
ı	34-2309R5	34		NO EFFECT	
ı	34-2309R6	34	•	NO EFFECT	
ı	34-2315 34-2315	11	S	10/10/91	
ı	34-2315 37 2315	23 71	S	10/10/92	
ı	34-2315 34-2315	31 37	S	10/10/91 10/10/91	
ı	34-2315R1	34 11	S S	10/10/91	
ı	34-2315R1	23	s S	10/10/91	
ı	34-2315R1	23 31	s S	06/10/93	
ı	34-2315R1	31 34	s S	10/10/91	
ı	34-2315R1	11	C	02/10/96	
ı	34-2315R2	23	C	06/10/96	
ı	34-2315R2	31	C	02/10/96	
ı	34-2315R2	34	C	02/10/96	
ı	34-2315R3	11	S	10/10/91	
ı	34-2315R3	23	S	10/10/92	
ı	34-2315R3	31	S	06/10/93	
ı	34-2315R3	34	S	10/10/93	
ı	34-2315R3	34	S	10/10/91	
ı	34-2317	34	Ū	NO EFFECT	
١	34-2320	34		NO EFFECT	
	34-2323	34	С	06/10/93	
١	34-2324	34	Č	06/10/92	
	34-2328	34	Č	06/10/91	
١	34-2329	34	-	NO EFFECT	
	34-2339	34		NO EFFECT	
١	34-2342	34	S	02/10/93	



SERVICE BULLETIN	<u> ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
Iz/ 27/0	7/	•	TNCORD	
34-2349	34 77	C	INCORP 10/10/93	
34-2350	34 77	C		
34-2353	34 77	С	INCORP	
34-2357 34-2358	34 34		NO EFFECT	
34-2367	34 34		NO EFFECT NO EFFECT	
34-2370	34 34	С	06/10/93	
34-2370R1	34 34	S	06/10/93	
34-2384	34	S	02/10/93	
34-2384R1	34	S	02/10/93	
34-2384R2	34	C	10/10/95	
34-2390	34	C	NO EFFECT	
34-2390R1	34		NO EFFECT	
34-2390R2	24		NO EFFECT	
34-2396	11	С	02/10/96	
34-2396	31	Č	02/10/96	
34-2396	34	Č	02/10/96	
34-2404	34	Ċ	INCORP	
34-2404R1	34	S	INCORP	
34-2407	34	C	10/10/93	
34-2409	34	С	10/10/95	
34-2412	31	S	10/10/93	
34-2412	34	S	06/10/94	
34-2412	34	S	10/10/93	
34-2412R1	31	S	10/10/93	
34-2412R1	34	S	06/10/94	
34-2412R1	34	S	10/10/93	
34-2412R2	31	S	10/10/93	
34-2412R2	34	S	06/10/94	
34-2412R2	34	S	10/10/93	
34-2430	34		NO EFFECT	
34-2439	34	С	10/10/95	
34-2443	34		NO EFFECT	
34-2443R1	34		NO EFFECT	
34-2443R2	34		NO EFFECT	
34-2443R3	34		NO EFFECT	
34-2443R4	34		NO EFFECT	
34-2443R5	34		NO EFFECT	
34-2443R6	34		NO EFFECT	
34-2443R7	34		NO EFFECT	
34-2443R8	34		NO EFFECT	
34-2443R9	34	•	NO EFFECT	
34-2446R1 34-2460R1	34 37	S	06/10/95	
34-2460R1 34-2475	34 34	S S	06/10/96 INCORP	
34-2475 34-2475R1	34 34	S S	02/10/95	
34-2475R1	34 34	s S	INCORP	
34-2481	34 34	ა	NO EFFECT	
124-2401	34		NO LFFECT	



CEDVICE			INCORPORATION	CUSTOMER ENGINEERING
SERVICE <u>BULLETIN</u>	<u>ATA</u>	s/c	DATE	ORDER NUMBER
BULLETIN	AIA	<u>37 C</u>	DATE	ORDER NOMBER
34-2481R1	31	С	06/18/99	MO 34-1090
34-2481R1	34	•	NO EFFECT	MO 34-1090
34-2496	34	S	02/10/96	
34A2496R1	34	C	06/18/99	MO 34-1097
34-2506	28		NO EFFECT	
34-2506	34		NO EFFECT	
34-2506R1	28		NO EFFECT	
34-2506R1	34		NO EFFECT	
34-2533	34	C	06/18/99	
34-2591	34		NO EFFECT	
34-2602	34		NO EFFECT	
34-2602R1	34		NO EFFECT	
34-2608	34	S	06/18/99	
34-2616	34		NO EFFECT	
34-2630	34	S	10/18/99	
34A2638	34		NO EFFECT	
34A2638R1	34		NO EFFECT	
34-2668	34-	S	10/18/00	
35-2059R1	35		NO EFFECT	
35-2059R2	35		NO EFFECT	
35-2064	35	С	02/10/93	
35A2067	35		NO EFFECT	
35-2069	35		NO EFFECT	
35-2074	35		NO EFFECT	
35-2074R1	35	_	NO EFFECT	
35A2075	35	S	02/10/92	
35A2075R1	35 35	S	02/10/92	
35-2080	35 35		NO EFFECT	
35-2085	35 35		NO EFFECT	
35-2085R1 35-2085R2	35 35		NO EFFECT	
35A2088	35 35	C	NO EFFECT	
35A2088R1	35 35	C C	INCORP INCORP	
35A2088R2	35 35	S	06/10/96	
35A2086K2	35 35	3	NO EFFECT	
35A2101	35 35		NO EFFECT	
35-2107	35	S	02/18/01	
36-2081	36	3	NO EFFECT	
36-2081R1	36		NO EFFECT	
36-2081R2	36		NO EFFECT	
36-2081R3	36		NO EFFECT	
36A2087	36		NO EFFECT	
36A2087R1	36		NO EFFECT	
36A2087R2	36		NO EFFECT	
36-2090	36		NO EFFECT	
36-2090R1	36		NO EFFECT	
36-2094	36		NO EFFECT	
36-2095	11	S	10/10/90	
•				



SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
36-2095	36	s	10/10/91	
36-2095	36	S	INCORP	
36-2095R1	11	C	10/10/93	
36-2095R1	36	C	10/10/93	
36-2096	36	C	10/10/95	
36-2096R1	36	S	10/10/93	
36A2097	36	3	NO EFFECT	
36A2097R1	36	S	02/10/94	
36A2097R1	36	C	02/18/00	CEO 70480
36A2097R2	36	S	INCORP	CEO 70480
36-2101	36	C	02/10/95	
36-2101R1	36	S	10/10/91	
36-2101R1	36	S	10/10/91	
36-2103	36	3	NO EFFECT	
36-2106	36		NO EFFECT	
36-2106R1	36		NO EFFECT	
36-2107	36		NO EFFECT	
36-2109	36		NO EFFECT	
36-2112	36		NO EFFECT	
36-2112R1	36		NO EFFECT	
36-2114	36		NO EFFECT	
36-2119	36		NO EFFECT	
36-2121	36	S	06/10/94	
36-2121R1	36	S	06/10/94	
36-2121R2	36	S	06/10/94	
36-2130	36	S	06/18/99	
36-2130R1	36	S	06/18/99	
36-2131	36	S	02/18/00	
38-2071	38	S	INCORP	
38A2077	38	Ċ	02/10/94	
38A2077R1	38	Č	02/10/94	
38-2079	38	-	NO EFFECT	
38-2080	38	С	06/10/93	
38-2081	38		NO EFFECT	
38-2081R1	38		NO EFFECT	
38-2082	11	S	10/10/91	
38-2082	38		NO EFFECT	
38-2084	30	С	06/10/93	
38-2084	38	С	06/10/93	
38-2084R1	30	S	06/10/91	
38-2084R1	38	S	INCORP	
38-2088	38		NO EFFECT	
38-2092	11	С	06/10/94	
38-2092	38	С	06/10/94	
38-2092	45	С	06/10/94	
38-2093	38		NO EFFECT	
38-2099	38		NO EFFECT	
38-2101	38	С	02/15/99	MO 38-0215

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SERVICE		0.40	INCORPORATION	CUSTOMER ENGINEERING
BULLETIN	<u>ATA</u>	<u>s/c</u>	<u>DATE</u>	<u>ORDER NUMBER</u>
38A2105	38	S	INCORP	
38A2105R1	38	C	02/15/99	MO 38-0215
38-2108	38	C	02/15/99	MO 38-0223
38-2108 38-2108R1	38	C	02/15/99	MO 38-0223
38-2112	38	C	NO EFFECT	NO 30 0223
38-2119	38		NO EFFECT	
38-2119R1	38		NO EFFECT	
45-2005	21	С	10/10/93	
45-2005	26	C	10/10/93	
45-2005	27	C	10/10/93	
45-2005	28	Č	10/10/93	
45-2005	29	Č	10/10/93	
45-2005	31	Č	10/10/93	
45-2005	45	Č	10/10/93	
45-2007	22	Č	10/10/91	
45-2007	23	Č	10/10/91	
45-2007	24	Č	10/10/91	
45-2007	26	Č	10/10/91	
45-2007	28	Č	10/10/91	
45-2007	29	Č	10/10/91	
45-2007	31	Č	10/10/91	
45-2007	32	Č	10/10/91	
45-2007	34	Č	10/10/91	
45-2007	36	Č	10/10/91	
45-2007	38	Č	10/10/91	
45-2007	45	Ċ	10/10/91	
45-2007	49	Ċ	10/10/91	
45-2007	71	Ċ	10/10/91	
45-2009	45	Ċ	INCORP	
45-2010	31	C	10/10/93	
45-2010	34	C	10/10/93	
45-2010	36	C	10/10/93	
45-2010	45	С	10/10/93	
45-2011	22	S	INCORP	
45-2011	23	S	INCORP	
45-2011	24	S	INCORP	
45-2011	28	S	INCORP	
45-2011	29	S	INCORP	
45-2011	31	S	INCORP	
45-2011	34	S	10/10/91	
45-2011	36	S	06/10/91	
45-2011	45	S	06/10/91	
45-2011	49	S	INCORP	
45-2011	71	S	INCORP	
45-2011	73	S	INCORP	
45-2011	74	S	INCORP	
45-2011	75	S	INCORP	
45-2011	78	S	INCORP	



SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION DATE	CUSTOMER ENGINEERING ORDER NUMBER
				
45-2011	79	S	INCORP	
45-2011	80	S	INCORP	
45-2011R1	22	S	INCORP	
45-2011R1	23	S	INCORP	
45-2011R1	24	S	INCORP	
45-2011R1	28	S	INCORP	
45-2011R1	29	S	INCORP	
45-2011R1	31	S	INCORP	
45-2011R1	34	S	10/10/91	
45-2011R1	36	S	06/10/91	
45-2011R1	45	S	06/10/91	
45-2011R1	49	S	INCORP	
45-2011R1	71	S	INCORP	
45-2011R1	73	S	INCORP	
45-2011R1	74	S	INCORP	
45-2011R1	75	S	INCORP	
45-2011R1	78	S	INCORP	
45-2011R1	79	S	INCORP	
45-2011R1	80	S	INCORP	
45-2012	22	Č	06/10/94	
45-2012	27	Č	06/10/94	
45-2012	34	Č	06/10/94	
45-2012	45	Č	06/10/94	
45-2012	49	C	06/10/94	
45-2012	71	C	06/10/94	
45-2012	72	C	06/10/94	
45-2012	73	C	06/10/94	
45-2012	76	C	06/10/94	
45-2012	78	C	06/10/94	
45-2012R1	22	S	06/10/92	
45-2012R1	27	S	INCORP	
45-2012R1	34	S	06/10/92	
45-2012R1	45	S	02/10/93	
45-2012R1	49	S	INCORP	
45-2012R1	71	S	INCORP	
45-2012R1	72	S	INCORP	
45-2012R1	73	S	INCORP	
45-2012R1	76	S	INCORP	
45-2012R1	78	S	INCORP	
45-2015	45	S	02/10/94	
45-2016	12	S	10/10/95	
45-2016	34	S	10/10/95	
45-2016	54 45	s S	10/10/95	
45-2016 45-2016R1	45 12		10/10/95	
45-2016R1	12 34	S	10/10/95	
45-2016R1	34 45	S	10/10/95	
45-2016K1 45-2037	45 31	S	10/10/95	MO /5_0015
45-2037	31 45	C C		MO 45-0015
143 ⁻²⁰³⁷	40	L	10/18/00	MO 45-0015



SERVICE	A.T.A	c/c	INCORPORATION	CUSTOMER ENGINEERING
BULLETIN	<u>ATA</u>	<u>s/c</u>	<u>DATE</u>	<u>ORDER NUMBER</u>
49-2053	49		NO EFFECT	
49-2053R1	49		NO EFFECT	
49-2056	49	S	INCORP	
49-2058	49	•	NO EFFECT	
49-2059	49		NO EFFECT	
49-2059R1	49		NO EFFECT	
49-2063	49	S	INCORP	
49-2064	49	S	06/10/92	
49-2065	49		NO EFFECT	
49-2067	49	S	INCORP	
49-2068	49	С	02/15/98	
49-2068R1	49	С	02/15/98	
49-2068R2	49	С	02/15/98	
49-2068R3	49	С	02/15/98	
49-2068R4	49	S	02/10/94	
49-2068R4	49	S	10/10/94	
49-2068R4	49	S	02/10/94	
49-2069	26	С	02/15/98	
49-2069	49	C	02/15/98	
49-2069R1	26	C	02/15/98	
49-2069R1	49	C	02/15/98	
49-2069R2	26	S	10/10/94	
49-2069R2	49	S	10/10/93	
49-2069R2	49	S	02/10/93	wa (o ooos
49-2069R3	26	С	02/15/99	MO 49-0085
49-2069R3	49	С	02/15/99	MO 49-0085
49-2072	49	S	10/10/95	
49-2073	49 51	S	INCORP	
51-2049 51-2052	51 51		NO EFFECT	
51-2052 51-2052R1	51 51		NO EFFECT NO EFFECT	
51-2052KT	51 51		NO EFFECT	
52-2204	51 52	S	06/10/90	
52-2204	12	S	06/10/90	
52-2207	52	S	06/10/90	
52-2207R1	12	S	06/10/90	
52-2207R1	52	S	06/10/90	
52-2215	52	S	INCORP	
52-2215R1	52	S	INCORP	
52-2218	52	·	NO EFFECT	
52A2220	52		NO EFFECT	
52A2220R1	52		NO EFFECT	
52A2220R2	52		NO EFFECT	
52A2220R3	52		NO EFFECT	
52-2221	52		NO EFFECT	
52-2221R1	52		NO EFFECT	
52-2221R2	52		NO EFFECT	
52-2225	11	S	06/10/91	



SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
52-2225 52-2225 52-2225R1 52-2225R1	31 52 11 31	S S C	06/10/91 INCORP 10/10/93 10/10/93	
52-2225R1 52-2225R2	52 11	C S	10/10/93 06/10/91	
52-2225R2 52-2225R2	31 52	S S	06/10/91 INCORP	
52-2229 52-2229	11 52	C C	06/18/99 02/18/00	MO 52-0195 MO 52-0195
52-2229 52A2230 52A2230R1	52 52 52	C C S	10/18/99 10/18/99 06/10/91	MO 52-0195
52-2232 52-2236	52 52	S	06/15/98 NO EFFECT	
52A2237 52-2238	52 52		NO EFFECT	
52-2239 52-2239 52-2239R1	11 52 11	c c	10/10/93 NO EFFECT 02/10/96	
52-2239R1 52-2239R2	52 11	S	NO EFFECT 10/10/93	
52-2239R2 52A2241	52 52		NO EFFECT NO EFFECT	
52A2241R1 52-2244 52-2244R1	52 52 52	S	06/15/98 NO EFFECT NO EFFECT	
52-2247 52-2248	52 52		NO EFFECT NO EFFECT	
52-2251 52-2251R1	52 52		NO EFFECT	
52-2254 52-2254R1 52-2256	52 52 52		NO EFFECT NO EFFECT NO EFFECT	
52-2256R1 52A2258	52 52	S	06/15/98 NO EFFECT	
52A2259 52A2259R1 52-2260	52 52 52	c	NO EFFECT NO EFFECT 10/10/97	
52-2260R1 52-2262	52 25	S S S	10/10/97 10/15/99	
52-2262 52-2263	52 52	S	02/15/99 NO EFFECT	
53-2302 53-2302R1 53-2309	53 53 53		NO EFFECT NO EFFECT NO EFFECT	
53-2309R1 53A2312R1	53 53		NO EFFECT NO EFFECT	



	SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION DATE	CUSTOMER ENGINEERING ORDER NUMBER
	<u> </u>	7.17.	<u> </u>	<u> </u>	GRUEN NOTIBELL
1	53A2312R2	53		NO EFFECT	
	53-2313	53		NO EFFECT	
ı	53-2315	38	С	06/10/92	
ı	53-2315	53		NO EFFECT	
ı	53-2316	53		NO EFFECT	
İ	53-2316R1	53		NO EFFECT	
İ	53A2317	53		NO EFFECT	
ı	53-2318	53		NO EFFECT	
ı	53-2319	53		NO EFFECT	
ı	53-2319R1	53		NO EFFECT	
	53A2320	53		NO EFFECT	
	53A2320R1	53		NO EFFECT	
	53-2322	53		NO EFFECT	
	53-2322R1	53		NO EFFECT	
	53-2323	53		NO EFFECT	
	53-2325	21	S	INCORP	
	53-2325	53		NO EFFECT	
	53-2327	53		NO EFFECT	
	53-2327R1	53		NO EFFECT	
	53-2327R2	53		NO EFFECT	
	53-2328	53		NO EFFECT	
	53-2328R1	53		NO EFFECT	
	53-2329	53		NO EFFECT	
	53-2329R1	53		NO EFFECT	
	53-2329R2	53		NO EFFECT	
	53-2331 53-2331	53		NO EFFECT	
	53-2334	53 53		NO EFFECT	
	53-2335	53 53		NO EFFECT	
	53-2340 53-2340R1	53 53		NO EFFECT	
	53-2340K1 53-2343	53		NO EFFECT NO EFFECT	
	53-2344	53		NO EFFECT	
	53-2344 53-2348	53		NO EFFECT	
	53-2353	53		NO EFFECT	
	53-2355	53		NO EFFECT	
	53-2356	53		NO EFFECT	
	53-2358	53		NO EFFECT	
	53-2360	53		NO EFFECT	
	53-2360R1	53		NO EFFECT	
	53-2365	53		NO EFFECT	
	53-2365R1	53		NO EFFECT	
	53-2370	53		NO EFFECT	
	53-2370R1	53		NO EFFECT	
	53-2374	53		NO EFFECT	
	53-2374R1	53		NO EFFECT	
	53A2378	53		NO EFFECT	
	53A2378R1	53		NO EFFECT	
	53-2379	53		NO EFFECT	
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S3-2379R1	SERVICE BULLETIN	<u> ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
S3-2385 S3					,
S3-2393					
53-2393 53 NO EFFECT 53-2393R1 51 S O6/10/96 53-2393R2 51 S O6/10/96 53-2393R2 51 S O6/10/96 53-2393R2 51 S O6/10/95 53-2394 51 S 10/10/95 53-2394 51 S 10/10/95 53-2394R1 51 S 10/10/95 53-2394R1 51 S 10/10/95 53-2394R1 53 NO EFFECT 53-2394R1 53 NO EFFECT 53-2398 51 S O6/10/96 53-2398 51 S O6/10/96 53-2398 51 S O6/10/96 53-2398 51 S O6/10/96 53-2398 51 S O6/10/96 53-2398 51 S O6/10/96 53-2398R1 51 S O6/10/96 53-2398R1 51 S O6/10/96 53-2398R1 53 NO EFFECT 53-2402 53 NO EFFECT 53-2402 53 NO EFFECT 53-2402 53 NO EFFECT 53-2409 53 NO EFFECT 53-2409 53 NO EFFECT 53-2409 53 NO EFFECT 53-2409 53 NO EFFECT 53-2409R3 53 NO EFFECT 53-2409R3 53 NO EFFECT 53-2415 53 NO EFFECT 53-2421 53 NO EFFECT 53-2421 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 54 NO EFFECT 53-2422 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 54 NO EFFECT 53-2424 74 NO EFFECT 53-2424 74 NO EFFECT 53-2424 74 NO EFFECT 53-2424 7					
S3-2393R1			S		
53-2393R1 53					
S3-2393R2 S1			S		
53-239R2 53 S NO EFFECT 53-2394 51 S 10/10/95 53-2394R1 51 S 10/10/95 53-2394R1 53 NO EFFECT 53A2396 53 NO EFFECT 53A2396R1 53 NO EFFECT 53-2398 51 S 06/10/96 53-2398R1 51 S 06/10/96 53-2398R1 53 NO EFFECT 53-2398R1 53 NO EFFECT 53-2400 53 NO EFFECT 53-2400 53 NO EFFECT 53A2409 53 NO EFFECT 53A2409R1 53 NO EFFECT 53A2409R2 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2416 53 NO EFFECT 53A24216 53 NO EFFECT 53A24216 53 NO EFFECT 53A24227 53 NO EFFECT <					
53-2394 51 S 10/10/95 53-2394R1 51 S 10/10/95 53-2394R1 53 NO EFFECT 53-2394R1 53 NO EFFECT 53-2398 53 NO EFFECT 53-2398 51 S 06/10/96 53-2398R1 51 S 06/10/96 53-2398R1 53 NO EFFECT 53-2398R1 53 NO EFFECT 53-2400 53 NO EFFECT 53-24900 53 NO EFFECT 53A2409 53 NO EFFECT 53A2409R1 53 NO EFFECT 53A2409R2 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A24109R3 53 NO EFFECT 53A2416 53 NO EFFECT 53A2417 53 NO EFFECT 53A2418 53 NO EFFECT 53A2427 53 NO EFFECT 53A2428					
53-2394R1 51 S 10/10/95 53-2394R1 51 S 10/10/95 53-2394R1 53 NO EFFECT 53A2396 53 NO EFFECT 53A2398 51 S 06/10/96 53-2398 53 NO EFFECT 53-23981 51 S 06/10/96 53-239871 53 NO EFFECT 53-239871 53 NO EFFECT 53-2400 53 NO EFFECT 53-2401 53 NO EFFECT 53-2402 53 NO EFFECT 53A2409 53 NO EFFECT 53A2409R1 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2410F1 53 NO EFFECT 53A2416 53 NO EFFECT 53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53A24237					
53-2394R1 51 S 10/10/95 53-2394R1 53 NO EFFECT 53A2396 53 NO EFFECT 53A2398R1 53 NO EFFECT 53-2398 53 NO EFFECT 53-2398R1 51 S 06/10/96 53-2398R1 53 NO EFFECT 53-2398R1 53 NO EFFECT 53-2398R1 53 NO EFFECT 53-2400 53 NO EFFECT 53-2402 53 NO EFFECT 53A2409R1 53 NO EFFECT 53A2409R2 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2416 53 NO EFFECT 53A2416 53 NO EFFECT 53A24219 53 NO EFFECT 53A24227 53 NO EFFECT 53A24231 53 NO EFFECT 53A24237 53 NO EFFECT 53A242381 53 NO			S		
53-2394R1 53 NO EFFECT 53A2396 53 NO EFFECT 53A2396R1 53 NO EFFECT 53-2398 51 S 06/10/96 53-2398R1 51 S 06/10/96 53-2398R1 53 NO EFFECT 53-2398R1 53 NO EFFECT 53A2400 53 NO EFFECT 53A2400 53 NO EFFECT 53A2409 53 NO EFFECT 53A2409R1 53 NO EFFECT 53A2409R2 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2416 53 NO EFFECT 53A2416 53 NO EFFECT 53A24216 53 NO EFFECT 53A2422 53 NO EFFECT 53A2423 53 NO EFFECT 53A2423 53 NO EFFECT 53A2423 53 NO EFFECT<					
53A2396 53 NO EFFECT 53A23981 53 NO EFFECT 53-2398 51 S			S		
53A2396R1 53 NO EFFECT 53-2398 51 S O6/10/96 53-2398R1 51 S O6/10/96 53-2398R1 53 NO EFFECT 53A2400 53 NO EFFECT 53A2409 53 NO EFFECT 53A2409R1 53 NO EFFECT 53A2409R2 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2416 53 NO EFFECT 53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-24221 53 NO EFFECT 53A2423 53 NO EFFECT 53A24231 53 NO EFFECT 53A2427 53 NO EFFECT 53A2428 53 NO EFFECT 53A2429 53 NO EFFECT 53A24448 53 NO EFFECT 53A24448 53 NO EFFECT 53A2449<				NO EFFECT	
53-2398 51 S 06/10/96 53-2398R1 51 S 06/10/96 53-2398R1 53 NO EFFECT 53-2398R1 53 NO EFFECT 53A2400 53 NO EFFECT 53A2409 53 NO EFFECT 53A2409R1 53 NO EFFECT 53A2409R2 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2410R1 53 NO EFFECT 53A2416 53 NO EFFECT 53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53A24281 53 NO EFFECT 53A2427 53 NO EFFECT 53A2427 53 NO EFFECT 53A2444R1 53 NO EFFECT 53A2449 53 NO EFFECT 53A2449 53 NO EFFECT 53A2499 53 NO EFFECT 53A2499 53 NO EFFECT 53A2498 </td <td></td> <td></td> <td></td> <td>NO EFFECT</td> <td></td>				NO EFFECT	
53-2398 53 NO EFFECT 53-2398R1 51 S O6/10/96 53-2398R1 53 NO EFFECT 53-2400 53 NO EFFECT 53-2402 53 NO EFFECT 53-2409 53 NO EFFECT 53A2409R1 53 NO EFFECT 53A2409R2 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2416 53 NO EFFECT 53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422R1 53 NO EFFECT 53A2423 53 NO EFFECT 53A2423R1 53 NO EFFECT 53A2427R1 53 NO EFFECT 53A2428 53 NO EFFECT 53A2449 53 NO EFFECT 53A2449 53 NO EFFECT 53A2449 53 NO EFFECT 53A2449 53 NO EFFECT 54-2116R2 54 <t< td=""><td></td><td></td><td></td><td></td><td></td></t<>					
53-2398R1 51 S 06/10/96 53-2398R1 53 NO EFFECT 53A2400 53 NO EFFECT 53-2402 53 NO EFFECT 53A2409 53 NO EFFECT 53A2409R2 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53-2415 53 NO EFFECT 53A2416 53 NO EFFECT 53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422 53 NO EFFECT 53A2423 53 NO EFFECT 53A2423 53 NO EFFECT 53A2427 53 NO EFFECT 53A2428 53 NO EFFECT 53A2449 53 NO EFFECT 53A2449 53 NO EFFECT 53A2409 53 NO EFFECT 54-2116R2 29 S 06/10/89 54-2124 71 C INCORP 54			S		
53-2398R1 53 NO EFFECT 53A2400 53 NO EFFECT 53-2402 53 NO EFFECT 53A2409R1 53 NO EFFECT 53A2409R2 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2416 53 NO EFFECT 53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-24221 53 NO EFFECT 53A24271 53 NO EFFECT 53A24273 53 NO EFFECT 53A24274 53 NO EFFECT 53A24277 53 NO EFFECT 53A242781 53 NO EFFECT 53A2428 53 NO EFFECT 53A2429 53 NO EFFECT 53A2449 53 NO EFFECT 53A2449 53 NO EFFECT 54-2116R2 29 S 06/10/89 54-2124 54 NO EFFECT 54-2124 71 <td< td=""><td></td><td></td><td></td><td></td><td></td></td<>					
53A2400 53 NO EFFECT 53-2402 53 NO EFFECT 53A2409 53 NO EFFECT 53A2409R1 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2416 53 NO EFFECT 53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-24221 53 NO EFFECT 53-24223 53 NO EFFECT 53A24231 53 NO EFFECT 53A2427 53 NO EFFECT 53A2427 53 NO EFFECT 53A2428 53 NO EFFECT 53A2428 53 NO EFFECT 53A24491 53 NO EFFECT 53A2428 53 NO EFFECT 53A2427 53 NO EFFECT 53A2428 53 NO EFFECT 53A2429 53 NO EFFECT 53A2490 53 NO EFFECT 54-2116R2 54 S INCOR			S	06/10/96	
53-2402 53 NO EFFECT 53A2409R1 53 NO EFFECT 53A2409R2 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2419 53 NO EFFECT 53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-24221 53 NO EFFECT 53A24231 53 NO EFFECT 53A24231 53 NO EFFECT 53A2427 53 NO EFFECT 53A24271 53 NO EFFECT 53A2428 53 NO EFFECT 53A24491 53 NO EFFECT 53A2449 53 NO EFFECT 53A2449 53 NO EFFECT 53A2450R1 53 NO EFFECT 54-2116R2 29 S 06/10/89 54-2124 54 NO EFFECT 54-2124 71 C INCORP 54-2124R1 54 NO EFFECT 54-2124R2 </td <td></td> <td></td> <td></td> <td>NO EFFECT</td> <td></td>				NO EFFECT	
53A2409 53 NO EFFECT 53A2409R1 53 NO EFFECT 53A2409R2 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2409R4 53 NO EFFECT 53-2415 53 NO EFFECT 53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-24221 53 NO EFFECT 53A2423 53 NO EFFECT 53A2423 53 NO EFFECT 53A2427 53 NO EFFECT 53A2427 53 NO EFFECT 53A2427 53 NO EFFECT 53A2428 53 NO EFFECT 53A2449 53 NO EFFECT 53A2450R1 53 NO EFFECT 53A2450R1 53 NO EFFECT 54-2116R2 29 S 06/10/89 54-2116R2 54 S INCORP 54-2124 71 C INCORP 54-2124R1 71 C INCORP	53A2400			NO EFFECT	
53A2409R1 53 NO EFFECT 53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53-2415 53 NO EFFECT 53A2416 53 NO EFFECT 53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422R1 53 NO EFFECT 53A242R1 53 NO EFFECT 53A244R1 53 NO EFFECT 54-2116R2 29 S O6/10/89 54-2124 <t< td=""><td>53-2402</td><td></td><td></td><td>NO EFFECT</td><td></td></t<>	53-2402			NO EFFECT	
53A2409R2 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2409R4 53 NO EFFECT 53A2416 53 NO EFFECT 53A2416R1 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422R1 53 NO EFFECT 53A242R1 53 NO EFFECT 53A244B1 53 NO EFFECT 53A244B1 53 NO EFFECT 53A244B1 53 NO EFFECT 53A244B1 53 NO EFFECT 54-2116R2 29 S OG/10/89 54-2116R2 54 S INCORP 54-2124 71 C INCORP 54-2124R1 71 C INCORP	53A2409			NO EFFECT	
53A2409R3 53 NO EFFECT 53A2409R4 53 NO EFFECT 53-2415 53 NO EFFECT 53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422R1 53 NO EFFECT 53A2423 53 NO EFFECT 53A2423R1 53 NO EFFECT 53A2427R1 53 NO EFFECT 53A2427R1 53 NO EFFECT 53A2428 53 NO EFFECT 53A24481 53 NO EFFECT 53A2449 53 NO EFFECT 53A2449 53 NO EFFECT 53A2450R1 53 NO EFFECT 54-2116R2 29 S O6/10/89 54-2116R2 54 S INCORP 54-2124 71 C INCORP 54-2124R1 54 NO EFFECT 54-2124R2 54 NO EFFECT 54-2124R2 71 S O2/10/95	53A2409R1			NO EFFECT	
53A2409R4 53 NO EFFECT 53-2415 53 NO EFFECT 53A2416 53 NO EFFECT 53A2416R1 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422R1 53 NO EFFECT 53A2423 53 NO EFFECT 53A2423R1 53 NO EFFECT 53A2427R1 53 NO EFFECT 53A2427R1 53 NO EFFECT 53A2428 53 NO EFFECT 53A2449R1 53 NO EFFECT 53A2450R1 53 NO EFFECT 53A2450R1 53 NO EFFECT 54-2116R2 29 S O6/10/89 54-2116R2 54 S INCORP 54-2124 71 C INCORP 54-2124R1 54 NO EFFECT 54-2124R2 54 NO EFFECT 54-2124R2 71 S O2/10/95	53A2409R2			NO EFFECT	
53-2415 53 NO EFFECT 53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422R1 53 NO EFFECT 53A2423 53 NO EFFECT 53A2423R1 53 NO EFFECT 53A2427 53 NO EFFECT 53A2427R1 53 NO EFFECT 53A2428 53 NO EFFECT 53A24481 53 NO EFFECT 53A2449 53 NO EFFECT 53A2450R1 53 NO EFFECT 54-2116R2 29 S O6/10/89 54-2116R2 54 S INCORP 54-2124 54 NO EFFECT 54-2124R1 54 NO EFFECT 54-2124R1 71 C INCORP 54-2124R2 54 NO EFFECT 54-2124R2 54 NO EFFECT 54-2124R2 71 S O2/10/95	53A2409R3	53		NO EFFECT	
53A2416 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422R1 53 NO EFFECT 53A2423 53 NO EFFECT 53A2423R1 53 NO EFFECT 53A2427 53 NO EFFECT 53A24271 53 NO EFFECT 53A24278 53 NO EFFECT 53A24428 53 NO EFFECT 53A2444R1 53 NO EFFECT 53A2449 53 NO EFFECT 53A2450R1 53 NO EFFECT 54-2116R2 29 S O6/10/89 54-2116R2 54 S INCORP 54-2124 54 NO EFFECT 54-2124R1 54 NO EFFECT 54-2124R2 54 NO EFFECT 54-2124R2 54 NO EFFECT 54-2124R2 71 C INCORP 54-2124R2 71 S O2/10/95	53A2409R4	53		NO EFFECT	
53A2416R1 53 NO EFFECT 53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422R1 53 NO EFFECT 53A2423 53 NO EFFECT 53A2423R1 53 NO EFFECT 53A2427 53 NO EFFECT 53A2427R1 53 NO EFFECT 53A2428 53 NO EFFECT 53A24481 53 NO EFFECT 53A2449 53 NO EFFECT 53A2450R1 53 NO EFFECT 54-2116R2 29 S 06/10/89 54-2116R2 54 S INCORP 54-2124 54 NO EFFECT 54-2124R1 54 NO EFFECT 54-2124R1 54 NO EFFECT 54-2124R2 54 NO EFFECT 54-2124R2 54 NO EFFECT 54-2124R2 71 S 02/10/95	53-2415	53		NO EFFECT	
53A2419 53 NO EFFECT 53-2422 53 NO EFFECT 53-2422R1 53 NO EFFECT 53A2423 53 NO EFFECT 53A2423R1 53 NO EFFECT 53A2427 53 NO EFFECT 53A2427R1 53 NO EFFECT 53A2428 53 NO EFFECT 53A24481 53 NO EFFECT 53A24499 53 NO EFFECT 53A2450R1 53 NO EFFECT 54-2116R2 29 S O6/10/89 54-2116R2 54 S INCORP 54-2124 54 NO EFFECT 54-2124R1 54 NO EFFECT 54-2124R1 71 C INCORP 54-2124R2 54 NO EFFECT 54-2124R2 54 NO EFFECT 54-2124R2 71 S O2/10/95	53A2416	53		NO EFFECT	
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54-2124R2 71 S 02/10/95			С	INCORP	
54-2130 54 NO EFFECT			S		
	54-2130	54		NO EFFECT	



SERVICE BULLETIN	<u> </u>	<u>s/c</u>	INCORPORATION DATE	CUSTOMER ENGINEERING ORDER NUMBER
				
54-2131	54		NO EFFECT	
54-2136	54	S	06/10/92	
54-2141R1	54		NO EFFECT	
54-2144	54		NO EFFECT	
54-2145	54		NO EFFECT	
54-2146	54	S	INCORP	
54-2146R1	54	S	06/10/97	
54-2146R1	54	S	10/10/96	
54-2148	54		NO EFFECT	
54A2150R1	54		NO EFFECT	
54A2150R2	54		NO EFFECT	
54A2150R3	54		NO EFFECT	
54A2151	54	S	02/10/93	
54A2151R1	54	S	02/10/93	
54A2151R2	54	S	02/10/93	
54A2152	54		NO EFFECT	
54A2152R1	54		NO EFFECT	
54A2152R2	54		NO EFFECT	
54A2152R3	54		NO EFFECT	
54A2152R4	54		NO EFFECT	
54A2153	54	S	INCORP	
54-2155	54	S	INCORP	
54-2155R1	54	С	10/18/00	MO 54-0079
54-2155R2	54	С	10/18/00	MO 54-0079
54A2156	54	S	06/10/95	
54A2156R1	54	S	06/10/96	
54A2156R2	54	S	06/10/96	
54A2156R3	54	S	02/18/00	
54-2161	54		NO EFFECT	
54-2161R1	54		NO EFFECT	
54-2164	54		NO EFFECT	
54-2164R1	54		NO EFFECT	
54-2164R2	54		NO EFFECT	
54-2165	54		NO EFFECT	
54-2165	71		NO EFFECT	
54-2167	54		NO EFFECT	
54-2167R1	54		NO EFFECT	
54-2168	54		NO EFFECT	
54-2176	54	S	06/15/98	
54-2178	54		NO EFFECT	
54-2181	54		NO EFFECT	
54-2188	54	S	06/15/98	
54-2192	54		NO EFFECT	
54-2193	54		NO EFFECT	
55-2030	55		NO EFFECT	
55-2033	55		NO EFFECT	
55-2033R1	55		NO EFFECT	
55-2034	55		NO EFFECT	



55-2034R1	SERVICE BULLETIN	<u>ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
55-2041R2	55-2034R2 55-2041	55 55	С	NO EFFECT	
55-2048					
55-2046 55			C		MO 55-UU29
55-2048					
57-2246 57 NO EFFECT 57-2246R3 57 NO EFFECT 57-2246R4 57 NO EFFECT 57-2246R5 57 NO EFFECT 57-2250 57 NO EFFECT 57-2253R1 57 NO EFFECT 57-2254 57 NO EFFECT 57-2255 28 C 10/18/99 57-2255 57 NO EFFECT 57-2255 57 NO EFFECT 57-2256 57 NO EFFECT 57-2256 57 NO EFFECT 57-2256 57 NO EFFECT 57-2256R1 57 NO EFFECT 57-2256R2 57 NO EFFECT 57-2261 57 NO EFFECT 57-2261 57 C 02/15/98 57-2261 57 C 02/15/98 57-2261R2 57 S 10/10/91 57-2261R3 57 S 10/10/94 57-2261R4 57 S 10/10/94 <tr< td=""><td></td><td></td><td></td><td></td><td></td></tr<>					
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57-2269	57		NO EFFECT	
57-2272	57		NO EFFECT	
57-2272R1	57		NO EFFECT	
57-2277	57		NO EFFECT	
57-2277R1	57		NO EFFECT	
57-2278	57		NO EFFECT	
57-2279	57		NO EFFECT	
57-2281	57		NO EFFECT	
57-2282	57		NO EFFECT	
57-2286	57		NO EFFECT	
57-2286R1	57		NO EFFECT	
57-2287	57		NO EFFECT	
57-2289	57	S	02/10/95	
57-2291	57		NO EFFECT	
57-2291R1	57		NO EFFECT	
57-2291R2	57		NO EFFECT	
57-2291R3	57		NO EFFECT	
57-2292	57		NO EFFECT	
57-2294	57		NO EFFECT	
57A2298	57		NO EFFECT	
57A2298R1	57		NO EFFECT	
57A2298R2	57		NO EFFECT	
57A2298R3	57		NO EFFECT	
57A2302	57		NO EFFECT	
57A2302R1	57	_	NO EFFECT	
57-2304	54	S	06/15/98	
57-2304	57	_	NO EFFECT	
57-2304R1	54	S	06/15/98	
57-2304R1	57 57		NO EFFECT	
57-2307	57 57		NO EFFECT	
57A2310	57 57		NO EFFECT	
57A2310R1 71-2232	57 77	•	NO EFFECT 06/10/90	
71-2232	34 71	S		
71-2252	71 71		NO EFFECT	
71-2257	71	S	NO EFFECT 10/10/93	
71-2257 71-2257R1	71	S	10/10/93	
71-2272	71	3	NO EFFECT	
71-2275	71		NO EFFECT	
71-2281	36	S	INCORP	
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71-2289	71	3	NO EFFECT	
73-2054	73		NO EFFECT	
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73-2062R1	73	S	02/10/96	
73-2062R1	73	S	02/10/96	
73-2064R2	73	•	NO EFFECT	
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73A2071R1	SERVICE <u>BULLETIN</u>	<u>ATA</u>	<u>s/c</u>	INCORPORATION <u>DATE</u>	CUSTOMER ENGINEERING ORDER NUMBER
74-2007 74-2009 74 74-2009 74 74-2009 74 76-2081 76-2081 76 76-2084 76 76-2084 76 76-2087 76-2087 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 76-2097 79-2039 79 79-2039 79 79-2039 79 79 79-2039 79 79 79-2039 79 79 79-2039 79 79 79-2036 79 79-2036 79 79-2036 79 79-2036 79 79-2036 79 79-2036 79 79-2006 70 70 70 70 70 70 70 70 70 70 70 70 70	•				
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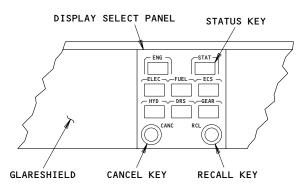
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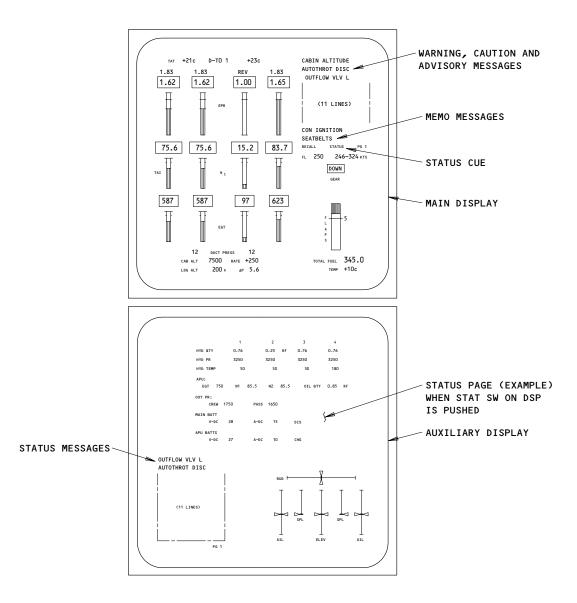


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EICAS Displays Figure 1

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EICAS MESSAGE LIST

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
A/G DISAGREE	(STATUS)	PRIMARY AND ALTERNATE AIR/GND LOGIC DISAGREE - WING AND/OR BODY GEAR TILT. INHIBITED BY BATTERY BUS OFF OR AC BUS 2 OFF.	32 09 01 00
A/P SINGLE SYS	(STATUS)	AUTOPILOT REVERSIONARY CONFIGURATION. NO AUTOPILOT REDUNDANCY.	22 10 84 00
ACARS ALERT	(MEMO)	THE ACARS SYSTEM NEEDS FLIGHT CREW ATTENTION OR ACTION	23 ME 05 00
ACARS CALL	(MEMO)	AN UPLINKED MESSAGE HAS BEEN RECEIVED WITH A VOICE CONTACT REQUEST	23 ME 02 00
ACARS MESSAGE	(MEMO)	AN UPLINKED MESSAGE HAS BEEN RECEIVED	23 ME 01 00
ACARS MU L	(STATUS)	LEFT ACARS MU FAILURE	23 27 16 00
ACARS MU R	(STATUS)	RIGHT ACARS MU FAILURE	23 27 17 00
ACARS NO COMM	(MEMO)	ACARS HAS NO VHF, SATCOM OR ATC RF LINK AVAILABLE	23 ME 03 00
ACARS VOICE	(MEMO)	ACARS IS SETTING THE VHF TRANSCEIVER TO VOICE MODE	23 ME 06 00
ACARS VOICE BUSY	(MEMO)	THE PARTY ON THE GROUND WITH WHOM THE FLIGHT CREW DESIRES VOICE COMMUNICATIONS CANNOT BE REACHED BECAUSE GROUND CIRCUITS ARE BUSY OR HIS TELEPHONE IS ALREADY IN USE	23 ME 07 00
ACESS MGT UNIT OR CABIN SYSTEM	(STATUS)	ACESS MGT SYS FAILED OR CABIN SERVICES SYSTEM INTERFACE TO EIU FAILURE	23 34 01 00

EICAS MESSAGES

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>ADC CENTER	(ADVISORY)	C ADC FAILURE	34 12 01 00
ADC CENTER	(STATUS)	C ADC FAILURE	34 12 02 00
>ADC LEFT	(ADVISORY)	L ADC FAILURE	34 12 03 00
ADC LEFT	(STATUS)	L ADC FAILURE	34 12 04 00
>ADC RIGHT	(ADVISORY)	R ADC FAILURE	34 12 05 00
ADC RIGHT	(STATUS)	R ADC FAILURE	34 12 06 00
ADF LEFT	(STATUS)	LOSS OF LEFT ADF DATA	34 57 12 00
ADF RIGHT	(STATUS)	LOSS OF RIGHT ADF DATA	34 57 13 00
AFT CARGO 3 LP A	(STATUS)	AFT CARGO 3 LOOP A FIRE OR FAULT	26 16 01 00
AFT CARGO 3 LP B	(STATUS)	AFT CARGO 3 LOOP B FIRE OR FAULT	26 16 02 00
AFT CARGO 4 LP A	(STATUS)	AFT CARGO 4 LOOP A FIRE OR FAULT	26 16 03 00
AFT CARGO 4 LP B	(STATUS)	AFT CARGO 4 LOOP B FIRE OR FAULT	26 16 04 00
AILERON LOCKOUT	(STATUS)	EITHER OR BOTH AILERON LOCKOUT ACTUATOR UNLOCKED WHEN IT SHOULD BE LOCKED, OR LOCKED WHEN IT SHOULD BE UNLOCKED OR FAILED	27 10 02 00
AILERON LOCKOUT	(ADVISORY)	EITHER OR BOTH AILERON LOCKOUT ACTUATOR UNLOCKED WHEN IT SHOULD BE LOCKED, OR LOCKED WHEN IT SHOULD BE UNLOCKED OR FAILED	27 10 01 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
AIR/GND SYSTEM	(ADVISORY)	LOSS OF THE AIR/GND LOGIC DUE TO THE LOSS OF OUTPUT POWER FROM A PSEU	32 09 03 00
>AIRSPEED LOW	(CAUTION)	LOW AIRSPEED	34 12 35 00
ALT ALERT SYS	(STATUS)	FAILURE OF THE ALTITUDE ALERT SYSTEM OR LOSS OF INPUT TO THE INTEGRATED DISPLAY SYSTEM	34 16 02 00
ALT DISAGREE	(CAUTION)	UNCORRECTED BARO ALTITUDE DISAGREES BY MORE THAN 200 FEET FOR MORE THAN 5 SECONDS. INHIBTED BELOW 400 FEET RADIO ALTITUDE	34 12 37 00
>ALTITUDE ALERT	(CAUTION)	EXCESSIVE DEVIATION FROM SELECTED ALTITUDE BY 300 FEET OR MORE	34 16 03 00
>ANTI-ICE NAC	(ADVISORY)	ANY NAC ANTI-ICE SYSTEM IS ON AND TAT > 12 DEGREES C AND ICE DETECTOR DOES NOT DETECT NAC ICE	30 21 31 00
ANTI-ICE NAC 1	(STATUS)	ENGINE 1 ANTI-ICE VALVE DISAGREES WITH COMMAND WITH ENGINE RUNNING OR TAI VALVE PRESSURE REGULATOR FAILED	30 21 23 00
ANTI-ICE NAC 2	(STATUS)	ENGINE 2 ANTI-ICE VALVE DISAGREES WITH COMMAND WITH ENGINE RUNNING OR TAI VALVE PRESSURE REGULATOR FAILED	30 21 24 00
ANTI-ICE NAC 3	(STATUS)	ENGINE 3 ANTI-ICE VALVE DISAGREES WITH COMMAND WITH ENGINE RUNNING OR TAI REGULATOR VALVE FAILED	30 21 25 00
ANTI-ICE NAC 4	(STATUS)	ENGINE 4 ANTI-ICE VALVE DISAGREES WITH COMMAND WITH ENGINE RUNNING OR TAI REGULATOR VALVE FAILED	30 21 26 00

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EICAS MESSAGE LIST

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>ANTI-ICE WING	(ADVISORY)	ANY WING ANTI-ICE SYSTEM IS ON AND TAT > 12 DEGREES C AND ICE DETECTOR DOES NOT DETECT WING ICE	30 11 05 00
ANTI-ICE WING L	(STATUS)	LEFT WING ANTI-ICE VALVE DISAGREES WITH COMMAND	30 11 02 00
ANTI-ICE WING R	(STATUS)	RIGHT WING ANTI-ICE VALVE DISAGREES WITH COMMAND	30 11 04 00
ANTISKID	(STATUS)	FAULT IN ANTISKID SYSTEM (NORMAL OR ALTERNATE). INHIBITED BY ANTISKID OFF (STATUS).	32 42 02 00
ANTISKID	(ADVISORY)	ANTISKID FAULT AFFECTING BRAKE SYSTEM IN USE (NORMAL OR ALTERNATE). INHIBITED BY ANTISKID OFF (ADVISORY).	32 42 01 00
ANTISKID OFF	(STATUS)	ANTISKID POWER OFF ON ALL 16 WHEELS OR PARKING BRAKE VALVE NOT FULLY OPEN WITH PARKING BRAKE RELEASED OR LOSS OF BOTH BUS INPUTS FROM BSCU.	32 42 04 00
ANTISKID OFF	(ADVISORY)	ANTISKID POWER OFF ON ALL 16 WHEELS OR PARKING BRAKE VALVE NOT FULLY OPEN WITH PARKING BRAKE RELEASED OR LOSS OF BOTH BUS INPUTS FROM BSCU.	32 42 03 00
>AOA RIGHT	(ADVISORY)	RIGHT AOA (ANGLE OF ATTACK) SENSOR FAILURE REPORTED BY THE CENTER ADC (AIR DATA COMPUTER) ON THE GROUND	34 12 33 00
AOA RIGHT	(STATUS)	RIGHT AOA (ANGLE OF ATTACK) SENSOR FAILURE REPORTED BY THE CENTER ADC (AIR DATA COMPUTER)	34 12 31 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
APU	(STATUS)	APU AUTOMATIC FAULT SHUTDOWN WHILE SWITCH IS IN ON POSITION, OR SWITCH IN STOP POSITION AND NO FAULT INDICATION WITH RPM GREATER THAN 95%. (APU AUTO EVENT)	49 11 02 00
APU	(ADVISORY)	APU AUTOMATIC FAULT SHUTDOWN WHILE SWITCH IS IN ON POSITION, OR SWITCH IN STOP POSITION AND NO FAULT INDICATION WITH RPM GREATER THAN 95%. (APU AUTO EVENT)	49 11 01 00
APU DOOR	(STATUS)	APU DOOR DISAGREE.	49 15 02 00
APU DOOR	(ADVISORY)	APU DOOR DISAGREE	49 15 01 00
APU DUCT LEAK	(STATUS)	APU BLEED DUCT LEAK/OVERHEAT	36 10 01 00
APU FIRE LOOP A	(STATUS)	APU FIRE LOOP A FIRE OR FAULT	26 15 01 00
APU FIRE LOOP B	(STATUS)	APU FIRE LOOP B FIRE OR FAULT	26 15 02 00
APU FUEL	(ADVISORY)	APU FUEL VALVE DISAGREE WITH COMMANDED POSITION OR APU FUEL PUMP LOW PRESSURE WHEN COMMANDED ON	28 25 01 00
APU FUEL PUMP	(STATUS)	APU FUEL PUMP LOW PRESSURE WHEN APU COMMANDED ON	28 25 02 00
APU FUEL VALVE	(STATUS)	APU FUEL VALVE DISAGREE WITH COMMANDED POSITION	28 25 03 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
APU GEN BEARING	(STATUS)	A BEARING FAILURE IN APU GENERATOR 1 OR 2 IS SENSED BY THE CORRESPONDING BUS CONTROL UNIT	24 21 01 00
APU GEN 1	(STATUS)	APU IS RUNNING AND AGCR NO. 1 IS OPEN	24 20 24 00
APU RUNNING	(MEMO)	APU RUNNING. SWITCH IN ON POSITION AND APU N1 GREATER THAN 95%	49 ME 01 00
APU STRT INHIBIT	(STATUS)	APU HAS DETECTED A FAULT THAT INHIBITS THE NEXT APU START	49 41 01 00
>ATC LEFT	(ADVISORY)	L-AIR TRAFFIC CONTROL TRANSPONDER FAULT	34 53 01 00
ATC LEFT	(STATUS)	L-AIR TRAFFIC CONTROL TRANSPONDER FAULT	34 53 02 00
>ATC RIGHT	(ADVISORY)	R-AIR TRAFFIC CONTROL TRANSPONDER FAULT	34 53 03 00
ATC RIGHT	(STATUS)	R-AIR TRAFFIC CONTROL TRANSPONDER FAULT	34 53 04 00
>ATTITUDE	(CAUTION)	CAPT AND F/O PITCH AND/OR ROLL IRS ATTITUDE READOUTS DIFFER BY 3 DEGREES OR MORE	34 21 01 00
AURAL SYNTH CARD	(STATUS)	AURAL SYNTHESIZER CARD LEFT AND/OR RIGHT (IN THE MAWEA) HAS FAILED	31 51 01 00
AURAL WARN SPKR	(STATUS)	FAILURE OF THE MAWEA AURAL WARNING LEFT AND/OR RIGHT SPEAKER	31 51 02 00
AUTOBRAKES	(STATUS)	AUTOBRAKE DISARMED OR INOPERATIVE OR SOLENOID VALVE OPEN WHEN AUTOBRAKE SWITCHED OFF	32 42 18 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
AUTOBRAKES	(ADVISORY)	AUTOBRAKE DISARMED OR INOPERATIVE OR SOLENOID VALVE OPEN WHEN AUTOBRAKE SWITCHED OFF	32 42 05 00
AUTOBRAKES 1	(MEMO)	AUTOBRAKES 1 SELECTED	32 ME 02 00
AUTOBRAKES 2	(MEMO)	AUTOBRAKES 2 SELECTED	32 ME 03 00
AUTOBRAKES 3	(MEMO)	AUTOBRAKES 3 SELECTED	32 ME 04 00
AUTOBRAKES 4	(MEMO)	AUTOBRAKES 4 SELECTED	32 ME 05 00
AUTOBRAKES MAX	(MEMO)	AUTOBRAKES MAX SELECTED	32 ME 06 00
AUTOBRAKES RTO	(MEMO)	AUTOBRAKES RTO SELECTED	32 ME 07 00
>AUTOPILOT	(CAUTION)	ACTIVE AUTOPILOT CONTROL INOPERATIVE OR THE AUTOPILOT IS IN GROUND TEST	22 10 01 00
>AUTOPILOT DISC	(WARNING)	LOSS OF ALL ENGAGED AUTO PILOTS (AUTO/MANUAL EVENT)	22 10 02 00
>AUTOSTART OFF	(ADVISORY)	THE AUTOSTART SYSTEM IS OFF	80 03 20 00
>AUTOTHROT DISC	(CAUTION)	MANUAL OR AUTOMATIC DISENGAGEMENT OF AUTOTHROTTLE OR FAILURE TO REMOVE POWER FROM A/T SERVO	34 61 01 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>BARO DISAGREE	(ADVISORY)	THE PILOT'S HAVE BEEN USING DIFFERENT BAROMETRIC REFERENCE SETTINGS FOR ONE MINUTE.	34 13 04 00
BAT CHARGER APU	(STATUS)	APU BATTERY CHARGER FAILED OR INPUT POWER TO CHARGER FAILED, OR INTERLOCK OPEN OR APU BATTERY OVERHEAT	24 30 01 00
BAT CHARGER MAIN	(STATUS)	MAIN BATTERY CHARGER FAILED OR INPUT POWER TO CHARGER FAILED, OR INTERLOCK OPEN OR MAIN BATTERY OVERHEAT	24 30 02 00
>BAT DISCH APU	(ADVISORY)	APU BATTERY DISCHARGING, INHIBITED DURING APU START	24 30 05 00
>BAT DISCH MAIN	(ADVISORY)	MAIN BATTERY DISCHARGING	24 30 07 00
>BATTERY OFF	(ADVISORY)	BATTERY SWITCH OFF	24 30 09 00
BLD 1 OVHT/PRV	(ADVISORY)	PRV FAILED CLOSED OR BLEED AIR OVERHEAT SWITCH ACTUATED CAUSING ENGINE 1 PRV AND HPSOV COMMANDED CLOSED	36 10 08 00
BLD 2 OVHT/PRV	(ADVISORY)	PRV FAILED CLOSED OR BLEED AIR OVERHEAT SWITCH ACTUATED CAUSING ENGINE 2 PRV AND HPSOV COMMANDED CLOSED	36 10 10 00
BLD 3 OVHT/PRV	(ADVISORY)	PRV FAILED CLOSED OR BLEED AIR OVERHEAT SWITCH ACTUATED CAUSING ENGINE 3 PRV AND HPSOV COMMANDED CLOSED	36 10 12 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
BLD 4 OVHT/PRV	(ADVISORY)	PRV FAILED CLOSED OR BLEED AIR OVERHEAT SWITCH ACTUATED CAUSING ENGINE 4 PRV AND HPSOV COMMANDED CLOSED	36 10 14 00
BLD DUCT LEAK C	(STATUS)	CENTER DUCT LEAK/OVERHEAT	36 10 76 00
BLD DUCT LEAK C	(CAUTION)	CENTER DUCT LEAK/OVERHEAT	36 10 75 00
BLD DUCT LEAK L	(STATUS)	LEFT DUCT LEAK/OVERHEAT	36 10 03 00
BLD DUCT LEAK L	(CAUTION)	LEFT DUCT LEAK/OVERHEAT	36 10 02 00
BLD DUCT LEAK R	(STATUS)	RIGHT DUCT LEAK/OVERHEAT	36 10 05 00
BLD DUCT LEAK R	(CAUTION)	RIGHT DUCT LEAK/OVERHEAT	36 10 04 00
BLEED 1	(ADVISORY)	ENG 1 PRV FAILED TO CLOSE WHEN COMMANDED (FALLS THROUGH E.S.I.) OR BLEED OVERPRESSURE DUE TO PRV FAILURE OR HPSOV OPEN AND PH SWITCH ACTUATED OR HPSOV OPEN WHEN ELECTRICALLY COMMANDED CLOSED	36 10 23 00
>BLEED 1 OFF	(ADVISORY)	ENGINE 1 PRSOV CLOSED WITH ENGINE RUNNING AND BLEED COMMANDED OFF	36 10 51 00
BLEED 1 OVHT	(STATUS)	BLEED AIR OVERHEAT SWITCH ACTUATED CAUSING ENGINE 1 PRV AND HPSOV COMMANDED CLOSED	36 10 09 00
BLEED 2	(ADVISORY)	ENG 2 PRV FAILED TO CLOSE WHEN COMMANDED (FALLS THROUGH E.S.I.) OR BLEED OVERPRESSURE DUE TO PRV FAILURE OR HPSOV OPEN AND PH SWITCH ACTUATED OR HPSOV OPEN WHEN ELECTRICALLY COMMANDED CLOSED	36 10 25 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>BLEED 2 OFF	(ADVISORY)	ENGINE 2 PRSOV CLOSED WITH ENGINE RUNNING AND BLEED COMMANDED OFF	36 10 53 00
BLEED 2 OVHT	(STATUS)	BLEED AIR OVERHEAT SWITCH ACTUATED CAUSING ENGINE 2 PRV AND HPSOV COMMANDED CLOSED	36 10 11 00
BLEED 3	(ADVISORY)	ENG 3 PRV FAILED TO CLOSE WHEN COMMANDED (FALLS THROUGH E.S.I.) OR BLEED OVERPRESSURE DUE TO PRV FAILURE OR HPSOV OPEN AND PH SWITCH ACTUATED OR HPSOV OPEN WHEN ELECTRICALLY COMMANDED CLOSED	36 10 27 00
>BLEED 3 OFF	(ADVISORY)	ENGINE 3 PRSOV CLOSED WITH ENGINE RUNNING AND BLEED COMMANDED OFF	36 10 55 00
BLEED 3 OVHT	(STATUS)	BLEED AIR OVERHEAT SWITCH ACTUATED CAUSING ENGINE 3 PRV AND HPSOV COMMANDED CLOSED	36 10 13 00
BLEED 4	(ADVISORY)	ENG 4 PRV FAILED TO CLOSE WHEN COMMANDED (FALLS THROUGH E.S.I.) OR BLEED OVERPRESSURE DUE TO PRV FAILURE OR HPSOV OPEN AND PH SWITCH ACTUATED OR HPSOV OPEN WHEN ELECTRICALLY COMMANDED CLOSED	36 10 29 00
>BLEED 4 OFF	(ADVISORY)	ENGINE 4 PRSOV CLOSED WITH ENGINE RUNNING AND BLEED COMMANDED OFF	36 10 57 00
BLEED 4 OVHT	(STATUS)	BLEED AIR OVERHEAT SWITCH ACTUATED CAUSING ENGINE 4 PRV AND HPSOV COMMANDED CLOSED	36 10 15 00
BLEED ASCTU A	(STATUS)	CHANNEL A OF AIR SUPPLY CONTROL AND TEST UNIT FAILED OR ARINC 429 BUS INVALID OR MISSING	36 10 20 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
BLEED ASCTU B	(STATUS)	CHANNEL B OF AIR SUPPLY CONTROL AND TEST UNIT FAILED OR ARINC 429 BUS INVALID OR MISSING	36 10 21 00
BLEED FAMV ENG 1	(STATUS)	FAMV FAILED OPEN	36 10 79 00
BLEED FAMV ENG 2	(STATUS)	FAMV FAILED OPEN	36 10 80 00
BLEED FAMV ENG 3	(STATUS)	FAMV FAILED OPEN	36 10 81 00
BLEED FAMV ENG 4	(STATUS)	FAMV FAILED OPEN	36 10 82 00
BLEED HP ENG 1	(ADVISORY)	HPSOV 1 FAILED CLOSED	36 10 34 00
BLEED HP ENG 1	(STATUS)	ENGINE 1 HPSOV OPEN AND PH SWITCH ACTUATED OR HPSOV OPEN WHEN ELECTRICALLY COMMANDED CLOSED	36 10 35 00
BLEED HP ENG 2	(ADVISORY)	HPSOV 2 FAILED CLOSED	36 10 36 00
BLEED HP ENG 2	(STATUS)	ENGINE 2 HPSOV OPEN AND PH SWITCH ACTUATED OR HPSOV OPEN WHEN ELECTRICALLY COMMANDED CLOSED	36 10 37 00
BLEED HP ENG 3	(ADVISORY)	HPSOV 3 FAILED CLOSED	36 10 38 00
BLEED HP ENG 3	(STATUS)	ENGINE 3 HPSOV OPEN AND PH SWITCH ACTUATED OR HPSOV OPEN WHEN ELECTRICALLY COMMANDED CLOSED	36 10 39 00
BLEED HP ENG 4	(ADVISORY)	HPSOV 4 FAILED CLOSED	36 10 40 00
BLEED HP ENG 4	(STATUS)	ENGINE 4 HPSOV OPEN AND PH SWITCH ACTUATED OR HPSOV OPEN WHEN ELECTRICALLY COMMANDED CLOSED	36 10 41 00
>BLEED ISLN APU OR BLEED ISLN APU	(ADVISORY)	APU BLEED ISOLATION VALVE/SWITCH DISAGREE	36 10 06 00

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LEVEL	DESCRIPTION	FAULT CODE
(STATUS)	APU BLEED ISOLATION VALVE COMMAND/POSITION DISAGREE	36 10 07 00
(STATUS)	LEFT BLEED ISOLATION VALVE/SWITCH DISAGREE	36 10 44 00
(ADVISORY)	LEFT BLEED ISOLATION VALVE/SWITCH DISAGREE	36 10 43 00
(STATUS)	RIGHT BLEED ISOLATION VALVE/SWITCH DISAGREE	36 10 46 00
(ADVISORY)	RIGHT BLEED ISOLATION VALVE/SWITCH DISAGREE	36 10 45 00
(STATUS)	APU BLEED AIR LOSS - APUC FAULT	49 11 11 00
(STATUS)	ENG 1 BLEED OVERPRESSURE DUE TO PRV FAILURE	36 10 59 00
(STATUS)	ENG 2 BLEED OVERPRESSURE DUE TO PRV FAILURE	36 10 60 00
(STATUS)	ENG 3 BLEED OVERPRESSURE DUE TO PRV FAILURE	36 10 61 00
(STATUS)	ENG 4 BLEED OVERPRESSURE DUE TO PRV FAILURE	36 10 62 00
(STATUS)	ENGINE 1 PRV FAILURE TO CLOSE WHEN COMMANDED	36 10 67 00
(STATUS)	ENGINE 2 PRV FAILURE TO CLOSE WHEN COMMANDED	36 10 68 00
(STATUS)	ENGINE 3 PRV FAILURE TO CLOSE WHEN COMMANDED	36 10 69 00
(STATUS)	ENGINE 4 PRV FAILURE TO CLOSE WHEN COMMANDED	36 10 70 00
	(STATUS) (STATUS) (ADVISORY) (STATUS) (STATUS) (STATUS) (STATUS) (STATUS) (STATUS) (STATUS) (STATUS) (STATUS)	(STATUS) APU BLEED ISOLATION VALVE COMMAND/POSITION DISAGREE (STATUS) LEFT BLEED ISOLATION VALVE/SWITCH DISAGREE (ADVISORY) LEFT BLEED ISOLATION VALVE/SWITCH DISAGREE (STATUS) RIGHT BLEED ISOLATION VALVE/SWITCH DISAGREE (ADVISORY) RIGHT BLEED ISOLATION VALVE/SWITCH DISAGREE (STATUS) APU BLEED AIR LOSS - APUC FAULT (STATUS) ENG 1 BLEED OVERPRESSURE DUE TO PRV FAILURE (STATUS) ENG 2 BLEED OVERPRESSURE DUE TO PRV FAILURE (STATUS) ENG 3 BLEED OVERPRESSURE DUE TO PRV FAILURE (STATUS) ENG 4 BLEED OVERPRESSURE DUE TO PRV FAILURE (STATUS) ENG 4 BLEED OVERPRESSURE DUE TO PRV FAILURE (STATUS) ENGINE 1 PRV FAILURE TO CLOSE WHEN COMMANDED (STATUS) ENGINE 2 PRV FAILURE TO CLOSE WHEN COMMANDED (STATUS) ENGINE 3 PRV FAILURE TO CLOSE WHEN COMMANDED

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>BODY GEAR STRG	(ADVISORY)	PRIMARY AND ALTERNATE SYSTEMS BOTH INDICATE ANY BODY GEAR STEERING ACTUATOR UNLOCKED WHEN SYSTEM NOT ARMED OR SYSTEM PRESSURIZED WHEN NOT ARMED.	32 53 01 00
BODY GR STRG SYS	(STATUS)	PRIM AND ALT SYS INDICATE ANY BODY GEAR STRG UNLOCKED OR PRESSURIZED WHEN SYS NOT ARMED AND NOT BOTH BODY GEAR LOCK SWITCHES INDICATE L OR R TURN AND NOT BODY GEAR STRG RELAYS ARMED AND NOT BOTH HYD PRESS SWITCHES LOW, OR ARM SIGNALS ARMED OR DISAGREE OR 20 DEG NOSE WHEEL SW CLOSED AND IRS GRD SP>50 KTS	32 53 02 00
>BOTTLE LOW APU	(ADVISORY)	APU BOTTLE LOW PRESSURE	26 22 01 00
BOTTLE LOW APU	(STATUS)	APU BOTTLE LOW PRESSURE	26 22 02 00
BRAKE LIMITER	(STATUS)	BRAKE TORQUE LIMITER FAILURE ON ONE OR MORE WHEELS OR PARKING BRAKE VALVE NOT FULLY OPEN WITH PARKING BRAKE RELEASED OR LOSS OF BOTH BUS INPUTS FROM THE BSCU.	32 42 08 00
BRAKE LIMITER	(ADVISORY)	BRAKE TORQUE LIMITER FAILURE ON MORE THAN ONE WHEEL FOR ANY TRUCK OR PARKING BRAKE VALVE NOT FULLY OPEN WITH PARKING BRAKE RELEASED OR LOSS OF BOTH BUS INPUTS FROM BSCU	32 42 07 00
>BRAKE SOURCE	(CAUTION)	ALL HYDRAULIC BRAKE PRESSURE SOURCES (NO. 4, NO. 1 AND NO. 2) ARE LOW.	32 41 02 00
BRAKE TEMP	(ADVISORY)	ANY BRAKE TEMP IS EQUAL TO OR GREATER THAN APPROX 5 UNITS	32 46 01 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
BRAKE TEMP SYS	(STATUS)	BRAKE TEMPERATURE MONITORING SYSTEM MALFUNCTION OR LOSS OF INPUT BUS.	32 46 03 00
>BTL LO L ENG A	(ADVISORY)	LEFT A BOTTLE LOW PRESSURE	26 21 17 00
>BTL LO L ENG B	(ADVISORY)	LEFT B BOTTLE LOW PRESSURE	26 21 19 00
>BTL LO R ENG A	(ADVISORY)	RIGHT A BTL LOW PRESSURE	26 21 21 00
>BTL LO R ENG B	(ADVISORY)	RIGHT B BOTTLE LOW PRESSURE	26 21 23 00
BTL LOW CARGO A	(STATUS)	A CARGO BOTTLE LOW PRESSURE	26 23 02 00
BTL LOW CARGO AA	(STATUS)	AA CARGO BOTTLE LOW PRESSURE	26 24 23 00
BTL LOW CARGO AB	(STATUS)	AB CARGO BOTTLE LOW PRESSURE	26 24 24 00
BTL LOW CARGO AC	(STATUS)	AC CARGO BOTTLE LOW PRESSURE	26 24 25 00
BTL LOW CARGO AD	(STATUS)	AD CARGO BOTTLE LOW PRESSURE	26 24 26 00
BTL LOW CARGO AE	(STATUS)	AE CARGO BOTTLE LOW PRESSURE	26 24 27 00
BTL LOW CARGO AF	(STATUS)	AF CARGO BOTTLE LOW PRESSURE	26 24 28 00
BTL LOW CARGO AG	(STATUS)	AG CARGO BOTTLE LOW PRESSURE	26 24 29 00
BTL LOW CARGO B	(STATUS)	B CARGO BOTTLE LOW PRESSURE	26 23 04 00
BTL LOW CARGO C	(STATUS)	C CARGO BOTTLE LOW PRESSURE	26 23 06 00
BTL LOW CARGO D	(STATUS)	D CARGO BOTTLE LOW PRESSURE	26 24 04 00
BTL LOW CARGO E	(STATUS)	E CARGO BOTTLE LOW PRESSURE	26 24 05 00
BTL LOW CARGO F	(STATUS)	F CARGO BOTTLE LOW PRESSURE	26 24 06 00
BTL LOW CARGO G	(STATUS)	G CARGO BOTTLE LOW PRESSURE	26 24 08 00
BTL LOW CARGO H	(STATUS)	H CARGO BOTTLE LOW PRESSURE	26 24 10 00
BTL LOW CARGO J	(STATUS)	J CARGO BOTTLE LOW PRESSURE	26 24 11 00
BTL LOW CARGO K	(STATUS)	K CARGO BOTTLE LOW PRESSURE	26 24 12 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
BTL LOW CARGO L	(STATUS)	L CARGO BOTTLE LOW PRESSURE	26 24 13 00
BTL LOW CARGO M	(STATUS)	M CARGO BOTTLE LOW PRESSURE	26 24 14 00
BTL LOW CARGO N	(STATUS)	N CARGO BOTTLE LOW PRESSURE	26 24 15 00
BTL LOW CARGO P	(STATUS)	P CARGO BOTTLE LOW PRESSURE	26 24 16 00
BTL LOW CARGO R	(STATUS)	R CARGO BOTTLE LOW PRESSURE	26 24 17 00
BTL LOW CARGO T	(STATUS)	T CARGO BOTTLE LOW PRESSURE	26 24 18 00
BTL LOW CARGO U	(STATUS)	U CARGO BOTTLE LOW PRESSURE	26 24 19 00
BTL LOW CARGO V	(STATUS)	V CARGO BOTTLE LOW PRESSURE	26 24 20 00
BTL LOW CARGO W	(STATUS)	W CARGO BOTTLE LOW PRESSURE	26 24 21 00
BTL LOW CARGO Y	(STATUS)	Y CARGO BOTTLE LOW PRESSURE	26 24 22 00
BTL LOW L ENG A	(STATUS)	LEFT A BOTTLE LOW PRESSURE	26 21 18 00
BTL LOW L ENG B	(STATUS)	LEFT B BOTTLE LOW PRESSURE	26 21 20 00
BTL LOW R ENG A	(STATUS)	RIGHT A BOTTLE LOW PRESSURE	26 21 22 00
BTL LOW R ENG B	(STATUS)	RIGHT B BOTTLE LOW PRESSURE	26 21 24 00
CAB EXH VLV AFT	(STATUS)	THE AFT CABIN EXHAUST VALVE IS NOT CLOSED WHEN THE OVERBOARD VALVE IS COMMANDED CLOSED	21 20 51 00
CAB EXH VLV FWD	(STATUS)	THE FORWARD CABIN EXHAUST VALVE IS NOT CLOSED WHEN THE OVERBOARD VALVE IS COMMANDED CLOSED	21 20 50 00
CABIN ALT AUTO	(CAUTION)	LOSS OF INPUT FROM OR FAILURE OF BOTH PRESSURE CONTROLLERS OR MANUAL MODE SELECTED (OR HIGH ALTITUDE LANDING PRIMARY RELAY FAILURE-OPTION)	21 30 01 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
CABIN ALT AUTO A	(STATUS)	LOSS OF ARINC BUS WITHOUT MANUAL SELECTED OR FAIL BIT SET FOR CABIN ALTITUDE CONTROL CHANNEL A.	21 30 02 00
CABIN ALT AUTO B	(STATUS)	LOSS OF ARINC BUS WITHOUT MANUAL SELECTED OR FAIL BIT SET FOR CABIN ALTITUDE CONTROL CHANNEL B.	21 30 03 00
CABIN ALTITUDE	(WARNING)	CABIN ALTITUDE EXCEEDS 10K FT.	21 30 04 00
CABIN INTERPHONE	(STATUS)	CABIN INTERPHONE SYS FAILED	23 42 01 00
CABIN SYSTEM OR ACESS MGT UNIT	(STATUS)	CABIN SERVICES SYSTEM INTERFACE TO EIU FAILURE OR ACESS MGT SYS FAILED	23 34 01 00
CACTCS AIR/GND	(STATUS)	PTC PRIMARY AND ALTERNATE AIR/GROUND SIGNAL DISAGREEMENT	21 60 14 00
CAPT XFR BUS	(STATUS)	CAPTAINS INSTRUMENT BUS TRANSFERRED WITH BUS 3 STILL POWERED OR NOT TRANSFERRED WITH NO POWER AVAILABLE ON BUS 3	24 50 01 00
CARGO A/C SELECT	(STATUS)	CARGO TEMP SELECTOR	21 20 25 00
CARGO DET AFT 1	(STATUS)	LOOP A AND LOOP B OF AFT ZONE 1 BOTH FAILED	26 16 28 00
CARGO DET AFT 2	(STATUS)	LOOP A AND LOOP B OF AFT ZONE 2 BOTH FAILED	26 16 29 00
CARGO DET AFT 3	(STATUS)	LOOP A AND LOOP B OF AFT ZONE 3 BOTH FAILED	26 16 26 00
CARGO DET AFT 4	(STATUS)	LOOP A AND LOOP B OF AFT ZONE 4 BOTH FAILED	26 16 27 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>CARGO DET AIR	(ADVISORY)	INSUFFICIENT VACUUM FOR CARGO SMOKE DETECTION SYSTEM (REQUIRES ANY TWO ENGINES RUNNING)	26 16 23 00
CARGO DET FWD 1	(STATUS)	LOOP A AND LOOP B OF FORWARD ZONE 1 BOTH FAILED	26 16 24 00
CARGO DET FWD 2	(STATUS)	LOOP A AND LOOP B OF FORWARD ZONE 2 BOTH FAILED	26 16 25 00
CARGO HEAT BULK	(STATUS)	BULK CARGO HEATER OR FAN FAILURE	21 40 01 00
CARGO HEAT FWD L	(STATUS)	LEFT FWD CARGO HEATER FAILURE	21 40 02 00
CARGO HEAT FWD R	(STATUS)	RIGHT FWD CARGO HEATER FAILURE	21 40 03 00
CARGO ZONE TEMP	(STATUS)	FWD CARGO ZONE TEMP SYSTEM LRU FAILURE OR IN CARGO BACKUP MODE OR FWD CARGO VLV A FAILURE OR FWD CARGO VLV B FAILURE OR CABIN SHUTOFF VALVE FAIL OR CARGO A/C CARD FAILURE OR ARINC 429 INVALID OR MISSING OR INTERFACE FAIL	21 60 13 00
CDU CENTER	(STATUS)	C CDU FAULT	34 61 03 00
CDU LEFT	(STATUS)	L CDU FAULT	34 61 04 00
CDU RIGHT	(STATUS)	R CDU FAULT	34 61 06 00
>CGO BTL DISCH	(ADVISORY)	CARGO BOTTLE A AND B LOW PRESSURE OR ANY ONE CARGO BOTTLE LOW PRESSURE WHILE ON THE GROUND	26 24 09 00
CGO DET 1 MN DK	(STATUS)	LOOP A AND LOOP B OF MAIN DECK 1 BOTH FAILED	26 14 21 00
CGO DET 2 MN DK	(STATUS)	LOOP A AND LOOP B OF MAIN DECK 2 BOTH FAILED	26 14 22 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
CGO DET 3 MN DK	(STATUS)	LOOP A AND LOOP B OF MAIN DECK 3 BOTH FAILED	26 14 23 00
CGO DET 4 MN DK	(STATUS)	LOOP A AND LOOP B OF MAIN DECK 4 BOTH FAILED	26 14 24 00
CGO DET 5 MN DK	(STATUS)	LOOP A AND LOOP B OF MAIN DECK 5 BOTH FAILED	26 14 25 00
CGO DET 6 MN DK	(STATUS)	LOOP A AND LOOP B OF MAIN DECK 6 BOTH FAILED	26 14 26 00
CGO DET AIR LWR	(STATUS)	INSUFFICIENT VACUUM FOR CARGO SMOKE DETECTION SYSTEM (REQUIRES ANY TWO ENGINES RUNNING	26 16 05 00
CGO DET AIR MD	(STATUS)	INSUFFICIENT VACUUM FOR CARGO SMOKE DETECTION SYSTEM (REQUIRES ANY TWO ENGINES RUNNING	26 14 29 00
CGO EXH V FWD L	(STATUS)	LEFT FWD CARGO EXH VLV (1 OR 1A) NOT IN COM POS	21 20 29 00
CGO EXH V FWD R	(STATUS)	RIGHT FWD CARGO EXH VLV (2 OR 2A) NOT IN COM POS	21 20 30 00
CGO OVBD VLV FWD	(STATUS)	FWD CARGO OVBD VALVE 3 OR 3A NOT IN COMMANDED POSITION	21 20 02 00
CON IGN ENG 1	(STATUS)	NO CONTINUOUS IGNITION ON ENGINE 1	74 03 12 00
CON IGN ENG 2	(STATUS)	NO CONTINUOUS IGNITION ON ENGINE 2.	74 03 13 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
CON IGN ENG 3	(STATUS)	NO CONTINUOUS IGNITION ON ENGINE 3.	74 03 14 00
CON IGN ENG 4	(STATUS)	NO CONTINUOUS IGNITION ON ENGINE 4.	74 03 15 00
CON IGNITION ON	(MEMO)	CONTINUOUS IGNITION SELECTED ON. INHIBITED BY ENG IGNITION (ADVISORY).	74 ME 01 00
>CONFIG FLAPS	(WARNING)	LE AND/OR TE FLAPS NOT IN TAKEOFF POSITION FOR A TAKEOFF AND TAKEOFF THRUST SELECTED ON ENGINES 2 OR 3	31 51 03 00
>CONFIG GEAR	(WARNING)	ANY THROTTLE AT 40 DEGREES TLA AND BELOW 800 FEET RADIO ALTITUDE AND ANY GEAR NOT DOWN AND LOCKED, OR LANDING FLAPS 25 DEGREES OR MORE AND ANY GEAR NOT DOWN AND LOCKED	31 51 04 00
>CONFIG GEAR CTR	(WARNING)	PRIMARY AND ALTERNATE SYSTEMS BOTH INDICATE ANY BODY GEAR STEERING ACTUATOR UNLOCKED WITH TAKEOFF THRUST SELECTED FOR ENGINES 2 OR 3.	31 51 05 00
>CONFIG PARK BRK	(WARNING)	PARKING BRAKE SET AND TAKEOFF THRUST SELECTED ON ENGINES 2 OR 3	31 51 06 00
>CONFIG SPOILERS	(WARNING)	SPEED BRAKE HANDLE NOT IN DOWN DETENT FOR A TAKEOFF AND TAKEOFF THRUST SELECTED ON ENGINES 2 OR 3	31 51 07 00
>CONFIG STAB	(WARNING)	STABILIZER NOT IN SELECTED GREENBAND FOR A TAKEOFF AND TAKEOFF THRUST SELECTED ON ENGINES 2 OR 3	31 51 08 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>CONFIG WARN SY	(ADVISORY)	FAILURE OF THE CONFIGURATION WARNING CARD OR FAILURE OF THE CARD FUNCTION PROGRAM PINS OR LOSS OF THE CONFIGURATION CARD INPUT TO THE EIU	31 51 09 00
CONFIG WARN SYS	(STATUS)	FAILURE OF THE TAKE OFF OR LANDING CONFIGURATION SYSTEM OR LOSS OF CONFIGURATION CARD INPUT TO THE INTERGRATED DISPLAY SYSTEM	31 51 10 00
CPCS AIR/GND	(STATUS)	CPCS PRIMARY AND ALTERNATE AIR/GROUND SIGNAL DISAGREEMENT	21 30 06 00
CPCS BACKUP SENS	(STATUS)	CABIN ALTITUDE BACKUP SIGNALS DIFFER BY MORE THAN 800 FEET	21 30 05 00
>CREW OXY LOW	(ADVISORY)	CREW OXYGEN PRESSURE AT OR BELOW A CUSTOMER SPECIFIED PRESSURE.	35 11 01 00
CTR REFUEL VLV	(STATUS)	CENTER REFUEL (STAB XFR) VALVES POSITION DISAGREE	28 10 21 00
>DATALINK AVAIL	(ADVISORY)	RETURN OF DATALINK CAPABILITY AFTER LOSS	23 27 08 00
>DATALINK LOST	(ADVISORY)	TOTAL LOSS OF DATALINK CAPABILITY DUE TO ACTIVE ACARS BEING IN A "NO COMM" CONDITION	23 27 07 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>DATALINK SYS	(ADVISORY)	TOTAL LOSS OF DATALINK CAPABILITY DUE TO ACARS MU FAILURE	23 27 09 00
>DATALINK SYS L	(ADVISORY)	TOTAL LOSS OF DATALINK CAPABILITY FOR THE ACARS-L DUE TO MU FAILURE	23 27 10 00
>DATALINK SYS R	(ADVISORY)	TOTAL LOSS OF DATALINK CAPABILITY FOR THE ACARS-R DUE TO MU FAILURE	23 27 11 00
>DET FIRE APU	(ADVISORY)	APU FIRE LOOP A AND B FAILURE	26 15 04 00
>DET FIRE/OHT 1	(ADVISORY)	ENG 1 LOOP A AND B FAILURES FOR FIRE OR OVERHEAT	26 11 21 00
>DET FIRE/OHT 2	(ADVISORY)	ENG 2 LOOP A AND B FAILURES FOR FIRE OR OVERHEAT	26 11 22 00
>DET FIRE/OHT 3	(ADVISORY)	ENG 3 LOOP A AND B FAILURES FOR FIRE OR OVERHEAT	26 11 23 00
>DET FIRE/OHT 4	(ADVISORY)	ENG 4 LOOP A AND B FAILURES FOR FIRE OR OVERHEAT	26 11 24 00
DME LEFT	(STATUS)	LOSS OF LEFT DME DATA	34 55 07 00
DME RIGHT	(STATUS)	LOSS OF RIGHT DME DATA	34 55 08 00
DOOR AFT CARGO	(CAUTION)	AFT CARGO DOOR NOT CLOSED AND LOCKED.	52 71 01 00
DOOR AFT CARGO	(STATUS)	AFT LOWER LOBE CARGO DOOR INDICATION SYSTEM FAULT DUE TO DOOR OPEN AND EITHER LATCH LOCKED, LATCH CLOSED, OR DOOR CLOSED INDICATION CIRCUITS INDICATING CLOSED.	52 71 27 00
DOOR BULK CARGO	(ADVISORY)	BULK CARGO DOOR NOT LATCHED.	52 71 02 00
DOOR ELEC CTR	(ADVISORY)	CENTER ELECTRICAL ACCESS DOOR NOT LATCHED.	52 71 03 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
DOOR ELEC MAIN	(ADVISORY)	MAIN ELECTRICAL ACCESS DOOR NOT LATCHED.	52 71 04 00
DOOR ENTRY L 1	(ADVISORY)	L 1 ENTRY DOOR NOT LATCHED.	52 71 05 00
DOOR ENTRY L 2	(ADVISORY)	L 2 ENTRY DOOR NOT LATCHED.	52 71 06 00
DOOR ENTRY L 3	(ADVISORY)	L 3 ENTRY DOOR NOT LATCHED.	52 71 07 00
DOOR ENTRY L 4	(ADVISORY)	L 4 ENTRY DOOR NOT LATCHED.	52 71 08 00
DOOR ENTRY L 5	(ADVISORY)	L 5 ENTRY DOOR NOT LATCHED.	52 71 09 00
DOOR ENTRY R 1	(ADVISORY)	R 1 ENTRY DOOR NOT LATCHED.	52 71 10 00
DOOR ENTRY R 2	(ADVISORY)	R 2 ENTRY DOOR NOT LATCHED.	52 71 11 00
DOOR ENTRY R 3	(ADVISORY)	R 3 ENTRY DOOR NOT LATCHED.	52 71 12 00
DOOR ENTRY R 4	(ADVISORY)	R 4 ENTRY DOOR NOT LATCHED.	52 71 13 00
DOOR ENTRY R 5	(ADVISORY)	R 5 ENTRY DOOR NOT LATCHED.	52 71 14 00
DOOR FWD CARGO	(CAUTION)	FORWARD CARGO DOOR NOT CLOSED AND LOCKED.	52 71 15 00
DOOR FWD CARGO	(STATUS)	FORWARD LOWER LOBE CARGO DOOR INDICATION SYSTEM FAULT DUE TO DOOR OPEN AND EITHER LATCH LOCKED, LATCH CLOSED, OR DOOR CLOSED INDICATION CIRCUITS INDICATING CLOSED.	52 71 26 00
DOOR L UPPER DK	(ADVISORY)	L UPPER DECK DOOR NOT LATCHED.	52 71 16 00
DOOR R UPPER DK	(ADVISORY)	R UPPER DECK DOOR NOT LATCHED.	52 71 17 00
DOOR SIDE CARGO	(CAUTION)	MAIN DECK SIDE CARGO DOOR NOT CLOSED AND LOCKED.	52 71 18 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
DOOR SIDE CARGO	(STATUS)	MAIN DECK SIDE CARGO DOOR INDICATION SYSTEM FAULT DUE TO DOOR OPEN AND EITHER LATCH LOCKED, LATCH CLOSED, OR DOOR CLOSED INDICATION CIRCUITS INDICATING CLOSED.	52 71 25 00
DOOR U/D FLT LK	(STATUS)	UPPER DECK DOOR FLIGHT LOCK DISAGREEMENT	52 71 24 00
DOOR U/D FLT LK	(CAUTION)	UPPER DECK DOOR FLIGHT LOCK DISAGREEMENT	52 71 19 00
DOORS AUTO	(MEMO)	ALL ENTRY/UPPER DECK DOORS IN AUTOMATIC MODE. INHIBITTED AFTER T/O THRUST IS APPLIED UNTIL 1 MINUTE AFTER LANDING	52 ME 02 00
DOORS AUTO/MAN	(MEMO)	ENTRY/UPPER DECK DOORS IN MIXED MODES.	52 ME 03 00
DOORS ELEC	(ADVISORY)	BOTH ELEC ACCESS DOORS NOT LATCHED. WILL INHIBIT INDIVIDUAL ELEC ACCESS DOOR MESSAGES.	52 71 20 00
DOORS ENTRY L	(ADVISORY)	TWO OR MORE LEFT ENTRY DOORS NOT LATCHED. WILL INHIBIT INDIVIDUAL LEFT ENTRY DOOR MESSAGES.	52 71 21 00
DOORS ENTRY R	(ADVISORY)	TWO OR MORE RIGHT ENTRY DOORS NOT LATCHED. WILL INHIBIT INDIVIDUAL RIGHT ENTRY DOOR MESSAGES.	52 71 22 00
DOORS MANUAL	(MEMO)	ALL ENTRY/UPPER DECK DOORS IN MANUAL MODE, INHIBITTED AFTER T/O THRUST IS APPLIED UNTIL 1 MINUTE AFTER LANDING	52 ME 01 00
DOORS UPR DECK	(ADVISORY)	BOTH UPPER DECK DOORS NOT LATCHED. WILL INHIBIT INDIVIDUAL UPPER DECK DOOR MESSAGES.	52 71 23 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
DRIVE 1 TEMP SNS	(STATUS)	NO. 1 IDG TEMP SENSOR FAILURE	24 11 02 00
DRIVE 2 TEMP SNS	(STATUS)	NO. 2 IDG TEMP SENSOR FAILURE	24 11 04 00
DRIVE 3 TEMP SNS	(STATUS)	NO. 3 IDG TEMP SENSOR FAILURE	24 11 06 00
DRIVE 4 TEMP SNS	(STATUS)	NO. 4 IDG TEMP SENSOR FAILURE	24 11 08 00
>DRIVE DISC 1	(ADVISORY)	DRIVE DISC SWITCH PRESSED AND FREQUENCY < 200 Hz (INHIBITS ELEC DRIVE 1)	24 11 10 00
DRIVE DISC 1	(STATUS)	DRIVE DISC SWITCH PRESSED AND FREQUENCY < 100 Hz	24 11 09 00
>DRIVE DISC 2	(ADVISORY)	DRIVE DISC SWITCH PRESSED AND FREQUENCY < 200 Hz (INHIBITS ELEC DRIVE 2)	24 11 12 00
DRIVE DISC 2	(STATUS)	DRIVE DISC SWITCH PRESSED AND FREQUENCY < 100 Hz	24 11 11 00
>DRIVE DISC 3	(ADVISORY)	DRIVE DISC SWITCH PRESSED AND FREQUENCY < 200 Hz (INHIBITS ELEC DRIVE 3)	24 11 14 00
DRIVE DISC 3	(STATUS)	DRIVE DISC SWITCH PRESSED AND FREQUENCY < 100 Hz	24 11 13 00
>DRIVE DISC 4	(ADVISORY)	DRIVE DISC SWITCH PRESSED AND FREQUENCY < 200 Hz (INHIBITS ELEC DRIVE 4)	24 11 16 00
DRIVE DISC 4	(STATUS)	DRIVE DISC SWITCH PRESSED AND FREQUENCY < 100 Hz	24 11 15 00
DUCT LEAK C LP A	(STATUS)	CENTER DUCT LEAK LOOP A OVERHEAT OR FAULT	36 10 77 00
DUCT LEAK C LP B	(STATUS)	CENTER DUCT LEAK LOOP B OVERHEAT OR FAULT	36 10 78 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
DUCT LEAK L LP A	(STATUS)	LEFT DUCT LEAK LOOP A OVERHEAT OR FAULT	36 10 71 00
DUCT LEAK L LP B	(STATUS)	LEFT DUCT LEAK LOOP B OVERHEAT OR FAULT	36 10 72 00
DUCT LEAK R LP A	(STATUS)	RIGHT DUCT LEAK LOOP A OVERHEAT OR FAULT	36 10 73 00
DUCT LEAK R LP B	(STATUS)	RIGHT DUCT LEAK LOOP B OVERHEAT OR FAULT	36 10 74 00
ECS MISC CARD	(STATUS)	CARD FAILURE OR ARINC 429 INVALID OR MISSING	21 20 05 00
>E/E CLNG CARD	(ADVISORY)	CARD FAILURE OR ARINC 429 INVALID OR MISSING ON THE GROUND	21 50 25 00
EE CLNG BYPASS V	(STATUS)	BYPASS VALVE NOT IN COMMANDED POSITION	21 50 01 00
EE CLNG CARD	(STATUS)	CARD FAILURE OR ARINC 429 INVALID OR MISSING	21 50 04 00
EE CLNG E6/E9 V	(STATUS)	E6/E9 VALVE NOT IN COMMANDED POSITION	21 50 03 00
EE CLNG EXH FAN	(STATUS)	EQUIPMENT COOLING AIR EXHAUST FAN FAIL	21 50 06 00
EE CLNG GND EXH	(STATUS)	GROUND EXHAUST VALVE NOT IN COMMANDED POSITION	21 50 13 00
EE CLNG INBD EXH	(STATUS)	EQUIPMENT INBOARD EXHAUST VALVE NOT IN COMMANDED POSITION	21 50 14 00
EE CLNG OVRD	(STATUS)	NO FLOW THROUGH MAIN RACK WHEN SYSTEM IN OVRD MODE	21 50 02 00
EE CLNG SUP FAN	(STATUS)	EQUIPMENT COOLING AIR SUPPLY FAN FAIL	21 50 08 00
EE CLNG SUPPLY V	(STATUS)	EQUIPMENT SUPPLY VALVE NOT IN COMMANDED POSITION	21 50 09 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>EFIS CONTROL L	(ADVISORY)	L EFIS CONTROL PANEL FAULT	31 61 01 00
EFIS CONTROL L	(STATUS)	L EFIS CONTROL PANEL FAULT	31 61 02 00
>EFIS CONTROL R	(ADVISORY)	R EFIS CONTROL PANEL FAULT	31 61 03 00
EFIS CONTROL R	(STATUS)	R EFIS CONTROL PANEL FAULT	31 61 04 00
>EFIS/EICAS C/P	(ADVISORY)	BOTH EFIS CONTROL PANELS FAULTY. INHIBITS >EFIS CONTROL L (ADVISORY) AND >EFIS CONTROL R (ADVISORY).	31 61 05 00
EICAS DSP	(STATUS)	EICAS DSP PAGE SELECT SWITCH FAULT FROM EITHER THE L OR R EFIS CP	31 61 06 00
EIU CENTER	(STATUS)	CENTER EIU FAILED OR OFF OR SHUTDOWN	31 61 07 00
EIU DISAGREE	(STATUS)	ANALOG DISCRETE OR ANALOG VARIABLE DISAGREEMENT EXISTS FOR APPROX. 3 MINUTES BETWEEN ANY EIU. A SHOP FAULT IS LOGGED IN THE DISAGREEING EIU.	31 61 08 00
>EIU LEFT	(ADVISORY)	LEFT EIU FAILED OR OFF ON THE GROUND	31 61 43 00
EIU LEFT	(STATUS)	LEFT EIU FAILED OR OFF OR SHUTDOWN	31 61 09 00
EIU RIGHT	(STATUS)	RIGHT EIU FAILED OR OFF OR SHUTDOWN	31 61 10 00
ELEC AC BUS 1	(CAUTION)	AC BUS 1 UNPOWERED — INHIBITS ELEC GEN OFF 1 AND ELEC BUS 1 ISLN	24 20 01 00
ELEC AC BUS 2	(CAUTION)	AC BUS 2 UNPOWERED - INHIBITS ELEC GEN OFF 2 AND ELEC BUS 2 ISLN	24 20 02 00
ELEC AC BUS 3	(CAUTION)	AC BUS 3 UNPOWERED — INHIBITS ELEC GEN OFF 3 AND ELEC BUS 3 ISLN	24 20 03 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ELEC AC BUS 4	(CAUTION)	AC BUS 4 UNPOWERED — INHIBITS ELEC GEN OFF 4 AND ELEC BUS 4 ISLN	24 20 04 00
ELEC ARINC LINK	(STATUS)	ANY BCU TO GCU, OR BCU TO BCU ARINC LINK INACTIVE	24 20 38 00
ELEC BCU 1	(STATUS)	BUS CONTROL UNIT 1 FAILED OR OFF, OR ARINC DATA BUS TO EIU FAILED, OR HOT BATTERY OR 28V BATTERY FAILED, OR DC LOAD SHED ONE FAILED	24 20 05 00
ELEC BCU 2	(STATUS)	BUS CONTROL UNIT 2 FAILED OR OFF, OR ARINC DATA BUS TO EIU FAILED, OR HOT BATTERY OR 28V BATTERY FAILED, OR DC LOAD SHED TWO FAILED	24 20 06 00
ELEC BTB 1	(STATUS)	BTB 1 FAILED	24 20 43 00
ELEC BTB 2	(STATUS)	BTB 2 FAILED	24 20 44 00
ELEC BTB 3	(STATUS)	BTB 3 FAILED	24 20 45 00
ELEC BTB 4	(STATUS)	BTB 4 FAILED	24 20 46 00
ELEC BUS ISLN 1	(ADVISORY)	BUS 1 TIE BREAKER OPEN (INHIBITED DURING AUTO LAND)	24 20 07 00
ELEC BUS ISLN 2	(ADVISORY)	BUS 2 TIE BREAKER OPEN (INHIBITED DURING AUTO LAND)	24 20 08 00
ELEC BUS ISLN 3	(ADVISORY)	BUS 3 TIE BREAKER OPEN (INHIBITED DURING AUTO LAND)	24 20 09 00
ELEC BUS ISLN 4	(ADVISORY)	BUS 4 TIE BREAKER OPEN (INHIBITED DURING AUTO LAND)	24 20 10 00
ELEC DRIVE 1	(STATUS)	NO. 1 IDG OUTLET TEMP ABOVE 157 DEGREES C FOR 10 MINUTES OR IDG 1 LOW OIL PRESS AND ENGINE RUNNING	24 11 01 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ELEC DRIVE 1	(ADVISORY)	IDG 1 LOW OIL PRESS OR HIGH OIL TEMP ABOVE 185 DEGREES C AND ENGINE 1 RUNNING	24 11 17 00
ELEC DRIVE 2	(STATUS)	NO. 2 IDG OUTLET TEMP ABOVE 157 DEGREES C FOR 10 MINUTES OR IDG 2 LOW OIL PRESS AND ENGINE RUNNING	24 11 03 00
ELEC DRIVE 2	(ADVISORY)	IDG 2 LOW OIL PRESS OR HIGH OIL TEMP ABOVE 185 DEGREES C AND ENGINE 2 RUNNING	24 11 18 00
ELEC DRIVE 3	(STATUS)	NO. 3 IDG OUTLET TEMP ABOVE 157 DEGREES C FOR 10 MINUTES OR IDG 3 LOW OIL PRESS AND ENGINE RUNNING	24 11 05 00
ELEC DRIVE 3	(ADVISORY)	IDG 3 LOW OIL PRESS OR HIGH OIL TEMP ABOVE 185 DEGREES C AND ENGINE 3 RUNNING	24 11 19 00
ELEC DRIVE 4	(STATUS)	NO. 4 IDG OUTLET TEMP ABOVE 157 DEGREES C FOR 10 MINUTES OR IDG 4 LOW OIL PRESS AND ENGINE RUNNING	24 11 07 00
ELEC DRIVE 4	(ADVISORY)	IDG 4 LOW OIL PRESS OR HIGH OIL TEMP ABOVE 185 DEGREES AND ENGINE 4 RUNNING	24 11 20 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ELEC FILTER FAIL	(STATUS)	A BUS HARMONIC DISTORTION FILTER HAS FAILED	24 50 20 00
ELEC GEN OFF 1	(ADVISORY)	GEN 1 BREAKER OPEN AND ENGINE 1 RUNNING	24 20 16 00
ELEC GEN OFF 1	(CAUTION)	GEN 1 BREAKER OPEN AND ENGINE 1 RUNNING	24 20 15 00
ELEC GEN OFF 2	(ADVISORY)	GEN 2 BREAKER OPEN AND ENGINE 2 RUNNING	24 20 18 00
ELEC GEN OFF 2	(CAUTION)	GEN 2 BREAKER OPEN AND ENGINE 2 RUNNING	24 20 17 00
ELEC GEN OFF 3	(ADVISORY)	GEN 3 BREAKER OPEN AND ENGINE 3 RUNNING	24 20 20 00
ELEC GEN OFF 3	(CAUTION)	GEN 3 BREAKER OPEN AND ENGINE 3 RUNNING	24 20 19 00
ELEC GEN OFF 4	(ADVISORY)	GEN 4 BREAKER OPEN AND ENGINE 4 RUNNING	24 20 22 00
ELEC GEN OFF 4	(CAUTION)	GEN 4 BREAKER OPEN AND ENGINE 4 RUNNING	24 20 21 00
ELEC GEN SYS 1	(STATUS)	IDG 1 FAIL OR GENERATOR FEEDER 1 FAILED OR GENERATOR CONTROL UNIT 1 OFF, OR 28V BACKUP FAILED, OR ARINC BUS FROM GCU1 TO BCU1 OR BCU2 FAILED OR GCB1 FAILED OR GCU1 FAILED	24 11 21 00
ELEC GEN SYS 2	(STATUS)	IDG 2 FAIL OR GENERATOR FEEDER 2 FAILED OR GENERATOR CONTROL UNIT 2 OFF, OR 28V BACKUP FAILED, OR ARINC BUS FROM GCU2 TO BCU1 OR BCU2 FAILED OR GCB2 FAILED OR GCU2 FAILED	24 11 23 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ELEC GEN SYS 3	(STATUS)	IDG 3 FAIL OR GENERATOR FEEDER 3 FAILED OR GENERATOR CONTROL UNIT 3 OFF, OR 28V BACKUP FAILED, OR ARINC BUS FROM GCU3 TO BCU1 OR BCU2 FAILED OR GCB3 FAILED OR GCU3 FAILED	24 11 25 00
ELEC GEN SYS 4	(STATUS)	IDG 4 FAIL OR GENERATOR FEEDER 4 FAILED OR GENERATOR CONTROL UNIT 4 OFF, OR 28V BACKUP FAILED, OR ARINC BUS FROM GCU4 TO BCU1 OR BCU2 FAILED OR GCB4 FAILED OR GCU4 FAILED	24 11 27 00
ELEC IDG 1 VALVE	(STATUS)	IDG 1 COOLING VALVE NOT IN COMMANDED POSITION	24 11 29 00
ELEC IDG 2 VALVE	(STATUS)	IDG 2 COOLING VALVE NOT IN COMMANDED POSITION	24 11 30 00
ELEC IDG 3 VALVE	(STATUS)	IDG 3 COOLING VALVE NOT IN COMMANDED POSITION	24 11 31 00
ELEC IDG 4 VALVE	(STATUS)	IDG 4 COOLING VALVE NOT IN COMMANDED POSITION	24 11 32 00
>ELEC SSB OPEN	(ADVISORY)	THE SPLIT SYSTEM BREAKER IS OPEN WHEN IT SHOULD BE CLOSED	24 20 37 00
ELEC SSB OPEN	(STATUS)	SPLIT SYSTEM BREAKER IS OPEN WHEN IT SHOULD BE CLOSED	24 20 27 00
ELEC STBY POWER	(STATUS)	STANDBY BUS UNPOWERED	24 20 48 00
ELEC TR UNIT 1	(STATUS)	TRANSFORMER RECTIFIER 1 FAIL	24 30 16 00
ELEC TR UNIT 2	(STATUS)	TRANSFORMER RECTIFIER 2 FAIL	24 30 17 00
ELEC TR UNIT 3	(STATUS)	TRANSFORMER RECTIFIER 3 FAIL	24 30 18 00
ELEC TR UNIT 4	(STATUS)	TRANSFORMER RECTIFIER 4 FAIL	24 30 19 00
ELEC UTIL BUS L	(ADVISORY)	UTILITY BUS 1 OR 2 OR GALLEY BUS 1 OR 2 UNPOWERED (NOT LOAD SHED)	24 50 02 00

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ETCAS MESSACE	LEVEL	DESCRIPTION	EAULT CODE
EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ELEC UTIL BUS R	(ADVISORY)	UTILITY BUS 3 OR 4 OR GALLEY BUS 3 OR 4 UNPOWERED (NOT LOAD SHED)	24 50 03 00
ELEVATOR FEEL	(STATUS)	EXCESSIVE PRESSURE DIFFERENCE BETWEEN METERED PRESSURE INPUTS OR AIRSPEED INPUTS	27 30 01 00
>EMER LIGHTS	(ADVISORY)	EMERGENCY LIGHTS SWITCH NOT IN THE ARMED POSITION, OR SWITCH IN ARMED POSITION AND EMERGENCY LIGHTS TURNED ON BY FLIGHT ATTENDANT SWITCH	33 51 01 00
ENG 1 AUTOSTART	(CAUTION)	AUTOSTART SYSTEM HAS FAILED TO START THE ENGINE AND HAS ABORTED ALL START ATTEMPTS	71 03 01 00
ENG 1 CONTROL	(STATUS)	EEC 1 IS IN A NO DISPATCH CONFIGURATION	73 03 06 00
ENG 1 CONTROL OR >ENG 1 CONTROL	(ADVISORY)	EEC 1 IS IN A NO DISPATCH CONFIGURATION	73 03 05 00
ENG 1 EEC C1	(STATUS)	ENG 1 EEC FAULT CATEGORY 1 WITH TIME LIMITED DISPATCH (INHIBITED BY ENG 1 CONTROL)	73 03 07 00
ENG 1 EEC MODE	(ADVISORY)	CONTROL IS IN ALTERNATE NON-RATING MODE	73 03 08 00
ENG 1 ESCV	(STATUS)	ELEVENTH STAGE COOLING VALVE FAILED	75 03 01 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ENG 1 FAIL	(CAUTION)	ENGINE 1 FLAMEOUT. AN AUTOMATIC RELIGHT/RESTART MAY BE IN PROGRESS	76 03 10 00
ENG 1 FIRE LP A	(STATUS)	ENG 1 FIRE LOOP A FIRE OR FAULT OUTPUT	26 11 05 00
ENG 1 FIRE LP B	(STATUS)	ENG 1 FIRE LOOP B FIRE OR FAULT OUTPUT	26 11 06 00
ENG 1 FUEL FILT	(ADVISORY)	DIFFERENTIAL PRESSURE ACROSS NO. 1 ENGINE FUEL FILTER APPROACHES BYPASS	73 03 10 00
ENG 1 FUEL FILT	(STATUS)	DIFFERENTIAL PRESSURE ACROSS NO. 1 ENGINE FUEL FILTER APPROACHES BYPASS	73 03 09 00
ENG 1 FUEL VLV	(STATUS)	NO.1 ENGINE FUEL VALVE DISAGREE WITH COMMANDED POSITION	76 03 06 00
ENG 1 FUEL VLV	(ADVISORY)	NO. 1 ENGINE FUEL VALVE DISAGREE WITH COMMANDED POSITION	76 03 02 00
ENG 1 IGNITOR 1	(STATUS)	ENGINE FAILS TO LIGHT USING IGNITOR 1	74 03 01 00
ENG 1 IGNITOR 2	(STATUS)	ENGINE FAILS TO LIGHT USING IGNITOR 2	74 03 02 00
>ENG 1 LIM PROT	(CAUTION)	ENG 1 CONTROL IN ALTERNATE MODE AND N1 THRUST SETTING EXCEEDS MAXIMUM RATING	73 03 13 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>ENG 1 LOW IDLE OR ENG 1 LOW IDLE	(ADVISORY)	ENG 1 AT MIN IDLE AND SHOULD BE AT APPROACH IDLE	73 03 14 00
ENG 1 LOW IDLE	(STATUS)	ENG 1 AT MIN IDLE AND SHOULD BE AT APPROACH IDLE	73 03 89 00
ENG 1 OIL FILT	(STATUS)	NO. 1 ENGINE OIL FILTER DELTA PRESSURE APPROACHED BYPASS.	79 03 02 00
ENG 1 OIL FILT	(ADVISORY)	NO. 1 ENGINE OIL FILTER DELTA PRESSURE APPROACHES BYPASS.	79 03 01 00
ENG 1 OIL PRESS	(STATUS)	NO. 1 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING.	79 03 04 00
ENG 1 OIL PRESS	(ADVISORY)	NO. 1 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING.	79 03 03 00
ENG 1 OIL PRESS	(CAUTION)	IDS S/W -009; NO. 1 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING FOR CAA CERTIFIED AIRPLANES	79 03 03 00
ENG 1 OIL PRESS	(CAUTION)	IDS S/W -010 AND SUBSEQUENT; NO. 1 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING FOR CAA CERTIFIED AIRPLANES	79 03 39 00
ENG 1 OIL TEMP	(ADVISORY)	ENG 1 OIL TEMP REACHED RED LINE LIMIT.	79 03 05 00
ENG 1 OVHT LP A	(STATUS)	ENGINE 1 NACELLE OVERHEAT DETECTOR LOOP A OVERHEAT OR FAULT OUTPUT	26 11 07 00
ENG 1 OVHT LP B	(STATUS)	ENGINE 1 NACELLE OVERHEAT DETECTOR LOOP B OVERHEAT OR FAULT OUTPUT	26 11 08 00
ENG 1 OVSP GOV	(STATUS)	OVERSPEED GOVERNER HAS FAILED ITS INITIALIZATION TEST	73 03 97 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ENG 1 REV POS	(STATUS)	ENGINE 1 EEC INCAPABLE OF SENSING REVERSER POSITION	73 03 15 00
ENG 1 REVERSER	(STATUS)	ENGINE 1 THRUST REVERSER SYSTEM ANOMALY.	78 03 01 00
ENG 1 REVERSER	(ADVISORY)	ENGINE 1 THRUST REVERSER SYSTEM ANOMALY.	78 03 18 00
>ENG 1 RPM LIM	(ADVISORY)	ENGINE THRUST LIMITED BY ROTOR REDLINE	71 03 02 00
>ENG 1 SHUTDOWN	(CAUTION)	NO. 1 ENGINE FIRE SWITCH PULLED OR FUEL CONTROL SWITCH IN CUTOFF. NO MASTER CAUTION LIGHTS OR CAUTION AURAL — INHIBITS OTHER ENGINE RELATED MESSAGES.	71 03 03 00
ENG 1 SPEED CARD	(STATUS)	NO. 1 ENGINE N2/N3 SPEED SENSING RELAY FAULT.	77 03 01 00
ENG 1 START EGT	(STATUS)	AN IN FLIGHT HOT ENGINE 1 START EXCEEDANCE HAS BEEN RECORDED	73 02 01 00
ENG 1 START VLV	(STATUS)	NO. 1 STARTER VALVE/SWITCH DISAGREE.	80 03 02 00
ENG 1 START VLV	(ADVISORY)	NO. 1 STARTER VALVE/SWITCH DISAGREE FOR 8 SEC INHIBITED BY STARTER CUTOUT 1.	80 03 01 00
ENG 2 AUTOSTART	(CAUTION)	AUTOSTART SYSTEM HAS FAILED TO START THE ENGINE AND HAS ABORTED ALL START ATTEMPTS.	71 03 04 00
ENG 2 CONTROL	(STATUS)	EEC 2 IS IN A NO DISPATCH CONFIGURATION	73 03 17 00
ENG 2 CONTROL OR >ENG 2 CONTROL	(ADVISORY)	EEC 2 IS IN A NO DISPATCH CONFIGURATION	73 03 16 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ENG 2 EEC C1	(STATUS)	ENG 2 EEC FAULT CATEGORY 1 WITH TIME LIMITED DISPATCH (INHIBITED BY ENG 2 CONTROL)	73 03 19 00
ENG 2 EEC MODE	(ADVISORY)	CONTROL IS IN ALTERNATE NON-RATING MODE	73 03 18 00
ENG 2 ESCV	(STATUS)	ELEVENTH STAGE COOLING VALVE FAILED.	75 03 02 00
ENG 2 FAIL	(CAUTION)	ENGINE 2 FLAMEOUT. AN AUTOMATIC RELIGHT/RESTART MAY BE IN PROGRESS	76 03 11 00
ENG 2 FIRE LP A	(STATUS)	ENG 2 FIRE LOOP A FIRE OR FAULT OUTPUT	26 11 09 00
ENG 2 FIRE LP B	(STATUS)	ENG 2 FIRE LOOP B FIRE OR FAULT OUTPUT	26 11 10 00
ENG 2 FUEL FILT	(ADVISORY)	DIFFERENTIAL PRESSURE ACROSS NO. 2 ENGINE FUEL FILTER APPROACHES BYPASS	73 03 21 00
ENG 2 FUEL FILT	(STATUS)	DIFFERENTIAL PRESSURE ACROSS NO. 2 ENGINE FUEL FILTER APPROACHES BYPASS	73 03 20 00
ENG 2 FUEL VLV	(STATUS)	NO. 2 ENGINE FUEL VALVE DISAGREE WITH COMMANDED POSITION.	76 03 07 00
ENG 2 FUEL VLV	(ADVISORY)	NO. 2 ENGINE FUEL VALVE DISAGREE WITH COMMANDED POSITION.	76 03 03 00
ENG 2 IGNITOR 1	(STATUS)	ENGINE FAILS TO LIGHT USING IGNITOR 1.	74 03 03 00
ENG 2 IGNITOR 2	(STATUS)	ENGINE FAILS TO LIGHT USING IGNITOR 2.	74 03 04 00
>ENG 2 LIM PROT	(CAUTION)	ENG 2 CONTROL IN ALTERNATE MODE AND N1 THRUST SETTING EXCEEDS MAXIMUM RATING	73 03 24 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>ENG 2 LOW IDLE OR ENG 2 LOW IDLE	(ADVISORY)	ENG 2 AT MIN IDLE AND SHOULD BE AT APPROACH IDLE	73 03 25 00
ENG 2 LOW IDLE	(STATUS)	ENG 2 AT MIN IDLE AND SHOULD BE AT APPROACH IDLE	73 03 90 00
ENG 2 OIL FILT	(STATUS)	NO. 2 ENGINE OIL FILTER DELTA PRESSURE APPROACHES BYPASS.	79 03 08 00
ENG 2 OIL FILT	(ADVISORY)	NO. 2 ENGINE OIL FILTER DELTA PRESSURE APPROACHES BYPASS.	79 03 07 00
ENG 2 OIL PRESS	(STATUS)	NO. 2 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING.	79 03 10 00
ENG 2 OIL PRESS	(ADVISORY)	NO. 2 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING.	79 03 09 00
ENG 2 OIL PRESS	(CAUTION)	IDS S/W -009; NO. 2 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING FOR CAA CERTIFIED AIRPLANES	79 03 09 00
ENG 2 OIL PRESS	(CAUTION)	IDS S/W -010 AND SUBSEQUENT; NO. 2 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING FOR CAA CERTIFIED AIRPLANES	79 03 40 00
ENG 2 OIL TEMP	(ADVISORY)	ENG 2 OIL TEMP REACHED RED LINE LIMIT.	79 03 11 00
ENG 2 OVHT LP A	(STATUS)	ENGINE 2 NACELLE OVERHEAT DETECTOR LOOP A OVERHEAT OR FAULT OUTPUT	26 11 11 00
ENG 2 OVHT LP B	(STATUS)	ENGINE 2 NACELLE OVERHEAT DETECTOR LOOP B OVERHEAT OR FAULT OUTPUT	26 11 12 00
ENG 2 OVSP GOV	(STATUS)	OVERSPEED GOVERNER HAS FAILED ITS INITIALIZATION TEST	73 03 98 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ENG 2 REV POS	(STATUS)	ENGINE 2 EEC INCAPABLE OF SENSING REVERSER POSITION	73 03 26 00
ENG 2 REVERSER	(STATUS)	ENGINE 2 THRUST REVERSER SYSTEM ANOMALY.	78 03 02 00
ENG 2 REVERSER	(ADVISORY)	ENGINE 2 THRUST REVERSER SYSTEM ANOMALY.	78 03 19 00
>ENG 2 RPM LIM	(ADVISORY)	ENGINE THRUST LIMITED BY ROTOR REDLINE	71 03 05 00
>ENG 2 SHUTDOWN	(CAUTION)	NO. 2 ENGINE FIRE SWITCH PULLED OR FUEL CONTROL SWITCH IN CUTOFF. NO MASTER CAUTION LIGHTS OR CAUTION AURAL — INHIBITS OTHER ENGINE RELATED MESSAGES.	71 03 06 00
ENG 2 SPEED CARD	(STATUS)	NO. 2 ENGINE N2/N3 SPEED SENSING RELAY FAULT.	77 03 03 00
ENG 2 START EGT	(STATUS)	AN IN FLIGHT HOT ENGINE 2 START EXCEEDANCE HAS BEEN RECORDED	73 02 02 00
ENG 2 START VLV	(STATUS)	NO. 2 STARTER VALVE/SWITCH DISAGREE.	80 03 04 00
ENG 2 START VLV	(ADVISORY)	NO. 2 STARTER VALVE/SWITCH DISAGREE FOR 8 SEC INHIBITED BY STARTER CUTOUT 2.	80 03 03 00
ENG 3 AUTOSTART	(CAUTION)	AUTOSTART SYSTEM HAS FAILED TO START THE ENGINE AND HAS ABORTED ALL START ATTEMPTS.	71 03 07 00
ENG 3 CONTROL	(STATUS)	EEC 3 IS IN A NO DISPATCH CONFIGURATION	73 03 28 00
ENG 3 CONTROL OR >ENG 3 CONTROL	(ADVISORY)	EEC 3 IS IN A NO DISPATCH CONFIGURATION	73 03 27 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ENG 3 EEC C1	(STATUS)	ENG 3 EEC FAULT CATEGORY 1 WITH TIME LIMITED DISPATCH (INHIBITED BY ENG 3 CONTROL)	73 03 29 00
ENG 3 EEC MODE	(ADVISORY)	CONTROL IS IN ALTERNATE NON-RATING MODE	73 03 30 00
ENG 3 ESCV	(STATUS)	ELEVENTH STAGE COOLING VALVE FAILED.	75 03 03 00
ENG 3 FAIL	(CAUTION)	ENGINE 3 FLAMEOUT. AN AUTOMATIC RELIGHT/RESTART MAY BE IN PROGRESS	76 03 12 00
ENG 3 FIRE LP A	(STATUS)	ENG 3 FIRE LOOP A FIRE OR FAULT OUTPUT	26 11 13 00
ENG 3 FIRE LP B	(STATUS)	ENG 3 FIRE LOOP B FIRE OR FAULT OUTPUT	26 11 14 00
ENG 3 FUEL FILT	(ADVISORY)	DIFFERENTIAL PRESSURE ACROSS NO. 3 ENGINE FUEL FILTER APPROACHES BYPASS	73 03 32 00
ENG 3 FUEL FILT	(STATUS)	DIFFERENTIAL PRESSURE ACROSS NO. 3 ENGINE FUEL FILTER APPROACHES BYPASS	73 03 31 00
ENG 3 FUEL VLV	(STATUS)	NO. 3 ENGINE FUEL VALVE DISAGREE WITH COMMANDED POSITION.	76 03 08 00
ENG 3 FUEL VLV	(ADVISORY)	NO. 3 ENGINE FUEL VALVE DISAGREE WITH COMMANDED POSITION.	76 03 04 00
ENG 3 IGNITOR 1	(STATUS)	ENGINE FAILS TO LIGHT USING IGNITOR 1.	74 03 05 00
ENG 3 IGNITOR 2	(STATUS)	ENGINE FAILS TO LIGHT USING IGNITOR 2.	74 03 06 00
>ENG 3 LIM PROT	(CAUTION)	ENG 3 CONTROL IN ALTERNATE MODE AND N1 THRUST SETTING EXCEEDS MAXIMUM RATING	73 03 35 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>ENG 3 LOW IDLE OR ENG 3 LOW IDLE	(ADVISORY)	ENG 3 AT MIN IDLE AND SHOULD BE AT APPROACH IDLE	73 03 36 00
ENG 3 LOW IDLE	(STATUS)	ENG 3 AT MIN IDLE AND SHOULD BE AT APPROACH IDLE	73 03 91 00
ENG 3 OIL FILT	(STATUS)	NO. 3 ENGINE OIL FILTER DELTA PRESSURE APPROACHES BYPASS.	79 03 14 00
ENG 3 OIL FILT	(ADVISORY)	NO. 3 ENGINE OIL FILTER DELTA PRESSURE APPROACHES BYPASS.	79 03 13 00
ENG 3 OIL PRESS	(STATUS)	NO. 3 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING.	79 03 16 00
ENG 3 OIL PRESS	(ADVISORY)	NO. 3 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING.	79 03 15 00
ENG 3 OIL PRESS	(CAUTION)	IDS S/W -009; NO. 3 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING FOR CAA CERTIFIED AIRPLANES	79 03 15 00
ENG 3 OIL PRESS	(CAUTION)	IDS S/W -010 AND SUBSEQUENT; NO. 3 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING FOR CAA CERTIFIED AIRPLANES	79 03 41 00
ENG 3 OIL TEMP	(ADVISORY)	ENG 3 OIL TEMP REACHED RED LINE LIMIT.	79 03 17 00
ENG 3 OVHT LP A	(STATUS)	ENGINE 3 NACELLE OVERHEAT DETECTOR LOOP A OVERHEAT OR FAULT OUTPUT	26 11 15 00
ENG 3 OVHT LP B	(STATUS)	ENGINE 3 NACELLE OVERHEAT DETECTOR LOOP B OVERHEAT OR FAULT OUTPUT	26 11 16 00
ENG 3 OVSP GOV	(STATUS)	OVERSPEED GOVERNER HAS FAILED ITS INITIALIZATION TEST	73 03 99 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ENG 3 REV POS	(STATUS)	ENGINE 3 EEC INCAPABLE OF SENSING REVERSER POSITION	73 03 37 00
ENG 3 REVERSER	(STATUS)	ENGINE 3 THRUST REVERSER SYSTEM ANOMALY.	78 03 03 00
ENG 3 REVERSER	(ADVISORY)	ENGINE 3 THRUST REVERSER SYSTEM ANOMALY.	78 03 20 00
>ENG 3 RPM LIM	(ADVISORY)	ENGINE THRUST LIMITED BY ROTOR REDLINE	71 03 08 00
>ENG 3 SHUTDOWN	(CAUTION)	NO. 3 ENGINE FIRE SWITCH PULLED OR FUEL CONTROL SWITCH IN CUTOFF. N O MASTER CAUTION LIGHTS OR CAUTION AURAL — INHIBITS OTHER ENGINE RE LATED MESSAGES.	71 03 09 00
ENG 3 SPEED CARD	(STATUS)	NO. 3 ENGINE N2/N3 SPEED SENSING RELAY FAULT.	77 03 05 00
ENG 3 START EGT	(STATUS)	AN IN FLIGHT HOT ENGINE 3 START EXCEEDANCE HAS BEEN RECORDED	73 02 03 00
ENG 3 START VLV	(STATUS)	NO. 3 STARTER VALVE/SWITCH DISAGREE.	80 03 06 00
ENG 3 START VLV	(ADVISORY)	NO. 3 STARTER VALVE/SWITCH DISAGREE FOR 8 SEC INHIBITED BY STARTER CUTOUT 3.	80 03 05 00
ENG 4 AUTOSTART	(CAUTION)	AUTOSTART SYSTEM HAS FAILED TO START THE ENGINE AND HAS ABORTED ALL START ATTEMPTS.	71 03 10 00
ENG 4 CONTROL	(STATUS)	EEC 4 IS IN A NO DISPATCH CONFIGURATION	73 03 39 00
ENG 4 CONTROL OR >ENG 4 CONTROL	(ADVISORY)	EEC 4 IS IN A NO DISPATCH CONFIGURATION	73 03 38 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ENG 4 EEC C1	(STATUS)	ENG 4 EEC FAULT CATEGORY 1 WITH TIME LIMITED DISPATCH (INHIBITED BY ENG 4 CONTROL)	73 03 40 00
ENG 4 EEC MODE	(ADVISORY)	CONTROL IS IN ALTERNATE NON-RATING MODE	73 03 41 00
ENG 4 ESCV	(STATUS)	ELEVENTH STAGE COOLING VALVE FAILED.	75 03 04 00
ENG 4 FAIL	(CAUTION)	ENGINE 4 FLAMEOUT. AN AUTOMATIC RELIGHT/RESTART MAY BE IN PROGRESS	76 03 13 00
ENG 4 FIRE LP A	(STATUS)	ENG 4 FIRE LOOP A FIRE OR FAULT OUTPUT	26 11 17 00
ENG 4 FIRE LP B	(STATUS)	ENG 4 FIRE LOOP B FIRE OR FAULT OUTPUT	26 11 18 00
ENG 4 FUEL FILT	(ADVISORY)	DIFFERENTIAL PRESSURE ACROSS NO. 4 ENGINE FUEL FILTER APPROACHES BYPASS	73 03 43 00
ENG 4 FUEL FILT	(STATUS)	DIFFERENTIAL PRESSURE ACROSS NO. 4 ENGINE FUEL FILTER APPROACHES BYPASS	73 03 42 00
ENG 4 FUEL VLV	(STATUS)	NO. 4 ENGINE FUEL VALVE DISAGREE WITH COMMANDED POSITION.	76 03 09 00
ENG 4 FUEL VLV	(ADVISORY)	NO. 4 ENGINE FUEL VALVE DISAGREE WITH COMMANDED POSITION.	76 03 05 00
ENG 4 IGNITOR 1	(STATUS)	ENGINE FAILS TO LIGHT USING IGNITOR 1.	74 03 07 00
ENG 4 IGNITOR 2	(STATUS)	ENGINE FAILS TO LIGHT USING IGNITOR 2.	74 03 08 00
>ENG 4 LIM PROT	(CAUTION)	ENG 4 CONTROL IN ALTERNATE MODE AND N1 THRUST SETTING EXCEEDS MAXIMUM RATING	73 03 46 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>ENG 4 LOW IDLE OR ENG 4 LOW IDLE	(ADVISORY)	ENG 4 AT MIN IDLE AND SHOULD BE AT APPROACH IDLE	73 03 47 00
ENG 4 LOW IDLE	(STATUS)	ENG 4 AT MIN IDLE AND SHOULD BE AT APPROACH IDLE	73 03 92 00
ENG 4 OIL FILT	(STATUS)	NO. 4 ENGINE OIL FILTER DELTA PRESSURE APPROACHES BYPASS.	79 03 20 00
ENG 4 OIL FILT	(ADVISORY)	NO. 4 ENGINE OIL FILTER DELTA PRESSURE APPROACHES BYPASS.	79 03 19 00
ENG 4 OIL PRESS	(STATUS)	NO. 4 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING.	79 03 22 00
ENG 4 OIL PRESS	(ADVISORY)	NO. 4 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING.	79 03 21 00
ENG 4 OIL PRESS	(CAUTION)	IDS S/W -009; NO. 4 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING FOR CAA CERTIFIED AIRPLANES	79 03 21 00
ENG 4 OIL PRESS	(CAUTION)	IDS S/W 010 AND SUBSEQUENT; NO. 4 ENGINE OIL PRESSURE BELOW LIMIT WITH ENGINE RUNNING FOR CAA CERTIFIED AIRPLANES	79 03 42 00
ENG 4 OIL TEMP	(ADVISORY)	ENG 4 OIL TEMP REACHED RED LINE LIMIT.	79 03 23 00
ENG 4 OVHT LP A	(STATUS)	ENGINE 4 NACELLE OVERHEAT DETECTOR LOOP A OVERHEAT OR FAULT OUTPUT	26 11 19 00
ENG 4 OVHT LP B	(STATUS)	ENGINE 4 NACELLE OVERHEAT DETECTOR LOOP B OVERHEAT OR FAULT OUTPUT	26 11 20 00
ENG 4 OVSP GOV	(STATUS)	OVERSPEED GOVERNER HAS FAILED ITS INITIALIZATION TEST	73 04 01 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ENG 4 REV POS	(STATUS)	ENGINE 4 EEC INCAPABLE OF SENSING REVERSER POSITION	73 03 48 00
ENG 4 REVERSER	(STATUS)	ENGINE 4 THRUST REVERSER SYSTEM ANOMALY.	78 03 04 00
ENG 4 REVERSER	(ADVISORY)	ENGINE 4 THRUST REVERSER SYSTEM ANOMALY.	78 03 21 00
>ENG 4 RPM LIM	(ADVISORY)	ENGINE THRUST LIMITED BY ROTOR REDLINE	71 03 11 00
>ENG 4 SHUTDOWN	(CAUTION)	NO. 4 ENGINE FIRE SWITCH PULLED OR FUEL CONTROL SWITCH IN CUTOFF. NO MASTER CAUTION LIGHTS OR CAUTION AURAL — INHIBITS OTHER ENGINE RELATED MESSAGES	71 03 12 00
ENG 4 SPEED CARD	(STATUS)	NO. 4 ENGINE N2/N3 SPEED SENSING RELAY FAULT.	77 03 07 00
ENG 4 START EGT	(STATUS)	AN IN FLIGHT HOT ENGINE 4 START EXCEEDANCE HAS BEEN RECORDED	73 02 04 00
ENG 4 START VLV	(STATUS)	NO. 4 STARTER VALVE/SWITCH DISAGREE.	80 03 08 00
ENG 4 START VLV	(ADVISORY)	NO. 4 STARTER VALVE/SWITCH DISAGREE FOR 8 SEC INHIBITED BY STARTER CUTOUT 4.	80 03 07 00
>ENG CONTROLS	(ADVISORY)	MORE THAN 2 EEC'S HAVE A DEAD CPU OR BOTH CHANNELS RESOURCE SHARING	73 03 04 00
ENG IGNITION	(ADVISORY)	NO CONTINUOUS IGNITION ON ANY OR ALL ENGINES	74 03 11 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
EQUIP COOLING	(CAUTION)	LOW FLOW IN EQUIP COOL AIR SUPPLY DUCT OR LOW FLOW IN FLTDK SUPPLY DUCT OR SMOKE DETECTED IN EQUIP COOL AIR EXH OR EQUIP COOL AIR SUPPLY OVERTEMP, OR EQUIP COOL AIR EXH FAN FAIL WITH EITHER THE INBD EXH VLV OR BYPASS VLV NOT IN THE CMD POS OR NO FLOW THROUGH RACK WHEN SYS IN OVRD MODE OR GND EXH VLV NOT IN CMD POS	21 50 05 00
EQUIP LOW FLOW	(STATUS)	LOW FLOW IN EQUIPMENT COOLING AIR SUPPLY DUCT	21 50 07 00
EQUIPMENT SMOKE	(STATUS)	SMOKE DETECTED IN EQUIPMENT COOLING AIR EXHAUST	21 50 10 00
EQUIPMENT TEMP	(STATUS)	EQUIPMENT COOLING AIR SUPPLY OVERTEMP	21 50 11 00
F/O XFR BUS	(STATUS)	FIRST OFFICERS INSTRUMENT BUS TRANSFERRED WITH BUS 2 STILL POWERED OR NOT TRANSFERRED WITH NO POWER AVAILABLE ON BUS 2	24 50 04 00
FIRE APU	(WARNING)	APU FIRE	26 15 03 00
FIRE CARGO AFT	(WARNING)	AFT CARGO FIRE	26 16 06 00
FIRE CARGO FWD	(WARNING)	FORWARD CARGO FIRE	26 16 07 00
FIRE ENG 1	(WARNING)	ENGINE 1 FIRE	26 11 25 00
FIRE ENG 2	(WARNING)	ENGINE 2 FIRE	26 11 26 00
FIRE ENG 3	(WARNING)	ENGINE 3 FIRE	26 11 27 00
FIRE ENG 4	(WARNING)	ENGINE 4 FIRE	26 11 28 00
FIRE MAIN DECK	(WARNING)	MAIN DECK CARGO FIRE IN MORE THAN 2 ZONES (COMBI 6 OR 12 PALLET, OR FREIGHTER)	26 14 02 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
			.
FIRE MN DK AFT	(WARNING)	MAIN DECK CARGO FIRE (COMBI - 6 OR 12 PALLET, OR FREIGHTER)	26 14 05 00
FIRE MN DK FWD	(WARNING)	MAIN DECK CARGO FIRE (COMBI - 12 PALLET, OR FREIGHTER)	26 14 03 00
FIRE MN DK MID	(WARNING)	MAIN DECK CARGO FIRE (COMBI - 6 OR 12 PALLET, OR FREIGHTER)	26 14 04 00
>FIRE TEST FAIL	(WARNING)	ONE OR MORE FIRE/OVERHEAT TEST DISCRETES FAILED DURING TEST (TO EIU OR TO MAWEA) OR COMBI CONFIG DISAGREES WITH DISCRETES SET IN TEST	26 11 77 00
>FIRE TEST PASS	(WARNING)	ALL FIRE/OVERHEAT TEST DISCRETES TRUE DURING TEST AND CORRECT FIRE CONFIG ON COMBI AIRPLANE	26 11 76 00
FIRE WHEEL WELL	(WARNING)	WHEEL WELL FIRE	26 17 01 00
FLAP CONTROL C	(STATUS)	CENTER FLAP CONTROL UNIT FAILED	27 50 06 00
FLAP CONTROL L	(STATUS)	LEFT FLAP CONTROL UNIT FAILED	27 50 11 00
FLAP CONTROL R	(STATUS)	RIGHT FLAP CONTROL UNIT FAILED	27 50 09 00
FLAP LOAD RELIEF	(STATUS)	LOAD RELIEF FUNCTION IS NOT OPERATIONAL	27 50 07 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>FLAP RELIEF	(ADVISORY)	LOAD RELIEF IN PROGRESS	27 50 01 00
FLAP SYS MONITOR	(STATUS)	FCU OR SENSOR FAULT WHICH AFFECTS DISPATCH.	27 50 02 00
FLAPS CONTROL	(CAUTION)	LEFT, CENTER AND RIGHT FCU NOT IN CONTROL OF BOTH LE AND TE FLAPS (INHIBITS L27102 AND L27108)	27 50 03 00
FLAPS DRIVE	(CAUTION)	INBOARD OR OUTBOARD TRAILING EDGE FLAP ASYMMETRY OR INBOARD OR OUTBOARD TE FLAP SHUTDOWN OR TE ELEC FLAP DISAGREE OR LE FLAP SHUTDOWN OR LE ELEC FLAPS DISAGREE (INHIBITED BY "FLAPS CONTROL" L27109)(INHIBITS L27102)	27 50 04 00
FLAPS PRIMARY	(CAUTION)	INBOARD OR OUTBOARD TRAILING EDGE HYDRAULIC FLAP DISAGREE OR LEADING EDGE PNEUMATIC FLAP DISAGREE (INHIBITED BY "FLAPS DRIVE" L27108 AND "FLAPS CONTROL" L27109)	27 50 05 00
FLIGHT RCDR SYS	(STATUS)	FLIGHT RECORDER SYSTEM FAILED OR OFF	31 31 01 00
>FLT CONT VLVS	(ADVISORY)	ONE OR MORE HYDRAULIC SYSTEM FLIGHT CONTROL VALVE CLOSED	27 10 04 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
FLT DK LOW FLOW	(STATUS)	LOW FLOW IN FLIGHT DECK SUPPLY DUCT	21 50 12 00
FMC LEFT	(ADVISORY)	LEFT FLIGHT MANAGEMENT COMPUTER FAULT	34 61 07 00
FMC LEFT	(STATUS)	LEFT FLIGHT MANAGEMENT COMPUTER FAULT	34 61 08 00
>FMC MESSAGE	(ADVISORY)	FLIGHT MANAGEMENT SYSTEM GENERATES ONE OF SEVERAL HIGH PRIORITY FMC MESSAGES	34 61 09 00
FMC RIGHT	(ADVISORY)	RIGHT FLIGHT MANAGEMENT COMPUTER FAULT	34 61 10 00
FMC RIGHT	(STATUS)	RIGHT FLIGHT MANAGEMENT COMPUTER FAULT.	34 61 11 00
>FMC STATUS	(ADVISORY)	FMC (NOT CONTROLLING MCDU) REQUIRES FURTHER FLIGHT PLAN CHANGE.	34 61 12 00
FSEIC	(STATUS)	FSEIC CARD OR BUS FAILED	28 22 01 00
FSMC A	(STATUS)	FUEL SYSTEM MANAGEMENT CARD (FSMC) A FAILED OR BUS FAILED	28 22 02 00
FSMC B	(STATUS)	FUEL SYSTEM MANAGEMENT CARD (FSMC) B FAILED OR BUS FAILED	28 22 03 00

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	EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
	>FUEL BALLAST OR FUEL BALLAST	(CAUTION)	CENTER TANK FUEL QUANTITY .LE. EITHER ENTERED FMC FUEL BALLAST VALUE	28 22 53 00
	FUEL BALLAST SYS	(CAUTION)	CENTER TANK FUEL QUANTITY VARIABLE INVALID AND EITHER FUEL BALLAST VARIABLE VALID OR FMC 4500 LBS LESS OR EQUAL FQIS AND CT PUMPS SW ON	28 22 54 00
	FUEL BALLAST SYS	(STATUS)	CENTER TANK QUANTITY FROM FQIS IS INVALID	28 22 55 00
_	FUEL BALLAST QTY	(CAUTION)	FMC FUEL BALLAST QUANTITY INPUT VALUE CHANGES BY MORE THAN 200 LBS FROM THE PREVIOUSLY RECEIVED VALID INPUT VALUE. FMC FUEL BALLAST QUANTITY INPUT COMPARISON INHIBITED FOR 60 SECONDS STARTING WHEN ALL ENGINES ARE SHUTDOWN FROM A STATE WHERE AT LEAST ONE ENGINE WAS RUNNING AND ONE CT PUMP SW ON	28 22 56 00
	>FUEL IMBAL 1-4 OR FUEL IMBAL 1-4	(ADVISORY)	TANK 1 < TANK 4 BY 3000 LBS (1360 KGS) OR TANK 4 < TANK 1 BY 3000 LBS (1360 KGS)	28 22 04 00
	>FUEL IMBAL 2-3 OR FUEL IMBAL 2-3	(ADVISORY)	TANK 2 < TANK 3 BY 6000 LBS (2720 KGS) OR TANK 3 < TANK 2 BY 6000 LBS (2720 KGS)	28 22 05 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>FUEL IMBALANCE OR FUEL IMBALANCE	(ADVISORY)	SUMMATION OF INBOARD MAIN TANK QUANTITIES RELATIVE TO SUMMATION OF OUTBOARD MAIN TANK QUATITIES DIFFER BY MORE THAN 6000 LBS (AFTER TANK TO ENGINE CONFIGURATION IS REACHED)	28 22 51 00
>FUEL JETT A	(ADVISORY)	JETTISON SYSTEM A FAILURE OR BUS FAILURE	28 31 01 00
FUEL JETT A	(STATUS)	JETTISON SYSTEM A FAILURE	28 31 02 00
>FUEL JETT B	(ADVISORY)	JETTISON SYSTEM B FAILURE OR BUS FAILURE	28 31 03 00
FUEL IMBAL 1-4	(ADVISORY)	TANK 1 < TANK 4 BY 3000 LBS (1360 KGS) OR TANK 4 < TANK 1 BY 3000 LBS (1360 KGS)	28 22 04 00
FUEL IMBAL 2-3	(ADVISORY)	TANK 2 < TANK 3 BY 6000 LBS (2720 KGS) OR TANK 3 < TANK 2 BY 6000 LBS (2720 KGS)	28 22 05 00
FUEL IMBALANCE	(ADVISORY)	SUMMATION OF INBOARD MAIN TANK QUANTITIES RELATIVE TO SUMMATION OF OUTBOARD MAIN TANK QUATITIES DIFFER BY MORE THAN 6000 LBS (AFTER TANK TO ENGINE CONFIGURATION IS REACHED)	28 22 51 00
FUEL JETT B	(STATUS)	JETTISON SYSTEM B FAILURE	28 31 04 00
FUEL JETT SYS	(CAUTION)	FUEL TOTAL IS LESS THAN FUEL TO REMAIN AND AT LEAST ONE NOZZLE VALVE OPEN OR BOTH JETT CARDS FAIL OR BOTH BUSSES FAIL	28 31 09 00
FUEL OVRD 2 AFT	(STATUS)	LOW FUEL PUMP OUTPUT PRESSURE AFT OVRD PUMP TANK 2 AND PUMP SWITCHED ON AND COMMANDED ON BY FSMC AND NOT IN JETTISON MODE AND > 10,000 LBS IN TANK	28 31 13 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
FUEL OVRD 2 AFT	(ADVISORY)	LOW FUEL PUMP OUTPUT PRESSURE AFT OVRD PUMP TANK 2 AND PUMP SWITCHED ON AND COMMANDED ON BY FSMC OR SWITCHED OFF AND MAIN TANKS NOT EQUAL.	28 31 12 00
FUEL OVRD 2 FWD	(STATUS)	LOW FUEL PUMP OUTPUT PRESSURE FWD OVRD PUMP TANK 2 AND PUMP SWITCHED ON AND COMMANDED ON BY FSMC AND NOT IN JETTISON MODE AND > 10,000 LBS IN TANK	28 31 15 00
FUEL OVRD 2 FWD	(ADVISORY)	LOW FUEL PUMP OUTPUT PRESSURE FWD OVRD PUMP TANK 2 AND PUMP SWITCHED ON AND COMMANDED ON BY FSMC OR SWITCHED OFF & MAIN TANKS NOT EQUAL.	28 31 14 00
FUEL OVRD 3 AFT	(STATUS)	LOW FUEL PUMP OUTPUT PRESSURE AFT OVRD PUMP TANK 3 AND PUMP SWITCHED ON AND COMMANDED ON BY FSMC AND NOT IN JETTISON MODE AND > 10,000 LBS IN TANK	28 31 17 00
FUEL OVRD 3 AFT	(ADVISORY)	LOW FUEL PUMP OUTPUT PRESSURE AFT OVRD PUMP TANK 3 AND PUMP SWITCHED ON AND COMMANDED ON BY FSMC OR SWITCHED OFF AND MAIN TANKS NOT EQUAL.	28 31 16 00
FUEL OVRD 3 FWD	(STATUS)	LOW FUEL PUMP OUTPUT PRESSURE FWD OVRD PUMP TANK 3 AND PUMP SWITCHED ON AND COMMANDED ON BY FSMC AND NOT IN JETTISON MODE AND >10,000 LBS IN TANK	28 31 19 00
FUEL OVRD 3 FWD	(ADVISORY)	LOW FUEL PUMP OUTPUT PRESSURE FWD OVRD PUMP TANK 3 AND PUMP SWITCHED ON AND COMMANDED ON BY FSMC OR SWITCHED OFF AND MAIN TANKS NOT EQUAL.	28 31 18 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
FUEL OVRD CTR L	(STATUS)	LOW FUEL PUMP OUTPUT PRESSURE CENTER TANK LEFT AND PUMP SWITCHED ON WITH FUEL INTANK GREATER THAN 6000 LBS (2730 KGS)	28 31 21 00
FUEL OVRD CTR L	(ADVISORY)	LEFT CENTER TANK PUMP LOW PRESSURE AND PUMP SWITCHED ON AND FUEL IN TANK LESS THAN 6000 LBS (2730 KGS) OR INVALID FQPU BUS OR PUMP SWITCHED OFF WITH FUEL IN TANK GREATER THAN 6000 LBS (2730 KGS) OR LOW FUEL PUMP OUTPUT PRESSURE CENTER TANK LEFT AND PUMP SWITCHED ON WITH FUEL IN TANK GREATER THAN 6000 LBS (2730 KGS)	28 31 20 00
FUEL OVRD CTR R	(STATUS)	LOW FUEL PUMP OUTPUT PRESSURE CENTER TANK RIGHT AND PUMP SWITCHED ON WITH FUEL IN TANK GREATER THAN 6000 LBS (2730 KGS)	28 31 23 00
FUEL OVRD CTR R	(ADVISORY)	RIGHT CENTER TANK PUMP LOW PRESSURE AND PUMP SWITCHED ON AND FUEL IN TANK LESS THAN 6000 LBS (2730 KGS) OR INVALID FQPU BUS OR PUMP SWITCHED OFF WITH FUEL IN TANK GREATER THAN 6000 LBS (2730 KGS) OR LOW FUEL PUMP OUTPUT PRESSURE CENTER TANK RIGHT AND PUMP SWITCHED ON WITH FUEL IN TANK GREATER THAN 6000 LBS (2730 KGS)	28 31 22 00
FUEL PMP STAB L	(STATUS)	STABILIZER LEFT FUEL PUMP LOW PRESSURE WHEN SWITCHED ON AND COMMANDED ON BY FSMC OR FJCC WHILE FUEL IN TANK IS GREATER THAN 2500 LBS (1150 KGS)	28 10 02 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
FUEL PMP STAB L	(ADVISORY)	STABILIZER LEFT FUEL PUMP LOW PRESSURE WHEN SWITCHED ON AND COMMANDED ON BY FSMC OR FJCC OR SWITCHED OFF WHILE FUEL IN TANK IS GREATER THAN 1500 LBS (690 KGS)	28 10 01 00
FUEL PMP STAB R	(STATUS)	STABILIZER RIGHT FUEL PUMP LOW PRESSURE WHEN SWITCHED ON AND COMMANDED ON BY FSMC OR FJCC WHILE FUEL IN TANK IS GREATER THAN 2500 LBS (1150 KGS)	28 10 04 00
FUEL PMP STAB R	(ADVISORY)	STABILIZER RIGHT FUEL PUMP LOW PRESSURE WHEN SWITCHED ON AND COMMANDED ON BY FSMC OR FJCC OR SWITCHED OFF WHILE FUEL IN TANK IS GREATER THAN 1500 LBS (690 KGS)	28 10 03 00
FUEL PRESS ENG 1	(CAUTION)	BOTH PUMPS IN TANK 1 LO PRESS AND X FEED VALVE CLOSED	28 22 09 00
FUEL PRESS ENG 2	(CAUTION)	BOTH PUMPS IN TANK 2 LO PRESS AND X FEED VALVE CLOSED	28 22 10 00
FUEL PRESS ENG 3	(CAUTION)	BOTH PUMPS IN TANK 3 LO PRESS AND X FEED VALVE CLOSED	28 22 11 00
FUEL PRESS ENG 4	(CAUTION)	BOTH PUMPS IN TANK 4 LO PRESS AND X FEED VALVE CLOSED	28 22 12 00
FUEL PUMP 1 AFT	(STATUS)	SWITCH ON AND LOW FUEL PUMP OUTPUT PRESSURE, TANK 1, AFT PUMP AND AIRPLANE IN THE AIR OR 15 MINUTES AFTER LANDING	28 22 14 00
FUEL PUMP 1 AFT	(ADVISORY)	LOW FUEL PUMP OUTPUT PRESSURE TANK 1, AFT PUMP. INHIBITED BY FUEL PRESS ENG 1.	28 22 13 00
FUEL PUMP 1 FWD	(STATUS)	SWITCH ON AND LOW FUEL PUMP OUTPUT PRESSURE, TANK 1, FWD PUMP AND AIRPLANE ON THE GROUND OR 30 MINUTES AFTER TAKEOFF	28 22 16 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
FUEL PUMP 1 FWD	(ADVISORY)	LOW FUEL PUMP OUTPUT PRESSURE TANK 1, FWD PUMP. INHIBITED BY FUEL PRESS ENG 1.	28 22 15 00
FUEL PUMP 2 AFT	(STATUS)	SWITCH ON AND LOW FUEL PUMP OUTPUT PRESSURE, TANK 2, AFT PUMP AND AIRPLANE IN THE AIR OR 15 MINUTES AFTER LANDING	28 22 18 00
FUEL PUMP 2 AFT	(ADVISORY)	LOW FUEL PUMP OUTPUT PRESSURE TANK 2, AFT PUMP. INHIBITED BY FUEL PRESS ENG 2.	28 22 17 00
FUEL PUMP 2 FWD	(STATUS)	SWITCH ON AND LOW FUEL PUMP OUTPUT PRESSURE, TANK 2, FWD PUMP AND AIRPLANE ON THE GROUND OR 30 MINUTES AFTER TAKEOFF	28 22 20 00
FUEL PUMP 2 FWD	(ADVISORY)	LOW FUEL PUMP OUTPUT PRESSURE TANK 2, FWD PUMP. INHIBITED BY FUEL PRESS ENG 2.	28 22 19 00
FUEL PUMP 3 AFT	(STATUS)	SWITCH ON AND LOW FUEL PUMP OUTPUT PRESSURE, TANK 3, AFT PUMP AND AIRPLANE IN THE AIR OR 15 MINUTES AFTER LANDING	28 22 22 00
FUEL PUMP 3 AFT	(ADVISORY)	LOW FUEL PUMP OUTPUT PRESSURE TANK 3, AFT PUMP. INHIBITED BY FUEL PRESS ENG 3.	28 22 21 00
FUEL PUMP 3 FWD	(STATUS)	SWITCH ON AND LOW FUEL PUMP OUTPUT PRESSURE, TANK 3, FWD PUMP AND AIRPLANE ON THE GROUND OR 30 MINUTES AFTER TAKEOFF	28 22 24 00
FUEL PUMP 3 FWD	(ADVISORY)	LOW FUEL PUMP OUTPUT PRESSURE TANK 3, FWD PUMP. INHIBITED BY FUEL PRESS ENG 3.	28 22 23 00
FUEL PUMP 4 AFT	(STATUS)	SWITCH ON AND LOW FUEL PUMP OUTPUT PRESSURE, TANK 4, AFT PUMP AND AIRPLANE IN THE AIR OR 15 MINUTES AFTER LANDING	28 22 26 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
FUEL PUMP 4 AFT	(ADVISORY)	LOW FUEL PUMP OUTPUT PRESSURE TANK 4, AFT PUMP. INHIBITED BY FUEL PRESS ENG 4.	28 22 25 00
FUEL PUMP 4 FWD	(STATUS)	SWITCH ON AND LOW FUEL PUMP OUTPUT PRESSURE, TANK 4, FWD PUMP AND AIRPLANE ON THE GROUND OR 30 MINUTES AFTER TAKEOFF	28 22 28 00
FUEL PUMP 4 FWD	(ADVISORY)	LOW FUEL PUMP OUTPUT PRESSURE TANK 4, FWD PUMP. INHIBITED BY FUEL PRESS ENG 4.	28 22 27 00
FUEL QTY LOW	(CAUTION)	LESS THAN 2000 LBS (910 KGS) IN ANY MAIN TANK	28 22 29 00
FUEL QTY SYS	(STATUS)	FUEL QUANTITY PROCESSOR OR INPUT NOT OPERATIONAL OR OUTPUT BUS FAILED	28 40 01 00
FUEL RES XFR 2	(ADVISORY)	RESERVE TANK 2 TRANSFER VALVES CLOSED WHEN COMMANDED OPEN	28 10 05 00
FUEL RES XFR 3	(ADVISORY)	RESERVE TANK 3 TRANSFER VALVES CLOSED WHEN COMMANDED OPEN	28 10 06 00
FUEL SCAV PUMP	(STATUS)	FUEL SCAVENGE PUMP OR PRESSURE SWITCH NOT OPERATIONAL	28 10 07 00
FUEL SPAR VLV 1	(STATUS)	ENGINE 1 FUEL SPAR VALVE DISAGREE WITH COMMAND	28 22 31 00
FUEL SPAR VLV 2	(STATUS)	ENGINE 2 FUEL SPAR VALVE DISAGREE WITH COMMAND	28 22 33 00
FUEL SPAR VLV 3	(STATUS)	ENGINE 3 FUEL SPAR VALVE DISAGREE WITH COMMAND	28 22 35 00
FUEL SPAR VLV 4	(STATUS)	ENGINE 4 FUEL SPAR VALVE DISAGREE WITH COMMAND	28 22 37 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
FUEL STAB XFR	(CAUTION)	HORIZONTAL STABILIZER FUEL FAIL TO TRANSFER OR BOTH FUEL MANAGEMENT CARDS FUNCTIONAL LOGIC FAILED AND FUEL IN STABILIZER TANK GREATER THAN 1500 LBS (690 KGS)	28 10 08 00
>FUEL TANK/ENG	(ADVISORY)	MAIN 2 OR 3 TANKS LESS THAN OR EQUAL TO MAIN 1 OR 4 FUEL QUANTITY AND TANK 1 OR 4 CROSSFEED VALVES NOT CLOSED (INHIBITED DURING JETTISON OR LOW FUEL)	28 22 38 00
FUEL TEMP	(STATUS)	FUEL TEMP NOT AVAILABLE	28 40 11 00
FUEL TEMP SYS	(ADVISORY)	FUEL TEMP NOT AVAILABLE	28 40 12 00
>FUEL TEMP LOW	(ADVISORY)	FUEL TEMP LESS THAN OR EQUAL TO THE MINIMUN FUEL OPERATING TEMPERATURE FOR FUEL TYPE SELECTED BY PILOT OR DEFAULT OF FUEL TEMP BELOW -37 DEG C	28 40 02 00
FUEL X FEED 1	(STATUS)	FUEL X FEED VALVE DISAGREE WITH COMMAND, TANK 1	28 22 40 00
FUEL X FEED 1	(ADVISORY)	FUEL XFEED VALVE DISAGREE WITH COMMAND, TANK 1	28 22 39 00
FUEL X FEED 2	(STATUS)	FUEL X FEED VALVE DISAGREE WITH COMMAND, TANK 2	28 22 42 00
FUEL X FEED 2	(ADVISORY)	FUEL XFEED VALVE DISAGREE WITH COMMAND, TANK 2	28 22 41 00
FUEL X FEED 3	(STATUS)	FUEL X FEED VALVE DISAGREE WITH COMMAND, TANK 3	28 22 44 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
FUEL X FEED 3	(ADVISORY)	FUEL XFEED VALVE DISAGREE WITH COMMAND, TANK 3	28 22 43 00
FUEL X FEED 4	(STATUS)	FUEL X FEED VALVE DISAGREE WITH COMMAND, TANK 4	28 22 46 00
FUEL X FEED 4	(ADVISORY)	FUEL XFEED VALVE DISAGREE WITH COMMAND, TANK 4	28 22 45 00
>FUEL XFER 1+4	(ADVISORY)	SWITCH ON BEFORE MAIN TANKS EQUAL OR SWITCH ON WHILE ON GROUND	28 10 09 00
FUEL XFR VLV 1	(STATUS)	M1 VALVE CLOSED WHEN COMMANDED OPEN BY JETTISON CARD OR MANUAL SWITCH	28 10 11 00
FUEL XFR VLV 4	(STATUS)	M4 VALVE CLOSED WHEN COMMANDED OPEN BY JETTISON CARD OR MANUAL SWITCH	28 10 12 00
FWD CARGO 1 LP A	(STATUS)	FWD CARGO 1 LOOP A FIRE OR FAULT	26 16 08 00
FWD CARGO 1 LP B	(STATUS)	FWD CARGO 1 LOOP B FIRE OR FAULT	26 16 09 00
FWD CARGO 2 LP A	(STATUS)	FWD CARGO 2 LOOP A FIRE OR FAULT	26 16 10 00
FWD CARGO 2 LP B	(STATUS)	FWD CARGO 2 LOOP B FIRE OR FAULT	26 16 11 00
FWD OVBD VLV	(STATUS)	FWD OVERBOARD VALVE NOT IN COMMANDED POSITION OR INTERFACE FAIL	21 20 03 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
G/S ANTENNA C	(STATUS)	C G/S ANTENNA FAILED TO SWITCH TO TRACK WITH GEAR DOWN, OR C G/S ANTENNA FAILED TO SWITCH TO BULKHEAD ANTENNA WITH GEAR UP	34 31 01 00
G/S ANTENNA L	(STATUS)	L G/S ANTENNA FAILED TO SWITCH TO TRACK WITH GEAR DOWN, OR L G/S ANTENNA FAILED TO SWITCH TO BULKHEAD ANTENNA WITH GEAR UP	34 31 02 00
G/S ANTENNA R	(STATUS)	R G/S ANTENNA FAILED TO SWITCH TO TRACK WITH GEAR DOWN, OR R G/S ANTENNA FAILED TO SWITCH TO BULKHEAD ANTENNA WITH GEAR UP	34 31 03 00
GEAR DISAGREE	(STATUS)	PRIMARY AND ALTERNATE SYSTEMS BOTH INDICATE ANY GEAR DISAGREES WITH LEVER POSITION UP OR DOWN, OR ALL GEAR NOT UP, OR ALL GEAR NOT DOWN.	32 31 02 00
GEAR DISAGREE	(CAUTION)	PRIMARY AND ALTERNATE SYSTEMS BOTH INDICATE ANY GEAR DISAGREES WITH LEVER POSITION UP OR DOWN, OR ALL GEAR NOT UP, OR ALL GEAR NOT DOWN.	32 31 01 00
GEAR DOOR	(STATUS)	PRIMARY AND ALTERNATE SYSTEMS BOTH INDICATE ANY LANDING GEAR DOOR OPEN. INHIBITED WHEN ALTERNATE GEAR IS SELECTED.	32 31 04 00
GEAR DOOR	(ADVISORY)	PRIMARY AND ALTERNATE SYSTEMS BOTH INDICATE ANY LANDING GEAR DOOR OPEN. INHIBITED WHEN ALTERNATE GEAR IS SELECTED.	32 31 03 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
GEAR MONITOR	(STATUS)	PRIMARY AND ALTERNATE LANDING GEAR POSITION INDICATION DISAGREE (SELECTED LANDING GEAR MAINTENANCE MESSAGES OR LOSS OF EITHER PSEU BUS OR SELECTED PSEU FAULTS)	32 61 01 00
GEAR TILT	(STATUS)	PRIMARY AND ALTERNATE SYSTEMS BOTH INDICATE ANY GEAR NOT TILTED WHEN AIRBORNE.	32 31 06 00
GEAR TILT	(CAUTION)	PRIMARY AND ALTERNATE SYSTEMS BOTH INDICATE ANY GEAR NOT TILTED WHEN AIRBORNE.	32 31 05 00
GND TESTS ENABLE	(STATUS)	GND TESTS ENABLE SWITCH ENABLED OR "FAILED"	45 45 01 00
>GPS	(ADVISORY)	LEFT GPS SENSOR UNIT OR ANTENNA OR RF OR RF PATH FAILURE AND RIGHT GPS SENSOR UNIT OR ANTENNA OR RF OR RF PATH FAILURE	34 58 11 00
>GPS LEFT	(ADVISORY)	LEFT GPS SENSOR UNIT OR ANTENNA OR RF OR RF PATH FAILURE	34 58 09 00
>GPS RIGHT	(ADVISORY)	RIGHT GPS SENSOR UNIT OR ANTENNA OR RF OR RF PATH FAILURE	34 58 10 00
GROUND PROX SYS	(STATUS)	GROUND PROXIMITY SYSTEM FAULT	34 46 02 00
HEAT L AOA	(STATUS)	LEFT ANGLE OF ATTACK PROBE HEAT POWER OR CONTINUITY LOSS	30 31 02 00
HEAT L AOA	(ADVISORY)	LEFT ANGLE OF ATTACK PROBE HEAT POWER OR CONTINUITY LOSS	30 31 01 00
HEAT L TAT	(STATUS)	LEFT TOTAL AIR TEMPERATURE PROBE HEAT POWER OR CONTINUITY LOSS	30 31 04 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
HEAT L TAT	(ADVISORY)	LEFT TOTAL AIR TEMPERATURE PROBE HEAT POWER OR CONTINUITY LOSS	30 31 03 00
HEAT P/S CAPT	(STATUS)	CAPTAIN'S MAIN PITOT HEAT POWER OR CONTINUITY LOSS	30 31 06 00
HEAT P/S CAPT	(ADVISORY)	CAPTAIN'S MAIN PITOT HEAT POWER OR CONTINUITY LOSS	30 31 05 00
HEAT P/S F/O	(STATUS)	FIRST OFFICER PITOT HEAT POWER OR CONTINUITY LOSS	30 31 08 00
HEAT P/S F/O	(ADVISORY)	FIRST OFFICER PITOT HEAT POWER OR CONTINUITY LOSS	30 31 07 00
HEAT P/S L AUX	(STATUS)	LEFT AUXILARY PITOT HEAT POWER OR CONTINUITY LOSS	30 31 10 00
HEAT P/S L AUX	(ADVISORY)	LEFT AUXILARY PITOT HEAT POWER OR CONTINUITY LOSS	30 31 09 00
HEAT P/S R AUX	(STATUS)	RIGHT AUXILARY PITOT HEAT POWER OR CONTINUITY LOSS	30 31 12 00
HEAT P/S R AUX	(ADVISORY)	RIGHT AUXILARY PITOT HEAT POWER OR CONTINUITY LOSS	30 31 11 00
HEAT R AOA	(STATUS)	RIGHT ANGLE OF ATTACK PROBE HEAT POWER OR CONTINUITY LOSS	30 31 14 00
HEAT R AOA	(ADVISORY)	RIGHT ANGLE OF ATTACK PROBE HEAT POWER OR CONTINUITY LOSS	30 31 13 00
HEAT R TAT	(STATUS)	RIGHT TOTAL AIR TEMPERATURE PROBE HEAT POWER OR CONTINUITY LOSS	30 31 16 00
HEAT R TAT	(ADVISORY)	RIGHT TOTAL AIR TEMPERATURE PROBE HEAT POWER OR CONTINUITY LOSS	30 31 15 00
HEAT WINDOW L	(ADVISORY)	CONTROLLER HEATER OR SENSOR FAULT OR SWITCH OFF.	30 40 01 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
HEAT WINDOW R	(ADVISORY)	CONTROLLER HEATER OR SENSOR FAULT OR SWITCH OFF.	30 40 02 00
>HF DATA	(ADVISORY)	HF DATA RADIO FAILURE	23 27 12 00
HF DATA	(STATUS)	SINGLE HF DATA SYSTEM FAILURE	23 27 13 00
HF DATA L	(STATUS)	LEFT HF DATA SYSTEM FAILURE	23 27 14 00
HF DATA OFF	(MEMO)	HF DATA RADIO IS OFF	23 ME 10 00
HF DATA R	(STATUS)	RIGHT HF DATA SYSTEM FAILURE	23 27 15 00
HUMID FLT DK	(STATUS)	THE FLIGHT DECK HUMIDIFIER HAS FAILED.	21 70 06 00
HYD CONTROL 1	(ADVISORY)	HYDIM 1 BUS INACTIVE	29 11 47 00
HYD CONTROL 4	(ADVISORY)	HYDIM 4 BUS INACTIVE	29 11 48 00
HYD OVHT SYS 1	(STATUS)	EDP, DEMAND, AND/OR OPTIONAL AUX PUMP CASE DRAIN TEMP >105 DEGRESS C	29 11 06 00
HYD OVHT SYS 1	(ADVISORY)	EDP, DEMAND, AND/OR OPTIONAL AUX PUMP CASE DRAIN TEMP >105 DEGREES C	29 11 05 00
HYD OVHT SYS 2	(STATUS)	EDP, AND/OR DEMAND PUMP CASE DRAIN TEMP >105 DEGREES C	29 11 08 00
HYD OVHT SYS 2	(ADVISORY)	EDP, AND/OR DEMAND PUMP CASE DRAIN TEMP >105 DEGREES C	29 11 07 00
HYD OVHT SYS 3	(STATUS)	EDP, AND/OR DEMAND PUMP CASE DRAIN TEMP >105 DEGREES C	29 11 10 00
HYD OVHT SYS 3	(ADVISORY)	EDP, AND/OR DEMAND PUMP CASE DRAIN TEMP >105 DEGREES C	29 11 09 00
HYD OVHT SYS 4	(STATUS)	EDP, AND/OR DEMAND PUMP CASE DRAIN TEMP >105 DEGREES C	29 11 12 00
HYD OVHT SYS 4	(ADVISORY)	EDP, DEMAND PUMP, AND/OR AUXILIARY CASE DRAIN TEMP >105 DEGREES C	29 11 11 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
HYD PRESS DEM 1	(STATUS)	HYD SYSTEM 1 DEMAND PUMP OUTLET PRESSURE LESS THAN 1400 PSI WHEN COMMANDED ON INHIBITED WITH ENGINES NOT RUNNING. ALSO FLAP DEMAND LOGIC FAILED. ALSO WHEN DEMAND PUMP NOT POWERED.	29 11 14 00
HYD PRESS DEM 1	(ADVISORY)	HYD SYSTEM 1 DEMAND PUMP SWITCHED OFF OR OUTLET PRESSURE LESS THAN 1400 PSI WHEN COMMANDED ON, INHIBITED BY SYS PRESS MESSAGE, OR DEMAND PUMP NOT POWERED.	29 11 13 00
HYD PRESS DEM 2	(STATUS)	HYD SYSTEM 2 DEMAND PUMP OUTLET PRESSURE LESS THAN 1400 PSI WHEN COMMANDED ON INHIBITED WITH ENGINES NOT RUNNING OR DEMAND PUMP NOT POWERED	29 11 16 00
HYD PRESS DEM 2	(ADVISORY)	HYD SYSTEM 2 DEMAND PUMP SWITCHED OFF OR OUTLET PRESSURE LESS THAN 1400 PSI WHEN COMMANDED ON, INHIBITED BY SYS PRESS MESSAGE, OR DEMAND PUMP NOT POWERED.	29 11 15 00
HYD PRESS DEM 3	(STATUS)	HYD SYSTEM 3 DEMAND PUMP OUTLET PRESSURE LESS THAN 1400 PSI WHEN COMMANDED ON INHIBITED WITH ENGINES NOT RUNNING OR DEMAND PUMP NOT POWERED	29 11 18 00
HYD PRESS DEM 3	(ADVISORY)	HYD SYSTEM 3 DEMAND PUMP SWITCHED OFF OR OUTLET PRESSURE LESS THAN 1400 PSI WHEN COMMANDED ON, INHIBITED BY SYS PRESS MESSAGE, OR DEMAND PUMP NOT POWERED.	29 11 17 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
HYD PRESS DEM 4	(STATUS)	HYD SYSTEM 4 DEMAND PUMP OUTLET PRESSURE LESS THAN 1400 PSI WHEN COMMANDED ON INHIBITED WITH ENGINES NOT RUNNING. ALSO FLAP DEMAND LOGIC FAILED. ALSO WHEN DEMAND PUMP NOT POWERED.	29 11 20 00
HYD PRESS DEM 4	(ADVISORY)	HYD SYSTEM 4 DEMAND PUMP SWITCHED OFF OR OUTLET PRESSURE LESS THAN 1400 PSI WHEN COMMANDED ON, INHIBITED BY SYS PRESS MESSAGE, OR DEMAND PUMP NOT POWERED.	29 11 19 00
HYD PRESS ENG 1	(STATUS)	ENGINE PUMP 1 OUTPUT PRESSURE LESS THAN 1400 PSI	29 11 22 00
HYD PRESS ENG 1	(ADVISORY)	ENGINE PUMP 1 OUTPUT PRESSURE LESS THAN 1400 PSI, INHIBITED BY SYS PRESS MESSAGE	29 11 21 00
HYD PRESS ENG 2	(STATUS)	ENGINE PUMP 2 OUTPUT PRESSURE LESS THAN 1400 PSI	29 11 24 00
HYD PRESS ENG 2	(ADVISORY)	ENGINE PUMP 2 OUTPUT PRESSURE LESS THAN 1400 PSI, INHIBITED BY SYS PRESS MESSAGE	29 11 23 00
HYD PRESS ENG 3	(STATUS)	ENGINE PUMP 3 OUTPUT PRESSURE LESS THAN 1400 PSI	29 11 26 00
HYD PRESS ENG 3	(ADVISORY)	ENGINE PUMP 3 OUTPUT PRESSURE LESS THAN 1400 PSI, INHIBITED BY SYS PRESS MESSAGE	29 11 25 00
HYD PRESS ENG 4	(STATUS)	ENGINE PUMP 4 OUTPUT PRESSURE LESS THAN 1400 PSI	29 11 28 00
HYD PRESS ENG 4	(ADVISORY)	ENGINE PUMP 4 OUTPUT PRESSURE LESS THAN 1400 PSI, INHIBITED BY SYS PRESS MESSAGE	29 11 27 00
HYD PRESS SYS 1	(CAUTION)	PRESSURE IN HYDRAULIC SYSTEM 1 LESS THAN 1200 PSI	29 11 29 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
HYD PRESS SYS 2	(CAUTION)	PRESSURE IN HYDRAULIC SYSTEM 2 LESS THAN 1200 PSI	29 11 30 00
HYD PRESS SYS 3	(CAUTION)	PRESSURE IN HYDRAULIC SYSTEM 3 LESS THAN 1200 PSI	29 11 31 00
HYD PRESS SYS 4	(CAUTION)	PRESSURE IN HYDRAULIC SYSTEM 4 LESS THAN 1200 PSI	29 11 32 00
>HYD QTY LOW 1	(ADVISORY)	HYDRAULIC QUANTITY IN SYSTEM 1 AT OR BELOW 0.34	29 11 33 00
>HYD QTY LOW 2	(ADVISORY)	HYDRAULIC QUANTITY IN SYSTEM 2 AT OR BELOW 0.34	29 11 34 00
>HYD QTY LOW 3	(ADVISORY)	HYDRAULIC QUANTITY IN SYSTEM 3 AT OR BELOW 0.34	29 11 35 00
>HYD QTY LOW 4	(ADVISORY)	HYDRAULIC QUANTITY IN SYSTEM 4 AT OR BELOW 0.34	29 11 36 00
HYD RSVR PRESS 1	(STATUS)	HYDRAULIC RESERVOIR 1 PRESSURE 21 PSIA OR LESS	29 17 01 00
HYD RSVR PRESS 2	(STATUS)	HYDRAULIC RESERVOIR 2 PRESSURE 21 PSIA OR LESS	29 17 02 00
HYD RSVR PRESS 3	(STATUS)	HYDRAULIC RESERVOIR 3 PRESSURE 21 PSIA OR LESS	29 17 03 00
HYD RSVR PRESS 4	(STATUS)	HYDRAULIC RESERVOIR 4 PRESSURE 21 PSIA OR LESS	29 17 04 00
HYDIM 1	(STATUS)	HYDIM 1 BUS INACTIVE	29 11 37 00
HYDIM 2	(STATUS)	HYDIM 2 BUS INACTIVE	29 11 38 00
HYDIM 3	(STATUS)	HYDIM 3 BUS INACTIVE	29 11 39 00
HYDIM 4	(STATUS)	HYDIM 4 BUS INACTIVE	29 11 40 00
>IAS/ALT DIFF	(ADVISORY)	CAPTAINS AND FIRST OFFICERS CALIBRATED DISAGREE BY 5 KNOTS OR UNCORRECTED ALTITUDES DIFFER BY 200 FEET	34 12 34 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
IAS DISAGREE	(CAUTION)	DISPLAYED AIRSPEEDS DISAGREE BY MORE THAN 5 KNOTS FOR MORE THAN 5 SECONDS. INHIBITED BELOW 400FT RAD ALT	34 12 36 00
ICE DETECTOR L	(STATUS)	LEFT ICE DETECTOR FAILED	30 81 02 00
ICE DETECTOR R	(STATUS)	RIGHT ICE DETECTOR FAILED	30 81 03 00
>ICE DETECTORS	(ADVISORY)	LEFT AND RIGHT ICE DETECTORS HAVE FAILED	30 81 01 00
>ICING NAC	(CAUTION)	LEFT OR RIGHT ICE DETECTOR DETECTS NAC ICE AND ANY NAC ANTI-ICE IS OFF IN THE AIR	30 81 07 00
>ICING WING	(ADVISORY)	ICE DETECTOR DETECTS ICE (WING LEVEL) AND WING ANTI ICE SYSTEM IS OFF IN THE AIR	30 81 06 00
>IDLE DISAGREE	(ADVISORY)	ONE OR MORE ENGINES WITH IDLE DISAGREE	73 03 50 00
IDLE DISAGREE	(STATUS)	ONE OR MORE ENGINES WITH IDLE DISAGREE	73 03 93 00
IDS CRT	(STATUS)	ANY IDS CRT FAILED OR OFF OR DRAWN BLANK DUE TO COMPUTER FAULT	31 61 11 00
IDS ENG DATA MON	(STATUS)	IDS ENGINE DATA WRAP AROUND MONITOR TRIPPED	31 61 49 00
IDS SOFTWARE	(STATUS)	INCOMPATIBLE SOFTWARE DETECTED BETWEEN IDUS OR EIUS OR BOTH	31 61 12 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
ILS ANTENNA	(CAUTION)	TWO OR MORE LOC ANT FAILED TO SWITCH TO TAIL OR BULKHEAD ANT AS SELECTED BY FCC, OR TWO OR MORE G/S ANT FAILED TO SWITCH TO BULKHEAD ANT WITH THE NOSE GEAR NOT DOWN, OR TWO OR MORE G/S ANT FAILED TO SWITCH TO TRACK ANT WITH NOSE GEAR DOWN OR IF MAWEA, PRI AND ALT PSEU DISAGREE WITH NOSE GEAR DOWN	34 31 04 00
ILS CENTER	(STATUS)	CENTER ILS FAILURE	34 31 05 00
ILS LEFT	(STATUS)	LEFT ILS FAILURE	34 31 06 00
ILS RIGHT	(STATUS)	RIGHT ILS FAILURE	34 31 07 00
>IRS AC CENTER	(ADVISORY)	CENTER INERTIAL REFERENCE SYSTEM AC FAIL POWER	34 21 16 00
IRS AC CENTER	(STATUS)	CENTER INERTIAL REFERENCE SYSTEM AC FAIL POWER	34 21 43 00
>IRS AC LEFT	(ADVISORY)	LEFT INERTIAL REFERENCE SYSTEM AC FAIL POWER	34 21 17 00
IRS AC LEFT	(STATUS)	LEFT INERTIAL REFERENCE SYSTEM AC FAIL POWER	34 21 44 00
>IRS AC RIGHT	(ADVISORY)	RIGHT INERTIAL REFERENCE SYSTEM AC FAIL POWER	34 21 18 00
IRS AC RIGHT	(STATUS)	RIGHT INERTIAL REFERENCE SYSTEM AC FAIL POWER	34 21 45 00
IRS ALIGN MODE C	(MEMO)	C IRS OPERATING NORMALLY IN ALIGN MODE OR INITIAL ATTITUDE MODE SELECTED	34 ME 04 00
IRS ALIGN MODE L	(MEMO)	L IRS OPERATING NORMALLY IN ALIGN MODE OR INITIAL ATTITUDE MODE SELECTED	34 ME 03 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
IRS ALIGN MODE R	(MEMO)	R IRS OPERATING NORMALLY IN ALIGN MODE OR INITIAL ATTITUDE MODE SELECTED	34 ME 05 00
IRS CENTER	(STATUS)	CENTER INERTIAL REFERENCE SYSTEM FAULT.	34 21 04 00
IRS CENTER	(ADVISORY)	CENTER INERTIAL REFERENCE SYSTEM FAULT	34 21 03 00
>IRS DC CENTER	(ADVISORY)	CENTER INERTIAL REFERENCE SYSTEM DC FAIL	34 21 05 00
IRS DC CENTER	(STATUS)	CENTER INERTIAL REFERENCE SYSTEM DC FAIL.	34 21 06 00
>IRS DC LEFT	(ADVISORY)	LEFT INERTIAL REFERENCE SYSTEM DC FAIL	34 21 07 00
IRS DC LEFT	(STATUS)	LEFT INERTIAL REFERENCE SYSTEM DC FAIL	34 21 08 00
>IRS DC RIGHT	(ADVISORY)	RIGHT INERTIAL REFERENCE SYSTEM DC FAIL	34 21 09 00
IRS DC RIGHT	(STATUS)	RIGHT INERTIAL REFERENCE SYSTEM DC FAIL.	34 21 10 00
IRS LEFT	(STATUS)	LEFT INERTIAL REFERENCE SYSTEM FAULT.	34 21 14 00
IRS LEFT	(ADVISORY)	LEFT INERTIAL REFERENCE SYSTEM FAULT	34 21 13 00
IRS MOTION	(ADVISORY)	L OR C OR R IRU DETECTED MOTION DURING ALIGNMENT	34 21 15 00
IRS RIGHT	(STATUS)	RIGHT INERTIAL REFERENCE SYSTEM FAULT.	34 21 20 00
IRS RIGHT	(ADVISORY)	RIGHT INERTIAL REFERENCE SYSTEM FAULT	34 21 19 00
>JETT NOZ ON	(ADVISORY)	BOTH NOZZLE VALVES OPEN	28 31 27 00
>JETT NOZ ON L	(ADVISORY)	LEFT NOZZLE VALVE OPEN	28 31 24 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>JETT NOZ ON R	(ADVISORY)	RIGHT NOZZLE VALVE OPEN	28 31 25 00
>JETT NOZZLE L	(ADVISORY)	L JETTISON NOZZLE VALVE DISAGREES WITH COMMAND.	28 31 05 00
JETT NOZZLE L	(STATUS)	L JETTISON NOZZLE VALVE DISAGREES WITH COMMAND.	28 31 06 00
>JETT NOZZLE R	(ADVISORY)	R JETTISON NOZZLE VALVE DISAGREES WITH COMMAND	28 31 08 00
JETT NOZZLE R	(STATUS)	R JETTISON NOZZLE VALVE DISAGREES WITH COMMAND.	28 31 07 00
JETT XFR VALVE	(STATUS)	ANY MAIN 2 OR 3 OR CENTER JETTISON TRANSFER VALVE DISAGREES WITH COMMAND.	28 31 26 00
LANDING ALT	(ADVISORY)	DISAGREEMENT BETWEEN FMC LANDING ALTITUDE SELECTED AND CPCS CONTROLLER TARGET ALTITUDE	21 30 10 00
LAV-GALLEY FANS	(STATUS)	BOTH LAV-GALLEY VENT FANS FAILED OR INTERFACE FAIL	21 20 04 00
LE MULT DRIVE	(STATUS)	MULTIPLE LEADING EDGE FAILURES	27 80 04 00
LE SINGLE DRIVE	(STATUS)	SINGLE LEADING EDGE DRIVE FAILURE	27 80 03 00
LOC ANTENNA C	(STATUS)	C LOC ANTENNA FAILED TO SWITCH TO NOSE BULKHEAD ANTENNA OR C LOC ANTENNA FAILED TO SWITCH TO VOR ANTENNA	34 31 08 00
LOC ANTENNA L	(STATUS)	L LOC ANTENNA FAILED TO SWITCH TO NOSE BULKHEAD ANTENNA OR L LOC ANTENNA FAILED TO SWITCH TO VOR ANTENNA	34 31 09 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
LOC ANTENNA R	(STATUS)	R LOC ANTENNA FAILED TO SWITCH TO NOSE BULKHEAD ANTENNA OR R LOC ANTENNA FAILED TO SWITCH TO VOR ANTENNA	34 31 10 00
LWR PRESS RELIEF	(STATUS)	LOWER PRESSURE RELIEF VALVE ACTUATED OR INTERFACE FAIL	21 30 11 00
M2/M3 < 3K SIG	(STATUS)	EITHER INBOARD MAIN TANK BELOW 3000 GALLONS (11,350 LTR) SIGNAL TO FJCC CARD DISAGREE	28 10 24 00
M2/M3 < 6K SIG	(STATUS)	EITHER INBOARD MAIN TANK BELOW 6000 GALLONS (22,700 LTR) SIGNAL TO FSMC CARD DISAGREE OR AIR/GROUND DISAGREE	28 10 23 00
MAWEA ID CARD	(STATUS)	MAWEA TAIL IDENTIFICATION CARD FAILED OR FAILURE OF THE CARD FUNCTION PROGRAM PINS OR LOSS OF THE TAIL ID CARD INPUT TO THE EIU	31 51 39 00
MAWEA MASTER MON	(STATUS)	EITHER MAWEA MASTER MONITOR A OR B CARD FAILED OR NO ACTIVITY	31 51 11 00
MAWEA PWR SUPPLY	(STATUS)	MAWEA SYSTEM POWER SUPPLY FAILURE OR BOTH SCID CARDS 1 AND 2 BUS INPUTS TO THE INTEGRATED DISPLAY SYSTEM INACTIVE	31 51 13 00
MAWEA SCID CARD	(STATUS)	MAWEA SIGNAL COLLECTION OR FAILURE OF THE CARD FUNCTION PROGRAM PINS OR LOSS OF THE SCID CARD INPUT TO THE EIU	31 51 38 00
MD CGO 1 LP A	(STATUS)	MAIN DECK 1 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 10 00
MD CGO 1 LP B	(STATUS)	MAIN DECK 1 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 11 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
MD CGO 2 LP A	(STATUS)	MAIN DECK 2 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 12 00
MD CGO 2 LP B	(STATUS)	MAIN DECK 2 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 13 00
MD CGO 3 LP A	(STATUS)	MAIN DECK 3 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 14 00
MD CGO 3 LP B	(STATUS)	MAIN DECK 3 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 15 00
MD CGO 4 LP A	(STATUS)	MAIN DECK 4 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 16 00
MD CGO 4 LP B	(STATUS)	MAIN DECK 4 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 17 00
MD CGO 5 LP A	(STATUS)	MAIN DECK 5 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 18 00
MD CGO 5 LP B	(STATUS)	MAIN DECK 5 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 19 00
MD CGO 6 LP A	(STATUS)	MAIN DECK 6 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 27 00
MD CGO 6 LP B	(STATUS)	MAIN DECK 6 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 28 00
MD CGO 7 LP A	(STATUS)	MAIN DECK 7 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 34 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
MD CGO 7 LP B	(STATUS)	MAIN DECK 7 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 35 00
MD CGO 8 LP A	(STATUS)	MAIN DECK 8 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 36 00
MD CGO 8 LP B	(STATUS)	MAIN DECK 8 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 37 00
MD CGO 9 LP A	(STATUS)	MAIN DECK 9 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 38 00
MD CGO 9 LP B	(STATUS)	MAIN DECK 9 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 39 00
MD CGO 10 LP A	(STATUS)	MAIN DECK 10 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 40 00
MD CGO 10 LP B	(STATUS)	MAIN DECK 10 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 41 00
MD CGO 11 LP A	(STATUS)	MAIN DECK 11 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 42 00
MD CGO 11 LP B	(STATUS)	MAIN DECK 11 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 43 00
MD CGO 12 LP A	(STATUS)	MAIN DECK 12 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 44 00
MD CGO 12 LP B	(STATUS)	MAIN DECK 12 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 45 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
MD CGO 13 LP A	(STATUS)	MAIN DECK 13 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 46 00
MD CGO 13 LP B	(STATUS)	MAIN DECK 13 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 47 00
MD CGO 14 LP A	(STATUS)	MAIN DECK 14 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 48 00
MD CGO 14 LP B	(STATUS)	MAIN DECK 14 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 49 00
MD CGO 15 LP A	(STATUS)	MAIN DECK 15 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 50 00
MD CGO 15 LP B	(STATUS)	MAIN DECK 15 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 51 00
MD CGO 16 LP A	(STATUS)	MAIN DECK 16 CARGO LOOP A FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 52 00
MD CGO 16 LP B	(STATUS)	MAIN DECK 16 CARGO LOOP B FIRE OR FAULT (COMBI AND FREIGHTER)	26 14 53 00
MN DK CGO 1 LP B	(STATUS)	MAIN DECK 1 CARGO LOOP B FIRE OR FAULT (COMBI)	26 14 11 00
MN DK CGO 2 LP A	(STATUS)	MAIN DECK 2 CARGO LOOP A FIRE OR FAULT (COMBI)	26 14 12 00
MN DK CGO 2 LP B	(STATUS)	MAIN DECK 2 CARGO LOOP B FIRE OR FAULT (COMBI)	26 14 13 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
MN DK CGO 3 LP A	(STATUS)	MAIN DECK 3 CARGO LOOP A FIRE OR FAULT (COMBI)	26 14 14 00
MN DK CGO 3 LP B	(STATUS)	MAIN DECK 3 CARGO LOOP B FIRE OR FAULT (COMBI)	26 14 15 00
MN DK CGO 4 LP A	(STATUS)	MAIN DECK 4 CARGO LOOP A FIRE OR FAULT (COMBI)	26 14 16 00
MN DK CGO 4 LP B	(STATUS)	MAIN DECK 4 CARGO LOOP B FIRE OR FAULT (COMBI)	26 14 17 00
MN DK CGO 5 LP A	(STATUS)	MAIN DECK 5 CARGO LOOP A FIRE OR FAULT (COMBI)	26 14 18 00
MN DK CGO 5 LP B	(STATUS)	MAIN DECK 5 CARGO LOOP B FIRE OR FAULT (COMBI)	26 14 19 00
MN DK CGO 6 LP A	(STATUS)	MAIN DECK 6 CARGO LOOP A FIRE OR FAULT (COMBI)	26 14 27 00
MN DK CGO 6 LP B	(STATUS)	MAIN DECK 6 CARGO LOOP B FIRE OR FAULT (COMBI)	26 14 28 00
NAI DUCT 1 LEAK	(STATUS)	ENG 1 FAN COWL TEMP 250+-5 DEG F	30 21 10 00
NAI DUCT 2 LEAK	(STATUS)	ENG 2 FAN COWL TEMP 250+-5 DEG F	30 21 11 00
NAI DUCT 3 LEAK	(STATUS)	ENG 3 FAN COWL TEMP 250+-5 DEG F	30 21 12 00
NAI DUCT 4 LEAK	(STATUS)	ENG 4 FAN COWL TEMP 250+-5 DEG F	30 21 13 00
NAI VALVE 1	(ADVISORY)	ENGINE 1 ANTI-ICE VALVE DISAGREES WITH COMMAND AND ENGINE RUNNING	30 21 14 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
NAI VALVE 2	(ADVISORY)	ENGINE 2 ANTI-ICE VALVE DISAGREES WITH COMMAND AND ENGINE RUNNING	30 21 15 00
NAI VALVE 3	(ADVISORY)	ENGINE 3 ANTI-ICE VALVE DISAGREES WITH COMMAND AND ENGINE RUNNING	30 21 16 00
NAI VALVE 4	(ADVISORY)	ENGINE 4 ANTI-ICE VALVE DISAGREES WITH COMMAND AND ENGINE RUNNING	30 21 17 00
NO AUTOLAND	(STATUS)	LOSS OF AUTOLAND SYSTEM	22 10 83 00
>NO AUTOLAND	(ADVISORY)	LOSS OF AUTOLAND SYSTEM PRIOR TO APPROACH	22 10 04 00
>NO AUTOLAND	(CAUTION)	LOSS OF AUTOLAND SYSTEM DURING APPROACH. INHIBITS >NO AUTOLAND (ADVISORY) OR OPTIONALLY MULTICHANNEL APPROACH SELECTED AND ONE AUTOPILOT ENGAGED	22 10 03 00
NO LAND 3	(STATUS)	DEGRADATION IN AUTOLAND SYSTEM	22 10 82 00
>NO LAND 3	(ADVISORY)	DEGRADATION IN AUTOLAND SYSTEM PRIOR TO APPROACH	22 10 06 00
>NO LAND 3	(CAUTION)	DEGRADATION IN AUTOLAND SYSTEM DURING APPROACH. INHIBITS >NO LAND 3 (ADVISORY)	22 10 05 00
NO SMOKING ON	(MEMO)	NO SMOKING SIGNS ARE MANUALLY SELECTED ON	33 ME 03 00
NOSE A/G DISAGRE	(STATUS)	PRIMARY AND ALTERNATE SYSTEMS AIR/GROUND LOGIC NOSE WHEEL COMPRESSED DISAGREE INHIBITED BY BATTERY BUS OFF OR AC BUS 2 OFF	32 09 02 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
OIL PRESS SNS 1	(STATUS)	SWITCH INDICATES HIGH OIL PRESSURE WITH ENG NOT RUNNING.	79 03 25 00
OIL PRESS SNS 2	(STATUS)	SWITCH INDICATES HIGH OIL PRESSURE WITH ENG NOT RUNNING.	79 03 26 00
OIL PRESS SNS 3	(STATUS)	SWITCH INDICATES HIGH OIL PRESSURE WITH ENG NOT RUNNING.	79 03 27 00
OIL PRESS SNS 4	(STATUS)	SWITCH INDICATES HIGH OIL PRESSURE WITH ENG NOT RUNNING.	79 03 28 00
OUTFLOW VALVE L	(STATUS)	AUTO CONTROL OF OFV L INOP OR MANUAL SELECTED	21 30 13 00
OUTFLOW VALVE R	(STATUS)	AUTO CONTROL OF OFV R INOP OR MANUAL SELECTED	21 30 15 00
OUTFLOW VLV L	(ADVISORY)	AUTO CONTROL OF OFV L INOP OR MANUAL SELECTED	21 30 12 00
OUTFLOW VLV R	(ADVISORY)	AUTO CONTROL OF OFV R INOP OR MANUAL SELECTED	21 30 14 00
>OVERSPEED	(WARNING)	AIRCRAFT SPEED (L OR C OR R ADC) EXCEEDS VMO/MMO	34 12 07 00
OVHT ENG 1 NAC	(CAUTION)	ENGINE 1 NACELLE OVERHEAT	26 11 32 00
OVHT ENG 2 NAC	(CAUTION)	ENGINE 2 NACELLE OVERHEAT	26 11 35 00
OVHT ENG 3 NAC	(CAUTION)	ENGINE 3 NACELLE OVERHEAT	26 11 38 00
OVHT ENG 4 NAC	(CAUTION)	ENGINE 4 NACELLE OVERHEAT	26 11 41 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
OVHT MN DK CGO	(CAUTION)	MAIN DECK CARGO COMPARTMENT THERMAL MONITORING SYSTEM DETECTED FLAME OR OVERHEATED CARGO	26 14 31 00
P/S XFR VLV	(STATUS)	PITOT OR STATIC SOURCE SELECT VALVE FAILS TO TRANSFER WHEN COMMANDED	34 12 08 00
PACK 1	(STATUS)	NEITHER PTC IS IN CONTROL OF PACK 1; OR THE PACK IN CONTROL REPORTS A FLOW CONTROL VLV FAIL, A COMPRESSOR OVERHEAT, PACK 1 OUTLET OVERHEAT, RAM AIR INLET/EXIT DOOR FAIL, TURBINE BYPASS VLV FAIL OR A COMPRESSOR TEMP SENSOR FAIL; OR PACK 1 TRIPS OFF DUE TO OVERHEAT, OUT OF SEQUENCE RAM AIR DOORS AND TURBINE BYPASS VLV	21 50 17 00
PACK 1	(ADVISORY)	NEITHER PTC IS IN CONTROL OF PACK 1 FOR 30 SECONDS; OR THE PACK IN CONTROL REPORTS A FLOW CONTROL VLV FAIL, A COMPRESSOR OVERHEAT, PACK 1 OUTLET OVERHEAT, RAM AIR INLET AND EXIT DOOR FAIL AND TURBINE BYPASS VLV FAIL; OR PACK 1 TRIPS OFF DUE TO OVERHEAT, OUT OF SEQUENCE RAM AIR DOORS AND TURB BYPASS VLV.	21 50 16 00
PACK 1 OFF	(MEMO)	PACK 1 OFF INHIBITED BY PACK 1 ADVISORY OR PACKS OFF, PACKS 1 AND 2 OFF OR PACKS 1 AND 3 OFF MEMOS	21 ME 02 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
PACK 2	(STATUS)	NEITHER PTC IS IN CONTROL OF PACK 2; OR THE PACK IN CONTROL REPORTS A FLOW CONTROL VLV FAIL, A COMPRESSOR OVERHEAT, PACK 2 OUTLET OVERHEAT, RAM AIR INLET/EXIT DOOR FAIL, TURBINE BYPASS VLV FAIL OR A COMPRESSOR TEMP SENSOR FAIL; OR PACK 2 TRIPS OFF DUE TO OVERHEAT, OUT OF SEQUENCE RAM AIR DOORS AND TURBINE BYPASS VLV	21 50 19 00
PACK 2	(ADVISORY)	NEITHER PTC IS IN CONTROL OF PACK 2 FOR 30 SECONDS; OR THE PACK IN CONTROL REPORTS A FLOW CONTROL VLV FAIL, A COMPRESSOR OVERHEAT, PACK 2 OUTLET OVERHEAT, RAM AIR INLET AND EXIT DOOR FAIL AND TURBINE BYPASS VLV FAIL; OR PACK 2 TRIPS OFF DUE TO OVERHEAT, OUT OF SEQUENCE RAM AIR DOORS AND TURB BYPASS VLV.	21 50 18 00
PACK 2 OFF	(MEMO)	PACK 2 OFF INHIBITED BY PACK 2 ADVISORY OR PACKS OFF, PACKS 1 AND 2 OFF OR PACKS 2 AND 3 OFF MEMOS	21 ME 03 00
PACK 3	(STATUS)	NEITHER PTC IS IN CONTROL OF PACK 3; OR THE PACK IN CONTROL REPORTS A FLOW CONTROL VLV FAIL, A COMPRESSOR OVERHEAT, PACK 3 OUTLET OVERHEAT, RAM AIR INLET/EXIT DOOR FAIL, TURBINE BYPASS VLV FAIL OR A COMPRESSOR TEMP SENSOR FAIL; OR PACK 3 TRIPS OFF DUE TO OVERHEAT, OUT OF SEQUENCE RAM AIR DOORS AND TURBINE BYPASS VLV	21 50 21 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
PACK 3	(ADVISORY)	NEITHER PTC IS IN CONTROL OF PACK 3 FOR 30 SECONDS; OR THE PACK IN CONTROL REPORTS A FLOW CONTROL VLV FAIL, A COMPRESSOR OVERHEAT, PACK 3 OUTLET OVERHEAT, RAM AIR INLET AND EXIT DOOR FAIL AND TURBINE BYPASS VLV FAIL; OR PACK 3 TRIPS OFF DUE TO OVERHEAT, OUT OF SEQUENCE RAM AIR DOORS AND TURB BYPASS VLV.	21 50 20 00
PACK 3 OFF	(MEMO)	PACK 3 OFF INHIBITED BY PACK 3 ADVISORY OR PACKS OFF, PACKS 1 AND 3 OFF OR PACKS 2 AND 3 OFF MEMOS	21 ME 04 00
PACK CONTROL	(ADVISORY)	PTC A AND PTC B FAILED	21 50 22 00
PACK CONTROL A	(STATUS)	PTC A FAILED	21 50 37 00
PACK CONTROL B	(STATUS)	PTC B FAILED	21 50 38 00
PACKS 1 + 2 OFF	(MEMO)	PACKS 1 AND 2 SELECTED OFF INHIBITED BY A PACK 1 OR PACK 2 ADVISORY OR A PACKS OFF MEMO	21 ME 08 00
PACKS 1 + 3 OFF	(MEMO)	PACKS 1 AND 3 SELECTED OFF INHIBITED BY A PACK 1 OR PACK 3 ADVISORY OR A PACKS OFF MEMO	21 ME 10 00
PACKS 2 + 3 OFF	(MEMO)	PACKS 2 AND 3 SELECTED OFF INHIBITED BY A PACK 2 OR PACK 3 ADVISORY OR A PACKS OFF MEMO	21 ME 09 00
PACKS HIGH FLOW	(MEMO)	PACKS HIGH FLOW SELECTED	21 ME 05 00
PACKS OFF	(MEMO)	3 PACKS SWITCHED OFF OR VALVES CLOSED. INHIBITED BY PACK 1,2,3 ADVISORY MESSAGES. INHIBITS ALL OTHER PACK OFF MEMOS.	21 ME 06 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
PARK BRAKE SET	(MEMO)	PARKING BRAKE SET (HANDLE SET AND VALVE CLOSED)	32 ME 01 00
PARK BRK VALVE	(STATUS)	PARK BRAKE VALVE POSITION DISAGREES WITH PARK BRAKE HANDLE POSITION.	32 44 05 00
PASS ADDRESS	(STATUS)	PASSENGER ADDRESS SYS FAILED	23 31 01 00
PASS ADDRESS 1	(STATUS)	PASSENGER ADDRESS 1 SYS FAILED	23 31 01 00
PASS ADDRESS 2	(STATUS)	PASSENGER ADDRESS 2 SYS FAILED	23 31 02 00
PASS OXYGEN ON	(ADVISORY)	PASSENGER OXYGEN FLOW CONTROL UNIT ACTUATED	35 21 03 00
PASS OXYGEN ON	(STATUS)	OXYGEN PASSENGER FLOW CONTROL UNIT ACTUATED	35 21 04 00
PASS SERVICES	(STATUS)	PASS SERVICES SYS FAIL	23 34 28 00
PASS SERVICES 1	(STATUS)	CABIN SERVICES 1 SYS FAILED	23 34 28 00
PASS SERVICES 2	(STATUS)	CABIN SERVICES 2 SYS FAILED	23 34 29 00
PASS SIGNS ON	(MEMO)	PASSENGER SIGNS ARE MANUALLY SELECTED ON. INHIBITS SEATBELTS ON (MEMO) AND NO SMOKING ON (MEMO).	33 ME 04 00
PEDAL STEERING	(STATUS)	PEDAL STEERING INTERCONNECT ACTUATOR DISAGREEMENT	32 51 12 00
PRESS RELIEF	(ADVISORY)	EITHER PRESSURE RELIEF VALVE (UPPER OR LOWER) ACTUATES AND ALL 3 PACKS ON AND COMMANDED TO HIGH FLOW	21 50 23 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
PRINTER MESSAGE	(MEMO)	AN UPLINKED MESSAGE IS BEING ROUTED TO THE PRINTER	23 ME 04 00
RADIO ALT CENTER	(STATUS)	C RADIO ALT FAILURE	34 33 01 00
RADIO ALT LEFT	(STATUS)	L RADIO ALT FAILURE	34 33 02 00
RADIO ALT RIGHT	(STATUS)	R RADIO ALT FAILURE	34 33 03 00
>RADIO TRANSMIT	(ADVISORY)	ONE OR MORE VHF/HF COMMUNICATION RADIOS HAVE TRANSMITTED CONTINUOUSLY FOR 30/60 SECONDS OR MORE	23 51 26 00
RECIRC FAN LWR L	(STATUS)	RECIRC FAN LOWER LEFT FAILURE	21 20 08 00
RECIRC FAN LWR R	(STATUS)	RECIRC FAN LOWER RIGHT FAILURE	21 20 09 00
RECIRC FAN UPR L	(STATUS)	RECIRC FAN UPPER LEFT FAILURE	21 20 07 00
RECIRC FAN UPR R	(STATUS)	RECIRC FAN UPPER RIGHT FAILURE	21 20 06 00
RES 2A XFR VLV	(STATUS)	RESERVE TANK 2A XFER VALVE NOT IN COMMANDED POSITION OR FAILED	28 10 13 00
RES 2B XFR VLV	(STATUS)	RESERVE TANK 2B XFER VALVE NOT IN COMMANDED POSITION OR FAILED	28 10 14 00
RES 3A XFR VLV	(STATUS)	RESERVE TANK 3A XFER VALVE NOT IN COMMANDED POSITION OR FAILED	28 10 15 00
RES 3B XFR VLV	(STATUS)	RESERVE TANK 3B XFER VALVE NOT IN COMMANDED POSITION OR FAILED	28 10 16 00
REV 1 INTERLOCK	(STATUS)	NO. 1 ENGINE REVERSER INTERLOCK FAILURE.	78 03 06 00
REV 2 INTERLOCK	(STATUS)	NO. 2 ENGINE REVERSER INTERLOCK FAILURE.	78 03 07 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
REV 3 INTERLOCK	(STATUS)	NO. 3 ENGINE REVERSER INTERLOCK FAILURE.	78 03 08 00
REV 4 INTERLOCK	(STATUS)	NO. 4 ENGINE REVERSER INTERLOCK FAILURE.	78 03 09 00
RUD RATIO DUAL	(ADVISORY)	UPPER AND LOWER RUDDER RATIO FUNCTION FAIL	27 20 21 00
RUD RATIO SNGL	(ADVISORY)	UPPER OR LOWER RUDDER RATIO FUNCTION FAIL	27 20 20 00
RUD TRIM CTR	(STATUS)	FAULT IS DETECTED IN THE RUDDER TRIM CONTROL SYSTEM	27 20 03 00
RUDDER RATIO	(STATUS)	UPPER AND/OR LOWER RUDDER RATIO FUNCTION FAIL OR PARTIAL FAILURE OF BOTH UPPER AND LOWER RRC FUNCTIONS IN ONE SRM ONLY	27 20 04 00
RUDDER RATIO	(ADVISORY)	UPPER AND/OR LOWER RUDDER RATIO FUNCTION FAIL	27 20 02 00
>SATCOM	(ADVISORY)	LOSS OF BOTH SATELLITE VOICE AND DATA CAPABILTITY DUE TO SATCOM SYSTEM FAILURE	23 25 01 00
SATCOM CALL	(MEMO)	GROUND TO AIR CALL	23 ME 08 00
>SATCOM DATA	(ADVISORY)	LOSS OF THE SATELLITE DATA COMMUNICATION DUE TO AN INTERFACE FAILURE	23 25 04 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
SATCOM DATA	(STATUS)	INTERFACE PROBLEM BETWEEN SATCOM AND ACARS	23 25 30 00
>SATCOM DATA L	(ADVISORY)	LOSS OF DATA CAPABILITY FOR THE SATCOM-L DUE TO INTERFACE FAILURE	23 25 05 00
SATCOM DATA L	(STATUS)	LOSS OF THE LEFT SATELLITE DATA COMMUNICATION DUE TO AN INTERFACE PROBLEM	23 25 31 00
>SATCOM DATA R	(ADVISORY)	LOSS OF DATA CAPABILITY FOR THE SATCOM-R DUE TO INTERFACE FAILURE	23 25 06 00
SATCOM DATA R	(STATUS)	INTERFACE PROBLEM BETWEEN SATCOM R AND ACARS	23 25 32 00
SATCOM HI GAIN L	(STATUS)	FAILURE OF THE HIGH GAIN ANTENNA SUBSYSTEM	23 25 25 00
SATCOM HI GAIN R	(STATUS)	FAILURE OF THE HIGH GAIN ANTENNA SUBSYSTEM	23 25 26 00
SATCOM HIGH GAIN	(STATUS)	SATCOM HIGH GAIN ANTENNA SUBSYSTEM FAILURE	23 25 24 00
>SATCOM L	(ADVISORY)	TOTAL LOSS OF VOICE AND DATA CAPABILITIES FOR SATCOM-L	23 25 02 00
SATCOM LO GAIN L	(STATUS)	FAILURE OF THE LOW GAIN ANTENNA SUBSYSTEM FOR THE SATCOM-L	23 25 28 00
SATCOM LO GAIN R	(STATUS)	FAILURE OF THE LOW GAIN ANTENNA SUBSYSTEM FOR THE SATCOM-R	23 25 29 00
SATCOM LOW GAIN	(STATUS)	SATCOM LOW GAIN ANTENNA SUBSYSTEM FAILURE	23 25 27 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
SATCOM MESSAGE	(MEMO)	SATCOM MESSAGE RECEIVED	23 ME 09 00
>SATCOM R	(ADVISORY)	TOTAL LOSS OF VOICE AND DATA CAPABILITIES FOR SATCOM-R	23 25 03 00
SATCOM SYSTEM	(STATUS)	SATCOM DATALINK FAILURE	23 25 21 00
SATCOM SYSTEM L	(STATUS)	SATCOM-L FAILURE	23 25 22 00
SATCOM SYSTEM R	(STATUS)	SATCOM-R FAILURE	23 25 23 00
>SATCOM VOICE	(ADVISORY)	TOTAL LOSS OF VOICE CAPABILITY DUE TO EQUIPMENT FAILURE	23 25 07 00
>SATCOM VOICE L	(ADVISORY)	TOTAL LOSS OF VOICE CAPABILITY DUE TO EQUIPMENT FAILURE	23 25 08 00
>SATCOM VOICE R	(ADVISORY)	TOTAL LOSS OF VOICE CAPABILITY FOR SATCOM-R DUE TO EQUIPMENT FAILURE	23 25 09 00
>SATVOICE AVAIL	(ADVISORY)	RE-ESTABLISHMENT OF VOICE CAPABILITY AFTER TEMPORARY LOSS	23 25 11 00
>SATVOICE LOST	(ADVISORY)	TEMPORARY LOSS OF VOICE CAPABILITY DUE TO LOG-OFF, REVERSION TO LOW GAIN, ETC. GROUND TO AIR CALLS FROM ATC WILL NOT BE RECEIVED	23 25 10 00
>SCAV PUMP ON	(ADVISORY)	SCAVENGE PUMP SELECTED ON WITH OVHD MAINT PANEL SWITCH	28 10 25 00
SEATBELTS ON	(MEMO)	SEATBELT SIGNS ARE MANUALLY SELECTED ON	33 ME 02 00
>SMOKE DR 5 REST	(CAUTION)	SMOKE DETECTED IN CREW REST DOOR 5	26 14 08 00

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	EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
	>SMOKE LAV/COMP	(ADVISORY)	SMOKE DETECTED IN ENCLOSED COMPARTMENTS OTHER THAN LAVATORIES AND CREW REST AREAS	26 13 04 00
	>SMOKE LAV/COMPT	(CAUTION)	SMOKE DETECTED IN ENCLOSED COMPARTMENTS OTHER THAN LAVATORIES AND CREW REST AREAS	26 13 03 00
	>SMOKE LAVATORY	(CAUTION)	SMOKE DETECTED IN LAVATORY (LAVATORIES)	26 13 01 00
	>SMOKE ZN F REST	(CAUTION)	SMOKE DETECTED IN CREW REST ZONE F	26 14 09 00
	SMOKE/OVRD VLV	(STATUS)	SMOKE/OVRD VALVE NOT IN COMMANDED POSITION	21 50 24 00
	>SNGL SOURCE ILS	(CAUTION)	BOTH PILOTS PFD/ND ON SAME G/S SOURCE OR LOC SOURCE	34 31 11 00
	>SNGL SOURCE RA	(ADVISORY)	BOTH PILOTS PFD/ND ON SAME RADIO ALTIMETER	34 33 12 00
	>SOURCE SEL ADC	(ADVISORY)	BOTH PILOTS PFD/ND ON SAME ADC	34 12 09 00
	>SOURCE SEL EIU	(ADVISORY)	BOTH PILOTS PFD/ND ON SAME EIU	31 61 14 00
	>SOURCE SEL F/D	(ADVISORY)	BOTH PILOTS ON SAME FLIGHT DIRECTOR SOURCE (FCC CHANNEL)	22 10 75 00
	>SOURCE SEL IRS	(ADVISORY)	BOTH PILOTS PFD/ND ON SAME IRU	34 21 23 00
	>SOURCE SEL NAV	(ADVISORY)	BOTH PILOTS ND ON SAME FMC OR SAME MCDU	34 61 13 00
	SPEEDBRAKE AUTO	(STATUS)	AUTO SPEEDBRAKE SYSTEM DETECTS FAULT	27 60 02 00
	SPEEDBRAKE AUTO	(ADVISORY)	AIR/GROUND DISAGREEMENT OR AUTOSPEEDBRAKE ACTUATOR NOT RETRACTED WHEN HANDLE IS NOT ARMED OR CONTROL CIRCUIT FAULT	27 60 01 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>SPEEDBRAKES EXT	(CAUTION)	SPEEDBRAKE LEVER BEYOND ARM DETENT; AND ONE (OR MORE) OF THE FOLLOWING CONDITIONS 1) AIRPLANE BETWEEN 15 FT AND 800 FT. RADIO ALT., OR 2) LANDING FLAPS SET (FLAP 25 OR 30), OR 3) ANGLE OF TWO (OR MORE) THRUST LEVERS 5 DEGREES (OR MORE) ABOVE IDLE STOP AND (RADIO ALTITUDE ABOVE 15' AND RADIO ALTITUDE SSM IS NOT NCD)	27 60 03 00
STAB AUTO CUTOUT	(STATUS)	AUTOMATIC STABILIZER SHUTDOWN INOP	27 40 01 00
STAB AUTO TRIM	(STATUS)	FAULT IS DETECTED IN THE AUTO STABILIZER DRIVE SYSTEM BY THE L AND/OR R SRM	27 40 22 00
>STAB GREENBAND	(ADVISORY)	NOSE GEAR PRESSURE SWITCH DISAGREES WITH SELECTED GREENBAND (MAWEA) GND ONLY OR INVALID CG ENTERED INTO MCDU.	27 40 02 00
STAB GREENBAND	(STATUS)	NOSE GEAR PRESSURE SWITCH DISAGREES WITH COMPUTED GREENBAND (MAWEA) GND ONLY OR INVALID CG ENTERED INTO MCDU	27 40 03 00
STAB SPEED TRIM	(STATUS)	STAB SPEED TRIM SYSTEM FAILURE	27 40 25 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
STAB TRIM	(STATUS)	HYD SYS 2 OR 3 STABILIZER DRIVE INOP CAUSING 1/2 DRIVE SPEED IN MANUAL AND AUTOLAND IN AIR OR ON GROUND	27 40 04 00
>STAB TRIM 2	(ADVISORY)	HYD SYS 2 STABILIZER DRIVE INOP CAUSING 1/2 DRIVE SPEED IN MANUAL AND AUTOLAND IN AIR OR ON GND	27 40 05 00
>STAB TRIM 3	(ADVISORY)	HYD SYS 3 STABILIZER DRIVE INOP CAUSING 1/2 DRIVE SPEED IN MANUAL AND AUTOLAND IN AIR OR ON GND	27 40 06 00
STAB TRIM UNSCHD	(STATUS)	ANY UNCOMMANDED STABILIZER MOTION	27 40 08 00
STAB TRIM UNSCHD	(CAUTION)	ANY UNCOMMANDED STABILIZER MOTION	27 40 07 00
STAB XFR SIG	(STATUS)	CENTER WING TANK QUANTITY BELOW 10000 GALLONS (37,850 LTR) SIGNAL OR IN AIR SIGNAL OR FLAPS RETRACTED SIGNAL OR HS PUMP SWITCHES SIGNAL TO FSMC CARD OR CENTER WING TANK SINGLE POINT SENSOR OR FQIS A/D OR IN AIR SIGNAL DISAGREE	28 10 22 00
STAB XFR VLV	(STATUS)	ANY HORIZONTAL STABILIZER FUEL ISOLATION VALVE DISAGREES WITH COMMAND	28 10 18 00

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1.57.5	DECORPORA	FALL T CODE
LEVEL	DESCRIPTION	FAULT CODE
(STATUS)	FAILURE OF SYSTEM OR LOSS OF INPUT TO THE INTEGRATED DISPLAY SYSTEM	27 30 02 00
(STATUS)	STANDBY INVERTER FAILURE	24 20 28 00
(CAUTION)	NO. 1 ENGINE STARTER VALVE OPEN ABOVE ENGINE RPM AT WHICH CUTOUT SHOULD OCCUR.	80 03 09 00
(CAUTION)	NO. 2 ENGINE STARTER VALVE OPEN ABOVE ENGINE RPM AT WHICH CUTOUT SHOULD OCCUR.	80 03 10 00
(CAUTION)	NO. 3 ENGINE STARTER VALVE OPEN ABOVE ENGINE RPM AT WHICH CUTOUT SHOULD OCCUR.	80 03 11 00
(CAUTION)	NO. 4 ENGINE STARTER VALVE OPEN ABOVE ENGINE RPM AT WHICH CUTOUT SHOULD OCCUR.	80 03 12 00
(ADVISORY)	APU STANDBY BUS UNPOWERED	24 20 29 00
(STATUS)	APU STANDBY BUS UNPOWERED	24 20 30 00
(ADVISORY)	MAIN STANDBY BUS UNPOWERED	24 20 31 00
(STATUS)	MAIN STANDBY BUS UNPOWERED	24 20 32 00
(MEMO)	STANDBY IGNITION SELECTED ON.	74 ME 02 00
	(STATUS) (CAUTION) (CAUTION) (CAUTION) (CAUTION) (ADVISORY) (STATUS) (ADVISORY) (STATUS)	(STATUS) FAILURE OF SYSTEM OR LOSS OF INPUT TO THE INTEGRATED DISPLAY SYSTEM (STATUS) STANDBY INVERTER FAILURE (CAUTION) NO. 1 ENGINE STARTER VALVE OPEN ABOVE ENGINE RPM AT WHICH CUTOUT SHOULD OCCUR. (CAUTION) NO. 2 ENGINE STARTER VALVE OPEN ABOVE ENGINE RPM AT WHICH CUTOUT SHOULD OCCUR. (CAUTION) NO. 3 ENGINE STARTER VALVE OPEN ABOVE ENGINE RPM AT WHICH CUTOUT SHOULD OCCUR. (CAUTION) NO. 4 ENGINE STARTER VALVE OPEN ABOVE ENGINE RPM AT WHICH CUTOUT SHOULD OCCUR. (ADVISORY) APU STANDBY BUS UNPOWERED (STATUS) MAIN STANDBY BUS UNPOWERED (STATUS) MAIN STANDBY BUS UNPOWERED

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
STBY INV APU	(STATUS)	APU STANDBY INVERTER FAILURE	24 20 33 00
STBY INV MAIN	(STATUS)	MAIN STANDBY INVERTER FAILURE	24 20 34 00
>STBY POWER OFF	(ADVISORY)	STANDBY BUS UNPOWERED	24 20 47 00
STROBE LIGHT OFF	(MEMO)	INFLIGHT-STROBE LIGHTS OFF	33 ME 01 00
>TCAS OFF	(ADVISORY)	TCAS SYSTEM OFF (INHIBITED BY ">TCAS SYSTEM")	34 45 05 00
>TCAS RA CAPT	(ADVISORY)	TCAS RESOLUTION ADVISORIES CANNOT BE DISPLAYED ON THE CAPTAIN'S PFD	34 45 02 00
>TCAS RA F/O	(ADVISORY)	TCAS RESOLUTION ADVISORIES CANNOT BE DISPLAYED ON THE F/O'S PFD	34 45 03 00
>TCAS SYSTEM	(ADVISORY)	TCAS DATA NOT DISPLAYABLE ON IDS	34 45 04 00
TCAS SYSTEM	(STATUS)	FAULT WITHIN DISPLAY OF TCAS	34 45 01 00
TE FLAPS	(STATUS)	TRAILING EDGE SYSTEM FAILURE	27 50 12 00
>TEMP CARGO A/C	(ADVISORY)	FWD CARGO A/C DUCT OVERHEAT OR FWD CARGO A/C COMPARMENT OVERHEAT	21 40 06 00
TEMP CARGO HEAT	(ADVISORY)	AFT CARGO COMPARTMENT OVERHEAT (WHEN AFT CARGO HEAT SYSTEM IS OPERATING).	21 40 07 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
TEMP DEV CGO HI	(ADVISORY)	FWD OR AFT CARGO A/C (PASSENGER) OR MAIN DECK OR LOWER LOBE (FREIGHTER) TEMP DEVIATION BY 5 DEG C FOR MORE THAN 10 MIN AND ASSOCIATED PACK NOT SELECTED OFF IN CRUISE.	21 40 36 00
TEMP DEV CGO LO	(ADVISORY)	FWD OR AFT CARGO A/C (PASSENGER) OR MAIN DECK OR LOWER LOBE (FREIGHTER) TEMP DEVIATION BY 5 DEG C FOR MORE THAN 10 MIN AND ASSOCIATED PACK NOT SELECTED OFF IN CRUISE.	21 40 37 00
TEMP ZONE	(ADVISORY)	ANY ZONE SUPPLY DUCT TEMP >185 DEGREE F OR CRITICAL ZTC FAILURE OR MASTER TRIM AIR PRSOV FAILED CLOSED	21 60 01 00
>TERR OVRD	(ADVISORY)	THE ALERTING AND DISPLAY FUNCTION OF THE GROUND PROXIMITY SYSTEM HAS BEEN MANUALLY OVERIDDEN	34 46 18 00
TERR POS	(ADVISORY)	HORIZONTAL POSITION UNCERTAINTY EXCEEDS LIMIT	34 46 19 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
TERR SYS	(STATUS)	THE EGPWS TERRAIN AWARENESS FUNCTION HAS FAILED	34 43 63 00
>TEST IN PROG	(WARNING)	FIRE/OVERHEAT SYSTEM TEST IN PROGRESS	26 11 75 00
THERM MON MN DK	(STATUS)	MAIN DECK CARGO COMPARTMENT THERMAL MONITORING SYSTEM OR CONTROLLER FAILURE	26 14 32 00
THERM MON XMTR	(STATUS)	MAIN DECK CARGO COMPARTMENT THERMAL MONITORING SYSTEM ARINC TRANSMITTER FAILURE	26 14 33 00
TIRE PRESS SYS	(STATUS)	TIRE PRESSURE INDICATION SYSTEM MALFUNCTION OR LOSS OF INPUT BUS.	32 48 01 00
>TIRE PRESSURE	(ADVISORY)	ABNORMAL TIRE PRESSURE CONDITION DETECTED BY THE TIRE PRESSURE INDICATION SYSTEM	32 48 02 00
TIRE PRESSURE	(STATUS)	ABNORMAL TIRE PRESSURE CONDITION DETECTED BY THE TIRE PRESSURE INDICATION SYSTEM	32 48 03 00
TIRE PRESSURE	(CAUTION)	ABNORMAL TIRE PRESSURE CONDITION DETECTED BY THE TIRE PRESSURE INDICATION SYSTEM, WHEN ON THE GROUND AND TAKE-OFF POWER IS NOT CURRENTLY BEING APPLIED.	32 48 04 00
TIRE PRESSURE	(ADVISORY)	ABNORMAL TIRE PRESSURE CONDITION DETECTED BY THE TIRE PRESSURE INDICATION SYSTEM, INHIBITED BY L32104.	32 48 05 00
>TRANSPONDER L	(ADVISORY)	L-AIR TRAFFIC CONTROL TRANSPONDER FAULT	34 53 01 00
>TRANSPONDER R	(ADVISORY)	R-AIR TRAFFIC CONTROL TRANSPONDER FAULT	34 53 03 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>TRIM AIR OFF	(ADVISORY)	MASTER TRIM AIR PRSOV COMMANDED CLOSED.	21 60 12 00
UPR PRESS RELIEF	(STATUS)	UPPER PRESSURE RELIEF VALVE ACTUATED	21 30 16 00
VMO GEAR DOWN	(MEMO)	ALTERNATE GEAR DOWN VMO	34 ME 08 00
VMO SPARE ENGINE	(MEMO)	SPARE ENGINE CARRIAGE VMO	34 ME 09 00
VOR LEFT	(STATUS)	LOSS OF LEFT VOR DATA	34 51 16 00
VOR RIGHT	(STATUS)	LOSS OF RIGHT VOR DATA	34 51 17 00
WAI VALVE LEFT	(ADVISORY)	LEFT WING ANTI ICE VALVE DISAGREES WITH COMMAND	30 11 01 00
WAI VALVE RIGHT	(ADVISORY)	RIGHT WING ANTI ICE VALVE DISAGREES WITH COMMAND	30 11 03 00
WEIGHT/BALANCE	(STATUS)	WEIGHT AND BALANCE SYSTEM FAILURE OR LACK OF INPUT TO THE INTEGRATED DISPLAY SYSTEM	31 41 01 00
WINDOW HEAT 1L	(STATUS)	CONTROLLER, HEATER OR SENSOR FAULT OR SWITCH OFF	30 40 03 00
WINDOW HEAT 1R	(STATUS)	CONTROLLER, HEATER OR SENSOR FAULT OR SWITCH OFF	30 40 04 00
WINDOW HEAT 2L	(STATUS)	CONTROLLER, HEATER OR SENSOR FAULT OR SWITCH OFF	30 40 05 00
WINDOW HEAT 2R	(STATUS)	CONTROLLER, HEATER OR SENSOR FAULT OR SWITCH OFF	30 40 06 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
WINDSHEAR PRED	(STATUS)	THE PREDICTIVE WINDSHEAR SYSTEM FUNCTION OF THE WEATHER RADAR UNIT HAS FAILED	34 43 64 00
WNSHR ALERT SYS	(STATUS)	FAILURE OF WINDSHEAR ALERT FUNCTION.	34 46 05 00
WXR SYS	(STATUS)	THE WEATHER RADAR DISPLAY IS NOT PRESENT WHEN WXR IS SELECTED ON THE EFIS CONTROL PANEL	34 46 63 00
>X FEED CONFIG	(ADVISORY)	XFEED 1 OR 4 VALVES CLOSED AND MAIN TANKS NOT EQUAL OR XFEED 2 OR 3 VALVES CLOSED AND FLAPS RETRACTED	28 22 50 00
>YAW DAMPER LWR	(ADVISORY)	LOWER YAW DAMPER INOPERATIVE. MAY BE DUE TO MODULE FAULT, ACTUATOR FAULT, IRU'S OFF OR IN ALIGN, ENGAGE SWITCH OFF, OR MODULE POWER OFF.	22 21 01 00
YAW DAMPER LWR	(STATUS)	LOWER YAW DAMPER INOPERATIVE. MAY BE DUE TO MODULE FAULT, ACTUATOR FAULT, IRU'S OFF OR IN ALIGN, ENGAGE SWITCH OFF, OR MODULE POWER OFF.	22 21 02 00

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EICAS MESSAGE	LEVEL	DESCRIPTION	FAULT CODE
>YAW DAMPER UPR	(ADVISORY)	UPPER YAW DAMPER INOPERATIVE. MAY BE DUE TO MODULE FAULT, ACTUATOR FAULT, IRU'S OFF OR IN ALIGN, ENGAGE SWITCH OFF, OR MODULE POWER OFF.	22 21 03 00
YAW DAMPER UPR	(STATUS)	UPPER YAW DAMPER INOPERATIVE. MAY BE DUE TO MODULE FAULT, ACTUATOR FAULT, IRU'S OFF OR IN ALIGN, ENGAGE SWITCH OFF, OR MODULE POWER OFF.	22 21 04 00
ZONE TEMP	(STATUS)	ANY ZONE TEMP SYSTEM LRU FAILURE OR CRITICAL ZTC FAILURE	21 60 03 00

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